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2002/052 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.

- **Detailed records**

Beet necrotic yellow vein benyvirus (rhizomania – EPPO A2 quarantine pest) was found for the first time in 2000 in the Columbia river basin of Washington and Oregon, USA (Gallian *et al*., 2002).

In Bulgaria, analysis of soil samples from 256 localities in 10 regions showed that *Globodera rostochiensis* (EPPO A2 quarantine pest) occurs in 85 localities. Highest population densities were found in 3 regions (Smolyan, Velingrad and Samokov). Nematological Abstracts, p 6 (37).

A survey on *Meloidogyne* species was carried out in Belgium and a total of 2877 soil and root samples were taken. *Meloidogyne* species were found in 9.2% of the samples. 10 % of these positive samples contained *M. chitwoodi* and/or *M. fallax* (both EPPO A2 quarantine pests). Studies on the genetic variability of nematode populations revealed considerable intraspecific variation supporting the idea that *M. chitwoodi* and *M. fallax* have been present in Belgium for a long time. Nematological Abstracts p 49 (347).

Phymatotrichopsis omnivora (EPPO A1 quarantine pest) was identified in 1995/1996 in alfalfa fields in the region of Lagunera (Coahuila and Durango) in Mexico. Review of Plant Pathology, 81(1), p 56 (378).

During a survey carried out in commercial strawberry fields in Maryland (US), among other viruses, *Strawberry crinkle cytorhabdovirus, Strawberry mild yellow edge potexvirus* (EU Annexes) and *Strawberry vein banding caulimovirus* (EPPO A2 quarantine pest) were detected. Review of Plant Pathology, 81(1), p 66 (453).

Tomato spotted wilt tospovirus (EPPO A2 quarantine pest) was found on *Dendranthema* crops in Shizuoka prefecture, Japan. Review of Agricultural Entomology, 90(3), p 198 (1365).

Tomato yellow leaf curl begomovirus (EPPO A2 quarantine pest) was reported for the first time in North Carolina, USA. Tomato crops showing symptoms were observed in 2000 and 2001 (Polston *et al*., 2002).

During a survey on tospoviruses of grain legumes (*Glycine max, Phaseolus aureus, P. mungo, Vigna unguiculata*) in Delhi, India, the presence of *Watermelon silver mottle tospovirus* (EPPO A1 quarantine pest) was detected by ELISA. This confirms earlier reports in India. It can also be noted that, so far, the virus was mainly reported from Cucurbitaceae. Review of Plant Pathology, 81(2), p 200 (1443).

Source: Gallian, J.J.; Wintermantel, W.M.; Hamm, P.B. (2002) First report of rhizomania of sugar beet in the Columbia river basin of Washington and Oregon. **Plant Disease, 86(1), p 72.**

Polston, J.E.; Rosebrock, T.R.; Sherwood, T.; Creswell, T.; Shoemaker, P.J. (2002) Appearance of *Tomato yellow leaf curl virus* in North Carolina. **Plant Disease, 86(1), p 73.**

Nematological Abstracts, January 2002.
Review of Agricultural Entomology, March 2002.
Review of Plant Pathology, January & Feburary 2002.

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

Computer codes: BNYV00, HETDRO, MELGCH, MELGFA, PHMPOM, SCRV00, SMYEV0, SVBV00, TSWV00, TYLCV0, WMCSV0, BG, IN, JP, MX, US

EPPO *Reporting Service*

2002/053 First report of *Citrus tristeza closterovirus* in Greece

In Greece, large scale surveys for *Citrus tristeza closterovirus* (CTV - EPPO A2 quarantine pest) have been conducted by the Ministry of Agriculture since 1995. More than 26,000 trees have been tested (ELISA and immunoprinting). In summer 2000, the first tree (sweet orange (*Citrus sinensis)* cv. Lane Late grafted on tolerant citrange (*C. sinensis* x *Poncirus trifoliata)* cv. Carrizo) infected by CTV was found in Argolis county, Peloponese. This tree belonged to a lot of CAC propagation material (20 trees) which had been illegally introduced from Spain in 1994. Subsequently, trees of this lot were traced back and 45 % were infected. Trees grafted with this infected material were then traced back in Argolis and Chania (Crete), and more than 3,500 trees were removed. Surveys continued to identify and destroy new infections. A few cases (15 cases) of natural transmission to cultivars other than cv. Lane Late were found, but only in the vicinity of the initially infected trees in the Argolis area. In Spring 2001, surveys were extended to certified propagation material of mandarin (*Citrus clementina)* var. Clemenpons on Carrizo citrange imported from Spain, and 7 of 1,038 plants were infected (0.64%). This is the first confirmed report of *Citrus tristeza closterovirus* in Greece. The situation of *Citrus tristeza closterovirus* in Greece can be described as follows: **Present, found in Peloponese and Crete, under official control.**

Source: Dimou, D.; Drossopoulou, J.; Moschos, E.; Varveri, C.; Bem, F. (2002) First report of *Citrus tristeza virus* in Greece.
Plant Disease, 86(3), p 329.

Additional key words: new record **Computer codes:** CTV000, GR

2002/054 First report of *Phytophthora quercina* in Turkey

In the Asian part of Turkey, surveys were carried out in forests from 1999 to 2001. Mature trees of several oak species showed symptoms of decline, including thinning of the crown, yellowing and wilting of leaves, branch dieback and growth of epicormic shoots on branches and trunk. Observations over time confirmed a slow progress of tree mortality. Soil samples including fine roots with necrotic lesions were collected, and leaf baits were also used, in order to study the presence of *Phytophthora* species. 10 species of *Phytophthora* were isolated and *P. quercina* (EPPO Alert List) was the most frequently isolated species (isolated from 29 sites, i.e. 57 %). This is the first report of *P. quercina* in Turkey. Isolates from Turkey showed some slight morphological differences with the haplotype, as well as a lower optimal temperature and higher growth rate when compared with European strains. *P. quercina* was also isolated on new hosts: *Quercus hartwissiana, Q. frainetto* and *Q. vulcanica*. Observations suggest that *P. quercina* is widespread in Turkey and occurs within the natural range of oak, which raises the question of its role in the oak decline syndrome.

Source: Balci, Y.; Halmschlager, E. (2002) First confirmation of *Phytophthora quercina* in Asia.
Plant Disease, 86(4), p 442.

Additional key words: new record **Computer codes:** PHYTQU, TR

2002/055 *Clavibacter michiganensis* subsp. *michiganensis* does not occur in Algeria

The NPPO of Algeria recently informed the EPPO Secretariat that it has verified the situation of *Clavibacter michiganensis* subsp. *michiganensis* (EPPO A2 quarantine pest) in Algeria, and that in contradiction with an earlier publication (see EPPO RS 2001/090 and 2001/197), this bacterium does not occur in Algeria. The situation of *Clavibacter michiganensis* subsp. *michiganensis* in Algeria can be described as follows: **Absent, pest record invalid**.

Source: **NPPO of Algeria, 2002-03**

Additional key words: denied record **Computer codes:** CORBMI, DZ

EPPO *Reporting Service*

2002/056 Survey on *Pepino mosaic potexvirus* on wild and cultivated *Lycopersicon* in Peru

In March 2000, a survey on *Pepino mosaic potexvirus* (EPPO Alert List) was carried out in central and southern Peru (Departments of Lima, Ayacucho, Apurimac, Arequipa, Moquegua and Tacna). These areas are part of the 'Sierra' (Andean highlands, mild climate) and 'Costa' (coastal region, arid and warm). 65 populations of wild *Lycopersicon* (*L. peruvianum, L. parviflorum, L. chilense, L. chmiekewskii, L. pimpinellifolium*), and four cultivated tomato (*L. esculentum*) fields were sampled and tested by DAS-ELISA for 5 viruses (*Pepino mosaic potexvirus, Potato X potexvirus, Potato Y potyvirus, Tobacco mosaic tobamovirus* and *Tomato mosaic tobamovirus*). In addition, six samples of other Solanaceae (*Datura, Nicotiana, Solanum caripense, S. muricatum*) were also collected. *Pepino mosaic potexvirus* was detected in 24 samples and *Tomato mosaic tobamovirus* was found in 2 samples. Mechanical inoculation of susceptible *L. esculentum* (cv. NE-1) with crude sap extracts of 20 samples confirmed that 15 of them were infected by *Pepino mosaic potexvirus* (DAS-ELISA positive and, in most cases, development of symptoms). These infected samples had been collected from the Departments of Apurimac, Arequipa and Moquegua and were obtained from wild *Lycopersicon* (3 samples of *L. chilense*, 3 *L. chmielewskii*, 2 *L. parviflorum* and 5 *L peruvianum*), from crops of tomato (1 sample) and *S. muricatum* (1 sample). These results showed that in Peru, *L. chilense, L. chmielewskii, L. parviflorum* and *L peruvianum* are natural hosts of the virus, as well as cultivated *L. esculentum* and *S. muricatum*. The fact that the virus is found in wild plants, and in many cases in isolated populations, indicate that factors other than mechanical transmission, are involved in virus spread. For example, in southern Spain, growers have observed that in glasshouses where bumble-bees were used to improve pollination, virus spread seemed faster. In inoculation tests on *L esculentum* cv. NE-1, symptoms caused by Peruvian isolates were milder than those of a European isolate. In most cases, a mild, faint, light green to dark green mosaic in young leaves, and production of nettle-like leaves were observed. It was recalled that genetic differences between European and Peruvian isolates had already been found in other studies.

Source: Soler, S.; Prohens, J.; Díez, M.J.; Nuez, F. (2002) Natural occurrence of *Pepino mosaic virus* in *Lycopersicon* species in Central and Southern Peru. **Journal of Phytopathology, 150(2), 49-53.**

Additional key words: host plants, detailed record **Computer codes:** PEPMV0, PE

2002/057 Further studies on citrus chlorotic dwarf disease

In the late 1980s, a new disease of citrus called citrus chlorotic dwarf was observed in the Eastern Mediterranean region of Turkey (see EPPO RS 94/209 and 97/014). It is causing serious losses within a limited area. Citrus chlorotic dwarf was considered to be caused by a virus transmitted by *Parabemisia myricae*. At first, natural spread was rapid, but recent surveys showed that it slowed down, as biological control of *P. myricae* was implemented. A survey was conducted in newly established orchards in the region of Icel. In total, 7,145 trees from 11 orchards were examined and an average infection rate of 7.8 % was found. During experiments, it was found that the virus is present only in low concentration in infected citrus plants and is very difficult to extract from infected tissues.

Source: Korkmaz, S. (2001) Studies on spread and characterization of the citrus chlorotic dwarf agent in the Eastern Mediterranean region of Turkey.
Arab and Near East Plant Protection Newsletter, no. 33, December 2001,

Additional key words: detailed record **Computer codes:** TR

2002/058 *Acizzia jamatonica*: a new pest of *Albizia* found in Italy

In 2001, during a survey carried out in Torino (IT) on *Cameraria ohridella*, trees of *Albizia julibrissin* attacked by an unknown psyllid were observed. Later, other psyllid infestations were found in a limited area in the Valle d'Aosta and in cities of 4 provinces in Piemonte (provinces of Biella, Cuneo, Torino and Vercelli). Leaves, flowers and young shoots of affected trees can be completely colonized by juvenile and adult states, leading to partial or total desiccation of affected parts. In heavy infestations, early defoliation of trees is observed. The insect was identified as *Acizzia jamatonica* (Homoptera: Psyllidae). This monophagous species (feeding exclusively on *Albizia*) is reported in China, Korea and Japan. Research will be carried out to identify possible biological control agents which could be used to control this new psyllid.

Source: Alma, A.; Tedeschi, R.; Rossi, J. (2002) [*Acizzia jamatonica* (Kuwayama) a new psyllid for Europe (Homoptera: Psyllidae).]
Informatore Fitopatologico, no. 4, 64-65.

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

EPPO *Reporting Service*

2002/059 Butternut canker (*Sirococcus clavigignenti-juglandacearum*): Addition to the EPPO Alert List

In North America, butternut canker caused by *Sirococcus clavigignenti-juglandacearum* has extensively destroyed butternut (*Juglans cinerea*) in its native range. This fungus causes perennial cankers on branches, trunks and exposed roots. Coalescing cankers progressively girdle branches and trunks and may kill trees. *S. clavigignenti-juglandacearum* was first found in Wisconsin in 1967 but was probably there earlier. It now occurs in several states in north-eastern USA and in parts of Canada. Although *J. cinerea* is a relatively minor component of forests, it provides high quality wood and an important food source for wildlife. During the past 10 to 15 years, butternut canker has contributed to a dramatic decrease in the number of live trees (up to 80% in some states). Considering its rapid spread, its aggressive nature on *J. cinerea*, the scarcity of resistant trees, and its lack of genetic diversity, it is felt that this fungus has been introduced into the USA, although its origin remains unknown. *S. clavigignenti-juglandacearum* can be spread by rain splash, air currents and also via infected seeds. Insects may play a role in disseminating the disease, as vectors or wounding agents. In North American forests, *S. clavigignenti-juglandacearum* has only been reported on *J. cinerea*, but there are a few reports of infection of scattered trees or seedlings in nurseries on *J. nigra*. However, it appears in inoculation studies that *J. regia* and *J. nigra*, which are cultivated species in Europe, are susceptible to the disease. So far, no control methods are available. Research is being carried out on the use of resistant trees. Schröder *et al*. (2002) considered that *S. clavigignenti-juglandacearum* could present a serious threat to walnut production in Europe and should be added to the EU quarantine lists. In the meantime, the EPPO Secretariat decided to add it to the EPPO Alert List.

Sirococcus clavigignenti-juglandacearum (butternut canker)

Why	*Sirococcus clavigignenti-juglandacearum* is causing severe tree mortality on *Juglans cinerea* (butternut) in North America. This fungus does not occur in Europe and could present a threat to *Juglans* species.
Where	North America: Canada (Quebec, Ontario, New Brunswick), USA (north-eastern states).
On which plants	In North America, mortality in forests is only reported on *J. cinerea*. It appears that other *Juglans* species (e.g. *J. ailantifolia* var. *cordiformis*, *J. regia* and *J. nigra*) are susceptible to the disease. However, more data is needed on the susceptibility of these species, in particular *J. regia* and *J. nigra* which are cultivated in Europe.
Damage	*S. clavigignenti-juglandacearum* causes cankers on stems, branches and exposed roots. As cankers coalesce progressively, they girdle branches and stems which may led to tree death. It is estimated that *S. clavigignenti-juglandacearum* has contributed to a dramatic decrease of *J. cinerea* in USA (in some states, up to 80%). *J. cinerea* is not very widely present in North American forests, but it provides high quality wood and important source of food (nuts) for wildlife. Its dramatic decrease is also perceived as a threat to forest biodiversity.
Dissemination	Spores of the fungus can be dispersed by rain splash and air currents. The fungus can survive and sporulate on dead trees for at least 20 months. The fungus can also be transported on seeds of *J. juncea* and *J. regia*. Insects are most probably playing a role in disease dissemination as vectors or wounding agents, but further studies are needed. For example, conidia of the fungus were found associated with the following Coleoptera: *Acoptus suturalis* (Curculionidae), *Astylopsis macula* (Cerambycidae), *Eubulus parochus*

(Curculionidae), *Hyperplatys maculata* (Cerambycidae). Feeding and egg-laying activities of *Conotrachelus juglandis* (Cucurlionidae) may also favour infections.

Pathway: Plants for planting, seeds, wood? of *J. cinerea* (*J. regia, J. nigra*?) from areas where *S. clavigignenti-juglandacearum* occur.

Possible risks: *J. regia* and *J. nigra* are cultivated in Europe and are considered as susceptible to the disease. But further data is needed, as severe infections have not been observed on these species in forests or plantations in North America. Considering the high mortality of *J. cinerea* and the absence of suitable control methods, *S. clavigignenti-juglandacearum* could present a threat to walnut cultivation in Europe.

Source(s):

Innes, L.; Laflamme, G. (1998) *Sirococcus clavigignenti-juglandacearum* on butternut and black walnut fruit. Foliage, shoot and stem diseases. Proceedings of the IUFRO WP 7.02.02 meeting, Quebec City, 1997-05-25/31, 129-132 (abst).

Orchard, L.P.; Kuntz, J.E. (1981) Disease reactions of walnut species to butternut canker. Forestry Research Notes, Department of Forestry, University of Wisconsin, no. 246, 7 pp (abst).

Ostry, M.E. (1997) *Sirococcus clavigignenti-juglandacearum* on heartnut (*Juglans ailantifolia* var. *cordiformis*). Plant Disease, 81(12), p 1461.

Ostry, M.E., Katovich, S.; Anderson, R.L. (1997) First report of *Sirococcus clavigignenti-juglandacearum* on black walnut. Plant Disease, 81(7), p 830.

Schröder, T.; Kehr, R.; Hüttermann, A. (2002) [Butternut canker – a threat for the cultivation of walnut trees in Europe ?] Nachrichtenblatt des Deutschen Pflanzenschutzdienstes, 54(1), 5-12.

INTERNET

Butternut canker by R.L. Anderson. Southern Appalachian Biological Control Initiative Workshop http://www.main.nc.us/SERAMBO/BControl/butternut.html

Butternut canker: the search for an insect vector by S. Halik. State of Vermont Agency of Natural Resources Department of Forests, Parks and Recreation Forestry Division http://www.state.vt.us/anr/fpr/forestry/protect/bb599.pdf

Distribution of butternut canker (*Sirococcus clavigignenti-juglandacearum*) in Eastern Canada. Frontline Express Bulletin, no. 2, 2001. Natural Resources Canada. http://www.glfc.cfs.nrcan.gc.ca/frontline/bulletin_no.2-en.html

How to identify butternut canker and manage butternut trees. USDA Forest Service North Central Forest Experiment Station. USDA Forest Service North Central Forest Experiment Station, Northeastern area http://www.na.fs.fed.us/spfo/pubs/howtos/ht_but/ht_but.htm

Three American tragedies: chesnut blight, butternut canker, and Dutch elm disease by Schlarbaum, S.E.; Hebard, F.; Spain, P.C.; Kamalay, J.C. USDA Southern Research Station http://www.srs.fs.fed.us/pubs/rpc/1999-03/rpc_99mar_33.htm

EPPO RS 2002/059

Panel review date: - Entry date 2002-04

Source: Schröder, T.; Kehr, R.; Hüttermann, A. (2002) [Butternut canker – a threat for the cultivation of walnut trees in Europe ?]
Nachrichtenblatt des Deutschen Pflanzenschutzdienstes, 54(1), 5-12.

Additional key words: alert list **Computer codes:** SIROCJ, CA, US

2002/060 Details on the situation of bois noir phytoplasma in Switzerland

In Switzerland, the presence of phytoplasma causing bois noir on grapevine (stolbur phytoplasma) has recently been confirmed by PCR in several cantons. Bois noir was confirmed in Valais (on cvs. Chardonnay, Pinot Noir), in Vaud (cvs. Gamaret, Diolinoir, Doral), and in Genève (cv. Chardonnay). In Ticino, all grapevine-producing areas are affected by bois noir. Bois noir does not cause serious epidemics, although it can cause some local problems (especially at the edges of vineyards). However, its possible confusion with grapevine flavescence dorée (EPPO A2 quarantine pest) which has never been found in Switzerland, justifies the continuation of careful monitoring of Swiss vineyards for the presence of phytoplasma diseases.

Source: Gugerli, P.; Cazelles, O.; Genini, M.; Emery, S.; Colombi, L. (2002) Maladie du bois noir de la vigne en Suisse romande et au Tessin.
Revue suisse de viticulture, arboriculture, horticulture, 34(1), 15-17.

Additional key words: absence, detailed record **Computer codes:** PHYP10, PHYP64, CH

2002/061 A new pathogen, *Xanthomonas arboricola* pv. *fragariae,* causing bacterial leaf blight of strawberry: Addition to the EPPO Alert List

So far, *Xanthomonas fragariae* (EPPO A2 quarantine pest) was the only known economically important bacterial disease of cultivated strawberry. During autumns/winters 1993 to 1995, unusual symptoms attributed to *X. fragariae* were observed on many cultivars in both experimental and production fields near Cesena, Emilia-Romagna, Italy. On the lower leaf surface, small, reddish-brown lesions, which were neither water-soaked nor translucent were observed at the initial stage of the disease. On the upper leaf surface, such lesions appeared as reddish spots. Bacterial exudate was never observed. Lesions then enlarged and became surrounded by a chlorotic halo. In some cases, along the leaf margins, large brown V-shaped lesions surrounded by a chlorotic halo were also observed. Frequently, midribs, major veins and petioles also showed lesions which, as they enlarged, caused a blackening of plant tissues. The final stage of the disease is a complete yellowing and whitening of the leaf. No symptoms were observed on flowers, peduncles or fruits. In preliminary descriptions, the disease was called bacterial leaf blight of strawberry. A gram-negative bacterium was consistently isolated from lesions. It was characterized (biochemical tests, fatty acid analysis, protein electrophoresis, serology, PCR, pigment analysis, ice-nucleation activity, AFLP, DNA hybridisation, pathogenicity and host range) and described as a new and distinct pathovar called *Xanthomonas arboricola* pv. *fragariae.* During characterization studies, 2 bacterial isolates from France, previously attributed to *X. fragariae,* were finally identified as

Xanthomonas arboricola pv. *fragariae*, which suggested that this new pathogen may also be present in France. In host range studies, artificial inoculations caused infections also on *Begonia natalensis*, *Ficus elastica* and *Philodendron scandens*.

Xanthomonas arboricola pv. fragariae (bacterial leaf blight - a new disease of strawberry)

Why	A new bacterial disease of strawberry (distinct from *Xanthomonas fragariae*) called bacterial leaf blight has recently been reported from Italy (Emilia-Romagna) in experimental and commercial fields. Although more data is needed on this new bacterium and in particular on the severity of the disease it causes, the EPPO Secretariat decided to add it on the Alert List.
Where	Italy (Emilia-Romagna), probably also present in France but to be confirmed.
On which plants	Strawberry (*Fragaria ananassa*). Infections could be obtained by artificial inoculations to *Begonia natalensis, Ficus elastica* and *Philodendron scandens*.
Damage	Leaf lesions (small reddish brown on lower leaf surface and reddish spots on the upper leaf surface) which never appear water-soaked or translucent. Lesions when enlarging become surrounded by a chlorotic halo. Final stage of the disease is a complete yellowing and whitening of the leaf. No symptoms are observed on flowers, peduncles or fruits. No data is yet available on crop damage or losses caused by the bacterium in areas where it is present.
Dissemination	No data for the moment.
Pathway	Plants for planting of strawberry from areas where the disease occur.
Possible risks	Strawberry is an important crop for the EPPO region. Bacterial diseases are difficult to control in practice. Although more data is needed on the geographical distribution, host range, biology, epidemiology, economic damage of the bacterium, the spread of a new bacterial disease could represent a threat to strawberry cultivation in Europe.
Source(s)	Janse, J.D.; Rossi, M.P.; Gorkink, R.F.J.; Derks, J.H.J.; Swings, J.; Janssens, D.; Scortichini, M. (2001) Bacterial leaf blight of strawberry (*Fragaria* (x) *ananassa*) caused by a pathovar of *Xanthomonas arboricola*, not similar to *Xanthomonas fragariae* Kennedy & King. Description of the causal organism as *Xanthomonas arboricola* pv. *fragariae* (p. no., comb. nov.). Plant Pathology, 50(6), 653-665.

EPPO RS 2002/061
Panel review date - Entry date 2002-04

Additional key words: new pest, Alert List **Computer codes:** XANTFR

2002/062 Control of *Dacus ciliatus* with pyrethroids

Dacus ciliatus (Diptera: Tephritidae – EPPO A1 quarantine pest) was discovered in 1997 in a limited area in Southern Negev, Israel (see EPPO RS 97/124). In laboratory studies and under quarantine conditions, it was observed that, unlike many other fruit flies, *D. ciliatus* was not affected by organophosphate insecticides. However, all tested pyrethroids (cypermethrin, fenpropathrin, bifenthrin) showed good efficacy against the adults when applied by surface contact or oral administration. It was also observed that piperonyl butoxide considerably increased the toxicity of pyrethroids. Further studies are now needed to identify a suitable attractant which could be used in combination with pyrethroids to control *D. ciliatus*.

Source: Maklakov, A.; Ishaaya, I.; Freidberg, A.; Yawetz, A.; Horowitz, A.R.; Yarom, I. (2001) Toxicological studies of organophosphate and pyrethroid insecticides for controlling the fruit fly *Dacus ciliatus* (Diptera: Tephritidae).
Journal of Economic Entomology, 94(5).

Additional key words: control **Computer codes:** DACUCI

2002/063 Studies on the natural dispersal of *Anoplophora glabripennis*

In 1999, studies were done in Gansu Province in China, on the natural dispersal of *Anoplophora glabripennis* (Coleoptera: Cerambycidae – EPPO A1 quarantine pest), as this is an important factor to be taken into account in survey and eradication programmes. The landscape of the area studied was composed of host trees (*Populus, Salix, Ulmus* – 72.3 %) and non-hosts (27.3%). The site was composed of trees planted as wind-rows bordering agricultural fields, of isolated trees and trees planted near houses or glasshouses. 16,511 adults were marked, released and recaptured (188 beetles were recaptured), and dispersal distances were measured. Results showed that the mean dispersal distance was approximately 266 m. 98 % of the beetles were recaptured within a radius of 560 m. Over a single season, the maximum dispersal distances were respectively, 1029 m and 1442 m for a male and a gravid female. This is higher than previously reported. Earlier studies were made in plantations of host plants where preferred host trees are available on shorter distances. This shows that surveys for *A. glabripennis* should include trees within a radius of 1500 m from infested trees.

Source: Smith, M.T.; Bancroft, J.; Li, G.; Gao, R.; Teale, S. (2001) Dispersal of *Anoplophora glabripennis*.
Environmental Entomology, 30(6), 1036-1040.

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

2002/064 Potential impact of *Anoplophora glabripennnis* on urban trees in USA

In USA, *Anoplophora glabripennis* (Coleoptera: Cerambycidae - EPPO A1 quarantine pest) has been introduced into the cities of New York and Chicago. As of June/July 2000, more than 4720 infected trees have been destroyed in New York, and more than 1390 trees in Chicago, for a total cost of more than 25 million USD. Studies have been made to assess the potential impact of the pest on urban trees in USA, in terms of tree mortality, canopy reduction and economic losses. Data was collected on the urban tree structure (tree species, number of trees, monetary value of trees) of 9 cities (Atlanta, Baltimore, Boston, Chicago, Jersey city, New York, Oakland, Philadelphia, Syracuse). Host preferences, rate and pattern of spread of *A. glabripenni*s were taken into account. For cities studied, potential tree resources at risk ranged from 12 to 61% of the total city tree population, with an estimated value of 72 to 2300 million USD per city. The corresponding loss of canopy cover which would result, if all preferred trees were killed, ranged from 13 to 68 %. These data were then extrapolated at national level. It was estimated that the maximum impact (all areas becoming infested) was a loss of 34.9% of total canopy cover, 30.3% tree mortality (1,200 million trees) and economic loss of 669,000 million USD. It is acknowledged that these estimates have a significant degree of uncertainty due to lack of information, but as more data will be gathered better estimates will be provided.

Source: Nowak, D.J.; Pasek, J.E.; Sequeira, R.A.; Crane, D.E.; Mastro, V. (2001) Potential effect of *Anoplophora glabripennis* (Coleoptera: Cerambycidae) on urban trees in the United States.
Journal of Economic Entomology, 94(1), 116-122.

Additional key words: economic impact **Computer codes:** ANOLGL, US

2002/065 Molecular assay to differentiate *Liriomyza huidobrensis* and *L. langei*

Observation of differences (crop preferences, levels of insecticide resistance) between populations of *Lyriomyza huidobrensis* (Diptera: Agromyzidae – EPPO A2 quarantine pest) have led to the assumption that *L. huidobrensis* could be composed of at least 2 cryptic species. On the basis of genetic studies, 2 cryptic species have been proposed: *L. langei* and *L. huidobrensis* (see EPPO RS 2001/016 and 2002/010). Although *L. langei* and *L. huidobrensis* cannot be distinguished morphologically, a PCR–RFPL assay has been developed to differentiate them. Preliminary studies showed that leafminer populations recently introduced into Sri Lanka, Canada* and South Africa belonged to *L. huidobrensis*.

* The EPPO Secretariat had previously no data on the occurrence of *L. huidobrensis* in Canada.

Source: Scheffer, S.J.; Wijesekara, A.; Visser, D.; Hallett, R.H. (2001) Polymerase chain reaction-restriction fragment-length polymorphism method to distinguish *Liriomyza huidobrensis* from *L. langei* (Diptera: Agromyzidae) applied to three recent leafminer invasions.
Journal of Economic Entomology, 94(5), 177-1182.

Additional key words: taxonomy, new record **Computer codes:** LIRIHU, CA

2002/066 Honey bees as bioindicators to detect *Erwinia amylovora* in the environment

In Italy, studies have showed that honey bees could usefully be used as bioindicators to monitor the presence of *Erwinia amylovora* (EPPO A2 quarantine pest) in the environment. The bacterium can be detected by PCR-ELISA in pollen, in bee hives, before any symptoms are found in the surrounding orchards. With this method, larger surfaces can be monitored (mean radius of area covered by bees is about 1.5 km). It facilitates early detection of the disease, as trees located in the area monitored can be placed under strict surveillance if the bacterium is found.

Source: Ghini, S.; Zeri, L.; Alessandrini, A.; Porrini, C.; Calzolari, A.; Sabatini, A.G. ; Firotti, S. (2002) [Environmental monitoring of the phytopathogen *Erwinia amylovora*, the causal agent of fireblight, with the use of honeybee.]
Informatore Fitopatologico, no. 4, 68-72.

Additional key words: detection, epidemiology **Computer codes:** ERWIAM, IT

2002/067 Name changes for whiteflies

Taxonomic revision of the whitefly genera *Dialeurodes*, *Singhiella* and *Massileurodes* has led to the following name changes:

- *Dialeurodes citrifolii* is now called *Singhiella citrifolii*
- *Dialeurodes setiger* is now *Massilieurodes setiger*
- *Dialeurodes chittendeni* is now *Massilieurodes chittendeni*

Dialeurodes citri and *D. kirkaldyi* remain unchanged.

Source: Martin, J. (2002) New name combinations – amongst European Mediterranean whiteflies, including an important pest.
EWSN Newsletter, no. 12, January 2002, edited by I.D. Bedford and D.J. Olivier, p 3.

Additional key words: taxonomy **Computer codes:** DIALCI, DIALSP

2002/068 PCR assay to detect simultaneously *Xanthomonas campestris* pv. *pelargonii* and *Ralstonia solanacearum* in *Pelargonium*

A multiplex PCR assay has been developed in USA to detect simultaneously the two major bacterial pathogens of geraniums (*Pelargonium* spp.) which are *Xanthomonas campestris* pv. *pelargonii* and *Ralstonia solanacearum* (EPPO A2 quarantine pest). Using this method, it is also possible to differentiate between the two pathogens. Further work is being done to adapt this technique to larger amounts of samples and to improve its rapidity.

Source: Glick, D.L.; Coffey, C.M.; Sulzinski, M.A. (2002) Simultaneous PCR detection of the two major bacterial pathogens of geranium.
Journal of Phytopathology, 150(2), 54-59.

Additional key words: diagnostic **Computer codes:** PSDMSO

2002/069 The genome of *Ralstonia solanacearum* has been completely sequenced

It has recently been announced that the genome of *Ralstonia solanacearum* (EPPO A2 quarantine pest) has been completely sequenced in France. This will help to identify genes which are potentially involved in pathogenicity and to design control methods.

Source: Anonymous (2002) Le séquençage complet du génome de la bactérie *Ralstonia solanacearum*, pathogène de nombreuses plantes vivrières, précise les mécanismes de son pouvoir infectieux.
INRA mensuel, no. 112, décembre 2000-janvier 2002, p 9.

Additional key words: genetics **Computer codes:** PSDMSO

2002/070 EPPO report on notifications of non-compliance (detection of regulated pests)

The EPPO Secretariat has gathered the notifications of non-compliance (as they are now called by FAO ISPM no. 13) for 2002 received since the previous report (EPPO RS 2002/034) from the following countries: Algeria, Austria, Belgium, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Malta, Netherlands, Poland, Portugal, Slovenia, Sweden, 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 notifications of non-compliance made because of the detection of regulated pests. Other notifications of non-compliance 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 notifications.

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Aleurodicus dispersus, Bemisia tabaci, Spoladea recurvalis, Trialeurodes ricini	*Amaranthus, Celosia, Telfairia*	Vegetables	Nigeria	United Kingdom	1
Ambrosia	*Glycine max*	Stored products	Belgium	Poland	1
	Glycine max	Stored products	Germany	Poland	1
	Glycine max	Stored products	Netherlands	Poland	3
	Panicum miliaceum	Stored products	Czech Republic	Poland	1

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
***Ambrosia* (cont.)**	*Panicum miliaceum*	Stored products	Ukraine	Poland	1
	Sorghum vulgare	Stored products	Hungary	Poland	1
	Zea mays	Stored products	Hungary	Poland	1
Ambrosia artemisiifolia	*Helianthus annuus*	Stored products	Ukraine	Lithuania	4
	Zea mays	Stored products	Hungary	Lithuania	7
Aphelenchoides fragariae	*Astilbe*	Bulbs and tubers	Netherlands	Poland	1
	Astilbe, Peonia	Bulbs and tubers	Netherlands	Poland	1
Aphis	*Gardenia*	Pot plants	Italy	Malta	1
Bemisia	*Hardenbergia*	Plants for planting	Israel	Netherlands	1
Bemisia tabaci	*Begonia hybrida*	Plants for planting	Netherlands	United Kingdom	2
	Citrus limon	Plants for planting	Italy	United Kingdom	1
	Corchorus	Vegetables	Nigeria	United Kingdom	2
	Corchorus olitorius	Vegetables	Nigeria	United Kingdom	1
	Croton	Plants for planting	Sri Lanka	United Kingdom	1
	Dendanthema	Cut flowers	Spain (Canary isl.)	United Kingdom	1
	Euphorbia pulcherrima, Oxalis deppei, Primula vulgaris	Pot plants	Austria	Czech Republic	1
	Hibiscus	Pot plants	Italy	Malta	1
	Hypericum	Cut flowers	(Netherlands)	United Kingdom	1
	Hypericum	Cut flowers	Israel	United Kingdom	1
Bemisia tabaci, Liriomyza	*Ocimum basilicum*	Vegetables	Thailand	United Kingdom	1
	Solidago	Cut flowers	Israel	Belgium	3
Ciborinia camelliae	*Camellia*	Plants for planting	Italy	Switzerland	1
Clavibacter michiganensis subsp. sepedonicus	*Solanum tuberosum*	Seed potatoes	Belarus	Poland	1
	Solanum tuberosum	Ware potatoes	Germany	Lithuania	1
	Solanum tuberosum	Ware potatoes	Poland	Latvia	1
	Solanum tuberosum	Ware potatoes	USA	United Kingdom	1
Colletotrichum acutatum	*Fragaria*	Cuttings	USA	United Kingdom	1
Cuscuta	*Trifolium resupinatum*	Seeds	Italy	Poland	1
Delottococcus proteae	*Protea*	Cut flowers	South Africa	United Kingdom	1
Ditylenchus dipsaci	*Medicago sativa*	Seeds	Italy	Czech Republic	1
Frankliniella occidentalis	*Dendranthema*	Cut flowers	Italy	Malta	2
	Helianthus	Cut flowers	Netherlands	Lithuania	3
	Rosa	Cut flowers	Netherlands	Lithuania	1
Frankliniella occidentalis, Aphis	*Gazania*	Pot plants	Italy	Malta	1
Frankliniella occidentalis, Aphis, Liriomyza	*Dendranthema*	Pot plants	Italy	Malta	1
Frankliniella occidentalis, Thrips	*Dimorphotheca*	Pot plants	Italy	Malta	1
	Gerbera	Pot plants	Italy	Malta	1

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Frankliniella schultzei	*Orchis*	Cut flowers	Thailand	France	1
Fusarium, Erwinia	*Solanum tuberosum*	Seed potatoes	Germany	Cyprus	2
Globodera rostochiensis	*Solanum tuberosum*	Ware potatoes	Belgium	Czech Republic	1
	Solanum tuberosum	Ware potatoes	Croatia	Slovenia	4
	Solanum tuberosum	Ware potatoes	Germany	Czech Republic	1
	Solanum tuberosum	Ware potatoes	Greece	Czech Republic	1
Guignardia citricarpa	*Citrus reticulata*	Fruits	Swaziland	Netherlands	1
	Citrus sinensis	Fruits	South Africa	Netherlands	4
	Citrus sinensis	Fruits	Swaziland	Netherlands	1
Helicoverpa armigera	*Abelmoschus esculentus*	Vegetables	Kenya	United Kingdom	2
	Dianthus	Cut flowers	Kenya	Netherlands	1
	Phaseolus vulgaris	Vegetables	Egypt	Netherlands	3
	Phaseolus vulgaris	Vegetables	Ethiopia	Netherlands	3
	Phaseolus vulgaris	Vegetables	Ghana	Netherlands	1
	Phaseolus vulgaris	Vegetables	Kenya	Netherlands	1
	Phaseolus vulgaris	Vegetables	Senegal	Netherlands	2
	Phaseolus vulgaris	Vegetables	South Africa	Netherlands	1
	Pisum sativum	Vegetables	Kenya	Netherlands	15
Helicoverpa armigera, Liriomyza huidobrensis	*Pisum sativum*	Vegetables	Kenya	United Kingdom	1
Leptinotarsa decemlineata	*Daucus*	Vegetables	Spain	United Kingdom	1
	Petroselinum crispum	Vegetables	France	United Kingdom	1
	Petroselinum crispum	Vegetables	Italy	United Kingdom	5
	Petroselinum crispum	Vegetables	Portugal	United Kingdom	1
Liriomyza	*Dendranthema*	Cut flowers	USA	Netherlands	1
	Gypsophila	Cut flowers	Netherlands	Czech Republic	3
	Ocimum basilicum	Vegetables	Thailand	Denmark	3
	Solidago	Cut flowers	Israel	Belgium	2
Liriomyza huidobrensis	*Cineraria*	Plants for planting	Italy	United Kingdom	1
	Ocimum basilicum	Vegetables	Israel	Ireland	1
	Osteospermum	Cuttings	Italy	United Kingdom	1
	Pisum sativum	Vegetables	Kenya	Netherlands	3
	Pisum sativum	Vegetables	Kenya	United Kingdom	2
Liriomyza sativae	*Amaranthus*	Vegetables	Nigeria	United Kingdom	1
Monilinia fructicola	*Prunus persica*	Fruits	Australia	France	1
Pepino mosaic potexvirus	*Lycopersicon esculentum*	Vegetables	Spain	United Kingdom	1
	Lycopersicon esculentum	Vegetables	Spain (Canary isl.)	United Kingdom	1
Phoma exigua var. foveata	*Solanum tuberosum*	Ware potatoes	Denmark	Lithuania	1
Phytophthora infestans, Fusarium	*Solanum tuberosum*	Seed potatoes	Netherlands	Cyprus	3
Phytophthora infestans, Fusarium, Erwinia	*Solanum tuberosum*	Seed potatoes	Belgium	Cyprus	1
	Solanum tuberosum	Seed potatoes	France	Cyprus	2
	Solanum tuberosum	Seed potatoes	Netherlands	Cyprus	1

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Potato spindle tuber pospiviroid	*Lycopersicon esculentum*	Seeds	Thailand	Austria	2
Ralstonia solanacearum	*Solanum tuberosum*	Ware potatoes	Egypt	Germany	1
	Solanum tuberosum	Ware potatoes	Egypt	Greece	2
	Solanum tuberosum	Ware potatoes	Egypt	Italy	1
	Solanum tuberosum	Ware potatoes	Egypt	United Kingdom	1
	Solanum tuberosum	Ware potatoes	Unknown[1]	Israel	1
Scirtothrips dorsalis	*Asparagus officinalis*	Vegetables	Thailand	Netherlands	1
Sitophilus oryzae	*Triticum*	Stored products	Slovakia	Poland	1
Sitophilus oryzae, Tribolium	*Triticum aestivum*	Stored products	Czech Republic	Poland	1
Spoladea recurvalis	*Celosia*	Vegetables	Nigeria	United Kingdom	1
	Celosia argentea, Amaranthus	Vegetables	Nigeria	United Kingdom	1
Tetranychus	*Rosa*	Cut flowers	Tunisia	Greece	1
Tetranychus kanzawai	*Hydrangea quercifolia*	Plants for planting	USA	United Kingdom	1
***Thrips* (suspect *palmi*)**	*Momordica cochinchinensis*	Vegetables	Dominican Rep.	United Kingdom	1
Thrips palmi	*Aranda, Dendrobium, Vanda,* Orchidaceae *(Mokara* hybrids*)*	Plants for planting	Thailand	France	1
Thrips palmi	*Dendrobium*	Cut flowers	Thailand	Netherlands	5
	Momordica	Vegetables	Dominican Rep.	United Kingdom	1
	Solanum melongena	Vegetables	Dominican Rep.	United Kingdom	1
Trialeurodes ricini, Bemisia tabaci	*Corchorus, Telfairia*	Vegetables	Nigeria	United Kingdom	1
	Telfairia	Vegetables	Nigeria	United Kingdom	1
	Telfairia occidentalis	Vegetables	Nigeria	United Kingdom	1
	Telfairia, Corchorus, Mentha	Vegetables	Nigeria	United Kingdom	1
Tribolium	*Triticum aestivum*	Stored products	Czech Republic	Poland	1
Xanthomonas campestris* pv. *phaseoli	*Phaseolus vulgaris*	Seeds	Madagascar	France	1
Xanthomonas campestris* pv. *vesicatoria	*Lycopersicon esculentum*	Seeds	China	Italy	1

[1] The exact origin of this consignment could not be ascertained as several potato consignments from various European countries were delivered in 'big bags' (not closed). They were then transferred to wooden chests at the port and transported within the same ship to Israel.

- **Fruit flies**

Pest	Consignment	Country of origin	C. of destination	nb
Ceratitis capitata	*Citrus paradisi, C. unshiu*	Turkey	Czech Republic	1
	Prunus armeniaca	Spain	Czech Republic	2
Non-European Tephritidae	*Citrus sinensis*	Argentina	Netherlands	1
	Syzygium aqueum	Malaysia	Netherlands	1

- **Wood**

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
***Anoplophora glabripennis,* grub holes > 3 mm**	Coniferae	Packing material	China	France	1
Cryphonectria parasitica	*Castanea sativa*	Wood and bark	Croatia	Slovenia	1
	Castanea sativa	Wood and bark	Georgia	Italy	2
	Castanea sativa	Wood and bark	Russia	Germany	1
	Castanea sativa	Wood and bark	Russia	Italy	3
Grub holes > 3 mm	Coniferae	Wood and bark	Bermuda	Portugal	1
	Coniferae	Packing material	China	Finland	1
	Coniferae	Packing material	China	Ireland	2
	Coniferae	Packing material	Korea, Dem. People's Republic	Austria	1
	Coniferae	Packing material	USA	Germany	3
	Hardwood	Packing material	China	France	1
	Hardwood	Packing material	China	Germany	7
	Hardwood	Packing material	China	Ireland	2
	Hardwood	Packing material	USA	Austria	1
	Larix sibirica	Wood and bark	Russia	Austria	1
	Unspecified	Packing material	China	Denmark	2
	Unspecified	Packing material	China	France	1
	Unspecified	Packing material	Taiwan	Denmark	1

- **Bonsais**

Pest	Consignment	Country of origin	Country of destination	nb
Guignardia	*Zelkova*	Netherlands	United Kingdom	1
Pratylenchus	*Juniperus chinensis, Pinus parviflora*	Japan	Germany	1
Pratylenchus, Tylenchorhynchus	*Acer palmatum, Carpinus, Cornus, Fagus, Ginkgo, Ilex, Rhododendron*	Japan	Germany	1
Xiphinema americanum	*Taxus cuspidata*	Japan	Netherlands	2
	Taxus cuspidata, Ilex crenata, Acer palmatum	Japan	Netherlands	1

Source: EPPO Secretariat, 2002-04.