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CONTENTS

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EPPO *Reporting Service*

2002/035 New data on quarantine pests and pests of the EPPO Alert List

By browsing through the literature, the EPPO Secretariat has extracted the following new data concerning quarantine pests and pests included on the EPPO Alert List. The situation of the pest concerned is indicated in bold, using the terms of ISPM no. 8.

- **New geographical records**

Beet necrotic yellow vein benyvirus (rhizomania - EPPO A2 quarantine pest) occurs in Iran (Farzdfar *et al*., 2002).

A study was done in Colombia to determine the main potato viruses in the departments of Caldas and Tolima. Serological tests revealed high incidences and concentrations of *Andean potato latent tymovirus* and *Andean potato mottle comovirus* (both EPPO A1 quarantine pests). The EPPO Secretariat had previously no data on the occurrence of *Andean potato mottle comovirus* in Colombia. **Present, found in Caldas and Tolima departments**. Review of Plant Pathology, 80(9), p 879 (6240).

In an annual report on migratory Lepidoptera in the Netherlands, it is noted that *Cacyreus marshalli* (Lepidoptera: Lycaenidae - EPPO A2 quarantine pest) has been observed in 1999 in the Netherlands. However, this species is not considered as established. **Transient**. Review of Agricultural Entomology, 89(10), p1297 (9282).

Diaphorina citri (Hemiptera: Psyllidae - EPPO A1 quarantine pest) is reported for the first time in the Peninsula de Paraguaná, State of Falcón, in Venezuela. It was observed in April 1999 on *Citrus aurantifolia* and later on *C. reticulata, C. latifolia* and *Murraya paniculata*. **Present, found in 1999 in the state of Falcón**. Review of Agricultural Entomology, 89(9), p 1013 (7304).

Liriomyza huidobrensis (Diptera: Agromyzidae – EPPO A2 quarantine pest) was found for the first time in Taiwan in early 1999, and spread to many vegetable crops. **Present, widespread**. Review of Agricultural Entomology, 89(9), p 1117 (8040).

- **Detailed records**

High infestations of *Bemisia tabaci* biotype B (Homoptera: Aleyrodidae - EPPO A2 quarantine pest) were observed in a large soybean field in the State of Maranhão, Brazil, in 1999. Review of Agricultural Entomology, 89(12), p 1482 (10558).

In New Zealand, a survey done in 1997 showed that *Ciborinia camelliae* (Ascomycota: Leotiales - EPPO A2 quarantine pest) was widely distributed in western, central and lower North Island. In 1998, it was found that the disease had not spread in North Island, except for

an isolated outbreak in Auckland. In South Island, *C. camelliae* was only found in Picton, Nelson, Golden Bay, Blenheim, Kaiapoi and Christchurch. Review of Plant Pathology, 80(12), p 1284 (9009 & 9010).

Frankliniella occidentalis (Thysanoptera: Thripidae – EPPO A2 quarantine pest) occurs on glasshouse crops in Wakayama Prefecture, Honshu, Japan. Review of Agricultural Entomology, 89(9), p 1163 (8353).

Liriomyza trifolii (Diptera: Agromyzidae – EPPO A2 quarantine pest) occurs in Sohag governorate, Egypt. Review of Agricultural Entomology, 90(2), p 101 (665).

Tomato spotted wilt tospovirus (EPPO A2 quarantine pest) occurs in Assam, India, and causes problems on *Capsicum annuum* crops. Review of Plant Pathology, 80(9), p 904 (6399).

Wheat High Plains virus (EPPO Alert List) occurs in Kansas and Utah, USA (Seifers *et al*., 2002)

- **New host plants**

In Toscana, Italy, *Impatiens necrotic spot tospovirus* (EPPO A2 quarantine pest) was found for the first time on *Spathiphyllum* plants grown under glass. Review of Plant Pathology, 80(9), p 920 (6505).

Source: Review of Agricultural Entomology, 89(9, 10, 12). September, October, December 2001.
Review of Agricultural Entomology, 90(2). February 2002.
Review of Plant Pathology, 80(9, 12). September, December 2001.

Farzadfar, S.; Pourrahim, R.; Golnaraghi, A.R.; Shahraeen, N. (2002) First report of beet soil-borne virus on sugar beet in Iran. **Plant Disease, 86(2), p 187.**

Seifers, D.L.; Harvey, T.L.; Louie, R.; Gordon, D.T.; Martin, T.J. (2002) Differential transmission of isolates of the *High Plains virus* by different sources of wheat curl mites. **Plant Disease, 86(2), 138-142.**

Additional key words: new records, detailed records, new host plants

Computer codes: APLPV00, APMOV0, BEMITA, BNYVV0, CACYMA, DIAACI, FRANOC, INSV00, LIRIHU, LIRITR, SCLECA, TSWV0, WHPV00, BR, CO, IR, IN, IT, JP, NL, NZ, TW, US, VE

2002/036 Findings of *Clavibacter michiganensis* subsp. *sepedonicus* in Sweden

The NPPO of Sweden recently informed the EPPO Secretariat that *Clavibacter michiganensis* subsp. *sepedonicus* (EPPO A2 quarantine pest) has been found in 2 lots of ware potatoes (cv. Folva) produced at 2 different places of production. In both cases, the origin of the seed potatoes used was a lot of Swedish certified seed potatoes (class A) bought in spring 2000. This lot had been produced in 1999 in Sweden but originated from a seed potato lot from Denmark (class E) produced in 1998. Before certification of the 1999 harvest, the lot had been tested and found free from ring rot. Another finding of ringrot was made in 2 lots of seed potatoes (cv. Folva) not yet certified and in one lot of ware potatoes of the same cultivar. All lots originated from the same Danish producer of seed potatoes, and had been bought in spring 2001 as certified seed potatoes (class E). During the investigations made to trace back the above mentioned cases, 3 other lots of ware potatoes (cv. Folva), at 3 different places of production, were also found infected by ringrot. The origin of the seed potatoes is still to be found in these cases. Investigations are continuing.

Source: **NPPO of Sweden, 2002-02.**

Additional key words: detailed record **Computer codes:** CORBSE, SE

2002/037 First report of *European stone fruit yellows phytoplasma* in Austria

The NPPO of Austria recently informed the EPPO Secretariat that *European stone fruit yellows phytoplasma* (EU Annexes) has been found for the first time in Austria. The disease was detected during a routine inspection of apricot trees grown for fruit production in the state of Niederösterreich. The infested trees were immediately destroyed. It was not possible to trace back the source of the infection. At present, a monitoring programme is being carried out on the whole territory of Austria. The situation of *European stone fruit yellows phytoplasma* in Austria can be described as follows: **Present, found on apricot in Niederösterreich, under official control.**

Source: **NPPO of Austria, 2002-03.**

Additional key words: new record **Computer codes:** PHYP16, AT

2002/038 First report of *Puccinia hemerocallidis* in Australia

Puccinia hemerocallidis (EPPO Alert List) has recently been found at Maleny in south-east Queensland, Australia. This is the first report of daylily rust in Australia. Considering the widespread distribution of potentially infected rhizomes from the infected production site and the difficulty of controlling air-borne diseases, it has been concluded that eradication was not feasible in Australia. However, restrictions on the internal movement of daylilies and other hosts have been put in place. The situation of *P. hemerocallidis* in Australia can be described as follows. **Present, found in Queensland**.

Source: **IPPC contact point in Australia, 2002-02.**

Queensland Government web site. Department of Primary Industry
Daylily rust. A new disease in Queensland.
http://www.dpi.qld.gov.au/health/8060.html

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

2002/039 Pest incursions reported in Finland

The NPPO of Finland has recently informed the EPPO Secretariat of the following incursions:

Bemisia tabaci (Homoptera: Aleyrodidae - EPPO A2 quarantine pest) was found in November 2001 on pot plants of *Euphorbia pulcherrima* at 3 nurseries producing pot plants. The source of this infestation remains unknown. It is recalled that during 2001, *B. tabaci* has been found at 12 nurseries producing pot plants of *E. pulcherrima*. Today, all these nurseries are free from *B. tabaci*.

Puccinia horiana (EPPO A2 quarantine pest) was found in October 2001 on *Dendranthema* at one nursery producing cut flowers. Eradication measures were taken and all infected pot plants of *Dendranthema* have been adequately treated. It is recalled that during 2001 (see also EPPO RS 2001/101), *P. horiana* has been found at 10 nurseries producing cut flowers or pot plants of *Dendranthema*. Today, all these nurseries are free from *P. horiana*.

Source: **NPPO of Finland, 2002-01-03, 2002-01-23.**

Additional key words: incursions **Computer codes:** BEMITA, PUCCHN, FI

2002/040 Incursion of *Phytophthora ramorum* in Poland

The NPPO of Poland recently informed the EPPO Secretariat that *Phytophthora ramorum* (EPPO Alert List) was isolated in 2001 from *Rhododendron* grown in containers, imported from Germany. *P. ramorum* was found only in one nursery in Poland. Phytosanitary measures were taken to eradicate the disease. All plants were immediately destroyed. As a result of surveys which were conducted in nurseries and public gardens for the presence of *P. ramorum*, the species was not found again in Poland.

Source: NPPO of Poland, 2002-02.

Additional key words: incursion **Computer codes:** PHYTSP, PL

2002/041 New hybrid quarantine pests ?

Dr C. Brasier, pathologist for the British Forestry Commission, has recently high-lighted the possibilities for hybridization (or genetic introgression) between fungal pests as a factor in the establishment of introduced species or in the appearance of new pathogens. He cites particularly:

1) *Ophiostoma ulmi*, cause of the original Dutch elm disease epidemic, declined because of virus infection. *Ophiostoma novo-ulmi*, cause of the second epidemic, first appeared as a genetically homogeneous population with full vegetative compatibility, making it very susceptible to viruses. It acquired vegetative incompatibility genes from *O. ulmi,* which it replaced, and thus made itself more resistant to spread of viruses. Further hybridization between the American and European forms of *O. novo-ulmi* is occurring where they meet, and allows the possibility of appearance of other new forms. It may be noted that yet another species *O. himal-ulmi* exists in the western Himalayas. It is very aggressive to European elms, but has not spread.
2) New *Melampsora* rust hybrids have appeared in Pacific North America and New Zealand, when the parents were introduced there. The hybrids combine the host ranges of the two parents on different poplars.
3) The *Phytophthora* which has recently attacked alder in the EPPO region (formerly on the EPPO Alert List) is a hybrid between the introduced *Phytophthora cambivora* and the local *Phytophthora fragariae*.
4) A new *Phytophthora* in the Netherlands, on *Primula* and *Spathiphyllum*, is a hybrid between *Phytophthora cactorum* and the introduced *Phytophthora nicotianae*.

It is argued that the known potential of some fungal groups (*Ophiostoma, Phytophthora*…) for genetic exchange between native and introduced species is an element to be taken into account in PRA.

Source: Brasier, C.M. (2001) Rapid evolution of introduced plant pathogens via interspecific hybridisation.
BioScience, 51(2), 123-133.

Additional key words: quarantine **Computer codes:** OPHSNU, PHYTSP

2002/042 The *Phytophthora* disease of alder occurs in Belgium

Dr Cavelier from the Centre de Recherches Agronomiques de Gembloux recently informed the EPPO Secretariat that the *Phytophthora* disease of alder (formerly on the EPPO Alert List) has been found for the first time in Belgium. The pathogen was identified in September 1999, in *Alnus glutinosa* stands (7 years-old) near river Dyle, in the commune of Grez-Doiceau, in Wallonie. In 1999, the phytosanitary status of *A. glutinosa* rapidly deteriorated in Wallonie, as severe die-back of alders was seen along several rivers (Amblère, Honnelle, Lesses, Mehaigne, Ourthe, Sûre, Vierre). It is stressed that the development of this new disease will have disastrous consequences on the ecology of riverbanks, as *A. glutinosa* is a major component of these ecosystems: high resistance to flooding, deep root system maintaining riverbanks and providing shelter for fish reproduction, light canopy favourable to good regulation of physical characteristics of water. In addition, *A. glutinosa* provides high quality wood and constitutes an important element in the landscape. Several recommendations are made to prevent further spread of the pathogen. In affected areas: 1) systematic destruction of trees is usually not recommended as this may favour further spread, prevent the identification of resistant trees and destabilize river banks; 2) if trees are destroyed, stumps should not be left near water streams or humid zones; 3) cutting back of *Alnus* trees should be done over short distances (it has been observed in UK that this usually provided healthy trees without destabilizing riverbanks), 4) when replanting, other tree species should be used whenever possible. In order to prevent the entry of the pathogen into areas where it is still absent: 1) *Alnus* wood should not be used for riverbank installations, 2) movement of water, mud, fish should be avoided, 3) disease-free planting material should be used, 4) tools should be

disinfected. Surveys will continue in Belgium to determine the extent of the disease, as well as studies on the genetic variability, pathogenicity and epidemiology.

Source: Cavelier, M.; Claessens, H.; Etienne, M. (1999) Premier signalement du *Phytophthora* de l'aulne (*Alnus glutinosa*) en Belgique.
Parasitica, 55(2-3), 63-71.

Claessens, H.; Cavelier, M. (2001) Le point sur le dépérissement de l'aulne.
Forêt Wallonne. Cahier Technique n° 13, 11-15.

Fiches d'information sur la maladie de l'aulne.
Edited by 'Centre de Recherches Agronomiques de Gembloux' and 'Faculté Universitaire des Sciences Agronomiques de Gembloux'.

Additional key words: new record **Computer codes:** PHYTSP, BE

2002/043 Situation of pitch canker (*Gibberella circinata*) in California

A review by Gordon *et al*. (2001) presents in details the situation of pitch canker (*Gibberella circinata* – EPPO Alert List) in California, US. Pitch canker was first described in southeastern USA in 1946 where it remains a chronic problem in pine plantations and seed orchards. In California, it was found in the mid-1980s. Surveys have showed that *G. circinata* is currently widespread in coastal California, near San Francisco and in Alameda, Santa Cruz, Monterey, San Luis Obispo, Santa Barbara counties. It is also found in Christmas tree farms in Los Angeles and San Diego counties. In California, Monterey pines (*Pinus radiata*) severely affected by the disease are found in nurseries, Christmas-tree production farms, landscape plantings and also in native forests (Ano Nuevo, Monterey peninsula and Cambria). In California, *G. circinata* was probably introduced from southeastern USA through infected seeds or nursery material, and spread on this type of material. Nurseries producing *P. radiata* sold seedlings to Christmas-tree production farms. The availability of infected (but asymptomatic) trees at "choose and cut" farms then provided a ready pathway for moving the pathogen in California. In addition, once pitch canker has killed large trees, their removal, usually as logs for firewood, offered other possibilities for spread. In California, unlike southeastern USA, insects play a major role in disease epidemiology, as vectors (e.g. *Conophthorus radiatae, Ernobius punctulatus, Ips paraconfusus, Pityophthorus setosus*) or wounding agents (e.g. *Aphrophora canadensis*). In California, essentially *P. radiata* is affected by *G. circinata*, but *P. attenuata* and *P. muricata* are also attacked. Glasshouse tests have shown that the following pine species are susceptible to the fungus: *P. contorta, P. coulteri, P. halepensis, P. jeffreyi, P. lambertiana, P. ponderosa* and *P. sabiniana*. In these

trials, *P. thunbergiana, P. pinea*, and *P. canariensis* were not susceptible. Control of *G. circinata* is difficult, particularly in natural forests.

Source: Gordon, T.R.; Storer, A.J.; Wood, D.L. (2001) The pitch canker epidemics in California.
Plant Disease, 85(11), 1128-1139.

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

2002/044 *Frankliniella fusca* is a vector of *Impatiens necrotic spot tospovirus*.

So far, *Impatiens necrotic spot tospovirus* (INSV – EPPO A2 quarantine pest) was only known to be transmitted by *Frankliniella occidentalis* (Thysanoptera: Thripidae – EPPO A2 quarantine pest). Laboratory studies were done to determine whether INSV could also be transmitted by *Frankliniella fusca*. A population of virus-free *F. fusca* was reared on detached peanut leaves. Adults were confined on peanut leaves for oviposition, and then the peanut leaves (adults being removed) were examined daily for larval emergence. First instar larvae (<12 h old) were given an acquisition access period of 24 to 48 h on INSV-infected leaves of *Emilia sonchifolia*. Larvae were then transferred to healthy peanut leaves until adult emergence, and resulting adults were subsequently given a 48 h inoculation access period on healthy *E. sonchifolia* seedlings. Thrips were killed and plants maintained, awaiting symptom expression. 7 to 10 days after inoculation, plants developed symptoms (chlorotic spots, mosaic and mottling). The presence of INSV was confirmed by serological (ELISA) and molecular (PCR) tests. These experiments were repeated several times and demonstrated that *F. fusca* is a vector of INSV.

Source: Naidu, R.A.; Deom, C.M.; Sherwood, J.L. (2001) First report of *Frankliniella fusca* as a vector of *Impatiens necrotic spot tospovirus*.
Plant Disease, 85(1), p 1211.

Additional key words: epidemiology **Computer codes:** INSV00

2002/045 Survey on tospoviruses of tomato crops in Argentina

In Argentina, tomato crops are affected by three tospoviruses: *Tomato spotted wilt tospovirus* (TSWV - EPPO A2 quarantine pest), *Tomato chlorotic spot virus* (TCSV) and *Groundnut ringspot tospovirus* (GRSV). Their incidence is variable but, in some cases, it was estimated that crop losses could reach up to 80 %. Surveys were done in 1996/1997 in the major tomato-growing areas: northwest (provinces of Salta, Jujuy, Tucumán), centre (Córdoba), northeast and coastal (Corrientes, Santa Fé, Buenos Aires), Río Negro valley (Río Negro). 420 tomato samples showing suspect symptoms were collected and tested (DAS-ELISA) for the presence of the three viruses. Out of the 420 tested samples, 170 gave positive results, and 63% were identified as GRSV, 28.2% as TCSV and 8.8% as TSWV. GRSV was found in central and northwest region, TCSV was found in the northeast and coastal region, and TSWV was only found in the Río Negro valley. The authors thought that this may be correlated with the presence of thrips vectors. It is noted that *Frankliniella occidentalis* (EPPO A2 quarantine pest) is thought to transmit TSWV more efficiently than the two other tospovirus species, and that *F. schultzei* can transmit TCSV but not TSWV. More studies on the distribution and transmission efficacy of thrips are needed.

Source: Williams, L.V.; López Lambertini, P.M.; Shohara, K.; Biderbost, E.B. (2001) Occurrence and geographical distribution of tospovirus species infecting tomato crops in Argentina.
Plant Disease, 85(12), 1227-1229.

Additional key words: detailed record **Computer codes:** FRANOC, TSWV00, AR

EPPO *Reporting Service*

2002/046 Incursions of *Scyphophorus acupunctatus* in Italy and in the Netherlands: Addition to the EPPO Alert List

Scyphophorus acupunctatus (Coleoptera, Curculionidae) was collected for the first time in Lombardia, Italy, in a glasshouse in 1998. It was found on *Beaucarnea recurvata* imported from Nicaragua, via the Netherlands. Affected plants presented holes along the trunk, and after a period of time adults emerged and could be identified. In spring 2000, *S. acupunctatus* was observed again in *Beaucarnea* in a glasshouse in the Province of Bergamo, Lombardia. *S. acupunctatus* is a pest of Agavacae and Dracaenaceae (*Agave, Dracaena* and *Yucca*) in many parts of the world (Colombo, 2001). Interestingly, it had been found at least twice in the Netherlands: in 1980 on Yucca plants from Guatemala (van Rossem *et al*., 1981) and in 1989 on the Agavaceous plants *Dasylirion longissimum* (de Goffau, 1991). It is stressed that these insects are difficult to detect as larvae bore galleries within the plants, and that inspections at production sites after import are needed to detect them. Considering repeated incursions of *S. acupunctatus* in at least two countries in Europe, the EPPO Secretariat adds *S. acupuntatus* to the Alert List.

Scyphophorus acupunctatus (Coleoptera: Curculionidae) – Sisal weevil

Why	*Scyphophorus acupunctatus* (synonyms: *S. interstitialis, S. anthracinus, S. robustior, Rhynchophorus asperulus*) has been found several times by Italy and the Netherlands on imported ornamental plants (*Beaucarnea, Dasylirion* and *Yucca*) under glasshouse conditions, which shows that the pest has a pathway to enter Europe.
Where	*S. acupunctatus* originates from the Americas, but it has been introduced to many other parts of the world (mainly arid and tropical regions), probably with the introduction of *A. sisalana* for the production of sisal. **EPPO region**: found in glasshouses on imported *Beaucarnea* in Italy, *Yucca* and *Dasylirion* in the Netherlands, respectively. Not established. **Asia**: Indonesia (Java, Kalimantan, Sumatra), Saudi Arabia. **Africa**: Kenya, South Africa, Tanzania. **North America**: Mexico, USA (Arizona, Arkansas, California, Colorado, Florida, Georgia, Hawaii, Kansas, Nevada, New Mexico, Texas). **Central America and Carribean**: Cayman islands, Costa Rica, Cuba, Netherlands Antilles (including Curaçao), Dominican Republic, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Nicaragua, Virgin Islands (US). **South America**: Belize, Brazil, Colombia, Venezuela. **Oceania**: Australia (Queensland).
On which plants	Agavaceae and Dracaenaceae. *Agave* (many different species, e.g. species used for fibre production: *A. sisalana* (sisal), *A. fourcroydes* (henequen); for beverage: *A. tequilana* (tequila); for ornamental purposes: *A. americana*….), *Beaucarnea*, *Dasylirion longissimum*, *Dracaena draco*, *Furcraea*, *Yucca* (e.g. *Y. aloifolia*, *Y. elephantipes*, *Y. glauca*).
Damage	Insect larvae bore galleries into the plants. Adult damage consists of groups of feeding punctures on young leaves. In cases of severe attacks, plants in nurseries may die. In addition to feeding damage, the insect favours the development of secondary fungal or bacterial rots. Adults of *S. acupunctatus* are small black weevils (9-15 mm long). There are 5 larval instars, and the fully developed larva is about 18 mm long, creamy white and legless. Pupation then takes place within a cocoon made of plant fibres and debris. The total life cycle takes 50-90 days, with 4 or 5 generations per year. *S. acupunctatus* is

considered as the most important pest of cultivated *Agave* (fibre, beverage and ornamental production). Yield losses of 40% have been reported in northern Yucatan, Mexico, on *A. fourcroydes* (henequen).

Pathway: Plants for planting and pot plants of *Agave, Beaucarnea, Dasylirion, Dracaena* and *Yucca* from countries where *S. acupunctatus* occurs.

Possible risks: Agave occurs essentially around the Mediterranean Basin for ornamental purposes. In other parts of Europe, host plants of *S. acupunctatus* are grown under glasshouse as ornamentals. More data is needed on the biology of the pest to assess its potential of establishment on agave growing outdoors (*S. acupunctatus* appears more as a tropical, subtropical species). Considering that a large trade of ornamental host plants takes place between Europe and countries where the pest is present, and the difficulty to detect the insect at the time of import, *S. acupunctatus* could present a risk for glasshouse production of ornamentals Agavaceae and Dracaenaceae.

Note: Imports of Agavacae and Dracaenaceae are also a pathway of other tropical stem/wood boring insects. For example, the ambrosia beetle *Xyleborus ferrugineus* (Coleoptera: Scolytidae). It was found several times in the Netherlands (at least in 1979, 1989, 1999) on *Dracaena*, and *Yucca* plants imported from Costa Rica, Guatemala, Honduras and Mexico (de Goffau, 1991, 2000) and grown under glasshouses. Another example is *Yuccaborus frontalis* (Coleoptera: Curculionidae) which was also found in the Netherlands in 1989 in *Yucca* and *Beaucarnea* plants imported from Central America (de Goffau, 1991).

Source(s):

CABI Crop Protection Compendium, 2001 edition. CABI, Wallingford, UK.

Colombo, M. (2000) *Scyphophorus acupunctatus* Gyllenhal (Coleoptera Curculionidae): prima segnalazione per l'Italia. Bolletino di Zoologia Agraria e di Bachicoltura, Serie II, 32(2), 165-170.

De Goffau, L.J.W. (1991) Jaarboek, Plantenziektenkundige Dienst – 1989/1990, 59-62 & 124-126.

De Goffau, L.J.W. (2000) *Xyleborus ferrugineus* damaging *Yucca*. Annual Report 1999. Diagnostic Centre, p 58.

Hill, D.S. (1983) Agricultural insect pests of the tropics and their control. 2nd edition. Cambridge University Press, UK, p 490.

Van Rossem, G.; van Bund, C.F.; Burger, H.C.; de Goffau, L.J.W. (1981) [Unusual infestations of insects in 1980]. Entomologische Berichten, 41(1), 84-87 (abstract).

Verbeek, W.A. (1976) Annual report for the period 1 July , 1974 to 30 June, 1975. Report Secretary for Agricultural Technical Service, South Africa, 229 pp (abstract).

INTERNET

Fucikovsky, L.; Velázquez, J. (2002) Complex bacterial, fungal and insect invasion of *Agave tequilana* weber var. Azul in Mexio. Abstract of a poster presented at the 3rd International Bacterial Wilt Symposium, 2002-02-04/08, South Africa
http://ibws.nexenservices.com/RSA%20Programm/Monday_poster.htm

UVI-CES Pest Management (US British Virgin Island) - Insect pests
http://rps.uvi.edu/CES/ipmhome.html

EPPO RS 2002/046
Panel review date - Entry date 2002-03

Additional key words: Alert List **Computer codes:** SCYPIN, IT

2002/047 Detection and host range of *Erwinia pyrifoliae*

Erwinia pyrifoliae (EPPO Alert List) was recently described as a new pathogen of Asian pear (*Pyrus pyrifolia*) in Korea. It was isolated during 4 consecutive years (from 1995 to 1998) in Korea orchards, in the region of Chuncheon (south of the country), exclusively from necrotic Asian pear trees. The occurrence of this disease in other regions of Korea has not been reported. It can also be recalled that *E. amylovora* does not occurs in Korea. Although *E. pyrifoliae* resembles *E. amylovora* (symptoms on immature pear, colony morphology on certain growing medium), it differs from it in microbiological and molecular assays. A pair of specific PCR primers has been developed to detect *E. pyrifoliae*, but not *Escherichia coli*, *Enterobacter pyrinus*, *Pantoea stewartii*, *Pseudomonas syringae*, *Xanthomonas campestris*, *E. amylovora*, *E. herbicola* and several other *Erwinia* species. Using these primers, *E. pyrifoliae* was detected from necrotic pear leaves. The genome of several strains of *E. pyrifoliae* was digested by two restriction enzymes and DNA fragments were analysed (pulsed-field gel electrophoresis). The patterns obtained differed from those of *E. amylovora*, and showed some variability within *E. pyrifoliae*. In addition, the host range of *E. pyrifoliae* was studied. Several fireblight hosts (*Cotoneaster*, *Crataegus*, *Malus domestica*, *Prunus salicifolia*, *Pyrus communis*, *Rubus idaeus*, *Pyrus pyrifolia*) were inoculated with strains of *E. pyrifoliae* and *E. amylovora*. Results showed that leaf necrosis was only obtained with *E. pyrifoliae* on European and Asian pears. Some weak symptoms were observed on *M. domestica* (cv. Idared only). The authors noted that in 1999 and 2000, they have not been able to detect again *E. pyrifoliae* in the region where it was first found. Phytosanitary measures (no details given) were taken in affected orchards, and have apparently been successful in reducing or eliminating the pathogen. It is also noted that the specific primers for *E. pyrifoliae* can also detect some *Erwinia* strains from Japan (but not all of them).

Source: Kim, W.S.; Jock, S.; Paulin, J.P.; Rhim, S.L.; Geider, K. (2001) Molecular detection of differentiation of *Erwinia pyrifoliae* and host range analysis of the Asian pear pathogen.
Plant Disease, 85(11), 1183-1188.

Additional key words: diagnostic methods **Computer codes:** ERWIPY, KR

EPPO *Reporting Service*

2002/048 Several closteroviruses are associated with little cherry disease

Little cherry disease was first reported in the 1930s, in the Kootenay valley in British Colombia, Canada (see also EPPO RS 99/066). In recent years, a serious outbreak of the disease was observed near Hamburg in Germany. In Canada, a known vector of the disease is the apple mealybug (*Phenacoccus aceris*), whereas in Germany the mode of dissemination of the disease remains unknown as this insect is uncommon. Initial studies showed that long flexuous virus particles characteristic of closteroviruses were present in phloem cells of infected trees. In 1996, a closterovirus associated with the disease in Germany was identified, its complete genomic sequence was determined, and it was called *Little cherry closterovirus*. PCR primers were then designed to detect this virus specifically. However, a number of isolates consistently gave a negative result. Initial characterization of a Canadian isolate showed that it was distinct from *Little cherry closterovirus*. This observation was confirmed by recent studies of Eastwell & Bernady (2001) who showed that the characteristics of the mealybug-transmitted virus in North America were very different from those of the *Little cherry closterovirus* associated with the disease in Europe. Studies done by Root & Jelkmann (2001) led to the partial characterization of a second closterovirus associated with little cherry disease which was called *Little cherry virus-2* (LChV-2). For consistency, the previously characterized virus was renamed *Little cherry virus-1* (LChV-1). Based on a limited sequence comparison, it was found that LchV-2 is the same virus as the one previously described in association with the disease in Canada. The conclusion was that little cherry disease is caused by at least 2 distinct closteroviruses. However, of the 28 isolates tested, one still tested negative to both LChV-1 and LChV-2, suggesting the possible existence of a third virus. Interestingly, LChV-1 and LChV-2 are only distantly related, suggesting that the two viruses probably arose independently on cherry. More recently, further studies done by Theilmann *et al*. (2002) confirmed the existence of a third closterovirus which was partially described and named LChV-3. LChV-3 was isolated also from British Colombia, Canada. Sequence comparison between LChV-3 and LChV-1 showed that these viruses are only remotely related. More studies are needed to better understand the distribution and the epidemiology of LChV-1, LChV-2 and LChV-3.

Source: Eastwell, K.C.; Bernady, M.G. (2001) Partial characterization of a closterovirus associated with apply mealybug-transmitted little cherry disease in North America. **Phytopathology, 91(3), 261-267.**

Rott, M.E.; Jelkmann, W. (2001) Detection and partial characterization of a second closterovirus associated with little cherry disease, Little cherry virus-2. **Phytopathology, 91(3), 261-267.**

Theilmann, J.; Mozafari, J.; Reade, R.; Wu, Z.; Xie, W.; Jesperson, G.; Bernardy, M.; Eastwell, K.C.; Rochon, D. (2002) Partial nucleotide and genome organization of a Canadian isolate of *Little cherry virus* and development of an Enzyme-Linked Immunosorbent Assay-based diagnostic test. **Phytopathology, 92(1), 87-98.**

Additional key words: aetiology **Computer codes:** LCHV00, CA, DE

2002/049 Alien plant species which are spreading in Norway

On the web site of the 'State of the Environment Norway' a list of alien species of vascular plants that are spreading in Norway is given, based on a publication from Fremstad & Elven (1997). It is estimated that half of the approximately 2630 plant species found in Norway occur naturally in the country. Of the species that have immigrated, 593 have become a permanent part of the Norwegian vegetation. More than 110 of these are thought to be expanding and some of them may have a significant impact on the vegetation.

Scientific name	First appearance	Escaped from
Abies alba		Forestry
Acer pseudoplatanus		Gardens
Achillea ptarmica		
Agrostis gigantea	1930s	
Amelanchier spicata		Gardens
Aquilegia vulgaris	Middle ages	Gardens
Arabis (Cardaminopsis) arenosa	1913	Roadsides and railways
Arabis caucasica		Gardens
Arabis suecica	1939	Roadsides and railways
Aruncus dioicus		Gardens
Barbarea vulgaris	1790s	
Berberis thunbergii		Gardens
Berteroa incana	1820s	
Bromus inermis	1900s	Grass cultivation
Bunias orientalis	1800-1810	
Campanula patula	1830	
Cerastium glomeratum		Roadsides and railways
Chaenorrhinum minus		Roadsides and railways
Chamomilla suaveolens	1862	
Cicerbita macrophylla		Gardens
Cicerbita plumieri		Gardens
Claytonia sibirica		
Cornus alba		Gardens
Cotoneaster bullatus		Gardens
Cotoneaster dielsianus		Gardens
Cotoneaster divaricatus		Gardens
Cotoneaster lucidus		Gardens
Cotoneaster simonsii		Gardens
Crepis biennis		
Crepis setosa	1961	
Cymbalaria muralis		
Dicentra formosa		Gardens
Draba nemorosa		
Echinochloa crus-galli		
Elodea canadensis	1925	
Epilobium ciliatum		
Epilobium glandulosum	1928	
Epilobium watsonii	1869	
Erigeron (Conyza) canadensis	1870	

Scientific name	First appearance	Escaped from
Erucastrum gallicum		
Fallopia x bohemica		Gardens
Festuca tenuifolia (Festuca ovina ssp. *capillata)*		
Festuca trachyphylla		Sown on roadsides
Galinsoga ciliata	1900s	
Galinsoga parviflora	1830	
Geranium sibiricum	1940s	
Geum macrophyllum		Gardens
Heracleum mantegazzianum		Gardens
Heracleum stevenii (H. laciniatum)	1850s	Gardens
Hesperis matronalis		Gardens
Impatiens glandulifera		Gardens
Impatiens parviflora	1875s	
Juncus tenuis	1899	
Laburnum alpinum		Gardens
Laburnum anagyroides		Gardens
Lactuca serriola		Gardens
Lamium confertum		
Lepidium densiflorum		
Lepidium heterophyllum		
Lepidium latifolium		
Lepidium ruderale		
Linaria repens		
Lonicera caerulea		Gardens
Lonicera tatarica		Gardens
Lupinus nootkatensis		Sown
Lupinus perennis		Sown
Lupinus polyphyllus		Gardens
Lysimachia punctata		Gardens
Mahonia aquifolium		Gardens
Meconopsis cambrica		Gardens
Mimulus guttatus		
Myrrhis odorata	Middle ages	
Oxalis europaea (O fontana)		
Picea glauca		Gardens and forestry
Picea sitchensis		Forestry
Pinus mugo		Forestry
Poa supina		Roadsides and railways
Polygonum cuspidatum (Reynoutria or *Fallopia japonica)*		Gardens
Potentilla intermedia		
Potentilla thuringiaca		
Primula elatior		Gardens
Pseudofumaria lutea		Gardens
Pulmonaria montana		Gardens
Pulmonaria rubra		Gardens
Ranunculus cymbalaria	1916	
Reynoutria (Fallopia) sachaliensis		Gardens
Rorippa austriaca		
Rorippa austriaca x sylvestris		

Scientific name	First appearance	Escaped from
Rosa glauca		Gardens
Rosa rugosa	1920s	Gardens
Rubus armeniacus		Gardens
Rumex confertus	1931	
Sambucus nigra	Middle ages	Gardens
Sambucus racemosa		Gardens
Saponaria officinalis		
Scilla siberica		Gardens
Scopolia carniolica		
Sedum spurium		Gardens
Senecio viscosus	1750s	
Sisymbrium altissimum		
Solidago canadensis		
Solidago gigantea		
Sorbus intermedia		Gardens
Spergularia rubra		
Symphoricarpos rivularis (S. albus var. *laevigatus)*		Gardens
Telekia speciosa		Gardens
Thlaspi caerulescens	1874	
Trifolium incarnatum		Sown
Trifolium spadiceum		
Tsuga heterophylla		Gardens
Veronica filiformis		
Veronica persica		

Source: Fremstad E.; Elven, R. (1997) Alien plants in Norway; a review. Norsk geografisk tidsskrift, 51, 199-218.

Web site of 'State of the Environment Norway'. http://62.92.38.7/Topics/Biological_diversity/Animals_plants/alien_species/plants.stm

Additional key words: invasive plant species **Computer codes:** NO

2002/050 Membership status of the IPPC

The following list gives the countries which are contracting parties to the IPPC. In bold, it indicates the countries which have now accepted the revised text of the IPPC. It may be noted that the following EPPO member countries have not yet become contracting parties to IPPC despite the repeated recommendations of EPPO Council: Kyrgyzstan, Latvia, Slovakia and Ukraine. In addition, as the IPPC has been revised all EPPO member countries are now invited to accept the revised text of the Convention. So far, only 16 EPPO member countries have accepted it (Albania, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Jordan, Lithuania, Morocco, Netherlands, Norway, Romania, Slovenia, Spain, Sweden, Tunisia).

Albania (1999-07-29)
Algeria
Argentina (2000-04-05)
Australia (2000-06-13)
Austria
Azerbaijan (2000-08-18)
Bahamas
Bahrain
Bangladesh (1998-11-24)
Barbados (1998-08-10)
Belgium
Belize
Bhutan
Bolivia
Brazil
Bulgaria
Burkina Faso
Cambodia
Canada (2001-10-22)
Cape Verde
Chile
Colombia
Costa Rica (1999-08-23)
Croatia (1999-05-14)
Cuba (2002-02-18)
Cyprus (1999-02-11)
Czech Republic (2001-04-04)
Denmark
Dominican Republic
Ecuador
Egypt
El Salvador
Equatorial Guinea
Eritrea (2001-04-06)
Estonia (2000-12-07)
Ethiopia
Finland
France
Germany
Ghana
Greece
Grenada
Guatemala
Guinea
Guyana
Haiti
Hungary (2001-06-28)
India
Indonesia
Iran (Islamic Republic of)
Iraq
Ireland
Israel
Italy
Jamaica
Japan
Jordan (2002-01)
Kenya
Korea, Republic of (2000-11-09)
Laos
Lebanon
Liberia
Libyan Arab Jamahiriya
Lithuania (2000-11-09)
Luxembourg
Malawi
Malaysia
Mali
Malta
Mauritius (2000-11-16)
Mexico (2000-06-28)
Moldova (2001-01-25)
Morocco (2000-02-08)
Netherlands (2000-08-27)
New Zealand (1999-06-22)
Nicaragua
Niger
Nigeria
Norway (2000-02-29)
Oman (2000-01-28)
Pakistan
Panama
Papua New Guinea (1999-01-15)
Paraguay
Peru (2000-03-22)
Philippines
Poland
Portugal
Romania (1999-01-21)
Russian Federation
Saudi Arabia (2000-08-07)
Senegal (2002-01)
Sierra Leone
Slovenia (2000-11-22)
Solomon Islands
South Africa
Spain (2000-06-05)
Sri Lanka
St. Kitts & Nevis
St. Vincent and the Grenadines (2001-11-15)
Sudan
Suriname
Sweden (1999-06-07)
Switzerland
Thailand
Togo
Trinidad & Tobago
Tunisia (1999-02-08)
Turkey
United Arab Emirates
United Kingdom
United States of America (2001-10-02)
Uruguay (2001-07-12)
Venezuela
Yemen
Zambia

Source: **FAO web site -** http://www.fao.org

2002/051 Symposium on Ecology and Management of Western corn rootworm

An International Symposium on Ecology and Management of Western corn rootworm will take place at Pauliner Kirche, Goettingen, Germany on 2003-01-19/23. The Symposium is intended for research scientists, chemical companies, plant protection services, advisers, government decision-makers, and will focus on integrated and sustainable management of *Diabrotica virgifera virgifera* in Europe and North America.

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Source: EPPO Secretariat, 2002-03.

Additional key words: conference **Computer codes:** DIABVI