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2012/203 First report of *Anthonomus eugenii* in the Netherlands

In July 2012, *Anthonomus eugenii* (Coleoptera: Curculionidae - EPPO A1 List) was found for the first time in the Netherlands. This is also the first time that an outbreak of *A. eugenii* is detected in the EPPO region. The pest was found in 4 glasshouses producing *Capsicum annuum* fruit and located in Westland (province of Zuid-Holland). On 2012-07-19, a grower reported to the Dutch NPPO unusual damage in one glasshouse of *C. annuum*. The identity of *A. eugenii* could be confirmed on the following day by using morphological and molecular identification tools. During specific surveys, signs of the pest were also observed in 3 nearby glasshouses producing *C. annuum* fruit. Damage was observed in 3 of the 4 infested glasshouses and consisted of small and prematurely aborted fruit. In 1 glasshouse, a single larva and several weevils were found but without significant damage to the crop. As all infested glasshouses are located close to each other, these findings are considered as one single outbreak originating from the same unknown source. For the moment, it is suspected that *A. eugenii* was introduced with imports of *Capsicum* fruit from a country where the pest occurs but investigations are currently being carried out to identify the possible source of this infestation. Phytosanitary measures have been taken to eradicate *A. eugenii* and include: pesticide applications, destruction and secure removal of affected crops and associated growing medium. Specific surveillance activities were carried out within a radius of 1 km around the infested glasshouses, as well as in *C. annuum* production units across the Netherlands. No further detections of the pest were made. The pest status of *Anthonomus eugenii* in the Netherlands is officially declared as: **Transient - Isolated outbreak, under eradication.**

Source: NPPO of the Netherlands (2012-08).

Additional key words: first record

Computer codes: ANTHEU, NL

2012/204 First report of *Aromia bungii* in Italy

In September 2012, the presence of *Aromia bungii* (Coleoptera: Cerambycidae - EPPO Alert List) was reported for the first time in Italy. The pest was found in the province of Napoli (Campania region), in an urban area located between Napoli and Pozzuoli, on several plum (*Prunus domestica*) and apricot (*P. armeniaca*) trees growing in parks and gardens. The infestation was first noticed by members of the public who alerted the Italian NPPO. Frass and exit holes have been observed, as well as larvae in the lower part of the trunk and in branches, mainly at the subcortical level. *A. bungii* has been identified on the basis of its morphological characteristics, and molecular analysis is currently being performed for confirmation. Considering the potential risks that *A. bungii* may present for many woody plant species, infested plum and apricot trees have been destroyed, intensive surveys are being carried out and an information campaign has been initiated to raise public awareness. Finally, a specific action plan against *A. bungii* is under development. The situation of *Aromia bungii* in Italy can be described as follows: **Present, first reported in 2012 in the province of Napoli (Campania region), under eradication.**

Source: NPPO of Italy (2012-10).

INTERNET

Servizio Fitosanitario Regionale - Regione Campania.

<http://www.agricoltura.regione.campania.it/difesa/aromia.html>

Additional key words: new record

Computer codes: AROMBU, IT

2012/205 *Drosophila suzukii* continues to spread in Europe

In their recent paper, Cini *et al.* (2012) reviewed the invasion of *Drosophila suzukii* (Diptera: Drosophilidae - EPPO A2 List) in Europe. They recalled that it was first reported in autumn 2008 in Spain (province of Rasquera). However, they noted that recent examination of captures made in 2008 in Malaise traps placed in Toscana (San Giuliano Terme, Pisa) also included *D. suzukii*, thus suggesting that the pest already occurred in Italy at that time. In 2009, more adults were trapped in other regions of Spain (Bellaterra, near Barcelona), France (Montpellier (Hérault) and other sites in Alpes-Maritimes) and Italy (Trentino). At that time, the first economic damage on cultivated berries was reported from Trentino. In 2010 and 2011, spread continued and the pest was reported from other Italian regions (Piemonte, Val d'Aosta, Lombardia, Veneto, Emilia-Romagna, Liguria, Marche and Campania). Spread also continued in France, as the pest was found in Corse and as far North as Ile-de-France. In 2011, first reports were made by Switzerland, Slovenia, Croatia*, Austria, Germany* and Belgium. Considering the geographical pattern of these first reports, the authors suggested that their history might reflect differences in the sampling efforts and/or problems of awareness rather than the true history of *D. suzukii* invasion. They also concluded that the rapid spread of *D. suzukii* posed a challenge to fruit production in Western Europe, and that research was needed to understand *D. suzukii* basic biology and develop efficient management strategies.

* New country records.

Source: Cini A, Ioriatti C, Anfora G (2012) A review of the invasion of *Drosophila suzukii* in Europe and a draft research agenda for integrated pest management. *Bulletin of Insectology* 65(1), 149-160.

Additional key words: distribution

Computer codes: DROSSU

2012/206 First report of *Drosophila suzukii* in Germany

In Germany, trapping programmes for *Drosophila suzukii* (Diptera: Drosophilidae - EPPO A2 List) were initiated in autumn 2010. Traps containing a mixture of cider and vinegar were displayed in fruit crops in Rheinland-Pfalz. In 2010, no captures were made. In 2011, monitoring was intensified across Germany and traps were placed in orchards, vineyards, supermarkets, grocery shops, and locations at which fruit waste was collected. In mid-September 2011, the first specimens of *D. suzukii* were caught in Siebeldingen (Rheinland-Pfalz). The pest was then caught in Dossenheim (Baden-Württemberg), and at the end of October 2011 it was caught on the Northern shore of Lake Constance (Bayern and Baden-Württemberg).

The situation of *Drosophila suzukii* in Germany can be described as follows: **Present, first found in 2011 in Rheinland-Pfalz, Baden-Württemberg and Bayern.**

Source: Vogt H, Baufeld P., Gross J, Kopler K, Hoffmann C (2012) [*Drosophila suzukii*: a new threat for the European fruit and grapevine. Report of an International Conference, Trento, IT, 2011-12-02]. *Journal für Kulturpflanzen* 64, 68-72 (in German).

Additional key words: new record

Computer codes: DROSSU, DE

2012/207 First report of *Drosophila suzukii* in Croatia

In 2010, the presence of *Drosophila suzukii* (Diptera: Drosophilidae - EPPO A2 List) was discovered in Croatia. The pest was caught in Istria in traps located in the following crops: raspberry (*Rubus idaeus*), peach (*Prunus persica*) and grapevine (*Vitis vinifera*).

The situation of *Drosophila suzukii* in Croatia can be described as follows: **Present, first found in 2010 in Istria.**

Source: Masten Milek T, Seljak G, Šimala M, Bjeliš M (2011) [First record of *Drosophila suzukii* (Matsumara, 1931) (Diptera: Drosophilidae) in Croatia]. *Glasiło biljne zaštite* 5, 377-382 (in Croatian) (abst.).

Additional key words: new record

Computer codes: DROSSU, HR

2012/208 First report of *Drosophila suzukii* in the United Kingdom

In the United Kingdom, *Drosophila suzukii* (Diptera: Drosophilidae - EPPO A2 List) was caught for the first time at the end of September 2012 at one location in Kent. Five specimens were trapped in raspberry and blackberry experimental plots at the East Malling Research centre. Considering its distribution in Europe and the difficulty of control, no official regulation is being considered.

The pest status of *Drosophila suzukii* in the United Kingdom is officially declared as: **Present, only in some areas.**

Source: IPPC website. Official Pest Reports - United Kingdom. *Drosophila suzukii* (2012-10-02). <https://www.ippc.int/index.php>

INTERNET

MailOnline. Strawberry alert: the 2 mm long Asian fruit fly that could decimate Britain's fruit industry. <http://www.dailymail.co.uk/sciencetech/article-2209952/Strawberry-alert-The-2mm-long-Asian-fruit-fly-decimate-Britains-fruit-industry.html>

Additional key words: new record

Computer codes: DROSSU, GB

2012/209 First report of *Drosophila suzukii* in Portugal

The NPPO of Portugal recently informed the EPPO Secretariat of the first record of *Drosophila suzukii* (Diptera: Drosophilidae - EPPO A2 List) on its territory. In July 2012, *D. suzukii* was found in a commercial greenhouse growing raspberries (*Rubus idaeus*) in Odemira county, Alentejo region (Southern Portugal). The identity of the pest was determined by its morphological characteristics and confirmed by molecular methods. No official control measures were taken.

The pest status of *Drosophila suzukii* in Portugal is officially declared as: **Present only in some areas.**

Source: NPPO of Portugal (2012-10).

Additional key words: new record

Computer codes: DROSSU, PT

2012/210 First report of *Drosophila suzukii* in the Netherlands

The presence of *Drosophila suzukii* (Diptera: Drosophilidae - EPPO A2 list) was detected for the first time in the Netherlands at the beginning of October 2012. An official survey for *D. suzukii* was initiated at the end of September 2012 using McPhail traps filled with 100 ml of a mixture (1:1) of red wine and vinegar with a few drops of detergent. Traps were placed in the southern half of the Netherlands, in private gardens (10 traps) and in forests (2 traps), and they were checked on a weekly basis for a maximum period of 4 weeks. *D. suzukii* was captured in 8 traps out of 12, in both private gardens and forests. In total 9 adult females and 13 males were captured. No particular damage was noticed on fruit or plants. The origin of the introduction of *D. suzukii* in the Netherlands is unknown but it is presumed that both natural spread and trade of infested fruits from other parts of Europe are the most probable pathways. In view of the already wide distribution of the pest in Europe, no phytosanitary measures are considered in the Netherlands at the present time. The pest status of *Drosophila suzukii* in the Netherlands is officially declared as: **Present, at low prevalence.**

Source: NPPO of the Netherlands (2012-11).

Additional key words: new record

Computer codes: DROSSU, NL

2012/211 Situation of *Drosophila suzukii* in Belgium

Following the first observation of 1 male *Drosophila suzukii* (Diptera: Drosophilidae - EPPO A2 List) in Belgium in November 2011 (see EPPO RS 2011/2011, RS 2012/10), an official survey was initiated in mid-March 2012 by the Belgian NPPO. In total, 30 traps were placed in fields of several soft fruit species, and 15 traps were placed in storage and packaging houses. In parallel, monitoring programmes were initiated by the Walloon Agricultural Research Centre (CRA-W) together with the Walloon Organisation of Strawberry Growers (6 traps), and by the Research Station for Fruit Growing (2 traps in the south of the province of Limburg). The results of the trapping programme are presented below. The identity of the specimens caught was confirmed by the National Reference Laboratory for Entomology.

- In January 2012: 1 male was caught in a light trap. This trap was located in a partly open former aviary containing bovine manure samples which had been collected near Gembloux (Namur province) and stored (since 2011-08-23) for a CRA-W research project on coprophagous insects. *D. suzukii* was caught just before a very cold period and follow up monitoring was negative.
- In July 2012: 1 male was caught in a trap placed in a sweet cherry (*Prunus avium*) orchard belonging to CRA-W in Gembloux within the framework of the monitoring project. No cherries were present at the time of finding.
- In August 2012: a total of 8 males and 3 females were caught in a trap in a raspberry production site in Gembloux (CRA-W). Another male specimen was caught at the same location in a trap located close to a compost heap. In addition, the official NPPO survey detected 3 males which were caught in a neglected cherry orchard in Zoutleeuw (province of Vlaams-Brabant). Because developing larvae were detected in some fruits, further investigations of the cherries found in the orchard (late season variety) and yellow/red plums in a neighbouring field are ongoing.

Despite these captures, no increase in fruit damage or production loss was observed. No official control measures were taken, but the survey is continuing and the horticultural sector is being kept informed of the results. The owner of the field where the insects were trapped was officially recommended to remove and destroy the remaining fruits.

The pest status of *Drosophila suzukii* in Belgium is officially declared as: **Present, few occurrences, under surveillance.**

Source: NPPO of Belgium (2012-09).

Additional key words: detailed record

Computer codes: DROSSU, BE

2012/212 First report of *Aculops fuchsiae* in Belgium

The NPPO of Belgium recently informed the EPPO Secretariat of the first finding of *Aculops fuchsiae* (Acari: Eriophyidae - EPPO A2 List) on its territory. *A. fuchsiae* was detected in Rumst (province of Antwerp) on *Fuchsia* spp. in August 2012. One fuchsia plant showing symptoms was sent to the national reference laboratory by a private collector of fuchsia on 2012-08-01. The identity of the pest was confirmed on 2012-08-08 on the basis of its morphological characteristics. Within the same collection, other fuchsia plants were showing similar symptoms. Investigations are ongoing to identify the possible source of this infestation but for the moment it could not be traced. Official control measures were taken, and all the plants (approximately 300 symptomatic and asymptomatic plants) in the private collection have been destroyed by burning.

The pest status of *Aculops fuchsiae* in Belgium is officially declared as: **Transient, actionable, under eradication.**

Source: NPPO of Belgium (2012-09).

Additional key words: new record

Computer codes: ACUPFU, BE

2012/213 First report of *Carpomya incompleta* in France

In mid-July 2012, the presence of *Carpomya incompleta* (Diptera: Tephritidae) on jujube was observed for the first time in France. This fruit fly was found in a commercial crop of jujube (*Ziziphus jujuba* cv. 'Sultane') in region Provence-Alpes-Côte d'Azur. The grower had noticed unusual damage. Insect larvae were reared in the laboratory (ANSES) and resulting adults were identified as *C. incompleta*. In the infested jujube orchard (1.2 ha), only minor damage was observed during summer (pictures can be viewed in the EPPO gallery: <http://photos.eppo.org/index.php/album/616-carpomya-incompleta-caryin->). No official control measures were taken against *C. incompleta*.

The pest status of *Carpomya incompleta* in France is officially declared as: **Present, only in some areas where the host crop is grown.**

EPPO note: *C. incompleta* is a monophagous species feeding on *Ziziphus* spp. which occurs in Africa and the Mediterranean Basin. According to the literature, its geographical distribution is as follows:

EPPO region: Egypt, Israel, Italy (recorded since 1853), France (see above).

Africa: Burkina Faso, Egypt, Ethiopia, Niger, Sudan.

Asia: Iraq, Israel, United Arab Emirates.

Source: NPPPO of France (2012-09).

Additional key words: new record

Computer codes: CARYIN, FR

2012/214 Outbreaks of *Bemisia tabaci* in Finland

The NPPPO of Finland recently informed the EPPO Secretariat of 3 outbreaks of *Bemisia tabaci* (Hemiptera: Aleyrodidae - EPPO A2 List) on its territory. In August 2012, *B. tabaci* was detected in 3 production sites (glasshouses) of poinsettias (*Euphorbia pulcherrima* cvs. 'Winter rose early cream', 'Winter rose early red' and various other cultivars). In one case, the grower himself had found whiteflies in his poinsettia production and alerted the NPPPO; the 2 other cases were discovered during regular phytosanitary inspections. Tracing-back studies showed that on 2 sites, the cultivars 'Winter rose early cream' and 'Winter rose early red' had been produced with plants for planting originating from Italy. On 1 site, the origin of the different cultivars could not be ascertained. Eradication measures were immediately implemented (spraying programmes, destruction of the most infested lot in 1 production site). Monitoring activities were also initiated (inspections every 4 weeks until September 2012 and then, every 2 weeks).

The pest status of *Bemisia tabaci* in Finland is officially declared as: **Present, under eradication.**

Source: NPPPO of Finland (2012-09).

Additional key words: detailed record

Computer codes: BEMITA, FI

2012/215 Update on the situation of *Diabrotica virgifera virgifera* in the Czech Republic

The NPPPO of the Czech Republic recently informed the EPPO Secretariat that *Diabrotica virgifera virgifera* (Coleoptera: Chrysomelidae - EPPO A2 List) has been found outside the delimited zones (infested zones and buffer zones). Since the last update (see EPPO RS 2012/163), additional captures have been made in pheromone traps placed in maize fields: 1 male and 2 males in the districts of Litoměřice and Beroun, respectively. Phytosanitary measures were applied in accordance with EU Decision 2008/644/EC.

The situation of *Diabrotica virgifera virgifera* in the Czech Republic can be described as follows: **Present, restricted distribution, under official control.**

Source: NPPPO of Czech Republic (2012-09).

Additional key words: detailed record

Computer codes: DIABVI, CZ

2012/216 *Synchytrium endobioticum* no longer found in Northern Ireland, United Kingdom

In Northern Ireland (GB), potato wart disease caused by *Synchytrium endobioticum* (EPPO A2 List) had been detected in some fields at the beginning of the 20th century. All infected fields had been excluded from potato production ('scheduled'). However, no new cases had been reported since 1959. From 2000 to 2011, a programme of systematic sampling

and testing of all land identified as having had an outbreak of *S. endobioticum* (approximately 750 fields) was carried out. During this 10-year programme, no viable spores have been found in any of the 750 fields, and as a consequence the restrictions imposed on the previously infested land have been lifted ('descheduled') in Northern Ireland.

Source: INTERNET
 Northern Ireland Executive. O'Neill announces lifting of potato wart disease restrictions. Press release of 2012-08-14.
http://www.northernireland.gov.uk/news-dard-140812-oneill-announces-lifting?WT.mc_id=rss-news
 ProMed posting (no. 20120820.1252253) of 2012-08-17. Wart disease, potato - UK: (Northern Ireland) Eradication. <http://www.promedmail.org>

Additional key words: absence, eradication

Computer codes: SYNCEN, GB

2012/217 Outbreak of *Anacridium melanorhodon arabafrum* in Qatar

In early August 2012, an outbreak of *Anacridium melanorhodon arabafrum* (Orthoptera: Acrididae) was observed in Qatar. The number of hoppers and adult locusts rose as a result of a new breeding cycle. The infestation was first noticed in the Southwestern area of Qatar and then in the North. The infestation was concentrated in these two areas causing some damage on date palm plantations and fodder grasses. It is most likely that the ecological conditions such as soil moisture and green vegetation became favourable for locust breeding and survival. It is noted that no rainfall occurred during this period. It is probable that the outbreak originated in the fodder grass fields which were irrigated by sprinkler systems. National survey and control teams were immediately dispatched in the infested areas and undertook control measures (applications of chlorpyrifos 48% EC at a rate of 2ml/l). Currently the situation is under control and the number of adults has been greatly reduced. Two scientists from the Commission for Controlling the Desert Locust in the Central Area (CRC-FAO) visited the area of infestation and confirmed the identification of this locust to subspecies level. This is the first time that an outbreak of *A. melanorhodon arabafrum* occurred during summer in Qatar.

Source: Personal communication with Dr Emad Hussain Al-Turaihi, Agricultural Affairs Department, Ministry of Environment, Doha, Qatar (2012-10).
 E-Mail: emadhussain30@yahoo.com

Additional key words: detailed record

Computer codes: ANCRMA, QA

2012/218 *Ralstonia solanacearum* detected in the Czech Republic

In the Czech Republic, the presence of *Ralstonia solanacearum* race 3 biovar 2 (EPPO A2 List) was detected during the annual official survey for brown rot in one commercial field of ware potatoes located at Sadská (district of Nymburk, Central Bohemian region). On 2012-08-13, the bacterium was detected in one potato sample (*Solanum tuberosum* cv. 'Cupido') which had been collected from this ware potato field (total area of 29.9 ha of which 10 ha were cultivated with cv. 'Cupido'). The infected ware potato crop had been grown from seed potatoes originating from the Netherlands and irrigated with surface

water. Tracing-back studies are still on-going to determine the possible origins of this infection. A delimiting survey has been carried but no other positive potato sample could be detected. The NPPO is currently testing samples of water and weeds collected from the irrigation pumping station and its vicinity. Phytosanitary measures are being taken to prevent any further spread of the disease and eradicate *R. solanacearum*.

The pest status of *Ralstonia solanacearum* in the Czech Republic is officially declared as: **Transient, under eradication.**

Source: NPPO of the Czech Republic (2012-08).

Additional key words: detailed record

Computer codes: RALSSO, CZ

2012/219 First report of ‘Candidatus Liberibacter solanacearum’ on carrots in France, in association with Trioza apicalis

The NPPO of France recently informed the EPPO Secretariat of the first record of ‘Candidatus Liberibacter solanacearum’ (EPPO A1 List - Solanaceae haplotypes*) in carrots (*Daucus carota*) on its territory. From March to June 2012, unusual symptoms characterized by poor crop growth and leaf yellowing started to be observed by growers in two fields (8 ha and 10 ha) of seed-producing carrots located in region Centre. In August 2012, the presence of ‘Ca. Liberibacter solanacearum’ was officially confirmed by the national reference laboratory (real-time PCR). Field observations showed that the disease affected approximately 50% of the area in the 8 ha-plot, and 90% in the 10 ha-plot. In addition, the presence of the carrot psyllid, *Trioza apicalis* (Homoptera: Psyllidae) was observed in infected fields. The origin of this infestation is unknown but the following three scenarios have been envisaged: 1) the pathogen was introduced with imports of infected carrot seeds from another country, thus supposing that the disease is seed-transmitted (which remains to be verified); 2) infected carrot psyllids were introduced via commercial exchanges and then spread the disease; 3) infected carrot seed lots were imported and grown, thus constituting a source for local populations of carrot psyllids to acquire and further transmit the disease. Phytosanitary measures have been taken and include the following:

- all seeds harvested from the two infested fields are kept in confined conditions for further studies, in particular on the possible seed transmission of ‘Ca. L. solanacearum’, and their commercialisation is prohibited;
- plant debris in infected fields have been buried;
- all machinery used to harvest infected seeds and bury plant material has been disinfected.

The pest status of ‘Candidatus Liberibacter solanacearum’ in France is officially declared as: **Transient.**

* The Solanaceae haplotypes of ‘Ca. L. solanacearum’ associated with zebra chip disease, as well as their psyllid vector, *Bactericera cockerelli* (Homoptera: Psyllidae), are absent from the EPPO region.

Source: NPPO of France (2012-10).

Additional key words: new record

Computer codes: LIBEPS, FR

2012/220 Occurrence of ‘Candidatus Phytoplasma pyri’ is confirmed in Belgium

In Belgium, symptoms of pear decline had been observed in some orchards but the presence of ‘Candidatus Phytoplasma pyri’ (EPPO A2 List) had not been confirmed by molecular tools. In October 2010, 137 samples mainly consisting of leaves showing early yellow or red discoloration were collected from 14 pear production orchards in the north-east of Belgium. This sampling was part of an NPPO research project on the occurrence of phytoplasmas in apple and pear production in Belgium. As the first part of the project dealt with ‘Candidatus Phytoplasma mali’ (results were reported in EPPO RS 2011/132), these 137 samples were stored at -20°C. Molecular analysis (PCR) was performed by the end of 2011 and approximately 15% of the 137 samples were found positive for ‘Ca. P. pyri’. These positive samples originated from 8 of the 14 inspected symptomatic orchards. The NPPO of Belgium is currently focussing its official inspections on the production of propagation material and fruit trees. Prescribed measures in nurseries involve the destruction of all symptomatic plants upon confirmation of an infection, and the inspection of the edges of neighbouring fields planted with susceptible host plants. The NPPO will conduct further research in order to determine the exact distribution of ‘Ca. P. pyri’ across Belgium and investigate the role of local insect vector populations in its dispersal. The pest status of ‘Candidatus Phytoplasma pyri’ in Belgium is officially declared as: **Present, restricted distribution, found in some production orchards, under surveillance.**

Source: NPPO of Belgium (2012-10).

Additional key words: new record

Computer codes: PHYPPY, BE

2012/221 ‘Syndrome des basses richesses’ detected in Germany: addition to the EPPO Alert List

As reported in EPPO RS 2002/017, 2002/084, 2008/083, a new disease of sugar beet (*Beta vulgaris*) called ‘syndrome des basses richesses’ has emerged in Eastern France since 1991. Affected sugar beet roots present a reduction of sugar content leading in some cases to serious economic consequences for the growers. Similar symptoms were also locally described in Hungary in 2005. For a long time, the etiology of the disease remained unclear, although stolbur phytoplasma and an unknown proteobacterium both transmitted by ciixid insects were found to be associated with the disease. Recent studies have showed that the main pathogen associated with ‘syndrome des basses richesses’ was a γ -proteobacterium tentatively called ‘Candidatus Arsenophonus phytopathogenicus’ (most *Arsenophonus* species are usually insect endosymbionts and are rather rarely plant pathogens) and that stolbur phytoplasma only played a marginal role. It was also demonstrated that the main vector of the disease was *Pentastiridius leporinus* (Hemiptera: Cixiidae), although originally it was misidentified as *P. beieri*. Because the disease has recently been found in Germany, the Panel on Phytosanitary measures decided that the ‘syndrome des basses richesses’ should be added to the EPPO Alert List, although it is acknowledged that many aspects of the biology and epidemiology of this disease remain highly uncertain.

'Syndrome des basses richesses' - a disease of sugar beet associated with 'Candidatus Arsenophonus phytopathogenicus' and transmitted by *Pentastiridius leporinus* (Hemiptera: Cixiidae)

Why	<p>'Syndrome des basses richesses' is an emerging disease of sugar beet (<i>Beta vulgaris</i>). It is associated with a γ-proteobacterium 'Candidatus Arsenophonus phytopathogenicus' and transmitted by a planthopper, <i>Pentastiridius leporinus</i> (Hemiptera: Cixiidae). This disease was first found in Eastern France in 1991 but its etiology remained uncertain for a long period. Syndrome des basses richesses causes a reduction in the sugar content at the time of harvest, thus leading to significant economic losses for growers. Because this syndrome has recently been detected in Germany, the Panel on Phytosanitary measures decided to add it to the EPPO Alert List.</p>
Where	<p>The disease was first observed in Eastern France in 1991. So far, it has only been observed in the departments of Côte-d'Or, Saône-et-Loire (Bourgogne region), and Jura (Franche-Comté region). In Hungary, similar symptoms were observed in 2005. At that time, the presence of bacterium-like organisms was detected in the phloem of diseased sugar beet plants but no recent information could be found to confirm the presence of 'Ca. A. phytopathogenicus' in Hungary. In Germany, the 'syndrome des basses richesses' was first observed in 2009 in several sugar beet fields near Heilbronn (Baden-Württemberg) and 'Ca. A. phytopathogenicus' was detected in diseased plants. The presence of <i>P. leporinus</i> was also noticed in affected fields. So far, the disease has only been found in Heilbronn, but investigations are being carried out in Baden-Württemberg to determine the extent and impact of the disease in sugar beet production.</p> <p>EPPO region: France (Côte d'Or, Saône-et-Loire, Jura), Germany (near Heilbronn in Baden-Württemberg), Hungary (symptoms only).</p> <p>The insect vector, <i>Pentastiridius leporinus</i>, is considered to be distributed throughout Europe, the Near East, Central and East Asia, and Northern Africa. From the literature, the following distribution list could be prepared.</p> <p>EPPO region: Albania, Algeria, Armenia, Austria, Azerbaijan, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, Netherlands, Poland, Portugal, Romania, Russia, Slovakia, Spain, Sweden, Switzerland, Tunisia, Turkey, Ukraine, United Kingdom.</p> <p>Africa: Algeria, Tunisia.</p> <p>Asia: Afghanistan, China, Iran, Kazakhstan, Kyrgyzstan, Mongolia, Turkmenistan.</p>
On which plants	<p>Sugar beet (<i>Beta vulgaris</i>).</p> <p>Until recently, the vector <i>P. leporinus</i>, was only reported to live on common reed (<i>Phragmites australis</i>). But studies carried out in Eastern France have shown that this insect was also associated with cultivated plants such as sugar beet and wheat (<i>Triticum aestivum</i>). In Eastern France, <i>P. leporinus</i> has only one generation per year and spends most of its life cycle as terricolous nymphal stages. Adults can colonize, mate, and lay eggs on sugar beet plants. Nymphs hatch within 10 to 15 days and by feeding on sugar beet roots, they develop into second and third instars from August to October. After a winter diapause, nymphs complete their development during the following spring by feeding on the roots of winter wheat. Adults then emerge from wheat fields in summer (June/July) and migrate to neighbouring sugar beet fields. Although it is supposed that <i>P. leporinus</i> has been able to shift from wild host plants to sugar beet fields and adapt to sugar beet/wheat rotations, these wild hosts have not yet been identified in Eastern France.</p>
Damage	<p>Symptoms appear shortly before the crop is harvested (usually in September). They include yellowing and bending of old leaves accompanied by new growth of central leaves which appear chlorotic, lanceolated and asymmetric. The bacterium systemically invades the phloem of sugar beet causing necrosis of the vascular bundles. The infected roots have lower sugar content (reduction of 2 to 4%). It is reported that this reduction of sugar content can have dramatic economic consequences for growers. For example, in 1992 the loss of income observed in Eastern France was of about 50% over 1000 ha. In 2004, the rate of affected</p>

Transmission	plants in sugar beet fields varied from 15 to 100 % over 1 800 ha, but no estimation of crop losses was given. <i>P. leporinus</i> has been identified as the main vector of ‘Ca. A. phytopathogenicus’ in sugar beet fields. It transmits the pathogen in a persistent mode. It is suggested that the emergence of the ‘syndrome des basses richesses’ in Eastern France has been coincidental with the increasing populations of <i>P. leporinus</i> in sugar beet fields.
Pathway	Infectious insect vectors.
Possible risks	Sugar beet is an economically important crop in the EPPO region. Direct control of the bacterium is not possible but it has been observed in Eastern France that the reduction of the vector populations with different techniques, such as chemical insect control, crop rotation with barley, and reduced tillage significantly lowered the impact of the disease. An express PRA conducted by the German NPPO concluded that the ‘syndrome des basses richesses’ presented a high risk for Germany, although many uncertainties remained due to the general lack of data. Finally, the whole picture is further complicated by the fact that ‘Ca. A. phytopathogenicus’ might also affect strawberry (<i>Fragaria ananassa</i>). It has recently been proposed that ‘Ca. A. phytopathogenicus’ was also the causal agent of strawberry marginal chlorosis. This disease of strawberry observed in France, Japan, and possibly Italy was initially thought to be associated with ‘ <i>Candidatus Phlomobacter fragariae</i> ’ and transmitted by <i>Cixius wagneri</i> (Hemiptera: Cixiidae). If it is further confirmed that the diseases of sugar beet and strawberry are caused by the same pathogen, this will add to the risk.
Sources	<p>Bressan A (2009) Agronomic practices as potential sustainable options for the management of <i>Pentastiridius leporinus</i> (Hemiptera: Cixiidae) in sugar beet crops. <i>Journal of Applied Entomology</i> 133, 760-766.</p> <p>Bressan A, Holzinger WE, Nusillard B, Sémétey O, Gatineau F, Simonato M, Boudon-Padieu E (2009) Identification and biological traits of a planthopper from the genus <i>Pentastiridius</i> (Hemiptera: Cixiidae) adapted to an annual cropping rotation. <i>European Journal of Entomology</i> 106, 405-413.</p> <p>Bressan A, Moral Garcia FJ, Boudon-Padieu E (2009) The prevalence of ‘<i>Candidatus Arsenophonus phytopathogenicus</i>’ infecting the planthopper <i>Pentastiridius leporinus</i> (Hemiptera: Cixiidae) increase nonlinearly with the population abundance in sugar beet fields. <i>Environmental Entomology</i> 40(6), 1345-1352.</p> <p>Bressan A, Sémétey O, Nusillard B, Boudon-Padieu E (2007) The syndrome ‘basses richesses’ of sugar beet in France is associated with different pathogen types and insect vectors. <i>Bulletin of Insectology</i> 60(2), 395-396.</p> <p>Bressan A, Sémétey O, Nusillard B, Clair D, Boudon-Padieu E (2008) Insect vectors (Hemiptera: Cixiidae) and pathogens associated with the disease syndrome ‘Basses Richesses’ of sugar beet in France. <i>Plant Disease</i> 92(1), 113-119.</p> <p>Bressan A, Terlizzi F, Credi R (2012) Independent origins of vectored plant pathogenic bacteria from arthropod-associated <i>Arsenophonus</i> endosymbionts. <i>Microbial Ecology</i> 63, 628-638.</p> <p>Gatineau F, Jacob N, Vautrin S, Larrue J, Lherminier J, Richard-Molard M, Boudon-Padieu E (2002) Association with the syndrome ‘Basses Richesses’ of sugar beet of a phytoplasma and a bacterium-like organism transmitted by a <i>Pentastiridius</i> sp. <i>Phytopathology</i> 92(4), 384-392.</p> <p>INTERNET</p> <p>Julius Kühn Institute. Express PRA zu Syndrom ‘basses richesses’ (SBR) dated 2012-07-11 (in German). http://pflanzengesundheit.jki.bund.de/dokumente/upload/2024d_basses_richesses_express-pra.pdf</p> <p>Kalkandelen A (1990) [Taxonomic studies on the species of Cixiidae (Homoptera) from Turkey. V- Pentastirini: <i>Pentastiridius</i> and <i>Setapius</i>]. <i>Bitki Koruma Bülteni</i> 30(1-4), 3-27 (in Turkish).</p> <p>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 syndrome’ disease of sugar beet in Hungary]. <i>Növényvédelem</i> 41(1), 31-40.</p> <p>Schröder M, Rissler D, Schrameyer K (2012) [‘Syndrome des Basses Richesses’ (SBR) - A new disease of sugar beet in Germany]. <i>Journal für Kulturpflanzen</i> 64, 396-397 (in German).</p> <p>Sémétey O (2005) Characteristics of transmission by <i>Pentastiridius leporinus</i> (Hemiptera, Cixiidae) of a phytopathogenic bacterium-like organism closely related to bacterial endosymbionts of hemiptera. Poster presented at the 6th International Workshop on leafhoppers and planthoppers of economic significance (University of California, Berkeley, 2005-08-07/12).</p> <p>Sémétey O, Bressan A, Gatineau F, Boudon-Padieu E (2007) Development with RISA of a specific assay for detection of the bacterial agent of syndrome ‘basses richesses’ of sugar beet. Confirmation of <i>Pentastiridius</i> sp. (Fulgoromorpha, Cixiidae) as the economic vector. <i>Plant Pathology</i> 56, 797-804.</p> <p>Sémétey O, Gatineau F, Bressan A, Boudon-Padieu E (2007) Characterization of a γ-3 Proteobacteria responsible for the syndrome ‘Basses Richesses’ of sugar beet transmitted by <i>Pentastiridius</i> sp. (Hemiptera, Cixiidae). <i>Phytopathology</i> 97, 72-78.</p>

2012/222 Phytosanitary requirements concerning the entry of plants and plant products into Reunion Island (FR)

The prefectural decree n°2011-01479 sets the required phytosanitary conditions on the territory of Reunion Island for the introduction of plants, plant products and other objects. This decree integrates relevant pieces of legislation related to plant protection, in particular the EU Directive 2000/29. This decree lists parasitic and invasive alien plants whose introduction and spread are prohibited in Reunion Island. This list has been summarized below with the plant family name, origin and occurrence in the EPPO region.

Species	Origin	Situation/location in the EPPO region
<i>Ailanthus altissima</i> (Simaroubaceae, EPPO List of Invasive Alien Plants)	China, Taiwan	Widespread
<i>Alternanthera philoxeroides</i> (Gomphrenoideae, EPPO List of IAP)	South America	FR, IT
<i>Austroeupatorium inulaefolium</i> (Asteraceae)	Americas	Not recorded
<i>Cardiospermum grandiflorum</i> (Sapindaceae)	Africa, Americas	Canarias (ES), FR, Madeira (PT), Sicilia (IT)
<i>Chromolaena odorata</i> (Asteraceae)	Americas	Not recorded
<i>Cecropia peltata</i> (Urticaceae)	Americas	Not recorded
<i>Erica lusitanica</i> (Ericaceae)	Southwestern Europe	Native in part of the EPPO region, alien and established in the UK
<i>Imperata cylindrica</i> (Poaceae)	Africa, Asia, Southern Europe	Native in part of the EPPO region
<i>Lygodium microphyllum</i> (Lygodiaceae)	Africa, Asia, Australasia	Not recorded
<i>Lythrum salicaria</i> (Lythraceae)	Africa, Asia, Europe	Native in most of the EPPO region
<i>Miconia calvescens</i> (Melastomataceae)	Americas	Not recorded
<i>Mikania cordata</i> (Asteraceae)	Asia	Not recorded
<i>Mimosa pigra</i> (Mimosoideae)	Africa, Americas	Not recorded
<i>Morella faya</i> (Myricaceae)	Africa, native in Azores, Madeira (PT), Canarias (ES)	Native in part of the EPPO region
<i>Ossaea marginata</i> (Melastomataceae)	South America	Not recorded
<i>Pennisetum setaceum</i> (Poaceae, EPPO List of IAP)	Africa, Asia, Southern Europe (IT)	Native in part of the EPPO region (DZ, IL, MA, TN); recorded in FR, ES, including Baleares, Islas Canarias, IT, including Sardinia, Sicilia
<i>Pereskia aculeata</i> (Cactaceae)	South America	Not recorded
<i>Pueraria montana</i> (Fabaceae, EPPO A2 List)	Asia	CH, IT
<i>Rubus</i> spp. (Rosaceae) of tropical origin present in Reunion such as <i>R. moluccanus</i> and <i>R. niveus</i>	Tropical areas	<i>R. niveus</i> in Madeira (PT)
<i>Striga</i> spp., absent from Reunion	/	/
<i>Wikstroemia indica</i> (Thymelaeaceae)	Asia, Australasia	Not recorded

Three species in particular may represent a threat to the most thermophile parts of the EPPO region: *Cardiospermum grandiflorum*, *Mikania cordata* and *Mimosa pigra*.

Source: Préfet de la Région Réunion, Arrêté Préfectoral n° 2011 - 001479 Fixant les conditions phytosanitaires requises pour l'introduction sur le territoire de l'île de la Réunion de végétaux, produits végétaux et autres objets.
http://daaf974.agriculture.gouv.fr/IMG/pdf/AP2011-001479conditions_import_vegetaux_cle84661f.pdf

Additional key words: invasive alien plants, legislation

Computer codes: 1RUBG, 1STRG, AILAL, ALRPH, AVQIN, CECPE, CRIGR, EIALU, EUPOD, IMPCY, LYFMI, LYTSA, MICCA, MIKCO, MIMPI, MYRFA, OSSMA, PESSA, PKIAS, PUEMO, RUBNI, RUBRE, WIKIN, FR

2012/223 The eradication of *Salvinia molesta* in the Pozzo del Merro, Italy

Salvinia molesta (Salviniaceae, EPPO List of Invasive Alien Plants) was observed in August 2003 in a pond at the Pozzo del Merro, situated a few kilometers from Rome on the municipality of Sant'Angelo Romano (IT). The Pozzo del Merro is one of the deepest sink hole in the world and is part of a natural reserve in the Rome Province. The species had covered the whole water surface in 2 months and was found to be able to overwinter. The invasive red-eared slider *Trachemys scripta* (Emydidae) was also found in the pond. The introduction of both the turtle and the invasive plant are thought to be the result of an aquarium release. In 2009, the Province of Roma decided to undertake the eradication of *S. molesta* through mechanical removal. The removal of 4 to 5 m³ of the plant was done in March in order to minimize disturbance on native amphibian species such as newts. This removal was followed by monitoring and repeated removal of the plant. As of 2012, *S. molesta* has not been observed and is considered eradicated in the Pozzo del Merro.

Source: Giardini M, Buccomino G, Buonfiglio V, Vecchio M & Vinci M (2012) La *Salvinia* estocia del Pozzo del Meero. In Giardini M (Ed) (2012) Sant'Angelo Romano (Monti Cornicolani, Roma). Un territorio ricco di storia e di natura. Comune di Sant'Angelo Romano, Regione Lazio p. 294-301.

Additional key words: invasive alien plants, eradication

Computer codes: SAVMO, IT

2012/224 Distribution of some invasive plants in Vojvodina, Serbia

A mapping project of invasive plants has been conducted in 2011 on the territory of the Autonomous Province of Vojvodina in Serbia, considering both the abundance and coverage of some plants. The following species were monitored: *Amaranthus retroflexus* (Amaranthaceae), *Ambrosia artemisiifolia* (Asteraceae, EPPO List of IAP), *Arctium lappa* (Asteraceae, native in Europe), *Artemisia vulgaris* (Asteraceae, native in Europe), *Asclepias syriaca* (Apocynaceae), *Carduus acanthoides* (Asteraceae, native in Europe), *Chenopodium album* (Amaranthaceae, native in Europe), *Conyza canadensis* (Asteraceae), *Cuscuta campestris* (Convolvulaceae), *Iva xanthifolia* (Asteraceae), *Rubus caesius* (Rosaceae, native in Europe), *Rumex crispus* (Amaranthaceae, native in Europe), *Sorghum halepense* (Poaceae) and *Urtica dioica* (Urticaceae, native in Europe).

Source: Konstantinović B, Meseldžija M, Samardžić N & Konstantinović B (2012) Distribution of invasive weeds on the territory of AP Vojvodina. In Marisavljević D, Ivanović Ž, Miltrović M & Oro V (Eds) (2012) International Symposium on Current Trends in Plant Protection, 25-28th September, 2012, Belgrade, Serbia. Proceedings. Institute for Plant Protection and Environment, Belgrade, Serbia, p, 44-48.

Additional key words: invasive plants

Computer codes: AMARE, AMBEL, ARFLA, ARTVU, ASCSY, CELA, CVCCA, ERICA, IVAXA, RUBCA, RUMCR, SORHA, URTDI, CS

2012/225 Invasive alien plants in managed woodlands in Vojvodina, Serbia

A list of alien plants occurring in the poplar and willow managed woodlands in Vojvodina, Serbia, has been assembled using data from field research, scientific papers and the Herbarium of the University of Novi Sad. This list consists of the following invasive alien plants:

Acer negundo (Aceraceae), *Ailanthus altissima* (Simaroubaceae, EPPO List of IAP), *Ambrosia artemisiifolia* (Asteraceae, EPPO List of IAP), *Ambrosia trifida* (Asteraceae), *Amorpha fruticosa* (Fabaceae, EPPO List of IAP), *Artemisia annua* (Asteraceae, native in part of the EPPO region), *Asclepias syriaca* (Apocynaceae), *Bidens frondosa* (Asteraceae, EPPO Observation List of Invasive Alien Plants), *Broussonetia papyrifera* (Moraceae), *Celtis occidentalis* (Ulmaceae), *Conyza canadensis* (Asteraceae), *Echinochloa crus-galli* (Poaceae), *Echinocystis lobata* (Cucurbitaceae), *Elaeagnus angustifolia* (Elaeagnaceae, native in part of the EPPO region), *Eleusine indica* (Poaceae), *Erechtites hieraciifolia* (Asteraceae), *Erigeron annuus* (Asteraceae), *Fallopia japonica* (Polygonaceae, EPPO List of IAP), *Fraxinus americana* (Oleaceae), *Gleditsia triacanthos* (Fabaceae), *Impatiens glandulifera* (Balsaminaceae, EPPO List of IAP), *Juglans nigra* (Juglandaceae), *Oxalis stricta* (Oxalidaceae), *Phytolacca americana* (Phytolaccaceae), *Rhus typhina* (Anacardiaceae), *Robinia pseudoacacia* (Fabaceae), *Sicyos angulatus* (Cucurbitaceae, EPPO List of IAP), *Solidago canadensis* (Asteraceae, EPPO List of IAP), *Solidago gigantea* (Asteraceae, EPPO List of IAP), *Symphytotrichum x salignum* (Asteraceae, native in part of the EPPO region) and *Vitis riparia* (Vitaceae).

Source: Krtivojević M, Igić R, Vukov D, Rućando M & Orlović S (2012) Invasive species of plants in the anthropogenic woodlands. In Marisavljević D, Ivanović Ž, Miltrović M & Oro V (Eds) (2012) International Symposium on Current Trends in Plant Protection, 25-28th September, 2012, Belgrade, Serbia. Proceedings. Institute for Plant Protection and Environment, Belgrade, Serbia, p 49-63.

Additional key words: invasive alien plants

Computer codes: ACRNE, AILAL, AMBEL, AMBTR, AMHFR, ARTAN, ASCSY, BIDFR, BRNPA, CETOC, ECHCG, ECNLO, ELEIN, ELGAN, EREHI, ERIAN, ERICA, FRXAM, GLITR, IPAGL, IUGNI, OXAST, PHTAM, POLCU, RHUTY, ROBPS, SIYAN, SOOCA, SOOGI, VITRI, ZMYSA, CS

2012/226 Publication of the proceedings of the International Symposium on Current Trends in Plant Protection, Belgrade (RS), 2012-09-25/28

Papers presented during the International Symposium on Current Trends in Plant Protection held on 2012-09-25/28 in Belgrade (Serbia) have been published. Articles on botany, phytopathology, phytopharmacy, integrated pest management, entomology and nematology are included.

Source: Marisavljević D, Ivanović Ž, Miltrović M & Oro V (Eds) (2012) International Symposium on Current Trends in Plant Protection, 25-28th September, 2012, Belgrade, Serbia. Proceedings. Institute for Plant Protection and Environment, Belgrade, Serbia, 616 pp.

Additional key words: invasive alien plants, proceedings

Computer codes: RS

2012/227 *Mesembryanthemum guerichianum*: a new alien plant potentially invasive in Australia

Mesembryanthemum guerichianum (Aizoaceae) has been reported in Australia in the states of South Australia, New South Wales and Victoria. This alien species originating from Namibia, South Africa and probably south-west Angola had been overlooked in Australia, presumably because of confusion with *M. crystallinum*.

In its native range, this annual or biennial shrub occurs in the drier regions, on sandy plains and along roadsides. In Australia, the species was observed invading degraded roadsides and adjacent land with relatively little remnant vegetation.

The species has so far not been recorded in the EPPO region, though, it may, as in Australia, have been mistaken with *M. crystallinum*. It is not expected to represent a major risk.

Source: Chinnock RJ, Stajsic V & Brodie CJ (2012) *Mesembryanthemum guerichianum* Pax (Aizoaceae): A weedy alien species new to Australia. *Plant Protection Quarterly* 27(2), 83-88.

Additional key words: invasive alien plants, new report

Computer codes: MEKGU, AU

2012/228 The control of *Alternanthera philoxeroides* with herbicides: a review

Alternanthera philoxeroides (Amaranthaceae, EPPO List of IAP) is so far only recorded in France and Italy in the EPPO region. It is invasive in other parts of the world, such as Australia, China, India, New Zealand, USA and the control of *A. philoxeroides* is generally considered to be difficult.

A. philoxeroides is more vigorous in aquatic habitats, but it also occurs in terrestrial habitats including pastures, urban areas and arable crops. As a consequence, other than threatening native plant communities by forming dense stands, *A. philoxeroides* also competes with pasture species, and crops such as rice for which yield losses of up to 45% have been reported.

This plant requires a warm growing season but can tolerate a wide range of climatic conditions, including winter frosts, which will kill exposed material. Although it is able to flower, seeds are not reported in its introduced range and the plant reproduces solely by clonal growth. Fragments of the plant are spread naturally by water.

The plant exhibits a phenotypic plasticity with its different growth forms occurring in aquatic and terrestrial environments, which is an important adaptive strategy to allow the plant to establish in a wide range of habitats. Differences in morphology may affect herbicide control efficacy. In addition, a number of other factors are considered to play a role in the tolerance of *A. philoxeroides* to herbicides, such as:

- Poor translocation out of leaves;
- Poor translocation to roots resulting in sub-lethal tissue concentrations;
- Exudation of glyphosate (and possibly other herbicides) by underground tissues;
- Poor translocation to quiescent buds;
- Auto-abscission or breakage of nodal tissue with high herbicide concentrations.

Evidence suggests that soil-applied herbicides provide better control than foliar-applied herbicides, this may be because the issue of poor translocation is circumvented.

The plant can be controlled effectively with glyphosate, although the management of subsequent fragments may be necessary. Substantial biomass reductions are achieved

when multiple applications of herbicide are made per year. For example in Australia, the best control of *A. philoxeroides* has been obtained with imazapyr and metsulfuron-methyl, although satisfactory results have also been reported with glyphosate and triclopyr TEA.

Source: Dugdale TM & Champion PD (2012) Control of alligator weed with herbicides: a review. *Plant Protection Quarterly* 27(2), 70-82.

Additional key words: invasive alien plants, control

Computer codes: ALRPH

2012/229 *Cardiospermum grandiflorum*: addition to the EPPO Alert List

Why

Cardiospermum grandiflorum (Sapindaceae) is a climbing vine originating from tropical Africa and Central and South America. It is used as an ornamental plant. It only reproduces by seeds, which are spread by wind and water. The plant smothers other plants in riparian habitats and forests, and is considered invasive in South Africa and Australia. In the EPPO region, it is recorded in Sicilia (IT), the Islas Canarias (ES) and Madeira (PT).

Geographical distribution

EPPO region: Italy (Sicilia), Portugal (Madeira), Spain (Islas Canarias).

Africa (native): Angola, Benin, Botswana, Cameroon, Central African Republic, Congo, Côte d'Ivoire, Ghana, Guinea, Kenya, Liberia, Malawi, Namibia, Nigeria, Sierra Leone, South Africa (alien, KwaZulu-Natal, Gauteng, Mpumalanga and Limpopo Provinces), Sudan, Swaziland, Tanzania, Togo, Uganda, Zaire, Zambia, Zimbabwe.

North America: USA (Hawaii).

Central America (native): Belize, Costa Rica, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama.

South America (native): Argentina, Bolivia, Brazil, Ecuador, Guyana, Paraguay, Peru, Uruguay, Venezuela.

Oceania: Australia (New South Wales, Queensland), Cook Islands, French Polynesia, New Zealand (North Island: Auckland, Waikato).

Note: the species is regulated in Australia, in South Africa and in the USA. It is casual in France in the Landes and Alpes-Maritimes departments.

Morphology

C. grandiflorum is a vine which can climb up to 8 m high in the canopy. Stems are hairy. The plant common name in English is 'balloon vine' because of the shape of its fruit. *C. grandiflorum* fruit are inflated capsules with pointed tips releasing 3 seeds when mature. Leaves are composed and made of 9 leaflets, triangular-shaped, dark green, with tooth margins, 16 cm long. Flowers are fragrant and growing in compact clusters, composed of 4 petals, white or yellow. A pair of tendrils grows at the base of flowers and leaf axils. The membranous, inflated fruit capsules are about 60 mm long, green turning brown. Seeds are black, heart-shaped, 6 to 8 mm.

In which habitats

The plant is found along waterways, roadsides and in disturbed sites, as well as forest edges. According to the Corine Land Cover nomenclature, the following habitats are invaded: mixed forests, broad-leaved forests, banks of continental water, riverbanks/canalsides (dry river beds), road and rail networks and associated land, other artificial surfaces (wastelands).

United States Department of Agriculture Germplasm Resources Information Network
(2012) *Cardiospermum grandiflorum* Sw. <http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?9013>

Additional key words: Invasive alien plants, alert list

Computer codes: CRIGR

2012/230 A new website on invasive alien species in Reunion Island (FR)

A new website on invasive alien species in Reunion Island (FR) has been launched. This website gathers all existing information on projects and management actions on invasive alien species in Reunion Island. It is the outcome of a partnership between public institutions, NGOs and other stakeholders in charge of invasive alien species, including plants and animals. Information and descriptions of invasive and potentially invasive alien plants are available, and citizen reports of these species may be made on line.

Source: Groupe espèces invasives de la Réunion : www.especiesinvasives.re

Additional key words: Invasive alien plants

Computer codes: FR

2012/231 Launch of the Global Invasive Alien Species Information Partnership

On Wednesday 10th of October, the Global Invasive Alien Species Information Partnership was launched. This Partnership was conceived as a dynamic network of stakeholders involved in the use and provision of information and tools relevant to the prevention, control, and eradication of invasive alien species.

The first phase of the Work Plan of the Partnership will last until the end of 2020 (consistent with the timeline for the Strategic Plan for Biodiversity 2011-2020). The Operational Plan of the Partnership includes two annexes: (a) a Memorandum of Cooperation (MoC) template through which relevant organizations can join and (b) the provisional Work Plan.

During its initial Phase, the Working Groups of the Partnership will focus on:

- The Partnership Gateway functionalities;
- Database interoperability, data gaps and quality improvement;
- Information synthesis and assessment;
- Taxonomic information services;
- Best practices for the non-electronic means of information access and exchange.

Source: The Partnership operational plan is accessible on the Convention on Biological Diversity website: <http://www.cbd.int/doc/meetings/cop/cop-11/information/cop-11-inf-34-en.pdf>

Additional key words: Invasive alien plants