How to use the EPPO Global Database?

- General contents and search tips -

- INTRODUCTION
- HOW TO SEARCH AND NAVIGATE
- OVERVIEW
- DISTRIBUTION
- HOST PLANTS
- HOST COMMODITIES AND PATHWAYS
- **CATEGORIZATION**
- <u>REPORTING</u>
- <u>PHOTOS</u>
- DOCUMENTS



EPPO (Paris, 2019-09)

INTRODUCTION

The EPPO Global Database (GD) is a freely accessible web-based database which is maintained by the Secretariat of the European and Mediterranean Plant Protection Organization (EPPO).

Objective

The main objective of the database is to provide National Plant Protection Organizations (NPPOs) of EPPO member countries with a rapid and easy access to all pest-specific information that has been produced or collected by EPPO.

A few milestones

The development of the database was initiated by the EPPO Secretariat in 1984 to collect data on the host plants and geographical distributions of quarantine pests. The first database appeared in 1990, as an internal tool for the EPPO Secretariat. It was then suggested that it could also be a useful resource for EPPO member countries, and in 1991 the first version of the database was released to the NPPOs and called PQR (Plant Quarantine data Retrieval system). From 1991 to 2007, several PQR versions were distributed to NPPOs on different computer media (e.g. disks and CD-Roms). In April 2007, the EPPO Executive Committee agreed that the database should be made freely available on the EPPO website, as a downloadable piece of software. In parallel and since 1996, the EPPO Secretariat has also been maintaining the Bayer coding system in a separate database called EPPT (EPPO Plant Protection Thesaurus). EPPT contained scientific names, synonyms, common names and computer codes (now called EPPO Codes) for a large number of plants, pests and microorganisms of interest to agriculture, forestry and the environment. In 2014, a new web-based interface gathering the whole contents of EPPT and PQR, as well as EPPO pest-specific documents (e.g. datasheets and Pest Risk Analyses) was launched and called the 'EPPO Global Database'.

Frequency of updates

The database is constantly updated by the EPPO Secretariat in a 'real-time' mode. In practice, changes are made to the database almost every day.

Main contents

GD was designed to provide free access to the following information:

- Basic information for species of interest to agriculture, forestry and plant protection: plants (cultivated and wild) and pests (including pathogens and invasive alien plants). For each species: scientific names, synonyms, common names in different languages, taxonomic position, and EPPO Codes are given.
- Detailed information for 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 of these pests: geographical distribution (with a world map), host plants and categorization (quarantine status) are given.
- EPPO datasheets and PRA reports.
- EPPO Standards.
- Pictures of plants and pests.
- Articles of the EPPO Reporting Service (free monthly newsletter on events of phytosanitary concern, such as new pest outbreaks, new host plants).

HOW TO SEARCH AND NAVIGATE

Search tools

To search GD and obtain information on a pest or a plant, a simple search tool is available at the top of the page.



An advanced search tool is also available for more complex types of searches, such as searching for a string of characters, a given type of organism or taxonomic group (instructions are provided online).

Green bar menu



This green bar menu provides a rapid access to:

- Lists of EPPO *Standards*.
- Lists of *photos* included in GD and presented by types of organisms (acari, bacteria, chromista, fungi, insecta, nematoda, plantae, rodentia, viruses and viroids).
- Lists of all EPPO Reporting Service issues (back to 1974).

The '*Explore by*' button allows users to obtain information, not starting with a pest / plant name, but with:

- Countries: to view lists of organisms present (or absent), lists of regulated organisms, articles of the EPPO Reporting Service for a given country.
- Regional Plant Protection Organizations / EU (European Union) / EAEU (Eurasian Economic Union): to view the same type of information as above.
- Data Sheets: to view a list of available EPPO data sheets.
- Taxonomy explorer: to view the taxonomic tree.
- PPP uses classification: to view the EPPO harmonized classification of plant protection products uses (please note that this classification is still under development).

EPPO GD Desktop: EPPO GD Desktop is the 'off-line' version of GD which replaced PQR in July 2018. It is a piece of software which first needs to be installed on computers. Once installed, no Internet connection is needed to run it. All installation instructions are provided online via GD.



Important note about GD Desktop: EPPO GD Desktop does not contain EPPO Standards, PRAs and other EPPO pest-specific documents (these are only available via the EPPO Global Database). EPPO GD Desktop is updated at intervals and not in a real-time mode (version date is indicated).

Left hand-side menu

The left hand-side menu is a contextual menu where buttons appear only if information is available. The menu may be different for pests or plants (e.g. 'host plants' & 'host commodities' to reflect the fact that pests are associated with their host plants and parts of them; 'pathways' to reflect the fact that plants can transport pests).



See above examples of menus for: a) a regulated pest, *Popillia japonica;* b) an invasive alien plant, *Eichhornia crassipes*, c) a cultivated plant, *Solanum tuberosum*.

Additional information about the green bar menu 'Reporting Service'

Each issue of the EPPO Reporting Service is stored in the database in English and French (as PDF files and back to 1974). In addition, every month and after being sent to all subscribers by email, individual articles of the EPPO Reporting Service (English version only) are transferred into GD by the EPPO Secretariat.



Home Standards - Photo EPPO Reporting Ser		Download the EPPO Reporting Service (PDF) in English or French.
	Num. Title	
Year: 2019 Num: 05	091 EPPO Q-bank: a new database maintained within the EPPO framework	
Num: 05	092 New data on-quarantine pests and pests of the EPPO Alert List	Click on the links to read
Download whole issue 💥	993 New BBCH growth stage keys	
Download whole issue	094 Recommendations to policy makers from Euphresco projects	the individual articles (in
	095 EPPO report on notifications of non-compliance	English only).
	096 Bactrocera dorsalis in Italy: more details	
	097 Update on the situation of Anoplophora glabripennis in France	
	098 Update on the situation of Xylotrechus chinensis in France	
	099 Dendroctonus valens: addition to the EPPO Alert List	
	100 First report of 'Candidatus Liberibacter solanacearum' in a potato tuber in Canada	

In the following chapters, the main contents that can be found under the different buttons of the left hand-side menu are presented with guidance on how to search data.

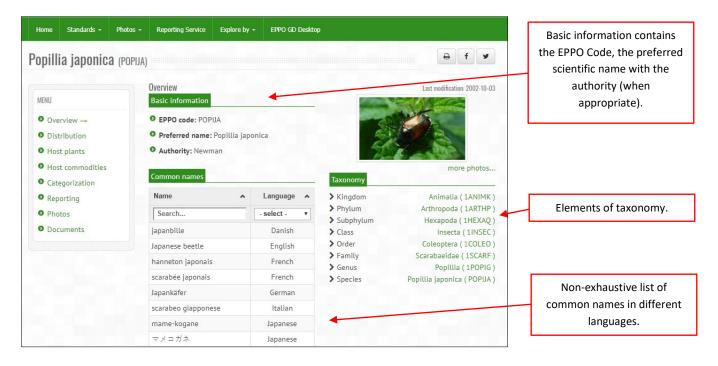
OVERVIEW

In the 'Overview' section, the database provides basic information on individual species (or other higher taxa). As of June 2019, more than 84 000 species are included in GD:

- 47 000 plant species (cultivated, wild, weeds);
- 26 000 animal species (e.g. insects, mites, nematodes, rodents), biocontrol agents;
- 11 000 microorganism species (e.g. bacteria, phytoplasmas, fungus, viruses, viroids and viruslike).

For each species, GD contains:

- A preferred scientific name (with authorities, if appropriate);
- Synonyms or other scientific names (also with authorities, if appropriate);
- Common names in different languages;
- Taxonomic position;
- EPPO Codes (for more information see the EPPO website).



When appropriate, a list of synonyms or other names (e.g. acronyms for viruses) is indicated under 'Other scientific names'. Notes on the taxonomy or any other elements concerning the pest / plant concerned can also be inserted in the species 'Overview'.



Important note about the taxonomy displayed in GD: the database is NOT a primary source for taxonomy (classification and nomenclature) and should not be considered as such. The EPPO Secretariat follows different sources (literature, databases) to provide some elements of taxonomy to its users. However, it does not attempt to provide all levels of the taxonomic tree or exhaustive lists of accepted taxa.

For a smaller sub-set of species (more than 1 650), GD provides data on their geographical distribution, host plants, categorization, and documents. These species mainly correspond to:

- pests of the EPPO A1 and A2 lists and of EU Plant Health legislation;
- pests of the EPPO Alert List;
- plants of the EPPO List of invasive alien plants and of EU concern;
- other quarantine pests and invasive plants of interest to other regions of the world.

DISTRIBUTION

opillia japonica (Pi			➡ f ¥ Last updated: 2019-04-05		Dynamic world map (updated
MENU	Distribution		Last updated: 2019-04-05		as soon as new/revised data
• Overview		_			is entered into GD). Buttons
 Distribution → 					are available to print (top
Host plants		A ST AD	A Contraction of the second se		right), enlarge and reduce it.
Host commodities		4.45	and the		
Categorization					
Reporting		, ASA			
 Photos Documents 	-				List of countries which can b
Documents	6				sorted or filtered (use small
OOLS		Se la	· · · · · · · · · · · · · · · · · · ·		arrows and boxes).
🖹 Save map as png	(
🖺 Save map as svg	Legend: O Present O Tra	nsient		4 -	
🖺 Save list as excel file	Continent A Country	State	Status 🗘 🖌		Click here to view more
🖺 Save list as csv file	- select - select -	• select - •	- select - v		details for individual
	America Canada		Present, restricted view		countries (or
	America Canada	British Columbia	Present, few occurrences view		states/provinces for large
	America Canada	New Brunswick	Present, restricted view		
			distribution		countries).
	ort the map itself or the ent file formats (png, svg		into	-, r	
differe stribution details in l	ent file formats (png, svg		into		Pest situation evaluated by the EPPO Secretariat.
differe stribution details in l ituation urrent pest situation	ent file formats (png, svg	g or excel, csv).			
differe stribution details in l ituation urrent pest situation courrences	ent file formats (png, svg taly evaluated by EPPO on the basis	g or excel, csv).			the EPPO Secretariat.
differe stribution details in l ituation urrent pest situation currences rst recorded in: 2014	ent file formats (png, svg taly evaluated by EPPO on the basis	g or excel, csv).			the EPPO Secretariat. Pest status provided by the
differe stribution details in l ituation arrent pest situation courrences rst recorded in: 2014 est status declared b	ent file formats (png, svg taly evaluated by EPPO on the basis	g or excel, csv).			the EPPO Secretariat.
differe stribution details in l ituation urrent pest situation currences rst recorded in: 2014 ist status declared b omments	ent file formats (png, svg taly <u>evaluated by EPPO on the basi</u> 4 <u>y NPPO:</u> Present, subject to offi	s of information dated	2014: Present, few		the EPPO Secretariat. Pest status provided by the
differe stribution details in l ituation urrent pest situation currences rst recorded in: 2014 ist status declared b omments 2PO Reporting Service	ent file formats (png, svg taly evaluated by EPPO on the basis 4 y NPPO: Present, subject to officient ce (2014/179) : first found by a f	s of information dated cial control (2014-10)	2014: Present, few		the EPPO Secretariat. Pest status provided by the
differe stribution details in l ituation urrent pest situation currences rst recorded in: 2014 st status declared b omments PPO Reporting Service e Ticino Valley Natu	ent file formats (png, svg taly evaluated by EPPO on the basis 4 y NPPO: Present, subject to offic ce (2014/179) : first found by a r rral Park, on wild plants (Rubus,	s of information dated cial control (2014-10)	2014: Present, few		the EPPO Secretariat. Pest status provided by the NPPO (if available).
differe stribution details in l ituation urrent pest situation scurrences rst recorded in: 2014 st status declared b omments PPO Reporting Service e Ticino Valley Natu lycine max). Under o	ent file formats (png, svg taly evaluated by EPPO on the basis 4 y NPPO: Present, subject to offic ce (2014/179) : first found by a r rral Park, on wild plants (Rubus,	s of information dated cial control (2014-10)	2014: Present, few		the EPPO Secretariat. Pest status provided by the NPPO (if available). Short summary of the EPP
differe stribution details in l ituation urrent pest situation currences rst recorded in: 2014 st status declared b omments PO Reporting Service e Ticino Valley Natu lycine max). Under co eferences	ent file formats (png, svg taly evaluated by EPPO on the basis 4 y NPPO: Present, subject to offin ce (2014/179) : first found by a f rral Park, on wild plants (Rubus, official control.	s of information dated cial control (2014-10)	2014: Present, few		the EPPO Secretariat. Pest status provided by the NPPO (if available). Short summary of the EPP Reporting Service article (i
differe stribution details in l ituation urrent pest situation currences rst recorded in: 2014 st status declared b omments PO Reporting Service e Ticino Valley Natu lycine max). Under co eferences	ent file formats (png, svg taly evaluated by EPPO on the basis 4 y NPPO: Present, subject to offin ce (2014/179) : first found by a f rral Park, on wild plants (Rubus, official control.	s of information dated cial control (2014-10)	2014: Present, few		the EPPO Secretariat. Pest status provided by the NPPO (if available). Short summary of the EPP Reporting Service article (i
differe stribution details in l ituation urrent pest situation currences rst recorded in: 2014 est status declared b omments PPO Reporting Service e Ticino Valley Natu lycine max). Under of eferences NPPO of Italy (2014- Pavesi M (2014) Popi	ent file formats (png, svg taly evaluated by EPPO on the basis 4 y NPPO: Present, subject to offin ce (2014/179) : first found by a f rral Park, on wild plants (Rubus, official control.	cial control (2014-10) naturalist in July 2014	2014: Present, few along the river Ticino, within , Vitis) and soybean crops		the EPPO Secretariat. Pest status provided by the NPPO (if available). Short summary of the EPP Reporting Service article (i
differe stribution details in li ituation arrent pest situation courrences rst recorded in: 2014 st status declared b omments PPO Reporting Service e Ticino Valley Natu lycine max). Under of eferences NPPO of Italy (2014- Pavesi M (2014) Popi o. 32, 53-55.	ent file formats (png, svg taly evaluated by EPPO on the basis y NPPO: Present, subject to offic real Park, on wild plants (Rubus, official control.	cial control (2014-10) naturalist in July 2014	2014: Present, few along the river Ticino, within , Vitis) and soybean crops		the EPPO Secretariat. Pest status provided by the NPPO (if available). Short summary of the EPP Reporting Service article (i any) and link to full article
differe stribution details in l ituation urrent pest situation currences rst recorded in: 2014 st status declared b omments PO Reporting Service e Ticino Valley Natu lycine max). Under of eferences NPPO of Italy (2014- Pavesi M (2014) Popi 5.32, 53-55. ituation in neighbou	ent file formats (png, svg taly evaluated by EPPO on the basis y NPPO: Present, subject to offic real Park, on wild plants (Rubus, official control.	cial control (2014-10) naturalist in July 2014	2014: Present, few along the river Ticino, within , Vitis) and soybean crops		the EPPO Secretariat. Pest status provided by the NPPO (if available). Short summary of the EPPO Reporting Service article (i any) and link to full article
differe stribution details in l ituation urrent pest situation ccurrences rst recorded in: 2014 est status declared b comments PPO Reporting Service reicino Valley Natu ilycine max). Under co efferences NPPO of Italy (2014-	ent file formats (png, svg taly evaluated by EPPO on the basis y NPPO: Present, subject to offic rea (2014/179) : first found by a i rral Park, on wild plants (Robus, official control. 10). illia japonica specie aliena inva- uring countries	s or excel, csv).	2014: Present, few along the river Ticino, within , Vitis) and soybean crops		Pest status provided by the

As shown in the screen capture above, the distribution of a pest in a specific country is evaluated by the EPPO Secretariat on the basis of the different pieces of information that are available at a given date (which is specified).

In order to ensure consistency within the database, a small number of presence/absence categories are being used. The current distribution categories are as follows:

- Present, no details
- Present, widespread
- Present, restricted distribution
- Present, few occurrences
- Absent, pest no longer present
- Absent, pest eradicated
- Absent, intercepted only
- Absent, invalid record
- Absent, unreliable record
- Absent, no pest record
- Absent, confirmed by survey
- Transient, under eradication

Pest status declared by NPPO: when NPPOs are providing the EPPO Secretariat with an official pest status. Pest status is included under this field. As this is a text field, the exact wording provided by the NPPO can be inserted here. NPPOs are encouraged to follow the guidance given by ISPM 8¹. In the past, when a NPPOs did not communicate any 'official pest status' but only provided a general statement, the information was summarized in another field called **'From NPPO'** which displayed a summary of the pest situation using the standard presence/absence categories (legacy from PQR).

First recorded: when the date of first detection of a pest in the country is known, this is indicated.

Eradication in: when the date of eradication of a pest is known, this is also indicated.

From CABI Pest (or Disease) Map number x (date): EPPO and CABI have a long-standing exchange of information about pest distributions. In particular, EPPO collaborates with CABI in the preparation of the CABI distribution maps of plant pests and distribution maps of plant diseases. Therefore, when a CABI map exists for the pest concerned, the information that is provided by the CABI map is indicated in this particular field (with the number of the map and its year of publication).

Comments: under this section, the EPPO Secretariat can add any comment that is felt useful to better describe the pest distribution in a country. In particular, when an article published in the EPPO Reporting Service provides some additional details, an active link is included. By clicking on this link, the EPPO Reporting Service article can be viewed in full.

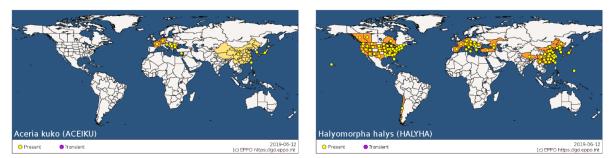
References

All references that have been used to describe the pest distribution are listed under 'References'. They can be bibliographic references, Internet sources and declarations/official notifications made by NPPOs (with a date). Some very short notes may be attached to some references, for example to indicate that it is a first published record, or that it provides detailed names of localities or of particular host plants.

¹ ISPM 8 Determination of pest status in an area. <u>https://www.ippc.int/en/publications/612/</u>

NOTES about world maps:

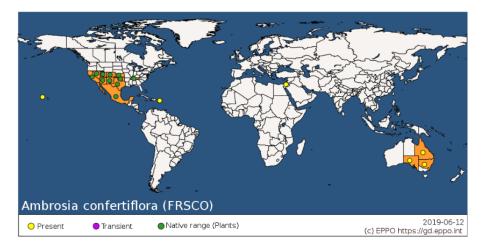
- 1) On world maps, only data on presence is shown by displaying a bright yellow dot on the 'centre' of each country together with an orange background. If it is considered that the pest is transient, this is indicated by a purple dot.
- 2) For large countries (e.g. Australia, Brazil, Canada, China, India, Russia, USA), geographical data is given as far as possible at provinces/states level. However, there may be cases where information is only available at country level. In such cases, the whole country is shown in pale orange instead of orange on the map (see example below).



In this example, as the EPPO Secretariat could not obtain information for individual Chinese provinces, the entire territory of China appears in light yellow with a single dot.

In this example, as information is available for individual Chinese provinces, yellow dots and orange backgrounds are displayed on each province.

3) For invasive alien plants (only) and when the native area is known, this is indicated by a green dot on individual countries.



HOST PLANTS

	Host	S			
MENU		Organism	^	Туре 🗘	List of host plants which ca
Overview		Search		- select -	be sorted or filtered (use
Distribution		Acer (1ACRG)		Minor	small arrows and boxes).
O Host plants →		Aesculus (1AECG)		Minor	
Host commodities		Betula (1BETG)		Minor	
Ocategorization		Castanea (1CSNG)		Minor	
Reporting		Cyperaceae (1CYPF)		Minor	
Photos		Fragaria x ananassa (FRAAN)		Major	
Documents		Glycine max (GLXMA)		Minor	
		Juglans (11UGG)		Minor	
TOOLS		Malus (1MABG)		Minor	
🖺 Save list as excel file		Malus domestica (MABSD)		Major	
🖺 Save list as csv file		Medicago sativa (MEDSA)		Minor	
-		plants (2PLAN)		Unclassified	
		Platanus (1PLTG)		Minor	

The pest/host plant combinations are classed in the following eight categories:

- Major: major host for the pest and economically important plant for the EPPO region.
- Minor: minor host for the pest <u>and/or</u> plant of minor economic importance for the EPPO region. In some cases where a genus has been included in GD in the list of hosts (usually in addition to a list of species), the genus has been listed as 'minor' to indicate that not all species of that genus are necessarily host of the pest.
- Alternate: for organisms which need distinct hosts to complete their life cycle (e.g. some aphids, some rusts).
- Unclassified: insufficient data to make any choice.
- Incidental: rarely or occasionally reported as a host plant.
- Wild/weed.
- Indicator: for pathogens (e.g. herbaceous indicators for viruses).
- Artificial: only in inoculation studies or under laboratory conditions, no records of infection in the field or the environment.

For highly polyphagous pests, non-taxonomic groups of hosts, such as 'plants', 'herbaceous plants' and 'woody plants' can be used.



Important note about the classification of host plants in GD:

Categories have been assigned by the EPPO Secretariat on the basis of available data at the time of entry. They correspond to an evaluation of the biological importance of the host plant for the pest concerned, together with the economic importance of this plant for the EPPO region. These categories do not reflect the complexity of the associations that may exist between a host plant and a pest, nor result from exhaustive literature reviews.

NEW FEATURE: addition of references for host plant records

Since September 2019, references to scientific papers or other sources are given for host plant records. Concerning the past content of GD, it is not realistic to add references for 12 000 existing host records over a short period of time, but this will be done gradually, and all new entries will be substantiated with references.

When references are available for a host plant, this is indicated by a small green icon References can be viewed by simply clicking on the green icon (see example below).



	Hosts				
NENU					
 D Overview D Distribution Host plants → Host commodities Categorization 	correspond to an evaluation of th economic importance of this plan	y the EPPO Secretariat on the basis of a e biological importance of the host pla t for the EPPO region. These categories een a host plant and a pest, nor result fr able in the guide.	nt for the pest concern a do not reflect the cor	ned, together with mplexity of the	
Reporting	Organism		^	Туре	:
Documents	Search			- select -	,
Datasheet	Acacia (1ACAG)			Wild/Weed	
Datasneet	Acalypha chamaedri	folia (ACCRE)		Incidental	
100LS		Simmonds MJS, Collins DW (2018) Potenti re pests: a case study using Scirtothrips d hya (ACCMA)	lorsalis. Journal of Pest		
	Actinidia chinensis (ATICH)		Incidental	
	Allamanda cathartic			Incidental	
	Allium cepa (ALLCE)			Incidental	

HOST COMMODITIES AND PATHWAYS

GD distinguishes between the host plants of a regulated pest (i.e. the plants which it can attack and damage in its area of distribution) and the plant commodities/pathways (e.g. plants for planting, fruits, seeds, cut flowers) liable to carry this pest in international trade. Historically, the host plant information mainly derived from the EPPO datasheets on quarantine pests, while the commodity information came from the EPPO pest-specific phytosanitary requirements (EPPO Standards PM2 – no longer updated but used in the early developments of the database), Annex IV of the EU Directive, and results of EPPO PRAs (Pest Risk Analyses).



As a case by case analysis based on the conclusions of PRAs (or other studies) has to be done by the EPPO Secretariat, the 'host commodities' and 'pathways' lists are available only for the EPPO/EU listed pests.

ırsaphelenchus xy	Host Commodities		₽f¥	List of host commodities which can be sorted or filtered (use
MENU	Туре	^	Host	small arrows and boxes).
• Overview	- select -		Search	
Distribution	bark		Abies (1ABIG)	
Host plants	bark		Cedrus (1CEUG)	
O Host commodities →	bark		Larix (1LAXG)	
Categorization	bark		Picea (1PIEG)	
Reporting	bark		Pinus (1PIUG)	
Photos	bark		Pseudotsuga (1PSTG)	
Documents	cut flowers or branches		Abies (1ABIG)	
	cut flowers or branches		Cedrus (1CEUG)	
	cut flowers or branches		Larix (1LAXG)	
	cut flowers or branches		Picea (1PIEG)	
	cut flowers or branches		Pinus (1PIUG)	
	cut flowers or branches		Pseudotsuga (1PSTG)	
	non-squared wood		Ables (1ABIG)	
	non-squared wood		Cedrus (1CEUG)	

In the database, the following categories are available (some are rarely used and cannot be searched for, as they are not attached to a specific plant species):

- Agricultural machinery
- All commodities
- Bark
- Bulbs or tubers
- Cut flowers or branches
- Fruits or vegetables
- Manufactured articles
- Non-squared wood

- Packaging material
- Plants for planting
- Plant waste
- Pollen
- Seeds
- Soil/growing medium
- Squared wood
- Stored products

Information on host commodities is included at genus level to avoid generating too long lists. However, search tools in GD allow to reflect the fact that species belonging to a genus that is considered to be a host commodity may also act as pathways (see example below).

	ngae pv. actinidiae (
MENU	Host Commodities			
meno	Туре	^	Host	^
 Overview 	- select -	•	Search	
 Distribution 	plants for planting		Actinidia (1ATIG)	
Host plants	pollen		Actinidia (1ATIG)	
O Host commodities →				
Ocategorization				
Reporting				

Plants for planting and pollen of *Actinidia* can be host commodities of *P. syringae* pv. *actinidiae*.

Home	Standards +	Photos -	Reporting Service	Ехφ	lore by -	EPPO GD Desktop								
Actini	dia chiner	<mark>1sis</mark> (atic	H)							•	f	y		
MENU			Pathways											Actinidia chinensis (plants for planting and pollen) can be a
Ove Ove Pest Detter			Commodity - select -	^ •	Pests Search.							^		pathway for moving <i>P. syringae</i> pv. <i>actinidiae</i> as it
	inays -		plants for planting		Pseudom	onas syringae pv. a	a <mark>ctini</mark> diae (a	as Actinidia) (F	PSDMAK)			×		belongs to the genus Actinidia.
			pollen		Pseudom	onas syringae pv. a	actinidiae (a	as Actinidia) (F	PSDMAK)					

Search tips

- 1) To get a list of host plants for a given pest: start your search with a pest and click on 'host plants'.
- 2) To get a list of host commodities for a given pest: start your search with a pest and click on 'host commodities'.
- 3) To get a list of pests associated with a plant: start your search with a plant and click on 'pests'.
- 4) To get a list of **pathways** (associated with a plant) that can transport pests: start your search with a plant and click on 'Pathways'. This list can be filtered by a country, in order to obtain a list of pests that are associated with the different plant commodities AND that are present in the country chosen. See our example below.

1st **step:** Get a list of commodities liable to carry potato pests. Start your search with 'potato' and click on 'Pathways'.

olanum tuberos	um (soltu)		0	ſ	•
	Pathways				
MENU	▼ Filter by country				
OverviewPests	Commodity 🔺	Pests			^
Pathways →	- select -	Search			_/
Reporting	bulbs or tubers	Andean potato latent virus (APLV00)		_	r
• Photos	bulbs or tubers	Andean potato mottle virus (APMOV0)			
	bulbs or tubers	Arracacha virus B oca strain (AVBO00)			
	bulbs or tubers	Boeremia foveata (PHOMEF)			
	bulbs or tubers	Clavibacter michiganensis subsp. sepedonicus (CORBSE)			
	bulbs or tubers	Ditylenchus destructor (DITYDE)			
	bulbs or tubers	Ditylenchus dipsaci (DITYDI)			
	bulbs or tubers	Epitrix cucumeris (EPIXCU)			
	bulbs or tubers	Epitrix tuberis (EPIXTU)			
	bulbs or tubers	Globodera pallida (HETDPA)			
	bulbs or tubers	Globodera rostochiensis (HETDRO)			
	bulbs or tubers	Liberibacter solanacearum (LIBEPS)			

In this example, GD provides a list of pests that can be transported by different potato commodities (e.g. seed and ware potatoes, plants for planting, true seeds, contaminating soil).

2nd step: Filter by country (Argentina in this example) to get a list of potato commodities liable to carry pests from Argentina. You can also get similar information for neighbouring countries (see top right box).

MENU	Pathways			
 Overview Pests Pathways → Reporting 	Argentina	•	No filter Argentina Neighbouring countries	In this example, GD provides a list of pests that can be transported by different potat commodities from Argentina.
• Photos	Commodity 🔺	Pests	· · · · · ·	
	- select -	Search		
	bulbs or tubers	Andean potato latent virus	(APLV00)	
	bulbs or tubers	Ditylenchus dipsaci (DITYD	1)	
	bulbs or tubers	Globodera pallida (HETDPA)	
	bulbs or tubers	Meloidogyne chitwoodi (Mi	ELGCH)	
	bulbs or tubers	Nacobbus aberrans (NACOB	(A)	
	bulbs or tubers	Potato deforming mosaic vi	irus (Argentina) (PDMV00)	
	bulbs or tubers	Ralstonia solanacearum rac	e 3 (PSDMS3)	
	bulbs or tubers	Tomato spotted wilt tospov	irus (TSWV00)	
	fruits or vegetables	Andean potato latent virus	(APLV00)	
	fruits or vegetables	Ditylenchus dipsaci (DITYD	1)	

		reignbourning countries	
Argentina	*	Bolivia	^
		Brazil	
		Chile	
		Paraguay Uruguay	
		Uruquay	-

14

CATEGORIZATION

opillia japonica (PO	JPIJA)			⊖ f ¥	
MENU	Categorization Country/NPPO	List	Year addition Year transfer	Year deletion	
• Overview	Africa				
Distribution	Morocco	Quarantine pest	2018		
 Host plants Host commodities 	Southern Africa	A1 list	2001		
 Categorization → 	America				
Reporting	Canada	Quarantine pest	2019		
• Photos	Chile	A1 list	1995		
Documents	Mexico	Quarantine pest	2018		Note that you can export th
TOOLS	United States of America	Quarantine pest	1989		list in different file format
Save list as excel file	Asia				(excel, csv).
🖺 Save list as csv file	Bahrain	A1 list	2003		
	China	A2 list	1993		
	Israel	Quarantine pest	2009		

This section provides information on the 'quarantine status' of a pest in different countries, as well as for the European Union and the Eurasian Economic Union. For individual countries, the indicated date corresponds to the publication date of the lists of regulated pests.

When appropriate, the status of a pest in the different EPPO lists (EPPO A1 and A2 Lists of pests recommended for regulation as quarantine pests, Alert List, List of Invasive Alien Plants) is also mentioned with the date of first addition, and eventually of transfer and deletion. For the other RPPOs, EPPO has compiled lists of pests recommended for regulation whenever these were available.

Search tips: To view lists of regulated pests for a given country, the EU or a Regional Plant Protection Organization, start your search by 'Explore by countries' (see Introduction – Green bar menu).



Lists of regulated pests are not available for all countries. It must be noted that the Secretariat is still in the process of incorporating quarantine lists that are being made available to EPPO, and it should be stressed that this only represents a small part of the information that is potentially available around the world.

REPORTING

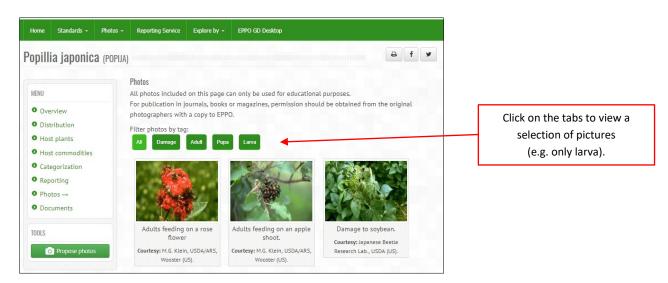
When EPPO Reporting Service articles are available for a given pest, they can be retrieved in this section (back to January 1974). As explained earlier (in the chapter on how to search and navigate), every month and after being sent to all subscribers, all articles of the EPPO Reporting Service (English versions only) are transferred into GD and indexed by the EPPO Secretariat.

opillia japonica (PC)PUA)	🖶 f 🛩	
	Reporting Service articles		Click on the link
Overview	Num. Title	year- month	to read the article
	2019/034 Dead beetle of Popillia japonica found in trap at Schiphol airport (NL)	2019-02	
Distribution	2018/092 Popillia japonica found in Vancouver (British Columbia, Canada)	2018-05	•
Host plants	2018/071 EPPO communication kits: templates for pest-specific posters and leaf		🛗 EPPO Reporting Service no. 02 - 2019 😓 Num. article: 2019/03
Host commodities	2017/160 First report of Popillia japonica in Switzerland	Dead beetle of Popillia japo	onica found in trap at Schiphol airport (NL)
• Categorization	2016/026 Harmful organisms in the European Union: Annual report 2014	In 2018-09-11, a dead female beetle was f	found, caught in a pheromone trap which was located at the cargo platform of the Schiphol airpc
Reporting →	2014/179 First report of Popillia japonica in Italy		Netherlands. In 2018-09-17, the beetle was identified as <i>Popillia japonica</i> (Coleoptera: Rutelidae art of a trapping network located at the airport (14 traps in 2018) and these specific surveys ha
Photos	2005/074 Pests absent in Slovakia		ance will be intensified with approximately 20 traps/km² within a range of 1 km around the findi
 Documents 	2003/018 Finding of Popillia japonica in Nova Scotia, Canada		Netherlands is officially declared as: Absent, intercepted only.
	2000/129 New data on quarantine pests and pests of the EPPO Alert List	Sources	
	1999/165 Pest distribution in Canada	NPPO of the Netherlands (2018-09).	
	1997/83 Detailed situation of Popillia japonica in USA	INTERNET	
	1996/209 Details on the geographical distribution of beetles of plant quarantine importance in Canada and Alaska		uthorhy. (2018-09-26) Pest report first finding of a single dead female beetle of Popillio ant/clant-health/cest-recorting/documents/cest-recort-first-finding-of-a-single-dead-female-beetle-of-popillia-
	1993/39 Soil moisture and soil texture preferences of Popillia japonica	1993-02	

Search tips: by using the advanced search tools (at the top of the screen), you can search through the 'full text' of the EPPO Reporting Service articles. In the 'Search for' box, choose 'Full text search', and indicate the term (English only) you are interested in as shown below. You will then obtain a list of Reporting Service articles where the term chosen has been used (either in the title of the article or its full text).

Q potatoes	Search results - 500 record(s) found				
DVANCED SEARCH CRITERIA	Reporting	Num	Title		
earch for	06-1997	1997/111	Situation of Ralstonia solanacearum in the EPPO region (latest update)		
Names or EPPO codes	02-2001	2001/037	Tecia solanivora: addition to the EPPO Alert List		
Search for taxon Names or EPPO codes	02-1996	1996/36	NAPPO quarantine lists for potato pests		
Preferred names only Names only EPPO codes only	01-1996	1996/02	Situation of Burkholderia (Pseudomonas) solanacearum in the EPPO region		
Full text search	05-2004	2004/077	Surveys on quarantine pests done in Bulgaria from 2001 to 2003		
Reporting services nguage	05-2014	2014/088	Incursion of Potato spindle tuber viroid in potato breeding material in the Netherlands		
All The second s	08-2015	2015/148	Andean potato latent virus (APLV) split into Andean potato latent virus (APLV) and Andean potato mild mosaic virus (APMMV)		
ок	03-2004	2004/045	USA officially declare the absence of Potato spindle tuber pospiviroid in seed potato production		
	02-2009	2009/035	Macroarray detection of potato viruses and Potato spindle tuber viroid		

PHOTOS



Whenever pictures are available, they can be viewed together with the name(s) of the photographer(s) and a small legend. If you wish, you can enlarge each picture by clicking on the thumbnail image. Please note that all pictures can be used for educational purposes only. For publication in commercial journals, books, magazines, and websites, permission should be obtained from the original photographers and copy in EPPO.

The EPPO Secretariat warmly thanks all photographers who have kindly provided their photos (as of June 2019, more than 8 000 photos are included in GD). As more pictures of plants, pests and diseases are always welcome, online tools have been developed to allow users to submit photos (see our guide on how to submit photos).

DOCUMENTS

g <mark>rilus anxius</mark> (agrl	AX)		₽f	
	Associated EPPO	Associated EPPO Standards		
MENU	Number	Title	Download	
 Overview Distribution 	PM1/002(27)	EPPO A1 and A2 Lists of pests recommended for regulation as quarantine pests (2018)	Download +	
Host plants	PM8/006(1)	Betula	Download +	
 Host commodities Categorization 	Associated docu	Associated documents		
Reporting	EPPO Datasheets			
Photos	Lang	Title	Download	
● Documents →		Data sheet on Agrilus anxius 🗩	Download	
	EPPO PRAs			
	Lang	Title	Download	
		PRA record for Agrilus anxius	Download	
		PRA report for Agrilus anxius	Download	

In this section, you can retrieve all pest-specific documents (as PDF files) that EPPO has produced:

- All EPPO Standards except PP1²;
- EPPO datasheets;
- Mini datasheets of pests which were formerly included in the EPPO Alert List;
- EPPO PRAs;
- Prioritization documents prepared for invasive alien plants

Note on datasheets and future plans: the EPPO Secretariat is currently exploring possibilities to present 'dynamic datasheets' in GD, so that the information on pest identity, host plants and geographical distribution could be directly generated by the database and automatically updated. These dynamic datasheets would gradually replace the static PDF datasheets.

² EPPO Standards PP1 – Efficacy Evaluation of Plant Protection Products are maintained in a separate database. In this PP1 database, general Standards can be freely accessed but a subscription is required for specific Standards (i.e. fungicides/bactericides, insecticides/acaricides, herbicides, plant growth regulators, molluscicides, nematicides, rodenticides and side-effects).