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General

Pests

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2017/028 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 (or formerly 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 the Republic of Korea, *Metcalfa pruinosa* (Hemiptera: Flatidae) was found for the first time in August 2005 in a persimmon (*Diospyros kaki*) orchard in Hanrim county (Gyeongnam province). The pest was then found on other hosts and locations. This is also the first record of *M. pruinosa* for Asia (Lee and Wilson, 2010). **Present, first found in 2005 in Gyeongnam province.**

The giant black aphid, *Pterochloroides persicae* (Hemiptera: Aphididae) has been recently found in France. In 2016, it was observed on peach (*Prunus persicae*) trees in the municipality of Bellegarde (Gard department). It is noted that its presence had also been recorded in 2006 and 2014 in the Pyrénées-Orientales department. *P. persicae* originates from China but has spread to other parts of the world such as India, Pakistan, the Middle East and the Mediterranean Basin. Its preferred host is peach but it can also be found on other fruit trees (e.g. *Citrus, Cydonia oblonga, Malus domestica, Prunus* spp*., Pyrus communis*). In the Western part of the Mediterranean Basin, it has been recorded in Italy (1977), Tunisia (1984), Spain (1994), France (2006) and Algeria (2008) (Anses, 2016; Laamari, 2015). **Present, Southern France.**

In Mozambique, *Tuta absoluta* (Lepidoptera: Gelechiidae – EPPO A2 List) was first trapped in 2016 in the Manica province, in the central part of the country. Later surveys detected the pest in the Northern part of Mozambique (Cabo Degado and Niassa provinces), then in the Central part (Manica, Tete and Sofala provinces) and finally in the Southern part of the country (Maputo and Gaza provinces). The pest status of *Tuta absoluta* in Mozambique is officially declared as: **Present: in all parts of the area where host crop(s) are grown** (IPPC, 2017).

- **Detailed records**

In Switzerland, Grapevine flavescence dorée phytoplasma (EPPO A2 List) was first recorded in Ticino in 2004 and remained limited to this canton until 2015. In autumn 2015, the disease was found for the first time in the canton of Vaud in two localities (Blonay and Tour-de-Peilz). Phytosanitary measures have been taken to prevent any further spread of the disease (Confédération Suisse, 2016).

Citrus canker (*Xanthomonas citri* subsp. *citri* – EPPO A1 List) has been found in Texas (US). The bacterium was detected in several citrus trees (*Citrus aurantifolia, C. hystrix, and C. limon x medica*) in private gardens in Rancho Viejo (Cameron county). Phytosanitary measures are being implemented (NAPPO, 2016).

In France, *Xylosandrus crassiusculus* (Coleoptera: Scolytidae - EPPO Alert List) was first found in August 2014 in the municipality of Nice (Alpes-Maritimes department) on 4 carob trees (*Ceratonia siliqua*). Despite eradication measures, surveys using traps conducted in 2015 detected the pest on 200 trees at the same location and on the island of Sainte Marguerite (also in Alpes-Maritimes). Eradication is no longer considered feasible (Anonymous, 2015).

In Spain, *Vespa velutina* (Hymenoptera: Vespidae – Asian hornet) was first found in 2010 in Navarra (EPPO RS 2015/075). This invasive species was then found in other parts of the country: País Vasco, Cataluña, Cantabria, Asturias, La Rioja, Illas Baleares (Mallorca), Castilla y León and Galicia (Xunta de Galicia, 2016).

- **Denied record**

In 2014, a paper (Demir *et al.*, 2014) mentioned the possible presence of *Malacosoma americanum* (Lepidoptera: Lasiocampidae – EPPO A1 List) in Turkey. This record was queried by the Turkish NPPO which undertook further studies on the identity of the pest found. Results of the diagnosis confirmed that the pest was not *M. americanum*, but *M. franconicum* which is native to Turkey. The original paper has been corrected and republished (NPPO of Turkey, 2016).

- **Eradication**

In Ukraine, *Bemisia tabaci* (Hemiptera: Aleyrodidae – EPPO A2 List) was first detected in 2007 in 1 greenhouse near Ivano-Frankivsk in the Western part of the country. The infestation was found on *Hibiscus* plants and covered approximately 0.7 ha. Most infested plants were destroyed and insecticide treatments were applied. In 2008, the pest was no longer found in this glasshouse. Since this first record, annual surveys have been conducted in Ukraine. In 2010, another outbreak was detected in 1 glasshouse producing curcurbits (*Cucumis* sp.) in the Striy district (K'viv oblast) and in 1 glasshouse producing ornamental tropical plants in Lviv city. In all cases, eradication measures were applied. As since 2014, no other findings have been made, the NPPO considers that the pest has been successfully eradicated (IPPC, 2016).
The pest status of *Bemisia tabaci* in Ukraine is officially declared as: **Absent, pest was eradicated.**

- **New pests**

Genetic studies have been conducted on a collection of 234 *Calonectria* isolates collected from *Buxus* plants showing symptoms of box blight. Previously, only one species, *Calonectria pseudonaviculata* (=*Cylindrocladium buxicola* – formerly EPPO Alert List) was known to be associated with the disease. Results of these genetic studies have shown that two distinct fungal species are involved with box blight: *C. pseudonaviculata sensu stricto* and a new species for which the name *Calonectria henricotiae* sp. nov. is proposed. Molecular tests (PCR-RFLP and real-time PCR) have been developed to detect and identify these two species (Gehesquière *et al.*, 2016).

A new phytophthora isolated from *Amaranthus tricolor* has been described in Taiwan and called *Phytophthora amaranthi* sp. nov. Affected plants showed water-soaked lesions on leaves, followed by wilting and plant collapse due to basal stem and root rot. In Taiwan, *A. tricolor* is an important vegetable crop which can be cultivated all year-round. This species can also be cultivated for ornamental purposes (Ann *et al.*, 2016).

- **Taxonomy**

The fungus causing annular leaf spot of potato in South America and initially described as *Septoria lycopersici* var. *malagutii* (EPPO A1 List) is now considered to be a distinct species called *Septoria malagutii* sp. nov. (Cline & Rossman, 2006).

Sources:

Ann PJ, Huang JH, Tsai JN, Ko WH (2015) Morphological, molecular and pathological characterization of *Phytophthora amaranthi* sp. nov. from amaranth in Taiwan. *Journal of Phytopathology* **164**(2), 94-101.

Anses. Fiche de reconnaissance. *Pterochloroides persicae* (by V. Balmès – dated 2016-09-01). http://draaf.normandie.agriculture.gouv.fr/IMG/pdf/BSV_Normandie_no09-2016_cle87e614.pdf

Cline TE, Rossman AY (2006) *Septoria malagutii* sp. nov., cause of annular leaf spot of potato. *Mycotaxon* **98**, 125-135.

Demir I, Nalçacioğlu R, Mohammad Gholizad L, Demirbag Z (2014) A highly effective nucleopolyhedrovirus against Malacosoma spp. (Lepidoptera: Lasiocampidae) from Turkey: isolation, characterization, phylogeny, and virulence. *Turkish Journal of Agriculture and Forestry* **38**, 462-470. http://journals.tubitak.gov.tr/agriculture/issues/tar-14-38-4/tar-38-4-5-1307-32.pdf

Gehesquière B, Crouch J, Marra R, Van Poucke K, Rys F, Maes M, Gobin B, Höfte M, Heungens K (2016) Characterization and taxonomic re-assessment of the box blight pathogen *Calonectria pseudonaviculata*, introducing *Calonectria henricotiae* sp. nov. *Plant Pathology* 65(1), 37-52.

INTERNET

- Confédération Suisse. Le Conseil fédéral (2016-06-02) Lutter contre la flavescence dorée, une maladie de quarantaine de la vigne apparue pour la première fois en Suisse romande en 2015. https://www.admin.ch/gov/fr/start/dokumentation/medienmitteilungen.msg-id-61963.html
- Govern de les Illes Balears. La vespa asiatica. *Vespa velutina.* http://www.caib.es/govern/rest/arxiu/2488796
- IPPC website. Official Pest Reports – Mozambique (MOZ-05/1 of 2017-01-13) Occurrence of tomato leaf miner (*Tuta absoluta*) in Mozambique. https://www.ippc.int/en/countries/mozambique/pestreports/2017/01/occurrence-of-tomato-leaf-miner-tuta-absoluta-in-mozambique/
- IPPC website. Official Pest Reports – Ukraine (UKR-01/2 of 2016-09-05) Eradication of *Bemisia tabaci* Gen. outbreaks in Ukraine. https://www.ippc.int/en/countries/ukraine/pestreports/2014/11/eradication-of-bemisia-tabaci-gen-outbreaks-in-ukraine/
- Xunta de Galicia. Protocolo de vixilancia e control fronte à avespa asiatica (*Vespa velutina*) 2016. http://mediorural.xunta.gal/fileadmin/arquivos/gandaria/apicultura/Protocolo_vixilancia_e_control_vespa_velutina_Galicia_Rev_2016.pdf

Laamari M, Cœur d'Acier Z, Jousselin R (2015) Première observation du puceron brun *Pterochloroides persicae* (Cholodkovsky) (Homoptera, Aphididae, Lachninae) sur pêcher en Algérie. *Bulletin OEPP/EPPO Bulletin* **45**(1), 106-107.

Lee HS, Wilson SW (2010) First report of the Nearctic flatid planthopper *Metcalfa pruinosa* (Say) in the Republic of Korea (Hemiptera: Fulgoroidea). *Entomological News* **121**(5), 506-513.

NAPPO Phytosanitary Pest Alert System. Official Pest Reports. USA (2016-07-15) Citrus canker (Xanthomonas spp.) - APHIS establishes a quarantine in portions of Cameron county, Texas. http://www.pestalert.org/oprDetail.cfm?oprID=672

NPPO of Turkey (2016-06).

Additional key words: new record, detailed record, denied record, eradication, new pest, taxonomy

Computer codes: BEMITA, CYLDBU, GNORAB, MALAAM, METFPR, PHYP64, PHYTAT, PTECPE, SEPTLM, VESPVE, XANTCI, XYLBCR, CH, ES, KR, MZ, TR, TW, UA, US

2017/029 15th Congress of the Mediterranean Phytopathological Union: 'Plant Health sustaining Mediterranean Ecosystems' (Cordoba, ES, 2017-06-20/23)

The 15th Congress of the Mediterranean Phytopathological Union on 'Plant Health sustaining Mediterranean Ecosystems' will be held in Cordoba, Spain, from the 20th to the 23rd of June 2017. Plenary, concurrent and poster sessions will be held on the following key topics:

- Invasive pathogens and new emerging plant disease
- Genome analysis: applications to plant health
- Integrated disease management
- New tools in plant disease diagnosis and management
- Plant pathology and food safety
- Molecular pathogen-host interactions
- Climate change: impact on Mediterranean plant pathology
- Biocontrol, natural compounds and plant defense stimulants
- Epidemiology and modelling
- Microbiomes and their role in plant health
- New bio-inspired treatments derived from microbiome and metabolome study

The deadline for submitting abstracts is the 15th of April 2017
For more information: http://mpucordoba.mpunion.eu/

Source: EPPO Secretariat (2017-02).

Additional key words: conference **Computer codes:** ES

2017/030 First report of *Xylosandrus compactus* in France

The NPPO of France recently informed the EPPO Secretariat of the first finding of *Xylosandrus compactus* (Coleoptera: Scolytidae) on its territory. In September 2016, *X. compactus* was found on ornamental plants (*Arbutus unedo, Laurus nobilis, Phillyrea* sp., and *Quercus ilex*) by professional gardeners in the Provence-Alpes-Côte-d'Azur region (Southern France). Affected plants showed desiccation and damage was considered to be limited (alteration of plant aesthetic appearance). The identity of the pest was confirmed by the official French reference laboratory using morphological methods. No official phytosanitary measures were undertaken.
The pest status of *Xylosandrus compactus* in France is officially declared as: **Present, only in some areas: Provence-Alpes-Côte-d'Azur region.**

Source: NPPO of France (2016-11).

Pictures: *Xylosandrus compactus*. https://gd.eppo.int/taxon/XYLSCO/photos

Additional key words: new record **Computer codes:** XYLSCO, FR

2017/031 *Xylosandrus compactus* occurs in Lazio, Liguria, Sicilia and Toscana (IT)

In Italy, *Xylosandrus compactus* (Coleoptera: Scolytidae) was first found in 2011 in urban parks in the province of Napoli, Campania region. It was observed on plants of *Quercus ilex, Viburnum tinus, Fraxinus ornus* and *Celtis australis* showing symptoms of withering on twigs and shoots of small diameter (EPPO RS 2013/130). Later, *X. compactus* was also found in Lazio, Liguria, Sicilia and Toscana, mainly on *Quercus ilex*, *Laurus nobilis* and *Ceratonia siliqua*. During summer 2016, the pest was found in Lazio region causing serious decline and wilting of Mediterranean maquis plants on the Circeo Promontory (Circeo National Park). The affected area covered more than 13 ha on which a large number of evergreen maquis species such as *Q. ilex, Viburnum tinus, Ruscus aculeatus, Pistacia lentiscus, L. nobilis* and *C. siliqua* presented wilting branches (up to 2-3 cm in diameter) or mortality of young plants. Considering the extent of damage caused by *X. compactus* on the Circeo National Park, the authors recommended that *X. compactus* should be added to the EPPO Alert List.

Source: Vannini A, Contarini M, Faccoli M, Della Valle M, Rodriguez CM, Mazzetto, Guarneri D, Vettraino AM, Speranza S (2017) First report of the ambrosia beetle *Xylosandrus compactus* and associated fungi in the Mediterranean maquis in Italy, and new host-pest associations. *Bulletin OEPP/EPPO Bulletin* **47**(1), DOI: 10.1111/epp.12358

Pictures: *Xylosandrus compactus*. https://gd.eppo.int/taxon/XYLSCO/photos

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

2017/032 Addition of *Xylosandrus compactus* and of its associated fungi to the EPPO Alert List

Why: *Xylosandrus compactus* (Coleoptera: Scolytidae - black twig borer) is a highly polyphagous pest of woody plants which has recently been reported from Italy and France. It probably originates from Asia and has been introduced to other parts of the world, most probably with trade of plants and wood. In parts of Italy (Lazio), serious damage has recently been observed on Mediterranean maquis plants in a natural environment. As this pest might also present a risk to many woody plants in nurseries, plantations, orchards, parks and gardens, scientists who had observed this outbreak in Lazio recommended that *X. compactus* should be added to the EPPO Alert List.

Where: *X. compactus* is widely distributed in Africa, Asia and South America. It has been introduced in the Pacific Islands, New Zealand, Southeastern USA, and more recently in Europe in Italy and Southern France. *X. compactus* is thought to originate from East Asia.
EPPO region: Italy (first found in 2011 - Campania, Lazio, Liguria, Sicilia and Toscana), France (first found in 2016 - Provence-Alpes-Côte-d'Azur region).
Africa: Benin, Cameroon, Central African Republic, Comoros, Congo, Congo (Democratic Republic of), Cote d'Ivoire, Equatorial Guinea, Gabon, Ghana, Guinea, Guinea-Bissau, Kenya, Liberia, Madagascar, Mauritania, Mauritius, Nigeria, Reunion, Senegal, Seychelles, Sierra Leone, South Africa, Tanzania, Togo, Uganda, Zimbabwe.
North America: USA (Alabama, Florida, Georgia, Hawaii, Louisiana, Mississippi, South Carolina, Texas).
Central America and the Caribbean: Cuba, Netherlands Antilles, Puerto Rico, Virgin Islands (British), Virgin Islands (US).
South America: Brazil (Amazonas, Goias, Tocantins), Peru.
Asia: Cambodia, China (Guangdong, Guizhou, Hainan, Hunan), East Timor, India (Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Tamil Nadu), Indonesia (Irian Jaya, Java, Kalimantan, Sulawesi, Sumatra), Japan (Hokkaido, Honshu, Kyushu, Ryukyu Archipelago, Shikoku), Laos, Malaysia (Sabah, West), Myanmar, Philippines, Singapore, Sri Lanka, Taiwan, Thailand, Vietnam.
Oceania: American Samoa, Fiji, Papua New Guinea, Samoa, Solomon Islands.

On which plants: *X. compactus* is highly polyphagous, more than 200 species belonging to approximatly 60 families have been reported to host it. In addition to a broad range of dicotyledonous trees and shrubs, *X. compactus* has been found attacking monocotyledonous plants such as orchids, ginger (*Zingiber*) and conifers (*Pinus* spp.). According to the literature, the main economic host is coffee (more particularly *Coffea canephora*). *X. compactus* is also recorded as a pest of tea (*Camelia sinensis*), cacao (*Theobroma cacao*), fruit trees (e.g. *Annona*, *Ficus carica*, *Macadamia ternifolia*, litchi (*Litchi chinensis*), avocado (*Persea americana*)) and forest trees in young plantations (e.g. *Aucoumea* sp., *Eucalyptus*, *Entandrophragma*, *Khaya*, *Erythrina, Melia azedarach, Swietenia*). In Italy, *X. compactus* has been reported causing damage in Mediterranean maquis plants such as: *Ceratonia siliqua, Laurus nobilis, Pistacia lentiscus, Quercus ilex, Ruscus aculeatus,* and *Viburnum tinus*. In France, it has been recorded on the following ornamental trees and shrubs but without causing major damage: *Arbutus unedo, Laurus nobilis, Phillyrea* sp., and *Quercus ilex*.

Damage: *X. compactus* is mainly a borer of seedlings, shoots and small twigs, but it can also breed in cut branches up to a diameter of about 6 cm (rarely in larger material). Infested plants display leaf and stem necrosis extending from the entrance hole. Flagging of branches occurs about 5-7 days after initial tunnelling and gallery formation. Wilting of twigs and

branches usually becomes evident within weeks of infestation. The entrance holes bored by females are small (0.8 mm diameter) and are located on the underside of branches. Cankers are commonly seen around the attacked areas of larger twigs and branches. Damage is caused by the wood boring activity of the insect and the introduction of ambrosia fungi which are necessary for larval development. *X. compactus* is associated with several fungal species (18 fungal species have been recorded so far) which are found in the female mycangium or inside insect galleries. Some of these fungi are known to be saprophytes (e.g. *Ambrosiella xylebori, A. macrospora*) but others are plant pathogenic (e.g. *Epicoccum nigrum, Fusarium solani, Geosmithia pallida*) and might play a role in the symptomatology observed on infested plants.
Adult females are shiny black, 1.6.-1.8 mm long. Males, which are incapable of flying, are reddish black and smaller than females (0.9-1.3 mm long). *X. compactus* is an arrhenotokous species (males derive from unfertilized eggs – females from fertilized ones). After mating, which primarily occurs between siblings just after adult emergence, the male remains in the gallery while the female leaves the tunnel through the entry hole and colonizes branches of new hosts, boring an entry hole and a subsequent brood gallery. The number of larval stages appear to vary between locations (2 to 3 larval stages have been observed). There are several overlapping generations per year.

Dissemination: Flight of adult females is the main means of movement and dispersal to new plants and new areas over short distances. In the literature, it is noted that adult females can disperse over at least 200 m, and that dispersal over several kilometres is probably possible, especially if wind-aided. Over long distances, trade of infested plants, cut branches, wood, and packing wood material can transport *X. compactus*.

Pathway: Plants for planting, cut branches, wood, packing wood material from countries where *X. compactus* occurs.

Possible risks: Many woody plants attacked by *X. compactus* are important fruit crops, forest trees or woody ornamentals in the EPPO region. Pest control and detection are most likely to be difficult due to its concealed mode of life. According to the literature, few natural enemies have been observed. Pruning and destruction of infested twigs, branches and seedlings is usually recommended to minimize the pest damage. In the tropics, *X. compactus* is considered to be a primary pest of coffee, as well as a pest of economically important forest trees species in young plantations (e.g. *Aucoumea*, *Entandrophragma*, *Khaya, Swietenia*). Although data is generally lacking on the biology of *X. compactus* and on the role of its associated fungi, it seems that this association has the potential to damage young plants in nurseries, orchards and plantations under temperate climates. The fact that serious damage has been reported in Lazio region (Italy) on several Mediterranean species, clearly demonstrates that *X. compactus* has the potential to become a pest in natural environments. Finally, the possible spread of *X. compactus* and its associated fungi to woody plants cultivated for fruit production, ornamental and forestry purposes also represents a risk for the EPPO region.

Sources

Balakrishnan MM, Ramya KS, Manjunatha Reddy GV, Vino Kumar PK (2011) An update on the natural enemies of the black twig borer *Xylosandrus compactus* (Coleoptera: Curculionidae). *Journal of Coffee Research* **39**(1/2), 86-89.

Bateman C, Šigut M, Skelton J, Smith KE, Hulcr J (2016) Fungal associates of the *Xylosandrus compactus* (Coleoptera: Curculionidae, scolytinae) are spatially segregated on the insect body. *Environmental Entomology* **45**(4), 883-890.

Bosso L, Senatore M, Varlese R, Ruocco M, Garonna AP, Bonanomi G *et al*. (2012) Severe outbreak of *Fusarium solani* on *Quercus ilex* vectored by *Xylosandrus compactus*. *Journal of Plant Pathology* **94**(suppl.), S4.99.

Burbano E, Wright M, Smith VE (2006) Determining the effectiveness of various lures for trapping the black twig borer, *Xylosandrus compactus*, on coffee. *Proceedings of the 21st International Conference on Coffee Science* (Montpellier, FR, 2006-09-11/15), 1423-1427.

CABI. Invasive Species Compendium. *Xylosandrus compactus* (shot-hole borer). http://www.cabi.org/isc/datasheet/57234

CABI/ EPPO (1997) Distribution Maps of Plant Pests no. 244. *Xylosandrus compactus*. CABI Wallingford, GB.

Chong JH, Reid L & Williamson M (2009) Distribution, host plants, and damage of the black twig borer, *Xylosandrus compactus* (Eichhoff), in South Carolina. *Journal of Agricultural and Urban Entomology* **26**, 199–208.

Delgado C, Couturier G (2010) *Xylosandrus compactus* (Coleoptera: Curculionidae: Scolytinae), a new pest of *Swietenia macrophylla* in the Peruvian Amazonia. *Boletin de la Sociedad Entomólogica Aragonesa* no. **47**,.441-443.

Francardi V, Pennacchio F, Santini L, Rumine P, Paoli A, Navarra A, Musetti N (2012) [First report of *Xylosandrus compactus* on *Laurus nobilis* in Tuscany]. Proceedings of the 'Giornate Fitopatologiche, (Milano Marittima, IT, 2012-03-13/16), 443-446.

Garonna AP, Dole SA, Saracino A, Mazzoleni S & Cristinzio G (2012) First record of the black twig borer *Xylosandrus compactus* (Eichhoff) (Coleoptera: Curculionidae, Scolytinae) from Europe. *Zootaxa* 3251, 64–68.

Greco EB, Wright MG (2013) Dispersion and sequential sampling plan for *Xylosandrus compactus* (Coleoptera: Curculionidae) infesting Hawaii coffee plantations. *Environmental Entomology* **42**(2), 277-282.

Hara AH, Beardsley JW Jr, 1976. The biology of the black twig borer, *Xylosandrus compactus* (Eichhoff), in Hawaii. *Proceedings of the Hawaiian Entomological Society* **23**(1), 55-70.

Ogogol R, Egonyu JP, Bwogi G, Kyamanywa S, Erbaugh M (2017) Interaction of the predatory ant *Pheidole megacephala* (Hymenoptera: Formicidae) with the polyphagous pest *Xylosandrus compactus* (Coleoptera: Curculionidea). *Biological Control* **104**, 66-70.

Pennacchio F, Santini L, Francardi V (2012) Pennacchio F, Santini L, Francardi V, 2012. Bioecological notes on *Xylosandrus compactus* (Eichhoff) (Coleoptera Curculionidae Scolytinae), a species recently recorded into Italy. *Redia* 95, 67-77.

EPPO RS 2017/032

Panel review date - Entry date 2017-02

Additional key words: Alert List **Computer codes:** XYLSCO

2017/033 First report of *Paysandisia archon* in Germany

The NPPO of Germany recently informed the EPPO Secretariat of the first finding of *Paysandisia archon* (Lepidoptera: Castniidae – EPPO A2 List) on its territory. At the end of January 2016, *P. archon* was found in a glasshouse of a nursery located near Halle in Saxony-Anhalt. One lot (300 plants) of *Trachycarpus fortunei* plants was found to be infested. The identity of the pest was confirmed by using the EPPO diagnostic protocol PM 7/108(1). In the infested lot, it is estimated that approximately 3 larvae per plant were present. This infested lot had been delivered in July 2015 from another EU Member State where the pest is present. Therefore, it is assumed that *P. archon* has been introduced with the delivered plants and the NPPO of the Member State concerned has been informed so that tracing-back investigations can be carried out. Phytosanitary measures were immediately taken to eradicate *P. archon*. All plants of the infested lot were destroyed and quarantine was imposed.

The pest status of *Paysandia archon* in Germany is officially declared as: **Transient, only at one location under glass, under eradication.**

Source: NPPO of Germany (2016-12).

Pictures: *Paysandisia archon*. https://gd.eppo.int/taxon/PAYSAR/photos

Additional key words: new record **Computer codes:** PAYSAR, DE

2017/034 First report of *Bactericera cockerelli* in Australia

In February 2017, *Bactericera cockerelli* (EPPO A1 List - vector of '*Candidatus* Liberibacter solanacearum') was reported for the first time near Perth, Western Australia (AU). The pest has been detected in several Perth backyard vegetables and in a commercial crop north of Perth. Testing is underway to determine whether '*Ca*. L. solanacearum' which is associated with zebra chip of potatoes is present. For the moment, '*Ca*. L. solanacearum' (potato haplotypes are included in the EPPO A1 List) has not been found in any samples taken. Phytosanitary measures have been taken to eradicate *B. cockerelli* and restrictions on the movements of host plants have been imposed to prevent any further spread. *B. cockerelli* has not been found in other Australian states.
The situation of *Bactericera cockerelli* in Australia can be described as follows: **Present, only in some areas (near Perth, Western Australia), under eradication.**

Source: IPPC website. Official Pest Reports – Australia (AUS-78/1 of 2017-02-16) Detection of *Bactericera cockerelli* (Tomato-potato psyllid) in Western Australia. https://www.ippc.int/en/countries/australia/pestreports/2017/02/detection-of-bactericera-cockerelli-tomato-potato-psyllid-in-western-australia/

Government of Western Australia. Department of Agriculture and Food. Biosecurity alert: Tomato potato psyllid. https://www.agric.wa.gov.au/tpp

Pictures: *Bactericera cockerelli*. https://gd.eppo.int/taxon/PARZCO/photos

Additional key words: new record **Computer codes:** PARZCO, AU

2017/035 *Spodoptera frugiperda* continues to spread in Africa

In early 2016, outbreaks of *Spodoptera frugiperda* (Lepidoptera: Noctuidae – EPPO A1 List) were reported for the first time from Africa in Benin, Nigeria, São Tomé et Príncipe, and Togo (EPPO RS 2016/188). High armyworm populations damaging maize (Zea mays) crops have been noticed. Since these initial reports, other African countries have reported confirmed or suspected outbreaks of *S. frugiperda*, thus showing that the pest is rapidly spreading.

- **Ghana**: the presence of the pest has recently been confirmed by molecular methods (CABI, 2017).
- **Congo (Democratic Republic of Congo), Malawi, Mozambique, Namibia**: preliminary reports have indicated the possible presence of the pest.
- **South Africa:** the first verified specimens of *S. frugiperda* were detected in various locations in the Limpopo, Gauteng, North West and Mpumalanga provinces.

- **Swaziland:** the pest was first detected in Big Bend and Siphofaneni in the Eastern part of the country, and then in Lomahasha, Nkambeni and Mkhuzweni in the Northeastern part. Isolated cases have also been recorded in central and Western Swaziland in young maize fields. Delimiting surveys are being carried out and control strategies are being developed. **Present: only in some areas** (IPPC, 2017).
- **Zambia**: in a preliminary pest report, the NPPO of Zambia has announced that the presence of *S. frugiperda* on its territory was suspected (IPPC, 2017).
- **Zimbabwe:** the presence of the pest has been confirmed.

Source: INTERNET
- CABI (2017-02-06). Scientists discover new crop-destroying armyworm is now 'spreading rapidly' in Africa. http://www.cabi.org/news-and-media/2017/scientists-discover-new-crop-destroying-armyworm-is-now-spreading-rapidly-in-africa/
- FAO Regional Office for Africa (2017-02-03) Fall army worm outbreak, a blow to prospects of recovery for southern Africa. http://www.fao.org/africa/news/detail-news/en/c/469532/
- Reuters (2017-02-22) Armyworm caterpillars ravage maize crop in southeast Congo. http://www.reuters.com/article/us-congo-maize-armyworm-idUSKBN1611FJ

IPPC website. Official Pest Reports
- South Africa (ZAF-33/1 of 2017-02-10) First detection of fall army worm (*Spodoptera frugiperda*). https://www.ippc.int/en/countries/south-africa/pestreports/2017/02/first-detection-of-fall-army-worm-spodoptera-frugiperda/
- Swaziland (SWZ-02/1) Detection of Fall Army Worm Spodoptera frugiperda in Swaziland. https://www.ippc.int/en/countries/swaziland/pestreports/2017/02/detection-of-fall-army-worm-spodoptera-frugiperda-in-swaziland/
– Zambia (ZMB-02/2 of 2017-02-16) Preliminary report on fall Armyworm in Zambia. https://www.ippc.int/en/countries/zambia/pestreports/2017/02/preliminary-report-on-fall-armyworm-in-zambia/

Pictures: *Spodoptera frugiperda.* https://gd.eppo.int/taxon/LAPHFR/photos

Additional key words: new record **Computer codes:** LAPHFR, CD, GH, MW, MZ, NA, SM, SZ, ZA, ZW

2017/036 *Rhynchophorus ferrugineus* detected for the first time in the United Kingdom

In the United Kingdom, *Rhynchophorus ferrugineus* (Coleoptera: Curculionidae - EPPO A2 List) has recently been found in a palm tree (*Livistonia rotundifolia*) purchased from a garden centre in Essex (Southeast England). Adults and larvae were collected by plant health inspectors and sent to Fera for identification. The infected palm was burnt. This palm tree was one of an imported consignment, the origin of which is being investigated. No further findings have been reported. This is the first time that *R. ferrugineus* is detected in the United Kingdom.

Source: INTERNET
HorticultureWeek (2016-11-15) First red palm weevil found in the UK. http://www.hortweek.com/first-red-palm-weevil-found-uk/plant-health/article/1415641

The Telegraph. News. Palmageddon? Britain's palm trees face extinction after killer beetle discovered. http://www.telegraph.co.uk/news/2016/11/19/britains-palm-trees-face-extinction-after-killer-beetle-discover/

Pictures: *Rhynchophorus ferrugineus*. https://gd.eppo.int/taxon/RHYCFE/photos

Additional key words: phytosanitary incident **Computer codes:** RHYCFE, GB

2017/037 First report of *Contarinia pseudotsugae* in France

The NPPO of France recently informed the EPPO Secretariat of the first record of *Contarinia pseudotsugae* (Diptera: Cecidomyiidae – EPPO Alert List) on its territory. During general surveillance activities carried out in forests, the presence of galls on needles of Douglas-fir trees (*Pseudotsuga menziesii*) was observed in August and September 2016. *C. pseudotsugae* was found at low levels in two regions (Hauts-de-France and Grand-Est). The species was identified using barcoding techniques.
The pest status of *Contarinia pseudotsugae* in France is officially declared as: **Present, only in some areas.**

Source: Anonymous (2015) Bilan phytosanitaire 2015. La Lettre du DSF no. 50, 13 pp.
NPPO of France (2016-12).

Pictures: *Contarinia pseudotsugae*. https://gd.eppo.int/taxon/CONTPS/photos

Additional key words: new record **Computer codes:** CONTPS, FR

2017/038 First report of *Batrachedra enormis* in France

The NPPO of France recently informed the EPPO Secretariat of the first finding of *Batrachedra enormis* (Lepidoptera: Batrachedridae) on its territory. In August 2016, the insect was found on 4 *Yucca* sp. plants in a private garden located in Var department (Southern France). Only limited damage was observed on infested plants. The identity of the insect was confirmed by morphological and molecular methods. The infested plants were destroyed and a survey will be conducted in the vicinity of the garden concerned.
The pest status of *Batrachedra enormis* in France is officially declared as: **Transient, actionable, under eradication.**

EPPO note: very limited information is available on *B. enormis*. This North American species is reported to occur in Mexico and Southern USA (Alabama, Arizona, California, Louisiana, New Mexico, South Carolina). Pictures of the pest and damage caused by its larvae to yucca plants in Southern France have been posted on Facebook.

Source: NPPO of France (2016-10).

INTERNET
- BugGuide Net. *Batrachedra enormis* - Large Batrachedra moth
  http://bugguide.net/node/view/367289
- Facebook. @cosave. https://www.facebook.com/Cosave/

- Mississippi State University. Mississippi Entomological Museum. North American Moth Photographers Group. http://mothphotographersgroup.msstate.edu/species.php?hodges=1413

Additional key words: new record **Computer codes:** BATREN, FR

2017/039 Update on the situation of *Scaphoideus titanus* in the Czech Republic

In the Czech Republic, *Scaphoideus titanus* (Hemiptera: Cicadellidae - main vector of flavescence dorée) was first found in July 2016 in a vineyard in the municipality of Valtice (Břeclav district, South Moravian region – EPPO RS 2016/165). A delimiting survey was carried out during the 2016 growing season and detected the pest in 8 other localities in the grapevine-growing areas of South-Moravian (Břeclav and Hodonin districts) and Zlin (Uherske Hradiste district) regions. The NPPO concluded that specific phytosanitary measures were no longer necessary but annual surveys will continue to follow the spread of *S. titanus* and verify the absence of Grapevine flavescence dorée phytoplasma.
The pest status of *Scaphoideus titanus* in the Czech Republic is officially declared as: **Present, only in some parts of the Czech Republic.**

Source: NPPO of the Czech Republic (2016-12).

Pictures: *Scaphoideus titanus*. https://gd.eppo.int/taxon/SCAPLI/photos

Additional key words: detailed record **Computer codes:** SCAPLI, CZ

2017/040 First report of *Paraleyrodes minei* in Malta

The nesting whitefly, *Paraleyrodes minei* (Hemiptera: Aleyrodidae) has recently been found in Malta. It was first found in Msida in July 2016. Numerous larvae and adults were observed on the leaf undersides of 3-4 years old lemon trees (*Citrus limon*). As the pest has subsequently been detected in several other localities, it is considered that it is established and widespread in Malta.
More information about *P. minei* can be found in the EPPO Global Database: https://gd.eppo.int/taxon/PARYMI

Source: Malumphy C, Mifsud D (2016) First record of the nesting whitefly, *Paraleyrodes minei* Iaccarino, 1990 (Hemiptera, Aleyrodidae) in Malta. *Bulletin of the Entomological Society of Malta* **8**, 90-93.

Additional key words: new record **Computer codes:** PARYMI, MT

2017/041 *Bemisia tabaci* found again in Finland

The NPPO of Finland recently informed the EPPO Secretariat about several outbreaks of *Bemisia tabaci* (Hemiptera: Aleyrodidae - EPPO A2 List) found on its territory during official surveys carried out in 2016. A total of 757 inspections were conducted in 328 greenhouses (where 402 samples were collected) and 60 inspections were conducted in 30 points of sale (75 samples). *B. tabaci* was found in 94 greenhouses (215 samples) producing ornamental plants. Approximately 80 % of the outbreaks were found on *Mandevilla,* 24 % on *Begonia* and 6 % on poinsettia *(Euphorbia pulcherrima)* (total percentage > 100 % since some growers had infestations on both *Mandevilla* and *Begonia)*. During inspections of points of sale, 3 infestations were found. Phytosanitary measures were taken to eradicate the pest and included: insecticide treatments and destruction of infested plants. As a result of these measures, 92 outbreaks were eradicated and 2 remain under eradication.
The situation of *Bemisia tabaci* in Finland can be described as follows: **Present, under eradication.**

Source: NPPO of Finland (2017-01).

Pictures: *Bemisia tabaci*. https://gd.eppo.int/taxon/BEMITA/photos

Additional key words: detailed record **Computer codes:** BEMITA, FI

2017/042 *Heterodera elachista* found in Lombardia, Italy

In Italy, *Heterodera elachista* (EPPO Alert List) was reported for the first time in 2013 in a single maize (*Zea mays*) field in Emilia-Romagna region (EPPO RS 2014/045). In this infested field, phytosanitary measures were taken to prevent any further spread (including the prohibition to grow maize). Surveys were conducted from 2014 to 2016 and did not detect any cysts of *H. elachista* in the field concerned. As a consequence, the regional plant protection service will authorize maize cultivation in 2017 but surveys will be conducted to verify that the nematode has been eradicated from Emilia-Romagna.
In December 2016, the NPPO of Italy informed the EPPO Secretariat that another outbreak has been detected in Lombardia region. In March 2016, the pest was detected in samples of soil and wheat plants (*Triticum* spp.) collected from a farm located in the municipality of Noviglio (province of Milano). On this farm, several cereal crops were presenting chlorosis and growth reduction. The identity of the nematode was confirmed using morphological and molecular methods (PCR, RFLP) in November 2016. The presence of cysts of *H. elachista* (average of 30 cysts per 100 cc of dried soil) was observed in the tested soil samples, and the surface of the infested area was estimated at 5 ha. The origin of this outbreak is unknown. Phytosanitary measures are being developed to eradicate the pest.
The pest status of *Heterodera elachista* in Italy is officially declared as: **Transient, actionable, under eradication.**

Source: NPPO of Italy (2016-12).

Pictures: *Heterodera elachista*. https://gd.eppo.int/taxon/HETDEL/photos

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

2017/043 First report of *Meloidogyne mali* in France

The NPPO of France recently informed the EPPO Secretariat of the first record of *Meloidogyne mali* (EPPO Alert List) on its territory. Following the detection of *M. mali* in the Netherlands and Italy (EPPO RS 2014/102), investigations have been carried out in France. In September 2016, *M. mali* was detected on *Ulmus chenmoui* trees planted in an experimental plot located in Ile-de-France region. The nematode was found also in *Rubus fructicosus* plants growing in their immediate vicinity. The pest was identified by morphological and molecular methods. The origin of this infestation is unknown but it is hypothesized that *M. mali* entered Europe with plant material imported from Asia to the Netherlands in the framework of research for resistance to Dutch elm disease. Phytosanitary measures are being implemented to delimit the extent of the infestation and eradicate the pest.
The pest status of *Meloidogyne mali* in France is officially declared as: **Transient, actionable, under eradication.**

Source: NPPO of France (2016-11).

Pictures: *Meloidogyne mali*. https://gd.eppo.int/taxon/MELGMA/photos

Additional key words: new record **Computer codes:** MELGMA, FR

2017/044 *Erwinia amylovora* eradicated from Estonia

In Estonia, an outbreak of *Erwinia amylovora* (EPPO A2 List) was detected for the first time in May 2012 (EPPO RS 2014/004). Eradication measures were immediately implemented. As confirmed by official surveys carried out from 2013 to 2016, no other cases have been detected. Therefore, the NPPO of Estonia considers that the bacterium is absent from its territory.
The pest status of *Erwinia amylovora* in Estonia is officially declared as: **Absent**.

Source: NPPO of Estonia (2017-02).

Pictures: *Erwinia amylovora*. https://gd.eppo.int/taxon/ERWIAM/photos

Additional key words: absence, eradication **Computer codes:** ERWIAM, EE

2017/045 First report of *Cucurbit yellow stunting disorder virus* in Italy

The NPPO of Italy recently informed the EPPO Secretariat of the first record of *Cucurbit yellow stunting disorder virus* (*Crinivirus*, CYSDV – EPPO A2 List) in Sardegna (IT) on melon (*Cucumis melo*) and courgette (*Cucurbita pepo*) crops. The identity of the virus was confirmed in December 2016 by molecular methods. The following two outbreaks were detected in Sardegna:

- CYSDV was found in 1 farm located in the municipality of Uta (Cagliari province) in field-grown courgettes (cv. 'Ardendo') and melons (cvs. 'Hispano' and 'Hidalgo').
- CYSDV was found in 1 farm located in the municipality of Serramanna (Sud province) in field grown melons (cv. 'Salzillo').

It is noted that no severe symptoms were observed and that only a small number of plants displayed symptoms (interveinal yellowing). However, as the vector *Bemisia tabaci* occurs in this area, the disease might spread. The origin of these outbreaks remains unknown. Phytosanitary measures are under consideration. Surveys in glasshouse and field crops will be conducted in 2017.
The pest status of *Cucurbit yellow stunting disorder virus* in Italy is officially declared as: **Present, only in some parts of the member state concerned (2 municipalities in Sardegna region).**

Source: NPPO of Italy (2017-01).

Additional key words: new record **Computer codes:** CYSDV0, IT

2017/046 First report of *Plum pox virus* in the Republic of Korea

In August 2016, *Plum pox virus* (*Potyvirus*, PPV – EPPO A2 List) was found for the first time in the Republic of Korea. The presence of PPV-D has been confirmed in a peach tree (*Prunus persica*). Eradication measures have immediately been taken. The infected tree has been destroyed and a national survey will be carried out.
The pest status of *Plum pox virus* in the Republic of Korea has been officially declared as: **Transient, actionable, under eradication by official control**

Source: IPPC website. Official Pest Reports – Republic of Korea (KOR-04/4 of 2016-09-06) First outbreak of *Plum pox virus* (PPV).

https://www.ippc.int/en/countries/republic-of-korea/pestreports/2016/08/first-outbreak-of-plum-pox-virus-ppv/

Pictures: *Plum pox virus*. https://gd.eppo.int/taxon/PPV000/photos

Additional key words: new record **Computer codes:** PPV000, KR

2017/047 First report of *Gnomoniopsis smithogilvyi* in Slovenia

In October 2016, the presence of *Gnomoniopsis* smithogilvyi was confirmed in Slovenia. The fungus was detected in an orchard (1.3 ha) on 12 year old sweet chestnut trees (*Castanea crenata x C. sativa* cv. 'Precoce Migoul') in the Eastern part of the country. During a survey, other infected trees displaying cankers and fruit rot were observed in the vicinity of the outbreak site. Further investigations detected another infected orchard in the Western part of Slovenia. A national express Pest Risk Analysis concluded that the disease may be spread by movements of infected plants, by insects (including *Dryocosmus kuriphilus*), and by natural dispersal of ascospores. An official delimiting survey is planned for 2017.
The pest status of *Gnomoniopsis smithogilvyi* in Slovenia is officially declared as: **Present, only in some areas.**

Source: IPPC website. Official Pest Reports – Slovenia (SVN-07/5 of 2017-01-31) First finding of *Gnomoniopsis smithogilvyi*.
https://www.ippc.int/en/countries/slovenia/pestreports/2017/01/first-finding-of-gnomoniopsis-smithogilvyi/

Additional key words: new record **Computer codes:** GNMPCA, SI

2017/048 Climate change increases the risk of naturalization from garden plants in Europe

From entry into a new region, to establishment and subsequent spread, alien plant species have to overcome biotic and abiotic barriers and limitations in order to persist and proliferate. Under current climatic conditions, many garden plants are unable to proliferate beyond their artificial niches but under expected climate change scenarios the number of species more suited to the new climatic conditions may increase leading to higher number of species naturalizing outside the confines of the garden wall. In the current study, all vascular plant species that are non-native to Europe were selected from the European Garden Flora. From this set of species those that had naturalized elsewhere other than Europe were selected – in total 783 species, and species distribution models were used to assess their potential European ranges based on different climate change scenarios. Under current climatic conditions, 10 % of Europe is climatically suitable for at least 70 of the species modelled. Climatic hotspots are clustered along the Atlantic coast of Portugal, Spain, France and the Southern Coast of the British Isles, as well as the Mediterranean coast of the Balkan Peninsula and in southern Europe. With climate change predictions, the area that is climatically suitable for these species increases with the severity of the climate change prediction. The areas of high naturalization risk are also predicted to expand under climate change where, under the worst case climatic scenario, 68 % of Europe is considered a high naturalization risk. Based on these potential scenarios, the authors highlight the importance of increasing awareness of plant invasions under climate change within horticultural circles.

Source: Dullinger I, Wessely J, Bossdorf O, Dawson W, Essl F, Gattringer A, Klonner G, Kreft H, Kuttner M, Moser D, Pergl J, Pyšek P, Thuiller W, van Kleunen, Weigelt P, Winter M, Dullinger S (2017) Climate change will increase the naturalization risk from garden plants in Europe. *Global Ecology and Biogeography* **26**, 43-53.

Additional key words: invasive alien plants **Computer codes:** ES, FR, PT

2017/049 No saturation in the accumulation of alien species worldwide

The movement of species beyond their native ranges has increased significantly over the last centuries with prominent factors leading to the accumulation of certain taxa. For example, in the ninetieth century plant hunters increased the number of plant species brought into Europe and the trade in exotic bird species in South East Asia has led to established populations. Invasive insects have been introduced in more recent times through increased trade and travel pathways. Using a dataset of 45 813 first records of 16 926 established alien species from a wide range of taxonomic groups and non-overlapping geographical regions from all continents, the development of alien species accumulation was assessed. One key prediction, which was tested with this large dataset was that the rates of introductions of species often intentionally introduced, for example mammals, birds and vascular plants, would have declined in recent years due to increased awareness. This was however, not the case. 37 % of all recorded alien species have been introduced between 1970 – 2014 even though there has been an increase in national legislation and international agreements over the last 100 years. There are exceptions to this trend, where the authors highlight a decrease in the number of first records of vascular plant species in New Zealand in the 1990s corresponding to the implementation of the Biosecurity Act (1993) which is based on a white list of permitted species compared to a black list of unwanted species. In New Zealand, any non-listed species would need to be risk assessed before entry is allowed. The authors highlight that pathways of introduction for invasive species into new regions are

changing because of increased anthropogenic pressures and climate change and there is a need to implement more effective prevention policies at all scales.

Source: Seebens H, Blackburn TM, Dyer EE, Genovesi P, Hulme PE, Jeschke JM, Pagad S, Pyšek P, Winter M, Arianoutsou M, Bacher S, Blasius B, Brundu G, Capinha C, Celesti-Grapow L, Dawson W, Dullinger S, Fuentes N, Jäger H, Kartesz J, Kenis M, Kreft H, Kühn I, Lenzner B, Liebhold A, Mosena A, Moser D, Nishino M, Pearman D, Pergl J, Rabitsch W, Rojas-Sandoval J, Roques A, Rorke S, Rossinelli S, Roy HE, Scalera R, Schindler S, Štajerová K, Tokarska-Guzik B, van Kleunen M, Walker K, Weigelt P, Yamanaka T, Essl F (2017) No saturation in the accumulation of alien species worldwide. *Nature Communications*. DOI: 10.1038/ncomms14435

Additional key words: invasive alien plants **Computer codes:** NZ

2017/050 Assessing wind and mammals as seed dispersal vectors for *Lespedeza cuneata*

Lespedeza cuneata (Fabaceae) is an erect semi-woody forb which can reach 2 m in height. Native to Asia and Australia, *L. cuneata* was first introduced into the US in 1896 where it invades grasslands and open forest communities often forming dense monocultures which compete with native species for light and nutrients. Although the species is a prolific seed producer, information on seed dispersal is limited and primary based on anecdotal reports. Small numbers of seeds have been found in the faeces of birds, cattle and deer indicating that endozoochory is possible. Seeds lack any significant morphological characteristics such as wings which would aid wind dispersal or burrs which would aid dispersal by attaching to the fur or wool of mammals. In the current study, using a series of field and laboratory experiments, wind and mammal fur were tested as mediators of seed dispersal. For wind, seed traps were arranged radially from 0.5 m to 3 m from the edge of a population of *L. cuneata* and were left for one month. The results showed that wind direction strongly influenced dispersal distance. For movement by animals, seed retention was tested by fitting pelts of deer, coyote and raccoon to artificial torsos and moving these torsos on a one-wheeled carrier through the natural habitat. Seeds were shown to be readily dispersed by mammal fur where the number of seeds retained was higher for animal species with longer fur (racoons). Currently *L. cuneata* is absent from the natural environments within the EPPO region but the impacts of the species in other regions of the world, and the fact that the species is available through horticulture within the EPPO region, warrant an evaluation of the risks it may pose to the region. *L. cuneata* is due to be risk assessed as part of the LIFE project 'Mitigating the threat of invasive alien plants in the EU through pest risk analysis to support the EU Regulation 1143/2014'.

Source: Quick, ZI, Houseman GR, Bűyűktahtakin IE (2016) Assessing wind and mammals as seed dispersal vectors in an invasive legume. *Weed Research* **57**, 35-43.

Additional key words: invasive alien plants **Computer codes:** LESCU US

2017/051 British Ecological Society Symposium 2017: The macroecology of alien species: Patterns, drivers and consequences of Global biotic exchange (Durham, GB, 2017-07-24/26)

A two-day symposium titled 'The macroecology of alien species: Patterns, drivers and consequences of Global biotic exchange' will take place in Durham (GB) and will explore the major drivers behind the mixing of the worlds biotas and the consequences of global biotic exchange. A broad range of engaging, international and UK-based invited speakers will present the current state of the knowledge of alien species macroecology, and attendees will be able to submit an abstract to present their own work in this field as an oral or poster presentation. Breakout workshops on the second day will provide the opportunity to summerize, and to address important questions that will provide ways forward to understanding the macroecology of alien species. Registration is now open via the link below.

Source: British Ecological Society website: http://www.britishecologicalsociety.org/events/bes-symposium-2017-macroecology-alien-species-patterns-drivers-consequences-global-biotic-exchange/

Additional key words: invasive alien plants, conference **Computer codes:** GB

2017/052 Ecology and Management of Alien Plant Invasions (EMAPI) conference (Lisbon, 2017-09-4/8)

The second announcement for the 2017 EMAPI conference – syntheses, challenges and new opportunities has been published with some key dates and information. The EMAPI conferences are held in alternate years at selected venues around the world, and are a unique meeting where it is possible to present state of the art alien plant research.

Sessions during the conference will include:

- New frontiers in alien plant invasions,
- How to promote and benefit from the collaboration of citizens,
- Impacts, risk assessments and implantation of prevention tools,
- The challenge after the Paris protocol: is there a new paradigm for the use of invasive alien species?
- Modelling plant invasions: the role of climate, traits and socio-economy,
- Biosecurity and management of alien plant invasions,
- The impact of biological invasions on ecological networks,
- Chasing invasive species with high technology.

Registration is now open and abstracts can now be received until 31st March. Early bird registration is open until 1st May and late bird registration is open until 30th June.

Source: EMAPI conference website: http://www.emapi2017.org/

Additional key words: invasive alien plants, conference **Computer codes:** PT