#### ORGANISATION EUROPEENNE ET MEDITERRANEENNE POUR LA PROTECTION DES PLANTES

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# EPPO Reporting Service

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#### 2014/179 First report of *Popillia japonica* in Italy

The NPPO of Italy recently informed the EPPO Secretariat of the first record of *Popillia* japonica (Coleoptera: Scarabaeidae, EPPO A1 List) on its territory. Until this report, the Japanese beetle was only known to occur at the 'margins' of the EPPO region, in the Azores (PT) and in Kunashir Island (Kurile Islands - Russian Far East). This is the first time that this polyphagous pest is recorded on the European mainland. In July 2014, a first picture of *P. japonica* was taken by a naturalist and posted on an entomologist's forum (http://www.naturamediterraneo.com/forum). The identity of the pest was then confirmed on the basis of its morphological characteristics. The outbreak area is located along the river Ticino, within the Ticino Valley Natural Park. It is noted that two airports are located in the vicinity of this area. Two contiguous Italian regions, Lombardia and Piemonte are concerned by this outbreak. The pest was observed on wild plants (e.g. Rubus, Ulmus, Rosa, Populus, Vitis), as well as on soybean (Glycine max) crops. According to a paper by Pavesi (2014), P. japonica was observed over a 2 km stretch near Turbigo (Milano province), where approximately 180 beetles were collected mainly on Urtica and Rubus plants, and occasionally found on Robinia pseudoacacia. Numerous mating adults were also observed. The Italian NPPO stated that apart from some localized damage due to feeding activity of the adults, no significant damage has been observed in the affected area so far. Although the source of this outbreak is not known, the presence of two airports near the infested area suggests that airport activities might have played a role in the introduction of P. japonica. Official control measures are being taken to prevent any further spread of the pest. Traps have been put into place to determine the extent of the infestation, as well as for mass trapping purposes. Hand picking of beetles is also being carried out. Additional measures to be implemented during the next growing season are being evaluated.

The pest status of *Popillia japonica* in Italy is officially declared as: **Present**, **subject to official control**.

Source: NPPO of Italy (2014-10).

Pavesi M (2014) *Popillia japonica* specie aliena invasiva segnalata in Lombardia. *L'Informatore Agrario* no. 32, 53-55.

Additional key words: new record Computer codes: POPIJA, IT

#### 2014/180 First report of *Thrips palmi* in Germany

The NPPO of Germany recently informed the EPPO Secretariat of the first record of *Thrips palmi* (Thysanoptera: Thripidae - EPPO A1 List) on its territory. In 2014-10-24, the pest was found on *Cyclamen persicum* (3500 plants) grown in a glasshouse used for trial purposes in Straelen (North Rhine-Westphalia). Infested plants showed symptoms on flowers and leaves. *T. palmi* was detected and identified morphologically by the Regional Plant Protection Service and the laboratory in the Julius Kühn-Institut (JKI). Tracing-back investigations were initiated immediately but so far, the origin of the infestation remains unknown. The young plants originated in a nursery in North Rhine-Westfalia but no infestations were found in this nursery. It is presumed that the pest may have been introduced into the trial greenhouses with other plant species. Investigations are ongoing. Phytosanitary measures were taken to eradicate the pest. Infested plants have been destroyed and quarantine has been imposed. Further survey activities are continuing. The pest status of *Thrips palmi* is officially declared as: Transient, only at one location in North Rhine-Westphalia, under eradication.

Source: NPPO of Germany (2014-10).

Additional key words: new record Computer codes: THRIPL, DE

# 2014/181 First report of *Thrips setosus* in the Netherlands: addition to the EPPO Alert List

The NPPO of the Netherlands recently informed the EPPO Secretariat of the first record of Thrips setosus (Thysanoptera: Thripidae) on its territory. This is also the first time that this species is found in the EPPO region. In September 2014, a grower located in the municipality of Kudelstaart reported thrips damage on plants for planting of Hydrangea. A sample of 10 adult thrips was collected and the identity of the pest was confirmed on 2014-10-03. Many adults and typical thrips feeding damage (silvery spots with dark punctures) were observed on the leaves of the Hydrangea plants inside and outside the greenhouse, as well as on weeds growing in their immediate vicinity (notably on Heracleum sphondylium, Lamium purpureum and Urtica dioica). Feeding damage could also be seen on the sepals of *Hydrangea* flowers. The origin of this incursion is unknown but could be linked to imports of cuttings from Japan. It is estimated that the pest has been present since June 2014 at least, but might have been introduced earlier. T. setosus is known to occur in Japan and the Republic of Korea. It can cause direct damage to plants by feeding on their foliage and is also a known vector of Tomato spotted wilt virus (Tospovirus, TSWV - EPPO A2 List). A preliminary pest risk analysis has been completed. Phytosanitary measures are pending, depending on the outcome of further tracing investigations and surveys which are currently being carried out on the premises of other growers.

The pest status of *Thrips setosus* in the Netherlands is officially declared as: Transient, incidental finding on *Hydrangea* plants for planting, measures are pending further tracing investigations and a specific survey.

#### Thrips setosus (Thysanoptera: Thripidae)

Why: The presence of *Thrips setosus* has recently been reported by the Netherlands in one production site of *Hydrangea* plants for planting. *T. setosus* is a polyphagous species which can transmit *Tomato spotted wilt virus* (*Tospovirus*, TSWV - EPPO A2 List). Because this is the first time that this potentially damaging thrips species is reported in the EPPO region, the EPPO Secretariat has decided to add it to the EPPO Alert List.

Where: until recently, *T. setosus* was only known to occur in parts of the Asia.

**EPPO region**: Netherlands (transient). In the Netherlands, the pest was first found in autumn 2014 in one production site of *Hydrangea* plants for planting grown indoors and outdoors. Official measures are being considered.

Asia: Japan (widespread), Korea (Republic of).

On which plants: *T. setosus* is a highly polyphagous species. In Japan, it has been found on many plant species including crops [e.g. *Capsicum annuum* (sweet pepper), *Cucumis sativus* (cucumber), *Cucurbita moschata* (pumpkin), *Dioscorea japonica* (Japanese mountain yam), *Momordica charantia* (bitter gourd), *Nicotiana tabacum* (tobacco), *Pisum sativum* (pea), *Sesamum* (sesame), *Solanum lycopersicum* (tomato), *Solanum melongena* (aubergine), *Solanum tuberosum* (potato), *Vicia sativa* subsp. *angustifolia* (narrow leaf vetch)], ornamental plants [e.g. *Abelia spathulata*, *Brassica olearacea* var. *acephala* (ornamental cabbage), *Chrysanthemum morifolium*, *Dahlia*, *Hippeastrum*, *Iris*, *Liriope platyphylla*, *Oenothera*, *Ophiopogon jaburan*, *Tagetes*], weeds and wild plants [*Ailanthus altissima*, *Cirsium japonicum*, *Lamium amplexicaule*, *Polygonum*, *Pueraria lobata*]. In the Republic of Korea, it was reported on rice (*Oryza sativa*). In Japan, it is considered to be a pest of tobacco (*Nicotiana tabacum*) and tomato (*Solanum lycopersicum*). In the Netherlands, *T. setosus* 

was found on *Hydrangea* plants, as well as on several weeds (e.g. *Heracleum sphondylium, Lamium purpureum, Urtica dioica*) growing in their vicinity.

Damage: *T. setosus* feeds on leaves but not on pollen. Damage is typical of leaf-feeding thrips (silvery spots with dark punctures on the foliage). In the Netherlands, feeding damage was also observed on the sepals of *Hydrangea* flowers. *T. setosus* has been shown to be a vector of TSWV, a virus which has a very large host range, including economically important vegetable and ornamental crops.

**Dissemination**: the potential of *T. setosus* for natural spread is relatively limited. Over long distances, the international trade of plants for planting is probably the main pathway.

Pathway: Plants for planting, cut flowers and foliage, fruit and vegetables, soil and growing media.

Possible risks: Information is generally lacking on the biology, distribution and economic impact of  $\it{T. setosus}$ . In the available literature, there is no indication that  $\it{T. setosus}$  is causing severe direct or indirect damage in its area of origin. However, studies carried out in Japan have shown that  $\it{T. setosus}$  has a fast development, high fecundity and high potential for population increase. These studies also concluded that the broad host plant range, high population growth rate, and virus transmission ability would have the potential to make  $\it{T. setosus}$  an important pest, in particular in glasshouse crops. As is the case for other thrips species, due to its small size and high rates of reproduction,  $\it{T. setosus}$  is likely to be difficult to detect and control. Finally, considering the impacts of earlier introductions of thrips species such as  $\it{Frankliniella occidentalis}$ , as direct plant feeders and virus vectors, it seems desirable to prevent any further spread of  $\it{T. setosus}$  in the EPPO region.

Sources:

INTERNET

National Plant Protection Organization, the Netherlands. Quick scan (QS. Ent.2014.11 - dated 2014-10-17) <a href="http://www.nvwa.nl/txmpub/files/?p\_file\_id=2207523">http://www.nvwa.nl/txmpub/files/?p\_file\_id=2207523</a>

Kurosawa M (1957) On Thysanoptera from Sikoku with description of a new species. Botyu-Kagaku 22, 94-97.

NPPO of the Netherlands (2014-10).

Mizobuchi M, Fujiwara Y (1991) [Notes on thrips (Thysanoptera) collected in and around ports of Kobe, Himeji, Uno and Hiraeo]. Research Bulletin of the Plant Protection Service Japan no. 27, 115-157 (in Japanese).

Murai T (2001) Life history study of Thrips setosus. Entomologia Experimentalis et Applicata 100, 245-251.

Woo KS, Kwon OK, Cho KS (1991) Studies on the distribution, host plants and taxonomy of Korean thrips (Insecta: Thysanoptera). Seoul National University. Journal of Agricultural Sciences 16(2), 133-148 (abst.).

Ohnishi J, Knight LM, Hosokawa D, Fujisawa I, Tsuda S (2001) Replication of *Tomato spotted wilt virus* after ingestion by adult *Thrips setosus* is restricted to midgut epithelial cells. *Phytopathology* **91**, 1149-1155.

Reitz SR, Gao YL, Lei ZR (2011) Thrips: pests of concern to China and the United States. Agricultural Sciences in China 10(6), 867-892.

EPPO RS 2014/181

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#### 2014/182 Incursion of *Anoplophora chinensis* in Switzerland

The NPPO of Switzerland recently informed the EPPO Secretariat of the finding of a single adult of *Anoplophora chinensis* (Coleoptera: Cerambycidae - EPPO A1 List) on its territory. On 2014-08-20, the beetle was incidentally found by children playing in a private garden located in Sirnach (canton Thurgau). The identity of the pest (*A. chinensis* adult female) was confirmed by the WSL Institute (Swiss Federal Institute for Forest, Snow and Landscape Research) on the basis of its morphological characteristics and further molecular analysis is underway. The origin of this incursion remains unknown but it is noted that the private garden concerned was located near a registered plant nursery. A demarcated area has been delimited, including the place of finding, the plant nursery, and their surroundings. On 2014-08-21, the garden and its immediate vicinity were visually inspected with the assistance of 2 sniffer dogs. Later in August 2014, all potential host plants of the nursery were inspected. In addition, sniffer dogs were used to examine all

Acer spp. plants, and any plant indicated as suspicious by the dogs was then destructively sampled. So far, no exit holes or insect specimens have been found.

The pest status of *Anoplophora chinensis* in Switzerland is officially declared as: **Transient**, **actionable**, **under surveillance**.

Source: NPPO of Switzerland (2014-09).

Additional key words: detailed record Computer codes: ANOLCN, CH

#### 2014/183 One beetle of Anoplophora chinensis found in Bayern, Germany

The NPPO of Germany recently informed the EPPO Secretariat of an isolated finding of *Anoplophora chinensis* (Coleoptera: Cerambycidae - EPPO A2 List) on its territory. On 2014-09-04, 1 beetle of *A. chinensis* was found in a private garden in Bayern. This beetle had emerged from a small *Acer* sp. tree which showed only 1 exit hole. The pest was identified morphologically. The tree had been purchased in April 2013 in a garden centre. Tracing-back activities have been initiated, and results currently obtained suggest that no other specimens may have been introduced and that the spread or establishment of the pest is unlikely. Phytosanitary measures have been taken to eradicate the pest. The infested tree has been destroyed and the Regional Plant Protection Service of Bayern is monitoring the infested site and its surroundings. An information campaign is also being carried out to raise public awareness about this pest.

The pest status of *Anoplophora chinensis* in Germany is officially declared as: **Transient**, single finding, actionable, under surveillance.

Source: NPPO of Germany (2014-09).

Additional key words: detailed record Computer codes: ANOLCN, DE

#### 2014/184 New findings of *Anoplophora glabripennis* in Germany

The NPPO of Germany recently informed the EPPO Secretariat of new findings of *Anoplophora glabripennis* (Coleoptera: Cerambycidae - EPPO A1 List) on its territory. In all cases, official control measures were taken to eradicate the pest (destruction of infested trees and establishment of demarcated areas). Tracing-back studies have been initiated but the origins of these infestations have not been identified, so far. Survey activities are continuing in Germany.

#### Sachsen-Anhalt (Saxony-Anhalt)

On 2014-09-01, *A. glabripennis* was found for the first time in Saxony-Anhalt, in the city of Magdeburg. The pest was detected in 1 *Aesculus hippocastanum* tree planted for amenity purposes. A beetle and a larva were found, as well as exit holes on several branches. The identity of the pest was determined by morphological and molecular (PCR) methods.

#### Bayern (Bavaria)

In September and October 2014, *A. glabripennis* was found in 2 new locations in Bavaria on *Acer, Sorbus* and *Salix* trees.

- The pest was detected on 14 trees in Neubiberg, near Munich. Some of these trees were heavily infested. The identity of the pest was determined by morphological methods. It is

noted that this new infested area is located 10 km away from the previous finding made in 2012 in Feldkirchen (EPPO RS 2013/138), where eradication actions are continuing.

- A. glabripennis was also found on 7 trees at Ziemetshausen near Augsburg. Some of these trees were heavily infested and it is presumed that the pest has been present for a few years. The identity of the pest was determined by morphological methods. Infested trees were growing in a public site and the infestation was notified by a private person.

The pest status of *Anoplophora glabripennis* in Germany is officially declared as: Transient, only at some locations in Baden-Württemberg, Bavaria, North Rhine-Westphalia, Saxony-Anhalt, under eradication.

Source: NPPO of Germany (2014-09, 2014-10).

Additional key words: detailed record Computer codes: ANOLGL, DE

#### 2014/185 First report of *Xylosandrus crassiusculus* in France

The NPPO of France recently informed the EPPO Secretariat of the first record of *Xylosandrus crassiusculus* (Coleoptera: Scolytidae - EPPO Alert List) on its territory. On 2014-08-11, the pest was found in the department of Alpes-Maritimes (Provence-Alpes-Côte d'Azur region) on 4 carob trees (*Ceratonia siliqua*). These carob trees were located in a forest in an urban area, and were all contained within a radius of 200 m. Unusual symptoms were detected in the framework of the national surveillance programme carried out in non-agricultural areas (pictures can be viewed on the Internet: <a href="http://draaf.paca.agriculture.gouv.fr/IMG/pdf/Xylosandrus\_crassiusculus\_DSF\_cle84bcc1-2.pdf">http://draaf.paca.agriculture.gouv.fr/IMG/pdf/Xylosandrus\_crassiusculus\_DSF\_cle84bcc1-2.pdf</a>).

Adults and larvae were collected from 1 infested tree and the identity of the pest was confirmed in the laboratory (Laboratoire National de l'ANSES, unité d'entomologie) on 2014-08-18. Studies are being carried out to determine the origin of this infestation. Phytosanitary measures are being implemented and include: destruction of infested trees, intensive surveys within a radius of 200-300 m, surveys in autumn and spring on a larger area, and implementation of a trapping network in the infested site and its surroundings (forest, parks and gardens where carob trees are present). An information campaign will also be carried out in the municipality concerned and neighbouring ones.

The pest status of *Xylosandrus crassiusculus* in France is officially declared as: **Transient**, actionable, under eradication.

Source: NPPO of France (2014-09).

Additional key words: new record Computer codes: XYLBCR, FR

#### 2014/186 First report of Rhagoletis cingulata in the Czech Republic

The NPPO of the Czech Republic recently informed the EPPO Secretariat of the first record of *Rhagoletis cingulata* (Diptera: Tephritidae - EPPO A2 List) on its territory. From the end of June until the end of July, 5 specimens were caught on yellow sticky traps which had been placed in commercial and experimental orchards of cherry trees (*Prunus avium* and *P. cerasus*). This survey was carried out by a private company dealing with biological pest control in fruit orchards, which then reported its results to the Czech NPPO. No damage was observed in the infested orchards. On 2014-08-26, the diagnostic laboratory of the

Czech NPPO confirmed the identity of the caught specimens on the basis of the morphological characteristics of *R. cingulata*.

These 5 adult specimens of *R. cingulata* had been caught in the following 3 municipalities, located in 2 distinct regions separated by 200 km:

- Chelcice and Truskovice (both in Strakonice district) South Bohemian region;
- Luzice (Hodonin district) South Moravian region.

The possible origin of the pest is unknown. No official control measures were taken but an official survey will be carried out in 2015 to determine the distribution of R. cingulata in the Czech Republic.

The pest status of *Rhagoletis cingulata* in the Czech Republic if officially declared as: Present, only in some areas.

Source: NPPO of the Czech Republic (2014-09).

Additional key words: new record Computer codes: RHAGCI, CZ

#### 2014/187 First report of *Eotetranychus lewisi* in the United Kingdom

The NPPO of the United Kingdom recently informed the EPPO Secretariat of the first outbreak of *Eotetranychus lewisi* (Acari: Tetranychidae - EU Annexes) on its territory. A mite infestation in poinsettias (*Euphorbia pulcherrima* cv. 'Freedom Red') was reported by a nurseryman in Northwestern England to the NPPO in August 2014. 50 plants (out of 128 520) were showing extensive and typical mite damage (i.e. foliar discolouration). Samples were taken during an official inspection and the identity of the pest was confirmed in September 2014 by Fera (morphological methods). It is thought that *E. lewisi* has been introduced into the nursery with cuttings imported via the Netherlands (EPPO note: *E. lewisi* is not known to occur in the Netherlands). As this nursery only grows poinsettias and is geographically isolated from other growers, the risk of natural spread is considered to be low. Hygiene measures and restrictions on the movement of plants have been implemented to reduce the risk of spreading the pest to other production sites. In addition, a programme of chemical treatments has been initiated.

The pest status of *Eotetranychus lewisi* in the United Kingdom is officially declared as: Transient, actionable, under eradication.

Source: NPPO of the United Kingdom (2014-09).

Additional key words: new record Computer codes: EOTELE, GB

# 2014/188 Synonymization of Bactrocera papayae, B. philippinensis, and B. invadens with Bactrocera dorsalis

Bactrocera papayae, Bactrocera philippinensis, Bactrocera carambolae and Bactrocera invadens are four fruit fly species that are highly similar, morphologically and genetically, to Bactrocera dorsalis (Diptera: Tephritidae - all EPPO A1 List). This similarity has rendered the discovery of reliable diagnostic characters problematic, which, in view of the economic importance of these taxa and the international trade implications, has resulted in on-going difficulties in many areas of plant protection, including plant quarantine, pest distributions, integrated pest management, and fundamental research. Consequently, a major international collaborative and multidisciplinary research effort was initiated in

2009 to build upon existing literature with the specific aim of resolving species limits among *B. papayae*, *B. philippinensis*, *B. carambolae*, *B. invadens* and *B. dorsalis*.

Multiple lines of evidence across a range of different disciplines (morphology, molecular genetics and phylogenetics, cytogenetics, sexual compatibility, chemoecology, host plants) undertaken by independent groups of researchers from all continents and covering a period of 20 years have led to the following conclusions:

- B. papayae, B. philippinensis, and B. invadens are synonymized with B. dorsalis, and a redescription of B. dorsalis is provided.
- B. carambolae remains a distinct species.

Although they were not the focus of the present review, two additional *Bactrocera* species were mentioned, *B. occipitalis* and *B. kandiensis*, but as they possess subtle differences in morphology and molecular genetics, they are still considered to be distinct species. Finally, it is noted that the synonymization of *B. invadens* and *B. papayae* with *B. dorsalis* (*B. philippinensis* occurs only in the Philippines), considerably expends the known distribution of *B. dorsalis*. These major changes in taxonomy and geographical distributions will be included in due course in the EPPO databases (PQR and EPPO Global Database).

Source:

Schutze MK, Aketarawong N, Amornsak W, Armstrong KF, Augustinos AA, Barr N, Bo W, Bourtzis K, Boykin LM, Cáceres C, Cameron SLChapman T, Chinvinijkul S, Chomič A, De Meyer M, Drosopoulos E, Englezou A, Ekesi S, Gariou-Papalexiou A, Geib SM, Hailstones D, Hasanuzzaman M, Haymer D, Hee AKW, Hendrichs J, Jessup AW, Ji QG, Khamis FM, Krosch MN, Leblanc L, Mahmood K, Malacrida AR, Mavragani-Tsipidou P, Mwatawala M, Nishida R, Ono H, Reyes J, Dubinoff D, San Jose M, Shelly TE, Srikachar S, Tan KH, Thanaphum S, Haq I, Vijaysegaran S, Wee SL, Yesmin F, Zacharopoulou A, Clarke AR (2014) Synonymization of key pest species within the *Bactrocera dorsalis* species complex (Diptera: Tephritidae): taxonomic changes based on a review of 20 years of integrative morphological, molecular, cytogenetic, behavioural and chemoecological data. *Systematic Entomology*. doi: 10.1111/syen.12113

Additional key words: taxonomy

Computer codes: BCTRCB, BCTRIN, BCTRCA, BCTRCD, BCTRPH,
BCTRPW, DACUDO

#### 2014/189 First report of Erwinia amylovora in Finland

The NPPO of Finland recently informed the EPPO Secretariat of the first outbreak of *Erwinia amylovora* (EPPO A2 List) on its territory. The disease was found during a specific survey for fireblight (Finland is an EU protected zone for fireblight). In September 2014, typical symptoms of fireblight were observed on a few pear trees (*Pyrus communis*) in a commercial orchard located in the Åland islands. A sample was collected and tested (isolation, IF, nested-PCR, pathogenicity tests) in the laboratory of the Finnish Food Safety Authority for the presence of *E. amylovora*. Positive results were obtained and confirmed by Fera (isolation, lateral-flow test, real-time PCR, fatty acid profiling) in the United Kingdom. The origin of the disease is unknown but it is possible that it has been introduced with infected planting material. In the diseased pear orchards, the plants for planting had been produced in Belgium and delivered to Finland in 2009. A survey around the outbreak site and tracing-back studies on planting material will be conducted. Eradication measures will be determined according to the on-going survey results. Infected trees and those located in their immediate vicinity will be destroyed during winter.

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

Source: NPPO of Finland (2014-10).

Additional key words: new record Computer codes: ERWIAM, FI

# 2014/190 Clavibacter michiganensis subsp. sepedonicus found on tomato in Belgium

The NPPO of Belgium recently informed the EPPO Secretariat of the detection of *Clavibacter michiganensis* subsp. *sepedonicus* (EPPO A2 List) in glasshouse tomatoes in the province of Antwerp. The bacterium was found in 1 greenhouse of tomatoes (*Solanum lycopersicum* cv. 'Merlice') grown on substrate for fruit production. Suspicious symptoms were observed by the grower on 2014-05-13 on several tomato plants (10 successive plants from 1 row) in his greenhouse and the identity of the bacterium was confirmed on 2014-08-28. The analysis was performed in accordance with EU Directive 93/85/EEC. It is noted that the tomato plants for planting originated in another EU member state. As this is the first report of a natural infection of *C. michiganensis* subsp. *sepedonicus* on tomato plants, research is being performed to identify the origin of the infection and to characterize the causal agent. Traceability studies have been carried out, but no positive results were obtained when testing lots related to the infected plants. Eradication measures have been taken.

The pest status of *Clavibacter michiganensis* subsp. *sepedonicus* in Belgium is officially declared as: On tomato: Transient, actionable, under eradication. On potato: Absent: pest eradicated.

Source: NPPO of Belgium (2014-10).

Additional key words: detailed record Computer codes: CORBSE, BE

## 2014/191 First report of 'Candidatus Liberibacter solanacearum' on carrots in Morocco

In March 2014, carrot plants (*Daucus carota* cv. 'Mascot') showing symptoms of yellowing, purpling and curling of leaves, proliferation of shoots, formation of hairy secondary roots, general stunting and plant decline were observed in commercial fields in the Gharb region of Morocco. In these fields, approximately 30% of the plants were symptomatic and unidentified psyllid nymphs were present. A total of 10 symptomatic and 2 asymptomatic samples were collected from 3 carrot fields. Laboratory testing (PCR, sequencing) confirmed the presence of '*Candidatus* Liberibacter solanacearum' (EPPO A1 List - Solanaceae haplotypes) in symptomatic samples. The bacterium was not detected in asymptomatic ones. This is the first time that '*Ca*. L. solanacearum' is reported from Morocco. This is also a first record for Africa.

The situation of 'Candidatus Liberibacter solanacearum' in Morocco can be described as follows: Present, first found in 2014 in carrot crops in the Gharb region.

Source: Tahzima R, Maes M, Achbani EH, Swisher KD, Munyaneza JE, de Jonghe K (2014) First

report of 'Candidatus Liberibacter solanacearum' on carrot in Africa. Plant Disease

**98**(10), p 1426.

Additional key words: new record Computer codes: LIBEPS, MA

### 2014/192 Ralstonia solanacearum (probably race 1) detected in ornamental Curcuma plants in the Netherlands

During the annual national survey on *Ralstonia solanacearum* (EPPO A2 List) carried out in the Netherlands, the presence of the bacterium was detected in ornamental *Curcuma* plants. On 2014-08-18, the identity of the bacterium, most probably race 1 (still under investigation), was confirmed in 2 greenhouse production sites on *Curcuma* plants for planting, grown for final consumers. In both production sites, mild symptoms were observed on a small number of plants (5 to 10 plants in the entire greenhouse). The NPPO considered that there was no risk of further spread to tomato or potato cultivation, because of the absence of such crops in the vicinity of the infected greenhouses and because irrigation water used within each company was recycled. The origin of this finding is unknown, however it is noted that both growers have regularly imported plant material from Thailand. A similar finding was recorded in 2001, and in the preceding years (1997) *R. solanacearum* race 1 had been regularly intercepted on rhizomes of *Curcuma* originating from Thailand.

Phytosanitary measures have been implemented to eradicate the disease. Measures taken on the two sites include removal and destruction of symptomatic plants, treatment of irrigation water, restricted access and movement of machinery, goods, plant material and persons. Cut flowers and plants for planting can be sold to final consumer only under official control. A survey has been completed on the premises of 3 other Dutch growers of *Curcuma* plants for planting and did not detect the bacterium.

The pest status of *Ralstonia solanacearum* (race 1) in the Netherlands is officially declared as: Transient, found on *Curcuma* plants for planting, under eradication.

Source: NPPO of the Netherlands (2014-09).

Additional key words: detailed record Computer codes: RALSSO, NL

# 2014/193 First report of Xanthomonas arboricola pv. pruni on Prunus laurocerasus in the United Kingdom

The NPPO of the United Kingdom recently informed the EPPO Secretariat of the first record of Xanthomonas arboricola pv. pruni (EPPO A2 List) on its territory. The infection was confirmed on young plants of Prunus laurocerasus at 3 sites (nurseries) in October 2013, August 2014 and September 2014 in the central area of the country. Typical shot hole symptoms were noticed during routine surveillance by plant health inspectors. Samples were collected and the identity of the bacterium was confirmed by sequencing. The infected plants from the first finding in 2013 originated in the Netherlands (where the disease has been recorded on P. laurocerasus, see EPPO RS 2009/178). The infected plants from the 2 outbreaks in 2014 appear to be of UK origin but this has not been confirmed. Phytosanitary measures have been taken to eradicate the disease. Where it has been possible to identify that the infection was related to a specific lot, all plants in that lot have been destroyed. Where identification of an infected lot has not been possible, the infected plants and those located within a radius of 2 m have been destroyed.

The pest status of Xanthomonas arboricola pv. pruni in the United Kingdom is officially declared as: Transient, actionable, under eradication.

Source: NPPO of the United Kingdom (2014-09).

Additional key words: new record Computer codes: XANTPR, GB

#### 2014/194 Diplocarpon mali found in Sachsen, Germany

At the end of summer 2012, the presence of Diplocarpon mali (anamorph: Marssonina coronaria - EPPO Alert List) was first reported in Germany (EPPO RS 2013/103). The fungus was found on apple trees (Malus domestica) at several locations in Hesse and Baden-Württemberg. On 2014-08-18, the fungus was also found on apple trees grown in a research institution in Sachsen (Saxony). Affected trees showed black spots on the leaves, yellowing and defoliation on single branches or the entire crown. The disease was observed in patches in a lot of 2 500 trees. The origin of this infestation is unknown. The research institution was advised to spray fungicides and fallen leaves were destroyed. An Expressfound carried was out and can be on the JKI website: http://pflanzengesundheit.jki.bund.de/dokumente/upload/47ac9\_marssonina\_coronaria\_e xpress-pra-en.pdf

The general conclusion of this PRA was that *D. mali* presents a medium risk to Germany and other European countries, but that the efficacy of phytosanitary measures to prevent its further spread is questionable.

The pest status of *Diplocarpon mali* in Germany is officially declared as: Present, in parts of the area (Baden-Wuerttemberg, Hesse, Saxony).

Source: NPPO of Germany (2014-09).

Additional key words: detailed record Computer codes: DIPCML, DE

#### 2014/195 First report of *Phytophthora rubi* in the Czech Republic

The NPPO of the Czech Republic recently informed the EPPO Secretariat of the first record of *Phytophthora rubi* (EPPO A2 List) on its territory. On 2014-06-23, a garden service worker noticed unusual symptoms in raspberry plants (*Rubus idaeus* cvs. 'Heritage' and 'Tulameen') in a garden in the municipality of Přívrat, district of Ústí nad Orlicí. A sample was collected and sent to the Central Institute for Supervising and Testing in Agriculture (CISTA). On 2014-07-29, the presence of *Phytophthora rubi* was confirmed by molecular tests (PCR and sequence analysis). The pathway of introduction of the pathogen is not known. Plants from both cultivars originated from the Czech Republic. They had been produced from tissue cultures in a laboratory, and planted in a nursery in pots containing horticultural substrate which had never been in contact with field soil. The plants had been bought from the nursery in July 2013 and planted in the garden where the symptoms appeared only in June 2014. The nursery is subject to regular official plant health checks, and none of the inspections carried out in 2013 and in 2014 detected symptoms in any of the *Rubus* plant lots. No phytosanitary measures were taken.

The pest status of *Phytophthora rubi* in the Czech Republic is officially declared as: **Present**, **only in some areas**.

Source: NPPO of the Czech Republic (2014-09).

Additional key words: new record Computer codes: PHYTFU, CZ

#### 2014/196 EPPO report on notifications of non-compliance

The EPPO Secretariat has gathered below the notifications of non-compliance for 2014 received since the previous report (EPPO RS 2014/151). Notifications have been sent directly to EPPO by Norway and via Europhyt for the EU countries and Switzerland. The EPPO Secretariat has selected notifications of non-compliance made because of the detection of pests. Other notifications of non-compliance due to prohibited commodities, missing or invalid certificates are not indicated. It must be pointed out that the report is only partial, as many EPPO countries have not yet sent their notifications. When a consignment has been re-exported and the country of origin is unknown, the re-exporting country is indicated in brackets. When the occurrence of a pest in a given country is not known to the EPPO Secretariat, this is indicated by an asterisk (\*).

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Agromyzidae	Apium graveolens Ocimum basilicum	Vegetables Vegetables (leaves)	Cambodia Cambodia	Switzerland France	2
Aleyrodidae	Limnophila aromatica Manihot esculenta Manihot esculenta Ocimum basilicum	Vegetables (leaves) Vegetables Vegetables Vegetables (leaves)	Thailand Congo Togo Israel	France France France France	1 1 1 1
Anthonomus eugenii	Capsicum frutescens Capsicum frutescens	Vegetables Vegetables	Dominican Rep. Dominican Rep.	Netherlands United Kingdom	1 1
Auchenorrhyncha, Aleyrodidae, Curculionidae, Coccinellidae and other Coleoptera, Orthoptera	Eupatorium perfoliatum	Cut flowers	USA	Switzerland	1
Bemisia	Echinodorus	Cuttings	Spain (Canary Isl.)	Germany	1
Bemisia tabaci	Alternanthera sessilis Amyris Apium graveolens Apium graveolens var. dulce Artemisia vulgaris Basella rubra Beloperone guttata Colocasia Colocasia Corchorus olitorius Corchorus olitorius Crossandra infundibuliformis Duranta Echinodorus Echinodorus argentinensis Eryngium foetidum Eryngium foetidum, Mentha, Piper sarmentosum Eustoma Houttuynia cordata Hygrophila Hygrophila polysperma Hypericum	Vegetables (leaves) Vegetables Vegetables Vegetables Vegetables (leaves) Vegetables (leaves) Plants for planting Vegetables Vegetables Vegetables Vegetables Vegetables Vegetables Plants for planting Plants for planting Plants for planting Cuttings Vegetables (leaves) Vegetables Cut flowers Vegetables (leaves) Plants for planting Plants for planting Cuttings Cuttings Cuttings Cuttings Vegetables (leaves) Vegetables Cut flowers Vegetables (leaves) Plants for planting Plants for planting Cut flowers	Sri Lanka Sierra Leone Cambodia Cambodia Cambodia Bangladesh Netherlands Cambodia Jordan Nigeria Jordan Jordan Netherlands Netherlands Sri Lanka Singapore Cambodia Malaysia  Israel Cambodia Sri Lanka Thailand Kenya	United Kingdom United Kingdom Germany Sweden United Kingdom Sweden United Kingdom United Kingdom Netherlands Sweden  Switzerland United Kingdom Sweden	1 1 1 1 1 1 1 1 2 2 1 4 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
B. tabaci (cont.)	Limnophila aromatica Lisianthus Mandevilla Manihot esculenta Mentha Mentha Mentha Mentha Mentha spicata Mentha, Ocimum gratissimum Nerium oleander Nomaphila Ocimum basilicum	Vegetables (leaves) Cut flowers Plants for planting Vegetables (leaves) Plants for planting Plants for planting Vegetables (leaves)	Thailand Israel Netherlands Thailand Cambodia Cambodia Israel Israel Spain (Canary Isl.) Spain (Canary Isl.) Cambodia  Netherlands Indonesia Cambodia Cambodia Israel Jordan Malaysia Malaysia Uganda Cambodia Vietnam Vietnam Israel Israel Bangladesh Bangladesh Bangladesh Cambodia Vietnam Malaysia Cambodia Vietnam Usenam Usenam Israel Israel Sarel	Austria Switzerland United Kingdom Sweden Sweden United Kingdom Netherlands Switzerland Netherlands Sweden United Kingdom United Kingdom United Kingdom Sweden United Kingdom Sweden United Kingdom Switzerland United Kingdom Netherlands United Kingdom Netherlands United Kingdom Netherlands United Kingdom Sweden United Kingdom	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Bephratelloides	Annona muricata	Fruit	Peru	Italy	2
Coleoptera	Allium sativum Cyperus esculentus	Vegetables Stored products	China Burkina Faso	Spain Spain	5 1
Coleoptera, Ephestia	Cyperus esculentus	Stored products	Burkina Faso	Spain	1
Curculionidae	Capsicum annuum	Stored products	China	Spain	1
Curculionidae, Diptera	Allium sativum	Vegetables	China	Spain	7
Diptera	Lagenaria Luffa acutangula Momordica	Fruit Vegetables Vegetables	Ghana Bangladesh Cambodia	United Kingdom United Kingdom United Kingdom	1 1 1
Drosophila melanogaster	Psidium guajava	Fruit	Egypt	Germany	1
Duponchelia fovealis	Begonia rex	Plants	Netherlands*	Norway	1
Ephestia	Cyperus esculentus	Stored products	Burkina Faso	Spain	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Ephestia (cont.)	Cyperus esculentus	Stored products	Mali	Spain	1
Formica	Annona muricata	Fruit	Sri Lanka	France	1
Guignardia	Citrus sinensis Citrus sinensis	Fruit Fruit	Brazil South Africa	Spain Spain	1 3
Helicoverpa	Rosa	Cut flowers	Ecuador	Netherlands	1
Helicoverpa zea	Rosa	Cut flowers	Ecuador	Netherlands	1
Hirschmanniella, Meloidogyne	Vallisneria	Plants for planting	Singapore	Germany	1
Insecta	Ananas comosus, Artocarpus heterophyllus Cassia fistula Cyperus esculentus Globba Haemanthus Murraya koenigii Trichosanthes, Robinia	Fruit Fruit Stored products Bulbs and tubers Bulbs and tubers Vegetables (leaves) Vegetables	Vietnam Burkina Faso Thailand (Thailand) Sri Lanka Sri Lanka	Italy Germany Spain Germany Germany France Germany	1 1 2 1 1 1
Lepidoptera	Cyphomandra Solanum Solanum melongena	Fruit Vegetables Vegetables	Ecuador Sri Lanka Sri Lanka	Spain Cyprus Cyprus	1 1 1
Leucinodes orbonalis	Solanum Solanum aethiopicum Solanum melongena Solanum melongena	Vegetables Vegetables Vegetables Vegetables	Vietnam Cameroon Cambodia Malaysia	Sweden Belgium Sweden Germany	1 1 1 1
Liriomyza	Apium graveolens Apium graveolens Artemisia Artemisia campestris Artemisia vulgaris Chrysanthemum Chrysanthemum Chrysanthemum Coriandrum sativum Ocimum basilicum Ocimum basilicum Ocimum basilicum Pisum sativum	Vegetables Vegetables (leaves) Vegetables (leaves) Vegetables (leaves) Vegetables (leaves) Cut flowers Vegetables (leaves) Vegetables	Cambodia Cambodia Cambodia Cambodia Cambodia Cambodia Colombia Colombia Cambodia Cambodia Ethiopia Spain (Canary Isl.) Tunisia Kenya	Czech Republic Germany United Kingdom Czech Republic United Kingdom United Kingdom United Kingdom Italy Ireland	1 1 3 1 1 1 2 1 2 1 1 2 1 1
Liriomyza huidobrensis	Chrysanthemum Eryngium Trachelium	Cuttings Cut flowers Cut flowers	Tanzania* Zimbabwe* Ecuador	Netherlands Netherlands Netherlands	1 1 2
Liriomyza sativae	Ocimum basilicum Ocimum basilicum	Vegetables (leaves) Vegetables (leaves)	Cambodia* Cambodia*	France Netherlands	1 1
Liriomyza trifolii	Gypsophila Solidago	Cut flowers Cut flowers	Israel Zimbabwe	Belgium Netherlands	1 1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Melampsora caprearum	Salix caprea	Plants	Germany	Norway	1
Meloidogyne enterolobii	Colocasia	Vegetables	Gambia*	United Kingdom	1
Meloidogyne, Pratylenchus	Carex, Imperata cylindrica Ophiopogon planiscapus	Plants for planting Plants for planting	Turkey Turkey	Germany Germany	1 1
Nematoda	Paeonia	Plants for planting	USA	France	1
Phyllosticta citricarpa	Citrus Citrus limon Citrus macroptera Citrus sinensis x Poncirus trifoliata Citrus sinensis x Poncirus	Fruit	Bangladesh* Argentina Bangladesh Argentina Argentina Brazil South Africa Suth Africa Swaziland Uruguay* Zimbabwe Zimbabwe Brazil South Africa	United Kingdom Italy United Kingdom Italy Spain France France Germany Italy Netherlands Spain United Kingdom Netherlands United Kingdom Netherlands France Germany France France France	1 1 1 1 1 3 3 3 3 2 6 1 1 2 1 2 1
Phytophthora ramorum	Rhododendron Rhododendron	Plants Plants	Belgium Germany	Norway Norway	2 1
Pseudococcidae	Malva, Ceiba chodatii	Plants for planting	Argentina	Spain	1
Radopholus similis	Epipremnum	Cuttings	Sri Lanka	Netherlands	1
Spodoptera frugiperda	Capsicum Solanum melongena	Vegetables Vegetables	Dominican Rep. Surinam	Netherlands Netherlands	1 1
Spodoptera littoralis	Rosa Rosa Solidago	Cut flowers Cut flowers Cut flowers	Kenya Uganda Tanzania	Netherlands Netherlands Netherlands	2 2 1
Spodoptera litura	Asparagus officinalis Basella Coriandrum sativum	Vegetables Vegetables (leaves) Vegetables (leaves)	Malaysia Vietnam Thailand	Netherlands United Kingdom Netherlands	1 1 1
Thaumatotibia leucotreta	Capsicum Capsicum Capsicum Capsicum Capsicum frutescens Citrus paradisi Citrus paradisi Citrus paradisi	Vegetables Vegetables Cut foliage Vegetables Vegetables Fruit Fruit Fruit	Kenya Uganda Uganda Uganda Uganda South Africa South Africa Swaziland	United Kingdom Ireland Netherlands United Kingdom United Kingdom France Spain France	18 1 1 17 1 1 1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
T. leucotreta (cont.)	Citrus reticulata Citrus sinensis	Fruit Fruit Fruit Fruit Fruit Fruit Fruit	South Africa South Africa South Africa South Africa South Africa South Africa Zimbabwe Zimbabwe	Spain France Italy Portugal Spain Sweden France Spain	1 3 1 1 9 1 1
Thripidae	Abelmoschus esculentus Luffa Luffa Luffa acutangula Momordica Momordica Moringa oleifera Orchidaceae Solanum melongena Solanum melongena	Vegetables Vegetables Vegetables Vegetables Vegetables Vegetables Vegetables (leaves) Cut flowers Vegetables Vegetables	India Dominican Rep. India Bangladesh Dominican Rep. Malaysia India Thailand Guyana Trinidad and Tobago	United Kingdom	1 1 1 1 3 1 1 1 1
Thrips	Limonium Solanum melongena	Cut flowers Vegetables	Kenya Sri Lanka	Ireland Cyprus	1 1
Thrips palmi	Dendrobium	Cut flowers	Thailand	Netherlands	2
Thysanoptera	Dendrobium Solanum melongena Solanum melongena	Cut flowers Vegetables Vegetables	Thailand Dominican Rep. Dominican Rep.	Switzerland France Switzerland	1 1 1
Tospovirus	Dracaena surculosa	Plants	Netherlands	Norway	4
Trioza erytreae	Murraya koenigii Murraya koenigii	Vegetables (leaves) Vegetables (leaves)	Uganda Uganda	Sweden United Kingdom	1 5
Uromyces dianthi	Dianthus	Plants	Netherlands	Norway	1
Viteus vitifoliae	Vitis vinifera	Plants for planting	United Kingdom	United Kingdom	1
Xanthomonas axonopodis pv. citri	Citrus Citrus latifolia Citrus limon Citrus sinensis	Fruit Fruit Fruit Fruit	Bangladesh Bangladesh Argentina Uruguay	United Kingdom United Kingdom Italy Italy	1 2 1 2
Xylella fastidiosa	Coffea arabica	Plants for planting	Costa Rica	Netherlands	1
<ul> <li>Fruit flies</li> </ul>					
Pest	Consignment	Country of origin	Destination	nb	
Anastrepha	Citrus paradisi Mangifera indica Mangifera indica	Mexico Jamaica Mexico	Netherlands United Kingdom Spain	1 2 1	
Bactrocera	Annona Capsicum Capsicum	Egypt Bangladesh Thailand	United Kingdom United Kingdom United Kingdom	1 1 1	

Pest	Consignment	Country of origin	Destination	nb
Bactrocera (cont.)	Capsicum frutescens Luffa acutangula Mangifera indica Manilkara zapota Momordica charantia Psidium guajava Psidium guajava	Cambodia Bangladesh Bangladesh India Vietnam Bangladesh Sri Lanka	Sweden United Kingdom United Kingdom United Kingdom Sweden United Kingdom United Kingdom United Kingdom	1 1 2 1 1 1
	Trichosanthes Trichosanthes Trichosanthes Trichosanthes cucumerina	Bangladesh Sri Lanka Bangladesh	United Kingdom United Kingdom United Kingdom United Kingdom	4 1 3
Bactrocera dorsalis	Annona squamosa	Cambodia	Sweden	1
Duoin ocona aonoano	Annona squamosa	Thailand	Germany	1
	Annona squamosa	Thailand	Sweden	1
	Mangifera indica	Thailand	Sweden	1
	Psidium guajava	Bangladesh	Sweden	1
Bactrocera latifrons	Capsicum	Thailand	Netherlands	1
	Solanum melongena	Cambodia	Sweden	1
Bactrocera zonata	Mangifera indica	Egypt	Sweden	1
Tephritidae (non-European)	Annona	Egypt	United Kingdom	1
	Annona	India	United Kingdom	2
	Annona	Uganda	United Kingdom	1
	Annona	Vietnam	France	1
	Annona muricata	Cameroon	France	1
	Annona muricata	Uganda	Netherlands	1
	Annona squamosa	Thailand	France	3
	Capsicum	Bangladesh Cameroon	United Kingdom	1 1
	Capsicum Capsicum	Ghana	France United Kingdom	1
	Capsicum	Uganda	United Kingdom	1
	Capsicum frutescens	Bangladesh	United Kingdom	1
	Capsicum frutescens	Cambodia	Netherlands	2
	Citrus reticulata	South Africa	Belgium	1
	Citrus sinensis	Argentina	Spain	2
	Citrus sinensis	South Africa	France	2
	Coccinia grandis	India	Ireland	1
	Lagenaria	Ghana	United Kingdom	2
	Lagenaria siceraria	Ghana	United Kingdom	1
	Luffa	Bangladesh	United Kingdom	1
	Luffa	Kenya	United Kingdom	1
	Luffa acutangula	Bangladesh	United Kingdom	1
	Mangifera indica	Bangladesh	United Kingdom	1 1
	Mangifera indica Mangifera indica	Brazil Dominican Rep.	United Kingdom France	1
	Mangifera indica	Dominican Rep.	Netherlands	1
	Mangifera indica	Dominican Rep.	United Kingdom	2
	Mangifera indica	Egypt	United Kingdom	1
	Mangifera indica	Jamaica	United Kingdom	1
	Mangifera indica	Mali	Netherlands	1
	Mangifera indica	Senegal	Belgium	1
	Mangifera indica	Senegal	France	5
	Mangifera indica	Senegal	Netherlands	1
	Mangifera indica	Senegal	Spain	3

Pest	Consignment	Country of origin	Destination	nb
Tephritidae (non-European)	Mangifera indica, Psidium guajava	Egypt	Switzerland	1
	Manilkara zapota	India	United Kingdom	2
	Momordica .	Bangladesh	Italy	1
	Momordica	Jordan	United Kingdom	1
	Momordica	Kenya	United Kingdom	1
	Passiflora edulis	Sri Lanka	Switzerland	1
	Prunus persica	Lebanon	United Kingdom	1
	Psidium guajava	Brazil	France	1
	Psidium guajava	Cambodia	Netherlands	2
	Psidium guajava	Cambodia	Switzerland	1
	Psidium guajava	Cambodia	United Kingdom	3
	Psidium guajava	Guinea	France	1
	Psidium guajava	Malaysia	United Kingdom	2
	Syzygium	Cambodia	France	1
	Syzygium samarangense	Cambodia	Switzerland	1
	Trichosanthes	Sri Lanka	Germany	3
	Trichosanthes	Sri Lanka	Switzerland	2
	Trichosanthes	Sri Lanka	United Kingdom	3
	Trichosanthes cucumerina	Bangladesh	United Kingdom	2
	Trichosanthes cucumerina	Sri Lanka	United Kingdom	2
	Trichosanthes dioica	Bangladesh	United Kingdom	2
	Vaccinium	Argentina	United Kingdom	2

#### • Wood

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Bostrichidae	Unspecified Unspecified Unspecified	Wood packing material Wood packing material Wood packing material (crate)	China India Vietnam	Netherlands Germany Germany	1 1 1
Bostrichidae, Xylothrips	Unspecified	Wood packing material (pallet)	China	Austria	1
Bursaphelenchus xylophilus	Unspecified	Wood packing material	China	France	6
хуюртиз	Unspecified	Wood packing material (pallet)	India (pallet was marked from IN)*	Czech Republic	1
	Unspecified	Wood packing material	Vietnam	France	1
Callidium	Unspecified	Wood packing material (pallet)	China	Austria	1
Cerambycidae	Juglans nigra Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified	Wood and bark Wood packing material Wood packing material Wood packing material (crate) Wood packing material (crate) Wood packing material (crate) Wood packing material (crate) and dunnage Wood packing material (pallet)	USA China China China China China China China China	Spain Germany Netherlands Germany Ireland Netherlands Czech Republic Czech	1 5 3 1 1 1 1
	·			Republic	·
	Unspecified	Wood packing material (pallet)	China	Germany	5
	Unspecified	Wood packing material (pallet) and dunnage	China	Germany	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Coleoptera	Chlorophora excelsa Chrysophyllum africanum	Wood and bark Wood and bark	Congo Central African Rep.	Spain Spain	1
	Entandrophragma cylindricum	Wood and bark	Central African Rep.	Spain	1
	Entandrophragma cylindricum	Wood and bark	Congo	Spain	1
	Juglans regia Unspecified	Wood and bark Wood packing material	USA Sri Lanka	Spain Italy	2 1
Dinoderus minutus, Lyctoxylon dentatum, Cerambycidae	Unspecified	Wood packing material (pallet)	China	Germany	1
Diplogaster	Unspecified	Wood packing material (pallet)	Belarus	Lithuania	1
Formica	Entandrophragma cylindricum	Wood and bark	Congo	Spain	1
	Unspecified	Wood packing material (crate)	India	Switzerland	1
Hesperophanes campestris	Unspecified	Wood packing material	China	Germany	1
Heterobostrychus aequalis	Unspecified Unspecified	Wood packing material Wood packing material (pallet)	China China	Germany Germany	1
Insecta	Juglans nigra Unspecified	Wood and bark Wood packing material (crate) Wood packing material (crate) Wood packing material (pallet) Wood packing material (pallet) Wood packing material (pallet)	USA China China India Sri Lanka China India China India Undia Vietnam	Spain France Sweden Switzerland France Switzerland Switzerland Switzerland Switzerland Switzerland	1 4 2 1 1 4 3 2 5
Isoptera	Unspecified	Objects with wooden parts	Indonesia	Czech Republic	1
Lyctus, Scolytidae	Unspecified	Wood packing material (pallet)	China	Austria	1
Microperus kadoyamaensis, Scolytidae	Unspecified	Wood packing material	China	Germany	1
Scolytidae	Liriodendron Unspecified	Wood and bark Wood packing material	USA China	Spain Germany	1 1
Sesia apiformis	Unspecified	Wood packing material	China	Estonia	1
Sinoxylon	Unspecified Unspecified unspecified Unspecified Unspecified	Wood packing material Wood packing material (crate) Wood packing material (pallet) Wood packing material (pallet)	India Vietnam India India Vietnam	Germany Germany Denmark Germany Germany	4 1 1 5 2
Sinoxylon anale	Unspecified	Wood packing material	India	Germany	3

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Trichoferus	Unspecified	Wood packing material (pallet)	China	Austria	1
Trichoferus, Scolytidae	Unspecified	Wood packing material (pallet)	China	Austria	1
Xyleborini	Unspecified	Wood packing material	China	Netherlands	1

#### Bonsais

PestConsignmentCountry of originDestinationnbLepidopteraPinus pentaphyllaJapanGermany1

Source: EPPO Secretariat, 2014-10.

#### 2014/197 First report of *Centipeda cunninghamii* in France and Spain

*Centipeda cunninghamii* (Asteraceae) is a perennial plant reaching 20 cm high originating from Australia and New Zealand. Outside its native range, the only known records are in Spain and in France.

In Spain, the plant was reported for the first time in 1998 in Cáceres, in the province of Extremadura. The plant was observed on the edge of inundated areas in *Preslion cervinae* communities where it was very abundant and exhibited a high vitality. It was also reported for the first time in 2010 in the locality of Sotoserrano in the province of Salamanca.

In France, *C. cunninghamii* was also found for the first time in the locality of Saint-Christophe-du-Ligneron in the Vendée Department in June 2013. Since then, the population has increased by more than 100 fold. The plant was reported to occur in temporary ponds containing rare and protected species: *Pilularia globulifera* (Marsileaceae), *Cicendia filiformis* (Gentianaceae), *Exaculum pusillum* (Gentianaceae), *Illecebrum verticillatum* (Caryophyllaceae). A reduction of the populations of *Pilularia globulifera* due to the presence of *C. cunninghamii* has been noted.

Considering the spread of *C. cunninghamii* in France and Spain, this species should usefully be monitored. A pest risk analysis should be performed to assess whether rapid action is necessary, as the distribution of the plant is still limited.

#### Source:

Guillot Ortiz D (2010) La tribu Anthemidae Cass. (Asteraceae) en la flora alóctona de la Península Ibérica e Islas Baleares. (Citas bibliográficas y aspectos etnobotánicos e históricos). *Monografías de la Revista Bouteloua* 9. Jolube Consultor y Editor Ambiental. Teruel y Jaca (Huesca).158 pp.

http://books.google.fr/books?id=SzxnAwAAQBAJ&pg=PA54&lpg=PA54&dq=centipeda+cunninghamii+caceres&source=bl&ots=apgFbixsm9&siq=oyA0-

 $\frac{HqdAumbcK6jQoy\_FBg0\_d4\&hl=en\&sa=X\&ei=CmYIVOHyMNSS7AbusoGwCw\&ved=0CDo}{Q6AEwAw\#v=onepage\&q=centipeda\%20cunninghamii\%20caceres\&f=false}$ 

Sánchez Rodríguez JA & Elías Rivas MJ (1998) *Centipeda cunninghamii* (DC.) A. Braun & Ascherson (Asteraceae), una planta adventicia nueva para Europa. Notas breves. *Anales Jardín Botánico de Madrid* 56, 167.

http://www.rjb.csic.es/jardinbotanico/ficheros/documentos/pdf/anales/1998/Anales\_56(1)\_151\_172.pdf

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Computer codes: CEPCU, ES, FR

Additional key words: invasive alien plants, new record

#### 2014/198 A new management manual on Baccharis halimifolia

A management manual on *Baccharis halimifolia* (Asteraceae, EPPO A2 List) has been written in the framework of the Life+ project 'Restauration of Habitats of Community Interest in the Basque Country's estuary' implemented in Pais Vasco, Spain. *B. halimifolia* is one of the invasive alien plants that causes the most serious negative impacts on wetlands and cliffs along the Atlantic coast.

This manual describes the morphology and biology of *B. halimifolia* with illustrations, and provides data on its distribution and impacts worldwide. Management methods are described for prevention, early detection, eradication, containment and control. This publication also provides detailed guidelines on how to select control methods according to the situations that are encountered.

The manual is available in English, Spanish and Basque.

Furthermore, in the framework of the Life+ project, field interventions have been accompanied by research work and monitoring and by an information campaign to raise awareness about the spread and environmental impacts of *B. halimifolia*. One of the achievements of the Life+ project has been the creation of an international commission to foster information exchange about the management of this invasive alien plant in different territories and to improve coordination.

Source:

Department for the Environment and Territorial Policy of the Basque Government (2014) *Baccharis halimifolia* management manual. Ihobe, Department for the Environment and Territorial Policy, Basque Government. 109 p.

Computer codes: BACHA, ES

Computer codes: FR

http://issuu.com/ingurumena/stacks/b98bdbd953754a7f8db566f25b50bdd0

Additional key words: invasive alien plants, management

## 2014/199 Survey on invasive alien plants targeting the conservation and nursery sectors in France

In anticipation of the forthcoming European regulation on invasive alien plants and to implement the European Code of conduct on horticulture and invasive alien plants, surveys have been performed in France targeting conservationists, land managers, as well as horticulturists and landscapers. The following aspects were considered in the survey:

- Definitions and concepts linked to invasive alien plants (i.e. characterics of plant invasiveness, impacts and area of origin);
- How to determine criteria when building lists of invasive species.

Results from this survey highlight divergences of opinions concerning the definition and concepts of what is an invasive plant and a lack of concertation between conservationsists on one side and those in horticulturists and landscapers on the other side. When analyzing the semantics used by the different professionals, staff working in Conservatoires Botaniques focused on the origin and the invasiveness of the species. Land managers and landscapers focused on the overall impacts, while horticulturists focused primarily on the invasiveness of the species.

Consensus approaches (initiatives in which all actors are involved in the decision-making) based on the assessment of both negative and positive impacts appear indispensable to establish a French national Code of conduct on horticulture and invasive alien plants. Consensus lists of invasive alien plants should facilitate risk prevention and be dynamic. To progress effectively on such a project, preventive actions should be accompanied by information and awareness-raising for the different professionals involved and the general public.

Source:

Guérin M, Mandon-Dalger I, Provendier D & Thiry J (2014) Gestion préventive des plantes exotiques envahissantes. Enquête auprès des acteurs professionnels de la conservation et de la filière horticole: Définitions - Listes - Concertation. Plante & Cité, Fédération des Conservatoires Botaniques Nationaux, ONEMA. 36 p. http://www.ecophytozna-pro.fr/m/Documents/view/365/n:122/slug:presentation

Heywood VH & Brunel S (2011) Code of conduct on horticulture and invasive alien plants. Council of Europe Publishing. 95 p.

http://www.coe.int/t/dg4/cultureheritage/nature/bern/ias/Documents/Publication\_Code\_en.pdf

Additional key words: invasive alien plants, social sciences, perception

# 2014/200 CBD toolkit to facilitate the achievement of the 'Aichi Biodiversity Target 9' on invasive alien species

The Convention on Biological Diversity (CBD) has released a prototype toolkit to help its members (CBD Parties) to achieve the 'Aichi Biodiversity Target 9' on invasive alien species. This toolkit explains the contents of the international agreements that are related to invasive alien species. It also explains other multilateral agreements related to plant, animal and human health, for Parties to the CBD to achieve Aichi Biodiversity Target 9 with examples of implementation in different countries.

Source: CBD Toolkit to facilitate parties to achieve Aichi Biodiversity Target 9 on invasive

alien species. <a href="http://www.cbd.int/invasive/doc/toolkit-prototype-en.pdf">http://www.cbd.int/invasive/doc/toolkit-prototype-en.pdf</a>

Additional key words: invasive alien plants

# 2014/201 List of alien species determined to be potentially invasive in the Spanish regulation

The Catalogue of invasive alien plants of the Spanish legislation on invasive alien plants was launched in December 2011 (see EPPO RS 2012/043) and revised in August 2013 (see EPPO RS 2013/227). The Annex 2 of this Spanish legislation consists of a list of alien species determined to have an invasive potential and to present a potential threat for Spain. It is prohibited to introduce these listed species in the natural environment. In certain cases their release can be granted but an administrative authorization is required, based on a risk analysis. If an outbreak of a listed species in found, emergency mesures should be taken. The management of these listed species can include preventive, containment and eradication measures. Professionals using these plant species should be made aware of this legislation and they are encouraged to use alternative species.

The plant species included in the Annex 2 of the Spanish legislation are listed in the table below together with the specific territories in which this legislation applies (a blank space means that the whole Spanish territory is concerned).

Species	Area of application
Abutilon grandifolium (Malvaceae)	Canarias
Abutilon theophrasti (Malvaceae)	
Acacia cyclops (Fabaceae)	Canarias
Acacia dealbata (Fabaceae)	Canarias and Baleares
Acacia farnesiana (Fabaceae)	Except Canarias
Acacia longifolia (Fabaceae)	
Acacia mearnsii (Fabaceae)	
Acacia melanoxylon (Fabaceae)	
Acacia saligna (Fabaceae)	
Acanthus mollis (Acanthaceae)	Canarias
Acer negundo (Sapindaceae)	
Aeonium spp. (Crassulaceae)	Baleares
Agapanthus praecox (Amaryllidaceae)	Canarias
Agave spp. (Asparagaceae) (except A. americana)	
Ageratina adenophora (Asteraceae)	Except Canarias
Ailanthus altissima (Simaroubaceae, EPPO List of Invasive Alien	Canarias
Plants)	
Albizia distachya (Fabaceae)	Canarias

Species	Area of application
Aloe vera (Xanthorrhoeaceae)	Canarias
Amelanchier spicata (Rosaceae, EPPO List of IAP)	
Anredera cordifolia (Basellaceae)	
Aptenia cordifolia (Aizoaceae	
Arbutus unedo (Ericaceae)	Canarias
Arctotheca calendula (Asteraceae, EPPO List of IAP)	
Argemone mexicana (Papaveraceae)	Canarias
Argemone ochroleuca (Papaveraceae)	Canarias
Atriplex semibaccata (Amaranthaceae)	Canarias
Bacopa monnieri (Plantaginaceae)	
Bidens aurea (Asteraceae)	Canarias
Bidens frondosa (Asteraceae)	
Caesalpinia gilliesii (Fabaceae)	Canarias
Caesalpinia spinosa (Fabaceae)	Canarias
Campylopus introflexus (Dicranaceae)	Except Canarias
Cardiospermum grandiflorum (Sapindaceae, EPPO List of IAP)	Canarias
Carpobrotus acinaciformis (Aizoaceae, EPPO List of IAP)	Canarias
Carpobrotus chilensis (Aizoaceae)	
Carpobrotus edulis (Aizoaceae, EPPO List of IAP)	Canarias
Castanea sativa (Fagaceae)	Canarias
Casuarina equisetifolia (Casuarinaceae)	Canarias
Centranthus ruber (Caprifoliaceae)	Canarias
Cirsium vulgare (Asteraceae)	Canarias
Cistus ladanifer f. maculatus (Cistaceae)	Canarias
Clematis vitalba (Ranunculaceae)	Baleares
Commelina diffusa (Commelinaceae)	Canarias
Cortaderia spp. (Poaceae)	Canarias
Cotula coronopifolia (Asteraceae)	Except Baleares
Crassula helmsii (Crassulaceae)	
Crassula muscosa (Crassulaceae) (= C. lycopodioides)	Canarias
Crassula multicava (Crassulaceae)	Canarias
Crocosmia x crocosmiflora (Iridaceae)	Cariarias
Cryptostegia grandiflora (Apocynaceae)	
Cupressus macrocarpa (Curpessaceae)	Canarias
Cyclospermum leptophyllum (Apiaceae)	Curiarias
Cylindropuntia spp. (except C. tunicata) (Cactaceae)	
Cynodon dactylon (Poaceae)	Canarias
Cyperus alternifolius subsp. flabelliformis (Cyperaceae)	Cariarias
Cytisus scoparius (Fabaceae)	Canarias
Datura ferox (Solanaceae)	Baleares
Datura inoxia (Solanaceae)	Baleares
Deleira odorata (Asteraceae, EPPO List of IAP)	Dalogras
Disphyma crassifolium (Aizoaceae)	Baleares
Drosanthemum spp. (Aizoaceae)	Baleares
Elodea canadensis (Hydrocharitaceae)	Canarias
Elodea nuttallii (Hydrocharitaceae, EPPO List of IAP)	
Eschscholzia californica (Papaveraceae)	0
Eucalyptus camaldulensis (Myrtaceae)	Canarias
Eucalyptus globulus (Myrtaceae)	Canarias
Echinocystis Iobata (Cucurbitaceae)	

Species	Area of application
Fallopia baldschuanica (Polygonaceae, EPPO List of IAP)	
Freesia refracta (Iridaceae)	Baleares
Gleditsia triacanthos (Fabaceae)	
Gomphocarpus fruticosus (Apocynaceae)	
Hakea sericea (Proteaceae, EPPO List of IAP)	
Hydrilla verticillata (Hydrocharitaceae)	
Hydrocotyle spp. (except H. vulgaris, Apiaceae)	
Hylocereus undatus (Cactaceae)	Canarias
Impatiens balfouri (Balsaminaceae)	
Impatiens glandulifera (Balsaminaceae, EPPO List of IAP)	
Ipomoea cairica (Convolvulaceae)	Canarias
Ipomoea indica (Convolvulaceae)	Except Canarias
Ipomoea pes-caprae (Convolvulaceae)	Except danarias
Juncus tenuis (Juncaceae)	
Kalanchoe daigremontiana (Crassulaceae)	Baleares
Lagarosiphon major (Hydrocharitaceae, EPPO List of IAP)	Darcares
Lantana camara (Verbenaceae)	
Lepidium virginicum (Brassicaceae)	
Lippia filiformis (Verbenaceae)	
Lonicera japonica (Caprifoliaceae)	
Melinis repens (Poaceae)	Canarias
Mirabilis jalapa (Nyctaginaceae)	Canarias and Baleares
	Canarias and Baleares  Canarias
Nephrolepis exaltata (Lomariopsidaceae) Neurada procumbens (Neuradaceae)	Canarias
Nicandra physalodes (Solanaceae)	Canarias
Nicotiana glauca (Solanaceae)	Camarias
Nicotiana paniculata (Solanaceae)	Canarias
Nymphaea mexicana (Nymphaeaceae)	
Oenothera biennis (Onagraceae)	
Oenothera glazioviana (Onagraceae)	
Oenothera x fallax (Onagraceae)	
Opuntia ficus-indica (Cactaceae)	0
Opuntia robusta (Cactaceae)	Canarias
Opuntia tomentosa (Cactaceae)	Canarias
Opuntia monacantha (= O. vulgaris, Cactaceae)	Canarias
Oxalis articulata (Oxalidaceae)	Baleares
Oxalis latifolia (Oxalidaceae)	
Oxalis pes-caprae (Oxalidaceae, EPPO List of IAP)	
Parkinsonia aculeata (Fabaceae)	
Paspalum distichum (Poaceae, EPPO List of IAP)	
Pelargonium capitatum (Geraniaceae)	Canarias
Pelargonium inquinans (Geraniaceae)	Canarias
Pelargonium zonale (Geraniaceae)	Canarias
Pennisetum spp. (except P. clandestinum and P. purpureum in	
Canarias, P. villosum in Baleares and P. setaceum)	
Phytolacca americana (Phytolaccaceae)	
Phytolacca polyandra (Phytolaccaceae)	Baleares
Phyllostachys aurea (Poaceae)	
Pittosporum tobira (Pittosporaceae)	Baleares
Pittosporum undulatum (Pittosporaceae)	Canarias

Species	Area of application
Populus alba (Salicaceae)	Canarias
Prosopis glandulosa (Fabaceae)	
Prunus dulcis (Rosaceae)	Canarias
Prunus serotina (Rosaceae, EPPO List of IAP)	
Pteris vittata (Pteridaceae)	Canarias
Pterocarya x rehderiana (Juglandaceae)	
Rhagodia nutans (= Einadia nutans, Amaranthaceae)	Canarias
Ricinus communis (Euphorbiaceae)	
Robinia pseudoacacia (Fabaceae)	
Rosa rugosa (Rosacae)	
Sagittaria calycina (Alismataceae)	
Salpichroa origanifolia (Solanaceae)	Canarias
Senecio angulatus (Asteraceae)	Canarias
Senecio cineraria (Asteraceae)	Baleares
Sesuvium portulacastrum (Aizoaceae)	Canarias
Solanum bonariense (Solanaceae)	Canarias
Solanum elaeagnifolium (Solanaceae)	
Solanum mauritianum (Solanaceae)	Canarias
Spartium junceum (Fabaceae)	Canarias and Baleares
Sporobolus indicus (Poaceae)	Except Canarias
Stenotaphrum secundatum (Poaceae)	
Sternbergia lutea (Amaryllidaceae)	Baleares
Symphyotrichum novi-belgii (Asteraceae)	
Symphyotrichum squamatum (Asteraceae)	Baleares
Tropaeolum majus (Tropaeolaceae)	
Verbascum thapsus (Scrophulariaceae)	Canarias
Verbascum virgatum (Scrophulariaceae)	Canarias
Wigandia caracasana (Boraginaceae)	Canarias
Zantedeschia aethiopica (Araceae)	Canarias
Zygophyllum waterlotii (Zygophyllaceae)	Canarias

Source:

Ministerio de agricultura, alimentación y medio ambiente, Boletín Official de Estado, Lunes 12 de diciembre de 2011, Núm. 29, Sec. I., 25 pp. http://www.boe.es/boe/dias/2011/12/12/pdfs/BOE-A-2011-19398.pdf

Real Decreto 630/2013, de 2 de agosto, por el que se regula el Catálogo español de especies exóticas invasoras. Boletín Oficial del Estado, Sábado 3 de agosto de 2013, Núm. 185.

http://www.boe.es/boe/dias/2013/08/03/pdfs/BOE-A-2013-8565.pdf

Additional key words: regulations, invasive alien plants

Computer codes: 1AEJG, 1AGVG, 1CDTG, 1DRUG, 1HYDG, 1KYOG, 1PESG, ABUMO, ABUTH, ACACC, ACADA, ACAFA, ACALO, ACAME, ACAMR, ACASA, ACRNE, ACUMO, AGPPR, AILAL, ALBLO, ALFVE, AMESP, APJCO, APULE, ARDUN, ARGME, ARGOC, AROCA, ASTNB, ASTSQ, ATXSE, BAOMO, BIDAU, BIDFR, BIKBA, BOGCO, CAEGI, CAESP, CBSCH, CIRVU, CLVVT, CNERU, COMDI, CRIGR, CSBHE, CSBMC, CSNSA, CSTLA, CSUEQ, CULCO, CVBMC, CVRGR, CYNDA, CYPFL, DATFE, DPHCR, ECNLO, ELDNU, ESHCA, EUCCM, EUCGL, EUPAD, FRERE, GLITR, GOPFR, HCRUN, HKASE, HYLVE, IPABF, IPAGL, IPOAC, IPOCA, IPOPC, IUNTE, KANDA, KMPIN, LANCA, LEPVI, LGAMA, LIPFI, LONJA, MIBJA, NEHEX, NICPH, NIOGL, NIOPA, NUUPR, NYMME, OEOBI, OEOER, OPUFI, OPURO, OPUTO, OPUVU, OXAAR, OXAPC, PAKAC, PASDS, PELCA, PELIQ, PELZO, PHTAM, PLLAR, POPAL, PRCJG, PRNDU, PRNSO, PTFRE, PTJJI, PTUTO, RHYRE, RIICO, RGDNU, ROBPS, ROSRG, SAGCA, SAOSC, SAPOR, SENAN, SENBI, SENMI, SOLBO, SOLEL, SOLMR, SPUJU, SPZIN, SSVPO, STBLU, STPSE, TOPMA, TTRCR, VESTH, VESVI, WIGCA, ZNTAE, ES