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2013/095 First report of *Erwinia amylovora* in Tunisia

In Tunisia, fireblight caused by *Erwinia amylovora* (EPPO A2 List) was found for the first time on pear (*Pyrus communis*) trees in May 2012. Symptoms were observed on flowers and young shoots of *P. communis* cv. 'Alexandrine' in one locality. Surveys carried out in 2013 during winter and spring showed that fireblight has spread to other governorates. Infection levels varied according to cultivars and regions. The first detection and confirmation of *E. amylovora* was performed by the Quarantine Laboratory of DGPCOPA (Ministry of Agriculture) in collaboration with the Olive Institute laboratory (Tunis), and in accordance with the EPPO Diagnostic Protocol for *E. amylovora*. An official control program is being established by the Tunisian NPPO which includes the destruction of highly infected trees and pruning of infected twigs followed by treatment with copper fungicide of trees with limited infections.

The pest status of *Erwinia amylovora* in Tunisia is officially declared as: **Present first found in 2012 with restricted distribution and under official control.**

Source: NPPO of Tunisia (2013-05).

Additional key words: new record

Computer codes: ERWIAM, TN

2013/096 First reports of *Erwinia amylovora* in Kazakhstan and Kyrgyzstan

In Kazakhstan, symptoms resembling those caused by fireblight (*Erwinia amylovora* - EPPO A2 List) have been observed by apple and pear growers in the Almaty area since 2008. In 2011, surveys were conducted in the regions of Enbekshikazakh (Almaty province) and Merky (Zhambyl province). As a result, 230 bacterial isolates showing morphological and cultural similarity to *Pseudomonas syringae* and *E. amylovora* were found. Laboratory analysis carried out by the Fruit and Vegetable Crop Protection Department of the Kazakh Research Institute for Plant Protection and Quarantine and by the All-Russian Plant Quarantine Centre confirmed the identify of *E. amylovora* in several samples of pear (*Pyrus communis* cv. 'Talgarskaya krasavitsa' and apple (*Malus domestica* cvs. 'Aport', 'Starcrimson' and 'Golden delicious'). Following this first identification, a national survey programme has been initiated in the main pome fruit production areas of Kazakhstan. In 2012, surveys showed that the fireblight outbreak was restricted to the Enbekshikazakh region (Almaty province). Eradication and containment measures were taken and included the destruction of infected trees, as well as treatments with copper compounds. Discussions are also taking place about possible compensation to be given to growers when destroying trees. An information campaign has been launched (television, radio, magazines, newspapers and internet). Research projects are also being initiated in the field of diagnosis, and epidemiology of fireblight. It is finally noted that this first finding of *E. amylovora* in Kazakhstan might be of particular interest to the scientific community as this territory is one of the centres of *Malus* spp. origin and genetic diversity.

The situation of *Erwinia amylovora* in Kazakhstan can be described as follows: **Present, first found in 2008 in the Almaty province, under eradication.**

The source of introduction of fireblight into Kazakhstan is unknown. The disease may have been introduced by trade, as since 2003 import permits have been delivered to import plants for planting of pome fruit and ornamental plants from countries where *E. amylovora* occurs. However, the disease may also have spread naturally, as *E. amylovora* was recently found in the bordering regions of Kyrgyzstan. In Kyrgyzstan, fireblight first appeared in 2008/2009 in the Chuy province. In 2011, it was also found in Issyk Kul province. So far in

the Issyk Kul province, outbreaks were discovered in the following localities: Issyk Kul (5.8 ha), Aksuisk (8 ha), Tonsk (5.3 ha), Tyupsk (5.3 ha), Dzhety-Oguz (0.1 ha), Balykchy (0.4 ha) and Karakol (0.1 ha).

The situation of *Erwinia amylovora* in Kyrgyzstan can be described as follows: **Present, first found in 2008, Chuy and Issyk Kul provinces.**

Source: Drenova NV, Isin MM, Dzhamurzina AA, Zharmukhamedova GA, Aitkulov AK (2012) Bacterial fire blight in the Republic of Kazakhstan. *Plant Health Research and Practice* 1(3), 44-48.

Additional key words: new record

Computer codes: ERWIAM, KG, KZ

2013/097 First report of *Ralstonia solanacearum* on tomatoes in Georgia

In June 2010, a bacterial wilt disease affecting tomato (*Solanum lycopersicum*) seedlings was reported by growers near Chkhorotsku (Samegrelo-Zmo Svaneti region), Western Georgia, causing up to 100% plant loss. In this region, observations made by growers suggested that aubergine (*Solanum melongena*) and pepper (*Capsicum annuum*) were also affected. Near Kutaisi (Imereti region), wilting and vascular discoloration were observed in tomato plants in 2010 and 2011. Samples were taken for further analysis at Shota Rustaveli State University Scientific Centre in Georgia and Fera (GB). Laboratory tests (PCR, fatty acids profiles, pathogenicity tests) confirmed the presence of *Ralstonia solanacearum* (EPPO A2 List) in diseased tomato plants. According to the authors, this is the first confirmed report of *R. solanacearum* affecting tomatoes in Georgia.

The situation of *Ralstonia solanacearum* in Georgia can be described as follows: **Present, only in some areas.**

Source: Mepharishvili G, Sikharulidze Z, Thwaites R, Tsetskhladze T, Dumbadze R, Gabaidze M, Muradashvili M (2012) First confirmed report of bacterial wilt of tomato in Georgia caused by *Ralstonia solanacearum*. *New Disease Reports* 25, 16. <http://dx.doi.org/10.5197/j.2044-0588.2012.025.016>

Additional key words: detailed record

Computer codes: RALSSO, GE

2013/098 First report of *Ralstonia solanacearum* on tomatoes in Mexico

Since June 2010, symptoms of bacterial wilt have been observed in several greenhouse tomato (*Solanum lycopersicum*) crops in several districts (at least 5) of the Morelos state in Mexico. Laboratory tests (PCR, pathogenicity tests) confirmed the presence of *Ralstonia solanacearum* (EPPO A2 List) phylotype II in diseased tomato plants. This is the first report of *R. solanacearum* affecting tomatoes in Mexico. It is noted that the disease was observed in greenhouses under which high temperatures (35-50°C) and high relative humidity (above 80%) conditions prevailed, and that field-grown tomatoes were not affected.

The situation of *Ralstonia solanacearum* in Mexico can be described as follows: **Present, only in some areas.**

Source: Hernández-Romano J, Ramírez-Rojas S, Ydrac-Morales CJ (2012) First report of *Ralstonia solanacearum* causing tomato bacterial wilt in Mexico. *New Disease Reports* 26, 22. <http://dx.doi.org/10.5197/j.2044-0588.2012.026.022>

Additional key words: detailed record

Computer codes: RALSSO, MX

2013/099 Outbreak of *Clavibacter michiganensis* subsp. *sepedonicus* in Finland

The NPPO of Finland recently informed the EPPO Secretariat of the detection of *Clavibacter michiganensis* subsp. *sepedonicus* (EPPO A2 List) in ware potatoes on 2 farms. The bacterium was detected in 2 samples of *Solanum tuberosum* cvs. 'Matilda' and 'Asterix' in January and February, respectively. The extent of the probable infestation has been determined as being the entire area of the 2 farms. The origin of these infestations is not known. On the infected farms, phytosanitary measures were applied in accordance with EU Directive 2006/56/EC.

The pest status of *Clavibacter michiganensis* subsp. *sepedonicus* in Finland is officially declared as: **Present, under eradication.**

Source: NPPO of Finland (2013-05).

Additional key words: detailed record

Computer codes: CORBSE, FI

2013/100 *Xanthomonas axonopodis* pv. *phaseoli* found in the Czech Republic

At the beginning of April 2013, the NPPO of the Czech Republic collected and tested bean seeds at the request of a company storing seeds in Smrzice (Olomouc region). Laboratory tests (fatty acid analysis (FAME) and pathogenicity tests) confirmed the presence of *Xanthomonas axonopodis* pv. *phaseoli* (EPPO A2 List) in seeds of *Phaseolus vulgaris* cv. 'Laurina'. This infected seed lot (in total 945 kg) had been imported from Poland. At the end of April, another seed lot (*P. vulgaris* cv. 'Zenit', 175 kg) imported from Hungary was also found to be infected by *X. axonopodis* pv. *phaseoli*. In both cases, the infected lots were disqualified as seed material.

The pest status of *Xanthomonas axonopodis* pv. *phaseoli* in the Czech Republic is officially declared as: **Present, few occurrences.**

Source: NPPO of the Czech Republic (2013-05).

Additional key words: detailed record

Computer codes: XANTPH, CZ

2013/101 Outbreaks of *Clavibacter michiganensis* subsp. *michiganensis* in Sardinia and Lazio (IT)

The NPPO of Italy recently informed the EPPO Secretariat of two outbreaks of *Clavibacter michiganensis* subsp. *michiganensis* (EPPO A2 List) in Sardinia and Lazio regions.

- **Sardinia**

In March 2013, *C. michiganensis* subsp. *michiganensis* was found during official surveys in 5 farms (total glasshouse surface of 15 000 m²) growing tomatoes for fruit production in the province of Cagliari. Affected plants showed wilting and dieback. The bacterium was detected by PCR on *Solanum lycopersicum* cvs. 'Bubu' and 'Arawak'. The origin of this outbreak has not yet been identified, but it is suspected that infected seeds or substrate might be the cause. The following phytosanitary measures were taken by the Regional PPO to eradicate the disease: destruction of the crops, disinfection, soil solarization and rotation with non-host plants. Additional surveys will be conducted in tomato production sites and nurseries.

The pest status of *Clavibacter michiganensis* subsp. *michiganensis* in Sardegna is officially declared as: **Transient, actionable, under eradication, detected in protected cultivation.**

- **Lazio**

In April 2013, *C. michiganensis* subsp. *michiganensis* was found during official surveys in 1 glasshouse (approximately 1 000 m²) of tomatoes grown for fruit production, in the province of Latina. Affected plants showed wilting and dieback. The bacterium was detected according to the EPPO diagnostic protocol PM7/42 in *Solanum lycopersicum* cv. 'Portento'. The origin of this outbreak has not yet been identified, but it is suspected that infected seeds may be the cause. The following phytosanitary measures were taken by the Regional PPO to eradicate the disease: destruction of the crop, disinfection of equipment and machinery, soil solarization and rotation with non-host plants.

The pest status of *Clavibacter michiganensis* subsp. *michiganensis* in Lazio is officially declared as: **Transient, actionable, under eradication, detected in protected cultivation.**

Source: NPPPO of Italy (2013-04, 2013-05).

Additional key words: detailed record

Computer codes: CORBMI, IT

2013/102 Updated situation of 'Candidatus Phytoplasma mali' in Belgium

In Belgium, the presence of '*Candidatus Phytoplasma mali*' (associated with apple proliferation - EPPO A2 List) was first confirmed in 2011. During a research project carried out from February 2009 until January 2011, this phytoplasma was detected in root samples collected from symptomatic and asymptomatic trees in 11 commercial and family apple orchards, as well as in psyllids captured in 2 apple orchards. These orchards, located in 6 different provinces (Hainaut, Liège, Limburg, Namur, Oost-Vlaanderen, and Vlaams-Brabant), had been selected because of the presence of symptoms or were neglected orchards (not always symptomatic). '*Ca. P. mali*' was detected in each studied orchard (see EPPO RS 2011/132). As a consequence of these results, an extensive and systematic survey was carried out by the Federal Agency for the Safety of the Food Chain in 2011-2012 in 87 apple tree nurseries. In 2011, 368 leaf samples (each composed of 20 leaves from 4 different trees) were taken in 60 nurseries, and in 2012, 418 leaf samples were taken in 52 nurseries. Collected leaf samples were tested (PCR assays) by the national reference laboratory. During this 2 year- survey, '*Ca. P. mali*' was detected in 5 nurseries located in the provinces of West-Vlaanderen, Luxembourg and Hainaut. All affected trees were destroyed and eradication measures were imposed in the nurseries concerned. Surveillance for '*Ca. P. mali*' will continue in 2013. Finally, a research project has been launched and will focus on the distribution of '*Ca. P. mali*', '*Ca. P. pyri*' and the role of psyllid vectors. The pest status of '*Candidatus Phytoplasma mali*' in Belgium is officially stated as: **Present, restricted distribution; under official control in nurseries.**

Source: NPPPO of Belgium (2013-05).

Additional key words: detailed record

Computer codes: PHYPPMA, BE

2013/103 First report of *Diplocarpon mali* in Germany: addition to the Alert List

The NPPO of Germany informed the EPPO Secretariat of the first finding of *Diplocarpon mali* (anamorph: *Marssonina coronaria*) on its territory. In August/September 2012, apple trees (*Malus domestica* cv. 'James Grieve') showed black spots on the leaves and defoliation at several locations in Hesse and Baden-Württemberg. Investigations showed that the disease was caused by *D. mali*, which was identified on the basis of its morphological characteristics. The origin of the fungus is unknown, but it is assumed that it may have been introduced some years ago. Disease symptoms had been observed in 2010 and 2011 (Hinrichs-Berger & Müller, 2012). At some locations, infested trees were sprayed with fungicides. At the moment, it is unclear which measures could be applied to effectively stop the spread of the pathogen. The situation is under further investigation. An Express PRA has been carried out by the German NPPO which concluded that *D. mali* might present a medium risk for Germany, although the effectiveness of phytosanitary measures to prevent further spread of the disease was questioned.

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

***Diplocarpon mali* (anamorph: *Marssonina coronaria*) – Marssonina blotch of apple**

Why	Premature leaf fall of apple trees caused by <i>Diplocarpon mali</i> has recently been recorded in several European countries. With the exception of one old record from Romania based on collection specimens (Parmelee, 1974), this disease had not been observed in apple orchards in the EPPO region until recently. In 2001 and 2002, <i>Marssonina coronaria</i> (the anamorph of <i>D. mali</i>) was observed for the first time in Italy, in Forno Canavese (Torino province, Piemonte region) in an old family orchard (<i>Malus domestica</i> cv. 'Furnas'). Ten years later, the disease was observed in August 2011, in several organic apple orchards in the province of Bolzano (Trentino-Alto Adige region). In Germany, it is considered that disease symptoms first appeared in 2010 in Baden-Württemberg. The presence of the fungus was officially reported in 2013, in several areas of Baden-Württemberg and Hesse. In Switzerland, the disease was first observed in 2011 near the Lake of Constance (Bodensee), mainly in organic orchards. In 2012, it was recorded in several areas of the German-speaking part of Switzerland. In Austria, the disease was first noticed in August 2011 at 4 locations in Steiermark (districts of Graz-Umgebung, Hartberg-Fürstenfeld, Weiz) in both organic and intensively managed apple orchards (cvs. Topaz, Jonagold, Gala, Luna). As <i>D. mali</i> seems to be an emergent disease in the EPPO region, the EPPO Secretariat considered that it could usefully be added to the Alert List.
Where	EPPO region: Austria, Germany, Italy, Romania, Switzerland. Asia: China (Anhui, Gansu, Hebei, Heilongjiang, Henan, Hubei, Jiangsu, Jilin, Liaoning, Neimenggu, Shaanxi, Shandong, Sichuan, Xinjiang, Yunnan), India (Himachal Pradesh, Jammu & Kashmir, Uttar Pradesh), Japan (Honshu, Kyushu), Korea (Republic of), Taiwan. North America: Canada (New Brunswick, Nova Scotia, Ontario, Prince Edward Island), USA (Wisconsin). South and Central America: Brazil (Rio Grande do Sul), Panama.
On which plants	The main host plant is apple (<i>Malus domestica</i>). Other <i>Malus</i> species (e.g. <i>M. baccata</i>) and <i>Chaenomeles</i> are also reported as hosts in the literature. Among apple trees, some cultivars appear to be more susceptible than others, such as: 'Topaz', 'Gala', 'Jonagold', 'Golden Delicious', 'Luna' (in Europe) and 'Fuji' (in Asia). In particular, it is noticed that cultivars that are resistant or less susceptible to apple scab (<i>Venturia inaequalis</i>) are usually susceptible to <i>D. mali</i> .
Damage	The main damage caused by <i>D. mali</i> is a premature defoliation of apple trees (with fruit still hanging on the tree). The disease usually starts after long periods of rain in summer with grey-black, diffuse spots on the upper sides of mature leaves. Spots may then coalesce and develop into larger chlorotic and necrotic

	<p>areas surrounded by red-violet edges. Small, black, round to oval fruiting bodies (acervuli) develop on the upper side of the leaves. When lesions are numerous, leaves become yellow and prematurely fall off the tree. Defoliation can start approximately 2 weeks after the appearance of the first symptoms (e.g. sometimes as early as mid-August, in Baden-Württemberg). Severe defoliation reduces the quantity and quality of apples, and sometimes affects flower initiation in autumn, leading to reductions in fruit set in the following season. Studies conducted in the Republic of Korea on <i>M. domestica</i> cv. 'Fuji' (grafted on M9 rootstock) showed that defoliation (more than 10% before the end of September) reduced fruit weight, as well as fruit red colour and starch content. Symptoms on fruit (small dark spots with acervuli) are rarely observed but may occur in highly infected orchards.</p> <p>The fungus overwinters in fallen leaves. Ascospores released from overwintered apothecia (on fallen leaves) are considered to be the inoculum for primary infections, and conidia produced in acervuli are thought to be responsible for secondary infections during the apple growing season. Infections require a relatively long duration of leaf wetness and temperatures of 20 to 25°C.</p>
Dissemination	<p>In the field, fungal spores are dispersed by rain and wind. Over long distances, trade of infected plants for planting can be a pathway. Movements of infected fruit are probably of low risk, considering the fact that apples are rarely infected and that the probability of transferring the fungus from fruit (usually intended for consumption) to orchards is low.</p>
Pathway	<p>Plants for planting from countries where <i>D. mali</i> occurs.</p>
Possible risks	<p><i>M. domestica</i> is widely grown in the EPPO region and the production of apple is of major economic importance. In the literature, <i>D. mali</i> is usually reported as a minor disease and no particular economic damage is reported. However, it is currently considered as a serious problem in apple orchards in the Republic of Korea, and in some parts of China (e.g. Shandong, Sichuan). Control measures against <i>D. mali</i> include the elimination of fallen leaves, pruning to facilitate air circulation within the foliage, and the use of fungicides. However, it is noted that <i>D. mali</i> has a relatively low sensitivity to copper fungicides (which are permitted in organic orchards), and that resistant strains to thiophanate-methyl have been detected in the late 1990s in Japan. It is generally considered that the most effective control method would be the use of resistant cultivars, and studies are being carried out in Korea to identify potential candidates. The reasons for the emergence of <i>D. mali</i> in several European countries are unclear, and the geographical distribution of this fungus probably needs to be further studied. It is assumed that the particularly wet summers of 2010 and 2011 favoured the disease. In addition, it is noted that <i>D. mali</i> was mainly found in organic apple orchards, or orchards with reduced fungicide treatment regimes. Although it is still unclear whether phytosanitary measures would be effective to prevent the entry or spread of <i>D. mali</i>, it seems appropriate to monitor this emerging disease within the EPPO region.</p>
Sources	<p>Australian Government - Biosecurity Australia (2009) Draft Import Risk Analysis report for fresh apple fruit from the People's Republic of China, 308 pp.</p> <p>CABI/EPPO (2011) <i>Diplocarpon mali</i>. Distribution Maps of Plant Diseases no. 1099. CABI, Wallingford (GB).</p> <p>CABI Invasive Species Compendium (2013) Datasheet on <i>Diplocarpon mali</i>. http://www.cabi.org/isc/?compid=5&dsid=109745&loadmodule=datasheet&page=481&site=144#</p> <p>Harada Y, Sawamura K, Konno K (1974) <i>Diplocarpon mali</i>, sp. nov., the perfect state of apple blotch fungus <i>Marssonina coronaria</i>. <i>Annals of the Phytopathological Society of Japan</i> 40, 412-418.</p> <p>Hinrichs-Berger J, Müller G (2012) [Premature defoliation on apple trees in Baden-Württemberg caused by <i>Marssonina coronaria</i>]. <i>Julius-Kühn-Archiv</i> no. 438, p 71 (in German).</p> <p>INTERNET</p> <p>Bioaktuell.ch. <i>Marssonina</i>-Blattfallkrankheit - eine neue Bedrohung im Bioobstbau? http://www.bioaktuell.ch/de/pflanzenbau/obstbau/obstbau-pflanzenschutz/marssonina.html</p> <p>Julius Kühn-Institut. Express PRA on <i>Diplocarpon mali</i> (in German). http://pflanzengesundheit.jki.bund.de/dokumente/upload/7687c_marssonina_coronaria_express-pra.pdf</p> <p>LAIMBURG (Land- und Forstwirtschaftliches Versuchszentrum). Diagnostik 2012. http://www.laimburg.it/de/pflanzenschutz/789.asp</p>

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2013/104 *Diaporthe vaccinii* detected again in the Netherlands

In the Netherlands, the presence of *Diaporthe vaccinii* (EPPO A2 List) was noticed for the first time in 2006 (EPPO RS 2009/130). The fungus was detected on 1 plant of highbush blueberry (*Vaccinium corymbosum*) in Horst, province of Limburg. As the plant was destroyed and the fungus was not detected in any other plants during subsequent surveys, it was considered that *D. vaccinii* no longer occurred. However, during recent follow-up surveys, symptoms of fungal damage on twigs were observed in May 2011 in another *V. corymbosum* production facility located in the same area (America-Horst, province of Limburg). No impact on yield was recorded at the affected company. In June 2011, similar symptoms were also observed on blueberries (*V. myrtillus*) in a moorland forest (Planken Wambuis) near Ede, province of Gelderland. The identification of *D. vaccinii* is complex but the fungus could be identified on the basis of morphological characteristics of pycnidia, conidia and aspect of the colonies growing on agar media, followed by a molecular test (DNA sequencing). It is considered that the regular imports of *Vaccinium* plants for plantings from North America (where the fungus occurs) constitute a likely pathway of introduction. It is not the first time that *D. vaccinii* is detected in the EPPO region, as several countries (Germany, Lithuania, Romania and the United Kingdom) have reported findings of this fungus which were subsequently eradicated. In 2013, surveys will be conducted at *Vaccinium* production sites and in public greens to better determine the distribution of *D. vaccinii* in the Netherlands. The infected plants will be destroyed. The pest status of *Diaporthe vaccinii* in the Netherlands is officially declared as: **Transient, under surveillance.**

Source: NPPO of the Netherlands (2013-04).

Additional key words: detailed record

Computer codes: DIAPVA, NL

2013/105 First report of *Spiranthes mosaic virus 3* in the United Kingdom

The NPPO of the United Kingdom recently informed the EPPO Secretariat of the first outbreak of *Spiranthes mosaic virus 3* (*Potyvirus*, SpMV3) detected in *Phlox paniculata* on its territory. So far, this virus was only reported from the USA where it has been found infecting both *Phlox* spp. (Polemoniaceae) and *Spiranthes cernua* (Orchidaceae). As SpMV3 is a potyvirus, it is presumed to be transmitted by aphids (but this has not been demonstrated).

In April 2013, several *Phlox paniculata* plants (approximately 24) showing unusual symptoms were observed at a garden centre in Basingstoke (Hampshire). Affected plants showed leaf mottling and the lower epidermis was delaminated from the leaf. These plants had been vegetatively propagated from mother plants at a UK nursery. Mother plants are thought to have been obtained 4 years ago from the Netherlands. However, it seems unlikely that the virus would have remained latent within the mother plants at the propagator nursery without symptoms for such long period. Therefore other sources of virus infection are being considered. All symptomatic plants have been destroyed and other lots at the same premises have been treated with insecticides to kill any potential aphid vectors. These plants will be monitored for disease symptoms. Individual samples will be collected from both first and second generation mother plants being maintained by the propagating nursery and will be tested for the presence of the virus. Investigations will be carried out to trace any other *Phlox* plants that may have been sent by the propagating nursery to other garden centres to ensure they are disease free.

The pest status of *Spiranthes mosaic virus 3* in the United Kingdom is officially declared as: **Present, under eradication.**

Source: NPPO of the United Kingdom (2013-05).

Guaragna MA, Ndum O, Jordan R (2006) Detection and characterization of two previously undescribed potyviruses in the terrestrial orchid *Spiranthes cernua*. *Acta Horticulturae* no. 722, 209-217.

Hammond J, Reinsel M (2011) Mixed infections and novel viruses in various species of *Phlox*. *Acta Horticulturae* no. 901, 119-126 (abst.).

Additional key words: new record

Computer codes: SPMV30, GB

2013/106 First report of *Heterodera zeae* in Greece

The corn cyst nematode, *Heterodera zeae* (EPPO Alert List) was first described in 1970 in India where it is now widespread and considered as a serious pest of maize (*Zea mays*). This species was then reported in Pakistan (1980), Egypt (1981), USA (1981), Thailand (1995), Nepal (2001), and Portugal (2002).

In Greece, a soil sample from Paleochori Kavallas (Northern Greece) was investigated for the presence of nematodes. It was collected during winter 2009 from a field where maize was annually cultivated in summer and left as fallow in winter. In previous years, maize plants had exhibited symptoms of stunting and wilting. Laboratory analysis (morphological characteristics, molecular tests) confirmed the presence of *Heterodera zeae* in the collected soil sample. It is noted that further investigations are needed to determine whether nematode presence is associated with economic losses in maize in Greece. This is the first record of *H. zeae* in Greece and the second for Europe.

The situation of *Heterodera zeae* in Greece can be described as follows: **Present, first found in 2009 in a soil sample from a maize field in Northern Greece.**

Source: Skantar AM, Handoo ZA, Zanakis GN, Tzortzakaris EA (2012) Molecular and morphological characterization of the corn cyst nematode, *Heterodera zae*, from Greece. *Journal of Nematology* 44(1), 58-66.

Additional key words: new record

Computer codes: HETDZE, GR

2013/107 Rhynchophorus ferrugineus found for the first time in Bretagne region (FR)

The NPPO of France recently informed the EPPO Secretariat of the first finding of *Rhynchophorus ferrugineus* (Coleoptera: Curculionidae - EPPO A2 List) in the Morbihan department, Bretagne region. Previously, *R. ferrugineus* was only reported from Southern France (Mediterranean coast and Corse). The pest was found in 8 palm trees (*Phoenix canariensis* and *Washingtonia robusta*) grown in private gardens in the municipalities of Ploemeur, Larmor-Plage, Locmiquélic, Moréac, Plaudren, and Caudan.

In April 2013, the regional PPO was alerted by the owner of a private garden in Ploemeur. During the inspection, all stages of *R. ferrugineus* (eggs, larvae, adults) were found on a *P. canariensis*. The identity of the pest was confirmed in May 2013 by the Anses plant health laboratory. Tracing-back studies revealed that this infested *P. canariensis* belonged to a lot of palm trees imported from a Spanish nursery which had been sold at various dates to private owners living in 6 different municipalities (see above). All palm trees belonging to this lot which were subsequently inspected were also found to be infested. Investigations are continuing to trace-back all other palm trees possibly coming from the same origin. The NPPO of Spain has been informed. All infested palm trees have been destroyed (by burning under official supervision) and phytosanitary measures have been taken in accordance with the amended EU Decision 2007/365/EC.

The pest status of *Rhynchophorus ferrugineus* in France is officially declared as: **Present, under eradication.**

Source: NPPO of France (2013-05).

Additional key words: detailed record

Computer codes: RHYCFE, FR

2013/108 First report of Halyomorpha halys in Italy

The NPPO of Italy recently informed the EPPO Secretariat of the first record of *Halyomorpha halys* (Heteroptera: Pentatomidae - EPPO Alert List) on its territory. In September 2012, a single adult specimen was collected by a University student in the locality of Magreta di Formigine (province of Modena, Emilia-Romagna region), then given to his entomology professor, and finally identified by the Museum of Natural History of Morbegno-Sondrio. This specimen was captured in a light trap during an insect collection carried out for educational purposes. The trap was located on a house terrace (approximately 3 m above ground level) in a small urban area close to uncultivated land. Other specimens collected from the urban area of Modena are currently in the process of identification. For the moment no official control measures were taken, but surveys will be conducted in 2013 to delimit the infested area, as well as studies on the host plants and possible economic impact of *H. halys*.

The pest status of *Halyomorpha halys* in Italy is officially declared as: Present, a single specimen identified in Modena province (Emilia-Romagna region). Other specimens found in the same area have not been identified yet.

Source: NPP0 of Italy (2013-05).

Additional key words: new record

Computer codes: HALYHA, IT

2013/109 *Halyomorpha halys* continues to spread in the EPPO region: first reports in France and Germany

Halyomorpha halys (Heteroptera: Pentatomidae - EPPO Alert List) continues to spread within the EPPO region. It was first reported in Switzerland, near Zürich in summer 2007 (RS 2008/199). The insect is now also recorded in the cantons of Basel-Stadt, St. Gallen and Schaffhausen. In the city of Zürich, the number of inquiries concerning *H. halys* made by the general public to the Urban Pest Advisory Service (UPAS - working on urban pests and public health) has significantly increased from 2006 to 2010. Interestingly, UPAS has found in its collection several specimens of *H. halys* dated from 2006. For some time, it was considered that the first record of *H. halys* in Europe had been made in Switzerland, but in fact the first specimen was caught in a light trap in 2004 in Liechtenstein at Balzers (bordering Switzerland).

In Germany, *H. halys* was first found in November 2011 in the city of Konstanz (Baden-Württemberg).

In France, *H. halys* was first found in Alsace region in 2012. Captures made so far in 2013 suggest that it is established in Alsace: Strasbourg (1 specimen caught near the University Botanical Garden, 1 in Strasbourg-Robertsau, 6 in Schiltigheim).

Source: Callot H, Brua C (2013) *Halyomorpha halys* (Stål, 1855), la punaise diabolique, nouvelle espèce pour la faune de France (Heteroptera Pentatomidae). *L'Entomologiste* 69(2), 69-71.
 Heckmann R (2012) Erster Nachweis von *Halyomorpha halys* (Stål, 1855) (Heteroptera: Pentatomidae) für Deutschland. *Heteropteron* 36, 17-18.
 Mueller G, Landau Luescher I, Schmidt M (2011) New data on the incidence of household arthropod pests and new invasive pests in Zürich (Switzerland). Proceedings of the 7th International Conference on Urban Pests (Ouro Preto, BR, 2011-08-07/10), 109-104.
 Wyniger D, Kment P (2010) Key for the separation of *Halyomorpha halys* (Stål) from similar-appearing pentatomids (Insecta: Heteroptera: Pentatomidae) occurring in Central Europe, with new Swiss records. *Mitteilungen der Schweizerischen Entomologischen Gesellschaft* 83(3/4), 261-270 (abst.).
INTERNET
 Société Alsacienne d'Entomologie. Insectes exotiques observés en Alsace par C Brua et H Callot. La punaise diabolique - *Halyomorpha halys*.
http://sites.estvideo.net/sae/spp_invasives.html
 Die Marmorierte Baumwanze, *Halyomorpha halys*. Aktuelle Verbreitungskarte.
<http://www.halyomorphahalys.com/aktuelle-verbreitungskarte-current-distribution.html>

Additional key words: new record

Computer codes: HALYHA, CH, DE, FR, LI

2013/110 First report of *Aleuroclava aucubae* in France

The NPPO of France recently informed the EPPO Secretariat of the first record of *Aleuroclava aucubae* (Hemiptera: Aleyrodidae) on its territory. In April 2013, numerous puparia were discovered on *Citrus* sp. in a private garden in Corse (department of Haute-Corse). The identity of the whitefly was confirmed in May 2013 by the Anses plant health laboratory. The origin of the introduction of *A. aucubae* into Corse is unknown. No particular phytosanitary measures were taken. As mentioned in EPPO RS 2013/011, *A. aucubae* is a polyphagous species which probably originates from Asia. During the last decade, it has been introduced into the USA (California in 2002) and the following European countries: Italy in 2007, Slovenia in 2011, and now France. In the literature, no particular economic damage is reported. However, considering the general lack of information about this species and the fact this is a regulated pest for Australia and New Zealand, the NPPO of France felt that it would be desirable to follow its possible spread within the EPPO region.

The pest status of *Aleuroclava aucubae* in France is officially declared as: **Present, only in some areas (Corse).**

Source: NPPO of France (2013-05).

Additional key words: new record

Computer codes: TETLAU, FR

2013/111 New EPPO poster and leaflet 'Don't Risk It'

EPPO recently published a poster 'Don't Risk It' together with an accompanying leaflet. This poster was endorsed officially by the EPPO Executive Committee in April 2013 and circulated to the NPPOs of all EPPO member countries in May 2013.

The objective of these documents is to raise public awareness about the risks of moving plants and their associated pests during international travel and to encourage responsible behaviour. It is primarily intended that the poster should be displayed in airports or any other sites where international travellers will see it (e.g. seaports, railway stations, travel agencies, embassies).



PDF files of the poster and leaflet can be downloaded from the EPPO website.

<http://www.eppo.int/PUBLICATIONS/poster/poster&leaflet.htm>

Source: EPPO Secretariat (2013-05).

Additional key words: publication

2013/112 Major invasive alien plants in Malta

Guidelines on managing invasive alien plants and restoring native plants communities in terrestrial settings in the Maltese Islands were elaborated by the Malta Environment and Planning Authority in 2013. These guidelines aim to assist:

- in the planning and implementation of management programmes aimed at counteracting the spread of invasive alien plants in natural and semi-natural areas;
- designing and implementing native plant conservation translocations.

The species listed in the table below are considered as major invaders in Malta, and their origin, situation in the EPPO region and whether they spread vegetatively or are prolific seed producers is indicated. In the guidelines, manual, mechanical, chemical or a combination of methods are described as appropriate for each of these species, as well as comments on the biology of the plant to facilitate its control.

Species	Origin	Situation in EPPO region	Spreads vegetatively	Prolific seed producer
<i>Acacia cyclops</i> (Fabaceae)	SW-Aus.	CY, DZ, ES (incl. Islas Canarias), IL, MA, MT, PT (incl. Azores), TN		X
<i>Acacia karroo</i> (Fabaceae)	Trop. Af.	CY, ES, FR (incl. Corse), IL, IT (incl. Sardinia, Sicilia), MA, MT, PT, TR		X
<i>Acacia saligna</i> (Fabaceae)	SW-Aus.	CY, DZ, ES (incl. Baleares, Islas Canarias), FR (incl. Corse), GR, IL, IT (incl. Sardinia, Sicilia), JO, MA, MT, PT (incl. Azores), TN, TR		X
<i>Aeonium arboreum</i> (Crassulaceae)	Af.	CY, ES (incl. Baleares), GR, MT, PT (Madeira)	X	
<i>Agave americana</i> (Asparagaceae)	Mexico	Widespread	X	
<i>Agave sisalana</i> (Asparagaceae)	Mexico	ES (incl. Baleares), IT (Sicilia), MT	X	
<i>Ailanthus altissima</i> (Simaroubaceae, EPPO List of Invasive alien plants)	As.	Widespread	X	X
<i>Aptenia</i> spp. (Aizoaceae)	.*	.*	X	X
<i>Arundo donax</i> (Poaceae)	As.	Widespread	X	
<i>Cardiospermum grandiflorum</i> (Sapindaceae, EPPO Alert List)	Trop. Af., C & S Am.	ES (Islas Canarias), FR, IT (Sicilia), MT, PT (Madeira)		X
<i>Carpobrotus edulis</i> (Aizoaceae, EPPO List of IAP)	S-Af.	Widespread	X	
<i>Casuarina equisetifolia</i> (Casuarinaceae)	As trop., Australas., Pacific	CY, MT, PT (Madeira)		X
<i>Eucalyptus</i> spp. (Myrtaceae)	Aus.	.*		
<i>Lantana camara</i> (Verbenaceae)	Trop. S-Am.	ES (incl. Baleares, Islas Canarias), FR (Corse), IL, IT (incl. Sicilia), MT, PT (Azores, Madeira),	X	X

Species	Origin	Situation in EPP0 region	Spreads vegetatively	Prolific seed producer
		TR		
<i>Leucaena leucocephala</i> (Fabaceae)	Am.	ES (incl. Islas Canarias), MT, PT (Madeira)		X
<i>Nicotiana glauca</i> (Solanaceae)	S-Am.	Widespread		X
<i>Nothoscordum borbonicum</i> (Amaryllidaceae)	Am.	ES (Balears), FR (incl. Corse), GB, IT, MT		X
<i>Opuntia ficus-indica</i> (Cacataceae)	Neotrop.	Widespread	X	
<i>Oxalis pes-caprae</i> (Oxalidaceae, EPP0 List of IAP)	S-Af.	Widespread	X	
<i>Pennisetum setaceum</i> (Poaceae, EPP0 List of IAP)	N-Af.	Native in part of the region in AL, IL, MA, TN. Established in ES (incl. Balears, Islas Canarias), FR, IT (incl. Sardinia), MT	X	X
<i>Pennisetum villosum</i> (Poaceae)	Af., As.	FR (incl., Corse), IT (incl. Sardinia), MT, PT (Incl. Azores, Madeira)	X	X
<i>Pittosporum tobira</i> (Pittosporaceae)	As. Temp.	ES (Balears), FR (Corse), IT, MT, PT (Azores)		X
<i>Ricinus communis</i> (Euphorbiaceae)	Trop. Af.	Widespread		X
<i>Schinus terbinthifolius</i> (Anacardiaceae)	Trop. S-Am.	ES, IL, MT, PT		X
<i>Symphotrichum squamatum</i> (Asteraceae)	S-Am.	Widespread		X
<i>Tropaeolum majus</i> (Tropaeolaceae)	S-Am.	ES (incl. Balears, Islas Canarias), FR (incl. Corse), IE, IT (incl. Sardinia, Sicilia), MT, PT (incl. Azores, Madeira)		X

* No details provided for these genera.

Source: DAISIE - Delivering Alien Invasive Species Inventories for Europe.
<http://www.europe-aliens.org>

Malta Environment and Planning Authority, Guidelines on alien plant species.
<http://www.mepa.org.mt/guidelines-alienplants>

Malta Environment and Planning Authority (2013) Guidelines on managing non-native plant invaders and restoring native plant communities in terrestrial settings in the Maltese Islands. 88 p.

Additional key words: invasive alien plants

Computer codes: 1APJG, 1EUCG, ABKDO, ACACC, ACAKA, ACASA, AEJAR, AGVAM, AGVSI, AILAL, ASTSQ, CBSSE, CRIGR, CSUEQ, LANCA, LUAGL, NIOGL, OPUFI, OXAPC, PESSA, PESVI, PTUTO, RIICO, SCITE, TOPMA, MT

2013/113 First report for *Crassula helmsii* in the Poitou-Charentes region, France

Crassula helmsii (Crassulaceae, EPPO A2 List) was previously only recorded in France in the Ain, Basse Normandie and Lorraine departments. It has now been reported for the first time in Chapelle-Bâton, in the Deux-Sèvres Department, Poitou-Charentes region in France.

The Conservatoire Botanique National Sud-Atlantique has released an alert datasheet describing the species, in order to collect further distribution data from botanists.

Source: Alain Dutartre, Institut national de recherche en sciences et technologies pour l'environnement et l'agriculture (Irstea), pers. comm., 2013

Conservatoire Botanique National Sud-Atlantique (2011) Document d'alerte. Plante exotique envahissante émergente. *Crassula helmsii*. 1 p.

Additional key words: detailed record, invasive alien plants

Computer codes: CSBHE, FR

2013/114 First report of *Hydrocotyle ranunculoides* in the Aquitaine region, France

Hydrocotyle ranunculoides (Apiaceae, EPPO A2 List) was previously reported in France in the Ain and in the Essonne departments. It has been found for the first time in the region Aquitaine on the Cousturet river in the municipality of Saubion, in the Landes Department. After its discovery in 2012, a manual removal of the plant was planned. Twelve interventions were organized, representing 36 working days, to remove in total 20.5 m³ of the plant. When undertaking manual removal, 3 agents out of 4 reported hand and forearm itching. The removal of *H. ranunculoides* needs to be undertaken with gloves to prevent direct contact with the plant.

The species has also been found in the Saubion municipality in the locality 'Lagrollet', as well as in the municipality of Tosse. Filters have also been placed to contain the species and to prevent its spread to the water catchment. The species has been observed on the Baudigau river, at the junction with the Marais d'Orx (protected wetland area of the Landes department). *H. ranunculoides* has also been recorded in the neighbouring department of Gironde.

The Conservatoire Botanique National Sud-Atlantique has released an alert datasheet describing the species, in order to collect further distribution data from botanists.

Source: Alain Dutartre, Institut national de recherche en sciences et technologies pour l'environnement et l'agriculture (Irstea), pers. comm., 2013

Dupain M (2013) L'Hydrocotyle fausse-renoncule (*Hydrocotyle ranunculoides* L. f.) en Gironde. *Bulletin de la Société Linnéenne de Bordeaux*, 148, nouvelle série n° 41(1), 53-57

François Arrué, Syndicat Mixte de Rivière Bourret-Boudigau, pers. comm., 2013

Conservatoire Botanique National Sud-Atlantique (2012) Document d'alerte. Plante exotique envahissante émergente. *Hydrocotyle ranunculoides*. 1 p.

Additional key words: detailed record, invasive alien plants

Computer codes: HYDRA, FR

2013/115 RINSE: a new EU project

RINSE (Reducing the Impact of Non-native Species in Europe) is a new EU project seeking to improve the management of invasive alien species across four partner countries in Western Europe: Belgium, United Kingdom, France and the Netherlands. RINSE will work across borders to share best practices and adopt strategic approaches to tackle the threats posed by invasive alien species (IAS). The project will deal with invasive alien plants, birds, fish and mammals, across a range of habitats. RINSE will also aim to increase public awareness of the threats posed by invasive alien species, and reflect on the most effective methods to address them.

RINSE has three Work Packages:

- targeting and prioritization: RINSE will audit the distribution of current IAS in the project area and make predictions about non-native species that might be problematic in the future. This will enable limited resources to be directed towards the species and sites of greatest concern.
- training and awareness raising: RINSE will deliver a wide range of training and communication materials for different target groups, enhancing their capacity to tackle IAS.
- field trials and demonstration projects: RINSE will seek to control IAS at priority sites using a range of proven and novel techniques, evaluate the most effective approaches and develop decision-making and support tools for the management of IAS.

The RINSE project will be carried out until the end of 2014 and has a total of nine partners from the 4 countries.

Source: Reducing the Impact of Non-Native Species in Europe
<http://www.rinse-europe.eu/>

Additional key words: invasive alien species, project

Computer codes: BE, FR, GB, NL

2013/116 SMARTER: a new EU project for the sustainable management of *Ambrosia artemisiifolia* in Europe

Long-term and widely applicable options are required for the sustainable management of *Ambrosia artemisiifolia* (Asteraceae, EPPO List of invasive alien plants), as well as the coordination of institutions involved in *Ambrosia* spp. research and management throughout Europe. The project 'Sustainable management of *A. artemisiifolia* in Europe' (SMARTER) will establish an interdisciplinary network including experts currently involved in the control of *A. artemisiifolia*. Other key-experts, health care professionals, aerobiologists, economists, as well as atmospheric and agricultural modellers will be involved in discussing long-term management options, monitoring, and the development of new innovative management solutions.

Source: European Cooperation in science and technology, Sustainable management of *Ambrosia artemisiifolia* in Europe
http://www.cost.eu/domains_actions/fa/Actions/FA1203

Additional key words: invasive alien plants

Computer codes: AMBEL

2013/117 EPPO Training course on the EPPO Prioritization process for invasive alien plants, Paris, EPPO Headquarters (2013-03-12/14)

EPPO organized a training course on the EPPO prioritization process for invasive alien plants attended by 11 participants from 9 countries. The training course consisted of general presentations spread over the 2 first days on the following topics:

- EPPO activities on Pest Risk Analysis;
- Definitions and concepts related to biological invasions;
- EPPO Standard on the prioritization process for invasive alien plants;
- Applications of the prioritization process in different countries including its comparison with other methods;
- Insights on uncertainties when performing prioritization assessments.

Participants also assessed, individually or in small groups, plant species of concern for their country, on which they had collected information before the meeting. The presentations of the following prioritization assessment are available online: *Amaranthus retroflexus* (Amaranthaceae) for Finland; *Ambrosia artemisiifolia* (Asteraceae, EPPO List of Invasive alien plants) for Belgium, the Czech Republic, Finland, Italy, Serbia and Turkey; *Asclepias syriaca* (Apocynaceae) for the Czech Republic; *Cannabis sativa* (Cannabaceae) for Serbia; *Cortaderia selloana* (Poaceae, EPPO List of IAP) for Croatia and Italy; *Lonicera japonica* (Caprifoliaceae) for Slovenia; *Polygonum perfoliatum* (Polygonaceae, EPPO A2 List) for Turkey; *Rudbeckia laciniata* (Asteraceae) for France and Belgium and *Sicyos angulatus* (Cucurbitaceae, EPPO List of IAP) for Italy and Slovenia.

Source: EPPO Training course on the EPPO Prioritization process for invasive alien plants, Paris, EPPO Headquarters, 2013-03-12/14.
http://archives.eppo.int/MEETINGS/2013_conferences/training_IAP.htm

Additional key words: training

Computer codes: AMARE, AMBEL, ASCCU, CDTSE, CNISA, LONJA, POLPF, RUDLA, SIYAN, BE, CZ, FI, FR, HR, IT, RS, SL, TR