

Rešerše

Zdroj: TREECD 1973 - 2000/01

Klíčová slova: Ascocalyx, Gremmeniella, Brunchorstia, Scleroderris

Výsledek: 393 záz. uspořádáno abecedně podle příjmení prvního autora

Historie dotazu:

No.	Records	Request
		The searches below are from: A:\ASCOCAL.HIS.
1	34	ASCOCALYX
2	513	ABIETINA
3	384	GREMMENIELLA
4	513	ABIETINA
5	34	BRUNCHORSTIA
6	795	PINEA
7	375	(ASCOCALYX and ABIETINA) or (GREMMENIELLA and ABIETINA) or (BRUNCHORSTIA and PINEA)
8	384	GREMMENIELLA
9	384	GREMMENIELLA*
10	387	#1 or #3 or #5
11	173	SCLERODERRIS*
12	393	#10 or SCLERODERRIS*
13	393	#10 or SCLERODERRIS*
		The searches above are from: A:\ASCOCAL.HIS.
		Searches and records above from: TREECD 1973-2000/01

Record 1 of 393 - TREECD 1973-2000/01

TI - TITLE: Gremmeniella disease and site factors affecting the condition and growth of Scots pine.

AU - AUTHOR(S): Aalto-Kallonen-T; Kurkela-T

AD - ADDRESS OF AUTHOR: Rajamaen metsatyonjohtajakoulu, Kukantoyraantie, 01900 Nurmijarvi, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Communicationes-Institutii-Forestalis-Fenniae. 1985, No. 126, 28pp.; 24 ref.

PY - PUBLICATION YEAR: 1985

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: Finnish

AB - ABSTRACT: The development of outbreaks of Gremmeniella abietina was studied in 6 young (20-40 yr old) stands in southern Finland in 1979. Water drainage channels and increased RH were characteristic of disease centres and trees in worst condition were at the bottom of topographic depressions. Some cankers were already established at the beginning of the 1970s; radial increment culminated in 1972-73 and ht. increment 1-2 yr later. Losses in radial increment as a result of the disease varied between 7.4 and 54% and in ht. increment between 11 and 58% in 1978.

DE - DESCRIPTORS: cankers-; infection-; Pines-; environmental-factors; yield-losses; Crop-losses; conifers-

OD - ORGANISM DESCRIPTORS: Gremmeniella-abietina; Pinus-sylvestris; Pinus-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi; Pinus; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0358-9609

IB - INTERNATIONAL STANDARD BOOK NUMBER: 951-40-0685-2

Record 2 of 393 - TREECD 1973-2000/01

TI - TITLE: In vitro responses of conifer adventitious shoots and calli inoculated with *Gremmeniella abietina*.

AU - AUTHOR(S): Abdul-Rahman-NN; Diner-AM; Skilling-DD; Karnosky-DF

AD - ADDRESS OF AUTHOR: BioSource For. Biotech. Gp., Michigan Technol. Univ., Houghton, MI 49931, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Forest-Science. 1987, 33: 4, 1047-1053; 18 ref.

PY - PUBLICATION YEAR: 1987

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Adventitious shoots of *Larix decidua* were inoculated with axenic vegetative hyphae or conidia of *G. abietina*. Dense mycelial growth on the host surface and needle necrosis occurred within 2 and 4 wk of inoculation with, respectively, vegetative hyphae and conidia. Pink conidial pustules and tendrils formed on some shoots within 1 month of inoculation. Examination by light microscopy and SEM showed that hyphae penetrated between or through epidermal cells and rarely through stomata. Inoculation of adventitious shoots of *L. leptolepis* and *L. laricina* resulted in 100% infection, but, compared with *L. decidua*, very little hyphal growth and no conidial pustules. Inoculation success was a function of spore inoculum density. Calli of balsam fir (naturally immune), Douglas fir (naturally moderately resistant), *L. leptolepis* and *L. laricina* (both naturally resistant) supported less fungal growth than *L. decidua* callus. The in vitro technique may reduce the time required to evaluate relative disease resistance.

DE - DESCRIPTORS: fungal-diseases; Cankers-; resistance-; methodology-; Larch-; infection-; Scanning-electron-microscopy; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Larix-laricina*; *Gremmeniella-abietina*; *Larix-leptolepis*; *Larix-decidua*; *Abies-balsamea*; *Pseudotsuga-menziessii*; fungi-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Larix*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; *Abies*; *Pseudotsuga*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0015-749X

Record 3 of 393 - TREECD 1973-2000/01

TI - TITLE: Japanese black pine, *Pinus thunbergii*, a new host for scleroderris canker in North America.

AU - AUTHOR(S): Abrahamson-LP; Silverborg-SB; Skilling-DD

AD - ADDRESS OF AUTHOR: Coll. Envir. Sci. & For., State Univ. New York, Syracuse, New York.

SO - SOURCE (BIBLIOGRAPHIC CITATION): AFRI-Research-Note,-Applied-Forestry-Research-Institute,-State-University-of-New-York. 1978, No. 26, 2 pp.; 6 ref.

PY - PUBLICATION YEAR: 1978

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: *Gremmeniella abietina* was identified from *P. thunbergii* (ht. 8-10 ft) growing in New York State.

DE - DESCRIPTORS: conifers-

OD - ORGANISM DESCRIPTORS: *Pinus-thunbergii*; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: New-York; USA-

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; Middle-Atlantic-States-of-USA; Northeastern-States-of-USA; USA; North-America; America

PT - PUBLICATION TYPE: Miscellaneous

Record 4 of 393 - TREECD 1973-2000/01

TI - TITLE: Gremmeniella-infected Pinus contorta as raw material in the production of kraft pulp.

AU - AUTHOR(S): Ahlgvist-B; Karlman-M; Witzell-J

AD - ADDRESS OF AUTHOR: MoDo Research and Development, S-981 80 Ornskoldsvik, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1996, 26: 3, 113-121; 24 ref.

PY - PUBLICATION YEAR: 1996

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: Pinus contorta logs with occluded cankers caused by the pathogen Gremmeniella abietina, as well as logs from unaffected trees were sampled from a 23-year-old plantation located at Ronnas, Savar, near Umea, Sweden, and compared in terms of the properties of paper made from the trees. Damaged wood gave kraft pulp with poor paper properties: it required a larger amount of beating energy and resulted in paper with a low tear strength, air permeability, tensile stiffness, burst strength, and poor light-scattering properties. However, small amounts of damaged wood mixed in with a large amount of healthy wood can pass almost unnoticed. The use of trees with a larger content of damaged wood will lead to serious pulp processing problems and give a pulp with poor paper properties. Thus, wood damaged by Gremmeniella should be sorted out and classed as low-grade raw material.

DE - DESCRIPTORS: forest-trees; sulfate-pulping; production-; wood-properties; damage-; quality-; paper-; pulps-; plant-pathogens; plant-pathogenic-fungi; fungal-diseases; pulping-; plant-pathology

OD - ORGANISM DESCRIPTORS: Gremmeniella-abietina; Pinus-contorta; fungi-

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi; Pinus; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; EFTA; Developed-Countries; European-Union-Countries; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 5 of 393 - TREECD 1973-2000/01

TI - TITLE: Susceptibility of four conifer species to *Gremmeniella abietina*.

AU - AUTHOR(S): Aitken-EAB

AD - ADDRESS OF AUTHOR: Forestry Department, Aberdeen University, Aberdeen, UK.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1993, 23: 3, 153-162; 21 ref.

PY - PUBLICATION YEAR: 1993

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: The susceptibility of 11 British provenances of *Pinus sylvestris* and of 3 other conifer species (*P. nigra*, *P. contorta* and *Picea abies*) to *G. abietina* was tested in inoculation tests performed at 2 different times of year. Significant ($P < 0.05$) differences in susceptibility were found among the *Pinus sylvestris* provenances, with a provenance originating from a native Scottish pinewood at Loch Maree showing the highest levels of disease. *P. nigra* subsp. *laricio* was the most susceptible species tested, although sporulation was greatest on *P. sylvestris*. *Picea abies* was also susceptible when inoculated later in the growing season (Aug., as opposed to Jun.). Infection in *Pinus contorta* was negligible. High levels of beta-phellandrene were tentatively linked with resistance among trees in a single stand of *P. sylvestris*.

DE - DESCRIPTORS: susceptibility-; resistance-; genetic-variation; provenance-; fungal-diseases; conifers-; disease-resistance; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Gremmeniella-abietina*; *Picea-abies*; *Pinus-contorta*; *Pinopsida*-; *Pinus-nigra*; fungi-

GE - GEOGRAPHIC NAMES: UK-

BT - BROADER DESCRIPTORS: fungi; *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; Spermatophyta; plants; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; *Picea*; British-Isles; Western-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 6 of 393 - TREECD 1973-2000/01

TI - TITLE: A disk camera system for automatic recording of visual data: snow depth in field plots.

AU - AUTHOR(S): Alberga-AH; Marosy-M; Tanner-CB; Upper-CD

AD - ADDRESS OF AUTHOR: Dep. Meteorol., Univ. Wisconsin, Madison, WI 53706, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Phytopathology. 1987, 77: 6, 927-929; 6 ref.

PY - PUBLICATION YEAR: 1987

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: A disc camera triggered by a timed signal provided an inexpensive method of obtaining visual data at a remote site. The method was used to record snow depth and duration in experimental plots of *Pinus resinosa* inoculated with *Gremmeniella abietina* during the winters of 1984-1985 and 1985-1986. The system can be adapted to accommodate any exposure interval > 1 s, with the time between site visits limited by the number of exposures (15) available/film disc.

DE - DESCRIPTORS: Techniques-; recording-; snow-; Pines-; Photography-; methodology-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; fungi-; *Pinus*-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; Pinaceae; Pinopsida; gymnosperms

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0031-949X

Record 7 of 393 - TREECD 1973-2000/01

TI - TITLE: Forest health and forest damage. Forestry conference held at the Agricultural University, Umea on 30 November 1988.

OT - ORIGINAL NON-ENGLISH TITLE: Skogstillstand och skogsskador. Skogskonferens 30 November, 1988, Lantbruksuniversitet, Umea.

AU - AUTHOR(S): Andersson-F (Convenor); Soderberg-U; Lundmark-JE; Ehnstrom-B; Barklund-P; Hallgren-JE; Christersson-L; Larsson-S; Karlmann-M; Lindroth-A; Eriksson-H; Nilsson-SI; Persson-T; Paustian-K; Fircks-H-von; Von-Fircks-H

AD - ADDRESS OF AUTHOR: Institutionen for Ekologi och Miljovard, Sveriges Lantbruksuniversitet, Uppsala, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Skogsfakta:-Konferens. 1989, No. 12, 97 pp.; many ref.

PB - PUBLISHER INFORMATION: Sveriges Lantbruksuniversitet, Skogsvetenskapliga Fakulteten; Uppsala; Sweden

PY - PUBLICATION YEAR: 1989

LA - LANGUAGE OF TEXT: Swedish

AB - ABSTRACT: Thirteen papers from this conference are presented in 3 sections. The first section contains 4 papers on (i) tree health and foliage density as used in the Swedish State survey (Soderberg, U.), (ii) soil conditions in relation to stand development, treatment and environmental influences (Lundmark, J. E.; 4 ref.), (iii) insect damage and air pollution (Ehnstrom, B.; 10 ref.), (iv) fungal diseases of spruce [Picea] and pine [Pinus] (Barklund, P.; 16 ref.). The second section deals with the concept of 'stress ecology' and includes papers on (i) stress and vitality (Hallgren, J. E.; 6 ref.), (ii) frost as a stress factor (Christersson, L.; Fircks, H. von; 21 ref.), (iii) predisposing factors for insect pest attacks in stressed trees (Larsson, S.; 5 ref.), (iv) *Gremeniella abietina* (Karlman, M.; 4 ref.), (v) forest water relations (Lindroth, A.), (vi) relation between foliage density and increment for spruce in S. Sweden (Eriksson, H.; 5 ref.), and (vii) soil acidification (Nilsson, S. I.; 23 ref.). The last section contains 2 papers on (i) whether liming can compensate for soil acidification (Persson, T.; 14 ref.), and (ii) a computer model (biological, chemical and hydrological processes) of the long-term consequences of acid precipitation on forest health (Paustian, K.; 17 ref.).

DE - DESCRIPTORS: foliage-; leaves-; stand-development; insect-pests; fungal-diseases; plant-diseases; plant-pathogenic-fungi; plant-pathogens; air-pollution; acid-deposition; simulation-models; simulation-; forest-trees; density-; damage-; forest-pests; frost-; plant-water-relations; forests-; increment-; soil-acidity; soil-pH; lime-; pines-; forest-health

OD - ORGANISM DESCRIPTORS: *Gremeniella-abietina*; *Picea*-; *Pinus*-

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: insects; arthropods; invertebrates; animals; arthropod-pests; pests; fungi; plant-pathogens; pathogens; trees; woody-plants; Spermatophyta; plants; *Gremeniella*; Helotiales; Ascomycotina; Eumycota; Pinaceae; Pinopsida; gymnosperms; EFTA; Developed-Countries; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Conference-proceedings

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0282-7360

IB - INTERNATIONAL STANDARD BOOK NUMBER: 91-576-3865-9

Record 8 of 393 - TREECD 1973-2000/01

TI - TITLE: Pests on lodgepole pine (*Pinus contorta*) in Finland.

AU - AUTHOR(S): Annala-E; Heliövaara-K; Puukko-K; Rousi-M

AD - ADDRESS OF AUTHOR: Finnish For. Res. Inst., Unioninkatu 40A, 00170 Helsinki 17, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Communicationes-Institutii-Forestalis-Fenniae*. 1983, No. 115, 27pp.; 32 ref.

PY - PUBLICATION YEAR: 1983

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: Finnish

AB - ABSTRACT: In a survey carried out at 31 localities over 3 successive years, *Hylobius* spp., *Gremmeniella abietina* and *Phacidium infestans* were the main pests on seedlings, voles and moose on young trees, and *Neodiprion sertifer* on older trees.

DE - DESCRIPTORS: insect-pests; fungal-diseases; wildlife-; damage-; Forest-trees; Surveys-; trees-; conifers-; agricultural-entomology

OD - ORGANISM DESCRIPTORS: *Pinus-contorta*; *Hylobius*-; *Neodiprion*-; *Gremmeniella-abietina*; *Phacidium-infestans*; *Neodiprion-sertifer*; *Voles*-; *Alces-alces*; *Alces*-; *Microtus*-; *Coleoptera*-; *Curculionidae*-; *Hymenoptera*-; *Diprionidae*-; arthropods-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: arthropod-pests; pests; animals; arthropods; invertebrates; insects; trees; woody-plants; *Spermatophyta*; plants; *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; *Curculionidae*; *Coleoptera*; *Diprionidae*; *Hymenoptera*; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; *Phacidium*; *Neodiprion*; *Microtinae*; *Muridae*; rodents; mammals; vertebrates; *Chordata*; *Alces*; *Cervidae*; ruminants; *Artiodactyla*; ungulates; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Miscellaneous

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0358-9609

IB - INTERNATIONAL STANDARD BOOK NUMBER: 951-40-0621-6

Record 9 of 393 - TREECD 1973-2000/01

TI - TITLE: Evaluation of promoting factors of Scleroderris [Gremmeniella abietina] canker, and the prediction of its damage on todo-fir (Abies sachalinensis Masters) in Hokkaido.

AU - AUTHOR(S): Asai-T

AD - ADDRESS OF AUTHOR: Hokkaido Forestry Research Institute, Bibai, Hokkaido 079-01, Japan.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Bulletin-of-the-Hokkaido-Forestry-Research-Institute. 1989, No. 27, 1-48; 77 ref.

PY - PUBLICATION YEAR: 1989

LA - LANGUAGE OF TEXT: Japanese

DE - DESCRIPTORS: Conifers-; Cankers-; distribution-; damage-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: Abies-sachalinensis; Gremmeniella-abietina; fungi-

GE - GEOGRAPHIC NAMES: Japan-; Hokkaido-

BT - BROADER DESCRIPTORS: fungi; Abies; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; Gremmeniella; Helotiales; Ascomycotina; Eumycota; East-Asia; Asia; Japan

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0910-3945

Record 10 of 393 - TREECD 1973-2000/01

TI - TITLE: Prediction method of the damage by *Scleroderris* [*Gremmeniella abietina*] canker on todo-fir in Hokkaido.

AU - AUTHOR(S): Asai-T

AD - ADDRESS OF AUTHOR: Hokkaido For. Exp. Sta., Bibai, Hokkaido 079-01, Japan.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Bulletin-of-the-Hokkaido-Forest-Experiment-Station. 1986, No. 24, 1-12; En captions and tables; 16 ref.

PY - PUBLICATION YEAR: 1986

LA - LANGUAGE OF TEXT: Japanese

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: Degree of damage, tree ht., and age and ht. at first damage were recorded in 1984 and 1985 in *Abies sachalinensis* stands planted in 1976 and 1977. Analysis showed that tree ht. at first damage was the most suitable variable for predicting future damage. The relation between tree ht. at first damage and the ratio of heavily damaged to total trees changed with time and distance from shelter trees. This was used to construct a transition model predicting changes in the degree of damage which fitted actual data well. A method is suggested for predicting the number of heavily damaged trees.

DE - DESCRIPTORS: Cankers-; damage-; simulation-; models-; Techniques-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Abies-sachalinensis*; *Gremmeniella-abietina*; fungi-

GE - GEOGRAPHIC NAMES: Japan-; Hokkaido-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Abies*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; East-Asia; Asia; Japan

PT - PUBLICATION TYPE: Journal-article

Record 11 of 393 - TREECD 1973-2000/01

TI - TITLE: Sclerodin and related compounds from a plant disease causing fungus. Scleroderris yellow.

AU - AUTHOR(S): Ayer-WA; Kamada-M; Ma-YT

AD - ADDRESS OF AUTHOR: Department of Chemistry, University of Alberta, Edmonton, Alta T6G 2G2, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Chemistry. 1989, 67: 12, 2089-2094; 12 ref.

PY - PUBLICATION YEAR: 1989

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The metabolites of *Sirococcus strobilinus* [*S. conigenus*] from conifers with *S.* blight were studied. The metabolites were similar to those isolated from *Gremmeniella abietina*, the causal organism of Scleroderris canker of pine. Sclerodin, scleroderolide, Scleroderris blue, lactone, tryptethelone, scleroquinone and Scleroderris yellow were isolated. Optical purity of the metabolites may be a function of the culture medium employed. Scleroderolide strongly inhibited the germination of lettuce seeds. Additional metabolites were isolated from the cultures.

DE - DESCRIPTORS: metabolites-; Lettuces-; germination-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: Pinopsida-; *Sirococcus-conigenus*; fungi-; *Lactuca-sativa*

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; gymnosperms; *Sirococcus*; Deuteromycotina; Eumycota; *Lactuca*; Asteraceae; Asterales; dicotyledons; angiosperms

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0008-4042

Record 12 of 393 - TREECD 1973-2000/01

TI - TITLE: Diffusion and damages caused by *Brunchorstia pinea* [*Gremmeniella abietina*] (Karst.) Hohn. on natural and artificial conifer populations in Italy.
AU - AUTHOR(S): Barbacovi-A; Capretti-P; Moriondo-F
SO - SOURCE (BIBLIOGRAPHIC CITATION): Translation, -Environment-Canada. 1979, No. OOENV TR-1863, 55pp.; Transl. from *Annali, Accademia Italiana di Scienze Forestali* (1979) 28, 123-161. Limited distribution; 75 ref.
PY - PUBLICATION YEAR: 1979
LA - LANGUAGE OF TEXT: English
DE - DESCRIPTORS: dieback-; conifers-; pines-
OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-cembra*; *Pinus-pinea*; *Pinus-nigra*; *Pinus-sylvestris*; *Pinus-*
GE - GEOGRAPHIC NAMES: Italy-
BT - BROADER DESCRIPTORS: *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; *fungi*; *Pinus*; *Pinaceae*; *Pinopsida*; *gymnosperms*; *Spermatophyta*; *plants*; *Southern-Europe*; *Europe*; *Mediterranean-Region*
PT - PUBLICATION TYPE: Miscellaneous

Record 13 of 393 - TREECD 1973-2000/01

TI - TITLE: Distribution and damage caused by *Brunchorstia pinea* in natural stands and plantations of conifers in Italy.

OT - ORIGINAL NON-ENGLISH TITLE: Diffusione e danni di *Brunchorstia pinea* (Karst.) Hohn. su popolamenti naturali e artificiali di conifere in Italia.

AU - AUTHOR(S): Barbacovi-A; Capretti-P; Moriondo-F

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Annali,-Accademia-Italiana-di-Scienze-Forestali*. 1979, 28: 123-161; 75 ref.

PY - PUBLICATION YEAR: 1979

LA - LANGUAGE OF TEXT: Italian

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: Conifer dieback caused by *B. pinea* [*Gremmeniella abietina*] has been recorded sporadically in the central Alps in natural forests of *Pinus cembra* and *P. sylvestris*. It is endemic in the *P. pinea* plantations of the Paduan delta and along the Adriatic coast in Romagna, where there are frequent outbreaks following particularly cold winters and springs and heavy rainfall. In the northern Apennines the disease occurs particularly on *P. nigra* in wet, shaded sites and in dense plantations. The disease causes damage where pines are planted on unsuitable sites, particularly with regard to light and min. temp. requirements. Susceptibility of shoots to *G. abietina* is increased in dense plantations and where southern species such as *P. pinea* are planted in areas with cold winters. Only the conidial stage of the disease occurs in Italy.

DE - DESCRIPTORS: dieback-; conifers-; pines-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-cembra*; *Pinus-pinea*; *Pinus-nigra*; *Pinus-sylvestris*; *Pinus-*

GE - GEOGRAPHIC NAMES: Italy-

BT - BROADER DESCRIPTORS: *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; *fungi*; *Pinus*; *Pinaceae*; *Pinopsida*; *gymnosperms*; *Spermatophyta*; *plants*; *Southern-Europe*; *Europe*; *Mediterranean-Region*

PT - PUBLICATION TYPE: Journal-article

Record 14 of 393 - TREECD 1973-2000/01

TI - TITLE: Occurrence of and interaction between *Gremmeniella abietina* and endophytic fungi in two conifers.

AU - AUTHOR(S): Barklund-P

AD - ADDRESS OF AUTHOR: Department of Forest Mycology and Pathology, Swedish University of Agricultural Sciences, Uppsala, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1989, 61 + 69 pp.; 9 pp. of ref.

PB - PUBLISHER INFORMATION: Swedish University of Agricultural Sciences, Uppsala

PY - PUBLICATION YEAR: 1989

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The literature is reviewed regarding *Gremmeniella abietina*, its taxonomy, distribution, biology and how environmental conditions influence its development. Three types of disease caused by *G. abietina* have been distinguished in Sweden, viz. (1) seedling mortality in nurseries and plantations, (2) perennial cankers, and (3) shoot dieback. A summary and discussion of original studies of *G. abietina* infection in *Pinus sylvestris* and *Picea abies*, and of interactions with endophytic fungi in S. Sweden, is included. Conidia of *G. abietina* infected and caused disease symptoms in annual shoots of *Pinus sylvestris* and *Picea abies*. In shoots of *P. abies*, the infection remained largely latent, with only a few seedlings showing symptoms. Symptoms were usually expressed during the first growing season after establishment of the infection, but longer latent periods were common. Both tree species also contained an endophytic microflora in their tissues. This was more prevalent in *P. abies* and so studies were focused on the endophytic flora of this species. Most of these endophytes were tissue specific. *Lophodermium piceae* was the predominant endophyte in the needle laminae; it did not appear to be pathogenic. Branch tips of *P. abies* contained an endophytic flora within the phellem, phloem and xylem. These species were split into two groups: the bark fungi (mostly inhabiting the older phloem) and the apical endophytes (found mainly in the tissues of the youngest internodes). As a latent pathogen, *G. abietina* showed the characteristics of an apical endophyte. *L. piceae* and the apical endophytes were uncommon in a stand severely infested with *G. abietina*. Acid mist treatments reduced the microflora: this promoted *G. abietina* conidia germination and initial spread of mycelium. The natural endophytic fungi appeared to offer some protection in *Picea abies*, but in *Pinus sylvestris* no such protection was apparent. Intact, endophyte-free seedlings exhibited an active defence against the pathogen. The full texts of five papers authored or co-authored by P. Barklund are also given.

DE - DESCRIPTORS: Conifers-; Fungal-diseases; biology-; resistance-; diseases-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; Fungi-; *Picea-abies*; *Pinus-sylvestris*; *Gremmeniella*-

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Picea*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Pinus*; Scandinavia; Northern-Europe; Europe; *Lophodermium*; Rhytismatales

PT - PUBLICATION TYPE: Thesis

IB - INTERNATIONAL STANDARD BOOK NUMBER: 91-576-3706-7

Record 15 of 393 - TREECD 1973-2000/01

TI - TITLE: Shoot diseases of conifers: proceedings of an International Symposium Garpenberg, Sweden, 10-15 June 1991.

AU - AUTHOR(S): Barklund-P (ed.); Livsey-S (ed.); Karlman-M (ed.); Stephan-R

AD - ADDRESS OF AUTHOR: Department of Forest Mycology and Pathology, Swedish University of Agricultural Sciences, Box 7026, 75007 Uppsala, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1993, 175 pp.; many ref.

PB - PUBLISHER INFORMATION: Department of Forest Mycology and Pathology, Swedish University of Agricultural Sciences; Uppsala; Sweden

PY - PUBLICATION YEAR: 1993

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: This publication contains 26 papers presented at this meeting of IUFRO Working Party S2.06.02 (Canker and shoot blight of conifers). Most of the papers deal with the biology, distribution and control of *Gremmeniella abietina* on pine (*Pinus* spp.), spruce (*Picea* spp.), fir (*Abies* spp.) and larch (*Larix* spp.) in Europe and North America. Other papers deal with *Lachnellula pini* on Scots pine (*Pinus sylvestris*), twig dieback on Scots pine caused by *Cenangium ferruginosum*, blights on shoots of conifers in Bulgaria, *Encoeliopsis laricina* on larch in Japan, and a review of *Tryblidiopsis pinastri*.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; plant-diseases; fungal-diseases; diseases-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Lachnellula*-; *Helotiales*-; *Rhytismatales*-; *Gremmeniella-abietina*; *pinopsida*-; *Pinus-sylvestris*; *Picea*-; *Abies*-; *Larix*-; fungi-

GE - GEOGRAPHIC NAMES: Europe-; North-America; Japan-

BT - BROADER DESCRIPTORS: *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; *Gremmeniella*; gymnosperms; *Spermatophyta*; plants; *Pinus*; *Pinaceae*; *Pinopsida*; America; East-Asia; Asia; Developed-Countries; OECD-Countries

PT - PUBLICATION TYPE: Conference-proceedings

IB - INTERNATIONAL STANDARD BOOK NUMBER: 91-576-4730-5

Record 16 of 393 - TREECD 1973-2000/01

TI - TITLE: Sub-top dying, a disorder of *Picea abies* of the dieback type.

OT - ORIGINAL NON-ENGLISH TITLE: 'Sub top dying' - en skada pa gran av 'dieback'-typ.

AU - AUTHOR(S): Barklund-P; Beyer-Ericson-L; Hyppel-A; Johansson-M; Lindeberg-G; Wasterlund-I

AD - ADDRESS OF AUTHOR: Skoghogskolan, Stockholm, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Skogen. 1977, 64: 14, 606-608; 3 pl.

PY - PUBLICATION YEAR: 1977

LA - LANGUAGE OF TEXT: Swedish

AB - ABSTRACT: This disease has been observed recently in S. Swedish spruce stands and differs from the dieback caused by *Scleroderris lagerbergii* [*Gremmeniella abietina*]. The symptoms are briefly described and illustrated. It is found in young and old stands; the affected shoots are usually a few metres below the top of the crown, but in severe cases the whole crown, and hence the tree, dies. Though the disorder is probably associated with water stress, it is not a typical disease of shallow sites, and the injured trees are scattered within the stand. Studies have shown a relation to size of root system and a poorer transpiration-regulating capacity in affected trees, but no differences in needle chemistry. *G. abietina* and *Sclerophoma pityophila* on green and diseased needles are thought to be secondary infections.

DE - DESCRIPTORS: foliage-; fungal-diseases; conifers-

OD - ORGANISM DESCRIPTORS: *Picea-abies*; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: *Picea*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0037-640X

Record 17 of 393 - TREECD 1973-2000/01

TI - TITLE: Endophytic fungi in Norway spruce - possible use in bioindication of vitality.

AU - AUTHOR(S): Barklund-P; Rowe-J

AD - ADDRESS OF AUTHOR: Dep. For. Mycol. & Path., SLU, S-75007 Uppsala, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): In Proceedings of the 12th international meeting for specialists in air pollution damages in forests, IUFRO section 2.09 'Air pollution'. Oulu, Finland, 23-30 August 1982. Aquilo,-Botanica. 1983, 19: 228-232; BLL; 3 ref.

PY - PUBLICATION YEAR: 1983

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: [See FA 42, 4487] During an outbreak of *Gremmeniella abietina* in Sweden in 1977-79, infection by an unidentified endophytic fungus was equal on healthy and diseased branches within each site but inversely related to the severity of dieback between sites. It is suggested that the endophyte reflects environmental stress; its occurrence showed inverse correlation with the extent of acid rain.

DE - DESCRIPTORS: IUFRO-; Acid-rain; damage-; Indicator-plants; Dieback-; POLLUTION-; fungal-diseases; conifers-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Picea*-; *Picea-abies*; plants-

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; *Picea*; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Conference-paper; Journal-article

Record 18 of 393 - TREECD 1973-2000/01

TI - TITLE: *Gremmeniella abietina* (*Scleroderris lagerbergii*), a primary parasite in a Norway spruce die-back.

AU - AUTHOR(S): Barklund-P; Rowe-J

AD - ADDRESS OF AUTHOR: Swedish Univ. Agric. Sci., Uppsala, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1981, 11: 1-2, 97-108; 7 fig. (3 col.), 4 tab.; 26 ref.

PY - PUBLICATION YEAR: 1981

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: *G. abietina* caused a serious dieback in S. Sweden in 1977. Damaged trees became infected in 1976 on the current season's shoots, and a combination of genetic and climatic factors in the preceding year may have contributed to disease spread. In most plantations few trees were killed but growth was checked. The pathogen spread from damaged internodes readily into younger tissue by way of the bark and less readily into older tissue via the cortex and stele; cankering prevented further spread. There was no apparent new infection in the 3 seasons following the epidemic. However, in 1979 abundant latent infection remained in adventitious shoots and buds on damaged trees, indicating a high disease potential.

DE - DESCRIPTORS: MEDROXYPROGESTERONE-; spread-; fungal-diseases; symptoms-; dieback-; forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Picea-abies*; PICEA-

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Picea*; Pinaceae; Pinopsida; gymnosperms; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 19 of 393 - TREECD 1973-2000/01

TI - TITLE: Infection experiments with *Gremmeniella abietina* on seedlings of Norway spruce and Scots pine.

AU - AUTHOR(S): Barklund-P; Unestam-T

AD - ADDRESS OF AUTHOR: Dep. For. Mycol. Path., Swedish Univ. Agric. Sci., 750 07 Uppsala, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1988, 18: 7, 409-420; 28 ref.

PY - PUBLICATION YEAR: 1988

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: Results of infection experiments performed in controlled climate chambers showed that conidia of *G. abietina* infected current annual shoots of Scots pine [*Pinus sylvestris*] and *Picea abies* seedlings. Fully elongated shoots with buds were more frequently infected than younger shoots. In *P. abies* shoots the infection remained largely latent, with only a few seedlings showing symptoms; symptom frequency was higher in pine. Mycelial growth inside the shoots was faster in pine than in *P. abies* and was favoured by low temp. (0-5°C, as opposed to 20°C) in both hosts. *P. abies* shoots had higher endophyte populations than pine shoots, and the populations in each host were reduced by low temp. Reductions in the normal epiphytic and endophytic flora by acid mist treatments favoured the development of *G. abietina*, whereas the presence of endophytes suppressed colonization by the pathogen.

DE - DESCRIPTORS: Pines-; infection-; Conifers-; Seedlings-; diseases-; fungal-diseases; forest-trees; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Picea-abies*; *Pinus-sylvestris*; fungi-; *Pinus*-

BT - BROADER DESCRIPTORS: Spermatophyta; plants; trees; woody-plants; fungi; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; *Picea*; Pinaceae; Pinopsida; gymnosperms; *Pinus*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 20 of 393 - TREECD 1973-2000/01

TI - TITLE: Long-term conservation of living fungal pathogens.

AU - AUTHOR(S): Bazzigher-G; Kanzler-E

AD - ADDRESS OF AUTHOR: Eidgenossische Anstalt fur das forstliche Versuchswesen, Birmensdorf, Switzerland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1985, 15: 1, 58-61; 1 fig.; 4 ref.

PY - PUBLICATION YEAR: 1985

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: Three simplified freeze drying methods proving particularly successful for conservation are described: freeze drying of mature agar cultures and vacuum drying on mesh strips for species readily and not readily forming spores. Tests revealed no loss of vitality after up to 25 yr storage: details are given for *Endothia* [*Cryphonectria*] *parasitica*, *Fomes annosus* [*Heterobasidion annosum*], *Ceratocystis ulmi*, *Phacidium infestans*, *Herpotrichia* spp. and *Ascocalyx* spp. Determination and extrapolation of max. lethal temp. curves allowed the storage lives of lyophilized fungi to be estimated.

DE - DESCRIPTORS: Techniques-; preservation-; plant-pathology

OD - ORGANISM DESCRIPTORS: fungi-; *Cryphonectria-parasitica*; *Heterobasidion-annosum*; *Ceratocystis-ulmi*; *Phacidium-infestans*; *Ascocalyx-*

BT - BROADER DESCRIPTORS: *Cryphonectria*; *Diaporthales*; *Ascomycotina*; *Eumycota*; *fungi*; *Heterobasidion*; *Aphyllophorales*; *Basidiomycotina*; *Ceratocystis*; *Ophiostomatales*; *Phacidium*; *Helotiales*; *Dothideales*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 21 of 393 - TREECD 1973-2000/01

TI - TITLE: Infection experiments with *Ascocalyx abietina* and *Ascocalyx laricina*.

OT - ORIGINAL NON-ENGLISH TITLE: Infektionsversuche mit *Ascocalyx abietina* und *Ascocalyx laricina*.

AU - AUTHOR(S): Bazzigher-G; Kanzler-E; Lawrenz-P

AD - ADDRESS OF AUTHOR: Eidgenossische Anstalt Forstliche Versuchswesen, Birmensdorf, Switzerland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1986, 16: 7, 433-439; 7 ref.

PY - PUBLICATION YEAR: 1986

LA - LANGUAGE OF TEXT: German

LS - LANGUAGE OF SUMMARIES: English, French

AB - ABSTRACT: Infection experiments on *Pinus cembra*, *P. montana* and larch in 1979-85 in Switzerland gave results varying greatly between years. Successful infection of the pines by *A. [Gremmeniella] abietina* took place only after incubation on favourable sites in the subalpine zone (1900 m above sea level), indicating that disease intensity may depend on site and microclimate. *A. [Mycosphaerella] laricina*, however caused disease on larch after incubation both at 1900 m and 545 m. Infection by both fungi was successful particularly in autumn. The spread of *G. abietina* in a *P. cembra* stand at 1900 m was followed from 1974 to 1984. The annual infection rate was 10-15%; this caused 50% mortality after 5 yr and 92% after 10 yr.

DE - DESCRIPTORS: Pines-; infection-; environmental-factors; Larch-; fungal-diseases; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-cembra*; *Larix*-; fungi-; *Pinus*-

GE - GEOGRAPHIC NAMES: Switzerland-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Western-Europe; Europe; *Mycosphaerella*; Dothideales

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 22 of 393 - TREECD 1973-2000/01

TI - TITLE: Managing scleroderris: the perspective of pest specialists and economists.

AU - AUTHOR(S): Beke-J; Fox-G; McKenney-D; Hopkin-AA

AD - ADDRESS OF AUTHOR: Canadian Forest Service-Sault Saint Marie, ON P6A 5M7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): NODA-Notes. 1996, No. 16, 7 pp.; 9 ref.

PB - PUBLISHER INFORMATION: Great Lakes Forestry Centre, Canadian Forest Service; Sault Ste. Marie, Ontario; Canada

PY - PUBLICATION YEAR: 1996

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: A cost-benefit analysis of scleroderris canker (*Gremmeniella abietina*) infections of red pine (*Pinus resinosa*) was developed over a single rotation in order to identify the threshold conditions under which disease control is worthwhile in Ontario. Two threshold definitions are considered: (1) a fixed treatment threshold, which considers control efforts to be fixed and pest incidence to vary - this approach, developed by pest specialists, helps to identify the level of pest incidence where benefits of control exceed costs; and (2) an optimum treatment threshold, the approach of economists which treats pest incidence as fixed and varies the control treatments (i.e. costs). Applying these concepts to forestry is complicated by the long production periods. To apply the economic framework to scleroderris, 5 functions model the relations among pest occurrence, damage, control measures, wood yields and net present value of the stand.

DE - DESCRIPTORS: plant-diseases; plant-pathogenic-fungi; plant-pathogens; forest-trees; disease-control; cost-benefit-analysis; models-; fungal-diseases; plant-pathology

OD - ORGANISM DESCRIPTORS: *Pinus-resinosa*; *Gremmeniella-abietina*; fungi-

GE - GEOGRAPHIC NAMES: Canada-; Ontario-

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms;

Spermatophyta; plants; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi;

OECD-Countries; Commonwealth-of-Nations; Developed-Countries; North-America;

America; Canada

PT - PUBLICATION TYPE: Miscellaneous

IB - INTERNATIONAL STANDARD BOOK NUMBER: 0-662-23953-9

Record 23 of 393 - TREECD 1973-2000/01

TI - TITLE: Ultrastructural study of galacturonic acid distribution in some pathogenic fungi using gold-complexed *Aplysia depilans* gonad lectin.

AU - AUTHOR(S): Benhamou-N

AD - ADDRESS OF AUTHOR: Departement phytologie, Fac. sci. de l'agriculture & de l'alimentation, Univ. Laval, Sainte-Foy (Quebec), G1K 7P4, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Microbiology. 1989, 35: 3, 349-358; 30 ref.

PY - PUBLICATION YEAR: 1989

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Gonad lectin, isolated from the mollusc *A. depilans*, was successfully conjugated to colloidal gold and used for ultrastructural detection of galacturonic acids in some pathogenic fungi. These sugar residues were found to occur in the fibrillar sheath surrounding hyphal cells of *Ascocalyx* [*Gremmeniella*] *abietina* and in intravacuolar dense inclusions of the spores. In hyphae and spores of *Ophiostoma* [*Ceratocystis*] *ulmi*, galacturonic acids were detected mainly in the outermost wall layers. In contrast, these saccharides appeared associated with the innermost wall layers and especially the plasma membrane of *Verticillium albo-atrum* cells. Galacturonic acids were found to be absent in cells of *Fusarium oxysporum* f.sp. *radicis-lycopersici* and *Candida albicans*. It is concluded that a heterogeneity in wall composition exists between ascomycete fungi.

DE - DESCRIPTORS: biochemistry-; cell-walls; galacturonic-acid; Electron-microscopy; plant-pathology

OD - ORGANISM DESCRIPTORS: *Candida-albicans*; *Gremmeniella-abietina*; *Ceratocystis-ulmi*; *Verticillium-albo-atrum*

BT - BROADER DESCRIPTORS: *Candida*; Deuteromycotina; Eumycota; fungi; *Gremmeniella*; Helotiales; Ascomycotina; *Ceratocystis*; Ophiostomatales; *Verticillium*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0008-4166

Record 24 of 393 - TREECD 1973-2000/01

TI - TITLE: Ultrastructural characterization of an extracellular fibrillar sheath on cells of *Ascochyta blight*, the sclerotinia canker agent of conifers.

AU - AUTHOR(S): Benhamou-N; Ouellette-GB

AD - ADDRESS OF AUTHOR: Dep. Phytol., Fac. Sci. Agric. Alimentation, Univ. Laval, Sainte-Foy, Que. G1K 7P4, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Botany. 1987, 65: 1, 154-167; 27 ref.

PY - PUBLICATION YEAR: 1987

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Morphology, ultrastructure and some aspects of the chemical composition of a fibrillar sheath surrounding cells of *A. [Gremmeniella] abietina* were studied using electron microscopy and gold-labelled ligands. Although consistently present around all cells, the fibrillar matrix was found to vary greatly in morphology within the same isolate, depending apparently on age and (or) physiological conditions of the cells. Around cells considered younger, the sheath appeared always to be constituted of fibrillar masses that varied in size and shape but were delineated by a well-defined border. In contrast, cells expected to be older were generally bordered by a regular and uniform matrix composed of numerous intertwined fine fibrils, some being associated with small osmiophilic knobs. The presence of RNA in the denser layers of the sheath was revealed through gold complexes with either RNase A or RNase B. Continuity of portions of the sheath with similar material surrounding endocells or intact cells through gaps in the wall was frequently observed. This observation was considered as one of the possible explanations for the presence of RNA in the sheath. Association of sugars such as beta-glucopyranosides and especially sialic acid with the extracellular matrix is, most probably, relevant to specific biological functions such as attachment to host cells, protection against unfavourable physical conditions and transport of cationic compounds. Peculiarities of this sheath produced by *G. abietina* contribute to distinguish it from those described in other fungi.

DE - DESCRIPTORS: ultrastructure-; morphology-; Electron-microscopy; forest-trees; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; Pinopsida-; fungi-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; gymnosperms; Spermatophyta; plants

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0008-4026

Record 25 of 393 - TREECD 1973-2000/01

TI - TITLE: Ultrastructural study and cytochemical investigation, by means of enzyme-gold complexes, of the fungus *Ascocalyx abietina*.

AU - AUTHOR(S): Benhamou-N; Ouellette-GB

AD - ADDRESS OF AUTHOR: Dep. Phytol., Fac. Sci. Agric. Alimentation, Univ. Laval, Sainte-Foy, Que. G1K 7P4, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Canadian-Journal-of-Botany*. 1987, 65: 1, 168-181; 42 ref.

PY - PUBLICATION YEAR: 1987

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: *A. [Gremmeniella] abietina*, causing canker of conifers, is composed of a regularly septate mycelium, often branched at divergent angles. All fungus cells appeared to be delimited by a thick wall surrounded by a dense fibrillar network. Peculiar ultrastructural characteristics of this fungus were observed, such as irregular nuclei with multishaped blebs and endoplasmic reticulum oriented in definite parallel arrays. Presence of single or multiple endocells was frequently observed. In some instances, gaps were present in the walls of enclosing cells where the cytoplasmic contents had escaped. Amylase, chitinase, beta-galactosidase, lipase and cellulase-gold complexes were used to localize various substances in *G. abietina* cells. With such complexes N-acetyl-D-glucosamine, beta-galactosides and lipids were detected in the cell walls, while glycogen deposits were found to occur in cytoplasmic electron-transparent bodies.

DE - DESCRIPTORS: ultrastructure-; cytology-; Electron-microscopy; forest-trees; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; Pinopsida-; fungi-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; gymnosperms; Spermatophyta; plants

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0008-4026

Record 26 of 393 - TREECD 1973-2000/01

TI - TITLE: Ultrastructural localization of glycoconjugates in the fungus, *Ascocalyx abietina*, the Scleroderris canker agent of conifers, using lectin-gold complexes.

AU - AUTHOR(S): Benhamou-N; Ouellette-GB

AD - ADDRESS OF AUTHOR: Dep. Phytol., Fac. Sci. Agric. Alimentation, Univ. Laval, Sainte-Foy, Que. G1K 7P4, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Journal-of-Histochemistry-and-Cytochemistry*. 1986, 34: 7, 855-868.

PY - PUBLICATION YEAR: 1986

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Different glycoconjugates were revealed in *Ascocalyx [Gremmeniella] abietina* by using various lectin-gold complexes. N-acetylglucosamine, N-acetylgalactosamine, and D-mannose were specifically localized in cell walls of fungal cells, N-acetylneuraminic acid (sialic acid) and L-fucose were detected in structures corresponding to lipid bodies, whereas they were absent from the cell wall. This is the first report on the occurrence of sialic acid in fungi and of fucose in Ascomycetes. The great advantage of using lectin-gold complexes for ultrastructural localization of sugars in phytopathogenic fungi, as well as in studies concerning host-pathogen interactions, is discussed.

DE - DESCRIPTORS: biochemistry-; Cankers-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: Pinopsida-; *Gremmeniella-abietina*; fungi-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0022-1554

Record 27 of 393 - TREECD 1973-2000/01

TI - TITLE: Immunocytochemical localization of antigen-binding sites in the cell surface of two ascomycete fungi using antibodies produced against fimbriae from *Ustilago violacea* and *Rhodotorula rubra*.

AU - AUTHOR(S): Benhamou-N; Ouellette-GB; Gardiner-RB; Day-AW

AD - ADDRESS OF AUTHOR: Dep. Phytol., Fac. Sci. Agric. Aliment., Univ. Laval, Sainte-Foy, Que. G1K 7P4, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Microbiology. 1986, 32: 11, 871-883; 28 ref.

PY - PUBLICATION YEAR: 1986

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Cross-reactivity between antisera produced against fimbriae from either of these fungi and cell surface proteins of *Ascocalyx abietina* and *Ceratocystis ulmi* was revealed by means of dot-immunobinding and immunocytochemical methods. Following-treatment with antiserum AR (*R. rubra*), the walls, septa and plasma membrane of *A. abietina* and *C. ulmi* cells (the latter either in culture or grown in elm wood sections) were appreciably labelled by gold particles, but the labelling intensity was always greater over the plasma membrane. The fibrillar sheath surrounding cells of *A. abietina* reacted with antiserum AU (*U. violacea*) while all other structures did not. No significant labelling with this antiserum occurred over cells of *C. ulmi*, indicating that they either lacked the antigens or that these were more easily removed during the fixation process. Possible explanations for the differences obtained with antisera AR and AU are discussed along with an overview of the potential use of these antisera in conjunction with the protein A-gold method in studies of host-parasite relationships.

DE - DESCRIPTORS: serology-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Ceratocystis-ulmi*; *Gremmeniella-abietina*

BT - BROADER DESCRIPTORS: *Ceratocystis*; *Ophiostomatales*; *Ascomycotina*; *Eumycota*; fungi; *Gremmeniella*; *Helotiales*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0008-4166

Record 28 of 393 - TREECD 1973-2000/01

TI - TITLE: Use of monoclonal antibody against poly [I] : poly [C] for detecting mycoviruses and potential applications to potato spindle tuber viroid and animal reoviruses.

AU - AUTHOR(S): Benhamou-N; Parent-JG; Garzon-S; Asselin-A; Ouellette-GB; Joly-JR

AD - ADDRESS OF AUTHOR: Dep. Phytol., Fac. Sci. Agric. Alimentation, Univ. Laval, Sainte-Foy, Que. G1K 7P4, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Plant-Pathology. 1987, 9: 2, 106-114; 31 ref.

PY - PUBLICATION YEAR: 1987

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Seven hybridoma cell lines, produced by fusing myeloma cells and splenocytes from BALB/c mice immunized with poly [I] : poly [C] complexed to methylated bovine serum albumin (MBSA), were selected for anti- dsRNA monoclonal antibodies (MAbs) by ELISA. Two cell lines 24-4D4 and 24-3A8, reacted positively with synthetic poly[I] : poly[C] and poly[A] : poly[U], whereas no reaction was observed with synthetic or naturally occurring ssRNA, and DNA. Sensitivity of 24-3A8 Mab was assessed by detecting amounts as low as 5-20 ng of PSTV in infected potato leaf extract. In a screening program to detect mycoviruses by dot-immunobinding, 64% of the 100 Ascocalyx [Gremmeniella] abietina Coniferae isolates tested were found positive for dsRNA. The presence of mycoviruses did not appear to be related to race classification. The nonaggressive Q412 str. of the elm pathogen Ophiostoma [Ceratozystis] ulmi was positive for dsRNA, whereas no reaction was noted with the aggressive 695 str. Ultrastructural investigations of fungal material revealed a very low degree of virus infection. The potential applicability of 24-3A8 Mab to recognize ultrastructurally dsRNA was tested by an immunogold procedure on reovirus-infected avian cells. No gold labelling was noted with ssRNA virus-infected animals cells. The absence of labelling of the dsRNA reovirus involved in the cytoplasmic polyhedrosis of insects suggested the importance of the conformational structure for antigenicity.

DE - DESCRIPTORS: Techniques-; detection-; potatoes-; monoclonal-antibodies; forest-trees; plant-pathology

OD - ORGANISM DESCRIPTORS: Gremmeniella-abietina; Ulmus-; Ceratozystis-ulmi; potato-spindle-tuber-viroid; plant-viruses; Solanum-tuberosum; Pinopsida-

BT - BROADER DESCRIPTORS: Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi; Ulmaceae; Urticales; dicotyledons; angiosperms; Spermatophyta; plants; Ceratozystis; Ophiostomatales; viroids; viruses; Solanum; Solanaceae; Solanales; gymnosperms

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0706-0661

Record 29 of 393 - TREECD 1973-2000/01

TI - TITLE: *Gremmeniella abietina* on red pine in New Hampshire.
AU - AUTHOR(S): Bergdahl-DR; Dyrkacz-T; Gotlieb-A
AD - ADDRESS OF AUTHOR: Dep. For., Univ. Vermont, Burlington, VT, USA.
SO - SOURCE (BIBLIOGRAPHIC CITATION): *Plant-Disease-Reporter*. 1979, 63: 12, 995-996; 9 ref.
PY - PUBLICATION YEAR: 1979
LA - LANGUAGE OF TEXT: English
AB - ABSTRACT: The first report of *G. abietina* in this State, where it was found causing lower branch mortality in 15-yr-old trees in a small isolated plantation in Coos County. Morphological and serological investigations of isolates showed that the fungus belonged to the European strain, rather than to the North American or Asian strains.
ADDITIONAL ABSTRACT: This report extends the known distribution of *G. abietina* [OCMI Map 423] and its European race to include NH.
DE - DESCRIPTORS: fungal-diseases; forest-trees; conifers-; plant-pathology; pines-
OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-resinosa*; *Pinus*-
GE - GEOGRAPHIC NAMES: New-Hampshire; USA-
BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; New-England-States-of-USA; Northeastern-States-of-USA; USA; North-America; America
PT - PUBLICATION TYPE: Journal-article

Record 30 of 393 - TREECD 1973-2000/01

TI - TITLE: A twenty-five year history of scleroderris canker [*Gremmeniella abietina*] in Vermont, USA (1971-1996).

AU - AUTHOR(S): Bergdahl-DR; Kelley-R; Teillon-HB; Laflamme-G et-al

AD - ADDRESS OF AUTHOR: Department of Forestry, University of Vermont, Burlington, VT 05405, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Foliage, shoot and stem diseases.

Proceedings of the IUFRO WP 7.02.02 meeting, Quebec City, May 25-31, 1997.

Information-Report -Laurentian-Forestry-Centre,-Quebec-Region,-Canadian-Forest-Service. 1998, No. LAU-X-122, 168-174; 21 ref.

PB - PUBLISHER INFORMATION: Laurentian Forestry Centre, Canadian Forest Service; Sainte-Foy; Canada

PY - PUBLICATION YEAR: 1998

LA - LANGUAGE OF TEXT: English

DE - DESCRIPTORS: IUFRO-; fungal-diseases; plant-pathogenic-fungi; plant-pathogens; plant-diseases; forest-trees; cankers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus*-; *Pinopsida*-; fungi-

GE - GEOGRAPHIC NAMES: USA-; Vermont-

BT - BROADER DESCRIPTORS: *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; Developed-Countries; North-America; America; OECD-Countries; New-England-States-of-USA; Northeastern-States-of-USA; USA

PT - PUBLICATION TYPE: Conference-paper; Journal-article

Record 31 of 393 - TREECD 1973-2000/01

TI - TITLE: Use of nucleic acid and isoenzyme polymorphisms for taxonomic and population studies of *Gremmeniella* spp.

AU - AUTHOR(S): Bernier-L; Hamelin-RC; Lecours-N; Ouellette-GB; Capretti-P et-al

AD - ADDRESS OF AUTHOR: Centre de Recherche en Biologie Forestiere, Universite Laval, Que. G1K 7P4, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Shoot and foliage diseases in forest trees. Proceedings of a Joint Meeting of the IUFRO Working Parties S2.06.02 and S2.06.04, Vallombrosa, Firenze, Italy 6-11 June 1994. 1995, 198-203; 18 ref.

PB - PUBLISHER INFORMATION: Istituto di Patologia e Zoologia Forestale e Agraria, Universita degli Studi di Firenze; Firenze; Italy

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Scleroderris canker is a serious pathogen of conifers in Europe, North America and Japan, caused by species and varieties of *Gremmeniella* (Ascomycotina). Intra- and interspecific variability were examined for a worldwide collection of isolates previously characterized by morphological, serological and electrophoretic methods. Ribosomal DNA (rDNA) gene polymorphisms and random amplified polymorphic DNAs (RAPDs) were detected following PCR amplification. Polymorphisms were also detected in eight isoenzyme systems after electrophoresis on starch, polyacrylamide and cellulose acetate gels. Phylogenetic analysis of length polymorphisms and restriction sites in the small subunit and internal transcribed spacer of PCR-amplified rDNA genes suggested the occurrence of seven distinct groups within *Gremmeniella*. They are: (1) *G. abietina* var. *abietina* (Gaa), North American; (2) Gaa, European race; (3) Gaa, Asian race; (4) *G. laricina* (Gl) from North America; (5) (Gl) from Europe; (6) *G. abietina* var. *balsamea* (Gab) from *Abies balsamea*; and (7) Gab from *Picea* spp. RAPD analysis of the North American and European races of *G. abietina* allowed unequivocal classification of all specimens tested, confirmed the presence of both races in North America and the European race in Europe and the absence of inter-racial hybrids among the specimens, and substantiated the hypothesis of a recent introduction of the European race into North America. Results from isoenzyme and rDNA analysis were generally consistent, with the exception that the European and North American isolates of *G. laricina* had similar isoenzyme patterns. Analysis of rDNA and isoenzyme polymorphisms also showed that *Gremmeniella* isolates were more related to each other than to *Ascochyta abietina*, a species which some authors consider to be closely related.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; genetic-variation; random-amplified-polymorphic-dna; isoenzymes; fungal-diseases; plant-diseases; taxonomy; characteristics; races; molecular-genetics; genetic-analysis; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Picea*; *Abies-balsamea*; *Gremmeniella*; pinopsida; fungi-

GE - GEOGRAPHIC NAMES: North-America; Europe; Asia; Japan-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Abies*; America; East-Asia; Asia; Developed-Countries; OECD-Countries

PT - PUBLICATION TYPE: Conference-paper

IB - INTERNATIONAL STANDARD BOOK NUMBER: 88-900074-0-0

Record 32 of 393 - TREECD 1973-2000/01

TI - TITLE: Comparison of ribosomal DNA length and restriction site polymorphisms in *Gremmeniella* and *Ascocalyx* isolates.

AU - AUTHOR(S): Bernier-L; Hamelin-RC; Ouellette-GB

AD - ADDRESS OF AUTHOR: Centre de Recherche en Biologie Forestiere, Faculte de Forestiere et de Geomatique, Universite Laval, Cite Universitaire, Quebec Canada G1K 7P4, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Applied-and-Environmental-Microbiology. 1994, 60: 4, 1279-1286; 40 ref.

PY - PUBLICATION YEAR: 1994

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The small subunit (SSU) and the internal transcribed spacer (ITS) of nuclear ribosomal DNA genes from 27 specimens of the fungal genera *Gremmeniella* and *Ascocalyx* were amplified by PCR. Length polymorphisms were observed in the SSU and allowed the differentiation of 4 groups among the isolates tested: *Ascocalyx abietis*; *Gremmeniella* isolates from *Picea* spp.; *Gremmeniella* isolates from *Abies balsamea*; and *Gremmeniella* isolates from *Abies sacchalinesis*, *Larix* spp. and *Pinus* spp. The amplified ITS was the same length for all *Gremmeniella* specimens and was 60 bp longer in *A. abietis*. Phylogenetic analysis of length polymorphisms and of 24 restriction sites in the SSU and ITS showed that *Gremmeniella* isolates were more related to each other than to the *Ascocalyx* isolate. Furthermore, 7 groups were evident within the genus *Gremmeniella*. The results confirmed that *Gremmeniella* and *Ascocalyx* should be kept as different taxa and suggest that the taxonomy of the former could be revised to consider isolates from *Abies balsamea* and from *Picea* spp. to be 2 different varieties while incorporating *Gremmeniella laricina* into *G. abietina*, as a new variety.

DE - DESCRIPTORS: forest-trees; plant-diseases; plant-pathogens; plant-pathogenic-fungi; phylogeny-; molecular-genetics; restriction-fragment-length-polymorphism; ribosomal-DNA; polymerase-chain-reaction; taxonomy-; fungal-diseases; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Gremmeniella*-; *Ascocalyx*-; *Abies-balsamea*; *Picea*-; *Larix*-; *Pinus*-; *Abies*-; pinopsida-; fungi-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Abies*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0099-2240

Record 33 of 393 - TREECD 1973-2000/01

TI - TITLE: New outbreak of scleroderris canker [*Gremmeniella abietina*] in Newfoundland (Poster).

AU - AUTHOR(S): Berube-JA; Carew-GC; Laflamme-G; Hudak-J; Laflamme-G et-al

AD - ADDRESS OF AUTHOR: Canadian Forest Service, Atlantic Forestry Centre, PO Box 6028, St. John's, NF A1C 5X8, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Foliage, shoot and stem diseases.

Proceedings of the IUFRO WP 7.02.02 meeting, Quebec City, May 25-31, 1997.

Information-Report -Laurentian-Forestry-Centre,-Quebec-Region,-Canadian-Forest-Service. 1998, No. LAU-X-122, 214-216; 4 ref.

PB - PUBLISHER INFORMATION: Laurentian Forestry Centre, Canadian Forest Service; Sainte-Foy; Canada

PY - PUBLICATION YEAR: 1998

LA - LANGUAGE OF TEXT: English

DE - DESCRIPTORS: IUFRO-; fungal-diseases; plant-pathogenic-fungi; plant-pathogens; plant-diseases; forest-trees; cankers-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Canada-; Newfoundland-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; OECD-Countries; Commonwealth-of-Nations; Developed-Countries; North-America; America; Canada

PT - PUBLICATION TYPE: Conference-paper; Journal-article

Record 34 of 393 - TREECD 1973-2000/01

TI - TITLE: Cross infectivity of scleroderris canker on native and exotic conifers in Newfoundland.

AU - AUTHOR(S): Berube-JA; Carew-GC; Laflamme-G; Warren-GR; Capretti-P et-al

AD - ADDRESS OF AUTHOR: Canadian Forest Service, Natural Resources Canada, Newfoundland and Labrador Region, Bldg. 304 Pleasantville, PO Box 60 28, St. John's, Newfoundland Z1C 4C7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Shoot and foliage diseases in forest trees. Proceedings of a Joint Meeting of the IUFRO Working Parties S2.06.02 and S2.06.04, Vallombrosa, Firenze, Italy 6-11 June 1994. 1995, 234-239; 9 ref.

PB - PUBLISHER INFORMATION: Istituto di Patologia e Zoologia Forestale e Agraria, Universita degli Studi di Firenze; Firenze; Italy

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: *Gremmeniella abietina* var. *abietina*, a European race, was first recorded on Austrian pine (*Pinus nigra*) in Newfoundland in 1979, and a red pine (*Pinus resinosa*) plantation 10 km N. of St. John's was destroyed by the disease in 1981. *Scleroderris* canker caused by *G. abietina* var. *balsamea* was also recorded on the Northern Peninsula in a Sitka spruce (*Picea sitchensis*) plantation - this variety does not appear to infect pine species. In tests of possible infectivity and virulence of the two *Gremmeniella* races, two conidial concentrations were used; seedlings of jack pine (*Pinus banksiana*), red pine, white spruce (*Picea glauca*), black spruce (*P. mariana*) and Japanese larch (*Larix leptolepis*) were inoculated by spraying on recently developed leader shoots. The European race of *G. abietina* was the more virulent, with infection rates of up to 40%. Red and jack pine were equally susceptible, followed by black spruce. Non-surface sterilized needles of all conifer species showed the presence of *Gremmeniella* viable spores three months after inoculation. *G. abietina* var. *balsamea* was not found on any seedlings. The presence of viable spores of the European race 3 months after inoculation suggests a great potential for every conifer species seedling to be a carrier of viable spores for months after the *Gremmeniella* sporulating season. One seedling of black spruce was infected with *Gremmeniella*; however, it is believed that this is representative of a potentially very low infection rate on non-pine hosts.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; resistance-; susceptibility-; testing-; forest-plantations; spread-; fungal-diseases; plant-diseases; virulence-; races-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Pinus-resinosa*; *Pinus-banksiana*; *Picea-mariana*; *Picea-glauca*; *Picea-sitchensis*; *Larix-leptolepis*; *Pinus-nigra*; *Gremmeniella-abietina*; pinopsida-; fungi-

GE - GEOGRAPHIC NAMES: Canada-; Newfoundland-

BT - BROADER DESCRIPTORS: *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Picea*; *Larix*; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; OECD-Countries; Commonwealth-of-Nations; Developed-Countries; North-America; America; Canada

PT - PUBLICATION TYPE: Conference-paper

IB - INTERNATIONAL STANDARD BOOK NUMBER: 88-900074-0-0

Record 35 of 393 - TREECD 1973-2000/01

TI - TITLE: Progress report on Swedish research on forest tree resistance to diseases.

AU - AUTHOR(S): Bjorkman-E

AD - ADDRESS OF AUTHOR: Dep. For. Bot. & Path., Royal Coll. For., Stockholm, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Bulletin-OEPP. 1973, No.9, 17-21.

PY - PUBLICATION YEAR: 1973

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Since 1971, resistance research on conifers, chiefly *Pinus sylvestris*, has consisted in testing plants from seed orchards and from tested progenies, with subsequent genetical analysis for possible resistance genes. In the course of a progeny test, it was found that resistance to *Phacidium infestans* was noticeably greater in northern pine material than in seedlings of southern provenance. No tendency to greater resistance in high-altitude pines was observed. There is reason to believe that *P. contorta*, so far found to be resistant to *Melampsora pinitorqua*, contains substances in its shoots which are absent from those of *P. sylvestris*.

DE - DESCRIPTORS: forest-trees; research-; tree-breeding; fungal-diseases; resistance-; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Phacidium*-; *Melampsora*-; fungi-; *Lophodermium-pinastris*; *Phacidium-infestans*; *Melampsora-populnea*; *Pinus-contorta*; *Pinus-sylvestris*; *Gremmeniella-ABIETINA*; *ENDOCRONARTIUM-PINI*

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; Helotiales; Ascomycotina; Eumycota; fungi; Uredinales; Basidiomycotina; *Lophodermium*; Rhytismatales; *Phacidium*; *Melampsora*; *Pinus*; *Gremmeniella*; *Endocronartium*; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0250-8052

Record 36 of 393 - TREECD 1973-2000/01

TI - TITLE: New fungus in forest nurseries.

AU - AUTHOR(S): Bjorkman-E

SO - SOURCE (BIBLIOGRAPHIC CITATION): Translation,-Environment-Canada. 1973, No.

OOENV TR 197., 4pp.; Transl. from Skogen (1959) 46 (14) 292-293. See FA 21, 3348. Limited distribution.

PY - PUBLICATION YEAR: 1973

LA - LANGUAGE OF TEXT: English

DE - DESCRIPTORS: seedlings-; conifers-

OD - ORGANISM DESCRIPTORS: Pinus-sylvestris; GREMMENIELLA-ABIETINA

BT - BROADER DESCRIPTORS: Spermatophyta; plants; Pinus; Pinaceae; Pinopsida; gymnosperms; Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Miscellaneous

Record 37 of 393 - TREECD 1973-2000/01

TI - TITLE: Testing of forest-tree species for resistance to parasitic fungi.
OT - ORIGINAL NON-ENGLISH TITLE: Die Prufung forstlicher Baumarten auf Resistenz gegen parasitare Pilze.
AU - AUTHOR(S): Bjorkman-E
AD - ADDRESS OF AUTHOR: Inst. For. Bot. & Pathol., Royal Coll. For., Stockholm, Sweden.
SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1972, 2: 4, 229-237.
PY - PUBLICATION YEAR: 1972
LA - LANGUAGE OF TEXT: German
LS - LANGUAGE OF SUMMARIES: English, French
AB - ABSTRACT: The scope and organization and resistance testing in Sweden are outlined; since 1971 work has included the detection of resistance genes in material of known genetic origin. The trees studied are all conifers, mainly *Pinus sylvestris*, and the fungi involved are *Lophodermium pinastri*, *Phacidium infestans*, *Scleroderris lagerbergii*, *Melampsora pinitorqua* and *Peridermium pini*.
DE - DESCRIPTORS: forest-trees; research-; broadleaves-; conifers-; plant-pathology; pines-
OD - ORGANISM DESCRIPTORS: fungi-; Pinus-
GE - GEOGRAPHIC NAMES: Sweden-
BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; dicotyledons; angiosperms; Pinaceae; Pinopsida; gymnosperms; Scandinavia; Northern-Europe; Europe
PT - PUBLICATION TYPE: Journal-article
IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 38 of 393 - TREECD 1973-2000/01

TI - TITLE: Tests of the resistance of forest trees to parasitic fungi in Sweden.

AU - AUTHOR(S): Bjorkman-E

SO - SOURCE (BIBLIOGRAPHIC CITATION): Sveriges-SkogsvForbunds-Tidskrift. 1971, 69: 5, 499-510.

PY - PUBLICATION YEAR: 1971

LA - LANGUAGE OF TEXT: Swedish

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: Investigations on *Pinus sylvestris* and *P. contorta* var. *latifolia* and their susceptibility to *Lophodermium pinastri*, *Phacidium infestans*, *Scleroderris lagerbergii*, *Melampsora pinitorqua* [*M. populnea*] and *Peridermium pini*. Preliminary observations on *Pinus sylvestris* inoculated with *Phacidium infestans* and *S. lagerbergii* suggested that resistance is greater in trees of northern than of southern origin.

DE - DESCRIPTORS: resistance-; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; fungi-; *Lophodermium-pinastri*; *Phacidium-infestans*; *Melampsora-populnea*; GREMMENIELLA-ABIETINA; ENDOCRONARTIUM-PINI

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Lophodermium*; Rhytismatales; Ascomycotina; Eumycota; fungi; *Phacidium*; Helotiales; *Melampsora*; Uredinales; Basidiomycotina; *Gremmeniella*; *Endocronartium*; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

Record 39 of 393 - TREECD 1973-2000/01

TI - TITLE: Summary of plant quarantine pest and disease situations in Canada - 1989.

AU - AUTHOR(S): Blangez-B

AD - ADDRESS OF AUTHOR: Diagnostic Services Section, Plant Protection Division, Agriculture Canada, Ottawa, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1989, 106 pp.

PB - PUBLISHER INFORMATION: Agriculture Canada, Plant Protection Division; Ottawa; Canada

PY - PUBLICATION YEAR: 1989

LA - LANGUAGE OF TEXT: English, French

AB - ABSTRACT: Surveys conducted in Canada in 1989 for quarantinable plant pests and diseases are summarized. The insect pests discussed include *Grapholita molesta* [*Cydia molesta*], *Lymantria dispar*, *Ostrinia nubilalis*, *Otiorhynchus ligustici*, *Oulema melanopus*, *Popillia japonica*, *Rhagoletis mendax*, *R. pomonella*, *Rhizotrogus majalis* [*Amphimallon majalis*] and *Yponomeuta malinellus*. Surveys of the snails *Helix aspersa* and *H. pomatia* and the nematodes *Bursaphelenchus xylophilus* and *Heterodera glycines* are also mentioned. The diseases discussed include *Ascocalyx abietina* [*Gremmeniella abietina*], *Gymnosporangium fuscum*, *Leptosphaeria maculans*, *Synchytrium endobioticum*, *Tilletia contraversa* and *Verticillium albo-atrum*. Distribution maps are given for several pests and diseases.

DE - DESCRIPTORS: Insect-pests; pests-; quarantine-; Plant-parasitic-nematodes; surveys-; geographical-distribution; plant-nematology; nematology-; agricultural-entomology; plant-pathology

OD - ORGANISM DESCRIPTORS: Tortricidae-; Lepidoptera-; Lymantriidae-; Pyralidae-; Curculionidae-; Coleoptera-; Chrysomelidae-; Scarabaeidae-; Yponomeutidae-; Mollusca-; Snails-; Helicidae-; *Cydia-molesta*; *Lymantria-dispar*; *Ostrinia-nubilalis*; *Otiorhynchus-ligustici*; *Oulema-melanopus*; *Popillia-japonica*; *Rhagoletis-mendax*; *Rhagoletis-pomonella*; *Amphimallon-majalis*; *Yponomeuta-malinellus*; *Helix-aspersa*; *Helix-pomatia*; Gastropoda-; *Helix*-; *Bursaphelenchus-xylophilus*; *Heterodera-glycines*

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: Lepidoptera; insects; arthropods; invertebrates; animals; Coleoptera; Gastropoda; Mollusca; *Cydia*; Tortricidae; *Lymantria*; Lymantriidae; *Ostrinia*; Pyralidae; *Otiorhynchus*; Curculionidae; *Oulema*; Chrysomelidae; *Popillia*; Scarabaeidae; *Rhagoletis*; Tephritidae; Diptera; *Amphimallon*; *Yponomeuta*; Yponomeutidae; *Helix*; Helicidae; *Bursaphelenchus*; Aphelenchoididae; Nematoda; *Heterodera*; Heteroderidae; OECD-Countries; Commonwealth-of-Nations; Developed-Countries; North-America; America

PT - PUBLICATION TYPE: Miscellaneous

Record 40 of 393 - TREECD 1973-2000/01

TI - TITLE: Effect of temperature on the ability of *Gremmeniella abietina* to survive and to colonize host tissue.

AU - AUTHOR(S): Blenis-PV; Patton-RF; Spear-RN

AD - ADDRESS OF AUTHOR: Dep. Pl. Path., Univ. Wisconsin, Madison, Wis., USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1984, 14: 3, 153-164; 3 fig., 4 tab.; 9 ref.

PY - PUBLICATION YEAR: 1984

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: *G. abietina* cultures were exposed each day to temps. of 24, 28, 32 and 34°C for c. 9 h and 12, 15.5, 20, 24, 28, 32 and 34°C for c. 15 h. The fungus survived 9 h exposures to 32-34°C for 4 wk, provided that the av. temp. was < 30°C. At av. temps. > 30°C, survival time was inversely proportional to the temp. When mycelium was inserted into stem wounds of red pine seedlings the fungus was recovered from symptomless trees 23-28 months later. Results of reisolation tests from inoculated seedlings exposed to different overwintering temp. regimes suggest that freezing, or freezing and thawing, may be more favourable for disease development than temps. slightly above freezing. An av. infection frequency of 79-93% occurred with alternate freezing and thawing. Based on knowledge of the effects of environmental factors on penetration, survival and induction of symptoms, a procedure is suggested for inoculating, maintaining and overwintering trees to achieve disease development.

DE - DESCRIPTORS: pines-; temperature-; Techniques-; Cankers-; methodology-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi; inoculation-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; fungi-; *Pinus-resinosa*; *Pinus-*

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; *Pinus*; Pinaceae; Pinopsida; gymnosperms

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 41 of 393 - TREECD 1973-2000/01

TI - TITLE: Polymerase chain reaction (PCR) detection and race identification in pine seedlings infected with scleroderris canker [Gremmeniella abietina](Poster).

AU - AUTHOR(S): Bourassa-M; Dusabenyagasani-M; Jacobi-V; Laflamme-G; Hamelin-RC; Laflamme-G et-al

AD - ADDRESS OF AUTHOR: Natural Resources centre, Canadian Forestry Service, Laurentian Forestry Centre, Sainte-Foy, QC G1V 4C7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Foliage, shoot and stem diseases.

Proceedings of the IUFRO WP 7.02.02 meeting, Quebec City, May 25-31, 1997.

Information-Report -Laurentian-Forestry-Centre,-Quebec-Region,-Canadian-Forest-Service. 1998, No. LAU-X-122, 209-213; 6 ref.

PB - PUBLISHER INFORMATION: Laurentian Forestry Centre, Canadian Forest Service; Sainte-Foy; Canada

PY - PUBLICATION YEAR: 1998

LA - LANGUAGE OF TEXT: English

DE - DESCRIPTORS: IUFRO-; fungal-diseases; plant-pathogenic-fungi; plant-pathogens; plant-diseases; forest-trees; cankers-; polymerase-chain-reaction; techniques-; molecular-biology; pines-

OD - ORGANISM DESCRIPTORS: Gremmeniella-abietina; Pinus-

BT - BROADER DESCRIPTORS: Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants

PT - PUBLICATION TYPE: Conference-paper; Journal-article

Record 42 of 393 - TREECD 1973-2000/01

TI - TITLE: *Gremmeniella abietina* in Austria - pathogenicity and biochemical characterization.

OT - ORIGINAL NON-ENGLISH TITLE: *Gremmeniella abietina* in Osterreich - Pathogenitat und biochemische Charakterisierung.

AU - AUTHOR(S): Breitenbach-Dorfer-M; Cech-T

AD - ADDRESS OF AUTHOR: Forstliche Bundesversuchsanstalt, Institut fur Immissionsforschung und Forstchemie, Seckendorff-Gudent-Weg 8, A-1131 Wien, Austria.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Centralblatt-fur-das-Gesamte-Forstwesen. 1996, 113: 2, 55-70; With English captions; 31 ref.

PY - PUBLICATION YEAR: 1996

LA - LANGUAGE OF TEXT: German

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: A 3-year trial was carried out using 14 isolates of *Gremmeniella abietina* - collected from 12 stone pine (*Pinus cembra*) stands, and 1 each from Scots pine (*P. sylvestris*) and Austrian pine (*P. nigra*) stands throughout Austria - which were inoculated onto *P. cembra* plants. None of the isolates caused a dieback of shoots. This may have been due to the climatic conditions at the experimental field (hot, dry summers, and no extreme frost during winter). However, all isolates produced bark necroses of various sizes. From this variation it is concluded that differences in pathogenicity exist. No clear geographic correlation between isolates of similar pathogenicity was observed. Plants inoculated with isolates from *P. sylvestris* and *P. nigra* developed significantly smaller necroses than plants inoculated with isolates from *P. cembra*. Isoenzyme analysis indicated that the North American strain of *G. abietina* does not exist in Austria. The Austrian isolates seem to be genetically more closely related to the European strain. However, the greatest similarity was found between Austrian isolates. Therefore it is concluded that the Austrian isolates are of autochthonous origin. A clear correlation between the banding pattern and pathogenicity could not be proven.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; pathogenicity-; inoculation-; isoenzymes-; variation-; strains-; fungal-diseases; pines-

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Pinus-cembra*; *Pinus-nigra*; *Gremmeniella-abietina*; *Pinus-*

GE - GEOGRAPHIC NAMES: Austria-

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms;

Spermatophyta; plants; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; EFTA; Central-Europe; Europe; Developed-Countries; European-Union-Countries; OECD-Countries

PT - PUBLICATION TYPE: Journal-article

Record 43 of 393 - TREECD 1973-2000/01

TI - TITLE: Proceedings of the twenty-sixth northeastern forest tree improvement conference, University Park, Pennsylvania, 25-26 July, 1978.

AU - AUTHOR(S): Brooks-JR; Cech-FC; Shigo-AL; Skilling-DD; Steiner-KC

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1979, iv+220 pp.

PB - PUBLISHER INFORMATION: Northeastern Forest Experiment Sta.; Durham, N. Hamp.; USA

PY - PUBLICATION YEAR: 1979

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The following are among the 19 papers presented: Brooks, J. R.; Cech, F. C. The effect of container type, fertilizer treatment and mycorrhizal inoculation on the production of container-grown hardwoods (40-47, 12 ref., 2 tab.). In tests with *Liriodendron tulipifera* and black cherry (*Prunus serotina*) high fertilizer levels and inoculation of the container soil with *Glomus fasciculatus* before seeding greatly improved outplanting survival and subsequent growth. Skilling, D. D. Scleroderris canker threatens pines in the northeast (58-61, 6 ref.). The potential of a new more virulent str. of *Gremmeniella abietina*, recently found in NY and Vt., to spread rapidly across N. America makes the disease a major threat to pine management in the area. Shigo, A. L. Decay resistant trees (64-72, 7 ref., 2 fig.). Compartmentalization of discoloured and decayed wood in living trees is explained. Trees can now be selected with the aid of a CODIT model and the Shigometer for ability to compartmentalize effectively.

DE - DESCRIPTORS: forest-trees; diseases-; mycorrhizas-; fertilizers-; effects-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus*-; *Liriodendron-tulipifera*; *Prunus-serotina*

GE - GEOGRAPHIC NAMES: USA-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Pinaceae; Pinopsida; gymnosperms; *Liriodendron*; Magnoliaceae; Magnoliales; dicotyledons; angiosperms; *Prunus*; Rosaceae; Rosales; North-America; America; *Glomus*; Zygomycotina

PT - PUBLICATION TYPE: Conference-proceedings

Record 44 of 393 - TREECD 1973-2000/01

TI - TITLE: Report on forest research for the year ended March 1972.

AU - AUTHOR(S): Burdekin-DA; Greig-BJW; Brasier-CM; Gibbs-JN; Parker-EJ; Young-CWT; Strouts-RG; Salt-GA; Biddle-PG

CA - CORPORATE AUTHOR(S): Forestry Commission, UK.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1972, vii + 193 pp.; 10 pl., 10 graphs, 1 map, 27 tab. See RPP 51, 2871.

PB - PUBLISHER INFORMATION: London, Her Majesty's Stationery Office.; UK

PY - PUBLICATION YEAR: 1972

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: a. In the forest pathology section (88-98) D.A. BURDEKIN & B.J.W. GREIG, assessing experiments on death and decay caused by *Fomes annosus*, conclude that stump removal is the most efficient way of eradicating the disease. The fungus caused a reduction in volume in apparently healthy trees as well as death in infected Scots pine. b. In cultural studies C.M. BRASIER demonstrated the stimulating effect of *Trichoderma viride* on oospore formation in *Phytophthora cambivora* and *P. cinnamomi* [RPP 51, 1143]. All *T. viride* isolates tested and some of *T. koningii*, *T. polysporum* and *T. piluliferum* were stimulatory. c. J.N. GIBBS reports on survey and research on Dutch elm disease (*Ceratocystis ulmi*), including host population and damage, regional differences and variation in pathogenicity. d. E.J. PARKER studied *Nectria coccinea* associated with beech bark disease. In an affected forest, symptom progression was observed and the annual mortality rate was c. 5%. e. C.W.T. YOUNG associates the dieback of London plane [*Platanus acerifolia*] with the over rapid thawing of twigs and small branches in unusually cold and sunny winter periods. Some clones appeared resistant to dieback. f. YOUNG & R.G. STROUTS suggest that epidemic outbreaks of dieback of Corsican pine [RAM 47, 2875] probably depend on the occurrence of wind-borne ascospores of *Scleroderris lagerbergii* and wet conditions favouring their discharge [RAM 48, 2608]. Some undetermined factor apparently restricted development of apothecia in certain years. Research papers include: g. SALT, G.A. Conifer seedling pathology (150-152). The effect of formalin and lime on growth of Sitka spruce at Wareham was assessed. The effect of soil fungicides and a thiram seed dressing on survival of spruce seedlings in the presence and absence of *Rhizoctonia solani* was determined. h. BIDDLE, P.G. Virus diseases of forest trees (153). Attempts to transmit suspected viruses of spruce and pine by grafting and insects have not yet succeeded.

DE - DESCRIPTORS: dieback-; spore-dispersal; formaldehyde-; lime-; control-; soil-treatment; thiram-; seed-treatment; transmission-; forest-trees; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Phytophthora-cambivora*; *Phytophthora-cinnamomi*; *Trichoderma*-; *Trichoderma-viride*; *Trichoderma-koningii*; *Phytophthora*-; *Ulmus*-; *Ceratocystis-ulmi*; *Nectria-coccinea*; *Platanus-acerifolia*; *Rhizoctonia-solani*; viruses-; HETEROBASIDIUM-ANNOSUM; TOLYPOCLADIUM-NIVEUM; GREMMENIELLA-ABIETINA; PICEA-

GE - GEOGRAPHIC NAMES: UK-

BT - BROADER DESCRIPTORS: dithiocarbamate-fungicides; carbamate-pesticides; pesticides; fungicides; trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Phytophthora*; Peronosporales; Mastigomycotina; Eumycota; fungi; Deuteromycotina; *Trichoderma*; Ulmaceae; Urticales; dicotyledons; angiosperms; *Ceratocystis*; Ophiostomatales; Ascomycotina; *Nectria*; Hypocreales; *Platanus*; Platanaceae; Hamamelidales; *Rhizoctonia*; Heterobasidion; Aphylllophorales; Basidiomycotina; *Tolypocladium*; *Gremmeniella*; Helotiales; British-Isles; Western-Europe; Europe

PT - PUBLICATION TYPE: Annual-report

Record 45 of 393 - TREECD 1973-2000/01

TI - TITLE: The course of a *Scleroderris lagerbergii* epidemic in a stand of *Pinus nigra*.

OT - ORIGINAL NON-ENGLISH TITLE: Über den Verlauf einer *Scleroderris-lagerbergii*-Epidemie in einem Schwarzkiefernbestand.

AU - AUTHOR(S): Butin-H; Hackelberg-L

AD - ADDRESS OF AUTHOR: Inst. Pflanzenschutz im Forst, Biol. Bundesanst. f. Land- u. Forstwirtschaft, Hann. Münden, German Federal Republic.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1978, 8: 5-6, 369-379; 8 ref.

PY - PUBLICATION YEAR: 1978

LA - LANGUAGE OF TEXT: German

LS - LANGUAGE OF SUMMARIES: English, French

AB - ABSTRACT: The study was made in 1975 in a 3.3-ha stand of 21-yr-old *P. nigra* near Bad Lauterberg (Harz Mts., W. Germany) that was in the last stages (no primary symptoms apparent) of an epidemic of *S. lagerbergii*. The date and intensity of infections was determined retrospectively by ring analysis and by the numbers of dead and living branch whorls on the trees. The results showed that the epidemic had begun in 1964, with the highest mortality in 1969. The starting point of the dieback was located in the southern border of the stand, shaded by an old beech [*Fagus sylvatica*] forest. The very wet spring and summer months of 1961-66 probably favoured the establishment and epidemic spread of the infection. Despite heavy losses of young trees, the development of the remaining ones indicated the high capacity of the stand to recover from even a severe attack by the fungus.

ADDITIONAL ABSTRACT: Disease development by *S. lagerbergii* [*Gremmeniella abietina*] in a 21-yr-old *P. nigra* stand in the Harz mountains, W. Germany was determined retrospectively by ring analysis of infected and non-infected trees. The intensity was characterized by the number of living branch whorls and internodal lengths. Originating from the southern edge of the stand shaded by an old beech forest, and aided by extremely wet spring and summer months, the disease started in 1964, with increasing mortality till 1969 and the end of epidemic spread in 1975. Surviving trees have recuperated well.

DE - DESCRIPTORS: fungal-diseases; methodology-; forest-trees; conifers-; plant-pathology; research-; pines-

OD - ORGANISM DESCRIPTORS: *Pinus-nigra*; *Pinus*-; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: German-Federal-Republic; Germany-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Western-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 46 of 393 - TREECD 1973-2000/01

TI - TITLE: Institute for Forest Plant Diseases, Hann. Munden.

OT - ORIGINAL NON-ENGLISH TITLE: Institut für Forstpflanzenkrankheiten in Hann. Munden.

AU - AUTHOR(S): Butin-H; Siepmann-R

SO - SOURCE (BIBLIOGRAPHIC CITATION): Annual-Report-for-1973,-Federal-Biological-Institute-for-Agriculture-and-Forestry-at-Berlin-and-Brunswick.-Jahresbericht-1973,-Biologische-Bundesanstalt-für-Land-und-Forstwirtschaft-in-Berlin-und-Braunschweig. 1974, 136-138.

PY - PUBLICATION YEAR: 1974

LA - LANGUAGE OF TEXT: German

AB - ABSTRACT: R. Siepmann (136) describes work on shoot dieback of pine caused by *Scleroderris lagerbergii* [*Gremmeniella abietina*]. H. Butin (136-137) established that pine needle cast was caused by *Naemacyclus niveus* (mainly on *Pinus nigra*) and *N. minor* (mainly on *P. sylvestris*) [RPP 53, 1978] as well as by *Lophodermium pinastri*.

DE - DESCRIPTORS: diseases-; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella-abietina*; *Lophodermium-pinastri*; *CYCLANEUSMA-NIVEUM*; *CYCLANEUSMA-MINUS*

GE - GEOGRAPHIC NAMES: German-Federal-Republic; Germany-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Lophodermium*; Rhytismatales; *Cyclaneusma*; Western-Europe; Europe

PT - PUBLICATION TYPE: Miscellaneous

Record 47 of 393 - TREECD 1973-2000/01

TI - TITLE: An attack by *Brunchorstia pinea* (Karst.) Hohn. on red spruce.
OT - ORIGINAL NON-ENGLISH TITLE: Un particolare attacco da *Brunchorstia pinea* (Karst.) Hohn. sull'abete rosso.
AU - AUTHOR(S): Capretti-P
AD - ADDRESS OF AUTHOR: Istituto di Patologia e Zoologia Forestale e Agraria, Florence, Italy.
SO - SOURCE (BIBLIOGRAPHIC CITATION): *Informatore-Fitopatologico*. 1981, 31: 5, 11-13; 3 fig.; 11 ref.
PY - PUBLICATION YEAR: 1981
LA - LANGUAGE OF TEXT: Italian
LS - LANGUAGE OF SUMMARIES: English
AB - ABSTRACT: *B. pinea* [*Gremmeniella abietina*] was found on *Picea abies* stems damaged by frost in a pine forest.
DE - DESCRIPTORS: frost-injury; forest-trees; conifers-; plant-pathology
OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Picea-abies*; PICEA-
GE - GEOGRAPHIC NAMES: Italy-
BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Picea*; Pinaceae; Pinopsida; gymnosperms; Southern-Europe; Europe; Mediterranean-Region
PT - PUBLICATION TYPE: Journal-article
IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0020-0735

Record 48 of 393 - TREECD 1973-2000/01

TI - TITLE: New record of *Brunchorstia pinea* (Karst.) Hohn in the South Eastern European Alps.
AU - AUTHOR(S): Capretti-P
AD - ADDRESS OF AUTHOR: Istituto di Patologia Forestale, Univ. Florence, Italy.
SO - SOURCE (BIBLIOGRAPHIC CITATION): *Phytopathologia-Mediterranea*. 1983, 22: 3, 212; 6 ref.
PY - PUBLICATION YEAR: 1983
LA - LANGUAGE OF TEXT: English
AB - ABSTRACT: *Gremmeniella abietina* was recorded on *Picea abies* and *Pinus nigra* in the Italian Alps and on *P. nigra* and *P. sylvestris* in Slovenia, Yugoslavia.
DE - DESCRIPTORS: pines-; Cankers-; forest-trees; conifers-; plant-pathology
OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Picea-abies*; *Pinopsida*-; fungi-; *Pinus-nigra*; *Pinus-sylvestris*; *Pinus*-
GE - GEOGRAPHIC NAMES: Italy-; Yugoslavia-
BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Picea*; Pinaceae; *Pinopsida*; gymnosperms; *Pinus*; Southern-Europe; Europe; Mediterranean-Region; Balkans
PT - PUBLICATION TYPE: Journal-article
IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0031-9465

Record 49 of 393 - TREECD 1973-2000/01

TI - TITLE: A shoot blight of larch caused by *Brunchorstia laricina* Ettl.

OT - ORIGINAL NON-ENGLISH TITLE: Un disseccamento del larice da *Brunchorstia laricina* Ettl.

AU - AUTHOR(S): Capretti-P

AD - ADDRESS OF AUTHOR: Istituto di Patologia Forestale, Univ. Florence, Italy.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Phytopathologia-Mediterranea*. 1983, 22: 3, 215-216; 1 fig.; 5 ref.

PY - PUBLICATION YEAR: 1983

LA - LANGUAGE OF TEXT: Italian

AB - ABSTRACT: Symptoms on larch in the Alto Adige, Italy, and the fungus are described.

DE - DESCRIPTORS: larch-; Dieback-; forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Larix*-; *Larix-decidua*

GE - GEOGRAPHIC NAMES: Italy-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Larix*; Southern-Europe; Europe; Mediterranean-Region; Deuteromycotina; Eumycota; fungi; Ascocalyx; Ascomycotina

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0031-9465

Record 50 of 393 - TREECD 1973-2000/01

TI - TITLE: Differential reaction in *Pinus* spp. to inoculation by various isolates of *Ascocalyx* (*Gremmeniella*) *abietina*.

AU - AUTHOR(S): Capretti-P; Dorworth-CE

AD - ADDRESS OF AUTHOR: Istituto di Patologia e Zoologia Forestale e Agraria, Università di Firenze, Piazzale delle Cascine 28, 50144 Florence, Italy.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1989, 19: 7, 407-413; 20 ref.

PY - PUBLICATION YEAR: 1989

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: Stem inoculation of 3 species of pole-sized pines with 4 isolates of *G. abietina* from diverse origins showed *P. pinea* to develop the longest cankers, *P. nigra* to be intermediate in reaction and *P. pinaster* to be least susceptible to tissue colonization. Three isolates of the fungus colonized host tissue to a greater extent than did the fourth isolate. This could not be correlated with the anamorphic physiological race or variety nor with geographic origin of host or isolate. The mean length of cankers formed on the Western exposures of the trees was found to be significantly longer ($P < 0.05$) than that on the southern exposures.

DE - DESCRIPTORS: Pines-; susceptibility-; Conifers-; Cankers-; resistance-; host-specificity; forest-trees; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; fungi-; *Pinus-pinea*; *Pinus-nigra*; *Pinus-pinaster*; *Pinus-*

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; *Pinus*; Pinaceae; Pinopsida; gymnosperms

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 51 of 393 - TREECD 1973-2000/01

TI - TITLE: Shoot and foliage diseases in forest trees.

AU - AUTHOR(S): Capretti-P; Heiniger-U; Stephan-R

AD - ADDRESS OF AUTHOR: Istituto di Patologia e Zoologia Forestale e Agraria, Universita di Firenze, P.le delle Cascine 28, 50144 Firenze, Italy.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1995, x + 309 pp.; ref. at end of each paper.

PB - PUBLISHER INFORMATION: Istituto di Patologia e Zoologia Forestale e Agraria, Universita degli Studi di Firenze; Firenze; Italy

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The proceedings comprise the contributions made at a joint meeting of the IUFRO Working Parties Canker and Shoot Blight of Conifers (S2.06-02) and Foliage Diseases (S2.06-04), 35 oral presentations and 24 posters (no distinction is made between the two in the publication), but include a few papers not presented at the meeting. The meeting was held at Vallombrosa near Firenze, central Italy, 6-11 June 1994. The papers are arranged under the following subject areas: foliage fungi (18 papers or posters); cypress canker disease (7); *Gremmeniella abietina*, physiology and population studies (9) and epidemiology (9); other canker and shoot blights (15). A list of participants is included.

DE - DESCRIPTORS: plant-pathogens; plant-pathogenic-fungi; fungal-diseases; forest-trees; IUFRO-; plant-pathology

PT - PUBLICATION TYPE: Conference-proceedings

IB - INTERNATIONAL STANDARD BOOK NUMBER: 88-900074-0-0

Record 52 of 393 - TREECD 1973-2000/01

TI - TITLE: Red pine stand characteristics and their relationship to methods of expressing intensity of Scleroderris canker infection.

AU - AUTHOR(S): Carvin-RP; Manion-PD

AD - ADDRESS OF AUTHOR: SUNY Coll. Envir. Sci. & For., Syracuse, NY 13210, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): USA, American Phytopathological Society: Abstracts. Phytopathology. 1979, 69: 9, 1023.

PY - PUBLICATION YEAR: 1979

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Twelve permanent plots of 273 to 1444 trees (ht. 3.66-4.88 m) were established in young red pine [*Pinus resinosa*] plantations throughout the range of Scleroderris (*Gremmeniella abietina*) canker in New York. Correlations were investigated between several methods of expressing disease intensity and site index, stand density, and individual tree characteristics (ht., age, d.b.h.). Av. ht. of infection was 0.5-0.9 m. Av. youngest infected whorl was negatively correlated ($r = -0.85$) and % trees infected was positively correlated ($r = 0.66$) with stand age. The various measures of disease intensity were poorly correlated with site index, stand density, and tree size.

DE - DESCRIPTORS: fungal-diseases; assessment-; conifers-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-resinosa*

GE - GEOGRAPHIC NAMES: New-York; USA-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota;

fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; Middle-Atlantic-States-of-USA; Northeastern-States-of-USA; USA; North-America; America

PT - PUBLICATION TYPE: Abstract-only

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0031-949X

Record 53 of 393 - TREECD 1973-2000/01

TI - TITLE: Research on cryptopycnidia for rapid diagnosis of *Gremmeniella abietina*.

OT - ORIGINAL NON-ENGLISH TITLE: Recherche de cryptopycnides, pour un diagnostic precoce de *Gremmeniella abietina*.

AU - AUTHOR(S): Cauchon-R; Lachance-D

AD - ADDRESS OF AUTHOR: Centre de Recherches forestieres des Laurentides, Sainte-Foy, Que., Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Plant-Pathology. 1980, 2: 4, 232-234; 6 fig.; 3 ref.

PY - PUBLICATION YEAR: 1980

LA - LANGUAGE OF TEXT: French

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: Pycnidia (called "cryptopycnidia" of *Brunchorstia pinea*, the conidia state of *G. abietina*, are often concealed in the bark of diseased pines. They are often hard to find but their disclosure (as described) allows an identification at an early stage of infection. Conidia from this type of pycnidium yield typical cultures of the pathogen.

DE - DESCRIPTORS: techniques-; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; North-America; America

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0706-0661

Record 54 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris shoot death in pine and spruce.

OT - ORIGINAL NON-ENGLISH TITLE: Scleroderris - Triebsterben bei Kiefer und Fichte.

AU - AUTHOR(S): Cech-T

AD - ADDRESS OF AUTHOR: Forstliche Bundesversuchsanstalt, A-1131, Vienna, Austria.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Osterreichische-Forstzeitung. 1996, 107: 11, 13.

PY - PUBLICATION YEAR: 1996

LA - LANGUAGE OF TEXT: German

AB - ABSTRACT: A note is given on shoot mortality observed in *Pinus* spp. and Norway spruce, *Picea abies*, in the Fore-Alps region of Austria, and on the predisposing weather factors and the pathogens involved, viz. *Sphaeropsis sapinea* and *Gremmeniella abietina*. The disease appears to affect pine shoots when a premature end to the growing season prevents them from ripening properly.

DE - DESCRIPTORS: climate-; seasonal-variation; climatic-factors; shoots-; damage-; mortality-; plant-pathogens; plant-pathogenic-fungi; plant-diseases; fungal-diseases; pines-

OD - ORGANISM DESCRIPTORS: *Sphaeropsis*-; *Picea-abies*; *Pinus*-; *Gremmeniella-abietina*; pinopsida-

GE - GEOGRAPHIC NAMES: Austria-

BT - BROADER DESCRIPTORS: Deuteromycotina; Eumycota; fungi; *Picea*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; EFTA; Central-Europe; Europe; Developed-Countries; European-Union-Countries; OECD-Countries; *Sphaeropsis*

PT - PUBLICATION TYPE: Journal-article

Record 55 of 393 - TREECD 1973-2000/01

TI - TITLE: Disease of dying conifer shoots caused by *Scleroderris lagerbergii*.
OT - ORIGINAL NON-ENGLISH TITLE: Choroba zamierania pedow drzew iglastych powodowana przez grzyba *Scleroderris lagerbergii* Gremm.
AU - AUTHOR(S): Chwalinski-K
AD - ADDRESS OF AUTHOR: Wydzial Les. Akad. Rol., Poznan, Poland.
SO - SOURCE (BIBLIOGRAPHIC CITATION): Las-Polski. 1983, No. 11, 16-17; 17 ref.
PY - PUBLICATION YEAR: 1983
LA - LANGUAGE OF TEXT: Polish
AB - ABSTRACT: A short review of important literature on the biology and control of *S. lagerbergii* [*Gremmeniella abietina*] for use by forest pathologists in Poland where the disease has only recently been discovered. Chemical control methods are described together with the possibility of using less susceptible clones and the need to maintain stand health through silvicultural methods.
DE - DESCRIPTORS: biology-; control-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi
OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; Pinopsida-; fungi-
GE - GEOGRAPHIC NAMES: Poland-
BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; gymnosperms; Central-Europe; Europe
PT - PUBLICATION TYPE: Journal-article
IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0023-8538

Record 56 of 393 - TREECD 1973-2000/01

TI - TITLE: *Sphaeropsis sapinea* (= *Diplodia pinea*), cause of dieback of top shoots of *Pinus* in the Netherlands.

OT - ORIGINAL NON-ENGLISH TITLE: *Sphaeropsis sapinea* (= *Diplodia pinea*), oorzaak van het afsterven van eindscheuten bij *Pinus* in Nederland.

AU - AUTHOR(S): Dam-BC-van; Kam-M-de

AD - ADDRESS OF AUTHOR: 'De Dorschkamp', Wageningen, Netherlands.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Nederlands-Bosbouw tijdschrift*. 1984, 56: 6, 173-177; 2 pl. (1 col.); 10 ref.

PY - PUBLICATION YEAR: 1984

LA - LANGUAGE OF TEXT: Dutch

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: Describes an outbreak in S.E. Netherlands, mainly on *P. nigra* which became severe in 1983 and 1984. Possible causes for the outbreak (the fungus is endemic in the Netherlands) are thought to be: weakening by a *Brunchorstia* epidemic in previous years, a heavy aphid infestation in 1983, ammonia emissions from local factory farming, and the warm summers of 1982 and 1983, but no evidence is submitted.

DE - DESCRIPTORS: Dieback-; conifers-

OD - ORGANISM DESCRIPTORS: *Diplodia-pinea*; *Pinus-nigra*; GREMMENIELLA-

GE - GEOGRAPHIC NAMES: Netherlands-

BT - BROADER DESCRIPTORS: *Diplodia*; Deuteromycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; Helotiales; Ascomycotina; Western-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0028-2057

Record 57 of 393 - TREECD 1973-2000/01

TI - TITLE: *Sphaeropsis sapinea* (= *Diplodia pinea*), cause of dieback of top shoots of *Pinus* in the Netherlands.

OT - ORIGINAL NON-ENGLISH TITLE: *Sphaeropsis sapinea* (= *Diplodia pinea*), oorzaak van het afsterven van eindscheuten bij *Pinus* in Nederland.

AU - AUTHOR(S): Dam-BC-Van; Kam-M-de

AD - ADDRESS OF AUTHOR: Rijksinstituut "De Dorschkamp", Wageningen, Netherlands.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Nederlands-Bosbouw tijdschrift*. 1984, 56: 6, 173-177; 4 fig. (1 col.); 10 ref.

PY - PUBLICATION YEAR: 1984

LA - LANGUAGE OF TEXT: Dutch

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: Symptoms on Corsican, Austrian and to a lesser extent on Scots pine in the SE Netherlands in 1982 were caused by *D. pinea*. In 1983 and 1984 more severe attacks, mainly on Austrian pine, were reported from various localities. The infected *P. nigra* stands appeared to have been weakened by a *Brunchorstia* [*Gremmeniella abietina*] epidemic in 1980-82 and trees may have been stressed by ammonia emissions from nearby intensive livestock-rearing industry. Measures for preventing damage are suggested. New plantations of *P. nigra* should not be established near attacked older, cone bearing stands as pycnidia on the cones seem to be the main source of inoculum.

DE - DESCRIPTORS: pines-; environmental-factors; forest-trees; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Diplodia-pinea*; *Gremmeniella-abietina*; *Pinopsida*-; *fungi*-; *Pinus*-

GE - GEOGRAPHIC NAMES: Netherlands-

BT - BROADER DESCRIPTORS: *Diplodia*; *Deuteromycotina*; *Eumycota*; *fungi*; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *gymnosperms*; *Spermatophyta*; *plants*; *Pinaceae*; *Pinopsida*; *Benelux*; *Developed-Countries*; *European-Union-Countries*; *OECD-Countries*; *Western-Europe*; *Europe*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0028-2057

Record 58 of 393 - TREECD 1973-2000/01

TI - TITLE: Recent research on Scleroderris canker of conifers. Proceedings of meeting in Salzburg/Austria and Ljubljana/Yugoslavia, September 1986.

AU - AUTHOR(S): Danaubauer-E (ed.); Stephen-BR

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1988, 167 pp.; Mitteilungen der Forstlichen Bundesversuchsanstalt Wein Vol. 162.

PB - PUBLISHER INFORMATION: Forstliche Bundesversuchsanstalt; Vienna; Austria

PY - PUBLICATION YEAR: 1988

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: German

AB - ABSTRACT: Following an introduction in which the IUFRO working party on Canker diseases - Scleroderris is described, the 16 contributions are arranged in the following sections; the fungus *Gremmeniella abietina*, structure and disease symptoms; occurrence and variation of *G. abietina*; stress factors and infection; resistance and control measures; and damage by other causes. A list of participants is appended.

DE - DESCRIPTORS: Plant-diseases

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; Pinopsida-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; gymnosperms; Spermatophyta; plants

PT - PUBLICATION TYPE: Conference-proceedings

IB - INTERNATIONAL STANDARD BOOK NUMBER: 3-7040-0965-2

Record 59 of 393 - TREECD 1973-2000/01

TI - TITLE: Fungus diseases of conifers introduced in the Central Botanical Gardens of the Byelorussian Academy of Sciences.

AU - AUTHOR(S): Darozhkin-MA; Fedarau-VM

AD - ADDRESS OF AUTHOR: Kuprevich Inst. Exp. Bot., Byelorussian Acad. Sci., USSR.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Vestsi-Akademii-Navuk-BSSR,-
Biyalagichnykh-Navuk. 1976, No. 3, 47-50; 2 tab.

PY - PUBLICATION YEAR: 1976

LA - LANGUAGE OF TEXT: White-Russian

LS - LANGUAGE OF SUMMARIES: Russian

AB - ABSTRACT: *Scleroderris lagerbergii* [Gremmeniella abietina] was recorded on *Pinus pallasiana*, *P. nigra*, *P. ponderosa*, *P. scopulorum* and *P. sibirica*. Small cankers are produced; cones, shoots, branches and young plants dry up. *Cronartium ribicola* was recorded on *P. strobus* and *P. flexilis*, and *Fomitopsis annosa* [Heterobasidion annosum] on *P. sibirica*. A list is given of other diseases found in isolated cases.

DE - DESCRIPTORS: diseases-; ecology-; arboreta-; decay-; roots-; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella-abietina*; *Cronartium-ribicola*; *Heterobasidion-annosum*; *Pinus-flexilis*; *Pinus-nigra*; *Pinus-ponderosa*; *Pinus-strobus*; *Pinus-sibirica*

GE - GEOGRAPHIC NAMES: USSR-; Belarus-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi; Cronartium; Uredinales; Basidiomycotina; Heterobasidion; Aphyllophorales; Pinus; Central-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

Record 60 of 393 - TREECD 1973-2000/01

TI - TITLE: The fungus that causes scleroderris canker survives field exposure in plastic bags.

AU - AUTHOR(S): Davis-CN; Dorworth-CE

AD - ADDRESS OF AUTHOR: Gt. Lakes FRC, Can. For. Serv., Sault Ste. Marie, Ont., Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Tree-Planters'-Notes. 1984, 35: 1, 18-19; 1 pl.; 6 ref.

PY - PUBLICATION YEAR: 1984

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Pinus resinosa branches infected with Gremmeniella abietina were collected in late spring and early summer and placed in clear or green plastic bags and sealed. Temp. and RH were recorded inside the bags which were placed in an open area exposed to the elements (a current disposal method). One bag was removed after 1, 2, 4, 6, 7 or 14 days' exposure and examined. The fungus remained viable in all bags exposed to sunlight. G. abietina was isolated from 33-70% of the branches checked, compared with those from 98% of branches not exposed to sunlight, indicating that exposure did kill some of the fungus. Temp. inside the green bags reached 45°C at midday. Branches sealed in green bags and placed in an oven at 45°C for 2-24 h also produced viable spores. It is recommended that bags containing infected branches are buried or burned.

DE - DESCRIPTORS: Fungal-diseases; control-; Pines-; survival-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: Gremmeniella-; Pinus-resinosa; Gremmeniella-abietina; fungi-; Pinus-

GE - GEOGRAPHIC NAMES: Canada-; Ontario-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; Helotiales; Ascomycotina; Eumycota; Pinus; Pinaceae; Pinopsida; gymnosperms; Gremmeniella; North-America; America; Canada

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0096-8714

Record 61 of 393 - TREECD 1973-2000/01

TI - TITLE: Pathogenesis-related proteins in Scots pine seedlings inoculated with *Gremmeniella abietina*.

AU - AUTHOR(S): Derome-K; Capretti-P et-al

AD - ADDRESS OF AUTHOR: Rovaniemi Research Station, Finnish Forest Research Institute, PO Box 16, 96301 Rovaniemi, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Shoot and foliage diseases in forest trees. Proceedings of a Joint Meeting of the IUFRO Working Parties S2.06.02 and S2.06.04, Vallombrosa, Firenze, Italy 6-11 June 1994. 1995, 162-165; 13 ref.

PB - PUBLISHER INFORMATION: Istituto di Patologia e Zoologia Forestale e Agraria, Universita degli Studi di Firenze; Firenze; Italy

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Studies were undertaken to evaluate host-pathogen interactions at the molecular level in current-year needles of Scots pine (*Pinus sylvestris*). Two pine provenances were planted outdoors in pots or directly into the ground at Rovaniemi, Finland. Half of the 3-yr-old seedlings were infected artificially with *Gremmeniella abietina*. Needle samples were taken for protein analysis by the Western blot method with maize anti-PRm 6 and tobacco anti-PR-P antibodies. A minor natural *G. abietina* infection occurred (1.9% of seedlings) in the experimental area prior to inoculation. After inoculation, 12.4% of all seedlings became infected. The number of successful infections was highest (20.5%) in the group of ground-planted, inoculated seedlings. Only a third of a random sample of seedlings proved to be infected, and only one-half of them with *G. abietina*. The Western blot analysis was not very successful in demonstrating the effect of this pathogen on the induction of pathogenesis-related proteins in pine needles in the field, but it does appear to be a useful molecular technique in more strictly controlled (laboratory) experiments.

DE - DESCRIPTORS: forest-trees; resistance-; biochemistry-; interactions-; host-parasite-relationships; plant-pathogens; plant-pathogenic-fungi; fungal-diseases; foliage-; plant-composition; chemical-composition; proteins-; plant-diseases; defence-mechanisms; pathogenesis-related-proteins; plant-pathology

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Gremmeniella*-; *Gremmeniella-abietina*; fungi-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; Helotiales; Ascomycotina; Eumycota; fungi; *Gremmeniella*; European-Union-Countries; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Conference-paper

IB - INTERNATIONAL STANDARD BOOK NUMBER: 88-900074-0-0

Record 62 of 393 - TREECD 1973-2000/01

TI - TITLE: Differences between provenances of *Pinus contorta* var. *latifolia* in resistance to attack by *Gremmeniella abietina*.

AU - AUTHOR(S): Dietrichson-J; Solheim-H

AD - ADDRESS OF AUTHOR: Division of Forest Genetics and Tree Breeding, Norwegian Forest Research Institute, PO Box 61, 1432 As-NLH, Norway.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Scandinavian-Journal-of-Forest-Research*. 1987, 2: 3, 273-279; 10 ref.

PY - PUBLICATION YEAR: 1987

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: A provenance trial of *P. contorta* var. *latifolia* planted in 1969 at Matrand, Eidskog, Norway, was apparently attacked by *G. abietina* in 1984/85. In late autumn the damage was recorded separately on the lower and upper halves of the trees. The provenances ranged in latitude from 40.25°N. to 56.28°N. and in altitude from 2850 to 450 m, the highest from interior western USA and lowest from western Canada. The most heavily attacked provenances were those from southern latitudes and high altitudes. The attack frequency changed gradually from south to north. In order to avoid attack by *G. abietina*, only well-adapted provenances should be used.

DE - DESCRIPTORS: Conifers-; Fungal-diseases; resistance-; Provenance-; Pines-; forest-trees; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Pinus-contorta*; *Gremmeniella*-; *Gremmeniella-abietina*; fungi-

GE - GEOGRAPHIC NAMES: Norway-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; Pinaceae; Pinopsida; gymnosperms; *Pinus*; Helotiales; Ascomycotina; Eumycota; *Gremmeniella*; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0282-7581

Record 63 of 393 - TREECD 1973-2000/01

TI - TITLE: On dieback disease of pines in Austria (*Scleroderris lagerbergii* Gremmen [*Gremmeniella abietina*] and *Cenangium ferruginosum* Fr.).

AU - AUTHOR(S): Donaubauer-E

SO - SOURCE (BIBLIOGRAPHIC CITATION): Translation, -Fisheries-and-Environment-Canada. 1978, No. OOENV TR-1494, 51 pp.; Transl. from 100 Jahre Forstliche Bundesversuchsanstalt (1974) 67-98. See FA 36, 6391. Limited distribution; 65 ref.

PY - PUBLICATION YEAR: 1978

LA - LANGUAGE OF TEXT: English

DE - DESCRIPTORS: conifers-

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Pinus-nigra*; *Pinus-cembra*; *Picea-abies*; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Austria-

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms;

Spermatophyta; plants; *Picea*; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; Central-Europe; Europe

PT - PUBLICATION TYPE: Miscellaneous

Record 64 of 393 - TREECD 1973-2000/01

TI - TITLE: Dieback of Pines in Austria caused by *Scleroderris lagerbergii* and *Cenangium ferruginosum*.

AU - AUTHOR(S): Donaubauer-E

SO - SOURCE (BIBLIOGRAPHIC CITATION): 100-Jahre-Forstliche-Bundesversuchsanstalt. 1974, 67-98; 45 ref.

PB - PUBLISHER INFORMATION: Forstliche Bundesversuchsanstalt.; Vienna; Austria

PY - PUBLICATION YEAR: 1974

LA - LANGUAGE OF TEXT: German

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: Discusses the incidence of these fungi, their economic importance, conditions favouring attack, susceptible species, distribution etc. *Pinus sylvestris*, *P. nigra* s.s., *P. cembra* (when young) and *Picea abies* growing under Pines are reported as hosts of *S. lagerbergii* (or its imperfect form *Brunchorstia pinea*), and the three Pines as hosts of *C. ferruginosum*. The infection areas of the two fungi rarely overlap. Observations, supported by infection trials, indicate that there are differences in virulence and in the morphology of conidia and pycnidia between strains of *S. lagerbergii* attacking *P. cembra* and strains attacking other hosts.

DE - DESCRIPTORS: conifers-

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Pinus-nigra*; *Pinus-cembra*; *Picea-abies*; GREMMENIELLA-ABIETINA

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; *Picea*; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi

PT - PUBLICATION TYPE: Miscellaneous

Record 65 of 393 - TREECD 1973-2000/01

TI - TITLE: Epidemiology of *Gremmeniella abietina* and *G. laricina* during the past 35 years in Austria.

AU - AUTHOR(S): Donaubauer-E; Capretti-P et-al

AD - ADDRESS OF AUTHOR: Institute of Forest Protection, Forest Research Centre, Vienna, Austria.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Shoot and foliage diseases in forest trees. Proceedings of a Joint Meeting of the IUFRO Working Parties S2.06.02 and S2.06.04, Vallombrosa, Firenze, Italy 6-11 June 1994. 1995, 204-209; 6 ref.

PB - PUBLISHER INFORMATION: Istituto di Patologia e Zoologia Forestale e Agraria, Universita degli Studi di Firenze; Firenze; Italy

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Epidemics of both pathogens became obvious in 1967 on all forest plantations on subalpine sites, firstly at higher elevations (2000 to 2300 m) but soon also at lower altitudes. Mortality was observed through marked trees on different sites. Mortality of *Pinus cembra* and *Larix europaea* [L. decidua] reached 100% on many sites. Most serious losses occurred until the late 1970s and decreased gradually thereafter; since the late 1980s both epidemics have slowed down considerably. Pycnidia of either species are at present hard to find. Observations over a long period indicated site influences on the progress of the disease, and also indicated suitable provenances. Genetic studies on *G. abietina* indicated that there was no introduced strain involved in the epidemic. Possible causes of the epidemic, and lessons from inoculation experiments are briefly discussed.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; mortality-; damage-; forest-plantations; subalpine-forests; vegetation-types; site-factors; altitude-; fungal-diseases; plant-diseases; epidemiology-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-cembra*; *Larix-decidua*; *Gremmeniella*-; *pinopsida*-; *fungi*-

GE - GEOGRAPHIC NAMES: Austria-

BT - BROADER DESCRIPTORS: *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; *fungi*; *Pinus*; *Pinaceae*; *Pinopsida*; *gymnosperms*; *Spermatophyta*; *plants*; *Larix*; *Developed-Countries*; *Central-Europe*; *Europe*; *EFTA*; *European-Union-Countries*; *OECD-Countries*

PT - PUBLICATION TYPE: Conference-paper

IB - INTERNATIONAL STANDARD BOOK NUMBER: 88-900074-0-0

Record 66 of 393 - TREECD 1973-2000/01

TI - TITLE: Mycoflora of canker tumours on Siberian larch and some biological features of *Lachnellula willkommii* (Hart.) Dennis.

AU - AUTHOR(S): Dorozhkin-NA; Fedorov-VN

AD - ADDRESS OF AUTHOR: Kuprevich Inst. Exp. Bot., Minsk, USSR.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Mikologiya-i-Fitopatologiya*. 1982, 16: 3, 273-276; 2 tab.; 13 ref.

PY - PUBLICATION YEAR: 1982

LA - LANGUAGE OF TEXT: Russian

AB - ABSTRACT: Of 10 spp. of fungi isolated in Belorussia, *L. willkommii* was the most frequent (>50%), followed by *Cytospora abietis* and *Coniothyrium fuckelii*. In tests on shoots 2 and 3 yr old *L. willkommii* was reisolated in 18 out of 20 cases when inoculated in Mar. *C. abietis* was only slightly pathogenic. *Scleroderris lagerbergii* [*Gremmeniella abietina*], developed better when inoculated in Mar. than in May. In mixed cultures *C. abietis* partially suppressed the development of *L. willkommii* and *Exosporina* sp. and *C. fuckelii* inhibited it completely. The use of these spp. in the control of the pathogen is recommended.

DE - DESCRIPTORS: larch-; biological-control; control-; diseases-; cankers-; forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: fungi-; *Coniothyrium-fuckelii*; *Gremmeniella-abietina*; *Larix-sibirica*; *Larix*-; TRICHOSCYPHELLA-WILLKOMMII

GE - GEOGRAPHIC NAMES: USSR-; Belarus-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Coniothyrium*; Deuteromycotina; Eumycota; fungi; *Gremmeniella*; Helotiales; Ascomycotina; *Larix*; Pinaceae; Pinopsida; gymnosperms; *Trichoscyphella*; Central-Europe; Europe; *Lachnellula*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0026-3648

Record 67 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris canker of pine in Byelorussia.

OT - ORIGINAL NON-ENGLISH TITLE: Skleroderrievyi rak sosny v Belorussii.

AU - AUTHOR(S): Dorozhkin-NA; Fedorov-VN

AD - ADDRESS OF AUTHOR: Kuprevich Inst. Exp. Bot., Byelorussian Acad. Sci., USSR.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Doklady-Akademii-Nauk-BSSR. 1977, 21: 11, 1040-1042; 2 tab.; 6 ref.

PY - PUBLICATION YEAR: 1977

LA - LANGUAGE OF TEXT: Russian

AB - ABSTRACT: *S. lagerbergii* [*Gremmeniella abietina*] attacks many pine spp. introduced into Byelorussia. The perfect state was recorded only once, on desiccated branches of *Pinus murrayana*. The pathogen develops in host tissues mainly in winter. The resistance of certain *Pinus* spp. is recorded on a 4-point scale.

DE - DESCRIPTORS: forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Belarus-; USSR-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Central-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0002-354X

Record 68 of 393 - TREECD 1973-2000/01

TI - TITLE: Mycoflora of cancer tumors [cankers] on Siberian larch and some biological characters of *Lachnellula willkommii* (Hart.) Dennis.

AU - AUTHOR(S): Dorozhkin-NA; Fedorov-VN

AD - ADDRESS OF AUTHOR: Kuprevich Inst. Exp. Bot., Acad. Sci. Belorussian SSR, Minsk, Belorussian SSR.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Translation, -Environment-Canada. 1984, No. OOENV TR-2397, 8pp.; Transl. from *Mikologiya i Fitopatologiya* (1982) 16 (3) 273-276. Ru. Limited distribution; 13 ref.

PY - PUBLICATION YEAR: 1984

LA - LANGUAGE OF TEXT: English

DE - DESCRIPTORS: Cankers-; conifers-

OD - ORGANISM DESCRIPTORS: fungi-; *Larix-sibirica*; *Coniothyrium-fuckelii*; *Gremmeniella-abietina*; TRICHOSCYPHELLA-WILLKOMMII

GE - GEOGRAPHIC NAMES: USSR-; Belarus-

BT - BROADER DESCRIPTORS: *Larix*; Pinaceae; Pinopsida; gymnosperms;

Spermatophyta; plants; *Coniothyrium*; Deuteromycotina; Eumycota; fungi;

Gremmeniella; Helotiales; Ascomycotina; *Trichoscyphella*; Central-Europe; Europe; *Lachnellula*

PT - PUBLICATION TYPE: Journal-article

Record 69 of 393 - TREECD 1973-2000/01

TI - TITLE: Status of pathogenic and physiologic races of *Gremmeniella abietina*.
AU - AUTHOR(S): Dorworth-CE
AD - ADDRESS OF AUTHOR: Great Lakes For. Res. Cent., Sault Ste. Marie, Ont.,
Canada.
SO - SOURCE (BIBLIOGRAPHIC CITATION): Plant-Disease. 1981, 65: 11, 927-931; 3
col. fig.; 29 ref.
PY - PUBLICATION YEAR: 1981
LA - LANGUAGE OF TEXT: English
AB - ABSTRACT: This article, from a contribution to the joint meeting of the
IXth International Congress of Plant Protection and the American
Phytopathological Society, in Washington DC, 1979, reviews the nomenclature of
the conifer pathogen, the physiologic and pathogenic races within the species,
and the diseases it causes.
DE - DESCRIPTORS: races-; reviews-; taxonomy-; forest-trees; conifers-; plant-
pathology
OD - ORGANISM DESCRIPTORS: Pinopsida-; *Gremmeniella-abietina*; fungi-
BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants;
gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi
PT - PUBLICATION TYPE: Journal-article
IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0191-2917

Record 70 of 393 - TREECD 1973-2000/01

TI - TITLE: Comparison of soluble proteins of *Ascocalyx abietis* and *Gremmeniella abietina* by serology and electrophoresis.

AU - AUTHOR(S): Dorworth-CE

AD - ADDRESS OF AUTHOR: Can. For. Serv., Sault Ste. Marie, Ont.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Canadian-Journal-of-Botany*. 1974, 52: 4, 919-922; 1 pl., 1 diag., 1 tab.

PY - PUBLICATION YEAR: 1974

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Three of the homologous reactions of *G. abietina* and the antisera were confluent with the heterologous precipitation lines of *A. abietis* against the same antisera. Acrylamide gel patterns of the separated proteins of the 2 genera differed by at least one band. Evidently these methods may be used in conjunction with classical procedures for diagnosing relationships among the Helotiales.

DE - DESCRIPTORS: proteins-; forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0008-4026

Record 71 of 393 - TREECD 1973-2000/01

TI - TITLE: Reducing damage to red pine by *Gremmeniella abietina* in the Great Lakes - St. Lawrence forest region of Ontario.

AU - AUTHOR(S): Dorworth-CE

AD - ADDRESS OF AUTHOR: Great Lakes For. Res. Cent., Sault St. Marie, Ont., Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Report, -Canadian-Forestry-Service. 1976, No. O-X-252, 22 pp.; 12 fig.; 15 ref.

PY - PUBLICATION YEAR: 1976

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: This pathogen causes significant damage to red pine (*Pinus resinosa*) in north central Ont. and measures must be taken to control the disease in areas where it is established. The use of healthy seedlings and a reduction in infected material and hence aerial spore load are recommended. The 1st 5 yr are most critical with regard to the application of control measures in plantations.

ADDITIONAL ABSTRACT: The 5 main symptoms of this disease of *Pinus resinosa* are described, viz. tree mortality, die-back of lower branches, needle-base discoloration, cankers and green pigment beneath the bark. The apothecium and pycnidium are described and illustrated. Recommendations are made for control of the disease at seedling and sapling stages. The extent of damage in Ontario is assessed.

DE - DESCRIPTORS: fungal-diseases; control-; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella-abietina*; *Pinus-resinosa*

GE - GEOGRAPHIC NAMES: Canada-; Ontario-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; North-America; America; Canada

PT - PUBLICATION TYPE: Miscellaneous

Record 72 of 393 - TREECD 1973-2000/01

TI - TITLE: Relative susceptibility of red pine and jack pine to *Gremmeniella abietina*.

AU - AUTHOR(S): Dorworth-CE

AD - ADDRESS OF AUTHOR: Great Lakes For. Res. Cent., Sault Ste. Marie, Ont., Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Bi-monthly-Research-Notes. 1977, 33: 1, 6.

PY - PUBLICATION YEAR: 1977

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Field trials indicated that jack pine (*Pinus banksiana*) is X2-3 as resistant as red pine (*P. resinosa*) to *G. abietina* on dry sites in the Great Lakes - St. Lawrence Forest Region. Frost damage does not alter the susceptibility of pines to infection by *G. abietina*, although frost or other damaging agents may accelerate the rate and extent of ultimate tree mortality. Up to 90% recovery of *G. abietina* was obtained from infected samples in early spring compared with 30-40% in summer when the fungus is quiescent. Evidently the pathogen resumes active growth by Oct. and occupies new woody tissues unaccompanied by other fungi which themselves become quiescent in the winter and fail to compete with *G. abietina*.

DE - DESCRIPTORS: fungal-diseases; resistance-; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella-abietina*; *Pinus-resinosa*; *Pinus-banksiana*

GE - GEOGRAPHIC NAMES: Canada-; Ontario-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; North-America; America; Canada

PT - PUBLICATION TYPE: Journal-article

Record 73 of 393 - TREECD 1973-2000/01

TI - TITLE: Sequence of formation and resin content of Scleroderris cankers.
AU - AUTHOR(S): Dorworth-CE
SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Forest-Research. 1973,
3: 2, 161-164; 20 ref.
PY - PUBLICATION YEAR: 1973
LA - LANGUAGE OF TEXT: English
LS - LANGUAGE OF SUMMARIES: French
AB - ABSTRACT: Reports further studies on Pinus resinosa in two plantations
previously described [cf. FA 34, 1052] near Searchmont, Ontario, in which it was
found that 95% of the branches infected by S. lagerbergii (Gremmeniella
abietina) were situated less than or equal to 0.8 m above the ground,
predominantly on the N. side of the tree. Spread of infection by the fungus
advanced about one internode/year; when it reached the bole, canker length
increased by ca. 3 cm/year, and eventually 60% of the canker formed lay above
and 40% below the site of stem invasion. The resin content of the cankers was
ca. twice that of adjacent healthy wood, the greatest increase occurring in the
benzene fractions rather than in the petroleum-ether or chloroform/methanol
fractions.
DE - DESCRIPTORS: cankers-; resins-; forest-trees; conifers-; plant-pathology;
pines-
OD - ORGANISM DESCRIPTORS: Pinus-resinosa; Pinus-; Gremmeniella-abietina
BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinus;
Pinaceae; Pinopsida; gymnosperms; Gremmeniella; Helotiales; Ascomycotina;
Eumycota; fungi
PT - PUBLICATION TYPE: Journal-article
IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0045-5067

Record 74 of 393 - TREECD 1973-2000/01

TI - TITLE: Epiphytology of *Scleroderris lagerbergii* in a kettle frost pocket.

AU - AUTHOR(S): Dorworth-CE

AD - ADDRESS OF AUTHOR: Canadian For. Service, Sault Ste. Marie, Ont.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1973, 3: 4, 232-242; 27 ref.

PY - PUBLICATION YEAR: 1973

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: German, French

AB - ABSTRACT: Reports a study of the mortality and survival of 2-year-old seedlings of *Pinus resinosa* and *P. banksiana* after planting out in the Goulais Kettle frost pocket in Central Ontario, Canada, in May 1970. Mortality of seedlings inoculated with conidia of *S. lagerbergii* was ca. twice that of uninoculated seedlings. It is suggested that summer frost damage will reduce survival of all the seedlings, particularly in the deepest part of the pocket, and will increase the rate of colonization by *S. lagerbergii*. Greatly increased mortality of inoculated compared with uninoculated seedlings at the rim of the pocket, where temperatures below freezing were not recorded during the summer months, indicate that *S. lagerbergii* is a primary pathogen. A possible mechanism of 'inoculum intensification' was tested by igniting smoke cartridges at the bottom of the pocket: the resulting smoke patterns showed that spores could be returned to the bottom of such depressions by wind vortices. This mechanism, and another implicating the effects of radiation fog [cf. FA 34, 1052], make it apparent that topographic depressions in general can act as foci for the intensification of epiphytotics of certain forest tree diseases. [Cf. FA 35, 229].

DE - DESCRIPTORS: fungal-diseases; frost-injury; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus-banksiana*; *Pinus-resinosa*; *Pinus*-; *Gremmeniella-abietina*

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 75 of 393 - TREECD 1973-2000/01

TI - TITLE: *Gremmeniella abietina* collected in Alberta, Canada.

AU - AUTHOR(S): Dorworth-CE

AD - ADDRESS OF AUTHOR: Canadian For. Service, Saulte Ste. Marie, Ont., Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Plant-Disease-Reporter*. 1975, 59: 3, 272-273; 7 ref.

PY - PUBLICATION YEAR: 1975

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Reports the occurrence of *G. abietina* (*Scleroderris lagerbergii*) on understorey *Pinus contorta* in Alberta, causing basal discoloration of the needles and branch dieback. This extends the known range of the fungus in N. America, westward from Ontario, by ca. 1650 km. [Cf. FA 34, 1052, 1745]

DE - DESCRIPTORS: foliage-; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus-contorta*; *Pinus*-; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; North-America; America

PT - PUBLICATION TYPE: Journal-article

Record 76 of 393 - TREECD 1973-2000/01

TI - TITLE: Disease problems in intensively managed forests - *Scleroderris lagerbergii*. Possibilities for selection and breeding for resistance.

AU - AUTHOR(S): Dorworth-CE

AD - ADDRESS OF AUTHOR: Great Lakes Forest Res. Centre, Sault Ste. Marie, Ont., Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1974, 4: 4, 228-232.

PY - PUBLICATION YEAR: 1974

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: Relatively stable phenotypes resistant to *S. lagerbergii* [*Gremmeniella abietina*] exist in Europe and selections can be used for breeding and the establishment of seed orchards. In N. America, where introduction of the pathogen may have been recent, natural selection of such phenotypes would be in its initial stages. Several commercially important spp. have not yet been attacked in their native ranges.

ADDITIONAL ABSTRACT: Relatively stable phenotypes resistant to *S. lagerbergii* (*Gremmeniella abietina*) exist in Europe and selections can be used for breeding and the establishment of seed orchards. In N. America, where introduction of the pathogen may have been recent, natural selection of such phenotypes would be in its initial stages.

DE - DESCRIPTORS: breeding-; tree-breeding; forest-trees; ARTIFICIAL-SELECTION; NATURAL-SELECTION; conifers-; broadleaves-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella-abietina*; *Gremmeniella*-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; dicotyledons; angiosperms; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 77 of 393 - TREECD 1973-2000/01

TI - TITLE: Longevity of Scleroderris lagerbergii Gremmen in Pine slash.
AU - AUTHOR(S): Dorworth-CE
SO - SOURCE (BIBLIOGRAPHIC CITATION): Bi-monthly-Research-Notes. 1972, 28: 1, 5.
PY - PUBLICATION YEAR: 1972
LA - LANGUAGE OF TEXT: English
AB - ABSTRACT: Describes studies which showed that S. lagerbergii was capable of surviving for at least 10 months in infected pruned branches of Pinus resinosa in Ontario. The implications for stand sanitation are pointed out.
DE - DESCRIPTORS: foliage-
OD - ORGANISM DESCRIPTORS: Pinus-resinosa; GREMMENIELLA-ABIETINA
BT - BROADER DESCRIPTORS: Pinus; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi
PT - PUBLICATION TYPE: Journal-article

Record 78 of 393 - TREECD 1973-2000/01

TI - TITLE: Stand reduction of red pine by *Gremmeniella abietina*.

AU - AUTHOR(S): Dorworth-CE

AD - ADDRESS OF AUTHOR: Great Lakes For. Res. Cent., Canadian For. Serv., Sault Ste. Marie, Ont. P6A 5M7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Forest-Research. 1979, 9: 3, 316-322; 2 pl.; 26 ref.

PY - PUBLICATION YEAR: 1979

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Damage to *Pinus resinosa* in a 24-yr-old plantation in Ontario, Canada by the N. American race of *G. abietina* occurred primarily within the first 10 yr after plantation establishment when mortality of 50 to 100% was common. Damage to the residual stands occurred as reduction in bole d.b.h., increase in effective plantation edge as a consequence of the infection-pocket mode of disease etiology with consequent reduction in natural pruning and increase in branch diam., and reduction in stand uniformity in terms of stem distribution and stem size. Quantity and quality of products was reduced. From author's summary.

ADDITIONAL ABSTRACT: Damage to *Pinus resinosa* by the N. American race of *G. abietina* occurs primarily within the first 10 yr of establishment of a plantation, mortality often being 50-100%. Damage in the residual stand occurs as a reduction in bole diam. at 1.3 m and reductions in stand uniformity and in quantity and quality of the products.

DE - DESCRIPTORS: fungal-diseases; damage-; economics-; increment-; forest-trees; conifers-; plant-pathology; yields-; pines-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-resinosa*; *Pinus-*

GE - GEOGRAPHIC NAMES: Canada-; Ontario-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; North-America; America; Canada

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0045-5067

Record 79 of 393 - TREECD 1973-2000/01

TI - TITLE: Presence of a late pleistocene drainage system manifested through depredation of red pine by *Gremmeniella abietina*.

AU - AUTHOR(S): Dorworth-CE

AD - ADDRESS OF AUTHOR: Great Lakes For. Res. Cent., Can. For. Serv., PO Box 490, Sault Ste. Marie, Ont. P6A 5M7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Ecology*. 1978, 59: 4, 645-648; 2 pl.; 13 ref.

PY - PUBLICATION YEAR: 1978

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Topographic depressions or frost pockets, noted in previous studies in central Ontario [see FA 36, 964] as being foci for accumulation of airborne spores, were identified in ground and aerial surveys as a prehistoric beach or terrace water drainage system. The system was not revealed by a normal geological survey contour interval but was indicated by the pattern of mortality of planted red pine which was killed by *G. abietina* in the troughs but survived on the boundaries. More recently planted jack pine (shown to be less susceptible to *G. abietina*, see FA 38, 6545) survived better.

DE - DESCRIPTORS: fungal-diseases; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus-banksiana*; *Pinus-resinosa*; *Gremmeniella-abietina*; *Pinus*-

GE - GEOGRAPHIC NAMES: Canada-; Ontario-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; North-America; America; Canada

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0012-9658

Record 80 of 393 - TREECD 1973-2000/01

TI - TITLE: Serological comparisons among selected inoperculate Discomycetes.

AU - AUTHOR(S): Dorworth-CE

SO - SOURCE (BIBLIOGRAPHIC CITATION): Proceedings-of-the-American-Phytopathological-Society. 1974, publ. 1975, 1: 108.

PY - PUBLICATION YEAR: 1974

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Discusses the need for a unified system of nomenclature for certain forest-tree pathogens in the Helotiales. The precipitin reactions of soluble proteins of 16 fungal isolates of six genera were tested with rabbit antiserum produced in response to soluble proteins of *Gremmeniella abietina* [*Scleroderris lagerbergii*] and the degrees of relationship suggested by the results are discussed.

DE - DESCRIPTORS: nomenclature-; taxonomy-; chemotaxonomy-; serology-

OD - ORGANISM DESCRIPTORS: Helotiales-; fungi-; GREMMENIELLA-ABIETINA

BT - BROADER DESCRIPTORS: Ascomycotina; Eumycota; fungi; *Gremmeniella*; Helotiales

PT - PUBLICATION TYPE: Abstract-only

Record 81 of 393 - TREECD 1973-2000/01

TI - TITLE: Influence of inoculum concentration on infection of red pine seedlings by *Gremmeniella abietina*.

AU - AUTHOR(S): Dorworth-CE

AD - ADDRESS OF AUTHOR: Canadian For. Service, Great Lakes Forest Res. Cent., Sault Ste. Marie, Ont., Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Phytopathology*. 1979, 69: 3, 298-300; 1 fig., 1 tab.; 21 ref.

PY - PUBLICATION YEAR: 1979

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Inoculation of *Pinus resinosa* seedlings with a graded series of inocula of the N. America race of *G. abietina* revealed that 2.5×10^8 conidia/m² of transplant-bed area were required to kill 50% of the seedlings. The capacity of the pathogen to colonize an artificial medium was generally reduced after a single passage through the host, although 2% of the isolates recovered from the host showed enhanced growth.

DE - DESCRIPTORS: fungal-diseases; methodology-; seedlings-; forest-trees; conifers-; plant-pathology; research-; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella-abietina*; *Pinus-resinosa*

BT - BROADER DESCRIPTORS: Spermatophyta; plants; trees; woody-plants; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0031-949X

Record 82 of 393 - TREECD 1973-2000/01

TI - TITLE: Epidemiology of *Scleroderris lagerbergii* in Central Ontario.

AU - AUTHOR(S): Dorworth-CE

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Botany. 1972, 50: 4, 751-765 + 1 pl.; ORS; 47 ref.

PY - PUBLICATION YEAR: 1972

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Attacks by *S. lagerbergii* in central Ontario are most severe in topographical depressions; the resulting disease was for long thought to be associated with frost damage. Observations in depressions that resembled frost pockets, however, indicated that extensive damage to regeneration of *Pinus resinosa* could be attributed primarily to amplified spore deposition in the depressions and rapid intensification of the disease in the presence of prolonged periods of high r.h. Topographic projections, photos, temperature profiles and spore-collection data support this thesis. Vertical restriction of attack to foliage within ca. 1.5 m of the ground is attributed to radiation fog, which prolongs the incubation period afforded to the fungus. Effects of edaphic variation, ground vegetation and snow cover are evaluated. Snow is important in modifying extremes of winter and early spring temperatures to the advantage of the fungus. Frost damage and infection by *S. lagerbergii* both result in plantation failures in topographic depressions.

DE - DESCRIPTORS: injuries-; frost-; conifers-

OD - ORGANISM DESCRIPTORS: *Pinus-resinosa*; GREMMENIELLA-ABIETINA

BT - BROADER DESCRIPTORS: *Pinus*; Pinaceae; Pinopsida; gymnosperms;

Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0008-4026

Record 83 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris lagerbergii Gremmen in the boreal forest of Ontario.

AU - AUTHOR(S): Dorworth-CE; Buchan-PE

SO - SOURCE (BIBLIOGRAPHIC CITATION): Information-Report, -Forest-Research-Laboratory, -Sault-Ste.-Marie, -Ontario. 1972, No. O-X-156, 9 pp.

PY - PUBLICATION YEAR: 1972

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Reports the distribution and establishment of the disease on Pinus banksiana, causing serious damage to young stands and destruction of seedling regeneration in older stands. [Cf. FA 33, 6455].

DE - DESCRIPTORS: conifers-

OD - ORGANISM DESCRIPTORS: Pinus-banksiana; GREMMENIELLA-ABIETINA

BT - BROADER DESCRIPTORS: Pinus; Pinaceae; Pinopsida; gymnosperms;

Spermatophyta; plants; Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Miscellaneous

Record 84 of 393 - TREECD 1973-2000/01

TI - TITLE: Impact of *Gremmeniella abietina* in a jack pine plantation.

AU - AUTHOR(S): Dorworth-CE; Davis-CN

AD - ADDRESS OF AUTHOR: Great Lakes Forest Res. Cent., Sault Ste. Marie, Ont., Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Tree-Planters'-Notes*. 1983, 34: 1, 21-24; 2 fig., 1 tab.; 9 ref.

PY - PUBLICATION YEAR: 1983

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Infection in a new *Pinus banksiana* plantation (replacing one of *P. resinosa* decimated by the pathogen) in Ont. increased rapidly during the first 9 yr, but tree mortality and main stem damage was negligible.

DE - DESCRIPTORS: pines-; epidemiology-; cankers-; diseases-; dieback-; forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-resinosa*; *Pinus-banksiana*; *Pinus-*

GE - GEOGRAPHIC NAMES: Ontario-; Canada-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Canada; North-America; America

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0096-8714

Record 85 of 393 - TREECD 1973-2000/01

TI - TITLE: Current and predicted future impact of the North American race of *Gremmeniella abietina* on jack pine in Ontario.

AU - AUTHOR(S): Dorworth-CE; Davis-CN

AD - ADDRESS OF AUTHOR: Great Lakes Forest Res. Cent., Sault Ste. Marie, Ont., Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Information-Report, -Canadian-Forestry-Service. 1982, No. 0-X-342, 18 pp.; 7 fig., 4 tab.; 22 ref.

PY - PUBLICATION YEAR: 1982

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: The race is not an economically serious threat to plans for regeneration of *Pinus banksiana* forest in Ont., although there has been, and probably will continue to be, extensive mortality in local situations. The serious effects are usually limited to cultivated (plantations, nursery) red pine (*P. resinosa*). *P. banksiana* needs intensive eradication treatment only where disease reduction is desired for reasons other than preservation of the immediate crop. The need for restriction of movement of the pathogen between geographic areas is emphasized.

DE - DESCRIPTORS: pines-; forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-*

GE - GEOGRAPHIC NAMES: Ontario-; Canada-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Pinaceae; Pinopsida; gymnosperms; Canada; North-America; America

PT - PUBLICATION TYPE: Miscellaneous

Record 86 of 393 - TREECD 1973-2000/01

TI - TITLE: Comparisons among isolates of *Gremmeniella abietina* by means of growth rate, conidia measurement, and immunogenic reaction.

AU - AUTHOR(S): Dorworth-CE; Krywienczyk-J

AD - ADDRESS OF AUTHOR: Canadian For. Service, Great Lakes For. Res. Cent., Sault Ste. Marie, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Botany. 1975, 53: 21, 2506-2525; 1 col. pl., 4 fig., 23 graphs, 3 tab.

PY - PUBLICATION YEAR: 1975

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Growth records among a worldwide collection of isolates of *G. abietina* revealed wide variation in response at different temps. Overall the fungus was identified as a facultative psychrophile with extended capacity for growth at low temps. and a thermal death or growth suppression point between 25 and 30 deg C. The gross appearance of cultures, extent of spore septation and appearance of heavily sporulating and pionnotal variants provide evidence to support a concept of separate N. American and European physiologic races. This concept is further supported by comparisons among soluble proteins using immunologic methods, as a result of which a 3rd (Asian) race is proposed. *G. abietina* is defined as a single species in geographic disjunction with a min. of 3 physiologic races. Formal subdivision of the sp. is discouraged in the absence of overwhelming evidence in support of such a requirement. The use of *G. abietina* and similar organisms with complex host ranges and aeriually disseminated spore states as models in biogeographic analyses will be highly problematic if not impossible.

ADDITIONAL ABSTRACT: Studies on 40 isolates of *G. abietina* [*Scleroderris lagerbergii*] from N. America, western Europe and Japan showed that the fungus is a single species with a multiplicity of growth forms in culture and at least three physiological races in geographic disjunction. *G. abietina* is defined as a facultative psychrophile with an extended capacity for growth at low temperatures and an intolerance of temperatures >25-30 deg C.

DE - DESCRIPTORS: forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0008-4026

Record 87 of 393 - TREECD 1973-2000/01

TI - TITLE: New York isolates of *Gremmeniella abietina* (*Scleroderris lagerbergii*) identical in immunogenic reaction to European isolates.

AU - AUTHOR(S): Dorworth-CE; Krywienczyk-J; Skilling-DD

AD - ADDRESS OF AUTHOR: Great Lakes For. Res. Cent., Canadian For. Serv., Sault Ste. Marie, Ont., Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Plant-Disease-Reporter*. 1977, 61: 10, 887-890; 11 ref.

PY - PUBLICATION YEAR: 1977

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Comparisons of *G. abietina* isolates from various conifers indicated that a recent isolate from New York State is immunologically identical to isolates belonging to the European race. The North American race differs from both the New York isolate and isolates of the European race. It is concluded that either an introduced European isolate or a mutant of the North American race is responsible for recent plantation losses in New York.

DE - DESCRIPTORS: conifers-; fungal-diseases; forest-trees

OD - ORGANISM DESCRIPTORS: *Gremmeniella*-; *Gremmeniella-abietina*; *Pinus-resinosa*; *Pinus-sylvestris*

GE - GEOGRAPHIC NAMES: New-York; USA-; Canada-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Helotiales; Ascomycotina; Eumycota; fungi; *Gremmeniella*; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Middle-Atlantic-States-of-USA; Northeastern-States-of-USA; USA; North-America; America

PT - PUBLICATION TYPE: Journal-article

Record 88 of 393 - TREECD 1973-2000/01

TI - TITLE: New York isolates of *Gremmeniella abietina* (*Scleroderris lagerbergii*) identical in immunogenic reaction to European isolates.

AU - AUTHOR(S): Dorworth-CE; Krywienczyk-J; Skilling-DD

AD - ADDRESS OF AUTHOR: Great Lakes For. Res. Cent. and Insect Path. Res. Inst., Canadian For. Serv., P.O. Box 490, Sault Ste. Marie, Ontario, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Plant-Disease-Reporter*. 1977, 61: 10, 887-890; 1 pl.; 11 ref.

PY - PUBLICATION YEAR: 1977

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: [See FA 37, 401, 7291] Immunogenic comparisons showed that newly-found isolates of *G. abietina* are identical to the more virulent European isolates and dissimilar to the standard North American isolates. It is suggested that either an introduced European isolate or a mutant of the North American race is the cause of recent red pine (*Pinus resinosa*) and Scots pine (*P. sylvestris*) mortality in New York state.

ADDITIONAL ABSTRACT: Comparisons of *G. abietina* (mostly from *Pinus* spp.) showed that a new and highly virulent NY isolate was immunologically identical to its European counterpart. The common N. American race was different from both. It is suggested that either an introduced European isolate or a mutant of the N. American race has caused recent losses in NY.

DE - DESCRIPTORS: fungal-diseases; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-resinosa*; *Pinus-sylvestris*; *Pinus*-

GE - GEOGRAPHIC NAMES: New-York; USA-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Middle-Atlantic-States-of-USA; Northeastern-States-of-USA; USA; North-America; America

PT - PUBLICATION TYPE: Journal-article

Record 89 of 393 - TREECD 1973-2000/01

TI - TITLE: Comparisons between serologic and gas chromatographic techniques for characterization of *Gremmeniella abietina* and related species.

AU - AUTHOR(S): Dorworth-CE; Webb-DP; Krywienczyk-J; McNamara-D

AD - ADDRESS OF AUTHOR: Great Lakes Forest Res. Cent., Sault Ste. Marie, Ont., Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1982, 12: 4-5, 209-217; 1 fig., 2 tab.; 23 ref.

PY - PUBLICATION YEAR: 1982

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: Of the techniques examined for mass screening of European, N. American and Asian isolates of *G. abietina* from Coniferae only gas-liquid chromatography provided consistent results but even these failed to conform uniformly with the physiologic race or serovar system already erected by means of serology. A random selection of Helotiales, however, reacted serologically, indicating a graded degree of relatedness that could provide valuable subordinate information for classic studies in morphological taxonomy.

DE - DESCRIPTORS: classification-; techniques-; identification-; fungal-diseases; methodology-; forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: Pinopsida-; *Gremmeniella-abietina*; fungi-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 90 of 393 - TREECD 1973-2000/01

TI - TITLE: Diseases cause by *Gremmeniella abietina* (Lagerb.) Schlapfer-Bernhard and *Cenangium ferruginosum* Fr. ex Fr. in Scots pine (*Pinus sylvestris* L.) stands in Poland.

AU - AUTHOR(S): Duda-B; Sierota-Z; Laflamme-G et-al

AD - ADDRESS OF AUTHOR: Forest Research Institute, Bitwy Warszawskiej 1920 r. Nr.3, 00-973 Warsaw, Poland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Foliage, shoot and stem diseases. Proceedings of the IUFRO WP 7.02.02 meeting, Quebec City, May 25-31, 1997. Information-Report -Laurentian-Forestry-Centre,-Quebec-Region,-Canadian-Forest-Service. 1998, No. LAU-X-122, 90-94; 11 ref.

PB - PUBLISHER INFORMATION: Laurentian Forestry Centre, Canadian Forest Service; Sainte-Foy; Canada

PY - PUBLICATION YEAR: 1998

LA - LANGUAGE OF TEXT: English

DE - DESCRIPTORS: IUFRO-; fungal-diseases; plant-pathogenic-fungi; plant-pathogens; plant-diseases; forest-trees; shoots-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-sylvestris*; Ascomycotina-; Pinopsida-; fungi-

GE - GEOGRAPHIC NAMES: Poland-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; Central-Europe; Europe; Developed-Countries

PT - PUBLICATION TYPE: Conference-paper; Journal-article

Record 91 of 393 - TREECD 1973-2000/01

TI - TITLE: Sequence-tagged sites (STS) for studies of molecular epidemiology of scleroderris canker of conifers.

AU - AUTHOR(S): Dusabenyagasani-M; Lecours-N; Hamelin-RC

AD - ADDRESS OF AUTHOR: Natural Resources Canada, Canadian Forest Service, Laurentian Forestry Centre, 1055 du PEPS, PO Box 3800, Sainte-Foy, Que., Canada, G1V 4C7.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Theoretical-and-Applied-Genetics. 1998, 97: 5-6, 789-796; 39 ref.

PY - PUBLICATION YEAR: 1998

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Scleroderris canker is a damaging disease of conifers caused by *Gremmeniella abietina* var. *abietina*. This pathogen is known to comprise a number of distinct races and biotypes. In North America, 2 races, an indigenous North American race and an introduced European race, are present. In Europe, 3 distinct biotypes have been reported within the European race: one in the Alps, another in Fennoscandia, and a third that overlaps with the first two. Random amplified microsatellites (RAMS) and DNA sequencing with arbitrary primer pairs (SWAPP) was used to design 5 PCR primer pairs flanking polymorphic regions of the genome of the European race of *G. abietina*. Length polymorphisms produced by repeats of basic units in microsatellites were distinguished by electrophoresis of PCR products in agarose gels, and point mutations were identified by low-ionic-strength single-strand conformation polymorphisms. Some primers generated private alleles in the European biotype and the psychrophilic Alpine and Fennoscandian biotypes, i.e., alleles that were fixed within the 2 groups but polymorphic between them. Conversely, one pair of primers amplified at least 3, 4 and 7 alleles in the Fennoscandian, Alpine and European biotypes, respectively. The Alpine and Fennoscandian biotypes, although geographically separated, were genetically more closely related to one another than to the European biotype, which has an overlapping distribution. However, both Alpine and Fennoscandian biotypes have similar ecotypic adaptation. It is suggested that the evolution of these biotypes could be explained by their geographic separation following the end of the last glaciation.

DE - DESCRIPTORS: polymerase-chain-reaction; epidemiology; alleles; biotypes; DNA; genomes; microsatellites; mutations; plant-diseases; plant-pathogens; plant-pathogenic-fungi; molecular-genetics; forest-trees; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; Pinopsida; fungi-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; gymnosperms; Spermatophyta; plants

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0040-5752

Record 92 of 393 - TREECD 1973-2000/01

TI - TITLE: New molecular approaches to study molecular epidemiology of scleroderris canker [Gremmeniella abietina].
AU - AUTHOR(S): Dusabenyagasani-M; Lecours-N; Hamelin-RC; Laflamme-G et-al
AD - ADDRESS OF AUTHOR: Natural Resources Canada, Canadian Forest Service, Laurentian Forestry Centre, Sainte-Foy, QC G1V 4C7, Canada.
SO - SOURCE (BIBLIOGRAPHIC CITATION): Foliage, shoot and stem diseases. Proceedings of the IUFRO WP 7.02.02 meeting, Quebec City, May 25-31, 1997. Information-Report -Laurentian-Forestry-Centre,-Quebec-Region,-Canadian-Forest-Service. 1998, No. LAU-X-122, 200-207; 13 ref.
PB - PUBLISHER INFORMATION: Laurentian Forestry Centre, Canadian Forest Service; Sainte-Foy; Canada
PY - PUBLICATION YEAR: 1998
LA - LANGUAGE OF TEXT: English
DE - DESCRIPTORS: IUFRO-; fungal-diseases; plant-pathogenic-fungi; plant-pathogens; plant-diseases; forest-trees; cankers-; epidemiology-; molecular-biology; techniques-; molecular-genetics; plant-pathology
OD - ORGANISM DESCRIPTORS: Gremmeniella-abietina
BT - BROADER DESCRIPTORS: Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi
PT - PUBLICATION TYPE: Conference-paper; Journal-article

Record 93 of 393 - TREECD 1973-2000/01

TI - TITLE: Regional variation in cold hardiness of Sakhalin fir (*Abies sachalinensis* Mast.) in Hokkaido, Japan.

AU - AUTHOR(S): Eiga-S; Sakai-A; Li-PH

AD - ADDRESS OF AUTHOR: Hokkaido For. Tree Breeding Inst., Ebetsu, Hokkaido, 069 Japan.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Plant cold hardiness. 1987, 169-182; 15 ref.

PB - PUBLISHER INFORMATION: Alan R. Liss, Inc.; New York; USA

PY - PUBLICATION YEAR: 1987

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Frost resistance was assessed in ramets from 457 plus trees from 32 natural stands. The distribution of freezing injury was nearly normal for ramets from western Hokkaido, while in those from eastern Hokkaido slight to moderate injuries were most frequent. The variance of frost injury decreased with increasing resistance in the ramets from eastern, but not western, Hokkaido, suggesting that natural selection has operated most strongly where winter is most severe. Freezing injury index in Nov. was correlated with longitude, av. temp. in Oct. and max. snow depth in Jan. at the site of origin. Frost resistance in midwinter was correlated with longitude and Jan. snow depth. Six characters related to winter survival (resistance to freezing, winter desiccation, late frost, mechanical damage by snow and *Scleroderris* canker, and proportion of lammas shoots) showed conspicuous differentiation patterns between populations that reflected the climatic pattern of the area.

DE - DESCRIPTORS: provenance-trials; Frost-resistance; conifers-

OD - ORGANISM DESCRIPTORS: *Abies-sachalinensis*; *Abies-*

GE - GEOGRAPHIC NAMES: Japan-; Hokkaido-

BT - BROADER DESCRIPTORS: *Abies*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; East-Asia; Asia; Japan

PT - PUBLICATION TYPE: Conference-paper

IB - INTERNATIONAL STANDARD BOOK NUMBER: 0-8451-1804-8

Record 94 of 393 - TREECD 1973-2000/01

TI - TITLE: Risks in planting Corsican and Austrian Pine determined from changes in area.

AU - AUTHOR(S): Elsland-M-ten-C-van; Goor-CP-van

SO - SOURCE (BIBLIOGRAPHIC CITATION): Nederlands-Bosbouw-Tijdschrift. 1974, 46: 9, 171-180; 7 ref.

PY - PUBLICATION YEAR: 1974

LA - LANGUAGE OF TEXT: Dutch

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: Compares data on the areas of these two Pines in the various regions of Holland, from inventories made between 1945 and 1974. The areas under the two species have decreased over the period, the reduction in area increasing from south to north. Stands suffer from dieback caused by *Brunchorstia pinea* [*Scleroderris lagerbergii*], stem canker caused by *Crumenula sororia*, and a non-lethal disorder called top-dying. Annual losses in stands, mainly caused by dieback, are ca. 2% in the north, 1% in the centre, and <0.5% in the south of the country. These Pines should not be planted in the north of the country.

DE - DESCRIPTORS: plantations-; conifers-

OD - ORGANISM DESCRIPTORS: *Pinus-nigra*; CRUMENULOPSIS-SORORIA; GREMMENIELLA-ABIETINA

GE - GEOGRAPHIC NAMES: Netherlands-

BT - BROADER DESCRIPTORS: *Pinus*; Pinaceae; Pinopsida; gymnosperms;

Spermatophyta; plants; *Crumenulopsis*; Helotiales; Ascomycotina; Eumycota; fungi; *Gremmeniella*; Western-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

Record 95 of 393 - TREECD 1973-2000/01

TI - TITLE: Genetic evaluation, multiple-trait selection criteria and genetic thinning of *Pinus contorta* var. *latifolia* seed orchards in Sweden.

AU - AUTHOR(S): Ericsson-T; Danell-O

AD - ADDRESS OF AUTHOR: Forestry Research Institute of Sweden (SkogForsk), Box 3, S-918 21 Savar, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Scandinavian-Journal-of-Forest-Research. 1995, 10: 4, 313-325; 11 ref.

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Seedling seed orchards were established in Sweden with 1112 open pollinated progenies of *Pinus contorta* plus-trees, selected from 88 wild stands in western Canada. The progenies were also grown in Swedish test plantations. Breeding values (best linear unbiased predictors) were calculated for tree condition, height, and ramicorn whorl frequency, assessed at ages ranging from 8- to 12-yr-old. On the harshest sites, damage caused by weather and fungi, e.g. *Gremmeniella abietina*, were also evaluated. Categorical data were transformed into values on a normal score scale to improve the efficiency of the evaluation. Breeding values for all assessed traits were combined to form total-value indices. These indices were then used to guide the genetic thinning of the seed orchards, where single trees were selected from groups of four. The genetic gains resulting from the genetic thinning operations on 1010 of the progenies were estimated to range from 2% for the milder utilization areas to 6% for the harshest. It should be possible to double or triple gains by harvesting seed selectively from the five superior families.

DE - DESCRIPTORS: forest-trees; selection-criteria; seed-orchards; evaluation-; fungal-diseases; plant-pathogens; plant-pathogenic-fungi; plant-diseases; plant-height; plant-morphology; climate-; disease-resistance; tree-breeding; breeding-; seed-production; thinning-; plant-pathology

OD - ORGANISM DESCRIPTORS: *pinus-contorta*; *Gremmeniella-abietina*; fungi-

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms;

Spermatophyta; plants; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi;

OECD-Countries; Developed-Countries; EFTA; European-Union-Countries;

Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0282-7581

Record 96 of 393 - TREECD 1973-2000/01

TI - TITLE: Genetic variation of *Pinus contorta* var. *latifolia* breeding material in Sweden.

AU - AUTHOR(S): Ericsson-T; Danell-O; Andersson-B

AD - ADDRESS OF AUTHOR: Forestry Research Institute of Sweden, Box 3, 910 36 Saver, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Forest-Research. 1994, 24: 4, 723-729; 22 ref.

PY - PUBLICATION YEAR: 1994

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Genetic parameters were estimated, using the restricted maximum likelihood method, for 1112 open-pollinated progenies of *Pinus contorta* var. *latifolia* plus trees selected from among 83 undisturbed stands in the interior of the Yukon and British Columbia, and 5 similar stands in Alberta. The progenies were grown in test plantations established throughout Sweden during the period 1979-81. Tree condition, height and ramicorn [steeply ascending branches] whorl frequency were assessed at ages ranging between 8 and 12 years. On the harshest sites, weather and fungal damage (e.g. caused by *Gremmeniella abietina*) were also assessed. Categorical data were transformed into values on a normal score scale to improve the efficiency of the evaluation. The genetic coefficients of variation in tree height ranged between 8 and 17%. The heritabilities for tree height, including stand genetic variation, were estimated to range between 0.10 and 0.54. Tree height was generally positively correlated with stem leaning and ramicorn whorl frequency. At one site, heritability estimates for stem injury and/or canker, and fungal and/or weather damage were 0.12 and 0.18, respectively.

DE - DESCRIPTORS: plus-trees; plant-height; branches-; climate-; fungal-diseases; plant-pathogens; plant-pathogenic-fungi; plant-diseases; heritability-; leaning-stems; damage-; plant-morphology; forest-trees; tree-breeding; progeny-testing; genetic-variation; height-; habit-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Helotiales*-; *Pinus-contorta*

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: pathogens; fungi; plant-pathogens; trees; woody-plants; Spermatophyta; plants; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; EFTA; Developed-Countries; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0045-5067

Record 97 of 393 - TREECD 1973-2000/01

TI - TITLE: The success of artificial regeneration of Scots Pine in Northern Finland and the origin of seed.

AU - AUTHOR(S): Etholen-K

SO - SOURCE (BIBLIOGRAPHIC CITATION): Folia-Forestalia,-Institutum-Forestale-Fenniae. 1972, No. 160, 27 pp.; 5 ref.

PY - PUBLICATION YEAR: 1972

LA - LANGUAGE OF TEXT: Finnish

LS - LANGUAGE OF SUMMARIES: English, Russian

AB - ABSTRACT: A study of 352 artificially regenerated stands of *Pinus sylvestris* (total 2193 ha) in Lapland and NE Finland, established between 1956 and 1964, revealed very low survival (seedling survival averaged 39.2%), and only 5.2% of the stands investigated had >1400 surviving seedlings per ha. Much of the mortality appeared to be due to *Scleroderris lagerbergii*. The results confirmed Sarvas's hypothesis that genetic adaptive variation stops at the temperature sum of 950 d.d. [day-degrees].

DE - DESCRIPTORS: ARTIFICIAL-REGENERATION; foliage-; conifers-

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; GREMMENIELLA-ABIETINA

BT - BROADER DESCRIPTORS: *Pinus*; Pinaceae; Pinopsida; gymnosperms;

Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Miscellaneous

Record 98 of 393 - TREECD 1973-2000/01

TI - TITLE: Summary of Plant Quarantine Pest and Disease Situations in Canada, 1995.

AU - AUTHOR(S): Farvin-R (Coordinator)

AD - ADDRESS OF AUTHOR: Animal and Plant Health Directorate, 3851 Fallowfield Road, Nepean, Ont. K2H 8P9, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1996, i+56 pp.; 7 ref.

PB - PUBLISHER INFORMATION: Agriculture and Agri-Food Canada, Plant Protection Division; Ottawa; Canada

PY - PUBLICATION YEAR: 1996

LA - LANGUAGE OF TEXT: English, French

AB - ABSTRACT: This report summarizes survey activities conducted during 1995 for the following quarantinable plant pests and diseases: *Grapholita molesta*, *Lymantria dispar*, *Popillia japonica*, *Rhagoletis mendax*, *R. pomonella*, *Tomicus piniperda*, *Yponomeuta malinellus*, *Globodera* spp., *Heterodera glycines*, *Gremmeniella abietina*, *Gymnosporangium fuscum*, *Lachnellula* [*Trichoscyphella*] *willkommii*, *Ophiostoma ulmi* and little cherry virus disease.

DE - DESCRIPTORS: plant-diseases; plant-pathogens; plant-pathogenic-fungi; insect-pests; plant-parasitic-nematodes; quarantine-; plant-pests; plant-nematology; control-; nematology-; plant-pathology; agricultural-entomology

OD - ORGANISM DESCRIPTORS: plant-viruses; *Globodera*-; *Heterodera-glycines*; *Grapholita-molesta*; *Lymantria-dispar*; *Popillia-japonica*; *Rhagoletis-mendax*; *Rhagoletis-pomonella*; *Tomicus-piniperda*; *Yponomeuta-malinellus*

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: viruses; Heteroderidae; Nematoda; invertebrates; animals; *Heterodera*; *Grapholita*; Tortricidae; Lepidoptera; insects; arthropods; *Lymantria*; Lymantriidae; *Popillia*; Scarabaeidae; Coleoptera; *Rhagoletis*; Tephritidae; Diptera; *Tomicus*; Scolytidae; *Yponomeuta*; Yponomeutidae; OECD-Countries; Commonwealth-of-Nations; Developed-Countries; North-America; America

PT - PUBLICATION TYPE: Miscellaneous

Record 99 of 393 - TREECD 1973-2000/01

TI - TITLE: Summary of plant quarantine pest and disease situations in Canada, 1997.

AU - AUTHOR(S): Favrin-R (Coordinator)

AD - ADDRESS OF AUTHOR: Science Division, Canadian Food Inspection Agency, 3851 Fallowfield Road, Nepean, Ont. K2H 8P9, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1998, 46 pp. (En) + 49 pp. (Fr); 1 ref.

PB - PUBLISHER INFORMATION: Canadian Food Inspection Agency; Nepean, Ontario; Canada

PY - PUBLICATION YEAR: 1998

LA - LANGUAGE OF TEXT: English, French

AB - ABSTRACT: This report summarizes survey activities conducted in 1997 for plant pests and diseases of quarantine significance to Canada, providing pest distribution information and maps for the following: insect pests *Grapholita molesta*, *Lymantria dispar*, *Popillia japonica*, *Rhagoletis mendax*, *R. pomonella*, *Tomicus piniperda* and *Yponomeuta malinellus*; nematode pest *Heterodera glycines*; and fungal pathogens *Gremmeniella abietina*, *Lachnellula willkommii* [*Trichoscyphella willkommii*], *Ophiostoma ulmi* [*Ceratocystis ulmi*] and *Puccinia horiana*. A phytosanitary note on little cherry closterovirus disease is also provided.

DE - DESCRIPTORS: surveys-; quarantine-; insect-pests; plant-pests; plant-parasitic-nematodes; plant-pathogenic-fungi; plant-diseases; plant-nematology; nematology-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Grapholita-molesta*; *Lymantria-dispar*; *Popillia-japonica*; *Rhagoletis-mendax*; *Rhagoletis-pomonella*; *Tomicus-piniperda*; *Yponomeuta-malinellus*; *Heterodera-glycines*; *Gremmeniella-abietina*; *Trichoscyphella-willkommii*; *Ceratocystis-ulmi*; *Puccinia-horiana*; plant-viruses

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: *Grapholita*; *Tortricidae*; *Lepidoptera*; insects; arthropods; invertebrates; animals; *Lymantria*; *Lymantriidae*; *Popillia*; *Scarabaeidae*; *Coleoptera*; *Rhagoletis*; *Tephritidae*; *Diptera*; *Tomicus*; *Scolytidae*; *Yponomeuta*; *Yponomeutidae*; *Heterodera*; *Heteroderidae*; *Nematoda*; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; *Trichoscyphella*; *Ceratocystis*; *Ophiostomatales*; *Puccinia*; *Uredinales*; *Basidiomycotina*; viruses; OECD-Countries; Commonwealth-of-Nations; Developed-Countries; North-America; America

PT - PUBLICATION TYPE: Miscellaneous

Record 100 of 393 - TREECD 1973-2000/01

TI - TITLE: Maritimes region.

AU - AUTHOR(S): Forbes-RS; Underwood-GR; Sickle-GA-Van

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Forestry-Service:-Annual-Report-
of-the-Forest-Insect-and-Disease-Survey,-Department-of-the-Environment,-
Canadian-Forestry-Service,-1971. 1972, 19-33.

PB - PUBLISHER INFORMATION: Ottawa.; Canada

PY - PUBLICATION YEAR: 1972

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Important diseases included *Scleroderris lagerbergii* on several
pine spp. in NB [RPP 51, 3590], the record on Austrian pine (*Pinus nigra*) being
new for N. America.

DE - DESCRIPTORS: forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *GREMMENIELLA-ABIETINA*

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae;
Pinopsida; gymnosperms; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi;
North-America; America

PT - PUBLICATION TYPE: Miscellaneous

Record 101 of 393 - TREECD 1973-2000/01

TI - TITLE: Potential insect transmission of *Scleroderris lagerbergii* by scolytid beetles.

AU - AUTHOR(S): Frederick-DJ; Sloan-NF; Skowron-WS Jr.

AD - ADDRESS OF AUTHOR: Michigan Technological University, Houghton, MI 49931, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Plant-Disease-Reporter*. 1976, 60: 5, 411-413; 8 ref.

PY - PUBLICATION YEAR: 1976

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: *Scleroderris lagerbergii* is continuing to gain importance in stands of jack pine (*Pinus banksiana*) and red pine (*P. resinosa*) in North America. Studies were carried out in Michigan on the possible role of insects in the dissemination of the fungus with *Pityophthorus cariniceps* Lec., *P. pulchellus* Eichh. and *Ips caelatus* Eichh. (*Orthotomicus caelatus*), which were the most common of the insects found in a naturally occurring jack pine seedling stand. Beetles placed on conidia-bearing cultures of *S. lagerbergii* were able to infect caged and wounded seedlings of *Pinus banksiana* in the laboratory, and infection was also induced by naturally contaminated beetles. The data suggest that insects may be important vectors of this disease under specific conditions in conifer stands.

DE - DESCRIPTORS: transmission-; insect-pests; disease-vectors; trees-; forest-trees; conifers-; plant-diseases; agricultural-entomology; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus-banksiana*; *Scolytidae*-; *Pinus-resinosa*; *Pinus*-; *Coleoptera*-; *Gremmeniella-abietina*; arthropods-

GE - GEOGRAPHIC NAMES: USA-; Michigan-; North-America

BT - BROADER DESCRIPTORS: arthropod-pests; pests; animals; arthropods; invertebrates; insects; woody-plants; *Spermatophyta*; plants; trees; *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; *Coleoptera*; insect-pests; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; North-America; America; East-North-Central-States-of-USA; North-Central-States-of-USA; USA; Lake-States-of-USA; *Orthotomicus*; *Scolytidae*

PT - PUBLICATION TYPE: Journal-article

Record 102 of 393 - TREECD 1973-2000/01

TI - TITLE: A dendrochronological study on the dying-off of young conifers in an afforestation at the Alpine timberline.

AU - AUTHOR(S): Frei-Raj-S; Schweingruber-FH; Raj-SF

AD - ADDRESS OF AUTHOR: Eidgenossische Forschungsanstalt fur Wald, Schnee und Landschaft, Zurcherstrasse, 8903 Birmensdorf, Switzerland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Dendrochronologia. 1993, No. 11, 159-164; 10 ref.

PY - PUBLICATION YEAR: 1993

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: German, Italian

AB - ABSTRACT: Growth rings were analysed from young dead *Pinus mugo*, *P. cembra* and *Larix decidua* trees, planted above the present day treeline in Davos, Switzerland, in a study of growth conditions and dieback due to a combination of climatic factors and pathogenic fungi (snow blight (*Phacidium infestans*) and *Gremmeniella* spp.).

DE - DESCRIPTORS: forest-trees; plant-pathogenic-fungi; plant-pathogens; plant-anatomy; growth-rings; wood-anatomy; climate-; climatic-factors; snow-; snow-cover; afforestation-; treelines-; dendrochronology-; dieback-; fungal-diseases

OD - ORGANISM DESCRIPTORS: *Pinus-cembra*; *Pinus-mugo*; *Larix-decidua*; pinopsida-; *Phacidium-infestans*; *Gremmeniella*-

GE - GEOGRAPHIC NAMES: Switzerland-

BT - BROADER DESCRIPTORS: *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Larix*; *Phacidium*; Helotiales; Ascomycotina; Eumycota; fungi; EFTA; Developed-Countries; OECD-Countries; Western-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

Record 103 of 393 - TREECD 1973-2000/01

TI - TITLE: Development of a more efficient serological test for differentiation of strains of *Gremmeniella abietina*.

AU - AUTHOR(S): Gotlieb-AR; Liese-AL

AD - ADDRESS OF AUTHOR: Bot. Dep., Univ. Vermont, Burlington, VT 05405, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): USA, American Phytopathological Society: Abstracts. *Phytopathology*. 1979, 69: 9, 1028-1029.

PY - PUBLICATION YEAR: 1979

LA - LANGUAGE OF TEXT: English

DE - DESCRIPTORS: fungal-diseases; methodology-; identification-; research-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; fungi-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Abstract-only

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0031-949X

Record 104 of 393 - TREECD 1973-2000/01

TI - TITLE: Diterpenoids and some water-soluble compounds of *Pinus sylvestris* and their possible relationship to resistance to fungal parasites.

AU - AUTHOR(S): Gref-R; Rudin-D

AD - ADDRESS OF AUTHOR: Dep. Forest Genetics and Pl. Physiol., Swedish Univ. of Agric. Sci., S-901 83 Umea, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1982, 29 pp. + 5 appendices; 48 ref.

PB - PUBLISHER INFORMATION: Sveriges Lantbruksuniversitet, Umea.; Sweden

PY - PUBLICATION YEAR: 1982

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The thesis is based on the following 5 papers: Gref, R. An ultrasonic extraction method for resin acids, soluble carbohydrates, quinic and shikimic acids in fresh pine tissues. 16 pp. [15 ref.] Gref, R. Low molecular weight carbohydrates, quinic and shikimic acids in the needles of *Pinus sylvestris* L. of different provenances. 10 pp. [15 ref.] Gref, R. (1981) Variation in isoabienol content in *Pinus sylvestris* needles. *Can. J. Bot.* 59: 831-835 [17 ref.] Gref, R.; Rudin, D. (1981) Inheritance of isoabienol in *Pinus sylvestris* L. -- A pilot study. Intern rapport Nr. 41. Inst. for Skoglig genetik och Vaxtfysiologi, Sveriges Lantbruksuniversitet. 9 pp. [11 ref.] Gref, R. Resin acids of *Pinus sylvestris* L. and their possible relationship to *Gremmeniella abietina* and *Melampsora pinitorqua* Braun [*M. populnea*] resistance. 17 pp. [26 ref.].

DE - DESCRIPTORS: fungal-diseases; resistance-; plant-composition; diseases-; cankers-; rust-diseases; dieback-; organic-compounds; resin-acids; terpenoids-; phenolic-compounds; conifers-; pines-

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Gremmeniella-abietina*; *Melampsora-populnea*; *Pinus-*

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; *Melampsora*; *Uredinales*; *Basidiomycotina*

PT - PUBLICATION TYPE: Thesis

IB - INTERNATIONAL STANDARD BOOK NUMBER: 91-576-1213-7

Record 105 of 393 - TREECD 1973-2000/01

TI - TITLE: The impact of industrial air pollutants on the occurrence of several important pathogenic fungi of forest trees in Poland.

AU - AUTHOR(S): Grzywacz-A; Wazny-J

AD - ADDRESS OF AUTHOR: Inst. Forest Wood Protection, Warsaw Agric. Acad., Poland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1973, 3: 3, 129-141; 32 ref.

PY - PUBLICATION YEAR: 1973

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: German, French

AB - ABSTRACT: Reports a general analysis, based on data from the Research Institute of Forestry, Warsaw, of the occurrence of the more important pathogenic fungi of forest trees in areas affected by industrial air pollutants compared with their over-all occurrence in the forests of Poland. Large quantitative differences were observed for a number of species including *Armillaria mellea*, *Lophodermium pinastri*, *Fomes annosus*, *Cronartium flaccidum*, *Melampsora pinitorqua*, *Phellinus [Fomes] pini*, *Cenangium abietis* and *Microsphaera alphitoides*. A more detailed study conducted near Torun showed that these differences depended on the SO₂ content of the atmosphere, the main factor being the distance from the source of emission. At high concentrations, both SO₂ and its derivatives act either fungicidally or fungistatically; at lower concentrations they behave as stimulators of fungal activity. [Cf. FA 33, 841].

DE - DESCRIPTORS: air-pollution; diseases-; forest-trees; effects-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Armillaria-mellea*; *Cronartium-flaccidum*; *Lophodermium-pinastri*; *Microsphaera-alphitoides*; fungi-; *Melampsora-populnea*; HETEROBASIDION-ANNOSUM; PHELLINUS-PINI; GREMMENIELLA-ABIETINA

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Armillaria*; Agaricales; Basidiomycotina; Eumycota; fungi; *Cronartium*; Uredinales; *Lophodermium*; Rhytismatales; Ascomycotina; *Microsphaera*; Erysiphales; *Melampsora*; Heterobasidion; Aphylllophorales; *Phellinus*; *Gremmeniella*; Helotiales

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 106 of 393 - TREECD 1973-2000/01

TI - TITLE: Forest insect and disease conditions in Canada 1995.

AU - AUTHOR(S): Hall-PJ; Bowers-WW; Hirvonen-H

AD - ADDRESS OF AUTHOR: Natural Resources Canada, Canadian Forest Service, Ottawa, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1998, 72 pp.

PB - PUBLISHER INFORMATION: Canadian Forest Service; Chalk River; Canada

PY - PUBLICATION YEAR: 1998

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Information is provided on the occurrence of major pests and diseases of Canadian forests in 1995. The insects included 18 species of Lepidoptera, Coleoptera and Hymenoptera. Diseases included the Armillaria mellea complex, Ophiostoma ulmi [Ceratocystis ulmi] and the cankers Lachnellula willkommii [Trichoscyphella willkommii], Sirococcus clavignenti-juglandacearum and Gremmeniella abietina. The mistletoe Arceuthobium americanum is also discussed. Appendices list the occurrence of other pests and diseases. An index is provided.

DE - DESCRIPTORS: insect-pests; forest-pests; plant-diseases; plant-pathogens; plant-pathogenic-fungi; parasitic-weeds; forest-trees; mistletoes-; host-parasite-relationships; weeds-; agricultural-entomology; plant-pathology

OD - ORGANISM DESCRIPTORS: Lepidoptera-; Coleoptera-; Hymenoptera-; Armillaria-mellea; Ceratocystis-ulmi; Trichoscyphella-willkommii; Gremmeniella-abietina; Arceuthobium-americanum; Sirococcus-; arthropods-; fungi-

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: insects; arthropods; invertebrates; animals; Armillaria; Agaricales; Basidiomycotina; Eumycota; fungi; Ceratocystis; Ophiostomatales; Ascomycotina; Trichoscyphella; Helotiales; Gremmeniella; Arceuthobium; Viscaceae; Santalales; dicotyledons; angiosperms; Spermatophyta; plants; Deuteromycotina; OECD-Countries; Commonwealth-of-Nations; Developed-Countries; North-America; America

PT - PUBLICATION TYPE: Miscellaneous

Record 107 of 393 - TREECD 1973-2000/01

TI - TITLE: Spectral interpretation of changes in forest using satellite scanner images.

AU - AUTHOR(S): Hame-T

AD - ADDRESS OF AUTHOR: Instrument Laboratory, Technical Research Centre of Finland, 02100 Espoo, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Acta-Forestalia-Fennica. 1991, No. 222, 111 pp.; 129 ref.

PB - PUBLISHER INFORMATION: Finnish Forest Research Institute; Helsinki; Finland

PY - PUBLICATION YEAR: 1991

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: Finnish

AB - ABSTRACT: A study was made of the spectral characteristics of sudden changes occurring in a 40X40 km forest in S. Finland in 1984-87 using satellite scanner images (Landsat Thematic Mapper and Spot images and spectroradiometer measurements). Scots pine (*Pinus sylvestris*) and Norway spruce (*Picea abies*) were the most common tree species. The changes were (1) clear felling, (2) selective thinning, (3) site preparation on clear felled areas, (4) weeding of deciduous shrubs and/or thinning of conifer seedling regeneration, (5) damage caused by the fungus *Gremmeniella abietina* and (6) deciduous shrub growth in regeneration areas. A computer model of spectral characteristics was developed and compared with the empirical data. *G. abietina* damage increased the reflectance in the visible part of the light spectrum and decreased the reflectance in the near infrared part. Near infrared reflectance was reduced after thinning. A system for automated monitoring of changes is presented.

DE - DESCRIPTORS: Conifers-; Remote-sensing; stand-characteristics; photointerpretation-; satellites-; damage-; vegetation-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Miscellaneous

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0001-5636

IB - INTERNATIONAL STANDARD BOOK NUMBER: 951-651-092-2

Record 108 of 393 - TREECD 1973-2000/01

TI - TITLE: An unsupervised change detection and recognition system for forestry.

AU - AUTHOR(S): Hame-T; Heiler-I; San-Miguel-Ayanz-J

AD - ADDRESS OF AUTHOR: VTT Automation Remote Sensing, PO Box 13002, FIN-02044 VTT, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): International-Journal-of-Remote-Sensing. 1998, 19: 6, 1079-1099; 33 ref.

PY - PUBLICATION YEAR: 1998

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: A new unsupervised method (AutoChange) for change detection and identification uses, as an input, two images acquired on different dates, and a parameter list given by the user. Change detection and identification are performed in separate procedures, and the output is a five channel image estimating the change magnitude and characterizing the changed and unchanged areas. The method carries out the change analysis using homogeneous units selected from the images and only in the ultimate phase the whole image is classified. Changes are detected and identified using clustering in two phases. First, clustering is performed on the earlier and later images to form the so called 'primary clusters'. Second, clustering is performed within the primary clusters of the later image to produce the 'secondary clusters'. Then the change magnitude and change type are obtained by comparing the primary clusters in the earlier image to the secondary clusters in the later image. The method, which was tested in southern Finnish boreal forest using Landsat Thematic Mapper data acquired in September 1984 and June 1985, could reliably detect and identify clearcuts. In addition, the method provided information on forest damage by *Gremmeniella* to *Pinus sylvestris*, since the type of the spectral change was consistent on damaged areas despite a minor magnitude of the change.

DE - DESCRIPTORS: change-; detection-; forestry-; boreal-forests; clear-felling; forests-; identification-; Landsat-; thematic-mapper; remote-sensing; trends-; image-processing; satellite-imagery; plant-diseases; plant-pathogens; plant-pathogenic-fungi; automation-

OD - ORGANISM DESCRIPTORS: *Gremmeniella*-; *Pinus-sylvestris*

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: Helotiales; Ascomycotina; Eumycota; fungi; Pinus; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; European-Union-Countries; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0143-1161

Record 109 of 393 - TREECD 1973-2000/01

TI - TITLE: Genetic differentiation within the European race of *Gremmeniella abietina*.

AU - AUTHOR(S): Hamelin-RC; Lecours-N; Hansson-P; Hellgren-M; Laflamme-G

AD - ADDRESS OF AUTHOR: Natural Resources Canada, Canadian Forest Service, Quebec Region, P.O. Box 3800, 1055 du P.E.P.S., Sainte-Foy, Quebec G1V 4C7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Mycological-Research. 1996, 100: 1, 49-56; 33 ref.

PY - PUBLICATION YEAR: 1996

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Twelve random amplified polymorphic DNA markers were variable within the European race of *G. abietina* var. *abietina* (GAA-EU) in Europe. Three distinct DNA amplification profiles (amplitypes) appeared to be correlated with ecotypic origin. The northern amplitype was present exclusively in northern Europe in plantations and natural stands of *Pinus sylvestris* and in plantations of *P. contorta* and apparently was adapted to the presence of deep, long-lasting snow cover in the winter. An alpine amplitype was found exclusively in the Alps at altitudes above 2000 m on *P. cembra*, *P. mugo*, *P. sylvestris* and *Larix lyallii* and also appears to represent an ecotype adapted to conditions of deep snow cover. The third amplitype, the European amplitype, was present throughout Europe and ranged from the Scandinavian countries and extended south to the Apennine mountains of northern Italy. Most of the GAA-EU samples tested from North America had RAPD profiles identical to those of the European amplitype indicating that the origin of this introduced pathogen could be central Europe. However, some of the samples from North America had RAPD profiles that did not match any found in Europe. The internal transcribed spacers of the ribosomal DNA repeat subunit were amplified and digested with restriction enzymes *Hae* III and *Msp* I. These restriction sites were polymorphic between the North American (GAA-NA) race and the EU race of *G. abietina* but were homogeneous among the 3 amplitypes described above. The rDNA restriction and RAPD profiles also indicated that GAA-NA was absent from the samples from Europe and that symptoms resembling those caused by GAA-NA were attributable to the northern and alpine amplitypes.

DE - DESCRIPTORS: plant-diseases; plant-pathogens; plant-pathogenic-fungi; molecular-genetics; random-amplified-polymorphic-DNA; races-; forest-trees; fungal-diseases; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *larix-*; *Pinus-sylvestris*; *Pinus-contorta*; *Pinus-cembra*; *pinopsida-*; *fungi-*

GE - GEOGRAPHIC NAMES: Europe-

BT - BROADER DESCRIPTORS: *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; *fungi*; *Pinaceae*; *Pinopsida*; *gymnosperms*; *Spermatophyta*; *plants*; *Pinus*; *Larix*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0953-7562

Record 110 of 393 - TREECD 1973-2000/01

TI - TITLE: Molecular evidence of distinct introductions of the European race of *Gremmeniella abietina* into North America.

AU - AUTHOR(S): Hamelin-RC; Lecours-N; Laflamme-G; Laflamme-G et-al

AD - ADDRESS OF AUTHOR: Natural Resources Canada, Canadian Forest Service, Laurentian Forestry Centre, Sainte-Foy, QC G1V 4C7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Foliage, shoot and stem diseases.

Proceedings of the IUFRO WP 7.02.02 meeting, Quebec City, May 25-31, 1997.

Information-Report -Laurentian-Forestry-Centre,-Quebec-Region,-Canadian-Forest-Service. 1998, No. LAU-X-122, 190-199; 29 ref.

PB - PUBLISHER INFORMATION: Laurentian Forestry Centre, Canadian Forest Service; Sainte-Foy; Canada

PY - PUBLICATION YEAR: 1998

LA - LANGUAGE OF TEXT: English

DE - DESCRIPTORS: IUFRO-; fungal-diseases; plant-pathogenic-fungi; plant-pathogens; plant-diseases; forest-trees; cankers-; geographical-distribution; molecular-biology; molecular-genetics; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella abietina*

GE - GEOGRAPHIC NAMES: North-America; Europe-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; America

PT - PUBLICATION TYPE: Conference-paper; Journal-article

Record 111 of 393 - TREECD 1973-2000/01

TI - TITLE: Phylogeny of *Gremmeniella* spp. based on sequences of the 5.8S rDNA and internal transcribed spacer region.

AU - AUTHOR(S): Hamelin-RC; Rail-J

AD - ADDRESS OF AUTHOR: Natural Resources Canada, Canadian Forest Service, Laurentian Forestry Centre, PO Box 3800, 1055 rue de PEPS, Sainte-Foy, Que. G1V 4C7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Botany. 1997, 75: 5, 693-698; 34 ref.

PY - PUBLICATION YEAR: 1997

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Sequences in the 5.8S ribosomal DNA and internal transcribed spacer region were obtained for taxa belonging to *Gremmeniella* spp., and phylogenetic analysis was carried out using parsimony and distance methods. A set of hypotheses concerning evolutionary relationships between members of the genus was tested. The hypothesis that all members of *G. abietina* var. *abietina* are closely related was rejected. It appears that the Asian race is quite divergent from the European and North American races, but is possibly more closely related to *G. abietina* var. *balsamea*. The phylogeny was consistent with host specificity: members of *G. abietina* var. *abietina* generally do not infect *Abies* or *Picea* spp. but the Asian race occurs on *A. sachalinensis* in Japan. The hypothesis that host specialization has created divergence within *G. abietina* var. *balsamea* was supported by the analysis because the levels of divergence between isolates originating from *Picea* spp. and *Abies* spp. were similar to those found between the North American and European races of *G. abietina* var. *abietina*. The hypothesis that greater divergence occurred between *G. abietina* and *G. laricina* than between *G. abietina* var. *abietina* and *G. abietina* var. *balsamea* was not supported. The level of divergence was as large between the 2 varieties within *G. abietina* as between the 2 species *G. abietina* and *G. laricina*. It is suggested that similar taxonomic levels should be applied to these 3 taxa.

DE - DESCRIPTORS: evolution-; plant-pathogens; plant-pathogenic-fungi; taxonomy-; phylogeny-; molecular-genetics; nucleotide-sequences; RNA-; plant-pathology

OD - ORGANISM DESCRIPTORS: *gremmeniella*-

BT - BROADER DESCRIPTORS: Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0008-4026

Record 112 of 393 - TREECD 1973-2000/01

TI - TITLE: *Gremmeniella abietina* in Northern Sweden: Silvicultural aspects of disease development in the introduced *Pinus contorta* and in *Pinus sylvestris*.

AU - AUTHOR(S): Hansson-P

AD - ADDRESS OF AUTHOR: Department of Silviculture, Umea, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Acta-Universitatis-Agriculturae-Sueciae - Silvestria*. 1996, No. 10, 40 pp. + papers I-V; many ref.

PB - PUBLISHER INFORMATION: Swedish University of Agricultural Sciences; Umea; Sweden

PY - PUBLICATION YEAR: 1996

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: This thesis, based on 5 papers (included as an appendix) published in or submitted to various journals, considers silvicultural measures in terms of their usefulness in reducing the adverse effects of disease caused by *G. abietina* in young stands of *P. contorta* and *P. sylvestris* in N. Sweden. It is suggested that the effects of the disease are greater in the exotic *P. contorta* due to greater exposure to other stresses in this species. Provenances of *P. contorta* recommended for broad-scale use are not adapted to cope with the oceanic-influenced weather which can affect interior N. Sweden. Mortality caused by *G. abietina* appeared to be lower after mounding, and leaning trees were more often killed than upright ones. *G. abietina* populations attacking *P. sylvestris* and *P. contorta* in N. Sweden appeared to be genetically identical, and it is suggested that there is a high risk of spread from infected *P. contorta* plantations to adjacent *P. sylvestris* plantations.

DE - DESCRIPTORS: diseases-; plant-pathogenic-fungi; stress-; provenance-; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Pinus-contorta*; *Pinus-sylvestris*; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Pinus*; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; EFTA; Developed-Countries; European-Union-Countries; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Thesis

Record 113 of 393 - TREECD 1973-2000/01

TI - TITLE: Susceptibility of different provenances of *Pinus sylvestris*, *Pinus contorta* and *Picea abies* to *Gremmeniella abietina*.

AU - AUTHOR(S): Hansson-P

AD - ADDRESS OF AUTHOR: Department of Silviculture, Swedish University of Agricultural Sciences, SE-901 83 Umea, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1998, 28: 1, 21-32; 35 ref.

PY - PUBLICATION YEAR: 1998

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: In a randomized block factorial experiment, 1200 seedlings of *P. sylvestris* and *P. abies* (from Sweden) and *P. contorta* (from Canada) were inoculated with conidia (2 X 104 and 1 X 106 conidia/seedling) of *Gremmeniella abietina* isolated from *P. contorta* plantations in northern Sweden. Another 600 seedlings were used as controls. Symptom expression and the extent of dead tissue on annual shoots were recorded 13 months after inoculation. Only the higher spore dose resulted in significant infection. *P. sylvestris* and *P. contorta* seedlings were equally susceptible (53% infected), and were significantly more infected than *P. abies* seedlings (39%). The annual shoots of *P. sylvestris* and *P. abies* were affected to 43 and 37%, respectively, of their length, which was significantly more than *P. contorta* shoots (15%). The frequency of affected seedlings differed between seedlings from the southern and northern areas for *P. sylvestris* and *P. abies*, and between the northwestern and south-eastern areas for *P. contorta*. *P. contorta* seedlings had recovered better and fewer had died 26 months after inoculation compared with *P. sylvestris* and *P. abies* seedlings. The susceptibilities of *P. sylvestris* and *P. contorta* to *G. abietina* are discussed.

DE - DESCRIPTORS: susceptibility-; disease-resistance; plant-diseases; plant-pathogens; plant-pathogenic-fungi; geographical-distribution; forest-trees; plant-pathology

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Pinus-contorta*; *Picea-abies*; *Gremmeniella-abietina*; *Pinopsida*-; fungi-

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; *Picea*; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; EFTA; Developed-Countries; European-Union-Countries; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 114 of 393 - TREECD 1973-2000/01

TI - TITLE: Survival, height and health status of 20-year-old *Pinus sylvestris* and *Pinus contorta* after different scarification treatments in a harsh boreal climate.

AU - AUTHOR(S): Hansson-P; Karlman-M

AD - ADDRESS OF AUTHOR: Swedish University of Agricultural Sciences, Department of Silviculture, S-901 83 Umea, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Scandinavian-Journal-of-Forest-Research. 1997, 12: 4, 340-350; 51 ref.

PY - PUBLICATION YEAR: 1997

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Northern provenances of *Pinus sylvestris* (from Sweden) and *Pinus contorta* (from Yukon, Canada) planted as 2-yr-old bare rooted seedlings at a site in northern Sweden in June, August and September 1977. Treatments studied per species were no scarification (control), patch scarification, and mounding. Performance in this harsh climate (where there are still unsolved mortality problems during regeneration) was evaluated 18 years after planting. The major mortality was during the first 2 growing seasons. For both species, survival was higher in mounded plots than in control plots. Survival of *Pinus sylvestris* was greatest following June planting, but planting date had no effect on survival of *Pinus contorta*. *Pinus contorta* was 11% taller than *Pinus sylvestris* in the treatment with highest survival, but this difference was not significant. Some 93% of the *Pinus contorta* trees were infected and 22% killed by *Gremmeniella abietina*, compared with 21% and 5%, respectively, for *Pinus sylvestris*. Some 83% of the *Pinus sylvestris* trees were infected and 24% killed by *Phacidium infestans*, compared with 8% and 2% for *Pinus contorta*. Leaning *Pinus contorta* trees were more severely damaged by *G. abietina* than those not leaning. Mounding reduced the mortality caused by *G. abietina* in *Pinus contorta* and by *Phacidium infestans* in *Pinus sylvestris*. Due to the increasing mortality of *Pinus contorta* during the last 6 yr, and the high frequency of *G. abietina*, the number of surviving trees of the two species are approaching equality. Significantly more *Pinus contorta* than *Pinus sylvestris* trees were leaning and had poor stem quality, but regardless of species, mounded plots showed the highest frequency of broken tops - all these defects caused by snow damage. Results suggest that more than 20 yr need to elapse before regeneration efforts with these two species in harsh areas can be evaluated reliably.

DE - DESCRIPTORS: performance-; growth-; increment-; forest-plantations; site-preparation; survival-; height-; health-; scarification-; climate-; mortality-; fungal-diseases; stem-form; leaning-stems; infection-; breakage-; snow-damage; mounds-; plant-diseases; plant-pathogenic-fungi; plant-pathogens; forest-trees; plant-pathology

OD - ORGANISM DESCRIPTORS: *Pinus-contorta*; *Pinus-sylvestris*; *Gremmeniella-abietina*; *Phacidium-infestans*; Pinopsida-; fungi-

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Phacidium*; EFTA; Developed-Countries; European-Union-Countries; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0282-7581

Record 115 of 393 - TREECD 1973-2000/01

TI - TITLE: Silvicultural aspects of the disease caused by *Gremmeniella abietina* in northern Sweden.

AU - AUTHOR(S): Hansson-P; Karlman-M; Laflamme-G et-al

AD - ADDRESS OF AUTHOR: Swedish University of Agricultural Sciences, Department of Silviculture, SE 901 83 Umea, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Foliage, shoot and stem diseases.

Proceedings of the IUFRO WP 7.02.02 meeting, Quebec City, May 25-31, 1997.

Information-Report -Laurentian-Forestry-Centre,-Quebec-Region,-Canadian-Forest-Service. 1998, No. LAU-X-122, 183-188; 21 ref.

PB - PUBLISHER INFORMATION: Laurentian Forestry Centre, Canadian Forest Service; Sainte-Foy; Canada

PY - PUBLICATION YEAR: 1998

LA - LANGUAGE OF TEXT: English

DE - DESCRIPTORS: IUFRO-; fungal-diseases; plant-pathogenic-fungi; plant-pathogens; plant-diseases; forest-trees; cankers-; silviculture-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; fungi-

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; EFTA; Developed-Countries; European-Union-Countries; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Conference-paper; Journal-article

Record 116 of 393 - TREECD 1973-2000/01

TI - TITLE: RAPD variation in *Gremmeniella abietina* attacking *Pinus sylvestris* and *Pinus contorta* in northern Sweden.

AU - AUTHOR(S): Hansson-P; Wang-XR; Szmidt-AE; Karlman-M

AD - ADDRESS OF AUTHOR: Department of Silviculture, Swedish University of Agricultural Sciences, Faculty of Forestry, S-901 83 Umea, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1996, 26: 1, 45-55; 37 ref.

PY - PUBLICATION YEAR: 1996

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: Genomic DNA from 81 isolates of *Gremmeniella abietina* collected from 11 plantations each of *Pinus sylvestris* and *Pinus contorta* in northern Sweden was studied using RAPD markers. The DNA variation between and within populations and the race and type distribution of *G. abietina* populations, causing symptoms similar to those of the North American race, were studied. The degree of genetic similarity was greater among *G. abietina* isolates from the same geographical areas than among isolates from different geographical areas, regardless of whether they were isolated from *P. sylvestris* or *P. contorta*. RAPD variation was greatest in the central parts of northern Sweden, suggesting that sexual reproduction has been somewhat more important there than further north or south. Only the RAPD fragments characteristic of the EU race of *G. abietina* were found in the material tested. The RAPD pattern described as characteristic of the northern type within the EU race was identified in 62% of the isolates. Divergence from the expected profile was due to differences in occurrence of fragments OPA12-1400 and 12-1500. This indicates that this part of the RAPD profile cannot be treated as diagnostic for the northern type. A conclusion of practical importance is that there is a considerable risk of *G. abietina* spreading from infected *P. contorta* plantations to adjacent areas with indigenous *P. sylvestris* regeneration, and vice versa, owing to the indicated lack of host-specificity of the pathogen. It is possible, however, that host-specific strains exist, but do not differ in their RAPD profiles.

DE - DESCRIPTORS: variation-; genetic-variation; plant-diseases; plant-pathogens; plant-pathogenic-fungi; spread-; forest-trees; fungal-diseases; pines-

OD - ORGANISM DESCRIPTORS: *gremmeniella-abietina*; *pinus-sylvestris*; *pinus-contorta*; *Pinus*-

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; *fungi*; *Pinus*; *Pinaceae*; *Pinopsida*; *gymnosperms*; *Spermatophyta*; *plants*; *OECD-Countries*; *Developed-Countries*; *EFTA*; *European-Union-Countries*; *Scandinavia*; *Northern-Europe*; *Europe*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 117 of 393 - TREECD 1973-2000/01

TI - TITLE: Random amplified microsatellites (RAMS) - a novel method for characterizing genetic variation within fungi.

AU - AUTHOR(S): Hantula-J; Dusabenyagasani-M; Hamelin-RC

AD - ADDRESS OF AUTHOR: Forest Research Institute, PO Box 18, FIN-01301, Vantaa, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1996, 26: 3, 159-166; 11 ref.

PY - PUBLICATION YEAR: 1996

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: A novel method, Random Amplified Microsatellites (RAMS - so-called because of the nature of amplified markers as two randomly amplified microsatellites with the intervening sequence), was applied to generate DNA markers in 11 isolates of fungi: *Armillaria cepistipes*, *Gremmeniella abietina*, *Heterobasidion annosum*, *Phytophthora cactorum*, *Phlebiopsis gigantea*, and *Stereum sanguinolentum* - mainly of geographic origin in Finland, and from *Pinus sylvestris*, *Picea abies*, *Abies alba* or *Betula pendula* trees. The technique is based on the polymerase chain reaction (PCR), and uses primers containing microsatellite sequences and degenerate anchors at the 5' end. The method is highly reproducible, applicable to all tested fungal species including members of the Phycmycetes, Ascomycetes and Basidiomycetes, and allows detection of interspecific and intraspecific DNA polymorphisms.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; fungal-diseases; genetic-variation; microsatellites-; polymerase-chain-reaction; polymorphism-; genetics-; genetic-markers; techniques-; methodology-; dna-; molecular-genetics; detection-; plant-pathology

OD - ORGANISM DESCRIPTORS: fungi-; *Armillaria*-; *Gremmeniella-abietina*; *Heterobasidion-annosum*; *Phytophthora-cactorum*; Basidiomycotina-; *Stereum-sanguinolentum*; *Pinus-sylvestris*; *Picea-abies*; *Abies-alba*; *Betula-pendula*; Pinopsida-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: Agaricales; Basidiomycotina; Eumycota; fungi; *Gremmeniella*; Helotiales; Ascomycotina; *Heterobasidion*; Aphyllophorales; *Phytophthora*; Peronosporales; Mastigomycotina; *Stereum*; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Picea*; *Abies*; *Betula*; Betulaceae; Fagales; dicotyledons; angiosperms; European-Union-Countries; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe; *Armillaria*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 118 of 393 - TREECD 1973-2000/01

TI - TITLE: Variation within *Gremmeniella abietina* in Finland and other countries as determined by Random Amplified Microsatellites (RAMS).

AU - AUTHOR(S): Hantula-J; Muller-MM

AD - ADDRESS OF AUTHOR: Forest Research Institute, PO Box 18, 01301, Vantaa, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Mycological-Research. 1997, 101: 2, 169-175; 12 ref.

PY - PUBLICATION YEAR: 1997

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Genetic variation in 93 isolates of *G. a. var. abietina* was investigated using RAMS. The isolates originated mostly from Finland, but were also from Canada, USA, Japan, Norway, Italy, Iceland and Sweden. Four banding pattern types were observed corresponding to the present division of this species in Asian, North American and 2 European races. An additional banding pattern also occurred. Intraspecific variation occurred within all races, the North American race being the most polymorphic. Isolates of the large tree type *Gremmeniella* from North America, Italy and Iceland contained RAMS alleles not observed in Finland, Sweden or Norway. It is concluded that the isolates of large tree type *Gremmeniella* should not be transported even within the area of its natural occurrence.

DE - DESCRIPTORS: plant-pathogens; plant-pathogenic-fungi; microsatellites; molecular-genetics; genetic-variation; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; European-Union-Countries; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0953-7562

Record 119 of 393 - TREECD 1973-2000/01

TI - TITLE: Host specificity of *Gremmeniella abietina*.

AU - AUTHOR(S): Heiniger-U; Frey-W; Capretti-P et-al

AD - ADDRESS OF AUTHOR: Swiss Federal Institute for Forest, Snow and Landscape Research, 8903 Birmensdorf, Switzerland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Shoot and foliage diseases in forest trees. Proceedings of a Joint Meeting of the IUFRO Working Parties S2.06.02 and S2.06.04, Vallombrosa, Firenze, Italy 6-11 June 1994. 1995, 240-243; 3 ref.

PB - PUBLISHER INFORMATION: Istituto di Patologia e Zoologia Forestale e Agraria, Universita degli Studi di Firenze; Firenze; Italy

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: In 1975, *Pinus cembra* and *P. mugo* were planted near the treeline at two test sites in Switzerland. By 1983, heavy losses were recorded due to *Gremmeniella abietina*: 77% and 67% of *P. cembra* were lost at Rudolf and Lucksalp, respectively, whereas figures for *P. mugo* were 38% and 2%, respectively.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; susceptibility-; treelines-; fungal-diseases; plant-diseases; yield-losses; crop-losses; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-mugo*; *Pinus-cembra*; *Pinus*-; fungi-

GE - GEOGRAPHIC NAMES: Switzerland-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; EFTA; Developed-Countries; OECD-Countries; Western-Europe; Europe

PT - PUBLICATION TYPE: Conference-paper

IB - INTERNATIONAL STANDARD BOOK NUMBER: 88-900074-0-0

Record 120 of 393 - TREECD 1973-2000/01

TI - TITLE: The effects of reindeer grazing on the natural regeneration of *Pinus sylvestris*.

AU - AUTHOR(S): Helle-T; Moilanen-H

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Rovaniemi Research Station, Etelaranta 55, SF-96300 Rovaniemi, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Scandinavian-Journal-of-Forest-Research. 1993, 8: 3, 395-407; 51 ref.

PY - PUBLICATION YEAR: 1993

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The effects of winter grazing by semi-domesticated reindeer on the natural regeneration of Scots pine (*Pinus sylvestris*) were studied in north-eastern Finland. A total of 50 regeneration areas subjected to long-term grazing intensity varying from heavy to none were investigated. During the previous year reindeer had damaged an average of 7.6% of the seedlings; 88% of all mechanical damage found was caused by reindeer. The damage frequency was related to the intensity of grazing, and was maximally 60%; 46% of the damaged seedlings were <50 cm in height, and the most common type of damage was branch breakage. Fungal diseases were responsible for the death or poor condition of the seedlings in 80% of the cases, compared with 12% for reindeer. Other vertebrates also damaged seedlings. Grazing slightly increased the incidence of scleroderris (*Ascocalyx abietina* [*Gremmeniella abietina*]) canker, but was associated with a low incidence of snow blight (*Phacidium infestans*), most probably due to packing of the snow. Grazing had no effect on the number of seedlings capable of developing, whilst plants between the age of 13-24 years grew faster in heavily grazed than in lightly grazed lichen (*Cladonia* spp.) vegetation.

DE - DESCRIPTORS: vegetation-; plant-diseases; forest-trees; plant-pathogenic-fungi; cankers-; vertebrate-pests; grazing-; snow-damage; natural-regeneration; damage-; wildlife-; fungal-diseases

OD - ORGANISM DESCRIPTORS: lichens-; *Cladonia*-; *Pinus-sylvestris*; reindeer-; *Gremmeniella-abietina*; *Phacidium-infestans*

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: plants; Lecanorales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; Rangifer; Cervidae; ruminants; Artiodactyla; mammals; vertebrates; Chordata; animals; *Gremmeniella*; Helotiales; *Phacidium*; European-Union-Countries; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0282-7581

Record 121 of 393 - TREECD 1973-2000/01

TI - TITLE: Comparison of *Gremmeniella abietina* isolates from *Pinus sylvestris* and *Pinus contorta* in terms of conidial morphology and host colonization.

AU - AUTHOR(S): Hellgren-M

AD - ADDRESS OF AUTHOR: Department of Forest Mycology and Pathology, Swedish University of Agricultural Sciences, Uppsala, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1995, 25: 3, 159-168; 27 ref.

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: In in vitro studies, *G. abietina* isolates from *P. contorta* in northern Sweden produced shorter conidia with fewer septa compared with isolates from *P. sylvestris* in the southern part of the country. After mycelial inoculation of shoots with *G. abietina* isolates from both host species, the resulting necroses were longer in *P. sylvestris* than in *P. contorta*. Keeping seedlings in artificial mild winter climate or detaching shoots from the seedling before inoculation caused longer necroses. No host specificity in colonization was found. Isolates from *P. sylvestris* caused longer necroses than did isolates from *P. contorta*, and both types of isolates caused longer necroses in *P. sylvestris* than in *P. contorta*. The differences found between the 2 *G. abietina* populations are thought to reflect regional variation in the fungus.

DE - DESCRIPTORS: plant-diseases; plant-pathogens; plant-pathogenic-fungi; forest-trees; forest-pests; morphology-; hosts-; geographical-variation; fungal-diseases; plant-pathology

OD - ORGANISM DESCRIPTORS: *Pinus-contorta*; *Pinus-sylvestris*; *Gremmeniella-abietina*; fungi-

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; OECD-Countries; Developed-Countries; EFTA; European-Union-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 122 of 393 - TREECD 1973-2000/01

TI - TITLE: *Gremmeniella abietina* - disease biology and genetic variation within Fennoscandia.

AU - AUTHOR(S): Hellgren-M

AD - ADDRESS OF AUTHOR: Swedish University of Agricultural Sciences, Department of Forest Mycology and Pathology, 750 07 Uppsala, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1995, 60 + 59 pp.; 43 ref.

PB - PUBLISHER INFORMATION: Department of Forest Mycology and Pathology, Swedish University of Agricultural Sciences (Lantbruksvetenskapliga Fakulteten, Sveriges Lantbruksuniversitet); Uppsala; Sweden

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: After a severe outbreak of disease caused by *Gremmeniella abietina*, the disease severity was studied in four *Pinus sylvestris* stands in southern Sweden during the period 1988-90. The production and maturation of apothecia and pycnidia were also assessed. Disease development was enhanced by cold and rainy growing seasons followed by winters with temperatures around 0°C. Warm summers tended to decrease new attacks. The disease had a mainly biennial life cycle. Infections could survive for extended periods in cankers on branches. In a climate chamber experiment with *P. sylvestris*, seedlings were fertilized with normal or excess amounts of nitrogen and inoculated with *G. abietina* mycelium. The uptake of phosphorus and nitrogen was low. Colonization of shoots was most extensive in seedlings containing the lowest concentrations of N. No correlations could be made with carbohydrate contents of needles. *G. abietina* disease in relation to N-content in seedlings is discussed. Isolates of *G. abietina* obtained from *P. contorta* in northern Sweden were compared with isolates from *P. sylvestris* in southern parts of the country in spore morphology and colonization rate in seedlings of both host species. Conidia produced in culture by isolates from the two hosts differed clearly in length and septation. The isolate types differed also in colonization rate in inoculated shoots. However, the difference did not seem to be caused by host preference. Populations of *G. abietina* representing different disease types and host trees were compared using length polymorphism in arbitrary primed DNA. Isolates representing a disease type common on small trees in northern Fennoscandia differed clearly from isolates representing a disease type of trees of all sizes, most common in the southern parts of the region. This reveals ecotypic differentiation within *G. abietina* in Europe. No differences were found that were correlated with host species. Variation was larger within northern populations compared to those in the south. This paper is based on 4 papers published or submitted for publication elsewhere.

DE - DESCRIPTORS: plant-pathogens; plant-pathogenic-fungi; plant-diseases; forest-trees; nitrogen-fertilizers; plant-nutrition; restriction-fragment-length-polymorphism; genetic-variation; fungal-diseases; plant-pathology

OD - ORGANISM DESCRIPTORS: *Pinus contorta*; *Pinus sylvestris*; *Gremmeniella abietina*; fungi-

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; EFTA; Developed-Countries; European-Union-Countries; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Thesis

IB - INTERNATIONAL STANDARD BOOK NUMBER: 91-576-4943-1

Record 123 of 393 - TREECD 1973-2000/01

TI - TITLE: Studies of the life cycle of *Gremmeniella abietina* on Scots pine in southern Sweden.

AU - AUTHOR(S): Hellgren-M; Barklund-P

AD - ADDRESS OF AUTHOR: Department of Forest Mycology and Pathology, Swedish University of Agricultural Sciences, P.O. Box 7026, 750 07 Uppsala, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1992, 22: 5, 300-311; 30 ref.

PY - PUBLICATION YEAR: 1992

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: The life cycle of *G. abietina* was followed in 16-32 yr old stands of *Pinus sylvestris* in S. Sweden during 1988-90 after a widespread outbreak of the disease in 1988, following which severely damaged trees started to recover. However, loss of shoots was not compensated in the following years. Pycnidia were found in the autumn of the same year in which symptoms appeared. They released conidia during the following spring and summer. The abundance of pycnidia on shoots was highest in stands planted on former arable land. Apothecia developed later and over a longer time; they began to release ascospores in summer. In the autumn after spore dispersal symptomless infections were found in otherwise healthy looking shoots. These infections could be detected 1 yr after their establishment. In spite of conducive weather conditions during 2 winters, no symptoms developed in these shoots. Cankers were formed during the growing season on 1 yr old shoots that were latently infected before shoot elongation. Although the life cycle of *G. abietina* was mainly biennial, it could be prolonged because fruit bodies were produced on dead shoot axes for a second year. The fungus could also survive in latent infections in cankers.

DE - DESCRIPTORS: life-cycle; Conifers-; fungal-diseases; Cankers-; biology-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Gremmeniella-abietina*; *Gremmeniella*-; fungi-

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 124 of 393 - TREECD 1973-2000/01

TI - TITLE: Genetic variation among Scandinavian *Gremmeniella abietina* populations.

AU - AUTHOR(S): Hellgren-M; Capretti-P et-al

AD - ADDRESS OF AUTHOR: Department of Forest Mycology and Pathology, Swedish University of Agricultural Sciences, Uppsala, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Shoot and foliage diseases in forest trees. Proceedings of a Joint Meeting of the IUFRO Working Parties S2.06.02 and S2.06.04, Vallombrosa, Firenze, Italy 6-11 June 1994. 1995, 181-189; 19 ref.

PB - PUBLISHER INFORMATION: Istituto di Patologia e Zoologia Forestale e Agraria, Universita degli Studi di Firenze; Firenze; Italy

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Isolates of *Gremmeniella abietina* were obtained from pycnidia on dead shoots of *Pinus sylvestris*, *P. contorta* and *Picea abies* trees, collected in heavily diseased stands in southern and northern Sweden, and one site in southern Norway. Variation in the *G. abietina* populations was studied by comparing conidiospore length and septation, colonization rate of host tissue and minisatellite DNA. Studies indicated that there were two distinct types, which were related to ecological conditions. One type attacked trees below 2-m in height in areas with a cold climate and heavy winter snow cover. The other type could cause damage to trees of all sizes, and was mainly found in the S. No separation among the isolates was found in relation to geographical distribution or host species.

DE - DESCRIPTORS: forest-trees; shoots-; plant-pathogens; plant-pathogenic-fungi; climatic-factors; geographical-distribution; genetic-variation; winter-; snow-; fungal-diseases; plant-diseases; plant-pathology

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Pinus-contorta*; *Picea-abies*; *Gremmeniella-abietina*; pinopsida-; fungi-

GE - GEOGRAPHIC NAMES: Sweden-; Norway-

BT - BROADER DESCRIPTORS: *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Picea*; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; OECD-Countries; Developed-Countries; EFTA; European-Union-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Conference-paper

IB - INTERNATIONAL STANDARD BOOK NUMBER: 88-900074-0-0

Record 125 of 393 - TREECD 1973-2000/01

TI - TITLE: Ecotypic variation of *Gremmeniella abietina* in northern Europe: disease patterns reflected by DNA variation.

AU - AUTHOR(S): Hellgren-M; Hogberg-N

AD - ADDRESS OF AUTHOR: Department of Forest Mycology and Pathology, Swedish University of Agricultural Science, P.O. Box 7026, S-750 07 Uppsala, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Botany. 1995, 73: 10, 1531-1539; 39 ref.

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Genetic variation in *G. abietina* isolated from *Pinus sylvestris*, *Pinus contorta* and *Picea abies* in southern and northern Fennoscandia (Sweden, Norway and Finland) was studied with arbitrary primed polymerase chain reaction. Fennoscandian *G. abietina* isolates were clearly separated into 2 ecotypically distinct groups based on their amplified banding patterns. Analysis of variance based on amplified fragments, AMOVA and principal component analysis confirmed the separation of the isolates into the 2 groups. One group contained isolates associated with a disease syndrome affecting young trees covered by deep snow during winter in northern Fennoscandia. The second group of isolates was found on trees between 15 and 40 years old, scattered throughout the crowns. It occurs throughout Fennoscandia but is most frequent in the southern parts. No size polymorphism was found in fragments resulting after restriction enzyme digestion of internal transcribed spacer and intergenic spacer regions of nuclear ribosomal DNA. An estimate of gene flow between populations calculated based on amplified band frequencies, FST, indicated that there was restricted genetic exchange between populations of the 2 groups of isolates.

DE - DESCRIPTORS: plant-diseases; plant-pathogens; plant-pathogenic-fungi; forest-trees; population-genetics; molecular-genetics; polymerase-chain-reaction; genetic-variation; fungal-diseases; plant-pathology

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Picea-abies*; *Pinus-contorta*; *Gremmeniella-abietina*; pinopsida-; fungi-

GE - GEOGRAPHIC NAMES: Scandinavia-; Sweden-; Norway-; Finland-

BT - BROADER DESCRIPTORS: *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Picea*; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Northern-Europe; Europe; OECD-Countries; Developed-Countries; EFTA; European-Union-Countries; Scandinavia

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0008-4026

Record 126 of 393 - TREECD 1973-2000/01

TI - TITLE: Additional records of *Gremmeniella abietina* in western Canada.

AU - AUTHOR(S): Hiratsuka-Y; Funk-A

AD - ADDRESS OF AUTHOR: Northern For. Res. Centre, Edmonton, Alta., Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Plant-Disease-Reporter*. 1976, 60: 7, 631; 5 ref.

PY - PUBLICATION YEAR: 1976

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Reports the occurrence of *G. abietina* in both the perfect and imperfect state on trees of *Pinus contorta* var. *latifolia* in and around the area in Jasper National Park, Alberta, already noticed [cf. FA 36, 7061]. The fungus was also identified on *P. albicaulis* and *P. ponderosa* in separate areas of British Columbia. It is thought that *G. abietina* is indigenous to western Canada since introduction on nursery stock is unlikely; symptoms are inconspicuous and it was discovered in widely separated areas. The need is emphasized for thorough checking in nurseries and plantations.

ADDITIONAL ABSTRACT: Additional records of *G. abietina* [CMI Map 423] are given and it is suggested that the fungus has not been introduced but is in fact a part of the indigenous flora.

DE - DESCRIPTORS: forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-contorta*; *Pinus-albicaulis*; *Pinus-ponderosa*

GE - GEOGRAPHIC NAMES: Alberta-; British-Columbia; Canada-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Canada; North-America; America

PT - PUBLICATION TYPE: Journal-article

Record 127 of 393 - TREECD 1973-2000/01

TI - TITLE: The host range and geographic distribution of the North American and European races of *Gremmeniella abietina* in Ontario.

AU - AUTHOR(S): Hopkin-AA; Davis-CN; Laflamme-G et-al

AD - ADDRESS OF AUTHOR: Canadian Forest Service, Sault Ste. Marie, PO Box 490, ON P6A 5M7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Foliage, shoot and stem diseases.

Proceedings of the IUFRO WP 7.02.02 meeting, Quebec City, May 25-31, 1997.

Information-Report -Laurentian-Forestry-Centre,-Quebec-Region,-Canadian-Forest-Service. 1998, No. LAU-X-122, 159-167; 22 ref.

PB - PUBLISHER INFORMATION: Laurentian Forestry Centre, Canadian Forest Service; Sainte-Foy; Canada

PY - PUBLICATION YEAR: 1998

LA - LANGUAGE OF TEXT: English

DE - DESCRIPTORS: IUFRO-; fungal-diseases; plant-pathogenic-fungi; plant-pathogens; plant-diseases; forest-trees; cankers-; geographical-distribution; host-range; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus*-; *Picea*-; *Pinopsida*-; fungi-

GE - GEOGRAPHIC NAMES: North-America; Europe-; Canada-; Ontario-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Pinaceae; *Pinopsida*; gymnosperms; Spermatophyta; plants; America; OECD-Countries; Commonwealth-of-Nations; Developed-Countries; North-America; Canada

PT - PUBLICATION TYPE: Conference-paper; Journal-article

Record 128 of 393 - TREECD 1973-2000/01

TI - TITLE: The distribution and control of scleroderris disease in Ontario.

AU - AUTHOR(S): Hopkin-AA; Laflamme-G

AD - ADDRESS OF AUTHOR: Forest Insect and Disease Survey Unit, Canadian Forest Service-Sault Ste. Marie, Great Lakes Forestry Centre, Sault Ste. Marie, Ontario P6A 5M7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Frontline,-Technical-Note -Canadian-Forest-Service -Sault-Ste.-Marie. 1995, No. 21, 4 pp.; 7 ref.

PB - PUBLISHER INFORMATION: Sault Ste. Marie, Ontario; Canada

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Scleroderris canker, caused by *Gremmeniella abietina*, has been regarded as a major pest of pines (*Pinus* spp.) for over 30 yr. The North American race, which causes cankering and mortality to young pines and does not cause mortality to trees >2 m tall, is found throughout eastern Canada. The European strain, which is considered more damaging, is concentrated in central Ontario. Both races of the disease are absent from eastern Ontario. Spraying with chlorothalonil is recommended for disease control in nurseries, while pruning is recommended for use in plantations.

DE - DESCRIPTORS: plant-diseases; plant-pathogens; plant-pathogenic-fungi; forest-trees; forest-nurseries; disease-control; pruning-; forest-plantations; chemical-control; fungicides-; chlorothalonil-; physical-control; fungal-diseases; control-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus*-; fungi-

GE - GEOGRAPHIC NAMES: Canada-; Ontario-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; OECD-Countries; Commonwealth-of-Nations; Developed-Countries; North-America; America; Canada

PT - PUBLICATION TYPE: Miscellaneous

IB - INTERNATIONAL STANDARD BOOK NUMBER: 0-662-23602-5

Record 129 of 393 - TREECD 1973-2000/01

TI - TITLE: The distribution and significance of scleroderris disease in Ontario.

AU - AUTHOR(S): Hopkin-AA; McKenney-DW

AD - ADDRESS OF AUTHOR: Natural Resources Canadas, Canadian Forest Service - Ontario, Sault Ste. Marie, Ontario, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): NODA-NFP-Technical-Report. 1995, No. TR-7, iv + 11 pp.; 33 ref.

PB - PUBLISHER INFORMATION: Sault Ste. Marie, Ontario; Canada

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Information on the distribution of scleroderris disease (*Gremmeniella abietina*) was compiled from surveys conducted in Ontario by the Canadian Forest Service from 1985 to 1993. Both the North American and European races of the disease are present in Ontario. The North American race, which is possibly indigenous, has been present in Ontario since at least the 1950s and occurs throughout the range of pines North of 45°. The European race was first isolated in Ontario in 1985. It is restricted in its distribution between 44°30' N and 45°45' N. Both races of the disease have been absent from the eastern area of the province near the Ottawa valley. However, the disease has been reported at high levels on the Quebec side of the border. In 1985, 0.5% of the pine plantations surveyed were infected by scleroderris. This level had increased to about 8% by 1993. In most affected plantations less than 5% of the trees were infected; however, levels in excess of 30% were reported in 1985-87, and again in 1993. The greatest damage caused by either race of this disease has been to trees less than 1.0 m in height. Mortality to this height class ranged from 0.7-13.0%. Trees between 1.0-3.0 m in height usually suffered only branch mortality.

DE - DESCRIPTORS: fungal-diseases; plant-diseases; plant-pathogens; plant-pathogenic-fungi; geographical-distribution; races-; damage-; forest-trees; pines-

OD - ORGANISM DESCRIPTORS: Pinus-; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Canada-; Ontario-

BT - BROADER DESCRIPTORS: Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; OECD-Countries; Commonwealth-of-Nations; Developed-Countries; North-America; America; Canada

PT - PUBLICATION TYPE: Miscellaneous

IB - INTERNATIONAL STANDARD BOOK NUMBER: 0-662-22623-2

Record 130 of 393 - TREECD 1973-2000/01

TI - TITLE: Detection and classification of Scleroderris canker in pine stands using aerial photography.

AU - AUTHOR(S): Hopkins-PF; Abrahamson-LP; Johnson-WL

AD - ADDRESS OF AUTHOR: Dep. For. Eng., Coll. Env. Sci. & For., State Univ. New York, Syracuse, NY 13210, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1979, v + 71 pp.; 9 pl. (2 col.); 45 ref.

PB - PUBLISHER INFORMATION: College of Environmental Science and Forestry, State University of New York; Syracuse, New York; USA

PY - PUBLICATION YEAR: 1979

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: In studies NE of Syracuse, New York, it was shown that Scleroderris canker (*Gremmeniella abietina*) in red pine (*Pinus resinosa*) and Scots pine stands can be detected and classified into 5 infection classes to an acceptable degree of accuracy using 70-mm aerial photography. Best results were with colour IR photographs taken at midday in June or July at a scale of approx. 1:12 000. Stereoscopic viewing was the best method of interpretation. The possibilities are considered of improving the technique by the use of shadowless photography and by machine detection from photographic density measurements.

DE - DESCRIPTORS: diseases-; cankers-; remote-sensing; infrared-photography; damage-; photointerpretation-; assessment-

OD - ORGANISM DESCRIPTORS: *Pinus-resinosa*; *Pinus-sylvestris*; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: New-York; USA-

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; Middle-Atlantic-States-of-USA; Northeastern-States-of-USA; USA; North-America; America

PT - PUBLICATION TYPE: Miscellaneous

Record 131 of 393 - TREECD 1973-2000/01

TI - TITLE: Forest insect and disease conditions in Ontario, 1981.

AU - AUTHOR(S): Howse-GM; Gross-HL; Syme-PD; Myren-DT; Meating-JH; Applejohn-MJ

AD - ADDRESS OF AUTHOR: Great Lakes Forest Research Centre, PO Box 490, Sault Ste. Marie, Ontario P6A 5M7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Information-Report,-Great-Lakes-Forest-Research-Centre. 1982, No. O-X-339, [4+] 49 pp.; 9 fig.; 46 ref.

PY - PUBLICATION YEAR: 1982

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: This review of forest insects and diseases in Ontario in 1981 provides detailed information on 3 important pests of conifers and 3 of hardwood trees, together with forecasts of conditions for 1982 and notes on many other species. Special surveys and provincial forest insect control programmes are described.

DE - DESCRIPTORS: forest-pests; distribution-; conifers-; insect-pests; control-; surveys-; forecasting-; damage-; diseases-; trees-; agricultural-entomology

OD - ORGANISM DESCRIPTORS: Picea-glauca; Choristoneura-fumiferana; Lymantria-dispar; Malacosoma-disstria; Neodiprion-swainei; Monochamus-; Gremmeniella-abietina; arthropods-

GE - GEOGRAPHIC NAMES: Ontario-; Canada-

BT - BROADER DESCRIPTORS: pests; animals; arthropod-pests; arthropods;

invertebrates; insects; woody-plants; Spermatophyta; plants; Picea; Pinaceae;

Pinopsida; gymnosperms; Choristoneura; Tortricidae; Lepidoptera; Lymantria;

Lymantriidae; Malacosoma; Lasiocampidae; Neodiprion; Diprionidae; Hymenoptera;

Cerambycidae; Coleoptera; Gremmeniella; Helotiales; Ascomycotina; Eumycota;

fungi; Canada; North-America; America

PT - PUBLICATION TYPE: Miscellaneous

Record 132 of 393 - TREECD 1973-2000/01

TI - TITLE: Dose-response relationships of five conifers to infection by conidia of *Gremmeniella abietina*.

AU - AUTHOR(S): Hudler-GW; Knudsen-GR; Beale-MA

AD - ADDRESS OF AUTHOR: Cornell Univ., Ithaca, NY, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Plant-Disease*. 1983, 67: 2, 192-194; 2 fig.; 20 ref.

PY - PUBLICATION YEAR: 1983

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Seedlings of 5 spp. were sprayed to run-off with distilled water or with suspensions containing 10², 10³, 5 X 10³, 10⁴ or 10⁵ conidia/ml of the European str. of *G. abietina*. Infection was determined in 1980 and survivors plus some replacement seedlings were reinoculated in June 1980. Effects of the 2nd inoculation were determined in 1981. In both years the order of susceptibility was *Pinus resinosa* > *P. strobus* > spruce (*Picea glauca* and *P. abies*). Disease incidence in *Pinus sylvestris* was not significantly different from that in *P. strobus* in 1980 but was much higher in 1981. Low disease incidence in *P. sylvestris* in 1980 was attributed to reduced shoot growth (thus fewer infection courts) after transplanting in 1979. In the pines, increased inoculum resulted in increased disease. Incidence was so low in *Picea* spp. at all inoculum levels that no relationship between inoculum dose and disease incidence could be identified. Where *G. abietina* was found on *Picea* spp. it may have been a weak parasite or a saprobe.

DE - DESCRIPTORS: pines-; susceptibility-; diseases-; cankers-; resistance-; fungal-diseases; infection-; forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Picea-abies*; *Picea-glauca*; *Pinus-resinosa*; *Pinus-strobus*; *Pinus-sylvestris*; *Pinus*-; PICEA-

GE - GEOGRAPHIC NAMES: USA-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Picea*; Pinaceae; Pinopsida; gymnosperms; *Pinus*; North-America; America

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0191-2917

Record 133 of 393 - TREECD 1973-2000/01

TI - TITLE: Production and maintenance of conidia of *Gremmeniella abietina*.

AU - AUTHOR(S): Hudler-GW; Knudsen-GR; Beale-MAR

AD - ADDRESS OF AUTHOR: Dep. Pl. Path., Cornell Univ., Ithaca, NY 14853, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Plant-Disease*. 1984, 68: 12, 1065-1066; 2 fig., 1 tab.; 8 ref.

PY - PUBLICATION YEAR: 1984

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The conifer pathogen produced abundant conidia when grown on V-8-juice agar amended with a variety of nutrients and vitamins, especially when cultures were incubated in the light at 10-20°C. Germination of conidia declined as cultures age beyond 4 wk or as conidia were stored under water.

DE - DESCRIPTORS: culture-; sporulation-; forest-trees; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; Pinopsida-; fungi-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; gymnosperms; Spermatophyta; plants

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0191-2917

Record 134 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris canker in New York State: attempts to justify and cope with regulatory action.

AU - AUTHOR(S): Hudler-GW; Neal-BG

AD - ADDRESS OF AUTHOR: Department of Plant Pathology, 334 Plant Science Building, Cornell University, Ithaca, NY 14853, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1990, 20: 2, 106-112; 8 ref.

PY - PUBLICATION YEAR: 1990

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: Experiments were performed (a) to determine whether *Gremmeniella abietina* could cause infections south of its currently known southern limit, (b) to test the relative susceptibility of various conifer species grown as Christmas trees in NY, and (c) to examine possible postharvest treatments to eradicate the pathogen from cut trees without damaging their quality. Field infection tests showed that the disease could occur up to 300 km south of the current limit; *Pinus resinosa*, *P. sylvestris*, *P. nigra* and *P. densiflora* were all susceptible, while *Pseudotsuga menziesii* and *Picea glauca* were not infected. Immersion of diseased seedlings in hot (55°C) water and immersion in or spraying with dilute sodium hypochlorite eradicated the pathogen with no apparent loss in needle colour or retention.

DE - DESCRIPTORS: Pines-; control-; conifers-; Heat-treatment; Sodium-hypochlorite; Christmas-trees; Cankers-; spread-; resistance-; fungal-diseases; forest-trees; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; fungi-; *Pinus-resinosa*; *Gremmeniella*-; *Pinus-sylvestris*; *Pinus-nigra*; *Pinus-densiflora*; *Pseudotsuga-menziesii*; *Picea-glauca*; *Pinus*-

GE - GEOGRAPHIC NAMES: New-York; USA-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Pseudotsuga*; *Picea*; Middle-Atlantic-States-of-USA; Northeastern-States-of-USA; USA; North-America; America

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 135 of 393 - TREECD 1973-2000/01

TI - TITLE: First record of *Brunchorstia pinea* (Karst.) v. Hohn. in a forest nursery in Czechoslovakia.

AU - AUTHOR(S): Jancarik-V; Urosevic-B

AD - ADDRESS OF AUTHOR: For. Game Management Res. Inst., Zbraslav nad Vltavou-Strnady, Czechoslovakia.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1973, 3: 2, 121-124; 2 fig.

PY - PUBLICATION YEAR: 1973

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: *Scleroderris lagerbergii* [Gremmeniella abietina; CMI Map 432] is newly reported on *Pinus sylvestris* in a small forest nursery in W. Bohemia.

DE - DESCRIPTORS: forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Czechoslovakia-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Central-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 136 of 393 - TREECD 1973-2000/01

TI - TITLE: First record of *Brunchorstia pinea* (Karst.) v. Hohn. [on *Pinus sylvestris*] in a forest nursery in Czechoslovakia.

AU - AUTHOR(S): Jancarik-V; Urosevic-B

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1973, 3: 2, 121-123.

PY - PUBLICATION YEAR: 1973

LA - LANGUAGE OF TEXT: English

DE - DESCRIPTORS: foliage-; conifers-

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *GREMMENIELLA-ABIETINA*

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; *gymnosperms*;

Spermatophyta; *plants*; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; *fungi*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 137 of 393 - TREECD 1973-2000/01

TI - TITLE: Seedling losses in the regeneration of Scots Pine (*Pinus sylvestris*) and Lodgepole Pine (*Pinus contorta*).

AU - AUTHOR(S): Kaasa-J

SO - SOURCE (BIBLIOGRAPHIC CITATION): Tidsskrift-for-Skogbruk. 1973, 81: 4, 437-445; 4 ref.

PY - PUBLICATION YEAR: 1973

LA - LANGUAGE OF TEXT: Norwegian

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: In regeneration of *Pinus sylvestris*, damage by *Phacidium infestans* was less severe in northern Hedmark than in SE Norway [cf. FA 33, 2758]. However, seedlings were damaged and killed by frost and by *Ascocalyx abietina* [*Scleroderris lagerbergii*] on the buds and branches. Regeneration by shelterwood methods is recommended in preference to clear felling. In a comparison of plantations at three locations of both species under comparable conditions, the % of unstocked plots attributable to frost damage and disease was 15-35 *P. contorta* and 50-86 for *P. sylvestris*.

DE - DESCRIPTORS: injuries-; frost-; seedlings-; NATURAL-REGENERATION; silvicultural-systems; conifers-

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Phacidium-infestans*; GREMMENIELLA-ABIETINA

BT - BROADER DESCRIPTORS: Spermatophyta; plants; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Phacidium*; Helotiales; Ascomycotina; Eumycota; fungi; *Gremmeniella*

PT - PUBLICATION TYPE: Journal-article

Record 138 of 393 - TREECD 1973-2000/01

TI - TITLE: Occurrence of *Gremmeniella abietina* damage on Scots pine along a pollution gradient from Monchegorsk nickel smelter to western Lapland.

AU - AUTHOR(S): Kaitera-J; Fedorkov-A; Jalkanen-R; Krutov-V; Tsvetkov-V

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Rovaniemi Research Station, Rovaniemi, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1995, 25: 1, 13-23; 25 ref.

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: *G. abietina* damage on *Pinus sylvestris* was studied at stand and tree level on the Kola Peninsula, Russia, and in northern Finland. At stand level, damage was recorded in 4 areas in Finland, while only individual damaged trees were found in Russia. According to the results of branch analysis, there was no sign of endemic epidemics in any of the areas. There was a significant negative correlation between the av. *G. abietina* damage and modelled SO₂ deposition and temp. sum along the gradient. The results suggest that *G. abietina* is distributed all over northern Finland and the Kola Peninsula in natural stands of *P. sylvestris*, and that the direct effect of SO₂ deposition from the Monchegorsk nickel smelter on the damage may be minimal.

DE - DESCRIPTORS: plant-diseases; plant-pathogens; plant-pathogenic-fungi; forest-trees; interactions-; pollution-; air-pollution; sulfur-dioxide; activity-; fungal-diseases; damage-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Gremmeniella-abietina*; fungi-

GE - GEOGRAPHIC NAMES: Russia-; Finland-; Europe-

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms;

Spermatophyta; plants; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; Asia; Central-Europe; Europe; Developed-Countries; European-Union-Countries;

EFTA; OECD-Countries; Scandinavia; Northern-Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 139 of 393 - TREECD 1973-2000/01

TI - TITLE: Development of fruiting bodies of large tree type of *Gremmeniella abietina* var. *abietina* and timing of infection of Scots pine in northern Finland.

AU - AUTHOR(S): Kaitera-J; Hantula-J; Jalkanen-R

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Rovaniemi Research Station, PO Box 16, FIN-96301 Rovaniemi, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1997, 27: 2, 115-124; 31 ref.

PY - PUBLICATION YEAR: 1997

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: The formation and maturing of the large tree type *Gremmeniella abietina* var. *abietina* fruiting bodies and their sporulation were investigated for 3 yr on Scots pine (*Pinus sylvestris*) in northern Finland. This was done by monthly assessment of shoots in the field and in the laboratory. Infection caused by *G. abietina* var. *abietina* was dated on Scots pine by monthly covering with pollination bags and exposing branches during the growing season. Pycnidia appeared between August and September, 1 yr after infection, and they started to release conidia between late June and early July, 2 yr after infection. Fresh pycnidia and microconidia were formed during the following August and September in the infected shoots. The causal large tree type of *G. abietina* var. *abietina* did not produce apothecia on branches within 3 yr of infection. Monthly covering and exposing branches showed that infection took place mainly between June and July.

DE - DESCRIPTORS: development-; symptoms-; timing-; infection-; plant-pathogens; plant-pathogenic-fungi; forest-trees; seasons-; life-cycle; fungal-diseases

OD - ORGANISM DESCRIPTORS: *gremmeniella-abietina*; *Pinus-sylvestris*

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; *fungi*; *Pinus*; *Pinaceae*; *Pinopsida*; *gymnosperms*; *Spermatophyta*; *plants*; *European-Union-Countries*; *Developed-Countries*; *EFTA*; *OECD-Countries*; *Scandinavia*; *Northern-Europe*; *Europe*

PT - PUBLICATION TYPE: *Journal-article*

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 140 of 393 - TREECD 1973-2000/01

TI - TITLE: Long-term damage on Scots pine caused by *Gremmeniella abietina* near a nickel smelter in the Kola peninsula.

AU - AUTHOR(S): Kaitera-J; Isaeva-L; Jalkanen-R

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute (FFRI), Rovaniemi Research Station, PO Box 16, FIN-96301 Rovaniemi, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1995, 25: 6-7, 391-399; 28 ref.

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: The history of damage caused by *Gremmeniella abietina* on 10 Scots-pine trees (*Pinus sylvestris*) in 1930-92 was studied near a nickel smelter in Tsuna, Russia. The most severely damaged area was located alongside a river. According to the results of branch analysis, the first sign of *G. abietina* infection occurred in 1937. During the following 4 decades, annual signs were few and they occurred at random. Most of the damage had appeared during the 1980s and the early 1990s. In terms of cankers, the peak occurred in the mid-1980s, and in terms of scars and leader changes, the peak was in the late 1980s and early 1990s. Branch mortality and secondary *Tomicus* spp. attacks increased in the late 1980s and were at their highest level in the early 1990s. The high number of mature *G. abietina* pycnidia on shoots formed in the years 1989-91 suggests that the epidemic will continue in the near future.

DE - DESCRIPTORS: damage-; pollution-; forest-trees; forest-pests; plant-pests; insect-pests; plant-pathogenic-fungi; plant-diseases; plant-pathogens; population-dynamics; outbreaks-; symptoms-; shoots-; branches-; fungal-diseases; air-pollution; biology-; plant-pathology; agricultural-entomology

OD - ORGANISM DESCRIPTORS: *Gremmeniella*-; *Pinus-sylvestris*; *Gremmeniella-abietina*; *Tomicus*-; fungi-; arthropods-

GE - GEOGRAPHIC NAMES: Russia-

BT - BROADER DESCRIPTORS: Helotiales; Ascomycotina; Eumycota; fungi; Pinus; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Gremmeniella*; Scolytidae; Coleoptera; insects; arthropods; invertebrates; animals; Asia; Central-Europe; Europe; Developed-Countries

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 141 of 393 - TREECD 1973-2000/01

TI - TITLE: Disease history of *Gremmeniella abietina* in a *Pinus sylvestris* stand.

AU - AUTHOR(S): Kaitera-J; Jalkanen-R

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Rovaniemi Research Station, PO Box 16, 96301 Rovaniemi, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1992, 22: 6-7, 371-378; 15 ref.

PY - PUBLICATION YEAR: 1992

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: The disease history of *G. abietina* was studied in 1990-91 in a severely infected 70-yr-old *P. sylvestris* stand in NE Finland. All the dead and living branches were cut from 14 living trees, and the numbers of cankers, scars and leader changes caused by *G. abietina* were counted in each annual shoot of each first order branch. The years were determined when whole branches had died. A total of 1727 branches with 11 564 branch leader shoots was examined. Both the total and the av. number of cankers and scars showed that *G. abietina* had frequently been present in the stand since 1961 and infrequently as early as the 1940s. A severe epidemic began in the 1980s. According to cankers formed, the epidemic peaked during 1982-86; according to scars, it peaked during 1981-88. Results suggested that branch analysis can be used to give an accurate picture of at least the previous 20-25 yr history of *G. abietina* infection.

DE - DESCRIPTORS: epidemiology-; conifers-; fungal-diseases; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Gremmeniella-abietina*; fungi-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 142 of 393 - TREECD 1973-2000/01

TI - TITLE: *Gremmeniella abietina* on Scots pine [*Pinus sylvestris*] in Rikkilehto stand in Salla, northern Finland.

OT - ORIGINAL NON-ENGLISH TITLE: Surmakka Rikkilehdon mannikossa Sallassa.

AU - AUTHOR(S): Kaitera-J; Jalkanen-R

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Department of Forest Ecology, p.O. Box 16, FIN-96301 Rovaniemi, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Folia-Forestalia*. 1993, No. 811, 18 pp.; 56 ref.

PB - PUBLISHER INFORMATION: Metsantutkimuslaitos; Helsinki; Finland

PY - PUBLICATION YEAR: 1993

LA - LANGUAGE OF TEXT: Finnish

LS - LANGUAGE OF SUMMARIES: English

DE - DESCRIPTORS: fungal-diseases; plant-pathogens; plant-pathogenic-fungi; plant-diseases; forest-trees

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-sylvestris*

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; European-Union-Countries; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0015-5543

IB - INTERNATIONAL STANDARD BOOK NUMBER: 951-40-1312-3

Record 143 of 393 - TREECD 1973-2000/01

TI - TITLE: The history of shoot damage by *Tomicus* spp. (Col., Scolytidae) in a *Pinus sylvestris* L. stand damaged by the shoot-disease fungus *Gremmeniella abietina* (Lagerb.) Morelet.

AU - AUTHOR(S): Kaitera-J; Jalkanen-R

AD - ADDRESS OF AUTHOR: The Finnish Forest Research Institute, Rovaniemi Research Station, Rovaniemi, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Journal-of-Applied-Entomology*. 1994, 117: 3, 307-313; 23 ref.

PY - PUBLICATION YEAR: 1994

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: German

AB - ABSTRACT: A method has been developed for studying the history of attack by *Tomicus piniperda* in stands of *Pinus sylvestris* in Finland. Attacks in a stand were dated by means of external evidence on living shoots and young branches, and from anatomical evidence in older shoots. The method revealed that outbreaks of *T. piniperda* were associated with epidemics caused by the fungal pathogen *Gremmeniella abietina*. The role of *T. piniperda* in the decline of a *G. abietina* infected stand is discussed.

DE - DESCRIPTORS: insect-pests; forest-trees; forest-pests; outbreaks-; damage-; plant-pathogenic-fungi; plant-diseases; plant-pathogens; plant-pests; fungal-diseases; pest-resistance; agricultural-entomology

OD - ORGANISM DESCRIPTORS: Scolytidae-; Coleoptera-; *Pinus-sylvestris*; *Tomicus-piniperda*; *Gremmeniella-abietina*; arthropods-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: insects; arthropods; invertebrates; animals; arthropod-pests; pests; trees; woody-plants; Spermatophyta; plants; fungi; plant-pathogens; pathogens; Coleoptera; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Tomicus*; Scolytidae; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0931-2048

Record 144 of 393 - TREECD 1973-2000/01

TI - TITLE: Stand and site characteristics in the decline of *Pinus sylvestris* caused by *Gremmeniella abietina* shoot disease in a severely damaged 50-year-old plantation in SE Lapland.

AU - AUTHOR(S): Kaitera-J; Jalkanen-R

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Rovaniemi Research Station, P.O. Box 16, FIN-96301 Rovaniemi, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Scandinavian-Journal-of-Forest-Research*. 1995, 10: 3, 256-263; 31 ref.

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: A study was made of the effect of stand and site characteristics on the decline of Scots pine (*Pinus sylvestris*) caused by *Gremmeniella abietina* in a 50-year-old stand in Finland. Damage of Scots pine was modelled using stand and site variables and stepwise regression analysis. The significant variables included in the model were stand elevation from the main cold air centre and the pH of the humus layer, while the other less significant variables were the density of Scots pine and Norway spruce, content of Cu and Ni in the humus layer, and the thickness of the humus layer and the A2 horizon.

DE - DESCRIPTORS: site-factors; stand-characteristics; topography-; heavy-metals; soil-chemistry; soil-pH; forest-decline; plant-pathogens; plant-pathogenic-fungi; plant-diseases; stand-density; fungal-diseases; models-; techniques-; forest-trees; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-sylvestris*; fungi-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; European-Union-Countries; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0282-7581

Record 145 of 393 - TREECD 1973-2000/01

TI - TITLE: In vitro growth of *Gremmeniella abietina* isolates (European race) at different temperatures.

AU - AUTHOR(S): Kaitera-J; Jalkanen-R

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Rovaniemi Research Station, Box 16, FIN-96301 Rovaniemi, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Scandinavian-Journal-of-Forest-Research*. 1996, 11: 2, 159-163; 20 ref.

PY - PUBLICATION YEAR: 1996

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The mycelial growth of 24 isolates of types A and B of *Gremmeniella abietina*, collected from Scots pine (*Pinus sylvestris*) stands in northern Finland and the Kola peninsula, Russia, was studied on malt agar plus pine needle extract at 18°C and 5°C. Great variation occurred within both types, and the results suggest that several isolates per stand are needed to represent one local isolate, if responses of *G. abietina* mycelia are studied on artificial media.

DE - DESCRIPTORS: in-vitro-culture; races-; variation-; in-vitro; growth-; plant-diseases; plant-pathogens; plant-pathogenic-fungi; forest-trees; fungal-diseases

OD - ORGANISM DESCRIPTORS: *pinus-sylvestris*; *gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Finland-; Russia-

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; *gymnosperms*; *Spermatophyta*; *plants*; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; *fungi*; *European-Union-Countries*; *Developed-Countries*; *EFTA*; *OECD-Countries*; *Scandinavia*; *Northern-Europe*; *Europe*; *Asia*; *Central-Europe*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0282-7581

Record 146 of 393 - TREECD 1973-2000/01

TI - TITLE: Old and fresh *Gremmeniella abietina* damage on Scots pine in Eastern Lapland in 1992.

AU - AUTHOR(S): Kaitera-J; Jalkanen-R

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Department of Forest Ecology, P.O. Box 16, 96301 Rovaniemi, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Silva-Fennica*. 1994, 28: 2, 107-113; 19 ref.

PY - PUBLICATION YEAR: 1994

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Damage to Scots pine (*Pinus sylvestris*) caused by *Gremmeniella abietina* was assessed in the summer of 1992 in sixty-seven stands in eastern Lapland, Finland. The area and severity of damage were less than had been previously estimated; the damage occurred especially in stands in the first-thinning stage or in middle age. Significant new infection in 1991 occurred in stands previously heavily infected by *G. abietina* near the Kemihaara river, Lake Naruska, the Naruska river, the Tuntsa river and Lake Vilma. Fresh damage occurred mainly in the lower or middle parts of the Scots pine canopies.

DE - DESCRIPTORS: forest-trees; shoots-; damage-; assessment-; plant-pathogens; plant-pathogenic-fungi; plant-diseases; fungal-diseases; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-sylvestris*; fungi-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; European-Union-Countries; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0037-5330

Record 147 of 393 - TREECD 1973-2000/01

TI - TITLE: *Gremmeniella abietina* produces pycnidia in cankers of living shoots with green needles on Scots pine.

AU - AUTHOR(S): Kaitera-J; Jalkanen-R

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Department of Forest Ecology, P.O. Box 16, 96301 Rovaniemi, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Silva-Fennica*. 1994, 28: 2, 139-141; 12 ref.

PY - PUBLICATION YEAR: 1994

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: A *Gremmeniella abietina* race of type A was found to produce pycnidia in cankers of previous year's shoots (1991) on branches of Scots pine (*Pinus sylvestris*) in E. Lapland, Finland. Current-year shoots (1992) had no apparent symptoms of infection by *G. abietina*, although some growth reduction was observed.

DE - DESCRIPTORS: forest-trees; life-cycle; pycnidia-; cankers-; shoots-; plant-pathogens; plant-pathogenic-fungi; plant-diseases; fungal-diseases

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-sylvestris*

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; European-Union-Countries; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0037-5330

Record 148 of 393 - TREECD 1973-2000/01

TI - TITLE: Distribution of *Gremmeniella abietina* along a pollution gradient in Lapland and Kola Peninsula.

AU - AUTHOR(S): Kaitera-J; Jalkanen-R; Capretti-P et-al

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Department of Forest Ecology, PO Box 16, 96301 Rovaniemi, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Shoot and foliage diseases in forest trees. Proceedings of a Joint Meeting of the IUFRO Working Parties S2.06.02 and S2.06.04, Vallombrosa, Firenze, Italy 6-11 June 1994. 1995, 219-223; 18 ref.

PB - PUBLISHER INFORMATION: Istituto di Patologia e Zoologia Forestale e Agraria, Universita degli Studi di Firenze; Firenze; Italy

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Scots pine (*Pinus sylvestris*) damage caused by *Gremmeniella abietina* was studied along the pollution gradient between Monchegorsk, Russia and western Lapland, Finland. Stand damage was noted in 4 of 15 areas in northern Finland and Kola. Tree damage was observed in 11 areas in Kola and northern Finland. Branch analysis indicated that the fungus was distributed widely over the areas studied, but no evidence of systematic epidemics was observed. Average damage within an area was related significantly and negatively to the temperature sum and modelled SO₂ levels, but not with site altitude, distance from Monchegorsk, or monthly May-September precipitation, number of pine trees cankered by *Lachnellula pini*, lesioned by *Peridermium pini* [*Endocronartium pini*] or attacked by *Tomicus* spp.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; damage-; air-pollution; climatic-factors; temperature-; precipitation-; altitude-; sulfur-dioxide; forest-pests; insect-pests; fungal-diseases; plant-diseases; plant-pathology; agricultural-entomology

OD - ORGANISM DESCRIPTORS: *Lachnellula*-; *Endocronartium-pini*; *Tomicus*-; *Gremmeniella-abietina*; *Pinus-sylvestris*; fungi-

GE - GEOGRAPHIC NAMES: Finland-; Russia-; Europe-

BT - BROADER DESCRIPTORS: Helotiales; Ascomycotina; Eumycota; fungi; *Endocronartium*; Uredinales; Basidiomycotina; Scolytidae; Coleoptera; insects; arthropods; invertebrates; animals; *Gremmeniella*; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; European-Union-Countries; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe; Asia; Central-Europe

PT - PUBLICATION TYPE: Conference-paper

IB - INTERNATIONAL STANDARD BOOK NUMBER: 88-900074-0-0

Record 149 of 393 - TREECD 1973-2000/01

TI - TITLE: Distribution of *Lachnellula pini* along the pollution gradient in Lapland and Kola Peninsula and in two Scots pine stands damaged by *Gremmeniella abietina* in eastern Lapland.

AU - AUTHOR(S): Kaitera-J; Jalkanen-R; Capretti-P et-al

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Department of Forest Ecology, PO Box 16, 96301 Rovaniemi, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Shoot and foliage diseases in forest trees. Proceedings of a Joint Meeting of the IUFRO Working Parties S2.06.02 and S2.06.04, Vallombrosa, Firenze, Italy 6-11 June 1994. 1995, 224-230; 15 ref.

PB - PUBLISHER INFORMATION: Istituto di Patologia e Zoologia Forestale e Agraria, Universita degli Studi di Firenze; Firenze; Italy

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Distribution of the canker *Lachnellula pini* was studied along a pollution gradient from a nickel smelter in Kola, Russia, to western Lapland, and in two Scots pine (*Pinus sylvestris*) stands damaged by *Gremmeniella abietina*. The pathogen was detected in almost all study areas along the gradient. In the pine stands, which were slightly or severely damaged by *G. abietina*, *L. pini* was common: on average 19.6 and 15.1% of pines, respectively, had *L. pini* cankers. Occurrence of *L. pini* was correlated negatively with average monthly long-term temperature June-September, but not with any other macroclimatic factors or with modelled sulfur dioxide deposition. There was no correlation between nickel content of soil and cankered pines, in the two damaged stands, indicating that nickel plays only a minor role in determining *L. pini* distribution. However, in the severely damaged stand, there was a correlation between the number of cankered pines and pH of both humus and fine fraction proportions in the soil A horizon. Although *L. pini* was more common in stands damaged by *G. abietina* than on average in surrounding stands along the pollution gradient, and this indicated a close relationship between the two pathogens, there was no correlation between *L. pini* and *G. abietina* occurrence among or within the studied areas, except for one site. Results strongly suggest that *L. pini* distribution is random.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; air-pollution; damage-; climatic-factors; temperature-; sulfur-dioxide; acid-deposition; nickel-; distribution-; soil-pollution; fungal-diseases; plant-diseases; plant-pathology

OD - ORGANISM DESCRIPTORS: *Lachnellula*-; *Gremmeniella-abietina*; *Pinus-sylvestris*; fungi-

GE - GEOGRAPHIC NAMES: Finland-; Russia-

BT - BROADER DESCRIPTORS: Helotiales; Ascomycotina; Eumycota; fungi; *Gremmeniella*; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; European-Union-Countries; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe; Asia; Central-Europe

PT - PUBLICATION TYPE: Conference-paper

IB - INTERNATIONAL STANDARD BOOK NUMBER: 88-900074-0-0

Record 150 of 393 - TREECD 1973-2000/01

TI - TITLE: Occurrence of *Gremmeniella abietina* var. *abietina* large- and small-tree types in separate Scots pine stands in northern Finland and in the Kola Peninsula, Russia.

AU - AUTHOR(S): Kaitera-J; Muller-MM; Hantula-J

AD - ADDRESS OF AUTHOR: The Finnish Forest Research Institute, Rovaniemi Research Station, P.O. Box 16, FIN-96301 Rovaniemi, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Mycological-Research*. 1998, 102: 2, 199-205; 27 ref.

PY - PUBLICATION YEAR: 1998

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Variation in *G. abietina* var. *abietina* was studied in 3 stands of Scots pine (*Pinus sylvestris*) in northern Finland and in the Kola Peninsula. Eighty-four isolates of large- and small-tree types of *G. abietina* var. *abietina* (LTT and STT, respectively) were identified on the basis of tentative characteristics (spore morphology, disease type and host size), fatty acid and sterol profiles (FAST), and random amplified microsatellite technique (RAMS). Both LTT and STT occurred in all 3 stands. In general, the classifications obtained using the 3 methods agreed with one another, although a few contradicting results were observed. Variation in fatty acids and sterols in *G. abietina* var. *abietina* was rather low, although the amounts of some individual extractives showed statistically significant differences between the stands. All pathogenic and asymptotic *G. abietina* var. *abietina* isolates originating from branches located at heights above the annual snow cover were identified as LTT based on RAMS, but some were grouped to STT according to their FAST profiles. Both STT and LTT were detected among the isolates obtained from seedlings according to both FAST and RAMS. In addition, in 2 cases RAMS markers thought to be STT- or LTT-specific were found in the same isolate. The results suggest that LTT of *G. abietina* var. *abietina* caused the devastating epidemics on pines at the first-thinning stage or middle age in northern Finland and in the Kola Peninsula during the 1980s.

DE - DESCRIPTORS: forest-trees; plant-diseases; plant-pathogens; plant-pathogenic-fungi; plant-pathology

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Pinopsida*; fungi-

GE - GEOGRAPHIC NAMES: Finland-; Russia-

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; Spermatophyta; plants; European-Union-Countries; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe; Asia; Central-Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0953-7562

Record 151 of 393 - TREECD 1973-2000/01

TI - TITLE: The effect of *Alectoria sarmentosa*, *Bryoria fuscescens*, and *Bryoria fremontii* extracts and usnic acid on the growth of *Gremmeniella abietina* in vitro.

AU - AUTHOR(S): Kaitera-JA; Helle-T; Jalkanen-RE

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Rovaniemi Research Station, P.O. Box 16, Etelaranta 55, FIN-96301 Rovaniemi, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Botany. 1996, 74: 3, 352-359; 27 ref.

PY - PUBLICATION YEAR: 1996

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: The effects of internal (homogenized) and external (prepared by dipping lichen in water) extracts of fresh arboreal lichens (*Alectoria sarmentosa*, *Bryoria fuscescens* and *Bryoria fremontii*) and commercial usnic acid extracted from *Usnea* spp. and *Cladonia* spp. on the growth of isolates of *Gremmeniella abietina* from Scots pine (*Pinus sylvestris*) in northern Finland and the Kola peninsula (Russia) were studied in vitro. Neither internal and external extracts of the three lichen nor usnic acid had strong inhibitive effect on the growth of either type A or type B *G. abietina*. A slight stimulative effect due to the extracts was, however, detected: type B grew faster on almost all media than type A, but great variation within isolates of both types existed suggesting that different types of *G. abietina* may have different responses to chemicals. The results do not support the hypothesis that a decline in numbers of arboreal lichens in southern Finland may enhance *G. abietina* epidemics.

DE - DESCRIPTORS: in-vitro; plant-extracts; growth-; plant-diseases; plant-pathogens; plant-pathogenic-fungi; fungal-diseases; inhibitors-

OD - ORGANISM DESCRIPTORS: gremmeniella-abietina; Pinus-sylvestris; lichens-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi; Pinus; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; European-Union-Countries; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0008-4026

Record 152 of 393 - TREECD 1973-2000/01

TI - TITLE: Comparison of *Gremmeniella abietina* historical damage to Scots pines.

AU - AUTHOR(S): Kaitera-JA; Jalkanen-RE

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, P.O. Box 16, FIN-96301 Rovaniemi, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Forest-Research. 1995, 25: 9, 1503-1508; 14 ref.

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Fifteen Scots Pine (*Pinus sylvestris*) trees that were slightly, moderately, or severely damaged by *Gremmeniella abietina* were felled in northern Finland to determine the disease history of the stand. The annual level of damage was determined by counting the scars and cankers on all the first-order branches. Annual branch leader changes (dead shoots), branch mortality, and attacks caused by shoot beetles (*Tomicus* spp.) were also determined. Most of the *G. abietina* damage occurred in the middle and late 1980s. However, the damage occurred at low levels in the stand as early as in the 1940s, demonstrating that the history of the disease followed the established pattern noticed earlier in eastern Lapland. For slightly damaged trees, most damage occurred in the mid-1980s, while for their severely damaged counterparts most damage occurred in the late 1980s.

DE - DESCRIPTORS: plant-pathogens; plant-pathogenic-fungi; plant-diseases; damage-; forest-trees; forest-pests; insect-pests; fungal-diseases; plant-pathology

OD - ORGANISM DESCRIPTORS: gremmeniella-abietina; Tomicus-; Pinus-sylvestris; fungi-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Scolytidae; Coleoptera; insects; arthropods; invertebrates; animals; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; European-Union-Countries; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0045-5067

Record 153 of 393 - TREECD 1973-2000/01

TI - TITLE: An outbreak of *Gremmeniella abietina* in central Finland.
AU - AUTHOR(S): Kallio-T; Hakkinen-R; Heinonen-J
AD - ADDRESS OF AUTHOR: Finnish Forest Res. Inst., Helsinki, Finland.
SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*.
1985, 15: 4, 216-223; 4 fig., 2 tab.; 13 ref.
PY - PUBLICATION YEAR: 1985
LA - LANGUAGE OF TEXT: English
LS - LANGUAGE OF SUMMARIES: French, German
AB - ABSTRACT: Studies on the occurrence of *G. abietina* on Scots pine showed the proportion of trees considered capable of recovering from the disease to increase with increasing stand density. Artificially regenerated stands were more infected than naturally regenerated ones, infection being most severe in 20-30 yr-old stands. Fertilizer treatment decreased the proportion of recoverable trees. Owing to differences between density distributions, there were no differences between the need to restock the 2 types of stand. It appeared that *G. abietina* initially infected the artificially regenerated stands and then spread to naturally regenerated ones.
DE - DESCRIPTORS: Pines-; forest-management; spread-; Cankers-; assessment-; resistance-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi
OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-sylvestris*; fungi-; *Pinus*-
GE - GEOGRAPHIC NAMES: Finland-
BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Scandinavia; Northern-Europe; Europe
PT - PUBLICATION TYPE: Journal-article
IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 154 of 393 - TREECD 1973-2000/01

TI - TITLE: Damage to *Pinus contorta* in northern Sweden with special emphasis on pathogens.

AU - AUTHOR(S): Karlman-M

AD - ADDRESS OF AUTHOR: Dep. Silvicult., SLU, S-901 83 Umeå, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Studia Forestalia Suecica*. 1986, No. 176, 42pp.; 186 ref.

PY - PUBLICATION YEAR: 1986

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: During a 9-yr study period, about 100 provenances were examined annually for different kinds of damage. Damage occurred mostly during the first 10 yr after planting; northern provenances were more resistant to pathogens than southern provenances. Southern and coastal provenances showed weather damage (frost and wind) almost every year; northern provenances showed weather damage as a result of temperature oscillations during shoot elongation. Weather damage predisposed plants to infection by secondary pathogens, primarily *Gremmeniella abietina* and *Phacidium infestans*; even northern provenances were infected by *P. infestans* in high altitude stands in N. Sweden. Vole damage was significant in N. Sweden, followed by severe infection by *G. abietina*. About 12 other fungal pathogens were recorded.

DE - DESCRIPTORS: Fungal-diseases; assessment-; damage-; frost-injury; wind-damage; Pines-; diseases-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Pinus contorta*; *Gremmeniella abietina*; *Phacidium infestans*; fungi-; *Pinus*-

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; *Phacidium*; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Miscellaneous

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0039-3150

IB - INTERNATIONAL STANDARD BOOK NUMBER: 91-576-2824-6

Record 155 of 393 - TREECD 1973-2000/01

TI - TITLE: Damage to *Pinus contorta* in N. Sweden in 1979.

OT - ORIGINAL NON-ENGLISH TITLE: Skador pa *Pinus contorta* i norra Sverige 1979.

AU - AUTHOR(S): Karlman-M

AD - ADDRESS OF AUTHOR: Inst. Ekol. Bot., Umea Univ., Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Sveriges-Skogsvarldsforbunds-Tidskrift. 1980, 78: 3, 14-26; 9 pl. (4 in col.); 23 ref.

PY - PUBLICATION YEAR: 1980

LA - LANGUAGE OF TEXT: Swedish

AB - ABSTRACT: A continuation of observations in *P. contorta* plantations, where damage had been reported in 1978 [see FA 40, 4633]. Climate in winter 1979 varied from extremely cold to mild; this led to damage to *P. contorta* in provenance trials in Norrland, Angermanland and Vasterbotten. Mainly southern, but also some northern provenances were affected. A majority of plants injured by vole and elk in 1978 had recovered, but quality impairment seemed inevitable. *Gremmeniella abietina* and *Sclerophoma pithyophila* were found as secondary pathogens. *Phacidium infestans* affected provenance trials in Angermanland (where since the planting in 1971, 16% of the plants have been killed by the disease) and Arvidsjaur. *P. contorta* remained resistant to *Melampsora pinitorqua* and *Lophodermella sulcigena*, both widespread in 1979 on *P. sylvestris*.

DE - DESCRIPTORS: injuries-; foliage-; conifers-

OD - ORGANISM DESCRIPTORS: *Pinus-contorta*; rodents-; *Pinus-sylvestris*; *Gremmeniella-abietina*; *Phacidium-infestans*; MELAMPSORA-POPULNEA; *Sydowia-polyspora*

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; mammals; vertebrates; Chordata; animals; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Phacidium*; *Melampsora*; Uredinales; Basidiomycotina; Scandinavia; Northern-Europe; Europe; Rhytismatales

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0371-2907

Record 156 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris canker on lodgepole pine introduced in northern Sweden.

AU - AUTHOR(S): Karlman-M; Hansson-P; Witzell-J

AD - ADDRESS OF AUTHOR: Swedish University of Agricultural Sciences, Faculty of Forestry, Department of Silviculture, 901 83 Umea, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Forest-Research. 1994, 24: 9, 1948-1959; 68 ref.

PY - PUBLICATION YEAR: 1994

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Conditions in 110 conventional plantings of introduced lodgepole pine (*Pinus contorta*) were investigated in northern Sweden during the period 1987-91. Severe damage by Scleroderris canker (caused by the fungus *Gremmeniella abietina*) was recorded at high altitudes in 1987. Damage was related to a period with extreme weather conditions. The disease was initially severe in low lying areas, from where it quickly spread throughout the plantations during 1988. Temperatures above average during 1988-1990 favoured tree vigour, which in turn slowed the spread of the disease. The frequency of stem cankers increased in seriously infected areas during 1989, and new severe damage was recorded locally in 1990 and in 1992. A strong correlation was found between disease severity and the temperature sum at the site. Lodgepole pine planted on spruce sites was often severely affected. A negative correlation was found between the frequency of *G. abietina* and the abundance of birch [*Betula*] thicket. In large areas in northern Sweden with a more favourable climate, lodgepole pine plantations were healthy and productive up to 1991. However, instability, leading to increased susceptibility to disease, has become a problem of great concern in some of these areas during the 1990s.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; plant-diseases; climate-; heat-sums; fungal-diseases

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-contorta*

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; OECD-Countries; Developed-Countries; EFTA; European-Union-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0045-5067

Record 157 of 393 - TREECD 1973-2000/01

TI - TITLE: *Gremmeniella abietina* on *Pinus contorta* in northern Sweden related to environmental factors - the disease situation in 1993.

AU - AUTHOR(S): Karlman-M; Hansson-P; Witzell-J; Capretti-P et-al

AD - ADDRESS OF AUTHOR: Swedish University of Agricultural Sciences, Department of Silviculture, Faculty of Forestry, 901 83 Umea, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Shoot and foliage diseases in forest trees. Proceedings of a Joint Meeting of the IUFRO Working Parties S2.06.02 and S2.06.04, Vallombrosa, Firenze, Italy 6-11 June 1994. 1995, 214-218; 13 ref.

PB - PUBLISHER INFORMATION: Istituto di Patologia e Zoologia Forestale e Agraria, Universita degli Studi di Firenze; Firenze; Italy

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Forest plantations of lodgepole pine (*Pinus contorta*) in northern Sweden have been infected by *Gremmeniella abietina*; the disease reached a peak in 1988 after a period of very extreme weather conditions. New severe infections were recorded locally in 1990 and 1992-93. However, in areas with less harsh climatic conditions, there were still large amounts of healthy and productive lodgepole pine stands. Insect damage and instability of trees (possibly due to site preparation techniques), however, may increase the susceptibility to pathogen damage. Lodgepole pine planted on sites that formerly supported spruce (*Picea abies*) has a high frequency of damage. Three- to 5-yr-old plantations of lodgepole pine are mainly healthy.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; climatic-factors; site-factors; snow-; damage-; susceptibility-; fungal-diseases; plant-diseases; environmental-factors; plant-pathology

OD - ORGANISM DESCRIPTORS: *Picea-abies*; *Gremmeniella-abietina*; *Pinus-contorta*; fungi-

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: *Picea*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; OECD-Countries; Developed-Countries; EFTA; European-Union-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Conference-paper

IB - INTERNATIONAL STANDARD BOOK NUMBER: 88-900074-0-0

Record 158 of 393 - TREECD 1973-2000/01

TI - TITLE: Damage in Pinus contorta plantations in northern Sweden planted in 1974-81 - results from 1987-91.

OT - ORIGINAL NON-ENGLISH TITLE: Skadelaget i praktiska kulturer med Pinus contorta i norra Sverige - resultat fran aren 1987-91.

AU - AUTHOR(S): Karlman-M; Witzell-J; Hansson-P

AD - ADDRESS OF AUTHOR: Institutionen for Skogsskotsel, Sveriges Lantbruksuniversitet, 90183 Umea, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Arbetsrapporter,-Institutionen-for-Skogsskotsel,-Sveriges-Lantbruksuniversitet. 1992, No. 62, 58 + 41 pp.; 4 pp. of ref.

PB - PUBLISHER INFORMATION: Institutionen for Skogsskotsel, Sveriges Lantbruksuniversitet (Department of Silviculture, Swedish University of Agricultural Sciences); Umea; Sweden

PY - PUBLICATION YEAR: 1992

LA - LANGUAGE OF TEXT: Swedish

AB - ABSTRACT: The results are presented of a report of the damage (mainly caused by Gremmeniella abietina) to Pinus contorta plantations in northern Sweden. Infection was correlated with low temperatures, site topography and the proportion of hardwoods in the stand.

DE - DESCRIPTORS: forest-plantations; forest-trees; fungal-diseases; climate-; temperature-; frost-injury; topography-

OD - ORGANISM DESCRIPTORS: Gremmeniella-abietina; Pinus-contorta

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi; Pinus; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; OECD-Countries; Developed-Countries; EFTA; European-Union-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Miscellaneous

Record 159 of 393 - TREECD 1973-2000/01

TI - TITLE: Effect of refertilization on tree growth in an old drainage area.

OT - ORIGINAL NON-ENGLISH TITLE: Jatkolannoituksen vaikutus puuston kasvuun vanhalla ojitusalueella.

AU - AUTHOR(S): Kaunisto-S

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Parkano Research Station, 39700 Parkano, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Folia-Forestalia. 1989, No. 724, 15 pp.; 27 ref.

PY - PUBLICATION YEAR: 1989

LA - LANGUAGE OF TEXT: Finnish

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: At the time of drainage in the 1930s the experimental area, near Parkano, Finland, was partly a Scots pine [*Pinus sylvestris*] mire (av. ht. of tree stands 6.8-17.1 m) and partly an open mire. Effects of PK fertilizer treatment in 1961-62 diminished after 15 yr. Factorial NPK refertilization in 1976 showed K deficiency and some increased growth from N (related to N-content of the peat). An epidemic of *Ascocalyx* [*Gremmeniella*] *abietina* 5-7 yr after refertilization severely reduced growth of trees on all plots but showed no significant interaction with fertilizer treatments.

DE - DESCRIPTORS: Conifers-; Fertilizers-; NPK-fertilizers; requirements-; fungal-diseases; Plant-diseases; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Pinus-sylvestris*; *Gremmeniella-abietina*; *Gremmeniella*-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: compound-fertilizers; fertilizers; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Pinus*; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Miscellaneous

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0015-5543

IB - INTERNATIONAL STANDARD BOOK NUMBER: 951-40-1032-9

Record 160 of 393 - TREECD 1973-2000/01

TI - TITLE: Shoot canker of conifers.

AU - AUTHOR(S): Khanso-ME; Krutov-VI

AD - ADDRESS OF AUTHOR: EstNIILKhOP, USSR.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Lesnoe-Khozyaistvo. 1983, No. 10, 70-72;
16 ref.

PY - PUBLICATION YEAR: 1983

LA - LANGUAGE OF TEXT: Russian

AB - ABSTRACT: A review is given of Soviet literature on shoot canker or dieback caused by *Gremmeniella abietina* (syn. *Crumenula abietina*, *Scleroderris lagerbergii*; conidial stage *Brunchorstia pinea*), and its incidence in the USSR since the 1960s. Some 20 species of pine are known to be attacked, as well as spruces, firs and larch.

DE - DESCRIPTORS: conifers-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: USSR-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota;
fungi

PT - PUBLICATION TYPE: Journal-article

Record 161 of 393 - TREECD 1973-2000/01

TI - TITLE: Spraying trials against needle-cast fungi.

AU - AUTHOR(S): Klingstrom-A

SO - SOURCE (BIBLIOGRAPHIC CITATION): Sveriges-Skogsvardsforbunds-Tidskrift. 1974, 72: 5-6, 579-593; 5 ref.

PY - PUBLICATION YEAR: 1974

LA - LANGUAGE OF TEXT: Swedish

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: Describes results of trials over 10 years in a number of nurseries in which *Pinus sylvestris* seedlings were sprayed with various mixtures of daconil and cycloheximide for controlling *Lophodermium pinastri*, *Phacidium infestans* and *Scleroderris lagerbergii*. A mixture of 1000 parts daconil to 1 part cycloheximide gave good protection; four treatments, each at a rate of 3.5 kg in 800 litres water per ha, were required during the growing season.

DE - DESCRIPTORS: seedlings-; fungicides-; cycloheximide-; nurseries-; conifers-

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Lophodermium-pinastri*; *Phacidium-infestans*; *GREMMENIELLA-ABIETINA*

BT - BROADER DESCRIPTORS: Spermatophyta; plants; pesticides; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Lophodermium*; Rhytismatales; Ascomycotina; Eumycota; fungi; *Phacidium*; Helotiales; *Gremmeniella*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0371-2907

Record 162 of 393 - TREECD 1973-2000/01

TI - TITLE: Control of Lophodermium and Phacidium needle cast and Scleroderris canker in Pinus silvestris.

AU - AUTHOR(S): Klingstrom-A; Lundeberg-G

AD - ADDRESS OF AUTHOR: Inst. Physiol. Bot., Univ. Uppsala, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1978, 8: 1, 20-25; 5 tab.; 12 ref.

PY - PUBLICATION YEAR: 1978

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: Acceptable control of L. pinastri in Sweden was obtained with 1 spray of cycloheximide in the autumn. P. infestans and S. lagerbergii [Gremmeniella abietina] were controlled with chlorothalonil + cycloheximide sprayed 4 times, once in early spring and 3 times after shoot elongation, the last spray as late as possible in autumn. The recommended dosage for nurseries is 800 l water with 3.5 kg chlorothalonil and 4 g cycloheximide (5 p.p.m.)/ha.

DE - DESCRIPTORS: diseases-; cycloheximide-; chlorothalonil-; control-; foliage-; fungal-diseases; fungicides-; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: Pinus-; Lophodermium-pinastri; Phacidium-infestans; Gremmeniella-abietina; Pinus-sylvestris

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: aromatic-fungicides; fungicides; pesticides; trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; Lophodermium; Rhytismatales; Ascomycotina; Eumycota; fungi; Phacidium; Helotiales; Gremmeniella; Pinus; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 163 of 393 - TREECD 1973-2000/01

TI - TITLE: Use of a computer simulation model to evaluate a plant disease biocontrol agent.

AU - AUTHOR(S): Knudsen-GR; Hudler-GW

AD - ADDRESS OF AUTHOR: US Environ. Protection Agency, Environ. Res. Lab., Corvallis, OR 97333, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Ecological-Modelling. 1987, 35: 1-2, 45-62.

PY - PUBLICATION YEAR: 1987

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The model (INHIBSIM) was developed to predict population dynamics of a bacterial biological control agent (*Pseudomonas fluorescens*) on the foliage of red pine (*Pinus resinosa*) seedlings, and subsequent effects on conidial germination of a fungal plant pathogen (*Gremmeniella abietina*). It was tested under controlled-environment and field conditions. Recoverable populations of bacteria were extremely sensitive to leaf wetness but relatively insensitive to temperature. Germination of conidia was insensitive to small variations in bacterial concentration. Successful biological control of foliar plant pathogens using bacterial antagonists will require identification of agents that do not require dense concn to be effective and development of techniques to enhance their survival. Predictive population models can identify and quantify these requirements, and reduce the costs of evaluating and developing potential biocontrol agents.

DE - DESCRIPTORS: Pines-; biological-control; diseases-; control-; Techniques-; models-; antagonists-; hosts-; fungal-diseases; simulation-; foliage-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pseudomonas-fluorescens*; *Pinus-resinosa*; *Gremmeniella*-; *Pinus*-; fungi-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; *Pseudomonas*; *Pseudomonadaceae*; Gracilicutes; bacteria; prokaryotes; *Pinus*; Pinaceae; Pinopsida; gymnosperms

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0304-3800

Record 164 of 393 - TREECD 1973-2000/01

TI - TITLE: Present status of researches on forest diseases in Japan.
AU - AUTHOR(S): Kobayashi-T
AD - ADDRESS OF AUTHOR: Forest Development Technological Institute, Rokuban-cho
7, Chiyodaku, Tokyo 102, Japan.
SO - SOURCE (BIBLIOGRAPHIC CITATION): Korean-Journal-of-Plant-Pathology. 1990,
6: 1, 146-167; 166 ref.
PY - PUBLICATION YEAR: 1990
LA - LANGUAGE OF TEXT: English
AB - ABSTRACT: A historical review of research in forest pathology 1945-1980 is
followed by an account of the present status of researches of forest tree
diseases, including *Gremmeniella abietina* on *Abies sachalinensis*; *Seiridium*
unicorne and *Pezicula livida* on *Chamaecyparis obtusa*; *Fusarium moniliforme*
[*Gibberella fujikuroi*] var. *subglutinans* on *Pinus luchuensis*; and pine [*Pinus*]
wilt caused by the nematode *Bursaphelenchus xylophilus*, with a brief note on
cooperative studies with workers in foreign countries.
DE - DESCRIPTORS: Forests-; diseases-; reviews-; Conifers-; research-; Fungal-
diseases; woody-plants; Plant-parasitic-nematodes; Forest-trees; damage-;
nematology-; plant-nematology; plant-pathology; pines-
OD - ORGANISM DESCRIPTORS: *Abies-sachalinensis*; *Chamaecyparis-obtusa*; *Seiridium-*
unicorne; *Gibberella-fujikuroi-var.-subglutinans*; *Gremmeniella-abietina*;
Gibberella-fujikuroi; *Nematoda*-; *Pinus*-; *Gremmeniella*-; *Seiridium*-; *Pezicula*-;
Pinus-luchuensis; *Gibberella*-; *Bursaphelenchus-xylophilus*
GE - GEOGRAPHIC NAMES: Japan-
BT - BROADER DESCRIPTORS: Spermatophyta; plants; Nematoda; invertebrates;
animals; trees; woody-plants; *Abies*; Pinaceae; Pinopsida; gymnosperms;
Chamaecyparis; Cupressaceae; *Seiridium*; Deuteromycotina; Eumycota; fungi;
Gibberella-fujikuroi; *Gibberella*; Hypocreales; Ascomycotina; *Gremmeniella*;
Helotiales; *Pinus*; *Bursaphelenchus*; Aphelenchoididae; East-Asia; Asia; *Pezicula*
PT - PUBLICATION TYPE: Journal-article
IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0256-8608

Record 165 of 393 - TREECD 1973-2000/01

TI - TITLE: A new disease of conifers in Polish forests.

OT - ORIGINAL NON-ENGLISH TITLE: Nowa choroba drzew iglastych w lasach Polski.

AU - AUTHOR(S): Kolk-A

AD - ADDRESS OF AUTHOR: Inst. Badaw. Les., Warsaw, Poland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Las-Polski. 1983, No. 8, 23-25.

PY - PUBLICATION YEAR: 1983

LA - LANGUAGE OF TEXT: Polish

AB - ABSTRACT: A description of symptoms of *Scleroderris lagerbergii* [*Gremmeniella abietina*] which was first noted in 1979 and now affects significant areas of forest in Bialystok, Gdansk, Szczecinek, Szczecin, Pila, Torun and Wroclaw provinces. All major native genera are affected, viz. *Pinus*, *Picea*, *Larix* and *Abies*. Needles brown and drop and branches die from cankers starting at the base of the crown in older stands, whereas needle drop in young stands starts from the apex. Stands on old field sites with moderate soil N content and on forest sites fertilized with NPK are most susceptible as well as stands affected by industrial air pollution or insect pests. In areas of heavy disease, young seedlings can also be affected. Several species of mites and insects appear to be associated with the disease, but their role is as yet uncertain.

DE - DESCRIPTORS: Cankers-; conifers-; pines-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; fungi-; *Abies*-; *Pinus*-; *Picea*-; *Larix*-

GE - GEOGRAPHIC NAMES: Poland-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; Central-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0023-8538

Record 166 of 393 - TREECD 1973-2000/01

TI - TITLE: Forest insect and disease conditions in Canada 1983.

AU - AUTHOR(S): Kondo-ES (ed.); Taylor-RG

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1984, 73 pp.; 8 fig., 1 tab. See RPP 62, 761.

PB - PUBLISHER INFORMATION: Forest Insect and Disease Survey Canadian Forestry Service; Ottawa; Canada

PY - PUBLICATION YEAR: 1984

LA - LANGUAGE OF TEXT: English, French

AB - ABSTRACT: The first part of this report is devoted to major forest insects and diseases (3-22) and includes accounts of Scleroderris canker (*Gremmeniella abietina*); European larch canker (*Lachnellula willkommii*); Dutch elm disease (*Ceratocystis ulmi*); and decline and dieback and stress-related disorders. Following some special surveys of pests, other insects and diseases are tabulated (27-61) for each region (Newfoundland, Maritimes, Quebec, Ontario, Western and Northern, and Pacific and Yukon). There is an index to insects and diseases.

DE - DESCRIPTORS: Forest-trees; diseases-; larch-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; Pinopsida-; *Ceratocystis-ulmi*; *Ulmus*-; TRICHOSCYPHELLA-WILLKOMMII

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; gymnosperms;

Ceratocystis; Ophiostomatales; Ulmaceae; Urticales; dicotyledons; angiosperms; *Trichoscyphella*; North-America; America; *Lachnellula*

PT - PUBLICATION TYPE: Annual-report

Record 167 of 393 - TREECD 1973-2000/01

TI - TITLE: Forest insect and disease conditions in Canada 1986.

AU - AUTHOR(S): Kondo-ES; Moody-BH

AD - ADDRESS OF AUTHOR: For. Insect & Disease Survey, Canadian For. Serv., Ottawa, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1987, 128pp.; 18 fig.; many ref.

PB - PUBLISHER INFORMATION: Canadian Forestry Service; Ottawa, Ontario K1A 0C5; Canada

PY - PUBLICATION YEAR: 1987

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Data from the 1986 survey of insect pests and diseases in Canadian forests are presented. Major insect pests included the tortricids *Choristoneura fumiferana*, *Acleris gloverana* and *C. pinus pinus*, the scolytids *Dendroctonus ponderosae*, *D. rufipennis* and *D. simplex*, *Lymantria dispar*, the lasiocampid *Malacosoma disstria* and the geometrid *Lambdina fiscellaria fiscellaria*. Major pathogens included *Ceratocystis ulmi*, *Gremmeniella abietina*, *Lachnellula willkommii* and decline, dieback and stress-related orders. The distribution of each pest or pathogen is given, with details of damage and control for some species. A national early warning system for acid rain is described. Special surveys of cone and seed pests, pests and diseases in young stands and plantations, Stillwell's syndrome (sudden death of balsam fir trees (*Abies balsamea*)) and the nematode *Bursaphelenchus xylophilus* were carried out and the results are presented. Other insects, diseases and damage are tabularized for each region with details of hosts, location and incidence, and a bibliography of the relevant literature is included.

DE - DESCRIPTORS: Distribution-; Damage-; Bibliographies-; forest-trees; forest-pests; surveys-; insect-pests; Forests-; diseases-; Entomophilic-nematodes; trees-; plant-parasitic-nematodes; plant-nematology; nematology-; agricultural-entomology; plant-pathology; entomopathogens-; natural-enemies

OD - ORGANISM DESCRIPTORS: Tortricidae-; Lepidoptera-; Scolytidae-; Coleoptera-; Lymantriidae-; Lasiocampidae-; Geometridae-; *Choristoneura-fumiferana*; *Acleris-gloverana*; *Dendroctonus-ponderosae*; *Dendroctonus-rufipennis*; *Lymantria-dispar*; *Malacosoma-disstria*; *Lambdina-fiscellaria-fiscellaria*; *Bursaphelenchus-xylophilus*; arthropods-

GE - GEOGRAPHIC NAMES: Canada-; North-America

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; pests; animals; arthropod-pests; arthropods; invertebrates; insects; animal-parasitic-nematodes; Nematoda; Lepidoptera; Coleoptera; *Choristoneura*; Tortricidae; *Acleris*; *Dendroctonus*; Scolytidae; *Lymantria*; Lymantriidae; *Malacosoma*; Lasiocampidae; *Lambdina-fiscellaria*; *Lambdina*; Geometridae; *Bursaphelenchus*; Aphelenchoididae; North-America; America; *Choristoneura-pinus*

PT - PUBLICATION TYPE: Miscellaneous

Record 168 of 393 - TREECD 1973-2000/01

TI - TITLE: A new canker disease of loblolly pine, *Pinus taeda* L., caused by *Ascocalyx pinicola* sp. nov.

AU - AUTHOR(S): Kondo-H; Kobayashi-T

AD - ADDRESS OF AUTHOR: Ibaraki Prefecture For. Exp. Sta., Naka-gun, Ibaraki 319-21, Japan.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Journal-of-the-Japanese-Forestry-Society*. 1984, 66: 2, 60-66; 1 pl. En captions; 11 ref.

PY - PUBLICATION YEAR: 1984

LA - LANGUAGE OF TEXT: Japanese

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: The disease was found in 15-20 yr old plantations in Ibaraki prefecture, Honshu. Incidence in 10 stands on varying sites ranged from 4 to 57% (av. 26%), and most of the diseased trees had 1 canker per stem. The lesions develop at the base of dead branches and gradually make deep vertical slits as the cambial tissues are destroyed. New lesions were recorded from 1968 to 1978 but more than 60% started in 1971-74 with a peak in 1973. The influence of some predisposing factors was inferred from the normal curve of annual disease development. About 75% of the cankers started on 5-9 yr old stems and most were 50-100 cm long. The proportion of cankers developing on the SW side was higher than on the NE side. Many apothecia of an *Ascocalyx* sp. were formed on lesions from late May to mid June, and inoculation with monoascospore isolates caused development of cankers on loblolly pine seedlings after 9-13 months. Comparison of morphological characteristics of the fungus with known *Ascocalyx* spp. and other genera suggested that it was a new species (*A. pinicola*) with no conidial stage.

DE - DESCRIPTORS: cankers-; pines-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Pinus-taeda*; fungi-; *Pinus-*

GE - GEOGRAPHIC NAMES: Japan-; Honshu-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; East-Asia; Asia; Japan; *Ascocalyx*; Ascomycotina; Eumycota

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0021-485X

Record 169 of 393 - TREECD 1973-2000/01

TI - TITLE: Antifungal activity in culture filtrates of the ectomycorrhizal fungus *Pisolithus tinctorius*.

AU - AUTHOR(S): Kope-HH; Fortin-JA

AD - ADDRESS OF AUTHOR: Centre de Recherche en Biologie Forestiere, Faculte de Foresterie et de Geomatique, Universite Laval, Sainte-Foy, Que. G1K 7P4, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Botany. 1990, 68: 6, 1254-1259; 19 ref.

PY - PUBLICATION YEAR: 1990

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: *P. tinctorius* secreted a metabolite that lysed hypha and conidia and inhibited the germination of conidia in a range of phytopathogenic fungi. The opt. incubation period for the production of the metabolite by *P. tinctorius* in liquid culture was 42-56 d. Dilutions of the culture filtrate with fresh medium caused a gradient on inhibitory effects. For hyphal lysis the min. ratio of culture filtrate to medium for complete growth inhibition was 5:1 for *Rhizoctonia* [*Thanatephorus*] *pratensis* and *Truncatella hartigii* and 3:1 for *Sphaerosporella brunnea*. At higher dilutions, the hyphae that formed were short celled and highly branched; many hyphae lysed. Conidial germination was completely inhibited at a ratio of 5:1 for both *Fusarium solani* and *T. hartigii*, 3:1 for a North American isolate of *Brunchorstia pinea* [*Gremmeniella abietina*] (NA), 1:1 for a European isolate of *G. abietina* (EU), and 1:3 for 2 str of *Cochliobolus sativus* (0910, 0912). Conidial lysis was seen for *T. hartigii* at a ratio of 5:1 and at a ratio of 1:1 for *G. abietina* (EU) and *C. sativus* (0910). Characterization of the cell-free culture filtrate through the separate additions of D-glucose and an adsorbent, activated charcoal, showed that hyphal lysis and conidia germination inhibition did not result from a depletion of carbohydrates from the growth medium but from the presence of some substance adsorbed by charcoal.

DE - DESCRIPTORS: antifungal-properties; Mycorrhizal-fungi; Cell-culture; Mycorrhizas-; diseases-; biotechnology-

OD - ORGANISM DESCRIPTORS: *Pisolithus-tinctorius*; *Pisolithus-*

BT - BROADER DESCRIPTORS: fungi; *Pisolithus*; Sclerodermatales; Basidiomycotina; Eumycota

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0008-4026

Record 170 of 393 - TREECD 1973-2000/01

TI - TITLE: Epiphytic mycoflora of the shoots of *Pinus sylvestris* and *Pinus nigra* their effect on the growth of *Gremmeniella abietina* cultures in the laboratory.

OT - ORIGINAL NON-ENGLISH TITLE: Mikoflora epifityczna pedow sosny pospolitej i sosny czarnej i jej wplyw na wzrost kultur *Gremmeniella abietina* (Lagerb.) Morelet w warunkach laboratoryjnych.

AU - AUTHOR(S): Kowalski-S; Stepniewska-H

AD - ADDRESS OF AUTHOR: Katedra Fitopatologii Lesnej, Akademia Rolnicza, Krakow, Poland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Zeszyty-Naukowe-Akademii-Rolniczej-im.-Hugona-Kollataja-w-Krakowie,-Lesnictwo. 1989, publ.1990, No. 19 (236), 35-46; En tab.; 15 ref.

PB - PUBLISHER INFORMATION: Krakow; Poland

PY - PUBLICATION YEAR: 1989

LA - LANGUAGE OF TEXT: Polish

LS - LANGUAGE OF SUMMARIES: English, Russian

AB - ABSTRACT: Fungi were isolated in spring and autumn from the surfaces of buds and shoots collected in 15-yr-old stands in Poland in a zone of medium industrial air pollution. The flora was similar qualitatively on both species and more diverse in the autumn when growth was complete. Only 7 species showed any inhibitory effect on cultures of *G. abietina* and it is suggested that the absence of a sufficient number of fungal antagonists may contribute to the spread of the pathogen.

DE - DESCRIPTORS: conifers-; fungal-diseases; shoots-; buds-; microbial-flora; air-pollution; pines-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-nigra*; *Pinus-sylvestris*; *Pinus*-

GE - GEOGRAPHIC NAMES: Poland-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; Central-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

Record 171 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris lagerbergii and its pathogenicity towards conifers.
OT - ORIGINAL NON-ENGLISH TITLE: Scleroderris lagerbergii i jego patogenicznosc na drzewach iglastych.
AU - AUTHOR(S): Kowalski-T
AD - ADDRESS OF AUTHOR: Inst. Ochrony Lasu, Akad. Rol., Krakow, Poland.
SO - SOURCE (BIBLIOGRAPHIC CITATION): Sylwan. 1983, 127: 6, 33-43; 2 pl.; 35 ref.
PY - PUBLICATION YEAR: 1983
LA - LANGUAGE OF TEXT: Polish
LS - LANGUAGE OF SUMMARIES: Russian, English
AB - ABSTRACT: A review of the literature and the author's own observations on the biology and occurrence of *S. lagerbergii* [*Gremmeniella abietina*] which has been observed in southern Poland since 1979 on *Pinus nigra*, especially in the Upper Silesian Industrial District, and on *P. sylvestris* and *P. strobus* in montane forests at Krynica. Several methods of prevention are listed, including use of local Scots pine provenances, establishment of spring-sown pine seedlings in place of natural regeneration, establishment under broadleaved canopies, rigorous culling and burning of infected nursery stock, avoiding frost pockets and generally ensuring healthy stand development for greater resistance.
DE - DESCRIPTORS: dieback-; pines-; reviews-; control-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi
OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Pinus-strobus*; *Pinus-nigra*; *Abies-alba*; *Pinus-*; *Abies-*; *Gremmeniella-abietina*; *fungi-*
GE - GEOGRAPHIC NAMES: Poland-
BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; *Abies*; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; Central-Europe; Europe
PT - PUBLICATION TYPE: Journal-article
IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0039-7660

Record 172 of 393 - TREECD 1973-2000/01

TI - TITLE: Infection of black pine with *Gremmeniella abietina* in forests of the Upper Silesian Industrial Region.

OT - ORIGINAL NON-ENGLISH TITLE: Porazenie sosny czarnej przez *Gremmeniella abietina* (= *Scleroderris lagerbergii*) w lasach Gornoslaskiego Okregu Przemyslowego.

AU - AUTHOR(S): Kowalski-T

AD - ADDRESS OF AUTHOR: Katedra Fitopatologii Lesnej, Akademia Rolnicza, Krakow, Poland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Sylwan. 1987, 131: 8, 31-39; 11 ref.

PY - PUBLICATION YEAR: 1987

LA - LANGUAGE OF TEXT: Polish

LS - LANGUAGE OF SUMMARIES: Russian, English

AB - ABSTRACT: Occurrence of *G. abietina* canker was measured in 1985-86 in 45 stands aged 4-70 yr on moist coniferous and mixed coniferous and mixed broadleaved forest sites in Chrzanow, Katowice and Swierklaniec forest districts, Poland, suffering from moderate to heavy air pollution. Black pine (*Pinus nigra*) content of stands was 20-80%. Results showed no infection in 4- to 10-yr-old stands and 7-53% infection in 40- to 70-yr-old stands. Heaviest infection (av. 67%) was in 11- to 25-yr-old stands: in the majority of trees only the lower part of the crown was affected and the number of dead shoots was less than 25%. Infection was most severe in *P. nigra* growing under a canopy of *P. sylvestris* or near older *P. nigra* stands.

DE - DESCRIPTORS: Conifers-; fungal-diseases; Air-pollution; diseases-; Pines-; forest-trees; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Pinus-nigra*; *Gremmeniella*-; *Gremmeniella-abietina*; fungi-; *Pinus*-

GE - GEOGRAPHIC NAMES: Poland-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Helotiales; Ascomycotina; Eumycota; *Gremmeniella*; Central-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0039-7660

Record 173 of 393 - TREECD 1973-2000/01

TI - TITLE: Causes and occurrence of shoot tip dieback of *Pinus nigra*, *P. sylvestris* and *P. strobus* in forest stands in southern Poland in 1979-80.
OT - ORIGINAL NON-ENGLISH TITLE: Występowanie i przyczyny odwierzchołkowego zamierania pedów *Pinus nigra*, *P. sylvestris* i *P. strobus* w niektórych drzewostanach południowej Polski w latach 1979-1980.
AU - AUTHOR(S): Kowalski-T; Domanski-S
AD - ADDRESS OF AUTHOR: Inst. Ochrony Lasy, AR, Krakow, Poland.
SO - SOURCE (BIBLIOGRAPHIC CITATION): *Acta-Agraria-et-Silvestria,-Silvestris*. 1983, 22: 19-34; 2 pl. En tab. & fig.; 27 ref.
PY - PUBLICATION YEAR: 1983
LA - LANGUAGE OF TEXT: Polish
LS - LANGUAGE OF SUMMARIES: English, Russian
AB - ABSTRACT: Studies were made of over 15 000 trees from young stands in the Upper Silesian industrial region and fungi inhabiting 378 dying trees and 2199 dying shoots were analysed in the laboratory. Shoots of *P. nigra* were most susceptible to dieback (28.4% affected) compared with *P. sylvestris* (5.8%) and *P. strobus* (4.5%). *Scleroderris lagerbergii* [*Gremmeniella abietina*] was the main pathogenic species, being present in 92% of dying shoots of *P. nigra*, 91% of *P. sylvestris* and 75% of *P. strobus*. Fruit bodies of *Crumenulopsis sororia* were always associated with the presence of cankers, especially on 2-3 yr old shoots; *Sarea resinae* fruit bodies were observed on resin excreted from cankers and necroses. *Pezicula livida* and *Phomopsis occulta* are also important in accelerating the death of diseased trees.
DE - DESCRIPTORS: dieback-; Cankers-; Pines-; susceptibility-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi
OD - ORGANISM DESCRIPTORS: *Pinus-nigra*; *Pinus-sylvestris*; *Pinus-strobus*; *Pinus-*; *fungi-*; *Crumenulopsis-sororia*; *Gremmeniella-abietina*; *Diaporthe-eres*
GE - GEOGRAPHIC NAMES: Poland-
BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; *Crumenulopsis*; *Helotiales*; *Ascomycotina*; *Eumycota*; *Gremmeniella*; Central-Europe; Europe; *Lecanorales*; *Pezicula*; *Phomopsis*; *Deuteromycotina*
PT - PUBLICATION TYPE: Journal-article

Record 174 of 393 - TREECD 1973-2000/01

TI - TITLE: The mycoflora of needles, shoots and branches of *Picea abies* of different ages, with particular reference to older trees suffering from spruce dieback.

OT - ORIGINAL NON-ENGLISH TITLE: Die Pilzflora von Nadeln, Trieben und Asten unterschiedlich alter Fichten (*Picea abies* (L.) Karst.) mit besonderer Berücksichtigung von Fichtensterben betroffener Altbaume.

AU - AUTHOR(S): Kowalski-T; Lang-KJ

AD - ADDRESS OF AUTHOR: Katedra Fitopatologii Lesnej, 29-Listopada 48, Pl-31-425, Krakow, Poland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Forstwissenschaftliches-Centralblatt. 1984, 103: 6, 349-360; 5 pl.; 38 ref.

PY - PUBLICATION YEAR: 1984

LA - LANGUAGE OF TEXT: German

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: Studies on 80-yr-old Norway spruce trees in W. Germany showed that trees classed as 'declining' had higher proportions of damaged needles and dead shoots, twigs and branches than trees classed as 'healthy'. However, no clear differences could be found in the species of fungi found in healthy and declining trees. The fungi most often isolated from the needles were *Rhizosphaera kalkhoffii*, *Tympanis* sp. and *Lophodermium piceae*, but they were not the primary cause of Norway spruce dieback. In younger and some older spruces, fungi (mainly *L. macrosporum*) were the primary cause of needle cast. Other damage to shoots was caused by *Sirococcus strobilinus* and *Scleroderris lagerbergii* [*Gremmeniella abietina*].

DE - DESCRIPTORS: foliage-; fungal-diseases; dieback-; diseases-; assessment-; conifers-

OD - ORGANISM DESCRIPTORS: *Picea-abies*; *Gremmeniella-abietina*; *Picea*; *SIROCOCCUS-CONIGENUS*

GE - GEOGRAPHIC NAMES: German-Federal-Republic; Germany-

BT - BROADER DESCRIPTORS: *Picea*; Pinaceae; Pinopsida; gymnosperms;

Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi;

Sirococcus; Deuteromycotina; Western-Europe; Europe; *Lophodermium*; Rhytismatales

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0015-8003

Record 175 of 393 - TREECD 1973-2000/01

TI - TITLE: On the parasitic mycoflora of artificial pine phytocoenoses in the felling areas in the Karelian ASSR and Murmansk region.

OT - ORIGINAL NON-ENGLISH TITLE: O parazitnoi mikoflore iskusstvennykh fitotsenozov sosny na vyrubkakh Karel'skoi ASSR i Murmanskoi oblasti.

AU - AUTHOR(S): Krutov-VI

AD - ADDRESS OF AUTHOR: Inst. Forestry, Petrozavodsk, USSR.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Mikologiya-i-Fitopatologiya. 1979, 13: 4, 342-348; 3 fig.; 24 ref.

PY - PUBLICATION YEAR: 1979

LA - LANGUAGE OF TEXT: Russian

AB - ABSTRACT: General notes are given on 7 spp. of Discomycetes and of several Basidiomycetes detected in these areas. The most widespread, *Phacidium infestans*, pathogen of snow cast, attacks young pines up to 10-15 yr. *Melampsora pinatorqua* [*M. populnea*] is also widespread but is more damaging in southern districts and in mixed plantations with birch and poplar. *Scleroderris lagerbergii* [*Gremmeniella abietina*] infects pines 6-25 yr old. *Lophodermium pinastri* (needle cast) is especially adapted to shaded and grassy areas and to high moisture conditions.

DE - DESCRIPTORS: ecology-; fungal-diseases; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; fungi-; *Phacidium-infestans*; *Melampsora-populnea*; *Gremmeniella-abietina*; *Lophodermium-pinastri*; *Pinus-sylvestris*

GE - GEOGRAPHIC NAMES: Russia-; USSR-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Phacidium*; Helotiales; Ascomycotina; Eumycota; fungi; *Melampsora*; Uredinales; Basidiomycotina; *Gremmeniella*; *Lophodermium*; Rhytismatales; *Pinus*; Asia; Central-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0026-3648

Record 176 of 393 - TREECD 1973-2000/01

TI - TITLE: Canker of young coniferous stands in the European north of Russia.
AU - AUTHOR(S): Krutov-VI; Capretti-P et-al
AD - ADDRESS OF AUTHOR: Forest Research Institute of Karelian Scientific Centre of Russian Academy of Sciences, 185610 Petrozavodsk, Russia.
SO - SOURCE (BIBLIOGRAPHIC CITATION): Shoot and foliage diseases in forest trees. Proceedings of a Joint Meeting of the IUFRO Working Parties S2.06.02 and S2.06.04, Vallombrosa, Firenze, Italy 6-11 June 1994. 1995, 276-280; 11 ref.
PB - PUBLISHER INFORMATION: Istituto di Patologia e Zoologia Forestale e Agraria, Universita degli Studi di Firenze; Firenze; Italy
PY - PUBLICATION YEAR: 1995
LA - LANGUAGE OF TEXT: English
AB - ABSTRACT: A brief account is given of the distribution and damage caused by *Gremmeniella abietina*, *Lachnellula willkommii*, *L. pini*, *Biatorella difformis* in young (1- to 30-yr-old) *Pinus sylvestris* and *Larix sibirica* reforestation stands in Karelia, Murmansk and Archangelsk regions of European Russia.
DE - DESCRIPTORS: geographical-distribution; damage-; forest-trees; plant-pathogens; plant-pathogenic-fungi; forest-plantations; fungal-diseases; plant-diseases; diseases-; plant-pathology
OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Trichoscyphella*-; *Trichoscyphella-willkommii*; *Lachnellula*-; *Lecanorales*-; *Pinus-sylvestris*; *Larix-sibirica*; *pinopsida*-; *fungi*-
GE - GEOGRAPHIC NAMES: Russia-
BT - BROADER DESCRIPTORS: *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; *fungi*; *Trichoscyphella*; *Pinus*; *Pinaceae*; *Pinopsida*; *gymnosperms*; *Spermatophyta*; *plants*; *Larix*; *Asia*; *Central-Europe*; *Europe*; *Developed-Countries*
PT - PUBLICATION TYPE: Conference-paper
IB - INTERNATIONAL STANDARD BOOK NUMBER: 88-900074-0-0

Record 177 of 393 - TREECD 1973-2000/01

TI - TITLE: *Gremmeniella abietina* (Lagerb.) Morelet, causal agent of shoot canker of conifers in forests of the USSR.

AU - AUTHOR(S): Krutov-VI; Khanso-ME

AD - ADDRESS OF AUTHOR: Karel Branch, Soviet Acad. Sci., Petrozavodsk, USSR.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Mikologiya-i-Fitopatologiya*. 1985, 19: 4, 337-344; 3 fig.; Many ref.

PY - PUBLICATION YEAR: 1985

LA - LANGUAGE OF TEXT: Russian

AB - ABSTRACT: Observations on the fungus and damage caused by it in the USSR (Karelia and Estonia) are discussed from the literature. In forests in northern latitudes particularly, damage can be severe under certain conditions.

DE - DESCRIPTORS: damage-; Cankers-; forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: Pinopsida-; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: USSR-; Estonia-; Russia-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Baltic-States; Northern-Europe; Europe; Asia; Central-Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0026-3648

Record 178 of 393 - TREECD 1973-2000/01

TI - TITLE: Parasitic mycoflora of artificial pine phytocoenoses at felling sites in the Karelian ASSR and Murmansk Oblast.

AU - AUTHOR(S): Krutov-VK (Krutov-VI); Krutov-VI

AD - ADDRESS OF AUTHOR: Inst. For., Karelian Branch Acad. Sci. USSR, Petrozavodsk, USSR.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Translation, -Environment-Canada. 1983, No. OOENV TR-2300, 14 pp.; Transl. from Mikologiya i Fitopatologiya (1979) 13 (4) 342-349. See FA 41, 6178; RPP 59, 4350; 23 ref.

PY - PUBLICATION YEAR: 1983

LA - LANGUAGE OF TEXT: English

DE - DESCRIPTORS: Fungal-diseases; distribution-; artificial-regeneration; conifers-

OD - ORGANISM DESCRIPTORS: Gremmeniella-abietina; Lophodermium-pinastri; Melampsora-populnea; Phacidium-infestans; Pinus-sylvestris

GE - GEOGRAPHIC NAMES: Russia-; USSR-

BT - BROADER DESCRIPTORS: Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi; Lophodermium; Rhytismatales; Melampsora; Uredinales; Basidiomycotina; Phacidium; Pinus; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; Asia; Central-Europe; Europe

PT - PUBLICATION TYPE: Miscellaneous

Record 179 of 393 - TREECD 1973-2000/01

TI - TITLE: Fungal diseases associated with nutritional growth disturbances of Scots pine.

AU - AUTHOR(S): Kurkela-T

AD - ADDRESS OF AUTHOR: Finnish Forest Res. Inst., Unioninkatu 40A, 00170 Helsinki 17, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Communicationes-Institutii-Forestalis-Fenniae. 1983, No. 116, 73-77; 3 fig.; 19 ref.

PY - PUBLICATION YEAR: 1983

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The relationships between mineral nutrition and diseases (snow blight, *Phacidium infestans*; *Gremmeniella abietina* canker and dieback; grey needle cast, *Lophodermella sulcigena*) that have been revealed mainly in forest fertilization studies with Scots pine at Kivisuo are reviewed.

DE - DESCRIPTORS: plant-nutrition; fungal-diseases

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Conference-paper; Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0358-9609

Record 180 of 393 - TREECD 1973-2000/01

TI - TITLE: Canker and die back of Scots pine at precommercial stage caused by *Gremmeniella abietina*.

AU - AUTHOR(S): Kurkela-T

SO - SOURCE (BIBLIOGRAPHIC CITATION): Translation,-Environment-Canada. 1982, No. OOENV TR-2192, 15 pp.; Transl. from *Folia Forestalia, Institutum Forestale Fenniae* (1981) No. 485. See FA 43, 3534. Limited distribution.

PY - PUBLICATION YEAR: 1982

LA - LANGUAGE OF TEXT: English

DE - DESCRIPTORS: diseases-; dieback-; cankers-; conifers-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-sylvestris*

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants

PT - PUBLICATION TYPE: Miscellaneous

Record 181 of 393 - TREECD 1973-2000/01

TI - TITLE: Canker and die-back of Scots pine at precommercial stage caused by *Gremmeniella abietina*.

OT - ORIGINAL NON-ENGLISH TITLE: Versosyopa (*Gremmeniella abietina*) riukuasteen mannikoissa.

AU - AUTHOR(S): Kurkela-T

AD - ADDRESS OF AUTHOR: Finnish Forest Res. Inst., Helsinki, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Folia-Forestalia*. 1981, No. 485, 12 pp.; 17 fig.; 34 ref.

PY - PUBLICATION YEAR: 1981

LA - LANGUAGE OF TEXT: Finnish

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: The disease, for a long time serious in N. Finland, has recently become more important in the S. Some characteristics of infection in stands 15-30 yr old are described and compared with growth disturbance due to deficient or imbalanced micronutrients in the soil. The features appearing most often in association with disease epidemics seem to be topographic depressions, unsuitable origin, and a branched growth form of pine.

DE - DESCRIPTORS: fungal-diseases; increment-; forest-trees; conifers-; plant-pathology; yields-; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella-abietina*; *Pinus-sylvestris*

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Miscellaneous

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0015-5543

Record 182 of 393 - TREECD 1973-2000/01

TI - TITLE: Session 3. Pathological surveys of growth disturbances. Session 4. Nutritional surveys of growth disturbances.

AU - AUTHOR(S): Kurkela-T (et-al); Soikkeli-S; Mannerkoski-H; Miyazawa-T; Paavilainen-E; Pietilainen-P; Raitio-H; Moller-G; Aronsson-A; Rehfuess-KE; Bosch-C; Pfannkuch-E; Wikner-B; Aurela-AM; Punkkinen-R; Kolari-KK

SO - SOURCE (BIBLIOGRAPHIC CITATION): In Growth disturbances of forest trees; proceedings of a IUFRO-Finnish Forest Research Institute workshop, 10-13 Oct. 1982. Communicationes-Institutii-Forestalis-Fenniae. 1983, No. 116, 73-152.

PY - PUBLICATION YEAR: 1983

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Kurkela, T. Fungal diseases associated with nutritional growth disturbances of Scots pine. 73-77 [19 ref., 2 pl.] *Phacidium infestans*, *Gremmeniella abietina*, *Lophodermella sulcigena*. Soikkeli, S. Viruses in conifer needles in Finland: description of visible symptoms and ultrastructural aberrations of mesophyll tissue. 77-83 [22 ref., 3 pl.] Norway spruce and Scots pine. Mannerkoski, H.; Miyazawa, T. Growth disturbances and needle and soil nutrient contents in a NPK-fertilized Scots pine plantation on a drained small-sedge bog. 85-91 [17 ref.] Paavilainen, E.; Pietilainen, P. Foliar responses caused by different nitrogen rates at the refertilization of fertile pine swamps. 91-104 [21 ref.] Raitio, H. Growth disturbance of *Betula pendula* in the Torajarvi experimental field. 104-110 [28 ref.] Moller, G. Variation of boron concentration in pine needles from trees growing on mineral soil in Sweden and response to nitrogen fertilization. 111-115 [4 ref., 2 pl.] Aronsson, A. Growth disturbances caused by boron deficiency in some fertilized pine and spruce stands on mineral soils. 116-122 [9 ref.] Rehfuess, K.E.; Bosch, C.; Pfannkuch, E. Nutrient imbalances in coniferous stands in southern Germany. 122-130 [28 ref.] Scots pine and Norway spruce. Wikner, B. Distribution and mobility of boron in forest ecosystems. 131-141 [31 ref.] Pietilainen, P. 6-phosphogluconate dehydrogenase activity in Scots pine vegetative buds on a growth disturbance area. 141-147 [63 ref.] Aurela, A.M.; Punkkinen, R. Electric point discharges and atmospheric nitrogen dioxide in coniferous forests. 148-152 [32 ref.]

DE - DESCRIPTORS: IUFRO-; fungal-diseases; viral-diseases; nutrient-deficiencies; boron-; Fertilizers-; NPK-fertilizers; nitrogen-; nutrition-physiology; dieback-; trees-; pines-

OD - ORGANISM DESCRIPTORS: *Phacidium-infestans*; *Gremmeniella-abietina*; plant-viruses; *Pinus-sylvestris*; *Picea-abies*; *Pinus*-; *Betula-pendula*; *Betula*-

BT - BROADER DESCRIPTORS: compound-fertilizers; fertilizers; woody-plants; Spermatophyta; plants; *Phacidium*; Helotiales; Ascomycotina; Eumycota; fungi; *Gremmeniella*; viruses; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Picea*; *Betula*; Betulaceae; Fagales; dicotyledons; angiosperms; Rhytismatales

PT - PUBLICATION TYPE: Conference-paper; Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0358-9609

Record 183 of 393 - TREECD 1973-2000/01

TI - TITLE: Pathogenicity of *Scleroderris lagerbergii*, *Lachnellula pini*, and *L. flavovirens* and their cankers on Scots pine.

AU - AUTHOR(S): Kurkela-T; Norokorpi-Y

AD - ADDRESS OF AUTHOR: Finnish For. Res. Inst., Rovaniemi, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Communicationes-Institutii-Forestalis-Fenniae*. 1979, 97: 1, 1-16; 3 fig., 2 tab.; 25 ref.

PY - PUBLICATION YEAR: 1979

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: Finnish

AB - ABSTRACT: The number and size of cankers developing on trees in Finland was greater after inoculation with *S. lagerbergii* [*Gremmeniella abietina*] than *L. pini*. *L. flavovirens* infection did not differ much from the controls. Canker development depended on the time of inoculation. Cankers wider than 20% of the stem circumference decreased the height growth of saplings.

DE - DESCRIPTORS: Maps-; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0358-9609

Record 184 of 393 - TREECD 1973-2000/01

TI - TITLE: Pathogenicity of *Scleroderris lagerbergii*, *Lachnellula pini*, and *L. flavovirens* and their cankers on Scots pine.

AU - AUTHOR(S): Kurkela-T; Norokorpi-Y

SO - SOURCE (BIBLIOGRAPHIC CITATION): Metsantutkimuslaitoksen-Julkaisuja,- Finland. 1979, 97: 1, 16 pp.; 25 ref.

PY - PUBLICATION YEAR: 1979

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: Finnish

AB - ABSTRACT: Randomly selected Scots pine saplings were inoculated with mycelial cultures of the fungi on two sites in the Kivalo experimental forest, N. Finland, in Sept. and Oct. 1970 and monthly from May to Sept. in 1971. In autumn 1974, when the trial was terminated, cankers were found on 82, 66 and 37% of the saplings inoculated with *S. lagerbergii* [*Gremmeniella abietina*], *L. pini* and *L. flavovirens* respectively and on 13% of the controls. *G. abietina* also produced larger cankers and killed more saplings than the other two fungi. Inoculation in Aug., Sept. and Oct. produced more cankers than that in May, June or July. Leader growth was affected significantly by cankers wider than 20% of the stem circumference.

DE - DESCRIPTORS: diseases-; cankers-; conifers-

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Gremmeniella-abietina*; fungi-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: *Pinus*; Pinaceae; Pinopsida; gymnosperms;

Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Miscellaneous

IB - INTERNATIONAL STANDARD BOOK NUMBER: 951-40-0369-1

Record 185 of 393 - TREECD 1973-2000/01

TI - TITLE: Air pollution problems in Swedish forests.

OT - ORIGINAL NON-ENGLISH TITLE: Luftverschmutzungsprobleme in schwedischen Waldern.

AU - AUTHOR(S): Kvist-K; Barklund-P

AD - ADDRESS OF AUTHOR: Plant & For. Protection Dep., Swedish Univ. Agric., Uppsala, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Forstwissenschaftliches-Centralblatt. 1984, 103: 1, 74-82; 49 ref.

PY - PUBLICATION YEAR: 1984

LA - LANGUAGE OF TEXT: German

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: In recent years, Norway spruce in Sweden has been subject to damage which has been blamed on air pollution from distant source, but not proven. Industrial pollution from within Sweden has caused damage to Norway spruce, Scots pine and beech for many years, but in the last 10 yr there has been an increase in SO₂, NO_x and O₃ pollution, believed to have been transported over long distances. Research is being carried out on the effects of these pollutants and on secondary fungal diseases. It has already been shown that acid rain encourages germination of *Gremmeniella abietina*. A new programme of research was set up in summer 1983 in Sweden, to survey and map forest damage, carry out foliar and soil chemical analyses, study the chemistry of pollutants, and study effects on lichens.

DE - DESCRIPTORS: air-pollution; damage-; fumes-; sulfur-dioxide; ozone-; nitrogen-oxides; acid-rain; POLLUTION-; forests-; nitrogen-dioxide; pines-

OD - ORGANISM DESCRIPTORS: Picea-abies; Pinus-sylvestris; Betula-; Picea-; Pinus-; plants-

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: Picea; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; Pinus; Betulaceae; Fagales; dicotyledons; angiosperms; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0015-8003

Record 186 of 393 - TREECD 1973-2000/01

TI - TITLE: A programme for monitoring in nurseries.

OT - ORIGINAL NON-ENGLISH TITLE: Programme de surveillance dans les pepinieres.

AU - AUTHOR(S): Lachance-C

AD - ADDRESS OF AUTHOR: Ministere des Ressources Naturelles, Direction de la Conservation des Forets, 1283 Boulevard Charest Ouest, Que. G1N 2C9, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Insectes-et-maladies-des-arbres:-Quebec-1993. 1993, 19-20.

PB - PUBLISHER INFORMATION: Ministry of Natural Resources, Quebec Region; Sainte-Foy; Canada

PY - PUBLICATION YEAR: 1993

LA - LANGUAGE OF TEXT: French

AB - ABSTRACT: In line with the Law on Forests, the production, sale and transportation of non-ornamental trees have been subjected to phytosanitary control in Quebec, Canada, since 1987. To achieve the objectives stipulated by the Law, 3 types of inspections are to be conducted in tree nurseries (certification, prevention and autumn inspection) to identify insect pests and pathogens. The inspections for 1993 involving 262 million plants produced in 45 nurseries revealed the presence of *Gremmeniella abietina*, *Cylindrocarpon destructans*, *C. floridanum*, *Septoria alnifolia*, *Fusarium*, *Lophodermium*, *Phoma* and *Phomopsis*, *Otiorhynchus ovatus*, *O. sulcatus* and *Lygus lineolaris*.

DE - DESCRIPTORS: plant-diseases; plant-pathogens; plant-pathogenic-fungi; insect-pests; forest-trees; diseases-; forest-pests; control-; legislation-; forest-nurseries; fungal-diseases; monitoring-; forestry-law; plant-pathology; agricultural-entomology

OD - ORGANISM DESCRIPTORS: *Lygus-lineolaris*; *Otiorhynchus-ovatus*; *Otiorhynchus-sulcatus*; fungi-; arthropods-

GE - GEOGRAPHIC NAMES: Canada-; Quebec-

BT - BROADER DESCRIPTORS: pathogens; plant-pathogens; fungi; arthropod-pests; arthropods; invertebrates; animals; pests; insects; trees; woody-plants; Spermatophyta; plants; *Lygus*; *Miridae*; *Heteroptera*; *Hemiptera*; *Otiorhynchus*; *Curculionidae*; *Coleoptera*; Developed-Countries; Commonwealth-of-Nations; North-America; America; OECD-Countries; Canada

PT - PUBLICATION TYPE: Annual-report

IB - INTERNATIONAL STANDARD BOOK NUMBER: 2-550-28861-0

Record 187 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris canker on pine.

AU - AUTHOR(S): Laflamme-G

AD - ADDRESS OF AUTHOR: Laurentian Forestry Centre, Quebec Region, Forestry Canada, Sainte-Foy, Quebec G1V 4C7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Information-Leaflet -Quebec-Region,- Forestry-Canada. 1991, No. 3 (revised), 12 pp.; 15 ref.

PB - PUBLISHER INFORMATION: Quebec Region, Forestry Canada; Sainte-Foy; Canada

PY - PUBLICATION YEAR: 1991

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Notes are given on the hosts in North America, biology, symptoms, disease development, damage and protection against *Gremmeniella abietina*.

DE - DESCRIPTORS: forest-trees; fungal-diseases; plant-diseases; plant-pathogens; plant-pathogenic-fungi; symptoms-; damage-; host-parasite-relationships; disease-control; pines-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus*-; *Pinopsida*-

GE - GEOGRAPHIC NAMES: North-America

BT - BROADER DESCRIPTORS: *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; *fungi*; *Pinaceae*; *Pinopsida*; *gymnosperms*; *Spermatophyta*; *plants*; *America*

PT - PUBLICATION TYPE: Miscellaneous

IB - INTERNATIONAL STANDARD BOOK NUMBER: 0-662-18709-1

Record 188 of 393 - TREECD 1973-2000/01

TI - TITLE: Description and distribution of scleroderris canker on *Picea mariana* (Mill.) B.S.P.

OT - ORIGINAL NON-ENGLISH TITLE: Description et distribution du chancre scleroderrien sur *Picea mariana* (Mill.) B.S.P.

AU - AUTHOR(S): Laflamme-G

AD - ADDRESS OF AUTHOR: Cent. Foresterie Laurentides, Sainte-Foy, Que. G1V 4C7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1988, 18: 3-4, 230-239; 15 ref.

PY - PUBLICATION YEAR: 1988

LA - LANGUAGE OF TEXT: French

LS - LANGUAGE OF SUMMARIES: English, German

AB - ABSTRACT: The distribution of *Gremmeniella abietina* infecting *P. mariana* was found to be restricted to an area 100 km north of Quebec City in Canada. Even with high rates of infection in the 2 stands studied (38 and 80%) the disease was not conspicuous, explaining its low known occurrence on natural spruce in North America. The fungus on spruce was morphologically identical to the same species on other hosts. It infected 1- and 2-yr-old shoots; cankers on branches and stems were also observed, and fruitbodies were numerous. Symptoms were not observed >2 m above the soil. Although it was known that the starting dates of sporulation and reaction to chemical control treatments were greatly different between *G. abietina* on *P. mariana* and on *Pinus resinosa*, 2 methods of race identification gave inconclusive results.

DE - DESCRIPTORS: pines-; fungal-diseases; Cankers-; distribution-; symptoms-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Picea-mariana*; *Gremmeniella-abietina*; fungi-; *Pinus-*

GE - GEOGRAPHIC NAMES: Quebec-; Canada-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Picea*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; Canada; North-America; America

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 189 of 393 - TREECD 1973-2000/01

TI - TITLE: An unusual symptom of Scleroderris canker on red pine in Quebec.
OT - ORIGINAL NON-ENGLISH TITLE: Symptome inusite du chancre scleroderrien sur le pin rouge au Quebec.
AU - AUTHOR(S): Laflamme-G
AD - ADDRESS OF AUTHOR: Cent. For. Laurentides, Canadian Forest Serv., Sainte-Foy, Que. G1V 4C7, Canada.
SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Plant-Pathology. 1986, 8: 1, 1-5; 6 fig.; 10 ref.
PY - PUBLICATION YEAR: 1986
LA - LANGUAGE OF TEXT: French
LS - LANGUAGE OF SUMMARIES: English
AB - ABSTRACT: The symptom on Pinus resinosa was observed at several locations in 1984. The pathogen, Ascocalyx (Gremmeniella) abietina, attacked 2-yr-old shoots instead of the previously recorded infection of terminal buds and the current season's growth. This observation is discussed with regard to current knowledge of the infection mode of the fungus.
DE - DESCRIPTORS: Pines-; symptoms-; Cankers-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi
OD - ORGANISM DESCRIPTORS: Gremmeniella-abietina; Pinus-resinosa; fungi-; Pinus-
GE - GEOGRAPHIC NAMES: Quebec-; Canada-
BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; Gremmeniella; Helotiales; Ascomycotina; Eumycota; Pinus; Pinaceae; Pinopsida; gymnosperms; Canada; North-America; America
PT - PUBLICATION TYPE: Journal-article
IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0706-0661

Record 190 of 393 - TREECD 1973-2000/01

TI - TITLE: Evaluation of microclimatic factors affecting ascospore release of *Gremmeniella abietina* var. *balsamea*.

AU - AUTHOR(S): Laflamme-G; Archambault-L

AD - ADDRESS OF AUTHOR: Forestry Canada - Quebec Region, Laurentian Forestry Centre, 1055 du P.E.P.S., Sainte-Foy, Quebec G1V 4C7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Plant-Pathology. 1990, 12: 2, 190-194; 24 ref.

PY - PUBLICATION YEAR: 1990

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: The ascospore release of *G. abietina* var. *balsamea* on an infected *Picea mariana* tree was measured every hour for 1339 hours; it was analysed with respect to microclimatic factors, such as rain, air temp., wind speed and leaf wetness, which were also recorded on an hourly basis. The spore dispersal period started in the middle on Jul. and ended in Oct., with a peak of spore release during the first 3 weeks of Aug. Leaf wetness measurements were best correlated with spore dispersal. RH and rain also showed a good correlation with spore dispersal but not as good as leaf wetness. Dew was not responsible for ascospore release. Mist or fog were most probably the cause of free water deposition and, as a result, the cause of spore release when no rain was recorded. Mist and fog were not measured directly but could be inferred from leaf wetness readings. Temp. had no direct effect on spore release.

DE - DESCRIPTORS: spore-dispersal; environmental-factors; Conifers-; fungal-diseases; Foliage-; diseases-; biology-; forest-trees; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Picea-mariana*; *Gremmeniella-abietina*; *Gremmeniella*-; *Picea*-; fungi-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Picea*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0706-0661

Record 191 of 393 - TREECD 1973-2000/01

TI - TITLE: Foliage, shoot and stem diseases of trees.

AU - AUTHOR(S): Laflamme-G; Berube-JA; Hamelin-RC

SO - SOURCE (BIBLIOGRAPHIC CITATION): Information-Report -Laurentian-Forestry-Centre,-Quebec-Region,-Canadian-Forest-Service. 1998, No. LAU-X-122, 272 pp.; many ref.

PB - PUBLISHER INFORMATION: Laurentian Forestry Centre, Canadian Forest Service; Sainte-Foy; Canada

PY - PUBLICATION YEAR: 1998

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: A total of 35 scientific papers and 16 posters were presented. Of these, 34 oral presentations and 9 posters are included here in the proceedings grouped as: Foliage diseases (12 papers); Shoot and twig blights (7); Hardwood canker and chestnut blight (5); Scleroderris canker (11) and Other diseases (8).

DE - DESCRIPTORS: IUFRO-; fungal-diseases; plant-pathogenic-fungi; plant-pathogens; plant-diseases; forest-trees; foliage-; shoots-; cankers-; plant-pathology

PT - PUBLICATION TYPE: Conference-proceedings

Record 192 of 393 - TREECD 1973-2000/01

TI - TITLE: Verification of the quality of control of scleroderris canker in plantations.

OT - ORIGINAL NON-ENGLISH TITLE: Verification de la qualite des travaux de controle du chancre scleroderrien en plantation.

AU - AUTHOR(S): Laflamme-G; Blais-R

AD - ADDRESS OF AUTHOR: Laur. FRC, Can. For. Serv., Sainte Foy, Que. G1V 4C7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Forestry-Chronicle. 1988, 64: 1, 12-17; 6 ref.

PY - PUBLICATION YEAR: 1988

LA - LANGUAGE OF TEXT: French

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: Observations were made in summer 1984 of 150 sample trees in 22 Pinus resinosa plantations in the Ottawa region, 1-10 months after treatment to control Gremmeniella abietina, when the plantations were aged 6-15 yr. Treatment comprised pruning infected branches and felling dead or badly infected trees. Eight types of fault were detected, which were classified into 2 groups - (a) deviations from instruction (e.g. not felling dead trees), and (b) errors in execution (e.g. leaving branch stumps or damaging the stem). Faults in group (a) were found in 1-69% of sample trees; only 5 plantations had <10% of these. Faults in group (b) were found in 8-82% of sample trees; 3 plantations only had 10% or less of sample trees with these faults.

DE - DESCRIPTORS: Cankers-; control-; pruning-; diseases-; wounds-; Pines-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: Gremmeniella-abietina; Pinus-resinosa; fungi-; Pinus-

GE - GEOGRAPHIC NAMES: Canada-; Quebec-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; Gremmeniella; Helotiales; Ascomycotina; Eumycota; Pinus; Pinaceae; Pinopsida; gymnosperms; North-America; America; Canada

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0015-7546

Record 193 of 393 - TREECD 1973-2000/01

TI - TITLE: *Pinus banksiana* not damaged by the European race of *scleroderris* canker [*Gremmeniella abietina*].

AU - AUTHOR(S): Laflamme-G; Blais-R; Laflamme-G et-al

AD - ADDRESS OF AUTHOR: Natural Resources Canada, Canadian Forest Service, Laurentian Forestry Centre, PO Box 3800, Sainte-Foy, QC G1V 4C7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Foliage, shoot and stem diseases. Proceedings of the IUFRO WP 7.02.02 meeting, Quebec City, May 25-31, 1997. Information-Report -Laurentian-Forestry-Centre,-Quebec-Region,-Canadian-Forest-Service. 1998, No. LAU-X-122, 175-178; 7 ref.

PB - PUBLISHER INFORMATION: Laurentian Forestry Centre, Canadian Forest Service; Sainte-Foy; Canada

PY - PUBLICATION YEAR: 1998

LA - LANGUAGE OF TEXT: English

DE - DESCRIPTORS: IUFRO-; fungal-diseases; plant-pathogenic-fungi; plant-pathogens; plant-diseases; forest-trees; cankers-; resistance-; disease-resistance; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-banksiana*; Pinopsida-; fungi-

GE - GEOGRAPHIC NAMES: Canada-; Europe-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; OECD-Countries; Commonwealth-of-Nations; Developed-Countries; North-America; America

PT - PUBLICATION TYPE: Conference-paper; Journal-article

Record 194 of 393 - TREECD 1973-2000/01

TI - TITLE: The earliest report of scleroderris canker in North America.

AU - AUTHOR(S): Laflamme-G; Capretti-P et-al

AD - ADDRESS OF AUTHOR: Natural Resources Canada, Canadian Forest Service, Quebec Region, PO Box 3800, Sainte Foy, Que. G1V 4C7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Shoot and foliage diseases in forest trees. Proceedings of a Joint Meeting of the IUFRO Working Parties S2.06.02 and S2.06.04, Vallombrosa, Firenze, Italy 6-11 June 1994. 1995, 210-213; 5 ref.

PB - PUBLISHER INFORMATION: Istituto di Patologia e Zoologia Forestale e Agraria, Universita degli Studi di Firenze; Firenze; Italy

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Documents concerned with mortality of red pine (*Pinus resinosa*) trees planted between 1934 and 1936 at Valcartier near Quebec City (seedlings supplied from a nursery in Ontario later found to have serious *Scleroderris* canker problems) were analysed, and the site of the plantations was visited and sampled. Photographs taken in 1946, and descriptions of the damage, indicate typical *Scleroderris* canker symptoms. Cankers sampled in 1988 showed that the fungus reached the stems in the early 1950s, in trees later damaged by the disease. Isolates collected on the site were identified as the North American race of *Gremmeniella abietina*. As no natural stands of jack (*P. banksiana*) and red pines were growing near the plantations, seedlings infected with *G. abietina* introduced in 1934, followed by high snow accumulation, explained the rapid increase in and the high rate of mortality in young trees.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; forest-nurseries; seedlings-; spread-; records-; history-; forest-plantations; snow-; fungal-diseases; plant-diseases; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-resinosa*; *Pinus-banksiana*; *Pinus*-; fungi-

GE - GEOGRAPHIC NAMES: Canada-; Quebec-; Ontario-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; OECD-Countries; Commonwealth-of-Nations; Developed-Countries; North-America; America; Canada

PT - PUBLICATION TYPE: Conference-paper

IB - INTERNATIONAL STANDARD BOOK NUMBER: 88-900074-0-0

Record 195 of 393 - TREECD 1973-2000/01

TI - TITLE: Status of the European race of scleroderris canker in Canada.

AU - AUTHOR(S): Laflamme-G; Hopkin-AA; Harrison-KJ

AD - ADDRESS OF AUTHOR: Natural Resources Canada, Canadian Forest Service, Laurentian Forestry Centre, PO Box 3800, 1055 du PEPS, Sainte-Foy, Quebec G1V 4C7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Forestry-Chronicle. 1998, 74: 4, 561-566; 47 ref.

PY - PUBLICATION YEAR: 1998

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Results from surveys conducted across Canada since 1978 on the occurrence of the European (EU) race of *Gremmeniella abietina*, the causal agent of scleroderris canker of conifers, are reviewed. In Newfoundland, only the EU race has been recorded and it is restricted to the Avalon Peninsula. Only one pine plantation is infected by the EU race in New Brunswick. In Ontario, a total of 171 plantations are infected and they are clustered in the central portion of the southern part of the province. The number of plantations infected by the EU race in Quebec is the highest in Canada with 749 plantations. In the four provinces, the most infected species is red pine (*Pinus resinosa*, 86% of the infected plantations), followed by two exotic species, Scots pine (*P. sylvestris*, 9.5%) and Austrian pine (*P. nigra*, 3.2%). White pine (*P. strobus*) and jack pine (*P. banksiana*) show resistance to the disease.

DE - DESCRIPTORS: geographical-distribution; resistance-; plant-diseases; plant-pathogenic-fungi; surveys-

OD - ORGANISM DESCRIPTORS: *Pinus-resinosa*; *Pinus-sylvestris*; *Pinus-nigra*; *Pinus-strobus*; *Pinus-banksiana*; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Canada-; Newfoundland-; Ontario-; Quebec-; New-Brunswick

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms;

Spermatophyta; plants; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi;

OECD-Countries; Commonwealth-of-Nations; Developed-Countries; North-America;

America; Canada

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0015-7546

Record 196 of 393 - TREECD 1973-2000/01

TI - TITLE: Large infection center of Scleroderris canker (European race) in Quebec Province.

AU - AUTHOR(S): Laflamme-G; Lachance-D

AD - ADDRESS OF AUTHOR: Laurentian For. Cent., Canadian For. Serv., 1055 du P.E.P.S., Sainte-Foy, Que. G1V 4C7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Plant-Disease. 1987, 71: 11, 1041-1043; 18 ref.

PY - PUBLICATION YEAR: 1987

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Scleroderris canker was found in 163 plantations, primarily on red pine and occasionally on Scots pine, during a survey of 1183 pine plantations in southwestern Quebec. The European race of *Gremmeniella abietina* was identified in 121 plantations and the North American race in 29. This is the second largest known outbreak of the European race in North America after that in New York State. Plantations varied in age from 6 to 24 yr; half of the diseased plantations were severely damaged. Both races were well mixed geographically, and no definite source of infection could be identified. The extensive presence of *G. abietina* (European race) in this region could not be explained. Jack pine was not affected by the disease.

DE - DESCRIPTORS: Pines-; races-; cankers-; distribution-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-resinosa*; *Pinus-sylvestris*; *Pinus-banksiana*; fungi-; *Pinus-*

GE - GEOGRAPHIC NAMES: Quebec-; Canada-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Canada; North-America; America

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0191-2917

Record 197 of 393 - TREECD 1973-2000/01

TI - TITLE: Antagonistic tests between endophytic fungi of red pine and *Gremmeniella abietina*.

AU - AUTHOR(S): Laflamme-G; Yang-DQ; Capretti-P et-al

AD - ADDRESS OF AUTHOR: Natural Resources Canada, Canadian Forest Service, Quebec Region, PO Box 3800, Sainte Foy, Que. G1V 4C7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Shoot and foliage diseases in forest trees. Proceedings of a Joint Meeting of the IUFRO Working Parties S2.06.02 and S2.06.04, Vallombrosa, Firenze, Italy 6-11 June 1994. 1995, 231-233; 4 ref.

PB - PUBLISHER INFORMATION: Istituto di Patologia e Zoologia Forestale e Agraria, Universita degli Studi di Firenze; Firenze; Italy

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Red pine (*Pinus resinosa*) needles were collected from three plantations in Quebec, Canada, and antagonistic tests were conducted. A European race isolate of *Gremmeniella abietina* was tested against the endophytic isolates. Four types of interaction were recorded: (1) endophytic fungal growth was inhibited by *G. abietina* - 40% of collected fungi exhibited this reaction, including *Hormonema dematioides*, a common fungus on red pine shoots; (2) no interaction - 37% had this reaction; (3) *G. abietina* growth was inhibited by endophytic fungi - 10% of fungi exhibited this; and (4) *G. abietina* was inhibited and parasitized by endophytic fungi - 4 out of 30 endophytic isolates exhibited this characteristic. These 4 isolates have been retained for identification and further experiments as potential biological control agents against *Scleroderris* canker.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; antagonism-; endophytes-; biological-control-agents; fungal-diseases; plant-diseases; antagonists-; plant-pathology

OD - ORGANISM DESCRIPTORS: fungi-; *Gremmeniella-abietina*; *Pinus-resinosa*

GE - GEOGRAPHIC NAMES: Canada-; Quebec-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; OECD-Countries; Commonwealth-of-Nations; Developed-Countries; North-America; America; Canada; Deuteromycotina

PT - PUBLICATION TYPE: Conference-paper

IB - INTERNATIONAL STANDARD BOOK NUMBER: 88-900074-0-0

Record 198 of 393 - TREECD 1973-2000/01

TI - TITLE: Host preference of two *Gremmeniella abietina* varieties on balsam fir, jack pine, and black spruce in eastern Canada.

AU - AUTHOR(S): Laflamme-G; Ylimartimo-A; Blais-R

AD - ADDRESS OF AUTHOR: Natural Resources Canada, Canadian Forest Service-Quebec, PO Box 3800, Sainte-Foy, Quebec G1V 4C7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Canadian-Journal-of-Plant-Pathology*. 1996, 18: 4, 330-334; 15 ref.

PY - PUBLICATION YEAR: 1996

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Host preference of *G. abietina* var. *balsamea* originating from *Picea mariana* or *Abies balsamea* and the North American race *G. abietina* var. *abietina* originating from *Pinus banksiana* was investigated by cross-inoculations on their original host species growing in a boreal forest in Quebec, Canada. Mycelia of 6 different isolates (2 from each host of origin) were inoculated into cortical tissue of current shoots in late autumn, and the length of the necrotic area was measured the next summer. There was evidence of host preference among the isolates. *G. abietina* var. *balsamea* caused more necrosis than *G. abietina* var. *abietina* on *P. mariana* and *A. balsamea*, and the opposite occurred on *P. banksiana*. The necrotic area on *P. mariana* was longer when caused by *G. abietina* var. *balsamea* originating from *P. mariana* than when caused by *G. abietina* var. *balsamea* originating from *A. balsamea*. It is suggested that the results agree with the morphological, biochemical and genetic separation of *G. abietina* into *G. abietina* var. *abietina* and *G. abietina* var. *balsamea*, and that they also support DNA-based differentiation of *G. abietina* var. *balsamea* isolates according to the host genera *Picea* and *Abies*. It is suggested that the genetic differentiation leading to separate genetic entities within *G. abietina* could be associated with host specialization.

DE - DESCRIPTORS: plant-diseases; plant-pathogens; plant-pathogenic-fungi; host-specificity; varieties-; fungal-diseases; forest-trees; plant-pathology

OD - ORGANISM DESCRIPTORS: *Picea-mariana*; *Abies-balsamea*; *Gremmeniella-abietina*; *Pinus-banksiana*; pinopsida-; fungi-

GE - GEOGRAPHIC NAMES: Canada-; Quebec-

BT - BROADER DESCRIPTORS: *Picea*; Pinaceae; Pinopsida; gymnosperms;

Spermatophyta; plants; *Abies*; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; OECD-Countries; Commonwealth-of-Nations; Developed-Countries; North-America; America; Canada

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0706-0661

Record 199 of 393 - TREECD 1973-2000/01

TI - TITLE: Anatomical investigations on the infection biology of *Scleroderris lagerbergii* Gr. (*Brunchorstia pinea* (Karst.) von Hohn.).

OT - ORIGINAL NON-ENGLISH TITLE: Anatomische Untersuchungen zur Infektionsbiologie von *Scleroderris lagerbergii* Gr. (*Brunchorstia pinea* (Karst.) von Hohn.).

AU - AUTHOR(S): Lang-KJ; Schutt-P

AD - ADDRESS OF AUTHOR: Forstbot. Inst. Munchen, German Federal Republic.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1974, 4: 3, 166-174; 8 fig.

PY - PUBLICATION YEAR: 1974

LA - LANGUAGE OF TEXT: German

LS - LANGUAGE OF SUMMARIES: English, French

AB - ABSTRACT: After spore germination of *S. lagerbergii* [*Gremmeniella abietina*] on *Pinus nigra* var. *austriaca*, the mycelium remained during the growing season under and between the leaf scales, invading them in the autumn by penetrating the outer wall of the epidermis directly and growing through the periderm into the inner tissues of the shoots.

DE - DESCRIPTORS: infection-; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella-abietina*

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 200 of 393 - TREECD 1973-2000/01

TI - TITLE: Anatomical studies on the infection biology of *Scleroderris lagerbergii* (*Brunchorstia pinea*).

AU - AUTHOR(S): Lang-KJ; Schutt-P

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1974, 4: 3, 166-174; 19 ref.

PY - PUBLICATION YEAR: 1974

LA - LANGUAGE OF TEXT: German

LS - LANGUAGE OF SUMMARIES: English, French

AB - ABSTRACT: Anatomical investigations of artificially and naturally infected shoots of *Pinus nigra* var. *austriaca* were made by means of light and fluorescence microscopy. Following spore germination, the mycelium lives under and between the scale leaves, subsequently invading the scale leaves directly. The hyphae can grow through the periderm, later invading the xylem via the rays. [Cf. FA 34, 5256].

DE - DESCRIPTORS: foliage-

OD - ORGANISM DESCRIPTORS: *Pinus-nigra*; *GREMMENIELLA-ABIETINA*

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; *gymnosperms*;

Spermatophyta; *plants*; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; *fungi*

PT - PUBLICATION TYPE: *Journal-article*

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 201 of 393 - TREECD 1973-2000/01

TI - TITLE: Anatomical investigations concerning the infection biology of *Scleroderris Lagerbergii* Gr. (*Brunchorstia pinea* (Karst.) von Hohn.).

AU - AUTHOR(S): Lang-KJ; Schutt-P

SO - SOURCE (BIBLIOGRAPHIC CITATION): Translation, -Environment-Canada. 1975, No. OOENV TR-841, 15 pp.; Transl. from *European Journal of Forest Pathology* (1974) 4 (3) 116-174. See FA 36, 2147. Limited distribution; 19 ref.

PY - PUBLICATION YEAR: 1975

LA - LANGUAGE OF TEXT: English

OD - ORGANISM DESCRIPTORS: *Pinus-nigra*; GREMMENIELLA-ABIETINA

BT - BROADER DESCRIPTORS: *Pinus*; Pinaceae; Pinopsida; gymnosperms;

Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Miscellaneous

Record 202 of 393 - TREECD 1973-2000/01

TI - TITLE: Pectic enzyme patterns as a taxonomic tool for the characterization of *Gremmeniella* spp. isolates.

AU - AUTHOR(S): Lecours-N; Toti-L; Sieber-TN; Petrini-O

AD - ADDRESS OF AUTHOR: Microbiology Institute, Swiss Federal Institute of Technology, ETH-Zentrum, 8092 Zurich, Switzerland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Botany. 1994, 72: 7, 891-896; 20 ref.

PY - PUBLICATION YEAR: 1994

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Isolates of different species of *Gremmeniella*, including some cultures from western Canada and some endophytic isolates, were characterized by pectic enzyme patterns. Pectinase isoenzyme patterns were in good agreement with results of electrophoresis of mycelial water-soluble proteins. The North American and European races of *G. abietina* var. *abietina* were distinguished on the basis of a cathodal polygalacturonase band present in all isolates of the former but absent in the latter. Another band, present in all isolates, showed polymorphisms related to the host from which the isolates are derived, making it possible to group them on a pathogen race-host genus basis. Sixteen isolates originating from western Canada that were previously found to belong to the North American race with a water-soluble protein assay were also found to belong to that race following the analysis of pectic enzymes. It was not possible using the assay to distinguish between isolates of *Brunchorstia pinea* var. *cembrae* and others derived from other *Pinus* spp. Among the endophytic isolates, the *P. cembra* endophytes showed the same polygalacturonase profile as those from diseased *Pinus*.

DE - DESCRIPTORS: plant-diseases; plant-pathogens; plant-pathogenic-fungi; forest-trees; isoenzymes-; races-; characteristics-; taxonomy-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella*-; fungi-

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: pathogens; fungi; plant-pathogens; trees; woody-plants; Spermatophyta; plants; enzymes; Pinaceae; Pinopsida; gymnosperms; Helotiales; Ascomycotina; Eumycota; OECD-Countries; Commonwealth-of-Nations; Developed-Countries; North-America; America

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0008-4026

Record 203 of 393 - TREECD 1973-2000/01

TI - TITLE: Mycoflora of *Pinus banksiana* and *Pinus resinosa* needles. I. Endophytic fungi.

OT - ORIGINAL NON-ENGLISH TITLE: Mycoflore des aiguilles de *Pinus banksiana* et *Pinus resinosa*. I. Champignons endophytes.

AU - AUTHOR(S): Legault-D; Dessureault-M; Laflamme-G

AD - ADDRESS OF AUTHOR: M. Dessureault, Centre de Recherche en Biologie Forestiere, Universite Laval, Sainte-Foy, Que. G1K 7P4, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Botany. 1989, 67: 7, 2052-2060; 29 ref.

PY - PUBLICATION YEAR: 1989

LA - LANGUAGE OF TEXT: French

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: The nature and distribution of endophytic fungi in healthy trees were studied in natural stands and plantations infected with scleroderris canker (caused by *Gremmeniella abietina*) in Quebec. Total colonization rates of the needles were 68% in *P. banksiana* and 89% in *P. resinosa*, and were generally higher in stands with a closed canopy. For a given tree, colonization rates increased with foliage age, but were not influenced by twig orientation. Only 17% of *P. banksiana* needles, but 76% of *P. resinosa* needles were colonized by more than one fungal species. *P. banksiana* needles never contained more than 2 endophytes, while up to 7 endophytes were found in *P. resinosa* needles. *G. abietina* was not isolated. Most endophytes in *P. banksiana* were *Coccomyces* [*Blumeriella*] sp., and those in *P. resinosa* were *Pragmopycnis* sp. and 3 species of *Leptostroma*.

DE - DESCRIPTORS: Conifers-; foliage-; fungal-diseases; diseases-; microbial-flora; ecology-; Pines-; endophytes-; forest-trees; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Pinus-resinosa*; *Pinus-banksiana*; *Gremmeniella*-; *Blumeriella*-; *Gremmeniella-abietina*; *Pinus*-; fungi-

GE - GEOGRAPHIC NAMES: Canada-; Quebec-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Helotiales; Ascomycotina; Eumycota; *Gremmeniella*; North-America; America; Canada; Deuteromycotina

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0008-4026

Record 204 of 393 - TREECD 1973-2000/01

TI - TITLE: Phytopathological state of pine and spruce forests cultivated in the north-west of the Russian Federation.

AU - AUTHOR(S): Leont'-eva-SI; Stenina-NP

AD - ADDRESS OF AUTHOR: Leningrad Scientific Research Institute of Forestry, Leningrad, USSR.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Mikologiya-i-Fitopatologiya. 1990, 23: 4, 389-392; 11 ref.

PY - PUBLICATION YEAR: 1990

LA - LANGUAGE OF TEXT: Russian

AB - ABSTRACT: During 1982-87 studies of pine (*Pinus*) and spruce (*Picea*) forests in the Leningrad region and Karelia, RSFSR, USSR revealed the following diseases to be widespread on pine: common 'schutte' [needle cast] caused by *Lophodermium seditiosum*; snow 'schutte' (*L. infestans*); and grey 'schutte' (*L. sulcigena*). Other diseases were shoot cancer (*Gremmeniella abietina*) and resin cancer (*Cronartium flaccidum*). *Sclerophoma pithya*, *Cenangium abietis*, *Melampsora pinitorqua* [*M. populnea*], *Coleosporium tussilaginis*, *Phacidium infestans*, *Hypodermella* [*Lophodermella*] *sulcigena* were also found on 10-20-year-old pines. No widespread diseases were found on *Picea*. Slight damage (4% infected needles) was caused by spruce 'shutte' (*Lophodermium macrosporum*), but the main damage is generally caused by frosts.

DE - DESCRIPTORS: Pines-; diseases-; Conifers-; Fungal-diseases; ecology-; Rust-diseases; Foliage-; forest-trees; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Picea*-; *Pinus*-; *Lophodermium-seditiosum*; *Gremmeniella-abietina*; *Cronartium-flaccidum*; *Melampsora-populnea*; *Phacidium-infestans*; *Lophodermium*-; *Gremmeniella*-; *Cronartium*-; *Melampsora*-; *Coleosporium*-; *Sclerophoma*-; *Phacidium*-; fungi-

GE - GEOGRAPHIC NAMES: RUSSIA-; USSR-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; Pinaceae; Pinopsida; gymnosperms; *Lophodermium*; Rhytismatales; Ascomycotina; Eumycota; *Gremmeniella*; Helotiales; *Cronartium*; Uredinales; Basidiomycotina; *Melampsora*; *Phacidium*; Deuteromycotina; Asia; Central-Europe; Europe; *Coleosporium*; *Sclerophoma*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0026-3648

Record 205 of 393 - TREECD 1973-2000/01

TI - TITLE: Disease and pest problems on Pinus sylvestris nurseries in Finland.

AU - AUTHOR(S): Lilja-S

AD - ADDRESS OF AUTHOR: For. Res. Inst., 01301 Vantaa, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Bulletin-OEPP. 1986, 16: 3, 561-564; 7 ref.

PY - PUBLICATION YEAR: 1986

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, Russian

AB - ABSTRACT: The main diseases are damping-off by fungi such as Fusarium and Alternaria already infecting ripening seeds in the cone; Botrytis cinerea in densely sown beds; Lophodermium seditiosum, causing needle cast and controlled with dithiocarbamates; Gremmeniella abietina, controlled with chlorothalonil alone or in mixtures; and Phacidium infestans, a serious pathogen of pine in central and N. Finland, controlled with quintozone, chlorothalonil or thiophanate-methyl.

DE - DESCRIPTORS: Pines-; diseases-; nurseries-; control-; Damping-off; Chlorothalonil-; Quintozone-; Thiophanate-methyl; forest-trees; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: Fusarium-; Alternaria-; Botrytis-cinerea; Lophodermium-seditiosum; Gremmeniella-abietina; Phacidium-infestans; Pinopsida-; fungi-; Pinus-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: Deuteromycotina; Eumycota; fungi; Botrytis; Lophodermium; Rhytismatales; Ascomycotina; Gremmeniella; Helotiales; Phacidium; gymnosperms; Spermatophyta; plants; Pinaceae; Pinopsida; European-Union-Countries; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0250-8052

Record 206 of 393 - TREECD 1973-2000/01

TI - TITLE: Proceedings of 'Pinus contorta - from untamed forest to domesticated crop'. Meeting of IUFRO WP 2.02.06 and Frans Kempe Symposium. Umea, Sweden, August 24-28, 1992.

AU - AUTHOR(S): Lindgren-D

AD - ADDRESS OF AUTHOR: Department of Forest Genetics and Plant Physiology, Swedish University of Agricultural Sciences, 90183 Umea, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Rapport -Institutionen-for-Skoglig-Genetik-och-Vaxtfysiologi,-Sveriges-Lantbruksuniversitet. 1993, No. 11, 416 pp.; many ref.

PB - PUBLISHER INFORMATION: Institutionen for Skoglig Genetik och vaxtfysiologi (Department of Forest Genetics and Plant Physiology), Sveriges Lantbruksuniversitet; Umea; Sweden

PY - PUBLICATION YEAR: 1993

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Thirty-eight papers are presented from this conference on Pinus contorta. The topics covered include provenance trials in various countries (Sweden, Scotland, Germany, Latvia, Finland, Norway, Denmark, Irish Republic, Netherlands, Croatia, New Zealand, Alaska, Alberta and British Columbia), wood properties, seed collection, tree breeding, cold acclimatization, fungal diseases (Gremmeniella abietina, Cronartium coleosporioides, C. comandrae and Endocronartium harknessii) and phenology, flowering and pollination.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; plant-diseases; flowers-; flowering-; phenology-; pollination-; genetic-variation-; cold-resistance; frost-resistance; acclimatization-; tree-breeding; seed-collection; IUFRO-; provenance-trials

OD - ORGANISM DESCRIPTORS: Gremmeniella-abietina; Cronartium-coleosporioides; Cronartium-comandrae; Endocronartium-harknessii; Pinus-contorta

GE - GEOGRAPHIC NAMES: Sweden-; Germany-; Latvia-; Finland-; Norway-; Denmark-; Irish-Republic; Netherlands-; Alberta-; British-Columbia; New-Zealand; Canada-; Alaska-; USA-; UK-; Scotland-; Croatia-; Europe-

BT - BROADER DESCRIPTORS: Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi; Cronartium; Uredinales; Basidiomycotina; Endocronartium; Pinus; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; OECD-Countries; Developed-Countries; EFTA; European-Union-Countries; Scandinavia; Northern-Europe; Europe; Western-Europe; Baltic-States; British-Isles; Benelux; Canada; North-America; America; Commonwealth-of-Nations; Australasia; Oceania; Pacific-States-of-USA; Western-States-of-USA; USA; Great-Britain; UK; Balkans; Southern-Europe; Mediterranean-Region

PT - PUBLICATION TYPE: Conference-proceedings

Record 207 of 393 - TREECD 1973-2000/01

TI - TITLE: Pinus nigra in the Pennine hills of northern England.

AU - AUTHOR(S): Lines-R

AD - ADDRESS OF AUTHOR: For. Comm., N. Res. Sta., Roslin, Midlothian, UK.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Quarterly-Journal-of-Forestry. 1985, 79: 4, 227-233; 14 ref.

PY - PUBLICATION YEAR: 1985

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Results at 10 and 20 yr are given for 2 series of trials (at alt. above 250 m): a species trial comparing Corsican and Austrian pine with 24 other species under moderate pollution by SO₂, and a provenance trial comparing up to 47 seed origins covering the range of varieties or ecotypes from France to Turkey. Dieback (by *Gremmeniella abietina*) terminated trials at higher altitudes after 20 yr.

DE - DESCRIPTORS: Species-trials; provenance-trials; Dieback-; conifers-; pines-

OD - ORGANISM DESCRIPTORS: Pinus-nigra; Pinus-; Gremmeniella-abietina

GE - GEOGRAPHIC NAMES: UK-

BT - BROADER DESCRIPTORS: Pinus; Pinaceae; Pinopsida; gymnosperms;

Spermatophyta; plants; Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi; British-Isles; Western-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0033-5568

Record 208 of 393 - TREECD 1973-2000/01

TI - TITLE: Should Scleroderris scare us?

AU - AUTHOR(S): Magasi-LP

AD - ADDRESS OF AUTHOR: Marit. FRC, Can. For. Serv., Fredericton, NB, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Information-Report, -Maritimes-Forest-Research-Centre, -Canada. 1979, No. M-X-100, ii + 4 pp.

PY - PUBLICATION YEAR: 1979

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: A discussion of the potential dangers of the 'new' European strain of *Gremmeniella abietina* which was discovered in 2 out of 76 isolates made from infected plantations in New Brunswick in 1978, both on red pine [*Pinus resinosa*]. The European strain is easily identified when infection occurs at more than 2 m ht., but both the European and the 'old' North American strains may occupy the lower 1 m of young trees; confirmation of identification involves lengthy serological comparisons with known isolates. Some of the control measures being adopted are reported, especially restrictions on red pine production, sanitary fellings and burnings, detailed surveys of pine plantations throughout the province and chemical spraying.

DE - DESCRIPTORS: cankers-; conifers-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-resinosa*

GE - GEOGRAPHIC NAMES: Canada-; New-Brunswick

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; North-America; America; Canada

PT - PUBLICATION TYPE: Miscellaneous

Record 209 of 393 - TREECD 1973-2000/01

TI - TITLE: Survival of *Gremmeniella abietina* (*Scleroderris lagerbergii*) in marketed Christmas trees.

AU - AUTHOR(S): Magasi-LP; Manley-JM

AD - ADDRESS OF AUTHOR: Canadian For. Serv., Maritimes Forest Res. Centre, Fredericton, NB, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Plant-Disease-Reporter. 1974, 58: 10, 892-894; 1 graph, 1 tab.

PY - PUBLICATION YEAR: 1974

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The fungus can survive in branches of 9 year old Scots pine [*Pinus sylvestris*] trees cut for marketing, whether they are indoors for 10 days or left outdoors. The significance of this in the introduction and spread of this disease is discussed. It is suggested that a phytosanitary certificate, based on summer inspection, be required from growers intending to ship trees to distant markets.

DE - DESCRIPTORS: survival-; Christmas-trees; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Pinus-sylvestris*; *GREMMENIELLA-ABIETINA*

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Pinus*; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Journal-article

Record 210 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris canker of conifers. Proceeding of an international symposium on scleroderris canker of conifers, held in Syracuse, USA, June 21-24, 1983.

AU - AUTHOR(S): Manion-PD

AD - ADDRESS OF AUTHOR: State Univ., New York, Syracuse, NY, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1984, xiii + 273 pp.; 9 pl. Volume 13, Forestry Sciences Series; many ref.

PB - PUBLISHER INFORMATION: Martinus Nijhoff/Dr. W. Junk Publishers; The Hague; Netherlands

PY - PUBLICATION YEAR: 1984

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: A symposium sponsored by the State University of New York, the USDA Forest Service, the Canadian Forestry Service and the IUFRO Scleroderris Canker Working Party. After welcoming addresses from the USDA Forest Service and the Canadian Forestry Service, there are 40 further papers, concluding with a summary of the symposium and future research needs, by the editor and Skilling, D.D. Topics covered include the distribution, dispersal and history of *Gremmeniella abietina* in North America and Europe, host range, resistance and pathogenicity, disease development, metabolites and genetic variation, the role of insects, and the effects of SO₂, acid rain and other environmental factors, pruning, fungicides, quarantines and disease management.

DE - DESCRIPTORS: Cankers-; resistance-; Acid-rain; ecology-; Air-pollution; fumes-; sulfur-dioxide

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; fungi-

GE - GEOGRAPHIC NAMES: New-York; North-America; Europe-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Middle-Atlantic-States-of-USA; Northeastern-States-of-USA; USA; North-America; America

PT - PUBLICATION TYPE: Conference-proceedings

IB - INTERNATIONAL STANDARD BOOK NUMBER: 90-247-2912-2

Record 211 of 393 - TREECD 1973-2000/01

TI - TITLE: Thinning as a treatment against *Heterobasidion annosum* and *Gremmeniella abietina*.

OT - ORIGINAL NON-ENGLISH TITLE: Trzebieze jako zabiegi przeciwdzialajace wystepowaniu huby korzeni (*Heterobasidion annosum* (Fr.) Bref.) i zamieraniu pedow sosny (*Gremmeniella abietina* (Lagerb.) Morelet).

AU - AUTHOR(S): Manka-K

SO - SOURCE (BIBLIOGRAPHIC CITATION): Sylwan. 1986, 130: 7, 1-8; 13 ref.

PY - PUBLICATION YEAR: 1986

LA - LANGUAGE OF TEXT: Polish

LS - LANGUAGE OF SUMMARIES: Russian, English

AB - ABSTRACT: Analysis of published data and the author's own observations indicate that thinning of Scots pine stands can reduce incidence of both diseases but whereas this can be performed at any time in the case of *G. abietina*, only spring thinnings are effective against *H. annosum* and increase the presence of the fungal antagonist *Phlebia gigantea*. Felling in summer or autumn in stands with *H. annosum* must be followed by removal of felled stems down to as small a diam. as possible. Spring felling is recommended when both diseases are present.

DE - DESCRIPTORS: control-; cankers-; root-and-butt-rots; thinning-; diseases-; Pines-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Heterobasidion-annosum*; *Pinus-sylvestris*; *Gremmeniella-abietina*; *Phlebia-gigantea*; fungi-; *Pinus-*

GE - GEOGRAPHIC NAMES: Poland-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Heterobasidion*; Aphyllophorales; Basidiomycotina; Eumycota; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; *Phlebia*; Central-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0039-7660

Record 212 of 393 - TREECD 1973-2000/01

TI - TITLE: Biotic series method for evaluation of soil fungi effect on plant pathogenic fungi III. Measurement of inhibition-zone between test fungus and tested fungus in the biotic test.

AU - AUTHOR(S): Manka-M; Manka-K

AD - ADDRESS OF AUTHOR: University of Agriculture, Department of Forest Pathology, ul. Wojska Polskiego 71 C, 60-625 Poznan, Poland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Phytopathologia-Polonica. 1995, No. 22, 99-105; 9 ref.

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Inhibition-zone in the biotic test is usually evaluated on the basis of distance of the straight line (in millimetres) between colonies growing together on agar medium (usually in a Petri dish). In cases of a particularly strong inhibition reaction, a more adequate way of measuring is proposed, i.e. along a line reflecting the route of antibiotic substance penetration into the medium. The method was tested on *Sclerophoma pithiophila* [*Sydowia polyspora*] against *Gremmeniella abietina*, and various *Penicillium* spp., *Chaetomium aureum* and *Verticillium candelabrum* against *Heterobasidion annosum*.

DE - DESCRIPTORS: plant-pathogens; plant-pathogenic-fungi; fungal-antagonists; biological-control-agents; biological-control; plant-disease-control; antagonism-; techniques-; evaluation-; antagonists-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Sydowia-polyspora*; *Gremmeniella-abietina*; *Penicillium*-; *Heterobasidion-annosum*

BT - BROADER DESCRIPTORS: *Sydowia*; Dothideales; Ascomycotina; Eumycota; fungi; *Gremmeniella*; Helotiales; Deuteromycotina; *Heterobasidion*; Aphyllophorales; Basidiomycotina

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 1230-0462

Record 213 of 393 - TREECD 1973-2000/01

TI - TITLE: Growth disturbances and needle and soil nutrient contents in a NPK-fertilized Scots pine plantation on a drained small-sedge bog.

AU - AUTHOR(S): Mannerkoski-H; Miyazawa-T

AD - ADDRESS OF AUTHOR: Univ. of Helsinki, Dep. of Peatland Forestry, Unionink, 40 B, 00170 Helsinki 17, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Communicationes-Institutii-Forestalis-Fenniae. 1983, No. 116, 85-91; 3 fig., 4 tab.; 17 ref.

PY - PUBLICATION YEAR: 1983

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The extent of dieback, mainly caused by *Gremmeniella abietina*, and N, P, K, Cu, Zn and B concentrations in needles of Scots pine three years after application of P, PK or NPK to young transplants are reported.

Fertilization increased both height development and growth disturbances. The latter were preceded by decreased B and increased K concentrations in needles and decreased Zn (kg/ha) in peat.

DE - DESCRIPTORS: NPK-fertilizers; plant-composition; responses-; nutrients-; trace-elements; fungal-diseases

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: compound-fertilizers; fertilizers; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Conference-paper; Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0358-9609

Record 214 of 393 - TREECD 1973-2000/01

TI - TITLE: Spore production and artificial inoculation techniques for *Gremmeniella abietina*.

AU - AUTHOR(S): Marosy-M; Patton-RF; Upper-CD

AD - ADDRESS OF AUTHOR: Department of Plant Pathology, University of Wisconsin, Madison, WI 53706, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Phytopathology*. 1989, 79: 11, 1290-1293; 10 ref.

PY - PUBLICATION YEAR: 1989

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Viable conidia of *G. abietina* were produced in flasks containing 20% V-8 broth incubated at 16-18°C under a 16-h photoperiod with a light intensity of approx. 100 µE m⁻²s⁻¹. More than 6 X 10⁷ spores/flask were usually produced in 21 d under these conditions. Red pine (*Pinus resinosa*) seedlings were inoculated with a suspension of conidia that had been produced in this way, held at 18°C at high RH for 3 d and transferred to 4°C. Disease symptoms of *Scleroderris* shoot blight, as indicated by loose fascicles, appeared after 56 d in the dark at 4°C.

DE - DESCRIPTORS: pines-; conidia-; techniques-; production-; Conifers-; Fungal-diseases; methodology-; infection-; culture-techniques; Foliage-; diseases-; forest-trees; plant-pathology; plant-pathogenic-fungi; inoculation-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-resinosa*; *Gremmeniella*-; Fungi-; *Pinus*-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; *Pinus*; Pinaceae; Pinopsida; gymnosperms

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0031-949X

Record 215 of 393 - TREECD 1973-2000/01

TI - TITLE: A conducive day concept to explain the effect of low temperature on the development of Scleroderris shoot blight.

AU - AUTHOR(S): Marosy-M; Patton-RF; Upper-CD

AD - ADDRESS OF AUTHOR: Department of Plant Pathology, University of Wisconsin, Madison, WI 53706, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Phytopathology. 1989, 79: 11, 1293-1301; 52 ref.

PY - PUBLICATION YEAR: 1989

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The in vitro growth of *Gremmeniella abietina* at -6°C both in the presence or absence of ice crystals was confirmed. Red pine [*Pinus resinosa*] seedlings artificially inoculated with the North American serotype, exposed to natural and artificially manipulated field conditions, developed symptoms of Scleroderris shoot blight when exposed to ≈ 44 d in which the temp. remained between -6 and +5°C or snow completely covered the seedlings or tree parts - a conducive day. Thus, an extended period of relatively mild canopy temp. during the winter appears to favour disease development. The conducive period, a period in which ≈ 44 conducive days occurred, could either occur in the winter after inoculation, or over the 2 winters after inoculation. The apparent latent period in the disease cycle may result from the need for winter conditions before symptom development can occur. The occurrence of symptoms primarily on lower branches and the restriction of the disease to latitudes that receive sustained snow cover in the Lake States are consistent with this observation. Comparison of literature descriptions of outbreaks of the disease to weather records revealed a strong association between conducive periods, usually single conducive winters and the occurrence of symptoms. The natural range of the disease may be restricted by the need for recurrence of conducive periods within 3 years to avoid breaking the disease cycle.

DE - DESCRIPTORS: pines-; temperature-; Conifers-; Fungal-diseases; biology-; Foliage-; diseases-; forest-trees; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-resinosa*; *Gremmeniella*-; *Pinus*-; fungi-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; *Pinus*; Pinaceae; Pinopsida; gymnosperms

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0031-949X

Record 216 of 393 - TREECD 1973-2000/01

TI - TITLE: Resistance tests against two different parasitic fungi on the same plus-tree progenies.

OT - ORIGINAL NON-ENGLISH TITLE: Resistensprovning mot tva olika parasitsvampar pa samma plustradsavkommor.

AU - AUTHOR(S): Martinsson-O

SO - SOURCE (BIBLIOGRAPHIC CITATION): Sweden,-Foreningen-Skogstradsforadling,-Institutet-for-Skogsforbattring:-Yearbook-1975,-Association-for-Forest-Tree-Breeding,-Institute-of-Forest-Improvement. 1976, 145-151; 6 ref.

PB - PUBLISHER INFORMATION: Uppsala.

PY - PUBLICATION YEAR: 1976

LA - LANGUAGE OF TEXT: Swedish

AB - ABSTRACT: Twenty-seven full-sib families of *Pinus sylvestris* were divided into two lots; each lot consisted of 25 individuals per family which were inoculated respectively with *Melampsora pinitorqua* and *Scleroderris lagerbergii* at the age of five months. The results of scoring for infection in the following year indicated that there is a negative correlation between resistance to *Melampsora* and resistance to *Scleroderris* in the same progenies.

DE - DESCRIPTORS: conifers-; forest-trees; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Melampsora*-; GREMMENIELLA-

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; Uredinales; Basidiomycotina; Eumycota; fungi; Helotiales; Ascomycotina; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Miscellaneous

Record 217 of 393 - TREECD 1973-2000/01

TI - TITLE: Tests of resistance to two different parasitic fungi in the same plus-tree progeny.

AU - AUTHOR(S): Martinsson-O

SO - SOURCE (BIBLIOGRAPHIC CITATION): Arsbok,-Foreningen-Skogstradsforadling-Institutet-for-Skogsforbattring-1975. 1976, 145-151; 6 ref.

PY - PUBLICATION YEAR: 1976

LA - LANGUAGE OF TEXT: Swedish

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: Gives results of tests for resistance to *Melampsora pinitorqua* [*M. populnea*] and *Scleroderris lagerbergii* on 27 full-sib families of *Pinus sylvestris* in Sweden [cf. FA 36, 6834]. A negative correlation was found between resistance to *M. pinitorqua* and resistance to *S. lagerbergii* in the same progeny.

DE - DESCRIPTORS: foliage-; plant-breeding; rust-diseases; tree-breeding; progeny-testing; conifers-

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Melampsora-populnea*; GREMMENIELLA-ABIETINA

BT - BROADER DESCRIPTORS: *Pinus*; Pinaceae; Pinopsida; gymnosperms;

Spermatophyta; plants; *Melampsora*; Uredinales; Basidiomycotina; Eumycota; fungi; *Gremmeniella*; Helotiales; Ascomycotina

PT - PUBLICATION TYPE: Miscellaneous

Record 218 of 393 - TREECD 1973-2000/01

TI - TITLE: Mortality and damage in Scots pine and lodgepole pine trials 4-9 years after planting.

OT - ORIGINAL NON-ENGLISH TITLE: Avganger och skador i odlingsforsok av tall och contortatall 4-9 ar efter plantering.

AU - AUTHOR(S): Martinsson-O; Karlman-M; Lundh-JE

AD - ADDRESS OF AUTHOR: The Swedish University of Agricultural Sciences, Department of Silviculture, S-901 83 Umea, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Rapport,-Institutionen-for-Skogsskotsel,-Sveriges-Lantbruksuniversitet. 1983, No. 10, 33 pp.; 24 ref.

PY - PUBLICATION YEAR: 1983

LA - LANGUAGE OF TEXT: Swedish

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: Scots pine and lodgepole pine plantations at 9 sites in central and N. Sweden were observed for 3 yr. Av. survival 4-8 yr after planting was 77% for Scots pine from seed orchards, 80% for Scots pine from natural stands and 89% for lodgepole pine. The most common causes of damage and mortality were moose, voles and fungal diseases. The most common diseases were *Phacidium infestans*, *Melampsora pinitorqua* [*M. populnea*] and *Gremmeniella abietina*. There was little insect damage.

DE - DESCRIPTORS: Wildlife-; damage-; rust-diseases; cankers-; species-trials; conifers-

OD - ORGANISM DESCRIPTORS: *Phacidium-infestans*; *Melampsora-populnea*; *Gremmeniella-abietina*; Voles-; *Pinus-sylvestris*; *Pinus-contorta*

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: *Phacidium*; Helotiales; Ascomycotina; Eumycota; fungi; *Melampsora*; Uredinales; Basidiomycotina; *Gremmeniella*; Microtinae; Muridae; rodents; mammals; vertebrates; Chordata; animals; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Miscellaneous

IB - INTERNATIONAL STANDARD BOOK NUMBER: 91-576-1530-6

Record 219 of 393 - TREECD 1973-2000/01

TI - TITLE: Damage by *Brunchorstia pinea* [*Gremmeniella abietina*] to spruce and pine in the Oberpfalz region.

OT - ORIGINAL NON-ENGLISH TITLE: Schaden durch *Brunchorstia pinea* an Fichten und Kiefern in der Oberpfalz.

AU - AUTHOR(S): Maschnig-E; Lang-KJ

AD - ADDRESS OF AUTHOR: Bavarian For. Exp. & Res. Inst., 8000 Munich, German Federal Republic.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Allgemeine-Forstzeitschrift. 1981, No. 16, 385-386; 1 pl.; 7 ref.

PY - PUBLICATION YEAR: 1981

LA - LANGUAGE OF TEXT: German

AB - ABSTRACT: Reports of injury to upper crown shoots in thicket/young pole stands of spruce were received from stations in Bavaria beginning in early summer, 1980; pycnidia were in evidence from July, 1980; and ripe fruiting bodies from Jan., 1981. Affected spruce stands were shaded by or directly adjacent to infected Scots pine stands, in which the fungus appears to be latent. Removal of affected material is recommended. The symptoms are described.

DE - DESCRIPTORS: fungal-diseases; conifers-

OD - ORGANISM DESCRIPTORS: *Picea-abies*; *Pinus-sylvestris*; *Gremmeniella-abietina*; *Gremmeniella*-

GE - GEOGRAPHIC NAMES: German-Federal-Republic; Germany-

BT - BROADER DESCRIPTORS: *Picea*; *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; *Pinus*; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; Western-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

Record 220 of 393 - TREECD 1973-2000/01

TI - TITLE: Jack pine diseases in Ontario.

AU - AUTHOR(S): McGauley-BH; Gross-HL

AD - ADDRESS OF AUTHOR: Ontario Min Nat. Resour., Pest Control Sect., Maple, Ont. L0J 1E0, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): In Jack pine symposium. Proceedings of a symposium in Timmins, Ontario, 18-20 October, 1983 [chaired by Smith, C.R.; Brown, G.]. COJFRC-Symposium-Proceedings,-Great-Lakes-Forest-Research-Centre,-Canada. 1984, No. O-P-12, 139-144; 21 ref.

PY - PUBLICATION YEAR: 1984

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Life cycle, symptoms, damage and control are outlined of *Cronartium comptoniae* and *Gremmeniella abietina*, the two most important diseases. A brief account is given of other common diseases.

DE - DESCRIPTORS: Fungal-diseases; biology-; symptoms-; control-; conifers-

OD - ORGANISM DESCRIPTORS: *Cronartium*-; *Gremmeniella*-; *Pinus-banksiana*; *Cronartium-comptoniae*

GE - GEOGRAPHIC NAMES: Canada-; Ontario-

BT - BROADER DESCRIPTORS: Uredinales; Basidiomycotina; Eumycota; fungi; Helotiales; Ascomycotina; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Cronartium*; North-America; America; Canada

PT - PUBLICATION TYPE: Conference-paper; Journal-article

Record 221 of 393 - TREECD 1973-2000/01

TI - TITLE: Brunchorstia disease I. Systematic position and nomenclature of the pathogen.

OT - ORIGINAL NON-ENGLISH TITLE: La maladie a Brunchorstia I. Position systematique et nomenclature du pathogene.

AU - AUTHOR(S): Morelet-M

AD - ADDRESS OF AUTHOR: Cent. Natn. Rech. Forest., Champenoux, France.

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1980, 10: 5, 268-277; 3 fig.; 25 ref.

PY - PUBLICATION YEAR: 1980

LA - LANGUAGE OF TEXT: French

LS - LANGUAGE OF SUMMARIES: English, German

AB - ABSTRACT: Critical analysis of nomenclature and taxonomy of the agent of Scleroderris canker of Coniferae has led to the adoption of the name Gremmeniella abietina (conidial state B. pinea). A detailed description of the fungus based on examination of numerous samples, and a complete critical synonymy are presented. A neotype is proposed and a new var., B. pinea var. cembrae, described. Rhabdospora pithyophila is transferred to Foveostroma. A comparative morphological and cultural study showed differences between Ascocalyx and Gremmeniella, the conidiogenesis of which is reproduced for the first time in electronic microscopy.

DE - DESCRIPTORS: nomenclature-; forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: Pinopsida-; Gremmeniella-abietina

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; gymnosperms; Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 222 of 393 - TREECD 1973-2000/01

TI - TITLE: Brunchorstia disease. 2. Distribution in France.

OT - ORIGINAL NON-ENGLISH TITLE: La maladie a Brunchorstia. 2. Repartition en France.

AU - AUTHOR(S): Morelet-M

AD - ADDRESS OF AUTHOR: Lab. Path. For., INRA-CNRF, Champenoux, F-54280 Seichamps, France.

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1980, 10: 6, 354-359; 14 ref.

PY - PUBLICATION YEAR: 1980

LA - LANGUAGE OF TEXT: French

LS - LANGUAGE OF SUMMARIES: German, English

AB - ABSTRACT: [See FA 42, 1360] Records of location and date of first findings of *Gremmeniella abietina* are listed for the 2 variations of its conidial stage: *Brunchorstia pinea* var. *pinea* and *B.p.* var. *cembrae* (in mountainous districts). It was found in 33 departments on *Pinus bougeti* [*P. sylvestris* X *P. uncinata*], *P. nigra*, *P. pinaster*, *P. sylvestris*, *P. strobus*, *P. thunbergii*, *P. cembra* and *P. uncinata*. Accompanying micro-flora are also listed. Damage is most severe in Verdun, where more than 3000 ha are affected and infection rate can be 80% and mortality up to 30%.

DE - DESCRIPTORS: Maps-; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus-nigra*; *Pinus-cembra*; *Pinus-sylvestris*; *Pinus-strobus*; *Pinus-pinaster*; *Pinus-thunbergii*; *Pinus-uncinata*; *Gremmeniella-abietina*; *Pinus-*

GE - GEOGRAPHIC NAMES: France-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; Western-Europe; Europe; Mediterranean-Region

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 223 of 393 - TREECD 1973-2000/01

TI - TITLE: Newly discovered diseases in Italian forests.

AU - AUTHOR(S): Moriondo-F

SO - SOURCE (BIBLIOGRAPHIC CITATION): Translation, -Fisheries-and-Environment-Canada. 1978, No. OOENV TR-1479, 14 pp.; transl. from Annali Accademia Italiana di Scienze Forestali (1963) 12, 322-323, 325-330. See FA 25, 3730. Limited distribution.

PY - PUBLICATION YEAR: 1978

LA - LANGUAGE OF TEXT: English

DE - DESCRIPTORS: ecology-; conifers-

OD - ORGANISM DESCRIPTORS: Pinus-cembra; Gremmeniella-abietina; Pinus-pinea; Diplodia-pinea; Heterobasidion-annosum; Pinus-pinaster; Pinus-sylvestris; Pinus-nigra; GREMMENIELLA-

GE - GEOGRAPHIC NAMES: Italy-

BT - BROADER DESCRIPTORS: Pinus; Pinaceae; Pinopsida; gymnosperms;

Spermatophyta; plants; Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi;

Diplodia; Deuteromycotina; Heterobasidion; Aphylllophorales; Basidiomycotina;

Southern-Europe; Europe; Mediterranean-Region

PT - PUBLICATION TYPE: Miscellaneous

Record 224 of 393 - TREECD 1973-2000/01

TI - TITLE: On the discomycetous genera *Ascocalyx* Naumov and *Gremmeniella* Morelet.

AU - AUTHOR(S): Muller-E

AD - ADDRESS OF AUTHOR: Inst. Microbiol., ETH Cent., Zurich, Switzerland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Sydowia*. 1983, 36: 193-203; 3 fig., 1 tab.; 25 ref.

PY - PUBLICATION YEAR: 1983

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: German

AB - ABSTRACT: A detailed comparative study of *Ascocalyx*, *Gremmeniella* and *Encoeliopsis* is presented. In view of similarities in the structure of asci and ascospores and on the basis of biochemical characters, the spp. associated with conifers are included in *Ascocalyx*, *A. abietina* being accepted for the pine pathogen (*G. abietina*) and *A. laricina* for that on larch. *G. juniperina* is transferred as *A. juniperina*.

DE - DESCRIPTORS: taxonomy-; Pines-; nomenclature-; Larch-; Cankers-; forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Ascocalyx*-; *Gremmeniella*-; Pinopsida-; *Gremmeniella-abietina*; *Larix*-; *Pinus*-; Fungi-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Helotiales; Ascomycotina; Eumycota; fungi; gymnosperms; *Gremmeniella*; Pinaceae; Pinopsida; *Ascocalyx*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0082-0598

Record 225 of 393 - TREECD 1973-2000/01

TI - TITLE: The diversity of *Gremmeniella abietina* var. *abietina* FAST-profiles.
AU - AUTHOR(S): Muller-MM; Uotila-A
AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, PO Box 18, 01301 Vantaa, Finland.
SO - SOURCE (BIBLIOGRAPHIC CITATION): Mycological-Research. 1997, 101: 5, 557-564; 27 ref.
PY - PUBLICATION YEAR: 1997
LA - LANGUAGE OF TEXT: English
AB - ABSTRACT: A total of 88 isolates of *G. a. var. abietina* belonging to the Asian, European and North American races were cultivated on agar plates and their fatty acids and sterols were extracted and analysed. Fourteen fatty acids and 7 sterols were detected by GC. Multivariate discriminant analysis revealed distinct differences between the contents of fatty acids and sterols (FAST-profiles) of the 3 races; the most distinct was the Asian race. Additionally, the presence of 2 ecologically different types in Finland, the large tree and small tree type (LTT and STT, respectively) was confirmed on the basis of their significantly different FAST-profiles. The FAST-profiles of European STT more closely resembled the American race than the European LTT. The diversity of North American isolates of the European race, which were supposedly initially introduced from Europe in the 1960s, were considerably higher than the diversity of the European LTT or STT isolates.
DE - DESCRIPTORS: plant-pathogens; plant-pathogenic-fungi; techniques-; differentiation-; biochemistry-; sterols-; fatty-acids; fungal-diseases; genetics-; plant-pathology
OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*
BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi
PT - PUBLICATION TYPE: Journal-article
IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0953-7562

Record 226 of 393 - TREECD 1973-2000/01

TI - TITLE: Preliminary investigation of the use of indirect immunofluorescence to detect conidia of *Brunchorstia pinea*.

AU - AUTHOR(S): Nelson-CL; Castello-JD; Manion-PD

AD - ADDRESS OF AUTHOR: Faculty of Environmental and Forest Biology, State University of New York, College of Environmental Science and Forestry, Syracuse, NY 13210, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Forest-Research. 1989, 19: 3, 389-392; 16 ref.

PY - PUBLICATION YEAR: 1989

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: An indirect immunofluorescence staining procedure was developed for detection of *Brunchorstia pinea* [*Gremmeniella abietina*] conidia from culture, pycnidia, and spore-trap collections, using antiserum to conidia and a commercially prepared fluorescein isothiocyanate protein A conjugate. Although cross reactivity occurred with spores of *Fusarium* spp., *Sirococcus* sp., *Phialophora* sp., *Gliocladium* sp., *Verticillium* sp., and *Gelatinosporium* sp., these spores were easily distinguished from those of *Gremmeniella abietina* by size, shape, septation, and degree of fluorescence. Fluorescent *G. abietina*-like conidia were collected in spore traps located within and outside the New York State quarantine region. The identity of *G. abietina*-like conidia could not, however, be corroborated by other methods.

DE - DESCRIPTORS: Quarantine-; Fungal-diseases; detection-; methodology-; Techniques-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: USA-; New-York

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; North-America; America; Middle-Atlantic-States-of-USA; Northeastern-States-of-USA; USA

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0045-5067

Record 227 of 393 - TREECD 1973-2000/01

TI - TITLE: *Gremmeniella abietina* in Finnish *Pinus sylvestris* stands in 1986-1992: a study based on the National Forest Inventory.

AU - AUTHOR(S): Nevalainen-S

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Joensuu Research Station, P.O. Box 68, FI-80101, Joensuu, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Scandinavian-Journal-of-Forest-Research*. 1999, 14: 2, 111-120; 41 ref.

PY - PUBLICATION YEAR: 1999

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Data from 24 544 pine (*Pinus sylvestris*) dominated plots (natural and artificial stands) of the Eighth National Forest Inventory (NFI) carried out in southern Finland in 1986-94 were used to examine stand damage in relation to stand characteristics. The most commonly identified cause of damage was *Gremmeniella abietina* (10.6% of the stands). Disease assessments by NFI groups were reliable at the stand level. The disease was spatially clustered, being almost twice as common on peatland as on mineral soil plots. However, there was no difference between undrained peatlands and mineral soils. The more the original peatland site type had changed after drainage, the more common was the disease. On mineral soil, disease frequencies were highest on alluviated plots or on the most fertile plots. Naturally regenerated stands were affected more than artificially regenerated stands, but the difference was significant only on the richer sites. The proportion of diseased plots increased with stand density up to 25-28 m² ha⁻¹. Altitude of the plot had only a weak effect on damage frequency.

DE - DESCRIPTORS: forests-; drainage-; peatlands-; site-types; soil-fertility; stand-density; forest-plantations; stand-characteristics; forest-damage; plant-pathogenic-fungi; fungal-diseases; spatial-distribution; forest-soils; natural-regeneration; artificial-regeneration; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Pinus-sylvestris*; *Gremmeniella*-; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Pinus*; Helotiales; Ascomycotina; Eumycota; fungi; *Gremmeniella*; Scandinavia; Northern-Europe; Europe; Developed-Countries; European-Union-Countries; OECD-Countries

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0282-7581

Record 228 of 393 - TREECD 1973-2000/01

TI - TITLE: The susceptibility of Scots pine to *Gremmeniella abietina*.
AU - AUTHOR(S): Nevalainen-S; Uotila-A
AD - ADDRESS OF AUTHOR: Finnish Forest Res. Inst., Joensuu, Finland.
SO - SOURCE (BIBLIOGRAPHIC CITATION): Vaxtskyddsnotiser. 1984, 48: 3-4, 76-80; 2 fig.; 32 ref.
PY - PUBLICATION YEAR: 1984
LA - LANGUAGE OF TEXT: English
LS - LANGUAGE OF SUMMARIES: Swedish
AB - ABSTRACT: The most important environmental factors increasing susceptibility were frost damage, shading, cool and rainy growing seasons, unfavourable topography and unsuitable soil conditions. A Finnish survey found clear differences in disease susceptibility among Scots pine clones in a seed orchard and among provenances in progeny trials. Seed transfer from S. to N. slightly increased the death rate. The degree of adaptation of trees to the prevailing environmental conditions was considered most important in determining susceptibility.
DE - DESCRIPTORS: Pines-; environmental-factors; susceptibility-; Frost-injury; Cankers-; resistance-; tree-breeding; diseases-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi
OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-sylvestris*; fungi-; Pinus-
GE - GEOGRAPHIC NAMES: Finland-
BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; Pinus; Pinaceae; Pinopsida; gymnosperms; Scandinavia; Northern-Europe; Europe
PT - PUBLICATION TYPE: Journal-article

Record 229 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris canker in conifers.

AU - AUTHOR(S): Nicholls-TH

SO - SOURCE (BIBLIOGRAPHIC CITATION): American-Christmas-Tree-Journal. 1979, 23: 1, 23-26; 4 pl.

PY - PUBLICATION YEAR: 1979

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The distribution of this disease (*Gremmeniella abietina*) in north central USA is reported. It attacks a variety of conifers, particularly those grown as Christmas trees. The current status of research work on the disease is outlined. Host range tests are in progress and quarantines have been enforced in some areas.

DE - DESCRIPTORS: christmas-trees; fungal-diseases; damage-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: USA-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; North-America; America

PT - PUBLICATION TYPE: Journal-article

Record 230 of 393 - TREECD 1973-2000/01

TI - TITLE: The effect of stand density on the susceptibility of *Pinus sylvestris* to *Gremmeniella abietina*.

AU - AUTHOR(S): Niemala-P; Lindgren-M; Uotilla-A

AD - ADDRESS OF AUTHOR: Department of Forest Ecology, Finnish Forest Research Institute, PO Box 18, 01301 Vantaa, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Scandinavian-Journal-of-Forest-Research*. 1992, 7: 1, 129-133; 38 ref.

PY - PUBLICATION YEAR: 1992

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The susceptibility of a 20-yr-old Scots pine (*Pinus sylvestris*) stand to Scleroderris canker (caused by *Gremmeniella abietina*) was monitored in relation to stocking density (ranging from 800 to 5000 trees/ha) at Karvia, Finland. Degree of damage (as indicated by the proportion of brown needles and the number of dead trees) was correlated with stand density. The proportion of dead trees was low at densities <1100 trees/ha and increased with increasing density.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; plant-diseases; disease-resistance; susceptibility-; fungal-diseases; stand-density; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-sylvestris*; fungi-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; pathogens; fungi; plant-pathogens; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0282-7581

Record 231 of 393 - TREECD 1973-2000/01

TI - TITLE: Effects of crown reduction on needle nutrient status of scleroderris-canker-diseased and green-pruned Scots pine.

AU - AUTHOR(S): Nuorteva-H; Kurkela-T

AD - ADDRESS OF AUTHOR: Department of Forest Ecology, Finnish Forest Research Institute, PO Box 18, 01301 Vantaa, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Forest-Research. 1993, 23: 6, 1169-1178; 26 ref.

PY - PUBLICATION YEAR: 1993

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: The effects of green crown reduction (needle loss) on the nutrient status of needles were studied in Scots pine (*Pinus sylvestris*) in Finland. Trees were either diseased with scleroderris canker (*Gremmeniella abietina*) or had been green pruned. The concentrations of 15 different elements were determined in needles collected in March 1987 from 120 trees in 6 young Scots pine stands. Four of the stands had suffered from scleroderris canker over the last 10 years, whereas the other 2 stands were healthy and had been pruned about 2 years before sampling. To eliminate the effects of soil and environmental factors, sample trees were chosen in pairs. Each pair contained one tree with a severely reduced crown (about a 50% reduction in crown length as a result of disease or pruning) and an adjacent tree (control) with an unaffected crown. Compared with the control trees, concentrations of foliar B, Ca, N and S were significantly greater in both diseased and pruned trees, while Mn was greater only in diseased trees, and Na and Cu only in pruned trees. Foliar Fe and Mg concentrations were lower in diseased trees than in control trees. In many stands there was a significant correlation between needle element concentrations and severity of crown reduction, suggesting that differences in foliar elemental concentration in Scots pine needles depend on the extent of crown reduction. The phenomenon should be considered when interpreting foliar analyses of recently defoliated conifers, particularly before conclusions are made about the need for fertilizer application, nutritional disturbances or the effects of air pollution.

DE - DESCRIPTORS: conifers-; foliage-; chemistry-; pruning-; fungal-diseases; nutrients-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Gremmeniella-abietina*; fungi-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0045-5067

Record 232 of 393 - TREECD 1973-2000/01

TI - TITLE: Rapid living crown reduction caused by *Gremmeniella abietina* affects foliar nutrient concentrations of Scots pine.

AU - AUTHOR(S): Nuorteva-H; Kurkela-T; Lehto-A

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, P.O. Box 18, 01301 Vantaa, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1998, 28: 5, 349-360; 43 ref.

PY - PUBLICATION YEAR: 1998

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The foliar chemistry of diseased and healthy trees was studied one growing season after severe reduction in living crowns caused by *G. abietina* in 4 young *Pinus sylvestris* stands in Finland. Sample trees were chosen pairwise on the basis of the living crown length: a diseased tree with approx. 50% live crown reduction and a healthy tree in each pair. Fifteen elements were determined in the youngest healthy needles on the lateral top shoots of each sample tree. Diseased trees had higher foliar boron, manganese and sodium concentrations and lower magnesium, iron, zinc, copper, potassium, nitrogen and sulfur concentrations compared with the healthy trees. Foliar calcium, aluminium, phosphorus, carbon and hydrogen concentrations did not differ between the diseased and healthy trees, except for P and Al in 2 of the stands when the stands were analysed separately. Significant correlations between the needle element concentrations and crown ratio (length of the living crown/tree height) were found especially for B (increasing B with decreasing crown ratio) and for Mg, Fe and Zn (decreasing concentrations with decreasing crown ratio). The effect of *G. abietina*-induced living crown reduction on tree nutrient status and the role of these mineral nutrients in the susceptibility are discussed.

DE - DESCRIPTORS: aluminium-; boron-; copper-; iron-; magnesium-; manganese-; nutrients-; phosphorus-; potassium-; sulfur-; susceptibility-; zinc-; plant-diseases; plant-pathogens; plant-pathogenic-fungi; plant-composition; host-parasite-relationships; forest-trees; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-sylvestris*; Pinopsida-; fungi-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; European-Union-Countries; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 233 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris canker found in Maine.

AU - AUTHOR(S): O'-Brien-JT; Stark-DA

AD - ADDRESS OF AUTHOR: NE Area, State & Private For., USDA For. Serv.,
Broomall, Pa., USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Plant-Disease-Reporter. 1979, 63: 3, 194;
2 ref.

PY - PUBLICATION YEAR: 1979

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The North American strain of Scleroderris canker (*Gremmeniella abietina*) was identified in a stand of red pines (*Pinus resinosa*) in trees with dead and dying branch tips, in Franklin County, Maine. Most infections were in seedlings and small saplings, and the oldest canker was formed in 1970. The nearest known infection is 25 miles N., in Quebec.

ADDITIONAL ABSTRACT: *Gremmeniella abietina* [CMI Map 423] is newly reported from Maine, USA on *Pinus resinosa*.

DE - DESCRIPTORS: fungal-diseases; forest-trees; conifers-; plant-pathology;
pines-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-resinosa*; *Pinus-*

GE - GEOGRAPHIC NAMES: Maine-; USA-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants;
Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae;
Pinopsida; gymnosperms; New-England-States-of-USA; Northeastern-States-of-USA;
USA; North-America; America

PT - PUBLICATION TYPE: Journal-article

Record 234 of 393 - TREECD 1973-2000/01

TI - TITLE: Pathology of radiata pine in California.

AU - AUTHOR(S): Old-KM

AD - ADDRESS OF AUTHOR: CSIRO, Div. For. Res., PO Box 4008, Canberra, ACT, Australia.

SO - SOURCE (BIBLIOGRAPHIC CITATION): CSIRO-Division-of-Forest-Research,- Pathology-and-Microbiology-Section-Report. 1979, No. 1, 76 pp.; 28 pl. (22 colour) Limited circulation; 76 ref.

PY - PUBLICATION YEAR: 1979

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The report was compiled following a survey from June to Sept., 1979 assessing pathogens which are prevalent in California and the likely consequences of their introduction in Australia where *Pinus radiata* is as yet free from pests and diseases. Pathogens are described, with the aid of photographs, electronmicrographs and line drawings, under 4 main headings: Foliar diseases; Stem diseases (principally western gall rust *Endocronartium harknessii*); Other shoot and stem disorders; Root diseases.

DE - DESCRIPTORS: assessment-; fungal-diseases; conifers-

OD - ORGANISM DESCRIPTORS: *Pinus-radiata*; *Lophodermium*-; *Naemacyclus*-; *Pestalotia*-; *Arceuthobium-occidentale*; *Endocronartium-harknessii*; *Gremmeniella-abietina*; *Heterobasidion-annosum*; MYCOSPHAERELLA-PINI; SIROCOCCUS-CONIGENUS

GE - GEOGRAPHIC NAMES: California-; USA-

BT - BROADER DESCRIPTORS: *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; Rhytismatales; Ascomycotina; Eumycota; fungi; Deuteromycotina; *Arceuthobium*; Viscaceae; Santalales; dicotyledons; angiosperms; *Endocronartium*; Uredinales; Basidiomycotina; *Gremmeniella*; Helotiales; *Heterobasidion*; Aphyllophorales; *Mycosphaerella*; Dothideales; *Sirococcus*; Pacific-States-of-USA; Western-States-of-USA; USA; North-America; America

PT - PUBLICATION TYPE: Miscellaneous

Record 235 of 393 - TREECD 1973-2000/01

TI - TITLE: Relative calibrated Landsat-TM data for standwise change detection in forestry. A pilot study on Scots pine infected by *Gremmeniella abietina*.

AU - AUTHOR(S): Olsson-H

AD - ADDRESS OF AUTHOR: Department of Biometry and Forest Management, Swedish University of Agricultural Sciences, 901 83 Umea, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): User contributions to satellite remote sensing programmes. Proceedings of the 9th EARSeL Symposium, Espoo, Finland, 27 June-1 July 1989 [chaired by Hallikainen, M.]. 1990, No. EUR 12827 EN, 299-305; 3 ref.

PB - PUBLISHER INFORMATION: Commission of the European Communities; Luxembourg

PY - PUBLICATION YEAR: 1990

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: A technique is described for calibrating data for two or more separate scene registrations so that changes relate to stand characteristics (number of trees, size distribution, species composition, vitality, etc.) rather than situation factors (solar radiation, sensor characteristics, atmospheric conditions, etc.). Data from an area in N. Sweden were able to distinguish a Scots pine (*Pinus sylvestris*) stand infected by *G. abietina* and a stand with snowbreak damage from a stand with normal development.

DE - DESCRIPTORS: Conifers-; fungal-diseases; Remote-sensing; thematic-mapper; damage-

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Gremmeniella-*; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; *Gremmeniella*; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Conference-paper

Record 236 of 393 - TREECD 1973-2000/01

TI - TITLE: Detection and partial characterization of extracellular proteases of the pathogenic fungi *Endocronartium pini*, *Gremmeniella abietina* and *Heterobasidion annosum*.

AU - AUTHOR(S): Pappinen-A; Weissenberg-K-von; Von-Weissenberg-K

AD - ADDRESS OF AUTHOR: University of Joensuu, Faculty of Forestry PO Box 111, 80101 Joensuu, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1997, 27: 6, 373-380; 25 ref.

PY - PUBLICATION YEAR: 1997

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Protease activities of 10 homokaryotic isolates of *H. annosum*, 2 isolates of *G. abietina* and 6 isolates of *E. pini* were investigated. All the fungi showed in vitro protease activity with denatured casein. The highest caseinolytic activity was at acidic pH, but *H. annosum* and *G. abietina* also showed caseinolytic activity at basic pH. Protease preparations from *H. annosum* degraded proteins from total phloem extracts of *Pinus sylvestris*, *Picea abies*, *Betula pendula* and *Juniperus communis*. The artificial substrates hippuryl arginine (HA) and hippuryl phenylactic acid (HPLA) were hydrolysed rapidly by *H. annosum* at pH 8.1, suggesting high exopeptidase activity at this pH. According to inhibitor studies with EDTA (ethylenediaminetetraacetic acid), E64 (L-trans-epoxy-succinyl-leucylamide-(4-guanidino)-butane- α -glutamate) and pin2 (potato trypsin/chymotrypsin inhibitor), cysteine and serine proteases were present among proteases secreted by these pathogens, although only very low protease activity was detected with *E. pini* at basic pH.

DE - DESCRIPTORS: proteinases-; detection-; characterization-; plant-pathogens; plant-pathogenic-fungi; enzymes-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Endocronartium-pini*; *Gremmeniella-abietina*; *Heterobasidion-annosum*

BT - BROADER DESCRIPTORS: *Endocronartium*; Uredinales; Basidiomycotina; Eumycota; fungi; *Gremmeniella*; Helotiales; Ascomycotina; *Heterobasidion*; Aphyllophorales

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 237 of 393 - TREECD 1973-2000/01

TI - TITLE: A programme for monitoring in plantations and seed orchards.
OT - ORIGINAL NON-ENGLISH TITLE: Programme de surveillance dans les plantations et les vergers a graines.
AU - AUTHOR(S): Paradis-C; Gagnon-G; Jean-S
AD - ADDRESS OF AUTHOR: Ministere des Ressources Naturelles, Direction de la Conservation des Forets, 1283 Boulevard Charest Ouest, Que. G1N 2C9, Canada.
SO - SOURCE (BIBLIOGRAPHIC CITATION): Insectes-et-maladies-des-arbres:-Quebec-1993. 1993, 12-18.
PB - PUBLISHER INFORMATION: Ministry of Natural Resources, Quebec Region; Sainte-Foy; Canada
PY - PUBLICATION YEAR: 1993
LA - LANGUAGE OF TEXT: French
AB - ABSTRACT: A brief account is given of the health status in plantations and nurseries of white pine [*Pinus strobus*] and Norway spruce [*Picea abies*] in different regions of Quebec, Canada, in 1993 compared with 1992. The main insect pests found in plantations included *Pissodes strobi*, *Neodiprion lecontei*, *Petrova albicapitana*, *Pikonema alaskensis*, *Choristoneura fumiferana* and *Zeiraphera canadensis*. Pathogens in plantations included *Gremmeniella abietina*, *Cronartium ribicola*, *Endocronartium harknessii* and *Armillaria* spp. *Armillaria* spp., *P. strobi*, *G. abietina* and *Rhabdophaga swainei* were the most important diseases and pests in seed orchards. Less damage from the spring frost was recorded compared with 1992.
DE - DESCRIPTORS: plant-diseases; plant-pathogens; plant-pathogenic-fungi; forest-trees; insect-pests; diseases-; forest-pests; fungal-diseases; forest-plantations; seed-orchards; monitoring-; forest-nurseries; plant-pathology; agricultural-entomology; forest-health
OD - ORGANISM DESCRIPTORS: *Pissodes-strobi*; *Neodiprion-lecontei*; *Pikonema-alaskensis*; *Choristoneura-fumiferana*; *Zeiraphera-canadensis*; Curculionidae-; Coleoptera-; Diprionidae-; Hymenoptera-; Tortricidae-; Lepidoptera-; Tenthredinidae-; Cecidomyiidae-; Diptera-; *Pinus-strobus*; *Picea-glauca*; *Gremmeniella-abietina*; *Cronartium-ribicola*; *Endocronartium-harknessii*; *Armillaria*-; *Picea-abies*; Pinopsida-; fungi-; arthropods-
GE - GEOGRAPHIC NAMES: Canada-; Quebec-
BT - BROADER DESCRIPTORS: pathogens; plant-pathogens; fungi; trees; woody-plants; Spermatophyta; plants; arthropod-pests; arthropods; invertebrates; animals; pests; insects; *Pissodes*; Curculionidae; Coleoptera; *Neodiprion*; Diprionidae; Hymenoptera; *Pikonema*; Tenthredinidae; *Choristoneura*; Tortricidae; Lepidoptera; *Zeiraphera*; Diptera; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Picea*; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; *Cronartium*; Uredinales; Basidiomycotina; *Endocronartium*; Agaricales; Developed-Countries; Commonwealth-of-Nations; North-America; America; OECD-Countries; Canada; *Petrova*; Cecidomyiidae
PT - PUBLICATION TYPE: Annual-report
IB - INTERNATIONAL STANDARD BOOK NUMBER: 2-550-28861-0

Record 238 of 393 - TREECD 1973-2000/01

TI - TITLE: The mode of infection and early stages of colonization of pines by *Gremmeniella abietina*.

AU - AUTHOR(S): Patton-RF; Spear-RN; Blenis-PV

AD - ADDRESS OF AUTHOR: Dep. Plant Path., Univ. Wisconsin, Madison, Wis. 53706, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1984, 14: 4-5, 193-202; 9 fig.; 17 ref.

PY - PUBLICATION YEAR: 1984

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: *G. abietina* infected red pine (*Pinus resinosa*) and Scots pine (*P. sylvestris*) through stomata on bracts subtending the short shoots. Germ tubes penetrated between the guard cells and the bract tissue was sparsely colonized by late summer or autumn. Only after mid Jan.-early Feb. of the following year did the fungus extend from the bract and begin to colonize the short shoot and surrounding cortical tissue, producing a resinous, brown, necrotic area of cortical parenchyma and phloem beneath the bract as the first visible symptom of infection.

DE - DESCRIPTORS: Pines-; infection-; symptoms-; Cankers-; histology-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-resinosa*; *Pinus-sylvestris*; fungi-; *Pinus-*

GE - GEOGRAPHIC NAMES: USA-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; *Pinus*; Pinaceae; Pinopsida; gymnosperms; North-America; America

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 239 of 393 - TREECD 1973-2000/01

TI - TITLE: Conidial germination and formation of necrosis in pine seedlings by *Gremmeniella abietina* at low temperatures.

AU - AUTHOR(S): Petaisto-RL

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Suonenjoki Research Station, 77600 Suonenjoki, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1993, 23: 5, 290-294; 14 ref.

PY - PUBLICATION YEAR: 1993

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: German, French

AB - ABSTRACT: On water agar, conidia of *G. abietina* had the same percentage germination rate at 0°C as at 5-12.5°C, but required longer to attain this percentage. However, the mean total length of the germ tubes produced from 1 conidium after 5 d increased with increasing temp. from 0°C to 12.5°C. *Pinus sylvestris* seedlings inoculated with mycelium of the pathogen and kept at -4°C to +2°C for 75 d in dark growth chambers all developed necroses, the length of which increased linearly with increasing temp. Results suggested that in the field, *G. abietina* can cause necrosis in *P. sylvestris* phloem at temp. below 0°C.

DE - DESCRIPTORS: plant-pathogenic-fungi; plant-pathogens; plant-diseases; forest-trees; temperature-; spore-germination; fungal-diseases; seedlings-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Gremmeniella-abietina*; fungi-

BT - BROADER DESCRIPTORS: plant-pathogens; pathogens; fungi; trees; woody-plants; Spermatophyta; plants; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 240 of 393 - TREECD 1973-2000/01

TI - TITLE: The ability of *Gremmeniella abietina* to hydrolyze polygalacturonic acid.

AU - AUTHOR(S): Petaisto-RL; Kajander-EO

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Suonenjoki Research Station, 77600 Suonenjoki, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1993, 23: 5, 306-313; 17 ref.

PY - PUBLICATION YEAR: 1993

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: *G. abietina* grew well in media where pectin was the sole C source. The fungus secreted at least 1 enzyme with polygalacturonase activity, and this was induced by addition of pectin to the culture medium. Pectin from apple and pectin from citrus did not differ in their ability to support growth of the fungus and induce enzyme activity. The induced polygalacturonase activity was high after culturing for 4 and 6 weeks. The enzyme showed highest activity at pH 3.5 and 38°C with long incubation times and the enzyme activity assay was linear for up to 3 h. Addition of Scots pine [*Pinus sylvestris*] needle extract to the pectin culture medium further enhanced fungal growth but decreased polygalacturonase activity, suggesting that the fungus can better utilize nutrients from needle extract than it can pectin alone.

DE - DESCRIPTORS: plant-pathogenic-fungi; plant-pathogens; biochemistry-; polygalacturonase-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 241 of 393 - TREECD 1973-2000/01

TI - TITLE: The susceptibility of Scots pine seedlings to *Gremmeniella abietina*: effect of growth phase, cold and drought stress.

AU - AUTHOR(S): Petaisto-RL; Kurkela-T

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Suomenjoki Research Station, 77600 Suonenjoki, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1993, 23: 6-7, 385-399; 44 ref.

PY - PUBLICATION YEAR: 1993

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: The susceptibility of *Pinus sylvestris* seedlings to *G. abietina* was studied during different simulated and natural growing seasons. Conidial inoculations made during the first half of the growing seasons resulted in higher disease occurrence than those made during the second half of the seasons. Cold stress in late summer, but not in spring, predisposed the seedlings to the disease. Drought stress in late summer increased cold hardiness but did not affect susceptibility to infection in the autumn.

DE - DESCRIPTORS: plant-pathogenic-fungi; plant-pathogens; plant-diseases; forest-trees; susceptibility-; environmental-factors; drought-; seasonal-variation; fungal-diseases; plant-pathology

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Gremmeniella-abietina*; fungi-

BT - BROADER DESCRIPTORS: plant-pathogens; pathogens; fungi; trees; woody-plants; Spermatophyta; plants; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 242 of 393 - TREECD 1973-2000/01

TI - TITLE: Effects of winter storage temperature and age of *Pinus sylvestris* seedlings on the occurrence of disease induced by *Gremmeniella abietina*.

AU - AUTHOR(S): Petaisto-RL; Laine-A

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Suonenjoki Research Station, FI-77600 Suonenjoki, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Scandinavian-Journal-of-Forest-Research*. 1999, 14: 3, 227-233; 17 ref.

PY - PUBLICATION YEAR: 1999

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Three winter storage temperatures (-7°C, -3°C and 0°C) were studied to determine their effects on the infection of Scots pine (*Pinus sylvestris*) container grown seedlings by *Gremmeniella abietina* in studies carried out in Finland in 1993-95. Pine seedlings in their first and second growing seasons were inoculated with conidia on two different occasions during the season, and after overwintering at the 3 different temperatures they were examined for symptoms of the disease. The seedlings overwintering at -7°C and -3°C were more diseased than those kept at 0°C. Seedling bud break was slower the lower the winter storage temperature, suggesting that growth initiating activity has a likely effect on the outbreak of disease.

DE - DESCRIPTORS: seedlings-; overwintering-; symptoms-; temperature-; storage-; fungal-diseases; plant-pathogenic-fungi; plant-pathogens; container-grown-

plants; forest-nurseries; plant-diseases; forest-trees; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Gremmeniella*-; *Gremmeniella-abietina*; *Pinus*-; *Pinus-sylvestris*; *Pinopsida*-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: *Helotiales*; *Ascomycotina*; *Eumycota*; *fungi*; *Gremmeniella*; *Pinaceae*; *Pinopsida*; *gymnosperms*; *Spermatophyta*; *plants*; *Pinus*; *Scandinavia*; *Northern-Europe*; *Europe*; *Developed-Countries*; *European-Union-Countries*; *OECD-Countries*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0282-7581

Record 243 of 393 - TREECD 1973-2000/01

TI - TITLE: Capability of the European and North American race of *Gremmeniella abietina* to hydrolyse polygalacturonic acid in vitro.

AU - AUTHOR(S): Petaisto-RL; Lappi-J

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Suonenjoki Research Station, FIN-77600 Suonenjoki, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1996, 26: 3, 123-132; 28 ref.

PY - PUBLICATION YEAR: 1996

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: Polygalacturonase was found to be one of the first enzymes secreted by a pathogen during infection. In vitro experiments were undertaken to compare the polygalacturonic acid hydrolyzing activity of North American races (from Canada and the USA, host trees *Pinus banksiana*, *P. contorta* and *P. resinosa*) and European races (from Finland and Sweden, host trees *P. sylvestris* and *P. cembra*) of *Gremmeniella abietina*. Isolates were grown in pure pectin media from which the enzyme activity was analysed. Altogether, 29 isolates were tested in five experiments (experimental runs in a growing chamber). The data were analysed using variance-component models that included fixed-race effects and random-experiment, isolate, flask and measurement effects. The European race secreted more polygalacturonic acid hydrolysing enzyme than the North American race and the mycelial dry weight produced was smaller for the European race. The differences between races were of the same order of magnitude as the variation between isolates within races; variance components relating to experimental errors were quite large. No correlation was found between the activity and mycelial dry matter production within races. Logarithmic transformation removed the apparent racial differences in the variability of the activity and mycelial dry weight. Results from the additionally tested A- and B-type of Finnish isolates indicated differences in dry matter production.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; in-vitro; races-; variation-; physiology-; enzymes-; polygalacturonase-; fungal-diseases; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Gremmeniella*-; *Pinus-banksiana*; *Pinus-contorta*; *Pinus-resinosa*; *Pinus-sylvestris*; *Pinus-cembra*; *Pinus*-; *Gremmeniella-abietina*; fungi-

GE - GEOGRAPHIC NAMES: Finland-; Sweden-; Canada-; Alberta-; USA-; Michigan-; Minnesota-; Wisconsin-; Europe-; North-America

BT - BROADER DESCRIPTORS: Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Gremmeniella*; European-Union-Countries; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe; Commonwealth-of-Nations; North-America; America; Canada; Lake-States-of-USA; North-Central-States-of-USA; USA; East-North-Central-States-of-USA; West-North-Central-States-of-USA

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 244 of 393 - TREECD 1973-2000/01

TI - TITLE: The ability of European and North American race of *Gremmeniella abietina* to hydrolyze polygalacturonic acid.

AU - AUTHOR(S): Petaisto-RL; Lappi-J; Capretti-P et-al

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Suonenjoki Research Station, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Shoot and foliage diseases in forest trees. Proceedings of a Joint Meeting of the IUFRO Working Parties S2.06.02 and S2.06.04, Vallombrosa, Firenze, Italy 6-11 June 1994. 1995, 154-161; 10 ref.

PB - PUBLISHER INFORMATION: Istituto di Patologia e Zoologia Forestale e Agraria, Universita degli Studi di Firenze; Firenze; Italy

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Polygalacturonase is one of the first enzymes excreted by pathogens during the infection process of some diseases. The possible difference in polygalacturonic acid hydrolyzing activity in vitro between the North American and the European race of *Gremmeniella abietina* was studied in 4 culture experiments. A total of 15 North American isolates and 14 European isolates were tested. Variation between isolates in dry matter production and to some extent in activity were greater for the N. American race. No correlation was found between activity and mycelial dry matter production within races. Results also indicated that the European race excreted more polygalacturonic acid hydrolyzing activity than the North American race.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; fungal-diseases; enzymes-; biodegradation-; biochemistry-; variation-; varieties-; races-; plant-pathology

OD - ORGANISM DESCRIPTORS: pinopsida-; *Gremmeniella-abietina*; *Gremmeniella*-; fungi-

GE - GEOGRAPHIC NAMES: North-America; Europe-

BT - BROADER DESCRIPTORS: gymnosperms; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; America

PT - PUBLICATION TYPE: Conference-paper

IB - INTERNATIONAL STANDARD BOOK NUMBER: 88-900074-0-0

Record 245 of 393 - TREECD 1973-2000/01

TI - TITLE: Analysis of the protein pattern of *Gremmeniella abietina* with special reference to protease activity.

AU - AUTHOR(S): Petaisto-RL; Rissanen-TE; Harvima-RJ; Kajander-EO

AD - ADDRESS OF AUTHOR: The Finnish Forest Research Institute, SF-77600 Suonenjoki, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Mycologia*. 1994, 86: 2, 242-249; 16 ref.

PY - PUBLICATION YEAR: 1994

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: *G. abietina* is the causative agent of Scleroderris canker of conifers. This fungus grows very slowly and thus its protein pattern may be difficult to obtain, especially since fungal protease activities are unknown. It is shown that the protease activity is very low in young cultures grown in Campbell's V8 juice liquid medium but degraded some of the protein bands making it very difficult to reliably compare electrophoretic protein pattern from sample to sample. A calcium- and zinc-dependent metalloprotease activity was specifically detected, and it was inhibited by ethyl-enediaminetetraacetate and o-phenanthroline at a neutral pH. Other protease activities may be present since inhibition of the proteolytic activity by p-chloromercuribenzoate and pepstatin was also seen. Phenylmethanesulfonyl fluoride showed only minimal inhibitory effect. The fungal protein patterns were reproducible with small intensity differences between different culture batches. The protein pattern resembled that of *Sirococcus strobilinus*, but immunoblotting with anti-*Gremmeniella* antibody showed no cross-reactivity and thus *Sirococcus* may not be closely related to *Gremmeniella*.

DE - DESCRIPTORS: plant-pathogenic-fungi; plant-pathogens; plant-diseases; electrophoresis-; proteins-; pathogenicity-; forest-trees; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; fungi-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0027-5514

Record 246 of 393 - TREECD 1973-2000/01

TI - TITLE: Detection of xylan hydrolyzing activity in culture extracts of *Gremmeniella abietina*.

AU - AUTHOR(S): Petaisto-RL; Talvinen-J; Kajander-EO

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, 77600 Suonenjoki, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1992, 22: 6-7, 349-353; 13 ref.

PY - PUBLICATION YEAR: 1992

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: *G. abietina* was cultured in media containing xylan from birch [*Betula*] wood or oat spelts as sole C source, with or without addition of pine [*Pinus sylvestris*] needle extract. Fungal growth was better on media containing needle extract than on the unsupplemented media. Xylanase activity was detected in the culture media, being higher in the unsupplemented media than in those containing needle extract. Tests on partially-purified xylanase preparations showed addition of needle extract to decrease enzyme activity, whereas acetone-precipitated needle extract had no such effect. The pH optimum of xylanase was c. 4.5.

DE - DESCRIPTORS: laboratory-tests; culture-media; enzymes-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 247 of 393 - TREECD 1973-2000/01

TI - TITLE: Two types of the European race of *Gremmeniella abietina* can be identified with immunoblotting.

AU - AUTHOR(S): Petaisto-RL; Uotila-A; Hellgren-M; Kaitera-J; Tuomainen-J; Kajander-EO

AD - ADDRESS OF AUTHOR: The Finnish Forest Research Institute, Suonenjoki Research Station, 77600 Suonenjoki, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Mycologia*. 1996, 88: 4, 619-625; 21 ref.

PY - PUBLICATION YEAR: 1996

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Protein patterns were used to distinguish between the 2 types of the European race of *G. abietina* in Fennoscandinavia. Separation was not obtained under denaturing conditions, but the 2 types were separated based on presence or absence of a 26-28 kD immunoreactive double band in Western blotting. Polyclonal antibodies, either crude or purified with preparative Western blotting, detected the double band in all 25 type B (short tree type) isolates but not in any of 27 type A (large tree type) isolates. The immunoassay was used to type 10 unclassified isolates. It is suggested that large tree and short tree types of the Swedish classification were immunologically identical to the Finnish types A and B, respectively. It is concluded that in Fennoscandinavia the European race can be divided into 2 serovars by RAPD markers.

DE - DESCRIPTORS: plant-pathogens; plant-pathogenic-fungi; races-; serovars-; fungal-diseases; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Sweden-; Finland-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; EFTA; Developed-Countries; European-Union-Countries; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0027-5514

Record 248 of 393 - TREECD 1973-2000/01

TI - TITLE: Taxonomic position of *Gremmeniella abietina* and related species: a reappraisal.

AU - AUTHOR(S): Petrini-O; Petrini-LE; Laflamme-G; Ouellette-GB

AD - ADDRESS OF AUTHOR: Microbiological Institute, Swiss Federal Institute of Technology, 8092 Zurich, Switzerland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Botany. 1989, 67: 9, 2805-2814; 27 ref.

PY - PUBLICATION YEAR: 1989

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: A comparative study of isolates and their corresponding herbarium specimens of *Gremmeniella* spp. from pine [*Pinus*], spruce [*Picea*] and balsam fir [*Abies balsamea*], of *Ascocalyx laricina* from larch [*Larix*], and of *A. abietis* from balsam fir was conducted using morphological and cultural characteristics as well as electrophoresis tests on 12 and 10-15% gradient polyacrylamide gels. In addition, the conidia and the ascospores of the specimens were treated with 4', 6-diamino-2-phenylindole to determine the number of nuclei per cell. *A. abietis* is quite distinct in the morphology of its anamorph and in its cultural characteristics from all other samples studied. The specimens from larch differ from the others by their 2-celled ascospores and their cultural characters. Among specimens from pines and from *Picea* and *Abies*, minor morphological and cultural differences were found. The electrophoresis tests confirm the differences observed in the cultural studies. The statistical analysis of the results supports the following classification of the specimens studied: within *G. abietina*, 2 varieties are recognized, a var. *typica*, with the known European and North American races from *Pinus* and the Asian race from *Abies sachalinensis*, and a new variety, var. *balsamea*, comprising the isolates from *Picea* and *Abies* (Quebec). A new combination is proposed in *Gremmeniella* for *Ascocalyx laricina*. *Ascocalyx abietis* is retained as a separate genus.

DE - DESCRIPTORS: taxonomy-; Biotechnology-; Electrophoresis-; Conifers-; fungal-diseases; forest-trees; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus*-; *Gremmeniella*-; *Picea*-; *Abies-balsamea*; *Abies-sachalinensis*; *Larix*-; *Ascocalyx*-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Pinaceae; Pinopsida; gymnosperms; *Abies*; *Ascocalyx*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0008-4026

Record 249 of 393 - TREECD 1973-2000/01

TI - TITLE: *Gremmeniella abietina* and *G. laricina* in Europe: characterization and identification of isolates and laboratory strains by soluble protein electrophoresis.

AU - AUTHOR(S): Petrini-O; Toti-L; Petrini-LE; Heiniger-U

AD - ADDRESS OF AUTHOR: Mikrobiologisches Institut, ETH-Zentrum, 8092 Zurich, Switzerland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Botany. 1990, 68: 12, 2629-2635; 25 ref.

PY - PUBLICATION YEAR: 1990

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Forty-four isolates of *Gremmeniella abietina* from different European regions and laboratory strains of *G. abietina* and *Ascocalyx abietis*, which originated from regenerated protoplasts, were characterized morphologically and by protein electrophoresis. On the basis of the electrophoretic profiles of all isolates tested, the North American race of *G. abietina* is not present in Europe. Isolates from *Pinus cembra* and two Finnish isolates differed slightly from the tester strain for the European race; their electromorphs were very similar to that of the European race on other hosts but differences were noticed that would support the maintenance of the variety *cembrae*. *G. abietina* var. *balsamea*, common on *Abies balsamea* and *Picea* spp. in Quebec, seems to be absent from the European counterparts *Abies alba* and *Picea abies*. The isolates from *P. abies* belong unequivocally to the European race of *G. abietina*. European and North American isolates of *G. laricina* were morphologically and electrophoretically indistinguishable. The *P. cembra* and *Larix decidua* endophytes showed the same electrophoretic profile as the isolates from diseased pines identified as *Brunchorstia pinea* var. *cembrae*. No changes were observed in the electrophoretic patterns of laboratory strains derived from regenerated protoplasts in comparison with those of the original isolates. Two isolates from *Abies* do not belong to any known species of *Brunchorstia*; on the basis of morphological, electrophoretic, and immunological evidence they belong to a taxon taxonomically close to *G. abietina*.

DE - DESCRIPTORS: Conifers-; Cankers-; biology-; host-specificity; races-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; fungi-; Pinopsida-

GE - GEOGRAPHIC NAMES: Europe-

BT - BROADER DESCRIPTORS: fungi; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; gymnosperms; Spermatophyta; plants

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0008-4026

Record 250 of 393 - TREECD 1973-2000/01

TI - TITLE: *Gremmeniella abietina* in Newfoundland.
AU - AUTHOR(S): Pritam-Singh; Dorworth-CE; Skilling-DD
AD - ADDRESS OF AUTHOR: Newfoundland Forest Res. Cent., Canadian For. Service, St. John's, Canada.
SO - SOURCE (BIBLIOGRAPHIC CITATION): *Plant-Disease*. 1980, 64: 12, 1117-1118; 11 ref.
PY - PUBLICATION YEAR: 1980
LA - LANGUAGE OF TEXT: English
AB - ABSTRACT: The fungus [CMIMap 423] is newly reported from the province on 5 cankered Austrian pines (*Pinus nigra* var. *austriaca*). It was identified as the European race, previously unrecorded in Canada, on the basis of cultural and serological characteristics.
ADDITIONAL ABSTRACT: Isolates belonging to the European race, as characterized by cultural and serological traits, were obtained from five *Pinus nigra* var. *austriaca* trees in 1979.
DE - DESCRIPTORS: physiological-races; fungal-diseases; forest-trees; conifers-; plant-pathology; pines-
OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella-abietina*; *Pinus-nigra*; *Gremmeniella*-
GE - GEOGRAPHIC NAMES: Canada-; Newfoundland-
BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; North-America; America; Canada
PT - PUBLICATION TYPE: Journal-article
IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0191-2917

Record 251 of 393 - TREECD 1973-2000/01

TI - TITLE: Role of biotechnology in forest disease research and management in Canada: synthesis.

AU - AUTHOR(S): Pritam-Singh; Singh-P

AD - ADDRESS OF AUTHOR: Forestry Canada, Hull, Que. K1A 1G5, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1989, 19: 3, 129-143; 74 ref.

PY - PUBLICATION YEAR: 1989

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: This review outlines Canada's forest resources and gives estimates of losses caused by diseases and pests, before describing the following disease/pest problems and biotechnological research on them: root rots caused by *Armillaria* spp., *Heterobasidion annosum*, *Phellinus weirii* and *Inonotus tomentosus*, scleroderris canker (*Gremmeniella abietina*), Western gall rust of hard pines (*Endocronartium harknessii*), Dutch elm disease (*Ceratocystis ulmi*), seedborne disease (*Sirococcus strobilinus* [*S. conigenus*]), wood decay, damage by low temp. and ice-nucleating agents, and pinewood nematodes (*Bursaphelenchus xylophilus*). The role of biotechnology in forest disease management is discussed.

DE - DESCRIPTORS: Biotechnology-; forests-; diseases-; Reviews-; forest-trees; pines-; Pathogenicity-; Losses-; woody-plants; Seeds-; Root-and-butt-rots; damage-; control-; Fungal-diseases; Frost-injury; Ice-damage; Decay-; Rust-diseases; Wilts-; plant-nematology; nematology-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Armillaria*-; *Heterobasidion-annosum*; *Phellinus-weirii*; *Gremmeniella-abietina*; *Sirococcus-conigenus*; *Ceratocystis-ulmi*; ULMUS-; *Endocronartium-harknessii*; *Bursaphelenchus-xylophilus*; Nematoda-; Pinus-

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Agaricales; Basidiomycotina; Eumycota; fungi; *Heterobasidion*; *Aphylllophorales*; *Phellinus*; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Sirococcus*; *Deuteromycotina*; *Ceratocystis*; *Ophiostomatales*; *Ulmaceae*; *Urticales*; dicotyledons; angiosperms; *Endocronartium*; *Uredinales*; *Bursaphelenchus*; *Aphelenchoididae*; *Nematoda*; invertebrates; animals; *Pinaceae*; *Pinopsida*; gymnosperms; North-America; America; *Inonotus*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 252 of 393 - TREECD 1973-2000/01

TI - TITLE: Influence of isolation method on the effectiveness of isolation of *Gremmeniella abietina* from Scots pine shoots and needles.

OT - ORIGINAL NON-ENGLISH TITLE: Efektywnosc izolowania *Gremmeniella abietina* (Lagerb.) Morelet z pedow i igiel sosny zwyczajnej w zaleznosci od sposobu izolacji.

AU - AUTHOR(S): Przezborski-A

AD - ADDRESS OF AUTHOR: Katedra Fitopatologii Lesnej, Akademia Rolnicza, Poznan, Poland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Prace-z-Zakresu-Nauk-Lesnych. 1987, publ. 1989, 64: 105-112; En tab. Sub-series of Prace Komisji i Nauk Rolynicznych i Komisji Nauk Lesnych; 6 ref.

PY - PUBLICATION YEAR: 1987

LA - LANGUAGE OF TEXT: Polish

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: Trials were made with material (live, dying or dead needles and shoot tops with buds up to 1.5 yr old, and dying parts of shoots 10-20 cm below the top) collected from the upper parts of Scots pine [*Pinus sylvestris*] trees with characteristic symptoms in several parts of northern and central Poland. Best isolations of *Gremmeniella abietina* were made from needles or from shoot tips with buds surface sterilized with 10% NaOCl and incubated at 4-16°C on malt agar enriched with extract of living needles.

DE - DESCRIPTORS: Conifers-; Cankers-; methodology-; culture-techniques; fungal-diseases

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-sylvestris*; Fungi-; *Gremmeniella*-

GE - GEOGRAPHIC NAMES: Poland-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; Central-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IB - INTERNATIONAL STANDARD BOOK NUMBER: 83-01-07707-7

Record 253 of 393 - TREECD 1973-2000/01

TI - TITLE: *Gremmeniella abietina*.

AU - AUTHOR(S): Punithalingam-E; Gibson-IAS

SO - SOURCE (BIBLIOGRAPHIC CITATION): CMI-Descriptions-of-Pathogenic-Fungi-and-Bacteria. 1973, No. 369, 2 pp.; 3 ref.

PY - PUBLICATION YEAR: 1973

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: *G. abietina* (syn. *Scleroderris lagerbergii*; conidial state *Brunchorstia pinea*) causes *Brunchorstia* dieback of Pines and Spruces.

DE - DESCRIPTORS: pines-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus*-; *Picea*-

BT - BROADER DESCRIPTORS: *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; *fungi*; *Pinaceae*; *Pinopsida*; *gymnosperms*; *Spermatophyta*; *plants*

PT - PUBLICATION TYPE: Miscellaneous

Record 254 of 393 - TREECD 1973-2000/01

TI - TITLE: Preliminary study on insect and fungal damage in pruned Scots pine stands.

OT - ORIGINAL NON-ENGLISH TITLE: Alustavia tutkimustuloksia hyonteis- ja sienituhhoista pystykarsituissa mannikoissa.

AU - AUTHOR(S): Raisanen-H; Laine-L; Kero-I; Kaleva-T

AD - ADDRESS OF AUTHOR: Finnish For. Res. Inst., Dep. For. Prot., PO Box 18, 01301 Vantaa, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Folia-Forestalia,-Institutum-Forestale-Fenniae. 1986, No. 663, 18pp.; 27 ref.

PY - PUBLICATION YEAR: 1986

LA - LANGUAGE OF TEXT: Finnish

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: Damage and site characteristics were studied in 48 stands pruned mainly in the autumn in southern Finland. Trees dying as a result of pruning were most numerous near the border of the forest or stand openings on poorer forest sites; they were on average shorter than the dominant ones, had thicker branches, greater pruning ht. as % of total ht., and greater numbers of pruned branches. All dead trees had been attacked by *Tomicus* spp. (60% of the phloem area at the base of the tree was covered by *T. piniperda* gallery systems and *T. minor* was also present on most of the trees). Trees that had been pruned the heaviest were weakened by canker (*Phacidium coniferarum*), drought-stress and *Ascocalyx* [*Gremmeniella*] *abietina*. Pruning wounds also contained the fungi *Sclerophoma pityophila* [*Sydowia polyspora*] and *Stereum sanguinolentum*.

DE - DESCRIPTORS: pruning-; diseases-; pests-; damage-; trees-; conifers-; agricultural-entomology

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Tomicus-piniperda*; *Tomicus-minor*; *Gremmeniella-abietina*; *Stereum-sanguinolentum*; *Sydowia-polyspora*; Coleoptera-; Scolytidae-; *Tomicus*-; arthropods-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: animals; woody-plants; Spermatophyta; plants; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Tomicus*; Scolytidae; Coleoptera; insects; arthropods; invertebrates; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Stereum*; Aphyllophorales; Basidiomycotina; *Sydowia*; Dothideales; Scandinavia; Northern-Europe; Europe; *Phacidium*

PT - PUBLICATION TYPE: Journal-article

IB - INTERNATIONAL STANDARD BOOK NUMBER: 951-40-0755-7

Record 255 of 393 - TREECD 1973-2000/01

TI - TITLE: Hyphal growth of *Gremmeniella abietina* in Scots pine shoots polluted with copper and nickel.

AU - AUTHOR(S): Ranta-H; Capretti-P et-al

AD - ADDRESS OF AUTHOR: University of Turku, Department of Biology, 20500 Turku, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Shoot and foliage diseases in forest trees. Proceedings of a Joint Meeting of the IUFRO Working Parties S2.06.02 and S2.06.04, Vallombrosa, Firenze, Italy 6-11 June 1994. 1995, 173-180; 22 ref.

PB - PUBLISHER INFORMATION: Istituto di Patologia e Zoologia Forestale e Agraria, Universita degli Studi di Firenze; Firenze; Italy

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Twigs of Scots pine (*Pinus sylvestris*) trees (height 2 to 4 m) were collected from 11 sites within a 5-km distance of a factory complex (producing copper, nickel, sulfuric acid and fertilizers) at Harjavalta, SW Finland. Main pollutants include sulfuric oxides and heavy metals. *Gremmeniella abietina* was inoculated into the shoots; frequency of the pathogen was measured after 6 weeks incubation. There was no correlation between the concentration of heavy metals in the shoots and *G. abietina* isolation frequency. Differences between these results and earlier in vitro studies are discussed. The fungus remained alive more often in shoots with 1.5-yr-old female cones, compared to shoots with no cones. The frequency of *G. abietina* isolations was positively correlated with *P. sylvestris* stand density around the sampled trees.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; shoots-; plant-composition; chemical-composition; heavy-metals; pollutants-; stand-density; copper-; nickel-; susceptibility-; hyphae-; growth-; fungal-diseases; air-pollution; plant-diseases; activity-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-sylvestris*; fungi-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; European-Union-Countries; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Conference-paper

IB - INTERNATIONAL STANDARD BOOK NUMBER: 88-900074-0-0

Record 256 of 393 - TREECD 1973-2000/01

TI - TITLE: Copper and nickel pollution: frequency of endophytic fungi in Scots pine shoots and endophyte growth in vitro.

AU - AUTHOR(S): Ranta-H; Neuvonen-S; Kaariainen-S; Vesanto-S

AD - ADDRESS OF AUTHOR: Department of Biology and Kevo Subarctic Research Institute, University of Turku, SF-20500 Turku, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Botany. 1994, 72: 1, 93-99; 28 ref.

PY - PUBLICATION YEAR: 1994

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: The frequency of endophytic microfungi was measured from current-year shoots of Scots pine (*Pinus sylvestris*) trees growing in Harjavalta, a heavily polluted area in western Finland. The copper (Cu) and (Ni) concentrations in shoot bark plus phloem, and needles of the same trees were measured. The frequency of isolates of endophytic taxa was either negatively (*Hormonema* sp. 2 and Sterile sp. 1) or positively (*Hormonema* sp. 1, BL132) correlated with the Cu and Ni concentration of bark plus phloem. Isolates of the most common endophytic taxa and the pathogenic *Gremmeniella abietina* from polluted Harjavalta and unpolluted northern Finland were grown in vitro in different levels of Cu (0.6-126 $\mu\text{g/ml}$) and/or Ni (0.3-50 $\mu\text{g/ml}$). The concentrations of Cu and Ni that reduced the linear growth to 50% of control were estimated. The endophyte taxa with frequencies positively correlated with concentration of Cu and Ni in the shoots were able to withstand increased concentrations of Cu and Ni in vitro. Compared with most of the other fungi, *G. abietina* isolates were particularly sensitive to addition of Ni. No evidence for intraspecific adaptation of *G. abietina* and *Hormonema* sp. 1 to Cu and Ni was found.

DE - DESCRIPTORS: heavy-metals; copper-; nickel-; endophytes-; pollution-; plant-composition; forest-trees; plant-pathogens; plant-pathogenic-fungi; air-pollution; activity-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Gremmeniella-abietina*; fungi-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; pathogens; plant-pathogens; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; EFTA; Developed-Countries; OECD-Countries; Scandinavia; Northern-Europe; Europe; Deuteromycotina

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0008-4026

Record 257 of 393 - TREECD 1973-2000/01

TI - TITLE: Effects of sulphuric acid and heavy-metal deposition on frequency of asymptomatic infections of *Gremmeniella abietina* in Scots-pine seedlings.

AU - AUTHOR(S): Ranta-H; Neuvonen-S; Virtanen-T

AD - ADDRESS OF AUTHOR: University of Turku, Department of Biology, Turku, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1995, 25: 1, 5-12; 25 ref.

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: The isolation frequency of *G. abietina* was measured from asymptomatic 4-year-old Scots pine [*Pinus sylvestris*] seedlings. The seedlings had been subjected to simulated sulfuric deposition (pH 3.1 or 4.1) or control treatments (irrigation with spring water (pH 6), or no irrigation) during the 3 previous growing seasons. The seedlings were planted in soil originating from 2 localities with different background levels of copper (Cu) and nickel (Ni), and the soil was further amended with Cu (63.3 mg/litre of soil) and Ni (20.5 mg/litre of soil), or a combination of the two. The seedlings were inoculated with conidia of *G. abietina* during their third growing season in the field. Asymptomatic infections of *G. abietina* were recovered frequently from seedlings that had received water irrigation. The addition of sulfuric acid to the irrigation water, and/or the lowered pH (pH 3.1 and 4.1) resulting from this addition, mitigated the effect of water application. The effect of Ni-treatment on the recovery of *G. abietina* depended on the irrigation treatment: with no irrigation, Ni-treatment increased isolation frequency; but, in irrigated seedlings the response was the opposite. Only 10.6% of the seedlings had symptoms caused by *G. abietina*; most of the seedlings had become infected before the application of the various treatments.

DE - DESCRIPTORS: plant-diseases; plant-pathogens; plant-pathogenic-fungi; forest-trees; symptoms-; copper-; nickel-; interactions-; sulfur-dioxide; heavy-metals; acid-rain; activity-; irrigation-; fungal-diseases; acid-deposition; soil-pollution; pollution-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Gremmeniella-abietina*; fungi-

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms;

Spermatophyta; plants; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 258 of 393 - TREECD 1973-2000/01

TI - TITLE: Interactions of *Gremmeniella abietina* and endophytic fungi in shoots of Scots pine trees treated with simulated acid rain.

AU - AUTHOR(S): Ranta-H; Neuvonen-S; Ylimartimo-A

AD - ADDRESS OF AUTHOR: University of Turku, Department of Biology and Kevo Subarctic Research Institute, FIN-20500 Turku, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Journal-of-Applied-Ecology*. 1995, 32: 1, 67-75; 28 ref.

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Detached shoots of *Pinus sylvestris* trees with naturally occurring endophytic fungi were inoculated with mycelium of *G. abietina*. The trees had been subjected to simulated acid rain (pH 3, both H₂SO₄ and HNO₃) or control irrigation (pH 6) during the previous 5 growing seasons. The shoots were incubated in controlled conditions for 6 weeks, after which they were surface sterilized, cut into pieces and plated on agar medium. The frequency of *G. abietina* and endophytic isolations was measured. Shoots were often colonized by endophytic fungi, 2 *Hormonema* species being clearly dominant. Although the frequency of these fungi tended to be low in trees treated with simulated acid rain, the effect of this treatment was not statistically significant. The isolation frequency of *Hormonema* 1 increased significantly with height of the host tree. The frequency of *Hormonema* 2 isolations differed significantly in 2 separate sub-areas. The frequency of isolation of *G. abietina* was not affected by simulated acid rain treatment. *G. abietina* was isolated more often from shoots with *Hormonema* 2, which suggests that there are common factors determining the success of the endophyte and *G. abietina*. Alternatively, the frequency of endophytic isolations was lower than expected in those parts of the shoots invaded by *G. abietina*, suggesting that the latter was a stronger competitor.

DE - DESCRIPTORS: pollution-; interactions-; forest-trees; plant-pathogens; plant-pathogenic-fungi; plant-diseases; endophytes-; acid-rain; activity-; fungal-diseases; acid-deposition; plant-pathology

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; fungi-; *Gremmeniella-abietina*

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; *Deuteromycotina*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0021-8901

Record 259 of 393 - TREECD 1973-2000/01

TI - TITLE: Use of specific needle impedance to separate provenances of Scots pine susceptible and resistant to *Gremmeniella abietina*.

OT - ORIGINAL NON-ENGLISH TITLE: Mannynversosyovalle alttiiden ja vastustuskykyisten taimialkuperien erottaminen neulasten ominaisimpedanssin mittauksella.

AU - AUTHOR(S): Repo-T; Mela-M; Valtanen-J

AD - ADDRESS OF AUTHOR: Finnish For. Res. Inst., SF-77600 Suonenjoki, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Folia-Forestalia,-Institutum-Forestale-Fenniae. 1984, No. 610, 11 pp.; 34 ref.

PY - PUBLICATION YEAR: 1984

LA - LANGUAGE OF TEXT: Finnish

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: Measurements of the specific impedance of current-yr and 1-yr-old needles of 17 provenances of Scots pine growing at 3 sites in Finland showed that it was not possible to separate provenances susceptible to *G. abietina*.

DE - DESCRIPTORS: genetics-; cankers-; dieback-; variation-; resistance-; conifers-; pines-

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Gremmeniella-abietina*; *Pinus-*

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: *Pinus*; Pinaceae; Pinopsida; gymnosperms;

Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IB - INTERNATIONAL STANDARD BOOK NUMBER: 951-40-0684-4

Record 260 of 393 - TREECD 1973-2000/01

TI - TITLE: Effect of Scleroderris canker on the growth of middle-aged Scots pine stands.

OT - ORIGINAL NON-ENGLISH TITLE: Versosurman vaikutus varttuneiden mannikoiden kasvuun.

AU - AUTHOR(S): Riihinen-A; Uotila-A

AD - ADDRESS OF AUTHOR: University of Helsinki, Forestry Field Station, Hyytiala, 35500 Korkeakoski, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Folia-Forestalia. 1992, No. 783, 10 pp.; 19 ref.

PB - PUBLISHER INFORMATION: Finnish Forest Research Institute; Helsinki; Finland

PY - PUBLICATION YEAR: 1992

LA - LANGUAGE OF TEXT: Finnish

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: Gremmeniella abietina caused widespread damage in Scots pine (*Pinus sylvestris*) stands in Finland during the period 1975-88. A study was made of the growth of 10 *P. sylvestris* stands exhibiting different degrees of damage. The stands were 37-54 yr old in 1987. The degree of canker damage was visually assessed for each tree in sample plots. Each tree was assigned to one of five disease classes, and each plot was assigned to one of three damage classes, viz. healthy, slightly damaged or severely damaged. Volume growth in the slightly damaged plots had decreased by 21.9-42.2%, depending on disease severity. Some 41-54% of trees in the severely damaged plots had been killed by the disease. [With English captions.]

DE - DESCRIPTORS: Conifers-; fungal-diseases; Cankers-; damage-; increment-; growth-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Gremmeniella*-; *Gremmeniella-abietina*; fungi-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; Helotiales; Ascomycotina; Eumycota; *Gremmeniella*; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Miscellaneous

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0015-5543

IB - INTERNATIONAL STANDARD BOOK NUMBER: 951-40-1192-9

Record 261 of 393 - TREECD 1973-2000/01

TI - TITLE: Fungi dangerous to *Pinus contorta* with special reference to pathogens from north Europe.

AU - AUTHOR(S): Roll-Hansen-F

AD - ADDRESS OF AUTHOR: Norwegian For. Res. Inst., For. Path., P.O. Box 62, N-1432 As-NLH, Norway.

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1978, 8: 1, 1-14; BLL; 77 ref.

PY - PUBLICATION YEAR: 1978

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: *P. contorta* is being planted to an increasing extent in Scandinavia. Notes are given on the potential pathogenicity to *P. contorta* of some N. European species of parasitic fungi (2 Uredinales, 2 Hymenomycetes and 15 Ascomycetes and Fungi Imperfecti). *P. contorta* is immune or very resistant to all the European rust fungi. It is more resistant than *P. sylvestris* to *Phacidium infestans* and *Lophodermium pinastri*, but less resistant to *Crumenulopsis sororia* and *Discella strobilina*. No clear-cut distinction could be made between *P. contorta* and *P. sylvestris* for resistance to the other fungi discussed; the choice of a provenance well-suited to the site conditions is considered to be the best measure to prevent severe damage by these species. Five N. American fungal pathogens of potential danger to N. European *P. contorta* plantations are also briefly mentioned.

ADDITIONAL ABSTRACT: Examples are given of N. American fungi potentially dangerous to *P. contorta* in N. Europe. This pine sp. was found to be immune or nearly so from all European rust fungi, more resistant than *P. sylvestris* to *Phacidium infestans* and *Lophodermium pinastri*, but less resistant to *Crumenulopsis sororia* and *Discella strobilina*.

DE - DESCRIPTORS: resistance-; fungal-diseases; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Pinus-contorta*; *Cronartium-comptoniae*; *Cronartium-coleosporioides*; *Endocronartium-harknessii*; *Melampsora-populnea*; *Heterobasidion-annosum*; *Botrytis-cinerea*; *Crumenulopsis-sororia*; *Diplodia-pinea*; *Gremmeniella-abietina*; *Lachnellula*-; *Lophodermium-pinastri*; *Phacidium-infestans*; *Sydowia-polyspora*; *Potebniamyces-coniferarum*; *Pinus*-; *fungi*-; *ARMILLARIA-MELLEA*; *MYCOSPHAERELLA-PINI*

GE - GEOGRAPHIC NAMES: Europe-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Cronartium*; Uredinales; Basidiomycotina; Eumycota; fungi; *Endocronartium*; *Melampsora*; *Heterobasidion*; Aphyllophorales; *Botrytis*; Deuteromycotina; *Crumenulopsis*; Helotiales; Ascomycotina; *Diplodia*; *Gremmeniella*; *Lophodermium*; Rhytismatales; *Phacidium*; *Sydowia*; Dothideales; *Potebniamyces*; *Armillaria*; Agaricales; *Mycosphaerella*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 262 of 393 - TREECD 1973-2000/01

TI - TITLE: On diseases and pathogens on forest trees in Norway 1966-1975. Part I. Pathogenic organisms and diseases caused by them.

AU - AUTHOR(S): Roll-Hansen-F; Roll-Hansen-H

SO - SOURCE (BIBLIOGRAPHIC CITATION): Meddelelser-fra-Skogforsk. 1995, 47: 9, 63 pp.; 4 pp. of ref.

PB - PUBLISHER INFORMATION: Norsk Institutt for Skogforskning (Norwegian Forest Research Institute); As; Norway

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Reports are presented of 135 species of fungi which caused diseases and rots on forest trees in Norway during the period 1966-1975. A more detailed report is presented for those with high practical importance: *Gremmeniella abietina*, *Heterobasidion annosum* and *Phacidium infestans*. The occurrence of *Agrobacterium tumefaciens* on *Salix caprea*, and 3 moss species checking growth of container-grown seedlings is also noted. A list of host species and their pathogens is included.

DE - DESCRIPTORS: plant-pathogens; plant-pathogenic-fungi; plant-diseases; bacterial-diseases; fungal-diseases; surveys-; forest-trees; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Heterobasidion-annosum*; *Phacidium-infestans*; *Agrobacterium-tumefaciens*; mosses-; *Salix-caprea*

GE - GEOGRAPHIC NAMES: Norway-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Heterobasidion*; Aphyllophorales; Basidiomycotina; *Phacidium*; *Agrobacterium*; Rhizobiaceae; Gracilicutes; bacteria; prokaryotes; Bryophyta; plants; *Salix*; Salicaceae; Salicales; dicotyledons; angiosperms; Spermatophyta; OECD-Countries; Developed-Countries; EFTA; European-Union-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Miscellaneous

IB - INTERNATIONAL STANDARD BOOK NUMBER: 82-7169-758-7

Record 263 of 393 - TREECD 1973-2000/01

TI - TITLE: *Scleroderris lagerbergii* in Norway. Hosts, distribution, perfect and imperfect state, and mode of attack.

AU - AUTHOR(S): Roll-Hansen-F; Roll-Hansen-H

AD - ADDRESS OF AUTHOR: Norwegian Forest Res. Inst., As.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Furuens knopp-og grentoerkesopp i Norge. Vertplanter, utbredelse, perfekt og imperfekt stadium, angrepsmate. Meddelelser-fra-det-Norske-Skogforsoeksvesen.* 1973, 30: 6, 443-459; 5 fig., 1 map.

PY - PUBLICATION YEAR: 1973

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: Norwegian

AB - ABSTRACT: Norwegian reports of *S. lagerbergii* are given with notes. New hosts are the spruces *Picea engelmannii* and *P. sitchensis*. Except in western Norway, where only the imperfect state is generally found, both states are common.

DE - DESCRIPTORS: reviews-; forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: PICEA-; GREMMENIELLA-ABIETINA

GE - GEOGRAPHIC NAMES: Norway-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

Record 264 of 393 - TREECD 1973-2000/01

TI - TITLE: Short survey of some tree diseases [and fume damage] and rot fungi in Iceland.

AU - AUTHOR(S): Roll-Hansen-F; Roll-Hansen-H

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Arsrit-Skograektarfelags-Islands-1972-1973*. 1973, 46-52; 8 ref.

PY - PUBLICATION YEAR: 1973

LA - LANGUAGE OF TEXT: Icelandic

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: Describes F damage to Sitka Spruce, and lists fungi (mainly those attacking stem and butt or roots, but including *Lophodermium pinastri*, *Scleroderris lagerbergii*, etc.) attacking *Betula pubescens*, *Pinus mugo*, *P. aristata* and *Larix sibirica*. The authors stress the need to ensure that some of the most serious diseases not yet found in Iceland (e.g. *Phacidium infestans*, *Lachnellula (Trichoscyphella) willkommii* var. *willkommii*, *Fomes annosus*) are not introduced with plant material.

DE - DESCRIPTORS: injuries-; air-pollution; damage-; larch-; diseases-; trees-; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Larix-sibirica*; *Pinus-aristata*; *Pinus-mugo*; *Betula-pubescens*; *Lophodermium-pinastri*; *Phacidium-infestans*; *Picea-sitchensis*; *Trichoscyphella-willkommii*; *Pinus-*; *Gremmeniella-abietina*; HETEROBASIDIUM-ANNOSUM; PICEA-; BETULA-

GE - GEOGRAPHIC NAMES: Iceland-

BT - BROADER DESCRIPTORS: woody-plants; Spermatophyta; plants; trees; *Larix*; Pinaceae; Pinopsida; gymnosperms; *Pinus*; *Betula*; Betulaceae; Fagales; dicotyledons; angiosperms; *Lophodermium*; Rhytismatales; Ascomycotina; Eumycota; fungi; *Phacidium*; Helotiales; *Picea*; *Trichoscyphella*; *Gremmeniella*; Heterobasidium; Aphyllophorales; Basidiomycotina; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Miscellaneous

Record 265 of 393 - TREECD 1973-2000/01

TI - TITLE: Notes on forest diseases and rot fungi in Iceland.
AU - AUTHOR(S): Roll-Hansen-F; Roll-Hansen-H
SO - SOURCE (BIBLIOGRAPHIC CITATION): Roll-Hansen, F.; Roll-Hansen, H. : Short survey of some tree diseases [and fume damage] and rot fungi in Iceland. Tidsskrift-for-Skogbruk. 1973, 81: 1, 73-79; 8 ref.
PY - PUBLICATION YEAR: 1973
LA - LANGUAGE OF TEXT: Norwegian
LS - LANGUAGE OF SUMMARIES: English
AB - ABSTRACT: [Cf. preceding abstract].
DE - DESCRIPTORS: injuries-; air-pollution; conifers-
OD - ORGANISM DESCRIPTORS: Picea-sitchensis; Larix-sibirica; Pinus-mugo; Betula-pubescentis; Pinus-aristata; Lophodermium-pinastri; Phacidium-infestans; Trichoscyphella-willkommii; GREMMENIELLA-ABIETINA; HETEROBASIDIUM-ANNOSUM
GE - GEOGRAPHIC NAMES: Iceland-
BT - BROADER DESCRIPTORS: Picea; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; Larix; Pinus; Betula; Betulaceae; Fagales; dicotyledons; angiosperms; Lophodermium; Rhytismatales; Ascomycotina; Eumycota; fungi; Phacidium; Helotiales; Trichoscyphella; Gremmeniella; Heterobasidium; Aphyllophorales; Basidiomycotina; Scandinavia; Northern-Europe; Europe
PT - PUBLICATION TYPE: Journal-article

Record 266 of 393 - TREECD 1973-2000/01

TI - TITLE: *Gremmeniella abietina*, *Phacidium infestans*, and other causes of damage in alpine, young pine plantations in Norway.

AU - AUTHOR(S): Roll-Hansen-F; Roll-Hansen-H; Skroppa-T

AD - ADDRESS OF AUTHOR: Norwegian Forest Research Institute, Hogskoleveien 12, 1432 As, Norway.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1992, 22: 2-3, 77-94; 30 ref.

PY - PUBLICATION YEAR: 1992

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: In field trials at 6 sites 600-750 m above sea level in SE Norway, young plantations of *Pinus contorta* (all 6 sites), *P. sylvestris* (2 sites) and *P. sibirica* (1 site) were assessed annually from 1972 to 1988 to determine growth, diseases and mortality. Great differences were found between the sites. Mean heights of *P. contorta* 16 yr after planting ranged from 180 to 451 cm. *G. abietina* was the most important cause of disease and mortality in 5 of the sites, whereas *Phacidium infestans* was more important at the remaining site, at least until 10 yr after planting. Other important causes of mortality and damage were *Armillaria borealis*, elks (*Alces alces*), voles and snow pressure. Differences between pine species, *Pinus contorta* provenances, sites and soil treatments are reported and discussed, as are effects of environment, climatic conditions, snow cover and nutrient deficiency.

DE - DESCRIPTORS: diseases-; high-altitude; Conifers-; fungal-diseases; mortality-; snow-damage; wildlife-; damage-; Snow-; plant-pathology; plant-pathogenic-fungi; pines-

OD - ORGANISM DESCRIPTORS: *Pinus-contorta*; *Pinus-sylvestris*; *Pinus-sibirica*; *Gremmeniella-abietina*; *Pinus*-; *Phacidium-infestans*; *Gremmeniella*-; *Phacidium*-; *Armillaria*-; *Alces-alces*; *Voles*-; fungi-

GE - GEOGRAPHIC NAMES: Norway-

BT - BROADER DESCRIPTORS: fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; *Phacidium*; Agaricales; Basidiomycotina; *Alces*; Cervidae; ruminants; Artiodactyla; mammals; vertebrates; Chordata; animals; ungulates; Microtinae; Muridae; rodents; Scandinavia; Northern-Europe; Europe; *Armillaria*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 267 of 393 - TREECD 1973-2000/01

TI - TITLE: Intensity of pathological mortality of *Pinus nigra* in some regions of Bulgaria.

AU - AUTHOR(S): Rosnev-B; Petkov-P

AD - ADDRESS OF AUTHOR: Institut Za Gorata, Sofia, Bulgaria.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Nauka-za-Gorata. 1990, 27: 3, 72-76; 7 ref.

PY - PUBLICATION YEAR: 1990

LA - LANGUAGE OF TEXT: Bulgarian

LS - LANGUAGE OF SUMMARIES: Russian, English

AB - ABSTRACT: A note is given on the incidence and severity of mortality of *P. nigra* caused by the fungi *Gremmeniella abietina* and *Cenangium ferruginosum*. The problem is worse in plantations than in natural stands, and in some cases up to 16-19% of the trees are very badly affected.

DE - DESCRIPTORS: forest-trees; forest-plantations; mortality-; effects-; plant-pathogenic-fungi; plant-pathogens; fungal-diseases

OD - ORGANISM DESCRIPTORS: *Pinus-nigra*; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Bulgaria-

BT - BROADER DESCRIPTORS: *Pinus*; Pinaceae; Pinopsida; gymnosperms;

Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Developed-Countries; Balkans; Southern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0861-007X

Record 268 of 393 - TREECD 1973-2000/01

TI - TITLE: *Gremmeniella abietina* (Lagerb.) Morelet on *Pinus nigra* in Bulgaria.

AU - AUTHOR(S): Rosnev-B; Petkov-P

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Gorsko-Stopanstvo-Gorska-Promishlenost*. 1985, 41: 8, 36-37.

PY - PUBLICATION YEAR: 1985

LA - LANGUAGE OF TEXT: Bulgarian

AB - ABSTRACT: *G. abietina* has recently been observed in Bulgaria causing dieback of lateral and terminal shoots of conifers, especially *Pinus nigra*. In some places, young plantations have been so seriously affected that they have been felled and replanted with broadleaves.

DE - DESCRIPTORS: dieback-; pines-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-nigra*; *Pinus*-; fungi-

GE - GEOGRAPHIC NAMES: Bulgaria-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Balkans; Southern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0205-1753

Record 269 of 393 - TREECD 1973-2000/01

TI - TITLE: Pathological causes of the deteriorating condition of some conifer plantations in Bulgaria.

AU - AUTHOR(S): Rosnev-B; Petkov-P

AD - ADDRESS OF AUTHOR: Inst. za Gorata, Sofia, Bulgaria.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Gorskostopanska-Nauka. 1986, 23: 3, 74-82; 22 ref.

PY - PUBLICATION YEAR: 1986

LA - LANGUAGE OF TEXT: Bulgarian

LS - LANGUAGE OF SUMMARIES: Russian, English

AB - ABSTRACT: Details are given of a pathology survey in conifer plantations. *Heterobasidion annosum* was found to be the main problem, on pines (including Scots and Austrian pine) and also Norway spruce and Douglas fir. *Lophodermium pinastri* and *Gremmeniella abietina* were also serious problems on pine; *L. seditiosum* and *L. conigenum* were recorded for the first time in Bulgaria. *Rhabdocline pseudotsugae*, *Phaeocryptopus gaeumannii* and *Phomopsis pseudotsugae* [*Potebniamyces coniferarum*] were found on Douglas fir.

DE - DESCRIPTORS: fungal-diseases; damage-; distribution-; conifers-

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Pinus-nigra*; *Pseudotsuga-menziesii*; *Picea-abies*; *Heterobasidion-annosum*; *Lophodermium-pinastri*; *Lophodermium-seditiosum*; *Gremmeniella-abietina*; *Rhabdocline-pseudotsugae*; *Phaeocryptopus-gaeumannii*; *Potebniamyces-coniferarum*; *Lophodermium-*

GE - GEOGRAPHIC NAMES: Bulgaria-

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; *Pseudotsuga*; *Picea*; *Heterobasidion*; *Aphylllophorales*; *Basidiomycotina*; *Eumycota*; fungi; *Lophodermium*; *Rhytismatales*; *Ascomycotina*; *Gremmeniella*; *Helotiales*; *Rhabdocline*; *Phaeocryptopus*; *Dothideales*; *Potebniamyces*; Balkans; Southern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

Record 270 of 393 - TREECD 1973-2000/01

TI - TITLE: Relationship between the elevation of seed collecting sites and the susceptibility of *Abies sachalinensis* to *Scleroderris lagerbergii* in Hokkaido, Japan.

AU - AUTHOR(S): Saho-H; Takahashi-I; Kurahashi-A; Capretti-P et-al

AD - ADDRESS OF AUTHOR: Department of Natural Resources, Miye University, Japan.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Shoot and foliage diseases in forest trees. Proceedings of a Joint Meeting of the IUFRO Working Parties S2.06.02 and S2.06.04, Vallombrosa, Firenze, Italy 6-11 June 1994. 1995, 244-247; 12 ref.

PB - PUBLISHER INFORMATION: Istituto di Patologia e Zoologia Forestale e Agraria, Universita degli Studi di Firenze; Firenze; Italy

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: *Abies sachalinensis* seedlings planted at altitudes over 700 m in Hokkaido were severely affected and killed by *Scleroderris lagerbergii* [*Gremmeniella abietina*]; in contrast, naturally regenerated seedlings were less affected by the pathogen. Living trees of *A. sachalinensis* with the disease were observed at altitudes over 1000 m, but only twigs, and not the main stem, had evidence of the disease. Test plantations were established with seedlings from an altitude gradient, and trees were surveyed after 13 years. Seedlings from high-altitude seed collections showed a greater resistance to the disease than seedlings grown from seeds collected at lower altitudes.

DE - DESCRIPTORS: altitude-; forest-trees; plant-pathogens; plant-pathogenic-fungi; susceptibility-; seeds-; resistance-; fungal-diseases; plant-diseases; diseases-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Abies-sachalinensis*; fungi-

GE - GEOGRAPHIC NAMES: Japan-; Hokkaido-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Abies*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; East-Asia; Asia; Developed-Countries; OECD-Countries; Japan

PT - PUBLICATION TYPE: Conference-paper

IB - INTERNATIONAL STANDARD BOOK NUMBER: 88-900074-0-0

Record 271 of 393 - TREECD 1973-2000/01

TI - TITLE: Site characteristics of Scots pine stands infected by *Gremmeniella abietina* in central Finland. I: Mineral soil sites.

AU - AUTHOR(S): Sairanen-A

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Department of Forest Protection, P.O. Box 18, 01301 Vantaa, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Acta-Forestalia-Fennica*. 1990, No. 216, 27 pp.; 71 ref.

PB - PUBLISHER INFORMATION: Finnish Forest Research Institute; Helsinki; Finland

PY - PUBLICATION YEAR: 1990

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: Finnish

AB - ABSTRACT: Mineral soil sites where Scots pine (*Pinus sylvestris*) exhibited *Gremmeniella abietina* (scleroderris canker) attack were characterized and classified. The tree stand, ground vegetation, soil type and site topography were described for 163 sample plots in 16 stands in 1983-87; all stands were at the pole stage or young thinning stage. The sites were classified according to the Cajander forest classification system and also numerically, using TWINSpan analysis based on the ground vegetation. The site topography of severely damaged stands was checked with colour infrared aerial photographs. The disease was most severe in depressions and frost pockets. No other significant correlations between disease severity and site factors were found. The results indicate that the main predisposing factor in the study area is an unfavourable microclimate. It is recommended that cold air drainage basins should not be regenerated with pine.

DE - DESCRIPTORS: Conifers-; Microclimate-; fungal-diseases; Cankers-; ecology-; Pines-; environmental-factors; forest-trees; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-sylvestris*; *Gremmeniella*-; fungi-; *Pinus*-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Miscellaneous

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0001-5636

IB - INTERNATIONAL STANDARD BOOK NUMBER: 951-40-1123-6

Record 272 of 393 - TREECD 1973-2000/01

TI - TITLE: Changes of important forest diseases in Hokkaido.

AU - AUTHOR(S): Sasaki-K

SO - SOURCE (BIBLIOGRAPHIC CITATION): Annual-Report-of-the-Hokkaido-Research-Center,-Forestry-and-Forest-Products-Research-Institute. 1998, No. 1997, 77-78.

PY - PUBLICATION YEAR: 1998

LA - LANGUAGE OF TEXT: Japanese

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: Monoculture of conifers has introduced some disease epidemics, of which the most important are shoot blight of larch [*Larix leptolepis*] and Scleroderris [*Gremmeniella*] canker of Todo fir [*Abies sachalinensis*], both of which cause significant damage. However, planting of these species has recently decreased, and a few new diseases caused by bacteria or fungi are found in some broadleaved tree species. In older forest plantations, decay is becoming the most important disease.

DE - DESCRIPTORS: cankers-; forest-plantations; forest-trees; plant-diseases; plant-pathogenic-fungi; plant-pathogens; monoculture-; fungal-diseases; age-of-trees; decay-; change-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Larix-leptolepis*; *Abies-sachalinensis*; *Gremmeniella*-; Pinopsida-; fungi-

GE - GEOGRAPHIC NAMES: Japan-; Hokkaido-

BT - BROADER DESCRIPTORS: *Larix*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Abies*; Helotiales; Ascomycotina; Eumycota; fungi; Developed-Countries; East-Asia; Asia; OECD-Countries; Japan

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0916-6165

Record 273 of 393 - TREECD 1973-2000/01

TI - TITLE: Contribution on the aetiology of shoot dieback of young larches in the subalpine zone. I. Study of possible fungus infections.

OT - ORIGINAL NON-ENGLISH TITLE: Beitrag zur Aetiologie des Triebsterbens junger Larchen der subalpinen Stufe. I. Untersuchung möglicher Pilzinfektionen.

AU - AUTHOR(S): Schnell-G; Kern-H; Müller-E

AD - ADDRESS OF AUTHOR: Inst. Phytomedizin, Eidg. Tech. Hochschule, Zurich, Switzerland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1985, 15: 2, 81-92; 3 fig., 3 tab.; 22 ref.

PY - PUBLICATION YEAR: 1985

LA - LANGUAGE OF TEXT: German

LS - LANGUAGE OF SUMMARIES: English, French

AB - ABSTRACT: Infection experiments with *Ascocalyx laricina* showed this fungus not to be the cause of shoot dieback: reisolations from inoculated tissues yielded various spp. but never *A. laricina*. In an examination of endophytic fungi from naturally regenerated young and old larch trees and young trees from plantations in 7 different locations in the Swiss subalpine zone *A. laricina* could only be isolated from completely dead shoots bearing its fruitbodies. However, known pathogenic fungi were found in healthy and dying tissues: *A. abietina*, *Sirococcus strobilinus*, *Scoleconectria cucurbitula* and *Sydowia polyspora*.

DE - DESCRIPTORS: Larch-; dieback-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: fungi-; *Sydowia-polyspora*; *Gremmeniella-abietina*; *Larix*-; *Larix-decidua*; *SIROCOCCUS-CONIGENUS*; *Nectria-fuckeliana*

GE - GEOGRAPHIC NAMES: Switzerland-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Sydowia*; Dothideales; Ascomycotina; Eumycota; *Gremmeniella*; Helotiales; Pinaceae; Pinopsida; gymnosperms; *Larix*; *Sirococcus*; Deuteromycotina; Western-Europe; Europe; *Ascocalyx*; Hypocreales

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 274 of 393 - TREECD 1973-2000/01

TI - TITLE: Investigations of plant diseases in reforestations of the subalpine region in the central Swiss alps.

AU - AUTHOR(S): Schnell-GR

AD - ADDRESS OF AUTHOR: Inst. Mikrobiol., Eidg. Tech. Hochschule, Zurich, Switzerland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1987, 17: 1, 19-33; 42 ref.

PY - PUBLICATION YEAR: 1987

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: The occurrence of individual spp. of endophytic fungi was recorded from healthy and dying needles and shoots of *Larix decidua*, *Pinus cembra* and *P. mugo*. Known pathogens, e.g. *Ascocalyx abietina*, *A. laricina*, *Sirococcus strobilinus* and *Scolecconectria cucurbitula*, were detected in both healthy and dying tissues, suggesting that fungal infection may not be the primary cause of poor tree health. Fruit bodies were formed only on dying plant parts, and only when plant development was restricted, suggesting that plant health cannot be evaluated solely on appearance of fruit bodies. The in vitro hydrolase reactions of selected endophytes gave some indication of potential in vivo tissue degradation.

DE - DESCRIPTORS: Larch-; diseases-; Pines-; forest-trees; Dieback-; Foliage-; upland-areas; conifers-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Pinus-cembra*; *Pinus-mugo*; *Gremmeniella-abietina*; *Sirococcus-conigenus*; *Larix-*; *Pinus-*; *Larix-decidua*; fungi-; *Nectria-fuckeliana*

GE - GEOGRAPHIC NAMES: Switzerland-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; *Sirococcus*; Deuteromycotina; *Larix*; Western-Europe; Europe; *Ascocalyx*; Hypocreales

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 275 of 393 - TREECD 1973-2000/01

TI - TITLE: Investigations on ecology and technique for afforestation at high altitudes: research results from the Stillberg avalanche region.

OT - ORIGINAL NON-ENGLISH TITLE: Untersuchungen zur Okologie und Technik der Hochlagenaufforstung. Forschungsergebnisse aus dem Lawinenanrissgebiet Stillberg.

AU - AUTHOR(S): Schonenberger-W; Frey-W (Coordinators)

AD - ADDRESS OF AUTHOR: EAFV, 8903 Birmensdorf, Switzerland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Schweizerische-Zeitschrift-fur-Forstwesen. 1988, 139: 9, 735-820; 39 ref.

PY - PUBLICATION YEAR: 1988

LA - LANGUAGE OF TEXT: German

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: A comprehensive report on the Stillberg project, started in 1955 near Davos, Switzerland, in an area (at 2000-2230 m alt.) where there had been catastrophic avalanches in 1951/52. During the 1960s and early 1970s, detailed investigations were made of the terrain, climate, microclimate, snow cover, avalanches, vegetation and soils, and preliminary studies were made on early test plantings, photosynthesis, transpiration, root growth and shoot development. Details are also given of the temporary wooden structures erected to hold the snow. Finally, details are given on the large-scale trial afforestation work started in 1975 with *Pinus cembra*, *P. mugo* and *Larix decidua*, with data on planting techniques, survival, the main damage factors, growth rates, and the characteristics of favourable and unfavourable sites for afforestation. Average survival after 10 years was 49% for *P. cembra*, 46% for *P. mugo* and 77% for *L. decidua*. Survival after 10 years was almost 100% on sites where the snow melted earliest, and almost nil on sites where it melted last. The pines were most often affected by fungal infections, viz. *Ascocalyx abietina* [*Gremmeniella abietina*] on both species, and *Phacidium infestans* on *Pinus cembra*. The mean ht. of the survivors after 10 years was 30-40 cm on the coldest sites, and 50-70 cm on the most favourable sites.

DE - DESCRIPTORS: Conifers-; Avalanches-; Afforestation-; mountains-; fungal-diseases

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Phacidium-infestans*; *Pinus-cembra*; *Ascocalyx-*; *Phacidium-*; *Pinus-mugo*; *Larix-decidua*

GE - GEOGRAPHIC NAMES: Switzerland-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Phacidium*; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Larix*; Western-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

Record 276 of 393 - TREECD 1973-2000/01

TI - TITLE: A canker disease of *Abies concolor* caused by *Nectria fuckeliana*.

AU - AUTHOR(S): Schultz-ME; Parmeter-JR Jr.

AD - ADDRESS OF AUTHOR: Department of Plant Pathology, University of California, Berkeley, CA 94720, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Plant-Disease*. 1990, 74: 2, 178-180; 7 ref.

PY - PUBLICATION YEAR: 1990

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: A canker disease of *A. concolor* caused by *N. fuckeliana* killed suppressed trees and cankered more vigorous trees, mainly in overstocked stands in northern California and southern Oregon, USA. Inoculations consistently showed that *N. fuckeliana* isolated from cankers caused the disease. Commonly isolated non-sporulating fungi and *Ascocalyx tenuisporus* (fruiting on the margins of cankers) occasionally caused small cankers in inoculation tests. Perithecia of *N. fuckeliana* were produced on bark associated with inoculations. On vigorous trees, most of the cankering occurred within 1-2 years after inoculation and calluses then grew over the wounds. On suppressed trees, cankering either killed trees within a year or resulted in slowly expanding lesions.

DE - DESCRIPTORS: Conifers-; fungal-diseases; Cankers-; symptoms-; damage-; forest-trees; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Abies-concolor*; *Nectria-fuckeliana*; *Nectria*-; fungi-

GE - GEOGRAPHIC NAMES: California-; Oregon-; USA-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Abies*; Pinaceae; Pinopsida; gymnosperms; *Nectria*; Hypocreales; Ascomycotina; Eumycota; Pacific-States-of-USA; Western-States-of-USA; USA; North-America; America; Pacific-Northwest-States-of-USA

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0191-2917

Record 277 of 393 - TREECD 1973-2000/01

TI - TITLE: Turning away from the 'clean forest' principle: a phytopathological risk?

OT - ORIGINAL NON-ENGLISH TITLE: Abkehr von der 'sauberen Wirtschaft' - ein phytopathologisches Risiko?

AU - AUTHOR(S): Schutt-P

AD - ADDRESS OF AUTHOR: Lehrstuhl Anat., Physiol. & Pathol. der Pflanzen, Univ. Munchen, D-8000 Munich 40, German Federal Republic.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Forstwissenschaftliches-Centralblatt. 1979, 98: 6, 309-316; 3 pl.; 11 ref.

PY - PUBLICATION YEAR: 1979

LA - LANGUAGE OF TEXT: German

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: The traditional concept of hygiene has tended to be neglected in recent years for economic reasons. Four types of fungal attack are cited as possible consequences: development of *Fomes annosus* [*Heterobasidion annosum*] sporocarps on decayed Norway spruce logs left lying; development of *Armillaria* [*Armillariella*] *mellea* rhizomorphs on young broadleaves killed by arboricides and left standing; multiplication of wood-rotting fungi on decayed logs, leading to an increase in the incidence of rot associated with beech bark disease; and increases in *Schleroderris* attack from the crowns of infected pines left in the stand after thinning. It is suggested that despite short-term economic disadvantages, forest sanitation measures should be restored. From author's summary.

DE - DESCRIPTORS: control-; roots-; decay-; root-and-butt-rots

OD - ORGANISM DESCRIPTORS: *Heterobasidion-annosum*; *Fagus-sylvatica*; *ARMILLARIA-MELLEA*; *GREMMENIELLA*-

GE - GEOGRAPHIC NAMES: German-Federal-Republic; Germany-

BT - BROADER DESCRIPTORS: *Heterobasidion*; *Aphyllorphorales*; *Basidiomycotina*; *Eumycota*; *fungi*; *Fagus*; *Fagaceae*; *Fagales*; *dicotyledons*; *angiosperms*; *Spermatophyta*; *plants*; *Armillaria*; *Agaricales*; *Helotiales*; *Ascomycotina*; *Western-Europe*; *Europe*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0015-8003

Record 278 of 393 - TREECD 1973-2000/01

TI - TITLE: Spore concentration and germination rate.

AU - AUTHOR(S): Schutt-P

SO - SOURCE (BIBLIOGRAPHIC CITATION): Translation,-Environment-Canada. 1975, No. OOENV TR-949, 4 pp.; Transl. from European Journal of Forest Pathology (1971) 1 122-123. See FA 33, 4653. Limited distribution; 3 ref.

PY - PUBLICATION YEAR: 1975

LA - LANGUAGE OF TEXT: English

OD - ORGANISM DESCRIPTORS: Botrytis-cinerea; Fusarium-oxysporum; Lophodermium-pinastris; fungi-; GREMMENIELLA-ABIETINA

BT - BROADER DESCRIPTORS: Botrytis; Deuteromycotina; Eumycota; fungi; Fusarium; Lophodermium; Rhytismatales; Ascomycotina; Gremmeniella; Helotiales

PT - PUBLICATION TYPE: Miscellaneous

Record 279 of 393 - TREECD 1973-2000/01

TI - TITLE: Shoot dieback of *Pinus nigra* in Bavaria (*Brunchorstia pinea*).
AU - AUTHOR(S): Schutt-P; Lang-KJ
SO - SOURCE (BIBLIOGRAPHIC CITATION): Allgemeine-Forstzeitschrift. 1973, 28: 11, 210-212; 7 ref.
PY - PUBLICATION YEAR: 1973
LA - LANGUAGE OF TEXT: German
AB - ABSTRACT: Reports on infections, sometimes serious, by *B. pinea* [*Scleroderris lagerbergii*] in Bavaria; these have occurred not only on *P. nigra* but also, in isolated cases, on *P. sylvestris*. Attacks on Norway Spruce have been reported from dominated trees in Lower Saxony and Austria.
DE - DESCRIPTORS: foliage-; forest-trees; conifers-; plant-pathology; pines-
OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Pinus-nigra*; *Picea-abies*; *Pinus*-; *GREMMENIELLA-ABIETINA*; *PICEA*-
BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Picea*; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi
PT - PUBLICATION TYPE: Journal-article

Record 280 of 393 - TREECD 1973-2000/01

TI - TITLE: *Scleroderris lagerbergii* - a weak parasite in healthy *Pinus nigra* stands.

AU - AUTHOR(S): Seipmann-R

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1975, 5: 3, 137-142; 11 ref.

PY - PUBLICATION YEAR: 1975

LA - LANGUAGE OF TEXT: German

LS - LANGUAGE OF SUMMARIES: English, French

AB - ABSTRACT: *S. lagerbergii* was isolated from suppressed branches undergoing natural pruning in four healthy 20- to 21-year-old stands of *P. nigra* growing near Kassel, W. Germany. Successful isolations were made from 44 long shoots out of a total of 168 showing recent signs of decay. The fungus causes the death of long shoots in which tissues have been weakened owing to reduced assimilation by the short shoots; accordingly, isolations were obtained only from quite recently killed tissue. The possibility of the spread of the fungus to terminal shoots is discussed. [Cf. FA 34, 398]

DE - DESCRIPTORS: conifers-

OD - ORGANISM DESCRIPTORS: *Pinus-nigra*; *GREMMENIELLA-ABIETINA*

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms;

Spermatophyta; plants; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 281 of 393 - TREECD 1973-2000/01

TI - TITLE: Tree mortality caused by *Gremmeniella abietina* in a subalpine afforestation in the central Alps and its relationship with duration of snow cover.

AU - AUTHOR(S): Senn-J

AD - ADDRESS OF AUTHOR: Swiss Federal Institute for Forest, Snow and Landscape Research, CH-8903 Birmensdorf, Switzerland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1999, 29: 1, 65-74; 33 ref.

PY - PUBLICATION YEAR: 1999

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: German, French

AB - ABSTRACT: Tree survival and causes of mortality were studied in an experimental afforestation in the upper subalpine forest zone in the Swiss Alps. A total of 59.8% of *Pinus cembra* and 45.6% of *Pinus mugo* were killed by *G. abietina* during the first 20 years after planting, compared to 1.5% of *Larix decidua* trees. The mortality rates caused by *G. abietina* were highly correlated with the duration of snow cover in spring. Tree losses were lowest at sites where the snow melted early and highest at sites where the snow ablation was delayed in spring. Tree mortality varied greatly between years. In the year after the coldest summer of the observation period mortality due to *G. abietina* infections was highest, suggesting high susceptibility of trees in poor condition. *Phacidium infestans* which was the second most important factor for mortality in *P. cembra*, killed trees irrespective of their condition. Other biotic and abiotic causes of tree mortality had negligible influence compared with the impact of *G. abietina* and *P. infestans*. Excluding anthropogenic impacts, the diverse spatial pattern of forested and treeless sites close to the subalpine timberline may predominantly result from the action of parasitic fungi, depending on the ablation pattern of the snow cover in spring.

DE - DESCRIPTORS: plant-diseases; plant-pathogens; plant-pathogenic-fungi; forest-trees; dead-trees; environmental-factors; snow-; snow-cover; yield-losses; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Phacidium-infestans*; *Pinus-cembra*; *Pinus-mugo*; *Larix-decidua*; Pinopsida-; fungi-

GE - GEOGRAPHIC NAMES: Switzerland-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Phacidium*; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Larix*; Western-Europe; Europe; Developed-Countries; EFTA; OECD-Countries

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 282 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris lagerbergii in large red and Scots pine trees in New York.

AU - AUTHOR(S): Setliff-EC; Sullivan-JA; Thompson-JH

AD - ADDRESS OF AUTHOR: Cary Arboretum, New York Bot. Garden, Millbrook, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Plant-Disease-Reporter. 1975, 59: 5, 380-381.

PY - PUBLICATION YEAR: 1975

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: *S. lagerbergii* [*Gremmeniella abietina*] is becoming widespread in the large pine trees in northern NY. It was isolated from the upper branches of Scots pine (*Pinus sylvestris*) 47-60 ft high and red pine (*P. resinosa*) 45-51 ft high. Mortality in both spp. resulted from numerous branch infections. Disease incidence was essentially 100% in some plantations. The pattern of disease development in the upper crown of large trees resembles that found in Europe and is unlike previous accounts of the disease in N. America.

DE - DESCRIPTORS: forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella-abietina*; *Pinus-sylvestris*; *Pinus-resinosa*

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*

PT - PUBLICATION TYPE: Journal-article

Record 283 of 393 - TREECD 1973-2000/01

TI - TITLE: Susceptibility of different Pinus nigra provenances to attack by Scleroderris lagerbergii.

OT - ORIGINAL NON-ENGLISH TITLE: Anfälligkeit verschiedener Schwarzkiefern-Herkunfte bei Scleroderris lagerbergii-Befall.

AU - AUTHOR(S): Siepmann-R

AD - ADDRESS OF AUTHOR: Institut für Pflanzenschutz im Forst, Biologische Bundesanstalt für Land- und Forstwirtschaft, Hann. Münden, German Federal Republic.

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1978, 8: 5-6, 280-284; 6 ref.

PY - PUBLICATION YEAR: 1978

LA - LANGUAGE OF TEXT: German

LS - LANGUAGE OF SUMMARIES: English, French

AB - ABSTRACT: Six-year-old trees grown from seed from Austria (var. austriaca), France (var. corsicana), Greece and Italy (var. calabrica), and Yugoslavia and Turkey (var. pallasiana = var. caramanica) were infected with conidia of S. lagerbergii over three successive years. No clear differences in reaction were observed between trees from different sources.

DE - DESCRIPTORS: geographical-races; provenance-trials; fungal-diseases; resistance-; conifers-; forest-trees; pines-

OD - ORGANISM DESCRIPTORS: Pinus-; Pinus-nigra; GREMMENIELLA-; GREMMENIELLA-ABIETINA

GE - GEOGRAPHIC NAMES: Europe-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; Pinus; Helotiales; Ascomycotina; Eumycota; fungi; Gremmeniella

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 284 of 393 - TREECD 1973-2000/01

TI - TITLE: On fruit body development and infection progress of *Scleroderris lagerbergii* incidence on black pine (*Pinus nigra* Arnold).

OT - ORIGINAL NON-ENGLISH TITLE: Zur Fruchtkörperbildung und zum Infektionsverlauf bei *Scleroderris lagerbergii*-Befall an Schwarzkiefer (*Pinus nigra* Arnold).

AU - AUTHOR(S): Siepmann-R

AD - ADDRESS OF AUTHOR: Inst. Forstpflanzenkrankh., Hannover-Munden, German Federal Republic.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Forstwirtschaftliches-Centralblatt. 1972, 91: 3, 153-160; 9 fig.

PY - PUBLICATION YEAR: 1972

LA - LANGUAGE OF TEXT: German

LS - LANGUAGE OF SUMMARIES: English, French

AB - ABSTRACT: Dieback symptoms appear at the base of terminal buds and below the scales of young long shoots. Symptoms visible from Dec. onwards either progress causing the shoot to die or become occluded by a healing process of the host, forming canker-like structures. Pycnidia with germinable conidia were observed from May of the year following infection until June-July of the 2nd year after infection.

DE - DESCRIPTORS: forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *GREMMENIELLA-ABIETINA*

GE - GEOGRAPHIC NAMES: German-Federal-Republic; Germany-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Western-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

Record 285 of 393 - TREECD 1973-2000/01

TI - TITLE: A contribution to the infection biology of dieback of *Pinus nigra* caused by *Scleroderris lagerbergii*.

OT - ORIGINAL NON-ENGLISH TITLE: Ein Beitrag zur Infektionsbiologie des durch *Scleroderris lagerbergii* verursachten Schwarzkiefertriebsterbens.

AU - AUTHOR(S): Siepmann-R

AD - ADDRESS OF AUTHOR: Inst. Forstpflanzenkrankh., Mann. Munden, German Federal Republic.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1976, 6: 2, 103-109; 4 fig.

PY - PUBLICATION YEAR: 1976

LA - LANGUAGE OF TEXT: German

LS - LANGUAGE OF SUMMARIES: English, French

AB - ABSTRACT: In buds the dead cells of the blade margins of scales are invaded first. In Dec. *S. lagerbergii* [*Gremmeniella abietina*] grows into the living parenchyma cells of the scales (cataphylls). In the long shoots hyphae can be observed in the cells of the epidermis and hypodermis in Aug., and in Jan. of the year following infection the living tissue of the primary cortex (cortex parenchyma) is invaded at and between the needle bases.

DE - DESCRIPTORS: forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-*

GE - GEOGRAPHIC NAMES: German-Federal-Republic; Germany-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Pinaceae; Pinopsida; gymnosperms; Western-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 286 of 393 - TREECD 1973-2000/01

TI - TITLE: Formation of fruiting bodies and the course of infection in *Scleroderris lagerbergii* attack on *Pinus nigra*.
AU - AUTHOR(S): Siepmann-R
SO - SOURCE (BIBLIOGRAPHIC CITATION): Forstwissenschaftliches-Centralblatt. 1972, 91: 3, 153-160; 16 ref.
PY - PUBLICATION YEAR: 1972
LA - LANGUAGE OF TEXT: German
LS - LANGUAGE OF SUMMARIES: English, French
AB - ABSTRACT: Describes and illustrates observations in a dense stand, 4 m. high, established in 1956, in the Harz Mts. Pycnidia with conidia of the *Brunchorstia pinea* stage were observed on infected (dead or dying) long shoots of the previous year from May until June/July of the following year (i.e. two years after infection). Apothecia with asci and ascospores were found only sporadically, two years after infection. Infection occurred on the young long shoots, either at the base of the terminal buds or under the scale leaves. Necroses could be observed on freshly infected long shoots as early as December; they sometimes resulted in occlusion or canker-like structures rather than complete dieback.
DE - DESCRIPTORS: conifers-
OD - ORGANISM DESCRIPTORS: *Pinus-nigra*; *GREMMENIELLA-ABIETINA*
BT - BROADER DESCRIPTORS: *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi
PT - PUBLICATION TYPE: Journal-article
IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0015-8003

Record 287 of 393 - TREECD 1973-2000/01

TI - TITLE: *Scleroderris lagerbergii* Gremmen, a parasite of weakness in healthy *Pinus nigra* stands (*Pinus nigra* Arnold).

AU - AUTHOR(S): Siepmann-R

SO - SOURCE (BIBLIOGRAPHIC CITATION): Translation, -Environment-Canada. 1976, No. OOENV TR-1075, 9 pp.; Transl. from European Journal of Forest Pathology (1975) 5 (3) 137-142. See FA 36, 7827. Limited distribution; 11 ref.

PY - PUBLICATION YEAR: 1976

LA - LANGUAGE OF TEXT: English

DE - DESCRIPTORS: conifers-

OD - ORGANISM DESCRIPTORS: *Pinus-nigra*; GREMMENIELLA-ABIETINA

BT - BROADER DESCRIPTORS: *Pinus*; Pinaceae; Pinopsida; gymnosperms;

Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Miscellaneous

Record 288 of 393 - TREECD 1973-2000/01

TI - TITLE: Inhibition of butt rot causing Basidiomycetes and of Gremmeniella abietina by Bacillus subtilis.

OT - ORIGINAL NON-ENGLISH TITLE: Wachstumshemmung von Stammfaulepilzen und von Gremmeniella abietina durch Bacillus subtilis.

AU - AUTHOR(S): Siepmann-R

AD - ADDRESS OF AUTHOR: Biologische Bundesanstalt für Land- und Forstwirtschaft, Institut für Pflanzenschutz im Forst, Braunschweig, German Federal Republic.

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1987, 17: 1, 59-64; 17 ref.

PY - PUBLICATION YEAR: 1987

LA - LANGUAGE OF TEXT: German

LS - LANGUAGE OF SUMMARIES: English, French

AB - ABSTRACT: A zone of inhibition was observed when the fungi, isolated from various conifers, were inoculated into the test plates with malt agar either together with *B. subtilis* (fast growing Basidiomycetes) or 2 weeks before *B. subtilis* (slow growing fungi). With some of the fast growing Basidiomycetes a zone of inhibition was observed only during the early growth phase. *Sparassis crispa*, either not growing or with restricted growth when transferred to the plates together with *B. subtilis*, completely suppressed the *Bacillus* culture when inoculated into the plates 2 weeks before *B. subtilis*.

DE - DESCRIPTORS: root-and-butt-rots; interactions-; forest-trees; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: Bacillus-subtilis; Gremmeniella-abietina; fungi-; Pinopsida-

BT - BROADER DESCRIPTORS: Bacillus; Bacillaceae; Firmicutes; bacteria; prokaryotes; Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi; gymnosperms; Spermatophyta; plants; Cantharellales; Basidiomycotina

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 289 of 393 - TREECD 1973-2000/01

TI - TITLE: *Scleroderris lagerbergii* Gr. as a weak parasite of healthy black pine (*Pinus nigra* Arnold) stands.

OT - ORIGINAL NON-ENGLISH TITLE: *Scleroderris lagerbergii* Gr. als Schwacheparasit in gesunden Schwarzkiefernbeständen (*Pinus nigra* Arnold).

AU - AUTHOR(S): Siepmann-R

AD - ADDRESS OF AUTHOR: Inst. Forstpflanzenkrankh., Hann. Munden, German Federal Republic.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1975, 5: 3, 137-142.

PY - PUBLICATION YEAR: 1975

LA - LANGUAGE OF TEXT: German

LS - LANGUAGE OF SUMMARIES: English, French

AB - ABSTRACT: In 4 healthy stands *S. lagerbergii* [*Gremmeniella abietina*] was isolated from 44 out of 168 long shoots with signs of recent decay on suppressed branches. The parasite causes death of tissues weakened by the reduced assimilation.

DE - DESCRIPTORS: parasitism-; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella-abietina*

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 290 of 393 - TREECD 1973-2000/01

TI - TITLE: On the infection biology of dieback of *Pinus nigra* caused by *Scleroderris lagerbergii*.
AU - AUTHOR(S): Siepmann-R
SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1976, 6: 2, 103-109; 8 ref.
PY - PUBLICATION YEAR: 1976
LA - LANGUAGE OF TEXT: German
LS - LANGUAGE OF SUMMARIES: English, French
AB - ABSTRACT: Describes studies of buds and long shoots of *P. nigra* [aggr.] from Corsica, Turkey and a German seed orchard in transverse and longitudinal section to investigate the stages of infection. After inoculation with conidia of the imperfect stage (*Brunchorstia pinea*) in July 1974, hyphae were found in the epidermis and hypodermis of long shoots by the end of Aug. and in the cortical parenchyma of the needle bases by Jan. 1975. Invasion of the bud scales of short-shoot buds was observed in early Dec. 1974, beginning in the dead cells of the blade margin and extending into the green tissue of the scales.
DE - DESCRIPTORS: conifers-
OD - ORGANISM DESCRIPTORS: *Pinus-nigra*; *GREMMENIELLA-ABIETINA*
BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi
PT - PUBLICATION TYPE: Journal-article
IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 291 of 393 - TREECD 1973-2000/01

TI - TITLE: Susceptibility of different provenances of *Pinus nigra* to *Scleroderris lagerbergii*.
OT - ORIGINAL NON-ENGLISH TITLE: Anfälligkeit verschiedener Schwarzkiefern-Herkunfte bei *Scleroderris lagerbergii* -Befall.
AU - AUTHOR(S): Siepmann-R
AD - ADDRESS OF AUTHOR: Inst. Pflanzenschutz im Forst, Biol. Bundesanst. f. Land.- u. Forstwirtschaft, D-3510 Hann. Munden, German Federal Republic.
SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1978, 8: 5-6, 280-284; 6 ref.
PY - PUBLICATION YEAR: 1978
LA - LANGUAGE OF TEXT: German
LS - LANGUAGE OF SUMMARIES: English, French
AB - ABSTRACT: Six-yr-old plants of 12 provenances of *P. nigra*, from Austria, France, Greece, Italy, Yugoslavia and Turkey, raised at Hann. Munden, W. Germany, were inoculated with conidia of *S. lagerbergii* in 3 successive years. No clear differences were found between the provenances in the rate of dieback produced.
ADDITIONAL ABSTRACT: When 6-yr-old trees, grown at the Inst. in W. Germany from seed from 12 sources in Austria, France, Greece, Italy, Yugoslavia and Turkey, were inoculated with *S. lagerbergii* [*Gremmeniella abietina*] no differences in the rate of dieback were found.
DE - DESCRIPTORS: provenance-trials; fungal-diseases; resistance-; forest-trees; conifers-; plant-pathology; pines-
OD - ORGANISM DESCRIPTORS: *Pinus-nigra*; *Pinus*-; *Gremmeniella-abietina*
GE - GEOGRAPHIC NAMES: Europe-; German-Federal-Republic; Germany-
BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Western-Europe; Europe
PT - PUBLICATION TYPE: Journal-article
IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 292 of 393 - TREECD 1973-2000/01

TI - TITLE: Distribution of dieback in *Pinus nigra* caused by *Scleroderris lagerbergii* in the Federal Republic of Germany.

AU - AUTHOR(S): Siepmann-R; Lang-KJ; Schonhar-S

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1975, 5: 3, 185-189; 11 ref.

PY - PUBLICATION YEAR: 1975

LA - LANGUAGE OF TEXT: German

LS - LANGUAGE OF SUMMARIES: English, French

AB - ABSTRACT: Dieback has been observed in almost all states, both along the coast and inland, and in flat and hilly situations. The occurrence of single trees or of whole stands that had been killed by the fungus, was observed mainly in 8- to 25-year-old *P. nigra* plantations.

DE - DESCRIPTORS: conifers-

OD - ORGANISM DESCRIPTORS: *Pinus-nigra*; *GREMMENIELLA-ABIETINA*

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms;

Spermatophyta; plants; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 293 of 393 - TREECD 1973-2000/01

TI - TITLE: Spread of dieback in black pine caused by *Scleroderris lagerbergii* Fr. in the Federal German Republic.

OT - ORIGINAL NON-ENGLISH TITLE: Verbreitung des durch *Scleroderris lagerbergii* Gr. verursachten Schwarzkiefertriebsterbens in der Bundesrepublik Deutschland [*Gremmeniella abietina* on *Pinus nigra*].

AU - AUTHOR(S): Siepmann-R; Lang-KJ; Schonhar-S

AD - ADDRESS OF AUTHOR: Inst. Forstpflanzenkrankh., Hann. Munden, German Federal Republic.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1975, 5: 3, 185-189; 1 map; 36 ref.

PY - PUBLICATION YEAR: 1975

LA - LANGUAGE OF TEXT: German

LS - LANGUAGE OF SUMMARIES: English, French

DE - DESCRIPTORS: forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: German-Federal-Republic; Germany-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Western-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 294 of 393 - TREECD 1973-2000/01

TI - TITLE: Causes of dieback of pine introductions and a complex system of protective measures.

AU - AUTHOR(S): Sinadskii-Yu-V; Groznova-VV

AD - ADDRESS OF AUTHOR: Main Bot. Garden, Acad. Sci. USSR, Moscow, USSR.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Byulleten'-Glavnogo-Botanicheskogo-Sada. 1986, No. 139, 68-70; 5 ref.

PY - PUBLICATION YEAR: 1986

LA - LANGUAGE OF TEXT: Russian

AB - ABSTRACT: Bio-ecological characteristics of *Scleroderris lagerbergii* [*Gremmeniella abietina*], one of the most serious pathogens of conifers, are analysed. Combined prophylactic, agrotechnical and chemical measures are recommended.

DE - DESCRIPTORS: Pines-; ecology-; integrated-control; Fungal-diseases; control-; Dieback-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Gremmeniella*-; *Pinus*-; fungi-

GE - GEOGRAPHIC NAMES: USSR-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; Pinaceae; Pinopsida; gymnosperms

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0366-502X

Record 295 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris [Gremmeniella abietina] canker of conifers discovered in Newfoundland.

AU - AUTHOR(S): Singh-P

AD - ADDRESS OF AUTHOR: For. Insect & Disease Survey, Can. For. Serv., PO Box 6028, St. Johns, Nfld., Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Woody-Points. 1979, 9: 6, 10.

PY - PUBLICATION YEAR: 1979

LA - LANGUAGE OF TEXT: English

OD - ORGANISM DESCRIPTORS: Gremmeniella-abietina

GE - GEOGRAPHIC NAMES: Canada-; Newfoundland-

BT - BROADER DESCRIPTORS: Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi; North-America; America; Canada

PT - PUBLICATION TYPE: Journal-article

Record 296 of 393 - TREECD 1973-2000/01

TI - TITLE: Ontario region.

AU - AUTHOR(S): Sippell-WL; Rose-AH; Gross-HL

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Forestry-Service:-Annual-Report-of-the-Forest-Insect-and-Disease-Survey,-Department-of-the-Environment,-Canadian-Forestry-Service,-1971. 1972, 54-72.

PB - PUBLISHER INFORMATION: Ottawa.; Canada

PY - PUBLICATION YEAR: 1972

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The establishment of red and jack pine (*Pinus resinosa* and *P. banksiana*) is threatened in several areas by *Scleroderris lagerbergii*. Some white spruce (*Picea glauca*) was killed by *Polyporus tomentosus*. *Armillaria* [*Armillariella*] *mellea* was one of the chief causes of mortality of young conifers. Many beech stands in varying stages of decline were surveyed but neither *Nectria coccinea* var. *faginata* nor the associated scale insect (*Cryptococcus fagi*) was found.

DE - DESCRIPTORS: decline-; forest-trees; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Pinopsida*-; *GREMMENIELLA-ABIETINA*; *PICEA*-; *COLTRICIA-TOMENTOSA*; *ARMILLARIA-MELLEA*

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; *Pinopsida*; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Coltricia*; Aphyllophorales; Basidiomycotina; *Armillaria*; Agaricales; North-America; America

PT - PUBLICATION TYPE: Miscellaneous

Record 297 of 393 - TREECD 1973-2000/01

TI - TITLE: Distribution of serological strains of *Gremmeniella abietina* in eastern North America.

AU - AUTHOR(S): Skilling-D; Kienzler-M; Haynes-E

AD - ADDRESS OF AUTHOR: USDA Forest Serv., St. Paul, Minn. 55108, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Plant-Disease*. 1984, 68: 11, 937-938; 1 tab.; 17 ref.

PY - PUBLICATION YEAR: 1984

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: A total of 327 mycelial isolates of *G. abietina* from northern North America (mainly from pines) were serologically typed to determine fungus str. All but 6 were either the North American or European str. Isolates from Mich., Minn. and Wis. were all typed as North American str. The European str. predominated in NY, Vt. and Newfoundland isolates.

DE - DESCRIPTORS: Pines-; Cankers-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; fungi-; *Pinus*-

GE - GEOGRAPHIC NAMES: North-America; Canada-; USA-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; Pinaceae; Pinopsida; gymnosperms; America; North-America

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0191-2917

Record 298 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris canker - the situation in 1980.

AU - AUTHOR(S): Skilling-DD

AD - ADDRESS OF AUTHOR: NCFES, USDA.For. Serv., St. Paul, MN, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Journal-of-Forestry. 1981, 79: 2, 95-97; 4 ref.

PY - PUBLICATION YEAR: 1981

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: [See FA 41, 4490] The distribution, identification, and host range of the European strain of scleroderris canker (*Gremmeniella abietina*), in North America are described. The strain was first recognised in 1975 and is well established in New York and Vermont, causing serious losses in red and Scots pines. It is also present in Maine, New Brunswick, Quebec and Newfoundland. All pines so far tested are highly susceptible to the disease, spruce is less susceptible, and the firs are more resistant. Minor infection has been found on hemlock, larch and Douglas fir.

DE - DESCRIPTORS: conifers-; pines-

OD - ORGANISM DESCRIPTORS: *Pinus-resinosa*; *Pinus-sylvestris*; *Pinus*-; *Gremmeniella-abietina*; *Tsuga*-; *Larix*-; *Pseudotsuga-menziessii*

GE - GEOGRAPHIC NAMES: North-America; USA-

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; *Pseudotsuga*; America; North-America

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0022-1201

Record 299 of 393 - TREECD 1973-2000/01

TI - TITLE: Development of an intermediate strain of *Gremmeniella abietina* in New York.

AU - AUTHOR(S): Skilling-DD

AD - ADDRESS OF AUTHOR: North Cent. For. Exp. Sta., 1992 Folwell Avenue, St. Paul, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Phytopathology*. 1981, 71: 2, 255.

PY - PUBLICATION YEAR: 1981

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Immunogenic studies have revealed the existence of strain on pines which is intermediate between the North American (NA) and European (E) strains; it is thought to have arisen by natural hybridization between the NA and E strains. [See also PBA 48, 7020; 49, 2130].

DE - DESCRIPTORS: physiological-races; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella*-

GE - GEOGRAPHIC NAMES: USA-

BT - BROADER DESCRIPTORS: *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; North-America; America

PT - PUBLICATION TYPE: Abstract-only

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0031-949X

Record 300 of 393 - TREECD 1973-2000/01

TI - TITLE: Identification of a more virulent form of Scleroderris canker in New York.

AU - AUTHOR(S): Skilling-DD

AD - ADDRESS OF AUTHOR: North Central For. Exp. Sta., USDA For Serv., St. Paul, Minn., USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Proceedings-of-the-American-Phytopathological-Society. 1976, 3: 267.

PY - PUBLICATION YEAR: 1976

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: This information has been noticed elsewhere. [See PBA 48, 2806].

DE - DESCRIPTORS: physiological-races; conifers-; forest-trees; pines-

OD - ORGANISM DESCRIPTORS: Pinus-; GREMMENIELLA-

GE - GEOGRAPHIC NAMES: New-York; USA-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; Helotiales; Ascomycotina; Eumycota; fungi; Middle-Atlantic-States-of-USA; Northeastern-States-of-USA; USA; North-America; America

PT - PUBLICATION TYPE: Abstract-only

Record 301 of 393 - TREECD 1973-2000/01

TI - TITLE: A more virulent strain of Scleroderris canker in North America.

AU - AUTHOR(S): Skilling-DD

AD - ADDRESS OF AUTHOR: N. Cent. For. Exp. Sta., St. Paul, Minn., USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 3rd International Congress of Plant Pathology, Munchen, 16-23 August 1978. 1978, 129.

PY - PUBLICATION YEAR: 1978

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: A more virulent strain of *Gremmeniella abietina*, causing Scleroderris canker in conifers, identical to isolates from Norway and Finland but differing from isolates from other areas in North America, was identified in New York and Vermont, USA.

DE - DESCRIPTORS: conifers-; physiological-races; forest-trees

OD - ORGANISM DESCRIPTORS: *Gremmeniella*-

GE - GEOGRAPHIC NAMES: USA-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Helotiales; Ascomycotina; Eumycota; fungi; North-America; America

PT - PUBLICATION TYPE: Abstract-only; Conference-paper

Record 302 of 393 - TREECD 1973-2000/01

TI - TITLE: The development of a more virulent strain of *Scleroderris lagerbergii* in New York State.

AU - AUTHOR(S): Skilling-DD

AD - ADDRESS OF AUTHOR: N. Cent. FES, USDA For. Serv., St. Paul, Minn. 55108, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1977, 7: 5, 297-302; 1 pl.; 5 ref.

PY - PUBLICATION YEAR: 1977

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: Several thousand ha of large trees of red pine (*Pinus resinosa*) and Scots pine (*P. sylvestris*) in N.Y. State have recently been killed by *Scleroderris lagerbergii* [*Gremmeniella abietina*] canker, which had previously affected only young trees. The New York strain of *G. abietina* differs in several ways from that previously observed in N. America: it has a wider host range, it can infect branches in the upper crown, mycelial isolates grow rapidly at 12-22 deg C, and a perfect stage has very rarely been observed. The New York strain is present in several *P. sylvestris* Christmas tree plantations in N.Y. State, and the danger of possible spread of the disease by unrestricted carriage of infected Christmas trees is emphasized.

ADDITIONAL ABSTRACT: Preliminary results of host range studies, growth of mycelial cultures, and spore-dispersal patterns indicated that the str. of *Gremmeniella abietina* causing widespread losses of pines in NY State [RPP 55, 423] is different from that previously observed in N. America. The potential danger of this new, more virulent str. is discussed with special reference to its possible rapid spread by shipping infected Christmas trees.

DE - DESCRIPTORS: Christmas-trees; decay-fungi; ecology-; physiological-races; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Pinus-resinosa*; *Gremmeniella-abietina*; *Pinus-*; GREMMENIELLA-

GE - GEOGRAPHIC NAMES: New-York; USA-

BT - BROADER DESCRIPTORS: fungi; trees; woody-plants; Spermatophyta; plants; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; Middle-Atlantic-States-of-USA; Northeastern-States-of-USA; USA; North-America; America

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 303 of 393 - TREECD 1973-2000/01

TI - TITLE: Spore dispersal and field infection of conifers by *Scleroderris* canker in New York.

AU - AUTHOR(S): Skilling-DD

AD - ADDRESS OF AUTHOR: NC FES, USDA For. Serv., 1992 Folwell Ave., St. Paul, Minn. 55108, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 131]. *Proceedings-of-the-American-Phytopathological-Society*. 1977, publ. 1978, 4: 110.

PY - PUBLICATION YEAR: 1977

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Studies in New York in 1976 showed that conidia of *Scleroderris lagerbergii* [*Gremmeniella abietina*] were released from May to Oct., with max. release in May and June. Results are similar to those obtained in Michigan during a similar study, except that ascospores are rare in New York, and frequent in the Lake States. Recent studies [see FA 39, 1222] have shown several other differences between strains from the 2 areas; the New York strain is similar to European isolates and more virulent than the Michigan strain, with symptoms developing within 10 wk (instead of 11 months) after field infection.

DE - DESCRIPTORS: fungal-diseases; symptoms-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: New-York; USA-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Middle-Atlantic-States-of-USA; Northeastern-States-of-USA; USA; North-America; America

PT - PUBLICATION TYPE: Abstract-only

Record 304 of 393 - TREECD 1973-2000/01

TI - TITLE: Field evaluation of *Larix* somaclones for resistance to *Gremmeniella abietina*.

AU - AUTHOR(S): Skilling-DD; Barker-MJ; Capretti-P et-al

AD - ADDRESS OF AUTHOR: USDA Forest Service, North Central Forest Experiment Station, 1992 Folwell Avenue, St. Paul, MN 55108, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Shoot and foliage diseases in forest trees. Proceedings of a Joint Meeting of the IUFRO Working Parties S2.06.02 and S2.06.04, Vallombrosa, Firenze, Italy 6-11 June 1994. 1995, 179-180; 3 ref.

PB - PUBLISHER INFORMATION: Istituto di Patologia e Zoologia Forestale e Agraria, Universita degli Studi di Firenze; Firenze; Italy

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Aseptic culture techniques were used to produce European larch (*Larix decidua*) somatic variants with resistance to *Gremmeniella abietina*. Regenerated plantlets were inoculated in vitro with conidia of *G. abietina*. Plantlets that survived three inoculations were multiplied in vitro and ex vitro from axillary buds to produce 50 clonal lines with putative disease resistance. These were field tested for 2 years at two locations in New York and one location in Wisconsin for resistance to both North American and European strains of *G. abietina*. Results of these tests show that not all clones with increased resistance under laboratory conditions maintained this degree of resistance in the field. However, several clonal lines produced in vitro were more resistant to both strains than seedling plants.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; tissue-culture; in-vitro-culture; resistance-; inoculation-; disease-resistance; testing-; fungal-diseases; somaclonal-variation; plant-diseases; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Larix-decidua*; fungi-

GE - GEOGRAPHIC NAMES: USA-; New-York; Wisconsin-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Larix*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; OECD-Countries; Developed-Countries; North-America; America; Middle-Atlantic-States-of-USA; Northeastern-States-of-USA; USA; Lake-States-of-USA; North-Central-States-of-USA; East-North-Central-States-of-USA

PT - PUBLICATION TYPE: Conference-paper

IB - INTERNATIONAL STANDARD BOOK NUMBER: 88-900074-0-0

Record 305 of 393 - TREECD 1973-2000/01

TI - TITLE: A serological procedure for identifying strains of *Gremmeniella abietina*.

AU - AUTHOR(S): Skilling-DD; Kienzler-M

AD - ADDRESS OF AUTHOR: NCFES, USDA For. Serv., St. Paul, MN 55108, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): General-Technical-Report,-North-Central-Forest-Experiment-Station,-USDA-Forest-Service. 1983, No. NC-87, iii + 15 pp.; 1 pl.; 5 ref.

PY - PUBLICATION YEAR: 1983

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The gel double diffusion method is described for distinguishing the European strain which is a potentially serious disease of conifers in North America.

DE - DESCRIPTORS: taxonomy-; methodology-; Fungal-diseases

OD - ORGANISM DESCRIPTORS: Fungi-; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: North-America

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; America

PT - PUBLICATION TYPE: Journal-article

Record 306 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris canker of northern conifers.

AU - AUTHOR(S): Skilling-DD; O'-Brien-JT

AD - ADDRESS OF AUTHOR: N. Cent. FES, St. Paul, Minn., USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Forest-Pest-Leaflet,-Forest-Service,-US-Department-of-Agriculture. 1972, No. 130, 4 pp.; 3 pl.; 5 ref.

PY - PUBLICATION YEAR: 1972

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: A description of the distribution in Canada and the USA, hosts, life history, symptoms of infection, damage caused and control methods for the fungus *Scleroderris lagerbergii*.

DE - DESCRIPTORS: fungal-diseases; control-

OD - ORGANISM DESCRIPTORS: fungi-; GREMMENIELLA-ABIETINA

GE - GEOGRAPHIC NAMES: USA-; Canada-

BT - BROADER DESCRIPTORS: Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi; North-America; America

PT - PUBLICATION TYPE: Miscellaneous

Record 307 of 393 - TREECD 1973-2000/01

TI - TITLE: The identification of strains of *Gremmeniella abietina* by field and laboratory methods.

AU - AUTHOR(S): Skilling-DD; Ostry-ME

AD - ADDRESS OF AUTHOR: NC FES, USDA For. Serv., St. Paul, MN 55108, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): USA, American Phytopathological Society: Abstracts. *Phytopathology*. 1979, 69: 9, 1045.

PY - PUBLICATION YEAR: 1979

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: [See FA 40, 3111] Distribution in USA and Canada, and identification, are described for European and North American strains.

DE - DESCRIPTORS: ecology-; identification-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; fungi-

GE - GEOGRAPHIC NAMES: USA-; Canada-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; North-America; America

PT - PUBLICATION TYPE: Abstract-only

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0031-949X

Record 308 of 393 - TREECD 1973-2000/01

TI - TITLE: Biology and control of Scleroderris canker in North America.
AU - AUTHOR(S): Skilling-DD; Schneider-B; Fasking-D
AD - ADDRESS OF AUTHOR: NCFES, USDA For. Serv., St. Paul, MN 55108, USA.
SO - SOURCE (BIBLIOGRAPHIC CITATION): Research-Paper,-North-Central-Forest-Experiment-Station,-USDA-Forest-Service. 1986, No. NC-275, 18pp.; 60 ref.
PY - PUBLICATION YEAR: 1986
LA - LANGUAGE OF TEXT: English
AB - ABSTRACT: An account is given of the taxonomy, distribution, host range, spore dissemination, infection biology, spread within stands, variation of isolates and control of European and N. American strains of *Gremmeniella abietina* in NE USA and Canada.
DE - DESCRIPTORS: Cankers-; infection-; spread-; control-; forest-trees; broadleaves-; plant-pathology; plant-pathogenic-fungi
OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; fungi-
GE - GEOGRAPHIC NAMES: USA-; Canada-; North-America
BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; dicotyledons; angiosperms; fungi; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; North-America; America
PT - PUBLICATION TYPE: Journal-article

Record 309 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris canker on Austrian and ponderosa pine in New York.

AU - AUTHOR(S): Skilling-DD; Schneider-BS; Sullivan-JA

AD - ADDRESS OF AUTHOR: North Central FES, USDA For. Serv., 1992 Folwell Av., St. Paul, Minn. 55108, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Plant-Disease-Reporter. 1977, 61: 8, 707-708; 1 pl.; 2 ref.

PY - PUBLICATION YEAR: 1977

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Schleroderris lagerbergii [Gremmeniella abietina] is reported for the first time on pole-size Pinus nigra and P. ponderosa in northern New York [see FA 37, 401]. P. ponderosa was very susceptible to the fungus; P. nigra appeared to be as susceptible as P. resinosa, with P. sylvestris as the most resistant species. S. lagerbergii will probably cause major plantation losses throughout northern New York in the next few years.

ADDITIONAL ABSTRACT: The disease, caused by Gremmeniella abietina, is newly reported on pole-sized Pinus nigra and P. ponderosa in northern NY. The fungus killed upper crowns of both spp. The former is moderately susceptible whereas the latter is extremely susceptible and is killed.

DE - DESCRIPTORS: forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: Gremmeniella-abietina; Pinus-nigra; Pinus-ponderosa; Pinus-

GE - GEOGRAPHIC NAMES: New-York; USA-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants;

Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi; Pinus; Pinaceae;

Pinopsida; gymnosperms; Middle-Atlantic-States-of-USA; Northeastern-States-of-USA; USA; North-America; America

PT - PUBLICATION TYPE: Journal-article

Record 310 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris canker -- development of strains and potential damage in North America.

AU - AUTHOR(S): Skilling-DD; Straby-AG

AD - ADDRESS OF AUTHOR: North Cent. Forest Exp. Sta., St. Paul, Minn., USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): High impact disease of the 1980s. Canadian-Journal-of-Plant-Pathology. 1981, 3: 263-265; 1 tab.; 10 ref.

PY - PUBLICATION YEAR: 1981

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Evidence for the existence of str. of *Gremmeniella abietina* on conifers in N. America, with the presence there of the European str. (to which Canadian pines are highly susceptible), intermediate and hybrid str. is reviewed. The potential effect of these str. on Canadian pine forests is discussed.

DE - DESCRIPTORS: races-; fungal-diseases; control-; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: Pinus-; *Gremmeniella-abietina*; Pinopsida-; *Gremmeniella*-

GE - GEOGRAPHIC NAMES: Canada-; North-America; USA-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; North-America; America

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0706-0661

Record 311 of 393 - TREECD 1973-2000/01

TI - TITLE: Fungicides for control of Scleroderris canker.

AU - AUTHOR(S): Skilling-DD; Waddell-CD

AD - ADDRESS OF AUTHOR: N. Central Forest Exp. Stn., USDA, St. Paul, Minn., USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Plant-Disease-Reporter. 1974, 58: 12, 1097-1100; 5 ref.

PY - PUBLICATION YEAR: 1974

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Reports the results of trials over a 3-year period, of 6 fungicides to control Scleroderris lagerbergii on Pinus resinosa nursery stock in N. Wisconsin. Chlorothalonil and chlorothalonil + cycloheximide were the most effective. About seven sprays of chlorothalonil at 0.3% active ingredient are recommended to control the disease. [Cf. FA 32, 2761]

DE - DESCRIPTORS: fungicides-; cycloheximide-; nurseries-; control-; chlorothalonil-; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: Pinus-resinosa; Pinus-; Gremmeniella-abietina

BT - BROADER DESCRIPTORS: pesticides; aromatic-fungicides; fungicides; trees; woody-plants; Spermatophyta; plants; Pinus; Pinaceae; Pinopsida; gymnosperms; Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Journal-article

Record 312 of 393 - TREECD 1973-2000/01

TI - TITLE: Evaluation of fungicides for control of *Gremmeniella abietina*.] Laboratory and preliminary field assays.

AU - AUTHOR(S): Smerlis-E

AD - ADDRESS OF AUTHOR: For. Res. Cent. Laurentides, Sainte-Foy, Quebec, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Rapport-d'Information.-Centre-de-Recherches-Forestieres-des-Laurentides. 1976, LAU-X-23, 34 pp.; 2 tab.; 8 ref.

PY - PUBLICATION YEAR: 1976

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Lab. and field trials with 20 fungicides against *G. abietina* are reported. In the lab. a str. from jack pine was generally less sensitive to fungicides than a str. from black spruce. In the field phygon 50-W was the most effective on jack pine and red pine, suppressing infection completely with 1-3 applications at 20 000 or 40 000 ppm. Ascospore discharge from apothecia on jack pine was completely inhibited by 2 applications of stove oil. Partial control of the str. on black spruce was obtained with 3 applications of C-O-CS, dithane M-22 or Z-C spray at 20000 or 40000 ppm.

DE - DESCRIPTORS: control-; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: Pinus-; *Gremmeniella-abietina*; PICEA-

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; North-America; America

PT - PUBLICATION TYPE: Miscellaneous

Record 313 of 393 - TREECD 1973-2000/01

TI - TITLE: Evaluation of fungicides for control of *Gremmeniella abietina* 1. Laboratory and preliminary field assays.

AU - AUTHOR(S): Smerlis-E

AD - ADDRESS OF AUTHOR: Centre Recherches Forestieres des Laurentides, Ste.-Foy, Quebec G1V 4C7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Rapport-d'Information,-Centre-de-Recherches-Forestieres-des-Laurentides. 1976, No. LAU-X-23, 34 pp.; 8 ref.

PY - PUBLICATION YEAR: 1976

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: In the laboratory, a strain of *Gremmeniella abietina* from *Pinus banksiana* was generally less sensitive to the 20 fungicides tested, than a strain from *Picea mariana*. In the field, dichlone was the most effective on *P. banksiana* and *P. resinosa*, against a strain from *P. banksiana*, suppressing infection completely after one to three applications at 20 000 or 40 000 p.p.m. in suspension. Partial protection of *P. banksiana* was obtained from copper oxychloride sulphate (COS), dodine, captafol, maneb, mancozeb, zineb, sulphur and folpet. Folpet was similarly effective on *P. resinosa*. Two applications of stove oil completely inhibited ascospore discharge in the field from apothecia on *P. banksiana*. On *P. mariana*, three applications at 20 000 or 40 000 p.p.m. in suspension of COS, maneb or ziram spray resulted in partial control of the strain from *P. mariana*. From author's summary.

DE - DESCRIPTORS: fungal-diseases; control-; fungicides-; dichlone-; dodine-; captafol-; maneb-; mancozeb-; zineb-; sulfur-; folpet-; ziram-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-banksiana*; *Pinus-resinosa*; *Picea-mariana*

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: pesticides; quinone-fungicides; fungicides; aliphatic-nitrogen-fungicides; dicarboximide-fungicides; dithiocarbamate-fungicides; carbamate-pesticides; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Picea*; North-America; America

PT - PUBLICATION TYPE: Miscellaneous

Record 314 of 393 - TREECD 1973-2000/01

TI - TITLE: Pathogenicity tests of some discomycetes occurring on conifers.

AU - AUTHOR(S): Smerlis-E

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Forest-Research. 1973, 3: 1, 7-16; 27 ref.

PY - PUBLICATION YEAR: 1973

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: The pathogenicity of *Cenangium ferruginosum*, *Dermea balsamea*, *D. piceina* pithya. piceina [cf. [cf. FA 30, 5970], *Potentillomyces coniferarum*, and *Pragmopora pithya* was confirmed and demonstrated on additional tree species, and the pathogenicity of the following was demonstrated for the first time: *Ascocalyx laricina*, *Biatorella resinae*, *Dermea pinicola*, *Lachnellula agassizii*, *L. arida*, *L. gallica*, *L. occidentalis*, *Potentillomyces balsamicola* var. *balsamicola*, *Pragmopora amphibola*. Inoculations with six other species were negative. The relative virulence of the fungi studied is discussed: the most virulent, on various species of conifers, appear to be *Potentillomyces coniferarum* and *Pragmopora pithya*. The material studied consisted of cankers, dead and dying branches and stems, fallen trees, and logging slash.

DE - DESCRIPTORS: pathogenicity-; forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: Pinopsida-; *Potentillomyces-coniferarum*

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; gymnosperms; *Potentillomyces*; Rhytismatales; Ascomycotina; Eumycota; fungi; *Ascocalyx*; *Lachnellula*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0045-5067

Record 315 of 393 - TREECD 1973-2000/01

TI - TITLE: Evaluation of fungicides used to control *Gremmeniella abietina* IV. Results of field trials in 1979 and 1980.

OT - ORIGINAL NON-ENGLISH TITLE: Evaluation de fongicides utilises pour le controle du *Gremmeniella abietina* IV. Resultats des essais effectues sur le terrain en 1979 et 1980.

AU - AUTHOR(S): Smerlis-E

SO - SOURCE (BIBLIOGRAPHIC CITATION): Rapport-d'Information-Centre-de-Recherches-Forestieres-des-Laurentides. 1983, LAU-X-58, 26 pp.; 5 tab. See RPP 56, 5829; 6 ref.

PY - PUBLICATION YEAR: 1983

LA - LANGUAGE OF TEXT: English, French

AB - ABSTRACT: Daconil 2787 flowable (chlorothalonil) at 20 g/l, applied twice with an interval of 2 wk, controlled the N. American str. of *G. abietina* on pine. The first treatment should be early in spring when the leading shoots of *Pinus banksiana* and *P. resinosa* are 10 and 5 cm long, respectively. Water suspensions of Acti-dione TGF (cycloheximide) at 0.4 g/l and Daconil wettable powder (chlorothalonil, 4 g) applied 4 times at weekly intervals were also effective. The Quebec str. of *G. abietina* on spruce seedlings was controlled by 1 application in July of a water suspension of 2% Bravo 6F [chlorothalonil], 2% Daconil 2787 flowable, 3% Daconil 2787 wettable powder or 4% Dyrene [anilazine].
DE - DESCRIPTORS: Pines-; control-; Chlorothalonil-; Cycloheximide-; Anilazine-; Cankers-; Fungicides-; nurseries-; diseases-; forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; Pinopsida-; *Picea*-; *Pinus-banksiana*; *Pinus-resinosa*; *Pinus*-

GE - GEOGRAPHIC NAMES: Canada-; Quebec-

BT - BROADER DESCRIPTORS: aromatic-fungicides; fungicides; pesticides; trees; woody-plants; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; gymnosperms; Pinaceae; Pinopsida; *Pinus*; North-America; America; Canada

PT - PUBLICATION TYPE: Miscellaneous

Record 316 of 393 - TREECD 1973-2000/01

TI - TITLE: Evaluation of fungicides for control of *Gremmeniella abietina*. II. Results of 1975, 1976 and 1977 field assays. III. Results of 1978 field assays.

OT - ORIGINAL NON-ENGLISH TITLE: Evaluation des fongicides utilises pour le controle du *Gremmeniella abietina*. II. Resultats des essais effectues sur le terrain en 1975, 1976 and 1977. III. Resultats des essais effectues sur le terrain en 1978.

AU - AUTHOR(S): Smerlis-E

AD - ADDRESS OF AUTHOR: Laur. FRC, Can. For. Serv., Sainte-Foy, Quebec G1V 4C7, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Rapport-d'Informations,-Centre-de-Recherches-Forestieres-des-Laurentides,-Canada. 1979; 1980, No. LAU-X-38; LAU-X-46, iv + 44; iii + 24 pp.; 3 ref. See FA 41, 6915; 4 ref.

PY - PUBLICATION YEAR: 1979

LA - LANGUAGE OF TEXT: English, French

DE - DESCRIPTORS: fungicides-; chlorothalonil-; triazines-; conifers-

OD - ORGANISM DESCRIPTORS: *Pinus-resinosa*; *Picea-glauca*; *Pinus-banksiana*; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Canada-; Quebec-

BT - BROADER DESCRIPTORS: pesticides; aromatic-fungicides; fungicides; *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; *Picea*; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; North-America; America; Canada

PT - PUBLICATION TYPE: Miscellaneous

Record 317 of 393 - TREECD 1973-2000/01

TI - TITLE: Bark beetle carriers of *Gremmeniella abietina* and other pathogenic microfungi.

AU - AUTHOR(S): Smerlis-E; Finnegan-RJ

AD - ADDRESS OF AUTHOR: Laurentian Forest Research Centre, Ste.-Foy, Quebec, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Forestry-Service-Research-Notes. 1981, 1: 1, 2-4; 12 ref.

PY - PUBLICATION YEAR: 1981

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: In studies in Quebec in 1979, 62% of adults of *Pityophthorus* sp. taken from dead infested branches of red pine (*Pinus resinosa*) were found to be carriers of *Gremmeniella abietina*, an important fungal pathogen of pines and spruces (*Picea* spp.); 7-46% of adults of *Orthotomicus caelatus* (Eichh.) similarly collected were carriers. Of about 12 species of fungi identified in one or both species of scolytids, *Leucostoma kunzei*, *Potebniomyces coniferarum*, *Ophionectria cucurbitula* (*Scoleconectria cucurbitula*), *Sydowia polyspora*, *Tympanis hypopodia* and *T. laricina* are known to be causal agents of cankers or diebacks of various species of conifers.

DE - DESCRIPTORS: natural-enemies; disease-vectors; trees-; plant-diseases; agricultural-entomology

OD - ORGANISM DESCRIPTORS: fungi-; *Gremmeniella-abietina*; *Potebniomyces-coniferarum*; *Sydowia-polyspora*; *Pinus-resinosa*; *Pityophthorus*-; *Scolytidae*-; arthropods-

GE - GEOGRAPHIC NAMES: Canada-; Quebec-

BT - BROADER DESCRIPTORS: woody-plants; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Potebniomyces*; Rhytismatales; *Sydowia*; Dothideales; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Scolytidae*; Coleoptera; insects; arthropods; invertebrates; animals; insect-pests; arthropod-pests; pests; North-America; America; Canada; *Leucostoma*; Diaporthales; *Orthotomicus*

PT - PUBLICATION TYPE: Journal-article

Record 318 of 393 - TREECD 1973-2000/01

TI - TITLE: Current threats to Polish forests.

OT - ORIGINAL NON-ENGLISH TITLE: Aktualne zagrozenie lasow w Polsce.

AU - AUTHOR(S): Smykala-J

AD - ADDRESS OF AUTHOR: Naczelny Zarzad Las. Panstw., Warsaw, Poland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Las-Polski. 1985, No. 17, 12-13.

PY - PUBLICATION YEAR: 1985

LA - LANGUAGE OF TEXT: Polish

AB - ABSTRACT: Results of the 1983 large-area inventory of forest health status by the Bureau of Forest Management and Forest Land Survey together with further data for 1984-85 are used to catalogue the extent of damage by different agents in Polish forests. On a vol. basis, only 78% of living trees are healthy, with 19% weakened and 3% severely weakened. Forests in 4 provinces (Szczecinek, Worclaw, Torun and Katowice) are in a disastrous condition, and only 5 provinces (Bialystok, Lodz, Lublin, Krakow and Radom) can be said to have healthy forests. Data are given for damage by air pollution (mainly SO₂, NO_x and F), snow and wind damage, excessive rainfall and drought, attack by *Lymantria monacha*, secondary insect pests, and the fungi *Cenangium ferruginosum* and *Scleroderris lagerbergii* [*Gremmeniella abietina*].

DE - DESCRIPTORS: Forest-inventories; Snow-; damage-; Wind-damage; Fungal-diseases; distribution-; Insect-pests; Air-pollution; fluorine-; sulfur-dioxide; nitrogen-oxides

OD - ORGANISM DESCRIPTORS: *Lymantria-monacha*; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Poland-

BT - BROADER DESCRIPTORS: arthropod-pests; pests; animals; arthropods; invertebrates; insects; *Lymantria*; *Lymantriidae*; *Lepidoptera*; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; Central-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0023-8538

Record 319 of 393 - TREECD 1973-2000/01

TI - TITLE: Hirkjolen Experimental Area.
OT - ORIGINAL NON-ENGLISH TITLE: Hirkjolen Forsoksomrade.
AU - AUTHOR(S): Solbraa-K
AD - ADDRESS OF AUTHOR: Seksjon Skogbehandling, Norsk Institutt for Skogforskning, 1432 As-NLH, Norway.
SO - SOURCE (BIBLIOGRAPHIC CITATION): Rapport -Norsk-Institutt-for-Skogforskning. 1990, No. 7-90, 27 pp.; With English captions; 10 ref.
PY - PUBLICATION YEAR: 1990
LA - LANGUAGE OF TEXT: Norwegian
LS - LANGUAGE OF SUMMARIES: English
AB - ABSTRACT: A description is presented of the Hirkjolen Experimental Area, which is located 280 km N. of Oslo, Norway, and between 740 and 1160 m altitude. The area is to be used as a demonstration area [for educational and recreational purposes] for forest ecological relationships and multiple use close to the tree line. Some 1150 ha are covered by forests and 250 ha are above the tree line. Norway spruce (*Picea abies*) generally occurs on E. and W. slopes and Scots pine (*Pinus sylvestris*) generally occurs on S. slopes and at lower altitudes. Birch (*Betula pubescens*) is dominant (i) in the valleys where the conifers suffer from summer frosts and (ii) near the tree line. Pine distribution is further restricted by fungal attacks (e.g. by *Phacidium infestans* and *Gremmeniella abietina*). Small plantations of *Larix decidua*, *Abies lasiocarpa*, *Tsuga mertensiana*, *Picea engelmannii* and *P. pungens* established in the 1930s have grown quite well up to about 1000 m altitude. *Pinus contorta* is well established in areas where planted Scots pine had suffered complete mortality.
DE - DESCRIPTORS: Broadleaves-; Conifers-; Nature-reserves; research-; Forest-ecology; treelines-; Forest-management; multiple-use
OD - ORGANISM DESCRIPTORS: *Picea-pungens*; *Picea-abies*; *Pinus-sylvestris*; *Betula-pubescens*; *Phacidium-infestans*; *Gremmeniella-abietina*; *Larix-decidua*; *Abies-lasiocarpa*; *Tsuga-mertensiana*; *Picea-engelmannii*; *Pinus-contorta*
GE - GEOGRAPHIC NAMES: Norway-
BT - BROADER DESCRIPTORS: dicotyledons; angiosperms; Spermatophyta; plants; *Picea*; Pinaceae; Pinopsida; gymnosperms; *Pinus*; *Betula*; Betulaceae; Fagales; *Phacidium*; Helotiales; Ascomycotina; Eumycota; fungi; *Gremmeniella*; *Larix*; *Abies*; *Tsuga*; Scandinavia; Northern-Europe; Europe
PT - PUBLICATION TYPE: Miscellaneous
IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0333-001X

Record 320 of 393 - TREECD 1973-2000/01

TI - TITLE: Reforestation of Scots pine after wildfires.
OT - ORIGINAL NON-ENGLISH TITLE: Kulturforryngelse av furu etter skogbrann.
AU - AUTHOR(S): Solbraa-K; Brunvatne-JO
AD - ADDRESS OF AUTHOR: Seksjon Skogbehandling, Norsk Institutt for Skogforskning, 1432 As, Norway.
SO - SOURCE (BIBLIOGRAPHIC CITATION): Rapport-fra-Skogforsk. 1994, No. 21, 1-39; With English figures and tables; 47 ref.
PB - PUBLISHER INFORMATION: Norsk Institutt for Skogforskning (Norwegian Forest Research Institute); As; Norway
PY - PUBLICATION YEAR: 1994
LA - LANGUAGE OF TEXT: Norwegian
LS - LANGUAGE OF SUMMARIES: English
AB - ABSTRACT: Observations up to 1992 are reported for Scots pine (*Pinus sylvestris*) plantations established (mainly by planting, with some direct sowing) on 5 burnt sites in Norway starting in 1976/77. Aspects discussed include attack by insect pests (*Hylobius abietis*) and fungi (*Rhizina undulata*, *Gremmeniella abietina*) and its control, effects of nitrogen fertilizer treatment, height increment, mortality etc.
DE - DESCRIPTORS: forest-trees; forest-pests; insect-pests; fungal-diseases; plant-diseases; nitrogen-fertilizers; height-; plant-height; increment-; mortality-; artificial-regeneration; direct-sowing; forest-fires; plantations-; burnt-soils
OD - ORGANISM DESCRIPTORS: *Hylobius-abietis*; *Rhizina-undulata*; *Gremmeniella-abietina*; *Pinus-sylvestris*
GE - GEOGRAPHIC NAMES: Norway-
BT - BROADER DESCRIPTORS: *Hylobius*; *Curculionidae*; *Coleoptera*; insects; arthropods; invertebrates; animals; *Rhizina*; *Pezizales*; *Ascomycotina*; *Eumycota*; fungi; *Gremmeniella*; *Helotiales*; *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; EFTA; Developed-Countries; European-Union-Countries; OECD-Countries; Scandinavia; Northern-Europe; Europe
PT - PUBLICATION TYPE: Miscellaneous
IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0803-2858

Record 321 of 393 - TREECD 1973-2000/01

TI - TITLE: Dieback of spruce.

OT - ORIGINAL NON-ENGLISH TITLE: Toppdod pa gran.

AU - AUTHOR(S): Solheim-H

SO - SOURCE (BIBLIOGRAPHIC CITATION): Norsk-Skogbruk. 1986, 32: 6-7, 12-13.

PY - PUBLICATION YEAR: 1986

LA - LANGUAGE OF TEXT: Norwegian

AB - ABSTRACT: Presents observations in S. Norway mainly in 1983 and 1985, when damage was considerable especially in the 10-20 age group, in trees with extra long top shoots. *Gremmeniella abietina* was present. Symptoms were particularly marked under or near pine trees. Effects of provenance, site quality, weather, acid rain and their interactions are briefly discussed.

DE - DESCRIPTORS: Dieback-; conifers-

OD - ORGANISM DESCRIPTORS: *Picea*-; *Picea-abies*; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Norway-

BT - BROADER DESCRIPTORS: Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Picea*; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0029-2087

Record 322 of 393 - TREECD 1973-2000/01

TI - TITLE: Observations on the occurrence and variation of *Scleroderris lagerbergii* Gremmen in north Germany.
OT - ORIGINAL NON-ENGLISH TITLE: Beobachtungen über das Vorkommen und die Variation von *Scleroderris lagerbergii* Gremmen in Norddeutschland.
AU - AUTHOR(S): Stephan-BR
AD - ADDRESS OF AUTHOR: Inst. Forstgenetik u. Forstpflanzenzuchtung, Grosshansdorf-Schmalenbeck, German Federal Republic.
SO - SOURCE (BIBLIOGRAPHIC CITATION): Zeitschrift-fur-Mykologie. 1979, 45: 1, 45-53; 3 fig., 1 tab.; 18 ref.
PY - PUBLICATION YEAR: 1979
LA - LANGUAGE OF TEXT: German
LS - LANGUAGE OF SUMMARIES: English
AB - ABSTRACT: In the last 10 yr *S. lagerbergii* [*Gremmeniella abietina*] has been found on 14 pine spp., 1 var. and an interspecific hybrid, and on 2 spruce spp. New hosts included *Pinus tabulaeformis*, *P. koraiensis* and *P. parviflora*. *P. contorta*, *P. mugo*, *P. resinosa*, *P. rigida* and *P. wallichiana* were new hosts for W. Germany. In spite of great variation in size and septation of pycnospores all 22 isolates of the fungus examined conformed with the sp.
DE - DESCRIPTORS: forest-trees; conifers-; plant-pathology; pines-
OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella-abietina*; PICEA-
GE - GEOGRAPHIC NAMES: German-Federal-Republic; Germany-
BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Western-Europe; Europe
PT - PUBLICATION TYPE: Journal-article
IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0170-110X

Record 323 of 393 - TREECD 1973-2000/01

TI - TITLE: Clonal reaction of Pinus nigra to Scleroderris lagerbergii Gremmen.
OT - ORIGINAL NON-ENGLISH TITLE: Klonabhängiges Verhalten bei Pinus nigra Arnold gegenüber Scleroderris lagerbergii Gremmen.
AU - AUTHOR(S): Stephan-BR
SO - SOURCE (BIBLIOGRAPHIC CITATION): Allg.-Forst-u.-Jagdztg. 1970, 41: 60-63.
PY - PUBLICATION YEAR: 1970
LA - LANGUAGE OF TEXT: German
AB - ABSTRACT: Of 14 grafted clones examined, three were markedly resistant to the pathogen.
DE - DESCRIPTORS: conifers-; forest-trees
GE - GEOGRAPHIC NAMES: German-Federal-Republic; Germany-
BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Western-Europe; Europe
PT - PUBLICATION TYPE: Journal-article

Record 324 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris [Gremmeniella abietina] canker disease of conifers. Bibliography of the disease and its pathogen during the last 100 years (1883-1986).

AU - AUTHOR(S): Stephan-BR (ed.); Schulze-I

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1987, 111pp.; 601 ref.

PB - PUBLISHER INFORMATION: Institut fur Forstgenetik & Forstpflanzenzuchtung; Grosshansdorf; German Federal Republic

PY - PUBLICATION YEAR: 1987

LA - LANGUAGE OF TEXT: En,De

DE - DESCRIPTORS: Bibliographies-; cankers-

OD - ORGANISM DESCRIPTORS: Gremmeniella-abietina

BT - BROADER DESCRIPTORS: Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Miscellaneous

Record 325 of 393 - TREECD 1973-2000/01

TI - TITLE: Further studies on differences between *Pinus nigra* clones in their susceptibility to *Scleroderris lagerbergii*.

OT - ORIGINAL NON-ENGLISH TITLE: Weitere Untersuchungen zur unterschiedlichen Anfälligkeit von *Pinus nigra*-Klonen gegenüber *Scleroderris lagerbergii*.

AU - AUTHOR(S): Stephan-BR; Scholz-F

AD - ADDRESS OF AUTHOR: BFA Forst- u. Holzwirtschaft, D-2070 Grosshansdorf 2, German Federal Republic.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1979, 9: 1, 46-51; 5 ref.

PY - PUBLICATION YEAR: 1979

LA - LANGUAGE OF TEXT: German

LS - LANGUAGE OF SUMMARIES: English, French

AB - ABSTRACT: Significant differences between 14 *P. nigra* clones in their susceptibility to *S. lagerbergii* [*Gremmeniella abietina*] were first noticed in 1969 [see FA 31, 6684]. The differences were still apparent in 1972, after further attacks by the fungus. There were also significant differences between the clones in the buffer capacity of homogenized bark from 1-yr-old shoots, the less susceptible clones having the higher buffering capacity.

ADDITIONAL ABSTRACT: In a seed plantation near Rendsburg (Holstein), 14 clones showed varied susceptibility to *S. lagerbergii* [*Gremmeniella abietina*] and differences in buffering capacity of homogenized bark tissue of 1-yr shoots. Less susceptible clones had a higher buffering capacity [RPP 50, 1453].

DE - DESCRIPTORS: variation-; plant-breeding; fungal-diseases; resistance-; genetics-; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus-nigra*; *Gremmeniella-abietina*; *Pinus*-; GREMMENIELLA-

GE - GEOGRAPHIC NAMES: German-Federal-Republic; Germany-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Western-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 326 of 393 - TREECD 1973-2000/01

TI - TITLE: Forest insect and disease conditions in Canada 1981.

AU - AUTHOR(S): Sterner-TE (ed.); Davidson-AG

AD - ADDRESS OF AUTHOR: Can. For. Serv., Environ. Can., Ottawa, Ont. K1A 1G5, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1982, ii + 46 pp.; 54 ref.

PB - PUBLISHER INFORMATION: Canadian Forestry Service; Ottawa; Canada

PY - PUBLICATION YEAR: 1982

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The occurrence and effects of *Choristoneura fumiferana*, *C. occidentalis*, *C. biennis*, *Dendroctonus ponderosae*, *D. rufipennis*, *D. simplex*, *Gremmeniella abietina*, *Lachnellula willkommii*, *Lymantria dispar*, *Ceratocystis ulmi*, *Arceuthobium* spp., *Orgyia pseudotsugata* and *Malacosoma disstria* are described for each affected region, with notes on control and forecasts for 1982. The results of special surveys on cone and seed pests and pests of young stands are reported, and the occurrence of other insects and diseases tabulated by region.

DE - DESCRIPTORS: damage-; insect-pests; fungal-diseases; mistletoes-

OD - ORGANISM DESCRIPTORS: *Choristoneura-fumiferana*; *Choristoneura-occidentalis*; *Choristoneura-biennis*; *Dendroctonus-ponderosae*; *Dendroctonus-rufipennis*; *Gremmeniella-abietina*; *Lymantria-dispar*; *Orgyia-pseudotsugata*; *Arceuthobium-*

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: arthropod-pests; pests; animals; arthropods; invertebrates; insects; *Choristoneura*; Tortricidae; Lepidoptera; *Dendroctonus*; Scolytidae; Coleoptera; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Lymantria*; Lymantriidae; *Orgyia*; Viscaceae; Santalales; dicotyledons; angiosperms; Spermatophyta; plants; North-America; America

PT - PUBLICATION TYPE: Miscellaneous

IB - INTERNATIONAL STANDARD BOOK NUMBER: 0-662-12067-1

Record 327 of 393 - TREECD 1973-2000/01

TI - TITLE: Forest insect and disease conditions in Canada 1980.

AU - AUTHOR(S): Sterner-TE; Davidson-AG

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1981, 43 pp.; 6 fig., 280 X 215 mm; 46 ref.

PB - PUBLISHER INFORMATION: Forest Insect and Disease Survey, Canadian Forestry Service.; Ottawa; Canada

PY - PUBLICATION YEAR: 1981

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: This report on forest insect and disease conditions in Canada represents an attempt to modify the Annual Report of the Forest Insect and Disease Survey, which has been published since 1951. The content of the report has been changed so that pests considered to be currently most significant are dealt with in detail and the status of other pests is summarised in tabular form by region. No attempt has been made to report the status of all pests in all regions. Numerous pests are consistently present in particular regions, but they have not been mentioned in this report unless significant changes in their status have occurred or new information has been obtained. Eight kinds of insects are dealt with as major pests, and many more as minor ones. Special surveys on cone and seed pests (in British Columbia and Ontario) and pests in young stands (also in British Columbia and Ontario) are reported.

ADDITIONAL ABSTRACT: This publication replaces the Annual Report of the Forest Insect and Disease Survey [RPP 60, 1625] and reflects the greater attention being paid to diseases likely to affect the forest economy and environment. Surveys are presented on major forest insects and diseases including Dutch elm disease (*Ceratocystis ulmi*) and scleroderris canker (*Gremmeniella abietina*), indicating incidence, distribution and economic impact. Other insects and diseases are listed under the regions (Newfoundland, Maritimes, Quebec, Ontario, Western and Northern, and Pacific and Yukon).

DE - DESCRIPTORS: forest-pests; forest-trees; diseases-; trees-; agricultural-entomology; plant-pathology

OD - ORGANISM DESCRIPTORS: *Ulmus*-; *Ceratocystis-ulmi*; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Canada-; British-Columbia; Ontario-

BT - BROADER DESCRIPTORS: pests; animals; trees; woody-plants; Spermatophyta; plants; *Ulmaceae*; *Urticales*; dicotyledons; angiosperms; *Ceratocystis*; *Ophiostomatales*; *Ascomycotina*; *Eumycota*; fungi; *Gremmeniella*; *Helotiales*; North-America; America; Canada

PT - PUBLICATION TYPE: Annual-report

IB - INTERNATIONAL STANDARD BOOK NUMBER: 0-662-11535-X

Record 328 of 393 - TREECD 1973-2000/01

TI - TITLE: Forest insect and disease conditions in Canada 1981.

AU - AUTHOR(S): Sterner-TE; Davidson-AG

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1982, 46 pp.; 8 fig.; 54 ref.

PB - PUBLISHER INFORMATION: Forest Insect and Disease Survey; Ottawa; Canada

PY - PUBLICATION YEAR: 1982

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: This review of forest insect and disease conditions in Canada replaces the former serial publication Annual Report of the Forest Insect and Disease Survey, which was published from 1951 to 1980. The new format was selected to reflect the changing emphasis toward those arthropods and diseases that are likely to affect significantly the forest economy or environment. In the first part of the volume, reviews are presented for about 8 major pest insects and 5 diseases in the various regions of the country. Special survey reports follow, on cone and seed pests and pests in young stands. The remainder of the volume contains summary reviews of other insects and diseases in the Newfoundland, Maritimes, Quebec, Ontario, Western and Northern, and Pacific and Yukon Regions.

DE - DESCRIPTORS: forest-pests; forest-trees; diseases-; larch-; trees-; agricultural-entomology; plant-pathology

OD - ORGANISM DESCRIPTORS: Gremmeniella-abietina; Pinopsida-; Ceratocystis-ulmi; Ulmus-; arthropods-; TRICHOSCYPHELLA-WILLKOMMII

GE - GEOGRAPHIC NAMES: Canada-; Newfoundland-; Quebec-; Ontario-; Yukon-Territory

BT - BROADER DESCRIPTORS: pests; animals; trees; woody-plants; Spermatophyta; plants; Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi; gymnosperms; Ceratocystis; Ophiostomatales; Ulmaceae; Urticales; dicotyledons; angiosperms; invertebrates; Trichoscyphella; North-America; America; Canada; Lachnellula

PT - PUBLICATION TYPE: Annual-report

IB - INTERNATIONAL STANDARD BOOK NUMBER: 0-662-12067-1

Record 329 of 393 - TREECD 1973-2000/01

TI - TITLE: Summary of plant quarantine pest and disease situations in Canada 1980.

AU - AUTHOR(S): Straby-AE; Schmidt-AC; Laidlaw-D; Reid-WD; Quenneville-M; Slight-C; Plant-Quarantine-Division-Agriculture-Canada; Canada-Plant-Quarantine-Division

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1981, 73 pp.; many fig.

PB - PUBLISHER INFORMATION: Plant Quarantine Division, Agriculture Canada.; Ottawa; Canada

PY - PUBLICATION YEAR: 1981

LA - LANGUAGE OF TEXT: English, French

AB - ABSTRACT: This annual report is the 3rd in a series which summarises current survey and control activities undertaken to prevent the spread within Canada of pests and diseases of plant quarantine significance. Separate accounts are provided for 18 such pests and diseases, including the insects *Lymantria dispar* (L.) (trap surveys having been conducted for the 1st time in all 10 provinces), *Operophtera brumata* (L.) (including biological control), *Popillia japonica* Newm., *Rhagoletis pomonella* (Walsh) (on apple), *Oulema melanopus* (L.) (on cereals), *Rhyacionia buoliana* (Denis & Schiff.) (a pest of pine [*Pinus*]), *Cydia molesta* (Busck) (*Grapholita molesta*) (a pest of fruit trees), *Rhagoletis mendax* Curr. (a pest of blueberry), *Delia coarctata* (Fall.) (a cereal pest) and *Amphimallon majalis* (Razoum.). Control measures (mainly chemical) against some of the pests are reviewed.

ADDITIONAL ABSTRACT: Summaries are given of current survey and control activities to prevent the spread within Canada of some diseases including potato wart (*Synchytrium endobioticum*), maize head smut (*Sphacelotheca reiliana*), bean (*Phaseolus vulgaris*) anthracnose (*Colletotrichum lindemuthianum*), pine canker (*Gremmeniella abietina*), tobacco blue mould (*Peronospora tabacina*), *Verticillium albo-atrum* on lucerne and Dutch elm disease (*Ceratocystis ulmi*).

DE - DESCRIPTORS: control-; biological-control; plant-diseases; potatoes-; maize-; beans-; tobacco-; lucerne-; agricultural-entomology; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Lymantria-dispar*; *Operophtera-brumata*; *Popillia-japonica*; *Rhagoletis-pomonella*; *Oulema-melanopus*; *Rhyacionia-buoliana*; *Cydia-molesta*; *Rhagoletis-mendax*; *Delia-coarctata*; *Amphimallon-majalis*; arthropods-; *Synchytrium-endobioticum*; *Sphacelotheca-reiliana*; *Colletotrichum-lindemuthianum*; *Gremmeniella-abietina*; *Pinus*-; *Peronospora-tabacina*; *Verticillium-albo-atrum*; *Ceratocystis-ulmi*; *Ulmus*-; *Zea-mays*; *Nicotiana*-; *Medicago*-; *Solanum-tuberosum*

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: *Lymantria*; *Lymantriidae*; *Lepidoptera*; insects; arthropods; invertebrates; animals; *Operophtera*; *Geometridae*; *Popillia*; *Scarabaeidae*; *Coleoptera*; *Rhagoletis*; *Tephritidae*; *Diptera*; *Oulema*; *Chrysomelidae*; *Rhyacionia*; *Tortricidae*; *Cydia*; *Delia*; *Anthomyiidae*; *Amphimallon*; *Synchytrium*; *Chytridiales*; *Mastigomycotina*; *Eumycota*; fungi; *Sphacelotheca*; *Ustilaginales*; *Basidiomycotina*; *Colletotrichum*; *Deuteromycotina*; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; *Peronospora*; *Peronosporales*; *Verticillium*; *Ceratocystis*; *Ophiostomatales*; *Ulmaceae*; *Urticales*; dicotyledons; angiosperms; *Zea*; *Poaceae*; *Cyperales*; monocotyledons; *Solanaceae*; *Solanales*; *Fabaceae*; *Fabales*; *Solanum*; North-America; America

PT - PUBLICATION TYPE: Annual-report

Record 330 of 393 - TREECD 1973-2000/01

TI - TITLE: Session I: Acid precipitation.

OT - ORIGINAL NON-ENGLISH TITLE: In Proceedings of the 12th international meeting for specialists in air pollution damages in forests, IUFRO section 2.09 'Air pollution'. Oulu, Finland, 23-30 August 1982.

AU - AUTHOR(S): Strand-L (et-al); Stuanes-AO; Barklund-P; Axelsson-G; Unestam-T; Tesar-V; Andersson-F

SO - SOURCE (BIBLIOGRAPHIC CITATION): Aquilo,-Botanica. 1983, 19: 32-86; BLL.

PY - PUBLICATION YEAR: 1983

LA - LANGUAGE OF TEXT: English, German

AB - ABSTRACT: Seven papers and 1 abstract are included of which 2 are noticed elsewhere: Strand, L. Acid precipitation and forest growth in Norway. 32-39 [9 ref.] Stuanes, A.O. Possible indirect long-term effects of acid precipitation on forest growth. 50-63 [33 ref.] In Scandinavia. Barklund, P.; Axelsson, G.; Unestam, T. Is infection of Gremmeniella abietina on Norway spruce favoured by acid precipitation? 64-67 [5 ref.] Tesar, V. [Immission ecological relations of silvicultural treatments at higher altitudes in the central German highlands.] Immissionsokologische Zusammenhänge der Waldbehandlung in den Hochlagen von Mittelgebirgen. 68-70. Andersson, F. Concluding remarks on acid precipitation and its effect and interaction in forest ecosystems. 80-86 [7 ref.]

DE - DESCRIPTORS: IUFRO-; Acid-rain; damage-

GE - GEOGRAPHIC NAMES: Norway-; Scandinavia-; Czechoslovakia-

BT - BROADER DESCRIPTORS: Scandinavia; Northern-Europe; Europe; Central-Europe

PT - PUBLICATION TYPE: Conference-paper; Journal-article

Record 331 of 393 - TREECD 1973-2000/01

TI - TITLE: Report on Forest Research for the year ended March 1984.

AU - AUTHOR(S): Strouts-RG; Rose-DR; Reffold-TC; Redfern-DB; Gregory-SC; Pratt-JE; Brasier-CM; Webber-JF; Lonsdale-D; Greig-BJW; Gibbs-JN

CA - CORPORATE AUTHOR(S): Forestry Commission, UK.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1984, 92 pp.; 6 pl., 9 fig., 5 tab. See RPP 63, 3035.

PB - PUBLISHER INFORMATION: Her Majesty's Stationery Office; London; UK

PY - PUBLICATION YEAR: 1984

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: In the Pathology section (32-37, 10 ref.) R.G. Strouts, D.R. Rose & T.C. Reffold note that severe defoliation of *Pseudotsuga menziesii* was caused by *Phaeocryptopus gaumannii* in Devonshire, and serious *Lophodermium seditiosum* damage developed on Corsican and Scots pine transplants in a W. Sussex and Shropshire nursery, respectively. The infrequently recorded leaf blight, *Sclerotinia crataegi* occurred on hawthorn (*Crataegus*). The powdery mildew *Microsphaera platani* was found on London plane (*Platanus X hispanica*) in London, the first record for Britain. Further outbreaks of *Seiridium cardinale* on *Cupressus leylandii* were reported from Bucks. and Surrey. *Inonotus dryadeus* was found on a beech in S. Glamorgan, apparently a new host record in the UK. D.B. Redfern, S.C. Gregory & J.E. Pratt report serious damage in nurseries in Scotland and N. England by *Lophodermium* spp. on Scots pine and *Brunchorstia pinea* on Corsican pine. *Seiridium cardinale* was found on a 30 cm tall *Thuja plicata* in Morayshire, a new British host record and the first report of the fungus in Scotland. Redfern & Rose describe winter cold damage which became evident following the exceptional weather in Dec. 1981 and Jan. 1982 and affected Corsican and lodgepole pines. A significant proportion of Scots pine in Thetford forest carry established stem lesions of *Peridermium pini*, according to B.J.W. Greig & J.N. Gibbs, these having the potential to cause death within a few years. An unusually early expression of *Heterobasidion annosum* butt rot was reported in a 10-yr-old mixed stand of *Abies grandis* and *Picea sitchensis* by Pratt. The fungus was restricted to those parts of the root systems close to the main stems and was absent from horizontally growing lateral roots. Studies on Dutch elm disease (*Ceratocystis ulmi*) by C.M. Brasier were concerned with vegetative (somatic) incompatibility which may have possibilities for biological control; and by J.F. Webber on the effects of nutrient levels on dimorphism. Studying decay in amenity trees, D. Lonsdale investigated the effects of flush pruning in 7 tree genera and the effects of pruning position on the rate of wound occlusion in *Sorbus intermedia*.

DE - DESCRIPTORS: Forest-trees; diseases-; pines-; Cold-injury; Records-; geography-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Phaeocryptopus-gaumannii*; *Pseudotsuga-menziesii*; *Lophodermium-seditiosum*; *Lophodermium*-; *Crataegus*-; *Platanus*-; *Seiridium-cardinale*; *Thuja-plicata*; *Fagus*-; *Heterobasidion-annosum*; *Abies-grandis*; *Picea-sitchensis*; *Ceratocystis-ulmi*; *Ulmus*-; *Pinus*-; GREMMENIELLA-ABIETINA; ENDOCRONARTIUM-PINI

GE - GEOGRAPHIC NAMES: UK-; Scotland-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Phaeocryptopus*; *Dothideales*; *Ascomycotina*; *Eumycota*; fungi; *Pseudotsuga*; *Pinaceae*; *Pinopsida*; gymnosperms; *Lophodermium*; *Rhytismatales*; *Rosaceae*; *Rosales*; dicotyledons; angiosperms; *Platanaceae*; *Hamamelidales*; *Seiridium*; *Deuteromycotina*; *Thuja*; *Cupressaceae*; *Fagaceae*; *Fagales*; *Heterobasidion*; *Aphylllophorales*; *Basidiomycotina*; *Abies*; *Picea*; *Ceratocystis*; *Ophiostomatales*; *Ulmaceae*; *Urticales*; *Gremmeniella*; *Helotiales*; *Endocronartium*; *Uredinales*; British-Isles; Western-Europe; Europe; Great-Britain; UK; *Sclerotinia*; *Microsphaera*; *Erysiphales*; *Cupressus*; *Inonotus*

PT - PUBLICATION TYPE: Annual-report

IB - INTERNATIONAL STANDARD BOOK NUMBER: 0-11-710130-3

Record 332 of 393 - TREECD 1973-2000/01

TI - TITLE: Sugar-beet chitinase inhibits the growth of a spruce pathogen.

AU - AUTHOR(S): Susi-A; Mikkelsen-JD; Weissenberg-K-von; Nielsen-KK; Von-Weissenberg-K

AD - ADDRESS OF AUTHOR: University of Helsinki, Department of Plant Biology, Helsinki, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1995, 25: 1, 61-64; 15 ref.

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: The inhibiting effect of sugarbeet chitinase, a defence enzyme in plants, on the growth of the fungi *Heterobasidion annosum* and *Gremmeniella abietina* was examined in vitro. The enzyme inhibited the growth of *H. annosum*, but had no effect on *G. abietina*. The role of hydrolytic enzymes in the defence mechanisms of plants is briefly discussed.

DE - DESCRIPTORS: plant-pathogens; plant-diseases; plant-pathogenic-fungi; forest-trees; sugarbeet-; sugar-crops; defence-mechanisms; enzymes-; disease-resistance; laboratory-tests; chitinase-; plant-extracts; antifungal-agents; activity-; fungal-diseases; antifungal-properties; plant-pathology

OD - ORGANISM DESCRIPTORS: *Picea*-; *Beta-vulgaris*-var.-*saccharifera*; *Gremmeniella-abietina*; *Heterobasidion-annosum*; *Chenopodiaceae*-; *Beta-vulgaris*; fungi-

BT - BROADER DESCRIPTORS: *Pinaceae*; *Pinopsida*; gymnosperms; Spermatophyta; plants; *Beta-vulgaris*; *Beta*; *Chenopodiaceae*; *Caryophyllales*; dicotyledons; angiosperms; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; *Heterobasidion*; *Aphylophorales*; *Basidiomycotina*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 333 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris canker on Red and Scots Pine in Vermont.

AU - AUTHOR(S): Tattar-TA; Teillon-HB; Walker-EB

SO - SOURCE (BIBLIOGRAPHIC CITATION): Plant-Disease-Reporter. 1973, 57: 4, 338; 4 ref.

PY - PUBLICATION YEAR: 1973

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Reports Scleroderris lagerbergii on 14-year-old trees of Pinus resinosa and 12-year-old trees of Pinus sylvestris in a plantation in Lamoille County. This is the first report of the disease in New England.

DE - DESCRIPTORS: foliage-; conifers-

OD - ORGANISM DESCRIPTORS: Pinus-resinosa; Pinus-sylvestris; GREMMENIELLA-ABIETINA

BT - BROADER DESCRIPTORS: Pinus; Pinaceae; Pinopsida; gymnosperms;

Spermatophyta; plants; Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Journal-article

Record 334 of 393 - TREECD 1973-2000/01

TI - TITLE: Liming with powdered oil-shale ash in a heavily damaged forest ecosystem. I. The effect on forest soil in a pine stand.

AU - AUTHOR(S): Terasmaa-T; Sepp-R

AD - ADDRESS OF AUTHOR: Estonian Research Institute of Forestry and Nature Conservation, Roomu Rd. 2, EE-2400, Tartu, Estonia.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Eesti-Teaduste-Akadeemia-Toimetised,- Okoloogia. 1994, 4: 3, 101-108, 136, 138; 12 ref.

PB - PUBLISHER INFORMATION: Tallin; Estonia

PY - PUBLICATION YEAR: 1994

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: Estonian, Russian

AB - ABSTRACT: A fertilization and liming experiment with mineral fertilizers and powdered oil-shale ash was carried out in a heavily damaged 50-year-old Scots pine (*Pinus sylvestris*) ecosystem in South Estonia. Root rot (*Heterobasidion annosum*) and scleroderris canker (*Gremmeniella abietina*) were frequently found in the stand. The site is characterized by low pH values of the soil (typical podzol, derived from fine sand). The treatment of the soil surface with powdered oil-shale ash (10 000 kg/ha) proved to be highly effective in reducing the acidity of forest soil and thus in improving environmental conditions for forest growth. During the 5.5-year experiment the pH of the limed soil rose significantly in comparison with the unlimed soil. At the same time other characteristics of soil acidity (hydrolytic acidity H8.2, exchangeable acidity H5.6) and the content of exchangeable aluminium decreased essentially.

DE - DESCRIPTORS: forest-soils; podzols-; acidification-; soil-amendments; amelioration-of-forest-sites; oil-shale; ash-; liming-

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*

GE - GEOGRAPHIC NAMES: Estonia-

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; Developed-Countries; Baltic-States; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

Record 335 of 393 - TREECD 1973-2000/01

TI - TITLE: Virulence of two Finnish *Gremmeniella abietina* types (A and B).

AU - AUTHOR(S): Terho-M; Uotila-A

AD - ADDRESS OF AUTHOR: Department of Plant Biology, University of Helsinki, PO Box 28, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1999, 29: 2, 143-152; 23 ref.

PY - PUBLICATION YEAR: 1999

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: German, French

AB - ABSTRACT: Thirteen Finnish *G. abietina* isolates of types A and B were compared for differences in their virulence. Three kinds of inoculations were made: 1 with conidia on young Scots pine (*Pinus sylvestris*) seedlings and 2 with mycelia on the stems and shoots of young *P. sylvestris* trees. Inoculations with conidia were carried out in August 1992 and inoculations with mycelia were carried out 6 times between 11 August and 20 October, 1992. The experiments were evaluated in the late spring and early summer of 1993. It was shown that there was a difference in virulence between the 2 types. In the conidial inoculations type A infected 34.7% and type B infected 11.0% of the inoculated seedlings. For mycelial inoculations with type A the mean canker (stems) and necrosis (shoots) lengths were 19.3 mm and 8.6 mm longer, respectively, than with type B inoculations. In shoot inoculations there also was a clear difference between the 2 types in the number of such inoculations where no symptoms were observed. For type B shoot inoculations there was no fungal growth in 21.5% whereas for type A inoculations the figure was only 3.7%.

DE - DESCRIPTORS: virulence-; plant-diseases; plant-pathogens; plant-pathogenic-fungi; pathogenicity-; forest-trees; plant-pathology

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Gremmeniella-abietina*; Pinopsida-; fungi-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; European-Union-Countries; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 336 of 393 - TREECD 1973-2000/01

TI - TITLE: Fungal diseases in afforestations of high altitude: experiences with Scleroderris and larch cancer epidemics.

AU - AUTHOR(S): Tomiczek-C; Turner-H (ed.); Tranquillini-W

AD - ADDRESS OF AUTHOR: Inst. For. Prot., For. Res. Sta., A-1131 Vienna, Austria.

SO - SOURCE (BIBLIOGRAPHIC CITATION): In Establishment and tending of subalpine forest: research and management. Proc. 3rd international workshop, IUFRO project group P1.07-00, 3-5 Sept. 1984, Riederalp, Switzerland. Berichte,- Eidgenossische-Anstalt-fur-das-Forstliche-Versuchswesen,-Switzerland. 1985, No. 270, 221-223; 9 ref.

PY - PUBLICATION YEAR: 1985

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: A survey of Scleroderris lagerbergii [Gremmeniella abietina] on Pinus cembra and Encoeliopsis laricina on Larix europea [decidua] in Austria, where epidemics have accelerated during recent years. Morphology, epidemiology, control and prevention are briefly discussed.

DE - DESCRIPTORS: cankers-; ecology-; Pines-; Larch-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: Larix-decidua; Gremmeniella-abietina; Pinus-cembra; fungi-; Pinus-

GE - GEOGRAPHIC NAMES: Austria-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; Larix; Pinaceae; Pinopsida; gymnosperms; Gremmeniella; Helotiales; Ascomycotina; Eumycota; Pinus; Central-Europe; Europe

PT - PUBLICATION TYPE: Conference-paper; Journal-article

Record 337 of 393 - TREECD 1973-2000/01

TI - TITLE: Spread of Ascocalyx [Gremmeniella] abietina to healthy pines in the vicinity of diseased trees.

OT - ORIGINAL NON-ENGLISH TITLE: Mannynversosyovan leviamisesta tautipesaketta ymparoiviin terveisiin mantyihin.

AU - AUTHOR(S): Uotila-A

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, 00170 Helsinki, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Silva-Fennica. 1985, 19: 1, 17-20; 7 ref.

PY - PUBLICATION YEAR: 1985

LA - LANGUAGE OF TEXT: Finnish

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: In a Scots pine progeny test at Loppi, Finland, 12 plots of 3 Siberian provenances were destroyed during the 1982 outbreak, whereas Finnish progenies remained relatively healthy. There were 29.7% more diseased pines in the 2 rows adjacent to the destroyed plots than in the rest of the same plots. Based on the life cycle of the fungus, the optimum time to carry out sanitation fellings is the first winter after symptoms of the disease have appeared.

DE - DESCRIPTORS: Sanitation-fellings; dieback-; provenance-; Fungal-diseases; infection-; conifers-

OD - ORGANISM DESCRIPTORS: Gremmeniella-abietina; Pinus-sylvestris

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi; Pinus; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0037-5330

Record 338 of 393 - TREECD 1973-2000/01

TI - TITLE: The effect of climatic factors on the occurrence of scleroderris canker.

OT - ORIGINAL NON-ENGLISH TITLE: Ilmastotekijoiden vaikutus mannynversosyopatuhoihin.

AU - AUTHOR(S): Uotila-A

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Department of Forest Protection, PL 18, 01301 Vantaa, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Folia-Forestalia. 1988, No. 721, 23 pp.; 60 ref.

PY - PUBLICATION YEAR: 1988

LA - LANGUAGE OF TEXT: Finnish

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: One-yr-old Scots pine (*Pinus sylvestris*) of 3 origins were planted in 5 blocks along a 100-m transect across a clear-felled kettle hole (alt. difference of 15 m between centre and edges). Temp., RH and dew were measured during one growing season and damage by *Ascocalyx* [*Gremmeniella*] *abietina* was assessed one year after planting. Most damage was found on the N.-facing slope and in the bottom of the hole. Climate statistics and damage to *P. sylvestris* stands were compared for the period 1970-86. Greatest damage followed growing seasons with a low temp. sum, high precipitation, and low total irradiation or summer frosts.

DE - DESCRIPTORS: Conifers-; fungal-diseases; Cankers-; ecology-; Pines-; environmental-factors; forest-trees; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-sylvestris*; *Gremmeniella*-; fungi-; *Pinus*-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Miscellaneous

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0015-5543

IB - INTERNATIONAL STANDARD BOOK NUMBER: 951-40-1019-1

Record 339 of 393 - TREECD 1973-2000/01

TI - TITLE: On the effect of seed transfer on the susceptibility of Scots pine to *Ascomyces* [*Gremmeniella*] *abietina* in southern and central Finland.

OT - ORIGINAL NON-ENGLISH TITLE: Siemenen siirron vaikutuksesta männyn versosyopaalittiuteen Etela- ja Keski-Suomessa.

AU - AUTHOR(S): Uotila-A

AD - ADDRESS OF AUTHOR: Finnish For. Res. Inst., PO Box 18, 01301 Vantaa, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Folia-Forestalia,-Institutum-Forestale-Fenniae*. 1985, No. 639, 12pp.; 30 ref.

PY - PUBLICATION YEAR: 1985

LA - LANGUAGE OF TEXT: Finnish

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: Three subtrials of an 18-yr-old Scots pine provenance trial with 29 Finnish provenances were inventoried using a continuous classification (0-100%). Southern provenances were more susceptible than northern ones with a clinal change in susceptibility that was significant for seed transfers >150-200 km (100 degree days) from S. to N. Climatic and soil factors had the most influence on susceptibility.

DE - DESCRIPTORS: provenance-trials; Fungal-diseases; resistance-; Pines-; susceptibility-; forest-trees; conifers-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-sylvestris*; *Pinus*-; fungi-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; fungi; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IB - INTERNATIONAL STANDARD BOOK NUMBER: 951-40-0720-4

Record 340 of 393 - TREECD 1973-2000/01

TI - TITLE: Physiological and morphological variation among Finnish *Gremmeniella abietina* isolates.

AU - AUTHOR(S): Uotila-A

AD - ADDRESS OF AUTHOR: Finnish Forest Res. Inst., SF-00170 Helsinki 17, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Communicationes-Institutii-Forestalis-Fenniae*. 1983, No.119, 12 pp.; 3 fig., 4 tab.; 21 ref.

PY - PUBLICATION YEAR: 1983

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: Finnish

AB - ABSTRACT: The growth rates of 26 Finnish isolates of the pathogen varied (25-47 mm/35 days at 15°C), as did conidial length (14-56 µm). Combining differences in septation of conidia and growth rates gave 2 morphologically and physiologically distinct races in Finland. Race A has 4-celled conidia and grows faster in vitro than race B. Race A occurs mainly in southern Finland in all kinds of pine forests; B has 4-8-celled conidia and occurs mainly in young pine sapling stands in northern Finland. The existence of intermediates or other races is possible. Further knowledge of the distribution of the perfect state and of pathogenicity in relation to races A and B is required.

DE - DESCRIPTORS: Pines-; races-; Cankers-; Dieback-; forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-sylvestris*; *Pinus-*

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Miscellaneous

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0358-9609

Record 341 of 393 - TREECD 1973-2000/01

TI - TITLE: Mating system and apothecia production in *Gremmeniella abietina*.

AU - AUTHOR(S): Uotila-A

AD - ADDRESS OF AUTHOR: Forestry Field Station of Helsinki University, 35500 Korkeakoski, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1992, 22: 6-7, 410-417; 18 ref.

PY - PUBLICATION YEAR: 1992

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: Isolates of *G. abietina* from *Pinus sylvestris* in Finland were designated as type A or B on the basis of conidial septation, conidial production in vitro and disease symptoms produced. For each type, mycelia derived from single spores from the same ascus were paired by inoculating the phloem of *P. sylvestris* seedlings growing in different climatic zones in Oct. 1989. Canker samples were collected in Jun. 1991 and apothecial production determined. *G. abietina* was shown to be a heterothallic fungus in which mating is controlled by a single locus composed of at least 2 mating alleles. Isolates of type B produced many more apothecia than those of type A, independent of climatic conditions. However, certain pairings between types A and B also produced apothecia with viable ascospores, and some apothecia were found in self-pairings between incompatible strains, especially of type B. Apothecia were mainly produced in the lower part of cankers, indicating a possible role for microconidia in mating.

DE - DESCRIPTORS: heterothallism-; conifers-; fungal-diseases; biology-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Gremmeniella-abietina*; fungi-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 342 of 393 - TREECD 1973-2000/01

TI - TITLE: Do the type A and type B of *Gremmeniella [abietina]* cross with each other only

AU - AUTHOR(S): Uotila-A; Laflamme-G et-al

AD - ADDRESS OF AUTHOR: Hyytiala Forestry Field Station, Helsinki University, Hyytialantie 124, 35500 Korkeakoski, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Foliage, shoot and stem diseases.

Proceedings of the IUFRO WP 7.02.02 meeting, Quebec City, May 25-31, 1997.

Information-Report -Laurentian-Forestry-Centre,-Quebec-Region,-Canadian-Forest-Service. 1998, No. LAU-X-122, 208.

PB - PUBLISHER INFORMATION: Laurentian Forestry Centre, Canadian Forest Service; Sainte-Foy; Canada

PY - PUBLICATION YEAR: 1998

LA - LANGUAGE OF TEXT: English

DE - DESCRIPTORS: IUFRO-; fungal-diseases; plant-pathogenic-fungi; plant-pathogens; plant-diseases; forest-trees; cankers-; hybridization-; genetics-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Conference-paper; Abstract-only

Record 343 of 393 - TREECD 1973-2000/01

TI - TITLE: Pathogenic variation in *Gremmeniella abietina* among Finnish isolates.

AU - AUTHOR(S): Uotila-A; Terho-M; Capretti-P et-al

AD - ADDRESS OF AUTHOR: University of Helsinki, Forestry Field Station Hyytiala, 35500 Korkeakoski, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Shoot and foliage diseases in forest trees. Proceedings of a Joint Meeting of the IUFRO Working Parties S2.06.02 and S2.06.04, Vallombrosa, Firenze, Italy 6-11 June 1994. 1995, 190-197; 14 ref.

PB - PUBLISHER INFORMATION: Istituto di Patologia e Zoologia Forestale e Agraria, Universita degli Studi di Firenze; Firenze; Italy

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Three types of experiments were conducted in Finland using 14 isolates of *Gremmeniella abietina* (7 each of type A, mainly found in southern Finland, and type B, found mainly in young plantations in northern Finland), and methods and results are briefly reported. In one experiment, conidia of *G. abietina* isolates were sprayed onto annual shoots of young Scots pine (*Pinus sylvestris*) seedlings in August 1992. In two other experiments, young Scots pines were inoculated 6 times between August and October with mycelium of isolates both in stems and annual shoots. Cankers in stems and necrosis in shoots was assessed in June 1993. Results showed that 34.7% of pine seedlings sprayed with type A conidia were infected and 11% of seedlings sprayed with type B were infected (compared to 1.4% control seedlings). In the mycelial inoculations, type A resulted in larger phloem necrosis than type B. Type A was particularly pathogenic in shoot inoculations made in August. The size of necrosis increased from inoculations made in August to those made in October. Results support the hypothesis that type A *G. abietina* is more pathogenic in Scots pine than type B.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; shoots-; pathogenicity-; inoculation-; testing-; variation-; fungal-diseases; plant-diseases; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-sylvestris*; fungi-

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; European-Union-Countries; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Conference-paper

IB - INTERNATIONAL STANDARD BOOK NUMBER: 88-900074-0-0

Record 344 of 393 - TREECD 1973-2000/01

TI - TITLE: Occurrence of *Brunchorstia pinea* [*Scleroderris lagerbergii*] in Bohemia/Moravia.

AU - AUTHOR(S): Urosevic-B; Jancarik-V

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Prace-Vyzkumneho-Ustavu-Lesniho-Hospodarstvi-a-Myslivosti*. 1973, 44: 95-105; 17 ref.

PY - PUBLICATION YEAR: 1973

LA - LANGUAGE OF TEXT: Czech

LS - LANGUAGE OF SUMMARIES: Russian, English

AB - ABSTRACT: This first record concerns 3-year nursery plants of *Pinus sylvestris*, whereas much of the evidence for the rest of Europe relates to *P. nigra* stands and plantations. Brief notes, largely based on the literature, are given on symptoms of attack, damage caused, other hosts, and control measures.

DE - DESCRIPTORS: conifers-

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; GREMMENIELLA-ABIETINA

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms;

Spermatophyta; plants; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0139-5807

Record 345 of 393 - TREECD 1973-2000/01

TI - TITLE: The occurrence of *Brunchorstia pinea* (Karst.) v. Hohn. on Czechoslovakian territory.
OT - ORIGINAL NON-ENGLISH TITLE: Vyskyt houby *Brunchorstia pinea* (Karst.) v. Hohn. na uzemi CSR.
AU - AUTHOR(S): Urosevic-B; Jancarik-V
SO - SOURCE (BIBLIOGRAPHIC CITATION): Prace-Vyzkumneho-ustavu-Lesniho-Hospodarstvi-a-Myslivosti. 1973, 44: 95-105; 4 fig.
PY - PUBLICATION YEAR: 1973
LA - LANGUAGE OF TEXT: Czech
LS - LANGUAGE OF SUMMARIES: Russian, English
AB - ABSTRACT: *B. pinea* [*Gremmeniella abietina*; RPP 53, 1975] destroyed c. 60 000 seedlings, 3 yr old, of *Pinus sylvestris* in the forest nursery Brezina. Control measures recommended include wide spacing, destruction of infected plants and spraying with 0.7-1% dithane M-22 in late spring-early summer.
DE - DESCRIPTORS: control-; forest-trees; conifers-; plant-pathology; pines-
OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella-abietina*
GE - GEOGRAPHIC NAMES: Czechoslovakia-
BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Central-Europe; Europe
PT - PUBLICATION TYPE: Journal-article
IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0139-5807

Record 346 of 393 - TREECD 1973-2000/01

TI - TITLE: Cankers and shoot blights of *Pinus pinea* in Italy.

AU - AUTHOR(S): Vagniluca-S; Goggioli-V; Capretti-P; Capretti-P et-al

AD - ADDRESS OF AUTHOR: Istituto di Patologia e Zoologia Forestale e Agraria, Universita di Firenze, Firenze, Italy.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Shoot and foliage diseases in forest trees. Proceedings of a Joint Meeting of the IUFRO Working Parties S2.06.02 and S2.06.04, Vallombrosa, Firenze, Italy 6-11 June 1994. 1995, 284-286; 12 ref.

PB - PUBLISHER INFORMATION: Istituto di Patologia e Zoologia Forestale e Agraria, Universita degli Studi di Firenze; Firenze; Italy

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: *Pinus pinea* is an introduced species in the northern part of the Mediterranean basin. Due to unsuitable climatic conditions in this region - particularly winter or late season frosts - the tree can be affected by fungal diseases such as *Brunchorstia pinea* [*Gremmeniella abietina*] and *Sphaeropsis sapinea* [*Diplodia pinea*], which cause, respectively, shoot blight and cankers and death of cones.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; cones-; shoots-; damage-; fungal-diseases; plant-diseases; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Sphaeropsis*-; *Pinus-pinea*; *diplodia-pinea*; fungi-

GE - GEOGRAPHIC NAMES: Italy-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Deuteromycotina; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Diplodia*; European-Union-Countries; Developed-Countries; Mediterranean-Region; OECD-Countries; Southern-Europe; Europe; *Sphaeropsis*

PT - PUBLICATION TYPE: Conference-paper

IB - INTERNATIONAL STANDARD BOOK NUMBER: 88-900074-0-0

Record 347 of 393 - TREECD 1973-2000/01

TI - TITLE: Damage caused by pine die-back (*Ascocalyx abietina*) on refertilization trial plots on Laaviosuo, Lammi, southern Finland.

OT - ORIGINAL NON-ENGLISH TITLE: Mannynversosyopatuhot Laaviosuon jatkolannoituskoelueella.

AU - AUTHOR(S): Vasander-H; Lindholm-T

AD - ADDRESS OF AUTHOR: University of Helsinki, Department of Peatland Forestry, Unioninkatu 40 B, SF-00170 Helsinki, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Suo. 1985, 36: 4-5, 85-94; 3 fig., 5 tab.; 40 ref.

PY - PUBLICATION YEAR: 1985

LA - LANGUAGE OF TEXT: Finnish

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: Damage caused by the pathogenic fungus *Ascocalyx abietina* was more common and severe on trial plots which had been refertilized with NPK or NPK + trace elements than on control or those plots which had been refertilized with wood ash or only some of the macro-nutrients. The incidence of damage was also positively correlated with the density and the mean height growth. It was hypothesized that delayed hardening of shoots in the autumn and frost damage combined with the increased growth and possible micronutrient deficiencies could explain these differences.

DE - DESCRIPTORS: fertilizers-; fungal-diseases; responses-; diseases-; minor-elements; NPK-fertilizers; Dieback-; conifers-; pines-

OD - ORGANISM DESCRIPTORS: Pinus-; *Gremmeniella-abietina*; *Pinus-sylvestris*

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: compound-fertilizers; fertilizers; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; Pinus; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0039-5471

Record 348 of 393 - TREECD 1973-2000/01

TI - TITLE: Protection of conifer seedlings from diseases.

OT - ORIGINAL NON-ENGLISH TITLE: Zashchita khvoinykh seyantsev ot boleznei.

AU - AUTHOR(S): Vedernikov-NM; Yakovlev-VG

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1972, 89pp.; NLL; 92 ref.

PB - PUBLISHER INFORMATION: Moscow, Lesnaya Promyshlennost'.; USSR

PY - PUBLICATION YEAR: 1972

LA - LANGUAGE OF TEXT: Russian

AB - ABSTRACT: A practical manual based on 10 years' investigations in nurseries in central and NW European Russia, producing mainly *Pinus sylvestris*, *Picea abies*, and Larch. Details are given on the pathogens causing infectious diseases of seedlings, conditions that promote the diseases, and their prevention and control. The diseases dealt with are : damping off ; *Lophodermium pinastri* ; *Phacidium infestans* ; *Meria laricis* ; *Melampsora pinitorqua* ; *Sclerotinia graminearum* and *Typhula graminearum* ; *Lophodermium macrosporum* ; *Botrytis cinerea* ; *Cladosporium herbarum* ; *Thelephora terrestris* ; and *Brunchorstia destruens*. Other topics deal with are disorders caused by nutritional disturbances, high and low temperatures, and damage by chemicals.

DE - DESCRIPTORS: seedlings-; nurseries-; conifers-

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Picea-abies*; *Larix-*; *Lophodermium-pinastri*; *Phacidium-infestans*; *Botrytis-cinerea*; *Cladosporium-herbarum*; *Thelephora-terrestris*; MELAMPSORA-POPULNEA; GREMMENIELLA-ABIETINA; *Sclerotinia-borealis*

BT - BROADER DESCRIPTORS: Spermatophyta; plants; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Picea*; *Lophodermium*; Rhytismatales; Ascomycotina; Eumycota; fungi; *Phacidium*; Helotiales; *Botrytis*; Deuteromycotina; *Cladosporium*; *Thelephora*; Aphyllophorales; Basidiomycotina; *Melampsora*; Uredinales; *Gremmeniella*; *Sclerotinia*

PT - PUBLICATION TYPE: Miscellaneous

Record 349 of 393 - TREECD 1973-2000/01

TI - TITLE: A spatial, climate-determined risk rating for scleroderris disease of pines in Ontario.

AU - AUTHOR(S): Venier-LA; Hopkin-AA; McKenney-DW; Wang-Y

AD - ADDRESS OF AUTHOR: Canadian Forest Service, 1219 Queen St. East, Sault Ste. Marie, ON P6A 3V5, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Forest-Research. 1998, 28: 9, 1398-1404; 43 ref.

PY - PUBLICATION YEAR: 1998

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Historical distribution data for scleroderris disease (caused by the fungus *Gremmeniella abietina* var. *abietina*) on pines (*Pinus* spp.) in Ontario were used to model its probability of occurrence as a function of climate factors. A logistic regression model of the probability of occurrence as a function of the mean temperature of the coldest quarter and the precipitation of the coldest quarter was a very good fit. The concordance (index of classification accuracy) of the model was 84%. The data were subsampled repeatedly, new parameter estimates were generated and the predictions were tested against data not included in the model. Classification accuracy was similar for each subsample model; therefore, it was concluded that the final model is stable. Gridded estimates of the climate variables were used to spatially extend the two-variable logistic regression model and produce a probability of occurrence map for scleroderris disease across Ontario. The predicted map of probability of occurrence fits well with the map of the observed locations of the disease. These results lend credence to previous work that suggests that distribution of scleroderris disease is strongly influenced by climate. The classification results also suggest that this model is a useful tool for assessing the risk of scleroderris disease throughout Ontario.

DE - DESCRIPTORS: climate-; precipitation-; climatic-factors; mathematical-models; plant-pathogens; plant-pathogenic-fungi; plant-diseases; fungal-diseases; regression-analysis; forest-trees; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella-abietina*; Pinopsida-; fungi-

GE - GEOGRAPHIC NAMES: Canada-; Ontario-

BT - BROADER DESCRIPTORS: Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; OECD-Countries; Commonwealth-of-Nations; Developed-Countries; North-America; America; Canada

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0045-5067

Record 350 of 393 - TREECD 1973-2000/01

TI - TITLE: Shoot-feeding aphids promote development of *Gremmeniella abietina*, the fungal pathogen causing scleroderris canker disease in conifers.

AU - AUTHOR(S): Virtanen-T; Ranta-H; Neuvonen-S

AD - ADDRESS OF AUTHOR: Department of Biology and Kevo Subarctic Research Institute, University of Turku, FIN-20014 Turku, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Journal-of-Phytopathology*. 1997, 145: 5-6, 245-251; 30 ref.

PY - PUBLICATION YEAR: 1997

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: German

AB - ABSTRACT: Experiments were conducted to test whether shoot feeding aphids (*Cinara pinea*) can promote the development of *G. abietina*, causing Scleroderris canker disease in conifers. Pine seedlings were infested with aphids at 2 different times and subsequently inoculated with conidia of *G. abietina* at 2 different times. The degree of infestation was classified into 3 groups based on the number of aphids/seedling: none, one (low level) and 3 (high level). Because of parthenogenetic reproduction, the number of aphids increased during the summer, so aphid numbers were also used to explain the development of the symptoms. Necrosis caused by *G. abietina* was more prevalent in seedlings infested by aphids in June and inoculated with the fungus in July. Expressed as percentages of the total length of the shoots, the necrosis had advanced 50, 70 and 95% with no, low and high aphid levels, respectively. Canker formation was significantly greater when *G. abietina* conidia were inoculated in July compared with August. In August, there were no statistically significant differences in the intensity of disease between aphid infestation levels, but the mean number of aphids was related to disease intensity. In the spring following infection, seedlings with aphids had more dead and fewer healthy terminal buds compared with seedlings without aphids.

DE - DESCRIPTORS: plant-diseases; plant-pathogens; plant-pathogenic-fungi; insect-pests; plant-pests; interactions-; forest-pests; seedlings-; fungal-diseases; forest-trees; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Cinara-pinea*; *Gremmeniella-abietina*; *Pinus-*; insects-; *Pinus-sylvestris*; *Pinopsida-*; fungi-

BT - BROADER DESCRIPTORS: *Cinara*; *Aphididae*; *Aphidoidea*; *Sternorrhyncha*; *Homoptera*; *Hemiptera*; insects; arthropods; invertebrates; animals; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; *Pinus*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0931-1785

Record 351 of 393 - TREECD 1973-2000/01

TI - TITLE: Current problems in forest pathology.
AU - AUTHOR(S): Vorontsov-AI
AD - ADDRESS OF AUTHOR: Lesotekh. Inst., Moscow, USSR.
SO - SOURCE (BIBLIOGRAPHIC CITATION): Lesovedenie. 1986, No. 4, 50-55; 22 ref.
PY - PUBLICATION YEAR: 1986
LA - LANGUAGE OF TEXT: Russian
LS - LANGUAGE OF SUMMARIES: English
AB - ABSTRACT: A review is given of the main forest pathology problems in the USSR, viz. oak mortality (with special reference to oak wilt or vascular mycosis caused by *Ceratocystis roboris*); Dutch elm disease (caused by *Ceratocystis ulmi*); and various diseases of conifers, especially canker caused by *Gremmeniella abietina*, rot caused by *Heterobasidion annosum*, and needle cast caused by *Lophodermium* spp.
DE - DESCRIPTORS: surveys-; diseases-; Forest-trees; plant-pathology
OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Ceratocystis-ulmi*; *Heterobasidion-annosum*; *Lophodermium*-; *Quercus*-; *Ulmus*-; *Pinopsida*-
GE - GEOGRAPHIC NAMES: USSR-
BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Ceratocystis*; Ophiostomatales; *Heterobasidion*; Aphyllophorales; Basidiomycotina; Rhytismatales; Fagaceae; Fagales; dicotyledons; angiosperms; Ulmaceae; Urticales; gymnosperms
PT - PUBLICATION TYPE: Journal-article
IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0024-1148

Record 352 of 393 - TREECD 1973-2000/01

TI - TITLE: Chemical basis of the resistance in pines to scleroderris canker.

AU - AUTHOR(S): Vuorinen-M; Hanso-M; Kurkela-T; Holopainen-JK; Kainulainen-P; Nerg-A; Rantanen-L; Capretti-P et-al

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Suonenjoki Research Station, 77600 Suonenjoki, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Shoot and foliage diseases in forest trees. Proceedings of a Joint Meeting of the IUFRO Working Parties S2.06.02 and S2.06.04, Vallombrosa, Firenze, Italy 6-11 June 1994. 1995, 166-172; 26 ref.

PB - PUBLISHER INFORMATION: Istituto di Patologia e Zoologia Forestale e Agraria, Universita degli Studi di Firenze; Firenze; Italy

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Pines, in this study *Pinus sylvestris*, are usually resistant to scleroderris canker (caused by *Gremmeniella abietina*), but the disease can break out following unfavourable environmental conditions, e.g., abnormally cool, short or wet growing seasons, or at unfavourable sites. Secondary metabolites, monoterpenes, resin acids and phenols, may also play an important role in defence mechanisms against scleroderris canker. *Pinus sylvestris* seeds were collected during the dormant season from 7 sites in Finland and 2 in Estonia. All provenances were grown at 3 sites (1 in Estonia and 2 in Finland) forming a gradient of about 1000 km running from S. to N. The study aimed to obtain basic information about the effects of transferring pine provenances to either more favourable or less favourable climatic conditions, based on the production of secondary metabolites by 3-yr-old seedlings. Results indicate that the effect of seedling origin on the concentration of secondary compounds is not as important as the effect of environment at the three sites.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; fungal-diseases; resistance-; secondary-metabolites; chemical-composition; plant-composition; foliage-; phenolic-compounds; monoterpenes-; resin-acids; climatic-factors; provenance-; biochemistry-; disease-resistance; environment-; plant-diseases; defence-mechanisms; environmental-factors; plant-pathology

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Gremmeniella-abietina*; fungi-

GE - GEOGRAPHIC NAMES: Finland-; Estonia-

BT - BROADER DESCRIPTORS: *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; European-Union-Countries; Developed-Countries; EFTA; OECD-Countries; Scandinavia; Northern-Europe; Europe; Baltic-States

PT - PUBLICATION TYPE: Conference-paper

IB - INTERNATIONAL STANDARD BOOK NUMBER: 88-900074-0-0

Record 353 of 393 - TREECD 1973-2000/01

TI - TITLE: The effect of acid rain treatments on the susceptibility of *Pinus sylvestris* to *Gremmeniella abietina*.

AU - AUTHOR(S): Vuorinen-M; Uotila-A

AD - ADDRESS OF AUTHOR: Finnish Forest Research Institute, Suonenjoki Research Station, FIN-77600 Suonenjoki, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1997, 27: 2, 125-135; 20 ref.

PY - PUBLICATION YEAR: 1997

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: Scots pine (*Pinus sylvestris*) seedlings were planted in a nursery bed 20 cm thick. The substrate had been removed from an illuvial horizon in the soil underlying a stand of Scots pine in Finland which had suffered from severe infection by *Gremmeniella abietina* (Scleroderris canker disease). The seedlings were irrigated for 3 yr, applying 3 pH levels (2.5, 3.5 and 4.5) using sulfuric acid, nitric acid, and a 3:1 mixture of sulfuric and nitric acid. The pH of the pure water used in the control treatment was 6.1-6.4. The seedlings were inoculated with the conidiospores of *G. abietina* to determine their susceptibility to infection with the disease. Because of the adequacy of its buffering capacity, the soil became more acidic only in the treatments at pH 2.5. The concentrations of extractable Ca and Mg cations decreased while the concentration of Al and Fe increased with soil acidification during the 3-yr experiment. Acidification did not increase the susceptibility of Scots pine to infection by the canker disease. Seedling growth was at its maximum in the acidification treatments where most nitrogen was added.

DE - DESCRIPTORS: susceptibility-; plant-diseases; plant-pathogens; plant-pathogenic-fungi; forest-trees; disease-resistance; seedlings-; irrigation-; soil-acidity; calcium-; magnesium-; soil-chemistry; aluminium-; iron-; cankers-; fungal-diseases; acid-deposition

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms;

Spermatophyta; plants; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi;

European-Union-Countries; Developed-Countries; EFTA; OECD-Countries;

Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 354 of 393 - TREECD 1973-2000/01

TI - TITLE: Genetic variability in the canker pathogen fungus, *Gremmeniella abietina*. 2. Fine-scale investigation of the population genetic structure.

AU - AUTHOR(S): Wang-XiaoRu; Ennos-RA; Szmidt-AE; Hansson-P; Wang-XR

AD - ADDRESS OF AUTHOR: Department of Forest Genetics and Plant Physiology, Swedish University of Agricultural Sciences, S-901 83 Umea, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Canadian Journal of Botany*. 1997, 75: 9, 1460-1469; 42 ref.

PY - PUBLICATION YEAR: 1997

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Genetic variation at 32 polymorphic random amplified polymorphic DNA loci was analysed in the ascomycete canker pathogen fungus *G. abietina* collected from 1 plantation of *Pinus contorta* in northern Sweden. The genetic variability maintained in the *G. abietina* population was high. Many different multilocus genotypes were found on each tree and in each sampling site within the plantation. The clonal fraction of the population was small and identical genotypes were found either on the same tree or branch or on trees in the same sampling site. The finding of very few widely distributed clones suggests that the effective dispersal of asexual spores is limited to a few metres and resulted in small clusters of clones in local sites. Analysis of molecular variance revealed that 45.3% of the total variation was attributable to differences among isolates within trees, 22.5% to trees within sites and 32.3% to sampling site differences. Allele frequencies at most of the loci varied significantly among the sampling sites and average total genetic diversity over the 32 loci was 0.27 indicating high population subdivision. The factors that could have contributed to the observed population structure were discussed.

DE - DESCRIPTORS: plant-diseases; plant-pathogens; plant-pathogenic-fungi; genetics-; genetic-variation; molecular-genetics; pycnidia-; polymerase-chain-reaction; random-amplified-polymorphic-DNA; genetic-analysis; population-genetics; diversity-; spore-dispersal; forest-trees; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-contorta*; Pinopsida-; fungi-

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; EFTA; Developed-Countries; European-Union-Countries; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0008-4026

Record 355 of 393 - TREECD 1973-2000/01

TI - TITLE: Genetic variability in the canker pathogen fungus, *Gremmeniella abietina*. Contribution of sexual compared with asexual reproduction.

AU - AUTHOR(S): Wang-XiaoRu; Wang-XR

AD - ADDRESS OF AUTHOR: Department of Forest Genetics and Plant Physiology, Swedish University of Agricultural Sciences, S-901 83 Umea, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Mycological-Research*. 1997, 101: 10, 1195-1201; 47 ref.

PY - PUBLICATION YEAR: 1997

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Genetic variation of *G. abietina* was investigated by RAPD marker analysis. A total of 126 single pycnidia isolates of *G. abietina* were sampled from one *Pinus contorta* plantation in northern Sweden. Average Nei's gene diversity over 32 putative RAPD loci was 0.29. Multilocus genotype analysis revealed 85 different genotypes among the 126 isolates sampled, of which 66 genotypes were detected only once. Nineteen genotypes were detected more than once among 41 isolates, representing 32.5% of clonal fraction of the sampled population. Gametic disequilibrium tests of the sampled population revealed significant associations between 29.6% (147 of 496) of the RAPD loci. When the clonal fraction was removed from the data set, the number of significant pairwise loci combinations decreased from 147 to 73 (14.7%), indicating a high degree of random mating. These results were consistent with previous field observations suggesting that sexual fruiting bodies of *G. abietina* were common in northern Scandinavia. The high genetic variability detected in the population also suggested that the population was founded by a relatively large number of unrelated genotypes.

DE - DESCRIPTORS: plant-diseases; random-amplified-polymorphic-DNA; plant-pathogenic-fungi; plant-pathogens; genetic-variation; asexual-reproduction; forest-plantations; genetic-markers; forest-trees; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-contorta*; Pinopsida-; fungi-

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; EFTA; Developed-Countries; European-Union-Countries; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0953-7562

Record 356 of 393 - TREECD 1973-2000/01

TI - TITLE: Pathogens observed on Lodgepole Pine grown in Finland.

AU - AUTHOR(S): Weissenberg-K-von

AD - ADDRESS OF AUTHOR: Exp. Sta. Reforestation, Iisvesi, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1975, 5: 5, 309-317; 9 ref.

PY - PUBLICATION YEAR: 1975

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: German, French

AB - ABSTRACT: Briefly reviews the literature on pathogens observed on *Pinus contorta* var. *latifolia* in plantations and on trial plots (shown on a map), and gives the results of a questionnaire survey of forest organizations in Finland on mortality and damage in this species. *Heterobasidion annosum* [*Fomes annosus*] and *Scleroderris lagerbergii* caused the most serious damage; *Lachnellula subtilissima* [*Trichoscyphella calycina*], *Crumenulopsis* [*Crumenula*] *sororia* and *Sclerophoma pityophila* caused damage less frequently. The majority of > 300 stands have reached an age of 40-60 years and their health is described as satisfactory to good.

ADDITIONAL ABSTRACT: Based on the literature and data from forestry organizations, it appears that damage by *Heterobasidion annosum* and *Scleroderris lagerbergii* [*Gremmeniella abietina*] is the most serious and that by *Lachnellula subtilissima*, *Crumenulopsis sororia* and *Sclerophoma pityophila* occurs less frequently. Most of the > 300 known stands are 40-60 yr old and in good condition.

DE - DESCRIPTORS: forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus contorta*; *Pinus*-; fungi-; *Heterobasidion annosum*; *Gremmeniella abietina*; *Crumenulopsis sororia*; *Sydowia polyspora*

GE - GEOGRAPHIC NAMES: Finland-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Heterobasidion*; Aphyllophorales; Basidiomycotina; Eumycota; fungi; *Gremmeniella*; Helotiales; Ascomycotina; *Crumenulopsis*; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 357 of 393 - TREECD 1973-2000/01

TI - TITLE: A serological intermediate of *Gremmeniella abietina*.

AU - AUTHOR(S): Wendler-PB; Gotlieb-AR; Bergdahl-DR

AD - ADDRESS OF AUTHOR: Bot. Dep., Univ. Vermont, Burlington, VT 05405, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): USA, American Phytopathological Society, Northeastern Division: Abstracts. *Phytopathology*. 1980, 70: 5, 470.

PY - PUBLICATION YEAR: 1980

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The Asian, European, and North American serotypes of *G. abietina* were compared with 27 isolates from Vermont using gel double diffusion and cross absorption tests. The majority of isolates were intermediate in type between the North American and European types (suggesting that hybridization has occurred), 3 resembled the European type, and 2 were of unknown type.

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: USA-; Vermont-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; North-America; America; New-England-States-of-USA; Northeastern-States-of-USA; USA

PT - PUBLICATION TYPE: Abstract-only

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0031-949X

Record 358 of 393 - TREECD 1973-2000/01

TI - TITLE: A newly discovered serotype of *Gremmeniella abietina*.

AU - AUTHOR(S): Wendler-PB; Gotlieb-AR; Bergdahl-DR

AD - ADDRESS OF AUTHOR: Univ. Vermont, Burlington, USA.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Canadian-Journal-of-Botany*. 1980, 58: 17, 1923-1928; 2 fig., 1 tab.; 18 ref.

PY - PUBLICATION YEAR: 1980

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: The Asian, European and North American serotypes of this pine pathogen were compared with 27 Vermont isolates using gel double diffusion and intragel cross absorption tests. An intermediate serotype, between the North American and European serotypes, was shown by cross absorption with antiserum prepared in response to a Vermont isolate. Most Vermont isolates resembled the Vermont intermediate in serological reaction; 3 resembled the European serotype and 2 were unknown serotypes. The serological data support possible hybridization between *G. abietina* isolates and the identification of a new serotype in Vermont.

DE - DESCRIPTORS: serotypes-; forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: USA-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; North-America; America

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0008-4026

Record 359 of 393 - TREECD 1973-2000/01

TI - TITLE: Risks associated with the introduction of *Pinus contorta* in northern Sweden with special attention to *Gremmeniella abietina* and North American rusts.

AU - AUTHOR(S): Witzell-J

AD - ADDRESS OF AUTHOR: Swedish University of Agricultural Sciences, Department of Silviculture, S-901 83 UMEA, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Acta-Universitatis-Agriculturae-Sueciae - Silvestria*. 1999, No. 89, 188 pp.; Thesis, Swedish University of Agricultural Sciences; many ref.

PB - PUBLISHER INFORMATION: Swedish University of Agricultural Sciences; Uppsala; Sweden

PY - PUBLICATION YEAR: 1999

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: This thesis is based on six papers included as appendices (including four published and one in press). Sixty years after the first plantings of the North American *Pinus contorta* in northern Sweden and twenty years after the start of the large scale planting programme, extensive epidemics of the native pathogen *Gremmeniella abietina* were recorded. A period with extremely cool and rainy summers (1984-87) followed by a mild winter with large amounts of snow, appeared to be an important predisposing factor to the epidemics. Studies in Sweden in 1987 to 1995 and tests of disease incidence in various provenances in British Columbia and the Yukon Territory, Canada, in 1993 are reported. There was a strong negative correlation between disease incidence of *G. abietina* and temperature sum at the Swedish site. The most severe attacks by *G. abietina* occurred in topographic depressions, on flat ground, and on sites where *Picea abies* was the dominant species of the old stand. The frequency of trees with stem cankers caused by *G. abietina* increased during the period of the study. Some cankers had fully girdled the stem and some were completely occluded at the end of the study period. A large proportion of wood damaged by *G. abietina* adversely influenced processability, and reduced the quality of kraft pulp. *G. abietina* was found less frequently in regenerations of native *Pinus sylvestris* than in those of *P. contorta*. In the Canadian studies, *P. sylvestris* showed susceptibility to the North American rusts *Endocronartium harknessii*, *Cronartium coleosporioides* and *Cronartium comandrae*. It was especially susceptible to *Endocronartium harknessii*, even though disease incidence was low in the studied areas. A high susceptibility to *Endocronartium harknessii* was found in the *P. contorta* provenances originating from the Yukon, and most frequently used in Sweden.

DE - DESCRIPTORS: cankers-; rust-diseases; epidemics-; plant-pathogens; plantations-; snow-; susceptibility-; plant-pathogenic-fungi; plant-diseases; forest-trees; provenance-; heat-sums; site-factors; disease-resistance; climate-; damage-; pulpwood-; fungal-diseases; risk-; topography-

OD - ORGANISM DESCRIPTORS: *Picea-abies*; *Pinus-sylvestris*; *Endocronartium-harknessii*; *Cronartium-coleosporioides*; *Cronartium-comandrae*; *Pinus-contorta*; *Gremmeniella-abietina*

GE - GEOGRAPHIC NAMES: British-Columbia; Canada-; Yukon-Territory; Sweden-

BT - BROADER DESCRIPTORS: *Picea*; *Pinaceae*; *Pinopsida*; gymnosperms;

Spermatophyta; plants; *Pinus*; *Endocronartium*; *Uredinales*; *Basidiomycotina*; *Eumycota*; fungi; *Cronartium*; *Gremmeniella*; *Helotiales*; *Ascomycotina*; Canada;

Developed-Countries; Commonwealth-of-Nations; North-America; America; OECD-Countries; EFTA; European-Union-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Thesis

IB - INTERNATIONAL STANDARD BOOK NUMBER: 91-576-5623-1

Record 360 of 393 - TREECD 1973-2000/01

TI - TITLE: Importance of site and tree species on disease incidence of *Gremmeniella abietina* in northern Sweden.

AU - AUTHOR(S): Witzell-J; Karlman-M; Laflamme-G et-al

AD - ADDRESS OF AUTHOR: Department of Silviculture, Swedish University of Agricultural Sciences, S-90183 Umea, Sweden.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Foliage, shoot and stem diseases. Proceedings of the IUFRO WP 7.02.02 meeting, Quebec City, May 25-31, 1997. Information-Report -Laurentian-Forestry-Centre,-Quebec-Region,-Canadian-Forest-Service. 1998, No. LAU-X-122, 179-182; 14 ref.

PB - PUBLISHER INFORMATION: Laurentian Forestry Centre, Canadian Forest Service; Sainte-Foy; Canada

PY - PUBLICATION YEAR: 1998

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The incidence of *Gremmeniella abietina* is reported for 32 regeneration areas of *Pinus contorta* and *P. sylvestris* situated on sites supporting pure stands of *P. sylvestris* and *Picea abies*. Trees planted on spruce sites were found to be more severely affected than trees planted on pine sites, and *P. contorta* was more severely affected than *P. sylvestris* on both sites.

DE - DESCRIPTORS: IUFRO-; fungal-diseases; plant-pathogenic-fungi; plant-pathogens; plant-diseases; forest-trees; site-factors; cankers-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Pinus-contorta*; *Picea-abies*; *Gremmeniella-abietina*; *Pinopsida*-; fungi-

GE - GEOGRAPHIC NAMES: Sweden-

BT - BROADER DESCRIPTORS: *Pinus*; *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; *Picea*; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; EFTA; Developed-Countries; European-Union-Countries; OECD-Countries; Scandinavia; Northern-Europe; Europe

PT - PUBLICATION TYPE: Conference-paper; Journal-article

Record 361 of 393 - TREECD 1973-2000/01

TI - TITLE: *Phaeotheca dimorphospora* as a potential biocontrol agent for shoot blight caused by *Gremmeniella abietina*.

AU - AUTHOR(S): Yang-D; Laflamme-G; Bernier-L; Dessureault-M

AD - ADDRESS OF AUTHOR: Centre de Recherche en Biologie Forestiere, Faculte de Foresterie et Geomatique, Universite Laval, Sainte-Foy, Quebec G1K 7P4, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Canadian-Journal-of-Plant-Pathology*. 1995, 17: 1, 7-12; 16 ref.

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: An isolate of *P. dimorphospora* from an *Ulmus americana* branch was tested for its capacity to suppress shoot blight caused by *G. abietina* on *Pinus resinosa* seedlings. In vitro germination of conidia of *G. abietina* was strongly inhibited by microconidia of *P. dimorphospora*. In a greenhouse bioassay, *P. dimorphospora* established itself on the foliage of the seedlings without causing any ill effects. A summer application of *P. dimorphospora* microconidia to the foliage of *G. abietina*-inoculated seedlings significantly reduced disease severity the following year, compared with the nontreated control. It is suggested that *P. dimorphospora* has potential in biocontrol of this shoot blight on *P. resinosa*.

DE - DESCRIPTORS: plant-diseases; plant-pathogens; plant-pathogenic-fungi; forest-trees; biological-control-agents; plant-disease-control; biological-control; diseases-; control-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-resinosa*; fungi-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants;

Deuteromycotina

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0706-0661

Record 362 of 393 - TREECD 1973-2000/01

TI - TITLE: Evaluation of a fungal antagonist, *Phaeotheca dimorphospora*, for biological control of tree diseases.

AU - AUTHOR(S): Yang-D; Plante-F; Bernier-L; Piche-Y; Dessureault-M; Laflamme-G; Ouellete-GB

AD - ADDRESS OF AUTHOR: Centre de Recherche en Biologie Forestiere, Universite Laval, Sainte-Foy, Que. G1K 7P4, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Canadian-Journal-of-Botany. 1993, 71: 3, 426-433; 14 ref.

PY - PUBLICATION YEAR: 1993

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: *Phaeotheca dimorphospora*, which was first isolated from elm wood and found to be antagonistic in vitro against the Dutch elm disease pathogen *Ophiostoma ulmi* [*Ceratocystis ulmi*], was tested for antifungal activity in vitro against other tree pathogens by a variation of the agar layer technique. *P. dimorphospora* produced antifungal compounds that were strongly inhibitory against a wide range of tree pathogens, including *C. ulmi*, *Gremmeniella* spp., *Armillaria* spp., *Septoria musiva* [*Mycosphaerella populorum*], *Verticillium albo-atrum*, *Cylindrocladium floridanum*, *Phytophthora* sp., *Nectria galligena*, and *Heterobasidion annosum*. Under light and interference microscopy, four types of morphological change were observed in the pathogens tested: swelling of hyphae, production of resting spores such as chlamydospores and of sclerotia, extrusion of cytoplasm from hyphal tips, and bursting and destruction of mycelium. Chloroform-soluble antagonistic compounds were extracted that showed both fungicidal and fungistatic effects on the test organisms.

DE - DESCRIPTORS: Biological-control; fungal-diseases; control-; plant-pathogens; trees-; evaluation-; biological-control-agents; antagonism-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Ceratocystis-ulmi*; *Gremmeniella*-; *Armillaria*-; *mycosphaerella-populorum*; *Verticillium-albo-atrum*; *Phytophthora*-; *Nectria-galligena*; *Heterobasidion-annosum*; fungi-; *Calonectria-kyotensis*

BT - BROADER DESCRIPTORS: woody-plants; Spermatophyta; plants; fungi; *Ceratocystis*; *Ophiostomatales*; Ascomycotina; Eumycota; Helotiales; Agaricales; Basidiomycotina; *Mycosphaerella*; Dothideales; *Verticillium*; Deuteromycotina; Peronosporales; Mastigomycotina; *Nectria*; Hypocreales; *Heterobasidion*; Aphyllophorales; *Cylindrocladium*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0008-4026

Record 363 of 393 - TREECD 1973-2000/01

TI - TITLE: A Canadian example of government-industry collaboration in tree improvement.

AU - AUTHOR(S): Yeatman-CW

AD - ADDRESS OF AUTHOR: Canadian For. Serv., Chalk River, Ont., Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Forestry-Chronicle. 1976, 52: 6, 283-288; 8 ref.

PY - PUBLICATION YEAR: 1976

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: Seeds of Jack Pine (*Pinus banksiana*) from 64 sources were tested on sites in the forest area of the Canadian International Paper Co. (CIP) at Baskatong and Sugarloaf, western Quebec, in 1966. Growth was better at Baskatong, with trees from seed from the same district attaining the greatest height. Scleroderris canker (*Gremeniella abietina*) caused widespread mortality at Sugarloaf, but was not present at Baskatong. Jack Pine stands on 120 ha west of Baskatong Lake have been chosen as a seed production area, and selection, measuring and recording of plus trees has been carried out. A progressive breeding programme is outlined.

DE - DESCRIPTORS: plant-breeding; provenance-trials; tree-breeding; conifers-

OD - ORGANISM DESCRIPTORS: *Pinus-banksiana*

GE - GEOGRAPHIC NAMES: Canada-; Quebec-

BT - BROADER DESCRIPTORS: *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; North-America; America; Canada

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0015-7546

Record 364 of 393 - TREECD 1973-2000/01

TI - TITLE: Effects of foliar nitrogen, potassium and magnesium concentrations on the resistance of Scots pine seedlings to scleroderris canker infection.

AU - AUTHOR(S): Ylimartimo-A

AD - ADDRESS OF AUTHOR: Department of Silviculture, University of Helsinki, Unioninkatu 40 B, 00170 Helsinki, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1991, 21: 6-7, 414-423; 25 ref.

PY - PUBLICATION YEAR: 1991

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: *Pinus sylvestris* seedlings were grown in quartz sand and N, K and Mg were given in different ratios with the irrigation water. After 1 growing season, 50% of the seedlings were inoculated with a conidial suspension of *Gremmeniella abietina*. After incubation in a growth chamber under simulated winter conditions, the resistance of the seedlings to infection was evaluated by measuring reductions in the force required to detach living needles from the shoot. Results showed the K deficiency reduced resistance, as did a combination of K and Mg deficiency (or increased N/K and N/Mg ratios). However, effects were dependent on the amount of light available in the growth chamber after winter dormancy.

DE - DESCRIPTORS: resistance-; nutrient-deficiencies; activity-; Conifers-; Seedlings-; diseases-; fungal-diseases; potassium-; magnesium-; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Gremmeniella-abietina*; *Gremmeniella*-; fungi-

BT - BROADER DESCRIPTORS: Spermatophyta; plants; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 365 of 393 - TREECD 1973-2000/01

TI - TITLE: Growth of *Gremmeniella abietina* on artificial media simulating the effects of mineral nutrient imbalance of Scots pine.

AU - AUTHOR(S): Ylimartimo-A; Haansuu-P

AD - ADDRESS OF AUTHOR: Department of Forest Ecology, P.O. Box 24 (Unioninkatu 40 B), 00014 University of Helsinki, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *European-Journal-of-Forest-Pathology*. 1993, 23: 6-7, 372-384; 37 ref.

PY - PUBLICATION YEAR: 1993

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: Since increased foliar N/K and N/Mg ratios are known to reduce the resistance of *Pinus sylvestris* to scleroderris canker caused by *G. abietina*, effects were studied of imbalances in concn of such nutrients and of amino acids affected by these nutrient imbalances on in vitro growth of the pathogen.

Mycelium was cultured on artificial media adjusted to simulate the changes in concn of inorganic N, K, Mg and Ca and of some free amino acids in the host with nutritional imbalance. Increased concn of K and Ca reduced mycelial growth, whereas a small increase in the inorganic N concn increased growth. Tenfold concn (compared with normal host levels) of arginine and glutamic acid, and up to 100-fold concn of proline increased growth. Results suggested that nutrient imbalances may enhance the colonization of host tissues by *G. abietina*.

DE - DESCRIPTORS: plant-pathogenic-fungi; plant-pathogens; plant-diseases; forest-trees; nutrient-balance; laboratory-tests; nutrients-; amino-acids; calcium-; potassium-; nitrogen-; magnesium-; fungal-diseases; plant-nutrition; nutrient-deficiencies; simulation-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Pinus-sylvestris*; *Gremmeniella-abietina*; fungi-

BT - BROADER DESCRIPTORS: plant-pathogens; pathogens; fungi; trees; woody-plants; Spermatophyta; plants; *Pinus*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 366 of 393 - TREECD 1973-2000/01

TI - TITLE: Ultrastructural and cytochemical results on scleroderris canker infection of red pine seedlings.

AU - AUTHOR(S): Ylimartimo-A; Laflamme-G; Simard-M; Rioux-D; Capretti-P et-al

AD - ADDRESS OF AUTHOR: Dept. of Forest Ecology, PO Box 24, University of Helsinki, 00014 Helsinki, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Shoot and foliage diseases in forest trees. Proceedings of a Joint Meeting of the IUFRO Working Parties S2.06.02 and S2.06.04, Vallombrosa, Firenze, Italy 6-11 June 1994. 1995, 146-153; 18 ref.

PB - PUBLISHER INFORMATION: Istituto di Patologia e Zoologia Forestale e Agraria, Universita degli Studi di Firenze; Firenze; Italy

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Results are reported of studies into the development of *Gremmeniella abietina* infection processes at the cellular level in *Pinus resinosa* seedlings. Different microscopic techniques (such as enzymes and antibodies conjugated to colloidal gold) were used. Hyphae of the pathogen were observed along middle lamellas, in cell walls and inside the cells of the bract and short shoot tissues of the infected seedlings. Pathogen cells penetrated into host cells through enzymatic degradation of host cell walls. These preliminary results indicate that the extracellular sheath of *G. abietina* may be implicated in host/pathogen interactions, including the attachment of hyphae to the host surface and the degradation of host cell walls inside host tissues.

DE - DESCRIPTORS: forest-trees; plant-pathogens; plant-pathogenic-fungi; shoots-; cytology-; biochemistry-; seedlings-; inoculation-; methodology-; interactions-; ultrastructure-; fungal-diseases; host-parasite-relationships; plant-diseases; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella*-; *Gremmeniella-abietina*; *Pinus-resinosa*; fungi-

GE - GEOGRAPHIC NAMES: Quebec-; Canada-

BT - BROADER DESCRIPTORS: Helotiales; Ascomycotina; Eumycota; fungi; *Gremmeniella*; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; Canada; OECD-Countries; Commonwealth-of-Nations; Developed-Countries; North-America; America

PT - PUBLICATION TYPE: Conference-paper

IB - INTERNATIONAL STANDARD BOOK NUMBER: 88-900074-0-0

Record 367 of 393 - TREECD 1973-2000/01

TI - TITLE: Ultrastructure and cytochemistry of early stages of colonization by *Gremmeniella abietina* in *Pinus resinosa* seedlings.

AU - AUTHOR(S): Ylimartimo-A; Laflamme-G; Simard-M; Rioux-D

AD - ADDRESS OF AUTHOR: Department of Forest Ecology, P.O. Box 24 (Unioninkatu 40 B), University of Helsinki, Helsinki, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): *Canadian Journal of Botany*. 1997, 75: 7, 1119-1132; 36 ref.

PY - PUBLICATION YEAR: 1997

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French

AB - ABSTRACT: This paper provides details on the infection processes at the ultrastructural level in *P. resinosa* seedlings during early stages of colonization by *G. abietina*. Different gold-conjugated enzymes and antibodies were used to cytochemically localize cellulose, pectin, fungal laccase and the pathogen cells in host tissues. *G. abietina* penetrated into the host through stomata of the short shoot bracts and sparsely colonized both intercellular and intracellular areas of the bract tissues. The colonizing hyphae usually had a thick wall surrounded by an extracellular sheath composed of fibrillar material. Microhyphae-like cells were observed as having penetrated host cell walls. The fungal cells (except the extracellular sheath), even when embedded in cellulosic or pectic material of host tissues, did not appear to contain cellulose or pectin. It is suggested that *G. abietina* is able to degrade cellulose and pectin and that phenoloxidases secreted by the pathogen could be involved in host cell wall degradation. The results indicated that the extracellular sheath of *G. abietina* is implicated in host-pathogen interactions such as attachment of hyphae to the host surface and cell wall degradation during colonization of host tissues.

DE - DESCRIPTORS: ultrastructure-; cytochemistry-; colonization-; seedlings-; cellulose-; laccase-; cell-walls; pectins-; forest-trees; fungal-diseases; infection-; responses-; plant-diseases; plant-pathogens; plant-pathogenic-fungi; plant-pathology

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-resinosa*; Pinopsida-; fungi-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0008-4026

Record 368 of 393 - TREECD 1973-2000/01

TI - TITLE: Infection of pine (*Pinus resinosa* and *P. sylvestris*) by *Gremmeniella abietina*: ultrastructural and cytochemical aspects only

AU - AUTHOR(S): Ylimartimo-A; Laflamme-G; Simard-M; Rioux-D; Laflamme-G et-al

AD - ADDRESS OF AUTHOR: Department of Forest Ecology, PO Box 24, FIN-00014 University of Helsinki, Finland.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Foliage, shoot and stem diseases.

Proceedings of the IUFRO WP 7.02.02 meeting, Quebec City, May 25-31, 1997.

Information-Report -Laurentian-Forestry-Centre,-Quebec-Region,-Canadian-Forest-Service. 1998, No. LAU-X-122, 189.

PB - PUBLISHER INFORMATION: Laurentian Forestry Centre, Canadian Forest Service; Sainte-Foy; Canada

PY - PUBLICATION YEAR: 1998

LA - LANGUAGE OF TEXT: English

DE - DESCRIPTORS: IUFRO-; fungal-diseases; plant-pathogenic-fungi; plant-pathogens; plant-diseases; forest-trees; cankers-; fungal-morphology; chemistry-

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; *Pinus-resinosa*; *Pinus-sylvestris*

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Pinus*; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants

PT - PUBLICATION TYPE: Conference-paper; Abstract-only

Record 369 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris canker of Todo-fir in Hokkaido, Northern Japan. IV. An analysis of climatic data associated with the outbreak.

AU - AUTHOR(S): Yokota-S

AD - ADDRESS OF AUTHOR: Govt. Forest Exp. Stn., Sapporo, Hokkaido, Japan.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Yokota, S. : Scleroderris canker of Todo-fir in Hokkaido, Northern Japan. III. Dormant infection of causal fungus. European-Journal-of-Forest-Pathology. 1975, 5: 1, 13-21; 5 graphs, 1 diag., 1 map, 1 tab.

PY - PUBLICATION YEAR: 1975

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: Exceptionally low air temp. in late Sept.-early Oct. 1969 and a subsequent long period of deep snow were considered the main factors favouring the outbreak of canker [on *Abies sachalinensis*] caused by *S. lagerbergii* [*Gremmeniella abietina*].

DE - DESCRIPTORS: forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Abies-sachalinensis*; *Gremmeniella-abietina*

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Abies*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 370 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris, canker of Todo-Fir in Hokkaido, northern Japan. III. Dormant infection of the causal fungus. IV. An analysis of climatic data associated with the outbreak.

AU - AUTHOR(S): Yokota-S

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1975, 5: 1, 7-21; 13 ref.

PY - PUBLICATION YEAR: 1975

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: German, French

AB - ABSTRACT: (III) The first symptoms of canker caused by *Scleroderris lagerbergii* on *Abies sachalinensis* appear in spring, although infection of current-year shoots by spores must be established early in the growing season of the previous year. Results of isolation experiments demonstrated the presence of a dormant infection of the causal fungus in the shoots, and invasion of new bark tissues under snow cover during the winter. (IV) An analysis of relevant climatic data for 1965-70 showed that exceptionally low air temperatures from late Sept. to early Oct. 1969, and a subsequent long period of deep snow, were probably the main factors favouring the outbreak of the canker in Hokkaido in 1970. [Cf. FA 36, 2807]

DE - DESCRIPTORS: conifers-

OD - ORGANISM DESCRIPTORS: *Abies-sachalinensis*; *GREMMENIELLA-ABIETINA*

BT - BROADER DESCRIPTORS: *Abies*; *Pinaceae*; *Pinopsida*; *gymnosperms*; *Spermatophyta*; *plants*; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; *fungi*

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 371 of 393 - TREECD 1973-2000/01

TI - TITLE: Enactment of emergency quarantine measures on Scleroderris canker in USA and Canada.

AU - AUTHOR(S): Yokota-S

AD - ADDRESS OF AUTHOR: Min. Agric., For. & Fish., For. Exp. Sta., Hokkaido Branch, Japan.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Translation,-Environment-Canada. 1979, No. OOENV TR-1799, ii + 17 pp.; Transl. from Forest Pests (Shinrin Boeki) (1979) 28 (3, 324) 9-14. Limited distribution.

PY - PUBLICATION YEAR: 1979

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: A description of measures taken in 1977-8 to control the spread of Gremmeniella abietina from infection centres in New York and Vermont.

DE - DESCRIPTORS: quarantine-

OD - ORGANISM DESCRIPTORS: Gremmeniella-abietina

GE - GEOGRAPHIC NAMES: Vermont-; New-York; USA-; Canada-

BT - BROADER DESCRIPTORS: Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi; New-England-States-of-USA; Northeastern-States-of-USA; USA; North-America; America; Middle-Atlantic-States-of-USA

PT - PUBLICATION TYPE: Miscellaneous

Record 372 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris canker of Todo-fir in Hokkaido, Northern Japan. III. Dormant infection of causal fungus.

AU - AUTHOR(S): Yokota-S

AD - ADDRESS OF AUTHOR: Govt. Forest Exp. Stn., Sapporo, Hokkaido, Japan.

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1975, 5: 1, 7-12; 2 fig., 1 tab. See RPP 54, 1900.

PY - PUBLICATION YEAR: 1975

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: The percentage of *S. lagerbergii* [*Gremmeniella abietina*] isolations [from *Abies sachalinensis*] increased from Oct. until the first needle fall symptoms, parallel with increase in snow depth. It was assumed that the fungus spreads easily in young shoots buried in snow. It was not found in winter buds because of the difference in time between spore discharge and bud formation. Isolates were obtained from bark tissues but not from wood. Results suggest that a considerable period is required for infection to become established in the bark, after which the fungus spreads further in these tissues during the winter under snow.

DE - DESCRIPTORS: forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Abies-sachalinensis*; *Gremmeniella-abietina*

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Abies*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 373 of 393 - TREECD 1973-2000/01

TI - TITLE: Etiological and pathological studies on Scleroderris canker in Hokkaido, Japan.

AU - AUTHOR(S): Yokota-S

AD - ADDRESS OF AUTHOR: Kyushu Branch Sta., Japan.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Bulletin-of-the-Forestry-and-Forest-Products-Research-Institute. 1983, No. 321, 89-116; 5 pl., 3 fig., 13 tab.; 57 ref.

PY - PUBLICATION YEAR: 1983

LA - LANGUAGE OF TEXT: Japanese

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: *S. lagerbergii* [*Gremmeniella abietina*] occurred on *Abies sachalinensis* and *A. alba* (a new host record on *Abies*) and on pine (*Pinus strobus*). Symptoms on *Abies* in Hokkaido differ from those in Europe and N. America in a healthy green needle cast in early spring, no canker extension on 2-yr-old shoots and no green-yellow pigment formation under the bark of the die-back or canker lesions. Symptoms on *P. strobus* in Japan are the same as those elsewhere. No differences were found in the morphological characteristics of the perfect state of the fungus on *A. spp.* from those on other hosts worldwide. The size and number of septa of pycnospores on *A. sachalinensis* differ from those in Europe and N. America, except for the fungus on *P. cembra* in Switzerland and northern Italy. Most of the pycnospores on *A. sachalinensis* are 7-septate and c. 50 μ m long. Apothecia mature during summer on shoots that died in previous years while pycnidia mature in summer on shoots that died in the same or previous years. *G. abietina* became established in the host through wounds on current shoots, winter buds and adventitious shoots. Wounds caused by application of dry ice for 3 min were the most favourable for pathogenicity. Under natural conditions the disease only occurs in colder areas where deep snow exists in winter. The host ranges of isolates from different hosts were determined. The pathogen from *A. sachalinensis* could infect at least 5 *A. spp.*, 1 *Picea sp.* and 7 *Pinus spp.* At least 3 physiological races of *G. abietina* are recognized serologically: European, North American and Asian. Isolates from *A. sachalinensis* belong to the Asian race while that from *P. strobus* in Japan is probably a European race.

DE - DESCRIPTORS: pines-; records-; hosts-; forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Abies-sachalinensis*; *Abies-alba*; *Gremmeniella-abietina*; *Abies-*; *Pinus-*

GE - GEOGRAPHIC NAMES: Japan-; Hokkaido-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Abies*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; East-Asia; Asia; Japan

PT - PUBLICATION TYPE: Journal-article

Record 374 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris canker of Todo-fir in Hokkaido, Northern Japan V. Relationship between disease development and forest type.

AU - AUTHOR(S): Yokota-S; Uozumi-T; Matsuzaki-S

AD - ADDRESS OF AUTHOR: Gov. Forest Exp. Sta. Sapporo, Hokkaido, Japan.

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1975, 5: 6, 356-366; 2 diag., 2 graphs, 4 tab. See RPP 54, 4659.

PY - PUBLICATION YEAR: 1975

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: Occurrence and severity of *Scleroderris lagerbergii* [*Gremmeniella abietina*] was compared in plantations of *Abies sachalinensis* with and without a canopy of deciduous trees. Most trees under cover remained healthy, whereas those in the open were severely damaged. It is suggested that the cover provided by deciduous trees affects such microclimatic conditions as min. temp. and snow deposit in early winter, creating more favourable conditions for the trees.

DE - DESCRIPTORS: forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Abies-sachalinensis*; *Gremmeniella-abietina*

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Abies*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 375 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris canker of Todo-fir in Hokkaido, Northern Japan. II. Physiological and pathological characteristics of the causal fungus.

AU - AUTHOR(S): Yokota-S; Uozumi-T; Matsuzaki-S

AD - ADDRESS OF AUTHOR: Govt. Forest Exp. Stn., Sapporo, Hokkaido, Japan.

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1974, 4: 3, 155-166; 5 fig., 3 graphs, 5 tab.

PY - PUBLICATION YEAR: 1974

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: German, French

AB - ABSTRACT: Ascospore expulsion by *S. lagerbergii* [*Gremmeniella abietina*] occurred at 0-35 deg C and germination at 0-25 deg . Ascospores discharged at 0 deg showed 70% germination at 0 deg after 3-4 days. Pycnosporos were discharged at 0-20 deg , opt. 10-15 deg , and germinated at 0-25 deg . Mycelial growth occurred at 0-25 deg , opt. 10 deg . Inoculation tests on *Abies sachalinensis*, with both mycelium and pycnospore suspension, were always positive. The lesions produced in spring were larger when shoots were damaged by dry ice prior to inoculation in autumn. Spraying intact shoots with a pycnospore suspension induced dieback of 1 yr shoots in the following spring; inoculation in June produced 60% infection, in July 34%, and in Aug. none. The results suggest that young succulent shoots without wounds can be infected.

DE - DESCRIPTORS: physiology-; forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Abies-sachalinensis*; *Gremmeniella-abietina*

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Abies*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 376 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris canker of Todo Fir in Hokkaido, northern Japan.

AU - AUTHOR(S): Yokota-S; Uozumi-T; Matsuzaki-S

AD - ADDRESS OF AUTHOR: Govt. Forest Exp. Stn., Hokkaido, Japan.

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology.
1974, 4: 2, 65-74; 16 ref.

PY - PUBLICATION YEAR: 1974

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: German, French

AB - ABSTRACT: In spring 1970, an extensive outbreak of a dieback and canker disease caused by *S. lagerbergii* occurred in plantations of the native *Abies sachalinensis*. Symptoms, distribution of the disease, and features of infected plantations are described, on the basis of a survey made in 1970-72. Variations in disease intensity, which were closely related to the slope of the ground, are also described; the disease occurred more frequently in stands on relatively level ground. [Cf. FA 34, 2310]

DE - DESCRIPTORS: forest-trees; conifers-; plant-pathology

OD - ORGANISM DESCRIPTORS: *Abies-sachalinensis*; GREMMENIELLA-ABIETINA

GE - GEOGRAPHIC NAMES: Japan-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Abies*; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; East-Asia; Asia

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 377 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris canker of Todo-Fir in Hokkaido, northern Japan. V. Relationship between disease development and forest type.

AU - AUTHOR(S): Yokota-S; Vozumi-T; Matsuzaki-S

SO - SOURCE (BIBLIOGRAPHIC CITATION): European-Journal-of-Forest-Pathology. 1975, 5: 6, 356-366; 21 ref.

PY - PUBLICATION YEAR: 1975

LA - LANGUAGE OF TEXT: English

LS - LANGUAGE OF SUMMARIES: French, German

AB - ABSTRACT: [Cf. FA 36, 7836] Reports a survey to assess the severity of attack by *S. lagerbergii* on three test plots at 560-630 m alt. on the S. slope of Mt. Yotei during 1972-74. The plots represented (a) *Abies sachalinensis* planted in 1964 under deciduous species (mainly *Tilia japonica*) of mean height ca. 15 m, (b) the same plantation after removal of the overstorey in 1971, and (c) a plantation established in 1963 after clear felling. Most trees in (a) remained healthy, whereas in (c) they were severely damaged; (b) had moderate damage. It is suggested that the deciduous overstorey had a protective effect, possibly through its influence on microclimatic conditions such as minimum temperature and early snow deposits.

DE - DESCRIPTORS: underplanting-; conifers-

OD - ORGANISM DESCRIPTORS: *Abies-sachalinensis*; *GREMMENIELLA-ABIETINA*; *Tilia-japonica*

BT - BROADER DESCRIPTORS: *Abies*; Pinaceae; Pinopsida; gymnosperms;

Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0300-1237

Record 378 of 393 - TREECD 1973-2000/01

TI - TITLE: Etiological and pathological studies on Scleroderris canker in Hokkaido, Japan.

AU - AUTHOR(S): Yokota-SI

SO - SOURCE (BIBLIOGRAPHIC CITATION): Bulletin,-Forestry-and-Forest-Products-Research-Institute,-Japan. 1983, No. 321, 89-116; 5 pl. En tab., fig. & pl.; 57 ref.

PY - PUBLICATION YEAR: 1983

LA - LANGUAGE OF TEXT: Japanese

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: [See FA 37, 5166] Scleroderris lagerbergii [Gremmeniella abietina] was first found on Abies sachalinensis in Hokkaido in 1970. The disease has since also been found on Pinus strobus (1973) and A. alba (1975). Differing symptoms of the disease on fir in Hokkaido and in Europe and North America are described; symptoms are the same on pine. Morphological characters of the perfect stage on A. sachalinensis in Hokkaido are the same as on other species and in other regions, but pycnospore morphology is different from that in Europe and North America. Experimental inoculations showed that infection was via wounds on current and adventitious shoots and winter buds, and that many current shoots were killed in the spring after spraying with pycnospores. The fungus was not re-isolated from fallen green needles. A. sachalinensis isolates could attack 4 other Abies species, 7 Pinus species and Picea rubens. Pathogenicity of an isolate from A. alba was similar, but neither fir isolate was as pathogenic as an isolate from Pinus strobus. Tables summarize the physiological characteristics of European, North American and 'Asian' (Hokkaido) races and it is suggested that the 'Asian' race is likely to be European in type.

DE - DESCRIPTORS: cankers-; fungal-diseases; ecology-; biology-; conifers-

OD - ORGANISM DESCRIPTORS: Gremmeniella-abietina; Abies-sachalinensis; fungi-; Gremmeniella-

GE - GEOGRAPHIC NAMES: Hokkaido-; Japan-

BT - BROADER DESCRIPTORS: Gremmeniella; Helotiales; Ascomycotina; Eumycota; fungi; Abies; Pinaceae; Pinopsida; gymnosperms; Spermatophyta; plants; Japan; East-Asia; Asia

PT - PUBLICATION TYPE: Journal-article

Record 379 of 393 - TREECD 1973-2000/01

TI - TITLE: Recovery of needle-fall trees of *Abies sachalinensis* by snow pressure reduction.

AU - AUTHOR(S): Yoshitake-T; Saito-T; Sakamoto-T

SO - SOURCE (BIBLIOGRAPHIC CITATION): Annual-Report-of-the-Hokkaido-Branch,-Forestry-and-Forest-Products-Research-Institute,-Japan. 1987, publ. 1988, No. 62, 56-63; 10 ref.

PY - PUBLICATION YEAR: 1987

LA - LANGUAGE OF TEXT: Japanese

LS - LANGUAGE OF SUMMARIES: English

AB - ABSTRACT: Needle loss as a result of heavy snow falls in Niigata prefecture, Japan, was examined for *Cryptomeria japonica*, *Abies homolepis*, *A. veitchii* and *Picea abies*. Two tree protection methods were tested in Hokkaido on young *A. sachalinensis* trees, where *Scleroderris* canker is common, and needle loss may be due to either phenomenon. A snow guard (a wooden frame around the tree) resulted in good recovery of the tree after seven years, though trees around almost died, suggesting that snow damage was responsible for needle loss. A snow guard stake only gave temporary protection to damaged trees. Pruning dead branches had a positive effect on moderately damaged trees. [With English figures and captions.]

DE - DESCRIPTORS: Conifers-; Snow-; snow-damage; Tree-guards

OD - ORGANISM DESCRIPTORS: *Cryptomeria-japonica*; *Abies-homolepis*; *Abies-veitchii*; *Picea-abies*; *Abies-sachalinensis*

GE - GEOGRAPHIC NAMES: Japan-

BT - BROADER DESCRIPTORS: *Cryptomeria*; *Taxodiaceae*; *Pinopsida*; *gymnosperms*; *Spermatophyta*; *plants*; *Abies*; *Pinaceae*; *Picea*; *East-Asia*; *Asia*

PT - PUBLICATION TYPE: Journal-article

Record 380 of 393 - TREECD 1973-2000/01

TI - TITLE: On withering of Monterey pine (*Pinus radiata*) in Southeastern Bulgaria.

OT - ORIGINAL NON-ENGLISH TITLE: Za s"khneneto na l"chistiya bor v Yugoiztochna B"lgariya.

AU - AUTHOR(S): Zlatanov-S

SO - SOURCE (BIBLIOGRAPHIC CITATION): Gorsko-Stopanstvo. 1977, 33: 6, 20-24; 3 fig., 3 tab.

PY - PUBLICATION YEAR: 1977

LA - LANGUAGE OF TEXT: Bulgarian

AB - ABSTRACT: The disease is caused by *Dothistroma* [*Scirrhia*] *pini*. High temps. and RH are necessary for development of the fungus. Pines on sites protected from wind are particularly affected. Infection by *Cenangium abietis* [*Gremmeniella abietina*] was also observed, Monterey pine being more susceptible than native pines. Seedlings infected by *S. pini* wither from the base upwards; new shoots develop on affected branches, which bear no fruit bodies. Seedlings infected by *G. abietina* wither from the top downwards; no new shoots develop and fruit bodies are observed on needles and branches.

DE - DESCRIPTORS: forest-trees; conifers-; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Pinus*-; *Gremmeniella-abietina*; MYCOSPHAERELLA-PINI

GE - GEOGRAPHIC NAMES: Bulgaria-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Mycosphaerella*; Dothideales; Balkans; Southern-Europe; Europe

PT - PUBLICATION TYPE: Journal-article

Record 381 of 393 - TREECD 1973-2000/01

TI - TITLE: Pathology.

OT - ORIGINAL NON-ENGLISH TITLE: Pathologie.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Summary-of-plant-quarantine-pest-and-disease-situation-in-Canada,-1984-1985. 1986, 38-63 En section; 40-66 Fr section.

PB - PUBLISHER INFORMATION: Agriculture Canada, Plant Health Division; Ottawa, Ontario; Canada

PY - PUBLICATION YEAR: 1986

LA - LANGUAGE OF TEXT: English, French

AB - ABSTRACT: The disease situations with regard to bean (*Phaseolus vulgaris*) anthracnose (*Colletotrichum lindemuthianum*); Scleroderris canker (*Gremmeniella abietina*) of conifers; little cherry disease; head smut (*Sphacelotheca reiliana*) of maize; potato wart (*Synchytrium endobioticum*); and lucerne wilt (*Verticillium albo-atrum*) are outlined. *G. abietina* continues to spread and is newly reported on pine from Ont.

DE - DESCRIPTORS: Legislation-; plant-diseases; diseases-; Cherries-; Maize-; Potatoes-; Lucerne-; Pines-; cereals-; root-crops; forest-trees; fruit-crops; plant-pathology

OD - ORGANISM DESCRIPTORS: *Phaseolus-vulgaris*; *Colletotrichum-lindemuthianum*; *Sphacelotheca-reiliana*; *Synchytrium-endobioticum*; *Verticillium-albo-atrum*; *Gremmeniella-abietina*; *Prunus*-; *Zea-mays*; *Medicago*-; *Pinus*-; *Solanum-tuberosum*

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: *Phaseolus*; *Papilionoideae*; *Fabaceae*; *Fabales*; *dicotyledons*; *angiosperms*; *Spermatophyta*; *plants*; *Colletotrichum*; *Deuteromycotina*; *Eumycota*; *fungi*; *Sphacelotheca*; *Ustilaginales*; *Basidiomycotina*; *Synchytrium*; *Chytridiales*; *Mastigomycotina*; *Verticillium*; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Rosaceae*; *Rosales*; *Zea*; *Poaceae*; *Cyperales*; *monocotyledons*; *Pinaceae*; *Pinopsida*; *gymnosperms*; *Solanum*; *Solanaceae*; *Solanales*; *OECD-Countries*; *Commonwealth-of-Nations*; *Developed-Countries*; *North-America*; *America*

PT - PUBLICATION TYPE: Miscellaneous

Record 382 of 393 - TREECD 1973-2000/01

TI - TITLE: Summary of plant quarantine pest and disease situations in Canada 1983.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1984, 48 + 51 pp.; 14 maps, 12 tab. See RPP 63, 1577.

PB - PUBLISHER INFORMATION: Plant Health Division, Agriculture Canada; Ottawa; Canada

PY - PUBLICATION YEAR: 1984

LA - LANGUAGE OF TEXT: English, French

AB - ABSTRACT: Survey activities are summarized, the information providing a basis for regulations and control measures to prevent the spread of pests and diseases. Quarantinable diseases included were: *Colletotrichum lindemuthianum* on bean [*Phaseolus*]; *Gremmeniella abietina* on red pine; cherry little cherry virus on cherry; head smut (*Sphacelotheca reiliana*) on maize; potato wart (*Synchytrium endobioticum*); and *Verticillium albo-atrum* on lucerne.

DE - DESCRIPTORS: Legislation-; plant-diseases; diseases-; quarantine-; Pines-; Cherries-; Maize-; Potatoes-; Lucerne-; arthropod-pests; plant-pathology; agricultural-entomology

OD - ORGANISM DESCRIPTORS: *Colletotrichum-lindemuthianum*; *Gremmeniella-abietina*; *Sphacelotheca-reiliana*; *Synchytrium-endobioticum*; *Verticillium-albo-atrum*; *Pinus*-; *Prunus*-; *Zea-mays*; *Medicago*-; *Solanum-tuberosum*

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: *Colletotrichum*; *Deuteromycotina*; *Eumycota*; *fungi*; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Sphacelotheca*; *Ustilaginales*; *Basidiomycotina*; *Synchytrium*; *Chytridiales*; *Mastigomycotina*; *Verticillium*; *Pinaceae*; *Pinopsida*; *gymnosperms*; *Spermatophyta*; *plants*; *Rosaceae*; *Rosales*; *dicotyledons*; *angiosperms*; *Zea*; *Poaceae*; *Cyperales*; *monocotyledons*; *Papilionoideae*; *Fabaceae*; *Fabales*; *Solanum*; *Solanaceae*; *Solanales*; *OECD-Countries*; *Commonwealth-of-Nations*; *Developed-Countries*; *North-America*; *America*

PT - PUBLICATION TYPE: Miscellaneous

Record 383 of 393 - TREECD 1973-2000/01

TI - TITLE: Summary of plant quarantine pest and disease situations in Canada, 1984-1985.

CA - CORPORATE AUTHOR(S): Canada, Plant Health Division, Agriculture Canada. Plant Health Division, Agriculture Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1986, 134pp.; 18 fig.

PB - PUBLISHER INFORMATION: Plant Health Division, Agriculture Canada; Ottawa, Ontario; Canada

PY - PUBLICATION YEAR: 1986

LA - LANGUAGE OF TEXT: English, French

AB - ABSTRACT: This annual report summarizes, with the aid of maps, survey activities conducted in Canada in 1984-85 for plant pests and diseases that are subject to quarantine control. The pests dealt with are the insects *Delia coarctata*, *Grapholita molesta* [*Cydia molesta*], *Lymantria dispar*, *Ostrinia nubilalis*, *Oulema melanopus*, *Popillia japonica*, *Rhagoletis mendax* and *Yponomeuta malinellus* and the nematodes *Bursaphelenchus xylophilus*, *Globodera rostochiensis* and *Heterodera trifolii*; the diseases are *Colletotrichum lindemuthianum*, *Gremmeniella abietina*, *Sphacelotheca reiliana*, *Synchytrium endobioticum*, *Verticillium albo-atrum* and little cherry disease.

DE - DESCRIPTORS: Quarantine-; insect-pests; plant-nematology; nematology-; agricultural-entomology

OD - ORGANISM DESCRIPTORS: Diptera-; Lepidoptera-; Pyralidae-; Lymantriidae-; Coleoptera-; Yponomeutidae-; Anthomyiidae-; Tortricidae-; Chrysomelidae-; Scarabaeidae-; Tephritidae-; *Delia-coarctata*; *Cydia-molesta*; *Lymantria-dispar*; *Ostrinia-nubilalis*; *Oulema-melanopus*; *Popillia-japonica*; *Rhagoletis-mendax*; *Yponomeuta-malinellus*; *Bursaphelenchus-xylophilus*; *Globodera-rostochiensis*; *Heterodera-trifolii*

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: insects; arthropods; invertebrates; animals; Lepidoptera; Diptera; Coleoptera; *Delia*; Anthomyiidae; *Cydia*; Tortricidae; *Lymantria*; Lymantriidae; *Ostrinia*; Pyralidae; *Oulema*; Chrysomelidae; *Popillia*; Scarabaeidae; *Rhagoletis*; Tephritidae; *Yponomeuta*; Yponomeutidae; *Bursaphelenchus*; Aphelenchoididae; Nematoda; *Globodera*; Heteroderidae; *Heterodera*; OECD-Countries; Commonwealth-of-Nations; Developed-Countries; North-America; America

PT - PUBLICATION TYPE: Annual-report

Record 384 of 393 - TREECD 1973-2000/01

TI - TITLE: Analysis of the Scleroderris situation in the Adirondacks.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Northern-Logger-and-Timber-Processor.
1978, 26: 12, 24-25, 44; 2 pl. BLL.

PY - PUBLICATION YEAR: 1978

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Since 1975 tree damage from the pathogenic fungus, Scleroderris lagerbergii [Gremmeniella abietina] has been increasing. Its life cycle is described and methods of control are outlined, though it is noted that there is no effective means of controlling the spread of the fungus under forest conditions. Recommendations are given for reducing its incidence.

DE - DESCRIPTORS: fungal-diseases; control-

OD - ORGANISM DESCRIPTORS: Gremmeniella-abietina; fungi-

GE - GEOGRAPHIC NAMES: New-York; USA-

BT - BROADER DESCRIPTORS: Gremmeniella; Helotiales; Ascomycotina; Eumycota;
fungi; Middle-Atlantic-States-of-USA; Northeastern-States-of-USA; USA; North-
America; America

PT - PUBLICATION TYPE: Journal-article

IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0029-3156

Record 385 of 393 - TREECD 1973-2000/01

TI - TITLE: Report on forest research for the year ended March 1979.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Report, -Forestry-Commission, -United-Kingdom. 1979, viii + 84 pp.; 4 pl., 2 fig.; many ref.

PY - PUBLICATION YEAR: 1979

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: The topics reviewed in a section on forest entomology (pp. 35-38) of this report on forest research in the UK include population studies on *Panolis flammea* (Schiff.), *Bupalus piniarius* (L.) and *Cephalcia lariciphila* (Wachtl); the biological control of *C. lariciphila* and *Gilpinia hercyniae* (Htg.); the chemical control *P. flammea*, *Hylobius abietis* (L.) and (in imported ladder poles) *Ips typographus* (L.); attractants for *Scolytus scolytus* (F.); and a survey of lachnids on conifers. A section on forest pathology (pp. 29-34) includes notes on the relation of *Cryptococcus fagisuga* Ldgr. to beech bark disease (caused by *Nectria coccinea*), and of *Tomicus piniperda* (L.) to the fungal pathogen *Gremmeniella abietina* (*Brunchorstia pinea*) in pines.

DE - DESCRIPTORS: population-dynamics; attractants-; control-; biological-control; insecticides-; conifers-; trees-; pest-control; stored-products; plant-diseases; agricultural-entomology; pines-

OD - ORGANISM DESCRIPTORS: fungi-; *Gremmeniella-abietina*; *Nectria-coccinea*; *Panolis-flammea*; *Bupalus-piniarius*; *Gilpinia-hercyniae*; *Hylobius-abietis*; *Cryptococcus-fagisuga*; *Tomicus-piniperda*; *Scolytus-scolytus*; *Ips-typographus*; *Fagus-*; *Pinus-*

GE - GEOGRAPHIC NAMES: UK-

BT - BROADER DESCRIPTORS: pesticides; woody-plants; Spermatophyta; plants; *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; *Nectria*; Hypocreales; *Panolis*; Noctuidae; Lepidoptera; insects; arthropods; invertebrates; animals; *Bupalus*; Geometridae; *Gilpinia*; Diprionidae; Hymenoptera; *Hylobius*; Curculionidae; Coleoptera; *Cryptococcus-Homoptera*; Eriococcidae; Coccoidea; Sternorrhyncha; Homoptera; Hemiptera; *Tomicus*; Scolytidae; *Scolytus*; *Ips*; Fagaceae; Fagales; dicotyledons; angiosperms; Pinaceae; Pinopsida; gymnosperms; British-Isles; Western-Europe; Europe; *Cephalcia*; Pamphiliidae

PT - PUBLICATION TYPE: Annual-report

IB - INTERNATIONAL STANDARD BOOK NUMBER: 0-11-710118-4

Record 386 of 393 - TREECD 1973-2000/01

TI - TITLE: Annual Report of the Forest Insect and Disease Survey, Canadian Forestry Service, 1973.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1974, 101 pp.; 8 maps, 37 tab. See RPP 53, 1565.

PB - PUBLISHER INFORMATION: Canadian Forestry Service.; Ottawa; Canada

PY - PUBLICATION YEAR: 1974

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: a. In Newfoundland (11-17) the needle rust of balsam fir (*Abies balsamea*), *Pucciniastrum epilobii*, affected 50-90% of young shoots in various stands, and was more common than *Chrysomyxa ledicola* on black and white spruce (*Picea mariana* and *P. glauca*). b. In the Maritimes region (18-30) willow blight, *Venturia saliciperda*, was widespread for the 5th consecutive yr. Some native and weeping willows died from the combined effects of willow blight and a canker, *Cryptodiaporthe salicina*. Leaf blotch of horse chestnut, *Guignardia aesculi*, was again severe in NS.c. In the Que. region (31-49) the beech bark disease, a complex of *Cryptococcus fagi* and *Nectria coccinea* var. *faginata*, continued to spread in eastern areas. A number of new localities for balsam fir decline, *Dermea balsamea* and *Thyronectria balsamea*, showed 3-26% incidence.d. In Ont. (50-69) canker, *Gremmeniella abietina*, continued to cause serious damage in young pine stands. A policy has been adopted of not planting pines near areas designated as canker 'hot spots'. *Hypoxylon mammatum* continued to be one of the most serious pathogens affecting trembling and large tooth aspen (*Populus grandidentata* and *P. tremuloides*), since the cankers frequently girdle the main stem or predispose trees to wind break. Higher levels of the spruce needle rusts *Chrysomyxa ledi* and *C. ledicola* were noted than in the 2 previous years.e. In the Prairies region (70-77) *Cronartium coleosporioides* caused severe infections on *Pinus contorta* var. *latifolia*. *C. ledi* and *C. ledicola* were widespread on both white and black spruce. Reports of fireblight, *Erwinia amylovora*, were more frequent on ornamental fruit trees in Sask. than previously.f. In BC (78-88) a survey of permanent sample plots showed increases in disease intensity of *Elytroderma deformans* on pine, with corresponding increases in tree mortality. On Vancouver Island heavy defoliation was caused by *Rhabdocline pseudotsugae* in Douglas fir (*Pseudotsuga menziesii*) regeneration, while *R. weirii* caused moderate damage. Also in this area damage from *Didymascella thujina* was observed, with up to 50% of the foliage damaged.

DE - DESCRIPTORS: fruit-trees; forest-trees; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Abies-balsamea*; *Pucciniastrum-epilobii*; *Chrysomyxa-ledicola*; *Chrysomyxa-ledi*; *Salix-*; *Venturia-saliciperda*; *Pinus-*; *Gremmeniella-abietina*; *Cronartium-coleosporioides*; *Hypoxylon-mammatum*; *Erwinia-amylovora*; *Pseudotsuga-menziesii*; *Rhabdocline-pseudotsugae*; *PICEA-*; *AESCULUS-HIPPOCASTANUM*; *Cryptococcus-fagisuga*

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; *Abies*; *Pinaceae*; *Pinopsida*; gymnosperms; *Pucciniastrum*; *Uredinales*; *Basidiomycotina*; *Eumycota*; fungi; *Chrysomyxa*; *Salicaceae*; *Salicales*; dicotyledons; angiosperms; *Venturia-Dothideales*; *Dothideales*; *Ascomycotina*; *Gremmeniella*; *Helotiales*; *Cronartium*; *Hypoxylon*; *Sphaeriales*; *Erwinia*; *Enterobacteriaceae*; *Gracilicutes*; bacteria; prokaryotes; *Pseudotsuga*; *Rhabdocline*; *Rhytismatales*; *Aesculus*; *Hippocastanaceae*; *Sapindales*; North-America; America; *Guignardia*; *Deuteromycotina*

PT - PUBLICATION TYPE: Annual-report

Record 387 of 393 - TREECD 1973-2000/01

TI - TITLE: Summary of plant quarantine pest and disease situations in Canada 1994.

OT - ORIGINAL NON-ENGLISH TITLE: Bilan concernant les ravageurs et les maladies vises par la quarantaine des plants au Canada 1994.

AD - ADDRESS OF AUTHOR: Plant Health Risk Assessment Unit, Animal and Plant Health Directorate, 3851 Fallowfield Road, Nepean, Ont. K2 8P9, Canada.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1995, i + 118 pp.; 5 ref.

PB - PUBLISHER INFORMATION: Agriculture and Agri-Food Canada, Plant Protection Division; Ottawa; Canada

PY - PUBLICATION YEAR: 1995

LA - LANGUAGE OF TEXT: English, French

AB - ABSTRACT: This report summarizes survey activities conducted during 1994 for the following quarantinable plant pests and diseases: *Grapholita molesta* [*Cydia molesta*], *Lymantria dispar*, *Popillia japonica*, *Rhagoletis mendax*, *R. pomonella*, *Tomicus piniperda*, *Yponomeuta malinellus*, *Y. padellus*, *Globodera* spp., *Heterodera glycines*, *Gremmeniella abietina*, *Gymnosporangium fuscum*, *Lachnellula wilkommii* [*Trichoscyphella willkommii*], *Ophiostoma ulmi* and cherry little cherry virus.

DE - DESCRIPTORS: plant-diseases; plant-pathogens; plant-pathogenic-fungi; insect-pests; plant-parasitic-nematodes; surveys-; quarantine-; control-; plant-nematology; nematology-; plant-pathology; agricultural-entomology

OD - ORGANISM DESCRIPTORS: plant-viruses; *Cydia-molesta*; *Lymantria-dispar*; *Popillia-japonica*; *Rhagoletis-mendax*; *Rhagoletis-pomonella*; *Tomicus-piniperda*; *Yponomeuta-malinellus*; *Yponomeuta-padellus*; *Globodera*-; *Heterodera-glycines*; *Gremmeniella-abietina*; *Gymnosporangium-fuscum*; *Trichoscyphella-willkommii*; *ceratocystis-ulmi*

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: viruses; *Cydia*; *Tortricidae*; *Lepidoptera*; insects; arthropods; invertebrates; animals; *Lymantria*; *Lymantriidae*; *Popillia*; *Scarabaeidae*; *Coleoptera*; *Rhagoletis*; *Tephritidae*; *Diptera*; *Tomicus*; *Scolytidae*; *Yponomeuta*; *Yponomeutidae*; *Heteroderidae*; *Nematoda*; *Heterodera*; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi; *Gymnosporangium*; *Uredinales*; *Basidiomycotina*; *Trichoscyphella*; *Ceratocystis*; *Ophiostomatales*; OECD-Countries; Commonwealth-of-Nations; Developed-Countries; North-America; America

PT - PUBLICATION TYPE: Annual-report

Record 388 of 393 - TREECD 1973-2000/01

TI - TITLE: Pathogen : *Gremmeniella abietina* (Lagerb.) Morelet [*Scleroderris lagerbergii* Gremmen]. Hosts : Pine (*Pinus* spp.).
SO - SOURCE (BIBLIOGRAPHIC CITATION): *Distribution-Maps-of-Plant-Diseases*. 1974, No. 423, Ed. 3, 2 pp.; Cf. FA 35, 226; many ref.
PY - PUBLICATION YEAR: 1974
LA - LANGUAGE OF TEXT: English
DE - DESCRIPTORS: fungal-diseases; conifers-; pines-
OD - ORGANISM DESCRIPTORS: *Pinus*-; *GREMMENIELLA-ABIETINA*
BT - BROADER DESCRIPTORS: *Pinaceae*; *Pinopsida*; gymnosperms; *Spermatophyta*; plants; *Gremmeniella*; *Helotiales*; *Ascomycotina*; *Eumycota*; fungi
PT - PUBLICATION TYPE: Miscellaneous
IS - INTERNATIONAL STANDARD SERIAL NUMBER: 0012-396X

Record 389 of 393 - TREECD 1973-2000/01

TI - TITLE: Abstracts of papers, 2nd International Congress of Plant Pathology, University of Minnesota, Minneapolis, Minn., USA, September 5-12, 1973.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1973?, 1141 abstracts.

PB - PUBLISHER INFORMATION: American Phytopathological Society, Inc.; St. Paul, Minn.; USA

PY - PUBLICATION YEAR: 1973

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: Presents a chronologically arranged programme, with abstracts of nearly all the papers (the remainder being shown by a number only), of this conference organized by the International Society for Plant Pathology in collaboration with the American Phytopathological Society and the Society of Nematologists. Some of the abstracts are noticed elsewhere in FA: these include many of the original research communications and reports dealing with subjects on which little has been published. Conference sessions of direct forestry interest, listed below, contain ca. 60 abstracts (mostly progress reports, or work published elsewhere in full) for which the original should be consulted. Forest pathology - Symposia 1-3 and 5-6: Disease problems in intensively managed forests - (1) needle and canker diseases [*Scleroderris lagerbergii* and *Dothistroma pini*]; (2) White Pine blister rust [*Cronartium ribicola*] and Pine twist rust [*Melampsora pinitorqua*]; (3) fusiform [*C. fusiforme*] and comandra [*C. comandrae*] rusts; (5) Poplar diseases and spike disease of Sandal [*Santalum album*]; and (6) root rots (I) *Armillaria mellea* and *Fomes annosus*, and (II) *Fomes lignosus* [mainly on Rubber] and *Phytophthora* spp. Symposium 4: Forest pathology in the USSR and other countries [Malaysia]. Symposium 7: Disease survey and damage appraisal [in N. America]. Colloquia [many of these abstracts are noticed separately in FA]: (1) Root rots of forest trees; (2) Diseases of forest trees; (9) Forest nematology; and (36) Virus and virus-like diseases of forest trees. Wood products pathology - Symposia 1-4: (1) Interaction of microorganisms during wood decay; (2) Bacterial degradation of wood; (3) Decay of resistant wood; and (4) The enzymatic mechanisms of the deterioration process.

DE - DESCRIPTORS: root-and-butt-rots; rust-diseases; surveys-; decay-; trees-; wood-; pines-

OD - ORGANISM DESCRIPTORS: Pinus-; Populus-; *Armillaria-mellea*; *Cronartium-comandrae*; *Cronartium-fusiforme*; *Cronartium-ribicola*; *Melampsora-populnea*; *Phytophthora*-; *Santalum-album*; plant-viruses; Nematoda-; MYCOSPHAERELLA-PINI; HETEROBASIDIUM-ANNOSUM; RIGIDOPORUS-LIGNOSUS; GREMMENIELLA-ABIETINA

BT - BROADER DESCRIPTORS: woody-plants; Spermatophyta; plants; Pinaceae; Pinopsida; gymnosperms; Salicaceae; Salicales; dicotyledons; angiosperms; *Armillaria*; Agaricales; Basidiomycotina; Eumycota; fungi; *Cronartium*; Uredinales; *Melampsora*; Peronosporales; Mastigomycotina; *Santalum*; Santalaceae; Santalales; viruses; invertebrates; animals; *Mycosphaerella*; Dothideales; Ascomycotina; *Heterobasidium*; Aphyllophorales; *Rigidoporus*; *Gremmeniella*; Helotiales

PT - PUBLICATION TYPE: Conference-proceedings

Record 390 of 393 - TREECD 1973-2000/01

TI - TITLE: Scleroderris canker, *Gremmeniella abietina* (Lagerb.) Morelet.

SO - SOURCE (BIBLIOGRAPHIC CITATION): Forest-Insect-and-Disease-Conditions-in-Canada-1985. 1986, 29-32.

PB - PUBLISHER INFORMATION: Canadian Forestry Service; Ottawa, Ontario; Canada

PY - PUBLICATION YEAR: 1986

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: This disease has been detected on conifers in all provinces except Prince Edward Island, Manitoba and Saskatchewan. The North American race of *G. abietina* is widely distributed in the Maritime Provinces, Quebec and Ontario. The European race has been detected at scattered locations in New Brunswick, Newfoundland, Quebec and Ontario.

DE - DESCRIPTORS: races-; forest-trees; plant-pathology; plant-pathogenic-fungi

OD - ORGANISM DESCRIPTORS: *Gremmeniella-abietina*; Pinopsida-; fungi-

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: *Gremmeniella*; Helotiales; Ascomycotina; Eumycota; fungi; gymnosperms; Spermatophyta; plants; OECD-Countries; Commonwealth-of-Nations; Developed-Countries; North-America; America

PT - PUBLICATION TYPE: Miscellaneous

Record 391 of 393 - TREECD 1973-2000/01

TI - TITLE: Annual Report of the Forest Insect and Disease Survey, Canadian Forestry Service, 1972.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1973, 107 pp.; 11 maps, 36 tab. See RPP 52, 2749.

PY - PUBLICATION YEAR: 1973

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: a. In Newfoundland (11-18) leaf and twig blight (*Pollaccia radiosa*) was widespread in regenerating trembling aspen (*Populus tremuloides*) and in some stands 100% of the shoots were infected. b. In the Maritimes region (19-32) Dutch elm disease (*Ceratocystis ulmi*) was found in 2 more locations; in Fredericton a sanitation programme has slowed down spread but the number of diseased elm trees increases annually, from 2 in 1961 to 62 in 1972.

Gremmeniella abietina (*Scleroderris lagerbergii*) [CMI Map 423] was found for the first time in NS in 1972 causing canker in a 15 yr old red pine (*Pinus resinosa*) plantation. Other noteworthy diseases included the first occurrence of *Rhizina undulata* [Map 489] on burned soil in NB.c. In the Que. region (33-53) evidence was obtained that the severity of white pine blister rust (*Cronartium ribicola*) increased with altitude, presumably as a result of differences in temp. and topography. Root rot caused by *Polyporus tomentosus* was largely responsible for the death of 20% of trees in a white spruce (*Picea glauca*) plantation. *P. tomentosus* var. *circinatus* was commonly observed on living trees. Semi-mature balsam fir (*Abies balsamea*) showed reddening and death of the crowns, associated with cankers of *Dermea balsamea* and *Thyronectria balsamea*. d. In Ont. (54-73) Dutch elm disease increased in infection and mortality but was not found further N. than 47 deg in the Sault Ste. Marie district and 47 deg 20' in the North Bay district. The results are tabulated of a survey of fungi causing root and butt rots in white spruce, black spruce (*P. mariana*) and balsam fir, initiated in 1971. *R. undulata* was found for the first time in Ont. on jack pine and black spruce. e. In the Prairies region (74-81) epidemic levels of conifer needle rusts (*Chrysomyxa ledicola* and *C. ledi*) occurred in west-central Alta. Serious injury was caused to ornamentals including apple and mountain ash (*Sorbus americana*) by *Erwinia amylovora* in several areas in Man. and Alta. f. In BC (82-94) severe infection of fir fireweed rust (*Pucciniastrum epilobii*) again occurred and was even more extensive than in the previous year.

DE - DESCRIPTORS: root-and-butt-rots; apples-; forest-trees; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Ulmus*-; *Ceratocystis-ulmi*; *Pinus*-; *Gremmeniella-abietina*; *Rhizina-undulata*; *Cronartium-ribicola*; *Abies-balsamea*; *Pinopsida*-; *Chrysomyxa-ledicola*; *Chrysomyxa-ledi*; *Sorbus-americana*; *Erwinia-amylovora*; *Abies*-; *Pucciniastrum-epilobii*; *Malus*-; VENTURIA-MACULARIS; PICEA-; COLTRICIA-TOMENTOSA

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Ulmaceae; Urticales; dicotyledons; angiosperms; *Ceratocystis*; Ophiostomatales; Ascomycotina; Eumycota; fungi; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; *Rhizina*; Pezizales; *Cronartium*; Uredinales; Basidiomycotina; *Abies*; *Chrysomyxa*; *Sorbus*; Rosaceae; Rosales; *Erwinia*; Enterobacteriaceae; Gracilicutes; bacteria; prokaryotes; *Pucciniastrum*; *Venturia-Dothideales*; Dothideales; *Coltricia*; Aphyllophorales; North-America; America

PT - PUBLICATION TYPE: Annual-report

Record 392 of 393 - TREECD 1973-2000/01

TI - TITLE: Annual Report of the Forest Insect and Disease Survey, Canadian Forestry Service, 1974.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1975, 109 pp.; 11 maps, 27 tab. See RPP 5, 3494.

PB - PUBLISHER INFORMATION: Canadian Forestry Service.; Ottawa; Canada

PY - PUBLICATION YEAR: 1975

LA - LANGUAGE OF TEXT: English

AB - ABSTRACT: a. In the Maritimes region (21-36) Dutch elm disease (*Ceratocystis ulmi*) continued to intensify with respect to new infections and mortality. There was a significant extension of its known distribution in NS where the disease was first found in 1969. Shoot blight (*Sirococcus strobilinus*) was found on red pine (*Pinus resinosa*) for the first time in each of the 3 Maritime Provinces and attacks current year shoots and causes browning of new needles and shoot dieback. b. In the Que. region (37-56) areas where pine canker (*Gremmeniella abietina*) infection levels are high should be avoided as planting sites for pine. Mortality of red pine seedlings at a nursery was attributed to this disease and sanitation measures recommended to limit its spread. *Hypoxylon mammatum* commonly affects the stems of aspen (*Populus* spp.) and causes considerable damage in small to medium sized trees. Trees on low lying land by rivers are more affected than those on higher ground. Mortality due to this disease was noted in most of 102 infected stands visited. New infections of *C. ulmi* were found on 6% of elms examined and tree mortality was common along the north shore of the Ottawa river. c. In the Ont. region (57-73) evidence was obtained that pine canker (*G. abietina*) outbreaks have rendered considerable areas of forest land unsuitable for jack (*P. banksiana*) and red pine production. d. In the Pacific region (83-93) *Chrysomyxa weirii* was severe on white spruce (*Picea glauca*) in parts of the Prince Rupert Forest District and *C. ledicola* caused defoliation on regeneration and pole sized Sitka spruce (*P. sitchensis*) near Tlell. Berckmann's blight (*Lepteutypa cupressi*) was confirmed in the Nelson Forest District and caused dieback sporadically in the Vancouver Forest District on western red cedar (*Thuja plicata*).

DE - DESCRIPTORS: forest-trees; plant-pathology; pines-

OD - ORGANISM DESCRIPTORS: *Ulmus*-; *Ceratocystis-ulmi*; *Pinus*-; *Gremmeniella-abietina*; *Hypoxylon-mammatum*; *Chrysomyxa-ledicola*; *Thuja-plicata*; SIROCOCCUS-CONIGENUS; PICEA-

GE - GEOGRAPHIC NAMES: Canada-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; Ulmaceae; Urticales; dicotyledons; angiosperms; *Ceratocystis*; Ophiostomatales; Ascomycotina; Eumycota; fungi; Pinaceae; Pinopsida; gymnosperms; *Gremmeniella*; Helotiales; *Hypoxylon*; Sphaeriales; *Chrysomyxa*; Uredinales; Basidiomycotina; *Thuja*; Cupressaceae; *Sirococcus*; Deuteromycotina; North-America; America

PT - PUBLICATION TYPE: Annual-report

Record 393 of 393 - TREECD 1973-2000/01

TI - TITLE: Insects and diseases of trees. Quebec 1990.

OT - ORIGINAL NON-ENGLISH TITLE: Insectes et maladies des arbres. Quebec 1990.

SO - SOURCE (BIBLIOGRAPHIC CITATION): 1991, 34 pp.

PB - PUBLISHER INFORMATION: Gouvernement du Quebec; Quebec; Canada

PY - PUBLICATION YEAR: 1991

LA - LANGUAGE OF TEXT: French

AB - ABSTRACT: The results of monitoring programmes for the insect pests and diseases of natural forests and plantations in Quebec during 1990 are reported. The continued increase of populations of *Choristoneura fumiferana* in the regions of Gaspesie and their decrease in Bas-Saint-Laurent are noted. A marked outbreak of *Pissodes strobi* on Norway spruce [*Picea abies*] occurred in several regions. There was a slight deterioration in the health of maples [*Acer* spp.] affected by decline in comparison with 1989. Populations of *Malacosoma disstria* decreased in forests in the west and some districts in the centre of the province but increased in regions of Mauricie. The distribution of *Lymantria dispar* extended northwards in Outaouais. Populations of *C. conflictana* increased in Saguenay and in the northeast of the region of Quebec. Considerable damage was caused by *Otiorhynchus ovatus* to the root system of trees in nurseries in Bas-Saint-Laurent. Frost damage to roots occurred in 33 nurseries and *Gremmeniella abietina* infected grey pine [*Pinus* sp.] in 7 nurseries. Summer dessication and spring frost damage were observed in several regions.

DE - DESCRIPTORS: Forest-trees; insect-pests; forest-pests; diseases-; agricultural-entomology; plant-pathology

OD - ORGANISM DESCRIPTORS: Lasiocampidae-; Lepidoptera-; Tortricidae-; Lymantriidae-; Coleoptera-; Curculionidae-; Choristoneura-fumiferana; Malacosoma-disstria; Lymantria-dispar; Choristoneura-conflictana; Otiorhynchus-ovatus; Picea-abies; Pissodes-strobi

GE - GEOGRAPHIC NAMES: Quebec-; Canada-

BT - BROADER DESCRIPTORS: trees; woody-plants; Spermatophyta; plants; arthropod-pests; pests; animals; arthropods; invertebrates; insects; Lepidoptera; Coleoptera; Choristoneura; Tortricidae; Malacosoma; Lasiocampidae; Lymantria; Lymantriidae; Otiorhynchus; Curculionidae; Picea; Pinaceae; Pinopsida; gymnosperms; Pissodes; Canada; North-America; America

PT - PUBLICATION TYPE: Book

IB - INTERNATIONAL STANDARD BOOK NUMBER: 2-550-21590-7