EPPO

Reporting

Service

Paris, 1996-11-01 **Reporting Service 1996, No. 11**

CONTENTS

96/204 New data on pests and diseases of plant quarantine importance

By browsing through the literature, the EPPO Secretariat has extracted the following new data concerning pests and diseases of plant quarantine importance.

New distribution records

During a field survey conducted in Papua New Guinea, citrus tristeza closterovirus (EPPO A2 quarantine pest) and citrus vein enation disease (EU Annex II/A2) were found. Review of Plant Pathology, 75(10), p 918 (6794).

Colletotrichum acutatum (EU Annex II/A2) was isolated from lesions on fruit and leaves of mangoes grown in Taiwan. Review of Plant Pathology, 75(11), p 1005 (7499).

Eutetranychus orientalis (EU Annex II/A1) is present in Queensland, Australia. It is felt that it has been in Queensland for at least 30 years. Review of Agricultural Entomology, 84(10), p1172 (9719).

Detailed records

Ceratitis cosyra (EPPO A1 quarantine pest) is considered as the most common species of *Ceratitis* in mango orchards in Zimbabwe. Review of Agricultural Entomology, 84(10), p 1173 (9727).

Cherry leaf roll nepovirus (EPPO A2 on *Rubus*) was found associated with the decline syndrome of *Fagus sylvatica* in Central Bohemia and Southeast Moravia, Czech Republic. Review of Plant Pathology, 75(9), p 846 (6225).

Cydia prunivora (EPPO A1 quarantine pest) is present in Massachusetts (USA). Review of Agricultural Entomology, 84(11), p 1292 (10690).

During a survey carried out in mandarin orchards in Sikkim (India), in 1989 and 1990, *Elsinöe fawcetii* (EU Annex II/A1) and *Xanthomonas axonopodis* pv. *citri* (EPPO A1 quarantine pest) were found. Review of Plant Pathology, 75(11), p 1004 (7487).

In Ukraine, *Globodera rostochiensis* (EPPO A2 quarantine pest) has spread since its first record in the early 1960s. It is estimated that the nematode is now present in an area of 6000 hectares in 12 of the 14 regions where potato production is a major activity. Nematological Abstracts, 65(3), p 123 (987).

Helicoverpa armigera (EPPO A2 quarantine pest) is present in the Andaman Islands (India). Review of Agricultural Entomology, 84(10), p 1149 (9540).

Ips typographus (EU Annex II/B) is present in Slovenia. Review of Agricultural Entomology, 84(8), p 959 (7948).

Liriomyza huidobrensis (EPPO A2 quarantine pest) is reported as being a serious pest of potatoes and other vegetables, in Cartago (Costa Rica), since 1989. Review of Agricultural Entomology, 84(10), p 1161 (9633).

Liriomyza trifolii (EPPO A2 quarantine pest) is present in India in several states, at least in: Andhra Pradesh, Karnataka, Madhya Pradesh, Maharashtra and Tamil Nadu. Review of Agricultural Entomology, 84(8), p 916 (7578-7581).

Tilletia indica (EPPO A1 quarantine pest) is reported for the first time from Gujarat (India). It was detected in grain samples from a field where the cv. Kalyansona was grown for 3 consecutive years. Review of Plant Pathology, 75(11), p 967 (7191).

Xylella fastidiosa (EPPO A1 quarantine pest), causing pear leaf scorch, is reported in several regions of Taiwan. During surveys carried out in 1992 and 1994, only 2 of the 10 regions studied were free from the disease and the incidence ranged from 5 to 43 %. This confirms earlier reports in Taiwan (EPPO RS 94/049). Review of Plant Pathology, 75(10), p 911 (6738).

Host plants

In Japan, *Bactrocera cucurbitae* and *B. dorsalis* (both EPPO A1 quarantine pests) have been found during import inspection on *Hylocereus undatus* (Cactaceae with edible fruit). In addition, both fruit flies could infest *Hylocereus undatus* in the laboratory. Review of Agricultural Entomology, 84(11), p 1320 (10914).

Field surveys carried out in Thailand, Malaysia and the Philippines showed that *Thrips palmi* (EPPO A1 quarantine pest) could be found attacking the following vegetables: ridge gourd (*Luffa acutangula*), bitter cucumber (*Momordica charantia*), cucumber, aubergine, *Capsicum annuum*, muskmelon, pumpkin, squash, watermelon, wax gourd (*Benincasa hispida*), *Vigna unguiculata*. Of these crops, the most frequently infested were aubergines. Review of Agricultural Entomology, 84(10), p 1165 (9664).

Source: **EPPO Secretariat, 1996-10**

Additional key words: new records, detailed records

Computer codes: CERTCO, CRLRXX, CSVEXX, COLLAC, CSTXXX, DACUDO, DACUCU, ELSIFA, EUTEOR, HELIAR, HETDRO, IPSXTY, LASPPR, LIRIHU, LIRITR, NEOVIN, THRIPL, XANTCI, XYLEFA, AU, CR, CZ, IN, PG, SI, TW, UA, US, ZW

96/205 Occurrence of *Meloidogyne chitwoodi* in Germany

Damage to potato tubers caused by *Meloidogyne chitwoodi* (EPPO A2 quarantine pest) has been described in the Northwest of the USA since approximately 1974. The nematode itself was described in 1980. In 1985, this root-knot nematode was also recorded from the Netherlands, and analysis of preserved tubers showed that it has probably been present in the country since the 1930s (EPPO RS 514/15, 1991). In Germany, potato tubers attacked by root-knot nematodes were observed in autumn 1994. Morphological and biochemical studies excluded the possibility that these outbreaks could be due to *M. hapla* or to one of the other *Meloidogyne* species known to occur in field or glasshouse conditions in Germany. The galls found in potato tubers were obviously caused by *M. chitwoodi*. The three findings of *Meloidogyne* from Germany could be identified as *M. chitwoodi sensu lato*, they were found near Hamburg and near the Dutch border. Morphological differences do not yet allow accurate assignment to *M. chitwoodi* forms identified in the Netherlands.

Source: Müller, J.; Sturhan, D.; Rumpenhorst, H.J.; Braasch, H.; Unger, J.G. (1996) [On the occurrence of a root-knot nematode (*Meloidogyne chitwoodi*) new to Germany.]
Nachrichtenblatt des Deutchen Pflanzenschutzdienstes, 18(6), 126-131.

Additional key words: new record

Computer codes: DE, MELGCH

96/206 First report of *Liriomyza huidobrensis* in Turkey

Liriomyza huidobrensis (EPPO A2 quarantine pest) was found for the first time in Turkey in 1994. It was observed on *Vicia faba*, *Cucumis sativus*, and *Phaseolus vulgaris* in Içel and Izmir Provinces. It is becoming an important pest in the Eastern Mediterranean and Aegean regions.

Source: Yabas, C.; Civelek, H.S.; Ulubilir, A. (1995) [The new leaf miner, *Liriomyza huidobrensis* (Blanchard, 1926) on vegetables for Turkey.] **Türkiye Entomoloji Dergisi, 19(2), 117-122.**

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

96/207 First report of *Maconellicoccus hirsutus* in Saint-Martin (Netherlands Antilles)

Maconellicoccus hirsutus (pink or Hibiscus mealy bug) continues to spread within the Caribbean region. On 1996-05-06, it was found for the first time in Saint-Martin (Anse Marcel), on Hibiscus plants. It can be recalled that this mealy bug was found in Grenada in November 1994, in Trinidad in August 1995 (EPPO RS 95/235) and in St Kitts & Nevis in 1996 (EPPO RS 96/028). This pest could be a serious threat also for southern USA, central and south America. It may be noted that the NAPPO Newsletter mentions interceptions of *M. hirsutus* in USA on consignments from several Central American and Carribbean countries where the pest has not yet been recorded. While such interceptions cannot be considered as records for those countries, they do suggest that the pest is already more widespread.

Source: Matile-Ferrero, D.; Etienne, J. (1996) Présence de la cochenille de l'hibiscus, *Maconellicoccus hirsutus* à Saint-Martin (Hemiptera, Pseudococcidae). **Revue française d'Entomologie, 18(1), p 38.**

Anonymous (1996) New pest outbreaks - The pink mealybug *Maconellicoccus hirsutus* Green. **NAPPO Newsletter 16(4), p 3.**

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

96/208 Situation of *Bursaphelenchus xylophilus* and *Monochamus alternatus* in Korea Republic

In 1988, *Bursaphelenchus xylophilus* (EPPO A1 quarantine pest) was reported for the first time in Pusan, Korea Republic (EPPO RS 514/13, 1991), in the south-east of the country facing the Japanese island of Kyushu. A survey was conducted to identify the distribution of the nematode in the country. Results showed that *B. xylophilus* is limited to Pusan and that of the 14 species of bark beetles studied, only *Monochamus alternatus* is a vector of the nematode. *M. alternatus* appears to be limited to Pusan, Masan, Chinhae, Chungmu, Geoea, Samchunpo, Goseong, Changwon, Tongyeong, Youngkwang, Yeosu, Sooncheun and Yangsan (as far as the EPPO Secretariat could check, most of these localities are situated in the region of Pusan). From 1989 to 1994, a national control programme of aerial spraying against the insect vector had contributed to reducing the number of dead pine trees and to limit the spread of the disease. In 1994, the number of infested trees had fallen by 90 % compared with the number in 1989. In timber, the nematode is eliminated by using kiln drying.

Source: Moon YilSeong; Lee SangMyeong; Park JiDoo; Yeo WoonHong (1995) [Distribution and control of the pine wood nematode, *Bursaphelenchus xylophilus* and its vector the Japanese pine swayer, *Monochamus alternatus*.]
FRI Journal of Forest Science (Seoul), 51, 119-126.

Additional key words: detailed record **Computer codes:** BURSXY, MONCAL, KR

96/209 Details on the geographical distribution of beetles of plant quarantine importance in Canada and Alaska

The book 'Checklist of Beetles of Canada and Alaska' gives many details on the geographical distribution of beetles in Canada and Alaska (US). These distribution records are based on published records and on specimens in the Canadian National Collection. The EPPO Secretariat has extracted the details which concern beetles of plant quarantine importance.

Anthonomus quadrigibbus (EPPO A1): Alberta, British Columbia, Manitoba*, Ontario*, Quebec*, Saskatchewan,
Anthonomus signatus (EPPO A1): Alberta*, British Columbia*, Manitoba*, Newfoundland*, Nova Scotia, Ontario, Prince Edward Island*, Quebec, Saskatchewan*

Arrhenodes minutus (EU II/A1): Ontario*, Quebec*

Conotrachelus nenuphar (EPPO A1): British Columbia*, Manitoba, Newfoundland*, Nova Scotia, Ontario, Quebec

Dendroctonus brevicomis (EPPO A1): Alberta, British Columbia
Dendroctonus ponderosae (EPPO A1): British Columbia
Dendroctonus pseudotsugae (EPPO A1): Alberta*, British Columbia
Dendroctonus rufipennis (EPPO A1): Alaska, Alberta*, British Columbia, Manitoba*, New Brunswick*, Newfoundland*, Northwest Territories*, Nova Scotia, Ontario*, Quebec*, Saskatchewan*, Yukon Territory*

Diabrotica barberi (EPPO A1): Manitoba*, New Brunswick*, Ontario, Quebec*
Diabrotica virgifera virgifera (EPPO A2): Ontario. **The EPPO Secretariat had previously no record of this pest in Canada.**

Dryocoetes confusus (EPPO A1): Alberta*, British Columbia

Epitrix cucumeris (EPPO A1): Manitoba*, New Brunswick*, Nova Scotia*, Ontario*, Quebec*, Saskatchewan*
Epitrix tuberis (EPPO A1): Alberta, British Columbia, Saskatchewan*

Gnathotrichus sulcatus (EPPO A1): British Columbia

Ips calligraphus (EPPO A1): Nova Scotia*, Ontario, Quebec, Saskatchewan*
Ips grandicollis (EPPO A1): Manitoba*, Ontario, Quebec

Ips pini (EPPO A1): Alaska*(US), Alberta*, British Columbia, Manitoba*, New Brunswick*, Newfoundland*, Northwest Territories*, Nova Scotia*, Ontario, Quebec*, Saskatchewan*, Yukon Territory*
Ips plastographus plastographus (EPPO A1): British Columbia.

Leptinotarsa decemlineata (EPPO A2): Alberta, British Columbia, Manitoba, New Brunswick, Nova Scotia, Ontario, Prince Edward Island, Quebec, Saskatchewan

Monochamus carolinensis (EPPO A1): New Brunswick*, Ontario, Quebec
Monochamus marmorator (EU I/A1): Manitoba*, New Brunswick*, Nova Scotia*, Ontario*, Quebec*
Monochamus mutator (EU I/A1): Manitoba*, New Brunswick*, Northwest Territories*, Ontario*, Quebec*, Saskatchewan*
Monochamus notatus (EU I/A1): Alberta*, British Columbia*, Manitoba*, New Brunswick* Northwest Territories*, Nova Scotia*, Ontario*, Prince Edward Island*, Quebec*, Saskatchewan*
Monochamus obtusus obtusus (EU I/A1): British Columbia
Monochamus scutellatus scutellatus (EU I/A1): Alaska*(US), Yukon Territory, Northwest Territories, British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island, Labrador, Newfoundland. **The EPPO Secretariat had previously no data on the occurrence of this species in Canada.**
Monochamus titillator (EU I/A1): Ontario

Pissodes nemorensis (EPPO A1): Manitoba*, New Brunswick*, Nova Scotia*, Ontario, Quebec
Pissodes strobi (EPPO A1): Alberta*, British Columbia, Manitoba, New Brunswick, Newfoundland, Nova Scotia, Ontario, Quebec, Saskatchewan
Pissodes terminalis (EPPO A1): British Columbia.

Popillia japonica (EPPO A1): Nova Scotia, Ontario, Quebec

Pseudopityophthorus minutissimus (EPPO A1): Ontario, Quebec

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* New detailed records

Source: Bousquet, Y. (Editor) (1991) Checklist of Beetles of Canada and Alaska, Research Branch, Agriculture Canada, Publication 1861/E, 430 pp.

Additional key words: new records, detailed records

Computer codes: ANTHSP, ARRHMI, CONHNE, DENCSP, DIABSP, DRYOCN, EPIXSP, GNAHSU, IPSXSP, LEPTDE, MONCSP, PISOSP, POPIJA, PSDPMI, CA; US

96/210 Forest insects present in Mexico

The book 'Forest Insects of Mexico' provides detailed information on forestry pests present in Mexico. For each species, a short description of the morphology, host plants, distribution in Mexico, biology, damage, importance and management is given. In addition, many colour pictures illustrate the species described and the damage they cause. The EPPO Secretariat has extracted new data (indicated in bold) on the geographical distribution concerning forestry pests of plant quarantine importance to the EPPO region. The importance of these pests to Mexico is also briefly indicated.

Dendroctonus adjunctus (EPPO A1 quarantine pest): **Chiapas**, **Chihuahua**, **Coahuila**, **Distrito Federal**, **Durango**, **Guerrero**, **Jalisco**, **Estado de México**, **Michoacán**, Morelos, **Oaxaca**, **Puebla**, **Querétaro**, **Sonora**, **Tlaxcala**, **Veracruz**.
Major pest of pine forests at altitudes above 2,800 m.

Dendroctonus brevicomis (EPPO A1 quarantine pest): **Chihuahua**, **Coahuila**, **Durango**, **Nuevo León**, **Zacatecas**. This confirms earlier reports appearing in PQR.
Generally, it is not considered as an important forest pest.

Dendroctonus frontalis (EPPO A1 quarantine pest): **Chiapas**, Durango, **Estado de México**, **Guerrero**, **Michoacán**, **Nuevo León**, **Oaxaca**.
One of the most important forest pest in conifer forests of Mexico at altitudes of 2,000 m, especially in areas where trees are of slow growth and poor shape.

Dendroctonus ponderosae (EPPO A1 quarantine pest): Baja California.
In Baja California, it is important in the Sierra de San Pedro Mártir, where it infests small groups of trees, and these trees have a high social value as they are scarce.

Dendroctonus pseudotsugae (EPPO A1 quarantine pest): Chihuahua, **Durango**.
Limited importance because of limited distribution of the host in Mexico, but considered as a serious threat because it can kill mature *Pseudotsuga* trees.

Gnathotrichus sulcatus (EPPO A1 quarantine pest): **Chiapas, Chihuahua, Coahuila, Distrito Federal, Durango, Estado de México, Hidalgo, Michoacán, Oaxaca, Puebla, Tlaxcala, Veracruz.**
In temperate forests, it is one of the most important wet wood borer species. Damage cause a quality reduction of sawn wood.

Hyphantria cunea (EPPO A2 quarantine pest): **Chihuahua**, Coahuila, **Durango**, **Hidalgo**, Nuevo León, **San Luis Potosí**, **Tamaulipas**.

It is an important pest in fruit tree culture and in urban forestry.

Ips calligraphus (EPPO A1 quarantine pest): **Chiapas, Estado de México, Guanajuato, Guerrero, Hidalgo, Jalisco, Michoacán, Morelos, Oaxaca, Puebla, Sinaloa, Veracruz**. Considered as one of the most important *Ips* species because of its wide distribution in Mexico and the damage it may cause.

Ips confusus (EPPO A1 quarantine pest) & *I. hoppingi*: **Baja California**, **Chihuahua**, **Hidalgo**, **San Luis Potosí**. As these two species are indistinguishable morphologically, the authors have described them together.
During drought periods, they can kill numerous trees but under normal conditions they are secondary.

Ips grandicollis (EPPO A1 quarantine pest): **Chiapas, Chihuahua, Colima, Durango, Estado de México, Guerrero, Hidalgo, Jalisco, Michoacán, Morelos, Puebla, Sinaloa, Veracruz.** The authors report that *I. grandicollis* is also present in **Guatemala, Honduras** and **Nicaragua.** All these country records (including Mexico) are new according to the EPPO Secretariat**.**
Only branches of fallen trees are infested, it does not attack living trees.

Ips lecontei (EPPO A1 quarantine pest): **Chiapas**, **Chihuahua**, **Colima**, **Durango**, **Jalisco**, **Oaxaca**, **Sonora**. This confirms earlier reports appearing in PQR.
It can cause damage after prolonged droughts, and young trees may be killed.

Ips pini (EPPO A1 quarantine pest): **Baja California**, **Chihuahua**, **Durango**, **Sonora**. This confirms earlier reports appearing in PQR.
It is considered as one of the most important *Ips* species.

Source: Cibrián Tovar, D.; Médenz Montiel, J.T.; Campos Bolaños, R.; Yates III, H.O.; Flores Lara, J. (1995) Forest insects of Mexico. Universidad Autónoma Chapingo, México, 453 pp.

Additional key words: new records, detailed records

Computer codes: MX, DENCAD, DENCBR, DENCFR, DENCPO, DENCPO, DENCPS, GNAHSU, HYPHCU, IPSXCA, IPSXCO, IPSXGR, IPSXLE, IPSXPI

96/211 A new pest of horse chestnut: *Cameraria ohridella*

In several countries of Central Europe, a new pest of horse chestnut (*Aesculus hippocastanum)* has been reported. *Cameraria ohridella* is a new species of lepidopteran leaf miner which was described in the Republic of Macedonia in 1985 (Deschka & Dimic, 1986). Attacked leaves show transparent leaf mines of approximately 4 cm long with a brown centre. Heavy infestations lead to brown discoloration and death of the leaves, and finally defoliation of the tree. Inside the mines, small larvae of 1-4 mm long (according to development stage from L1 to L5) can be found. Their yellowish body is strikingly flat with bulbous segments. Brown pupae of 3.5-4 mm long can be found in autumn in pupal chambers inside the leaves. Adults are small moths with reddish gold forewings of 2.8 to 3.8 mm long, with white transverse bands underlined with a narrow black line. Hindwings are feathery. Antennae are almost as long as the forewings. *Cameraria ohridella* was then reported in 1989 in Austria where it spread to the whole country by 1994 (Krehan, 1995). In 1992, it was found in Upper Italy in Toblach (Trentino-Alto Adige) and, in 1993, in south Germany (Butin & Führer, 1994). In Hungary, an outbreak was found in 1994 (Szaboky, 1994) and continued in 1995 (Czencz & Bürgés, 1996). It appeared that the pest could overwinter in Hungary as pupae in fallen leaves. In 1995, 3 generations were observed. Each generation took about 35-50 days. In heavily, infested trees, damage could reach 30-40 % in June and increased to 80-90 % in August. Finally, during the EPPO Workshop for Phytosanitary Inspectors (Nitra, SK, 1996-10-15/18), its presence in Slovakia was also reported.

Source:

Butin, H.; Führer, E. (1994) [The horse-chestnut miner (*Cameraria ohridella* Deschka & Dimic), a new parasite of *Aesculus hippocastanum*.]. **Nachrichtenblatt des Deutschen Pflanzenschutzdienstes, 46(5), 89-91**.

Czencz, C.; Bürgés, G. (1996) [The horse-chestnut leaf miner (*Cameraria ohridella* Deschka et Dimic, 1986, Lep.; Lithocolletidae)]. **Növényvédelem, 32(9), 437-444**.

Deschka, G.; Dimic, N. (1986) [*Cameraria ohridella* sp. n. (Lep., Lithocolletidae) from Macedonia, Yugoslavia.]. **Acta Entomologica Jugoslavica, 22(1-2), 11-23**.

Krehan, H. (1995) [Horse chesnut leafmining moth *Cameraria ohridella*, incidence of attack in Austria.]. **Forstschutz-Aktuell, 16, 8-11.**

Szaboky, C. (1994) [The occurrence of *Cameraria ohridella* in Hungary.]. **Növényvédelem, 30(11), 529-530**.

Additional key words: new pest **Computer codes:** LITHOD, AT, DE, HU, IT, SK, YU

96/212 *Cacoecimorpha pronubana* found on *Pinus halepensis* in Spain

In January 1996, in a forest nursery located in Arganda, near Madrid (Spain), a severe outbreak of caterpillars was observed on terminal shoots of *Pinus halepensis*. The attacked plants were young transplanted trees of approximately 3 year-old and 15-25 cm height. Samples were taken to the laboratory for identification. Adults could be obtained and were identified as *Cacoecimorpha pronubana* (EPPO A2 quarantine pest). Although, this pest is well known on horticultural crops, this is apparently the first report on *Pinus*.

Source: Castresana, L.; Notario, A.; Iglesia, C. (1996) Nota sobre un Tortrícido, *Cacoecimorpha pronubana* (Hübner), que ataca a los pinos.
Boletín de Sanidad Vegetal - Plagas, 22(2), 469-473.

Additional key words: new host plant **Computer codes:** TORTPR, PIUHA

96/213 Further spread of *Gonipterus scutellatus* in Spain

In the EPPO RS 96/049, the occurrence of *Gonipterus scutellatus* (EPPO A2 quarantine pest) in the north-west of Spain was reported. It was first found in 1991 in Pontevedra (Galicia). In 1994, the pest had spread in Galicia around Pontevedra, within a radius of approximately 45 km. In a more recent paper, it appears that further spread took place. In 1995, this defoliator of eucalyptus trees was present within a radius of 83-85 km around its original focus. It is now present in the whole province of Pontevedra, in the southern part of La Coruña, and western part of Orense and Lugo. These areas are very close to Portugal. The authors of this paper stated that they have seen the pest in the northern part of Portugal, and felt that it has probably been introduced there during the current year (however this has not been confirmed by the Portuguese authorities). In 1994, *G. scutellatus* was found also in Asturias near Navia and Luarca (north coast of Spain).

Source: Mansilla Vazquez, P.; Pérez Otero, R. (1996) El defoliador del eucalipto *Gonipterus scutellatus*.
Phytoma-España, no. 81, 36-42.

Additional key words: detailed record **Computer codes:** GONPSC, ES

96/214 Introduction of *Anoplophora glabripennis* in New York State (US)

An exotic longhorned beetle, has been found for the first time in USA, in the Greenpoint section of Brooklyn and in a small area in Amityville (New York State) on street and park trees. The insect was first found on dying Norway maples (*Acer platanoides*) and identified as *Anoplophora glabripennis* (Coleoptera: Cerambycidae), an Asian species. In Brooklyn, the mature larvae feed in the hardwood of mature street and park trees (mainly maples and horse chestnut: *A. platanoides*, *A. pseudoplatanus*, *A. saccharinum*, *A. saccharum*, *Aesculus hippocastanum*). Adults emerge during the summer months through holes (diameter of approximately 10 mm or more) in the bark. Heavy sap flow occurs from these large wounds. Infested trees are also more susceptible to secondary attack by other diseases or insects. Sawdust is also found at the basis of attacked trees. Oviposition cavities chewed out by females are found in the bark of the trunk and at the junction of branches and trunk. It is not known how this dangerous pest was introduced into USA, but it is suspected that it may have been transported on dunnage from Asia. The Brooklyn area is situated near a maritime port complex. For the moment, approximately 150 to 200 trees are infested in the Brooklyn area. In Amityville, the number of affected trees is probably less. Further surveys are being carried out, and eradication measures are being implemented.

USDA-APHIS gives also much information of the pest itself. *A. glabripennis* is widely distributed in China, Japan and Korea, where it can be a serious forest pest. It attacks there the following tree species: *Acer negundo*, *A. truncatum*, *Morus alba*, *Populus canadensis*, *P.* x *dokuanensis*, *P.* x *euramericana*, *P. nigra*, *P. nigra* var. *italica*, *P.* x *simopyraidalis*, *Robinia pseudoacacia*, *Salix babylonica*, *S. matsudana*, *Ulmus parvifolia* and also black pear and plum trees. A summary of the biology of the pest is given:
Egg stage: the whitish, oblong eggs are 5-7 mm in length. Both ends of the eggs are slightly concave.
Larval stage: mature larvae are 50 mm in length. The prothorax has a brown mark. The front of the mark does not have a brown margin.
Pupal stage: the whitish pupae are 30-33 mm in length with a width of 11 mm. The eighth segment of the abdomen has a protruding structure.
Adult stage: adults are 20-25 mm long and 7-12 mm large. Their color is jet-black with a lustre. The antennae have 11 segments. The base of the antennae are whitish with a blue-black color. The antennae of the males are 2.5 times their body length; the antennae of the females are 1.3 times the body length. The base of the elytra does not have a granular structure. Each elytron has about 20 white dots.

Source: USDA-APHIS server on INTERNET
http://www.aphis.usda.gov

Additional key words: new record, introduction **Computer codes:** ANOLSP, US

96/215 Update on the situation of citrus tristeza closterovirus in Mexico

In 1983, citrus tristeza closterovirus (EPPO A2 quarantine pest) was detected for the first time in Mexico, in Tamaulipas State. Further findings were then reported in 1986 in Veracruz State in experimental plots. In 1992 and 1993, nursery plants were found contaminated by citrus tristeza closterovirus in Veracruz State. An official campaign has been set up and includes restriction on the movement of plants from the contaminated areas, surveys of nurseries and orchards in different parts of the country, eradication of the disease, extension and information, support to research programmes. In April 1994, eradication of the disease in the 14 nurseries and two experimental plots situated in Veracruz was completed, and more than a million plants were burned. In 1995, further surveys were carried out in commercial orchards in the States of Colima, Nuevo León, San Luis Potosí, Quintana Roo and Veracruz (including nurseries also in this State) but results were not given in this paper.

Source: Nieves Ordáz, F. (1996) Medidas fitosanitarias aplicadas a los citricos en Mexico (Parte 2 de 3). **Boletín Fitosanitario, no. 43, 6-7.**

Additional key words: detailed record **Computer codes:** MX, CSTXXX

96/216 Situation of citrus tristeza closterovirus in Cyprus

A survey on citrus tristeza closterovirus (EPPO A2 quarantine pest) was carried out in Cyprus over the last five years. Results showed that infection was found in 5.8 % of the 125,000 tested trees. The virus was found in 12 citrus cultivars and in 335 citrus orchards. Eradication of the diseased trees is being implemented.

Source: Anonymous (1996) Disease and Pest outbreaks - Citrus tristeza in Cyprus. **Arab and Near East Plant Protection Newsletter, FAO, no. 22, p30**.

Additional key words: detailed record **Computer codes:** CSTXXX, CY

96/217 Studies on traps and attractants for *Ceratitis capitata*

In Spain, comparative studies have been carried out in peach orchards on the type of traps and attractants for *Ceratitis capitata* (EPPO A2 quarantine pest). Several combinations of traps (Tephri, Jackson and Delta) and attractants (Nu-Lure, Trimedlure, ammonium acetate, putrescine (1-4 diamminobutane), ammonium salts) have been tested and their effectiveness was evaluated for both males and females. Concerning the type of trap, results showed that the greater number of captures was obtained with the Tephri traps, whereas the Jackson and Delta traps were less effective, especially for females. Concerning the type of attractant, the authors stressed that there was no universal attractant for both sexes. However, the most effective attractant for males was consistently Trimedlure. For females, Nu-lure with ammonium acetate gave the most satisfactory results. The combination of putrescine and ammonium acetate was also found appropriate, as it appears highly selective of *C. capitata* and remain efficient for more than 45 days. The authors noted that ammonium salts used in this study presented little interest as attractants.

Source: Sastre, S.; Serra, F.; Ros, J.P. (1996) Control de la población de hembras de mosca de la fruta (*Ceratitis capitata*, Wied). **Phytoma-España, no. 80, 26-36.**

Additional key words: trapping **Computer codes:** CERTCA, ES

96/218 Overwintering of *Ceratitis capitata* in Northern Greece

Studies were carried out in Northern Greece near Thessaloniki on the overwintering potential of *Ceratitis capitata* (EPPO A2 quarantine pest). They took place in a untreated orchard of various host plants (apple, pear, peach, apricot, quince, fig and persimmon (*Diospyros kaki*)), situated within the northern limits of establishment of the fly (40.3° north latitude). During three winters (1992-1995), larvae within various naturally infested fruits, pupae and adults were exposed to natural outdoor temperatures. Results showed that within the northern limits of its distribution, *C. capitata* overwinters almost exclusively in the larval stage inside fruits. In exceptionally mild winters a small proportion of pupae may also overwinter. The authors noted that the type of host fruit is important, as this may have an influence on the duration of larval stage. A host fruit which favour slow growth in conjunction with low winter temperatures, may enable the larval stage to persist throughout the winter. Observations made showed that certain host fruit, like apple and quince, which become infested in autumn and fall to the ground can remain in sufficiently good condition to provide a suitable refuge for *C. capitata*. The authors underlined the practical implications of their results which showed that a proportion of the larval population can remain inside host fruits for many months during winter. They feel that it may be impossible to eradicate *C. capitata* in short-term programmes (6-8 months), and that surveillance policy and conclusions regarding eradication should be based on trap detection made in summer and autumn when adults are active and not in other seasons where populations are very difficult to detect.

Source: Papadopoulos, N.T.; Carey, J.R.; Katsoyannos, B.I.; Kouloussis, N.A. (1996) Overwintering of the Mediterranean fruit fly (Diptera: Tephritidae) in Northern Greece.
Annals of the Entomological Society of America, 89(4), 526-534.

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

96/219 Genetic studies on *Fusarium oxysporum* f. sp. *albedinis*

Fusarium oxysporum f. sp. *albedinis* (EPPO A2 quarantine pest) can be differentiated from non pathogenic *F. oxysporum* isolated from date palm roots or soil (see EPPO RS 95/100). This suggests that little genetic variability may exist within *F. oxysporum* f.sp. *albedinis*. Genetic studies have been conducted to test the hypothesis of the unique origin of *F. oxysporum* f. sp. *albedinis* isolates, as a result of the invasion of the Moroccan oases by a single virulent clone. 42 isolates were collected from several cultivars and different locations in Morocco, and 2 isolates from Algeria were also included. All isolates were tested for vegetative compatibility and genetic variability by RFLP (restriction fragment length polymorphism) and RAPD (random amplified polymorphic DNA). Both nuclear and mitochondrial genome were examined. Results showed that all isolates belonged to the same vegetative compatibility group and no polymorphism was observed either with RAPD or RFLP. Cluster analysis showed that most of the *F. oxysporum* f. sp. *albedinis* isolates were grouped at a small genetic distance. The authors concluded that this genetic homogeneity supports the hypothesis that Moroccan populations of *F. oxysporum* f. sp. *albedinis* may belong to a single clonal lineage that originated in Moroccan palm groves which then reached the Algerian oases.

Source: Tantaoui, A.; Ouiten, M.; Geiger, J.P.; Fernandez, D. (1996) Characterization of a single clonal lineage of *Fusarium oxysporum* f.sp. *albedinis* causing Bayoud disease of date palm in Morocco. **Phytopathology, 86(7), 787-792**.

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

96/220 New strains of potato spindle tuber viroid and tomato Australian leaf curl bigeminivirus from a wild *Solanum* sp. in Australia

Leaf curl is a severe disease of tomato in the Northern part of Australia. It can induce leaf curl, yellowing, upward leaf rolling and cessation of fruit production. This disease has appeared each year since 1970, causing complete crop failure in some early plantings in the coastal area. In Northern Territory, studies were carried out to identify wild plants which could act as natural reservoirs of the Australian tomato leaf curl bigeminivirus (TLCV-Au). Many wild plants were tested for the presence of the virus. As a result, three distinct virus-like agents were isolated from a wild, symptomless *Solanum* sp. Two of them were identified as geminiviruses which are related but distinct from TLCV-Au. These viruses were not mechanically transmissible. A third agent, mechanically transmissible, was also found, and it caused stunting, shoot elongation and hairlessness on tomato plants. A circular RNA was isolated from these tomato plants and analysis revealed that the RNA sequence was a variant of potato spindle tuber viroid (EPPO A2 quarantine pest). Potato spindle tuber viroid had been found in Australia in 1982 on potato breeding material, it was successfully eradicated in 1987 and is now considered of plant quarantine importance for Australia. The authors pointed out that there is no evidence of field infection by potato spindle tuber viroid.

Source: Behjatnia, S.A.A.; Dry, I.B.; Krake, L.R.; Condé, B.D.; Connelly, M.I.; Randles, J.W.; Rezaian, M.A. (1996) New potato spindle tuber viroid and tomato leaf curl geminivirus strains from a wild *Solanum* sp. **Phytopathology, 86(8), 880-886**.

Additional key words: epidemiology **Computer codes:** AU, POSTXX

96/221 Damage of *Diabrotica virgifera* to maize following soybean in USA

In late June 1987, severe damage caused by larvae of *Diabrotica virgifera* (EPPO A2 quarantine pest) were observed on maize grown for seed production, in Illinois (USA). This damage occurred in 6 fields which had been planted the year before with soybeans. These soybean crops were free from weeds and grown for seed production. Damage in first year maize crops was observed again in the same area in 1988 and to varying degrees during the following years. Laboratory studies and field studies were conducted to try to explain the possible causes of this new problem. Results demonstrated that eggs of *D. virgifera* from populations found in this area did not present a prolonged diapause trait (i.e. eggs which could enter into diapause for 2 winters or more). Field studies showed that a small number of *D. virgifera* eggs were laid in soybean fields. It was noted that pyrethroid insecticides are routinely used in maize crops grown for seed production to control *Helicoverpa zea*. In the laboratory, it was demonstrated that permethrin acted as a repellent for *D. virgifera* females. The authors felt that the use of permethrin in maize fields probably incite females to lay eggs in untreated soybeans situated nearby. They concluded that the occurrence of damage on first year maize following soybean is probably due to the use of pyrethroid during the previous summer in adjacent maize fields.

Source: Levine, E.; Oloumi-Sadeghi, H. (1996) Western corn rootworm (Coleoptera: Chrysomelidae) larval injury to corn grown for seed production following soybeans grown for seed production.
Journal of Economic Entomology, 89(4), 1010-1016.

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

96/222 FAO/IPGRI Technical Guidelines for the safe movement of stone fruits and *Eucalyptus* spp.

FAO and IPGRI (International Plant Genetic Resources Institute, previously IBPGR) have recently issued two new technical guidelines for the safe movement of stone fruits and *Eucalyptus* spp. Information is provided on diseases and also on some insect pests of these crops. Details on symptoms, geographical distribution, significance, host range, transmission are given in these guidelines, also with relevant data on treatments to be used in order to ensure safe movement of planting material of these crops. So far, FAO/IBPGR have already published guidelines for the following crops: cocoa, *Musa* (1st and 2nd edition), edible aroids, yam, sweet potato, legumes, citrus, cassava, grapevine, vanilla, coconut, sugarcane, small fruits, stone fruits, *Eucalyptus* spp.

They can be obtained from: Publications Office, IPGRI Headquarters
Via delle Sette Chiese 142
00145 Rome
Italy

Source: FAO/IPGRI, 1996-09.

Additional key words: publication

96/223 Second International Conference on Soil Solarization and Integrated Management of Soilborne Pests

The second International Conference on Soil Solarization and Integrated Management of Soilborne Pests will take place in Aleppo, Syria, on the 1997-06-16/21. It is organized by the FAO Regional Office for the Near East, ICARDA, the Faculty of Agriculture of the University of Jordan, the Arab Society for Plant Protection and the University of California, Davis. The Conference will be run in English.
The Conference programme will include: 1) key-note papers on: soil fumigation (present and future constraints), history and principles of integrated management of soilborne pests, mode of action of solarization (physical, chemical and biological), pre-and post-plant solarization, longevity of soil solarization & effect of sublethal heating, new plastics for soil solarization, temperature/efficacy predictive models, solarization in integrated management systems, solarization and the environment, integrated management of soilborne pests;
2) contributed papers and poster sessions on new findings on soil solarization and IPM of soilborne pests; and 3) demonstrations of soil solarization.

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Source: **EPPO Secretariat, 1996-10.**

Additional key words: Conference

96/224 10th Congress of the Mediterranean Phytopathological Union

The 10th Congress of the Mediterranean Phytopathological Union will take place in Montpellier, France, in 1997-06-02/05. It will be organized by the Société Française de Phytopathologie. The main topics will be: 1) current phytopathological constraints in the Mediterranean region; 2) diversity, detection and characterization of micro-organisms (pathogenic or symbiotic) associated with plants, diagnosis, identification, population structure and evolution; 3) plant-microbe interactions (biochemical, cellular and molecular aspects of pathogenesis, symbiosis and plant defence); 4) genetic improvement for resistance (any approach); 5) epidemiology, modelling of phytopathological constraints, control of diseases and integrated pest management.

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Source: **EPPO Secretariat, 1996-11.**

Additional key words: Conference