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2007/021 First outbreak of *Erwinia amylovora* in Morocco

The NPPO of Morocco recently informed the EPPO Secretariat of the first report of fireblight (*Erwinia amylovora* – EPPO A2 List) on its territory. In May 2006, symptoms resembling those of fireblight were observed on pear (*Pyrus communis*), apple (*Malus domestica*) and quince (*Cydonia oblonga*) trees in one orchard located in the region of Meknes. Samples were tested at the laboratory and the presence of *Erwinia amylovora* was confirmed. Surveys were carried out in fruit tree orchards in the region of Meknes but no fireblight symptoms were observed. In order to eradicate the disease and prevent any further spread, the following phytosanitary measures were taken: all infected trees (43 ha of orchard) were destroyed and burned, the infected orchard was placed under strict quarantine, information and extension campaigns for technicians, growers, nurserymen are being organized, and surveys will continue, in particular during the flowering period in fruit tree-producing areas. The NPPO of Morocco considers that with the destruction of the infected orchard and the absence of symptoms in other orchards, the outbreak is likely to have been eradicated.
The pest status of *Erwinia amylovora* in Morocco is officially declared as follows: **Transient, one outbreak under eradication.**

Source: NPPO of Morocco, 2007-02.

Additional key words: new record, eradication **Computer codes:** ERWIAM, MA

2007/022 First report of *Rhynchophorus ferrugineus* in Cyprus

The NPPO of Cyprus informed the EPPO Secretariat that *Rhynchophorus ferrugineus* (Coleoptera: Curculionidae – EPPO A2 List) has recently been found on palm trees on its territory. The pest was observed for the first time on 2006-09-14 and its identity was confirmed on 2006-09-18 by the laboratories of the Plant Protection Section of the Department of Agriculture and the Agricultural Research Institute in Cyprus. *R. ferrugineus* was found on 4 palm trees (*Phoenix canariensis*) in the garden of a hotel located on the coastal area of Lemesos. The pest was then detected in isolated cases, in the areas of Nicosia and Larnaca, also on *P. canariensis* grown in private and public gardens. All infested plants were removed and burned. In addition, the NPPO of Cyprus has taken measures in: 1) training all plant health inspectors in the identification and handling of infested palm trees; 2) informing the public on the appearance of *R. ferrugineus* (newspapers, announcements on radio and television programmes). Further surveys are being carried out to delimit the extent of the infestation of *R. ferrugineus* in Cyprus.
The pest status of *Rhynchophorus ferrugineus* in Cyprus is officially declared as follows: **Present, first recorded in Cyprus in 2006, 3 outbreaks, official measures are taken for its eradication.**

Source: NPPO of Cyprus, 2006-12.

Additional key words: new record **Computer codes:** RHYCFE, CY

2007/023 Situation of *Rhynchophorus ferrugineus* in Spain

In Spain, *Rhynchophorus ferrugineus* (Coleoptera: Curculionidae – EPPO A2 List) was first detected in 1994 on the coastal region of Granada, Andalucía, on *Phoenix canariensis* (see EPPO RS 96/096). The pest was then found in Comunidad Valenciana. In September 2005, *R. ferrugineus* was detected at Elche and in August 2006, it was found in two new areas located in the historical part of the Elche palm grove which was listed as a world heritage site by UNESCO in 2000. In December 2005, the presence of *R. ferrugineus* was officially confirmed in Islas Canarias (Fuerteventura and Gran Canaria) where natural palm forests still occur. In 2005, *R. ferrugineus* was also reported from the region of Murcia. Finally, in October 2006, the pest was discovered on the island of Mallorca (Baleares) on *P. canariensis*. In all infested regions, measures are being taken to prevent further spread of the pest. Nevertheless, it is stressed that control measures against this pest, both at national and international level, should be strengthened.
The situation of *Rhynchophorus ferrugineus* in Spain can be described as follows: **Present, found in Andalucía, Comunidad Valenciana, Murcia, Islas Baleares (Mallorca), Islas Canarias (Fuerteventura and Gran Canaria), under official control.**

Source: Ferry M, Gómez (2007) El picudo rojo de la palmera datilera: gravedad de la plaga en España y necesidad de un cambio radical y urgente de estrategia en la lucha. *Phytoma España* no. 185, 42-46.

INTERNET (last retrieved on 2007-02-30)
Insectos de Argentina y el Mundo. Preocupación por plaga de picudo rojo en Canarias. http://axxon.com.ar/mus/info06/060008.htm
Govern de les Illes Balears. Sanitat vegetal. Avisos fitosanitarios. Detección del escarabajo picudo rojo de las palmeras en Mallorca. http://sanitatvegetal.caib.es/becut.es.htm

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

2007/024 Incursion of *Potato spindle tuber viroid* in ornamental Solanaceae in Germany

The NPPO of Germany recently informed the EPPO Secretariat of an incursion of *Potato spindle tuber viroid* (*Pospiviroid*, PSTVd – EPPO A2 List) in Nordrhein-Westfalen. An earlier finding had been made in 2006 on imported material of *Solanum jasminoides* and successfully eradicated (see EPPO RS 2006/159). During testing of ornamental plants of Solanaceae for the establishment of mother plants for propagation, PSTVd was detected in 17 companies. Ornamental species concerned were *Solanum jasminoides, Solanum rantonnetii, Datura* sp., *Brugmansia suaveolens* and *Brugmansia variegata*. The infected plants did not show any symptoms. The pathogen was identified by RT-PCR. Some lots originated from another EU Member State, but most of the lots had been produced by the companies concerned from their own mother plants. All companies were obliged to destroy the infected lots under official control.
The pest status of *Potato spindle tuber viroid* in Germany is officially declared as follows: **Transient in one area; actionable, under eradication**.

Source: NPPO of Germany, 2006-02.

Additional key words: phytosanitary incident **Computer codes:** PSTVD0, DE

2007/025 *Peronosclerospora sorghi* does not occur in Australia

Sorghum downy mildew caused by *Peronosclerospora sorghi* does not occur in Australia. There had been records in the past but these are now considered erroneous. The record of *P. sorghi* in Queeensland is definitely incorrect because specimens of a downy mildew on maize, which were initially identified as *P. sorghi* were re-examined and considered to be *P. maydis*. In Western Australia, *P. sorghi* was recorded on maize in a quarantine block in 1989 but this is now considered extremely doubtful because the conidia were very similar to those recorded later as *P. maydis* in northern Queensland.
The situation of *Peronosclerospora sorghi* in Australia can be described as follows: **Absent, invalid record.**

Source: Biosecurity Australia, 2007-02.

Wang E, Ryley M, Meinke H (2000) Prediction of sorghum downy mildew risk in Australia using daily weather data. *Australasian Plant Pathology* **29**(2), 108-119.

Additional key words: denied record **Computer codes:** PRSCSO, AU

2007/026 *Citrus tristeza virus* found in the Eastern Black Sea region of Turkey

In early spring 2006, stunted citrus trees were observed in the Eastern part of the Black Sea region of Turkey. Affected plants were Satsuma mandarin trees (*Citrus unshiu*) grafted on *Poncirus trifoliata*, more than 30 years old and growing in commercial orchards or private gardens. Laboratory analyses (DAS-ELISA, DTBIA, RT-PCR) showed that some of these trees were infected by *Citrus tristeza virus* (*Closterovirus*, CTV – EPPO A2 List). It is noted that, previously, CTV had only been reported in the Mediterranean and Aegean regions of Turkey.
The situation of *Citrus tristeza virus* in Turkey can be described as follows: **Present, limited distribution (Aegean, Black Sea and Mediterranean regions).**

Source: Korkmaz S, Cevik B, Onder S, Koc K (2006) First report of the presence of *Citrus tristeza virus* in the Eastern Black Sea region of Turkey. *Journal of Plant Pathology* **88**(3 suppl.), S69.

Additional key words: detailed record **Computer codes:** CTV000, TR

2007/027 Stem-pitting strains of *Citrus tristeza virus* reported in Croatia

In Croatia, citrus are grown along the Dalmatian coast and in some islands (covering approximately 1500 ha). The major species grown are Satsuma mandarins (*Citrus unshiu*) grafted on *Poncirus trifoliata*. The presence of *Citrus tristeza virus* (C*losterovirus,* CTV - EPPO A2 List) had previously been observed in the Neretva Valley. During characterization studies of isolates from Croatia, 15 samples (budsticks) were collected in autumn 2003 from the areas of Kastela, Split, Metkovic (Neretva Valley) and the island of Vis. These budsticks were grafted under glasshouse conditions onto indicator plants (*C. sinensis* cv. Madam Vinous) and symptoms were later observed. Typical symptoms of stem-pitting were observed with 4 CTV isolates collected from *C. sinensis* cvs. Fukumoto and Washington, *C. unshiu* cv. Ichimaru and *C. wilsonii.* In spring 2004, stem-pitting symptoms were observed in a Satsuma orchard in the Neretva Valley, thus confirming the occurrence of stem-pitting strains in Croatia. It is noted that most Satsumas were introduced into the Neretva region from Japan between 1964 and 1984, and that stem-pitting strains were probably introduced at the same time and have been spreading there for several decades.

Source: Cerni S, Skoric D, Krajacic, Gatin Z, Santos C, Martins V, Nolasco G (2005) Occurrence of stem-pitting strains of *Citrus tristeza virus* in Croatia. *Plant Disease* **89**(3), p. 342.

Additional key words: detailed record **Computer codes:** CTV000, HR

2007/028 Survey on glasshouse thrips and tospoviruses in Hungary

In 2002-2004, surveys were carried out in glasshouse crops in Hungary for the presence of thrips and tospoviruses. *Thrips palmi* (Thysanoptera: Thripidae – EPPO A1 List) was not found during this survey. *Frankliniella occidentalis* (EPPO A2 List) was observed in 17% of the glasshouses surveyed, in all parts of the country. The following species were found in the infested glasshouses, sometimes in mixed populations: *Frankliniella occidentalis* (in 87% of the sites), *Thrips tabaci* (20.4%) and *Frankliniella intonsa* (5.4%). In 2004, samples were also tested for the presence of tospoviruses: *Tomato spotted wilt virus* (TSWV - EPPO A2 List), *Impatiens necrotic spot virus* (INSV - EPPO A2 List) were detected with average infection levels of 1.3 % and 5.9%, respectively. The EPPO Secretariat had previously no data on the occurrence of INSV in Hungary.

Source: Kovács CV, Kiss F, Lucza Z (2006) [Survey for *Frankliniella occidentalis* Pergande and *Thrips palmi* Karny, made together with surveying for tospoviruses in Hungary (2002-2004).]. *Növényvédelem* **42**(7), 365-370 (in Hungarian).

Additional key words: new record, detailed record, absence **Computer codes:** INSV00, FRANOC, THRIPL, TSWV00, HU

2007/029 Surveys on grapevine yellows and insect vectors in Hungary

Surveys were carried out in Hungarian vineyards on grapevine yellows. Only Stolbur phytoplasma (EPPO A2 List, causing bois noir on grapevine) was detected both in diseased grapevines and in its insect vector *Hyalesthes obsoletus. H. obsoletus* was found with relatively low population density on grapevine but in high density on nettles (*Urtica dioica*). During these studies, *Scaphoideus titanus* (vector of grapevine flavescence dorée) and *Oncopsis alni* (vector of Palatinate grapevine yellows) were not found.

Source: Kaminszky M, Orosz A, Barasits T, Csörnyei K, Cziklin M, Dulinafka G, Gál S, Molnár J, Gyulai P, Havasréti B, Szendrey G, Tóth B, Varga M, Vörös G, Alberto A, Palermo S (2006) [Monitoring survey for Auchenorrhyncha fauna of vineyards infected with phytoplasma causing grapevine yellows.]. *Növényvédelem* **42**(4), 177-193 (in Hungarian).

Palermo S, Ember I, Botti S, Elekes M, Alma A, Bertaccini A, Orosz A, Kölber M (2006) [Detection of Stolbur phytoplasma in species of Cixiidae found in Hungarian vineyards.]. *Növényvédelem* **42**(6), 297-304 (in Hungarian).

Additional key words: detailed record **Computer codes:** PHYP10, HU

2007/030 Possible transovarial transmission of '*Candidatus* Phytoplasma prunorum' by *Cacopsylla pruni*

The possible transovarial transmission of two phytoplasmas, '*Candidatus* Phytoplasma prunorum' (associated with European stone fruit yellows) and '*Candidatus* Phytoplasma mali' (Apple proliferation - EPPO A2 List) by their respective psyllid vectors *Cacopsylla pruni* and *C. melanoneura,* was investigated in Italy. Results showed that *C. pruni* could transmit '*Ca*. Phytoplasma prunorum' transovarially, as it could be detected in the progeny of infected females (i.e. eggs, nymphs and newly emerged adults). It was also showed that psyllids which had acquired the phytoplasma transovarially could then transmit it by feeding on a healthy plum seedling. Transovarial transmission could not be demonstrated with '*Ca*. Phytoplasma mali' in the experimental design used. Although further studies are needed, these first results open new perspectives on the study of the epidemiology of European stone fruit yellows. The fact that the insect is not only a vector but also a reservoir for the phytoplasma has implications for disease management.

Source: Tedeschi R, Ferrato V, Rossi J, Alma A (2006) Possible phytoplasma transovarial transmission in the psyllids *Cacopsylla melanoneura* and *Cacopsylla pruni*. *Plant Pathology* **55**(1), 18-24.

Additional key words: epidemiology **Computer codes:** PHYPMA, PHYPPR

2007/031 Molecular characterization and detection of *Peach mosaic virus*

Peach mosaic disease was first observed in 1931 in Texas and then in Colorado and California (US). The disease has also been reported from Mexico. *Peach mosaic virus* (PcMV – EPPO A1 List) was identified as its causal agent. PcMV is serologically related to *Cherry mottle leaf virus* (CMLV) but these are considered to be distinct viruses, as they cause distinct diseases and have different host range and vectors. Molecular studies were carried out in Canada and confirmed that PcMV and CMLV are distinct viruses which belong to the genus *Trichovirus*. However, both PcMV and CMLV present some unique features among this genus which exist in other genera such as *Allexivirus, Carlavirus* and *Vitivirus*. During these studies, a reliable and specific RT-PCR assay was developed for the detection of *Peach mosaic virus*, which could provide a useful tool in certification schemes.

Source: James D, Varga A, Croft H, Rast H, Thompson D, Hayes S (2006) Molecular characterization, phylogenetic relationships and specific detection of *Peach mosaic virus*. *Phytopathology* **96**(2), 137-144.

Additional key words: taxonomy, diagnostics **Computer codes:** PCMV00

2007/032 Nested PCR test to detect *Xanthomonas axonopodis* pv*. dieffenbachiae* in *Anthurium*

A nested PCR test was developed in Réunion (FR) for the specific detection of *Xanthomonas axonopodis* pv*. dieffenbachiae* (EPPO A2 List) in *Anthurium* plants. This new nested PCR assay was tested with a large collection of strains of *X. axonopodis* pv*. dieffenbachiae* from *Anthurium* and other Araceae, using serological and pathogenicity tests in parallel. This method could be used directly on plant samples (DNA extraction is not needed) and successfully detected latent infections. No amplification was obtained for most strains isolated from other Araceae. Some strains from *Syngonium* (not pathogenic to *Anthurium*) gave a positive result with the PCR test, but could then be distinguished from anthurium-pathogenic strains by RFLP. This finding is consistent with previous studies which indicated that there is a high level of relatedness between strains from *Anthurium* and *Syngonium*. No amplification was obtained with strains belonging to other bacterial genera, other *Xanthomonas* species and saprophytic bacteria isolated from *Anthurium*. It is concluded that this nested PCR is a useful diagnostic tool for the detection of *X. axonopodis* pv*. dieffenbachiae* on propagation material and in traded plants of *Anthurium*.

Source: Robène-Soustrade I, Laurent P, Gagnevin L, Jouen E, Pruvost O (2006) Specific detection of *Xanthomonas axonopodis* pv*. dieffenbachiae* in Anthurium (*Anthurium andreanum*) tissues by nested PCR. *Applied and Environmental Microbiology* **72**(2), 1072-1078.

Additional key words: diagnostics **Computer codes:** XANTDF

2007/033 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

In Japan, *Bactrocera latifrons* (Diptera: Tephritidae) was reported to occur on Yonaguni Island (Okinawa) in 1984. The EPPO Secretariat had previously no information about its occurrence in Japan (Ishida *et al.*, 2005). **Present, no detail.**

Ceratitis quinaria (Diptera: Tephritidae – EU Annexes) occurs in Benin in mango orchards, together with *C. cosyra, C. silvestrii* and *Bactrocera invadens* (Vayssières *et al.*, 2005). **Present, no detail.**

Cucurbit yellow stunting disorder virus (*Crinivirus* – EPPO A2 List) occurs in Iran. The virus was detected in diseased melons in the Boushehr Province, in the south of Iran (Keshavarz & Izadpanah, 2005). **Present, Boushehr Province (south)**.

During the last 16 years, *Frankliniella occidentalis* (Thysanoptera: Thripidae – EPPO A2 List), *Liriomyza huidobrensis* (Diptera: Agromyzidae – EPPO A2 List) and *Scaphoideus titanus* (Homoptera: Cicadellidae - vector of grapevine flavescence dorée) have been introduced into Serbia and Montenegro. The EPPO Secretariat had previously no information about their occurrence (Glavendekić *et al.*, 2005). **Present, no detail.**

Detailed records

In Brazil, *Anastrepha fraterculus, A. obliqua* (Diptera: Tephritidae – EPPO A1 List) and *Ceratitis capitata* (Diptera: Tephritidae – EPPO A2 List) are reported for the first time from the state of Alagoas.

Anastrepha serpentina (Diptera: Tephritidae) was trapped in Amazonas, Brazil (Ronchi-Teles & da Silva, 2005).

During studies done in 1999/2000, *Anastrepha obliqua* and *Ceratitis capitata* (Diptera: Tephritidae – EPPO A2 List) were caught in Rio Grande do Norte, Brazil (Araujo *et al.*, 2005).

During studies done in 2003/2004, *Anastrepha obliqua* and *Ceratitis capitata* (Diptera: Tephritidae – EPPO A2 List) were caught in Mato Grosso do Sul, Brazil (Rodrigues *et al.*, 2006).

Source: Araujo EL, Medeiros MKM, Silva VE, Zucchi RA (2005) [Fruit flies (Diptera: Tephritidae) in the semi-arid region of the State of Rio Grande do Norte, Brazil: host plants and infestation indices.] *Neotropical Entomology* **34**(6), 889-894 (abst.).

Glavendekić M, Mihajlović L, Petanović R (2005) Introduction and spread of invasive mites and insects in Serbia and Montenegro. In *Plant protection and plant health in Europe: introduction and spread of invasive species*. BCPC Conference, Humbolt University (DE), 2005-06-09/11, 229-230.

Gonçalves GB, dos Santos JCG, da Silva CE, dos Santos ES, do Nascimento RR, Sant'ana AEG, Zucchi RA (2006) Occurrence of fruit flies (Diptera: Tephritidae) in the state of Alagoas, Brazil. *Florida Entomologist* **89**(1), 93-94.

Ishida T, Nakahara S, Minoura K, Dohino T (2005) [Development and reproductive ability of *Bactrocera latifrons* (Hendel) (Diptera: Tephritidae) on Yonaguni Island.] *Research Bulletin of the Plant Protection Service*, Japan, no. 41, 39-42 (abst.).

Keshavarz T, Izadpanah K (2005) Etiology of cucurbit yellows in the Boushehr Province, Iran. *Iranian Journal of Plant Pathology* **41**(2), 107-121 (abst.).

Rodrigues SR, Nantes LR, de Souza SR, Abot AR, Uchoa-Fernandes MA (2006) [Frugivorous flies (Diptera, Tephritidae) collected in Aquidauana, MS.] *Revista Brasileira de Entomologia* **50**(1), 131-134.

Ronchi-Teles B, da Silva NM (2005) [Population fluctuation of *Anastrepha* Schiner (Diptera: Tephritidae) species in Manaus region, AM, Brazil.] *Neotropical Entomology* **34**(5), 733-741 (abst.).

Vayssières JF, Goergen G, Lokossou O, Dossa P, Akponon C (2005) A new *Bactrocera* species in Benin among mango fruit fly (Diptera: Tephritidae) species. *Fruits (Paris)* **60**(6), 371-377 (abst.).

Additional key words: new records, detailed records

Computer codes: ANSTFR, ANSTOB, ANSTSE, CERTCA, CERTQU, CYSDV0, DACULA, FRANOC, LIRIHU, SCAPLI, BJ, BR, IR, JP, YU

2007/034 Aphid species recently reported as new introductions

The following aphid species have recently been reported in the literature as new introductions. The intention is not to present an exhaustive list but to give a few examples of introductions of aphid species into different parts of the world, especially as some of them are new for the EPPO region.

Aphis illinoisensis

From 1985 to 2003, a survey on aphid species was done in Guadeloupe and in other Caribbean islands (Etienne, 2005). During this survey, 13 aphid species were reported for the first time including *Aphis illinoisensis* which is an American pest of *Vitis vinifera*. In the Caribbean, *A. illinoisensis* was found in: Cuba, Jamaica, Haiti, Puerto Rico, Guadeloupe. Interestingly, it has recently been reported in the EPPO region in Turkey and Greece. In June 2005, *A. illinoisensis* was recorded for the first time on the island of Kriti in all major viticultural areas. The pest was first found in several localities of Heraklion Prefecture and near the city of Khania (Khania prefecture) but within one growing season it was found throughout the island. These aphids feed on young shoots and leaves and in some cases on berries. *A. illinoisensis* was reported in September 2002 in southern Turkey (Tsitsipis *et al.*, 2005).

Cerataphis brasiliensis

During the survey done in Guadeloupe and other Caribbean islands (see above, Etienne, 2005), *Cerataphis brasiliensis* was also found. This species originates from South-East Asia and is a pest of palm trees. In the Caribbean, it was found in: Cuba, Guadeloupe (including la Désirade), Haiti, Jamaica, Martinique, Puerto Rico, Trinidad. Interestingly, *C. brasiliensis* has also been reported by the NPPO of France on palm trees which had been imported from Brazil (see EPPO 2004/152).

Illinoia liriodendri

Illinoia liriodendri is a pest of *Liriodendron tulipifera* (tuliptree) of North American origin. Its presence is now reported in France (Rabasse *et al.*, 2005). It was first collected in Nantes (Loire-Atlantique) in spring 1998, infesting large *L. tulipifera* along avenues and in public parks. In July 2001, *I. liriodendri* was reported from many localities in the South-West of France (Ariège, Landes, Pyrénées-Atlantiques, Tarn). It then continued to spread to different (and sometimes distant) parts of France (Alpes-Maritimes, Ille-et-Vilaine, Isère).

I. liriodendri has recently been found in Germany (see EPPO RS 2005/086), and is also reported as present in Italy (widespread in Lombardia and Piemonte) and the United Kingdom (found on a few trees).

In May 2006, the NPPO of Slovenia also reported the presence of *I. liriodendri* on its territory. The aphid was found in September 2004 on *L. tulipifera* trees in parks of Nova Gorica, close to the Italian border. So far, no other outbreak has been found. The origin of this infestation could not be clearly established, although it is likely that the pest has naturally spread from Italy. No official measures have been taken so far.

Illinoia morrisoni

Illinoia morrisoni is also of North American origin (present in Colorado and California). It was observed for the first time in France on *Cupressus arizonica* at Pégomas (Alpes-Maritimes) in June 1995, and then in 1999 and 2001 at Pégomas and Mougins. Several alatae were caught by suction traps in Bretagne (Landerneau and Rennes), first in 1979 and again 10 years later. In Italy, few specimens of alatae of *I. morrisoni* were also caught by a suction trap at Pozzuolo del Friuli (province of Udine, Friuli-Venezia Giulia region). However, no aphids were caught on *Cupressus* in this area. In the United Kingdom, *I. morrisoni* has been observed in Kew Gardens on *Sequoia sempervirens* and later in a greenhouse in Surrey, on *Cupressus macrocarpa* and *Taxodium distichum*. So far, *I. morrisoni* has not been reported as a major pest of Cupressaceae nor of other coniferous plants (Rabasse *et al.*, 2005).

Siphonatrophia cupressi

Another American species, *Siphonatrophia cupressi,* was found for the first time in Europe at Mougins (Alpes-Maritimes, France), in May 1999 on *Cupressus arizonica*. The same species was also caught in a suction trap at Pozzuolo del Friuli in June 1999 and again in 2000, 2001 and 2002. But since then, the pest has not been trapped at this location. *S. cupressi* is a specific pest of Cupressaceae (*Cupressus arizonica, C. guadelupensis, C. macrocarpa; Juniperus scopulorum, J. virginiana*) in the USA (California, Colorado, Idaho, New Mexico, Utah) and Central America (Honduras, Mexico). In the South of France, *S. cupressi* parasitized by *Lysiphlebus testaceipes* have been observed (Rabasse *et al.*, 2005).

Tinocallis ulmiparvifoliae

Tinocallis ulmiparvifoliae was first observed in Spain on a bonsai (*Ulmus parvifolia*) found in the city of León in December 2002, but originating from a nursery in Barcelona (Pérez Hidalgo and Nieto Nafría, 2005). *T. ulmiparvifoliae* is a pest of Asian origin (China, Japan, Korea, Taiwan) and introductions have been reported from Australia, Italy, the United Kingdom, and USA (California and Florida). It is occasionally intercepted in Europe on bonsais from Asia.

Source: Etienne J (2005) Les pucerons de Guadeloupe, des Grandes et Petites Antilles (Hemiptera, Aphididae). *Bulletin de la Société entomologique de France* **110**(4/5), 455-462.

Pérez Hidalgo N, Nieto Nafría (2005) *Tinocallis ulmiparvifoliae* Matsumura, 1919 (Hemiptera: Aphididae, Calaphidinae): una nueva especie de pulgón introducida

en la Península Ibérica. *Boletin de la Asociación española de Entomología* **29**(1/2), 125-127.
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NPPO of Slovenia, 2006-06.

Additional key words: new records **Computer codes**: APHIIL, CEATVA, MACSLR, TINCUP

2007/035 EPPO report on notifications of non-compliance

The EPPO Secretariat has gathered the notifications of non-compliance for 2006 received from Russia and notifications received via Europhyt since the previous report (EPPO RS 2007/015) from the following EU countries: France, the Netherlands, Slovenia, Spain, and the United Kingdom. When a consignment has been re-exported and the country of origin is unknown, the re-exporting country is indicated in brackets. When the occurrence of a pest in a given country is not known to the EPPO Secretariat, this is indicated by an asterisk (*).

The EPPO Secretariat has selected notifications of non-compliance made because of the detection of pests. Other notifications of non-compliance due to prohibited commodities, missing or invalid certificates are not indicated. It must be pointed out that the report is only partial, as many EPPO countries have not yet sent their notifications.

NOTE: In the previous report (RS 2007/015), two corrections should be made:
- on page 13, *Meloidogyne* was found by the Dutch NPPO on a consignment of plants for planting of Rosa (and of course not of cut flowers!) from South Africa.
- on page 17, packing wood (pallets) from Bulgaria was intercepted by Germany because of the presence of *Bursaphelenchus* sp. (and not *B. xylophilus*).

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Acroptilon repens	*Vitis vinifera*	Fruit	Tajikistan	Russia	1
Agromyzidae	*Coriandrum sativum*	Vegetables (leaves)	Thailand	France	1
	Ocimum basilicum	Vegetables (leaves)	Thailand	France	10
Aleyrodidae	*Eryngium foetidum*	Vegetables (leaves)	Thailand	France	13
	Shortia	Cuttings	Japan	United Kingdom	1
Ambrosia artemisiifolia	*Zea mays*	Stored products	Ukraine	Russia	11

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Ambrosia trifida	*Glycine max*	Stored products	USA	Russia	1
Bemisia tabaci	*Citrus*	Pot plants	Netherlands	Russia	1
	Eryngium foetidum	Vegetables (leaves)	Thailand	France	4
	Euphorbia pulcherrima	Pot plants	Netherlands	Russia	1
	Hibiscus rosa-sinensis	Pot plants	Netherlands	Russia	7
	Lycopersicon esculentum	Vegetables	Ukraine	Russia	2
	Ocimum basilicum	Vegetables (leaves)	Israel	Netherlands	1
Bidens pilosa	*Glycine max*	Stored products	Argentina	Russia	12
	Glycine max	Stored products	Brazil	Russia	7
	Glycine max	Stored products	Germany	Russia	13
	Glycine max	Stored products	Netherlands	Russia	2
Bidens pilosa, Ambrosia artemisiifolia	*Glycine max*	Stored products	Netherlands	Russia	1
Bidens pilosa, Ipomoea lacunosa	*Glycine max*	Stored products	Argentina	Russia	1
	Glycine max	Stored products	Brazil	Russia	4
	Glycine max	Stored products	Netherlands	Russia	4
Bidens pilosa, Ipomoea lacunosa, Ambrosia artemisiifolia	*Glycine max*	Stored products	Netherlands	Russia	2
Bidens pilosa, Ipomoea lacunosa, Cenchrus pauciflorus	*Glycine max*	Stored products	Brazil	Russia	1
Carposina niponensis	*Malus domestica*	Fruit	China	Russia	26
	Prunus armeniaca	Fruit	China	Russia	1
	Pyrus communis	Fruit	China	Russia	7
Carposina niponensis, Grapholita molesta	*Malus domestica*	Fruit	China	Russia	4
Clavibacter michiganensis subsp. *michiganensis*	*Lycopersicon esculentum*	Seeds	China	Slovenia	1
Cuscuta	*Nicotiana tabacum*	Stored products	Azerbaijan	Russia	1
	Vitis vinifera	Fruit	Uzbekistan	Russia	2
Didymella ligulicola	*Chrysanthemum*	Cut flowers	Netherlands	Russia	1
	Chrysanthemum	Pot plants	Netherlands	Russia	2
Frankliniella occidentalis	*Alstroemeria*	Cut flowers	Netherlands	Russia	2
	Alstroemeria	Pot plants	Netherlands	Russia	2
	Alstroemeria, Dianthus, Rosa	Cut flowers	Kenya	Russia	2
	Alstroemeria, Rosa	Cut flowers	Netherlands	Russia	2
	Anthurium	Cut flowers	Netherlands	Russia	1
	Brassica oleracea	Vegetables	Spain	Russia	1
	Chrysanthemum	Cut flowers	Israel	Russia	1
	Chrysanthemum	Cut flowers	Netherlands	Russia	14
	Chrysanthemum	Pot plants	Netherlands	Russia	8

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
F. occidentalis (cont.)	*Chrysanthemum, Dianthus*	Cut flowers	Ecuador	Russia	1
	Chrysanthemum, Dianthus, Gerbera	Cut flowers	Netherlands	Russia	2
	Chrysanthemum, Dianthus, Rosa	Cut flowers	Ecuador	Russia	2
	Chrysanthemum, Gerbera	Cut flowers	Netherlands	Russia	1
	Chrysanthemum, Rosa	Cut flowers	Kenya	Russia	1
	Chrysanthemum, Rosa	Cut flowers	Netherlands	Russia	1
	Chrysanthemum, Saintpaulia ionantha	Pot plants	Netherlands	Russia	2
	Dianthus	Cut flowers	Ecuador	Russia	2
	Dianthus	Cut flowers	Portugal	Russia	1
	Dianthus caryophyllus	Cut flowers	Colombia	Russia	2
	Dianthus caryophyllus	Cut flowers	Ecuador	Russia	1
	Dianthus caryophyllus	Cut flowers	Netherlands	Russia	2
	Dianthus caryophyllus	Cut flowers	Spain	Russia	1
	Dianthus caryophyllus	Cut flowers	Turkey	Russia	1
	Dianthus, Rosa	Cut flowers	(Netherlands)	Russia	1
	Dianthus, Rosa	Cut flowers	Ecuador	Russia	1
	Dianthus, Rosa	Cut flowers	Netherlands	Russia	6
	Dianthus, Rosa	Cut flowers	Spain	Russia	1
	Eustoma, Rosa	Cut flowers	Netherlands	Russia	1
	Gerbera	Cut flowers	Netherlands	Russia	1
	Gypsophila	Cut flowers	China	Russia	1
	Gypsophila	Cut flowers	Ecuador	Russia	1
	Gypsophila, Helianthus	Cut flowers	Ecuador	Russia	1
	Gypsophila, Rosa	Cut flowers	Israel	Russia	1
	Gypsophila, Rosa	Cut flowers	Netherlands	Russia	1
	Helianthus	Cut flowers	Israel	Russia	1
	Helianthus	Cut flowers	Netherlands	Russia	5
	Hypericum	Cut flowers	Netherlands	Russia	1
	Lactuca sativa	Vegetables	France	Russia	2
	Lactuca sativa	Vegetables	Netherlands	Russia	9
	Lactuca sativa	Vegetables	Spain	Russia	1
	Prunus armeniaca	Fruit	(Netherlands)	Russia	2
	Prunus armeniaca	Fruit	Spain	Russia	1
	Prunus armeniaca	Fruit	Turkey	Russia	4
	Prunus persica	Fruit	Turkey	Russia	1
	Rosa	Cut flowers	(Netherlands)	Russia	1
	Rosa	Cut flowers	Denmark	Russia	1
	Rosa	Cut flowers	Ecuador	Russia	5
	Rosa	Cut flowers	Israel	Russia	1
	Rosa	Cut flowers	Kenya	Russia	10
	Rosa	Cut flowers	Netherlands	Russia	34
	Rosa	Pot plants	Netherlands	Russia	1
	Saintpaulia ionantha	Pot plants	Netherlands	Russia	3
	Solanum pseudocapsicum	Pot plants	Netherlands	Russia	2
	Unspecified	Cut flowers	Ecuador	Russia	1
	Verbena	Plants for planting	Netherlands	Russia	1
Globodera rostochiensis	*Rosa*	Plants for planting	Germany	Russia	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Grapholita molesta	*Malus domestica*	Fruit	China	Russia	9
	Malus domestica, Prunus armeniaca	Fruit	China	Russia	1
	Prunus armeniaca	Fruit	China	Russia	2
	Prunus domestica	Fruit	Romania	Russia	1
	Prunus persica	Fruit	China	Russia	1
	Prunus persica	Fruit	Italy	Russia	13
	Prunus persica var. nectarina	Fruit	China	Russia	1
	Prunus persica var. nectarina	Fruit	Greece	Russia	1
	Prunus persica var. nectarina	Fruit	Italy	Russia	3
	Pyrus communis	Fruit	China	Russia	2
	Pyrus communis, Prunus persica	Fruit	China	Russia	2
Guignardia citricarpa	*Citrus sinensis*	Fruit	Brazil	Netherlands	31
Helicoverpa armigera	*Rosa*	Cut flowers	Tanzania	Netherlands	1
Liriomyza trifolii	*Chrysanthemum*	Cut flowers	Netherlands	Russia	1
	Gypsophila	Cut flowers	Israel	Netherlands	1
Liriomyza, Frankliniella occidentalis	*Chrysanthemum, Gerbera*	Cut flowers	Netherlands	Russia	1
Phthorimaea operculella	*Solanum tuberosum*	Ware potatoes	Egypt	Russia	1
Puccinia horiana, Frankliniella occidentalis	*Chrysanthemum, Rosa*	Cut flowers	Netherlands	Russia	1
Spodoptera littoralis	*Rosa*	Cut flowers	Israel	Netherlands	1
Stenocarpella maydis, Ipomoea hederacea, I. lacunosa	*Zea mays*	Stored products	USA	Russia	1
Stenocarpella maydis, Ipomoea hederacea, I. lacunosa, Ambrosia trifida	*Glycine max*	Stored products	USA	Russia	1
Thysanoptera	*Momordica charantia, Solanum melongena*	Vegetables	Thailand	France	1
	Solanum melongena	Vegetables	Thailand	France	3

- **Fruit flies**

Pest	Consignment	Country of origin	Destination	nb
Ceratitis capitata	*Citrus reticulata*	Morocco	Russia	5
	Citrus reticulata	South Africa	Russia	2
	Citrus reticulata	Spain	Russia	22
	Citrus reticulata	Turkey	Russia	3
	Citrus sinensis	Italy	Russia	1
	Citrus sinensis	Spain	Russia	3
	Gypsophila, Rosa	Spain	Russia	1
	Prunus domestica, Vitis vinifera	Spain	Russia	1
	Prunus persica	Spain	Russia	3
Non-European Tephritidae	*Annona squamosa*	Thailand	France	2
	Capsicum annuum	Thailand	France	8
	Capsicum frutescens	Thailand	France	7
	Capsicum frutescens, Sizygium samarangense	Thailand	France	1
	Mangifera indica	Thailand	France	3
	Sizygium jambos	Thailand	France	4
	Sizygium samarangense	Thailand	France	14

- **Wood**

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Monochamus	*Picea*	Wood and bark	Russia	Spain	2

Source: NPPO of Russia.
EPPO Secretariat, 2007-01.

2007/036 Symposium on 'Import and contained use of plant pests or potential plant pests, a game without borders', Wageningen, NL, 2007-05-31/06-01

The new quarantine laboratory of the Dutch Plant Protection Service will be officially opened on 2007-05-31. On this occasion, a symposium on 'Import and contained use of plant pests or potential plant pests, a game without borders' will be organized. Its main aim will be to discuss the practical implementation of EU Directive 95/44*. In this respect, the new EPPO Standard PM 3/64 (Intentional import of organisms that are plant pests or potential plant pests) will also be presented. During this symposium, several key lectures will be presented on the following topics:

- Risk assessment of the import of alien species/plant pests, potential damage to plants and/or the environment (biodiversity)
- Phytosanitary risks related to the contained use of plant pests or potential plant pest in research and development
- Containment of plant pests and potential plant pests in laboratories, specific legislation
- Emerging plant pests or other potential harmful organisms: are some strains more risky than others?

This symposium will take place on 2007-05-31/06-01 at the Plant Protection Service, Wageningen, Netherlands. There are no registration fees.
Contact point: c.l.j.lamers@minlnv.nl

*Commission Directive 95/44/EC of 26 July 1995 establishing the conditions under which certain harmful organisms, plants, plant products and other objects listed in Annexes I to V to Council Directive 77/93/EEC may be introduced into or moved within the Community or certain protected zones thereof, for trial or scientific purposes and for work on varietal selections.

Source: EPPO Secretariat, 2007-02.

Additional key words: conferences

2007/037 EPPO Workshop on Pest Reporting, Lyon, FR, 2007-05-14/16: last call

An EPPO Workshop on Pest Reporting will be organized at Lyon (France) on 2007-05-14/16, with the assistance of the French Plant Protection Service. Pest reporting and related issues (pest status, eradication and surveillance) are core activities of National Plant Protection Organizations (NPPOs) and are very important elements of communication among NPPOs. Therefore, there is clearly a need for NPPO officers to have a clear understanding of their obligations under ISPMs 6, 8, 9, 13 & 17, as well as to be able to implement them correctly. Participants can register until **2007-03-28**, directly on the EPPO website or by contacting the EPPO Secretariat (hq@eppo.fr).

More information about this Workshop can be found on the EPPO website:
http://www.eppo.org/MEETINGS/conferences/pest_reporting.htm

Source: EPPO Secretariat, 2007-02.

Additional key words: conference

2007/038 A proposed prioritization system for the management of invasive alien plants in South Africa

Every country has invasive plants or weeds whose presence conflicts in some way with human management objectives and needs. Resources for research and control are limited, so priority should be given to species that present the biggest problems. A prioritization system designed to assess objectively invasive alien plants at a national level has been developed in South Africa. The evaluation includes a set of 17 criteria and a scoring system, and is divided into 5 modules:

- Module A: potential invasiveness
  - Is the species known to exhibit **long-distance dispersal** (>5 km)?
  - Is the species **invasive elsewhere**, outside South Africa?
- Module B: spatial characteristics
  - **Distribution**: what is the current percentage of quarter degree grid squares that countain the species in the country: 1-2%, 3-5%, 6-10%, 11-20%, 21-40%, >40%.
  - **Density**: the species occurs predominantly as: individual plants, small clumps, vast monospecific stands, mixed stands with other invasive plants.
- Module C: potential impacts
  - Reduction in **biodiversity** where the species occurs is: nil, minor, moderate or profound?
  - The species impact on **water resources** is: nil, reduction of stream flow by 10-30%, > 30% reduction, stream no longer flows at all.
  - The negative impact of the species is: nil, <10%, 11-30%, >30% reduction in profit, land unusable.
  - The positive economic impact of the species is: nil, informal, small business, commercial, any two or more of the previous ones.
  - The species is **poisonous** to stock or humans.
- Module D: Potential for control
  - The options for realistic **chemical control** of the species are: unavailable, impractical in most situations, partially successful, effective and practical
  - The options for **biological control** of the species are: complete control, substantial control, negligible control, no agents released yet
  - The options for **mechanical control** of the species are: not available, impractical in most situations, partially successful, effective and practical
  - Is there **legislation** to assist the control of the species?
  - Can any agency be held **accountable** for the introduction or proliferation of the invasive species in South Africa?
- Module E: conflicts of interest
  - Possible conflicts of interest with the **commercial sector**
  - Possible conflicts of interest with the **informal sector** (non-commercial)
  - According to a **cost-benefit analysis**, the species has: substantial economic value, some economic value, limited value, no apparent value.

Total prioritization scores, calculated from criterion and module scores, were used to assess species' priority. Prioritization scores were calculated by combining independent assessments provided by several experts, thus increasing the reliability of the rankings.
Two decision-making procedures could be used: the nominal group techniques (NGTs) and the Delphi method. Nominal group techniques involve an interactive group structure whereas the Delphi method uses the individual opinions of experts with no "face-to-face" interaction. The Delphi method has a number of advantages over NGTs, allowing a group of individuals to reach consensus without having to meet.

The total confidence score, a separate index, indicated the reliability and availability of data used to make an assessment. The final ranking was made by combining two separate indices, the total prioritization score and the total confidence score.
This prioritization system was used to study 61 plant species and assign them prioritization and confidence scores. Out of the 61 plants assessed, *Lantana camara* (Verbenaceae), *Chromolaena odorata* (Asteraceae) and *Opuntia ficus-indica* (Cactaceae) were those with the highest ranks. These are plants in which the greatest number of resources, human and economic, can confidently be invested for their successful control.

Source: Robertson MP, Villet MH, Fairbanks DHK, Henderson L, Higgins SI, Hoffmann JH, Le Maitre DC, Palmer AR, Riggs I, Shackleton CM and Zimmermann HG (2003). A proposed prioritization system for the management of invasive alien plants in South Africa. *South African Journal of Science* **99**, 37-43.

Additional key words: invasive alien plants, prioritization **Computer codes:** LANCA, EUPOD, OPUFI, ZA

2007/039 Use of introduction characteristics of Mediterranean alien plants to predict their invasion success

The possibility for developing a model to evaluate the invasiveness of species introduced to Mediterranean islands was explored.
A database of all non-native plant records whether naturalized, casual or planted was compiled from 100 published flora covering 79 islands in the Mediterranean Basin. Species considered to be native in any part of the region were omitted, leaving 862 species. Descriptive information on plant species was provided as follows:

- to characterize propagule pressure, a frequency of introduction index was created
- mode of introduction: crop species, forestry species, horticultural uses (small scale), grown in public places, grown for ornamental purposes in gardens, introduced accidentally with seeds or soil, other accidental introductions
- date of introduction: archeophyte, 1500-1800, 1800-1900, 1900-1950, 1950+
- region of origin: Europe, Middle East and North Africa, North and Central Asia, Far East, South and South East Asia, Central Africa, South Africa, Australasia, Mexico-California, North America, South America, Neotropics, Oceanic islands, uncertain
- pollination strategy: water-pollinated, wind-pollinated, insect-pollinated with radial symmetry of the corolla, insect-pollinated with zygomorphic symmetry or tubular corolla, self-pollinated, pollinated by birds or mammals
- growth form: geophyte, therophyte, chamaephyte/hemicryptophyte, phanerophyte, suffrutescent, hydrophyte, vine, succulent
- range size: number of regions in which the species is native
- clonality: non clonal, clonal, clonal with rapid vegetative spread.

A Canonical Discriminant Analysis (CDA) was used to find species traits based on four invasion categories: never naturalized (140 species), naturalized on 3 islands or fewer (105 species), naturalized on 4-9 islands (31 species), naturalized on 10 or more islands (18 species).
Data suggest that the likelihood of naturalization was almost three times lower for archeophytes compared to species introduced in the past century. There is therefore a basic decrease in mean invasion success with increasing residence time. This may be because the historical origins of the Mediterranean flora remain obscure, and many of the better naturalizers from ancient times may be considered native.
The nature of introductions over the centuries was analyzed. The archeophyte flora was dominated by highly domesticated species imported for essential uses, mainly as food

crops. Recent arrivals were more likely to be accidental and from the New World. The mode of introduction is a major factor affecting the rate of spread, and private introductions to gardens appear to be less of a risk than those planted widely in the public domain. Moreover, the rate of invasion was found to be higher for non-clonal species having good dispersal abilities than for clonal species.
Naturalization success was higher for species originating from other Mediterranean climates and succulents were the most successful growth form. Low naturalization ability is correlated with the regions of origin covering temperate Eurasia, and with phanerophytes and forestry species, suggesting that trees generally have a low success rate.
This estimate relied on the number of islands on which the species was naturalized, which does not reflect necessarily the negative ecological and economic impacts caused and is not necessarily a true reflection of the potential of a species to become invasive at small spatial scale.

Source: Lambdon PW, Hulme PE (2006) Predicting the invasion success of Mediterranean alien plants from their introduction characteristics. *Ecography.* **29**, 853-865

This study was conducted as part of the EU Framework 6 project ALARM and the database assembled during the framework 5 project EPIDEMIE.

Additional key words: invasive alien plants, species traits

2007/040 New data on the biology and ecology of *Pueraria lobata*

Pueraria lobata (Fabaceae, EPPO A2 List) originates from the Far East and is very invasive in South-Eastern USA. It is also recorded in southern Switzerland (Ticino). A study has been undertaken on the situation of the plant in Switzerland and on its biology.

Distribution in Switzerland: the plant is present in Ticino in 24 stands along the Lakes Maggiore and Lugano and in 5 stands bordering Italy. Among these 29 sites, 7 cover more than 1000 m², 10 cover between 100 and 1000 m², and 12 cover less than 100 m². All infested sites are located in the warmer region of southern Switzerland, with an average annual temperature close to 11°C. 75% of these sites stand below 300 m and are oriented SW and SE. Most sites are less than 15 m away from houses and roads and less than 200 m from lakes.

Mode of dispersal: because plant wastes have been found in 20 stands, it is suspected that garden wastes may be a pathway.

Habitats: invaded habitats are open, disturbed and on the edge of forests.

Environmental requirements: the plant is able to survive in frosted and shallow soils even though its roots cannot develop fully. According to soil analysis in 6 locations, the plant can grow on soils with a pH varying from 3 to 8. *P. lobata* can almost double the concentration of nitrogen compounds in the top soil (1 to 6 cm deep) due to its symbiosis with *Rhizobium* bacteria.

Biology and reproduction: In Caslano and Magliaso, the plant can grow up to 26 cm per day. An average growth rate of 8.8 cm per day was measured between April and July. In

one year, a plant can reach an average length of 15 m. The vine can also climb over trees, which break under the weight of foliage, especially when wet.
The plant mainly propagates vegetatively by developing new roots at the nodes of the shoots lying on the soil, but it can also produce viable seeds. From each node forming roots, 30 new branches of several metres long can grow in all directions. From each node, further shoots can sprout.

Impacts: according to phytosociological relevés, there is a reduction of the number of species in invaded places: while 20-25 species grow in 4 m^2 of non-invaded meadow or forest, only 6-9 species grow in 4 m^2 invaded by *P. lobata*. Moreover, light indicators are lower under the cover of *P. lobata*, while temperature indicator values are higher.
A reduction of the number and diversity of arthropods have also been identified in invaded sites. Near Magliaso, while a total of 262 arthropods (corresponding to 17 taxa) were found in uninvaded forests, only 187 arthropods (corresponding to 12 taxa) were found in invaded sites. The number of mites, beetles, ants and springtails decreased in invaded sites, while the number of *Glomerida* and *Myriapoda* feeding on litter augmented.

The distribution of *P. lobata* is likely to increase exponentially in southern Switzerland due to global warming. The plant should therefore be eradicated whenever possible, or at least be contained, in particular by preventing its dispersal by human activities.

Source: Pron S (2006) Ecology, distribution and evaluation of the exotic liana *Pueraria lobata* (Willd) Ohwi (Fabaceae) in southern Switzerland. Thesis Department of Environmental Sciences. Swiss federal Institute of Technology ETH Zurich, Switzerland.

Additional key words: invasive alien plants, biology **Computer codes:** CH, PUELO

2007/041 Plants newly naturalized in North-Western France (Maine-et-Loire)

In France, the following plants have been observed in the department of Maine-et-Loire (North-West):

- *Cortaderia selloana* (Poaceae) is naturalizing in the area, and is already recorded as invasive in the South of France. In Maine-et-Loire, it escaped from cultivation and creates dense monospecific and impenetrable stands.
- *Eichhornia crassipes* (Pontederiaceae) is a tropical species originating from South America. It appeared in the Maine river but is not thought to have the potential to overwinter at these latitudes.
- *Lagarosiphon major* (Hydrocharitaceae, EPPO list of IAS) and *Lemna minuta* (Lemnaceae) have been observed.
- *Pistia stratiotes* (Araceae) was observed once.
- *Saururus cernuus* (Saururaceae) originates from North America. The species is recorded as naturalized in Italy (lake Comabbia near Varese), in Belgium (Flandres), and in the United Kingdom (Hampshire). In Maine-et-Loire it was first observed in 2002 in the Souzay river in Souzay-Champigny in association with *Bidens tripartita*, *Bidens frondosa* (Asteraceae), *Ludwigia uruguayensis* (= *L. grandiflora*) (Onagraceae, EPPO List of IAS) and *Paspalum distichum* (Poaceae). The species is considered invasive there and has been mechanically removed (hand pulling of rhizomes present in the sediments up to 1 m deep).

- *Senecio inaequidens* (Asteraceae, EPPO list of IAS) originates from South Africa and is invasive in the South of France. It arrived in Maine-et-Loire in 2001 and spreads along railways.
- *Solanum sarrachoides* (Solanaceae) originates from Brazil and is now very frequently found in the Loire department.
- *Sporobolus indicus* (Poaceae) is a pantropical species colonizing roadsides densely and rapidly. It competes with other plants and modifies floristic associations significantly and establishes very late in the season (August-November). This annual plant is also recorded as invasive in Lazio (Italy, Laura Celesti Grapow, pers. comm.) and in Serbia (Danijela Stesevic *et al*. pers. comm.)

Other species are newly recorded but are not considered invasive: *Bocconia cordata* (Papaveraceae), *Chenopodium pumilio* (Chenopodiaceae), *Dryopteris erythrosora* (Dryopteridaceae), *Lagurus ovatus* (Poaceae), *Plantago major* subsp. *intermedia* (Plantaginaceae), *Populus jackii* cv. "Gileadensis" (Salicaceae), *Portulaca grandiflora* (Portulacaceae), *Mirabilis jalapa* (Nyctoginaceae), *Rostraria cristata* (Poaceae), *Sedum kamtschaticum* subsp. *ellacombinum* (Crassulaceae), *Setaria viridis* (Poaceae), *Tellima grandiflora* (Saxifragaceae).

Source: Delaunay G (2004) Contributions à l'étude de la flore du Maine-et-Loire: quelques observations récentes dans la dition et ses proches environs. *Le Monde des Plantes*. **483**, 29-31.

Additional key words: invasive alien plants, new records

Computer codes: BIDFR, BIDTR, CDTSE, CHEPU, EICCR, LASOV, LGAMA, LEMMT, LPHCR, LUDUR, MCYCO, MIBJA, PASDS, PIIST, PORGR, SENIQ, SETVI, SOLSA, SPZIN, SUACE, TLLGR, FR

2007/042 *Pistia stratiotes* in the EPPO region

Pistia stratiotes (Araceae) is an aquatic plant originating from South America. It is extensively traded for ornamental and aquarium purposes. The plant is thought to spread via dumpings of aquarium or escapees from ornamental ponds. It is an invasive plant often found in the tropics and subtropics.
Its common name is "water lettuce" in English and "laitue d'eau" in French. In the EPPO region, it is considered invasive in Islas Canarias (Spain). While absent from Scotland, it is listed in the Scottish Wildlife and Countryside Act which prohibits importation of the plant as well as of *Eichhornia crassipes* (see EPPO RS 2006/243) which resembles *P. stratiotes*.

Geographical distribution
EPPO region: Spain (Islas Canarias, considered invasive) (Victoria Eugenia Martin Osoria & Wolfredo Wildpret, pers. comm.).

Asia: Cambodia, China, Indonesia, Malaysia, Thailand, Vietnam.

Africa (invasive): Burkina Faso, Seychelles, Swaziland.

North America: USA (Arizona, California, Colorado, Delaware, Georgia, Hawaii, Kansas, Louisiana, Maryland, Mississippi, Missouri, Ohio, New Jersey, New York, North Carolina, South Carolina, Texas), Virgin Islands (US).

Oceania: Australia (invasive) (Australian Capital Territory, New South Wales, Northern Territory, Queensland, Western Australia), Cook Islands (Rarotonga Island), French Polynesia, Guam, New Caledonia, Northern Mariana Islands (Rota Island), Papua New Guinea, Philippines, Solomon Islands, Vanuatu.

South America: Puerto Rico (invasive).

Note: The plant is considered to be native from South America, but a comprehensive list of countries could not be found. The plant has been eradicated from New Zealand. The plant is casual in France and perhaps also in other temperate countries of the EPPO region.

Morphology

P. stratiotes is a free-floating perennial of quiet ponds which forms colonies. It is stoloniferous and has long, feathery, hanging roots. Leaves are light green and velvety-hairy with many prominent longitudinal veins, obovate to spathulate-oblong, 15 cm long and forming a rosette. Flowers are inconspicuous, few, unisexual, and enclosed in a leaf-like spathe. The fruit is a green berry.

Biology and ecology

Water lettuce reproduces both by seeds and vegetatively. Vegetative reproduction involves daughter vegetative offshoots of mother plants on short, brittle stolons. Rapid vegetative reproduction allows water lettuce to cover an entire lake, from shore to shore, with a dense mat of connected rosettes within a short period of time. In Florida (US), densities of up to 1,000 rosettes per m^2 have been reported. Stolons are spread by water currents and floods, and are also moved by boats or fishing equipments. The most commonly accepted pathway of this species into the USA is in ballast water released by ships from South America.

Habitats

P. stratiotes occurs in lakes, water courses, wetlands.

Environmental requirements

P. stratiotes is usually found in lakes and rivers, however it can survive in mud. Its optimal growth temperature ranges from 22 to 30°C but it can endure temperature extremes of 15°C and 35°C.

Impacts

Dense mats can have a negative economic effect by blocking waterways, thus increasing navigational difficulties and hindering flood control efforts. They can also lead to a lower concentration of oxygen in covered waters and sediments by blocking the air-water interface and root respiration. Extremely thick mats of *P. stratiotes* can prevent sunlight from reaching underlying water. The cumulative effect of these negative characteristics of the plant is a loss of biodiversity in invaded habitats. *P. stratiotes* mats can also serve as a breeding place for mosquitoes.

Control

The most common physical control method is raking the plant from the pond's surface.
Chemical treatment can be done against *P. stratiotes.* For example, the contact herbicide endothall has been used successfully in North America.
A biological control programme against *Pistia stratiotes* was undertaken simultaneously with programmes for other aquatic invaders such as *Eichhornia crassipes*, *Salvinia molesta* and *Hydrilla verticillata*, to avoid the increase of other invasive species as one was controlled.

Regulatory status
In Australia, the plant is regulated in Western Australia, New South Wales, Queensland, Northern Territory and Australian Capital Territory. In the USA, the plant is regulated in Alabama, California, Connecticut, Florida, South Carolina, and Texas. A Pest Risk Analysis has been performed for the Pacific islands and is available from the Internet. In the United Kingdom, the Scottish Wildlife and Countryside Act prohibits the release of *P. stratiotes* into the wilderness.

Source: Global Invasive Species Database:
http://www.issg.org/database/species/ecology.asp?si=285&fr=1&sts=sss
Pacific Island Ecosystem at Risk:
http://www.hear.org/pier/species/pistia_stratiotes.htm

Additional key words: invasive alien plants, new records **Computer codes:** PIIST, ES, GB

2007/043 DAISIE project: the European Alien Species Expertise Registry

Searching expertise and making contacts worldwide is particularly relevant to tackle the topic of invasive alien species.
Within the EU project DAISIE, the European Alien Species Expertise Registry collects the expertise of experts worldwide on alien species that are already present in Europe or may be introduced. The expertise registry contains details on more than 1500 experts from 90 countries with respect to taxonomic expertise, geographical units, and thematic areas (such as distribution, conservation, restoration, ecology, economical impact, genetics, legislation, administration, management, control, pathways, transportation, physiology, and risk assessment), and for more than 3000 taxa.
Any expert can register freely and easily at www.europe-aliens.org.

Source: Delivering Alien Invasive Inventories for Europe (DAISIE): www.europe-aliens.org

Additional key words: invasive alien species, expert registry

2007/044 XIV European Weed Research Society Symposium

The European Weed Research Society (EWRS) will hold its XIV symposium on 2007-06-10/12 in Hamar (Norway). The scientific programme will cover all areas of weed science (crop and non-crop situations) including environmental aspects:

1. Invasive plants and biological weed control
2. Chemical weed management
3. Crop-weed interactions and non-chemical methods
4. Weed temporal and spatial dynamics
5. Herbicide resistance in weeds and crops
6. Weed biology
7. Biodiversity and weed communities.

Source: XIV European Weed Research Society Symposium – 2007-06-10/12 – Hamar, Norway.
http://sites.web123.no/Planteforsk/EWRSSymposium/

Additional key words: invasive alien plants, conference **Computer codes:** NO