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Reporting

Service

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CONTENTS

99/072 Algeria again a member country of EPPO

In 1999-04, Algeria joined EPPO again. The Organization now has 42 member countries. The contact for Algeria is:

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Source: **EPPO Secretariat, 1999-04.**

99/073 Survey on *Ralstonia solanacearum* and *Clavibacter michiganensis* subsp. *sepedonicus* in Latvia

A survey was conducted in 1998 in Latvia on *Ralstonia solanacearum* and *Clavibacter michiganensis* subsp. *sepedonicus* (both EPPO A2 quarantine pests). In total, 162 samples of seed potatoes were collected from an area of 540 ha and tested by IF for *R. solanacearum* and by ELISA and IF for *C. michiganensis* subsp. *sepedonicus* (according to the Council Directives 98/57/EC and 93/85/EEC).
R. solanacearum was **not** found in the tested samples.
C. michiganensis subsp. *sepedonicus* was detected in 14 samples. The total area infested by ring rot was 72.3 ha. Phytosanitary measures to prevent any further spread and to eradicate the pathogen have been taken following the requirements of Council Directive 93/85/EEC. According to the EPPO Secretariat, this is the first report of *C. michiganensis* subsp. *sepedonicus* in Latvia.

Source: **NPPO of Latvia, 1999-05.**

Additional key words: absence, new record **Computer codes:** CORBSE, PSDMSO, LV

99/074 Transmission frequency of *Clavibacter michiganensis* subsp. *insidiosus* to lucerne seeds

A PCR-based method (isolation from plant material on semi-selective medium followed by PCR) which has been developed for *Clavibacter michiganensis* subsp. *insidiosus* (EPPO A2 quarantine pest) was used in USA to determine the frequency of transmission of the bacterium to lucerne seeds. To obtain infected seed lots, seeds were produced in three different ways: 1) from infected plants grown and pollinated in the glasshouse; 2) from infected plants grown in the field and transplanted into the glasshouse to produce seeds; 3) from diseased 2-year-old plants grown and pollinated in the field. Seeds produced by each infected plant were collected and tested to identify infected seed lots. It was found that 6.3 to 7.7 % of diseased plants had transmitted *C. m.* subsp. *insidiosus* to seeds. When individual seeds were tested in infected seed lots, it was found that approximately 2.5 to 8.7 % of the seeds contained the bacterium. The authors concluded that transmission of *C. m*. subsp. *insidiosus* from infected plants to seeds occurred at a low frequency with a few infected plants producing a limited number of infected seeds. They also felt that this PCR-based method could be particularly useful in identifying the bacteria isolated from lucerne seed lots.

Source: Samac, D.A.; Nix, R.J.; Oleson, A.E. (1998) Transmission frequency of *Clavibacter michiganensis* subsp. *insidiosus* to alfalfa seed and identification of the bacterium by PCR.
Plant Disease, 82(12), 1362-1367.

Additional key words: epidemiology **Computer codes:** CORBIN

99/075 Transmission of peach mosaic ?closterovirus by *Eriophyes insidiosus*

Peach mosaic ?closterovirus (EPPO A1 quarantine pest) affects several *Prunus* species in USA and Mexico and is spread by the peach bud mite, *Eriophyes insidiosus*. Experiments were made on the transmission process of peach mosaic closterovirus by *E. insidiosus*. Results have shown that: 1) the transmission efficiency of a single mite was as high as 17%; 2) the minimum inoculation access period was between 3 to 6 h; 3) the minimum acquisition access period was of 3 days. The authors felt that unlike most other mite vectors which transmit diseases in a persistent mode, *E. insidiosus* appeared to transmit peach mosaic ?closterovirus in a semi-persistent mode.

Source: Gispert, C.; Oldfield, G.N.; Perring, T.M.; Creamer, R. (1998) Biology of the transmission of peach mosaic virus by *Eriophyes insidiosus* (Acari: Eriophyidae).
Plant Disease, 82(12), 1371-1374.

Additional key words: epidemiology **Computer codes:** PCMXXX

99/076 First report of peach latent mosaic viroid in Egypt on apple and pear

In Egypt, peach latent mosaic viroid (PLMVd - quarantine status under review) has been detected in apple fruit (*Malus domestica* cv. Golden Delicious) and pear (*Pyrus communis*) bark and fruit. This viroid induced canker on bark, scab and streak disease of fruit. The presence of PLMVd was detected by using RT-PCR, followed by southern and dot blot hybridization analysis of the amplified products with a PLMVd cRNA probe. It is noted that trees infected by PLMVd have sporadically been found in commercial orchards of apple and pear. This is the first report of PLMVd in Egypt, and also the first time that this viroid is detected on apple and pear.

Source: El-Dougdoug, Kh., A. (1998) Occurrence of peach latent mosaic viroid in apple (*Malus domestica*). Annals of Agricultural Science (Cairo), 43(1), 21-30.
Review of Plant Pathology, 78(2), abstract 1389, p 187.

Additional key words: new record, new host plants **Computer codes:** PLMVd, EG

99/077 Tomato yellow leaf curl virus found on tomatoes in north Florida and south Georgia (US)

In summer 1997, tomato yellow leaf curl geminivirus (TYLCV - EPPO A2 quarantine pest) was first reported in USA, in south Florida (see EPPO RS 97/169). During October 1998, symptoms characteristic of TYLCV were observed in tomato fields in Gadsen County (north Florida) and in Decatur Country (south Georgia). Observed symptoms included plant stunting, reduction in leaf size, yellow leaf margins and mottling. TYLCV was specifically identified in symptomatic tomato samples. Whiteflies were collected from the same fields in Georgia and Florida, and were identified as *Bemisia tabaci* (EPPO A2 quarantine pest), but the biotype was not established. This is the first report of TYLCV in north Florida and in Georgia.

Source: Momol, T. (1999) Tomato yellow leaf curl virus on tomato in north Florida and south Georgia.
University of Florida Pest Alert WWW site, 1999-04-03
http://extlab1.entnem.ufl.edu/pestalert/tmm-0304.htm

Additional key words: detailed record **Computer codes:** TYLCV, US

99/078 First report of *Rhynchophorus ferrugineus* in Jordan

The NPPO of Jordan has recently informed the EPPO Secretariat that *Rhynchophorus ferrugineus* (red palm weevil) was found on the 12th May 1999 on date palms in Ghor Kebed, central Jordan Valley. This is the first report of *R. ferrugineus* in Jordan.

Source: **NPPO of Jordan, 1999-05.**

Additional key words: new record **Computer codes:** RHYCFE, JO

99/079 Biology of *Rhynchophorus ferrugineus* in Spain

Rhynchophorus ferrugineus has recently been introduced into Andalucía, Spain (see EPPO RS 96/096, 97/010), and biological studies have been carried out in Spain. Pupa were collected in Almuñecar, Motril, Salobreña, La Herradura (Granada), and insects were reared in the laboratory on sugarcane. Several parameters of the biological cycle were studied: adult longevity, fecundity, fertility and egg mortality, larval and pupal duration (and associated mortality rates), duration of the complete life cycle. Compared to bibliographic data, results showed a slight reduction of the mean values of adult longevity (43-67 d) and fecundity (109-208 eggs/female), and a slight increase of the mean duration values of the different stages and of the complete cycle (122 d).
Observations were also made on the host range of the pest in the region of Almuñecar. In Spain, the insect can complete its life cycle on *Phoenix canariensis*, *P. dactylifera*, *Cocos nucifera* and *Elaeis guineensis*. In addition, larvae (L4 and L5) have been observed on *Washingtonia* sp., *Metroxylon sagu* and *Sabal* sp. The main host plant in Almuñecar is *P. canariensis*. It has also been observed that adults showed a marked sedentarity, however it is not known whether this is due to the adaptation of the pest to its new climatic conditions or if it is part of its normal behaviour.

Source: Esteban-Durán, J.; Yela, J.L.; Beitia-Crespo, F.; Jiménez-Álvarez, A. (1998) Biología del curculiónido ferruginoso de las palmeras *Rhynchophorus ferrugineus* (Olivier) en laboratorio y campo: ciclo en cautividad, peculiaridades biológicas en su zona de introducción en España y métodos biológicos de detección y posible control (Coleoptera: Curculionidae: Rhynchophorinae).
Boletín de Sanidad Vegetal - Plagas, 24(4), 737-748.

Additional key words: biology **Computer codes:** RHYCFE

99/080 *Callidiellum rufipenne*: a new exotic beetle found in North Carolina and Connecticut (US)

The cedar longhorned beetle, *Callidiellum rufipenne* (Coleoptera: Cerambycidae), has recently been found in North Carolina, US. This Asian species was discovered on *Juniperus virginiana* near Manteo in May 1997, and the identification was confirmed in February 1998. The infested trees were growing several kilometres from any major port, suggesting that *C. rufipenne* may be established in North Carolina. In September 1998, *C. rufipenne* was discovered in Connecticut on *Thuja*. Based on the number of infested trees found, it appears that there may only be several hundreds to some 2000 infested trees. Eradication therefore appears feasible. All infested trees are being destroyed and measures are being taken to

prevent any further spread. Surveys are being carried out to determine the distribution of the pest.

C. rufipenne is reported to occur in Asia: China, Japan, Korea Republic, Korea Democratic People's Republic and Taiwan. It has been introduced into Italy in 1988 where it was found for the first time on *Juniperus communis* in Pineta di San Vitale, near Ravenna (Campadelli & Sama, 1989). It was probably introduced on timber imported from East Asia. The Canadian information sheet also mentions an introduction into Spain, but no reference is given.
It is a pest of: *Chamaecyparis*, *Cryptomeria*, *Cupressus*, *Juniperus*, *Thuja* (and possibly *Abies*). In Japan, there is one generation per year. Adults emerge from dead trees in spring and mate on the surface of the trunk of weakened or dead trees (however, it is noted that live insects were found in Connecticut on healthy *Thuja*). Eggs are laid in bark crevices. Larvae hatch, enter the bark and feed on phloem and cambium, making galleries. Mature larvae enter xylem in late summer, pupate within cells in the autumn, and overwinter as adults. The larval galleries are sinuous, increase in width from beginning to end, and sometimes girdle a branch. Adult males are iridescent deep blue to black with brownish-red to red patches on the upper corners of the wing covers and have a reddish-orange abdomen. Antennae of the male are slightly longer than the body. Females have brownish-red to red wing covers, and a reddish-orange abdomen.

Source: Anonymous (1999) Cedar longhorned beetle search continues.
NAPPO Newsletter, 19(2), p 8.

Campadelli, G.; Sama, G. (1989) [First report in Italy of a Japanese cerambycid: *Callidiellum rufipenne* Motschulsky].
Bollettino dell' Istituto di Entomologia 'Guido Grandi' dell' Universita degli Studi di Bologna, 43, 69-73.

INTERNET
A new exotic Cerambycid beetle (*Callidiellum rufipenne*), found in North Carolina, USA (submitted by Rob Favrin, CFIA-PHSU). Plant Health Early Warning System (CFIA, Canada)
http://cfia-acia.agr.ca/english/ppc/science/pps/phnews/phwhp.html

Asian Beetle News Release, 1999-01-08.
http://www.state.ct.us/caes/newsbeetl.htm

Pellizzari, G.; Dalla Montà, L. (1997) [Insect pests introduced to Italy from 1945 to 1995]
http://www.greentarget.com/dif3/insetti_fitofagi.html (also published in Informatore Fitopatologico, no.10, 4-12)

Additional key words: new record **Computer codes:** US

99/081 *Heteronychus arator* (Coleoptera: Scarabaeidae): potential quarantine pest

A quarantine status for *Heteronychus arator* (Coleoptera: Scarabaeidae) was proposed by the NPPO of United Kingdom, after a commodity risk assessment was made on strawberries from South Africa and potatoes from New Zealand. The EPPO Panel on Phytosanitary Regulations has examined a full PRA on this pest and is now proposing to add it to the A1 list. The final decision will be taken by EPPO Council after consultation of EPPO member countries, but in the meantime it was felt useful to draw attention to this pest.
Heteronychus arator (black maize weevil) is a polyphagous pest which attacks grapevine, maize, many vegetables and ornamental crops, e.g.: *Begonia* spp., *Brassica*, *Calendula* spp., *Curcurbita* spp., *Daucus carota*, *Fragaria ananassa*, *Lactuca sativa*, *Lycopersicon esculentum*, *Petunia* spp., *Phlox* spp., *Pisum sativum*, *Rheum rhabarbarum*, *Solanum tuberosum*, *Vitis vinifera*, *Zea mays*, many grasses and weeds. On potatoes, the adults burrow into the tubers. On maize, adults feed into the stems of maize plants, attacked plants wilt, collapse and subsequently die. In pastures, larvae can cause severe damage by feeding on roots. *H. arator* occurs in: Australia, Ethiopia, Kenya, Madagascar, Mozambique, New Zealand, South Africa, Tanzania, Zimbabwe, Zambia.

Source: **NPPO of United Kingdom, EPPO Secretariat, 1991-01.**

Additional key words: potential quarantine pest **Computer codes:** HETRAR

99/082 Severe attacks of *Rhagoletis completa* in Lombardia (IT)

The walnut husk fly, *Rhagoletis completa*, was first found in Italy in Friuli-Venezia Giulia in 1991 (EPPO RS 93/210). Its presence was then recorded in other parts of north Italy (Lombardia, Piemonte, Trentino-Alto Adige, Veneto) and also in Lazio (see EPPO RS 94/111 and 97/037). In 1995-1996, studies were made on the behaviour of *R. completa* in two walnut orchards near Pavia (Lombardia), using yellow traps baited with ammonium carbonate. Large numbers of adults were trapped (more than 200 adults/trap/week), and high infestations on fruits were observed (nearly all fruits were attacked). The flight curve obtained showed that the adults appear during the first decade of July until the beginning of October.

Source: Romani, M. (1998) [Severe attacks by *Rhagoletis completa* in walnut orchards in Lombardia.]
Informatore Fitopatologico, no. 11, 13-16.

Additional key words: detailed record **Computer codes:** RHAGCO, IT

99/083 First report of rust on daisy (*Bellis perennis*) in Italy

In autumn 1996, a severe outbreak of rust was observed on daisies (*Bellis perennis*) in Friuli-Venezia Giulia, Italy. The causal agent was identified as *Puccinia lagenophorae*. This is the first report of a rust on *Bellis perennis* in Italy. By using artificial inoculation of aeciospores, all tested *B. perennis* cultivars were found susceptible to the disease, and the most susceptible were cvs: Tasso rosa, Tasso bianco, Tasso rosso, Ruby bianco. In chemical control trials, it was showed that the following fungicides gave good control of the disease, both as preventive and curative treatments: azoxystrobin, tebuconazole, myclobutanil, bitertanol and triforine. In this paper, it is also reported, based on data from Scholler (1997), that other outbreaks of *P. lagenophorae* on *B. perennis* occurred recently in Austria, Germany and Switzerland.

Note: it can be recalled that a very similar rust disease has been found in UK on *Bellis perennis* (EPPO RS 98/131), but it was attributed to another species *Puccinia distincta*, originating from Australia. However, the taxonomy of these rusts appears rather complex. Weber *et al*. (1998) have compared *P. distincta* with other rusts recorded on daisies in UK: *P. obscura* and *P. lagenophorae*. *P. obscura* is a heteroecious rust (alternate host: *Luzula* spp.) well-known in UK. *P. lagenophorae* is a common rust of *Senecio vulgaris*, native of Australia and found in Europe in 1960. Previous reports noted that it could be inoculated successfully onto several members of the Asteraceae including *B. perennis*, and consequently *P. distincta* was at that time considered as a synonym of *P. lagenophorae*. However, Weber *et al*. (1998) have repeatedly failed to inoculate wild and cultivated daisies with aeciospores of *P. lagenophorae* from *S. vulgaris* (and *vice versa*). In addition, differences in teliospore morphology between *P. distincta* and *P. lagenophorae* led to the conclusion that *P. distincta* was distinct from *P. lagenophorae*. As *P. distincta* has the same aecial host as *P. obscura* (i.e. daisies but *P. distincta* cannot be inoculated to *Luzula*), and their teliospores are morphologically very similar, Weber *et al*. felt that *P. distincta* may derive from *P. obscura*.

Source: Gullino, M.L.; Bertetti, D.; Luongo, I.; Arbusti, M.; Garibaldi, A. (1999) [Rust on common daisy (*Bellis perennis*): appearance in Italy and chemical control trials.]
Informatore fitopatologico no.1/2, 52-55.

Scholler, M. (1997) Rust fungi on *Bellis perennis* in Central Europe: delimitation and distribution.
Sydowia, 49, 174-181.

Weber, R.W.S.; Webster, J.; Al-Gharabally, D.H. (1998) *Puccinia distincta*, cause of the current daisy rust epidemic in Britain, in comparison with other rusts recorded on daisies, *P. obscura* and *P. lagenophorae*.
Mycological Research, 102(10), 1227-1232.

Additional key words: new record **Computer codes:** PUCCSP, IT

99/084 Surveys on *Phytophthora* disease of alder in UK

In 1993, a new lethal disease of common alder (*Alnus glutinosa*) was reported in Southern Britain, UK (see EPPO RS 95/010, 96/041). By early summer 1994, investigations showed that the diseased alders were quite widespread on the banks of streams and rivers, but also in places at some distance from waterways. The disease mainly occurs on *A. glutinosa*, but also on *A. incana* (grey alder) and *A. cordata* (Italian alder). It was established that the disease was caused by an usual form of *Phytophthora cambivora*, a well-known pathogen of broad-leaved trees such as *Castanea*, *Fagus* and *Malus* (but previously unknown on *Alnus*). Surveys were carried out in southern England and east Wales, on an area of 70 000 km^2. Data was collected from 63 observation plots. In 1994, 3.9 % of trees showed crown symptoms and 1.2 % trees were dead (although not all were killed by the disease). The combined percentage of symptomatic and dead trees rose to 6 % in 1995 and to 7.9 % in 1996. It was also noted that a positive correlation existed between disease incidence and high levels of nitrate in waters. At present, it is still not clear whether this unusual form of *P. cambivora* is a new fungus introduced into Europe and spreading there, or if it is a native fungus whose damage is increased by environmental changes such as water pollution. As of June 1998, this *Phytophthora* disease has also been observed in Austria, Denmark, France, Germany, Netherlands (EPPO RS 98/023), Sweden, but with a variable severity. In addition to UK, tree mortality has only been reported from some places in Austria, France and Sweden.

Source: Gibbs, J.N.; Lipscombe, M.A.; Peace, A.J. (1999) The impact of *Phytophthora* disease on riparian populations of common alder (*Alnus glutinosa*) in Southern Britain.
European Journal of Forestry, 29(1), 1-88.

Web site of the UK Forestry Commission
http://www.forestry.gov.uk/research/summary.html

Additional key words: detailed record, new records **Computer codes:** PHYTSP

99/085 *Aphelenchoides besseyi* in South Africa

So far, in South Africa, *Aphelenchoides besseyi* (EPPO A2 quarantine pest) had only been intercepted on imported orchid plants from South East Asia, on flower bulbs from Europe and on rice bran from Malawi. However, it has been recently found on locally-grown strawberries, flower bulbs and garlic. A survey has indicated that the distribution of *A. besseyi* in South Africa is limited.

Source: Bennett, H.A. (1997) Incidence of the nematode *Aphelenchoides besseyi* in South Africa. Abstracts of papers presented at the 13th Symposium of the Nematological Society of Southern Africa, 1997-03-09/14, San Lameer (ZA).
African Plant Protection, 3(2), 107-108.

Additional key words: new record **Computer codes:** APLOBE, ZA

99/086 Extraction methods for *Aphelenchoides besseyi*

After the first finding of *Aphelenchoides besseyi* (EPPO A2 quarantine pest) in rice seeds in the Province of Bologna (Emilia-Romagna) in 1996 (EPPO RS 96/076), surveys have been conducted in Italy. The nematode has been detected at low levels in rice seeds in Emilia-Romagna, Lombardia, Piemonte and Veneto. Observations made in the fields in 1998 revealed the presence of symptoms on rice plants (white tips, dwarfing, crinkling of flag leaf). Several methods of nematode extraction from rice seeds were compared: the EPPO Phytosanitary Procedure which uses whole seeds (OEPP/EPPO, 1992) and methods used by the Regional Plant Protection Service in which crushed seeds, hulled seeds or chaff are soaked in water at room temperature. The highest number of nematodes was obtained after 48 hours of incubation in water at room temperature from rice chaff or crushed seeds. It appeared that the use of rice chaff as testing material is appropriate for quarantine purposes.

Source: Moretti, F.; Cotroneo, A.; Tacconi, R.; Santi, R.; De Vincentis, F. (1999) [Damage from *Aphelenchoides besseyi* on rice and nematode extraction methods from rice seeds].
Informatore Fitopatologico, no. 3, 39-41.

OEPP/EPPO (1992) EPPO Standard PM 3/38(1) *Aphelenchoides besseyi*. Test method for rice seeds.
Bulletin OEPP/EPPO Bulletin, 22(2), 217-218.

Additional key words: detailed record, detection method **Computer codes:** APLOBE, IT

99/087 Details on the situation of *Meloidogyne chitwoodi* in South Africa

In South Africa, *Meloidogyne chitwoodi* (EPPO A2 quarantine pest) has been reported on potatoes from Boston and Mooi River in Kwazulu-Natal, and on potatoes and wheat from Montgomery in the Eastern Cape. In 1995, potato yield losses were observed by farmers in the Mooi River area, due to a heavy infestation of *M. chitwoodi*. The identity of the nematode was verified by using an ITS-PCR method. Trials on host plant suitability were also carried out with a *M. chitwoodi* population from Mooi River. Result showed that *Lycopersicon esculentum*, *Brassica rapa*, *Eragrostis tef* and *Lolium multiflorum* supported high populations of *M. chitwoodi*, whereas *E. curvula*, *Arachis hypogea* and *Zea mays* were poor hosts, but these plants were nevertheless able to maintain populations of *M. chitwoodi*.

Source: Fourie, H.; Ziljlstra, C.; McDonald, A.H. (1998) ITS-PCR sequence-based identification of *Meloidogyne chitwoodi* from Mooi River, South Africa, and screening of crops for host suitability.
African Plant Protection, 4(2), 107-111.

Additional key words: detailed record **Computer codes:** MELGCH, ZA

99/088 Genetic studies on *Meloidogyne chitwoodi* and *M. fallax*

Reliable differentiation methods between *Meloidogyne chitwoodi*, *M. fallax* (both EPPO A2 quarantine pests) and other *Meloidogyne* species are needed for quarantine purposes. In particular, both *M. chitwoodi* and *M. fallax* live in the same environment as *M. hapla*. A molecular technique (ITS-RFLP) was used to compare 3 German populations of *M. chitwoodi* (sensu lato, as these populations were found before *M. fallax* was described as a separate species) to populations of the same species from the Netherlands and USA, and to 5 other *Meloidogyne* species (*M. fallax*, *M. hapla*, *M. naasi*, *M. incognita*, *M. javanica*). With this technique, clear differentiation was obtained between *M. chitwoodi*, *M. fallax*, *M. hapla*, *M. naasi*, and the group *M. incognita/M. javanica* (to differentiate these two species other restriction enzymes had to be used). As a result, two German populations were assigned to *M. chitwoodi* and one population to *M. fallax*.
Genetic relationships between these *Meloidogyne* species were also studied by using RADP analysis. A clear separation was observed between all species investigated, with the smallest distance between *M. incognita* and *M. javanica*. A close relationship was found between *M. chitwoodi* and *M. fallax* but the species are clearly distinct. *M. chitwoodi* populations could also be classified approximately according to their geographic origins. On the basis of genetic distances between nematode populations from USA, Germany and the Netherlands, an introduction of *M. chitwoodi* from USA to Germany or to Netherlands appears unlikely, as well as an introduction from the Netherlands to Germany. The present distribution of *M.*

chitwoodi in Europe suggests that populations of *M. chitwoodi* and *M. fallax* have existed for a long time in Europe. The authors felt that further studies on additional populations are necessary, but stressed that this no longer possible with German populations, because in spite of extensive searches in different regions of Germany, *M. chitwoodi* and *M. fallax* could no longer be found.
Note: In 1998, the German NPPO has officially declared that *M. chitwoodi* was found in the past but not established in Germany.

Source: Schmitz, B.; Burgermeister, W.; Braasch, H. (1998) Molecular genetic classification of Central European *Meloidogyne chitwoodi* and *M. fallax* populations.
Nachrichtenblatt des Deutschen Pflanzenschutzdienstes, 50(12), 310-317.

Additional key words: identification method, genetics **Computer codes:** MELGCH, MELGFA, DE

99/089 Identification methods for *Bursaphelenchus* species

Reliable methods for the differentiation of *Bursaphelenchus xylophilus* (EPPO A1 quarantine pest) from other *Bursaphelenchus* species associated with pine trees are essential for quarantine purposes. A molecular technique using RFLP analysis of the amplified internal transcribed spacer region of ribosomal DNA (ITS-RFLP) has been successfully developed to differentiate between: *Bursaphelenchus xylophilus*, *B. mucronatus*, *B. fraudulentus*, *B. leoni* and *B. sexdentati*. This method could also differentiate between the 2 intraspecific forms of *B. mucronatus*.

Source: Hoyer, U.; Bergermeister, W.; Braasch, H. (1998) Identification of *Bursaphelenchus* species (Nematode, Aphelenchoididae) on the basis of amplified ribosomal DNA (ITS-RFLP).
Nachrichtenblatt des Deutschen Pflanzenschutzdienstes, 50(11), 273-277.

Additional key words: identification method **Computer codes:** BURSXY

99/090 *Esteya vermicola:* a new endoparasitic hyphomycete affecting *Bursaphelenchus xylophilus* in Taiwan

In Taiwan, pine wilt disease, caused by *Bursaphelenchus xylophilus* (EPPO A1 quarantine pest), was first reported in 1985 in northern areas. It is now widespread and causes at least 50-60 % mortality on pines. During research carried out on the pathogenicity of *B. xylophilus*, a population recovered from a wilting pine was established on a sterile mycelial culture (on PDA growing medium). Unexpectedly, this population of nematodes was drastically reduced after 2-4 weeks incubation at room temperature. Examination of dead nematodes revealed the presence of an unknown endoparasitic hyphomycete. This fungus was described as a new genus and species: *Esteya vermicola*. The authors noted that *Esteya vermicola* shows a very high infectivity, as a population of *B. xylophilus* can be killed in 8-10 days *in vitro*. They felt that further studies are needed to verify the potential which *Esteya vermicola* may present for biological control.

Source: Liou, J.Y.; Shih, J.Y.; Tzean, S.S. (1999) *Esteya*, a new nematophagous genus from Taiwan, attacking the pinewood nematode (*Bursaphelenchus xylophilus*).
Mycological Research, 103(2), 242-248.

Additional key words: biological control **Computer codes:** BURSXY

99/091 EPPO report on selected intercepted consignments

The EPPO Secretariat has gathered the intercepted consignment reports for 1999 received since the previous report (EPPO RS 99/052) from the following countries: Czech Republic, Denmark, Estonia, Finland, Greece, Ireland, Latvia, Netherlands, Norway, Slovakia, Spain, Switzerland, United Kingdom. When a consignment has been re-exported and the country of origin is unknown, the re-exporting country is indicated in brackets. When the occurrence of a pest in a given country is not known to the EPPO Secretariat, this is indicated by an asterisk (*).

The EPPO Secretariat has selected interceptions made because of the presence of pests. Other interceptions due to prohibited commodities, missing or invalid certificates are not indicated. It must be pointed out that the report is only partial, as many EPPO countries have not yet sent their interception reports.

Note: The EPPO RS 99/032 mentioned a French interception of ware potatoes contaminated by *Synchytrium endobioticum* from Germany. The German NPPO has informed the EPPO Secretariat that further investigations done by both countries have shown that Germany was

most probably **not** the country of origin. However the exact origin of the consignment could not be traced back with certainty.

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Anoplophora chinensis	*Acer*	Plants for planting	China	Netherlands	1
Bemisia tabaci	*Clerodendrum, Mandevilla*	Plants for planting	Israel	United Kingdom	1
	Crossandra infundibuliformis	Cuttings	Sri Lanka	Denmark	1
	Eustoma	Cut flowers	Israel	United Kingdom	1
	Hibiscus	Plants for planting	Netherlands	United Kingdom	1
	Hibiscus	Plants for planting	Spain	United Kingdom	1
	Hygrophila	Aquarium plants	Israel	Denmark	1
	Hygrophila salicifolia	Aquarium plants	Singapore	Denmark	1
	Hypericum	Cut flowers	Netherlands	United Kingdom	1
	Leaves	Vegetables	Ghana	United Kingdom	1
	Leaves	Vegetables	Nigeria	United Kingdom	1
	Solidago	Cut flowers	Israel	Ireland	1
	Solidago	Cut flowers	Netherlands	Ireland	2
	Trachelium	Cut flowers	Netherlands	United Kingdom	1
Bemisia tabaci **(biotype B)**	*Dendranthema*	Cut flowers	Israel	Netherlands	2
Bemisia tabaci **(biotype B),** ***Liriomyza trifolii, Helicoverpa armigera***	*Lisianthus*	Cut flowers	Kenya	Netherlands	1
Bemisia tabaci, Liriomyza **sp. (probably** ***L. trifolii*****)**	*Solidago*	Cut flowers	Netherlands	United Kingdom	1
Chrysomphalus aonidum	*Citrus sinensis*	Fruit	Israel	Greece	1
Clavibacter michiganensis **subsp.** ***sepedonicus***	*Solanum tuberosum*	Ware potatoes	Germany	Czechia	1
	Solanum tuberosum	Ware potatoes	Germany	Netherlands	2
	Solanum tuberosum	Ware potatoes	Poland	Estonia	3
	Solanum tuberosum	Ware potatoes	Poland	Latvia	11
	Solanum tuberosum	Ware potatoes	Poland	Slovakia	1
Clavibacter michiganensis **subsp.** ***sepedonicus, Globodera rostochiensis***	*Solanum tuberosum*	Ware potatoes	Poland	Estonia	1
Ditylenchus dipsaci	*Narcissus*	Bulbs	United Kingdom	Netherlands	4
Frankliniella occidentalis	*Dianthus*	Cut flowers	Netherlands	Estonia	1
Globodera rostochiensis	*Solanum tuberosum*	Ware potatoes	Italy	Ireland	1
Globodera **sp.**	*Solanum tuberosum*	Seed potatoes	United Kingdom	Spain	1
Helicoverpa armigera	*Dianthus*	Cut flowers	Israel	Netherlands	4
	Dianthus	Cut flowers	Kenya	Netherlands	3
	Liatris	Cut flowers	South Africa	Netherlands	1
	Liatris	Cut flowers	Zimbabwe	Netherlands	1
	Phaseolus	Vegetables	Egypt	Netherlands	1
	Phaseolus	Vegetables	Ethiopia	Netherlands	2
	Phaseolus	Vegetables	Senegal	Netherlands	1
	Pisum sativum	Vegetables	Zambia	United Kingdom	1
	Pisum sativum	Vegetables	Zimbabwe	United Kingdom	1

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Leptinotarsa decemlineata	*Lactuca sativa*	Vegetables	Portugal	United Kingdom	2
	Lactuca sativa	Vegetables	(France)	United Kingdom	1
	Spinacea oleracea	Vegetables	Italy	United Kingdom	1
Liriomyza huidobrensis	*Cestrum*	Cut flowers	Israel	United Kingdom	1
	Coriandrum sativum	Vegetables	Cyprus	United Kingdom	1
	Coriandrum sativum	Vegetables	Cyprus	United Kingdom	1
	Dendranthema	Cut flowers	Netherlands	Ireland	1
	Dendranthema	Cut flowers	Zimbabwe*	Netherlands	1
	Gypsophila	Cut flowers	Israel	United Kingdom	1
	Gypsophila	Cut flowers	Spain	United Kingdom	1
	Petroselinum crispum	Vegetables	Cyprus	United Kingdom	1
	Spinacea oleracea	Vegetables	Cyprus	United Kingdom	1
	Trigonella foenum-graecum	Vegetables	Cyprus	United Kingdom	2
Liriomyza huidobrensis, L. trifolii	*Gypsophila*	Cut flowers	Israel	United Kingdom	1
***Liriomyza* sp.**	*Gypsophila*	Cut flowers	Israel	United Kingdom	1
	Ocimum basilicum	Vegetables	Thailand	Denmark	1
Liriomyza* sp. *(*probably *L. huidobrensis* or *L. bryoniae)	*Coriandrum sativum*	Vegetables	Cyprus	United Kingdom	1
	Gypsophila	Cut flowers	Israel	United Kingdom	1
Liriomyza* sp. *(*probably *L. huidobrensis)	*Trigonella foenum-graecum*	Vegetables	Cyprus	United Kingdom	1
***Liriomyza* sp. *(*probably *L. trifolii* or *L. sativae),* Thripidae**	*Ocimum basilicum*	Vegetables	Thailand	United Kingdom	1
Liriomyza* sp. *(*probably *L. trifolii* or *L. sativae),* Thripidae *(*probably *Thrips tabaci)	*Ocimum basilicum*	Vegetables	Thailand	United Kingdom	1
Liriomyza* sp. *(*probably *L. trifolii)	*Aster*	Cut flowers	Israel	United Kingdom	1
Liriomyza* sp., *Hyadaphis coriandri	*Coriandrum*	Vegetables	Thailand	United Kingdom	1
***Meloidogyne* sp.**	*Rosa*	Plants for planting	Denmark	Norway	3
	Rosa	Plants for planting	Poland	Norway	1
Milviscutulus mangiferae	*Cordyline*	Cut flowers	Malaysia	United Kingdom	1
Monilinia fructicola	*Prunus domestica*	Fruit	South Africa	United Kingdom	2
Puccinia horiana	*Dendranthema*	Cut flowers	Netherlands	Estonia	1
Ralstonia solanacearum	*Curcuma alismatifolia*	Plants for planting	Thailand	Netherlands	1
	Solanum tuberosum	Ware potatoes	Egypt	Greece	6
	Solanum tuberosum	Ware potatoes	Syria*	Greece	5
	Solanum tuberosum	Ware potatoes	Syria*	United Kingdom	1

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Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
***Spodoptera* sp. (probably *S. litura*)**	*Ocimum basilicum*	Vegetables	Thailand	United Kingdom	1
Thrips palmi	*Dendrobium*	Cut flowers	Thailand	Netherlands	4
	Momordica	Vegetables	Dominican Rep.	United Kingdom	1
	Momordica	Vegetables	India	United Kingdom	1
	Momordica	Vegetables	Thailand	United Kingdom	1
	Orchidaceae	Cut flowers	Singapore	Greece	1
	Rosa	Cut flowers	India	Netherlands	1
***Thrips* sp. (probably *T. palmi*)**	*Momordica*	Vegetables	Bangladesh	United Kingdom	1
	Momordica	Vegetables	Dominican Rep.	United Kingdom	2
Tomato ringspot nepovirus	*Pelargonium*	Plants for planting	USA	United Kingdom	1
	Pelargonium zonale	Cuttings	(France)	United Kingdom	1
Xiphinema americanum	*Ilex crenata*	Plants for planting	Japan	Netherlands	2

- **Wood**

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Ips sexdentatus	Conifer	Wood	Bulgaria	Greece	1
Ips typographus	*Picea*	Sawn wood	Poland	United Kingdom	1

- **Bonsais**

One consignment of *Serissa* bonsais from China was intercepted by the Netherlands because of the presence of *Rhizoecus hibisci.*

Source: EPPO Secretariat, 1999-05.

99/092 PQR version 3.8 is now available

An updated version of PQR, the EPPO database on plant quarantine has just been released. It contains information on geographical distribution, host plants, scientific and common names of quarantine pests listed by EPPO and the European Union, and also on pests of the provisional EPPO Alert List. Data on pests of quarantine interest to other Regional Plant Protection Organizations (RPPOs), addresses of National Plant Protection Organizations and RPPOs, membership of RPPOs are also included.

PQR version 3.8 can be downloaded freely form the EPPO Web site (www.eppo.org). Otherwise, it is also available on diskettes from the EPPO Headquarters, 1 rue Le Nôtre, 75016 Paris, France, at a price of 250 FRF (annual registration fee).

Source: EPPO Secretariat, 1999-05.

99/093 5th Congress of EFPP on Biodiversity in Plant Pathology

The 5th Congress of the European Foundation for Plant Pathology will be held on 2000-09-18/22, in Taormina and Giardini-Naxos, Sicily (IT). The theme of this Congress will be Biodiversity in Plant Pathology. For further information, please contact:

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Source: EPPO Secretariat, 1999-05.

Additional key words: conference