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POUR LA PROTECTION DES PLANTES

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ORGANIZATION

# EPPO Reporting Service

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**2010/077 First report of *Guignardia citricarpa* in the USA**

In March 2010, symptoms of citrus black spot were detected in the USA on commercial Valencia sweet oranges (*Citrus sinensis*) in the Immokalee area (Collier county), Florida. Laboratory analysis confirmed the presence of *Guignardia citricarpa* (EPPO A1 List). This is the first time that *G. citricarpa* is reported from North America. For the moment, it is not known how this pathogen was introduced into Florida. An appropriate regulatory response for this incursion is being devised and delimiting surveys are underway.

The situation of *Guignardia citricarpa* in the USA can be described as follows: **Present, an incursion was first found in March 2010 in Florida (Collier county), under official control.**

**Source:** Schubert T, Sutton B, Jeyaprakash A (2010) Pest Alert - Citrus black spot (*Guignardia citricarpa*) discovered in Florida. Florida Department of Agriculture and Consumer Services. <http://www.doacs.state.fl.us/pi/enpp/pi-pest-alert.html>

USDA (2010) USDA confirms new citrus disease in Florida. News Release of 2010-04-08. [http://www.aphis.usda.gov/newsroom/content/2010/04/fla\\_citrus\\_disease.shtml](http://www.aphis.usda.gov/newsroom/content/2010/04/fla_citrus_disease.shtml)

Additional key words: new record

Computer codes: GUIGCI, US

**2010/078 First report of *Meloidogyne enterolobii* in Vietnam**

In Southern Vietnam, citrus trees are often planted together with guava (*Psidium guajava*) for the management of huanglongbing (citrus disease associated with 'Candidatus Liberibacter asiaticus'). Some guava seedlings showed decline symptoms including brown discoloration of the leaves, growth inhibition, leaf drop and finally died. Affected seedlings also presented numerous galls on the roots, suggesting the presence of root-knot nematodes. Morphological and molecular studies confirmed the presence of *Meloidogyne enterolobii* (EPPO Alert List) on diseased guava seedlings. This is the first report of this nematode in Vietnam.

The situation of *Meloidogyne enterolobii* in Vietnam can be described as follows: **Present, first reported in 2009 on *Psidium guajava* in the southern part of the country.**

**Source:** Iwahori H, Truc NTN, Ban DV, Ichinose K (2009) First report of root-knot nematode *Meloidogyne enterolobii* on guava in Vietnam. *Plant Disease* 93(6), p 675.

Additional key words: new record

Computer codes: MELGMY, VN

**2010/079 First record of *Phytophthora alni* in Alaska, USA**

Surveys were initiated in 2007/2008 to identify the possible causes of the widespread dieback and mortality which is currently being observed on *Alnus incana* subsp. *tenuifolia* (thinleaf alder) across South-Central and Interior Alaska (US). More than 500 isolates of *Phytophthora* and *Pythium* species were recovered from baiting watercourses or saturated rhizosphere soil. *Phytophthora alni* subsp. *uniformis* (formerly EPPO Alert List) was recovered from soil samples collected beneath alder trees in the Kenai Peninsula, through Anchorage and up to Fairbanks in the North. As of February 2009, *P. alni* subsp. *uniformis* was isolated in 11 sites. During these studies other *Phytophthora* species were also recovered: *P. gonapodyides*, *P. megasperma*, *P. pseudosyringae*, *P. gallica*, and an

unknown *Phytophthora* species. This is the first time that *P. alni* is reported from North America but further studies are needed to better understand its possible role in the alder disease, as other pathogens could also be involved (e.g. *Valsa* or *Cytospora* spp.). It is stressed that for the moment there is no field evidence that *Phytophthora* species are causing root disease or are involved in the dieback and mortality of alder in Alaska. Studies are also needed to determine the possible origins of these new *Phytophthora* species in Alaska (i.e. are they native or introduced exotic species?).

**Source:** INTERNET  
 Adams GC, Catal M, Trummer L, Hansen EM, Reeser P, Worrall JJ (2008) *Phytophthora alni* subsp. *uniformis* found in Alaska beneath thinleaf alders. *Plant Health Progress*. <http://www.forestpathology.org/pdfs/adams2008Palni.pdf>  
 Trummer L (2009) Alder *Phytophthora* (*Phytophthora alni* subsp. *uniformis*) in Alaska. <http://www.fs.fed.us/r10/spf/fhp/phytophthora/uniformis.html>

**Additional key words:** new record

**Computer codes:** PHYTAL, US

### **2010/080 First report of *Ophiostoma ulmi* and *O. novo-ulmi* in Japan**

During a survey carried out in 2007, the causal agents of Dutch elm disease, *Ophiostoma ulmi* and *O. novo-ulmi*, were detected for the first time in Japan. Isolates had been obtained from bark of fallen *Ulmus davidiana* and *U. laciniata* trees infested by *Scolytus esuriens* (Coleoptera: Scolytidae) at two sites in Hokkaido. So far, no damage on elm trees has been reported from Hokkaido. Genetic and field studies are in progress to assess the status and history of the two pathogens in Japan (e.g. endemic/invasive) and their association with the native elms and bark beetles.

**Source:** Masuya H, Brasier C, Ichihara Y, Kubono T, Kanzaki N (2009) First report of the Dutch elm disease pathogens *Ophiostoma ulmi* and *O. novo-ulmi* in Japan. *New Disease Reports* Volume 20 (2009-09 to 2010-01). <http://www.bspp.org.uk/publications/new-disease-reports/ndr.php?id=020006>

**Additional key words:** new record

**Computer codes:** CERAUL, OPHSNU, JP

### **2010/081 First report of *Euphorbia mosaic virus* in Cuba**

In January 2007, unusual symptoms were observed in tobacco plants (*Nicotiana tabacum*) in a field in the eastern part of Cuba. These symptoms included downward curling, rugosity and yellow mottle of leaves with a reduction in plant height. Affected leaves could no longer be used for the manufacture of cigarettes. Laboratory analysis revealed the presence of *Euphorbia mosaic virus* (Begomovirus, EuMV - EU Annexes). It is stated that additional work is now needed to determine the epidemiological risk of the presence of this virus on tobacco in Cuba. In particular, it is noted that studies should be done on *Euphorbia heterophylla* (a known host plant of EuMV) because it is a common weed in many cultivated areas in Cuba which could act as a reservoir and thus contribute to disease spread. This is the first time that EuMV is reported from Cuba, and from tobacco plants. The situation of *Euphorbia mosaic virus* in Cuba can be described as follows: **Present, first detected in 2007 in one tobacco field.**

**Source:** Fiallo-Olivé E, Rivera-Bustamante RF, Martínez-Zubiaur Y (2009) First report of tobacco as a natural host of *Euphorbia mosaic virus* in Cuba. *New Disease Reports* Volume 20 (2009-09 to 2010-01).  
<http://www.bspp.org.uk/publications/new-disease-reports/ndr.php?id=020005>

**Additional key words:** new record, host plant

**Computer codes:** EUMV00, CU

**2010/082 ‘Candidatus Liberibacter solanacearum’ detected on tomato and capsicum crops in Mexico**

In Mexico, the potato disease called Zebra chip (associated with ‘*Candidatus Liberibacter solanacearum*’ - EPPO Alert List) was first identified in 1994. It has caused significant economic damage, often leading to abandonment of entire potato fields. Recent studies have showed that ‘*Ca. L. solanacearum*’ was also causing damage to tomato (*Lycopersicon esculentum*) and capsicum (*Capsicum annuum*) crops in Mexico.

- In March 2009, capsicum plants showing symptoms resembling those caused by *Bactericera cockerelli* (psyllid vector of ‘*Ca. L. solanacearum*’) were observed in a field in La Cruz de Elota, Sinaloa. Affected plants showed chlorotic or pale green apical growth and leaf cupping, sharp tapering of the leaf apex, shortened internodes, and general stunting. Molecular analysis confirmed the presence of ‘*Ca. L. solanacearum*’ (Munyanza *et al.*, 2009a).

- In March 2009, plants showing symptoms resembling those of a phytoplasma disease called ‘permanente del tomate’ (permanent yellowing disease) were observed in tomato fields in Sinaloa. It was noted that these symptoms also resembled those caused by ‘*Ca. L. solanacearum*’ in New Zealand. Affected tomato plants showed an overall chlorosis, severe stunting, leaf cupping, purple discoloration of veins, excessive branching of axillary shoots, and leaf scorching. Symptom incidence ranged from 18 to 40%. Samples (8 symptomatic and 5 asymptomatic) were collected from two tomato fields in La Cruz de Elota and Culiacán. Molecular analysis confirmed the presence of ‘*Ca. L. solanacearum*’ (Munyanza *et al.*, 2009a).

**Source:** Munyanza JE, Sengoda VG, Crosslin JM, Garzón-Tiznado JA, Cardenas-Valenzuela OG (2009a) First report of ‘*Candidatus Liberibacter solanacearum*’ in pepper plants in Mexico. *Plant Disease* 93(10), p 1076.

Munyanza JE, Sengoda VG, Crosslin JM, Garzón-Tiznado JA, Cardenas-Valenzuela OG (2009b) First report of ‘*Candidatus Liberibacter solanacearum*’ in tomato plants in Mexico. *Plant Disease* 93(10), p 1076.

**Additional key words:** detailed record, host plant

**Computer codes:** LIBEPS, MX

**2010/083 ‘Candidatus Liberibacter solanacearum’ detected on tomato crops in Colorado (US)**

In 2002, glasshouse tomato growers from Fort Lupton in Colorado (US) noticed symptoms resembling those of ‘psyllid yellows’ caused by *Bactericera cockerelli* (vector of ‘*Ca. Liberibacter solanacearum*’ - EPPO Alert List). Symptoms appeared approximately 6 weeks after the first psyllids were observed in the crops. Symptoms usually began with retarded growth, erectness of new growth, chlorosis and purpling of leaves, followed by an overall chlorosis and production of many small, poor-quality fruits. Samples from symptomatic and

asymptomatic plants were collected in September and December 2002. These samples have been stored (in RNAlater bottles) for 6 years, and tested later to verify the possible presence of ‘*Ca. Liberibacter solanacearum*’. Results clearly indicated that the symptoms of psyllid yellows observed in Colorado in 2002 were associated with the presence of ‘*Ca. Liberibacter solanacearum*’\* in glasshouse tomato crops.

\* In their studies McKenzie *et al.* have used the other name ‘*Ca. L. psyllauros*’. It is not entirely clear whether ‘*Ca. L. solanacearum*’ and ‘*Ca. L. psyllauros*’ correspond to the same pathogen, but for simplification the EPPO Secretariat has chosen to consider them as synonymous.

**Source:** McKenzie CL, Shatters Jr RG (2009) First report of ‘*Candidatus Liberibacter psyllauros*’ associated with psyllid yellows of tomato in Colorado. *Plant Disease* 93(10), p 1074.

**Additional key words:** detailed record, host plant

**Computer codes:** LIBEPS, US

### 2010/084 Details on quarantine pests in Spain: 2008 situation

The magazine ‘Phytoma-España’ presented the phytosanitary situation of the main crops in each region of Spain (except Comunidad Valenciana) for the year 2008. The EPPO Secretariat has extracted the following information on the presence of several quarantine pests or pests of the Alert List.

***Bemisia tabaci*** (Homoptera: Aleyrodidae - EPPO A2 List): Andalucía, Cataluña, País Vasco.

***Ceratitis capitata*** (Diptera: Tephritidae - EPPO A2 List): Andalucía, Aragón, Baleares, Cataluña, Extremadura, La Rioja, Murcia.

***Chrysomphalus aonidum*** (Hemiptera: Diaspididae): Baleares (first found in 2008 in Mallorca on ornamental citrus).

***Clavibacter michiganensis* subsp. *michiganensis*** (EPPO A2 List): Aragón (in tomato fields).

***Ctenarytaina spatulata*** (Hemiptera: Psyllidae - formerly EPPO Alert List): Asturias.

**Cucumber vein yellowing virus (*Ipomovirus* - EPPO A2 List):** Andalucía.

***Cucurbit yellow stunting disorder virus (Crinivirus - EPPO A2 List):*** Andalucía.

***Erwinia amylovora*** (EPPO A2 List): Castilla y León, La Rioja, País Vasco (1 outbreak on *Cotoneaster*). In all cases, eradication measures were applied and all infected trees were destroyed.

***Eutetranychus orientalis*** (Acari: Tetranychidae - EPPO A2 List): Andalucía, Murcia.

***Frankliniella occidentalis*** (Thysanoptera: Thripidae - EPPO A2 List): Andalucía, Castilla-La Mancha, Cataluña, Extremadura, Murcia, Navarra.

***Gibberella circinata*** (anamorph *Fusarium circinatum* - EPPO A2 List): País Vasco (found in 1 nursery, and on *P. radiata* in forests).

*Globodera rostochiensis* and *G. pallida* (EPPO A2 List): outbreaks were observed in Islas Baleares.

*Grapevine flavescence dorée phytoplasma* (EPPO A2 List): Cataluña (not found since 2004 in Alt Empordá, isolated cases remain in Baix Empordá).

*Gonipterus scutellatus* (Coleoptera: Curculionidae - EPPO A2 List): Asturias (under biological control).

*Helicoverpa armigera* (Lepidoptera: Noctuidae - EPPO A2 List): Andalucía, Asturias, Cataluña, Extremadura, Navarra.

*Paysandisia archon* (Lepidoptera: Castniidae - EPPO A2 List): Baleares (Mallorca, Menorca), Cataluña.

*Pepino mosaic virus* (*Potexvirus* - EPPO Alert List): Cataluña, Murcia.

*Pezothrips kellyanus* (formerly EPPO Alert List): Cataluña (first found in 2008).

*Plum pox virus* (*Potyvirus* - EPPO A2 List): Murcia.

*Ralstonia solanacearum* (EPPO A2 List): Castilla y León (6 positive samples on ware potatoes).

*Rhynchophorus ferrugineus* (Coleoptera: Curculionidae - EPPO A2 List): Baleares (Ibiza, Mallorca), Cataluña.

*Spodoptera littoralis* (Lepidoptera: Noctuidae - EPPO A2 List): Andalucía (low impact on cotton).

*Tomato spotted wilt virus* (*Tospovirus* - EPPO A2 List): Andalucía, Cataluña, País Vasco, Murcia, Navarra.

*Tomato yellow leaf curl virus* (*Begomovirus* - EPPO A2 List): Andalucía, Cataluña, Murcia.

*Tomato torrado virus* (EPPO Alert List): Cataluña, Murcia (low incidence).

*Toxoptera citricidus* (Homoptera: Aphididae - EPPO A1 List): Asturias (found on the coastal area where citrus are grown).

*Tuta absoluta* (Lepidoptera: Gelechiidae - EPPO A2 List): Andalucía, Aragón, Baleares (all islands), Cataluña, Castilla-La Mancha, Extremadura, Murcia, Navarra, País Vasco.

*Unaspis yanonensis* (Hemiptera: - Diaspididae - formerly EPPO A2 List): Cataluña (first found in January 2003 in Castello d'Euries, province of Girona, now also present in the province of Barcelona).

*Xanthomonas axonopodis* pv. *pruni* (EPPO A2 List): Aragón (found for the first time in August 2008 in one commercial orchard, surveys and eradication are under way), Cataluña (2 cases, under eradication).

*Xanthomonas fragariae* (EPPO A2 List): Andalucía (low incidence).

***Xanthomonas vesicatoria* (EPPO A2 List): Navarra (on capsicum).**

**Source:** Anonymous (2009) Incidencia de plagas y enfermedades en las Comunidades Autónomas en 2008.  
*Phytoma-España* no. 207, 14-50.  
*Phytoma-España* no. 208, 36-62.  
*Phytoma-España* no. 209, 44-52.  
*Phytoma-España* no. 210, 50-55.

**Additional key words:** new record, detailed records

**Computer codes:** BEMITA, CERTCA, CHRYFI, CORBMI, CTNRST, CVYV00, CYSDV0, ERWIAM, EUTEOR, FRANOC, GIBBCI, GNORAB, GONPSC, HELIAR, HETDPA, HETDRO, PAYSAR, PEPMV0, PEZTKE, PHYP64, PPV000, PSDMSO, RHYCFE, SPODLI, TOTV00, TOXOCI, TSWV00, TYLCV0, UNASYA, XANTFR, XANTPR, XANTVE, ES

**2010/085 *Nysius huttoni* found in the United Kingdom**

In September 2007, *Nysius huttoni* (Heteroptera: Lygaeidae - EPPO Alert List) was found for the first time in the United Kingdom. *N. huttoni* was observed in 4 sites along the Suffolk coast, in natural environments (North Warren and Minsmere reserves, Sizewell, Southwold). The habitat favoured by this bug was sparsely vegetated sandy soil with *Rumex acetosella* (Sheep's sorrel). In 2009, *N. huttoni* was also observed in Essex. No particular damage to plants was noticed.

**Source:** Bowdrey J (2009) *Nysius huttoni* spreading. *Het News* no.14, p 14. Available online: [http://www.hetnews.org.uk/pdfs/Issue%2014\\_Autumn%202009\\_966kb.pdf](http://www.hetnews.org.uk/pdfs/Issue%2014_Autumn%202009_966kb.pdf)

Cuming N (2008) New to British Isles: *Nysius huttoni* White, 1878. *Het News* no.11, p 10. Available online: [http://www.hetnews.org.uk/pdfs/Issue%2011\\_Spring%202008\\_1667Kb.pdf](http://www.hetnews.org.uk/pdfs/Issue%2011_Spring%202008_1667Kb.pdf)

INTERNET (last retrieved in 2010-01)  
 The Suffolk biological records centre. *Nysius huttoni* by N. Cuming (October 2008)  
<http://www.boxvalley.co.uk/nature/sns/wad70/w70-sbrc.asp>

**Additional key words:** new record

**Computer codes:** NYSIHU, GB

**2010/086 Situation of *Nysius huttoni* in Belgium and first record in France**

In 2002, the presence of *Nysius huttoni* (Heteroptera: Lygaeidae - EPPO Alert List) was observed for the first time in Belgium and the Netherlands. It is suspected that this polyphagous bug has been introduced from New Zealand via imports of apple and kiwi fruits. In Belgium, *N. huttoni* is now present across the entire region of Flanders (except Limburg), and it also occurs in the Walloon region (provinces of Hainaut and Brabant). In infested areas, no crop damage has been reported. The insect was mainly found in dry and sparsely vegetated habitats, and only 14% of these sites were located near agricultural fields. In addition to Belgium, the presence of *N. huttoni* is also reported from the Northern France. Several specimens were collected from Comines, Wervicq-Sud and Halluin (Nord département) in 2006.

**Source:** Aukema B, Bruers JM, Viskens GM (2007) [New and rare Belgian bugs II (Hemiptera: Heteroptera)]. *Bulletin de la Société royale belge d'Entomologie* **143**, 83-89 (in Dutch).

Bonte J, Casteels H, de Clercq P, Maes M (2009) Occurrence, ecology, impact and management of *Nysius huttoni* in Belgium (NYSHUT). Abstract of a paper presented at the 6<sup>th</sup> International Symposium on Crop Protection (Gent, BE, 2009-05-19).

Bonte J, Casteels H, Maes M, De Clercq P (2010) Occurrence, ecology and potential impact of the New Zealand wheat bug *Nysius huttoni* White (Hemiptera: Lygaeidae) in Belgium. *Bulletin OEPP/EPPO Bulletin* (in press).

**Additional key words:** detailed record, new record

**Computer codes:** NYSIHU, BE, FR

### 2010/087 *Diuraphis noxia* does not occur in the United Kingdom

The presence of *Diuraphis noxia* in the United Kingdom was erroneously mentioned in the EPPO database PQR (currently under revision). The source of this record was an old datasheet (USDA, 1963). The datasheet did not provide any reference to substantiate this record, but it is now supposed that it might have been a paper written by Stroyan in 1950 on 'recent additions to the British Aphid Fauna' which included *Cuernavaca noxius* (the old name of *D. noxia*). It is likely that the species found was actually *Cuernavaca muehlei* with which *D. noxia* was once incorrectly synonymised. In later publications about the British aphid fauna, as well as in the two editions of 'Aphids on the World's Crops (Blackman and Eastop, 2000 and 2006), *D. noxia* is not listed as being present in the United Kingdom. Finally, *D. noxia* has never been caught in suction traps of the 'Rothamsted Insect Survey'. It is now considered that this old record is erroneous and that *D. noxia* is absent from the United Kingdom.

**Source:** Personal communication with Dr Bishop, Fera (2010-04).

Blackman RL, Eastop VF (2006) Aphids on the World's. Herbaceous plants and shrubs. Volume 2: The Aphids. The Natural History Museum, London.

Blackman RL, Eastop VF (2000) Aphids on the World's Crops - An Identification and Information guide. Wiley, 466 pp.

USDA (1963) Insects not known to occur in the United States. Cooperative Economic Insect Report, Vol. 2 (July to December) p 1357.

**Additional key words:** absence, denied record

**Computer codes:** BRAYNO, GB

### 2010/088 EPPO report on notifications of non-compliance

The EPPO Secretariat has gathered below the notifications of non-compliance for 2009 received since the previous report (EPPO RS 2009/201). Notifications have been sent directly to EPPO by Israel, and via Europhyt for the EU countries. 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
<b>Acari</b>	<i>Malus</i>	Fruits	Hungary	Israel	1
	<i>Malus</i>	Fruits	USA	Israel	1
<b>Acinetobacter calcoaceticus</b>	-	Pollen	Slovakia	Israel	1
<b>Agromyzidae</b>	<i>Dendrobium</i>	Cut flowers	Thailand	Switzerland	1
	<i>Eryngium foetidum</i> , <i>Ocimum basilicum</i>	Vegetables	Thailand	France	1
	<i>Ocimum basilicum</i>	Vegetables	Thailand	France	1
	<i>Ocimum basilicum</i>	Vegetables	Thailand	France	1
<b>Aleyrodidae</b>	<i>Apium graveolens</i>	Vegetables	Thailand	France	1
<b>Alternaria brassicicola</b>	<i>Brassica</i>	Seeds	Italy	Israel	1
<b>Ambrosia</b>	<i>Zea mays</i>	Stored products	Russia	Israel	1
	<i>Zea mays</i>	Stored products	Ukraine	Israel	1
	<i>Zea mays</i>	Stored products	USA	Israel	1
<b>Aphididae</b>	<i>Primula</i>	Pot plants	Netherlands	Israel	1
<b>Arhopalus rusticus</b>	Unspecified	Dunnage	Unknown origin	Israel	1
<b>Ascaris</b>	-	Soil and growing medium (peat)	Ireland	Israel	1
<b>Ascochyta fabae</b>	<i>Vicia faba</i>	Seeds	Spain	Israel	1
<b>Aspergillus flavus</b>	-	Stored products (hay)	USA	Israel	1
<b>Bemisia</b>	<i>Erysimum</i>	Plants for planting	Israel	United Kingdom	1
	<i>Euphorbia pulcherrima</i>	Plants for planting	Germany	United Kingdom	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Israel	Czech Republic	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Israel	Switzerland	2
<b>Bemisia tabaci</b>	<i>Artemisia dracunculus</i>	Plants for planting	Israel	United Kingdom	4
	<i>Dipladenia</i>	Plants for planting	Belgium	United Kingdom	1
	<i>Dipladenia</i>	Plants for planting	Netherlands	United Kingdom	2
	<i>Dipladenia</i>	Plants for planting	Portugal	United Kingdom	1
	<i>Duranta</i>	Plants for planting	Portugal	United Kingdom	1
	<i>Eryngium foetidum</i>	Vegetables	Thailand	France	20
	<i>Eryngium foetidum</i> , <i>Ocimum basilicum</i>	Vegetables	Thailand	France	4
	<i>Erysimum</i>	Plants for planting	Israel	United Kingdom	2
	<i>Euphorbia pulcherrima</i>	Cuttings	Denmark*	United Kingdom	1
	<i>Euphorbia pulcherrima</i>	Plants for planting	Germany	Finland	4
	<i>Euphorbia pulcherrima</i>	Plants for planting	Germany	Ireland	2
	<i>Euphorbia pulcherrima</i>	Cuttings	Germany	United Kingdom	3
	<i>Euphorbia pulcherrima</i>	Plants for planting	Germany	United Kingdom	5
	<i>Euphorbia pulcherrima</i>	Plants for planting	Netherlands	Ireland	1
	<i>Euphorbia pulcherrima</i>	Cuttings	Netherlands	United Kingdom	2
	<i>Euphorbia pulcherrima</i>	Cuttings	Sweden	United Kingdom	1
<i>Eustoma</i>	Cut flowers	Israel	Netherlands	1	

Pest	Consignment	Type of commodity	Country of origin	Destination	nb	
<b>B ; tabaci (cont.)</b>	<i>Hemigraphis</i>	Plants for planting	Singapore	United Kingdom	1	
	<i>Hibiscus</i>	Plants for planting	Belgium	United Kingdom	2	
	<i>Hibiscus</i>	Plants for planting	Netherlands	United Kingdom	4	
	<i>Hibiscus rosa-sinensis</i>	Plants for planting	Netherlands	United Kingdom	1	
	<i>Hygrophila</i>	Plants for planting	Singapore	France	1	
	<i>Hygrophila salicifolia</i>	Plants for planting	Singapore	United Kingdom	1	
	<i>Hypericum</i>	Cut flowers	Ecuador*	Sweden	1	
	<i>Hypericum androsaemum</i>	Cut flowers	Netherlands	United Kingdom	3	
	<i>Lantana</i>	Plants for planting	Italy	United Kingdom	1	
	<i>Limnophila aromatica</i>	Vegetables	Sri Lanka	France	1	
	<i>Lisianthus</i>	Cuttings	Netherlands	United Kingdom	1	
	<i>Mandevilla</i>	Cuttings	Spain (Canary Isl.)	Switzerland	1	
	<i>Mandevilla</i>	Plants for planting	Spain (Canary Isl.)	Switzerland	1	
	<i>Manihot esculenta</i>	Vegetables	Congo	France	3	
	<i>Mentha</i>	Cuttings	Israel	United Kingdom	1	
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Israel	France	5	
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Israel	Ireland	2	
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Israel	Switzerland	1	
	<i>Ocimum sanctum</i>	Vegetables (leaves)	Thailand	France	3	
	<i>Pelargonium</i>	Plants for planting	Israel	United Kingdom	1	
	<i>Polygonum odoratum</i>	Vegetables (leaves)	Vietnam	France	1	
	<i>Solidago</i>	Cut flowers	Israel	France	1	
	<i>Solidago</i>	Cut flowers	Israel	Switzerland	1	
	<i>Solidago</i>	Cut flowers	Netherlands	Ireland	1	
	Unspecified	Cuttings	Israel	United Kingdom	1	
	<b>Bemisia tabaci, Heliothis</b>	<i>Ocimum basilicum</i>	Vegetables (leaves)	Israel	Czech Republic	1
	<b>Bemisia tabaci, Liriomyza</b>	<i>Ocimum basilicum</i>	Vegetables (leaves)	Israel	Ireland	1
<b>Bemisia tabaci, Thrips palmi</b>	<i>Solanum macrocarpon</i>	Vegetables	Surinam	Netherlands	1	
<b>Brachiaria humidicola</b>	<i>Chloris gayana</i>	Seeds	Australia	Israel	1	
<b>Cadra cautella</b>	<i>Helianthus annuus</i>	Stored products	Egypt	Israel	1	
	<i>Tamarindus indica</i>	Stored products	Thailand	Israel	1	
<b>Carnation mottle virus</b>	<i>Dianthus</i>	Cuttings	Italy	Israel	1	
	<i>Dianthus</i>	Cuttings	Netherlands	Israel	1	
	<i>Dianthus</i>	Cuttings	Spain	Israel	1	
<b>Carposinidae</b>	<i>Syzygium</i>	Fruits	India	United Kingdom	1	
<b>Cerastium semidecandrum</b>	<i>Chloris gayana</i>	Seeds	Australia	Israel	1	
<b>Chenopodium</b>	<i>Petroselinum crispum</i>	Seeds	France	Israel	1	
<b>Chenopodium hybridum</b>	<i>Anethum graveolens</i>	Seeds	France	Israel	1	
<b>Cheyletidae</b>	<i>Coffea</i>	Stored products	Congo	Israel	1	
<b>Chironomidae</b>	-	Soil and growing medium (peat)	Ireland	Israel	1	
<b>Chrysanthemum stunt viroid</b>	<i>Chrysanthemum</i>	Plants for planting	Netherlands	United Kingdom	1	
<b>Citrus tristeza virus</b>	<i>Citrus</i>	Plants for planting	Spain	Portugal	1	

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<b>Clavibacter michiganensis</b> <b>subsp. michiganensis</b>	<i>Lycopersicon esculentum</i>	Seeds	India	France	1
	<i>Lycopersicon esculentum</i>	Seeds	Thailand	France	1
<b>Clavibacter michiganensis</b> <b>subsp. sepedonicus</b>	<i>Solanum tuberosum</i>	Ware potatoes	Germany	Netherlands	1
<b>Claviceps</b>	<i>Petroselinum crispum</i>	Seeds	France	Israel	1
<b>Claviceps purpurea</b>	<i>Lolium</i>	Seeds	USA	Israel	1
<b>Colletotrichum gloeosporioides</b>	<i>Medicago sativa</i>	Stored products	USA	Israel	1
<b>Comamonas acidovorans</b>	-	Stored products (hay)	USA	Israel	1
<b>Corynesporasca</b>	<i>Ocimum</i>	Vegetables (leaves)	Thailand	Germany	1
<b>Crepis capillaris</b>	<i>Thymus vulgaris</i>	Seeds	Netherlands	Israel	1
<b>Cuscuta</b>	<i>Coriandrum sativum</i>	Seeds	Italy	Israel	1
	<i>Foeniculum</i>	Seeds	Italy	Israel	1
	<i>Ocimum basilicum</i>	Seeds	USA	Israel	1
	<i>Petroselinum crispum</i>	Seeds	Italy	Israel	1
<b>Diaphania indica</b>	<i>Momordica</i>	Vegetables	Kenya	United Kingdom	1
<b>Digitaria eriantha</b>	<i>Chloris gayana</i>	Seeds	Australia	Israel	1
<b>Dreschlera</b>	<i>Lolium</i>	Seeds	USA	Israel	1
<b>Erwinia carotovora</b>	<i>Brassica oleracea</i> var. <i>capitata</i> f. <i>alba</i>	Vegetables	Netherlands	Israel	1
<b>Euchrysops cnejus, Maruca</b> <b>vitrata</b>	<i>Dolichos lablab</i>	Vegetables	Bangladesh	Germany	1
<b>Fallopia convolvulus</b>	<i>Beta vulgaris</i>	Seeds	Germany	Israel	1
	<i>Beta vulgaris</i>	Seeds	Italy	Israel	3
	<i>Brassica oleracea</i> var. <i>botrytis</i>	Seeds	Italy	Israel	1
	<i>Coriandrum sativum</i>	Seeds	Italy	Israel	1
	<i>Fagopyrum</i>	Stored products	Ukraine	Israel	1
	<i>Hordeum</i>	Stored products	Russia	Israel	1
	<i>Hordeum</i>	Stored products	Ukraine	Israel	2
	<i>Raphanus sativus</i>	Seeds	Netherlands	Israel	1
	<i>Spinacia oleracea</i>	Seeds	Japan	Israel	1
	<i>Spinacia oleracea</i>	Seeds	USA	Israel	1
	<i>Triticum</i>	Stored products	Hungary	Israel	1
	<i>Triticum</i>	Stored products	Moldova	Israel	1
	<i>Triticum</i>	Stored products	Russia	Israel	6
	<i>Triticum</i>	Stored products	Ukraine	Israel	16
<i>Triticum</i>	Stored products	USA	Israel	1	
<b>Frankliniella occidentalis</b>	<i>Euphorbia</i>	Pot plants	Netherlands	Israel	1
<b>Fusarium oxysporum</b>	<i>Lycopersicon esculentum</i>	Seeds	Netherlands	Israel	2

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<i>Fusarium solani</i>	-	Stored products (hay)	USA	Israel	1
<i>Galeopsis tetrahit</i>	<i>Spinacia oleracea</i>	Seeds	USA	Israel	1
Gelechiidae	<i>Lycopersicon esculentum</i>	Fruits	Spain	United Kingdom	1
<i>Globodera pallida</i>	<i>Solanum tuberosum</i>	Ware potatoes	Italy	Lithuania	4
<i>Globodera rostochiensis</i>	<i>Solanum tuberosum</i>	Ware potatoes	Cyprus	Ireland	1
	<i>Solanum tuberosum</i>	Ware potatoes	Italy	Ireland	9
<i>Guignardia</i>	<i>Citrus reticulata</i>	Fruits	South Africa	Netherlands	2
<i>Guignardia citricarpa</i>	<i>Citrus limon</i>	Fruits	Argentina	Netherlands	1
	<i>Citrus limon</i>	Fruits	South Africa	United Kingdom	1
	<i>Citrus sinensis</i>	Fruits	Brazil	Belgium	2
	<i>Citrus sinensis</i>	Fruits	Brazil	United Kingdom	2
<i>Helicotylenchus dihystra</i> , <i>Tylenchorhynchus</i>	Unspecified	Plants for planting	China	United Kingdom	1
<i>Helicoverpa armigera</i>	<i>Pisum sativum</i>	Vegetables	Kenya	Ireland	1
<i>Heliothis</i>	<i>Annona squamosa</i>	Fruits	Thailand	Germany	1
<i>Hirschmanniella</i>	<i>Vallisneria</i>	Plants for planting	Singapore	France	2
<i>Leptinotarsa decemlineata</i>	<i>Spinacia oleracea</i>	Vegetables (leaves)	Portugal	United Kingdom	1
<i>Leptosphaeria maculans</i>	<i>Brassica</i>	Seeds	Italy	Israel	1
	<i>Brassica oleracea</i> var. <i>caulorapa</i>	Seeds	USA	Israel	2
<i>Leucinodes orbonalis</i>	<i>Solanum aethiopicum</i>	Vegetables	Ghana	Germany	1
	<i>Solanum melongena</i>	Vegetables	Thailand	Luxemburg	1
<i>Liriomyza</i>	<i>Apium graveolens</i>	Vegetables	Thailand	Czech Republic	1
	<i>Apium graveolens</i>	Vegetables	Thailand	Denmark	2
	<i>Chrysanthemum</i>	Cut flowers	Colombia	United Kingdom	1
	<i>Coriandrum sativum</i>	Vegetables	Israel	France	1
	<i>Eryngium foetidum</i> , <i>Ocimum sanctum</i>	Vegetables	Thailand	France	1
	<i>Ocimum americanum</i> , <i>Ocimum basilicum</i>	Vegetables (leaves)	Thailand	France	1
	<i>Ocimum americanum</i>	Vegetables (leaves)	Thailand	France	2
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Thailand	France	16
	<i>Trigonella</i>	Vegetables (leaves)	India	France	1
<i>Liriomyza huidobrensis</i>	<i>Chrysanthemum</i>	Cut flowers	Colombia	United Kingdom	1
	<i>Eryngium</i>	Cut flowers	Kenya	Netherlands	2
	<i>Gypsophila</i>	Cut flowers	Ecuador	Netherlands	2
	<i>Gypsophila</i>	Cut flowers	Kenya	Netherlands	2
<i>Liriomyza huidobrensis</i> , <i>Liriomyza sativae</i>	<i>Eryngium</i>	Cut flowers	Kenya	Netherlands	1

<b>Pest</b>	<b>Consignment</b>	<b>Type of commodity</b>	<b>Country of origin</b>	<b>Destination</b>	<b>nb</b>
<b><i>Liriomyza sativae</i></b>	<i>Ocimum basilicum</i>	Vegetables (leaves)	Thailand	France	4
<b><i>Liriomyza sativae, Liriomyza trifolii</i></b>	<i>Ocimum</i>	Vegetables (leaves)	Ethiopia	United Kingdom	1
	<i>Ocimum basilicum</i>	Vegetables (leaves)	Ethiopia	United Kingdom	1
<b><i>Liriomyza trifolii</i></b>	<i>Apium</i>	Vegetables	Thailand*	Netherlands	1
	<i>Apium graveolens</i>	Vegetables	Thailand*	Denmark	2
	<i>Apium graveolens</i>	Vegetables	Thailand*	Netherlands	1
	<i>Apium graveolens</i>	Vegetables	Thailand*	Sweden	1
	<i>Gypsophila</i>	Cut flowers	Israel	Netherlands	1
<b><i>Meloidogyne</i></b>	<i>Livistona</i>	Plants for planting	USA	Belgium	1
	<i>Trachycarpus fortunei</i>	Plants for planting	China	France	1
<b><i>Meloidogyne incognita</i></b>	<i>Zingiber officinale</i>	Tubers	China	Israel	1
<b><i>Myrothecium roridum</i></b>	<i>Brassica oleracea</i> var. <i>capitata</i> f. <i>alba</i>	Vegetables	Netherlands	Israel	1
<b><i>Myzus ascalonicus</i></b>	<i>Sempervivum</i>	Pot Plants	Netherlands	Israel	1
<b><i>Opogona sacchari</i></b>	<i>Cycas revoluta</i>	Plants for planting	Unknown origin	Netherlands	1
<b><i>Oribatidae, Eulophidae ?</i></b>	<i>Malus</i>	Fruits	Italy	Israel	1
<b><i>Penicillium</i></b>	-	Stored products (hay)	USA	Israel	1
<b><i>Pepino mosaic virus</i></b>	<i>Lycopersicon esculentum</i>	Fruits	Belgium	Poland	1
	<i>Lycopersicon esculentum</i>	Fruits	France	Poland	2
	<i>Lycopersicon esculentum</i>	Fruits	Italy	Poland	1
	<i>Lycopersicon esculentum</i>	Fruits	Netherlands	Austria	1
	<i>Lycopersicon esculentum</i>	Fruits	Netherlands	Poland	12
	<i>Lycopersicon esculentum</i>	Plants for planting	Netherlands	Poland	1
	<i>Lycopersicon esculentum</i>	Fruits	Netherlands	United Kingdom	1
	<i>Lycopersicon esculentum</i>	Fruits	Spain	Poland	4
	<i>Lycopersicon esculentum</i>	Fruits	Spain	United Kingdom	1
<b><i>Persicaria maculosa</i></b>	<i>Anethum graveolens</i>	Seeds	France	Israel	1
	<i>Spinacia oleracea</i>	Seeds	USA	Israel	1
<b><i>Phylloxera quercus</i></b>	<i>Quercus ilex</i>	Plants for planting	Italy	United Kingdom	1
<b><i>Phytophthora ramorum</i></b>	<i>Camellia</i>	Plants for planting	France	United Kingdom	1
	<i>Pieris</i>	Plants for planting	Netherlands	United Kingdom	1
	<i>Pieris japonica</i>	Plants for planting	Netherlands	United Kingdom	1
	<i>Pieris, Rhododendron japonicum</i>	Plants for planting	Germany	Slovenia	1
	<i>Rhododendron</i>	Plants for planting	France	United Kingdom	1
	<i>Rhododendron</i>	Plants for planting	Germany	Denmark	1
	<i>Rhododendron</i>	Plants for planting	Germany	United Kingdom	1
	<i>Rhododendron</i>	Plants for planting	Netherlands	Slovenia	1
	<i>Rhododendron</i>	Plants for planting	Netherlands	United Kingdom	2
	<i>Rhododendron catawbiense</i>	Plants for planting	Denmark	Finland	1
	<i>Rhododendron catawbiense</i>	Plants for planting	Germany	Finland	1
	<i>Rhododendron ponticum</i>	Plants for planting	Netherlands	United Kingdom	1
	<i>Viburnum tinus</i>	Plants for planting	Italy	United Kingdom	1

<b>Pest</b>	<b>Consignment</b>	<b>Type of commodity</b>	<b>Country of origin</b>	<b>Destination</b>	<b>nb</b>
<i>Plum pox virus</i>	<i>Prunus domestica</i>	Plants for planting	Germany	Netherlands	1
<i>Polygonum argyrocoleon</i>	<i>Ocimum basilicum</i>	Seeds	USA	Israel	1
<b>Pseudococcidae</b>	<i>Annona</i>	Fruits	India	Germany	3
<i>Pseudomonas cichorii</i>	<i>Brassica oleracea var. capitata f. alba</i>	Vegetables	Netherlands	Israel	1
<b>Psocoptera</b>	<i>Coffea</i>	Stored products	Congo	Israel	1
<i>Pythium</i>	-	Stored products (hay)	USA	Israel	1
<i>Quadraspidiotus perniciosus</i>	<i>Malus</i>	Fruits	France	Israel	1
<i>Radopholus similis</i>	<i>Scindapsus</i>	Plants for planting	Sri Lanka	Netherlands	1
<i>Ralstonia solanacearum</i>	<i>Solanum melongena</i>	Seeds	Netherlands	Israel	1
	<i>Solanum melongena</i>	Seeds	Thailand	Israel	1
	<i>Solanum tuberosum</i>	Ware potatoes	Greece	Czech Republic	1
<i>Rhizoctonia solani</i>	-	Stored products (hay)	USA	Israel	1
<i>Rhizopus</i>	-	Stored products (hay)	USA	Israel	1
<i>Rumex acetosella</i>	<i>Thymus vulgaris</i>	Seeds	Netherlands	Israel	1
<b>Scatopsidae</b>	<i>Allium cepa</i>	Vegetables	Netherlands	Israel	3
<i>Sclerotinia sclerotiorum</i>	<i>Brassica campestris</i>	Seeds	Italy	Israel	1
	<i>Coriandrum sativum</i>	Stored products	Ukraine	Israel	1
	<i>Petroselinum crispum</i>	Seeds	France	Israel	1
	<i>Raphanus sativus</i>	Seeds	USA	Israel	1
<i>Setaria palmifolia</i>	<i>Chloris gayana</i>	Seeds	Australia	Israel	1
<i>Sitotroga cerealella</i>	<i>Sorghum</i>	Stored products	Hungary	Israel	1
<i>Spodoptera littoralis</i>	<i>Rosa</i>	Cut flowers	Zimbabwe	Netherlands	1
<i>Spodoptera litura</i>	<i>Rosa</i>	Cut flowers	India	Netherlands	3
	<i>Rosa</i>	Cut flowers	India	United Kingdom	1
<i>Stenocarpella maydis</i>	<i>Zea mays</i>	Seeds	USA	Israel	1
<i>Sternochetus mangiferae</i>	<i>Mangifera indica</i>	Fruits	India	Sweden	1
<i>Thrips palmi</i>	<i>Dendrobium</i>	Cut flowers	Thailand	Belgium	1
	<i>Dendrobium</i>	Cut flowers	Thailand	France	1
	<i>Dendrobium</i>	Cut flowers	Thailand	Netherlands	2
	<i>Mangifera, Momordica charantia, Solanum melongena</i>	Fruits and vegetables	Surinam	Netherlands	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<b>T ; palmi (cont.)</b>	<i>Mangifera, Momordica, Solanum melongena</i>	Fruits and vegetables	Surinam	Netherlands	1
	<i>Mangifera, Solanum melongena</i>	Fruits and vegetables	Surinam	Netherlands	1
	<i>Solanum melongena</i>	Vegetables	Surinam	Netherlands	1
<b>Thrips palmi, Dacus</b>	<i>Momordica</i>	Vegetables	Ghana	United Kingdom	1
<b>Thysanoptera</b>	<i>Dendrobium</i>	Cut flowers	Thailand	Switzerland	6
	<i>Momordica charantia</i>	Vegetables	Thailand	France	3
	<i>Momordica charantia, Solanum melongena</i>	Vegetables	Thailand	France	1
	<i>Ocimum sanctum</i>	Vegetables (leaves)	Thailand	France	3
	<i>Ocimum sanctum, Solanum melongena</i>	Fruits and vegetables	Thailand	France	1
	<i>Orchidaceae</i>	Cut flowers	Thailand	Switzerland	2
	<i>Solanum melongena</i>	Vegetables	Dominican Rep.	Switzerland	3
	<i>Solanum melongena</i>	Vegetables	Sri Lanka	France	1
	<i>Solanum melongena</i>	Vegetables	Thailand	France	4
<b>Tobamoviruses</b>	<i>Lycopersicon esculentum</i>	Seeds	Netherlands	Israel	1
<b>Tomato apical stunt viroid</b>	<i>Lycopersicon esculentum</i>	Seeds	USA*	Israel	1
<b>Trichoderma</b>	-	Stored products (hay)	USA	Israel	1
<b>Tuta absoluta</b>	<i>Lycopersicon esculentum</i>	Fruits	Italy	United Kingdom	1
	<i>Lycopersicon esculentum</i>	Fruits	Spain	Netherlands	1
	<i>Lycopersicon esculentum</i>	Fruits	Spain	United Kingdom	7
	<i>Lycopersicon esculentum</i>	Plants for planting	Spain	United Kingdom	1
<b>Xanthomonas</b>	<i>Euphorbia pulcherrima</i>	Plants for planting	Germany	United Kingdom	1
<b>Xanthomonas axonopodis pv. citri</b>	<i>Citrus</i>	Fruits	Bangladesh	United Kingdom	2
	<i>Citrus aurantifolia</i>	Fruits	Bangladesh	United Kingdom	3
	<i>Citrus aurantifolia</i>	Fruits	Pakistan	United Kingdom	1
	<i>Citrus aurantifolia, Prunus armeniaca</i>	Fruits	Pakistan	United Kingdom	1
	<i>Citrus, Momordica, Solanum melongena</i>	Fruits and vegetables	Bangladesh	United Kingdom	1
<b>Xanthomonas axonopodis pv. phaseoli</b>	<i>Phaseolus vulgaris</i>	Seeds	Tunisia	France	1
<b>Xiphinema</b>	-	Soil and growing medium	Surinam	Netherlands	1
	<i>Vitis vinifera</i>	Plants for planting	Turkey	Germany	1
<b>Zonitoides arboreus</b>	<i>Nertera</i>	Pot plants	Netherlands	Israel	1

• **Fruit flies**

<b>Pest</b>	<b>Consignment</b>	<b>Country of origin</b>	<b>Destination</b>	<b>nb</b>
<b>Anastrepha</b>	<i>Mangifera</i>	Dominican Rep.	United Kingdom	1
	<i>Mangifera indica</i>	Dominican Rep.	United Kingdom	1
<b>Anastrepha obliqua</b>	<i>Mangifera indica</i>	Dominican Rep.	Netherlands	1
	<i>Mangifera indica</i>	Dominican Rep.	United Kingdom	1
<b>Bactrocera</b>	<i>Mangifera indica</i>	Cameroon	Switzerland	1
	<i>Mangifera indica</i>	Pakistan	United Kingdom	1
	<i>Mangifera indica</i>	Senegal	Belgium	1
	<i>Mangifera indica</i>	Togo	France	1
	<i>Psidium</i>	Thailand	United Kingdom	1
<b>Bactrocera correcta</b>	<i>Syzygium samarangense</i>	Thailand	Switzerland	1
<b>Bactrocera dorsalis</b>	<i>Annona muricata</i>	Vietnam	France	5
	<i>Annona muricata, Annona squamosa, Mangifera indica</i>	Vietnam	France	1
	<i>Annona squamosa</i>	Thailand	France	2
	<i>Capsicum annuum, Syzygium samarangense</i>	Thailand	France	1
	<i>Mangifera</i>	Pakistan	United Kingdom	1
	<i>Mangifera indica</i>	India	France	6
	<i>Mangifera indica</i>	India	United Kingdom	1
	<i>Mangifera indica</i>	Pakistan	France	2
	<i>Mangifera indica</i>	Thailand	France	1
	<i>Psidium guajava</i>	Thailand	France	1
<i>Syzygium samarangense</i>	Thailand	France	1	
<b>Bactrocera invadens</b>	<i>Mangifera indica</i>	Cameroon	France	1
	<i>Mangifera indica</i>	Mali	France	2
	<i>Mangifera indica</i>	Senegal	France	1
	<i>Mangifera indica</i>	Senegal	United Kingdom	1
<b>Bactrocera latifrons</b>	<i>Capsicum annuum</i>	Thailand	France	2
<b>Bactrocera zonata</b>	<i>Mangifera</i>	Pakistan	United Kingdom	1
	<i>Mangifera indica</i>	Egypt	France	1
	<i>Mangifera indica</i>	Pakistan	France	1
	<i>Mangifera indica</i>	Pakistan	United Kingdom	4
<b>Ceratitis cosyra</b>	<i>Mangifera indica</i>	Mali	France	2
<b>Tephritidae (non-European)</b>	<i>Annona</i>	India	Germany	1
	<i>Annona squamosa, Mangifera indica, Momordica charantia, Psidium guajava, Solanum melongena</i>	India	Switzerland	1

Pest	Consignment	Country of origin	Destination	nb
<b>Tephritidae (non-European)</b>	<i>Capsicum annuum</i>	Thailand	France	3
	<i>Mangifera indica</i>	Côte d'Ivoire	France	1
	<i>Mangifera indica</i>	Dominican Rep.	France	2
	<i>Mangifera indica</i>	Dominican Rep.	Germany	2
	<i>Mangifera indica</i>	Dominican Rep.	United Kingdom	1
	<i>Mangifera indica</i>	India	United Kingdom	1
	<i>Mangifera indica</i>	Mali	France	2
	<i>Mangifera indica</i>	Pakistan	France	3
	<i>Mangifera indica</i>	Pakistan	United Kingdom	6
	<i>Mangifera indica</i>	Senegal	France	1
	<i>Mangifera, Syzygium</i>	Surinam	Netherlands	1
	<i>Momordica charantia</i>	Thailand	France	1
	<i>Momordica charantia</i>	Thailand	France	1
	<i>Psidium guajava</i>	India	Switzerland	1
	<i>Syzygium samarangense</i>	Thailand	France	1
	<i>Syzygium samarangense</i>	Thailand	France	1
<b>Tephritidae (non-European), Pseudococcidae</b>	<i>Annona squamosa</i>	India	Germany	3
	<i>Annona squamosa</i>	Thailand	Germany	1

• **Wood**

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<b><i>Acantholyctus cornifrons</i></b>	<i>Bamboo</i>	Wood (canes)	China	Israel	1
<b><i>Anoplophora glabripennis</i></b>	Unspecified	Wood packing material	China	Sweden	1
<b><i>Arhopalus rusticus</i></b>	Unspecified	Wood	Ukraine	Israel	1
<b><i>Berginus</i></b>	Unspecified	Wood	Ukraine	Israel	1
<b>Bostrichidae</b>	Unspecified	Wood packing material (crates)	India	Germany	2
<b>Buprestidae</b>	Unspecified	Wood packing material	India	Germany	1
<b><i>Bursaphelenchus</i></b>	Unspecified	Wood packing material (pallets)	Portugal	Latvia	2
<b><i>Camponotus fallax</i></b>	Unspecified	Wood	Ukraine	Israel	1
<b>Cerambycidae</b>	Unspecified	Wood packing material	Brazil	Germany	1
	Unspecified	Wood packing material	China	Poland	2
	Unspecified	Wood	Ukraine	Israel	1
	<i>Bambusa</i>	Wood (canes)	China	Israel	1
	Unspecified	Wood	Ukraine	Israel	1
<b>Chrysididae</b>	Unspecified	Wood	Ukraine	Israel	1
<b>Coleoptera</b>	Unspecified	Wood packing material (pallets)	Vietnam	Germany	1
<b>Cossioninae</b>	<i>Bambusa</i>	Wood (canes)	China	Israel	1

<b>Pest</b>	<b>Consignment</b>	<b>Type of commodity</b>	<b>Country of origin</b>	<b>Destination</b>	<b>nb</b>
<b>Cryptophagidae</b>	<i>Bambusa</i>	Wood (canes)	China	Israel	1
<b>Dinoderus</b>	Unspecified	Wood	China	Israel	1
<b>Dinoderus bifoveolatus</b>	<i>Bambusa</i>	Wood (canes)	China	Israel	2
<b>Dinoderus minutus</b>	<i>Bambusa</i>	Wood (canes)	China	Israel	2
	Unspecified	Wood	Ukraine	Israel	1
<b>Dolopsidae</b>	<i>Bambusa</i>	Wood (canes)	China	Israel	1
<b>Dryocoetes villosus</b>	Unspecified	Wood	Ukraine	Israel	1
<b>Eurytomidae</b>	<i>Bambusa</i>	Wood (canes)	China	Israel	1
<b>Gnathotrichus</b>	Unspecified	Wood	China	Israel	1
<b>Grub holes &gt; 3 mm</b>	<i>Larix</i>	Wood and bark	Russia	Finland	1
<b>Hippodamia tredecimpunctata</b>	Unspecified	Wood	Ukraine	Israel	1
<b>Lasioderma</b>	Unspecified	Wood	Ukraine	Israel	1
<b>Minthea</b>	Unspecified	Wood packing material	India	Germany	1
<b>Monochamus</b>	Unspecified	Wood packing material (pallets)	China	Germany	1
	Unspecified	Wood packing material (crates)	India	Germany	1
<b>Nematoda</b>	<i>Picea abies</i>	Wood and bark	Canada	Finland	1
	Unspecified	Wood packing material	China	Finland	1
<b>Odontocolon dentipes</b>	Unspecified	Wood	Ukraine	Israel	1
<b>Orthotomicus lasiocarpi</b>	Unspecified	Wood	China	Israel	1
<b>Phoracantha semipunctata</b>	Unspecified	Wood packing material (pallets)	Brazil	Belgium	1
<b>Pollenia</b>	Unspecified	Wood	Ukraine	Israel	1
<b>Scolytidae</b>	<i>Bambusa</i>	Wood (canes)	China	Israel	1
<b>Scolytus intricatus</b>	Unspecified	Wood	Ukraine	Israel	1
<b>Scolytus pygmaeus</b>	Unspecified	Wood	Ukraine	Israel	1
<b>Scolytus rugulosus</b>	Unspecified	Wood	Ukraine	Israel	1
<b>Silvanus</b>	<i>Bambusa</i>	Wood (canes)	China	Israel	1
<b>Sinoxylon</b>	Unspecified	Wood packing material	Bangladesh	Germany	1
	Unspecified	Wood packing material	India	Austria	2
	Unspecified	Wood packing material (crates)	India	Austria	1
	Unspecified	Wood packing material	India	Germany	1

<b>Pest</b>	<b>Consignment</b>	<b>Type of commodity</b>	<b>Country of origin</b>	<b>Destination</b>	<b>nb</b>
<b><i>Sinoxylon</i> (cont.)</b>	Unspecified	Wood packing material (crates)	India	Germany	11
	Unspecified	Wood packing material (pallets)	India	Germany	5
	Unspecified	Wooden objects	India	Germany	1
	Unspecified	Wood packing material	Malaysia	Germany	1
	Unspecified	Wood packing material (pallets)	Vietnam	Germany	1
<b><i>Taphrorychus bicolor</i></b>	Unspecified	Wood	Ukraine	Israel	1
<b><i>Vespula germanica</i></b>	Unspecified	Wood	Belgium	Israel	1

• **Bonsais**

<b>Pest</b>	<b>Consignment</b>	<b>Country of origin</b>	<b>Destination</b>	<b>nb</b>
<b><i>Helicotylenchus dihystra</i></b>	<i>Ulmus</i>	Netherlands	United Kingdom	1
<b><i>Helicotylenchus dihystra, Meloidogyne</i></b>	Unspecified	China	United Kingdom	1
<b><i>Helicotylenchus dihystra, Tylenchorhynchus</i></b>	Unspecified	China	United Kingdom	1
<b><i>Helicotylenchus dihystra, Tylenchorhynchus annulatus</i></b>	Unspecified	China	United Kingdom	1

Source: EPPO Secretariat, 2010-04.

**2010/089    New record: *Galenia pubescens* in Spain**

*Galenia pubescens* (Aizoaceae) is a prostrate perennial plant native to South Africa where it colonizes inland karoo vegetation (arid vegetation composed of dwarf, succulent shrubs mainly belonging to the families Mesembryanthemaceae, Crassulaceae and Asteraceae, and constituting a hotspot of biodiversity) and coastal areas (between altitudes of 15 to 1830 m). *G. pubescens* has been introduced either voluntarily or accidentally and naturalized in other Mediterranean Types regions: in Southern Australia, in Chile, in California and in the Mediterranean Basin (Israel and Southern Spain). Nevertheless, it is not included in national lists of invasive alien plants, as it is known to colonize mainly disturbed environments.

*G. pubescens* was recently recorded in Andalucía (Southern Spain) in 3 coastal areas in Huelva, Cádiz and Málaga. Its potential invasiveness has been assessed both in salty wetlands and dunes by analyzing the following factors:

Time since introduction in Spain: it is estimated that the species has been present in Spain for at least 40 years and that it currently covers 15 804 ha.

Growth type: in dunes and wetlands, *G. pubescens* was the only perennial species forming dense prostrate mats.

Flowering and seed production: in coastal dunes, *G. pubescens* flowered throughout the year. Annual seed production in dunes was estimated around 100 000 seeds/m<sup>2</sup>/year. The flowering period of *G. pubescens* was longer than the one measured for the invasive *Carpobrotus edulis* (Aizoaceae, EPPO List of Invasive Alien Plants) in Californian coastal areas, and the amount of seeds produced was about 4 times higher. Additionally, the small seeds produced by *G. pubescens* are rapidly spread along transport corridors such as road sides where the plant is usually found. Further studies on seed persistence and germination should be done.

Light attenuation: specific light attenuation values measured for *G. pubescens* were 98.3-99.6%, and were significantly higher than those measured for any other species in dunes and in wetlands.

Overlapping with flowering period of native species: the flowering period of *G. pubescens* was the longest among dune plant species. Percentage of overlap reached mean values of 94±10% in dunes, and 73±38% in wetlands.

Loss of native species richness and diversity: a significant decrease in the native species richness and Shannon's diversity index was found in the invaded plots of both dunes and wetlands. The loss of native richness and diversity persisted in all seasons. These indices were higher than those reported for *Carpobrotus edulis* invading Mediterranean islands.

Changes in plant functional types in invaded dunes: perennial species were substituted by annual, ruderal grasses or forbs such as *Bromus* spp. (Poaceae), *Ecballium elaterium* (Cucurbitaceae), *Anacyclus radiatus* (Asteraceae) as well as the invasive *Oxalis pes-caprae* (Oxalidaceae, EPPO List of IAP). In wetlands, changes were less evident as the contribution of ruderal species was already relatively high.

From the analysis of all these factors, it could be concluded that *G. pubescens* has a competitive advantage over native vegetation. Monitoring and control measures to prevent the spread of this species are therefore recommended.

**Source:** Garcia-de-Lomas J, Cozar A, Dana ED, Hernandez I, Sanchez-Garcia I, Garcia CM (2010) Invasiveness of *Galenia pubescens* (Aizoaceae): a new threat to Mediterranean-climate coastal ecosystems. *Acta Oecologica* **36**(1), 39-45.

Euekalert Website (2010) Exotic plant takes over dunes of Southern Spain.  
[http://www.euekalert.org/pub\\_releases/2010-03/f-sf-ept032910.php](http://www.euekalert.org/pub_releases/2010-03/f-sf-ept032910.php)

El Mundo (2010) Una planta exótica invade las dunas costeras del sur de España. El Mundo, 2010/03/29.

<http://www.elmundo.es/elmundo/2010/03/29/ciencia/1269869021.html>

Additional key words: invasive alien plants, new record

Computer codes: ANYRA, BROSS, CBSED, ECAEL, GAJPU, OXAPC, ES

## 2010/090 The situation of *Pistia stratiotes* in the EPPO region

In Russia, *Pistia stratiotes* (Araceae, EPPO Alert List) and *Eichhornia crassipes* (Pontederiaceae, EPPO A2 List) were recorded in 2003 in ponds and rivers of Moscow and its neighbourhood. Both species are grown for ornamental purposes and escape summertime cultivation, *E. crassipes* being also used for wastewater treatment. Despite forming large floating mats during hot summers, the first frosts of October kill these plants completely. The only area where they could be potentially invasive is Southern Russia. However, an overwintering population has been observed in 1993 in the Kazachii channel in the Volga delta in Astrakhan; it was able to thrive because of warm water discharged from a power station.

In Germany, *P. stratiotes* had been observed in the river Erft in 1981 as a consequence of warm water discharged from mining activities, but in 2005, the species was no longer found.

In Northern Spain, the botanist Iaispuru collected the plant in 2001 in Guipuzcoa (Pais Vasco) as well as in Southern France, in the Landes department (lake of Garros, near the cities of Tarnos and Ondres). It was suggested that the species had been introduced by waterfowl. The species could not be found again in 2004 in the Landes, suggesting that the species was able to establish. No recent information is available concerning the Spanish record in Pais Vasco. In Southern Spain, *Pistia stratiotes* was observed in 2005 in the Doñana National Park, forming monospecific stands 3 km long in a canal coming from the Guadalquivir river and receiving water from agricultural land. These waters were rich in nutrients, with traces of pesticides, and had a low oxygen content according to the analysis made by the Consejería de Medio Ambiente de Andalucía. These conditions did not allow growth of native hydrophyte species, but fitted *P. stratiotes*' requirements. However, *P. stratiotes* is no longer found there.

In Slovenia, the species was also recorded as naturalized in a natural thermal stream (Topla) near Čatez, where the water is at 17°C all year round. Plants developed and flowered from April to August. Over the winter, older rosettes decayed, but small rosettes survived, and new rosettes formed new stolons in spring. Viable seeds were also present in the sediments, although no seedlings were found. Only 2 years after its first occurrence in 2001, *P. stratiotes* had spread along 3 km and covered about 25 ha, and a decline in native vegetation was observed.

- Source:** García Murillo P, Dana Sánchez ED, Rodríguez Hiraldo C (2005) *Pistia stratiotes* L. (Araceae) una planta acuática exótica en las proximidades del parque nacional de Doñana (SW España). *Acta Botanica Malacitana* **20**, 235-236.
- Šajna N, Haler M, Škornik S, Kaligarič M (2007) Survival and expansion of *Pistia stratiotes* L. in a thermal stream in Slovenia. *Aquatic Botany* **87**, 75-79.
- Schanzer IA, Shvetsov AN, Ivanov MV (2003) *Eichhornia crassipes* and *Pistia stratiotes* are spreading in ponds and rivers of Moscow and Moscow region. *Byulleten Moskovskogo Obshchestva Ispytatelei Prirody Otdel Biologicheskii* **108**, 85-88.
- Vivant J (2004) Plantes signalées dans les Landes et Pyrénées atlantiques en 2004. Blog de Jean Vivant. [http://www.jean-vivant.net/doc\\_02.php](http://www.jean-vivant.net/doc_02.php)

Additional key words: invasive alien plants, new records

Computer codes: EICCR, PIIST, DE, ES, FR, RU, SL

**2010/091 Restoration of the Bagaud Island (FR) through the eradication of *Carpobrotus* spp. and rats**

The National Park of Port Cros (FR) has planned an ecological restoration of the Bagaud Island, invaded by *Carpobrotus* spp. (Aizoaceae, EPPO List of IAP) and rats (*Rattus rattus*, Muridae). Without taking any action, the site would have lost its biological diversity due to the progression of the invasive *Carpobrotus* spp. which are also spread by rats eating seeds. This project associates land managers, scientists and private donors. The objective of this project is to restore an island which has nature reserve status, and to provide a case study in the field of eradication. Additionally, a documentary film will be produced to raise public awareness on eradication of invasive alien species.

**Source:** Parc National de Port Cros, Institut Méditerranéen d'Ecologie et de Paléoécologie (2008) Restauration écologique de l'île de Bagaud (Parc National de Port Cros). Approche intégrée entre science et conservation, 4 pp.

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**Additional key words:** invasive alien plants, eradication

**Computer codes:** CBSSS, FR

**2010/092 Risk analysis of potential invasive plants in Spain**

Non native plant species that could potentially become invasive in Spain if introduced have been identified and assessed. Species ranking has been performed by applying 2 different risk assessment protocols: the Australian Weed Risk Assessment system developed by Pheloung *et al.*, 2009 (hereafter called WRA), and the Risk Assessment for Central Europe developed by Weber & Gut (2004) (hereafter called WG-WRA). The WRA has been chosen because of its success and consistency in different regions, while the WG-WRA has been selected because it has specifically been developed for Europe.

A plant data set has been aggregated by listing species that are absent from Spain and invasive in neighbouring countries (France, Italy, Northern African countries, Portugal, as well as in other Mediterranean type regions of the world such as Chile, South Africa, and California). The IUCN, DAISIE and EPPO Lists were used. A preliminary list of 80 species was obtained, and each of these species was then assessed through the WRA and the WG-WRA on the basis of information available in the literature and the Internet.

According to the WRA protocol, species which obtained a score higher than 6 or should be subjected to import prohibition. According to the WG-WRA protocol, species are considered to present a “high risk” when scores are 28 or 29, “intermediate risk” for scores between 21 and 27, and “low risk” for scores between 3 and 20.

All species assessed, together with their scores given by both WRA and WG-WRA protocols are listed in the table below. Species are ordered according to the score obtained with the WRA, and the “high risk” scores given by the WG-WRA protocol are indicated in bold:

Potential invasive alien plants in Spain	WRA score	WG-WRA score
<i>Chromolaena odorata</i> (Asteraceae)	27	<b>33</b>
<i>Cabomba caroliniana</i> (Cabombaceae, EPPO List of Invasive Alien Plants)	27	<b>30</b>
<i>Hydrocotyle ranunculoides</i> (Apiaceae, EPPO A2 List)	25	<b>28</b>
<i>Salvinia molesta</i> (Salviniaceae, EPPO Alert List)	23	<b>32</b>
<i>Hydrilla verticillata</i> (Hydrocharitaceae, EPPO Alert List)	23	27

Potential invasive alien plants in Spain	WRA score	WG-WRA score
<i>Prosopis glandulosa</i> (Fabaceae)	22	32
<i>Cryptostegia grandiflora</i> (Apocynaceae)	22	29
<i>Ludwigia peploides</i> (Onagraceae, EPPO List of IAP)	21	30
<i>Alternanthera philoxeroides</i> (Amaranthaceae, EPPO Alert List)	21	33
<i>Nassella tenuissima</i> (Poaceae, EPPO Alert List)	20	30
<i>Cortaderia jubata</i> (Poaceae)	20	32
<i>Panicum maximum</i> (Poaceae)	19	31
<i>Elodea nuttallii</i> (Hydrocharitaceae, EPPO List of IAP)	19	28
<i>Crassula helmsii</i> (Crassulaceae, EPPO A2 List)	19	26
<i>Asparagus asparagoides</i> (Asparagaceae)	19	29
<i>Acacia mearnsii</i> (Fabaceae)	19	31
<i>Opuntia aurantiaca</i> (Cactaceae)	18	25
<i>Mimosa pigra</i> (Fabaceae)	18	29
<i>Lupinus arboreus</i> (Fabaceae)	18	28
<i>Lagarosiphon major</i> (Hydrocharitaceae, EPPO List of IAP)	18	28
<i>Heracleum mantegazzianum</i> (Apiaceae, EPPO List of IAP)	18	32
<i>Lysichiton americanus</i> (Araceae, EPPO List of IAP)	17	26
<i>Clidemia hirta</i> (Melastomataceae)	17	24
<i>Watsonia bulbifera</i> (Iridaceae)	16	23
<i>Tamarix ramosissima</i> (Tamaricaceae)	16	32
<i>Tamarix aphylla</i> (Tamaricaceae)	16	31
<i>Hedychium gardnerianum</i> (Zingiberaceae)	16	29
<i>Gunnera tinctoria</i> (Gunneraceae)	16	26
<i>Cotoneaster franchetii</i> (Rosaceae)	16	24
<i>Rubus ellipticus</i> (Rosaceae)	15	26
<i>Pueraria lobata</i> (Fabaceae, EPPO A2 List)	15	28
<i>Miscanthus sinensis</i> (Poaceae)	15	24
<i>Miconia calvescens</i> (Melastomataceae)	15	24
<i>Epilobium ciliatum</i> (Onagraceae)	15	24
<i>Cereus martinii</i> (Cactaceae)	15	24
<i>Acacia nilotica</i> (Fabaceae)	15	30
<i>Parthenium hysterophorus</i> (Asteraceae)	14	20
<i>Mikania micrantha</i> (Asteraceae)	14	29
<i>Triadica sebifera</i> (Euphorbiaceae)	13	24
<i>Sesbania punicea</i> (Fabaceae, EPPO Alert List)	13	23
<i>Ligustrum sinense</i> (Oleaceae)	13	27
<i>Dalbergia sissoo</i> (Fabaceae)	13	25
<i>Chorispota tenella</i> (Brassicaceae)	13	14
<i>Celtis sinensis</i> (Ulmaceae)	13	23
<i>Alhagi pseudalhagi</i> (Fabaceae)	13	27
<i>Acroptilon repens</i> (Poaceae, EPPO List of IAP)	13	22
<i>Psidium cattleianum</i> (Myrtaceae)	12	24
<i>Passiflora subpeltata</i> (Passifloraceae)	12	25
<i>Leptospermum laevigatum</i> (Myrtaceae)	12	25
<i>Heracleum sosnowskyi</i> (Apiaceae, EPPO A2 List)	12	23
<i>Berberis thunbergii</i> (Berberidaceae)	12	27
<i>Acacia paradoxa</i> (Fabaceae)	12	23
<i>Spathodea campanulata</i> (Bignoniaceae)	11	24
<i>Reynoutria x bohemica</i> (Polygonaceae, EPPO List of IAP)	11	25

Potential invasive alien plants in Spain	WRA score	WG-WRA score
<i>Reynoutria sachalinensis</i> (Polygonaceae, EPPO List of IAP)	11	26
<i>Coreopsis lanceolata</i> (Asteraceae)	11	24
<i>Cinnamomum camphora</i> (Lauraceae)	11	22
<i>Wedelia trilobata</i> (Asteraceae)	10	23
<i>Rosa rugosa</i> (Rosaceae)	10	27
<i>Melaleuca quinquenervia</i> (Myrtaceae)	10	23
<i>Eugenia uniflora</i> (Myrtaceae)	10	20
<i>Cinchona pubescens</i> (Rubiaceae)	10	20
<i>Cecropia peltata</i> (Urticaceae)	10	23
<i>Aristolochia elegans</i> (Aristolochiaceae)	10	21
<i>Ardisia elliptica</i> (Primulaceae)	10	21
<i>Humulus scandens</i> (Cannabaceae)	9	20
<i>Dipogon lignosus</i> (Fabaceae)	9	18
<i>Hakea salicifolia</i> (Proteaceae)	8	22
<i>Solidago nemoralis</i> (Asteraceae)	7	22
<i>Cassia laevigata</i> (Fabaceae)	7	18
<i>Amelanchier spicata</i> (Rosaceae, EPPO List of IAP)	7	22
<i>Spartina anglica</i> (Poaceae)	6	21
<i>Rivina humilis</i> (Phytolaccaceae)	6	16
<i>Passiflora edulis</i> (Passifloraceae)	6	23
<i>Syzygium cumini</i> (Myrtaceae)	5	20
<i>Solanum seafortianum</i> (Solanaceae)	5	19
<i>Hiptage benghalensis</i> (Malpighiaceae)	5	20
<i>Echinocystis lobata</i> (Cucurbitaceae)	5	20
<i>Bidens connata</i> (Asteraceae)	5	18
<i>Pinus elliotii</i> (Pinaceae)	2	18

According to both risk assessment protocols, most screened species are potentially invasive in Spain. In particular, *Chromolaena odorata* which is a fast growing perennial shrub native to South and Central America has obtained the highest score in both tests. The next most potentially invasive species were the aquatic species: *Cabomba caroliniana*, *Hydrocotyle ranunculoides*, *Ludwigia peploides* and *Alternanthera philoxeroides*.

- Source:** Andreu J, Vilà M (2009) Risk analysis of potential plants in Spain. *Journal for Nature Conservation*. doi: 10.1016/j.jnc.2009.02.002.  
<http://www.montsevilla.org/paperssci.asp>  
 Pheloung PC, Williams PA, Halloy SR (1999) A weed risk assessment model for use as a biosecurity tool evaluating plant introductions. *Journal of Environmental Management* 57, 239-251.  
 Weber E, Gut D (2004) Assessing the risk of potentially invasive plant species in central Europe. *Journal for Nature Conservation* 12, 171-179.

**Additional key words:** invasive alien plants, risk analysis

**Computer codes:** ACAAR, ACAMR, ACANL, ADASO, ALHPS, ALRPH, AMESP, ARPEL, ASPAS, BEBTH, BIDCN, CABCA, CASLA, CDTJU, CECPE, CENRE, CETSI, CIHPU, CINCA, COBTE, CRLLA, CSBHE, CTTFR, CVRGR, CXAHI, DAGSI, DGOLI, ECNLO, EEUMA, ELDNU, EPIAC, EUEUN, EUPOD, HERSO, HEYGA, HKASA, HUMJA, GUATI, HERMZ, HTGBE, HYDRA, HYLLI, LEKLA, LGAMA, LIGSI, LUDPE, LUPAB, LSYAM, MICCA, MIKMI, MIMPI, MISSI, MLAQU, OPUAU, PANMA, PAQED, PAQSP, PIUEL, PRCJG, PSILO, PTNHY, PUELO, REYBO, REYSA, RIVHU, ROSRG, RUBEL, SAQSE, SAVMO, SEBPU, SOLSE, SOONE, SPOCA, SPTAN, STDTN, SYZCU, TAAPE, TAAAP, WASME, WEDTR, ES

**2010/093 Biology and ecology of *Kochia scoparia*, an invasive species in Algeria**

*Kochia scoparia* (Chenopodiaceae) is an annual plant, 0.4-2.5 m tall, originating from Eurasia. It occurs in Australia, Canada, Afghanistan, Pakistan, South Africa and the United States. Within the EPPO region, the plant is exotic and has invaded the Ouaty valley near Biskra in Algeria, as well as being recorded in Morocco.

In Algeria, the life cycle of *K. scoparia* begins in March, it flowers in September or October and each plant produces around 2 000 seeds. In November, the plant then dries and stands on the ground, making tillage difficult. *K. scoparia* prefers humid and disturbed habitats, it grows on any soil and can tolerate salinity. The species prefers sunny places, and is particularly abundant in fields with micro-irrigation. Seeds are spread through wind, and dead plants are transported as tumbleweed. The plant is also spread through human activities when used as a fodder, and is also used to control soil erosion.

In Algeria it is commonly found in cultivated fields and is particularly abundant in irrigated crops and has not been reported in natural habitats so far. It is also found along road sides. In the Ouaty valley, it almost invaded the totality of the 1137 ha of irrigated crop land since 2003. Land has been abandoned in this area because of the presence of this invasive plant. In addition to its impacts to agriculture, the pollen of *K. scoparia* is allergenic.

In the United States, the plant is recorded as a weed of cereals. In Canada, it is recorded as a weed of lentils and chick peas.

**Source:** Benmeddour T, Fenni M (2008) Biologie et écologie de Ganida (*Kochia scoparia* (L.) Schrad) : plante envahissante du périmètre de l'Ouatya, Biskra. Actes du colloque international sur l'aridoculture: optimisation des productions agricoles et développement durable (Biskra, DZ, 2008-12-13/14). Tome 1: communications orales, 341-356. <http://www.crstra.dz/Information/S2010-1.htm>

USDA (2010) Germplasm Resources Information Network's. *Bassia scoparia* (L.) A. J. Scott. <http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?404228>

**Additional key words:** invasive alien plants

**Computer codes:** KCHSC, DZ

**2010/094 6th NEOBIOOTA Conference: Biological Invasions in a Changing World - from Science to Management, Copenhagen (DK), 2010-09-10/14**

The 6th NEOBIOOTA Conference: Biological Invasions in a Changing World - from Science to Management will be held in Copenhagen (DK) on 2010-09-10/14, and not on 2010-09-14/17 as was erroneously announced in the previous issue of the EPPO Reporting Service.

**Source:** NEOBIOOTA 2010 Conference, "Biological Invasions in a Changing World - from Science to Management". <http://cis.danbif.dk/neobiota2010>

**Additional key words:** invasive alien plants

**Computer codes:** DK