EPPO

Reporting

Service

Paris, 1998-08-01 **Reporting Service 1998, No. 8**

CONTENTS

98/138 Jordan, Lithuania and Macedonia are new EPPO member countries

Three more governments have acceded to the EPPO Convention: Jordan in 1997; Lithuania and Macedonia in the last few months. These new EPPO member countries are welcome to the Organization. Total membership of EPPO is now 41.

Source: **French Ministry of Foreign Affairs.**
EPPO Secretariat, 1998-08.

98/139 New data on quarantine pests

By browsing through the literature, the EPPO Secretariat has extracted the following new data concerning quarantine pests.

New geographical records

Liriomyza bryoniae (EU Annex I/A2) and *Phyllocnistis citrella* occur in Turkmenistan. Review of Agricultural Entomology, 86(8), p 967 (7543).

Detailed records

A large survey was carried out on fruit flies in Australia in 1994. Among 17 species trapped, it was noted that *Bactrocera tryoni* (EPPO A1 quarantine) which occurs in the eastern states has spread to several locations in the Northern Territory. Review of Agricultural Entomology, 86(8), p 919 (7166).

In 1992, chrysanthemum stunt viroid (EPPO A2 quarantine pest) has been detected in chrysanthemum cultivated in Hokkaido, Japan. Review of Plant Pathology, 77(7), p 812 (6049).

In Iran, a survey was carried out in central Mazandaran (near the Caspian Sea) in 1996, to determine the possible spread of citrus tristeza closterovirus (EPPO A2 quarantine pest) from the initial infested foci (Mahdasht orchards in Sari). 400 samples were tested y DAS-ELISA , and 9 were found positive. All infected trees were *Citrus unshiu* grafted on *Poncirus trifoliata* and some were found in new sites in the province Mazandaran, in the suburbs of Babol (Note: it is a limited spread as Babol and Sari are rather close). Review of Plant Pathology, 77(7), p 794 (5922).

Citrus tristeza closterovirus (EPPO A2 quarantine pest) occurs in Zhejiang province, China. Review of Plant Pathology, 77(8), p 904 (6766).

Didymella ligulicola (EPPO A2 quarantine pest) has been isolated from pyrethrum (*Tanacetum cinerariifolium*) in Tasmania, Australia. It is noted that this the first confirmed record of *D. ligulicola* on pyrethrum in Australia. Review of Plant Pathology, 77(8), p 931 (6974).

Elsinoë fawcettii (EU Annex II/A1) occurs in Punjab, India. Review of Plant Pathology, 77(7), p 794 (5925).

Premnotrypes vorax (EPPO A1 quarantine pest) occurs in Trujillo State in Venezuela. Review of Agricultural Entomology, 86(7), p 841 (6594).

Source: **EPPO Secretariat, 1998-08.**

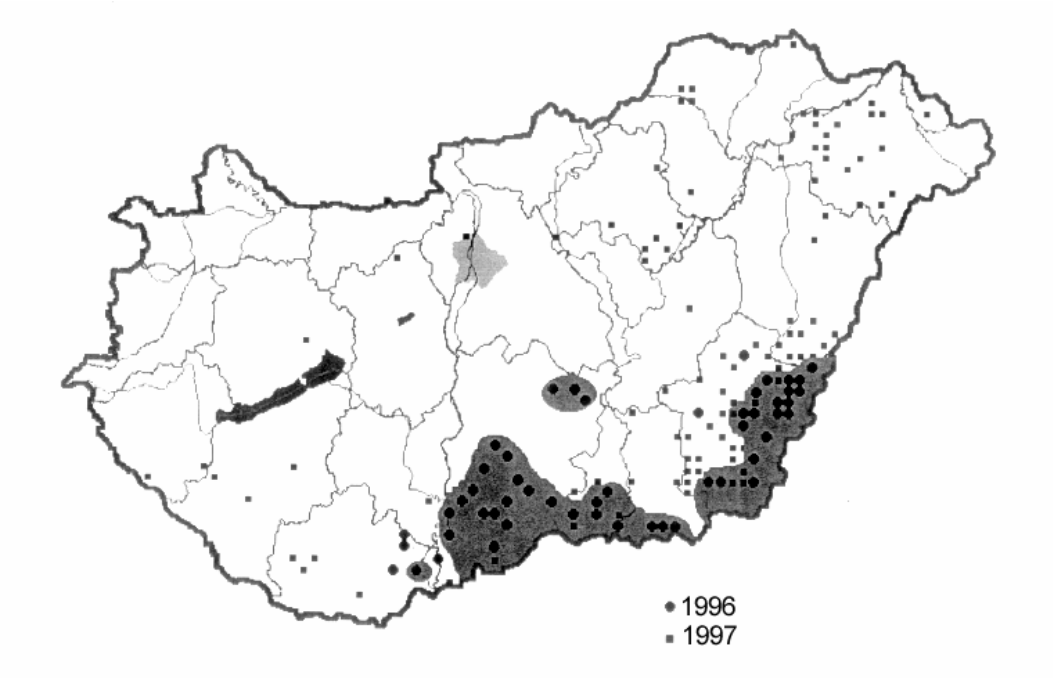
Additional key words: new records, detailed records

Computer codes: CHSXXX, CSTXXX, DACUTR, ELSIFA, LIRIBO, MYCOLG, PHYNCI, PREMVO AU, CN, IR, JP, IN, TM, VE

98/140 Situation of fireblight in Hungary in 1997

Erwinia amylovora (EPPO A2 quarantine pest) was reported for the first time in Hungary in spring 1996 (EPPO RS 96/106). Surveys have been carried out since then (see EPPO RS 97/009 and 97/090). In 1997, the disease was found in 17 counties at 133 locations, representing 1195 ha of infected area (469 ha gardens, 726 ha orchards). The map below illustrates the situation of fireblight in Hungary in 1997. The Plant Protection Service stressed that nurseries are still free from *E. amylovora* and are subjected to regular phytosanitary inspections.

Distribution of *Erwinia amylovora* in Hungary



Source: **Plant Protection Service of Hungary, 1998-07**

Additional key words: detailed record **Computer codes:** ERWIAM, HU

98/141 Situation of several quarantine pests in Hungary in 1997

The Plant Protection Service of Hungary has recently informed the EPPO Secretariat of the situation of several quarantine pests in 1997.

- *Clavibacter michiganensis* subsp. *michiganensis* (EPPO A2 quarantine pest): was found in one location (Borota in Bács-Kiskun county) on tomato plants.
- *Cryphonectria parasitica* (EPPO A2 quarantine pest): is present on 6 sites (68 ha), the infected area has not increased (see EPPO RS 97/089). Nurseries are free from this disease.
- *Diabrotica virgifera virgifera* (EPPO A2 quarantine pest) was caught in 4 counties (4000 beetles) in the south of Hungary. The pest continues to spread towards the north. Larvae were seen for the first time slightly damaging maize roots near Szeged, but without any impact on maize yield (see EPPO RS 97/156, 98/001).
- *Globodera rostochiensis* (EPPO A2 quarantine pest): infested soils and crops were found on 18 isolated areas (246,5 ha) which are placed under quarantine. Situation is similar to 1996 (see EPPO RS 97/089).
- *Helicoverpa armigera* (EPPO A2 quarantine pest): occurs locally, in 16 counties on various crops: alfalfa, maize, potato, sugarbeet, tobacco, vegetables and ornamentals. Situation is similar to 1996 (see EPPO RS 97/089).
- *Puccinia horiana* (EPPO A2 quarantine pest): occurs very locally, in 8 places (0.5 ha - growers and private gardens). Situation is similar to 1996 (see EPPO RS 97/089)
- *Trogoderma granarium* (EPPO A2 quarantine pest): was observed in one store (Dunaújváros in Fejér county) and was rapidly eradicated.

Source: **Plant Protection Service of Hungary, 1998-07.**

Additional key words: detailed records

Computer codes: CORBMI, DIABVI, ENDOPA, HETDRO, HELIAR, PUCCHN, TROGGA, HU

98/142 Surveys carried out in Germany on *Ralstonia solanacearum*

Surveys on *Ralstonia solanacearum* (EPPO A2 quarantine pest) have been carried out in Germany on the 1997 harvest of German potatoes and on imports from the Netherlands made in 1998. Samples were tested according to the EU protocol (IF with polyclonal antisera and/or PCR, semi-selective medium, and biological tests on aubergine and tomato). Sample size varied from 200 tubers/ha to 200 tubers/3 ha for seed potatoes, and for ware potatoes sample size was 200 tubers/25 t. Concerning the German production, 13.029 samples have been tested. No positive sample was found for seed potatoes. Two positive samples of ware potatoes (cv. Agria) were found in Bayern. In addition, visual inspections were carried out on 2.991 cut tubers and no symptoms were observed. Concerning potatoes imported in 1998 from the Netherlands, 1.153 samples have been tested so far, and only one positive sample of seed potatoes was detected by the laboratory in Bayern.

Source: **Plant Protection Service of Germany, 1998-08.**

Additional key words: detailed record **Computer codes:** PSDMSO, DE

98/143 *Echinothrips americanus* introduced in glasshouses in France

Echinothrips americanus has been found for the first time in France, in June 1996. This thrips was observed in a nursery in the Haut Rhin département, on *Ficus* plants imported from the Netherlands. Another focus was then detected in Burgundy. In 1997, *E. americanus* was found in again these two regions under glasshouses, as well as in Centre and Poitou-Charente. The French Plant Protection Service has taken eradication measures.

E. americanus is a polyphagous species originating from North America. It is reported as widespread in the east of North America (from south of Canada to Florida, Iowa being a western limit). It is occasionally found in California, Hawaii, Mexico and Bermuda. In 1993, *E. americanus* was reported for the first time in Europe, in the Netherlands (see EPPO RS 95/093). It was found in nurseries on Araceae (*Syngonium*, *Philodendron*, *Homalomena*) and eradication measures were taken. However, United Kingdom made several interceptions of *E. americanus* on *Dieffenbachia*, *Hibiscus*, *Syngonium podophyllum* from the Netherlands in 1995/1996 (see EPPO RS 95/175, 96/060). It illustrates the fact that *E. americanus* can be easily spread in trade. In 1995, this thrips species was also observed in Germany, in the regions of Frankfurt am Main and Kassel on *Syngonium podophyllum* grown in glasshouses.

Little information is available on the biology of *E. americanum*. It causes direct damage by feeding but does not transmit viruses. It can attack more than 40 plant genus from 20 families, and it appears that Araceae and Balsaminaceae are particularly attractive to this insect. Among ornamental species, *E. americanum* can be found on : *Anthurium*, *Asparagus*, *Bambusa*, *Cordyline*, *Dendranthema*, *Desmodium*, *Dieffenbachia*, *Euphorbia*, *Ficus*,

Hibiscus, *Impatiens*, *Passiflora*, *Philodendron*, *Spathiphyllum* and *Syngonium*. This species needs rather high temperatures for its development, and is most probably not able to survive outdoor in French conditions. From the literature and the experience in France, *E. americanum* appears as a minor pest causing little damage which can be easily controlled by chemical products. However, considering its presence in several European countries and the importance of the trade of ornamental plants, it is felt that this species may cause problems.

Source: Reynaud, P. (1998) *Echinothrips americanus*. Un nouveau thrips des serres importé en France.
Phytoma – La Défense des Végétaux, no. 507, 36-38.

Additional key words: introduction **Computer codes:** FR

98/144 *Cameraria ohridella* is present in Czechia

The horse chestnut leafminer *Cameraria ohridella* is now present in Czechia. It is reported as a serious pest of horse chestnut in approximately 80 localities. This pest was first described in the Republic of Macedonia in 1985 and then spread to several countries in Central Europe (see EPPO RS 96/211, 97/125). Its distribution is now the following:

EPPO region: Austria (1989), Croatia (1995), Czechia (1997), Germany (south, 1994), Hungary (1994), Italy (north, 1982), Macedonia (1985), Slovakia (1996), Slovenia (1995).

Source: Skuhravy, V. (1998) [On the leaf mining moth *Cameraria ohridella* Desch. & Dim. (Lep., Lithocolletidae) attacking *Aesculus hippocastanum* L. in the Czech Republic.]
Anzeiger für Schädlingskunde Pfanzenschutz Umweltschutz, 71(5), 81-84.

Additional key words: new record **Computer codes:** LITHOD, CZ

98/145 Spread of *Metcalfa pruinosa* in Ticino (Switzerland)

As previously reported (see EPPO RS 96/040), *Metcalfa pruinosa* originates from the Americas, and was first introduced into Europe in Italy (in 1979). It then spread in north-east Italy, south-east of France (around 1986), Slovenia (in 1991), and was first found in the south of Ticino (Switzerland) in 1993. Surveys carried out in 1995-1997 have shown that *M. pruinosa* is spreading in Ticino. However, populations levels are low and no damage is seen. This very polyphagous insect has been observed on many plants (found on 65 plant species, including ornamentals, weeds and the following crops: basil, bean, cherry, cucumber, grapevine, kaki, parsley, pepper, potato, strawberry, tomato, *Rubus*, etc.). Biological control using the parasidoid *Neodryinus typhlocybae* (Hymenoptera, Dryinidae) is envisaged against *M. pruinosa* in Ticino.

Source: Bonavia, M.; Jermini, M.; Brunetti, R. (1998) La cicadelle *Metcalfa pruinosa* Say au Tessin. Distribution actuelle, dynamique des populations et perspectives de lutte.
Revue Suisse de Viticulture, Arboriculture, Horticulture, 30(3), 169-172.

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

98/146 First report of *Ustilago scitaminea* in Australia

On 20th of July 1998, *Ustilago scitaminea* (sugarcane smut) was reported in a commercial sugarcane field in the Ord River District in Western Australia (Australia). Surveys are being conducted to assess the extent of the disease, and *U. scitaminea* has been detected on 14 sugarcane crops. Two of the crops showed disease incidence levels of approximately 5%, other crops showed incidence of 1 % or lower. Eradication measures are being taken. *U. scitaminea* is a rather widespread fungus which is present in many countries where sugarcane is grown (CABI, 1991). However, according to the EPPO Secretariat this is the first report of *U. scitaminea* in Australia. (EPPO note: a recent introduction had also been reported from Morocco, see EPPO RS 97/071).

Source: Roberts, B. (1998) Detection of sugarcane smut in the Ord River irrigation District, Kununurra (Western Australia). **OCPPO Alert of 3 August 1998, State department of Agriculture and Industry, Australia.**

CABI map No. 79, 6th edition (1991), CABI International, Wallingford, UK

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

98/147 Possibilities of biological control of *Cacyreus marshalli*

Cacyreus marshalli (EPPO A2 quarantine pest) was introduced into Europe in 1989 (and probably earlier) in Menorca, Baleares (ES – see RS 520/03, 1992), and then spread to continental Spain (RS 94/033), Italy (RS 97/139) and France (98/080). This pelargonium pest continues to spread, and Sarto & Gabarra (1998) mention that *C. marshalli* appeared in 1997 in East Sussex (UK) and that it occurs in Morocco. The exact status of the record in UK is under investigations by the British National Plant Protection Organization, which does not consider that the pest is established. The reported Moroccan record is new. So far, no potential biological control agents had been found in Europe and only chemical control has been applied. This raised difficulties, as many attacked plants are grown in private gardens. However, in September 1997, 20 to 30 eggs of *C. marshalli* were collected from *Pelargonium peltatum* in Cabrils (ES) and a few of them gave rise to adults of *Trichogramma evanescens*. This was also observed from parasitized eggs collected in Lleida. Although further studies are necessary to evaluate the potential of *T. evanescens* to control *C. marshalli*, the authors felt that for the first time since the introduction of this pest into Europe possibilities for biological control can be envisaged.

Source: Sarto, V.; Gabarra, R. (1998) Un Himenòpter parasitoid d'ous del barrinador del gerani.
Catalunya Rural i Agrària, no. 46, 24-26.

Additional key words: new records, biological control **Computer codes:** CACYMA, GB, MA

98/148 Studies on citrus leprosis ?rhabdovirus

Studies were carried out to try to better characterize citrus leprosis ?rhabdovirus (EPPO A1 quarantine pest). The virus can be mechanically transmitted to herbaceous hosts which all develop necrotic local lesions: *Chenopodium amaranticolor*, *C. album*, *C. capitatum*, *C. foliosum*, *C. murale*, *C. polyspermum*, *C. quinoa* and *Gomphrena globosa*, and also to sweet orange (*Citrus sinensis*). Mechanical inoculation was improved by growing test plants at temperatures above 25°C. *C. quinoa* appeared as the most reliable indicator plant, however back-inoculation to citrus was not successful (back-inoculation to sweet orange was only possible from sweet orange). Host-plant studies were also done on citrus and non-citrus plants (*Camellia japonica*, *Magnolia arbustifolia*, *Palicourea rigida*, *Pera glabrata*, *Aspidosperma macrocarpum*) showing leprosis-like symptoms. Mechanical transmission of the virus to herbaceous plants was achieved from symptomatic citrus plants but not from other plants. Attempts to purify the virus from field samples of symptomatic citrus were so far unsuccessful. However, in PEG-concentrated preparations a 25 kD protein could be observed in SDS-PAGE electrophoresis (and not in healthy controls). Observations using electronic microscopy support the view that citrus leprosis virus may be a non-enveloped rhabdovirus.

Source: Lovisolo, O.; Colariccio, A.; Chagas, C.M.; Rossetti, V.; Kitajima, E.W.; Harakava, R. (1996) Partial characterization of citrus leprosis virus. **Proceedings of the 13th IOCV Conference, 1996, 179-188.**

Additional key words: identification **Computer codes:** CSLXXX

98/149 Management of tomato spotted wilt tospovirus: effect of plant age

Tomato spotted wilt tospovirus (TSWV - EPPO A2 quarantine pest) is common in north-eastern Spain and is a limiting factor to tomato production in important growing regions. Tomato plants, naturally infected by TSWV which expressed symptoms at 24, 38, 45, 60, 67 and 74 days after transplanting were monitored for production in an experimental plot, at Cabrils near Barcelona (ES). Results showed that plants which had developed symptoms at 24, 38 or 45 days after transplanting yielded significantly less and produced fewer and smaller tomatoes than those that had developed symptoms later, at 60, 67 and 74 days after transplanting. However, the quality of the fruit was drastically decreased by TSWV, irrespective of plant age at time of symptom expression. The authors felt that management strategies which try to delay infection of TSWV in tomato crops will not be effective, at least in the period considered (July to September). Other management methods suggested by other studies, e.g. application of horticultural oils of film-forming products, used of thrips-repellent mulches, or floating row covers should be investigated.

Source: Moriones, E.; Aramburu, J.; Riudavets, J.; Arnó, J.; Laviña, A. (1998) Effect of plant age at time of infection by tomato spotted wilt tospovirus on the yield of field-grown tomato.
European Journal of Plant Pathology, 104(3), 295-300.

Additional key words: epidemiology **Computer codes:** TMSWV, ES

98/150 Resistance to metalaxyl in isolates of *Plasmopara halstedii*

In 1995 and 1996, isolates of *Plasmopara halstedii* (EU Annex II/A2) showing an atypical reaction to metalaxyl were collected in France and tested in the laboratory for their level of sensitivity to this systemic fungicide. Metalaxyl has been commonly used in France since 1990, and losses caused by *P. halstedii* have become insignificant despite the spread of new races of sunflower downy mildew. These laboratory studies showed that primary and secondary infections caused by one of these unusual isolates were not controlled by metalaxyl (at the concentration registered for seed treatment). This is the first report of physiological resistance to metalaxyl in *P. halstedii*. However, loss of efficacy in the field has not yet been observed. The authors stressed that the risk exists and that surveys on the occurrence of resistant isolates should be continued.

Source: Albourie, J.-M.; Tourvieille, J.; Tourvieille de Labrouhe, D. (1998) Resistance to metalaxyl in isolates of the sunflower pathogen *Plasmopara halstedii*.
European Journal of Plant Pathology, 104(3), 235-242.

Additional key words: resistance **Computer codes:** PLASHA

98/151 Chrysanthemum stunt viroid found in petunia

A natural infection of a petunia plant (*Petunia* hybrida Surfinia) by chrysanthemum stunt viroid (EPPO A2 quarantine) was detected in the Netherlands. The affected plant showed mosaic, malformed leaves and growth reduction. Analysis showed that the plant was also infected by both tobacco mosaic tobamovirus and potato Y potyvirus. It is felt that most probably the viroid was not responsible for the symptoms observed in the infected petunia plant, as no symptoms were observed after graft or mechanical inoculation. The origin of the viroid infection could not be traced. This is the first time that chrysanthemum stunt viroid has been isolated from a naturally infected petunia plant. The authors concluded that chrysanthemum stunt viroid does not pose a significant threat to petunia cultivation as long as the viroid is absent from plants used for vegetative propagation. However, the symptomless nature of the infection makes necessary to test individual mother plants.

Source: Verhoeven, J.T.J.; Arts, M.S.J.; Owens, R.A; Roenhorst, J.W. (1998) Natural infection of petunia by chrysanthemum stunt viroid. **European Journal of Plant Pathology, 104(4), 383-386.**

Additional key words: host plant **Computer codes:** CHSXXX

98/152 Use of squash-PCR to study tomato yellow leaf curl bigeminivirus transmission by *Bemisia tabaci*

A squash-PCR method has been developed in Israel to detect tomato yellow leaf curl bigeminivirus (TYLCV - EPPO A2 quarantine pest). With this method, the virus can be detected on samples of infected tissues (leaves, roots, stems) as small as 1 mm² squashed onto nylon membrane. TYLCV can also be detected in individual viruliferous *Bemisia tabaci* (EPPO A2 quarantine pest). This squash-PCR method was used to study whitefly transmission of TYLCV. Tomato plants were inoculated by placing a single viruliferous insect in the centre of a young leaflet. TYLCV could be detected at the site of inoculation on certain plants as early as 5 min after the beginning of the access feeding, and in all plants after 30 min. Using this technique, it was also possible to detect the virus in the head of *B. tabaci* as early as 5 min after the beginning of the access feeding on infected tomato plants, after 10 min in the thorax and after 25 min in the abdomen.

Source: Atzmon, G.; van Oss, H.; Czosnek, H. (1998) PCR-amplification of tomato yellow leaf curl virus (TYLCV) DNA from squashes of plants and whitefly vectors: Application to the study of TYLCV acquisition and transmission. **European Journal of Plant Pathology, 104(2), 189-194**.

Additional key words: detection method, epidemiology **Computer codes:** BEMITA, TYLCV

98/153 Suitability of apples as *Anastrepha fraterculus* hosts

Anastrepha fraterculus (EPPO A1 quarantine pest) occurs in Brazil (it originates from the tropical Americas) where its primary host plants belong to the family Myrtaceae, but several introduced crops (peaches and loquats) have been successfully colonized by it. Apples were commercially introduced into Brazil in the early 1970s, and the cultivated area expanded from 170 ha in 1970 to over 28,000 ha in 1996. *A. fraterculus* has become a major pest of apple, leading to losses of up to 2 %. Behavioural studies have shown that females readily oviposit in apples, but it is felt that populations have not yet become established in apple orchards. Further studies were carried out in Brazil to compare the life cycle (with emphasis on demography) in apples (cvs. Gala, Fuji, Golden Delicious) and guavas. It was observed that host type had a strong effect on immature stages, mainly on larval development and survival. The following host susceptibility rank was shown: guava>Golden Delicious>Gala>Fuji. High mortality was observed for larval stages, with only 8% survival (from egg to adult) in apple and 24% in guava. Guava produced adults with higher survivorship and reproductive rates. Despite the high mortality observed in immature stages, females showed a high reproductive output, yielding positive values of intrinsic rates of increase on both guavas and apples (0.056 in guavas and 0.031 in Gala apples). Authors concluded that mature apples may be considered as suitable hosts for *A. fraterculus*.

Source: Sugayama, R.L.; Kovaleski, A.; Liedo, P.; Malavasi, A. (1998) Colonization of a new fruit crop by *Anastrepha fraterculus* (Diptera: Tephritidae) in Brazil: a demographic analysis.
Environmental Entomology, 27(3), 642-648.

Additional key words: host plant, biology **Computer codes:** ANSTFR, BR

98/154 Trapping studies for *Rhagoletis mendax*

Rhagoletis mendax (EPPO A1 quarantine pest) is generally considered as the most important pest of commercially grown blueberries (*Vaccinium angustifolium*, *V. corymbosum*) in the eastern and mid-western USA. Studies were carried out on trapping methods, in order to monitor adult fruit-fly populations and apply chemical treatments at appropriate timing. Several types of traps were tested. Yellow, green, red and glue sphere traps (9 cm diameter) were found to be equal or better than yellow sticky traps (Pherocon AM). To be most effective, yellow sticky traps had to be placed in a 'V' orientation (sticky surface facing down) and not in a vertical position. Both spheres and yellow sticky traps baited with ammonia captured more flies than unbaited traps which may suggests that ammonia is the main factor over trap shape or colour. It was observed that more females than males were captured on ammonia-baited traps, which is consistent with the assumption that females seek a protein source for egg maturation. The authors concluded that growers can be recommended to use either yellow sticky traps (Pherocon AM) in a 'V' orientation or coloured spheres, both baited with ammonia, to trap *R. mendax*.

Source: Liburd, O.E.; Alm, R.S.; Casagrande, R.A.; Polavarapu, S. (1998) Effect of trap color, bait, shape and orientation in attraction of blueberry maggot (Diptera: Tephritidae) flies.
Journal of Economic Entomology, 91(1), 243-249.

Additional key words: traps **Computer codes:** RHAGME

98/155 EPPO report on selected intercepted consignments

The EPPO Secretariat has gathered the intercepted consignment reports for 1998 received since the previous report (EPPO RS 98/119) from the following countries: Austria, Belgium, Czechia, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Switzerland, Slovenia, Spain, Sweden, United Kingdom. When a consignment has been re-exported and the country of origin is unknown, the re-exporting country is indicated in brackets. When the occurrence of a pest in a given country is not known to the EPPO Secretariat, this is indicated by an asterisk (*).

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

EPPO *Reporting Service*

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Alternaria alternata	*Rosmarinus officinalis*	Cuttings	Israel	United Kingdom	1
Aphelenchoides, Tylencho-rhynchus, Ditylenchus	*Cycas revoluta*	Plants for planting	Costa Rica	Denmark	2
Bemisia tabaci	*Ajuga*	Cuttings	Israel	United Kingdom	1
	Argyranthemum	Cuttings	Australia	Denmark	1
	Crossandra	Cuttings	Sri Lanka	Denmark	1
	Euphorbia pulcherrima	Plants for planting	Thailand	Germany	1
	Euphorbia pulcherrima	Cuttings	Germany	United Kingdom	1
	Euphorbia pulcherrima	Plants for planting	Germany	United Kingdom	1
	Euphorbia pulcherrima	Cuttings	Netherlands	United Kingdom	1
	Euphorbia pulcherrima	Plants for planting	Netherlands	United Kingdom	1
	Euphorbia pulcherrima	Cuttings	Portugal	United Kingdom	2
	Euphorbia pulcherrima	Plants for planting	Portugal	United Kingdom	1
	Eustoma	Cut flowers	Kenya	United Kingdom	1
	Ficus benjamina	Plants for planting	Netherlands	Sweden	1
	Hibiscus	Cut flowers	Senegal	France	1
	Hibiscus rosa-sinensis	Plants for planting	USA	Belgium	1
	Hygrophila difformis	Aquarium plants	Singapore*	Denmark	1
	Hypericum	Cuttings	Israel	Netherlands	1
	Manihot	Vegetables	Cameroon	France	1
	Manihot	Vegetables	Gabon*	France	1
	Manihot	Vegetables	Vietnam	France	1
	Piper sarmentosum	Cut flowers	Thailand	France	2
	Solidago	Cut flowers	Belgium	Ireland	1
	Solidago	Cut flowers	Israel	Ireland	12
	Solidago	Cut flowers	Israel	United Kingdom	1
	Solidago	Cut flowers	Netherlands	Ireland	6
	Solidago	Cut flowers	Netherlands	United Kingdom	1
	Solidago	Cut flowers	Zimbabwe	France	1
	Solidago	Cut flowers	Zimbabwe	United Kingdom	1
Clavibacter michiganensis* subsp. *insidiosus	*Medicago sativa*	Seeds	Italy	Czechia	1
Clavibacter michiganensis* subsp. *sepedonicus	*Solanum tuberosum*	Ware potatoes	Germany	Netherlands	4
	Solanum tuberosum	Ware potatoes	Sweden	Finland[1]	1
Coccidae	*Cycas revoluta*	Plants for planting	Spain	Portugal	2
***Colletotrichum* sp.**	*Tillandsia*	Plants for planting	Guatemala	United Kingdom	1
***Dialeuropora* sp.**	Ornamentals	Cut flowers	Vietnam	France	1
Ditylenchus dipsaci	*Allium cepa*	Plants for planting	Netherlands	United Kingdom	2
	Narcissus	Plants for planting	(Netherlands)	Denmark	1
	Ornamentals	Bulbs	United Kingdom	Netherlands	1
Erwinia amylovora	*Cotoneaster*	Plants for planting	Netherlands	Ireland	1
***Frankliniella* sp.**	Orchidaceae	Cut flowers	Singapore*	France	1
Globodera pallida	*Solanum tuberosum*	Ware potatoes	Cyprus	Norway	1

[1] Laboratory tests (IF, PCR) were carried out, but no biological tests. Potatoes were used for industrial processing.

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Globodera rostochiensis	*Solanum tuberosum*	Ware potatoes	Belgium	Czechia	1
	Solanum tuberosum	Ware potatoes	Cyprus	Norway	2
	Solanum tuberosum	Ware potatoes	Greece	Czechia	1
	Solanum tuberosum	Ware potatoes	Italy	Ireland	2
***Helicotylenchus, Paratylenchus,* Criconematidae**	*Picea nidiformis*	Plants for planting	Moldova	France	1
Helicotylenchus, Xiphinema diversicaudatum, Paratylenchus	*Pinus nigra*	Plants for planting	Moldova	France	1
Helicoverpa armigera	*Dianthus*	Plants for planting	Israel	Netherlands	3
	Dianthus	Cut flowers	Israel	Netherlands	4
	Dianthus	Plants for planting	Morocco	Netherlands	1
	Dianthus caryophyllus	Cut flowers	Morocco	France	7
***Heterodera* sp.**	*Phoenix dactylifera*	Pot plants	Egypt	France	1
Leaf miners (mines)	*Dendranthema*	Cuttings	USA	Denmark	3
Leptinotarsa decemlineata	*Allium ampeloprasum*	Vegetables	France	United Kingdom	1
	Allium porrum	Vegetables	France	Ireland	2
	Allium porrum	Vegetables	Unknown origin	Ireland	1
	Solanum tuberosum	Ware potatoes	Germany	United Kingdom	1
	Solanum tuberosum	Ware potatoes	Italy	Ireland	4
	Solanum tuberosum	Ware potatoes	Italy	United Kingdom	7
	Solanum tuberosum	Ware potatoes	Spain	United Kingdom	2
Liriomyza (*probably *trifolii)	*Eustoma*	Cut flowers	Kenya	United Kingdom	1
	Gypsophila	Cut flowers	Kenya	United Kingdom	1
Liriomyza huidobrensis	*Callistephus*	Cut flowers	Netherlands	Sweden	1
	Dendranthema	Cut flowers	Netherlands	Ireland	2
	Dendranthema	Cut flowers	Netherlands	United Kingdom	1
	Gypsophila	Cut flowers	Israel	Ireland	2
	Gypsophila	Cut flowers	Israel	United Kingdom	1
	Gypsophila	Cut flowers	Kenya	United Kingdom	1
	Gypsophila	Cut flowers	Netherlands	Ireland	7
	Gypsophila	Cut flowers	Netherlands	United Kingdom	4
	Lisianthus	Plants for planting	Netherlands	United Kingdom	1
	Verbena	Cuttings	Germany	Denmark	1
	Verbena	Plants for planting	Netherlands	United Kingdom	1
Liriomyza sativae	*Ocimum basilicum*	Vegetables	Thailand	France	13
***Liriomyza* sp.**	*Brassica chinensis*	Vegetables	Thailand	Denmark	1
	Brassica pekinensis	Vegetables	Thailand	Denmark	1
	Dianthus	Pot plants	Netherlands	United Kingdom	1
	Eustoma	Cut flowers	Israel	France	1
	Gypsophila	Cut flowers	Israel	Germany	1
	Gypsophila	Cut flowers	Israel	United Kingdom	1
	Gypsophila	Cut flowers	Netherlands	Czechia	1
	Gypsophila	Cut flowers	Netherlands	Norway	2
	Ocimum basilicum	Vegetables	Israel	France	5
	Ocimum basilicum	Vegetables	Morocco	France	1
	Ocimum basilicum	Vegetables	Thailand	Denmark	4

EPPO *Reporting Service*

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
L. huidobrensis	*Ocimum basilicum*	Vegetables	Thailand	Sweden	1
	Ornamentals	Cut flowers	Togo	France	1
	Solanum melongena	Vegetables	Togo	France	1
Liriomyza* sp., *Bemisia tabaci	*Ocimum basilicum*	Vegetables	Thailand	United Kingdom	1
Meloidogyne	*Phoenix dactylifera*	Pot plants	Egypt	France	1
***Meloidogyne, Hoplolaimus,* Criconematidae**	*Phoenix dactylifera*	Pot plants	Egypt	France	1
Nematodes	*Cycas revoluta*	Plants for planting	Costa Rica	Germany	2
	Musa sp.	Plants for planting	Togo	Germany	1
Paratylenchus, Helicotylenchus, Pratylenchus thornei, Tylenchorhynchus	*Betula*	Plants for planting	Moldova	France	1
Paratylenchus, Helicotylenchus, Tylenchorhynchus	*Acer saccharum*	Plants for planting	Moldova	France	1
Paratylenchus, Rotylenchus, Xiphinema	*Tilia platyphyllos*	Plants for planting	Moldova	France	1
Paratylenchus, Xiphinema, Helicotylenchus, Pratylenchus thornei	*Betula verrucosa*	Plants for planting	Moldova	France	1
Paratylenchus, Xiphinema, Helicotylenchus, Pratylenchus thornei	*Pinus montana*	Plants for planting	Moldova	France	1
Pratylenchus neglectus, Helicotylenchus	*Spiraea*	Plants for planting	Moldova	France	1
Pratylenchus neglectus, Zygotylenchus	*Deutzia*	Plants for planting	Moldova	France	1
Phthorimaea operculella	*Solanum tuberosum*	Ware potatoes	Cyprus	Norway	2
Plodia interpunctella	*Zea mays*	Stored products	Croatia	Slovenia	2
Ralstonia solanacearum	*Solanum tuberosum*	Ware potatoes	Egypt	Germany	4
	Solanum tuberosum	Ware potatoes	Egypt	Greece	6
	Solanum tuberosum	Ware potatoes	Egypt	Italy	8
	Solanum tuberosum	Ware potatoes	Egypt	Spain	7
	Solanum tuberosum	Seed potatoes	Netherlands	Germany	2
Spodoptera littoralis	*Melissa officinalis*	Plants for planting	Italy	United Kingdom	1
Thripidae	*Citrus aurantium* var. *myrtifolia*	Plants for planting	Italy	Sweden	1
	Protea barbigera	Cut flowers	South Africa	Portugal	1

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Thripidae, Aphididae	*Rosa*	Cut flowers	Brazil	Portugal	1
Thrips palmi	*Dendrobium*	Cut flowers	Thailand	Denmark	2
	Dendrobium	Cut flowers	Thailand	Italy	2
	Orchidaceae	Cut flowers	Singapore	Belgium	1
	Orchidaceae	Cut flowers	Singapore	Denmark	1
	Orchidaceae	Cut flowers	Singapore	France	1
	Orchidaceae	Cut flowers	Thailand	Belgium	7
	Orchidaceae	Cut flowers	Thailand	Denmark	1
***Thrips* sp. (probably *palmi*)**	*Momordica charantia*	Vegetables	Dominican Rep.	United Kingdom	1
	Momordica charantia	Vegetables	Thailand	France	1
	Solanum melongena	Vegetables	Thailand	France	2
	Solanum sp.	Vegetables	Thailand	France	1
***Thrips* sp.**	*Dendrobium*	Cut flowers	Thailand	Italy	4
Tomato black ring nepovirus	*Pelargonium*	Plants for planting	Spain (Canary Islands*)	United Kingdom	1
Tomato spotted wilt, Impatiens necrotic spot tospoviruses	*Zantedeschia rehmannii*	Bulbs	USA	Denmark	1
Tribolium, Oryzaephilus surinamensis	*Zea mays*	Stored products	Hungary	Slovenia	1
Xanthomonas campestris pv. citri	*Citrus hystrix*	Fruits	Thailand	France	20
Xiphinema americanum	*Areca*	Plants for planting	Cuba	United Kingdom	1

- **Fruit flies**

Pest	Consignment	Country of origin	C. of destination	nb
***Bactrocera* sp.**	*Mangifera indica*	Pakistan	France	2
***Ceratitis* sp.**	*Mangifera indica*	Burkina Faso	France	1
	Mangifera indica	Mali	France	1
	Mangifera indica	South Africa	France	1
Tephritidae (probably *B. cucurbitae* or *D. cilius*)	*Cucurbita* sp.	Pakistan	France	1
Tephritidae (non European)	*Citrus paradisi*	Argentina	France	1
	Mangifera indica	Burkina Faso	Germany	1
	Mangifera indica	Côte d'Ivoire	France	1
	Mangifera indica	India	France	1
	Mangifera indica	Pakistan	Luxembourg	2

- **Wood**

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Aphelenchoidae	**Pinus sp.**	Dunnage	China	France	1
***Aphelenchoides* sp. and other nematodes**	*Pinus* sp.	Wood	Madagascar	France	1
Ips duplicatus	Unspecified	Dunnage	Belgium	United Kingdom	1
Ips typographus	*Picea*	Dunnage	Latvia	United Kingdom	1
	Unspecified	Dunnage	Estonia	United Kingdom	1
***Monochamus* sp.**	*Larix sibirica*	Wood	Russia	Austria	2
Various adult beetles	Unspecified	Dunnage	Latvia	United Kingdom	1

- **Bonsais**

13 consignments of bonsai plants (*Acer, Celtis, Ilex crenata, Lisgustrum, Rhododendron lateritium, Sageretia, Serissa, Taxus cuspidata, Ulmus parvifolia, Zelkova*) from China (11) and Japan (2) were intercepted by Belgium (5), France (7) and United Kingdom (1) because of the presence of nematodes: Criconematidae, *Helicotylenchus,* Heteroderidae, *Pratylenchus penetrans, Pratylenchus thornei,* Trichodoridae, *Tylenchorhynchus*, *Xiphinema;* and aphids: *Tinocallis takachihoensis.*
Bonsais plants of *Acer buergerianum* from Korea Republic were intercepted by United Kingdom because of the presence of *Anoplophora malasiaca* (EPPO A1 quarantine pest).

Note. The following interceptions were made in 1997 by Hungary

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Agrobacterium tumefaciens	Unspecified fruit tree species	Grafts	Romania	Hungary	1
Calandra granaria	*Helianthus annuus*	Stored products	Ukraine	Hungary	2
Curculio elephas	*Castanea sativa*	Stored products	Albania	Hungary	2
***Cuscuta* sp.**	*Medicago sativa*	Seeds	Italy	Hungary	1
Ephestia elutella	*Juglans regia*	Stored products	Ukraine	Hungary	1
	Papaver somniferum	Seeds	Austria	Hungary	1
	Spices (mixture)	Stored products	Germany	Hungary	1
Globodera rostochiensis	*Solanum tuberosum*	Ware potatoes	Poland	Hungary	1
Insects	*Coffea arabica*	Stored products	(Italy)	Hungary	1
Ips sexdentatus	Unspecified	Wood	Ukraine	Hungary	1
Ips typographus	Unspecified	Wood	Ukraine	Hungary	1
Laemophloeus ferrugineus	*Coffea arabica*	Stored products	Brazil	Hungary	1
	Coffea arabica	Stored products	Uganda	Hungary	1
***Laemophloeus ferrugineus, Tribolium* sp.**	*Coffea arabica*	Stored products	Uganda	Hungary	2

EPPO *Reporting Service*

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Liriomyza trifolii	Ornamentals	Plants for planting	Germany	Hungary	1
Oryzaephilus surinamensis	*Hordeum distichon*	Stored products	Ukraine	Hungary	1
Rhizopertha dominica, Tribolium confusum	*Triticum aestivum*	Stored products	Ukraine	Hungary	1
Scolytidae	Unspecified	Wood	Romania	Hungary	1
	Unspecified	Wood	Ukraine	Hungary	1
Spongospora subterranea	*Solanum tuberosum*	Seed potatoes	Germany	Hungary	1
Tribolium confusum	*Coffea arabica*	Stored products	(Italy)	Hungary	1
	Helianthus annuus	Stored products	Moldova	Hungary	1
	Helianthus annuus	Stored products	Ukraine	Hungary	1
	Hordeum vulgare	Stored products	Croatia	Hungary	1
Tribolium confusum, Calandra granaria	*Helianthus annuus*	Stored products	Ukraine	Hungary	1
***Tribolium* sp.**	*Coffea arabica*	Stored products	Uganda	Hungary	1
***Tribolium* sp.**	*Theobroma cacao*	Stored products	(Germany)	Hungary	1
***Tyroglyphus* sp.**	*Theobroma cacao*	Stored products	(Germany)	Hungary	1

Source: EPPO Secretariat, 1998-08.