ORGANISATION EUROPEENNE
ET MEDITERRANEENNE
POUR LA PROTECTION DES PLANTES

EUROPEAN AND MEDITERRANEAN
PLANT PROTECTION
ORGANIZATION

EPPO *Reporting Service*

NO. 4 PARIS, 2006-04-01

CONTENTS ***Pests & Diseases***

Invasive Plants

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EPPO *Reporting Service*

2006/076 New data for quarantine pests and pests on 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**

Cryphonectria parasitica (EPPO A2 list) is reported for the first time from the Czech Republic. It was observed in one chestnut tree (*Castanea sativa*) in the town of Uherský Brod (Jankovský *et al.*, 2004). **Present, only in 1 site**.

In Iran, a survey on cyst nematodes revealed the presence of *Heterodera glycines* (EPPO Action List A2). This is the first record of this species in Iran (Maafi *et al.*, 2004). **Present, no details.**

In Paraguay, *Heterodera glycines* (EPPO Action List A2) was found for the first time in 2002/2003, in the Caaguazu province (Centurión *et al.*, 2004). **Present, first found in 2002/2003, in Caaguazu province.**

During a survey on virus diseases of *Rubus*, the presence of *Raspberry ringspot nepovirus* (EPPO A2 list) was detected in Romania (Isac *et al.*, 2004). **Present, no details.**

Phakopsora euvitis (EPPO Alert List) was found for the first time in Brazil in March 2001, in vineyards of table grapes in the north-west of Paraná. Grapevine rust was later found in other vineyards in São Paulo and Mato Grosso (Tessmann *et al.*, 2004; de Souza, 2004). **Present, first found in 2001, only in some areas (Paraná, São Paulo, Mato Grosso).**

Phakopsora pachyrhizi (EPPO Alert List) is reported to occur in Bolivia (Yorinori *et al.*, 2004). **Present, no details.**

Venturia nashicola (EU Annexes) is reported as an economically important disease of pear in China. It infects fruits, leaves and young shoots, resulting in significant annual yield losses on pears, especially on traditional Chinese varieties (Li *et al.*, 2005). The EPPO Secretariat had previously no data on the occurrence of this fungus in China. **Present, no details.**

- **Detailed records**

Surveys were done in Nigeria on host plants of *Bemisia tabaci* (Homoptera: Aleyrodidae – EPPO A2 list), at Samaru and its surroundings from 2000 to 2002. 42 plant species (35 cultivated and 7 wild species) were found infested by *B. tabaci*. Results showed that in the region of Samaru

(North of Nigeria), *B. tabaci* has a wide host range and occurs both during dry and wet seasons, in lowlands and highlands (Alegbejo & Banwo, 2005).

Curtobacterium flaccumfaciens pv. *flaccumfaciens* (EPPO A2 list) is occurring in the State of Goias and in the Federal District of Brazil (Uesugi *et al.*, 2003).

In the Caribbean Basin, the presence of *Diaphorina citri* (EPPO A1 list – vector of citrus huanglongbing) is reported from the Cayman Islands, Jamaica, the Dominican Republic and Puerto Rico (Halbert and Núñez, 2004). The EPPO Secretariat had previously no data on the occurrence of the pest in these countries.

Nacobbus aberrans (EPPO A1 list) occurs in the State of Puebla, Mexico (González-Pérez *et al*., 2004).

In India, *Phakopsora pachyrhizi* (EPPO Alert List) is reported for the first time from Rajasthan (Gupta and Kaur, 2004).

In New Zealand, an isolated outbreak of *Synchytrium endobioticum* (EPPO A2 list) was found in a domestic garden in Southland (South Island). Eradication measures are being applied (Anonymous, 2005).

Tomato yellow leaf curl begomovirus (EPPO A2 list) is reported from South Carolina (US). Symptomatic tomato plants were observed in 2005 at several locations near Charleston (Ling *et al.*, 2006).

- **Absence**

On the basis of field surveys, phytosanitary inspections of plant material intended for export and literature searches, it is considered that *Ditylenchus dipsaci* does not occur in India (Rajan and Arjun Lal, 2005).

- **New host plants**

In Washington State (US), *Iris yellow spot tospovirus* (EPPO Alert List) was first found in 2003. It rapidly spread to all onion-producing counties, affecting seed and bulb crops. In 2005, it was also detected in a collection of wild onions, infecting *Allium pskemense, A. vavilovii* and *A. altaicum* (Pappu *et al*., 2006).

Phytophthora ramorum (EPPO Alert List) was isolated from *Adiantum jordanii* and *A. aleuricum* (Adiantaceae) growing at two forest sites in California (US). Affected ferns showed brown spots which may coalesce, killing entire leaves, but the disease did not appear to be fatal to the ferns (Vettraino *et al.*, 2006).

In Georgia (US), natural infections by *Tomato spotted wilt tospovirus* (TSWV - EPPO A2 list) were unexpectedly detected in asymptomatic *Pinus* seedlings and trees. No thrips could be observed feeding on *Pinus* during this study. There is no indication that TSWV can cause damage to pine trees, but *Pinus* species may act as reservoirs and play a role in the epidemiology of the virus (Mullis *et al*., 2006).

Source:

Alegbejo MD, Banwo OO (2005) Host plants of *Bemisia tabaci* Genn. in Northern Nigeria. *Journal of Plant Protection Research* **45**(2), 93-98.

Anonymous (2005) Plant kingdom records 18/12/2004 – 04/02/2005. Validated new to New Zealand reports. *Biosecurity* no. 58, p 21.

Centurión FM, Shimizu K, Momota Y (2004) First record of soybean cyst nematode, *Heterodera glycines* Ichinohe from Paraguay. *Japanese Journal of Nematology* **34**(1) 39-42 (abst.).

González-Pérez E, Yáñez-Morales M, Santiago-Santiago V, Montero-Pineda A (2004) Fungi biodiversity on pepper wilt and some related factors in Tlacotepec de José Manzo, El Verde, Puebla. *Agrociencia (Montecillo)* **38**(6), 653-661 (abst.).

Gupta VP, Kaur A (2004) *Phakopsora pachyrhizi* – soybean rust pathogen new to Rajasthan. *Journal of Mycology and Plant Pathology* **34**(1), p 151 (abst.).

Halbert SE, Núñez CA (2004) Distribution of the Asian citrus psyllid *Diaphorina citri* Kuwayama (Rhynchota: Psyllidae) in the Caribbean Basin. *Florida Entomologist* **87**(3), 401-402.

Isac V, Isac M, Mladin P (2004) Viruses occurrence in raspberry cultivars grown in Romania. *Acta Horticulturae* no. 656, 171-175.

Jankovský L, Haltofová P, Juhásová G, Kobza M, Adamčíková, K, Palovčíková D (2004) The first record of *Chryphonectria parasitica* in the Czech Republic. *Czech Mycology* **56**(1/2), 45-51 (abst.).

Li BH, Xu XM, Li JT, Li BD (2005) Effects of temperature and continuous and interrupted wetness on the infection of pear leaves by conidia of *Venturia nashicola*. *Plant Pathology* **54**(3), 357-363.

Ling KS, Simmons AM, Hassell RL, Keinath AP, Polston JE (2006) First report of Tomato yellow leaf curl virus in South Carolina. *Plant Disease* **90**(3), p 379.

Maafi ZT, Sturhan D, Ahmad Kheiri, Geraert E, Subbotin SA, Moens M (2004) Morphology of some cyst-forming nematodes from Iran. *Russian Journal of Nematology* **12**(1), 59-77 (abst.).

Mullis SW, Csinos AS, Gitaitis D, Martinez-Ochoa N (2006) First report of Pinaceae in Georgia naturally infected with *Tomato spotted wilt tospovirus*. *Plant Disease* **90**(3), p 376.

Pappu HR, Hellier BC, Dugan FM (2006) Wild *Allium* spp. as natural hosts of *Iris yellow spot virus*. *Plant Disease* **90**(3), p 378.

Rajan, Arjun Lal (2005) On the non-occurrence of *Ditylenchus dipsaci* in India. *Bulletin OEPP/EPPO Bulletin* **35**(1), 37-41.

Souza, NS de (2004) [Occurrence of grape rust in the State of Mato Grosso, Brazil.]. *Fitopatologia Brasileira* **29**(2), p 226 (abst.).

Tessmann DJ, Dianese JC, Genta W, Vida JB, May de Mio LL (2004) Grape rust caused by *Phakopsora euvitis*, a new disease for Brazil. *Fitopatologia Brasileira* **29**(3), p 338 (abst.).

Uesugi CH, Freitas MA, Menezes JR (2003) [First occurrence of *Curtobacterium flaccumfaciens* pv. *flaccumfaciens* on bean in the State of Goias and Federal District of Brazil.] *Fitopatologia Brasileira* **28**(3), p 324 (abst.).

Vettraino AM, Hüberli D, Swain S, Bienapfl JC, Smith A, Garbelotto M (2006) First report of infection of maiden-hair-fern (*Adiantum jordanii* and *A. aleuticum*) by *Phytophthora ramorum* in California. *Plant Disease* **90**(3), p 379.

Yorinori JT, Nunes Junior J, Lazzarotta JJ (2004) [Asiatic rust of soyabeans in Brazil:

evolution, economic importance and control.] *Documentos – Embrapa Soja* no. 247, 63 pp (abst.).

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

Computer codes: BEMITA, CORBFL, DIAACI, DITYDI, ENDOPA, HETDGL, IYSV00, NACOBA, PHAKPA, PHLLAM, PHYTRA, RPRSV0, SYNCEN, TSWV00, TYLCV0, VENTNA, BO, BR, CN, CZ, DM, IN, IR, JM, KY, MX, NG,NZ, PR, PY, RO, US

2006/077 Isolated finding of *Xylophilus ampelinus* in Slovenia

In Slovenia, the presence of *Xylophilus ampelinus* (EPPO A2 list) was suspected on the basis of visual observation of symptoms in the 1960s. The disease was only observed in a limited coastal area, but some very sensitive local cultivars (e.g. cvs 'Rebula' and 'Pinela') were temporarily abandoned in this infected area. However, one vineyard of cv. 'Rebula' remained till today. Since 2002, symptoms of bacterial blight have been observed again in this vineyard. Samples were collected and tested by several methods (biochemical tests, fatty acid profiling, IF, nested-PCR, pathogenicity tests) and isolation of the bacterium on agar media was attempted. Results of laboratory tests confirmed the presence of *X. ampelinus* in this vineyard in Slovenia. In 2002, disease symptoms (angular lesions on leaves) were conspicuous and *X. ampelinus* was identified. In 2003 and 2004, symptom expression was faint. In 2003, no positive sample could be found, but *X. ampelinus* was again isolated and identified (colony morphology and RT-PCR) in 2004. It is concluded that symptoms observed in the 1960s were probably caused by *X. ampelinus*, and that at present the pathogen is still confined to this single vineyard as no symptoms have been observed in surrounding vineyards. This failure to spread is most probably related to the absence of vectors.
The situation of *Xylophilus ampelinus* in Slovenia can be described as follows: **Present, first observed in the 1960s and confirmed in 2005 in a very limited area (1 vineyard).**

Source: Dreo T, Seljak G, Janse JD, van der Beld I, Tjou-Tam-Sin L, Gorkink-Smits P, Ravnikar M (2005) First laboratory confirmation of *Xylophilus ampelinus* in Slovenia. *Bulletin OEPP/EPPO Bulletin* **35**(1), 149-155.

Additional key words: new record

Computer codes: XANTAM, SI

2006/078 *Plum pox potyvirus* found in apricot samples collected in China

In the Hunan Province of China, leaves of apricot trees (*Prunus armeniaca* cvs. Hong Mei, Bai Mei and a selected genotype) showed yellow rings and diffused chlorotic spots resembling those of *Plum pox potyvirus* (PPV - EPPO A2 list). Samples collected from 3 symptomatic trees were repeatedly analyzed using DAS-ELISA and RT-PCR during summers 2001/2003, in a laboratory located in the Czech Republic. PPV was detected in leaves, bark, and leaf buds of all 3 trees using ELISA with polyclonal and monoclonal antibodies. Results were confirmed using RT-PCR with a PPV-specific primer pair. Further analysis revealed the presence of the PPV-D strain. This is the first publication indicating the occurrence of PPV in China, but further studies are needed to better understand the situation of PPV in China.
The situation of *Plum pox potyvirus* in China can be described as follows: **Present, isolated findings; detected in 3 apricot trees (Hunan province) in 2001/2003, further studies are needed to confirm the extent of the disease.**

Source: Navratil M, Safarova D, Karesova R, Petrzik K (2005) First incidence of *Plum pox virus* on apricot trees in China. *Plant Disease* **89**(3), p 338.

Additional key words: new record **Computer codes:** PPV000, CN

2006/079 First report of *Iris yellow spot tospovirus* in Peru

In Peru, necrotic lesions and dieback were observed in onion crops (*Allium cepa*) grown near the cities of Supe and Ica in 2003. Samples were collected from symptomatic plants. Tests (DAS-ELISA) revealed the presence of *Iris yellow spot tospovirus* (IYSV – EPPO A2 list). In 2004 and 2005, symptoms of IYSV were observed again on onion crops in the Supe and Casma valleys. Similarly, IYSV was detected in symptomatic plants by ELISA and RT-PCR (*Tomato spotted wilt tospovirus* was not found in any tested sample). Additional samples were then collected from regions in northern and southern Peru and also gave positive test results. As onions have become significant export crops for Peru, further studies are needed to determine the impact of IYSV. This is the first report of IYSV in Peru.
The situation of *Iris yellow spot tospovirus* in Peru can be described as follows: **Present, first found in 2003, several outbreaks have been detected in onion crops.**

Source: Mullis SW, Gitaitis RD, Nischwitz C, Csinos AS, Rafael Mallaupoma ZC, Inguil Rojas EH (2006) First report of onion (*Allium cepa*) naturally infected with *Iris yellow spot virus* in Peru. *Plant Disease* **90**(3), p 377.

Additional key words: new record **Computer codes:** IYSV00, PE

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2006/080 New phytoplasma diseases of potatoes

In Bolivia during surveys carried out in 2002/2003, a potato disease called 'brotes grandes' (big buds) was found on potato crops in the valleys of Chilón, Saipina, Pulquina and Comarapa (Santa Cruz Department). In some fields, up to 90% of the plants were affected. Symptoms included tuber-like growths in leaf axils, varying in size and colour from red to purple or black and bearing terminal, adventitious leaves. Tubers often produced hair-like shoots, reducing their quality and yield. Molecular analysis revealed the presence of a phytoplasma similar to ash witches' broom phytoplasma (belonging to subgroup B of the '*Candidatus* Phytoplasma asteris' group 16SrI). A very similar phytoplasma was also detected in vines (*Serjania perulacea*, Sapindaceae) present in the vicinity of infected potato fields and showing symptoms of little-leaf (Jones *et al*., 2005).

In Texas and Nebraska (US), a new disease of potatoes causing a serious defect in transformed potato chips was observed recently. The defect consisted of patchy brown discoloration of chips which may lead to rejection by the processor. In the field, infected potato plants showed stunting, leaf chlorosis, slight purple coloration of new growth, swollen nodes, proliferation of axillary buds and aerial tubers. Tuber symptoms included mild vascular brown discoloration. Seed potatoes from affected plants produced hair-like shoots. Molecular studies done in 2004 revealed the presence of a phytoplasma belonging to the subgroup A of the '*Candidatus* Phytoplasma asteris' group (16SrI) and of a new phytoplasma related to, but distinct from the stolbur phytoplasma group (16SrXII). In 2005, the new phytoplasma was detected again in 14 defective tuber samples from storage and in 16 symptomatic plants from the field (Secor *et al.*, 2006).

Source: Jones P, Arocha Y, Antesana O, Montellano E, Franco P (2005) 'Brotes grandes' (big bud) of potato: a new disease associated with a 16SrI-B subgroup phytoplasma in Bolivia. *Plant Pathology* **54**(2), p 234.

Secor GA, Lee IM, Bottner KD, Rivera-Varas V, Gudmestad NC (2006) First report of a defect of processing potatoes in Texas and Nebraska associated with a new phytoplasma. *Plant Disease* **90**(3), p 377.

Additional key words: new pests **Computer codes:** BO, US

2006/081 Apricot pseudo-chlorotic leaf spot virus: a new *Trichovirus* of stone fruit trees

During surveys done on *Prunus* material collected from Southern Italy which presented disease symptoms of unclear etiology, the presence of an unknown filamentous virus was found using a polyvalent PCR assay designed for the detection of *Trichovirus, Capillovirus* and *Foveavirus*. This virus was detected in mixed infection with *Apple chlorotic leaf spot trichovirus* (ACLVS) in 2 Japanese plum trees (*Prunus salicina* cv. Shiro) showing severe stem pitting or grooving symptoms, and in 1 apricot tree (*P. armeniaca* cv. Bulida) with symptoms resembling those of Apricot ringpox disease. This virus was characterized as a new and distinct species for which the name Apricot pseudo-chlorotic leaf spot virus is now proposed (to highlight its close relationship with ACLVS). Apricot pseudo-chlorotic leaf spot virus also has been found in several *Prunus* samples from France, Italy, Spain and Australia. In addition, preliminary comparisons of sequences suggested that it probably occurs in Jordan, Hungary, and Turkey. So far, it has been recovered only from a limited number of *Prunus* species (*P. armeniaca, P. domestica, P. salicina, P. persica*), but its host range needs to be further studied, particularly to determine whether it could infest other *Prunus* (e.g. cherry) and pome fruits (e.g. *Cydonia, Malus, Pyrus*). As this new virus has always been detected in combination with ACLVS, and associated with different types of symptoms, it is difficult to understand its pathogenicity. Further studies are needed to better understand the respective roles of ACLVS and Apricot pseudo-chlorotic leaf spot virus in disease expression.

Source: Liberti D, Marais A, Svanella-Dumas L, Dulucq MJ, Alioto D, Ragozzino A, Rodoni B, Candresse T (2005) Characterization of Apricot pseudo-chlorotic leaf spot virus, a novel *Trichovirus* isolated from stone fruit trees. *Phytopathology* **95**(4), 420-426.

Additional key words: new pest **Computer codes:** APCLSV

2006/082 Further research on the etiology of cherry chlorotic rusty spot disease

As reported in EPPO RS 97/053, a new disease called ‘cherry chlorotic rusty spot’* was observed in Italy, in a cherry orchard in the province of Avellino (Campania). The disease was first described in May 1992 in a young orchard (3 years old) of 0.5 ha, comprising 120 sweet cherry trees (*Prunus avium*, cultivars belonging to the Bigarreau group and a local one ‘La Signora’) grafted on sour cherry rootstocks (*P. cerasus*). Leaf symptoms appeared in spring and were characterized by chlorotic spots which later developed a rusty appearance with small reddish spots. Defoliation was observed later in the season. Fruits were small and deformed with colour alterations (reddish line patterns). In the affected orchard, the first symptoms had in fact already been observed in spring 1989 on 2 trees, and within 3 years 30% of the trees were

affected by the disease. Since then, the etiology of cherry chlorotic rusty spot has been investigated. The first hypothesis was that a viral agent was involved but ELISA tests failed to detect any known viruses of stone-fruit trees. In addition, the disease could not be transmitted by grafting to cherry seedlings or peach indicator GF305. Bacteria could not be isolated either. Light and electronic microscopy revealed the presence of mycelium-like structures in naturally infected cherry leaf and fruit tissues. However, it was not possible to isolate any fungus on several nutritive substrates. Molecular studies were undertaken and showed that several dsRNAs (10 to 12) and 2 small circular RNAs were consistently associated with the disease. Further characterization and phylogenetic analysis of 6 of these dsRNAs showed that they are most probably the genomic components of 2 new species of mycoviruses belonging to the genera *Chrysovirus* and *Partitivirus*. Therefore, it is hypothetized that 'cherry chlorotic rusty spot' is a disease of complex etiology which may involve a fungus, itself infected by at least 2 mycoviruses. Finally, it is recalled that two other cherry diseases showing very similar symptoms had also been described in Emilia-Romagna in 1962 and in the Amasya region in Turkey in 1970 (the disease was there called Amasya cherry disease). It is suggested that these disorders might be identical and caused by the same pathogen(s).

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* EPPO note: Cherry chlorotic rusty spot 'virus' was added in 1998 to the EPPO Alert List as a new disease of cherry, but deleted in 2001 in the absence of data on its etiology, distribution and severity.

Source: Alioto D, Covelli L, Zaccaria F, Di Serio F, Vitale T, Ragozzino A (2005) Cherry chlorotic rusty spot: a disease with complex aetiology in cherry orchards of Campania region. *Informatore Fitopatologico* no. 3, 45-50.

Additional key words: etiology **Computer codes:** CCRSV0, IT

2006/083 *Cacopsylla pyri* is a vector of pear decline in Spain

Studies were carried out in Northern Spain to determine the ability of *Cacopsylla pyri* (Homoptera: Psyllidae) to transmit the phytosplasma associated with pear decline ('*Candidatus* Phytoplasma pyri' – EPPO A2 list). Studies were done in a commercial plot (400 non-certified *Pyrus communis* cv. Williams) with many trees known to be infected by pear decline (incidence was estimated at 80%). Over a period of 1 year, approximately 100 psyllids were collected monthly from pear trees, using the beating tray method, and tested for the presence of '*Ca*. P. pyri'. Psyllids were then used for experiments on phytoplasma transmission both to healthy *P. communis* trees and to an artificial feeding medium. Results showed that *C. pyri* can transmit '*Ca.* P. pyri'. These results confirmed other studies done in Italy and France. It was also found that the frequency of psyllids carrying the phytoplasma varied according to the season, with the highest percentages in September and October and lowest in February, which coincided with the

seasonal detection of '*Ca.* P. pyri' in pear trees. Differences between males and females in phytoplasma transmission were observed, and females were found to be significantly more efficient than males. In addition, studies of the sex ratio indicated that there was a higher proportion of females than males throughout most of the year. It is felt that more detailed investigations are needed to better understand how females are involved in disease spread. Finally, since *C. pyri* is the most important pear psyllid species in Spain and other Mediterranean countries, it is likely to be the main vector of pear decline in these countries.

Source: Garcia-Chapa M, Sabaté J, Laviña A, Batlle A (2005) Role of *Cacopsylla pyri* in the epidemiology of pear decline in Spain. *European Journal of Plant Pathology* **111**(1), 9-17.

Additional key words: epidemiology **Computer codes:** PHYPY

2006/084 *Murraya paniculata* is not a host of '*Candidatus* Liberibacter asiaticum'

In Japan, huanglongbing ('*Candidatus* Liberibacter asiaticum' – EPPO A1 list) occurs in a few islands of the Ryukyu Archipelago, in particular in Okinawa where phytosanitary measures have been applied to avoid any further spread. But in 2002, it was found in other neighbouring islands of the Archipelago (Yoronjima, Okinoerabujima, Tokunoshima and Kikaijima islands which are part of Kagoshima prefecture). Growers asked the authorities to regulate the movements of *Murraya paniculata*, as they suspected it might be a pathway for the disease. Transmission studies were done by grafting infected *Citrus* buds to healthy *M. paniculata*, followed by PCR testing. However, it was not possible to transmit *L. asiaticum* to *M. paniculata*. The authors concluded that *M. paniculata* is not a host plant of *L. asiaticum*.

Source: Dai K, Ikeshiro T, Matsuura T, Kimura S, Hamagami A, Fujiwara Y, Kobashigawa Y, Miyakuni S (2005) [Investigation of host range of *Candidatus* Liberobacter asiaticum – Is *Murraya paniculata* a host plant of *Candidatus* L. asiaticum?] *Research Bulletin of the Plant Protection Service* no. **41**, 53-57 (abstract).

Additional key words: detailed record, host plant **Computer codes:** LIBEAS, JP

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2006/085 New disease of sugar beet 'Syndrome des Basses Richesses' found in Hungary

An unknown disease of sugar beet has recently been observed in Hungary. Symptoms resembled those of the disease called 'syndrome des basses richesses' which was described in France. Analysis revealed the presence of bacterium-like organisms (BLO) in the phloem of diseased plants. It can be recalled that 'syndrome des basses richesses' was first reported in Bourgogne (FR) in 1991 and is mainly characterized by a low sugar content in the roots of affected plants. Its etiology is still unclear, although both a phytoplasma (belonging to stolbur group) and a BLO (related to '*Candidatus* Phlomobacter fragariae') have been found associated with the disease. In addition, studies showed that an insect vector (*Pentastiridius beieri*, Homoptera: Ciixidae) might be involved in disease transmission (see EPPO RS 2002/017 and 2002/084).

Source: Pocsai E, Boudon-Padieu E, Desqué D, Gatineau F, Larrue J, Ember I, Elekes M, Gergely L, Hertelendy P, Potyondi L, Zsolnai B (2005) [Occurrence of 'low-sugar syndrom' disease of sugar beet in Hungary.] *Növényvédelem* **41**(1), 31-40.

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

2006/086 Multiplex RT-PCR to detect tospoviruses

In Japan, the following tospoviruses have been reported in crops: *Tomato spotted wilt tospovirus* (TSWV - EPPO A2 list) on chrysanthemums, tomato and *Capsicum*; *Watermelon silver mottle tospovirus* (WSMoV – EPPO A1 list) on watermelon and New Zealand spinach (*Tetragonia tetragonioides*), *Impatiens necrotic spot tospovirus** (INSV – EPPO A2 list) on *Cineraria, Cyclamen* and *Eustoma grandiflorum,* and *Iris yellow spot tospovirus* (IYSV – EPPO Alert List) on *E. grandiflorum* and *Alstroemeria*. A one-step multiplex RT-PCR has been developed in Japan to simultaneously detect and identify these five different tospovirus species. The system is composed of a universal degenerate primer and five virus species-specific primers. With this method, it was possible to detect single infections and also multiple infections in ornamental crops.

* The EPPO Secretariat had previously no data on the occurrence of INSV in Japan.

Source: Uga H, Tsuda S (2005) A one-step reverse transcription-polymerase chain reaction system for the simultaneous detection and identification of multiple tospovirus infections. *Phytopathology* **95**(2), 166-171.

Additional key words: diagnostics, new record **Computer codes:** INSV00, TSWV0, WSMOV0, JP

2006/087 Update on the situation of *Aonidiella citrina* in Italy

As reported in EPPO RS 95/035, an outbreak of *Aonidiella citrina* (Homoptera: Diaspididae – EU Annexes) was found in 1994 in Calabria, Italy. Surveys were done in 1991-2001 in citrus orchards in Calabria and Sicilia using pheromone traps. Results showed that the pest is still limited to the area where it was first detected and has not caused serious damage. The situation is very similar to the one described in earlier surveys done in 1999-2000 (see EPPO RS 2002/134), i.e. *A. citrina* occurs only in the Sibari Plain (localities of Corigliano and Rossano, Calabria) and it is not observed in citrus orchards in Sicilia. The situation of *Aonidiella citrina* in Italy can be described as follows: **Present, first found in 1994, confined to a limited area in the Sibari Plain in Calabria.**

Source: Palmeri V, Benfatto D, Mazzeo G, Di Leo A (2005) Observations on the yellow scale on citrus in Italy. *Informatore Fitopatologico* no. 3, 54-58.

Additional key words: detailed record **Computer codes:** AONDCI, IT

2006/088 EPPO report on notifications of non-compliance

The EPPO Secretariat has gathered the notifications of non-compliance for 2005 received since the previous report (EPPO RS 2005/188) from the following countries: Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, France, Finland, Germany, Ireland, Lithuania, Netherlands, Poland, Switzerland, United Kingdom. When a consignment has been re-exported and the country of origin is unknown, the re-exporting country is indicated in brackets. When the occurrence of a pest in a given country is not known to the EPPO Secretariat, this is indicated by an asterisk (*).

The EPPO Secretariat has selected notifications of non-compliance only in the cases where pests have been detected. 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 for 2005.

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Agromyzidae	*Eryngium foetidum*	Vegetables	Thailand	France	1
	Ocimum	Vegetables	Thailand	France	1
	Ocimum basilicum	Vegetables	Israel	France	1
	Ocimum basilicum	Vegetables	Thailand	France	1
Aleyrodidae	*Eryngium foetidum*	Vegetables	Thailand	France	5
	Eryngium foetidum	Vegetables	Vietnam	France	1
	Hygrophila polysperma	Aquarium plants	Singapore	France	1
	Ocimum	Vegetables	Thailand	France	1

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Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Ambrosia artemisiifolia	*Helianthus annuus*	Stored products	Ukraine	Bulgaria	3
Asterolecanium	*Hoodia gordonii*	Plants for planting	Namibia	United Kingdom	1
Bemisia tabaci	*Amaranthus caudatus*	Vegetables	Ghana	United Kingdom	1
	Anubias	Aquarium plants	Singapore	United Kingdom	1
	Cestrum	Cut flowers	Netherlands	United Kingdom	1
	Dendranthema	Cut flowers	Spain (Canary Isl.)	United Kingdom	1
	Dendranthema morifolium	Cut flowers	Spain (Canary Isl.)	United Kingdom	1
	Eryngium foetidum	Vegetables	Thailand	France	1
	Eryngium foetidum	Vegetables	Vietnam	France	1
	Euphorbia pulcherrima	Cuttings	Kenya	Germany	1
	Euphorbia pulcherrima	Plants for planting	Netherlands	United Kingdom	1
	Eustoma	Cut flowers	Israel	Netherlands	5
	Hemigraphis	Plants for planting	Singapore	United Kingdom	1
	Hypericum	Cut flowers	Israel	France	1
	Liatris spicata	Cut flowers	Israel	United Kingdom	3
	Lisianthus	Cut flowers	Israel	United Kingdom	2
	Ludwigia	Aquarium plants	Singapore	United Kingdom	1
	Manihot esculenta	Vegetables	Ghana	United Kingdom	1
	Nomaphila	Aquarium plants	Indonesia	France	1
	Ocimum	Vegetables	Spain (Canary Isl.)	United Kingdom	1
	Ocimum	Vegetables	Spain (Canary Isl.)	United Kingdom	1
	Ocimum basilicum	Vegetables	Cyprus	United Kingdom	1
	Ocimum basilicum	Vegetables	Israel	Netherlands	8
	Salvia officinalis	Cuttings	Israel	United Kingdom	2
	Solidago	Cut flowers	Israel	Netherlands	15
	Solidago	Cut flowers	Israel	United Kingdom	2
	Solidago	Cut flowers	Zimbabwe	Netherlands	1
	Trachelium	Cut flowers	Israel	Netherlands	1
	Unspecified	Cut flowers	Nigeria	United Kingdom	1
	Unspecified	Aquarium plants	Singapore	United Kingdom	1
	Unspecified	Vegetables	Thailand	United Kingdom	1
Bemisia tabaci, B. afer	*Manihot esculenta*	Vegetables	Gambia	United Kingdom	1
Bemisia tabaci, Liriomyza	*Solidago*	Cut flowers	Israel	United Kingdom	1
***Bemisia tabaci, Phenacoccus solenopsis* (suspected)**	*Manihot esculenta*	Vegetables	Ghana	United Kingdom	1
Bemisia tabaci, Phenacoccus solenopsis, Aleurodicus dispersus, Tetramorium, Oligonychus gossypii	*Ipomoea batatas, Manihot esculenta*	Vegetables	Gambia	United Kingdom	1
Bemisia tabaci, Spodoptera	*Ipomoea batatas*	Vegetables	Ghana	United Kingdom	1
Colletotrichum truncatum	*Murraya koenigii*	Vegetables	Ghana	United Kingdom	1
Contarinia maculipennis, Thrips palmi	*Dendrobium*	Cut flowers	Thailand	Netherlands	1
Criconematidae	*Jubaea*	Plants for planting	Chile	France	1

EPPO *Reporting Service*

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Diaphania indica	*Momordica*	Vegetables	Bangladesh	United Kingdom	1
	Momordica	Vegetables	Kenya	Germany	2
	Momordica	Vegetables	Kenya	United Kingdom	1
	Momordica charantia	Vegetables	India	United Kingdom	2
	Momordica charantia	Vegetables	Kenya	United Kingdom	1
	Momordica, Solanum melongena	Vegetables	India	United Kingdom	1
Ditylenchus dipsaci	*Sternbergia lutea*	Bulbs	Turkey	Netherlands	1
Erwinia amylovora	*Crataegus*	Plants for planting	Netherlands	United Kingdom	2
Geotrichum candidum	*Citrus paradisi*	Fruits	Argentina	France	1
Guignardia citricarpa	*Citrus*	Fruits	Benin	France	1
	Citrus limon	Fruits	South Africa	Netherlands	1
	Citrus reticulata	Fruits	Argentina	Netherlands	1
	Citrus reticulata	Fruits	Brazil	Lithuania	1
	Citrus sinensis	Fruits	Brazil	Netherlands	2
	Citrus sinensis	Fruits	South Africa	Netherlands	2
	Citrus sinensis	Fruits	Swaziland	Netherlands	1
	Citrus sinensis	Fruits	Zimbabwe	Netherlands	1
Helicoverpa armigera	*Dianthus caryophyllus*	Cut flowers	Israel	Germany	1
	Dianthus caryophyllus	Cut flowers	Netherlands	Germany	1
	Dianthus caryophyllus	Cut flowers	Spain	Germany	1
	Eustoma	Cut flowers	Israel	Netherlands	1
	Gypsophila	Cut flowers	Israel	Netherlands	2
	Ocimum basilicum	Vegetables	Israel	Netherlands	1
	Ocimum basilicum	Vegetables	Thailand	Netherlands	1
	Pisum sativum	Vegetables	Kenya	United Kingdom	1
	Pisum sativum	Vegetables	Zambia	Netherlands	4
	Pisum sativum	Vegetables	Zimbabwe	Netherlands	2
	Pisum sativum	Vegetables	Zimbabwe	United Kingdom	3
	Rosa	Cut flowers	Zambia	Netherlands	1
Hirschmanniella	*Anubias*	Aquarium plants	Singapore	France	1
	Hydrocharitaceae	Aquarium plants	Singapore	France	1
	Unspecified	Aquarium plants	Singapore	Germany	1
	Unspecified	Aquarium plants	Thailand	Belgium	2
	Vallisneria	Aquarium plants	Singapore	France	5
	Vallisneria	Aquarium plants	Singapore	France	1
Leucinodes orbonalis	*Solanum*	Vegetables	India	United Kingdom	1
	Solanum melongena	Vegetables	India	Netherlands	1
	Solanum melongena	Vegetables	Thailand	Netherlands	9
	Solanum torvum	Vegetables	Thailand	Netherlands	2
Liriomyza	*Argyranthemum*	Cuttings	Kenya	Germany	1
	Gypsophila paniculata	Cut flowers	Israel	United Kingdom	2
	Ocimum basilicum	Fruits	Israel	France	1
Liriomyza (*suspect *huidobrensis)	*Pisum sativum*	Vegetables	Guatemala	United Kingdom	1

EPPO *Reporting Service*

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Liriomyza huidobrensis	*Eryngium*	Cut flowers	Ecuador	Netherlands	2
	Eryngium	Vegetables	Kenya	Netherlands	2
	Gypsophila	Cut flowers	Ecuador	Netherlands	1
	Gypsophila	Cut flowers	Israel	Ireland	1
	Gypsophila	Cut flowers	Kenya	Netherlands	1
	Pisum sativum	Vegetables	Kenya	United Kingdom	2
	Primula	Plants for planting	Belgium	United Kingdom	1
Liriomyza sativae	*Ocimum americanum*	Vegetables	Thailand	France	1
Liriomyza trifolii	*Eustoma*	Cut flowers	Israel	Netherlands	1
	Gypsophila	Cut flowers	Israel	Netherlands	9
	Solidago	Cut flowers	Zimbabwe	Netherlands	2
Meloidogyne	*Rosa*	Plants for planting	China	Germany	1
Nematoda	*Pelargonium*	Plants for planting	USA	France	1
Opogona sacchari	*Crinum*	Plants for planting	Netherlands	Germany	1
	Pachira aquatica	Plants for planting	Netherlands	Germany	1
Parlatoria pergandii	*Citrus*	Fruits	Syria	United Kingdom	1
Pepino mosaic potexvirus	*Lycopersicon esculentum*	Vegetables	(Poland)	Austria	1
	Lycopersicon esculentum	Fruits	Netherlands	United Kingdom	1
Phomopsis vexans	*Solanum melongena*	Vegetables	Dominican Rep.	United Kingdom	2
Phytophthora ramorum	*Aucuba japonica*	Plants for planting	Belgium	United Kingdom	1
	Viburnum tinus	Plants for planting	Italy	United Kingdom	1
Pratylenchus	*Carex*	Cuttings	Turkey	Germany	1
Prunus necrotic ringspot nepovirus	*Prunus avium*	Plants for planting	Yugoslavia	Germany	1
Puccinia	*Solanum melongena*	Vegetables	Ghana	United Kingdom	1
Radopholus similis	*Cryptocoryne*	Plants for planting	Philippines	Germany	1
Rhynchophorus ferrugineus	*Phoenix canariensis, Washingtonia filifera*	Plants for planting	Egypt	France	1
Spodoptera littoralis	*Eustoma*	Cut flowers	Israel	Germany	1
	Ocimum	Vegetables	Spain (Canary Isl.)	United Kingdom	2
	Rosa	Cut flowers	Israel	Netherlands	4
	Rosa	Cut flowers	Tanzania	Netherlands	1
Spodoptera litura	*Dendrobium*	Cut flowers	Thailand	United Kingdom	1
Temnorhynchus	*Phoenix dactylifera, Washingtonia*	Plants for planting	Egypt	France	1
Thripidae	*Eustoma*	Cut flowers	Israel	Germany	2
	Orchidaceae	Cut flowers	Thailand	Germany	1

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Thrips	*Momordica*	Vegetables	Dominican Rep.	Germany	3
	Momordica	Vegetables	India	Germany	1
	Momordica charantia	Vegetables	Kenya	Germany	1
Thrips (*suspect *T. palmi)	*Asparagus officinalis*	Vegetables	Thailand	Netherlands	1
	Dendrobium	Cut flowers	Thailand	Belgium	1
	Momordica	Vegetables	Dominican Rep.	Germany	2
	Momordica charantia	Vegetables	Dominican Rep.	United Kingdom	1
Thrips palmi	*Dendrobium*	Cut flowers	Thailand	Belgium	2
	Dendrobium	Cut flowers	Thailand	Netherlands	1
	Dendrobium, Mokara, Aranda	Cut flowers	Singapore	Netherlands	2
	Momordica	Vegetables	Dominican Rep.	Netherlands	2
	Momordica	Vegetables	Thailand	Netherlands	1
	Momordica charantia	Vegetables	Dominican Rep.	United Kingdom	1
	Momordica charantia	Vegetables	India	United Kingdom	1
	Momordica charantia	Vegetables	Suriname	Netherlands	1
	Orchidaceae	Cut flowers	Thailand	Belgium	1
	Orchidaceae	Cut flowers	Thailand	Finland	1
	Solanum melongena	Vegetables	Malaysia	Netherlands	1
	Solanum melongena	Vegetables	Suriname	Netherlands	10
	Solanum melongena	Vegetables	Thailand	Netherlands	2
Thrips palmi, Diaphania indica, Phlaeothripidae	*Momordica charantia*	Vegetables	India	United Kingdom	1
Thrips palmi, Leucinodes orbonalis	*Solanum melongena*	Vegetables	Thailand	Netherlands	1
Thrips, Diaphania indica	*Momordica*	Vegetables	Kenya	Germany	1
Thrips, Helicoverpa, Diaphania indica	*Momordica*	Vegetables	India	Germany	1
Thysanoptera	*Eustoma*	Cut flowers	Israel	Germany	1
Tilletia	*Triticum aestivum*	Stored products	India	United Kingdom	1
Xanthomonas axonopodis* pv. *phaseoli	*Phaseolus vulgaris*	Seeds	Tanzania	France	1
Xanthomonas fragariae	*Fragaria ananassa*	Plants for planting	Hungary	Germany	1
	Fragaria ananassa	Plants for planting	Netherlands	Belgium	1

- **Fruit flies**

Pest	Consignment	Country of origin	C. of destination	nb
Anastrepha	*Mangifera indica*	Dominican Rep.	Netherlands	1
Bactrocera dorsalis	*Annona squamosa*	Thailand	Czech Rep.	4
Non-European Tephritidae	*Annona squamosa*	Thailand	France	3
	Annona squamosa	Vietnam	Czech Rep.	1

Pest	Consignment	Country of origin	C. of destination	nb
Non-European Tephritidae	*Annona squamosa*	Vietnam	France	4
	Capsicum	Thailand	France	1
	Capsicum frutescens	Thailand	France	6
	Capsicum frutescens	Vietnam	France	1
	Capsicum frutescens, Capsicum annuum, Syzygium samarangense	Thailand	France	1
	Mangifera indica	Cameroon	France	1
	Mangifera indica	Dominican Rep.	France	1
	Mangifera indica	Dominican Rep.	Netherlands	2
	Mangifera indica	Mali	France	1
	Mangifera indica	Pakistan	France	5
	Mangifera indica	Senegal	France	3
	Mangifera indica	Senegal	Netherlands	1
	Mangifera indica	Thailand	France	2
	Psidium guajava	India	France	2
	Syzygium	Thailand	Netherlands	1
	Syzygium jambos	Thailand	France	2
	Syzygium samarangense	Thailand	France	2
	Ziziphus	Thailand	France	1
	Ziziphus rotundifolia	Thailand	France	1

- **Wood**

Pest	Consignment	Type of commodity	Country of origin	C. of destination	nb
Anobiidae	Unspecified	Packing wood	Indonesia	Germany	1
Aphelenchoides	Unspecified	Packing wood	Morocco	Lithuania	1
Arrhenodes	*Quercus alba*	Wood and bark	USA	France	1
Bostrichidae	Unspecified	Packing wood	Indonesia	Germany	1
Bursaphelenchus xylophilus	Coniferae	Packing wood	USA	Finland	2
Coleoptera	Fagus, Quercus	Wood and bark	Romania	Cyprus	1
Grub holes > 3 mm	Coniferae	Packing wood	China	Germany	1
	Coniferae	Packing wood	China	Netherlands	1
	Hardwood	Packing wood	China	Germany	4
Heterobostrychus aequalis	Unspecified	Packing wood	Thailand	France	1
Living larvae, grub holes > 3mm	Unspecified	Packing wood	China	Germany	1
Monochamus	Larix sibirica	Wood and bark	Russia	Poland	1
	Picea	Wood and bark	Russia	Poland	1
	Picea abies	Wood and bark	Russia	Poland	1
Scolytidae	Populus, Fagus, Abies	Wood and bark	Romania	Cyprus	1
Sinoxylon	Unspecified	Packing wood	India	Austria	3
Sinoxylon, grub holes > 3 mm	Hardwood	Packing wood	Indonesia	Germany	2

- **Bonsais**

Pest	Consignment	Country of origin	C. of destination	nb
Criconematidae	*Pinus pentaphylla*	Japan	France	1
Criconematidae, Pratylenchus	*Juniperus chinensis*	Japan	France	1
Cryphodera brinkmanii	*Pinus pentaphylla*	Japan	France	1
Heteroderidae	*Premna*	Japan	France	1
Oligonychus perditus	*Juniperus chinensis*	Japan	Netherlands	1
Pratylenchus	*Cryptomeria japonica*	Japan	France	1
	Serissa foetida	Japan	France	1
Spodoptera litura	*Serissa*	China	Netherlands	1
Tinocallis takachihoensis	*Zelkova*	China	United Kingdom	1

Source: EPPO Secretariat, 2006-04.

2006/089 New version of EPPO Plant Protection Thesaurus is now available

Since 1995, EPPO has managed the database formerly known as the Bayer Code System (© Bayer AG Germany). EPPO also produces an interface called the Plant Protection Thesaurus (EPPT) to consult this database. EPPT covers organisms important in agriculture and crop protection: crops, plant pests (including pathogens and weeds), hygiene pests, natural enemies, organisms used in ecotoxicological studies etc.
For each organism, it provides:

- preferred scientific name
- EPPO (Bayer) code
- synonyms
- common names in many languages
- taxonomic relationships and other classifications

At present, about 28 000 species of plants are included (cultivated plants, wild plants and weeds), 19 200 species of animals (especially insects, mites and nematodes) and 4300 species of microorganisms. The data content of EPPT is constantly being improved, revised and extended. EPPT is provided on a CD-Rom and can be used on PCs running Windows 98, NT 4.0, 2000 or XP. EPPT is available at a price of 200 EUR. For more information please consult our web page: http://www.eppo.org/PUBLICATIONS/eppt/eppt.htm

Source: **EPPO Secretariat, 2006-05.**

Additional key words: publications

2006/090 EPPO Conference on Computer Aids for Plant Protection (Wageningen, NL, 2006-10-17/19)

In October, EPPO is organizing a Conference on Computer Aids for Plant Protection in Wageningen (NL), in cooperation with the Netherlands Plant Protection Service. This is part of a sequence of EPPO meetings on computer applications in plant protection, which have previously been held in France (1989), Sweden (1992), Germany (1995), Italy (1999) and United Kingdom (2002). As on previous occasions, the Conference will combine spoken presentations with practical demonstrations of computer models, databases and decision support schemes.

The Conference will address the following key themes over several sessions:

- Models for forecasting
- Decision support systems
- Tools for pest risk analysis (including Climex, GPS systems, the EPPO computer program for PRA)
- Databases for Plant Protection (including EPPO databases)
- Other computer applications for plant protection

You can pre-register on the EPPO website:
http://www.eppo.org/MEETINGS/conferences/computer_applications.htm

Source: EPPO Secretariat, 2006-05.

Additional key words: conference

2006/091 Survey on weeds in arable crops in France

A survey was initiated in France to confirm earlier field reports stating a significant increase of several weeds. It focussed on the following 5 species of which 2 are on the EPPO list of invasive alien plants: *Ambrosia artemisiifolia* (Asteraceae, EPPO list of invasive alien plants), *Sicyos angulatus* (Cucurbitaceae, EPPO list of invasive alien plants), *Abutilon theophrasti* (Malvaceae), *Vulpia myuros* (Poaceae) and *Orobanche ramosa* (Orobanchaceae), and farmers from all parts of France were asked to provide information.
Ambrosia artemisiifolia: The management of this Asteraceae originating from North-America is difficult. This is particularly true in sunflower (*Helianthus annuus*) because this crop is also an Asteraceae. As several phytosanitary products are no longer authorised for environmental reasons, herbicide treatments of spring crops are more complex and expensive. The spread of this plant is also monitored in Italy, Switzerland and Hungary. In France, it has caused severe problems in the Rhône-Alpes region and is now spreading towards the North and South through human activities and exchanges of seeds for birds.
Sicyos angulatus: This North-American climber can strongly affect maize crops and is considered as a weed in Italy, Croatia and Japan. It has been predominantly observed in Haute-Garonne, Lot, Gironde, Aveyron, Ardèche and Hautes-Alpes. Surprisingly, results showed that the species was not merely restricted to the South-Western part of France, but was present almost all over the country. Nevertheless, this survey has limitations, as farmers may have confused *S. angulatus* with *Bryonia cretica*, an indigenous and very widespread species.

Source: Chauvel B, Dessaint F, Lonchamp JP, Gasquez J (2005) Cinq élues et des candidates. Enquête sur les mauvaises herbes envahissantes en grandes cultures en France. *Phytoma - La Défense des Végétaux* **578**, 16-20.

Additional key words: detailed records **Computer codes:** AMBEL, SIYAN, FR

2006/092 Harmful *Orthops* species (Heteroptera: Miridae) occurring on *Heracleum sosnowskyi*

Heracleum sosnowskyi (Ombelliferae, EPPO list of invasive alien plants) originates from the Caucasus and is thought to have the potential to be as invasive as *Heracleum manteggazianum* (Ombelliferae, EPPO list of invasive alien plants), although the later is more widespread in Europe. *H. sosnowskyi* produces up to 40 000 fruits per plant and its large leaves shade lower vegetation, having a negative impact on biodiversity. As chemical control of this plant is very difficult, biological control has been explored in Poland. Research showed the occurrence of Heteropteran fauna on *H. sosnowskyi*, and in particular of 3 species of *Orthops* (Heteroptera: Miridae): *O. campestris* (accounting for 48.57% of the total number of Miridae), *O. kalmi*

(44.91%) and *O. basalis* (2.04%). Imagos and larvae of these plant bugs can cause feeding damage to *H. sosnowsky*, and by sucking sap from buds and then fruits, they can help to reduce fruit germinability.

Sources: Wrzesińska D, Wawrzyniak (2005) Harmful *Heteroptera* of *Orthops* genus (*Miridae, Heteroptera*) occurring on Sosnowski's Hogweed (*Heracleum sosnowskyi* Manden.) in Poland. *Journal of Plant Protection Research*, **45 (2)**, 107-114.

Additional key words: Invasive plant research **Computer codes:** HERSO, PL

2006/093 Current list of neophytes in Hungary

This list provides information on neophytes in Hungary and is based on Hungarian specialised literature, botanical periodicals and the authors' field experience. For each of these neophytes in Hungary, the authors provide information on their invasive status (invasive, naturalized or casual) and their transformer status (transformer species are indicated in bold, and '*tra*' is in italics when the species transforms arable land).

List of 71 invasive neophytes in Hungary, of which 33 are transformers

Taxon	Transformers
Acer negundo	**tra**
Ailanthus altissima (EPPO list of invasive alien plants)	**tra**
Amaranthus blitoides	
Amaranthus chlorostachys	***tra***
Amaranthus retroflexus (EPPO list of invasive alien plants)	***tra***
Ambrosia artemisiifolia	**tra**
Amorpha fruticosa	**tra**
Artemisia annua	
Asclepias syriaca	**tra**
Aster lanceolatus	**tra**
Aster novi-belgii	
Aster ×salignus	**tra**
Bassia scoparia	
Bidens frondosus (EPPO list of invasive alien plants)	
Celtis occidentalis	**tra**
Cenchrus incertus (EPPO list of invasive alien plants)	
Chenopodium aristatum	
Chenopodium strictum	
Conyza canadensis	***tra***
Cuscuta campestris	
Cyperus difformis	
Cyperus esculentus* var. *leptostachyus	***tra***
Echinochloa oryzoides	

Echinochloa phyllopogon	
Echinocystis lobata	**tra**
Elaeagnus angustifolia	**tra**
Eleusine indica	
Elodea canadensis	**tra**
Epilobium ciliatum	
Erechtites hieraciifolia	
Erigeron annuus subsp. *annuus*	
Erigeron annuus subsp. *strigosus*	
Fallopia ×bohemica (EPPO list of invasive alien plants)	**tra**
Fallopia japonica* var. *japonica (EPPO list of invasive alien plants)	**tra**
Fraxinus pennsylvanica	**tra**
Galinsoga parviflora	
Hedera hibernica	
Helianthus tuberosus (EPPO list of invasive alien plants)	**tra**
Heracleum mantegazzianum (EPPO list of invasive alien plants)	**tra**
Heracleum sosnowskyi (EPPO list of invasive alien plants)	**tra**
Humulus scandens	**tra**
Impatiens glandulifera (EPPO list of invasive alien plants)	**tra**
Impatiens parviflora	
Iva xanthiifolia	***tra***
Juncus tenuis	
Oenothera biennis	
Oxalis corniculata	
Oxalis dillenii	
Oxalis stricta	
Oxybaphus nyctagineus	
Panicum capillare	
Panicum miliaceum* subsp. *ruderale	***tra***
Parthenocissus inserta	**tra**
Phytolacca americana	**tra**
Phytolacca esculenta	
Prunus serotina (EPPO list of invasive alien plants)	
Ribes aureum	
Robinia pseudacacia	**tra**
Rudbeckia laciniata	
Senecio vernalis	
Solidago canadensis (EPPO list of invasive alien plants)	**tra**
Solidago gigantea (EPPO list of invasive alien plants)	**tra**
Sorghum halepense	***tra***
Tragus racemosus	
Typha laxmannii	
Veronica persica	
Vitis riparia	**tra**
Vitis rupestris	
Xanthium italicum	**tra**
Xanthium ×saccharatum	
Xanthium spinosum	

Sources: Balogh L, Dancza István, Királi G (2005) Actual list of neophytes in Hungary and their classification according to their success. In: Mihály B, Botta-Dukát Z (eds.), Biological invasions in Hungary, invasive plants, 61-92. Természet BÚVÁR Alapítvány Kiadó, Budapest.

Additional key words: List of invasive alien plants **Computer codes:** HU

2006/094 Symposium 'An Evolutionary Perspective of Biological Invasions', Fribourg (CH), 2006-10-2/3

The Universities of Fribourg and Lausanne organize on 2006-10-02/03 the Symposium 'An Evolutionary Perspective of Biological Invasions'. In recent decades, the frequency of biological invasions has increased to an unprecedented level, stimulating a multitude of research projects in population biology and community ecology. Evolutionary processes, however, have long been neglected in the study of biological invasions, a trend that has been changing only recently. Moreover, populations of invasive exotic plant species might react differentially to climate warming, but there is little evidence to substantiate this. This symposium will try to bring together scholars from ecology, evolution, and from plant and animal biology to discuss concepts and new developments in this greatly expanding research field. Submission of talks is open until 2006-07-21 online at www.unifr.ch/biol/ecology/biolinv.

Sources: Heinz Müller-Schärer, University of Fribourg, heinz.mueller@unifr.ch
Website: www.unifr.ch/biol/ecology/biolinv

Additional key words: conference **Computer codes:** CH