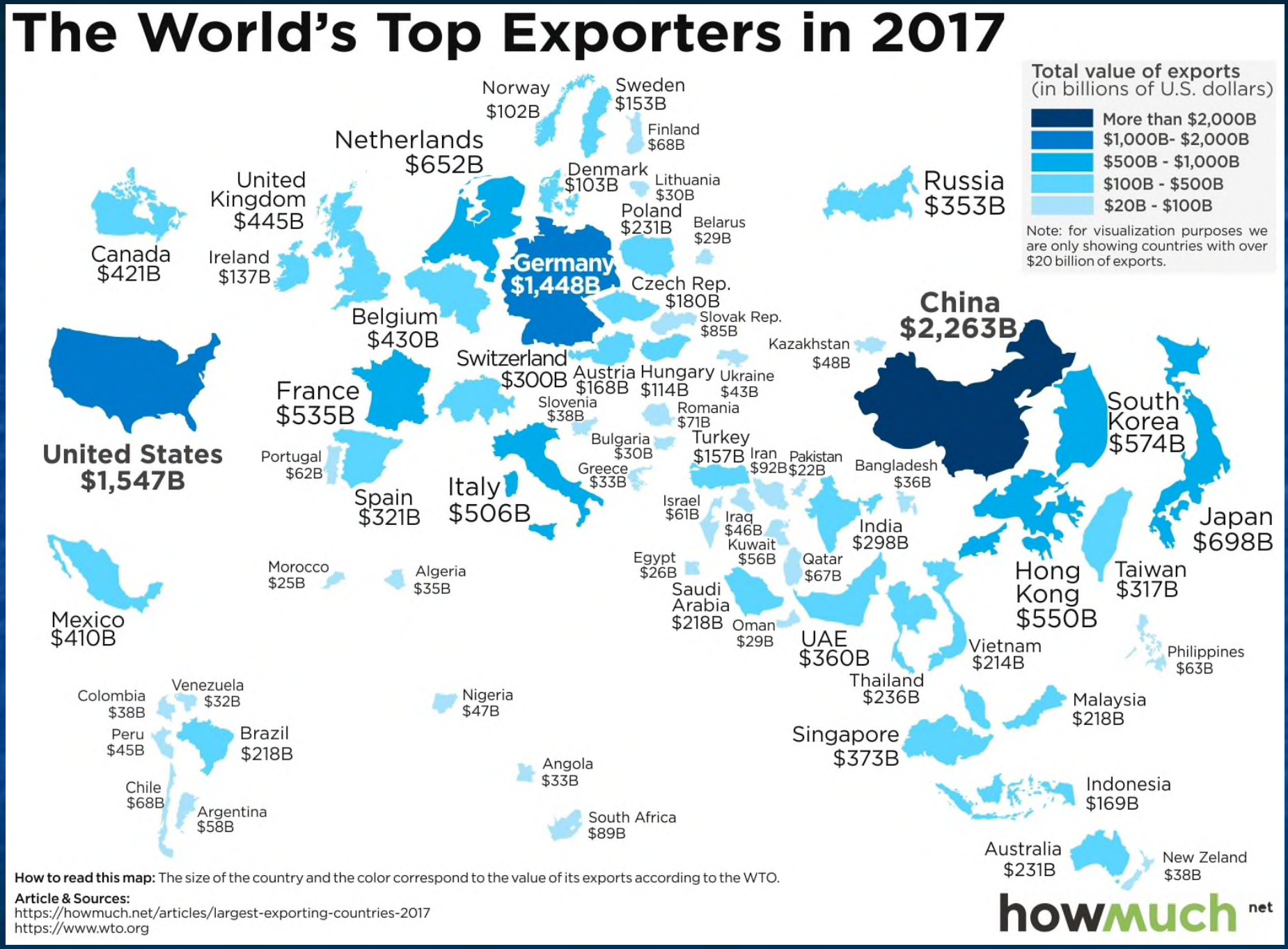
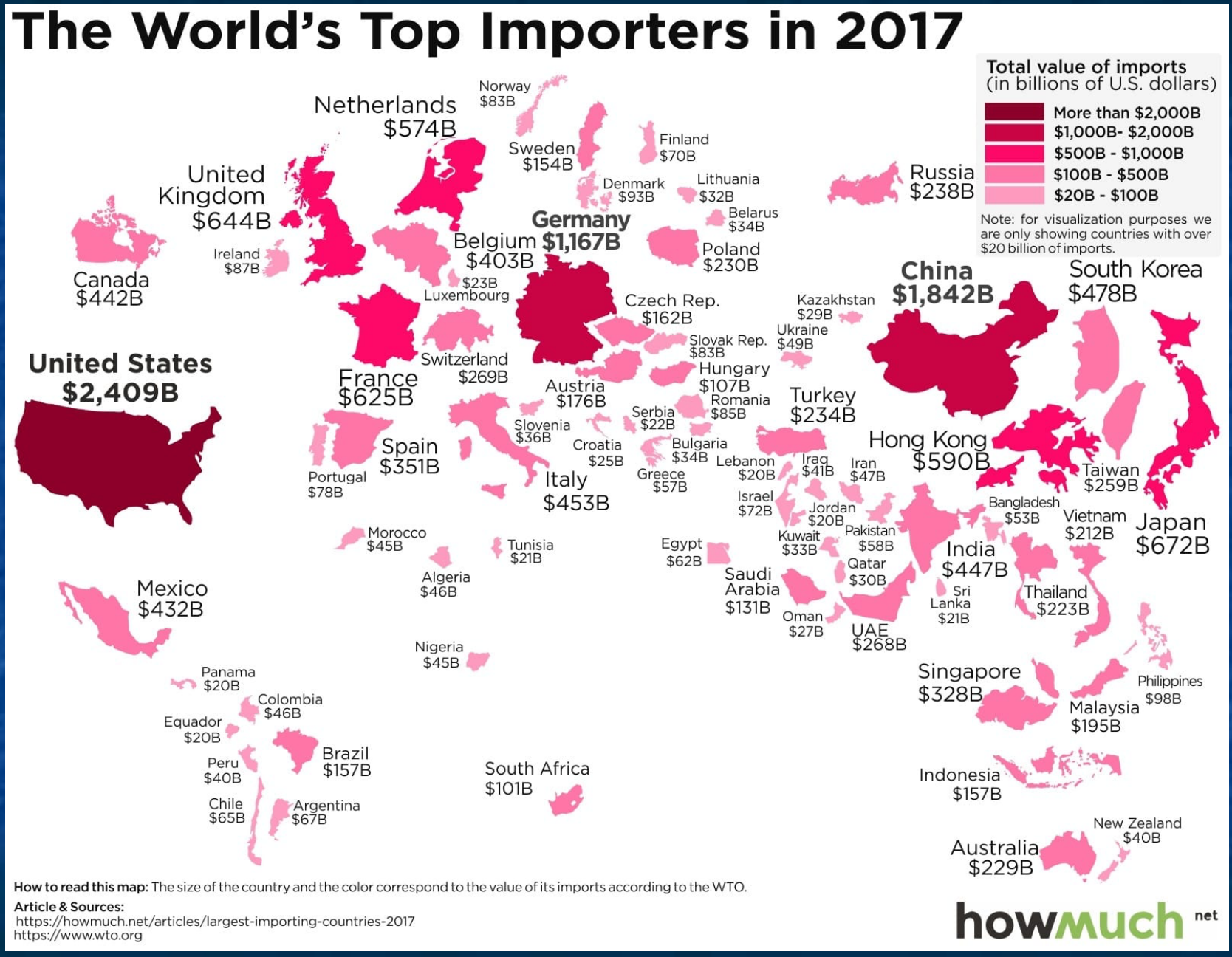
Nuovi fitofagi e malattie: tecniche di difesa

Stefano Speranza

speranza@unitus.it

Univ. Tuscia Stefano Speranza 2019


The World's Top Exporters in 2017
Total value of exports
(in billions of U.S. dollars)
More than $2,000B
$1,000B- $2,000B
$500B - $1,000B
$100B - $500B
$20B - $100B
Note: for visualization purposes we are only showing countries with over $20 billion of exports.
Norway $102B
Sweden $153B
Finland $68B
Netherlands $652B
Denmark $103B
Lithuania $30B
Russia $353B
United Kingdom $445B
Canada $421B
Ireland $137B
Poland $231B
Belarus $29B
Germany $1,448B
Czech Rep. $180B
Slovak Rep. $85B
Belgium $430B
China $2,263B
Kazakhstan $48B
Switzerland $300B
Austria $168B
Hungary $114B
Ukraine $43B
France $535B
Slovenia $38B
Romania $71B
South Korea $574B
United States $1,547B
Bulgaria $30B
Turkey $157B
Iran $92B
Pakistan $22B
Portugal $62B
Greece $33B
Bangladesh $36B
Spain $321B
Italy $506B
Israel $61B
Iraq $46B
India $298B
Japan $698B
Kuwait $56B
Egypt $26B
Qatar $67B
Morocco $25B
Algeria $35B
Hong Kong $550B
Taiwan $317B
Saudi Arabia $218B
Oman $29B
Mexico $410B
UAE $360B
Vietnam $214B
Philippines $63B
Thailand $236B
Colombia $38B
Venezuela $32B
Nigeria $47B
Malaysia $218B
Peru $45B
Brazil $218B
Singapore $373B
Angola $33B
Chile $68B
Argentina $58B
Indonesia $169B
South Africa $89B
Australia $231B
New Zeland $38B
How to read this map: The size of the country and the color correspond to the value of its exports according to the WTO.
Article & Sources:
https://howmuch.net/articles/largest-exporting-countries-2017
https://www.wto.org
howmuch net


The World's Top Importers in 2017
Total value of imports
(in billions of U.S. dollars)
More than $2,000B
$1,000B- $2,000B
$500B - $1,000B
$100B - $500B
$20B - $100B
Note: for visualization purposes we are only showing countries with over $20 billion of imports.
United States $2,409B
China $1,842B
Germany $1,167B
Netherlands $574B
United Kingdom $644B
France $625B
Spain $351B
Italy $453B
Belgium $403B
Switzerland $269B
Austria $176B
Hong Kong $590B
South Korea $478B
Japan $672B
India $447B
Russia $238B
Turkey $234B
Mexico $432B
Canada $442B
Norway $83B
Sweden $154B
Finland $70B
Denmark $93B
Lithuania $32B
Belarus $34B
Poland $230B
Ireland $87B
Luxembourg $23B
Czech Rep. $162B
Slovak Rep. $83B
Hungary $107B
Romania $85B
Serbia $22B
Slovenia $36B
Croatia $25B
Bulgaria $34B
Portugal $78B
Greece $57B
Kazakhstan $29B
Ukraine $49B
Lebanon $20B
Iraq $41B
Iran $47B
Israel $72B
Jordan $20B
Kuwait $33B
Pakistan $58B
Bangladesh $53B
Vietnam $212B
Taiwan $259B
Egypt $62B
Saudi Arabia $131B
Qatar $30B
Oman $27B
UAE $268B
Sri Lanka $21B
Thailand $223B
Singapore $328B
Philippines $98B
Malaysia $195B
Indonesia $157B
Australia $229B
New Zealand $40B
Morocco $45B
Tunisia $21B
Algeria $46B
Nigeria $45B
Panama $20B
Colombia $46B
Equador $20B
Peru $40B
Brazil $157B
Chile $65B
Argentina $67B
South Africa $101B
How to read this map: The size of the country and the color correspond to the value of its imports according to the WTO.
Article & Sources:
https://howmuch.net/articles/largest-importing-countries-2017
https://www.wto.org
howmuch.net

https://www.eppo.int

European and Mediterranean Plant Protection Organization
Organisation Européenne et Méditerranéenne pour la Protection des Plantes

Google™ Custom Search

- Home
- About EPPO
- Meetings
- Plant quarantine
- Plant Protection Products
- Standards
- Databases
- Publications
- Worldwide activities

What's New

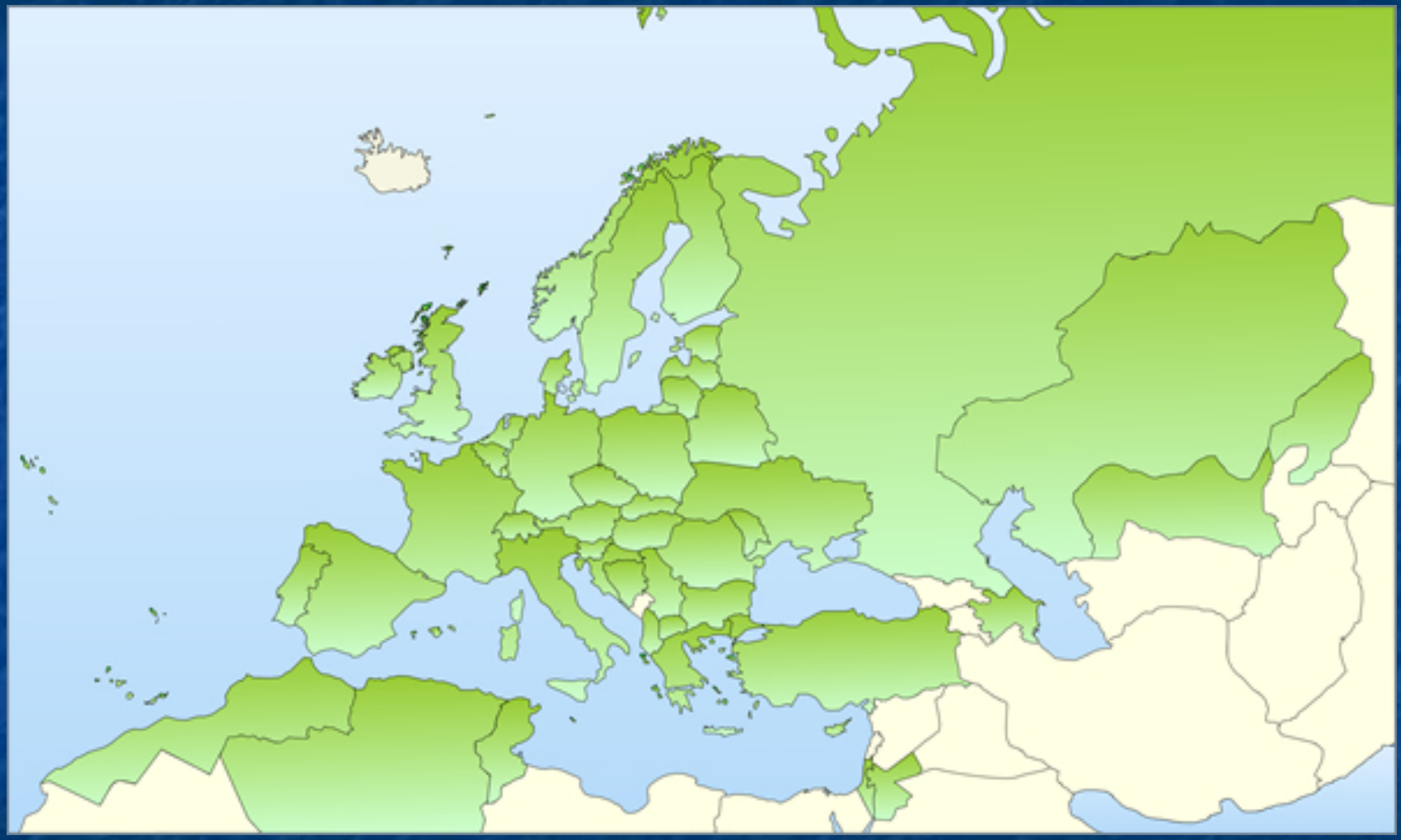
- Panel on CPM Affairs (Krakow, 01/04 September)
- Panel on Quarantine Pests for Forestry (Bykovo, 30 June - 02 July)
- EPPO Workshop on comparative assessment (Brussels, 06/07 May) **View the presentations**
- EPPO/CoE Workshop 'Code of conduct on horticulture and invasive alien plants' (Ski, 04/05 June) **View the presentations**
- EPPO Conference on Diagnostics (York, 10/15 May) **View the presentations**
- PPPs: NEW extrapolation tables for solanaceous crops
- Working Party on Plant Protection Products (Torino, 12/14 May)
- '*Anoplophora glabripennis* - Eradication programme in Italy' read a paper by Hérard *et al.*
- New EU Plant Protection Products Regulation
- EUPHRESCO - Update on European phytosanitary research coordination
- Closer cooperation for the accreditation of diagnostic labs between EPPO and EA (European co-operation for Accreditation)
- New database on EPPO Standards for the Efficacy Evaluation of PPPs
- EPPO Collection of Phytosanitary Regulations: texts sent in 2009-03

EPPO Events

- Conference on computer aids for plant protection (Istanbul)
  Postponed

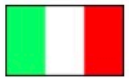
Quick links

EPPO is an intergovernmental organization responsible for European cooperation in plant health. Founded in 1951 by 15 European countries, EPPO now has 50 members, covering almost all countries of the European and Mediterranean region. Its objectives are to protect plants, to develop international strategies against the introduction and spread of dangerous pests and to promote safe and effective control methods. As a Regional Plant Protection Organization, EPPO also participates in global discussions on plant health organized by FAO and the IPPC Secretariat. Finally, EPPO has produced a large number of standards and publications on plant pests, phytosanitary regulations, and plant protection products. **more information »**



Italy

joined EPPO in 1951



NPPO contact point

Mr Bruno Caio FARAGLIA
Ministero delle Politiche Agricole
Alimentari e Forestali
Direzione Generale dello Sviluppo Rurale
Ufficio DISR V
Via XX Settembre, 20
00187 ROMA

Tel: +39/06 4665 6092 or
Tel: +39/06 4665 4218
E-mail: b.faraglia@politicheagricole.it or
f.sorgoni@politicheagricole.it

View NPPO structure
(in preparation)

Phytosanitary regulations

Original text
Italy is a member of the European Union and therefore applies '**Council Directive 2000/29/EC** of 8 May 2000 on protective measures against the introduction into the Community of organisms harmful to plants or plant products and against their spread within the Community'.
You can download here a **non official consolidation in English** (only).

Many other EU texts related to EU Directive 2000/29 or other aspects of plant health can be viewed and downloaded here (in English or French).

EPPO summaries of EU phytosanitary regulations
Summaries prepared in 2004 (in English and French).

EPPO specific summaries for Italy
Summaries prepared in 2004 (in English and French).

Reminder: to be informed when new phytosanitary regulations are available, register on the e-mail list 'Regulations' of the EPPO Electronic Documentation Service

EPPO meetings in Italy

(click on the dots to view EPPO meeting places)

To view this map you need FlashPlayer

Russia

joined EPPO in 1957 (as USSR)

NPPO contact point

Mr Sergey DANKVERT
Federal Service for Veterinary
and Phytosanitary Surveillance
Orlikov per. 1/11
107139 MOSCOW 84

Tel: +7 499 975 43 47
Fax: +7 495 607 51 11
E-mail: info@svfk.mcx.ru

View NPPO structure
(in preparation)

Phytosanitary regulations

Original text
Regulations of 1994 for the protection of the Territory of the Russian Federation against Quarantine Pests, Plant Diseases and Weeds.
List of animal plant pests, agents of plant diseases, plants (weeds) of quarantine significance for the Russian Federation of 31.03.2003 (EPPO translation from Russian).

EPPO Summaries
Summaries prepared in 1999 (in English and French).

Reminder: to be informed when new phytosanitary regulations are available, register on the e-mail list 'Regulations' of the EPPO Electronic Documentation Service

Useful web sites

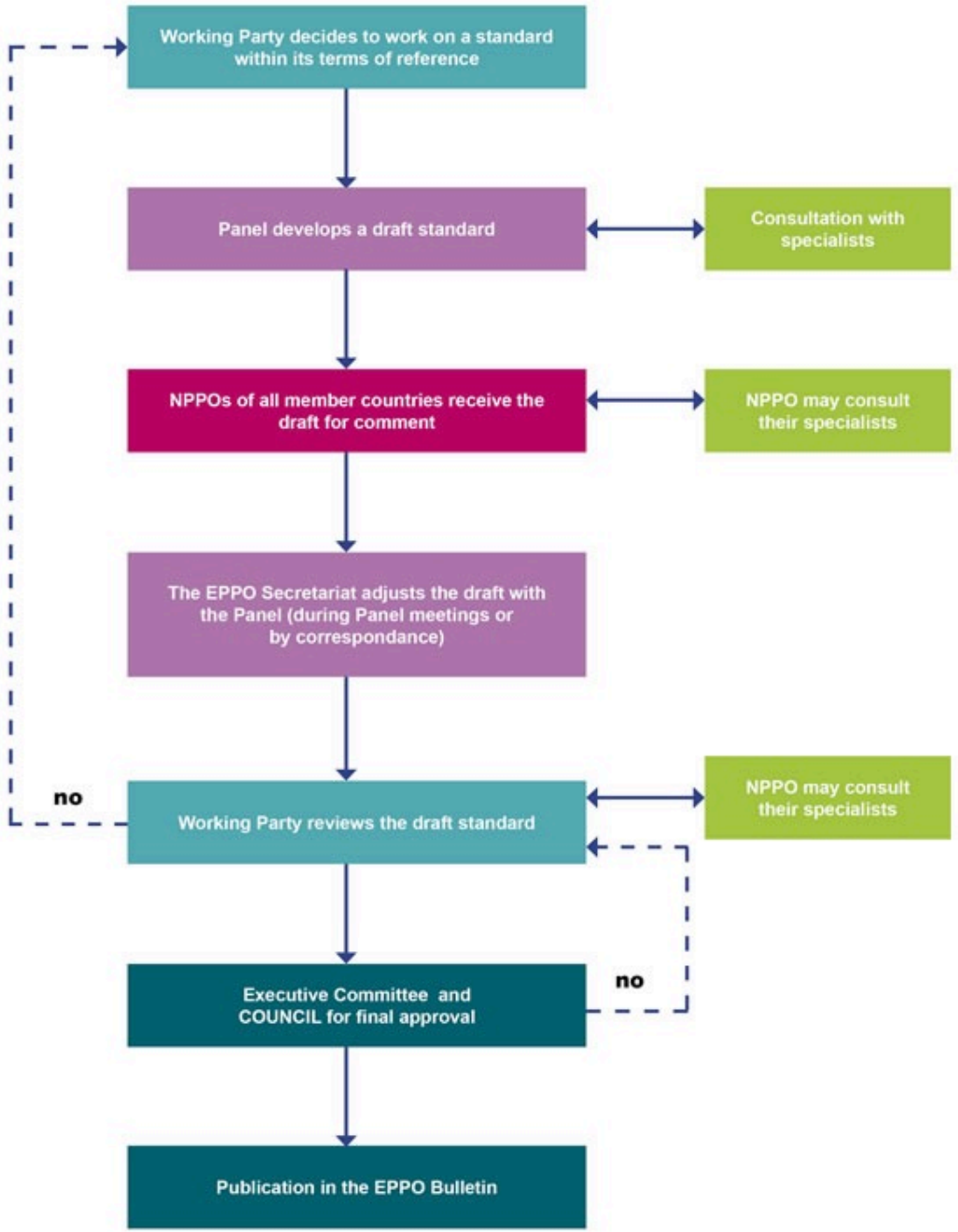
Federal Service for Veterinary and Phytosanitary Surveillance
Russian national Plant Quarantine Centre (in Russian only)
Phytosanitary regulations of the 'Customs Union' of Belarus, Kazahkstan and Russia (in Russian only)

EPPO meetings in Russia

(click on the dots to view EPPO meeting places)

To view this map you need FlashPlayer

EPPO approval procedure of Standards



https://gd.eppo.int

EPPO Global Database

Search by name or EPPO code... Go!

advanced search...

Login

Register

Home | Standards | Photos | Reporting Service | Explore by

What is EPPO Global Database?

EPPO Global Database is maintained by the Secretariat of the European and Mediterranean Plant Protection Organization (EPPO). This database is still under development but its ultimate goal is to include all pest-specific information that has been produced or collected by EPPO.

Current contents:

- **basic information for more than 72 000 species** of interest to agriculture, forestry and plant protection: plants (cultivated and wild) and pests (including pathogens). For each species: scientific names, common names in different languages, taxonomic position, and EPPO codes are given.
- **detailed information for more than 1600 pest species** that are of regulatory interest (EPPO and EU listed pests, as well as pests regulated in other parts of the world). For each pest: geographical distribution (with a world map), host plants and categorization (quarantine status) are given. A large part of the functionalities of PQR (EPPO database on quarantine pests) has already been transferred to EPPO Global Database.
- **EPPO datasheets**
- **EPPO Standards**
- **more than 3000 pictures of pests** (including invasive alien plants).
- **articles of the EPPO Reporting Service** (since 1992).

It is planned to include more information: dynamic EPPO datasheets, more articles from the EPPO Reporting Service and other documents (e.g. PRA reports).

How to cite EPPO Global Database?

EPPO (2016) EPPO Global Database (available online). https://gd.eppo.int

How to request new EPPO codes?

Read the guidelines

Latest news

EPPO Reporting Service no. 2 is available.

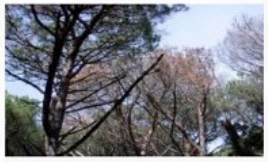
New world distributions are available for:
- Aleurotrachelus trachoides
- Bactrocera latifrons
- Contarina pseudotsugae
- Prodiplosis longifila

New pictures have been added for:
- Ambrosia confertiflora
- Anthrenus sp.
- Apriona germari
- Cyperus esculentus
- Heracleum mantegazzianum
- Nicandra physalodes
- Solanum carolinense
- Sorghum halepense
- Xylella fastidiosa

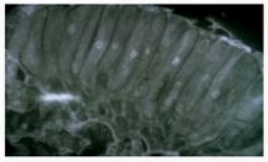
The EPPO Secretariat warmly thanks all photographers who have kindly provided their photos. More pictures of plants, pests and diseases are always welcome!

Ophiognomonia clavigignenti-juglandacearum
(SIROCJ)
view more...

Solidago canadensis
(SOOCA)
view more...



Heterobasidion irregulare
(HETEIR)
view more...



Melampsora farlowii
(MELMFA)
view more...

Home
About EPPO
Meetings
Plant quarantine
Plant Protection Products
Standards
Databases
Publications
Worldwide activities

EPPO activities on plant quarantine

One of the aims of EPPO is to help its member countries to prevent entry or spread of dangerous pests (plant quarantine). The Organization has therefore been given the task of identifying pests which may present a risk, and of making proposals on the phytosanitary measures which can be taken. In recent years, the identification of risk has been formalized, because transparent justifications of phytosanitary measures are required and phytosanitary measures have to be commensurate with the risk. Several EPPO Standards on Pest Risk Analysis (PRA) are now available. To perform these activities, much information on pests presenting a risk to the EPPO region is required and has been collected by the Organization. Most of it **(data sheets, maps, diagnostic protocols and pictures)** can be retrieved here.

EPPO Pest Lists with pest-specific information

You can read here an **introduction to the EPPO Pest Lists**

EPPO A1 and A2 Lists of pests recommended for regulation as quarantine pests as approved by EPPO Council in September 2008 (A1/A2 Lists pdf version)

- **A1 List**
- **A2 List**

EPPO Alert List: pests possibly presenting a risk to EPPO member countries (early warning)

EPPO Action List of A1 and A2 pests recommended for regulation, but not yet included in EPPO member countries' phytosanitary regulations

Priority list of invasive alien plants to be managed in EPPO member countries

Other documented pests

DEFINITIONS

A1 pest (for an area)	A quarantine pest not present in that area
A2 pest (for an area)	A quarantine pest present in that area but not widely distributed there and being officially controlled
Quarantine pest	A pest of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled
Regional Plant Protection Organization	An intergovernmental organization with the functions laid down by Article VIII of the IPPC

Monochamus obtusus	"	map	-	-
Monochamus saltuarius	"	map	-	-
Monochamus scutellatus	"	map	-	pict
Monochamus titillator	"	map	-	-
		map		-
Myndus crudus (putative vector of palm lethal yellowing phytoplasma)	ds	map	-	pict
Naupactus leucoloma	ds	map	-	-
Nemorimyza (Amauromyza) maculosa	ds	map	-	-
Oligonychus perditus	ds	map	-	pict
Orgyia pseudotsugata	ds	map	-	pict
Pheletes (Limonius) californicus	ds	map		
Pissodes nemorensis	ds	map	-	-
Pissodes strobi	ds	map	-	-
Pissodes terminalis	ds	map	-	pict
Premnotrypes latithorax	ds	map	-	-
Premnotrypes suturicallus	"	map	-	pict
Premnotrypes vorax	"	map	-	-
Pseudopityophthorus minutissimus and P. pruinosus (as putative vectors of Ceratocystis fagacearum)	ds	map	-	-
		map	-	-
Rhagoletis fausta	ds	map	-	-
Rhagoletis indifferens	ds	map	-	-
Rhagoletis mendax	ds	map	-	-
Rhagoletis pomonella	ds	map	-	pict
Rhizoecus hibisci	ds	map	diag	-
Rhynchophorus palmarum	ds	map	-	-
Scaphoideus luteolus (vector of Elm phloem necrosis phytoplasma)	ds	map	-	-
Scirtothrips aurantii	ds	map	diag	pict
Scirtothrips citri	ds	map	diag	pict
Spodoptera eridania	ds	map	-	pict
Spodoptera frugiperda	ds	map	-	pict
Spodoptera litura	ds	map	-	pict
Sternochetus mangiferae	ds	map	-	pict
Thrips palmi	ds	map	diag+fig	pict
Trioza erytreae (vector of Liberobacter spp.)	ds	map	diag	pict
Tuta absoluta	ds	map	-	pict
Unaspis citri	ds	map	diag	pict

Scopo

Informazioni

Inserimento organismi

Rischio potenziale

Introduction to the EPPO Alert List

Purpose

The main purpose of the Alert List is to draw the attention of EPPO member countries to certain pests possibly presenting a risk to them and achieve early warning. It can also be used by EPPO to select candidates which may be submitted to a Pest Risk Analysis (PRA). In itself, the EPPO Alert List is not a quarantine list, and does not constitute a recommendation for phytosanitary regulations.

Inclusion of pests

The pests are selected by the EPPO Secretariat, mainly from the literature but also from suggestions of NPPOs of member countries. Their addition to the list is marked by an article in the EPPO Reporting Service. All pests on the Alert List are selected because they may present a phytosanitary risk for the EPPO region. The reasons for considering inclusion to the Alert List can be of various nature: e.g. pests which are new to science, new outbreaks recorded in the EPPO region or in other parts of the world, reports of rapid spread.

Information

Short paragraphs are included for each pest to explain why it was selected, to summarize its geographical distribution, main host plants, damage, pathways and to assess possible risks in the EPPO region. A list of sources from which information has been compiled is included and whenever possible, pictures are provided. The collected information is also transferred into the EPPO databases (PQR and EPPO Global Database).

Possible risks

It must be stressed that the section 'possible risks' is not the result of a PRA according to the EPPO Standards (PM 5) but is a preliminary attempt by the EPPO Secretariat to identify the main elements of risk. Some of the pests may later be selected by relevant EPPO Panels and submitted to a PRA. As a result, they may be added to the EPPO A1 and A2 Lists (lists of pests recommended for regulation as quarantine pests) or, if the PRA shows the risk to be low, removed from the Alert List.

Maintenance

- To achieve early warning, the EPPO Secretariat makes additions to the Alert List as soon as new potential phytosanitary problems are identified.
- The EPPO Secretariat, as appropriate, search for additional information on the pests of the Alert List and update the text accordingly.
- Since the Alert List resides on the EPPO website, constantly updated information can be provided. EPPO member countries can also interact and provide new data to be added.
- The Alert List, including the text on each pest, is reviewed critically every year by the Panel on Phytosanitary Measures and by the Panel on Quarantine Pests for Forestry. This 'consolidated' version is also addressed to the Working Party on Phytosanitary Regulations for information.
- To keep the Alert List reasonably short, entries are not kept for more than 3 years, if no new information is found or if no particular action has been taken within the EPPO region.

EPPO Alert List

(last updated in 2016-02)

The main purpose of the Alert List is to draw the attention of EPPO member countries to certain pests possibly presenting a risk to them and achieve early warning. Pests are marked with an asterisk* in the table below when PRAs are planned or under development within EPPO. The entry date corresponds to the date when the pest was added to the Alert List.

Read a short introduction to the EPPO Alert List.

View information on previously listed organisms: as explained in the short introduction, after a certain period, if it appears that the risk is no so high and that no special phytosanitary action is needed, the pests are deleted from the Alert List. On the opposite, when the risk is considered sufficiently high, pests are transferred to the EPPO A1/A2 Lists of pests recommended for regulation as quarantine pests.

Pest Names	Main host plants or habitats	PRA	Entry date
Insects and mites			
Agrilus auroguttatus (Coleoptera: Buprestidae)	*Quercus* spp.		2013-03
Aleurotrachelus trachoides (Hemiptera: Aleyrodidae)	Polyphagous	*	2015-11
Bactrocera latifrons (Diptera: Tephritidae)	Fruits (Solanaceae, Cucurbitaceae)	*	2015-10
Ceratothripoides brunneus NEW	Solanaceae and other plant families		2016-02
Ceratothripoides claratris NEW	*Solanum lycopersicum* and other Solanaceae		2016-02
Contarinia pseudotsugae (Diptera: Cecidomyiidae)	*Pseudotsuga menziesii*		2016-01
Lycorma delicatula (Hemiptera: Fulgoridae)	Woody plants (including grapevine)	*	2015-02
Massicus raddei (Coleoptera: Cerambycidae)	*Quercus* spp., *Castanea* spp.		2015-03
Megacopta cribraria (Hemiptera: Plataspidae)	*Glycine max* (soybean) and other legumes		2014-10
Myiopardalis pardalina (Diptera: Tephritidae)	*Cucumis melo* and other cucurbits		2013-06
Pseudacysta perseae (Hemiptera: Tingidae)	*Persea americana* (avocado)		2015-01
Ophiomyia kwansonis (Diptera: Agromyzidae)	*Hemerocallis* spp.		2013-01
Prodiplosis longifila (Diptera: Cecidomyiidae)	Polyphagous	*	2015-11
Singhiella simplex (Hemiptera: Aleyrodidae)	*Ficus* spp.		2014-11
Strauzia longipennis (Diptera: Tephritidae)	*Helianthus annuus*		2011-02
Thrips setosus (Thysanoptera: Thripidae)	Polyphagous		2014-10
Xylosandrus crassiusculus (Coleoptera: Scolytidae)	Polyphagous (woody deciduous plants)		2009-03

EPPO Alert List

(last updated in 2017-02)

The main purpose of the Alert List is to draw the attention of EPPO member countries to certain pests possibly presenting a risk to them and achieve early warning. Pests are marked with an asterisk* in the table below when a Pest Risk Analysis (PRA) is planned or under development within EPPO. The entry date corresponds to the date when the pest was added to the Alert List.

Read a short introduction to the EPPO Alert List.

View information on previously listed pests: in order to keep the Alert List reasonably short, pests are included on the Alert List on a temporary basis. Pests may be submitted to a Pest Risk Analysis (PRA), and depending on the results of this PRA they may be transferred to the EPPO A1/A2 Lists of pests recommended for regulation as quarantine pests. For the other pests, after a certain period (usually 3 years), if the relevant Panels consider that sufficient alert has been given to the NPPOs, pests are removed from the Alert List.

WHAT'S NEW

- *Xylosandrus compactus* (2017-02)
- *Broussonetia papyrifera* (2016-10)
- *Curtobacterium flaccumfaciens* pv. *poinsettiae* (2017-01)

Pest Names	Main host plants or habitats	PRA	Entry date
Insects and mites			
Agrilus auroguttatus (Coleoptera: Buprestidae)	*Quercus* spp.		2013-03
Aleurothrixus trachoides (Hemiptera: Aleyrodidae)	Polyphagous	*	2015-11
Bactrocera latifrons (Diptera: Tephritidae)	Fruits (Solanaceae, Cucurbitaceae)	*	2015-10
Ceratothripoides brunneus (Thysanoptera: Thripidae)	Solanaceae and other plant families	*	2016-02
Ceratothripoides claratris (Thysanoptera: Thripidae)	*Solanum lycopersicum* and other Solanaceae	*	2016-02
Contarinia pseudotsugae (Diptera: Cecidomyiidae)	*Pseudotsuga menziesii*		2016-01
Massicus raddei (Coleoptera: Cerambycidae)	*Quercus* spp., *Castanea* spp.		2015-03
Megacopta cribraria (Hemiptera: Plataspidae)	*Glycine max* (soybean) and other legumes		2014-10
Myiopardalis pardalina (Diptera: Tephritidae)	*Cucumis melo* and other cucurbits		2013-06
Pseudacysta perseae (Hemiptera: Tingidae)	*Persea americana* (avocado)		2015-01
Prodiplosis longifila (Diptera: Cecidomyiidae)	Polyphagous	*	2015-11
Singhiella simplex (Hemiptera: Aleyrodidae)	*Ficus* spp.		2014-11
Strauzia longipennis (Diptera: Tephritidae)	*Helianthus annuus*		2011-02
Thrips setosus (Thysanoptera: Thripidae)	Polyphagous		2014-10
Xylosandrus compactus (Coleoptera: Scolytidae)	Polyphagous (woody plants)		2017-02
Xylosandrus crassiusculus (Coleoptera: Scolytidae)	Polyphagous (woody deciduous plants)		2009-03
Zaprionus indianus (Diptera: Drosophilidae)	Fig (*Ficus carica*) and other fruit crops		2016-11
Zaprionus tuberculatus (Diptera: Drosophilidae)	Polyphagous (fruit crops)		2016-1

Carpomya pardalina

Pest Names	Main host plants or habitats	PRA	Entry date
Insects and mites			
Agrilus auroguttatus (Coleoptera: Buprestidae)	*Quercus* spp.		2013-03
Aleurotrachelus trachoides (Hemiptera: Aleyrodidae)	Polyphagous	*	2015-11
Bactrocera latifrons (Diptera: Tephritidae)	Fruits (Solanaceae, Cucurbitaceae)	*	2015-10
Ceratothripoides brunneus NEW	Solanaceae and other plant families		2016-02
Ceratothripoides claratris NEW	*Solanum lycopersicum* and other Solanaceae		2016-02
Contarinia pseudotsugae (Diptera: Cecidomyiidae)	*Pseudotsuga menziesii*		2016-01
Lycorma delicatula (Hemiptera: Fulgoridae)	Woody plants (including grapevine)	*	2015-02
Massicus raddei (Coleoptera: Cerambycidae)	*Quercus* spp., *Castanea* spp.		2015-03
Megacopta cribraria (Hemiptera: Plataspidae)	*Glycine max* (soybean) and other legumes		2014-10
Myiopardalis pardalina (Diptera: Tephritidae)	*Cucumis melo* and other cucurbits		2013-06
Pseudacysta perseae (Hemiptera: Tingidae)	*Persea americana* (avocado)		2015-01
Ophiomyia kwansonis (Diptera: Agromyzidae)	*Hemerocallis* spp.		2013-01
Prodiplosis longifila (Diptera: Cecidomyiidae)	Polyphagous	*	2015-11
Singhiella simplex (Hemiptera: Aleyrodidae)	*Ficus* spp.		2014-11
Strauzia longipennis (Diptera: Tephritidae)	*Helianthus annuus*		2011-02
Thrips setosus (Thysanoptera: Thripidae)	Polyphagous		2014-10
Xylosandrus crassiusculus (Coleoptera: Scolytidae)	Polyphagous (woody deciduous plants)		2009-03

EPPO Alert List – last updated in 2019-02

Insects and mites

Name	Main host plants	PRA	Entry date
Agrilus bilineatus (Coleoptera: Buprestidae)	*Castanea* spp., *Quercus* spp.		2018-11
Agrilus fleischeri (Coleoptera: Buprestidae)	*Populus* spp.	*	2018-03
Contarinia pseudotsugae (Diptera: Cecidomyiidae)	*Pseudotsuga menziesii*		2016-01
Crisicoccus pini (Hemiptera: Coccidae) – **NEW**	*Pinus* spp.		2018-01
Fiorinia phantasma (Hemiptera; Diaspididae)	Polyphagous		2018-10
Gymnandrosoma aurantianum (Lepidoptera: Tortricidae)	Citrus and other fruit crops		2017-03
Myiopardalis pardalina (Diptera: Tephritidae)	*Cucumis melo* and other cucurbits		2013-06
Naupactus xanthographus (Coleoptera: Curculionidae)	Fruit trees	*	2018-02
Neodiprion abietis (Hymenoptera: Diprionidae)	*Abies, Picea* and *Pseudostuga*		2017-05
Strauzia longipennis (Diptera: Tephritidae)	*Helianthus annuus*		2011-02
Xylosandrus compactus (Coleoptera: Scolytidae)	Polyphagous (woody plants)	*	2017-02
Xylosandrus crassiusculus (Coleoptera: Scolytidae)	Polyphagous (woody deciduous plants)	*	2009-03
Xylotrechus chinensis (Coleoptera: Cerambycidae)	*Morus* spp. (mulberries)		2018-08
Zaprionus indianus (Diptera: Drosophilidae)	Fig (*Ficus carica*) and other fruit crops		2016-11
Zaprionus tuberculatus (Diptera: Drosophilidae)	Polyphagous (fruit crops)		2016-11

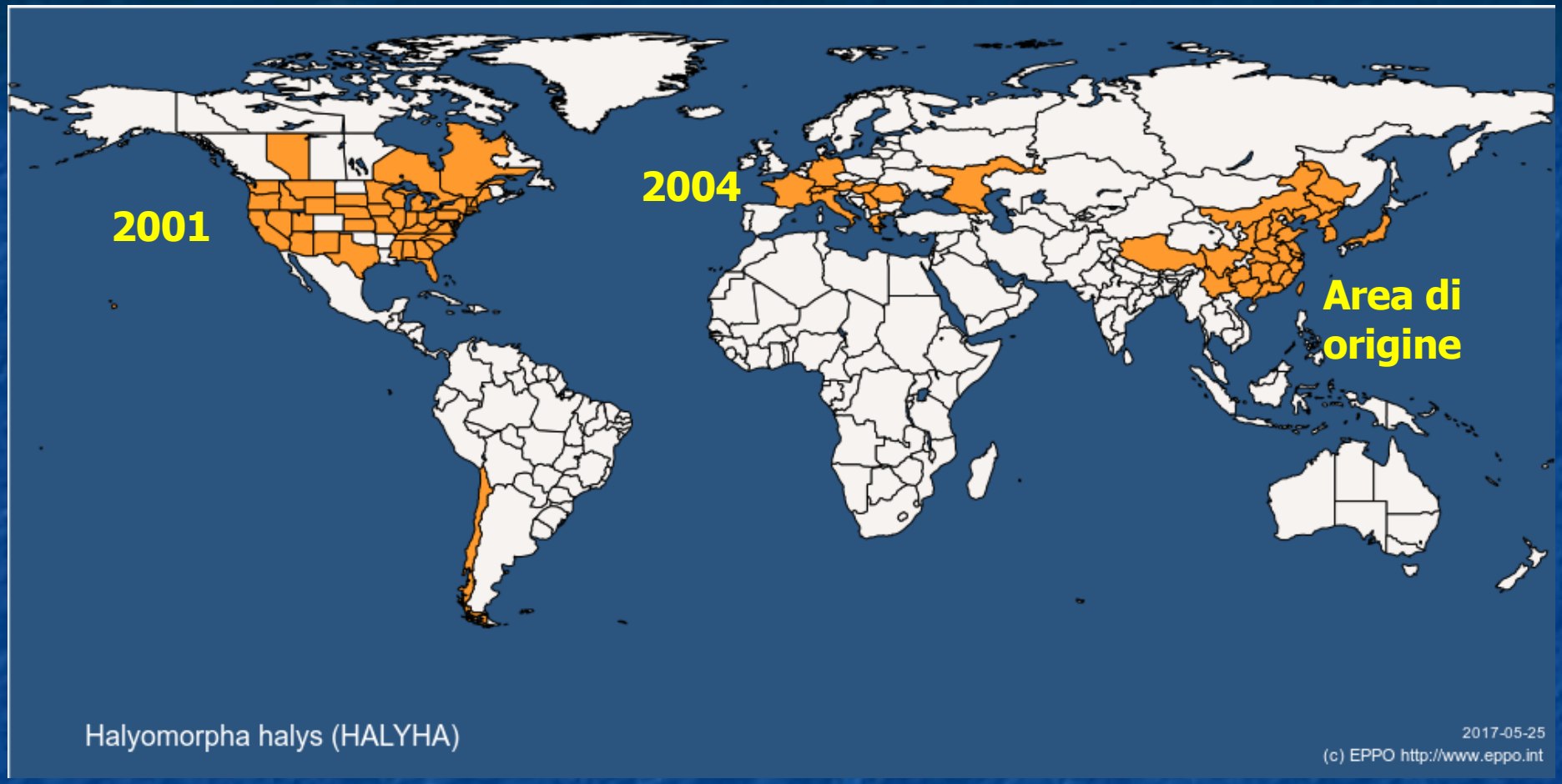
EPPO Alert List – last updated in 2019-11

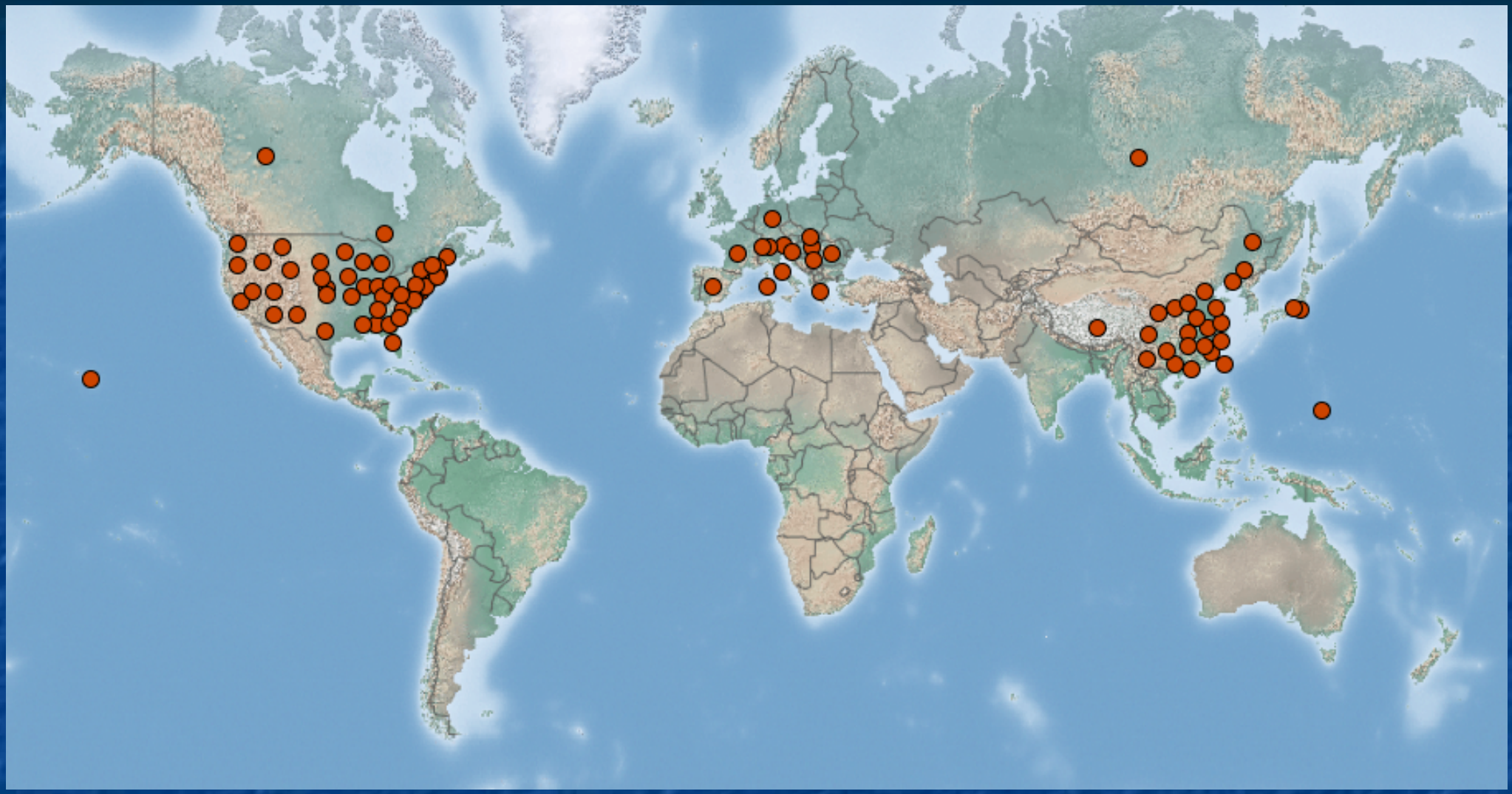
Insects and mites

Name	Main host plants	PRA	Entry date
Chrysobothris femorata (Coleoptera: Buprestidae)	Polyphagous (woody deciduous plants)		2019-10
Crisicoccus pini (Hemiptera: Coccidae)	*Pinus* spp.		2019-01
Dendroctonus valens (Coleoptera: Scolytidae)	*Pinus* spp.		2019-05
Elasmopalpus lignosellus (Lepidoptera: Pyralidae) – **NEW**	Polyphagous		2019-11
Fiorinia phantasma (Hemiptera; Diaspididae)	Polyphagous		2018-10
Gymnandrosoma aurantianum (Lepidoptera: Tortricidae)	Citrus and other fruit crops		2017-03
Myiopardalis pardalina (Diptera: Tephritidae)	*Cucumis melo* and other cucurbits		2013-06
Naupactus xanthographus (Coleoptera: Curculionidae)	Fruit trees	*	2018-02
Neodiprion abietis (Hymenoptera: Diprionidae)	*Abies, Picea* and *Pseudostuga*		2017-05
Saperda tridentata (Coleoptera: Cerambycidae)	*Ulmus* spp.		2019-06
Tetranychus mexicanus (Acari: Tetranychidae)	Polyphagous		2019-09
Xylosandrus compactus (Coleoptera: Scolytidae)	Polyphagous (woody plants)	*	2017-02
Xylosandrus crassiusculus (Coleoptera: Scolytidae)	Polyphagous (woody deciduous plants)	*	2009-03
Xylotrechus chinensis (Coleoptera: Cerambycidae)	*Morus* spp. (mulberries)		2018-08
Zaprionus indianus (Diptera: Drosophilidae)	Fig (*Ficus carica*) and other fruit crops		2016-11
Zaprionus tuberculatus (Diptera: Drosophilidae)	Polyphagous (fruit crops)		2016-11

Halyomorpha halys (Heteroptera: Pentatomidae)
chinche apestosa, brown marmorated stink bug
(**BMSB**)

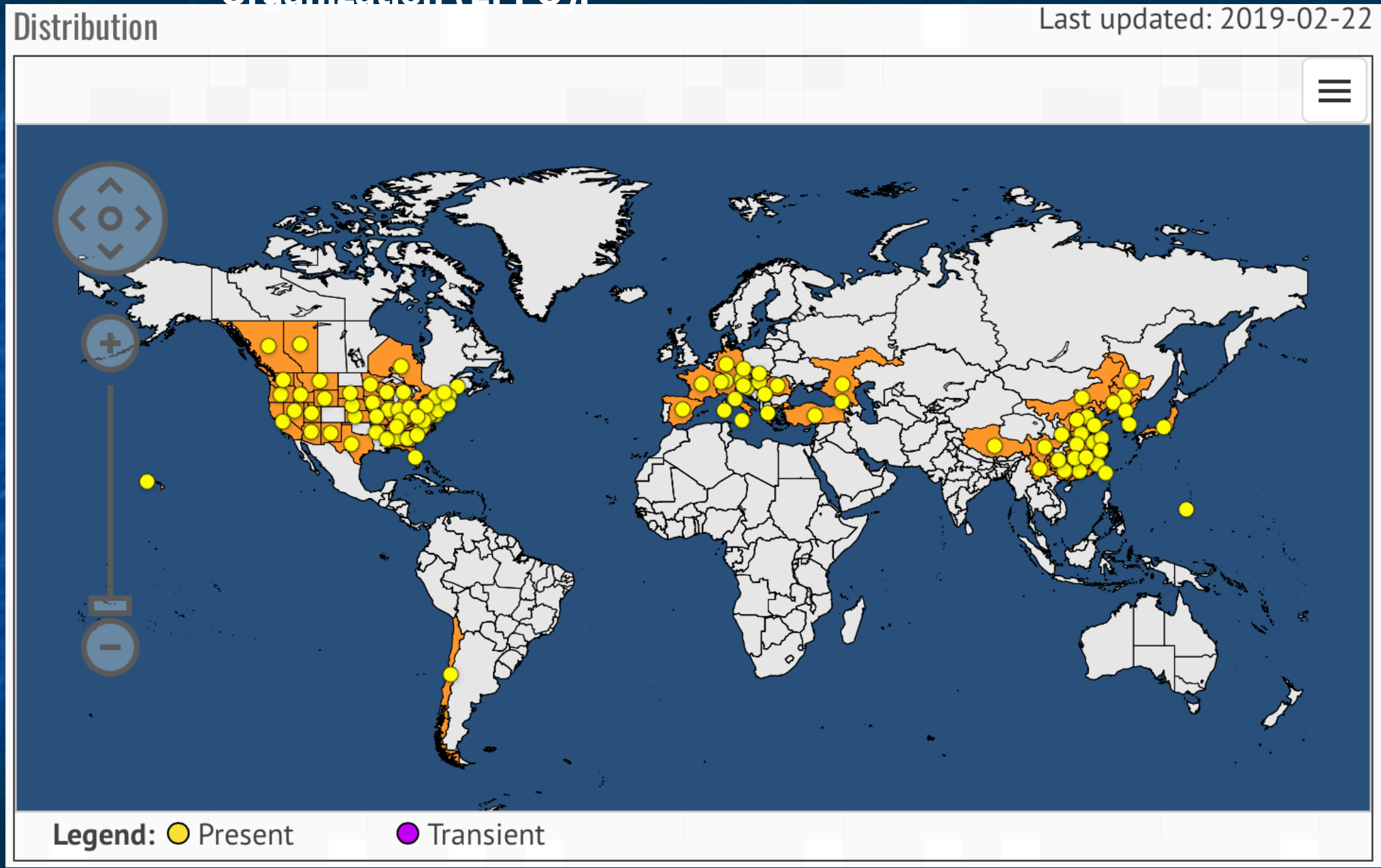
Stefano Speranza


2001
2004
Area di origine
Halyomorpha halys (HALYHA)
2017-05-25
(c) EPPO http://www.eppo.int



CABI 2019

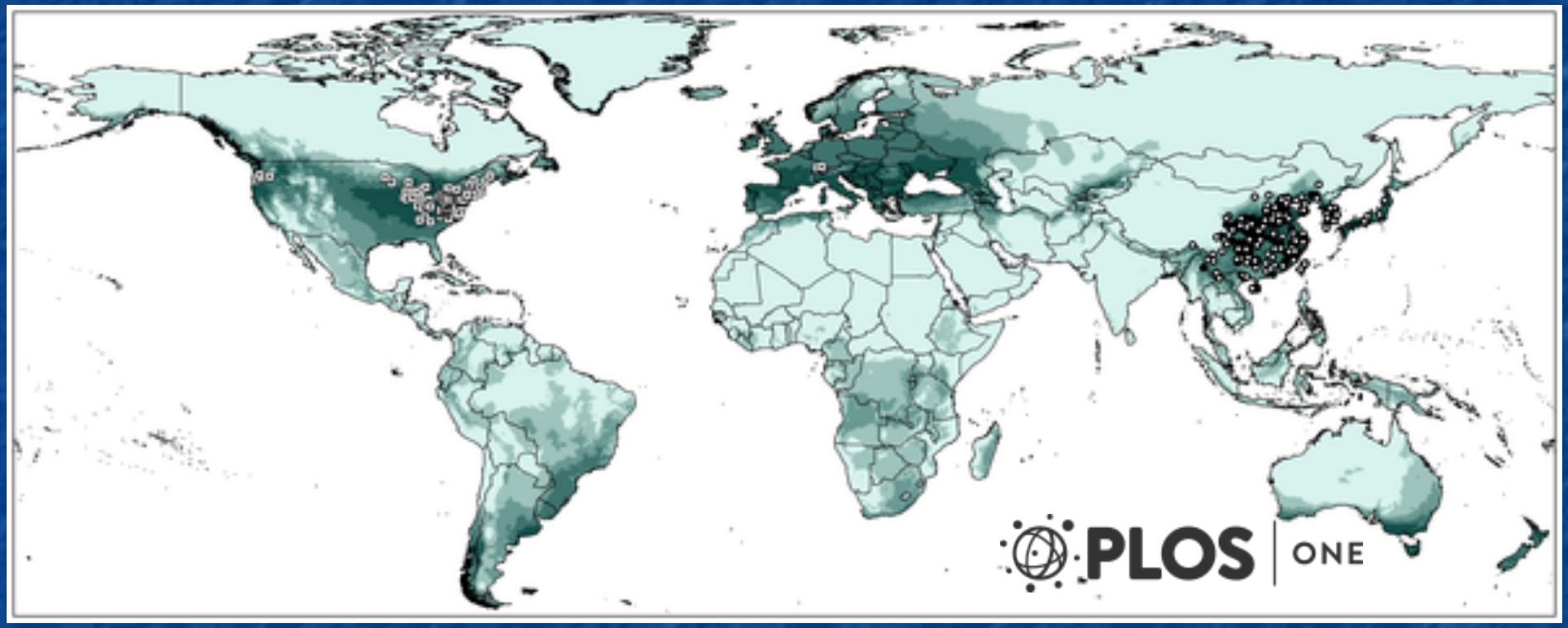
European and Mediterranean Plant Protection Organization (EPPO).



https://gd.eppo.int/taxon/HALYHA/distributio

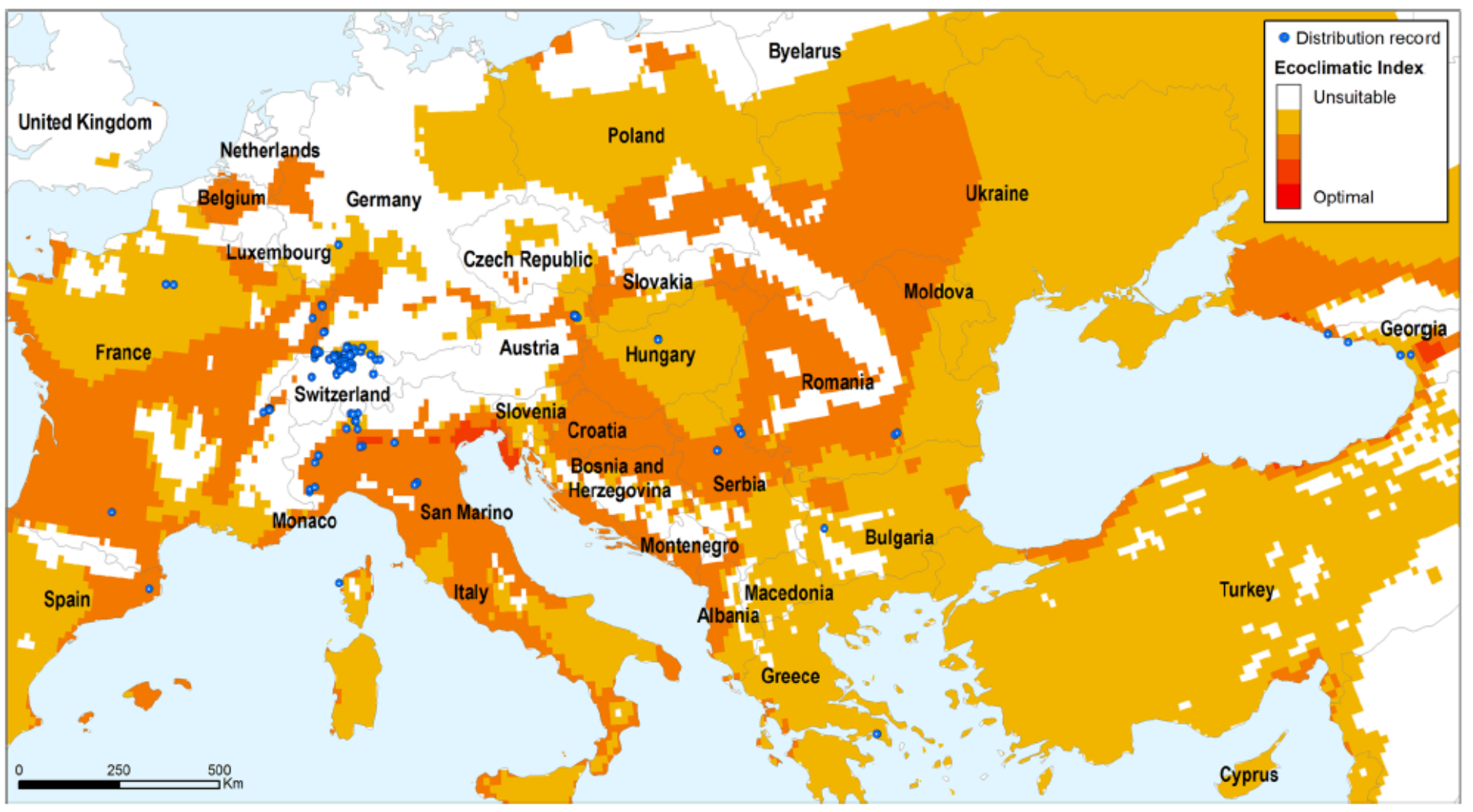
2012

Niche model based on reduced native records and transferred worldwide using Maxent.

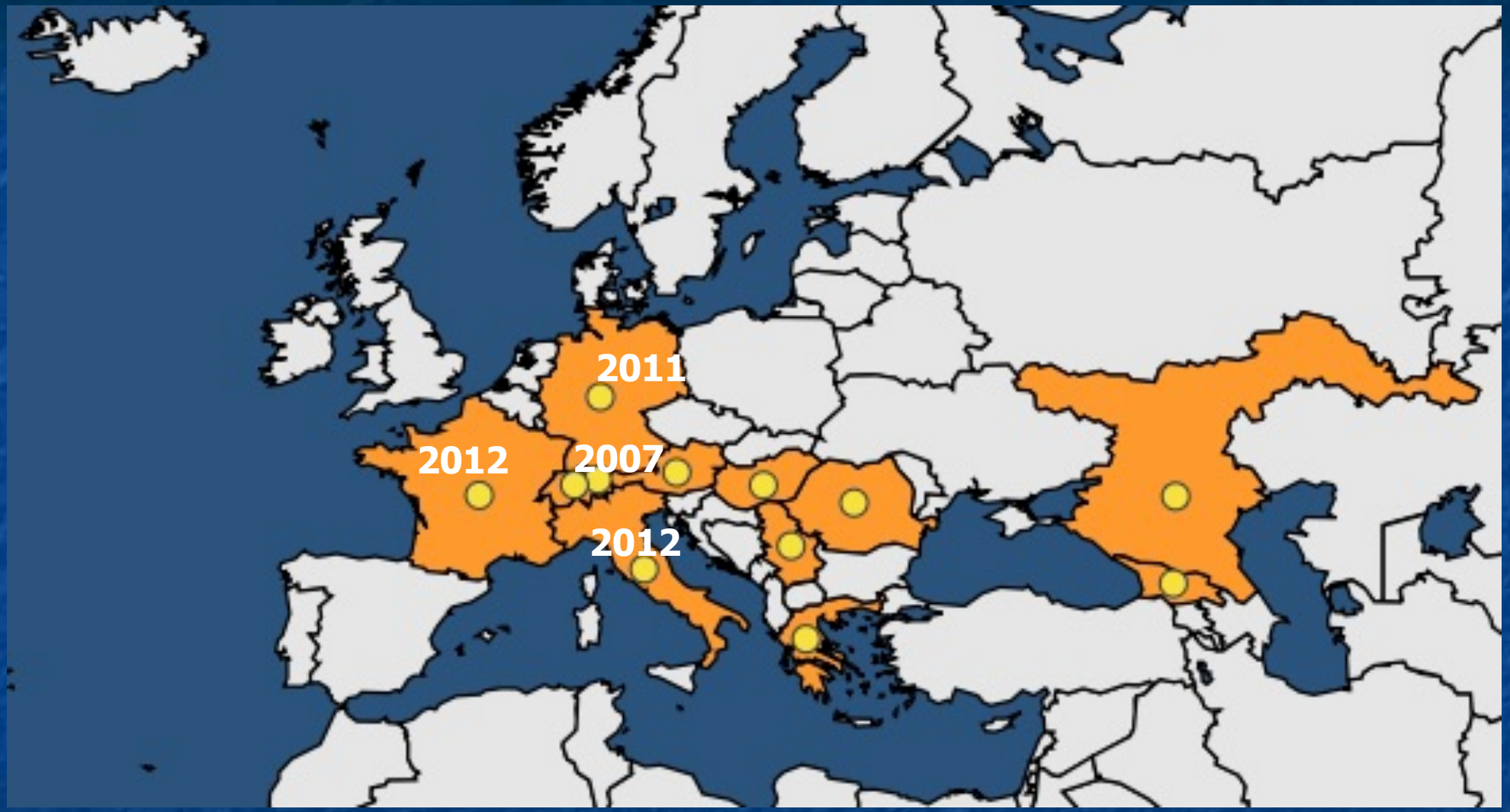


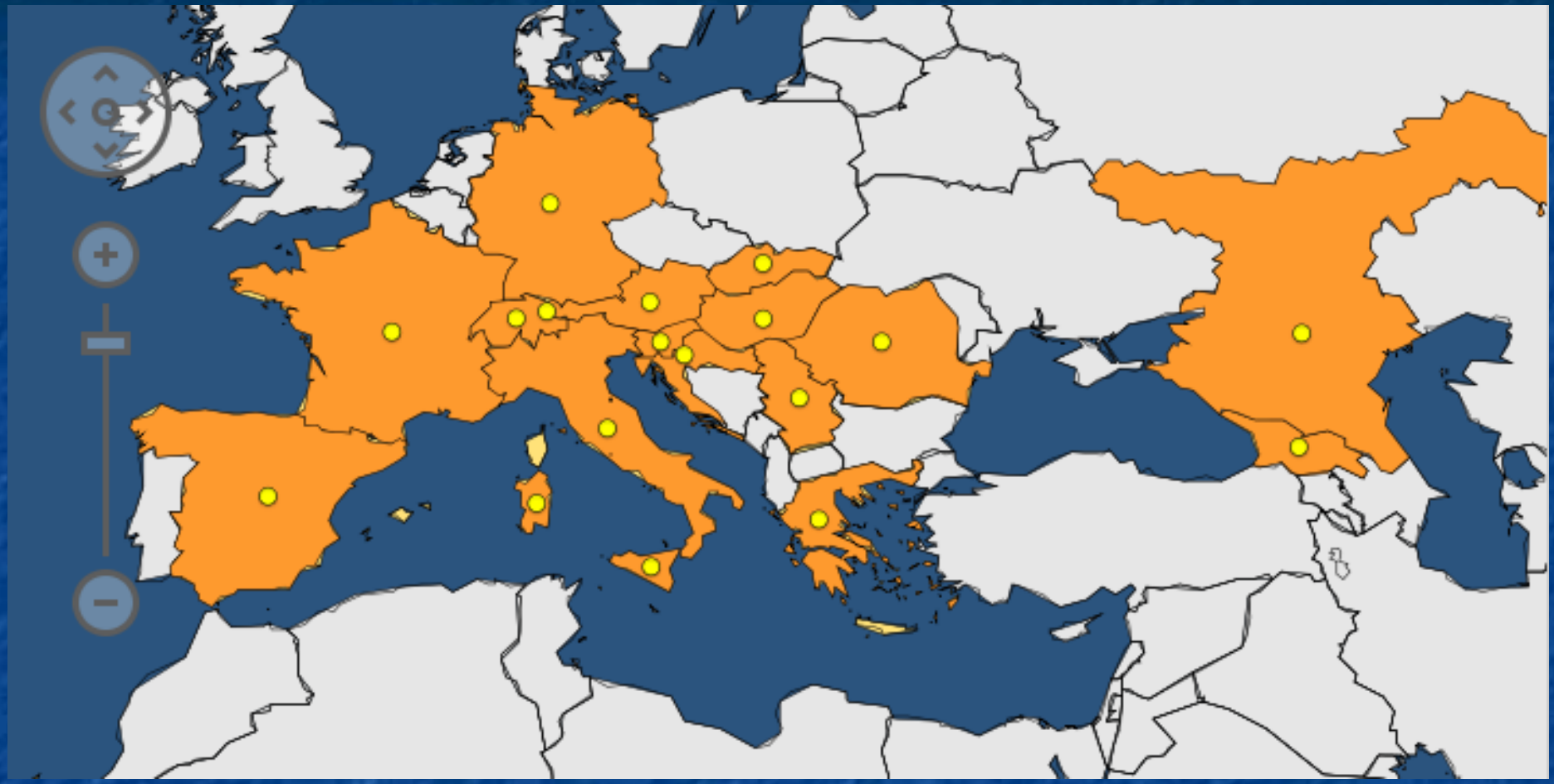
Zhu G, Bu W, Gao Y, Liu G (2012) Potential Geographic Distribution of Brown Marmorated Stink Bug Invasion (Halyomorpha halys). PLOS ONE 7(2): e31246. https://doi.org/10.1371/journal.pone.0031246
http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0031246

2017

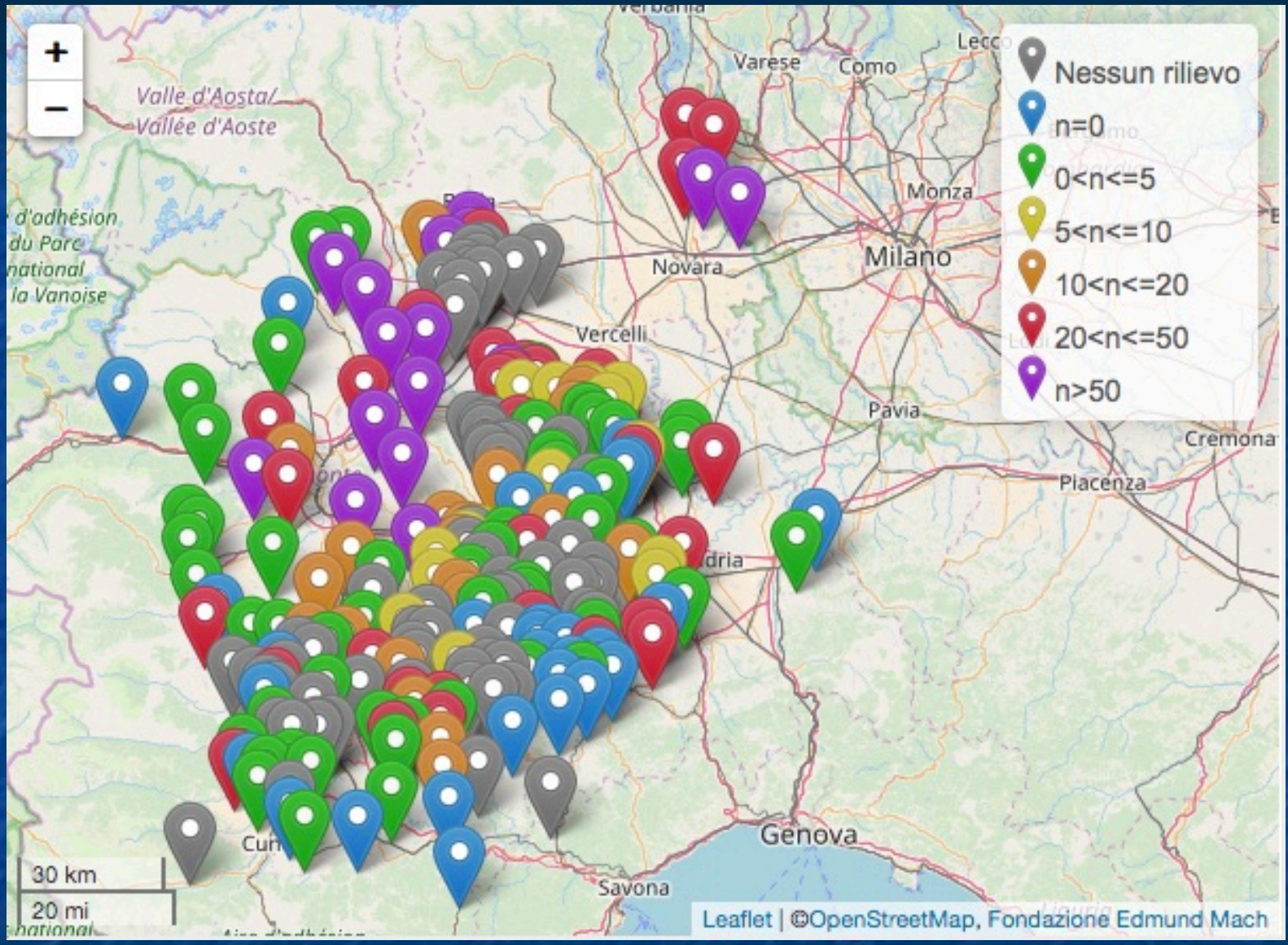


Kriticos et al., 2017. The potential global distribution of the brown marmorated stink bug, *Halyomorpha halys*, a critical threat to plant biosecurity. J. Pest Sci. 90(4): 1033 – 1043.


2011
2012
2007
2012



EPPO. Last updated: 2018-06-19


Nessun rilievo
n=0
0<n<=5
5<n<=10
10<n<=20
20<n<=50
n>50
Varese
Como
Monza
Milano
Novara
Vercelli
Pavia
Cremona
Piacenza
Genova
Savona
Valle d'Aosta/
Vallée d'Aoste
30 km
20 mi
Leaflet | ©OpenStreetMap, Fondazione Edmund Mach

AGRION

Ospiti				
Gelso	Pomaceae	Drupaceae	Pomodoro	Melanzana
Peperone	Mais	Soia	Girasole	Frutti di bosco
Noce	Fico	Vite	Nocciolo	Castagno
Cachi	Fagioli	Cucurbitaceae	Luppolo	Frumento
Acero	Olmo	Rosa	Piracanta	Paulonia
Catalpa	Pecan	Goji	Ailanto	Olivo
.....				

Cibo preferito: frutti e semi

Danni:

- ✓ sviluppo stentato delle piante
- ✓cascola precoce dei frutti
- ✓deformazioni e colorazioni anomale dei frutti
- ✓Potenziale vettore di patologie vegetali

Criticità nella gestione del problema:

- ➢ non sono noti sul territorio antagonisti naturali
- ➢ potenziale riproduttivo è notevole
- ➢Estrema polifagia
- ➢Estremamente mobili (gli adulti oltre 1 km giorno)
- ➢Rischio trasporto passivo in fase autunnale









Foto di Matteo Chialva - Pinerolo

Foto di Enzo Gillio Tos - Bollengo

http://www.antoninodemaria.it/news/cimice-asiatica.html#gallery5a517bbfeb-4

https://www.youwinemagazine.it/2017/03/scienza-del-vino-vitivinicoltura-la.html

BMSB on hazelnut in Georgia (courtesy of Dott. Ivan Palomba)

Biologia de BMSB

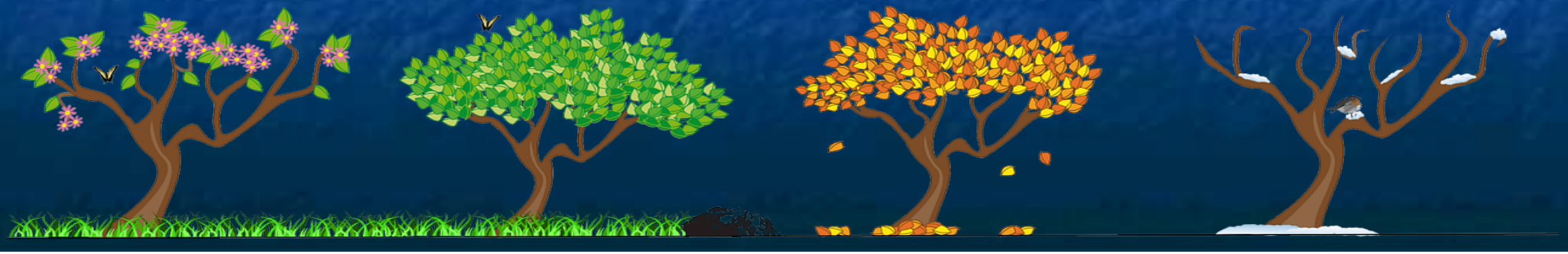
Ovoposición

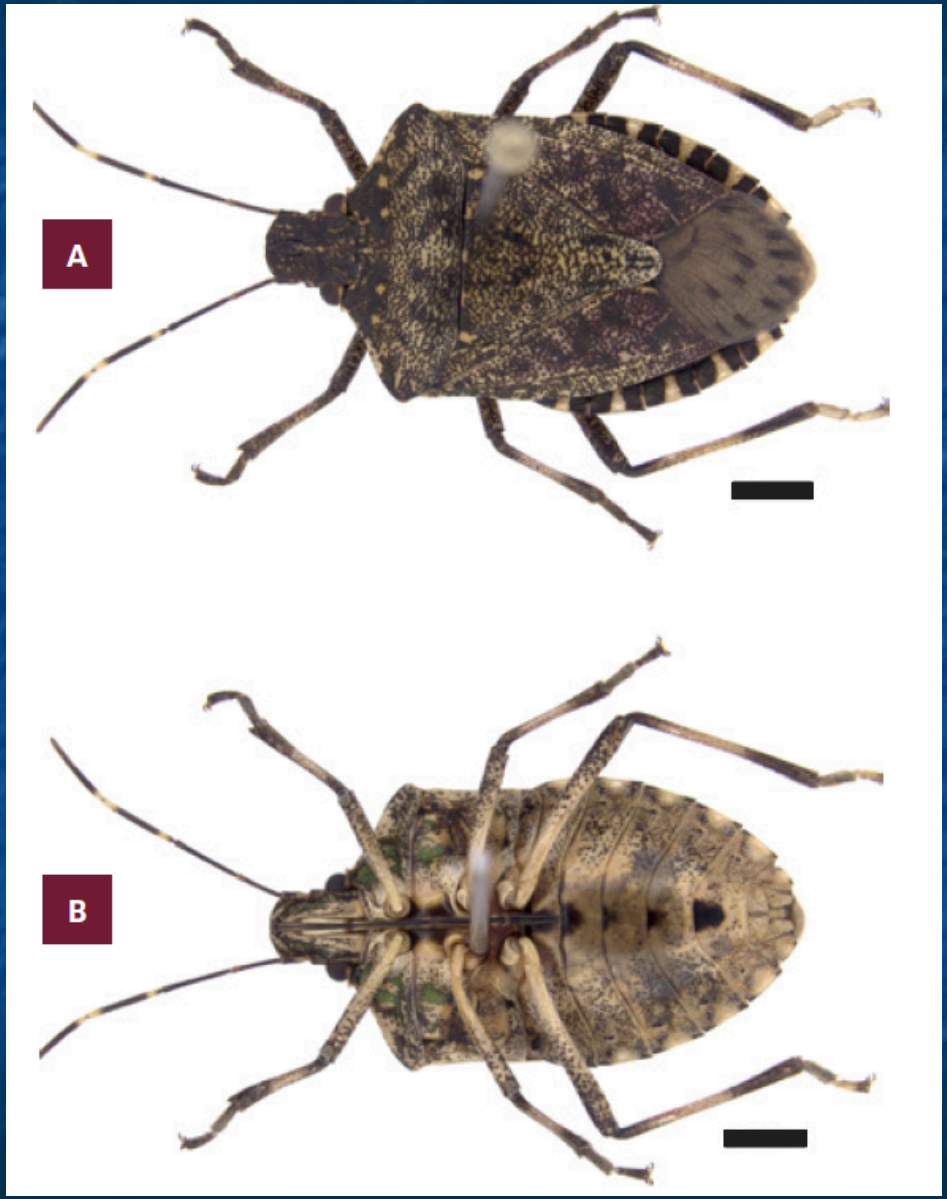
Adulto y jóvenes en fase de nutrición

Adulto en fase de nutrición

X 2-3 ?

Adulto en fase de agregación



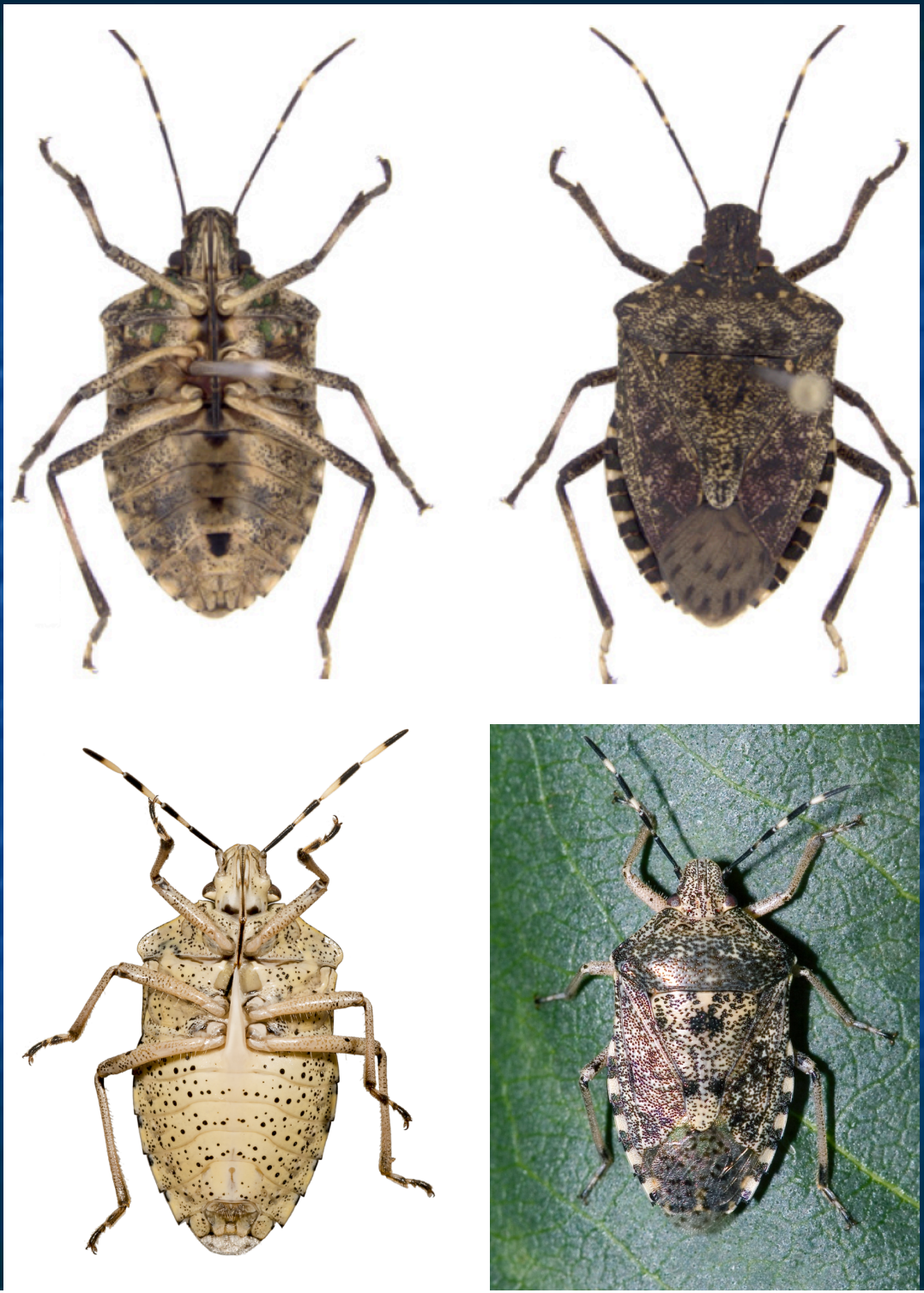


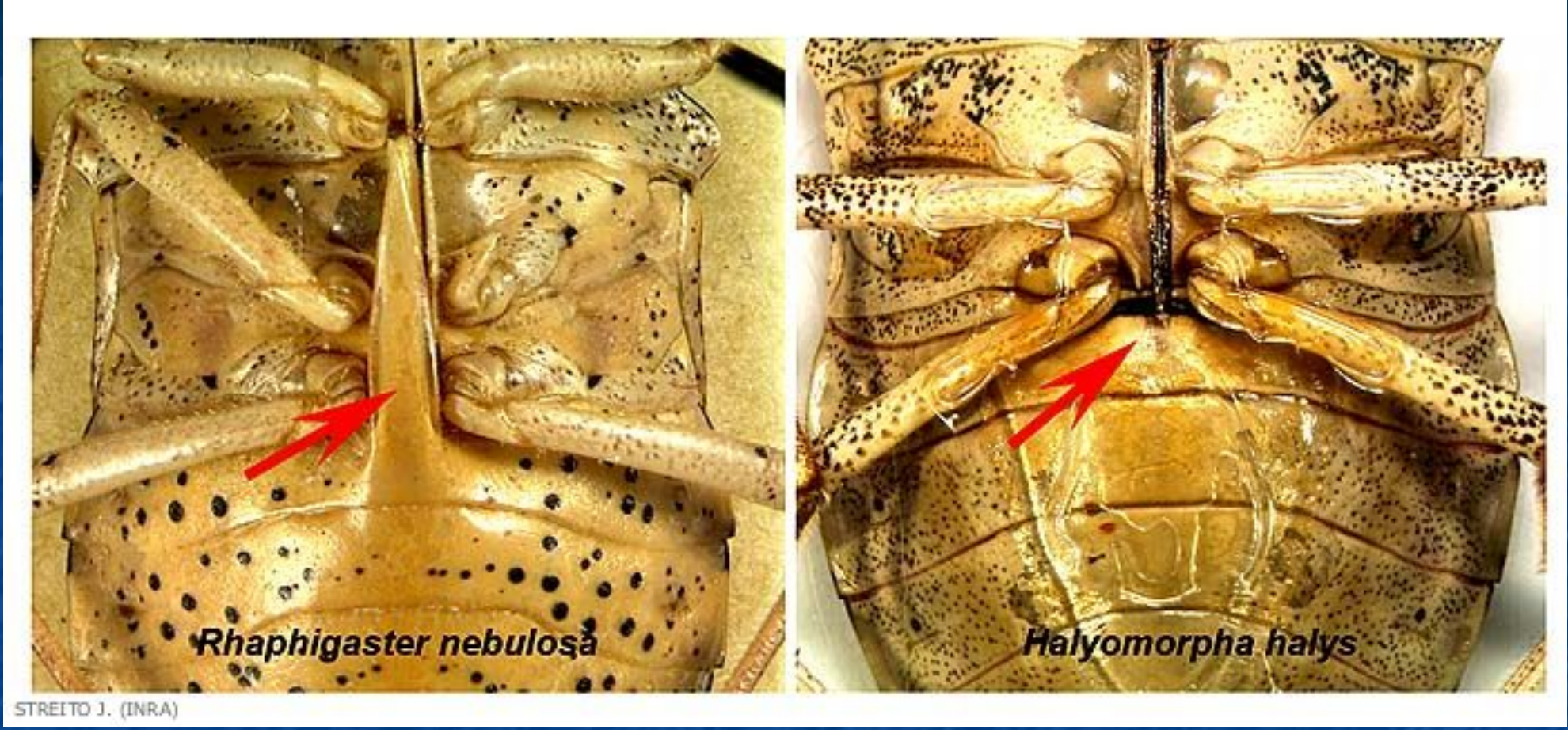
Capo: generalmente rettangolare

Antenne: 5 segmenti con DUE bande bianche

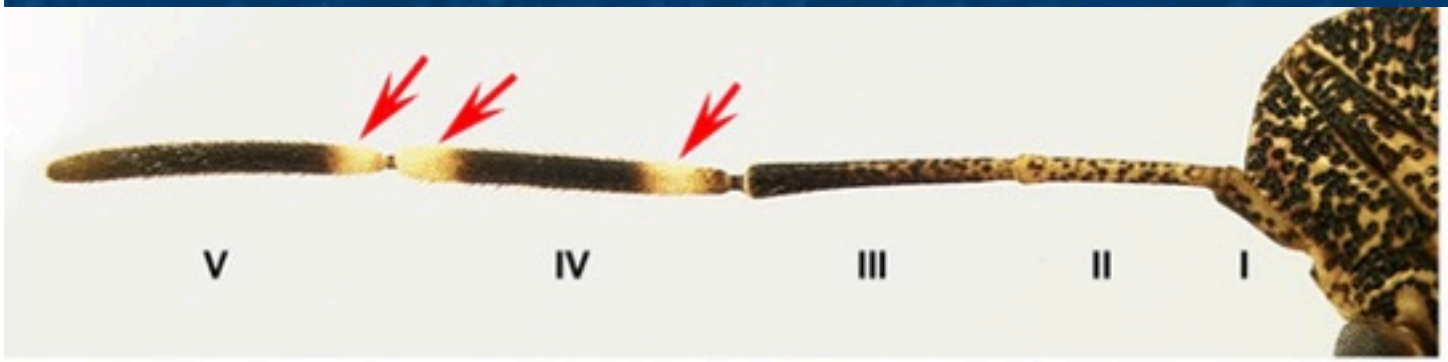
Occhi rossicci

Rostro: raggiunge il terzo sternite addominale





J. Streito (INRA)



Halyomorpha halys

Rhaphigaster nebulosa

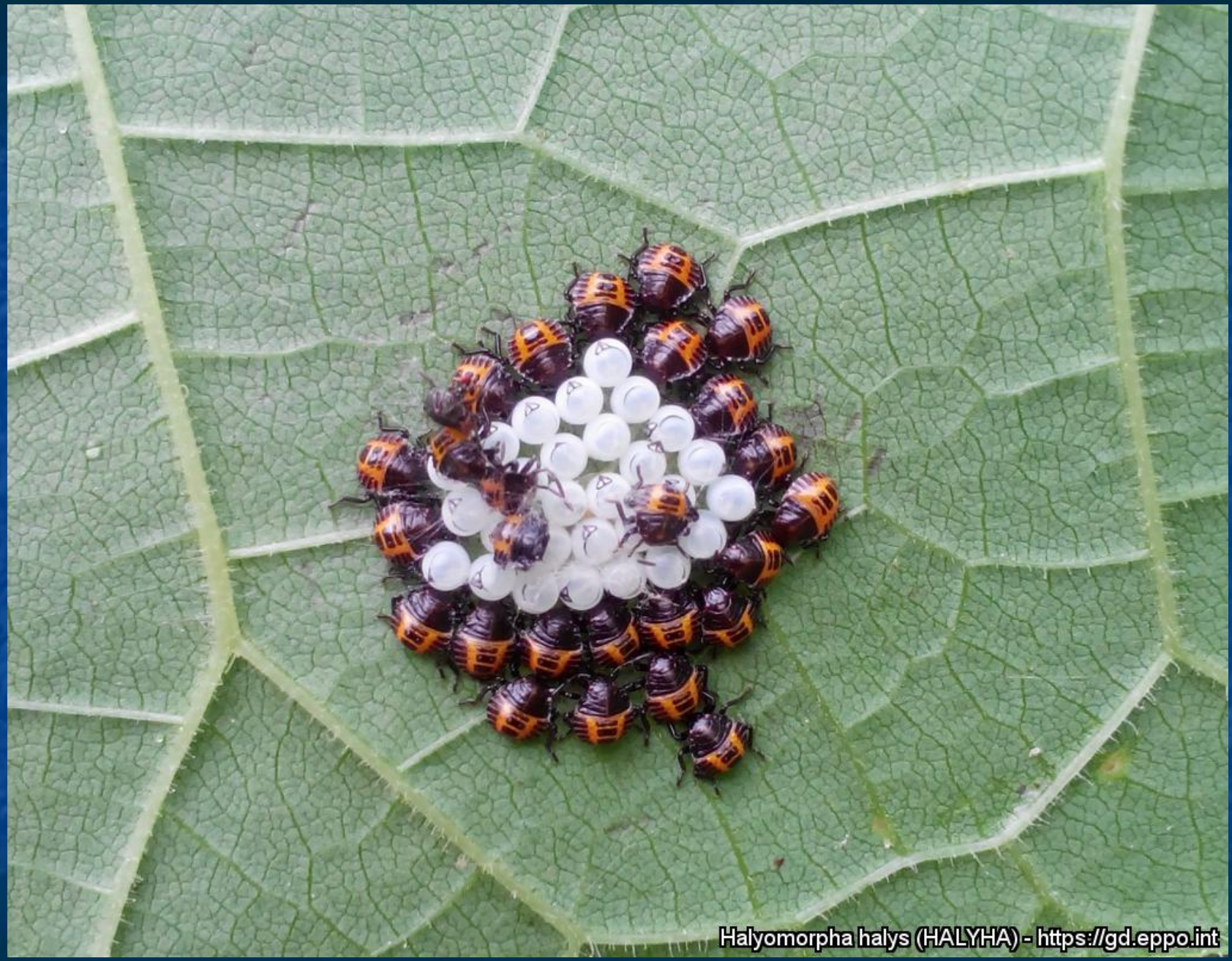
Maurel et al., Carnets natures, 2016, 3:21-25.

IASMA notizie, 3, 2016.

Preimmaginal stages
5

Male

Female


Halyomorpha halys (HALYHA) - https://gd.eppo.int

Fase di aggregazione

Fase di aggregazione

BMSB on hazelnut in Georgia (courtesy of Dott. Ivan Palomba)

BMSB on hazelnut in Georgia (courtesy of Dott. Ivan Palomba)

Fase de agregación

Foto di Tracy Leskey, 2014

Parasitoides encontrados en Italia

Anastatus bifasciatus (Hymenoptera, Eupelmidae)

\+ *Trissolcus* sp.

Tavella et al., Convegno Bologna 14 febbraio 2017

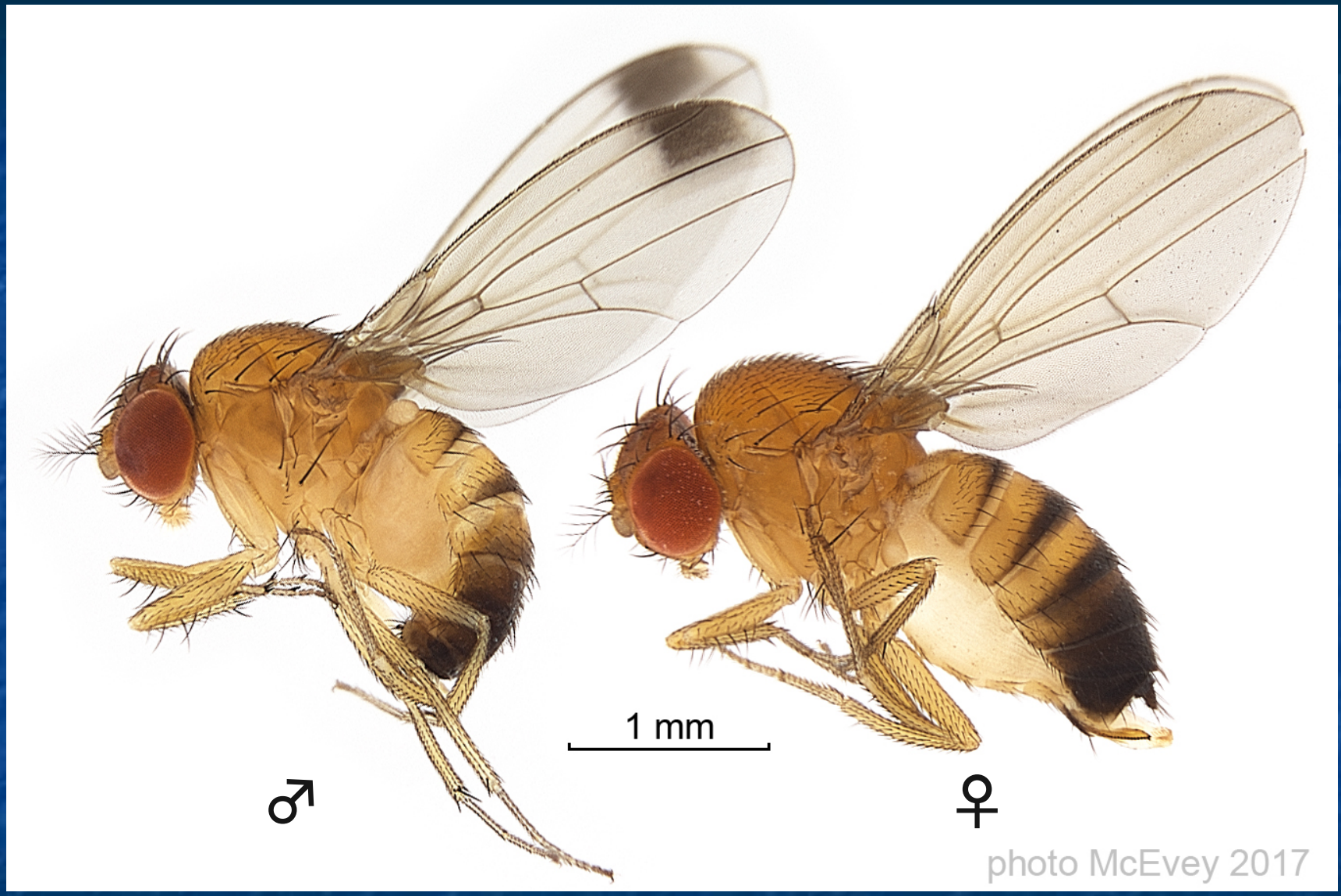
Acciones clave:

Monitoraggio!

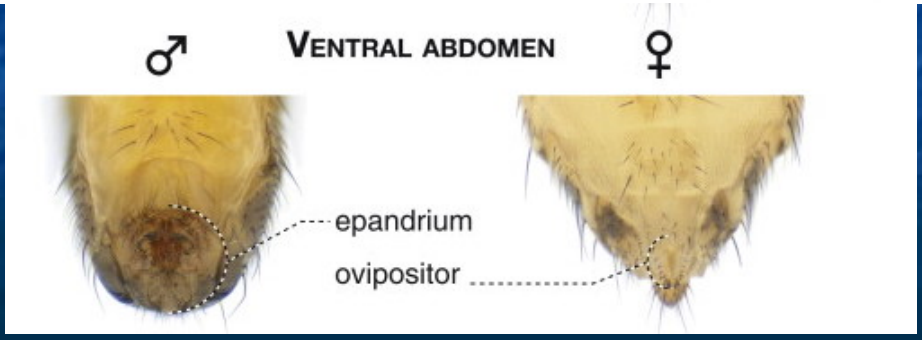
- Dal bordo del frutteto
- Con tramppole a feromone (MTD+Murgantiolo)
- Insetti attratti in un raggio di 6 metri dalla trappola
- diferentes atractivos de las especies vegetales (Ailanthus, Arce, Avellana, Cornus sanguinea, Viburnum, Mirabolano, Ligustro, etc.).
- Teniendo en cuenta la posición predominante (de abril a septiembre prefieren residir en setos y en el borde de la huerta).
- Investigación de estrategias de control con bajo impacto ambiental

Drosophila suzukii (Diptera: Drosophilidae)

List A2 EPPO


1 mm
♂
♀
photo McEvey 2017

Drosophila melanogaster



https://www.sciencedirect.com/topics/neuroscience/drosophila-melanogaster

EPPO

DEFINITIONS

A1 pest (for an area)	A quarantine pest not present in that area
A2 pest (for an area)	A quarantine pest present in that area but not widely distributed there and being officially controlled
Quarantine pest	A pest of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled
Regional Plant Protection Organization	An intergovernmental organization with the functions laid down by Article VIII of the IPPC

EPPO region: France (first records in 2010 - Aquitaine, Corse, Languedoc-Roussillon, Midi-Pyrénées, Provence-Alpes-Côte d'Azur, and Rhône-Alpes), Italy (first records in 2009 - Campania, Liguria, Trentino-Alto Adige, Piemonte, Toscana), Russia (Far East), Slovenia (first records in autumn 2010), Spain (near Barcelona), Switzerland (first record in 2011, in Grisons and Ticino cantons).
Asia: China (Guangxi, Guizhou, Henan, Hubei, Yunnan, Zhejiang), India (Chandigarh, Jammu and Kashmir, Uttar Pradesh), Japan (Hokkaido, Honshu, Kyushu, Ryukyu), Korea Democratic People's Republic, Korea Republic (including Cheju island), Myanmar, Pakistan, Russia (Primor'e region - Far East), Taiwan, Thailand.
North America: Canada (British Columbia, first found in autumn 2009 in the Fraser Valley area and caught in a cherry orchard in the Central Okanagan Valley), USA (Hawaii introduced into the 1980s; California (2008), Florida (2009), Louisiana (2010), Michigan (2011), North Carolina (2010), Oregon (2009), South Carolina (2010), Utah (2010), Washington (2009), Wisconsin (2011)).

- Fino a 15 generazioni per anno
- Ciclo molto corto (10 gg)
- Sverna come adulto in ripari
- Il volo è stato rilevato anche a circa 10 ° C

Ospiti vegetali:
- Actinidia
- Ciliegio
- Prunus spp.
- Lamponi e tutti i piccoli frutti
- Fragola
- Cachi
- Fico
- Vite
- Melo
- Pero nashi

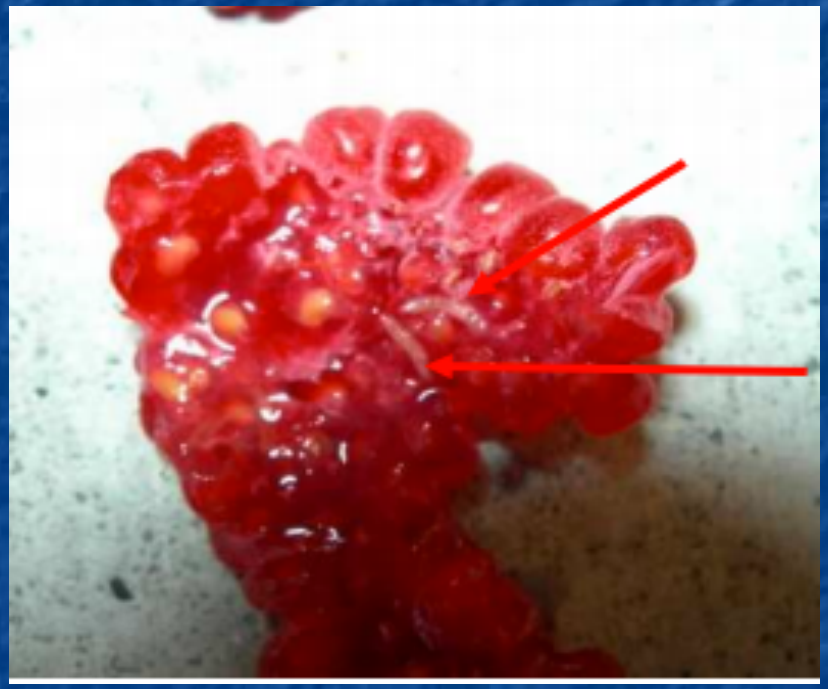
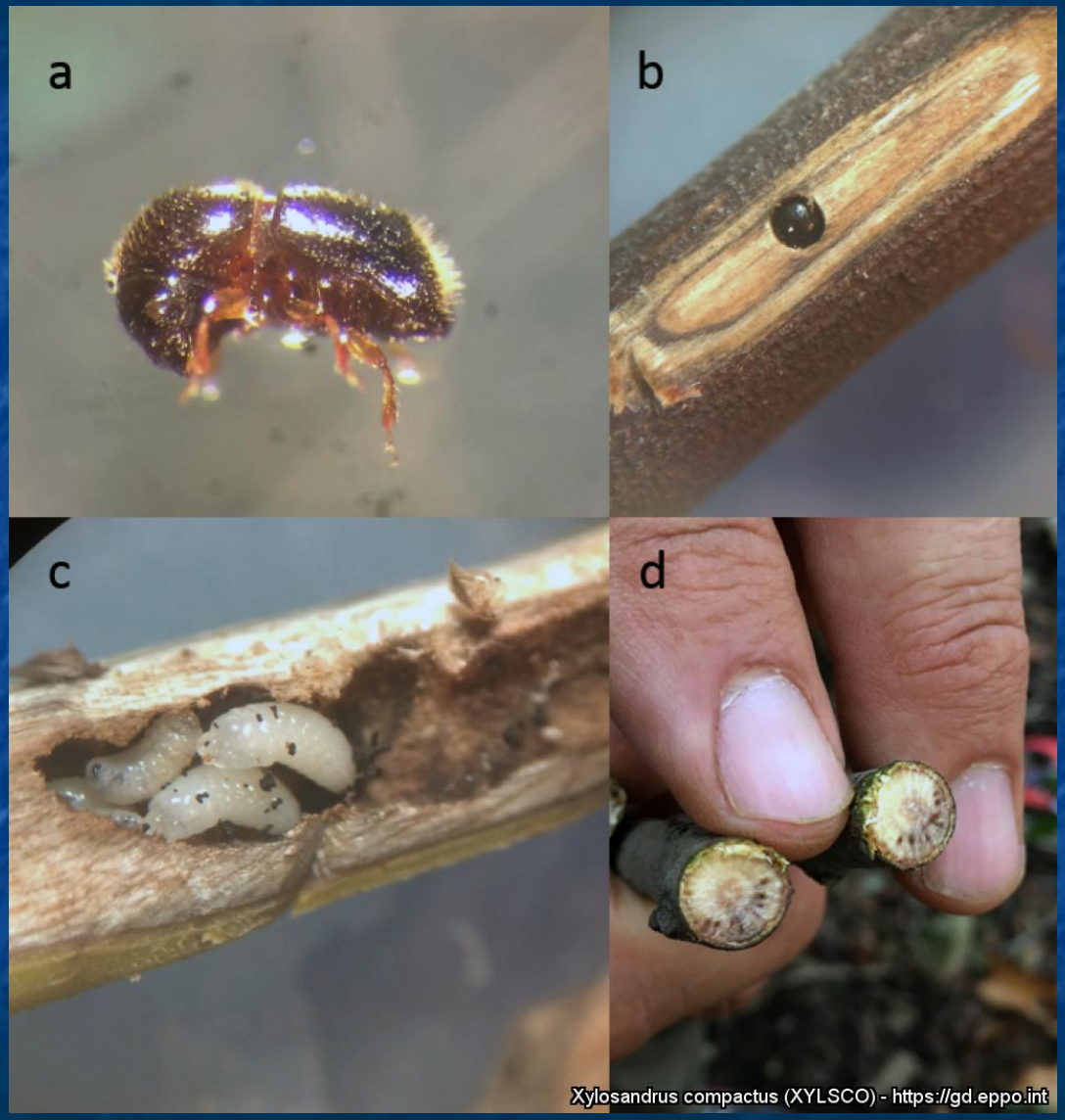


Table 1: Insecticidal active substances with potential effectiveness against *D. suzukii*. '+' indicates efficacy demonstrated in North America under trial conditions (experiments are still ongoing).

Active substance	**Active substance sub-groups**	**Relevant uses**	**Comments**
Malathion[+]	organophosphate	Pome fruit, stone fruit, berries and small fruit	Recently approved for use in Europe (Annex I listed), product authorizations expected to be forthcoming.
Diazinon[+]		Some US fruit crops (no details)	Authorized in the US but did not achieve European authorization.
Dimethoate		Not presently on relevant fruit crops in Europe. May be some scope for testing/extensions of use.	Approved for use in Europe (Annex I listed)
Chlorpyrifos		Pome fruit, stone fruit, berries and small fruit	Approved for use in Europe (Annex I listed)
Spinosad[+]	spinosyn	Pome fruit, stone fruit, berries and small fruit	Approved for use in Europe (Annex I listed)
Cypermethrin	Pyrethrin/pyrethroid[+]	Pome fruit, stone fruit, berries and small fruit	Approved for use in Europe (Annex I listed)
Alpha-cypermethrin		Pome fruit, stone fruit,	Approved for use in Europe (Annex I listed)
Deltamethrin		Pome fruit, stone fruit, berries and small fruit	Approved for use in Europe (Annex I listed)
Lambda cyhalothrin		Pome fruit, stone fruit, berries and small fruit	Approved for use in Europe (Annex I listed)

Nome	
ACETAMIPRID	Nisso Chemicals Europo GmbH
DELTAMETRINA - DELTAMETHRIN	Hoechst Schering AgrEvo GmbH
DIMETOATO - DIMETHOATE	American Cyanamid Co.
FOSMET	Stauffer Chemical Co. (ora Zeneca Agrochem.)
PIRETRINE	

Xylosandrus compactus (Coleoptera: Scolytidae (?))



Xylosandrus compactus (Coleoptera: Scolytidae)

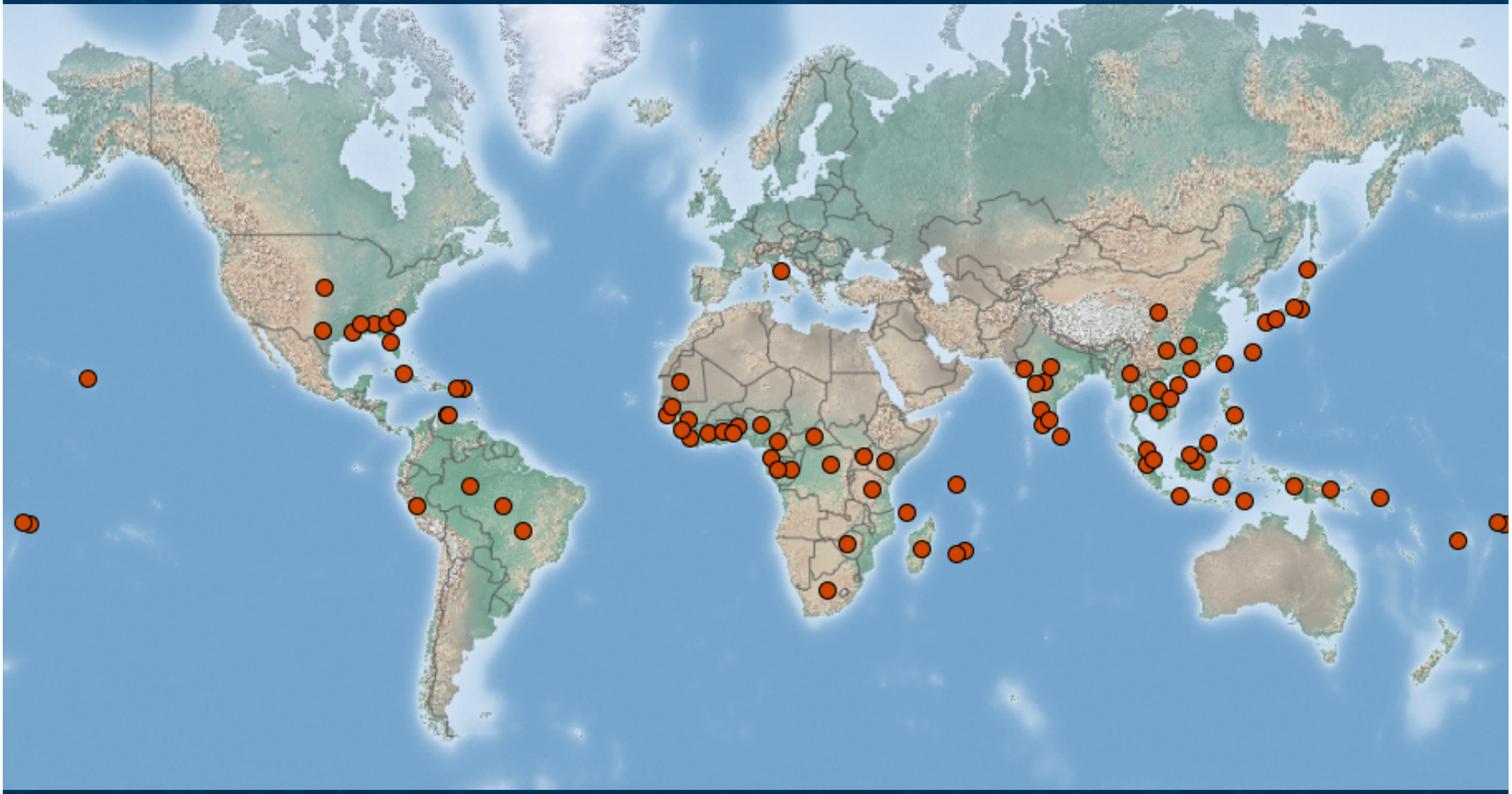
Xylosandrus compactus (Coleoptera: Scolytidae)

Dominio: Eukaryota
Regno: Metazoa
Phylum: Arthropoda
Subphylum: Uniramia
Classe: Insecta
Ordine: Coleoptera

Familia: Scolytidae
Genere: Xylosandrus
Specie: *Xylosandrus compactus*

Familia: Curculionidea
Sottofamilia: Scolytinae
Genere: Xylosandrus
Specie: *Xylosandrus compactus*

Xylosandrus compactus (Coleoptera: Scolytidae)

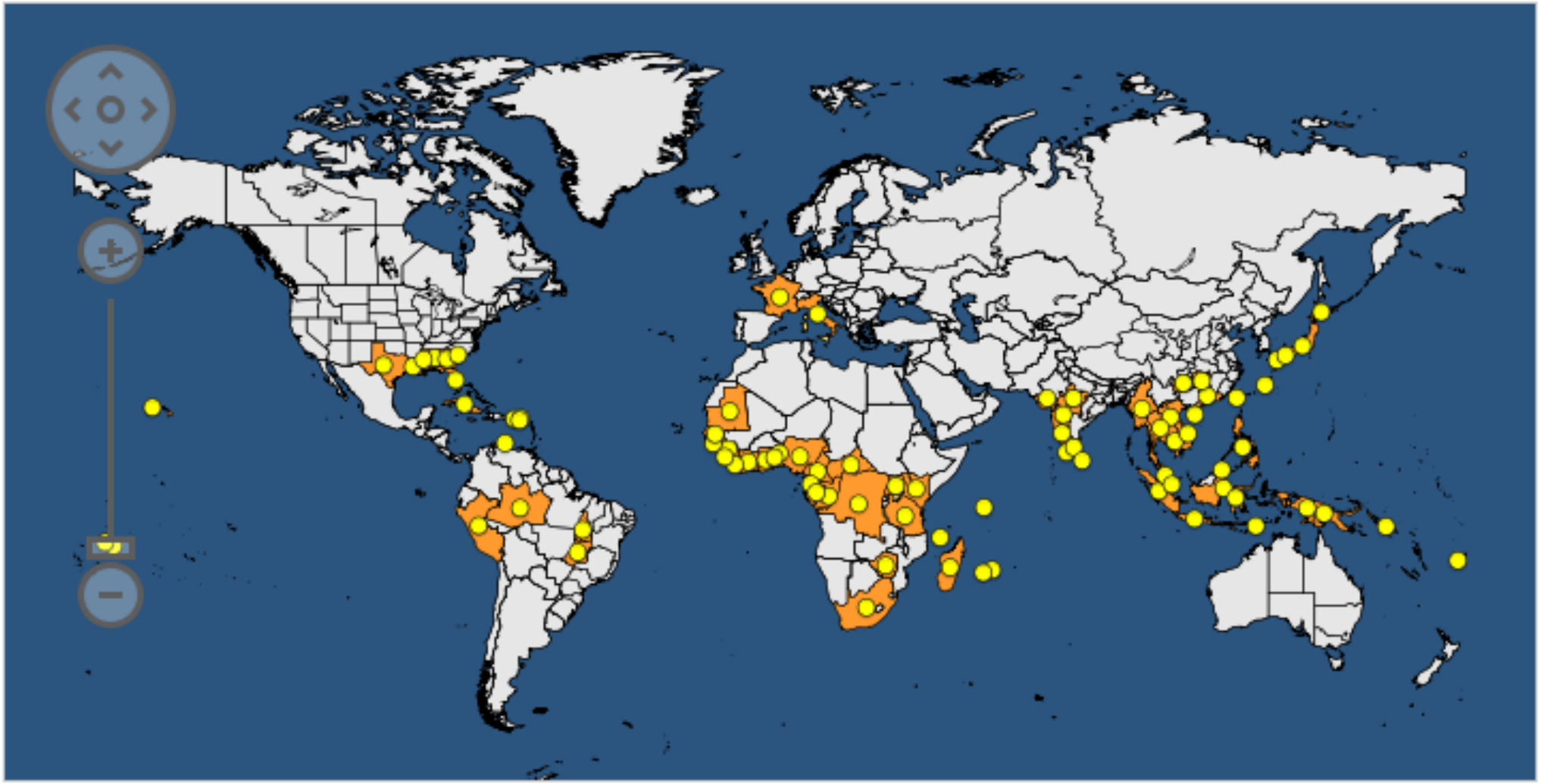


CABI

Univ. Tuscia Stefano Speranza 2019

Xylosandrus compactus (Coleoptera: Scolytidae)

EPPO 26/04/2017



Xylosandrus compactus (Coleoptera: Scolytidae)

Ospiti primari

type	EPPOCode	Pref_name
Major	CAHSI	Camellia sinensis
Major	COFCA	Coffea canephora
Major	THOCA	Theobroma cacao
Major	2WOOP	woody plants

Xylosandrus compactus (Coleoptera: Scolytidae)

Ospiti secondari

type	EPPOCode	Pref_name
Minor	ACAAF	Acacia auriculiformis
Minor	ACAMG	Acacia mangium
Minor	ANUMU	Annona muricata
Minor	ANUSQ	Annona squamosa
Minor	ARDUN	Arbutus unedo
Minor	AUMKL	Aucoumea klaineana
Minor	BUXSE	Buxus sempervirens
Minor	CSNSS	Castanea sp.
Minor	CEDME	Cedrela mexicana
Minor	CEQSI	Ceratonia siliqua
Minor	CCSCA	Cercis canadensis
Minor	CINCA	Cinnamomum camphora
Minor	CINZE	Cinnamomum verum
Minor	1COFG	Coffea
Minor	COFAR	Coffea arabica
Minor	CRWFL	Cornus florida
Minor	DAGSS	Dalbergia sp.
Minor	1DENG	Dendrobium
Minor	ENDUT	Entandrophragma utile
Minor	ERZAB	Erythrina abyssinica
Minor	EUDZW	Eusideroxylon zwageri
Minor	FIUCA	Ficus carica
Minor	GADJA	Gardenia jasminoides
Minor	HVEBR	Hevea brasiliensis
Minor	HYEMA	Hydrangea macrophylla
Minor	KHAGR	Khaya grandifoliola
Minor	KHAIV	Khaya ivorensis
Minor	KHASE	Khaya senegalensis
Minor	LURNO	Laurus nobilis
Minor	LUAGL	Leucaena leucocephala
Minor	MCDIN	Macadamia integrifolia
Minor	MAGGR	Magnolia grandiflora
Minor	MNGIN	Mangifera indica
Minor	MEIAZ	Melia azedarach
Minor	MYRCE	Morella cerifera
Minor	OCHLA	Ochroma lagopus
Minor	PEBAM	Persea americana
Minor	PEBBO	Persea borbonia
Minor	PLRSS	Phillyrea sp.
Minor	1PIUG	Pinus
Minor	PIALE	Pistacia lentiscus
Minor	PMEPI	Pometia pinnata
Minor	PUNGR	Punica granatum
Minor	QUEIL	Quercus ilex
Minor	RUCAC	Ruscus aculeatus
Minor	SHOSS	Shorea sp.
Minor	SWESS	Swertia sp.
Minor	SWIMA	Swietenia macrophylla
Minor	SWIMG	Swietenia mahagoni
Minor	TOOCI	Toona ciliata
Minor	VIBTI	Viburnum tinus

Xylosandrus compactus (Coleoptera: Scolytidae)

Ceratonia siliqua in Sicilia

Xylosandrus compactus (Coleoptera: Scolytidae)

Xylosandrus compactus (Coleoptera: Scolytidae)

Categorization

Country/NPPO	List	Year addition
America		
Brazil	A1 list	1995
Asia		
Israel	Quarantine pest	2009
RPPO/EU		
CPPC	A1 list	1990
EPPO	Alert list	2017
OIRSA	A1 list	1992

Xylosandrus compactus (Coleoptera: Scolytidae)

E' UN FITOFAGO PRIMARIO

Danno

Disseccamento dei rametti
Imbrunimento dei tessuti vegetali limitrofi le gallerie per azione fitopatogena dei funghi associati all'insetto

Xylosandrus compactus (Coleoptera: Scolytidae)

Infesta rametti di piccolo diametro (fino a 2-2,5 cm di diametro)

Gli adulti svernano all'interno delle gallerie fuoriuscendo nella tarda primavera per la ricerca dei nuovi siti di infestazione.
La femmina penetra fino alla zona midollare del rametto in cui scava una galleria longitudinale (materna).
Nella galleria materna vengono depositate le spore fungine dei funghi utilizzati per l'alimentazione delle future larve e deposte le uova

I maschi nascono per partenogenesi arrenotoca e si accoppiano con le sorelle all'interno delle gallerie materne

Le femmine fecondate sfarfallano alla ricerca dei nuovi siti di infestazione

Un ciclo completo può essere svolto in circa un mese a 25 gradi
Si presuppone che nei nostri ambienti possa fare almeno 2 generazioni per anno

Xylosandrus compactus (Coleoptera: Scolytidae)

Femmina lunga 1,3-1,8 mm
Maschio lungo 0,8-1,1mm

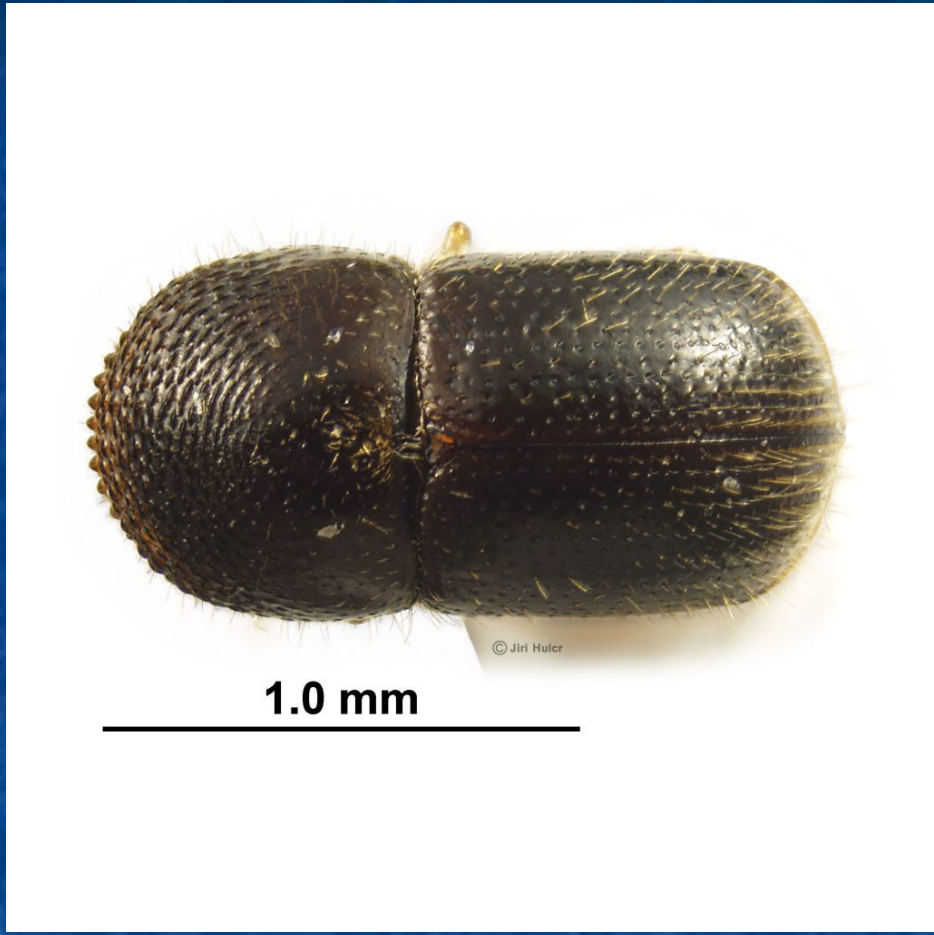
Victoria L. Tenbrink, Research Associate
Arnold H. Hara, Entomologist
Beaumont Research Center
Hilo, Hawaii

Xylosandrus compactus (Coleoptera: Scolytidae)

Xylosandrus compactus (Coleoptera: Scolytidae)

Univ. Tuscia Stefano Speranza 2019

Xylosandrus compactus (Coleoptera: Scolytidae)



European and Mediterranean Plant Protection Organization
Organisation Européenne et Méditerranéenne pour la Protection des Plantes

Data sheets on quarantine pests
Fiches informatives sur les organismes de quarantaine

Tuta absoluta

Identity

Name: *Tuta absoluta* Povolny
Synonyms: *Scrobipalpuloides absoluta* Povolny, *Scrobipalpula absoluta* Povolny, *Gnorimoschema absoluta* Clarke, *Phthorimaea absoluta* Meyrick
Taxonomic position: *Insecta*: *Lepidoptera*: *Gelechiidae*
Common names: tomato borer, South American tomato moth, tomato leaf miner, South American tomato pinworm (English); polilla del tomate, polilla perforadora, cogollero del tomate, gusano minador del tomate, minador de hojas y tallos de la papa (Spanish); traça-do-tomateiro (Portuguese)
Note on taxonomy and nomenclature: *Tuta absoluta* was originally described as *Phthorimaea absoluta* (Meyrick, 1917). The genus was successively changed to *Gnorimoschema* (1962) and *Scrobipalpula* (1964). This species was later placed in a new genus, *Scrobipalpuloides* (in 1987). The correct name of the species is now *Tuta absoluta* (Povolny, 1994)
EPPO code: GNORAB
Phytosanitary categorization: EPPO A1 action list no. 321

Hosts

The main host of *T. absoluta* is tomato, but potato is also reported as a host (CIP, 1996; Galarza, 1984; Notz, 1992), together with *Lycopersicon hirsutum*, *Solanum lyratum* and various wild solanaceous species such as *Solanum nigrum*, *Solanum elaeagnifolium*, *Solanum puberulum*, *Datura stramonium*, *Datura ferox* and *Nicotiana glauca*. In laboratory studies (Galarza, 1984), aubergine was reported as a potential host (with other solanaceous species), but there are no references to its importance in the field. There is an old record of tobacco being attacked in Argentina (Mallea *et al.*, 1972).

Geographical distribution

EPPO region: absent
South America: Argentina (introduced from Chile in 1964 according to García & Espul, 1982), Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, Venezuela. *T. absoluta* is not present in Andean regions at high altitudes (above 1000 m), as low temperatures are a limiting factor for its survival (Notz, 1992)
Asia: Japan (unconfirmed). There is an old record of *T. absoluta* attacking *Solanum lyratum* in Japan (Clarke, 1962) but no recent records
EU: absent

Biology

T. absoluta has a high reproductive potential. Larvae do not enter diapause as long as food is available, and there may be 10–12 generations per year (5 in Argentina). The biological cycle is completed in 29–38 days depending on environmental conditions. Studies in Chile have shown that development takes 76.3 days at 14°C, 39.8 at 19.7°C and 23.8 at 27.1°C (Barrientos *et al.*, 1998). Adults are nocturnal and usually hide during the day between leaves. Females lay eggs on aerial parts of their host plants and a single female can lay a total of about 260 eggs during its lifetime. Four larval instars develop. In Argentina, young larvae appear at the end of winter. Pupation may take place in the soil, on the leaf surface or within mines, depending on environmental conditions. When *T. absoluta* does not pupate in the soil, a cocoon is usually built. The pest may overwinter as eggs, pupae or adults.

Detection and identification

Symptoms

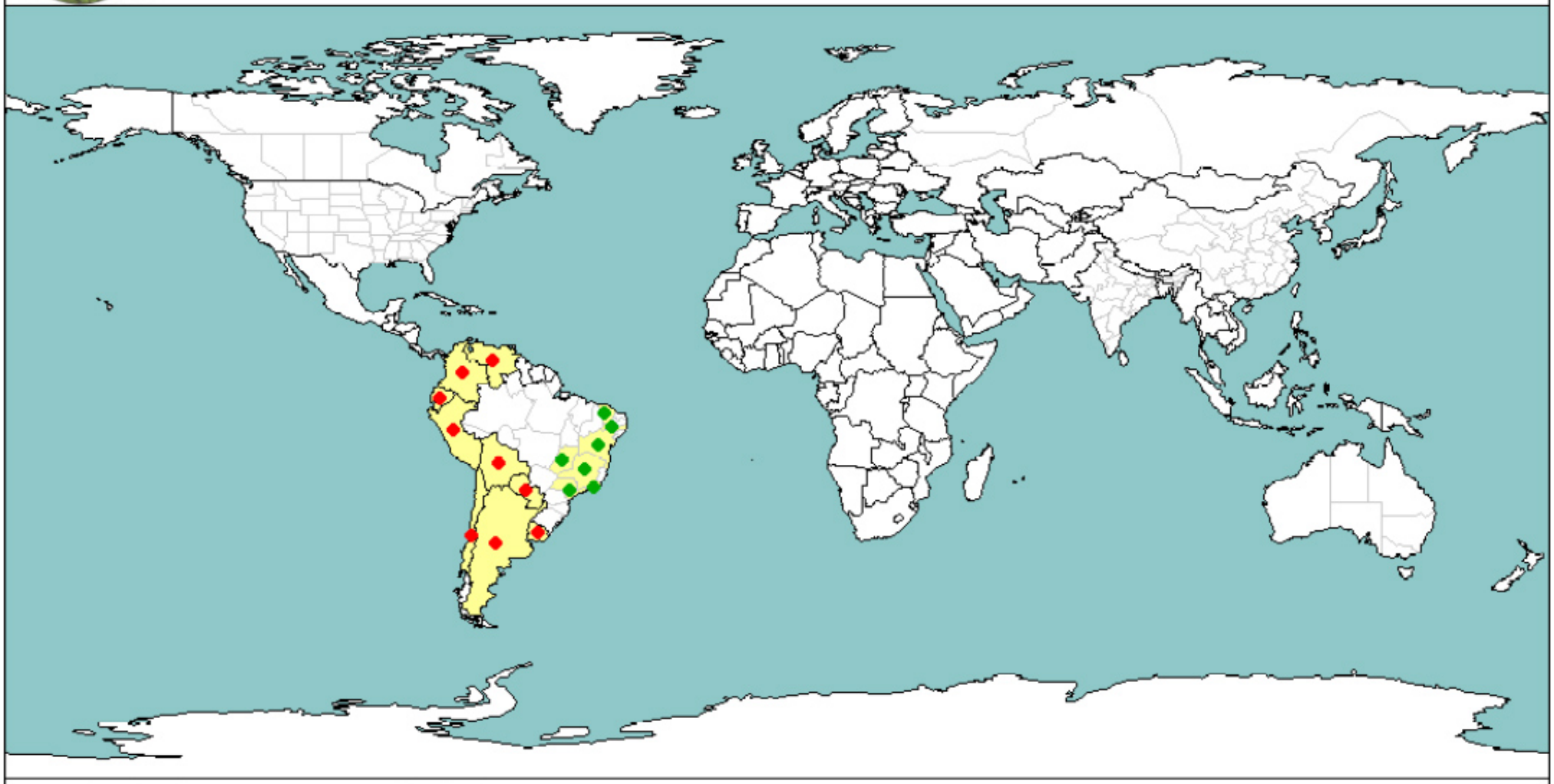
After hatching, young larvae penetrate into tomato fruits, leaves or stems on which they feed and develop, thus creating conspicuous mines and galleries. Fruits can be attacked as soon as they are formed, and the galleries bored inside them can be invaded by secondary pathogens leading to fruit rot. On leaves, larvae feed only on mesophyll tissues, leaving the epidermis intact. Leaf mines are irregular and may later become necrotic. Galleries in stems alter the general development of the plants. Tomato plants can be attacked at any developmental stage, from seedlings to mature plants. The pest is generally easily found because it prefers apical buds, flowers or new fruits, on which the black frass is visible. On potato, only aerial parts are attacked, and *T. absoluta* does not develop on tubers (Caffarini *et al.*, 1999; Notz, 1992).

Morphology

Egg
Small (0.36 mm long and 0.22 mm large), cylindrical, creamy

Distribution Maps of Quarantine Pests for Europe

Tuta absoluta



National record

Present

Present only in some areas

Subnational record

Present

Present only in some areas

2006-09-19

UNIVERSITÀ DEGLI STUDI DELLA Tuscia

Foglie (F), Fusto (Fu), Colletto (C), Radici (R), Fiori (Fi), Bacche (B)

Zone di infestazione e danno sulla pianta

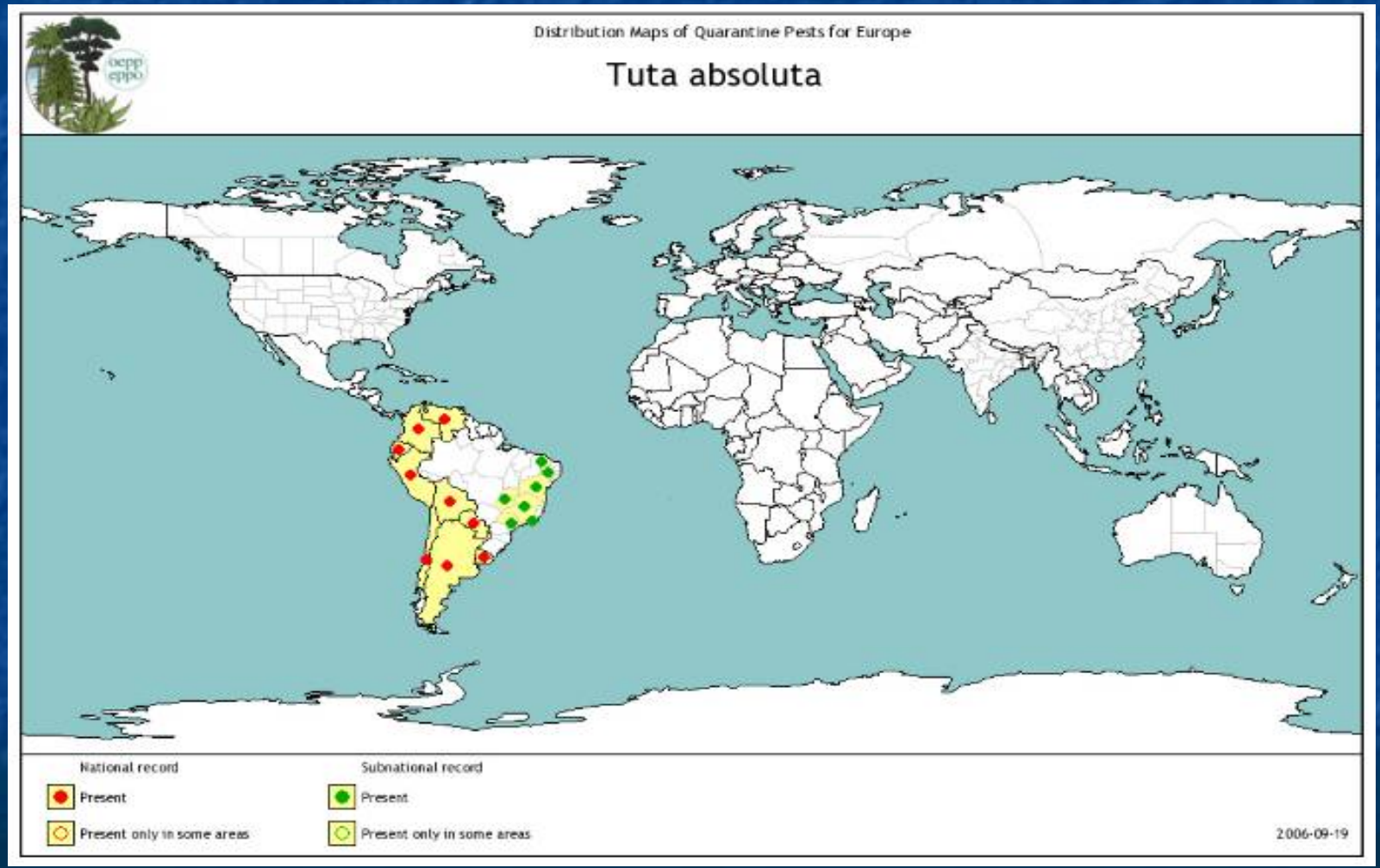
Tuta absoluta

A2 EPPO list

Possono completare 10-12 generazioni per anno per assenza di diapausa dovuta alla continua disponibilità di alimento.
Il ciclo biologico è di circa un mese ed è normale individuare generazione sorelle all'interno dell'area infestata (concomitante presenza di uova, larve, crisalidi e adulti). Le femmine ovidepongono sulla parte aeree della pianta. Le larve neonate si accrescono in tipiche mine sulle foglie.

UNIVERSITÀ DEGLI STUDI DELLA Tuscia

Distribuzione mondiale fino al 2006

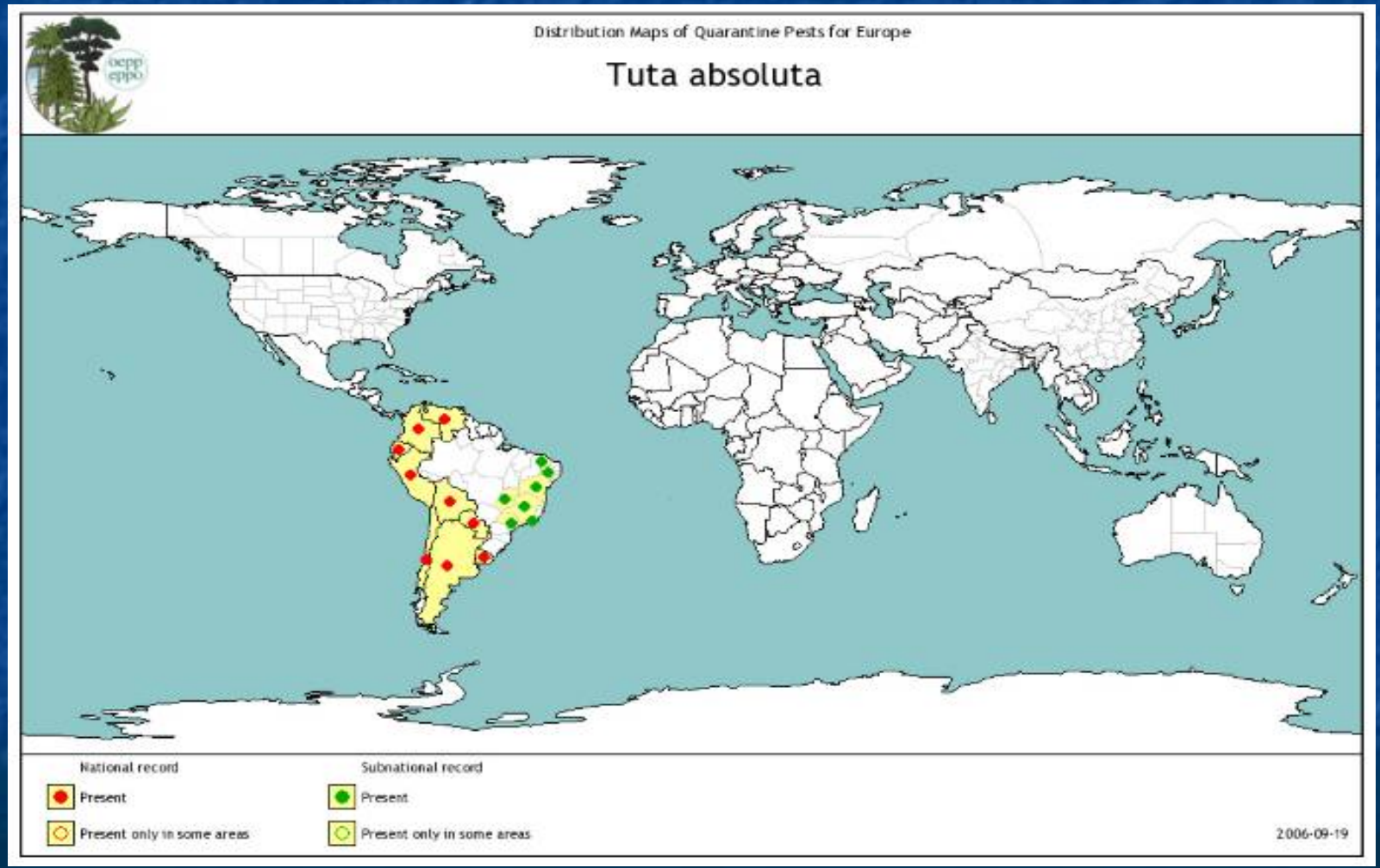


UNIVERSITÀ DEGLI STUDI DELLA Tuscia

Attuale distribuzione nel bacino del mediterraneo

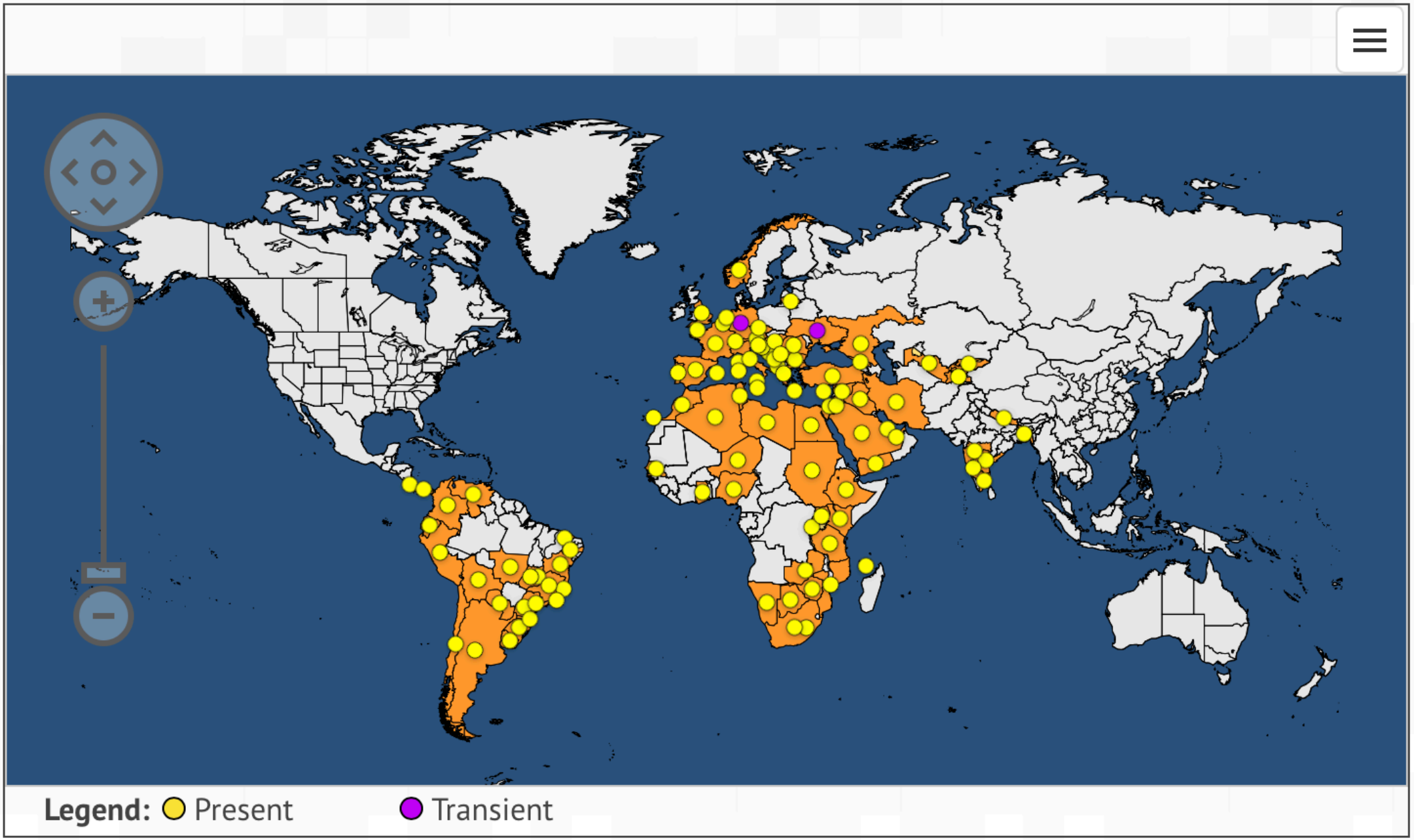
UNIVERSITÀ DEGLI STUDI DELLA Tuscia

Distribuzione mondiale fino al 2006



Distribution

Last updated: 2019-01-23



Univ. Tuscia Stefano Speranza 2019

UNIVERSITÀ DEGLI STUDI DELLA Tuscia

UNIVERSITÀ DEGLI STUDI DELLA Tuscia

UNIVERSITÀ DEGLI STUDI DELLA Tuscia

UNIVERSITÀ DEGLI STUDI DELLA Tuscia

UNIVERSITÀ DEGLI STUDI DELLA Tuscia

UNIVERSITÀ DEGLI STUDI DELLA Tuscia

UNIVERSITÀ DEGLI STUDI DELLA Tuscia

UNIVERSITÀ DEGLI STUDI DELLA Tuscia

UNIVERSITÀ DEGLI STUDI DELLA Tuscia

UNIVERSITÀ DEGLI STUDI DELLA Tuscia

UNIVERSITÀ DEGLI STUDI DELLA Tuscia

UNIVERSITÀ DEGLI STUDI DELLA Tuscia

UNIVERSITÀ DEGLI STUDI DELLA Tuscia

UNIVERSITÀ DEGLI STUDI DELLA Tuscia

EPPO Gallery

Résultats de votre recherche : tuta

1 album trouvé :
Tuta absoluta (GNORAB)

15 images trouvées :

diaporama << < 1 > >> page 1|2

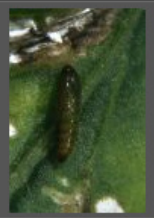

20/04/2009
1641 visites


20/04/2009
1291 visites


20/04/2009
1115 visites


20/04/2009
1220 visites


20/04/2009
1193 visites


20/04/2009
1093 visites

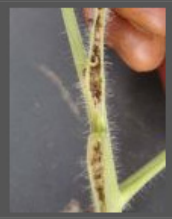

20/04/2009
1118 visites


20/04/2009
1389 visites


20/04/2009
1181 visites


20/04/2009
1612 visites


20/04/2009
1278 visites


20/04/2009
1280 visites

<< < 1 > >>

Cydalima perspectalis

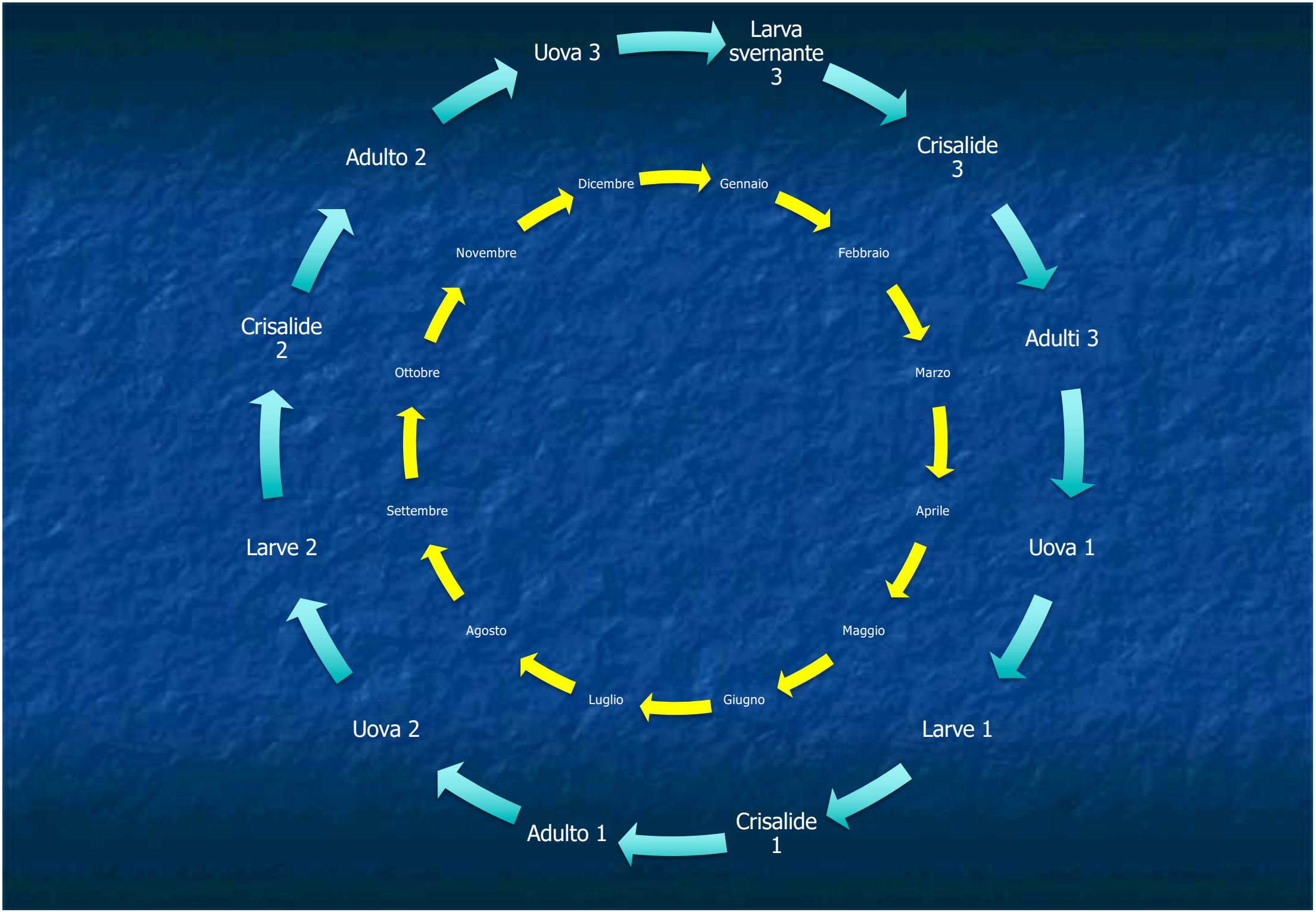
Piralide del bosso
Lepidoptera: Crambidae

http://www.actaplantarum.org/floraitaliae/viewtopic.php

Univ. Tuscia Stefano Speranza 2017

Biologia

Univ. Tuscia Stefano Speranza 2017


Uova 3
Larva svernante 3
Crisalide 3
Adulti 3
Uova 1
Larve 1
Crisalide 1
Adulto 1
Uova 2
Larve 2
Crisalide 2
Adulto 2
Gennaio
Febbraio
Marzo
Aprile
Maggio
Giugno
Luglio
Agosto
Settembre
Ottobre
Novembre
Dicembre

Univ. Tuscia Stefano Speranza 2017

Danni

Univ. Tuscia Stefano Speranza 2017

Univ. Tuscia Stefano Speranza 2017

Glycaspis brimblecombei

(Homoptera, Psyllidae) – red gum lerp psyllid

Univ. Tuscia Stefano Speranza 2017

Univ. Tuscia Stefano Speranza 2017

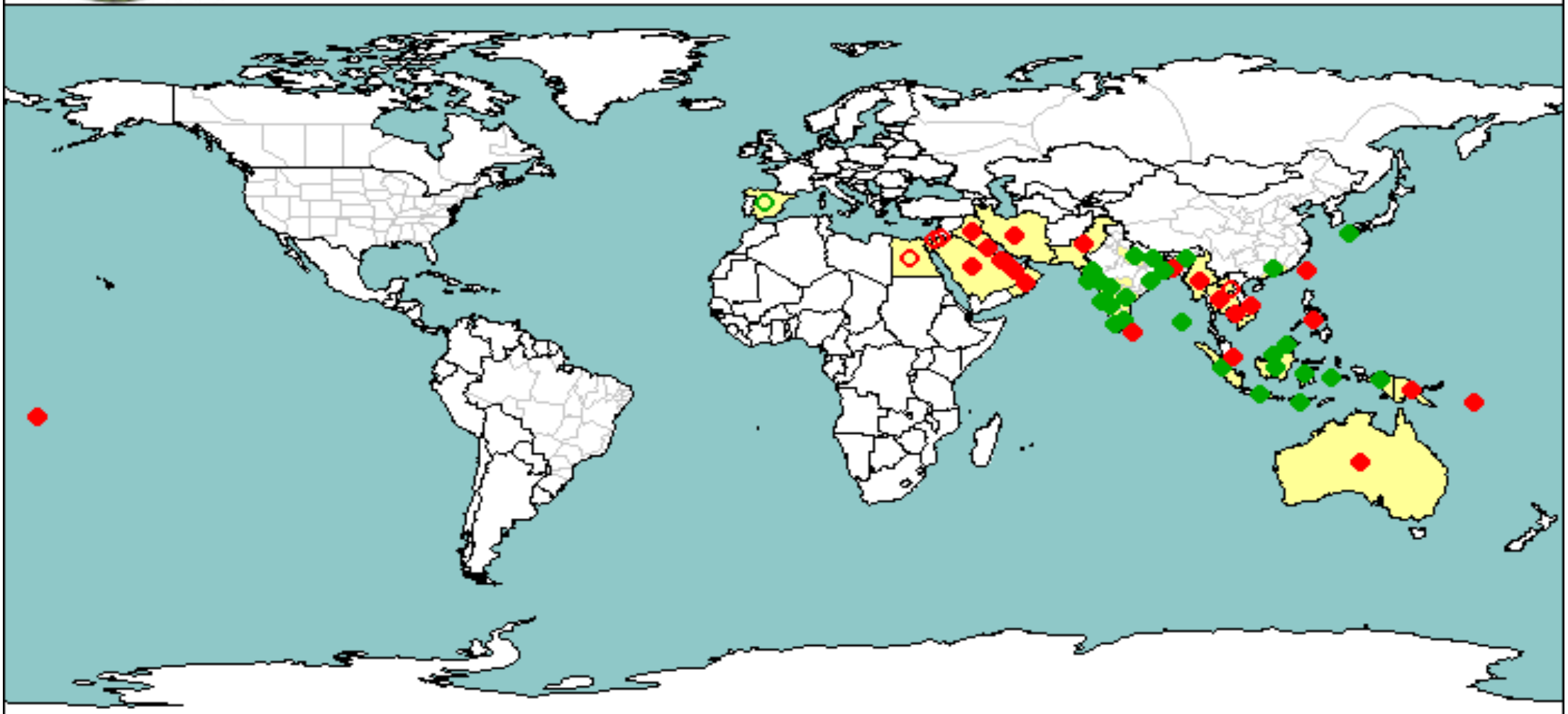
http://foros.embalses.net/showthread.php/15104-Glycaspis-brimblecombei

Il PUNTERUOLO ROSSO DELLE PALME
Rhynchophorus ferrugineus (Olivier)

Univ. Tuscia Stefano Speranza 2017

Distribution Maps of Quarantine Pests for Europe

Rhynchophorus ferrugineus



National record

Present

Present only in some areas

Subnational record

Present

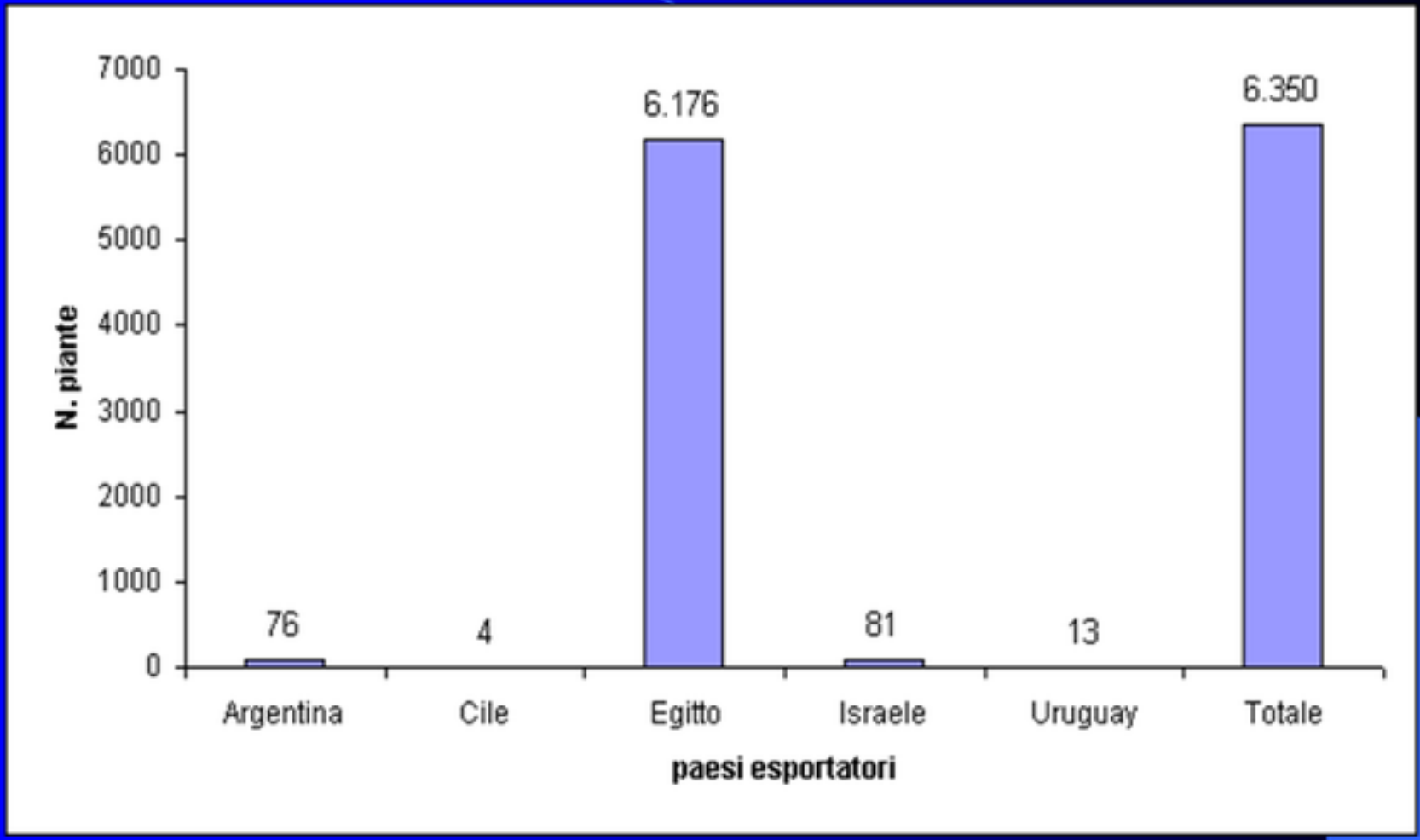
Present only in some areas

2006-09-19

How do palm trees arrive ?

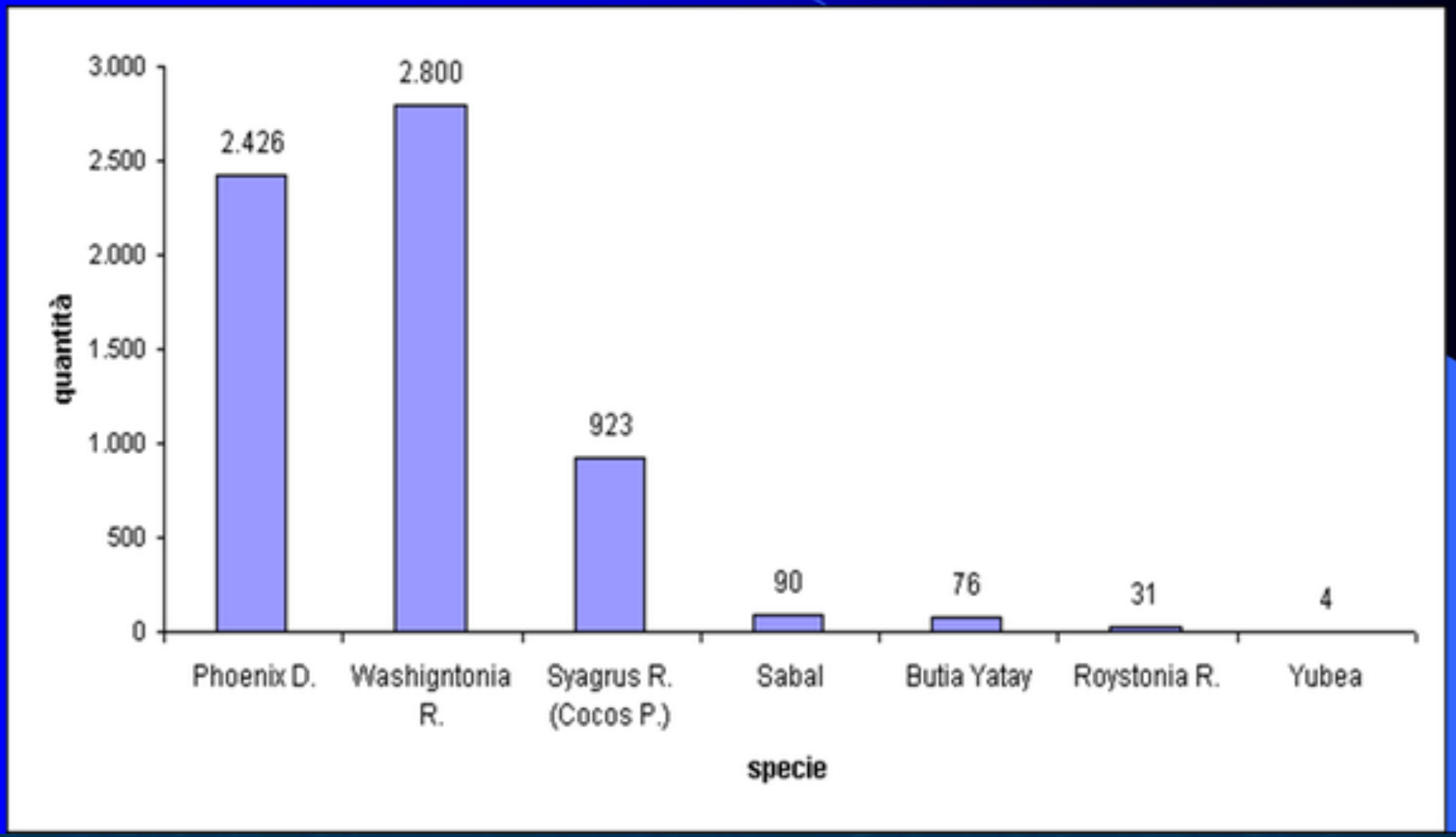
http://www.eppo.org/QUARANTINE/rhynchophorus_italy

Imported palms in Campania from not EU countries 2006



http://www.eppo.org/QUARANTINE/rhynchophorus_italy

Palm spp. imported in Campania in 2006
Total 6.350



http://www.eppo.org/QUARANTINE/rhynchophorus_italy

Un po' di numeri

30.000 Palme colpite in Europa

700 Palme colpite nel Lazio (dati dicembre 2007)

400 Palme abbattute nel 2007

300 o più (?) Palme da abbattere nel 2008

Fortemente infestate le Regioni: Sicilia, Campania, Lazio

Adulto

- L'adulto di *R. ferrugineus* presenta un colore rosso ferruginoso a cui deve il nome.

- Sulle elitre sono evidenti striature nere di numero e forma variabili.

- Il pronoto, visto dorsalmente si presenta liscio e con la base arrotondata.

- La lunghezza dell' adulto può variare tra i 2 ed i 5 cm e la larghezza da 1 a 1,5 cm.

- Il caratteristico rostro ha una base allargata su cui si inseriscono le antenne. Presenta una sezione cilindrica, forma molto allungata che, nella parte terminale, può essere più o meno arcuata.

- Sulla porzione distale del rostro dei maschi è presente una serie di fitte setole erette

Uova

- Le uova hanno una forma ovale allungata, generalmente più allargata alla base; il colore può variare dal bianco giallastro al marrone.

-L'uovo misura da 2,5 a 4,0 mm di lunghezza
-media di oltre 200 uova per femmina

Larva

- La larva è apoda e di colore biancastro; presenta un capo fortemente sclerificato ed arrotondato, di colore scuro.

- Supera i 5 cm di lunghezza.

- Lo stadio larvale è quello che determina i danni mortali alle piante, con l' escavazione di gallerie e cavità all' interno dello stipite e delle pinne fogliari.

Univ. Tuscia Stefano Speranza 2017

Biologia di *Rhynchophorus ferrugineus*

-*R. ferrugineus* si sviluppa tipicamente come endofita all'interno delle palme attaccate.

-Generalmente gli adulti sono attratti da piante danneggiate o malate, ma è possibile anche l'infestazione di piante sane.

-Individuata una palma idonea, **i maschi** di *R. ferrugineus* producono un feromone di aggregazione capace di richiamare molti individui femminili e realizzare gli accoppiamenti.

-Le femmine depongono le loro uova in fori praticati con il rostro nelle parti che offrono meno resistenza, sia alla base delle foglie o dei giovani germogli, sia nelle ferite o nelle cicatrici presenti sulla pianta.

-Il numero di uova deposte in totale da una femmina può variare da alcune decine a svariate centinaia.

-I maschi emettono un feromone di aggregazione

-Gli adulti sono attratti da kairomoni da stress o da ferita

- Dopo circa 3 giorni le uova schiudono e le larve neonate cominciano a nutrirsi dei tessuti più teneri.

- La larva scava gallerie anche molto profonde all'interno del peduncolo fogliare e dello stipite che riempie di rosura mescolata ad essudati della pianta.

- Numerose gallerie possono minare la stabilità della palma fino a determinarne la caduta.

- La durata del periodo larvale è molto variabile; la larva raggiunga la maturità mediamente in 96 giorni (Spagna), dopo avere effettuato 3-4 mute.

- A maturità la larva cessa di alimentarsi e costruisce un bozzolo con le fibre della pianta.

maschio

Univ. Tuscia Stefano Speranza 2017

Femmina

2) Secondo stadio:

una pianta che ha perso la cima, appare come capitozzata.

Altre piante hanno evidenziato una chioma con tutte le foglie ripiegate verso il basso, in una tipica forma ad ombrello. E' questo l'ultimo stadio prima del disseccamento totale

3) Terzo stadio: *una pianta con chioma ad ombrello in avanzato stato di disseccamento, a destra una Phoenix "apparentemente priva di danni"*

Prodotti fitosanitari - Lista

Criteri di ricerca:

Avversità: Insetti

Nome avversità: PUNTERUOLO ROSSO DELLE PALME - Rhynchophorus ferrugineus

Coltura: Coltura

Denominazione: PALMA

Visualizzare anche sospesi e revocati: No

Risultati della ricerca: 3 fitofarmaci

Nota: Classi tossicologiche ....

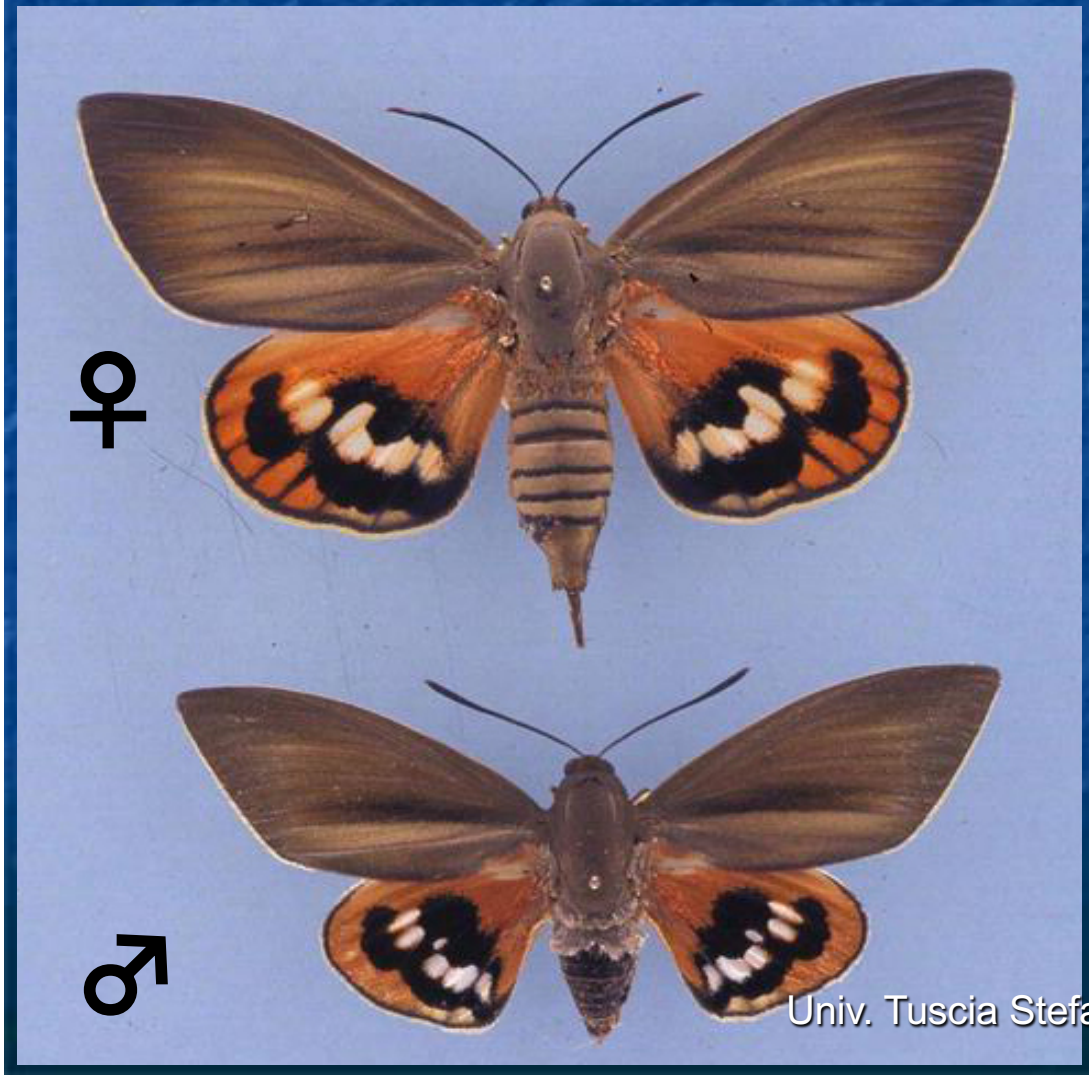
Sel.	N. Reg.	Nome	C.Toss.	Ditta	Componenti	Data scadenza	S/R
○	10927	KOHINOR PLUS	Xn N	MAGAN ITALIA SRL	CIFLUTRIN, IMIDACLOPRID		
○	4012	RELDAN 22	Xi N	DOW AGROSCIENCES ITALIA SRL	CLORPIRIFOS-METILE		
○	8795	VERTIMEC EC	Xn N	SYNGENTA CROP PROTECTION S.P.A.	ABAMECTINA		

Paysandisia archon
Paisandisia

Lepidoptera: Castnidae

ORGANISMO DA QUARANTENA
Lista EPPO A2/338

- Farfalla di grosse dimensioni (9-11 cm di apertura alare).
- Ali anteriori marrone olivastro; ali posteriori rosse con macchie nere e bianche; antenne clavate.
- Le femmine sono riconoscibili per le maggiori dimensioni e la presenza di un lungo ovopositore.



Paysandisia archon

Uovo:
Colore dal bianco grigiastro al bianco crema, lungo circa 5 mm.
Presenta 7 coste longitudinali

Larva:
Appena nata è rosata e lunga meno di un millimetro.
La larva matura è bianco crema ed è lunga fino a 8 centimetri.

Paysandisia archon

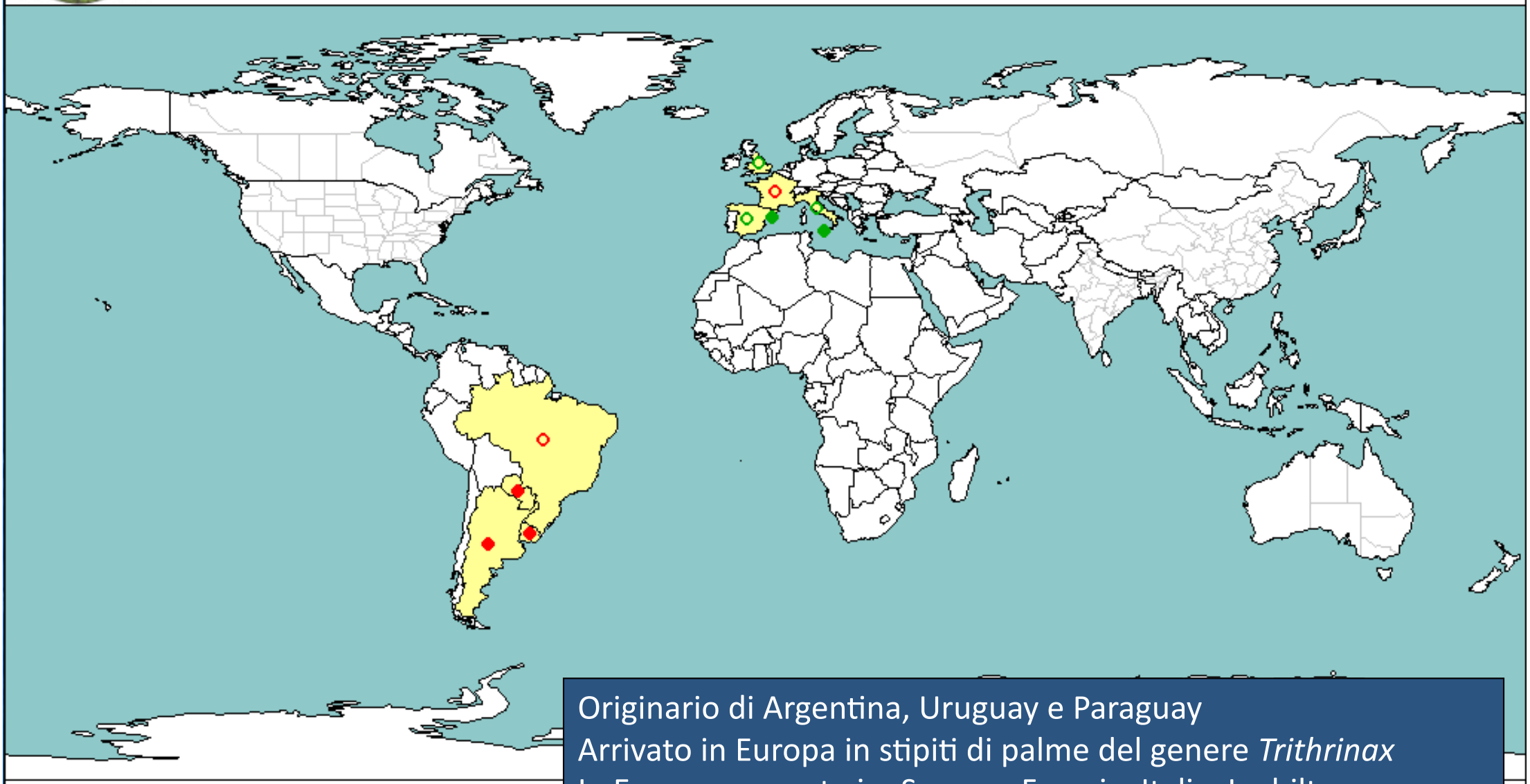
Paysandisia archon

Crisalide:
Lunga circa 5 cm. E' protetta da un bozzolo che la larva costruisce con escrementi, seta, rosura e fibre delle palme attaccate.

Il bozzolo, spesso, presenta meno fibre lunghe di quello del Rincoforo.

Distribution Maps of Quarantine Pests for Europe

Paysandisia archon



Originario di Argentina, Uruguay e Paraguay
Arrivato in Europa in stipiti di palme del genere *Trithrinax*
In Europa presente in: Spagna, Francia, Italia, Inghilterra

2006-09-19

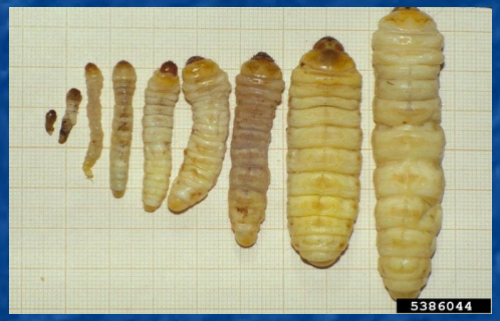
Paysandisia archon

Phoenix canariensis

In Italia è segnalata sulle seguenti palme :

- *Phoenix canariensis*
- *Washingtonia filifera*
- *Trachycarpus fortunei*
- ***Chamaerops humilis*** (palma endemica in Italia)

Paysandisia archon



Ciclo biologico:

- Ciclo piuttosto lungo; una generazione l'anno o una generazione in più anni.

- Uova inserite in piccoli gruppi all'inserzione del rachide fogliare o sul germoglio apicale.

- La larva neonata penetra all'interno dello stipite.

- Nell'ultimo stadio larvale si porta verso la superficie dello stipite per formare il bozzolo e trasformarsi in crisalide

- Volo degli adulti: da giugno a settembre (esemplari adulti sono stati anche rinvenuti anche in ottobre e novembre)

Paysandisia archon

SINTOMI E DANNI

Spesso le palme attaccate non presentano sintomi specifici, ma si evidenzia un deperimento generale con diffusi ingiallimenti fogliari.

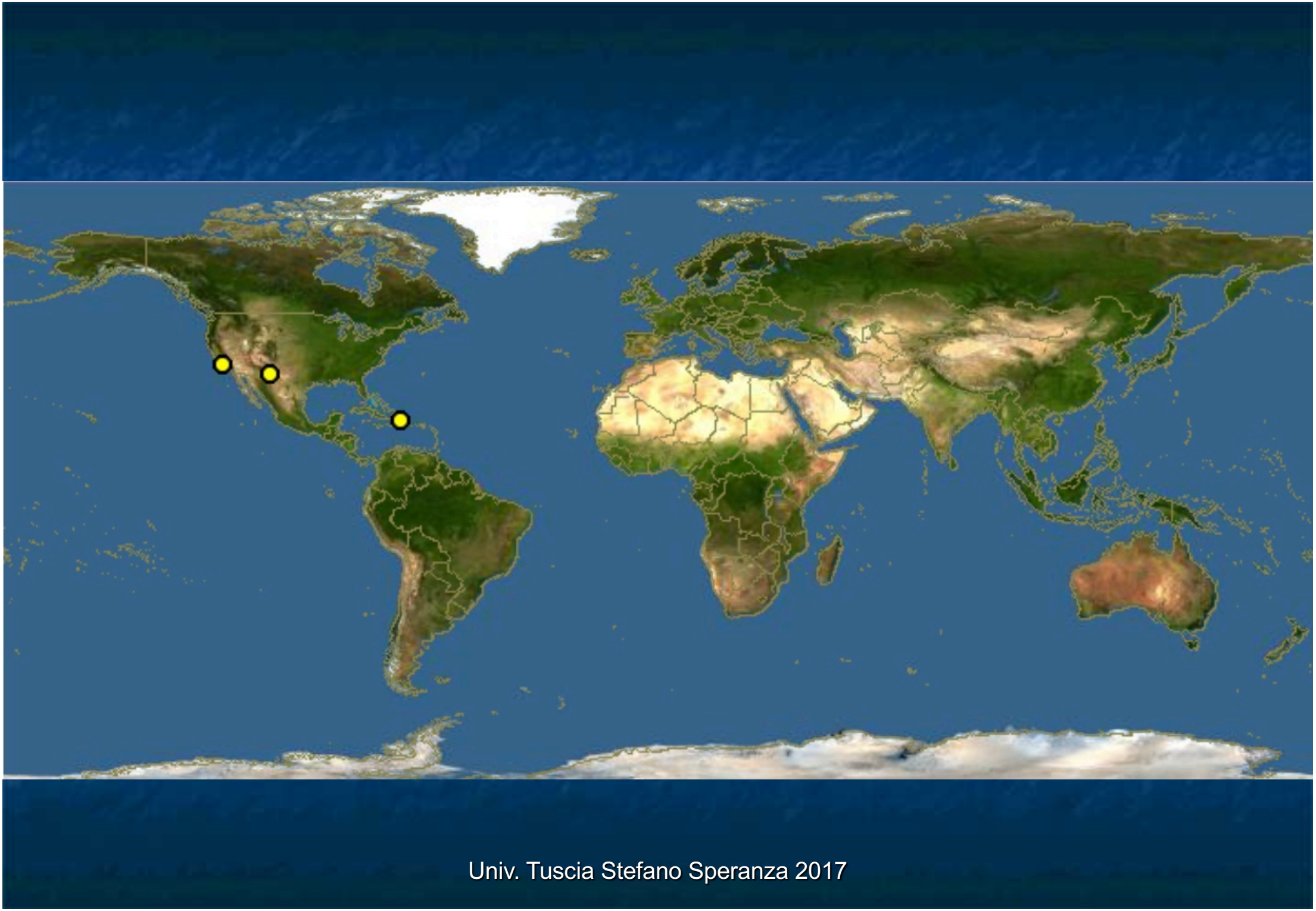
- Presenza di abbondante rosura all'esterno dello stipite delle piante
- Presenza di esuvie
- Sezionando il rachide fogliare (Phoenix) si possono vedere i fori circolari delle gallerie larvali

Paysandisia archon

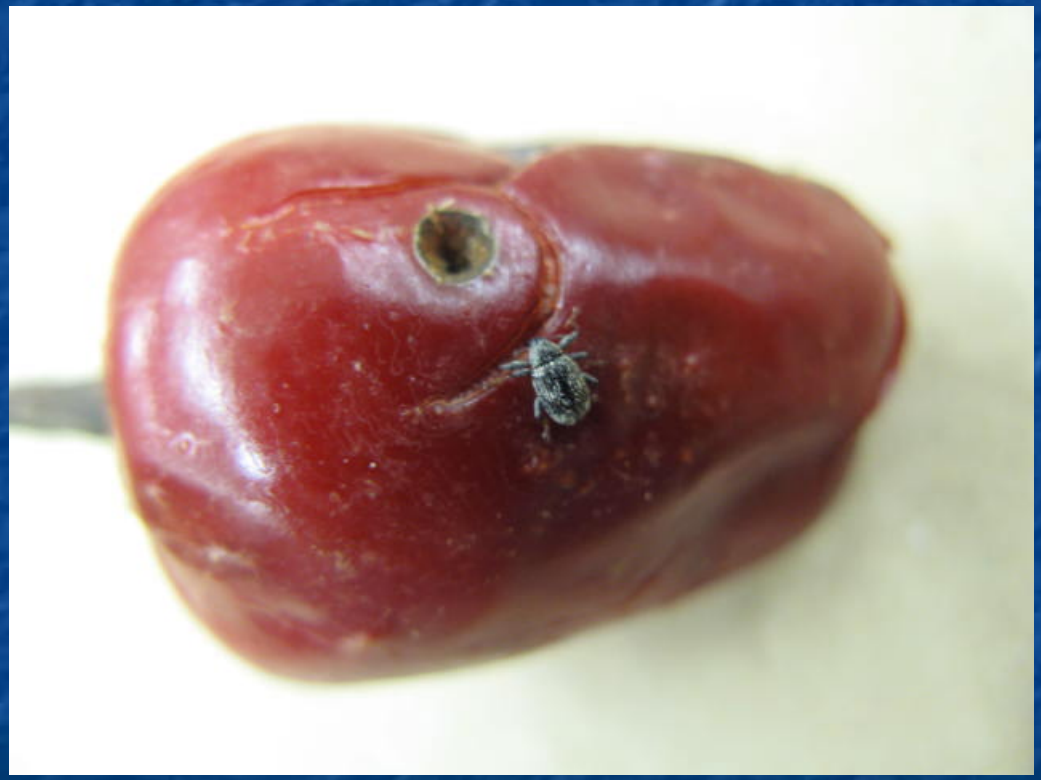
- Si possono notare perforazioni del lembo fogliare, sintomo di attacco pregresso, quando le foglie erano ancora chiuse (*Washingtonia* e *Trachycarpus*).

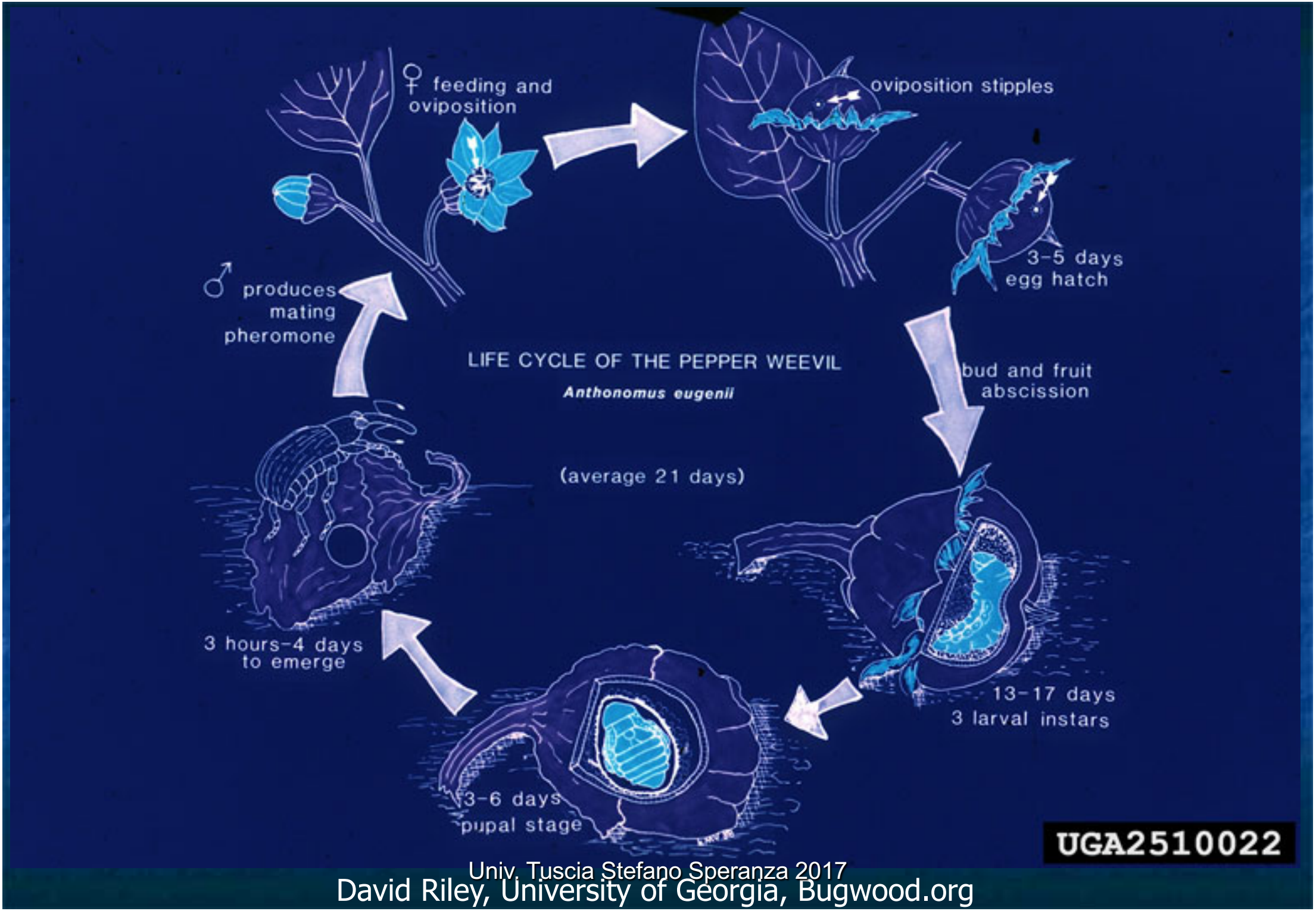
Anthonomus eugenii
(Coleoptera: Curculionidae)

Punteruolo del peperone


Univ. Tuscia Stefano Speranza 2017

Univ. Tuscia Stefano Speranza 2017

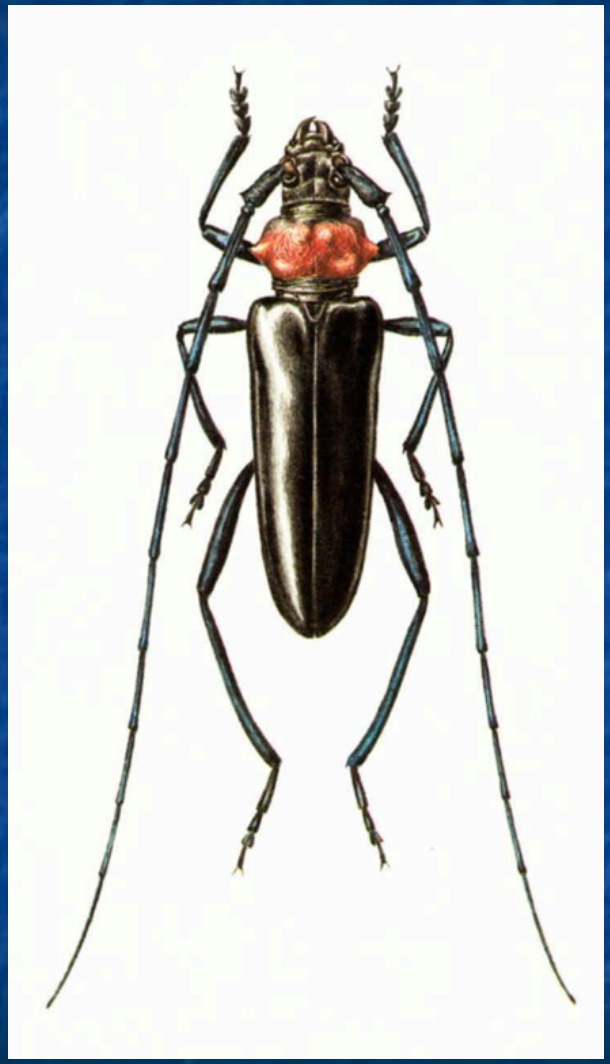




Univ. Tuscia Stefano Speranza 2017

David Riley, University of Georgia, Bugwood.org

Aromia bungii



Univ. Tuscia Stefano Speranza 2019