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2007/208 EPPO welcomes Azerbaijan as its 49th member country

Azerbaijan joined EPPO on the 2007-09-14. The Organization is glad to welcome Azerbaijan as its 49th member country. The contact point for Azerbaijan is:

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Source: French Ministry of Foreign Affairs, 2007-12.
EPPO Secretariat, 2007-12

Additional key words: new EPPO member country

Computer codes: AZ

2007/209 PQR version 4.6 is now available from the EPPO website

The updated version of PQR (version 4.6 - December 2007) is now available free of charge from the EPPO website: <http://www.eppo.org/DATABASES/pqr/pqr.htm>

PQR is a database which contains detailed information about the geographical distribution and host plants of regulated pests in Europe (also including some pests of regulatory concern to other RPPOs). It also provides information on commodities which are able to act as pathways in international trade.

As decided by the EPPO Executive Committee in April 2007, PQR can now be freely downloaded from the EPPO website. However, if needed, copies of the database on CD-ROM can still be ordered from the EPPO Secretariat at a price of 75 euros.

Source: EPPO Secretariat, 2007-12.

2007/210 New data on quarantine pests and pests of the EPPO Alert List

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

New records

Leptoglossus occidentalis (Heteroptera: Coreidae) is a forest insect of American origin feeding on seeds of several conifer species which was first found in France in September 2006. It is now reported from several departments in the south of France: Alpes-Maritimes, Ardèche, Gard, Hérault (Chapin and Chauvel, 2007). **Present, in the south.** It can be recalled that *L. occidentalis* has also been reported from Italy and Slovenia (EPPO RS 99/045 and 2006/159).

The presence of *Stephanitis takeyai* (Hemiptera: Tingidae, formerly EPPO Alert List) on *Pieris* and of *Pezothrips kellyanus* (Thysanoptera: Thripidae, formerly EPPO Alert List) on *Citrus* is reported in France (Streito and Martinez, 2005). **Present, no details.**

Tomato mosaic Havana virus (*Begomovirus*, ToMHV - formerly EPPO Alert List) was detected for the first time in Nicaragua in 2006 on tomato crops. Affected plants showed severe yellow leaf curl symptoms and a purple discolouration of the leaf margins (Monger *et al.*, 2007). **Present, no details.** ToMHV was first described in Cuba and it has also been reported from Jamaica and Honduras (ProMed, 2006; GeminiDetective website).

Verticillium dahliae (EPPO A2 List) causing verticillium wilt of melon (*Cucumis melo*) is reported for the first time from Tunisia. The disease was observed in several greenhouses in the Chott Mariem and Souassi regions during spring 2006 (Jabnoun-Khiareddine *et al.*, 2007). **Present, Chott Mariem and Souassi regions.**

Xanthomonas campestris pv. *musacearum* is the causal agent of a new serious banana wilt in Eastern Africa (EPPO RS 2003/171, 2005/119). It was first reported in Ethiopia on *Enset ventricosum* in 1968. It remained of low economic importance until 2001 when outbreaks occurred in central Uganda on banana (*Musa* spp.). Further outbreaks were then reported in the Democratic Republic of Congo (eastern part), Rwanda, and Tanzania (Lake Victoria region). The EPPO Secretariat had no previous data on the occurrence of *X. campestris* pv. *musacearum* in Rwanda and Tanzania (Mwangi *et al.*, 2007). **Present, no details.**

Xanthomonas vesicatoria (EPPO A2 List) occurs on tomato crops in Karnataka, India (Kavitha and Umesha, 2007). **Present, found in Karnataka.**

Xylosandrus germanus (Coleoptera: Scolytidae) was found for the first time in Hungary in June 2005, in the county of Baranya (Lakatos and Kajimura, 2007). **Present, found in 2005 in Baranya county.**

Detailed records

In Iran, a survey was conducted to identify nematodes associated with potato crops. The presence of *Ditylenchus destructor* (EU Annexes) was detected in the provinces of Semnan and Tehran (Tanhamaafi *et al.*, 2005).

In the USA, *Dryocosmus kuriphilus* (Hymenoptera: Cynipidae - EPPO A2 List) also occurs in Kentucky and Virginia (Cooper and Rieske, 2007).

As reported in EPPO RS 2006/076, *Heterodera glycines* (EPPO A1 List) occurs in Paraguay. During a survey done in 2004/2005, it was found in 13 fields in the main soybean producing areas of the country. *H. glycines* was detected in the districts of Alto Parana, Canindeyu, and Caaguazu. *H. glycines* is considered to be a serious threat to soybean production in Paraguay (Sano and Pedrozo, 2006).

Tomato yellow leaf curl virus (*Begomovirus* - EPPO A2 List) and *Tomato mottle virus* (*Begomovirus* - EPPO A1 List) were detected for the first time in Alabama (US). Both viruses were detected in 2005, and again in 2006, on commercial tomato crops (Akad *et al.*, 2007).

In Mexico, it is considered that *Tomato yellow leaf curl virus* (*Begomovirus*, TYLCV - EPPO A2 List) was first introduced in the east coast and Yucatan region around 1996. TYLCV is now also reported in the western part of the country, in the states of Sinaloa and Sonora (Idris *et al.*, 2007).

Host plants

'*Candidatus* *Liberibacter asiaticus*' (EPPO A1 List) was detected in *Clausena lansium* (Rutaceae) showing symptoms of huanglongbing in China (Ding *et al.*, 2005).

In Spain, *Iris yellow spot virus* (*Tospovirus* - EPPO Alert List) was observed for the first time on commercial leek crops (*Allium porrum* cvs. Asthow, Edison, Shelton) in Alicante, Comunidad Valenciana (Córdoba-Sellés *et al.*, 2007).

In the United Kingdom, *Phytophthora ramorum* (EPPO Alert List) was detected on *Magnolia stellata*, *M. loebneri* (Magnoliaceae) and *Griselinia littoralis* (Griselinaceae) causing leaf infections. Affected trees were destroyed (Giltrap *et al.*, 2007).

Tomato spotted wilt virus (*Tospovirus* - EPPO A2 List) was detected in *Coprosma repens* (Rubiaceae) showing necrotic spots and concentric rings on the leaves. The disease was observed in a nursery located in Catania Province, Sicilia (Italy) on potted plants (Polizzi and Bellardi, 2007).

In Italy, *Tomato yellow leaf curl virus* (*Begomovirus* - EPPO A2 List) was observed for the first time on protected crops of beans (*Phaseolus vulgaris*) in the province of Ragusa, Sicilia (Davino *et al.*, 2007).

- Source:
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- Polizzi G, Bellardi MG (2007) First report of Tomato spotted wilt virus on *Coprosma repens* (Mirror Bush) in Italy. *Plant Disease* 91(10), p 1362.
- Sano Z, Pedrozo LM (2006) Distribution of *Heterodera glycines* in Paraguay and its effect on the growth of soybean. *Nematologia Mediterranea* 34(1), 33-35 (abst.).
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- ProMed posting of 2006-03-09. Geminiviruses, vegetable crops - Jamaica. <http://www.promedmail.org>

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

Computer codes: DITYDE, HETDGL, IYSV00, LEPLOC, LIBEAS, PEZTKE, PHYTRA, STEPTA, TOHMHV, TOMOVO, TSWV00, TYLCVO, VERTDA, XANTMU, XANTVE, ES, FR, GB, HD, IN, IR, IT, JM, MX, NI, PY, RW, TN, TZ, US

2007/211 First report of *Mycosphaerella pini* in the Netherlands

In November 2007, *Mycosphaerella pini* (EU Annexes) was detected at two locations on old *Pinus* trees growing in public parks in the Netherlands. Only mild symptoms (yellow spots) were observed on some needles of the affected trees. Since natural spread was considered the most likely pathway, no eradication measures were applied. Nurseries growing *Pinus* will be informed and surveys will continue to monitor the disease. This is the first report of *M. pini* in the Netherlands.

The pest status of *Mycosphaerella pini* in the Netherlands is officially declared as: Present.

Source: NPPO of the Netherlands, 2007-12.

INTERNET (last retrieved in 2007-12)
 Website of the Dutch Ministry of Agriculture, Nature and Food Quality. Pest report. *Scirrhia pini* on *Pinus* sp. in public green.
http://www.minlnv.nl/portal/page?_pageid=116,1640321&_dad=portal&_schema=PORTAL&p_file_id=23902

Additional key words: new record

Computer codes: SCIRPI, NL

2007/212 *Synchytrium endobioticum* detected in Prince Edward Island, Canada

The occurrence of *Synchytrium endobioticum* (EPPO A2 List) has been confirmed by the NPPO of Canada in Prince Edward Island in November 2007. The fungus was found in a single potato field (18.2 ha) intended for processing. All harvested potatoes were processed or destroyed and all equipment was cleaned and disinfected. In order to prevent any further spread, restrictions were imposed on the movement of equipment and material from the infected field. In Canada, *S. endobioticum* has been reported from Newfoundland and occasionally from Prince Edward Island (see EPPO RS 2000/167 and 2002/144).

The pest status of *Synchytrium endobioticum* in Canada is officially declared as follows: **Present, only in some areas (Newfoundland, Prince Edward Island), and subject to official control.**

Source: NAPPO Phytosanitary Alert System – Official Pest Reports (2007-11-01) Confirmation of potato wart (*Synchytrium endobioticum*) detection in a single potato field in Prince Edward Island. <http://www.pestalert.org/oprDetail.cfm?oprID=292>

Additional key words: detailed record

Computer codes: SYNCEN, CA

2007/213 *Globodera rostochiensis* detected in Alberta, Canada

In Canada, *Globodera rostochiensis* (EPPO A2 List) has only been found in Newfoundland, and in small areas in Vancouver Island (Saanich – British Columbia), and Quebec (Saint-Amable). Similarly, *G. pallida* has only been detected in a small area of Newfoundland (see EPPO RS 2007/156). During the ongoing surveillance programme of seed potato crops, *G. rostochiensis* was detected in 2 soil samples from 2 farms in Alberta (out of 2721 samples collected from this province). Phytosanitary measures were immediately implemented to contain the pest. Additional sampling and testing are being carried out to delimit the infestation.

The pest status of *Globodera rostochiensis* in Canada is officially declared as follows: **Present, only in some areas (Alberta, Vancouver Island in British Columbia, Newfoundland, Quebec), and subject to official control.**

Source: NAPPO Phytosanitary Alert System – Official Pest Reports (2007-11-23) Golden nematode – Update on the Canadian situation. <http://www.pestalert.org/oprDetail.cfm?oprID=297>

Additional key words: detailed record

Computer codes: HETDRO, CA

2007/214 First report of *Xanthomonas axonopodis* pv. *poinsettiicola* on *Euphorbia pulcherrima* in Lombardia (IT)

The regional plant protection service of the Lombardia region, Italy, recently informed the EPPO Secretariat of the first occurrence of *Xanthomonas axonopodis* pv. *poinsettiicola* (EPPO Alert List). The bacterium was detected on *Euphorbia pulcherrima* cvs. Primero and Freedom growing in 2 nurseries in Beverate (province of Lecco) and Concorezzo (province of Milano). This is the first time that *X. axonopodis* pv. *poinsettiicola* is detected in Lombardia. It can be recalled that the bacterium had been reported in 2003 in the Lazio region (see EPPO RS 2004/175).

Source: NPPO of Italy, Regione Lombardia, 2007-12.

Additional key words: detailed record

Computer codes: XANTPN, IT

2007/215 Incursion of *Diaphania perspectalis* in Germany and addition to the EPPO Alert List

The NPPO of Germany recently informed the EPPO Secretariat of the incursion of *Diaphania perspectalis* (Lepidoptera: Pyralidae) in Baden-Württemberg. In May 2007, heavy damage on *Buxus* plants (mainly *B. sempervirens*) was observed in the city of Weil am Rhein and its surroundings. Damage was caused by larval feeding on leaves and shoots, leading to almost complete defoliation of *Buxus* hedgerows. Because of the high infestation level, it was assumed that this insect was introduced several years ago (probably around 2005). *D. perspectalis* originates from Asia and is known to occur in Japan, China and Korea Republic. It is assumed that it was introduced into Germany with commodities from China, since there was an important shipping centre for commodities imported from China close to the infested area. So far, the infestation is being controlled by insecticide treatments. On the basis of a preliminary risk assessment, the NPPO of Germany considered that *D. perspectalis* presented a high risk potential for Southern and Western Europe. Therefore, the EPPO Secretariat felt that this pest could be added to the EPPO Alert List.

The pest status of *Diaphania perspectalis* in Germany is officially declared as follows: **Transient, actionable, under eradication.**

***Diaphania perspectalis* (Lepidoptera: Pyralidae)**

Why	<i>Diaphania perspectalis</i> (synonym <i>Glyphodes perspectalis</i>) is a pest of <i>Buxus</i> originating from Asia which was reported for the first time in 2007 in Europe, in Germany. Although data is lacking on the biology, geographical distribution and economic impact, <i>D. perspectalis</i> is apparently able to cause severe defoliation to <i>Buxus</i> plants.
Where	EPPO region: Germany (Baden-Württemberg). <i>D. perspectalis</i> was found in May 2007 in the city of Weil am Rhein and its surroundings. Eradication measures are being implemented in Germany. Asia: China, Japan, Korea Republic.
On which plants	<i>Buxus</i> species (e.g. <i>B. microphylla</i> , <i>B. microphylla</i> var. <i>insularis</i> , <i>B. sempervirens</i> , <i>B. sinica</i>).
Damage	Larvae feed on leaves and shoots and severe infestations can lead to almost complete defoliation of the plants. Data is lacking on the biology of the pest but in China (Shanghai), 3 to 4 generations per year have been observed with 6 to 7 larval instars. Larvae pupate on the leaves.

	<p>Pictures can be viewed on the Internet: http://www.lepiforum.eu/cgi-bin/lepiwiki.pl?action=browse&id=Glyphodes_Perspectalis&revision=9 http://www.klaus-rennwald.de/neubuerger/index.html http://nafoku.de/butfly/hfm/17102007_0836.htm</p>
Dissemination	<p>Adults can fly but no data is available on the natural dispersal of this insect. Trade of infested <i>Buxus</i> plants or parts of plants can disseminate the pest over long distances. In Germany, it was observed that <i>D. perspectalis</i> was found in the vicinity of a shipping centre for commodities imported from China, so it might be possible that the pest could also be transported as a hitchhiker on various commodities.</p>
Pathway	<p>Plants for planting of <i>Buxus</i>.</p>
Possible risks	<p><i>Buxus</i> are commonly planted in European gardens (parterres, hedges, topiary work) and are also growing in forests as understory shrubs. Severe attacks of <i>D. perspectalis</i> can lead to defoliation and therefore completely disfigure <i>Buxus</i> plants which in many cases are grown for ornamental purposes. Although data is lacking on the control of <i>D. perspectalis</i>, chemical and biological control methods (e.g. with nematodes such as <i>Steinernema</i> sp.) are mentioned in the literature. The introduction of such a new pest in Europe could represent a threat to nurseries, parks and gardens, and <i>Buxus</i> shrubs growing in the wild.</p>
Source(s)	<p>Bin-Cheng Zhang (1994) Index of economically important Lepidoptera. CABI Wallingford, GB, 599 pp. CABI Crop Protection Compendium. http://www.cabicompndium.org/cpc/ Maruyama T (1993) Life cycle of the box-tree pyralid, <i>Glyphodes perspectalis</i> (Walker) (Lepidoptera: Pyralidae). IV. Effect of various host plants on larval growth and food utilization. <i>Japanese Journal of Applied Entomology and Zoology</i> 7(3), 117-122 (abst.). NPPO of Germany, 2007-07. Tang SJ, Qin HZ, Sun W (1990) Studies on bionomics of <i>Diaphania perspectalis</i>. <i>Journal of Shanghai Agricultural College</i> 8(4), 307-312 (abst.). Zhou-Wei, Xia-CaiYun, Sun-XingQuan, Zhu-Bing, Liu-XiaoPing, Liu-ZhiCheng, Wang-Yan (2005) Studies on the biological characteristics and control of <i>Diaphania perspectalis</i> Walker. <i>Journal of Shanghai Jiaotong University Agricultural Science</i> 23(1), 52-56 (abst.).</p>
EPPO RS 2007/215	
Panel review date	-
	Entry date 2007-11

2007/216 Invasive *Bactrocera* species in Africa

A webpage on 'Invasive fruit fly pests in Africa' provides useful information about the current situation of four Asian *Bactrocera* species (Diptera: Tephritidae) which have been introduced into Africa. It also provides information on the identification of these species. The EPPO Secretariat has extracted the following new information.

***Bactrocera cucurbitae* (EPPO A1 List)**

In Africa, *B. cucurbitae* was probably introduced a long time ago. Although it was restricted to eastern Africa for several decades, it has recently been reported from western Africa and the Seychelles. The EPPO Secretariat had previously no data on the occurrence of *B. cucurbitae* in: Benin*, Nigeria*, Senegal*, Togo* and Uganda*. There was an old record of *B. cucurbitae* in Egypt (in the Lower Nile Valley) but extensive surveys have recently been made and could not detect the pest. It is now felt that this record is erroneous and that *B. cucurbitae* should be considered as absent from Egypt.

***Bactrocera invadens* (EPPO Alert List)**

In Africa, *B. invadens* was first found in Kenya in 2003 (see EPPO RS 2005/085) and it continued to spread within this continent. Its presence is now also reported from Côte d'Ivoire* and Ethiopia*. It is considered that *B. invadens* originates from Asia (Sri Lanka) but its situation there is not well known. It was recently recorded in Bhutan (see EPPO RS 2007/150) and in the south of India. In India*, the presence of *B. invadens* was reported for

the first time during surveys conducted from May to August 2005 (Sithanantham *et al.*, 2006).

The following list of host plants of *B. invadens* in Africa has been gathered (no data was available on its hosts in Asia):

- Anacardiaceae: *Anacardium occidentale*, *Mangifera indica*, *Sclerocarya birrea*,
Spondias cytherea.
Annonaceae: *Annona muricata*.
Caricaceae: *Carica papaya*.
Cucurbitaceae: *Citrullus lanatus*, *Cucumis figarei*, *Cucumis sativus*.
Combretaceae: *Terminalia catappa*.
Dracaenaceae: *Dracaena steudneri*.
Ebenaceae: *Diospyros montana*.
Flacourtiaceae: *Flacourtia indica*.
Lauraceae: *Persea americana*.
Musaceae: *Musa* sp.
Myrtaceae: *Psidium guajava*.
Rosaceae: *Eriobotrya japonica*, *Prunus persica*.
Rutaceae: *Citrus limon*, *C. paradisi*, *C. reticulata*, *C. sinensis*, *Fortunella japonica*.
Sapotaceae: *Chrysophyllum albidum*.
Solanaceae: *Lycopersicon esculentum*.
Strychnaceae: *Strychnos mellodora*.

Bactrocera latifrons

In Africa, the first specimens were trapped at the beginning of 2006 in Morogoro, in Tanzania (see EPPO RS 2006/228). Surveys have shown that this species is widespread in Tanzania but with low numbers because of its limited host range. In 2007, it was found for the first time in Kenya* near the border with Tanzania.

***Bactrocera zonata* (EPPO A1 List)**

On the African continent, *B. zonata* was first recorded in the Kalubia governorate in Egypt in 1993 on *Psidium guajava*, and then in the Fayoum governorate. In 1994, *B. zonata* was found in the Alexandria and Giza governorates on different fruit trees cultivated in private gardens. By 1997, the pest was widespread in Egypt (even occurring in desert areas such as the oases of Dakhla, Kharga, and Sinai). In Africa, *B. zonata* is also reported from Libya*, the islands of the Indian Ocean (Mauritius and Réunion). In the Arabian Peninsula, *B. zonata* is reported in Oman, Saudi Arabia, United Arab Emirates and Yemen*.

* The EPPO Secretariat had previously no data on the occurrence of the pest in the country concerned.

Source: Sithanantham S, Selvaraj P, Boopathi T (2006) The fruit fly *Bactrocera invadens* (Tephritidae: Diptera) new to India. *Pestology* 33(9), 36-37.

INTERNET (last retrieved in 2007-12).

Invasive Fruit Fly Pests in Africa. A diagnostic tool and information reference for the four Asian species of fruit fly (Diptera, Tephritidae) that have become accidentally established as pests in Africa, including the Indian Ocean Islands, by Marc De Meyer, Salah Mohamed and Ian M. White.

<http://www.africamuseum.be/fruitfly/AfroAsia.htm>

Additional key words: new records, detailed records, denied records

Computer codes: BCTRIN, DACUCU, DACULA, DACUZO, BJ, CI, EG, ET, IN, KE, LY, NG, SN, TG, UG, YE

2007/217 First record of *Acanalonia conica* in Italy

A North American planthopper species, *Acanalonia conica* (Homoptera: Acanaloniidae) has recently been found in Italy. It was first observed in the Veneto region (province of Padova) in 2004, and then in Lombardia (province of Pavia) in July and August 2006. *A. conica* is a polyphagous species. In Veneto, it was observed on a wide range of host plants (*Amorpha fruticosa*, *Corylus avellana*, *Cornus sanguinea*, *Prunus* sp., *Urtica dioica*, *Parietaria officinalis*, *Humulus lupulus*, *Solanum nigrum*, *Chenopodium* sp., *Xanthium italicum*). In Lombardia, few specimens of *A. conica* were caught on the foliage of *Ulmus* and *Morus* trees growing near a vineyard, and in a small family orchard. Adults of *A. conica* are green, 13 mm long, and appear during summer (June-July to September). There is one generation per year. Eggs are laid in the bark or in the leaves. As the nymph feeds, it produces a white waxy secretion which covers its body and the twig or leaf around it. Adults and nymphs also excrete honeydew on which sooty mould can develop. In the USA, *A. conica* is a common and widespread species which is not considered a severe pest. In Italy, its introduction raised some concern because of its similarities with *Metcalfa pruinosa* (Homoptera: Flatidae). Its currently known geographical distribution is as follows:
North America: USA (Alabama, Arkansas, Connecticut, Delaware, Florida, Georgia, Iowa, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Missouri, Mississippi, North Carolina, Nebraska, New York, Ohio, Pennsylvania, Tennessee, Texas, Virginia).
EPPO region: Italy (few specimens found in Veneto and Lombardia).

Source: Nicoli Aldini R, Mazoni E, Ciampitti M (2006) [First finding of the nearctic hopper *Acanalonia conica* (Say) (Fulgoromorpha Acanaloniidae) in Lombardy (Northern Italy).] *Bolletino di Zoologia Agraria e di Bachicoltura Serie II* 38(3), 261-264 (in Italian).

INTERNET (last retrieved in 2007-11)

Museo di Storia Naturale di Venezia. *Acanalonia conica* (Say, 1830) (Insecta, Homoptera, Acanaloniidae).

http://www.msn.ve.it/index.php?pagina=progamb_view&id=4&idprog=38

North American Fulgoroidea database - Distribution of *Acanalonia conica* in USA

<http://ctap.inhs.uiuc.edu/dmitriev/taxahelp.asp?hc=221&key=FulgUS&lng=En>

University of Minnesota. Department of Entomology. IPM of Midwest Landscapes. Planthopper.

<http://www.entomology.umn.edu/cues/Web/187Planthopper.pdf>

Additional key words: new record

Computer codes: IT

2007/218 First record of *Anatrachyntis badia* in Italy

In 2006 during surveys on insect pests of ornamental plants in parks and gardens, the presence of a new microlepidoptera, *Anatrachyntis badia* (Lepidoptera: Cosmopterigidae) was recorded for the first time in Italy. *A. badia* was found in several cities in Sicilia (Catania, Messina, Palermo) and Calabria (Tarsia and Altomonte, near Cosenza) feeding on leaves of *Cycas revoluta* and *C. circinalis*. Affected plants presented yellowing leaves followed by necrosis and suberification, as well as perforation of the leaf and erosion of the underside. Preliminary observations made in Sicilia showed that the highest numbers of larvae were detected near colonies of the mealybug *Pseudococcus longispinus* (Homoptera: Pseudococcidae) which probably render plant tissues more susceptible to *A. badia*

infestations. *A. badia* originates from North America where it feeds on various host plants (cones of *Pinus*, citrus fruits, banana, cabbage, sorghum). Its currently known geographical distribution is as follows:

North America: USA (California, Florida, Hawaii, Louisiana, Maryland).

EPPO region: France, Malta, Netherlands, Spain (including Islas Canarias), United Kingdom.

Source: Bella S, Mazzeo G (2006) First record of *Anatrachyntis badia* (Hodges, 1962) (Lepidoptera Cosmopterigidae) in Italy. *Bolletino di Zoologia Agraria e di Bachicoltura Serie II* 38(3), 255-260.

Additional key words: new record

Computer codes: IT

2007/219 Details on the situation of several *Brevipalpus* species in France and its overseas territories and departments

Details regarding the current situation of several *Brevipalpus* species (Acari: Tenuipalpidae) in France were recently sent to the EPPO Secretariat.

- *Brevipalpus californicus*

As reported in the EPPO RS 2007/152, *Brevipalpus californicus* does not occur on mainland France. In the French overseas territories and departments, its current situation is as follows:

French Guiana: Absent (which corrects an old and unconfirmed report).

Guadeloupe: Absent.

Martinique: Absent.

Réunion: Present (Etienne and Vilardebo, 1978). The EPPO Secretariat had previously no data on the occurrence of *B. californicus* on the Island of Réunion.

- *Brevipalpus phoenicis*

Guadeloupe: Present, found on *Alpinia purpurata*, *Annona muricata*, *Citrus*, *Psidium guajava* (Flechtmann and Etienne, 2006).

- *Brevipalpus styxus*

Guadeloupe (Les Saintes): Present, found on *Solanum racemosum* (Flechtmann and Etienne, 2006).

- *Brevipalpus trinidadensis*

Guadeloupe: Present, found on *Wedelia calycina* (Flechtmann and Etienne, 2006).

Source: Personal communication with Philippe Reynaud, NPPO of France, 2007-12.
Etienne J, Vilardebo A (1978) Notes sur les principaux ravageurs des agrumes de l'île de la Réunion. *Fruits* 33(12), 873-876.
Flechtmann CHW, Etienne J (2006) Further notes on plant associated mites (Acari) from Guadeloupe and Les Saintes, Lesser Antilles. *International Journal of Acarology* 32(4), 377-382.

Additional key words: denied records, new records, detailed records

Computer codes: BRVPSP, FR, GD, GF, RE

2007/220 Surveys on scale insects in the French Antilles and other Caribbean islands

From 1984 to 2006, surveys on scale insects (Homoptera: Coccidae) were carried out in the French Antilles and other Caribbean islands (Guadeloupe including La Désirade, Les Saintes, Marie-Galante, Saint-Barthélemy and Saint-Martin, Martinique, Dominica, Dominican Republic). In addition, studies were also made on collections of scale insects which had been gathered in the past. 1300 samples were collected from cultivated and wild plants. As a result, 140 scale species belonging to 8 families were recorded. Ten species are reported for the first time from the Caribbean or the neotropical region: *Asterolecanium arabidis*, *Bambusaspis bambusicola*, *Bambusaspis mimica*, *Dysmicoccus debregeasiae*, *Icerya seychellarum seychellarum*, *Nipaecoccus guazumae*, *Rhizoecus amorphophalli*, *Rhizoecus variabilis*, *Spilococcus mamillariae*, and *Umbaspis regularis*. These studies also provided new data on the following scale species:

- ***Aulacaspis yasumatsui* (EPPO Alert List)**

It is reported for the first time on *Cycas* species in Guadeloupe (*Cycas revoluta*, *C. circinalis*) and in Martinique. *A. yasumatsui* is considered as a very serious threat to *Cycas* in the French Antilles and studies are being made on the possible introduction of biological control agents: *Coccobius fulvus* (Hymenoptera: Aphelinidae) and *Cybocephalus binotatus* (Coleoptera: Nitidulidae).

- ***Maconellicoccus hirsutus* (EPPO A1 List)**

The presence of *M. hirsutus* is reported for the first time on the islands of La Désirade, Marie-Galante, and Saint-Barthélemy. The pest was observed on *Hibiscus rosa-sinensis*.

- ***Parasaissetia nigra* (EU Annexes)**

It was found in Martinique on *Hibiscus rosa-sinensis*, thus confirming earlier reports.

- ***Unaspis citri* (EPPO A1 List)**

It is reported for the first time from Marie-Galante on citrus, and it also occurs in Martinique (the EPPO Secretariat had previously no data about its occurrence on this island).

Source: Matile-Ferrero D, Etienne J (2006) Cochenilles des Antilles françaises et de quelques autres îles des Caraïbes (Hemiptera, Coccoidea). *Revue française d'Entomologie* (NS) 28(4), 161-190.

Additional key words: new records, detailed records

Computer codes: AULSYA, PHENHI, SAISNI, UNASCI, FR, GD, MT

2007/221 Real-time multiplex detection of *Meloidogyne chitwoodi* and *M. fallax*

A multiplex real-time PCR assay has been developed in the Netherlands for the simultaneous detection of *Meloidogyne chitwoodi* and *M. fallax* (both EPPO A2 List). This PCR method could detect both species in DNA samples extracted from batches of juvenile nematodes, from single juveniles and from infected plant material (potato tubers and crocus bulbs). Although the preliminary results were found satisfactory, further research is needed to verify that this real-time PCR method can reliably be used on field samples.

Source: Zijlstra C, van Hoof RA (2006) A multiplex real-time Polymerase Chain Reaction (TaqMan) assay for the simultaneous detection of *Meloidogyne chitwoodi* and *M. fallax*. *Phytopathology* 96(11), 1255-1262.

Additional key words: diagnostics

Computer codes: MELGCH, MELGFA

2007/222 New real-time PCR test to detect '*Candidatus* Phytoplasma mali'

A new real-time PCR test has been developed to detect specifically '*Candidatus* Phytoplasma mali' (phytoplasma associated with apple proliferation - EPPO A2 List). Comparisons were made with other real-time PCR protocols and conventional PCR (using fU5/rU3 primers). The new real-time PCR test was found highly sensitive (10 to 100 fold more sensitive than conventional PCR) and its specificity was improved compared to other real-time PCR tests. The authors concluded that the new method had a good potential for routine testing, in particular in certification schemes.

Source: Aldaghi M, Massart S, Roussel S, Jijakli MH (2007) Development of a new probe for specific and sensitive detection of '*Candidatus* Phytoplasma mali' in inoculated apple trees. *Annals of Applied Biology* 151(2), 251-258.

Additional key words: diagnostics

Computer codes: PHYPMA

2007/223 New real-time PCR test to detect *Guignardia citricarpa*

A new real-time PCR test was developed in the Netherlands to specifically detect *Guignardia citricarpa* (EPPO A1 List) on citrus fruits. When compared with conventional PCR, the new protocol was found more sensitive, less laborious and faster. It could also be adapted to portable thermocyclers to be used for on-site detection. It is considered that this new real-time PCR protocol efficiently detects *G. citricarpa* in lesions from suspect fruit samples and could be used during routine import inspections.

Source: van Gent-Pelzer MPE, van Brouwershaven IR, Kox LFF, Bonants PJM (2007) TaqMan PCR method for routine diagnosis of the quarantine fungus *Guignardia citricarpa* on citrus fruits. *Journal of Phytopathology* 155(6), 357-363.

Additional key words: diagnostics

Computer codes: GUIGCI

2007/224 Substitute species to garden pond plants in Scotland, United Kingdom

Plantlife, a charity organisation working to protect wild plants and their habitats in the United Kingdom, has released a leaflet to warn gardeners about the threats caused by aquatic invasive alien plants used for garden ponds in Scotland, and to propose non-invasive substitute plants.

The following plants are considered as invasive and shall not be used and bought: *Azolla filiculoides* (Azollaceae, EPPO List of Invasive Alien Plants), *Cabomba caroliniana* (Cabombaceae, EPPO List of IAP), *Crassula helmsii* (Crassulaceae, EPPO A2 List), *Eichhornia crassipes* (Pontederiaceae, EPPO Alert List), *Elodea canadensis* (Hydrocharitaceae), *Elodea nuttallii* (Hydrocharitaceae, EPPO List of IAP), *Hydrocotyle ranunculoides* (Apiaceae, EPPO A2 List), *Lagarosiphon major* (Hydrocharitaceae, EPPO List of IAP), *Myriophyllum aquaticum* (Haloragaceae), *Pistia stratiotes* (Araceae, EPPO Alert List), *Salvinia molesta* (Salviniaceae, EPPO Alert List).

The following native species are proposed as substitutes: *Callitriche stagnalis* (Callitrichaceae), *Eleocharis acicularis* (Cyperaceae), *Myosotis scorpioides* (Boraginaceae), *Myriophyllum spicatum* (Haloragaceae), *Nuphar lutea* (Nymphaeaceae), *Nymphaea alba* (Nymphaeaceae), *Potamogeton natans* (Potamogetonaceae), *Ranunculus aquatilis* (Ranunculaceae), *Ranunculus flammula* (Ranunculaceae). The cosmopolitan *Ceratophyllum demersum* (Ceratophyllaceae) is also proposed as a substitute plant; nevertheless, this species has shown invasive behaviour and should be used with care.

In addition, the leaflet recalls that it is illegal to uproot wild plants, and makes the following recommendations:

- Dispose of any pond plant very carefully and compost them at home or through municipal composting schemes, or burn them
- Try to use native plants instead of invasive alien plants, preferably from local sources
- Only buy properly labelled plants (check the full Latin name)
- Ask store managers for proper labelling.

Source: Plantlife (2006) Pond Alert! Managing your garden pond to protect Scotland's wildlife. Plantlife International.
<http://www.plantlife.org.uk/uk/plantlife-campaigning-change-invasive-plants.html>

Additional key words: invasive alien plants, substitutes

Computer codes: AZOFI, CABCA, CSBHE, EICCR, ELDC, ELDNA, HYDRA, LGAMA, MYPBR, PISST, SAVMO, GB

2007/225 Weeds of the future: garden plants which may threaten grasslands in Australia

Introduced plants in Australia can be categorized into three major groups:

- Widespread invasive plants: these naturalized plants are causing significant economic, environmental and social costs
- Emerging and sleeper invasive plants: these naturalized plants are spreading or are likely to spread
- Future weeds: these plants are not yet naturalized.

While most work and research focuses on the 2 first categories, a study has been undertaken to identify garden plants which could in the future become a threat to grasslands in Australia.

This study was based on the Western Australia Department of Agriculture and Food's "plant database" which covers approximately 576 000 taxa.

First of all, this database was queried so that the species meet the following criteria:

- They are already introduced into Australia
- They are not naturalized nor reported as weeds in Australia
- They are recorded overseas as environmental and/or agricultural weeds.

This resulted in an initial list of 1080 species. In order to focus on the plant species presenting the greatest threat to the Australian grasslands, the following types of plant species were then removed:

- cold climate tree species
- species recorded as occurring in aquatic environments (except for Poaceae and Cyperaceae species)
- species with a single reference as a weed species outside of Australia
- species referenced as a weed overseas in climates dissimilar to Australia
- species with none or a single record of being sold in Australia

281 species were finally identified as presenting the greatest potential threat to the grasslands of Australia.

Case studies were undertaken and provided detailed descriptions and potential distributions in Australia for the following 11 species: *Asclepias syriaca* (Asclepiadaceae) originating from North America; *Equisetum* spp. native to the northern hemisphere; *Festuca gaultheri* (Poaceae) originating from France and Spain; *Hieracium* spp. (Asteraceae) originating from Europe and Asia; *Inula helenium* (Asteraceae) native to Eurasia; *Lonicera* spp. (Caprifoliaceae) originating from Asia, Europe and North America; *Miscanthus floridulus* (Poaceae, originating from Japan, Taiwan and the Pacific Islands); *Nassella tenuissima* (Poaceae) originating from South America; *Onopordum nervosum* (Asteraceae) native to the northern hemisphere; *Ornithogalum nutans* (Liliaceae) native to south-eastern Europe; and *Tamarix gallica* (Tamaricaceae) native to southern Europe, Asia and Africa.

Source: Barker J, Randall R, Grice T (2006) Weeds of the future? Threats to Australia's grazing industries by garden plants. Meat and livestock Australia limited, North Sydney, Australia, 107 p.
http://www.weeds.crc.org.au/publications/other_products.html

Additional key words: invasive alien plants

Computer codes: ASCSY, MISFL, STDTN, AU

2007/226 First report of *Cabomba caroliniana* in France

In France, *Cabomba caroliniana* (Cabombaceae, EPPO List of IAP) has been recorded for the first time on the Bourgogne canal in Dijon during the hottest period of summer 2005. A study had been undertaken since 15 km of the canal had been significantly invaded over this period. This study ascertained that in general, indigenous species were present, but noted the new occurrence of *C. caroliniana*. Water analysis did not show any quality degradation in the canal. Until now, *C. caroliniana* is only considered casual in France.

Source: Dutartre A, Chauvin C, Grange J (2006) Colonisation végétale du canal de Bourgogne à Dijon. Bilan 2006 - Propositions de gestion. Voies Navigables de France, Cemagref. 87 p.

Contact: Alain Dutartre, Cemagref Bordeaux (FR),
alain.dutartre@bordeaux.cemagref.fr

Additional key words: invasive alien plant, new record

Computer codes: CABCA, FR

2007/227 *Salvinia molesta* in the EPPO region: addition to the EPPO Alert List

Considering the potential of invasiveness and the absence of *Salvinia molesta* in the EPPO region, the Secretariat considered that this species could usefully be added to the EPPO Alert List.

Why: *Salvinia molesta* (Salviniaceae) is a floating aquatic fern originating from South America. Its common name is "Giant Salvinia" in English. The plant is traded as an aquatic ornamental plant, as well as an aquarium plant. It is thought that many infestations have arisen from discarded aquarium material. Within the EPPO region, it has not yet been recorded in the wild. Because this plant has shown invasive behaviour where it has been introduced elsewhere in the world, and is still absent from the EPPO region, it can be considered a new emerging invader in Europe.

Geographical distribution

Africa (invasive): Botswana, Burkina Faso, Côte d'Ivoire, Ghana, Kenya, Madagascar, Mauritius, Namibia, Senegal, South Africa, Swaziland, Tanzania, Uganda, Zambia.

Asia (invasive): India (south), Indonesia (Kalimantan), Malaysia (Sabah, Sarawak), Philippines, Singapore, Sri Lanka, Thailand.

Caribbean (native): Cuba, Trinidad and Tobago.

North America: Mexico (native), USA (invasive - Arizona, California, Florida, Hawaii, Louisiana, Mississippi, North Carolina, Texas).

Oceania (invasive): Australia (Australian Capital Territory, New South Wales, Queensland, Tasmania, South Australia, Victoria, Western Australia), Fiji, French Polynesia, New Caledonia, New Zealand, Papua New Guinea, Vanuatu.

South America (native): Argentina, Brazil (south-eastern), Colombia, Guyana

Note: in the USA, the plant has been eradicated from the District of Columbia and from South-Carolina. Its presence is uncertain in Alabama.

Morphology

S. molesta is a free floating aquatic fern. It lacks true roots, but it produces a horizontal rhizome (that lies below the water surface), and two types of fronds: buoyant and submersed, the later functioning as roots. Individual plants are up to 30 cm long with numerous leaves which usually form a mat from 2.5 cm up to 1 m thick.

The floating leaves are light to medium green, often with brownish edges in mature plants, elliptic and entire. The plant greatly varies morphologically depending on the habitat conditions (i.e. space and nutrient availability) and leaves can vary from 1.5 cm to 6 cm wide.

Habitats

It grows preferably in stagnant or slow-flowing waters such as lakes, water courses, wetlands, ditches, ponds, canals.

Biology and ecology

S. molesta prefers tropical, sub-tropical or warm temperate areas of the world. Depending on the climate, it can either be a perennial or an annual (in non-tropical regions). In nutrient rich waters, it may reach a density of 30 000 small plants per m² and can double its biomass in 2 days under optimal conditions. Optimal growth is observed at water temperatures ranging from 20°C to 30°C. Buds are killed if exposed for more than two hours to temperatures below -3°C or above 43°C. The plant can tolerate a wide pH range, the optimum being between pH 6 and pH 7.5. The plant is able to tolerate salinity, and growth is greatly stimulated by an increase in nutrients levels.

The plant only reproduces vegetatively and is dispersed by wind and water. Vegetative parts of the plant may be spread by human activities such as fishing, movement of boats, etc. It has also been reported as being spread by animals (hippos in Africa and water buffaloes in Australia).

Impacts

S. molesta reduces oxygen diffusion into the water, reducing the quality of the habitat for flora and fauna. Native aquatic plants are eliminated; dead plants release large amounts of nutrients into the water, thereby increasing eutrophication. In the Kakadu national park (Australia), bird species that used open waters declined in areas that were heavily infested. Small fish and snake abundance was also reduced. In India and on the islands of Borneo and Sri Lanka, the plant impacts upon fisheries and is also a serious weed in ricelands. It blocks irrigation channels and makes fluvial transport more difficult. It may also provide an ideal breeding ground for mosquitoes, which are vectors of diseases (malaria in Sri Lanka, encephalitis in Australia).

Control

Integrated control: Proliferation of *S. molesta* as well as other aquatic weeds is often indicative of increased nutrient levels in water. Sustainable management of the whole ecosystem by decreasing the nutrient level and improving sewage drainage and effluent treatment is likely to reduce the biomass of floating plants. Following *S. molesta* removal, continuous monitoring of infestation sites is necessary to detect new outbreaks. Large infestations may be mechanically harvested, but this may cause fragmentation and further spread. Manual control is considered difficult, costly and inefficient. Herbicides used are diquat formulated for use in running waters, hexazinone, chlorsulfuron, or fluridone.

Biological control: *Cyrtobagous salviniae* (Coleoptera: Curculionidae) has been successfully used as a biological control agent in Australia, Kenya, Malaysia, Namibia, Papua New

Guinea, Philippines, Senegal, South Africa, South India, Sri Lanka, USA (Texas, Louisiana), Zambia, Zimbabwe, etc.

Source: Global Invasive Species database
<http://www.issg.org/database/species/ecology.asp?si=569&fr=1&sts=sss>

Pacific Island Ecosystems at Risk
http://www.hear.org/pier/species/salvinia_molesta.htm

Weber E (2003) Invasive plant species of the world - a reference guide to environmental weeds. CABI Publishing. Wallingford, UK, 548 p. p. 384.

Additional key words: invasive alien plant, alert list

Computer codes: SAVMO

2007/228 *Fallopia baldschuanica* in the EPPO region: addition to the EPPO Alert List

Considering the potential of invasiveness and the limited presence of *Fallopia baldschuanica* in the EPPO region, the Secretariat considered that this species could usefully be added to the EPPO Alert List.

Why: Fallopia baldschuanica (Polygonaceae) is a perennial vine native to Asia. Its common name is "mile-a-minute-vine", or "Russian vine" in English. The plant has been introduced for ornamental purposes and is still sold as such (first introduced in Spain in 1889). Within the EPPO region, its distribution is still limited. Because this plant has shown invasive behaviour where it has been introduced elsewhere in the world, and is still limited in the EPPO region, it can be considered a new emerging invader in Europe.

Geographical distribution

EPPO Region: Denmark (not invasive), Ireland (invasive), Germany, Spain (invasive), Italy (invasive), Slovenia (invasive).

Asia (native): Afghanistan, China (Tibet), Pakistan (Waziristan in the north-east), Russia (south, Siberia), Tajikistan.

North America (invasive): USA (California, Colorado, Maryland, Massachusetts, Michigan, New Jersey, New Mexico, New York, Pennsylvania, Utah, Virginia, Washington).

Central America: Costa Rica.

Note: the species is casual in Belgium. In Slovenia, it is present in the warmer south-western part.

Morphology

F. baldschuanica is a non rhizomatous perennial vine growing up to 3-10 m. The lower part of climbing stems is woody. Leaves are simple and deciduous, 3-10 x 1-5 cm, ovate-oblong, petiole 1-4 cm, and margin entire or wavy. Terminal inflorescences in dense panicles, 3-15 cm with bisexual flowers, in fascicles of more than 5 flowers, greenish white to pink, 5-8 cm. The plant flowers from May to October. Achenes are dark brown to black, shiny, smooth, 2-4 x 1.8-2.2 mm.

Biology and ecology

The plant can grow in many types of soils. It can tolerate temperatures down to -20°C, but is sensitive to long lasting periods of frost. The species hybridizes with the very invasive *Fallopia japonica* (EPPO List of IAP) which may increase its reproductive ability. It can reproduce both sexually by seeds and vegetatively by layering and rhizomes.

Habitats

F. baldschuanica thrives in disturbed sites, walls and ruins, riparian forests.

Impacts

This vine grows over shrubs and trees, and threatens native vegetation.

Control

The best strategy is to prevent the introduction of *F. baldschuanica* in wild areas. The only management method which has shown some effectiveness is the manual removal of plants. This mechanical method can only be effective if subterranean organs are removed.

Source: Personal communication with Laura Celesti-Grapow, University of Roma, La Sapienza, 2005 (laura.celesti@uniroma1.it)
 Personal communication with Nejc Jogan, University of Ljubjana, 2005 (nejc.jogan@bf.uni-lj.si)
 Missouri Botanical Garden
<http://www.mobot.org/gardeninghelp/plantfinder/Plant.asp?code=E760>
 Sanz Elorza M, Dana Sánchez ED, Sobrina Vesperinas E Eds (2004) Atlas de las plantas alóctonas invasoras en España. Dirección General para la Biodiversidad. Madrid, 384 pp.
 United States Department of Agriculture - Plant Database - Plants Profile
<http://plants.usda.gov/java/profile?symbol=POBA3>

Additional key words: invasive alien plant, alert list

Computer codes: BIKBA, DE, DK, ES, IE, IT, FR, SI