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2016/024 New data on quarantine pests and pests of the EPPO Alert List

By searching through the literature, the EPPO Secretariat has extracted the following new data concerning quarantine pests and pests included on the EPPO Alert List, and indicated in bold the situation of the pest concerned using the terms of ISPM no. 8.

• New records

In Bulgaria, *Aproceros leucopoda* (Hymenoptera: Argidae - formerly EPPO Alert List) was found for the first time in June 2015 on *Ulmus minor* in the Western Balkan range on 5 sites. The insect was then also found in Sofia. Only low levels of damage were observed in Bulgaria (Doychev, 2015). **Present**, first found in 2015.

Iris yellow spot virus (*Tospovirus*, IYSV - formerly EPPO Alert List) occurs in Zimbabwe. The disease symptoms were first observed on bulb onion crops during surveys conducted in November 2014 in 2 farms in Harare. Laboratory tests then confirmed the presence of the virus (Karavina *et al.*, 2016). Present, first found in 2014 on onion crops near Harare.

Basil downy mildew caused by *Peronospora belbahrii* is reported for the first time from China. The disease was observed in December 2014 on basil crops in Sanya city (Hainan province). It is estimated that the disease affected almost 40% of the plants over an area of 70 km² (Kong *et al.*, 2015). **Present, first found in 2014 in Hainan province**.

In South Africa, *Tomato torrado virus* (*Torradovirus*, ToTV - formerly EPPO Alert List) was first found in 2015 in tunnel and field-cultivated tomato crops in the Limpopo province. The virus was also detected in weeds (*Datura stramonium*) harbouring large whitefly populations and growing along rows of tomato crops (Moodley *et al.*, 2016). Present, first found in 2015 in the Limpopo province.

Xanthomonas euvesicatoria (EPPO A2 List) occurs in the Republic of Korea. In April 2014, leaf spot symptoms were observed on seedlings of hot pepper (*Capsicum annuum*) in a commercial greenhouse in Jinju. In this greenhouse, disease incidence reached 35%. Laboratory and pathogenicity tests confirmed the identity of the bacterium (Myung *et al.*, 2015). Present, no details.

In the Republic of Korea, 224 grapevine leaf samples were collected in May 2014 from the major grape-growing areas of Gimcheon, Yeongdong, Okcheon, Cheonan, and Songsan and tested by RT-PCR for several grapevine viruses. Results revealed the presence of *Blueberry leaf mottle virus* (*Nepovirus*, BLMoV - EPPO A2 List) which could be detected in leaves showing yellowing and mottling symptoms. Results for BLMoV were as follows: Gimcheon (61.0%), Yeongdong (51.1%), Okcheon (70.0%), Cheonan (47.7%), and Songsan (16.3%). This is the first time that BLMoV is reported from the Republic of Korea and Asia (Kwak *et al.*, 2016).

• Detailed records

Until recently, *Heterodera glycines* (EPPO A2 List) was restricted to the two main soybean production areas in China, in the northeast and the Yellow River valley. However, it now appears that this nematode is spreading into Southern and Western China. During surveys conducted in 2012 and 2013, *H. glycines* was detected in samples from Wuming (Guangxi province), Puding (Guizhou province), and Anfu (Jiangxi province). During other surveys conducted from 2010 to 2014 in the northern part of China, *H. glycines* was also found in

the province of Gansu and the autonomous region of Ningxia. Finally, its presence has been reported in Xinjiang (Peng *et al.*, 2016; Wang *et al.*, 2015).

During entomological surveys carried out in Sicilia (Italy), the presence of *Gonipterus scutellatus* (Coleoptera: Curculionidae - EPPO A2 List - now considered to be a complex of species) was observed on *Eucalyptus globulus* in Piedimonte Etneo (Catania province). It is noted that *G. scutellatus* was first found in Liguria in the 1970s and then in Lazio. In 2012, it was found in Montecristo Island, in the Tuscan Archipelago, and further surveys confirmed its presence in several localities of Toscana. Finally, it is noted that for the moment, this weevil does not seem to be a major threat for Sicilian eucalyptus trees, as no severe damage has been observed in other Italian regions (Mazza *et al.*, 2015).

• New pests

In April 2015, unusual symptoms were observed in a greenhouse tomato crop (*Solanum lycopersicum* cv. 'Candela') in Jordan. Diseased plants showed mild foliar symptoms at the end of the season but strong brown rugose symptoms on fruits that greatly affected the market value of the crop. Disease incidence was close to 100%. The presence of a new tobamovirus, tentatively called Tomato brown rugose fruit virus, was detected in affected tomato plants (Salem *et al.*, 2015).

• New host plants

In 2012, the presence of *Tomato leaf curl New Delhi virus* (*Begomovirus*, ToLCNDV - EPPO Alert List) was detected on opium poppy (*Papaver somniferum*) during a survey carried out in breeding plots in Lucknow (Uttar Pradesh), India. Affected plants showed severe leaf curling. The presence of whiteflies (*Bemisia tabaci*) was also noticed on poppy plants (Srivastava *et al.*, 2016).

Source: Doychev D (2015) First record of the invasive elm sawfly *Aproceros leucopoda* Takeuchi (Hymenoptera: Argidae) in Bulgaria. *Silva Balcanica* 16(1), 108-112. Karavina C, Ibaba JD, Gubba A (2016) First report of *Iris yellow spot virus* infecting

Karavina C, Ibaba JD, Gubba A (2016) First report of *Iris yellow spot virus* infecting onion in Zimbabwe. *Plant Disease* **100**(1), p 235.

Kong XY, Wang S, Wan SL, Xiao CL, Luo F, Liu Y (2015) First report of downy mildew on basil (*Ocimum basilicum*) in China. *Plant Disease* **99**(11), p 1642.

Kwak HR, Yoon JS, Shin JC, Seo JK, Kim M, Lee JK, Lee KS, Kim CS, Choi HS, Kim JS (2016) First report of *Blueberry leaf mottle virus* on grapevine in Korea. *Plant Disease* **100**(1), p 232.

Mazza G, Inghilesi AF, Tricarico E, Montagna M, Longo S, Roversi PF (2015) First report of *Gonipterus scutellatus* complex (Coleoptera Curculionidae) in Sicily (Italy). *Redia* **98**, 149-150. [Link]

Moodley V, Gubba A, Mafongoya PL (2016) First report of *Tomato torrado virus* on tomato (*Solanum lycopersicum*) in South Africa. *Plant Disease* **100**(1), p 231.

Myung IS, Yoon MJ, Lee JY, Kim YS, Kwon JH, Lee YK, Shim HS (2015) Bacterial spot of hot pepper, caused by *Xanthomonas euvesicatoria*, a new disease in Korea. *Plant Disease* **99**(11), p 1640.

Peng DL, Peng H, Wu DQ, Huang WK, Ye WX, Cui JK (2016) First report of soybean cyst nematode (*Heterodera glycines*) on soybean from Gansu and Ningxia China. *Plant Disease* **100**(1), p 229.

Salem N, Mansour A, Ciuffo M, Falk BW, Turina M (2016) A new tobamovirus infecting tomato crops in Jordan. *Archives of Virology* **161**(2), 503-506.

Srivastava A, Lumar S, Jaidi M, Raj SK, Shukla SK (2016) First report of *Tomato leaf* curl New Delhi virus on opium poppy (*Papaver somniferum*) in India. *Plant Disease* 100(1), p 232.

Wang D, Duan YX, Wang YY, Zhu XF, chen LJ, Liu XY, Chen JS (2015) First report of soybean cyst nematode, *Heterodera glycines*, on soybean from Guangxi, Guizhou, and Jiangxi Provinces, China. *Plant Disease* **99**(6), p 893.

Additional key words: new record, detailed record, new host plant, new pest

Computer codes: APRCLE, BLMOVO, GONPSC, HETDGL, IYSVOO, PEROBE, TOBRFV, TOLCND, TOTVOO, XANTEU, BG, CN, IN, IT, JO, KR, ZA, ZW

2016/025 EPPO report on notifications of non-compliance

The EPPO Secretariat has gathered below the notifications of non-compliance for 2015 received since the previous report (EPPO RS 2015/195). Notifications have been sent 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	Ornamental plants	Cuttings	Israel	France	1
Aleyrodidae	Pelargonium	Plants for planting	Tanzania	Spain	1
Aphididae, <i>Erwinia</i> amylovora, Phyllonorycter leucographella, Tortricidae	Pyracantha	Plants for planting	Netherlands	Latvia	1
Atherigona orientalis	Capsicum	Vegetables	Pakistan	Germany	1
Bemisia	Salvia officinalis	Plants for planting	Israel	United Kingdom	1
Bemisia tabaci	Alternanthera sessilis Artemisia dracunculus, Origanum majorana, Ocimum basilicum, Origanum vulgare, Thymus	Vegetables (leaves) Vegetables (leaves)	Sri Lanka Morocco	United Kingdom Switzerland	1 1
	Capsicum Capsicum annuum Capsicum annuum Corchorus Corchorus olitorius Corchorus olitorius Corchorus olitorius Diospyros kaki Dipladenia splendens Eryngium Eryngium Eryngium foetidum Euphorbia pulcherrima Euphorbia pulcherrima Hibiscus	Vegetables Vegetables Vegetables (leaves) Vegetables (leaves) Vegetables (leaves) Vegetables (leaves) Plants for planting Plants for planting Vegetables (leaves) Vegetables (leaves) Vegetables (leaves) Cuttings Cuttings Plants for planting Vegetables (leaves)	Egypt Egypt Thailand Ghana Nigeria Bangladesh Nigeria Spain Netherlands Laos Thailand Laos Germany Mexico Netherlands Congo, Dem. Rep.	United Kingdom Belgium Ireland United Kingdom United Kingdom United Kingdom United Kingdom United Kingdom United Kingdom Sweden United Kingdom Netherlands United Kingdom France	$ \begin{array}{c} 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 1\\ 2\\ 1\\ 9\\ 1 \end{array} $

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
<i>B. tabaci</i> (cont.)	Hibiscus Hibiscus rosa-sinensis Hibiscus sabdariffa Hibiscus sabdariffa Hygrophila corymbosa Ipomoea batatas Ipomoea batatas Limnophila Limnophila Limnophila aromatica Lisianthus Majorana, Ocimum,	Vegetables (leaves) Plants for planting Vegetables (leaves) Vegetables (leaves) Cuttings Vegetables Vegetables (leaves) Vegetables (leaves) Vegetables (leaves) Cut flowers Vegetables (leaves)	Ghana Netherlands Congo, Dem. Rep. Togo Malaysia Ghana Togo Laos Laos Thailand Netherlands Morocco	United Kingdom United Kingdom Belgium Netherlands United Kingdom Belgium France United Kingdom Sweden United Kingdom Switzerland	1 1 1 1 2 1 1 2 2 1
	Mangifera indica,	Fruit and Vegetables	Congo	Ireland	1
	Manihot esculenta Manihot esculenta Mentha Mentha Mentha Mentha, Ocimum	Vegetables (leaves) Vegetables Vegetables (leaves) Vegetables (leaves) Vegetables (leaves) Vegetables (leaves)	Congo, Dem. Rep. Ghana (Israel) Israel Jordan Laos	France United Kingdom Netherlands Netherlands United Kingdom Sweden	2 1 1 2 1 1
	tenuiflorum Morinda citrifolia Ocimum basilicum Ocimum basilicum Ocimum basilicum Ocimum basilicum Ocimum basilicum Ocimum gratissimum Ocimum tenuiflorum, Piper sarmentosum Paederia Perilla frutescens Persicaria odorata, Piper sarmentosum Piper sarmentosum Solanum macrocarpon Telfairia occidentalis Tiliacora Unspecified	Fruit Vegetables (leaves) Vegetables (leaves) Vegetables (leaves) Vegetables (leaves) Vegetables (leaves) Vegetables (leaves) Vegetables (leaves) Vegetables (leaves) Vegetables (leaves) Vegetables Vegetables Vegetables Vegetables Vegetables Vegetables Vegetables Vegetables Vegetables Vegetables Vegetables Vegetables	Thailand Thailand Israel Israel Morocco Thailand Nigeria Laos Laos Laos Laos Laos Laos Nigeria Nigeria Nigeria Thailand	Sweden United Kingdom Switzerland United Kingdom France Austria United Kingdom Sweden Sweden Sweden Sweden Sweden Sweden Sweden United Kingdom United Kingdom United Kingdom Sweden Erance	3 1 2 1 1 1 6 2 1 1 1 1 1 1
Botrytis	Passiflora edulis	Fruit	Ecuador	Spain	1
Clavibacter michiganensis subsp. michiganensis	Solanum lycopersicum Solanum lycopersicum	Seeds Seeds	China India	Germany France	2 1
Coleoptera, Diptera, Tephritidae	Voacanga africana	Stored products	Ghana	Spain	1
Diptera	Passiflora	Fruit	Uganda	United Kingdom	1
Earias vittella	Abelmoschus Abelmoschus esculentus Abelmoschus esculentus Abelmoschus esculentus	Vegetables Vegetables Vegetables Vegetables	Thailand India Pakistan Sri Lanka	Germany Germany Germany Germany	1 8 1 2

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Ecdytolopha aurantianum	Citrus sinensis	Fruit	Brazil	Spain	2
Elsinoe fawcettii	Citrus sinensis	Fruit	South Africa	Cyprus	1
Fungi	Castanea sativa	Fruit	Chile	Spain	1
Halyomorpha halys	Unspecified	Various objects	USA	Germany	1
Helicoverpa armigera	Capsicum Dianthus caryophyllus Rosa	Vegetables Cut flowers Cut flowers	Kenya Turkey Kenya	United Kingdom Germany Netherlands	1 1 1
Helicoverpa assulta, Spodoptera exigua	Eustoma	Cut flowers	Israel	Germany	1
Insecta	Citrus, Citrus clementina, Citrus limon, Citrus maxima, Citrus sinensis	Fruit	Tunisia	France	1
	Prunus armeniaca	Fruit	Turkey	France	1
Lepidoptera, Pseudococcidae	Pyrus pyrifolia	Fruit	China	Spain	1
Leucinodes orbonalis	Solanum aethiopicum	Vegetables	Cameroon	Belgium	1
Liriomyza	Apium graveolens Artemisia vulgaris Capsicum Coriandrum sativum, Ocimum basilicum Ocimum basilicum Ocimum basilicum Ocimum basilicum Ocimum basilicum Ocimum basilicum Solidago	Vegetables (leaves) Vegetables (leaves) Vegetables (leaves) Vegetables (leaves) Vegetables (leaves) Vegetables (leaves) Vegetables (leaves) Vegetables (leaves) Cut flowers	Laos Laos Dominican Rep. Israel Laos Laos South Africa Thailand Israel	Denmark United Kingdom United Kingdom Czech Republic Netherlands Czech Republic United Kingdom United Kingdom Czech Republic United Kingdom	1 1 2 1 1 1 1 1 1 1
Liriomyza congesta	Solidago	Cut flowers	Kenya	Netherlands	1
Liriomyza huidobrensis	Apium graveolens Apium graveolens Aster Chrysanthemum Dendrobium Eryngium Gypsophila	Vegetables Vegetables Cut flowers Cut flowers Cut flowers Cut flowers Cut flowers	Laos* Vietnam Ethiopia* Colombia Ecuador Kenya Ecuador	Denmark Switzerland Netherlands Netherlands Netherlands Netherlands Italy	1 1 1 1 1 1
Liriomyza sativae	Coriandrum sativum Ocimum americanum Ocimum basilicum Ocimum basilicum	Vegetables (leaves) Vegetables (leaves) Vegetables (leaves) Vegetables (leaves)	Israel Laos* Iran Malaysia	Netherlands Sweden Germany Netherlands	2 1 1 1
Liriomyza trifolii	Allium fistulosum Carthamus Ocimum basilicum Solidago	Vegetables Cut flowers Vegetables (leaves) Cut flowers	Egypt Israel Jordan Israel	Germany Netherlands Netherlands Netherlands	1 1 1 1
Lonchaeidae	Citrus sinensis	Fruit	Zimbabwe	Spain	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Nematoda	Adiantum, Bolbitis, Polypodium, Pyrrosia	Aquatic plants	Thailand	Germany	1
Noctuidae	Eryngium foetidum	Vegetables (leaves)	Laos	United Kingdom	1
Noctuidae, Tephritidae	Abelmoschus esculentus, Benincasa, Cyamopsis tetragonoloba	Vegetables	Ghana	Spain	1
Opogona sacchari	Pleomele	Plants for planting	Netherlands	Germany	1
Phyllosticta citriasiana	Citrus maxima Citrus maxima	Fruit Fruit	China China	France Spain	1 3
Phyllosticta citricarpa	Citrus medica var. ethrog Citrus paradisi Citrus reticulata Citrus sinensis Citrus sinensis Citrus sinensis Citrus sinensis Citrus sinensis Citrus sinensis Citrus sinensis Citrus sinensis	Fruit Fruit Fruit Fruit Fruit Fruit Fruit Fruit Fruit Fruit	Cameroon Bangladesh* Uruguay* Argentina Argentina Brazil Brazil South Africa South Africa Uruguay* Uruguay*	Switzerland United Kingdom Netherlands Belgium Netherlands Spain Netherlands Spain Belgium Netherlands	1 1 2 4 5 3 1 2 57
<i>Phyllosticta citricarpa,</i> Tephritidae	Citrus sinensis	Fruit	Brazil	Netherlands	1
Phytophthora ramorum	Rhododendron Rhododendron hybrids	Plants for planting Plants for planting	Netherlands Belgium	Finland United Kingdom	1 1
Plodia interpunctella	Ceratonia siliqua	Stored products	Turkey	Spain	1
Plum pox virus	Prunus dulcis	Plants for planting	Serbia	Croatia	1
Psocoptera	Oryza sativa	Stored products	Bangladesh	Italy	1
Ralstonia solanacearum (race 1)	Rosa	Plants for planting	Netherlands	Belgium	1
Spodoptera	Amaranthus Lagenaria Limnophila	Vegetables (leaves) Vegetables Vegetables (leaves)	Bangladesh Bangladesh Laos	United Kingdom United Kingdom United Kingdom	1 1 1
Spodoptera eridania	Capsicum Rubus ulmifolius	Vegetables Fruit	Suriname Mexico	Netherlands Netherlands	1 1
Spodoptera frugiperda	Capsicum Momordica Solanum melongena	Vegetables Vegetables Vegetables	Suriname Suriname Suriname	Netherlands Netherlands Netherlands	1 1 2
Spodoptera latifascia	Areca	Plants for planting	Honduras	Netherlands	1
Spodoptera littoralis	Rosa Rosa	Cut flowers Cut flowers	Ethiopia Uganda	Netherlands Netherlands	1 1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Spodoptera litura	Microsorum Ocimum Ocimum basilicum Tagetes Tagetes erecta	Cuttings Vegetables (leaves) Vegetables (leaves) Plants for planting Cut flowers	Malaysia India India Thailand Thailand	Netherlands France France Sweden Sweden	1 1 1 1
Spoladea recurvalis	Amaranthus	Vegetables (leaves)	Togo	Belgium	1
Tenebroides	Prunus dulcis	Fruit	USA	Spain	1
Thaumatotibia leucotreta	Abelmoschus esculentus, Capsicum	Vegetables	Kenya	Ireland	1
	Capsicum Capsicum Capsicum Capsicum Capsicum Capsicum annuum Capsicum annuum Capsicum chinense Capsicum frutescens Capsicum frutescens Capsicum frutescens Capsicum frutescens Citrus sinensis Citrus sinensis Solanum aethiopicum	Vegetables Vegetables Vegetables Vegetables Vegetables Vegetables Vegetables Vegetables Vegetables Vegetables Vegetables Vegetables Fruit Fruit Vegetables	Ghana Kenya Kenya Mozambique Uganda Zambia Uganda Uganda Uganda Côte d'Ivoire Kenya Uganda South Africa South Africa Cameroon	United Kingdom Germany United Kingdom United Kingdom United Kingdom Netherlands Switzerland United Kingdom France Netherlands Netherlands France Spain Belgium	1 1 21 4 18 1 2 2 2 1 1 1 4 2 1
<i>Thaumatotibia leucotreta,</i> Lonchaeidae	Citrus sinensis	Fruit	Zimbabwe	Spain	1
Thripidae	Abelmoschus esculentus Capsicum Luffa acutangula Momordica Momordica Orchidaceae	Vegetables Vegetables Vegetables Vegetables Cut flowers	India Dominican Rep. India Dominican Rep. Laos Thailand	United Kingdom United Kingdom United Kingdom United Kingdom United Kingdom United Kingdom	1 1 1 1 1
Thrips palmi	Abelmoschus esculentus Dendrobium Dendrobium hybrids Gomphrena globosa Mokara Momordica charantia Momordica charantia Orchidaceae Rosa Solanum melongena	Vegetables Cut flowers Cut flowers Cut flowers Cut flowers Vegetables Vegetables Cut flowers Cut flowers Cut flowers Vegetables	India Malaysia Thailand Thailand Malaysia Dominican Rep. Dominican Rep. (Singapore) Thailand Mauritius	United Kingdom Italy Italy Netherlands Belgium Netherlands Netherlands United Kingdom Germany United Kingdom France	1 2 2 1 1 1 1 1 2
Thysanoptera	Asteriscus, Begonia, Brachyscome, Cestrum nocturnum, Felicia amelloides, Fuchsia, Leucanthemum, Sutera	Cuttings	Tanzania	Spain	1
	Dianthus Gypsophila	Cut flowers Cut flowers	Colombia Ethiopia	Spain France	1 1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Thysanoptera	Solanum melongena	Vegetables	Sri Lanka	Switzerland	1
Tribolium confusum	Pistacia vera	Stored products	USA	Spain	1
Xanthomonas arboricola pv. pruni	Prunus laurocerasus	Plants for planting	Netherlands	United Kingdom	2
Xiphinema americanum	Araucaria bidwillii	Plants for planting	China	Netherlands	1
Xylella fastidiosa	Mandevilla sanderi	Cuttings	Brazil	Italy	1

• Fruit flies

Pest	Consignment	Country of origin	Destination	nb
Bactrocera	Averrhoa carambola Citrus maxima	Malaysia China	Netherlands Netherlands	1 1
	Citrus paradisi Mangifara indiaa	China	Netherlands	1
	Mangilera Indica	Madagascar	France	1
	Manyilera inuica	Suimaine	Nethenatius	I
Bactrocera cucurbitae	Momordica charantia	Sri Lanka	France	1
Bactrocera dorsalis	Annona muricata	Philippines*	France	1
	Mangifera indica	(Vietnam)	Germany	1
	Mangifera indica	Senegal*	France	2
Bactrocera latifrons	Capsicum	Cambodia*	France	1
	Capsicum annuum	Laos	Sweden	5
	Capsicum, Nephelium Iappacerum	(Vietnam)	Germany	1
Ceratitis capitata	Capsicum chinense	Uganda	Austria	1
Tephritidae (non-European)	Annona	Thailand	France	1
	Annona	Togo	France	1
	Annona muricata	Cameroon	Belgium	8
	Annona muricata	Vietnam	France	1
	Benincasa	Pakistan	United Kingdom	1
	Capsicum	Cambodia	France	1
	Capsicum	Cameroon	France	1
	Capsicum	Congo, Dem. Rep.	France	1
	Capsicum	Laos	United Kingdom	2
	Capsicum	Senegal	France	1
	Capsicum	Ihailand	Switzerland	1
	Capsicum	Ihailand	United Kingdom	1
	Capsicum	Uganda	Germany	2
	Capsicum annuum	India	Ireland	1
	Capsicum annuum	Laos	Sweden	1
		Togo	France	1
		Cameroon	Belgium	1
	Capsicum frutescens	Laondo	Nethenands	1
	Capsicuiti itulescetis	Oyanua China	Germany	ן ר
	Citrus cinoneis	Cillia South Africa	Franco	ა ე
	Mandifera indica	Brazil	I Inited Kinadom	∠ 1
	manyiicia inaica	DIULII	onicu kinguulli	1

Pest	Consignment	Country of origin	Destination	nb
Tephritidae (non-European)	Mangifera indica Momordica Momordica Momordica charantia,	Madagascar Kenya Uganda Bangladesh	France United Kingdom United Kingdom Ireland	1 2 5 1
	Solanum melongena, Trichosanthes dioica Prunus persica var. nucipersica	South Africa	Belgium	1
	Solanum	Sri Lanka	United Kingdom	1
	Trichosanthes	Mauritius	France	1
	Vaccinium	Argentina	United Kingdom	6
	Vaccinium corymbosum	Argentina	United Kingdom	1

• Wood

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Anobium	Entandrophragma cylindricum	Wood and bark	Central African Rep.	Spain	1
Bostrichidae	Unspecified Unspecified	Wood packaging material (pallet) Wood packaging material (pallet)	Namibia Vietnam	France Germany	1 1
Bursaphelenchus mucronatus	Unspecified Unspecified	Wood packaging material (pallet) Wood packaging material (pallet)	Russia Ukraine	Lithuania Latvia	1 1
Bursaphelenchus xylophilus	Unspecified	Wood packaging material (pallet)	Portugal	France	1
Callidium	Unspecified	Wood packaging material (pallet)	China	Austria	1
Cerambycidae	Unspecified Unspecified Unspecified Unspecified	Wood packaging material (crate) Wood packaging material (crate) Wood packaging material Wood packaging material (pallet)	China China China China	Germany Germany Netherlands Slovenia	1 1 1 1
Cerambycidae, Lyctus	Unspecified	Wood packaging material (pallet)	China	Austria	1
Dermestidae	Unspecified	Wood packaging material (pallet)	China	Austria	1
Formicidae	Entandrophragma cylindricum	Wood and bark	Congo, Dem. Rep.	Spain	1
Heterobostrychus, Lyctus brunneus	Unspecified	Object with wooden parts	China	Germany	1
Insecta	<i>Quercus alba</i> Unspecified	Wood and bark Wood packaging material (pallet)	USA (Singapore)	France Czech Republic	1 1
	Unspecified Unspecified Unspecified	Dunnage Wood packaging material Wood packaging material (crate)	China China China	France France Switzerland	1 1 1
Isoptera	Laurelia sempervirens, Nothofagus obliqua	Wood and bark	Chile	Spain	1

Pest	Consignment	Type of commodity	Country of origin	Destination	nb
Lyctus	Unspecified Unspecified	Wood packaging material (pallet) Wood packaging material	China India	Austria Germany	1 2
Monochamus alternatus	Unspecified	Wood packaging material	China (Hong Kong)	Germany	1
Nitidulidae	Unspecified	Wood packaging material (pallet)	China	Austria	1
Rhabditis	Unspecified Unspecified	Wood packaging material Wood packaging material (crate)	Russia Russia	Italy Lithuania	1 1
Rhabditis, Tetropium castaneum	Unspecified	Wood packaging material	Russia	Denmark	1
Scolytidae	Entandrophragma cylindricum	Wood and bark	Central African Rep.	Spain	1
	Unspecified	Wood packaging material (pallet)	China	Austria	2
Seinura	Unspecified	Wood packaging material (pallet)	Russia	Lithuania	1
Silvanidae	Quercus alba	Wood and bark	USA	Spain	1
Sinoxylon	Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified	Wood packaging material (pallet) Wood packaging material Wood packaging material (crate) Wood packaging material (pallet) Wood packaging material (pallet) Wood packaging material (pallet) Wood packaging material (pallet) Wood packaging material (crate) Wood packaging material (pallet) Wood packaging material (pallet)	China India India India Indonesia Indonesia Indonesia Indonesia Malaysia Singapore Thailand Thailand Vietnam	Germany Germany Germany Czech Republic Germany Germany Germany Germany Germany Germany Estonia Germany	1 3 1 5 1 1 1 1 1 1 1 1 2
Sinoxylon anale	Unspecified Unspecified Unspecified	Wood packaging material (pallet) Wood packaging material Wood packaging material (pallet)	China (Hong Kong) India Vietnam	Germany Germany Germany	1 1 1
Siricidae	Unspecified Unspecified	Wood packaging material (pallet) Wood packaging material	China China	Austria Spain	3 1
Trichoferus	Unspecified	Wood packaging material (pallet)	China	Austria	1
Xylopsocus capucinus	Unspecified	Wood packaging material (pallet)	China	Germany	2
Xylosandrus	Unspecified	Wood packaging material (pallet)	China	Austria	1

• Bonsais

Pest	Consignment	Country of origin	Destination	nb
Ceroplastes floridensis, Josephiella, Lecanium, Meloidogyne	Ficus thonningii	China	Italy	1
Meloidogyne enterolobii	Portulacaria afra	China	Belgium	1

Source:

EPPO Secretariat (2016-02).

INTERNET EUROPHYT. Annual and monthly reports of interceptions of harmful organisms in imported plants and other objects. <u>http://ec.europa.eu/food/plant/plant_health_biosecurity/europhyt/interceptions/index_en.htm</u>

2016/026 Harmful organisms in the European Union: Annual report 2014

The European Commission has recently published an annual report on pest outbreaks which were notified by the EU Member States during 2014. This report contains useful statistics about the distribution of the pests within taxonomic groups, possible sources of outbreaks, and phytosanitary measures taken. The report focuses on significant outbreaks of regulated pests notified in 2014 (i.e. *Anoplophora chinensis, A. glabripennis, Popillia japonica, Strauzia longipennis, Trioza erytreae,* and *Xylella fastidiosa*). Information about outbreaks of non-regulated pests which were found for the first time on the EU territory in 2014 (i.e. *Erwinia pyrifoliae, Geosmithia morbida and Pityophthorus juglandis, Lissorhoptrus oryzophilus, Meloidogyne mali, Pseudacysta perseae, Sirococcus tsugae, Thaumastocoris peregrinus, Thrips setosus and Xylosandrus crassiusculus*) is also provided.

This report is freely available from the European Commission website: http://ec.europa.eu/food/plant/docs/phb_ho_annual_report_2014_en.pdf

Source: EPPO Secretariat (2016-01).

Additional key words: publication, EU

Computer codes: ANOLCN, ANOLGL, ERWIPY, GEOHMO, LISSOR, MELGMA, PITOJU, POPIJA, PSEYPE, SIROTS, STRALO, THMCPE, THRISE, TRIZER, XYLBCR, XYLEFA

2016/027 International Workshop on *Xylella fastidiosa* and the Olive Quick Decline Syndrome (OQDS) (Bari, IT, 2016-04-19/22)

An International Workshop on *Xylella fastidiosa* and the Olive Quick Decline Syndrome (OQDS) will be organized from the 19th to the 22nd of April 2016 in Bari, Italy, by the Food and Agriculture Organization (FAO), the International Plant Protection Convention (IPPC) as well as the Near-East Plant Protection Organization (NEPPO), the European and Mediterranean Plant Protection Organization (EPPO), the International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM) Mediterranean Agronomic Institute of Bari (MAIB) and the CIHEAM-IAM Bari and Consiglio Nazionale Delle Ricerche (CNR). The

objectives of this Workshop are to share updated information on the disease and train NPPOs on the pathogen and its vectors, surveillance, diagnostic and control methods. This Workshop will include the following five sessions, a field trip and demonstrations of diagnostic assays.

- Session 1: Opening; general presentations on the pathogen and relative vectors and disease impact; the Apulian outbreak; the state of the research.
- Session 2: PRAs and existing projects (EUPHRESCO, FAO, etc.).
- Session 3: Legal aspects, presentation of the EC legislation, presentation of other countries legislations and implications for trade.
- Session 4: Surveillance and control methods.
- Session 5: Communication aspects on *Xylella fastidiosa* and the Olive quick decline syndrome (OQDS), as well as on pests in general.

Pre-registration is open until the 31st of March (no registration fees): <u>https://ippc.wufoo.com/forms/international-workshop-on-xylella-fastidiosa/</u>

Call for abstracts is open until the 15th of March: <u>https://ippc.wufoo.com/forms/call-for-abstract-xylella-fastidiosa-workshop/</u>

Source: EPPO Secretariat (2016-01).

Additional key words: conference

Computer codes: XYLEFA, IT

2016/028 10th Meeting of the International Pest Risk Research Group (Parma, IT, 2016-08-23/26)

The International Pest Risk Research Group (IPRRG) will be hosting its 10th annual meeting in association with the European Food Safety Authority (EFSA) from the 23rd to the 26th of August 2016 at the EFSA headquarters in Parma, Italy. The IPRRG is a group of research scientists and pest risk practitioners that aims to develop enhanced pest risk modelling and mapping methods. Oral and poster presentations are invited on all aspects of pest risk research and abstracts should be submitted before the 31st of May 2016. Presentations on advances in modelling and mapping risks (e.g. pathway analysis, species distribution modelling, spread modelling, uncertainty analysis, climate change impacts and vectorborne disease risk), impact assessment, and communicating risks to policy makers are particularly welcomed.

More information about the meeting can be found on the IPRRG website: <u>http://www.pestrisk.org/?page_id=640</u>

Source: EPPO Secretariat (2016-02).

Additional key words: conference, PRA

Computer codes: IT

2016/029 First report of Dryocosmus kuriphilus in Belgium

The NPPO of Belgium recently informed the EPPO Secretariat of the first report of Dryocosmus kuriphilus (Hymenoptera: Cynipidae - EPPO A2 List) on its territory. The first observations were reported by amateur entomologists and citizens via Internet forums in July 2015 and a sample was sent to the Institute for Agricultural and Fisheries Research. The NPPO was informed and more samples were collected from 3 outbreak sites which had been reported in the municipalities of Bree (province of Limburg); Tessenderlo (province of Limburg) and Scherpenheuvel-Zichem (province of Vlaams Brabant); and Retie (province of Antwerpen). The identity of the pest was confirmed in August 2015. The 3 outbreak sites were located in natural areas (public sites and conservation areas). In each outbreak site, only a few infested chestnut trees (Castanea sativa) were found and these were moderately infested. In Bree, 4 trees were found infested. In Tessenderlo/Scherpenheuvel-Zichem, 10 trees were infested (covering an area of approximately 0.3 ha), and in Retie, 3 trees were infested (in an area of approximately 100 m²). During summer 2015, the presence of *D. kuriphilus* was also reported in a few other municipalities in the provinces of Limburg and Antwerpen. The origin of the pest is unknown but natural spread from neighbouring infested countries is possible.

The pest status of *Dryocosmus kuriphilus* in Belgium is officially declared as: Present: in some parts of Belgium: confirmed in provinces of Limburg, Antwerpen and Vlaams-Brabant.

Source: NPPO of Belgium (2015-12).

Pictures Dryocosmus kuriphilus: <u>https://gd.eppo.int/taxon/DRYCKU/photos</u>

Additional key words: new record

Computer codes: DRYCKU, BE

2016/030 Situation of Contarinia pseudotsugae in Belgium

The NPPO of Belgium recently provided the EPPO Secretariat with more details about the suspected occurrence of Contarinia pseudotsugae (Diptera: Cecidomyiidae - EPPO Alert List) on its territory (see EPPO RS 2016/007 and RS 2016/008). The first alert was given in 2015-10-27 when a sample, collected by a phytosanitary inspector in September 2015 in a nursery growing mainly forest tree material, was found to be infested by this new needle midge. The other findings were made in forestry stands by the regional forestry services, and l'Observatoire wallon de la Santé des forêts (Wallonia Public Service). As only larvae could be collected, the identity of the pest remains to be confirmed on adult specimens. For the moment and on the basis of the symptoms observed, the pest is thought to be C. pseudotsugae. In the Walloon region, a network of selected observation points is used for monitoring tree health and samples collected via this network between 2015-10-26 and 2015-11-27 led to the detection of the pest in all visited sites (provinces of Namur, Liège and Luxemburg). Symptoms observed corresponded to brown discolorations of the needles and needle losses at the end of the branches on a majority of Pseudotsuga menziesii plants in the nursery and of *P. menziesii* trees in the forest sites monitored. A short PRA (Quick Scan PRA) was carried out and validated on 2015-11-27. No official phytosanitary measures were taken given the wide distribution of the pest, and its eradication is not considered feasible. Further survey activities will be carried out by the regional forestry authorities in the framework of general forest health campaigns.

The pest status of *Contarinia pseudotsugae* (if confirmed) in Belgium is officially declared as: Present, under surveillance. Infestation confirmed in the area monitored at present (Ardennes, Famenne, Lorraine).

Source: NPPO of Belgium (2015-12).

Pictures Contarinia pseudotsugae: <u>https://gd.eppo.int/taxon/CONTPS/photos</u>

Video <u>http://www.eppo.int/QUARANTINE/Alert_List/insects/Contarinia_pseudotsugae.htm</u>

Additional key words: detailed record

Computer codes: CONTPS, BE

2016/031 Eradication of Anoplophora glabripennis in Neukirchen am Inn (Bavaria), Germany

In 2004, *Anoplophora glabripennis* (Coleoptera: Cerambycidae - EPPO A1 List) was found in Neukirchen am Inn in Bavaria, and this was the first finding of the pest in Germany (see EPPO RS 2004/072). *A. glabripennis* was found in private gardens and public sites on *Acer* sp., *Aesculus hippocastanum* and *Populus* sp. It was suspected that the pest had been introduced with wood packaging material. An infested area and a buffer zone were demarcated, and eradication measures have been implemented since 2004. Intensive surveys were carried out. After 4 vegetation periods without any finding of the pest, *A. glabripennis* is now considered to be eradicated from Neukirchen am Inn.

The pest status of Anoplophora glabripennis in Germany is officially declared as: Transient, only in some areas (in Bavaria, Baden-Wuerttemberg, North-Rhine Westphalia), under eradication.

Source: NPPO of Germany (2016-02).

 Pictures
 Anoplophora glabripennis: <u>https://gd.eppo.int/taxon/ANOLGL/photos</u>

Additional key words: detailed record, eradication

Computer codes: ANOLGL, DE

2016/032 Ceratothripoides brunneus (Thysanoptera: Thripidae): addition to the EPPO Alert List

Why: *Ceratothripoides brunneus* (Thysanoptera: Thripidae - tomato thrips) was identified in the EPPO study on pest risks associated with the import of tomato fruit as possibly presenting a risk for the EPPO region. This thrips species was later selected as a priority for PRA by the EPPO Panel on Phytosanitary Measures. An EPPO Expert Working Group met in December 2015 to conduct PRAs on several tomato pests, including *C. brunneus*. The conclusions of this PRA will then be reviewed by different EPPO bodies before being published.

Where: *C. brunneus* is considered to be of African origin but it has spread to Asia and the Caribbean. *C. revelatus* was previously considered as a synonym of *C. brunneus* but is now thought to be a distinct species. These recent taxonomic changes have brought some uncertainties about the geographical distribution of the pest. **EPPO region**: absent.

Africa: Angola, Burundi, Cameroon, Congo, Côte d'Ivoire, Ethiopia, Ghana, Kenya, Mozambique, Nigeria, Sierra Leone, South Africa, Tanzania, Togo, Uganda, Zimbabwe. Asia: Indonesia (Java, Sumatra), Malaysia (peninsular). Central America and the Caribbean: Cuba, Guadeloupe, Puerto Rico.

On which plants: *C. brunneus* is mostly a pest of Solanaceae but it has been found on 23 species in 15 families. Solanaceous hosts include aubergines (S. melongena, S. aethiopicum), Capsicum spp., tomato (Solanum lycopersicum), and potato (S. tuberosum). Various crops such as cucurbits (Citrullus lanatus, Cucumis melo, Cucurbita maxima, Momordica charantia), basil (Ocimum basilicum), beans (Phaseolus vulgaris), carrot (Daucus carota), cowpea (Vigna unguiculata), cocoa (Theobroma cacao), coffee (Coffea arabica), tea (Camellia sinensis), and weeds (e.g. Ageratum conyzoides, Bidens pilosa, Datura stramonium, Galinsoga parviflora, Solanum incanum, Solanum villosum, Sonchus oleracea, Tithonia diversifolia) are reported to host *C. brunneus*.

Damage: larvae and adults feed on leaves, as well as on fruits, buds, and flowers. Pupae develop in the soil. Larvae and adults can cause direct damage, primarily on leaves and fruit, and to a lesser extent on stems by feeding. Damage on flowers and buds is rare. In a study on thrips species conducted in four major tomato production areas in Kenya, *C. brunneus* was found to be the predominant thrips species in all areas. In the literature, it is also noted that damage in Kenya and Uganda on tomato, due to thrips (with *C. brunneus* as the dominant species) could be 'as high as 30%. No data could be found to indicate that *C. brunneus* might be a virus vector.

Dissemination: adult thrips can fly and ensure natural spread within crops. *C. brunneus* can be transported over long distance by the horticultural trade. EPPO member countries have occasionally intercepted *C. brunneus* on consignments of vegetables (e.g. on *S. melongena, Momordica charantia*) imported from African countries.

Pathway: fruits and vegetables, cut flowers?, plants for planting of host plants, soil, from countries where *C. brunneus* occurs.

Possible risks: several host plants of *C. brunneus* (e.g. aubergine, capsicum, carrot, cucurbits, tomato and potato) are major crops in the EPPO region. *C. brunneus* has been regularly intercepted on traded commodities, thus demonstrating that pathways for entry do exist. According to the EPPO Study, the climatic similarity between the area where it occurs and the EPPO region is medium and more studies are needed to better determine areas at risk within the EPPO region. However, it seems probable that indoor and protected conditions would allow the pest development in many parts of the EPPO region.

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EPPO RS 2016/032 Panel review date

Entry date 2016-02

Additional key words: Alert List

Computer codes: CRTZBR

2016/033 Ceratothripoides claratris (Thysanoptera: Thripidae): addition to the EPPO Alert List

Why: *Ceratothripoides claratris* (Thysanoptera: Thripidae - Oriental tomato thrips) was identified in the EPPO study on pest risks associated with the import of tomato fruit as possibly presenting a risk for the EPPO region. *C. claratris* was later selected as a priority for PRA by the EPPO Panel on Phytosanitary Measures. An EPPO Expert Working Group met in December 2015 to conduct PRAs on several tomato pests, including *C. claratris.* The conclusions of this PRA will then be reviewed by different EPPO bodies before being published.

Where: *C. claratris* is probably of Asian origin, but seems to have spread to Africa in recent years. In the literature, *C. claratris* is referred to as a species adapted to the hot and humid tropics of South East Asia. In East Africa, it is observed in the humid coastal and low-mid altitude zones.

EPPO region: absent.

Africa: Kenya, Tanzania, Uganda.

Asia: China (Yunnan), India, Philippines, Thailand.

On which plants: the main host of *C. claratris* is tomato (*Solanum lycopersicum*), but it has also been observed on other solanaceous crops such as, aubergine (*S. melongena*), *Capsicum* spp., and tobacco (*Nicotiana tabacum*), as well as on crops belonging to other plant families (e.g. Cucurbitaceae, Fabaceae and Asteraceae).

Damage: Larvae and adults feed on plants and fruits, and pupae develop in the soil. Larvae and adults cause direct damage on leaves, stems and fruit by feeding. Oviposition on fruit causes deformation. Indirect damage to plants is caused by the transmission of viruses and *C. claratris* has been reported to be a vector of *Capsicum chlorosis virus* (*Tospovirus*) and *Tomato necrotic ringspot virus* (*Tospovirus*). In Thailand, *C. claratris* is the predominant thrips species in tomato crops. It is reported to be one of the most destructive insect pests of tomato and the cause of significant yield losses in both field and glasshouse tomatoes. However, in other Asian or East African countries, no indication of damage could be found.

Dissemination: Adult thrips can fly but no data could be found on the potential for natural spread of *C. claratris*. Over long distances, trade of infested plants could disseminate the species. Unlike *C. brunneus*, no records of interception could be found.

Pathway: Fruits and vegetables, cut flowers?, plants for planting of host plants, soil, from countries where *C. claratris* occurs.

Possible risks: Several hosts (e.g. tomato, aubergine) are major vegetable crops in the EPPO region. According to the EPPO Study, the climatic similarity between the area where it occurs and the EPPO region is low to medium, but as *C. claratris* is known to occur in glasshouses in Thailand, it cannot be excluded that this tropical species might establish under glasshouse conditions in the EPPO region.

Sources:

EPPO (2015) EPPO Study on Pest Risks Associated with the Import of Tomato Fruit. EPPO Technical Document no. 1068. Available at <u>http://www.eppo.int</u>

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EPPO RS 2016/033 Panel review date

Entry date 2016-02

Additional key words: Alert List

Computer codes: CRTZCL

2016/034 More details about the situation of *Macrohomotoma gladiata* in Algeria and first report in France

As reported in the EPPO RS 2016/010, the presence of *Macrohomotoma gladiata* (Hemiptera: Homotomidae) has recently been detected in Algeria. This Asian psyllid was first found in spring 2015 on urban ficus trees planted in the University campus of Mostaganem. Intially found on 3 trees, infestation rapidly spread to all *Ficus* trees (approximately 30 trees) of the University campus. At the end of summer 2015, colonies of *M. gladiata* were observed on the majority of ficus trees planted along the streets and squares of the city of Mostaganem. In November 2015, the pest was also found in the city of Oran.

In addition to Algeria, the presence of *M. gladiata* has very recently been detected in France. In November 2015, *P. gladiata* was discovered in the city of Nice on an ornamental *Ficus microcarpa* planted outdoors. As this species is showing invasive behaviour, its further spread around the Mediterranean Basin is expected to occur.

Source: Anonymous (2016) Psylle sur Ficus: la France aussi. *Phytoma* no. 691, p 5.

Guenaoui Y, Ouvrard Y (2016) Une nouvelle espèce de psylle découverte sur Ficus en Algérie. *Phytoma* no. 691, 7-9.

Additional key words: new record

Computer codes: MAHOGL, FR

2016/035 Sentinel trees: a new method for early warning

The early detection of insect invaders is a challenge in plant health, as many of these insect species were not necessarily known to cause significant damage in their native range and some were not even known to science before being introduced into a new area. As Asia is currently considered to be the main origin of insect invaders to Europe, sentinel trees were planted in China during 2007-2011 as an early warning tool to evaluate the potential of Asian insects to colonize European trees. Seedlings (1-1.5 m tall) of 5 broadleaved (*Carpinus betulus, Fagus sylvatica, Quercus petraea, Q. suber, Q. ilex*) and 2 conifer species (*Abies alba, Cupressus sempervirens*) were planted in blocks of 100 seedlings at two widely separated sites: in a nursery in Beijing and in a forest environment near Fuyang (Anhui province). Sentinel trees were regularly inspected for the presence of insects (every month from May to October from 2007 to 2011 in Beijing - every 2 weeks from May to October from 2008 to 2011 in Fuyang). As a result, 104 insect species, mostly defoliators, were observed at various stages (eggs, larvae, pupae, adults) on European trees. Although many insects were probably incidental feeders, 38 species colonized the European sentinel trees more than 5 times during the studied period. The full list is

included in the original paper, but a list of insects which could be identified to the species level has been extracted below by the EPPO Secretariat (in order of occurrence).

Species	Order: Family	Known host in China	European trees in China
Compsapoderus continentalis	Coleoptera: Attelabidae	?	C. betulus, F. sylvatica, Q.
			petraea, Q. suber
Altica cirsicola	Coleoptera: Chrysomelidae	Thistles	C. sempervirens, Q. suber
Holotrichia diomphalia	Coleoptera: Scarabeidae	Field crops, Azadirachta,	A. alba, C. betulus, C.
		Prosopis, Ziziphus, Populus	sempervirens, F. sylvatica,
			Q. ilex, Q. petraea, Q.
			suber
Holotrichia trichophora	Coleoptera: Scarabeidae	Field crops, Sapium,	A. alba, C. betulus, C.
		Cinnamomum, Castanea	sempervirens, F. sylvatica,
			Q. ilex, Q. petraea, Q.
			suber
Rhopalus sapporensis	Hemiptera: Coreidae	Rice, field crops	Q. ilex, Q. petraea
Pteroma nr pendula	Lepidoptera: Psychidae	Legume trees	C. betulus, F. sylvatica, Q.
		-	ilex, Q. petraea, Q. suber
Lema coronata	Coleoptera: Chrysomelidae	Commelina communis	Q. petraea
Lema diversa	Coleoptera: Chrysomelidae	Commelina communis	Q. petraea
Calomycterus obconicus	Coleoptera: Curculionidae	Field crops, polyphagous	Q. suber
Echinocnemus squameus	Coleoptera: Curculionidae	Field crops, rice	Q. petraea
Basilepta fulvipes	Coleoptera: Eumolpidae	Cerasus, Prunus, Malus,	Q. petraea
		Pterocarya	
Anomala corpulenta	Coleoptera: Rutelidae	Field crops, fruit trees,	Q. petraea
		Populus	
Mimela chinensis	Coleoptera: Rutelidae	Field crops, fruit trees	C. betulus, Q. petraea
Holotrichia parallela	Coleoptera: Scarabeidae	Ulmus, Populus, Salix, field	A. alba, C. betulus, C.
		crops	sempervirens, F. sylvatica,
			Q. ilex, Q. petraea, Q.
			suber
Holotrichia titanus	Coleoptera: Scarabeidae	Field crops	A. alba, C. betulus, C.
			sempervirens, F. sylvatica,
			Q. IIex, Q. petraea, Q.
Clatua tamuia	Hemintene, Canaidee	Field energy wing subset	suber
Cietus tenuis	Hemiptera: Coreidae	Field crops, rice, wheat,	C. Detulus
Deluceria haccorum	Llemintene. Denteteneidee	Maize	C hatulus
Dolycoris baccarum	Hemiptera: Pentatomidae	Field crops, fruit trees	C. betulus
Eysarcoris guttiger	Hemiptera: Pentatomidae	Field Crops	C. betulus, Q. petraea
Trabala vishnou	Lepidoptera: Lasiocampidae	Jugians, Castanea, Quercus, Malus	Q. petraea, Q. suber
Cifuna nr locuples	Lepidoptera: Lymantridae	Field crops, Lythrum	Q. petraea, Q. suber
		salicaria	
Acronicta rumicis	Lepidoptera: Noctuidae	Pyrus, Malus, Amygdalus,	Q. petraea
		Rumex, Polygonum	

The use of sentinel plants to identify possible insect threats is promising but several constraints were encountered during this project: the taxonomic identification was difficult as a large proportion of the collected specimens were larvae, the duration of the experiment was too short to monitor bark and wood borers or fruit/cone pests which develop on larger trees, climatic and environmental factors have seriously affected the acclimatization and survival of tree seedlings, logistical and administrative difficulties were major constraints when planting trees in a foreign country. The use of an alternative method based on arboretum surveys, relying on a worldwide network of arboreta, botanical gardens and nurseries is also discussed. This latter approach tends to overcome the logistical and administrative difficulties, and allows studies on mature trees. However, it usually relies on a limited number of trees of the same species. In conclusion, both approaches were considered useful and complementary to identify potential insect invasions and achieve early warning.

Source: Roques A, Fan JT, Courtial B, Zhang YZ, Yart A, Auger-Rozenberg MA, Denux O, Kenis M, Baker R, Sun JH (2015) Planting sentinel European trees in Eastern Asia as a novel method to identify potential insect pest invaders. *PlosOne* DOI: 10.1371/journal.pone.0120864 <u>http://www.plosone.org/article/fetchObject.action?uri=info:doi/10.1371/journal.p</u> <u>one.0120864&representation=PDF</u>

Additional key words: early warning

Computer codes: ACRNRU, ANMLCP, BASLFU, CALMOB, CIFULO, CLESPU, COMUCO, CREAPE, DOLYBA, ECHISQ, EUSAGU, HALTCI, HOLTPA, HOLTTI, HOLTTR, LACHDI, LEMACO, LEMADV, MMLACH, RPLUSA, TRBAVI, CN

2016/036 'Candidatus Liberibacter asiaticus' does not occur in Portugal

In summer 2015, the presence of 'Candidatus Liberibacter asiaticus' (EPPO A1 List) was suspected in one orchard located in Silves county (Algarve region), Portugal. The grower reported symptoms of leaf yellowing on 20 year-old citrus trees (*Citrus sinensis*). These symptoms appeared in spring/summer 2014, disappeared during winter but reappeared in spring 2015. The Regional and Central Plant Protection Services inspected the orchard on 2015-08-24 and noted the presence of symptoms on approximately 80% of the trees. Six samples were taken from 6 symptomatic trees and sent to the Portuguese Official laboratory (INIAV) for testing 'Candidatus Liberibacter spp.' and Xylella fastidiosa. On 2015-10-23, the laboratory reported that 1 of the 6 samples tested positive for 'Ca. L. asiaticus' (all results were negative for X. fastidiosa).

Immediately after receiving the laboratory (INIAV) report which indicated a suspicion of 'Ca. L. asiaticus' in 1 sample, 12 samples were taken from the same trees. Half of these samples were sent to the French reference laboratory (ANSES) for testing for 'Ca. Liberibacter spp.' and the other half was sent to INIAV for testing for 'Ca. Liberibacter spp.' and Xylella fastidiosa. All tested samples gave negative results. In addition, 8 samples composed of fresh leaves and DNA extracts were also sent to ANSES. Similarly, all results were negative for 'Ca. Liberibacter spp.'. As a precaution, official phytosanitary measures were taken in the orchard from which the initial suspect sample had been taken. In December 2015, all plants and fruit were burnt in situ. An intensive monitoring and sampling programme was initiated in the surrounding area in 2 other plots belonging to same grower and in nearby 3 nurseries. In total 61 plots were inspected and 100 samples from host plants were collected and sent to INIAV for testing. The analysis of these 100 samples has now been completed and all results were negative for 'Ca. Liberibacter spp'. Finally, intensive inspections for insect vectors were carried out at the same sites and no evidence of their presence was found. Until now, 142 traps have been installed in the orchards located in the surroundings and in nurseries. These traps were inspected once every two weeks, and sent to INIAV for examination. The results were consistent with the outcome of the specific surveys that had been carried out for the known vectors of 'Ca. Liberibacter asiaticus' in recent years. The only insects identified in the orchard and surrounding areas were whiteflies (Aleurothrixus floccosus), aphids (Aphis spiraecola and A. gossypii), mites, scale insects and the cicadellid Penthimiola bella. Diaphorina citri has never been detected in Portugal, and Trioza erytreae has been found only in the northern part of the country. Monitoring and sampling of host plants will resume in spring 2016. The pest status of 'Candidatus Liberibacter asiaticus' in Portugal is officially declared as: Absent.

Source: NPPO of Portugal (2016-02).

Pictures Liberibacter asiaticus: <u>https://gd.eppo.int/taxon/LIBEAS/photos</u>

Additional key words: absence

Computer codes: LIBEAS, PT

2016/037 Xylella fastidiosa does not occur in Lebanon

In 2015, a paper suggesting the presence of *Xylella fastidiosa* (EPPO A1 List) in Lebanon was published (Temsah, 2015). The bacterium was detected on oleander (*Nerium oleander*) showing leaf scorch, chlorosis and stunting symptoms in the campus of the American University of Beirut. The presence of the bacterium was confirmed by ELISA and by *in situ* observations made with a scanning electron microscope. However, no isolation and culturing on appropriate growing media were done at that time. Considering the

potential risk presented by X. fastidiosa on agricultural and landscaping plants in Lebanon, an extensive survey was conducted across the country, covering olive growing areas, nurseries, ornamental plants and other potential hosts (e.g. Acacia saligna, Coffea arabica, Myrtus communis, Olea europaea, Polygala myrtifolia, Spartium junceum, Prunus spp., Vitis spp., Westringia fructicosa). In the main olive growing areas, the survey was initiated in May 2014. Samples were collected during three vegetative seasons from a total of 82 olive trees (covering 24 groves). In addition, 30 grapevine plants with symptoms resembling those of Pierce's disease were collected during autumn 2014. Following the initial finding on N. oleander, twig samples were collected from oleanders (32 trees) at the American University campus to confirm the earlier ELISA results by molecular, serological and isolation methods. In spring 2015, samples were also taken from nurseries which had imported ornamentals and olive seedlings from Italy in 2014-2015. Several methods were used (ELISA and DTBIA with specific antibodies, PCR with three specific sets of primers, isolation on four growing media) but all results were negative for X. fastidiosa, including those for the samples from oleander. It is suggested that the ELISA-positive samples initially obtained were false-positive. It is noted that the presence of leaf scorch symptoms which were frequently observed during the survey may have multiple origins, abiotic or biotic (e.g. drought, salty winds, nutrient deficiency/toxicity, frost damage, fungal pathogens). On the basis of the survey results, it is concluded that X. fastidiosa does not occur in Lebanon.

Source: Habib W, nigro F, Gerges E, Jreijiri F, Al Masri Y, El Riachy M, Choueiri E (2016) *Xylella fastidiosa* does not occur in Lebanon. *Journal of Phytopathology* (in press).

Temsah M, Hanna I, Saad A (2015) First report of *Xylella fastidiosa* associated with oleander leaf scorch in Lebanon. *Journal of Crop Protection* 4, 131-137.

Pictures Xylella fastidiosa: <u>https://gd.eppo.int/taxon/XYLEFA/photos</u>

Additional key words: denied record

Computer codes: XYLEFA, LB

2016/038 Eradication of the outbreak of *Clavibacter michiganensis* subsp. sepedonicus on tomato in Belgium

In August 2014, an outbreak of *Clavibacter michiganensis* subsp. *sepedonicus* (EPPO A2 List) was found on glasshouse tomatoes in Belgium (EPPO RS 2014/190). This outbreak concerned 10 successive plants (*Solanum lycopersicum* cv. 'Merlice') along 1 row in a greenhouse used for tomato fruit production in the Province of Antwerp. This outbreak is now considered eradicated as appropriate measures (destruction of the 10 infected plants and plants in their direct vicinity, and implementation of hygiene measures) have been successfully taken.

The pest status of *Clavibacter michiganensis* subsp. *sepedonicus* in Belgium is officially declared as: Absent, pest eradicated.

Source: NPPO of Belgium (2015-12).

 Pictures
 Clavibacter michiganensis subsp. sepedonicus: https://gd.eppo.int/taxon/CORBSE/photos

Additional key words: absence, eradication

Computer codes: CORBSE, BE

2016/039 Ralstonia solanacearum detected in Rosa in Belgium

The NPPO of Belgium recently informed the EPPO Secretariat of the first confirmed report of Ralstonia solanacearum (EPPO A2 List) on Rosa on its territory. A sample containing symptomatic Rosa plants was sent by a grower to the Institute for Agricultural and Fisheries Research (ILVO). After a positive isolation test, the NPPO was alerted in October 2015 and an inspection of the greenhouse took place on 2015-10-13. All Rosa cultivars present in this greenhouse (about 8000 Rosa plants for cut flower production) were inspected and sampled. The symptomatic red rose cultivar 'Lucky Red' was confirmed to be infected and the pathogen was identified as R. solanacearum biovar 3 / phylotype I, a variant which is different from the causal agent of potato brown rot. Samples were also taken from other rose cultivars and from 3 other companies, but all tested samples gave negative results. Investigations were carried and showed that the origin of this outbreak was the supplier of the plants which was located in the Netherlands. Eradication measures were taken (destruction of the affected plants and implementation of hygiene measures) and the NPPO now considers that these have been successful to eradicate the bacterium. The pest status of *Ralstonia solanacearum* biovar 3/phylotype I in Belgium is officially declared as: Absent: pest eradicated.

Source: NPPO of Belgium (2015-12).

Pictures Ralstonia solanacearum: <u>https://gd.eppo.int/taxon/RALSSO/photos</u>

Additional key words: detailed record

Computer codes: RALSSO, BE

2016/040 First report of Tomato leaf curl New Delhi virus in Italy

In October 2015, unusual symptoms were observed on zucchini squash (*Cucurbita pepo*) grown in open fields of the Province of Trapani (Sicilia), Italy. Symptoms were characterized by yellow mosaic, severe leaf curling, swelling of veins on young leaves, shortening of internodes, roughness of the fruit skin and reduced fruit size. Molecular analysis (PCR, sequencing) confirmed the presence of *Tomato leaf curl New Delhi virus* (*Begomovirus*, ToLCNDV - EPPO Alert List) in symptomatic samples. This is the first time that ToLCNDV is reported from Italy.

The situation of *Tomato leaf curl New Delhi virus* in Italy can be described as follows: Present, first found in 2015 in outdoor crops of *Cucurbita pepo* in Sicilia.

Source: Panno S, Iacono G, Davino M, Marchione S, Zappardo V, Bella P, Tomassoli L, Accotto GP, Davino S (2016) First report of *Tomato leaf curl New Delhi virus* affecting zucchini squash in an important horticultural area of southern Italy. *New Disease Reports* 33, 6 <u>http://dx.doi.org/10.5197/j.2044-0588.2016.033.006</u>

Additional key words: new record

Computer codes: TOLCND, IT

2016/041 First report of Plantago asiatica mosaic virus in Hungary

During a survey, unusual symptoms were observed during winter 2013 on *Lilium* plants in a 2-ha greenhouse in Dabas city, Hungary. Extensive necrotic areas were observed along the veins of lily leaves. The lower leaves withered, flower production declined, and the plants gradually died. In the case of cv. 'Rialto', the disease incidence reached more than 50%, and 30% infection was observed on cv. 'Conca d'Or' during the visual inspection of 10 000 plants. Laboratory analysis (electron microscopy, RT-PCR, sequencing) confirmed the presence of *Plantago asiatica mosaic virus* (*Potexvirus*, PIAMV) in symptomatic plants. This is the first time that this virus is detected in Hungary. Based on sequences similarity of PIAMV isolates detected in Hungary with a Dutch isolate, and the fact that the lily bulbs originated from the Netherlands, it is suspected that the import of bulbs from the Netherlands was the source of infection.

The situation of *Plantago asiatica mosaic virus* in Hungary can be described as follows: Present, first found in 2013 in a *Lilium* greenhouse in Dabas (Pest county).

Source: Pájtli É, Eke S, Palkovics L (2015) First report of *Plantago asiatica mosaic virus* (PIAMV) incidence on *Lilium* sp. in Hungary. *Plant Disease* **99**(9), p 1288.

Additional key words: new record

Computer codes: PLAMV0, HU

2016/042 First report of Plantago asiatica mosaic virus in Italy

During winters 2013 and 2014, severe leaf symptoms (necrotic streak) were observed on plants of lily hybrids (*Lilium* spp.) in several greenhouses of the Campania region, in Southern Italy. A total of 14 symptomatic plants (7 in 2013 and 7 in 2014) were selected and tested in the laboratory for the presence of viruses (ELISA, DAS-ELISA, RT-PCR, sequencing, pathogenicity tests). Results confirmed the presence of *Plantago asiatica mosaic virus* (*Potexvirus*, PIAMV) in symptomatic plants. This is the first time that this virus is detected in Italy. Based on sequence similarity of PIAMV isolates detected in Campania with a Dutch isolate, it is suspected that the introduction of infected bulbs from the Netherlands is the likely source of infection.

The situation of *Plantago asiatica mosaic virus* in Italy can be described as follows: Present, first found in 2013 in several greenhouses in Campania region.

Source: Parrella G, Greco B, Pasqualini A, Nappo AG (2015) *Plantago asiatica mosaic virus* found in protected crops of lily hybrids in Southern Italy. *Plant Disease* **99**(9), p 1289.

Additional key words: new record

Computer codes: PLAMV0, IT

2016/043 Impacts of Arundo donax on riparian habitats and ground dwelling arthropods

Arundo donax (Poaceae) is a perennial grass species native to Southern and Central Asia which has been used in cultivation for hundreds of years for its canes which are used as building material. The species is expanding rapidly along riparian habitats in Mediterranean-climate habitats where it can have negative impacts on native plant and associated invertebrate species. Previous studies conducted in the USA have shown that *A. donax* can reduce the abundance and diversity of native invertebrate communities when it invades a habitat. In the present study, 27 sampling sites were surveyed across three Mediterranean rivers in the north-east of Spain to evaluate the effects of *A. donax* on the invertebrate community. Each sampling site consisted of a patch of *A. donax* or native vegetation. Ground dwelling invertebrates were sampled using pitfall traps and Berlese funnel traps. The study detected a significant increase in the abundance of collembola and a decrease in the abundance, body size and diversity of macro-invertebrates at order and family level in invaded sites compared to uninvaded sites. Invaded sites had a simplified macro-invertebrate community structure suggesting that the presence of *A. donax* can significantly alter the habitat it invades.

Source: Maceda-Veiga A, Basas H, Lanzaco G, Sala M, de Sostoa A, Serra A (2016) Impacts of the invader giant reed (*Arundo donax*) on riparian habitats and ground arthropod communities. *Biological Invasions* 18, 731-749.

Additional key words: invasive alien plants, impacts

Computer codes: ABKDO, ES

2016/044 Phenological dynamics of the invasive plant Acacia longifolia in Portugal

Acacia longifolia (Mimosoideae) is a bushy shrub or small tree native to South-East Australia. Introduced into Portugal at the beginning of the 20th century to stabilise sand dunes, A. longifolia has since become invasive and forms extensive monocultures in riparian habitats, along roadsides and mountain slopes. Timing, duration and abundance of vegetative and reproductive events and physiological and morphological adaptive strategies of species in using resources may play an important role in the success of invasive plant species. The current study examined the phenology of A. longifolia in four populations in North, Central and Southern Portugal. The distance between populations varied from 100 to 500 km. Climate data from March 2007 to March 2011 were compiled from records obtained from the weather station closest to each population. In 2008, phenological data was collected from each population by monitoring the presence or absence of both reproductive and vegetative (leaf initiation) phenophases. Significant variations in vegetative and reproductive phenophases were observed between populations. In the case of reproductive phenophases variation was observed across elevation or latitudinal gradients, with populations that were subject to more stressful climatic conditions advancing their flowering and fruiting. The occurrence of each phenophase was strongly associated with climatic conditions in the previous 5 - 12 months suggesting that plants receive phenological cues prior to this response. Temperature and irradiance were the most significant predictors of the phenological cycle of A. longifolia but precipitation also exerted a strong influence on budding and flowering.

Source: Morais MC, Freitas H (2015) Phenological dynamics of the invasive plant Acacia Iongifolia in Portugal. Weed Research 55, 555-564.

Computer codes: ACALO, PT

2016/045 Reproduction of *Crassula helmsii* by seed in Western Europe

Crassula helmsii (EPPO A2 List: Crassulaceae) is an amphibious succulent perennial species native to temperate Australia and New Zealand. The species forms extensive monospecific mats in wetlands throughout Western Europe enabling C. helmsii to outcompete native species for space, light and nutrients. In Europe C. helmsii readily reproduces through vegetative regeneration of turions and stem fragments. Flowering occurs in most populations between July and September, though the ability of the species to reproduce through seed in Europe remains largely unknown. In the present study, the reproductive ability of C. helmsii was evaluated by assessing if (1) seeds are present in populations from across Western Europe, (2) whether the seeds are viable and (3) whether the seeds can survive until the next growing season. Plant material containing flowers and fruits was collected during the autumn of 2014 from 16 populations in the Netherlands, Belgium, France, England and Germany. Following a period of cold stratification, seed viability was tested from each population. Seedlings were grown from seed samples from all populations except two, and from all of the five countries. The results of an in situ test revealed that seeds can survive under normal winter conditions. The results suggest that reproduction by seed is a relatively cryptic but widespread phenomenon throughout Western Europe and that these findings can have implications on the efficacy of management techniques currently applied for the control of *C. helmsii*.

Source: D'hondt B, Denys L, Jambon W, De Wilde, Adriaens T, Packet J, van Valkenburg J (2016) Reproduction of *Crassula helmsii* by seed in western Europe. *Aquatic Invasions*. <u>http://www.aquaticinvasions.net/2015/ACCEPTED/AI_2016_Dhondt_etal_corrected proof.pdf</u>

Pictures Crassula helmsii: <u>https://gd.eppo.int/taxon/CSBHE/photos</u>

Additional key words: invasive alien plants

Computer codes: CSBHE

2016/046 Invasive aquatic plants in China

Aquatic invasive alien plants cost the Chinese government millions of US dollars each year in control and management costs. Species such as *Alternanthera philoxeroides* (EPPO A2: Chenopodiaceae) and *Eichhornia crassipes* (EPPO A2: Pontederiaceae) form dense floating mats which impede human activities in invaded waterbodies and at the same time alter the ecology of the habitat reducing favourable conditions for native species. In the present study, an analysis was conducted on invasive aquatic plant species in China. Information was gathered from online databases and journals, and from grey literature. In total, 152 aquatic invasive plant species were recorded from China belonging to 39 families and 84 genera. Most aquatic species recorded in this study were introduced from South America (25.6 %), followed by North America (23.6 %), Asia (15.13 %), Africa (8.55 %) and Australia and New Zealand (0.6 %). The majority of species identified in the study (146 species) are freshwater species and only 6 species were identified as occurring in marine intertidal or estuarine habitats. Since the introduction of exotic species into China is not regulated, it is likely that more non-native aquatic plant species will enter China in the future.

Source: Wang H, Wang Q, Bowler PA, Xiong W (2016) Invasive aquatic plants in China. Aquatic Invasions. <u>http://www.aquaticinvasions.net/2015/ACCEPTED/AI_2016_Wang_etal_correctedpr</u> <u>oof.pdf</u> Additional key words: invasive alien plants

Computer codes: ALRPH, EICCR, CN

2016/047 Does invasion by *Eupatorium adenophorum* increase forest fire severity?

Eupatorium adenophorum (Ageratina adenophora: Asteraceae) is a widespread invasive alien species in China which was first introduced in 1940. In the Sichuan Province, A. adenophora can increase understory plant density from 3 to 8 stems per m^2 in a single year. An established invasion can result in 85 - 90 % cover which reduces native plant occurrence. The structural change in the understory as a result of the invasion can have significant impacts on the intensity and duration of fires (due to natural events) in the region. In the current study, five forest sites were selected where each differed in the dominant plant species. In each site, invaded and uninvaded plots were selected and the number of species, percentage cover of each species and height was recorded. Litter was harvested from 5, 1 x 1 m quadrats in each plot at each site and wet and dry biomass was recorded along with heat content values and ignition points. Using computer models to simulate fire intensity the fuel chemistry (moisture, ash, heat value and ignition point) and fire severity (flame length and fire intensity) was compared under three burning scenarios (low, moderate and extreme) for invaded and uninvaded plots at each site. At each site, fire severity and fuel loads were forecast to be significantly higher in invaded plots compared to uninvaded plots indicating the presence of A. adenophora may increase fire surface severity through increased fuel loads while reducing the moisture, ash and ignition point of understory herbaceous species.

Source: Wang S, Niu S (2016) Do biological invasions by *Eupatorium adenophorum* increase forest fire severity? *Biological Invasions* **18**, 717-729.

Additional key words: invasive alien plants, impacts

Computer codes: EUPAD, CN

2016/048 First report of Oenothera laciniata in Libya

The genus *Oenothera* contains approximately 145 herbaceous species native to North and South America. A number of *Oenothera* species are established worldwide with approximately 70 species being reported from Europe. *Oenothera laciniata* (Onagraceae) is native to North America and is reported for the first time from Libya. During surveys conducted in 2014 and 2015, *O. laciniata* was collected from Ain Zara region 20 km south east of Tripoli.

Source: Mahklouf M (2016) A new record *Oenothera laciniata* Hill. for the flora of Libya. International *Journal of Modern Botany*, 6(1), 6-9. <u>http://article.sapub.org/10.5923.j.ijmb.20160601.02.html</u>

Additional key words: invasive alien plants, new record

Computer codes: OEOLA, LY

2016/049 New LIFE funded project on pest risk assessment for invasive plants

EPPO, in collaboration with the Panel on Invasive Alien Plants and the UK NERC Centre for Ecology and Hydrology, has received LIFE funding for a project titled 'Mitigating the threat of invasive alien plants in the EU through pest risk analysis to support the EU Regulation 1145/2014'. The project, which started on 2016-02-01, will produce 16 pest risk assessments for high priority species which will, depending on the outcome of the PRA, ultimately lead to their regulation within the EU. The project is divided into three stages where the first stage will be to select the 16 species from a larger list of identified invasive alien plants. Experts from the EPPO Panel on Invasive Alien Plants will meet in March 2016 to prioritize the species based on their potential impacts, spread capacity and availability of scientific information for each species (amongst other criteria). Following the prioritization of the 16 species, stage 2 will see each species undergo a pest risk assessment (PRA) where international experts for each species will meet to review the scientific literature on each species and compile the dossier. Following the completion of the risk assessments, each PRA will undergo a peer review process which will constitute the third stage of the project. In addition to preparing the PRA, the project will produce datasheets for each species, a dedicated project website which will include key information. Training workshops on the EPPO Prioritization Process for invasive alien plants and PRA will be conducted as part of the project.

Source: Environment LIFE programme website: <u>http://ec.europa.eu/environment/life/funding/lifeplus.htm</u> EPPO website: <u>http://www.eppo.int/INVASIVE_PLANTS/ias_plants.htm</u>

Additional key words: invasive alien plants