ORGANISATION EUROPEENNE
ET MEDITERRANEENNE
POUR LA PROTECTION DES PLANTES

EUROPEAN AND MEDITERRANEAN
PLANT PROTECTION
ORGANIZATION

EPPO Reporting Service

NO. 9 PARIS, 2007-09-01

CONTENTS _____ *Pests & Diseases*

_____ *Invasive Plants*

1, rue Le Nôtre
75016 Paris

Tel. : 33 1 45 20 77 94
Fax : 33 1 42 24 89 43

E-mail : hq@eppo.fr
Web : www.eppo.org

2007/165 New additions to the EPPO Lists

In September 2007, the EPPO Council approved the addition of the following pests to the EPPO A1 and A2 Lists of pests recommended for regulation. In order to draw the attention of NPPOs to these newly added pests, they have also been placed on the EPPO Action List. The later has been completely redesigned to display management measures which are being recommended to the EPPO member countries and brief descriptions of the areas endangered by these pests (http://www.eppo.org/QUARANTINE/Action_List/action_list.htm).

A1 List (pests absent from the EPPO region):

- *Puccinia hemerocallidis*

A2 List (pests locally present in the EPPO region):

- *Hesperophanes campestris* (Coleoptera: Cerambycidae)
- *Megaplatypus mutatus* (Coleoptera: Platypodidae)
- *Fusarium foetens*
- *Blueberry scorch virus*
- *Tomato infectious chlorosis virus*

Transfer from the A1 to the A2 List:

- *Aculops fuchsiae* (Acari: Eriophyidae)
- *Anoplophora chinensis* (Coleoptera: Cerambycidae)
- *Toxoptera citricida* (Homoptera: Aphididae, vector of *Citrus tristeza virus*)

For each individual pest, datasheets and distribution maps are being prepared and will be available in due course on the EPPO web site.

Source: EPPO Secretariat, 2007-09.

Additional key words: EPPO Lists

Computer codes: ACUPFU, ANOLCH, BLSCV0, FUSAFO, HESOCA,PLTPMU, PUCCHM, TICV00, TOXOCI

2007/166 First record of *Anoplophora glabripennis* in Italy

Anoplophora glabripennis (Coleoptera: Cerambycidae – EPPO A2 List) was found for the first time in Italy in June 2007. It was discovered during a survey for the other species (*A. chinensis* – EPPO A2 List) which was introduced in 2000 in the south-west of Milano (Lombardia). The first adult of *A. glabripennis* was caught on the 2007-06-10 in a private garden of a company located at Corbetta (province of Milano). The identity of the pest was confirmed as *A. glabripennis* in 2007-07-24. In the garden concerned, 1 sycamore maple (*Acer pseudoplatanus*) and 3 birches (*Betula pendula*) were found severely infested by *A. glabripennis*. This is the first record of *A. glabripennis* in Italy.
The situation of *Anoplophora glabripennis* in Italy can be described as follows: **Present, first found in 2007 in one private garden in Lombardia, under eradication.**

Source: Maspero M, Jucker C, Colombo M (2007) First record of *Anoplophora glabripennis* (Motschulsky) (Coleoptera Cerambycidae Lamiinae Lamiini) in Italy. *Bollettino di Zoologia Agraria e di Bachicoltura, Ser. II,* **39**(2), 161-164.

Additional key words: new record

Computer codes: ANOLGL, IT

2007/167 Details on the situation of *Rhynchophorus ferrugineus* in Sicilia, Italy

In Sicilia (Italy), *Rhynchophorus ferrugineus* (Coleoptera: Curculionidae – EPPO A2 List) was first reported in 2005 in the historical centre of the city of Acireale (province of Catania) on *Phoenix canariensis*, and in several other localities along the Ionian coast (see EPPO RS 2006/001 and 2006/028). The pest was later found in the province of Trapani (Marsala, Petrosino, Mazara del Vallo, Dattilo) and on the islands of Favignana (Egadi), Lampedusa and Pantelleria. *R. ferrugineus* has been found in the city of Palermo since mid-2005 and the main outbreak has been found in the 'Parco d'Orléans'. As of June 2007, approximately 100 palm trees have been destroyed in the city of Palermo. Phytosanitary measures are continuing in Sicilia to eradicate the pest.

Source: Lo Verde G, Massa B (2007) [Observations on red palm weevil in Sicily. *Bollettino di Zoologia Agraria e di Bachicoltura Serie II* **39**(2), 131-149.] (in Italian).

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

2007/168 Details on the situation of *Rhynchophorus ferrugineus* in France in 2007

In summer 2007, the presence of *Rhynchophorus ferrugineus* (Coleoptera: Curculionidae – EPPO A2 List) was reported in the region of Languedoc-Roussillon, France. It can be recalled that in 2006, *R. ferrugineus* was first found in Corsica and then on the mainland in Var and Alpes-Maritimes (see EPPO RS 2006/225).
The situation of *Rhynchophorus ferrugineus* in France can be described as follows: **Present, few outbreaks found in Corsica (Corse du Sud), Languedoc-Roussillon, Provence-Alpes-Côte d'Azur (Alpes-Maritimes, Var), under eradication.**

Source: Anonymous (2007) Phyto Régions. Provence-Alpes-Côte-d'Azur. Le charançon rouge du palmier a mis le rostre en France. *Phytoma – La Défense des Végétaux* No. 607, p 4.

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

2007/169 Situation of *Diabrotica virgifera* in France in 2007

In summer 2007, the presence of *Diabrotica virgifera* (Coleoptera: Chrysomelidae – EPPO A2 List) was detected again in France. It can be recalled that in 2006, *D. virgifera* had only been reported in Alsace (see EPPO RS 2007/004). In 2007, 9 adults were caught in Alsace, in the area where the pest had been detected in 2003 near the Basel-Mulhouse international airport. One adult was caught for the first time in Bourgogne (Saône-et-Loire) near a motorway service area. Finally, at the end of August, 1 adult was caught in Rhône-Alpes near the airport of Lyon (Satolas). Eradication measures have immediately been implemented in all infested areas.
The situation of *Diabrotica virgifera* in France can be described as follows: **Present, few specimens caught in Alsace, Bourgogne and Rhône-Alpes regions in 2007, under eradication.**

Source: Anonymous (2007) Phyto Régions. Alsace, Bourgogne et Rhône-Alpes. *Diabrotica virgifera*, encore « passager clandestin » ? *Phytoma – La Défense des Végétaux* No. 607, p 3.

Additional key words: detailed record **Computer codes:** DIABVI, FR

2007/170 First report of *Aculops fuchsia*e in Southern England, United Kingdom

The NPPO of United Kingdom recently informed the EPPO Secretariat of the first finding of *Aculops fuchsiae* (Acari: Eriophyidae – EPPO A2 List) in the south of England (Hampshire). The gall mite was found in fuchsia plants grown in a private garden and the identity of the pest was confirmed in September 2007. This is the first record of *A. fuchsiae* on the UK mainland (*A. fuchsiae* was recently found on the islands of Jersey and Guernsey, see EPPO RS 2007/087 and 2007/109).
The situation of *Aculops fuchsiae* in United Kingdom can be described as follows: **Present, first found in 2007 in one private garden in Southern England (Hampshire), under official control.**

Source: NPPO of UK, 2007-09

INTERNET (last retrieved on 2007-09)
International Phytosanitary Portal, FAO. Pest reports (2007-09-25). *Aculops fuchsiae* – fuchsia gall mite. https://www.ippc.int/id/188346?language=en
The British Fuchsia Society. http://www.thebfs.org.uk/Defra/notice1.html

Additional key words: new record **Computer codes:** ACUPFU, GB

2007/171 Situation of *Aculops fuchsiae* in France

In France, the presence of *Aculops fuchsiae* (Acari: Eriophyidae – EPPO A2 List) was detected in 2003, along the southern coast of Bretagne (see EPPO RS 2004/001). The pest was then also found in Loire-Atlantique but remained located to coastal areas. However, in June 2007, *A. fuchsiae* was detected in a private garden in Maine-et-Loire.
The situation of *Aculops fuchsiae* in France can be described as follows: **Present, first found in 2003, several outbreaks were recorded in Bretagne and Pays-de-la-Loire regions, under eradication.**

Source: Anonymous (2007) Phyto Régions. Pays-de-la-Loire. Le phytopte du fuchsia s'éloigne des côtes. *Phytoma – La Défense des Végétaux* No. 607, p 3.

Additional key words: detailed record **Computer codes:** ACUPFU, FR

2007/172 Update on the situation of *Aculops fuchsiae* in Jersey

As reported in EPPO RS 2007/109, *Aculops fuchsiae* (Acari: Eriophyidae – EPPO A2 List) was first observed in Jersey in 2006 in a public park. In 2007 further infestations were reported in several gardens, including the garden of an amateur who had brought fuchsia material from South America, escaping any phytosanitary controls. His entire collection of more than 150 fuchsia varieties was heavily infested. The presence of *A. fuchsiae* on the island was publicized and it became clear that the pest was widespread with more than 200 properties affected. When considering prevailing winds, it was observed that most of these infestations were located downwind from the amateur fuchsia collection mentioned above. The outbreak is mainly concentrated in St Helier (central south coast) but *A. fuchsiae* is also being reported in low numbers and isolated sites on the east, west and centre of the island. In all cases, affected plants were destroyed. Chemical control has not been attempted because it was felt too costly and unlikely to be effective due to the advanced

stage of galling on some plants and the pressure of reinvasion. It was also advised not to plant any fuchsias for the foreseeable future.
The situation of *Aculops fuchsiae* in Jersey can be described as follows: **Present, mainly around St Helier, under eradication.**

Source: NPPO of Jersey, 2007-10.

Additional key words: detailed record **Computer codes:** ACUPFU, JS

2007/173 First record of *Tomato yellow leaf curl virus* in the Netherlands

The NPPO of the Netherlands recently informed the EPPO secretariat of the first occurrence of *Tomato yellow leaf curl virus* (TYLCV, *Begomovirus* – EPPO A2 List). The outbreak was first suspected at one company at the beginning of September 2007 and the identity of the virus was confirmed using molecular techniques (PCRs) at the end of September. To date, TYLCV has been detected only in a small number of companies, on a very low number of tomato plants (from 3 to 20 plants per company). In addition, TYLCV has not been detected at companies producing tomato plantlets intended for planting. The origin of this outbreak has not been identified. Surveys across the whole territory of the Netherlands have been planned to determine the extent of the outbreak. All infected tomato plants have been destroyed and insecticide treatments have been applied to eradicate populations of *Bemisia tabaci*. This is the first report of TYLCV in the Netherlands.
The status of *Tomato yellow leaf curl virus* in the Netherlands is officially declared as: **Transient, on *Lycopersicon esculentum* (tomato) plants.**

Source: NPPO of the Netherlands, 2007-10.

Internet (last retrieved on 2007-10)
Website of the Dutch Ministry of Agriculture, Nature and Food Quality. Pest report. *Tomato yellow leaf curl virus* (TYLCV) on *Lycopersicon lycopersicum* (tomato plants). http://www.minlnv.nl/cdlpub/servlet/CDLServlet?p_file_id=22143

Additional key words: new record **Computer codes:** TYLCV00, NL

2007/174 First report of Tomato torrado virus in Poland

In Poland, unusual disease symptoms were observed on tomatoes (*Lycopersicon esculentum* cv. Grace) in the Wielkopolska region in 2003 and 2004. Affected plants showed severe stunting, leaf deformation and necrosis. The occurrence of the disease also appeared to be associated with the presence of *Trialeurodes vaporariorum*. Electron microscopy revealed the presence of spherical virus particles (25-28 nm diameter). Laboratory studies were conducted to identify the virus present (transmission studies, ISEM, RT-PCR, comparison of sequences). The similarity of symptoms on tomato plants, the morphology of virus particles, genome composition and nucleotide sequences strongly suggested that the virus found in Poland is identical to Tomato torrado virus (ToTV) which has recently been identified in Spain (see EPPO RS 2007/128). This is the first report of ToTV in Poland.

Source: Pospieszny H, Borodynko N, Obręplowska A, Hasiów B (2007) The first report of Tomato torrado virus in Poland. *Plant Disease* **91**(10), p 1364.

Additional key words: new record **Computer codes:** TOTV00, PL

2007/175 Studies on *Ralstonia solanacearum* in Korea Republic

The genetic diversity and distribution of *Ralstonia solanacearum* (EPPO A2 List) was studied in the Republic of Korea. Between 1997 and 2005, 478 isolates were collected from wilted plants (tomato, potato, capsicum, aubergine, sesame, sunflower, peanut) at 90 different locations in 9 Korean provinces. Genetic diversity was determined on the basis of biovar, pathogenicity, AFLP, and gene sequence analyses (16S rRNA, endoglucanase, *hrpB*, *mutS*). Studies showed that 440 isolates belonged to biovars 1, 3 or 4, and that 38 belonged to biovar 2. In particular, biovar 2 (race 3) isolates* were found only in cultivated tomato and potato fields in the south of the country. These isolates were found in 2 sites at Jeju-do, 2 sites at Jeollanam-do and 3 sites at Gyeongsangnam-do. As it is considered that race 3 (biovar 2) probably originates from the Andean region, it is supposed that these types of isolates have been introduced into Korea by the international trade of potatoes.

* The EPPO Secretariat had no previous data on the occurrence of *R. solanacearum* biovar 2 (race 3) in Korea Republic.

Source: Jeong Y, Kim J, Kang Y, Lee S, Hwang I (2007) Genetic diversity and distribution of Korean isolates of *Ralstonia solanacearum. Plant Disease* **91**(10), 1277-1287.

Additional key words: detailed record **Computer codes:** PSDMS3, KR

2007/176 *Ralstonia solanacearum* reported in Greece

In Greece, *Ralstonia solanacearum* (EPPO A2 List) was isolated from 3 samples (out of 6 samples) of tomato plants showing wilting symptoms which had been collected near the village of Petsaki, in the area of Kalavryta (Achaea Prefecture, Peloponnese). Subsequently, samples from solanaceous crops, weeds and water were tested for the presence of the bacterium (39 samples of potato tubers, 2 of aubergine, 1 of *Capsicum annuum*, 14 of weeds collected from the banks of the river Selinous, 13 of water taken from the same river). *Ralstonia solanacearum* was detected in 19 potato samples (coming from 7 areas) and in 1 aubergine sample but not in any other. This is the second report of *R. solanacearum* in Greece after 40 years of absence (see EPPO RS 2002/167). Phytosanitary measures were applied in accordance with EU Directive 98/57/EC.
The situation of *Ralstonia solanacearum* in Greece can be described as follows: **Present, reported again in 2006 after 40 years of absence, one outbreak in Peloponnese, under official control.**

Source: Alivizatos AS, Glynos PE, Karafla C, Ziaziari C, Stathopoulos F (2006) Host plants of *Ralstonia solanacearum* in the Kalavryta area. Abtracts of presentations given at the 11th Hellenic Phytopathological Congress Preveza, GR, 2002-04-01 *Phytopathologia Mediterranea* **45**(1), p 74.

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

2007/177 Details about the situation of *Phytophthora ramorum* in France

Phytophthora ramorum (EPPO Alert List) was first observed in France in 2002 causing twig blight and brown spot on *Rhododendon* species grown in nurseries (see EPPO RS 2003/037). After this first finding, surveys for *P. ramorum* were regularly conducted throughout France, in nurseries and their vicinity. The pathogen was only detected in nurseries at 29 locations in 2002, 9 in 2003, 23 in 2004, 17 in 2005 and 19 in 2006. *P. ramorum* was mainly found on *Rhododendron* and occasionally on *Viburnum tinus*. It was detected on *Pieris japonica* (in 2 nurseries in 2005) and on *Camellia* (in 1 nursery in 2006), but in these nurseries *P. ramorum* also occurred on *Rhododendron*. More recently, it was observed on *Syringa* and *Taxus* (Anonymous, 2007). Most infected plants were found in the north-west of France (Bretagne and Pays-de-la-Loire regions) which corresponds to the main rhododendron-growing area. To date, R. *ramorum* has not been found outside ornamental nurseries in France and all tested isolates (78 isolates collected from 2002 to 2004) were found to be the A1 mating type.
The situation of *Phytophthora ramorum* in France can be described as follows: **Present, found in nurseries mainly on *Rhododendron* spp. in the north-west (Bretagne, Pays-de-la-Loire), under official control.**

Source: Anonymous (2007) Phyto Région. Pays-de-la-Loire. *Phytophthora ramorum* passe sur if et lilas. *Phytoma – La Défense des Végétaux* No. 607, p 3.

Husson C, Delatour C, Frey P, Marçais B, Saurat C, Schenck N (2007) First report of *Phytophthora ramorum* on ornamental plants in France. *Plant Disease* **91**(10), p 3159.

Additional key words: detailed record **Computer codes:** PHYTRA, FR

2007/178 Surveys on *Phytophthora* species in Lithuania

Since 2004, surveys have been carried out by the NPPO of Lithuania on *Phytophthora* species, and in particular on *Phytophthora ramorum* (EPPO Alert List). 81 samples of various plants (*Pieris, Quercus, Rhododendron, Syringa, Vaccinium, Viburnum*) and soil were collected and tested in the laboratory. *P. ramorum* was not detected in any sample but *P. cactorum* was identified for the first time in Lithuania. *P. cactorum* was detected in a rhododendron plantation at Kaunas (Central Lithuania) and in the rhododendron collection of the Botanical Gardens of Šiauliai University (Northern Lithuania), in August and October 2004 respectively. In August 2005, *P. cactorum* was detected on container-grown rhododendrons which had been imported from Poland. There have been no further findings in Lithuania.

Source: Jovaišienė Z, Lane C (2006) First report of *Phytophthora cactorum* in Lithuania. *Botanica Lithuanica* **12**(3), 197-199.

Additional key words: absence, new record **Computer codes:** PHYTRA, PHYTCA, LT

2007/179 Ash dieback in Europe and possible implication of *Chalara fraxinea*: addition to the EPPO Alert List

During the last decade, a new dieback of ash trees (*Fraxinus excelsior*) has been observed in several European countries. Affected trees are showing shoot dieback, bark necrotic lesions, stem cankers, wilting and premature leaf fall, and may die. Ash dieback was first observed in Poland and Lithuania in the early 1990s, in the mid-1990s in Latvia and Estonia, and then in Germany, Denmark, Sweden, Austria and the Åland archipelago of Finland (but not on the mainland). In Poland, a new fungus species was found associated with ash dieback and named *Chalara fraxinea* sp. nov. (Kowalski, 2006). So far, no teleomorph of this species has been observed in cultures or in nature but it is suggested that it may be closely related to species having a *Ceratocystis* perfect stage. *C. fraxinea* could be isolated from diseased shoots at the onset of the disease and also from dead roots of living trees. More recently, *C. fraxinea* has also been isolated from diseased ash trees in Germany (Schumacher *et al.*, 2007). Although *C. fraxinea* is suspected to be the main cause of ash dieback, many other fungi were isolated from diseased ash trees in European countries and other abiotic factors (e.g. frost, drought) may also be involved in the disease. Despite the fact that studies are clearly needed to better understand the role of *C. fraxinea* in ash dieback, the EPPO Secretariat considered that it could usefully be added to the EPPO Alert List because the disease may be a threat to ash trees growing in European forests, parks, and nurseries.

Chalara fraxinea (Ash dieback)

Why	A disease suspected to be caused by a newly described fungus species, *Chalara fraxinea*, has increasingly been observed in European countries on ash trees (*Fraxinus excelsior*) in the last ten years. Because ash dieback may represent a serious threat to forest, amenity and nursery ash trees, the EPPO Secretariat decided that *C. fraxinea* should be added to the EPPO Alert List. However, it is acknowledged that much data is lacking on its pathogenicity (other biotic and abiotic factors could be involved in ash dieback), biology, geographical distribution and economic impact.
Where	**EPPO region:** Germany**,** Poland (*C. fraxinea* has been identified in these two countries). On the basis of symptoms, the disease has also been observed in: Austria, Denmark, Estonia, Finland (Åland archipelago but absent on the mainland), Latvia, Lithuania, Sweden.
On which plants	*Fraxinus excelsior* (European ash). No data is available on the susceptibility of other *Fraxinus* species.
Damage	Initially, small necrotic spots (without exudate) appear on stems and branches. These necrotic lesions then enlarge resulting in wilting, dieback of branches and particularly in the death of the top of the crown. The disease is often chronic but can be lethal. Ash dieback has been observed not only on forest trees but also in urban areas (parks and gardens) and in nurseries. Pictures of the disease can be viewed on the Internet: http://www.plantesygdomme.dk/Asketoptoerre/thumbnails.html
Dissemination	Data is lacking on the biology of *C. fraxinea*. It was isolated from diseased twigs and branches, as well as in dead roots of living ash trees.
Pathway	Although data is lacking on the biology of the fungus, it seems likely that plants for planting and wood of *F. excelsior* could be pathways for spreading the disease over long distances.
Possible risks	*Fraxinus* are widely grown across the EPPO region both for forestry and amenity purposes. Although data is still lacking on the exact role of *C. fraxinea* in ash dieback, EPPO member countries should be warned that ash dieback is emerging in Europe and that there may be a risk in moving diseased *F. excelsior* plants across the region without any precaution. Further studies are obviously needed

on the etiology of ash dieback, its geographical distribution and economic impact.

Source(s)
Kowalski T (2006) *Chalara fraxinea* sp. nov. associated with dieback of ash (*Fraxinus excelsior*) in Poland. *Forest Pathology* **36**(4), 264-270.
Schumacher J, Wulf A, Leonhard S (2007) [First record of *Chalara fraxinea* T. Kowalski sp. nov. in Germany – a new agent of ash decline.] *Nachrichtenblatt des Deutschen Pflanzenchutzdienstes* **59**(6), 121-123 (in German).
INTERNET (last retrieved in 2007-09)
Forest & Landscape Denmark. Ash dieback in Denmark.
http://en.sl.life.ku.dk/forskning/fagdatacenterskov/skovsundhed/skader/asketoptoerre.aspx
NAPPO – Pest Alert System. *Chalara fraxinea* Kowalski - Intensive dieback of European ash in Poland associated with a newly described fungal species, *Chalara fraxinea.*
http://www.pestalert.org/viewNewsAlert.cfm?naid=26
Nordic Forest Research Cooperation Committee. Ash decline in Nordic and Baltic countries.
http://www.metla.fi/org/pathcar/ash-decline.htm
Research and Training Centre for Forests, Natural Hazards and Landscape (BFW)
Actual situation of dieback of ash in Austria by TL Cech and U Hoyer-Tomiczek.
http://bfw.ac.at/400/pdf/fsaktuell_40_3.pdf
Ash dieback and premature leaf shedding in Austria by TL Cech.
http://bfw.ac.at/400/pdf/fsaktuell_37_8.pdf

EPPO RS 2007/179
Panel review date - Entry date 2007-09

2007/180 Surveys on *Globodera* species in Lithuania

In 2006, studies were carried out in Lithuania to analyze *Globodera* species occurring in potato fields using morphological and molecular methods. So far, only *Globodera rostochiensis* is known to occur in Lithuania (EPPO A2 List; see EPPO RS 2005/075 and 2004/075). 11 406 soil samples were collected from a total area of 2 742 ha (across the 10 counties of Lithuania). A total of 672 cysts were recovered and on the basis of morphological characters, only *G. rostochiensis* was identified. In addition, 117 cysts from 5 counties (Vilnius, Kaunas, Šiauliai, Telšiai and Utena) were identified by PCR using specific primer pairs which enable *G. rostochiensis* and *G. pallida* to be distinguished. Again, only *G. rostochiensis* was identified. The nematode was found in 116 fields out of 437, mainly in small fields cultivated with various plant species and located near homesteads. It is concluded that both morphological and molecular methods confirm the presence of *G. rostochiensis* and the absence of *G. pallida i*n Lithuania.

Source: Jogaitė V, Čėpulytė R, Stanelis A, Būda V (2007) Monitoring of *Globodera* spp. in Lithuania using diagnostic morphometric analysis and Polymerase Chain Reaction. *Acta Zoologica Lituanica* **17**(2), 184-186.

Additional key words: absence, detailed record **Computer codes:** HETDRO, HETDPA, LT

2007/181 Legislation on *Hydrocotyle ranunculoides* in the Netherlands

The Dutch Flora and Fauna Act, Article 14, designates which species should not be introduced in nature, and also includes:
1. a general ban on the introduction of animals or eggs in nature
2. a ban on the introduction (planting or sowing) of designated plant species in nature
3. a prohibition to possess, transport and sell designated species
4. a requirement that designated species should represent a danger for protected animals or plants, or cause a significant degradation to their habitats
5. an exemption for the introduction of designated fish species.

In the application of the above article, only *Hydrocotyle ranunculoides* is mentioned as a designated plant species.

Source: Netherlands Act on Fauna and Flora.
http://www.st-ab.nl/wetten/0087_Flora-_en_faunawet.htm (in Dutch).
Contact: Ton Rotteveel a.j.w.rotteveel@minlnv.nl

Additional key words: legislation, invasive alien plants **Computer codes:** HYDRA, NL

2007/182 Weeds of national significance in Australia

In 1998, the Australian governments (national, state and territory governments) endorsed a system to identify which weed species could be considered as Weeds of National Significance (WONS) within an agricultural, forestry and environmental context. Twenty weed species were identified, using the following 4 major criteria:
- invasiveness
- impacts
- potential for spread
- socio-economic and environmental values.

The Australian governments then endorsed a final list in 1999. This was the first attempt to prioritize weeds over a range of different land uses at a national level. It was not a purely scientific process, but an attempt to draw together meaningful indicators on which to base future weed decision-making. For each WON, a strategic plan outlining control actions and responsible bodies has been prepared. A management coordinator and a National Management/Steering Committee have been designated to oversee the implementation of the strategic plans and decide upon priorities.
WONS are listed in the table below, with their family, origin, and status in the Global Compendium of Weeds (GCW) indicating their invasive behaviour elsewhere in the world:

Species	Family	Origin	GCW Status
Acacia nilotica	Fabaceae	NW Af., India, Pakistan	W, NW, AW, EW
Alternanthera philoxeroides	Amaranthaceae	Am., trop As. & Af.	W, SW, NW, AW, EW
Annona glabra	Annonaceae	trop Am., trop. W Af.	W, NW, AW, EW
Asparagus asparagoides	Liliaceae	S-Af.	W, NW, AW, EW
Cabomba caroliniana	Cabombaceae	S-Am.	W, NW, AW, EW
Chrysanthemoides monilifera subsp. *monilifera & C. monilifera* subsp. *rotundata*	Asteraceae	S-Af.	W, SW, NW, AW, EW

Species	Family	Origin	GCW Status
Cryptostegia grandiflora	Asclepiaceae	Madagascar	W, NW, AW, EW
Hymenachne amplexicaulis	Poaceae	Am.	W, NW, AW, EW
Lantana camara	Verbenaceae	Am.	W, NW, AW, EW
Mimosa pigra	Fabaceae	Af., Am.	W, NW, AW, EW
Nassella neesiana	Poaceae	S-Am.	W, NW, AW, EW
Nassella trichotoma	Poaceae	S-Am.	W, NW, AW, EW
Parkinsonia aculeata	Fabaceae	Am.	W, NW, AW, EW
Parthenium hysterophorus	Asteraceae	Am.	W, NW, AW, EW
Prosopis spp.	Fabaceae	Am.	/
Rubus fruticosus agg.	Rosaceae	Eur.	W, NW, AW, EW
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtiji	Salicaceae	/	/
Salvinia molesta	Salviniaceae	S-Am.	W, NW, AW, EW
Tamarix aphylla	Tamaricaceae	Af. As.	W, SW, NW, AW, EW
Ulex europaeus	Fabaceae	Eur.	W, NW, AW, EW

* Abbreviations for the Global Compendium of Weeds column:
W: weed; SW: sleeper weed; NW: noxious weed; AW: Agricultural weed; EW: environmental weed.
The species in bold is listed on the EPPO List of Invasive Alien Plants.

Source: Weeds of national significance (WONS). http://www.weeds.gov.au/weeds/lists/wons.html

A Global Compendium of Weeds. http://www.hear.org/gcw/alpha_select_gcw.htm

Additional key words: invasive alien plants

Computer codes: ACANL, ALRPH, ANUGL, ASPAS, CABCA, CSMMO, CSMMR, CVRGR, HYVAM, LANCA, MIMPI, STDTR, PAKAC, PTNHY, 1PRCG, RUBFR, 1SAXG, SAVMO, TAAAP, ULEEU, AU

2007/183 Invasive alien plants of national interest in New Zealand

Early action maximises the opportunity to eradicate pests and diseases or contain them within a particular area. In New Zealand, a decision-making scheme to elaborate a list of pests to be subject to new management programmes was agreed by the Central Regional Biodiversity Forum in October 2006. It includes general guidance, the overall process to be followed and criteria for decision-making.
MAF Biodiversity New Zealand (BNZ), regional Councils, Department of Conservation (DOC), Land Information New Zealand (LINZ), Ministry of Health (MOH) and Ministry of Fisheries (MFish) identified 20 pests, of which 15 are plants, to be subjected to a national management programme. For each species, an assessment of the pest consequences was made and management options were prepared and reviewed by a technical Advisory Group.
The 15 plants listed as national interest pests are listed in the table below in order of priority, with their family, origin, response goal in New Zealand and status in the Global Compendium of Weeds (GCW) which indicates their invasive behaviour elsewhere in the world:

Species	Family	Origin	GCW Status	Response goal in NZ
Salvinia molesta	Salviniaceae	Brazil	W, QW, NW, EW	Eradication
Eichhornia crassipes	Pontederiaceae	S-Am.	W, QW, NW, EW	Eradication
Sorghum halepense	Poaceae	Medit. to India	W, QW, NW, EW	Eradication
Homeria collina (= *Moraea flaccida)*	Iridaceae	Af.	EW	Eradication
Ehrharta villosa	Poaceae	S-Af.	W, Nat W, EW	Eradication
Phragmites australis	Poaceae	Cosmopolitan	W, QW, NW, Nat W, EW	Eradication
Hydrilla verticillata	Hydrocharitaceae	Af., As., Australia	W, QW, NW, Nat W, EW	Eradication
Ceratophyllum demersum	Ceratophyllaceae	Eur.	W, SW, QW, NW, Nat W, EW	Eradication and exclusion from South Island
Bryonia cretica subsp. *dioica*	Cucurbitaceae	Af., temp As., Eur.	W	Eradication
Zizania latifolia	Poaceae	As.	W, QW, EW	Eradication of isolated populations, containment of large populations
Nassella neesiana	Poaceae	S-Am.	W, QW, NW, EW	Containment
Lagarosiphon major	Hydrocharitaceae	Trop & southern Africa	W, QW, NW, EW	Site-specific control
Egeria densa	Hydrocharitaceae	S-Am.	W, QW, NW, EW	Site-specific control
Heracleum mantegazzianum	Apiaceae	Eastern Eur.	W, QW, NW, EW	No programme

* Abbreviations for the Global Compendium of Weeds column:
W: weed; SW: sleeper weed; NW: noxious weed; Nat W: Native Weed; AW: Agricultural weed; EW: environmental weed.
The species in bold are listed on the EPPO List of Invasive Alien Plants.

Source: Lamb V (2007) New response programmes for national interest pests. *Biosecurity* **76**, 20-21.

More information available at: http://www.biosecurity.govt.nz/pest-and-disease-response/pests-and-diseases-watchlist/

A Global Compendium of Weeds. http://www.hear.org/gcw/alpha_select_gcw.htm

Additional key words: invasive alien plants, eradication, containment

Computer codes: BYODI, EHRVI, EICCR, ELDDE, CEYDE, HERMZ, HOMBR, HYLVE, LGAMA, PHRCO, SAVMO, SORHA, ZIZLA, NZ

2007/184 Noxious weeds in set-aside areas: results of a nationwide network in Switzerland

Fallow land sown with a wildflower seed mixture is one of the major set-aside areas promoted by the Swiss legislation in order to enhance biodiversity in the landscape. Still, the installation of such areas on arable land raises concerns about their potential to contribute to the dissemination of noxious weeds. About 200 fallow lands have been monitored for 3 years (2003-2005) during summers in different Swiss areas, in order to list the main weeds and estimate their abundance.

Weeds

Cirsium arvense (Asteraceae), *Rumex obtusifolius* (Polygonaceae), *Elytrigia repens* (Poaceae), *Convolvulus arvensis* (Convolvulaceae) are respectively the most represented weeds in the monitored fallows. About 5 to 10% of the fallows were estimated to present a critical weed situation.

While infestations remain limited, some difficult cases have justified the registration of several herbicides on fallow lands, such as glyphosate which is a non selective herbicide, or other selective herbicides like metsulfuron against *Rumex obtusifolius,* clopyralid against *Cirsium arvense,* or graminicides against *Elytrigia repens.*

Invasive alien plants

Ambrosia artemisiifolia (Asteraceae) has never been found in the survey, but other neophytes have been observed sporadically: *Buddleia davidii* (Buddleiaceae, EPPO List of IAP), *Oenothera biennis* (Onagraceae), *Reynoutria japonica* (Polygonaceae, EPPO List of IAP), *Senecio inaequidens* (Asteraceae, EPPO List of IAP). *Solidago canadensis* and *S. gigantea* (Asteraceae, EPPO List of IAP) appear to be the biggest problem, since about one third of fallow lands sown with wildflower seed mixtures are covered (up to 50% of the surface area) by these species. *Solidago* spp. are not considered a threat to agriculture, but to indigenous flora and biodiversity. Fallow lands aimed at promoting biodiversity in agricultural areas are paradoxically helping the establishment and spread of an invasive alien plant.

As conclusion, while the situation of weeds in fallow lands in Switzerland is globally considered as satisfactory, invasion by *Solidago* spp. constitutes a particular problem. The possible registration of herbicides to control specifically *Solidago* spp. or other invasive alien species (such as *Reynoutria japonica*) in fallow lands may be considered.

Source: Delabays N, Mermillod G, Bohren C (2007) Plantes indésirables dans les jachères florales: résultat d'un réseau national d'observation. *Revue Suisse d'Agriculture*, **39**(4): 199-203.

Additional key words: invasive alien plants, monitoring

Computer codes: AGRRE, AMBEL, BUDDA, CONAR, CIRAR, OEOBI, POLCU, RUMOB, SOOCA, SOOGI, SENIQ, CH

2007/185 Impacts of *Heracleum mantegazzianum* on invaded vegetation in Germany

Heracleum mantegazzianum (Apiaceae, EPPO List of IAS) is commonly regarded as a hazardous invader. In Germany, field studies were conducted in 20 areas (1 km² landscape sections) to evaluate which habitats are the most likely to become invaded; what are the impacts on local plant communities and regional flora; what are the other environmental impacts; and what is the plant's potential to conflict with nature conservation.

Which habitats are most likely to become invaded?

A logistic regression was used to analyse which factors could explain the presence or absence of *H. mantegazzianum* in a habitat. Results showed that:

- occurrences of the invasive plant are spatially auto-correlated: habitats adjacent to invaded sites have an increased probability of invasion due to local seed dispersal.
- the vegetation structure of habitats affect the probability of invasion: woody habitats (i.e.>10% tree or shrub cover) have a lower probability of being invaded than completely herbaceous ones.
- at the landscape scale, the probability of establishment decreased with increasing distance from rivers and road corridors. Regarding roads, only agricultural ones had a significant effect.

Impact on local plant communities

The stand coverage of *H. mantegazzianum* varied from 1 to almost 100%. A high cover percentage can be expected to affect plant communities substantially.

An analysis of 202 sampling plots (25 m²) with *H. mantegazzianum* from 20 study areas in Germany revealed a negative relationship between *H. mantegazzianum* cover and the number of vascular plant species. This suggests that increasing *H. mantegazzianum* cover generally reduces resident species richness. In order to thoroughly assess impacts of *H. mantegazzianum* on plant species diversity, it is necessary to distinguish different community types and to consider mechanisms of impact. Parameter estimates from this study predicted that the number of species was reduced by 4.8 in tall-herb communities compared to the average and that an increase in *H. mantegazzianum* cover by 50 percentage points decreased the number of species by 2.4. Moreover, negative trends in species numbers due to *H. mantegazzianum* cover were confined to ruderal grasslands and to other open community types.

The main mechanism by which *H. mantegazzianum* can outcompete other plant species is by shading out lower-growing species. Pyšek and Pyšek (1995) found significant differences in the number of vascular plant species between uninvaded vegetation and dominant stands of *H. mantegazzianum.* This is in agreement with the results from this German study, where species numbers of tall-herb communities, regardless of *H. mantegazzianum* cover, were considerably lower than in other community types. Altogether, it is stated that the negative relationship between *H. mantegazzianum* cover percentage and the number of vascular plant species per unit area is attributable to generally decreasing species numbers in the course of succession from low-growing and light-demanding vegetation types towards tall-herb stands, and finally woodlands. This reduction in species numbers is mediated by native tall herbs as well as *H. mantegazzianum* or other neophytes. Thus, loss of plant species diversity in such cases is a general symptom of successional changes rather than a particular effect of invasive species.

Impact on regional flora

The assumed impact of invasive plant species that attain high cover in indigenous vegetation are the suppression and possibly, local exclusion of native plant species. On the regional scale, a dominant plant invader could cause a decline of regional populations of

native species. To make a native species endangered, in the sense of a high risk of regional extinction, would require that the invasive species dominates a large proportion of the habitat area of a particular indigenous population. Thus, since fairly common species normally co-occur with *H. mantegazzianum*, they would only be regionally endangered if the invader (i) attains high rates of habitat occupancy (i.e. percentage of suitable habitats invaded), (ii) builds up extensive stands and (iii) commonly attains dominance which would, altogether, result in a (iv) high habitat saturation (i.e. percentage of total habitat area covered by the invader).
In the 20 locations in Germany, as species that co-occur with *H. mantegazzianum* are generally widespread and abundant, it appears that regional populations of associated plant species have not been endangered at the current level of invasion. However, the invasion pattern of *H. mantegazzianum* in the study areas is merely a snapshot and does not provide a way to predict further development.

Other environmental impacts
In addition to impacts on plant communities and populations, dense stands of *H. mantegazzianum* can lead to riverbank erosion, mediated through the suppression or exclusion of native species, which play an important role in riverbank stabilization. Deposition of eroded silt can alter substrate characteristics in rivers and, for example, render gravel substrates unsuitable for salmonid spawning.

Potential for conflicts with nature conservation
No rare habitats, communities or co-occuring plant species were found associated with *H. mantegazzianum* during the field study in Germany. Analysis of preferred site conditions showed that *H. mantegazzianum* is barely capable of invading sites offering suitable conditions (drought, wetness, poor nutrient status) for rare species and communities and, if so, it would be constrained to low abundances. Therefore, it seems that *H. mantegazzianum* cannot endanger plant communities and plant species of concern for nature conservation. However, in a few cases, *H. mantegazzianum* was found at sites that formerly featured protected community types (e.g. nutrient-poor chalk grassland), but these sites had degenerated due to abandonment of appropriate management, eutrophication or other reasons. In such situations *H. mantegazzianum,* is not the cause, but is rather a symptom of habitat deterioration caused by human activity.

Source: Thiele J, Otte A (2007) Impact of *Heracleum mantegazzianum* on invaded vegetation and human activities. In Pyšek P, Cock MJW, Nentwig W, Ravn HP (eds) (2007) Ecology and management of Giant Hogweed (*Heracleum mantegazzianum*). CAB International. P. 144-156

Pyšek P, Pyšek A (1995) Invasion by *Heracleum mantegazzianum* in different habitats in the Czech Republic. *Journal of Vegetation Science*, **6**(5):711-718.

Additional key words: invasive alien plant, impact **Computer codes:** HERMZ, DE

2007/186 Feasibility of biological control of *Ambrosia artemisiifolia* in Europe

During the 12th International Symposium on the Biological Control of Weeds held on 2007-04-22/27 in Montpellier (France), a workshop on the feasibility of biological control of *Ambrosia artemisiifolia* (Asteraceae) was organized.
The following presentations were made:

- Results of the international meeting of experts held in Vienna on 2006-09-27 (see www.bba.bund.de/ambrosia).
- The biological control against *A. artemisiifolia* in Australia by *Zygogramma bicolorata* (Coleoptera: Chrysomelidae) and *Epiblema strenuana* (Lepidoptera: Tortricidae).
- The biological control against *A. artemisiifolia* in Russia by *Zygogramma saturalis*.
- The list of known insect biological control agents: *Epiblema strenuana, Zygogramma bicolorata, Z. disrupta, Z. saturalis.*
- Potential fungal biological control agents in Hungary: *Protomyces gravidus, Puccina xanthii* and *Sclerotinia sclerotiorum*, and the insect biological control agents *Zygogramma suturalis* and *Ophraella communa* (both Coleoptera: Chrysomelidae).
- Actions undertaken in Italy: *A. artemisiifolia* is now infesting the Po Valley regions, and in the Lombardia region alone, the direct costs of allergies on the public health system, that were attributed to the plant, exceeded 1 million euros in 2003. Efficient management of *A. artemisiifolia* can only be achieved through an integrated network of countries using biological control in combination with different agronomic and mechanical strategies.
- Phytosanitary status of *A. artemisiifolia*: the plant is already too widespread to fit with quarantine regulation in most parts of the world. Within the EPPO region, a draft standard on national regulatory control system (PM 9) is being circulated for country consultation by EPPO.

The workshop concluded that a European program for the biological control of *A. artemisiifolia* would be highly desirable.

Source: Contact: Dominique Coutinot, dcoutinot@ars-ebcl.org

Additional key words: invasive alien plants, biological control **Computer codes:** AMBEL