

# Information tools to support implementation of Aichi Target 9

- GRIIS Global Register of Introduced and Invasive Species
- Invasive Alien Species Pathway Management Resource
- Global Invasive Species Database and other information systems

Piero Genovesi and Shyama Pagad

17<sup>th</sup> meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA)— Montreal, Canada Global Invasive Alien Species Information Partnership (GIASIPartnership) event



# **Aichi Target 9**

By 2020, invasive alien species and pathways are identified and prioritized,
priority species are controlled or eradicated,
and measures are in place to manage pathways to prevent their introduction and establishment

# **Requires Parties to:**

- Develop lists of species;
- Develop inventories of pathways;
- Assess key species and pathways;

# **GRIIS**

# Global Register of Introduced and Invasive Species

- Developed within GIASIP by IUCN ISSG, with co-funding of the EU, through the Secretariat of the CBD;
- Consulting global/ regional/ national databases/ other sources;
- Merge lists and harmonise information; resolve taxonomy issues;
- Validate lists of species with country experts;
- Identify a country editor who will support with updates in the mediumlong term;



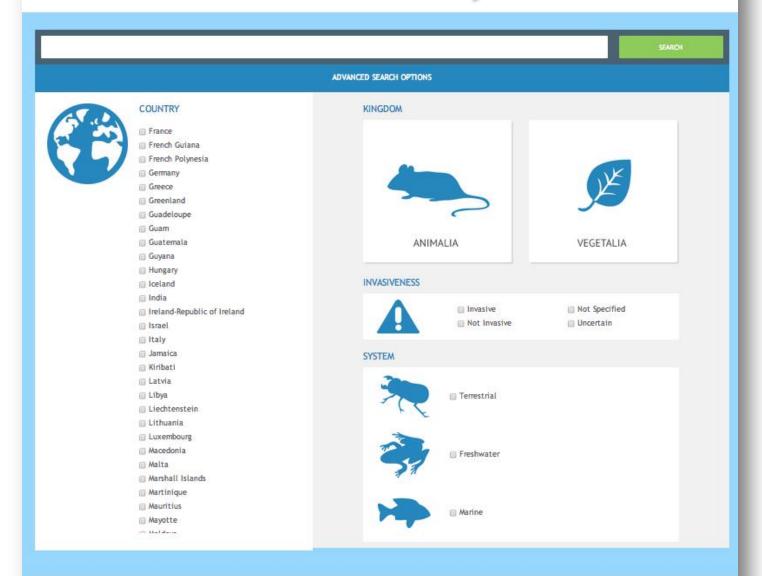
# **GRIIS**

# Global Register of Introduced and Invasive Species

- Over 50 databases consulted, more than 60 experts contacted, > 15 country editors identified;
- 110 countries substantially covered, 32 well covered;

















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GIASIpartnership

GRIIS has been developed with the co-funding from the European Union through the Secretariat of the Convention on Biological Diversity within the framework of the Global Invasive Alien Species Information Partnership (GIASIPartnership). The GIASIPartnership provides support for the implementation of Target 9 of the Aichi Biodiversity Targets - "By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment"

#### ADVANCED SEARCH OPTIONS



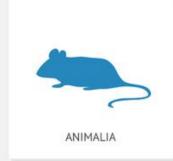
#### COUNTRY

- Scotland
   Scotland
- ☐ Serbia
- Seychelles
- ☐ Sicilia
- Slovakia
- Solomon Islands
- South Africa
- Spain
- St. Eustacius
- St. Maartens
- Suriname
- Svalbard
- Sweden
- Switzerland
- Tokelau
- □ Tonga
- ☐ Trinidad and Tobago
- Tunisia
- □ Turkey



- Tuvalu
- Ukraine United Kingdom
- Uruguay
- Venezuela
- Wallis and Ftunua
- Zimbabwe

### KINGDOM





### INVASIVENESS



- Invasive
- Not Invasive
- Not Specified
- Uncertain

#### SYSTEM



☐ Terrestrial



Freshwater





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### SEARCH RESULTS 85 RESULTS (click here to download this report)

## Achyranthes aspera

Country: TUVALU | | Kingdom: Plantae | | Invasiveness: not specified | | System: terrestrial

- Pacific Island Ecosystems at Risk (PIER) (2013) http://www.hear.org/pier/species/achyranthes\_aspera.htm
- CABI Invasive Species Compendium (ISC) (2013) http://www.cabi.org/isc/?
   compid=5&dsid=2664&loadmodule=datasheet&page=481&site=144

### Aedes aegypti

Country: TUVALU | | Kingdom: Animalia | | Invasiveness: not specified | | System: terrestrial/freshwater

Global Invasive Species Database (GISD) (2013) http://www.issg.org/database/species/ecology.asp?si=1003&fr=1&sts=&lang=EN

### Alocasia macrorrhizos

Country: TUVALU || Kingdom: Plantae || Invasiveness: not specified || System: terrestrial

- Pacific Island Ecosystems at Risk (PIER) (2013) http://www.hear.org/pier/species/alocasia\_macrorrhizos.htm
- CABI Invasive Species Compendium (ISC) (2013) http://www.cabi.org/isc/? compid=5&dsid=4220&loadmodule=datasheet&page=481&site=144

1 2 3 4 5 6 7 8 9 10 11 12 ... NEXT LAST

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COUNTRY

Tuvalu

**\* MODIFY YOUR CRITERIA** 

# **Invasive Species Compendium**

Biology & Ecology



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Datasheets > Achyranthes aspera (devil's horsewhip)

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Bacteria

---Fungi

--Oomycetes

- Plants

--- Protozoa

-Viruses

-Pathway causes

-Pathway vectors

Last modified: 23 August 2013

Datasheet Type(s): Invasive Species, Pest, Host

Plant

Cover

Preferred Scientific Name

Images Identity

Achyranthes aspera

Preferred Common Name

devil's horsewhip

#### Taxonomic Tree

Domain: Eukaryota Kingdom: Plantae

Phylum: Spermatophyta Subphylum: Angiospermae

Class: Dicotyledonae

More...

# Summary of Invasiveness

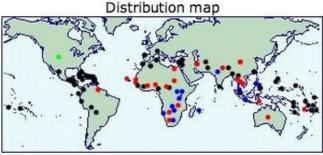
A. aspera can become aggressive outside of its native range and has naturalized widely. It appears to be kept under control in its native range by natural enemies.

**Picture** 

References

Report

click on the picture for further information



click on the map for further information

Impact Summary



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## Achyranthes aspera

Country: TUVALU | | Kingdom: Plantae | | Invasiveness: not specified | | System: terrestrial

- Pacific Island Ecosystems at Risk (PIER) (2013) http://www.hear.org/pier/species/achyranthes\_aspera.htm
- CABI Invasive Species Compendium (ISC) (2013) http://www.cabi.org/isc/? compid=5&dsid=2664&loadmodule=datasheet&page=481&site=144

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### Alocasia macrorrhizos

Country: TUVALU || Kingdom: Plantae || Invasiveness: not specified || System: terrestrial

- · Pacific Island Ecosystems at Risk (PIER) (2013) http://www.hear.org/pier/species/alocasia\_macrorrhizos.htm
- CABI Invasive Species Compendium (ISC) (2013) http://www.cabi.org/isc/? compid=5&dsid=4220&loadmodule=datasheet&page=481&site=144

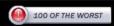
1 2 3 4 5 6 7 8 9 10 11 12 ... NEXT LAST

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Species name Country or Id	ocation Habitat	Organism type			
	Trabitat	Organism type			
	all	‡ all	<b>‡</b> GO ►		

# Aedes aegypti (insect)

Ecology <u>Distribution</u>

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PRINTER VERSION

#### Interim profile, incomplete information

Taxonomic name: Aedes aegypti

Synonyms: Culex aegypti Linnaeus, 1762, Culex albopalposus Becker, 1908, Culex anguste-alatus Becker, 1908, Culex annulitarsis Macquart, 1844, Culex argenteus Poiret, 1787, Culex augens Wiedemann, 1828, Culex calopus Meigen, 1818, Culex elegans Ficalbi, 1889, Culex exagitans Walker, 1856, Culex excitans Walker, 1848, Culex fasciatus Fabricius, 1805, Culex frater Robineau-Desvoidy, 1827, Culex inexorabilis Walker, 1848, Culex insatiabilis Bigot, 1859, Culex kououpi Brulle, 1833, Culex rossii Giles, 1889, Culex taeniatus Wiedemann, 1828, Culex toxorhynchus Macquart, 1838, Culex viridifrons Walker, 1848, Duttonia alboannulis Ludlow, 1911, Mimeteomyia pulcherrima Taylor, 1919, Stegomyia atritarsis Edwards, 1920, Stegomyia canariensis Pittaluga, 1905, Stegomyia luciensis Theobald, 1901, Stegomyia nigeria Theobald, 1901, Stegomyia nigeria Theobald, 1901, Stegomyia nigeria Theobald, 1901, Stegomyia luciensis Theobald, 1901,

Common names: stégomyie (French), yellow fever mosquito

Organism type: insect

The yellow fever mosquito Aedes aegypti is very common in urban and suburban areas in the tropic and subtropic regions. It is adapted to close association with humans and the female feeds almost exclusively on human blood. A. aegypti is the domestic vector of the yellow fever virus, caused epidemics of yellow fever in the Americas (before the 1940's) and recently in West Africa, and is responsible for 'urban yellow fever' - direct transmission of the virus between humans. A. aegypti is also the most important carrier of the dengue virus, although it is not paticularly susceptible to viral infection compared with other mosquito species.

#### Occurs in:

urban areas

#### Geographical range

Native range: Africa. (Soper 1967).

Known introduced range: American Samoa, Anguilla, Antigua & Barbuda, Argentina, Aruba, Australia, Bahamas, Barbados, Belize, Brazil, Bolivia, British Virgin Islands, Cambodia, Cayman Islands, China, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Fiji, French Guiana, Grenada, Guadeloupe, Guatemala, Guyana, Haiti, Hawaii, Honduras, India, Indonesia, Laos, Malaysia, Martinique, Mexico, Monsterrat, Myanmar, Netherlands Antilles, New Caledonia, Nicaragua, Niue, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Puerto Rico, St. Barthelemy, St. Kitts & Nevis, St. Lucia, St. Martin, St. Vincent & the Grenadines, Samoa, Singapore, Solomon Islands, Sri Lanka, Suriname, Thailand, Timor-Leste, Trinidad & Tobago, Tokelau, Tonga, Turks & Caicos Islands, Tuvalu, United States, Uruguay, Vanuatu, Venezuela. Vietnam, Virgin Islands, Wallis & Futuna. (Gubler 1998).

Compiled by: IUCN SSC Invasive Species Specialist Group (ISSG) with support from the Overseas Territories Environmental Programme (OTEP) project XOT603, a joint project with the Cayman Islands Government - Department of Environment

To contribute information, please contact Shyama Pagad.

Last Modified: Monday, 17 July 2006



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#### SEARCH RESULTS 85 RESULTS (click here to download this report)

### Banana bunchy top virus

Country: TUVALU | | Kingdom: Animalia | | Invasiveness: invasive | | System: terrestrial

- Global Invasive Species Database (GISD) (2013) http://www.issg.org/database/species/ecology.asp?si=141&fr=1&sts=&lang=EN
- CABI Invasive Species Compendium (ISC) (2013) http://www.cabi.org/isc/? compid=5&dsid=8161&loadmodule=datasheet&page=481&site=144

#### Bemisia tabaci

Country: TUVALU | | Kingdom: Animalia | | Invasiveness: not specified | | System: terrestrial

- Global Invasive Species Database (GISD) (2013) http://www.issg.org/database/species/ecology.asp?si=106&fr=1&sts=&lang=EN
- CABI Invasive Species Compendium (ISC) (2013) http://www.cabi.org/isc/? compid=5&dsid=8927&loadmodule=datasheet&page=481&site=144

#### Canna indica

Country: TUVALU || Kingdom: Plantae || Invasiveness: not specified || System: terrestrial

- Global Invasive Species Database (GISD) (2013) http://www.issg.org/database/species/ecology.asp?si=640&fr=1&sts=&lang=EN
- Pacific Island Ecosystems at Risk (PIER) (2013) http://www.hear.org/pier/species/canna\_indica.htm
- CABI Invasive Species Compendium (ISC) (2013) http://www.cabi.org/isc/? compid=5&dsid=14575&loadmodule=datasheet&page=481&site=144

YOUR SEARCH CRITERIA

COUNTRY

Tuvalu

✗ MODIFY YOUR CRITERIA

# Pacific Island Ecosystems at Risk (PIER)

[back] [PIER species lists] [PIER home]

# Canna indica

L., Cannaceae









Present on Pacific Islands? yes

Primarily a threat at high elevations? no

Risk assessment results: High risk, score: 17 (Go to the risk assessment)

Other Latin names: Canna cinea Mill.; (Inna edulis Ker Gawl.; Canna limbata Roscoe; Canna lutea Mill.

Common name(s): [more details]

Chamorro: mongos halum-tano

Chinese: mei ren jiao

Chuukese: apeellap, oruuru, yapellap, yoruuru

English: African arrowroot, arrowroot, canna, edible canna, Indian shot, purple arrowroot, Queensland arrowroot, red canna, Sierra Leone arrowroot, wild canna

Fijian: gasau ni ga, ngasau ni nga

French: balisier comestible, tous-les-mois

Hawaiian: ali'ipoe, li'ipoe, poloka

I-Kiribati: te riti Japanese: dandoku Mangarevan: corona

Maori (Cook Islands): nūāenga, nuāēnga, pia renga, tiare papa'ā

Marshallese: an

# Canna indica

# RISK ASSESSMENT RESULTS: High risk, score: 17

Australian/New Zealand Weed Risk Assessment adapted for Hawai'i.

Information on Risk Assessments

Original risk assessment

Can arro can Diet	Answer	Score		
1.01	Is the species highly domesticated?	y=-3, n=0	У	-3
1.02	Has the species become naturalized where grown?	y= 1, n=-1	у	1
1.03	Does the species have weedy races?	y=1, n=-1	у	1
2.01	Species suited to tropical or subtropical climate(s) (0-low; 1-intermediate; 2-high) – If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"	See Append 2	2	
2.02	Quality of climate match data (0-low; 1-intermediate; 2-high) see appendix 2		2	
2.03	Broad climate suitability (environmental versatility)	y=1, n=0	У	1
2.04	Native or naturalized in regions with tropical or subtropical climates	y=1, n=0	У	1
2.05	Does the species have a history of repeated introductions outside its natural range? y=-2	?=-1, n=0	у	
3.01	Naturalized beyond native range y = 1*multiplier (see Append 2), n= question 2.05		У	2
3.02	Garden/amenity/disturbance weed y = 1*multiplier (see Append 2)	n=0	у	2
3.03	Agricultural/forestry/horticultural weed y = 2*multiplier (see Append 2)	n=0		
3.04	Environmental weed y = 2*multiplier (see Append 2)	n=0		
3.05	Congeneric weed y = 1*multiplier (see Append 2)	n=0	у	2
4.01	Produces spines, thorns or burrs	y=1, n=0	n	0
4.02	Allelopathic	y=1, n=0	n	0
4.03	Parasitic	y=1, n=0	n	0
4.04	Unpalatable to grazing animals	y=1, n=-1	n	-1
4.05	Toxic to animals	y=1, n=0	n	0
4.06	Host for recognized pests and pathogens	y=1, n=0	У	1

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ADVANCED SEARCH OPTIONS COUNTRY KINGDOM III marta Marshall Islands Mayotte Moldova Morocco
 ANIMALIA VEGETALIA Namibia Nauru
 ■ Nauru
 Netherlands INVASIVENESS New Caledonia □ Nigeria ☐ Invasive Not Specified Niue ■ Not Invasive Uncertain Northern Ireland ■ Norway SYSTEM Palau Papua New Guinea Paraguay □ Terrestrial Peru Pitcaim ■ Saba ☐ Saint Barthelemy (France) Saint Lucia Saint Martin (France) ☐ Saint Pierre & Miquelon ■ Marine Tuvalu Ukraine



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### SEARCH RESULTS 388 RESULTS (click here to download this report)



## Acacia auriculiformis

Country: MAYOTTE | | Kingdom: Plantae | | Invasiveness: invasive | | System: terrestrial

- IUCN Les espèces envahissantes en outre-mer http://www.especes-envahissantes-outremer.fr/autoComplete/index.php
- Pacific Island Ecosystems at Risk (PIER) (2013) http://www.hear.org/pier/species/acacia\_auriculiformis.htm
- IUCN Red List of Threatened Species http://www.iucnredlist.org/details/19891902/0

# Acacia farnesiana

Country: MAYOTTE | | Kingdom: Plantae | | Invasiveness: invasive | | System: terrestrial

- IUCN Les espèces envahissantes en outre-mer http://www.especes-envahissantes-outremer.fr/autoComplete/index.php
- Global Invasive Species Database (GISD) (2013) http://www.issg.org/database/species/ecology.asp? si=49&fr=1&sts=&lang=EN
- Pacific Island Ecosystems at Risk (PIER) (2013) http://www.hear.org/pier/species/acacia\_farnesiana.htm

# Acacia mangium

Country: MAYOTTE | | Kingdom: Plantae | | Invasiveness: invasive | | System: terrestrial

- IUCN Les espèces envahissantes en outre-mer http://www.especes-envahissantes-outremer.fr/autoComplete/index.php
- Global Invasive Species Database (GISD) (2013) http://www.issg.org/database/species/ecology.asp? si=1662&fr=1&sts=&lang=EN

YOUR SEARCH CRITERIA

COUNTRY

Mayotte Saint Lucia Tuvalu

X MODIFY YOUR CRITERIA

1	A	В	C	D	E	F	G
1	Country	COUNTRY	Species name	Kingdom	terrestrial, freshwater, marine, host	Invasiveness	REF CODE
2	MAYOTTE	MYT	Acacia auriculiformis	Plantae	terrestrial	invasive	5, 9, 311
3	MAYOTTE	MYT	Acacia farnesiana	Plantae	terrestrial	invasive	5, 10, 11
4	MAYOTTE	MYT	Acadia mangium	Plantae	terrestrial	invasive	5, 12
5	SAINT LUCIA	LCA	Aceria guerreronis	Animalia	terrestrial	invasive	8
6	MAYOTTE	MYT	Achyranthes aspera	Plantae	terrestrial	invasive	6, 13
7	TUVALU	TUV	Achyranthes aspera	Plantae	terrestrial	not specified	13, 361
8	MAYOTTE	MYT	Acridotheres tristis	Animalia	terrestrial	uncertain	5, 6, 14, 312
9	SAINT LUCIA	LCA	Adenanthera pavonina	Plantae	terrestrial	invasive	8, 15, 16
10	MAYOTTE	MYT	Adenanthera pavonina	Plantae	terrestrial	invasive	6, 15, 16
11	SAINT LUCIA	LCA	Aedes aegypti	Animalia	terrestrial/freshwater	invasive	8, 17
12	TUVALU	TUV	Aedes aegypti	Animalia	terrestrial/freshwater	not specified	17
13	MAYOTTE	MYT	Aedes albopictus	Animalia	terrestrial	invasive	5, 18
4	MAYOTTE	MYT	Agapornis canus	Animalia	terrestrial	not specified	5, 313
15	MAYOTTE	MYT	Agapornis pullarius	Animalia	terrestrial	not specified	5, 314
16	MAYOTTE	MYT	Ageratum conizoides	Plantae	terrestrial	invasive	5, 19, 20
17	MAYOTTE	MYT	Albizia chinensis	Plantae	terrestrial	invasive	5
18	SAINT LUCIA	LCA	Albizia lebbeck	Plantae	terrestrial	invasive	8, 21, 22
19	MAYOTTE	MYT	Albizia lebbeck	Plantae	terrestrial	invasive	6, 21, 22
20	MAYOTTE	MYT	Aleurites moluccana	Plantae	terrestrial	invasive	5, 23, 24
21	TUVALU	TUV	Alocasia macrorrhizos	Plantae	terrestrial	not specified	25, 360
22	TUVALU	TUV	Alternanthera sessilis	Plantae	terrestrial/freshwater	not specified	26, 27
23	TUVALU	TUV	Amaranthus blitum	Plantae	terrestrial	not specified	28
24	TUVALU	TUV	Amaranthus viridis	Plantae	terrestrial	not specified	29
25	SAINT LUCIA	LCA	Amazona amazonica	Animalia	terrestrial	invasive	8, 310

# **GRIIS**

# Global Register of Introduced and Invasive Species

- Validation process is crucial as incorrect data will have implications maybe on trade etc;
- Ex coconut beetle in Niue: one of 6
   databases list the beetle as being
   present. Experts considered it wrong;
- Focus on island nations and Asia.
- List of Norway is the gold star standard
- Scarce info for marine biome; project with the World Register of marine species is feeding information to GRIIS
- Global coverage by mid 2014, country lists validated and complete.
- Additional information collated on evidence of impact



# Increasing interoperability and access





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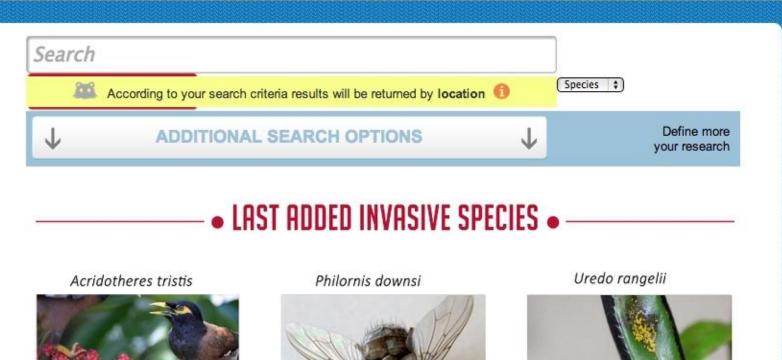
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The Global Invasive Species Database is managed by the Invasive Species Specialist Group (ISSG) of the IUCN Species Survival Commission. It was developed as part of the global initiative on invasive species led by the Global Invasive Species Programme (GISP), and has been redesigned in 2013 with support from the Abu Dhabi Environment Agency, the Italian Ministry of Environment and ISPRA - the Institute for Environmental Protection and Research, Italy. Conditions of use.



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According to your search criteria results will be returned by location 📵



Species \$



ADDITIONAL SEARCH OPTIONS



Define more your research

# LAST ADDED INVASIVE SPECIES • -

# Acridotheres tristis



Philornis downsi



Uredo rangelii











The Global Invasive Species Database is managed by the Invasive Species Specialist Group (ISSG) of the IUCN Species Survival Commission. It was developed as part of the global initiative on invasive species led by the Global Invasive Species Programme (GISP), and has been redesigned in 2013 with support from the Abu Dhabi Environment Agency, the Italian Ministry of Environment and ISPRA - the Institute for Environmental Protection and Research, Italy. Conditions of use.



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The research found 3 species in 1 page

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Rattus exulans (kiore, Kleine Pazifikratte, Maori rat, Pacific rat, Polynesian rat, tikus Polynesia)

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Mammalia	Rodentia	Muridae
CAR TSCARGAR	F100 100 100 100 100 100 100 100 100 100		DOMESTICAL DEPOSITION	2009883800000000

System: Terrestrial

<u>Rattus norvegicus</u> (brown rat, common rat, isorotta, Norway rat, pouhawaiki, Rata de noruega, rata noruega, rat surmolot, ratto di fogna, ratto grigio, rotta, sewer rat, surmolotto, tikus riul, topo delle fogne, Wanderratte, water rat)

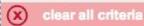
Animalia Chordata Mammalia Rodentia Murida	Animalia Chordata M		Mammalia	Animalia
--	---------------------	--	----------	----------

Rattus rattus (black rat, blue rat, bush rat, European house rat, Hausratte, roof rat, ship rat)

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Mammalia	Rodentia	Muridae

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#### Rattus exulans

System: Terrestrial

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Mammalia	Rodentia	Muridae

IMPACT



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GENERAL

Kleine Pazifikratte (German), kiore (Maori), Maori rat (English), Pacific rat (English), Polynesian rat (English), tikus Polynesia English, Indonesia)

MANAGEMENT

Mus exulans , Peale, 1848 Mus maorium, Hutton, 1877, 1879

ISTRIBUTION

Rattus norvegicus SIMILAR SPECIES

#### SPECIES DESCRIPTION

The Pacific rat (Rattus exulans) is the smallest of the three rats (Rattus us and R. exulans) closely associated with humans. R. exulans has a slender body, pointed snout, large ears, and relatively small, delicate feet. A ruddy brown back contrasts with a whitish belly. Mature individuals are 4.5 to 6 inches long (11.5 to 15.0cm) from the tip of the nose to the base of the tail and weigh 1.5 to 3 ounces (40 to 80 g). The tail has prominent fine scaly rings and is about the same length as the head and body. Female R. exulans have 8 nipples, compared to 10 and 12 nipples normally found on R. rattus and R. norvegicus, respectively (Tobin 1994). Morphology (skull size) of R. exulans has been shown to vary with latitude (Bergman's rule: geographic races of species with smaller body size are found in warmer parts and larger body size in colder parts of the species range) and island size. This effect is most pronounced in the tropics (Atkinson and Towns 2001)

A useful feature distinguishing them from other rats is the dark outer edge of the upper side of the hind foot near the ankle, the remainder of the foot being pale.

#### BE NOTES

The larger species of Rattus rattus and Rattus norvegicus are known to displace the Pacific rat (Rattus exulans) from its environmental wintern Deny, mature marking are 4.0 to 0 mores rong (11.0 to 15.0cm) from the tip of the nose to the base of the tail and weigh 1.5 to 3 ounces (40 to 80 g). The tail has prominent fine scaly rings and is about the same length as the head and body. Female R. exulans have 8 nipples, compared to 10 and 12 nipples normally found on R. rattus and R. norvegicus, respectively (Tobin 1994). Morphology (skull size) of R. exulans has been shown to vary with latitude (Bergman's rule: geographic races of species with smaller body size are found in warmer parts and larger body size in colder parts of the species range) and island size. This effect is most pronounced in the tropics (Atkinson and Towns 2001).

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#### **E** NOTES

The larger species of Rattus rattus and Rattus norvegicus are known to displace the Pacific rat (Rattus exulans) from its environmental niche (Spennemann, 1997).

The Polynesian rat is thought to have originated from the Malayar region, and to have been deliberately introduced to many islands by Polynesians who considered it a valuable food source (Spennemann,

Compiler: IUCN SSC Invasive Species Specialist Group Updates with support from the Overseas Territories Environmental Programme (OTEP) project XOT603, a joint project with the Cayman Islands Government - Department of Environment

#### Review:

Pubblication date:

#### HABITAT DESCRIPTION

Pacific rats can live in a wide range of habitats including grassland, scrub and forest, however they do require adequate food supplies and shelter (especially in temperate latitudes). They are able to climb trees easily where at least some of their feeding is done, but are not good swimmers. Snap trap success results have shown annual cycles in the abundance of R. exulans on Tiritiri Island in New Zealand. R. exulans are predominantly nocturnal, but become active just before dark during times of high density.

REFERENCE

Husking stations have been found amongst tree roots, within wide fissures in tree trunks at ground level, amongst rock piles, under the enlarged bases of fronds shed from nikau palms, and occasionally up trees - all characteristically dry places (Campbell et al., 1984). Rattus exulans is considered to be a fairly sedentary animal with a limited home range (Spennemann, 1997).

#### **REPRODUCTION**

Placental, sexual. Females are polyestrous and ovulate spontaneously. Breeding largely determined by food availability. Litter size normally 6 - 11, gestation is 21-24 days, young weaned at about 28 days. Females can be sexually active in the season of their birth, and can have up to six litters a year (Wittenberg, R. (ed.) 2005). In New Zealand, the Norway rat has been observed breeding throughout abundance of R. exulans on Tiritiri Island in New Zealand, R. exulans are predominantly nocturnal, but become active just before dark during times of high density.

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### PATHWAY

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec eget tellus commodo, imperdiet urna a, commodo justo,









The Global Invasive Species Database is managed by the Invasive Species Specialist Group (ISSG) of the IUCN Species Survival Commission. It was developed as part of the global initiative on invasive species led by the Global Invasive Species Programme (GISP), and has been redesigned in 2013 with support from the Abu Dhabi Environment Agency, the Italian Ministry of Environment and ISPRA - the Institute for Environmental Protection and Research, Italy. Conditions of use.

CONTACT GENERAL DISTRIBUTION IMPACT MANAGEMENT REFERENCE LOCATIONS Countries (or multi-country features) with distribution records for Rattus exulans **ALIEN RANGE NATIVE RANGE** South East Asia [2] Australia [1] Chile [15] Cook Islands [19] FIII [34] French Polynesia [1] Guam [1] India [5] Indonesia [1] Japan [27] Kiribati [1] Malaysia [33] Marshall Islands [14] Micronesia, Federated States Of [1] Myanmar [7] New Caledonia [1] New Guinea [68] New Zealand [4] Northern Mariana Islands [8] Pacific - Western Central [3] Palau [28] Papua New Guinea [1] Philippines [8] Pitcairn [4] Samoa [18] Solomon Islands [1] Taiwan [3] Tokelau [5] Tonga [4] Tuvalu [15] United States [2] United States Minor Outlying Islands [8] Vanuatu



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Rattus exulans System : Terrestrial

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Mammalia	Rodentia	Muridae



GENERAL

DISTRIBUTION

**IMPACT** 

MANAGEMENT

REFERENCE

CONTACT

# LOCATIONS > KIRIBATI

Informations on *Rattus exulans* has been recorded for the following locations. Click on the name for additional informations.

# **KIRIBATI**

Location	Invasiveness	Occurrence	Source
Abaiang (Apaiang, Charlotte) Is.	Invasive	Established	SPREP, 2000
Apamama (Hopper) Is.	Invasive	Established	SPREP, 2000
Aranuka (Henderville) Is.	Invasive	Established	SPREP, 2000
Arorai (Hurd) Is.	Invasive	Established	SPREP, 2000
Birnie Is.	Invasive	Established	SPREP, 2000
Butaritari (Taritari, Touching) Is.	Invasive	Established	SPREP, 2000
Canton Is.	Invasive	Established	SPREP, 2000
Caroline Is.	Invasive	Established	SPREP, 2000
Christmas Is. (Kiritimati)	Invasive	Established	SPREP, 2000
Enderbury Is.	Invasive	Established	SPREP, 2000
Gardner (Nikumaroro) Is.	Invasive	Established	SPREP, 2000
Hull (Orona) Is.	Invasive	Established	SPREP, 2000

Details of Rattus exulans in Birnie Is, information





# SPECIES NOTES FOR THIS LOCATION

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# **LOCATION NOTE**

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# MANAGEMENT NOTES FOR THIS LOCATION

### TRAPPING SYSTEM DETAILS

START DATE:XX-XX-XXXX
END DATE:XX-XX-XXXX

TYPE:Lorem STATUS:Ipsum

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Rattus exulans

System: Terrestrial

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Mammalia	Rodentia	Muridae

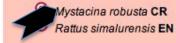


GENERAL DISTRIBUTION IMPACT MANAGEMENT REFERENCE CONTACT

# IMPACT INFORMATION

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Oligosoma suteri LC

Platymantis vitianus EN

View more species

# LOCATIONS

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# MECHRNISM

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# OUTCOMES

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OTHER SEARCH OPTIONS

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#### Home > Mystacina robusta (New Zealand Greater Short-tailed Bat)



# Mystacina robusta

NOT EVALUATED	DATA DEFICIENT	LEAST	NEAR THREATENED	VULNERABLE	ENDANGERED	<pre>CRITICALLY ENDANGERED&gt;</pre>	EXTINCT IN THE WILD	EXTINCT
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Summary | Classification Schemes | Images & External Links | Bibliography | Full Account

### Taxonomy [top]

Kingdom	Phylum	Class	Order	Family
ANIMALIA	CHORDATA	MAMMALIA	CHIROPTERA	MYSTACINIDAE

Scientific Name: Mystacina robusta Species Authority: Dwyer, 1962

Common Name/s:

English - New Zealand Greater Short-tailed Bat

Taxonomy
Assessment Information
Geographic Range
Population
Habitat and Ecology
Threats
Conservation Actions
Bibliography

View Printer Friendly

### Assessment Information [top]

Red List Category & Criteria:	Critically Endangered D ver 3.1
Year Published:	2008
Date Assessed:	2008-06-30
Assessor/s:	O'Donnell, C.
Reviewer/s:	Lamoreux, J. (Global Mammal Assessment Team), Racey, P.A., Medellín, R. & Hutson, A.M. (Chiroptera Red List Authority)
Contributor/s:	

Justification:

Listed as Critically Endangered (Possibly Extinct) because there have been no confirmed reports of this species since it was last seen in 1967 on Big South Cape Island, New Zealand. Recent, unconfirmed reports of bats from this small island and a neighbouring island, however, could be this species and surveys are urgently needed. Should this species be found to persist, its population size would almost certainly be tiny (<50 mature individuals) as would its geographic range.



# Habitat and Ecology [top]

Habitat and Ecology:	Although the habitat preferences of this species are incompletely known, it is presumed to have similar requirements to <i>Mystacina tuberculata</i> in that it was a forest species that was largely restricted to undisturbed old-growth forest. Remains of this species in limestone caves suggest that it roosted in caves, and it is possible that the species also roosted in tree cavities, although there is no direct evidence for this (Lloyd 2001).
Systems:	Terrestrial

# Threats [top]

Major Threat(s):		no indicator a marked decline i		
•		r Pacific Rat ( <i>Rattus exulans</i> ) t		
	probable that this introdu <del>ction largely resulted in the demi</del> se of <i>Mystacina robusta</i> (Lloyd 2001).			

# Conservation Actions [top]

# Conservation Actions:

Rats have been eradicated from both Big South Cape (where the species was last seen) and neighbouring Putauhina Island. Following these eradications, there have been several reports of bat sightings from Putauhina, and in 1999 Colin O'Donnell recorded *Mystacina-like* echolocation calls from the island that do not belong to *M. tuberculata* (O'Donnell 1999). There have also been two unconfirmed reports of bats being seen on Big South Cape. The identity of the bats being seen still must be confirmed, and although *M. tuberculata* is thought to have once inhabited these islands, the nearest populations of it or the only other New Zealand bat species (*Chalinolobus tuberculatus*) are more than 50 km away. For this reason, there is a real possibility that *M. robusta* still survives in low numbers (C. O'Donnell pers. comm.).

Rattus exulans

1611	DI 1	01	0.1	E
Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Mammalia	Rodentia	Muridae



GENERAL DISTRIBUTION IMPACT MANAGEMENT REFERENCE CONTACT

# MANAGEMENT INFORMATION

Rats were successfully eradicated from Ducie and Oeno in 1997 (Brooke, 1998 in Varnham, 2006). Action being considered/required includes total eradication from Pitcairn, and to keep Ducie and Oeno rat-free (Brooke, 1998 in Varnham, 2006; Brooke and Trevelyan, 2003 in Varnham, 2006) and eradication from Henderson (Hilton, 2004 in Varnham, 2006).

# LOCATIONS

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# STRATEGY

# PREVENTION

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System: Terrestrial

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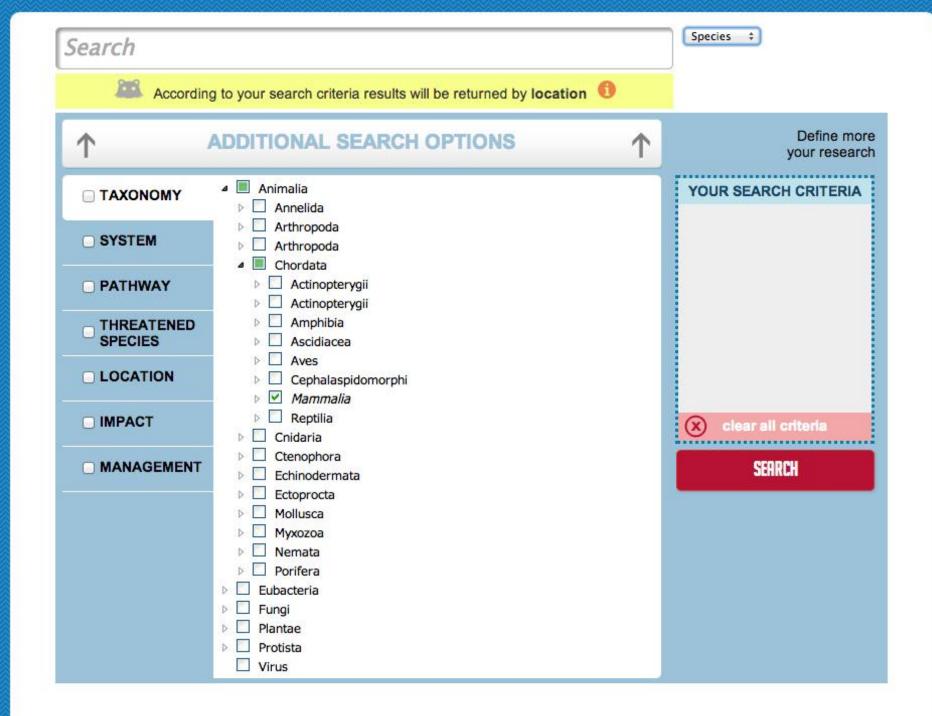
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Clear all criteria

# Search the IUCN Red List

Keywords Taxonomy

Location

Systems

Habitat

NEAR THREATENED

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Threats

Assessment

Life History

Taxa to show:

- Species
- Subspecies and varieties
- Stocks and subpopulations
- Show regional

Taxonomy

E ANIMALIA ANNELIDA

- **⊞** □ ARTHROPODA
- E CHORDATA

  - AMPHIBIA
  - # AVES
  - □ CEPHALASPIDOMORPHI
  - □ CHONDRICHTHYES
  - # MAMMALIA
  - # MYXINI
  - # REPTILIA
  - SARCOPTERYGII
- + CNIDARIA
- ECHINODERMATA
- **⊞** MOLLUSCA

# [X]

### Action to tackle Southeast Asia's Extinction Crisis

assessments

17 September 2013 - Southeast Asia hosts a high proportion of the world's uniquely diverse fauna and flora, but key threats in the region such as habitat loss, hunting and trade continue to drive much of its... more



### Rare and endangered species successfully return to nature

17 September 2013 - Three Montagu's Harrier (Circus pygargus) chicks, found





#### No criteria selected

Select a tab on the left and enter text or select options.

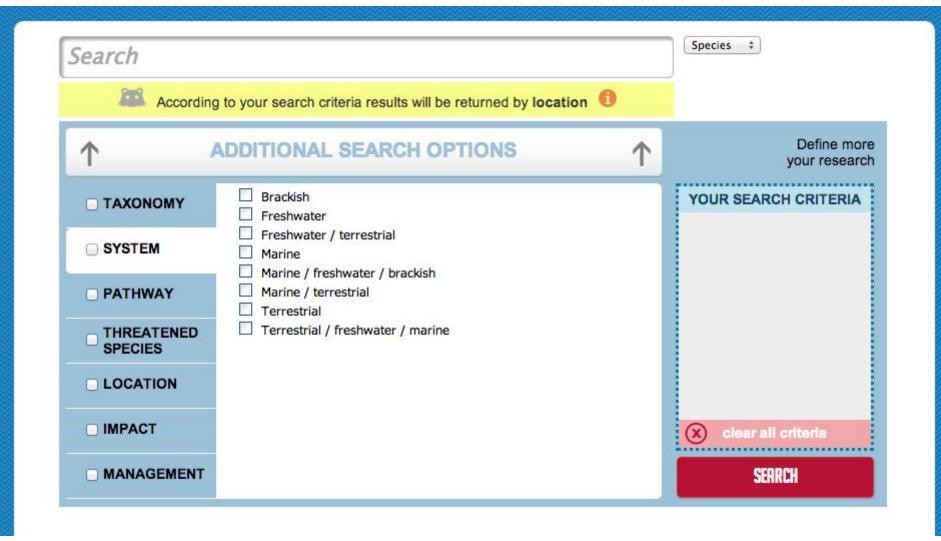
Then, press the arrow button to build your search criteria here.

You may select options from multiple tabs.

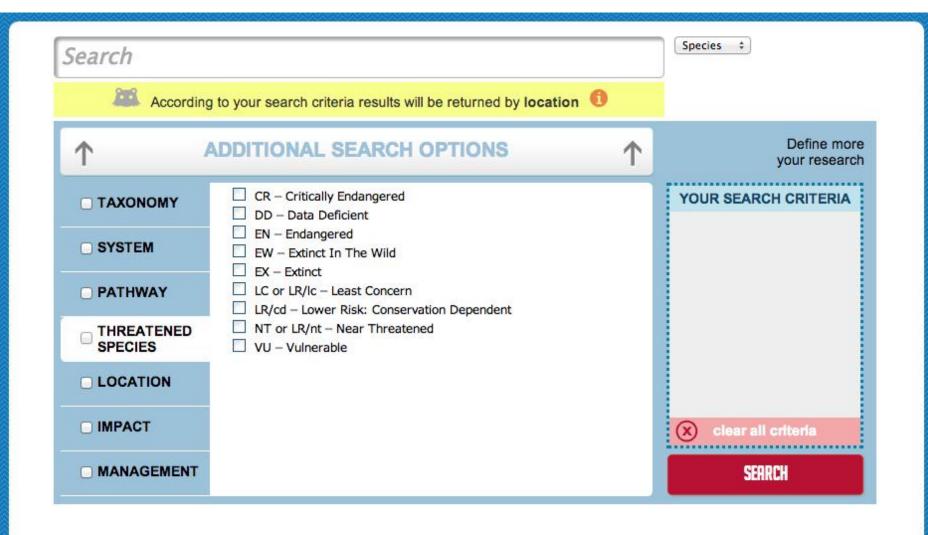
Your selections must appear in this area to be used in your final search.

Click the "Run Search" button below to run your search using the criteria displayed above.

Run search



TAXONOMY SYSTEM PATHWAY THREATENED SPECIES LOCATION IMPACT MANAGEMENT	griculture quaculture quariend animals quaculture	1	YOUR SEARCH CRITERIA
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2013.1

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# Search the IUCN Red List

Keywords Taxonomy

Location

Systems Habitat

Threats

Assessment

Taxa to show:

Subspecies

Stocks and

and varieties

subpopulations

☑ Species

Life History



Major step 03 October

NEAR THREATENED

India, Indon with the ain Urban area

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Show regional assessments

#### Categories

✓ EX – Extinct

✓ EW – Extinct In The Wild ✓ CR – Critically Endangered

✓ EN – Endangered

✓ VU – Vulnerable

✓ LR/cd – Lower Risk: Conservation Dependent

✓ NT or LR/nt – Near Threatened

✓ DD – Data Deficient

✓ LC or LR/Ic – Least Concern

#### Annotations

Under petition

Needs updating (older than 10 years)

#### **Publication Years**

1996 (animals only)

1998 (plants only)

**✓** 2000

**✓** 2002 **✓** 2003

**✓** 2004

**✓** 2006 **✓** 2007

**✓** 2008

**✓** 2009

**✓** 2010

**✓** 2011 **✓** 2012

**✓** 2013

# Your Search Criteria

#### No criteria selected

Select a tab on the left and enter text or select options.

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Run search





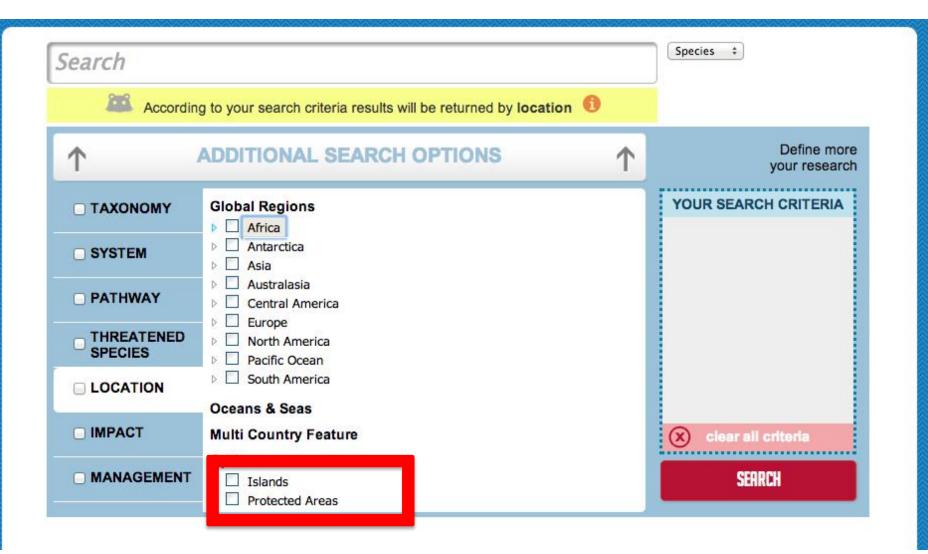
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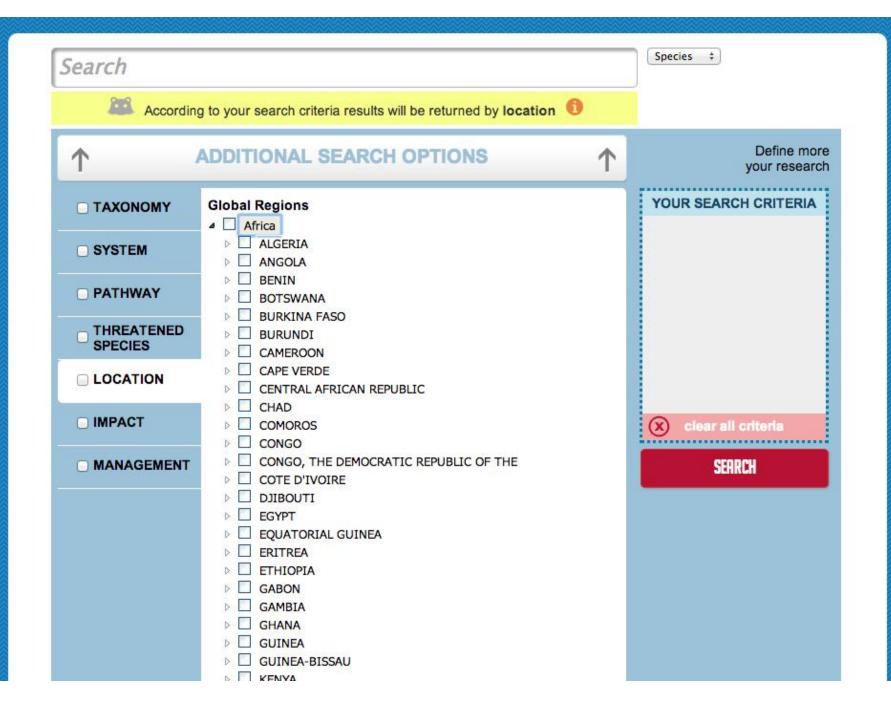


Rare and endangered species successfully return to nature

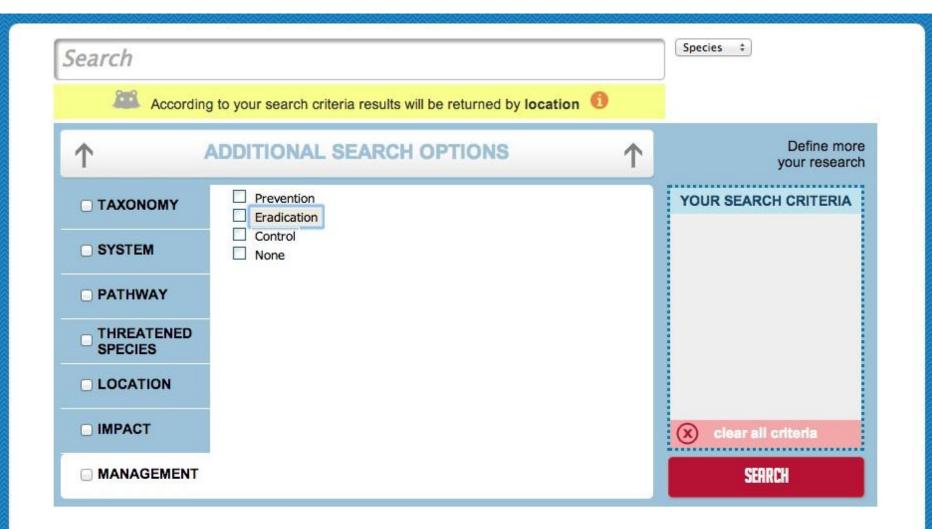
17 September 2013 - Three Montagu's Harrier (Circus pygargus) chicks, found







Search		Species ‡
According	g to your search criteria results will be returned by location	
<b>↑</b>	ADDITIONAL SEARCH OPTIONS   ↑	Define more your research
□ TAXONOMY	<ul> <li>□ Ecosystem Services</li> <li>■ Mechanism</li> </ul>	YOUR SEARCH CRITERIA
SYSTEM	Poisoning/Toxicity Trampling Islammability	
□ PATHWAY	☐ Interaction with other invasive species ☐ Rooting/Digging	
THREATENED	Grazing/Herbivory/Browsing Parasitism Disease transmission	
LOCATION	Competition Bio-fouling	
☐ IMPACT	Hybridisation Predation	⊗ clear all criteria
MANAGEMENT	☐ Other ☐ Outcome ☐ Environmental Species - Population	SEARCH
	Reduces/inhibits the growth of other species Interference with reproduction Species range change Indirect mortality Plant/animal health Alteration of genetic resources Population size decline other Socio-Economic Environmental Ecosystem - Habitat	



First Prev 1 2 3 4 Next Last

Acridotheres tristis (Calcutta myna, common myna, German Indischer mynah, Hirtenmaina, house myna, Indian myna, Indian mynah, manu, manu kaomani, manu kavamani, manu rataro, manu teve, Martin triste, mynah, piru, talking myna)

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Aves	Passeriformes	Sturnidae

System: Terrestrial

Alternanthera sessilis (bhirangijhar, brode chevrette, brede embellage, common roadside weed, dwarf copperleaf, fisi'i'ano, galuti, horng-tyan-wu, joyweed, lianzi cao, magloire, mata kura, mukunuwanna, okula beluulechad, palewawae, periquito-sessil, phak pet thai, sessile joyweed, ti, vao sosolo)

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Magnoliopsida	Caryophyllales	Amaranthaceae

Asterias amurensis (flatbottom seastar, Japanese seastar, Japanese starfish, Nordpazifischer Seestern, northern Pacific seastar, North Pacific seastar, purple-orange seastar)

Kingdom	Phylum	Class	Order	Family
Animalia	Echinodermata	Asteroidea	Forcipulatida	Asteriidae

**Boa constrictor imperator** (boa, boa colombiana, boa constrictora, central American boa, Colombian boa, Colombian redtail boa, common boa constrictor, common northern boa)

Mandan	Dhadaa	Olean	0-4	Familia	
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YOUR SEARCH CRITERIA







#### **GLOBAL INVASIVE SPECIES DATABASE**

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The research found 1235 species in 247 pages

First Prev 1 2 3 4 5 ... Next Last

Aba Samuel Reservoir : Cyprinus carpio

Acambay valley : Cyprinus carpio

Afghanistan: Cyprinus carpio

Afghanistan : Salmo trutta

Afghanistan: Oncorhynchus mykiss

Afghanistan: Hypericum perforatum

Africa: Solenopsis geminata

Africa: Sonchus asper

Alabama: Cyprinus carpio

Alabama: Salmo trutta

Alabama: Oncorhynchus mykiss

Alabama: Solenopsis geminata

Alabama: Sorghum halepense

Alabama: Hypophthalmichthys nobilis

Alabama: Sonchus asper

Alaska: Oncorhynchus mykiss Alaska: Hypericum perforatum

Alaska: Sonchus asper

Albania: Cyprinus carpio

YOUR SEARCH CRITERIA

Taxonomy: animals

Impact: predation





- Developed as a prototype for COP 11, Hyderabad. Encouraging comments by CBD Parties
- Co-funding received by ISSG from EU via SCBD within GIASIPartnership to operationalize
- Inclusion of a back-endDatabase and Search function
- Mapping of Pathway/vector terms

# Invasive Alien Species Pathway Management Resource



The coconut rhinoceros beetle Oryctes rhinoceros is one of the most damaging insects to coconut palms and African oil palm in southern and south- east Asia and the Western Pacific island. The mature beetles bore into the young developing leaf structures of palms with the consequence of reduced productivity, and in young seedlings they can cause death.

Welcome to the Invasive Alien Species Pathway Management Resource

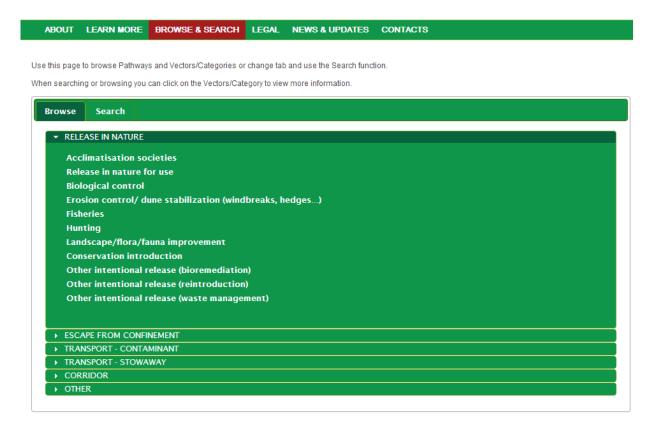
One of the most important types of information in the practical approach to prevention and management of biological invasions is the identity of the pathways of introduction and details of the vectors. These are necessary for the prevention of introduction of potentially invasive species and also for the containment of further spread of established invasions. The Invasive Alien Species Pathway Management Resource aims to provide information on the identity and the management of these pathways.

Invasion pathways are the actual or theoretical routes along which introduced species move during their early stages of invasion (which includes introduction, establishment or naturalization, spread and then damage to biodiversity or human development). Species that become invasive (whether they are animals, plants or micro-organisms)

## Two Search options Browse and Search Box

- ✓ **Browse**Exploring the schema
  By clicking on main
  categories or subcategories....
- ✓ **Search Box**Can query on pathway/
  vector term, species
  name, country and
  organism type

# Invasive Alien Species Pathway Management Resource



#### **Partners and Collaborators**

Co-funded by EU and SCBD through the GIASIPartnership. Mapping supported by Council of Europe

#### **Key Partners**

- IUCN-ISSG lead
- Centre for Ecology and Hydrology (CEH)
- DAISIE (Delivering Alien Invasive Species Inventories for Europe)
- CAB International
- National Invasive Species Council USA

**Note:** The **Invasive Alien Species Pathway Management Resource** has been developed with the co-funding from the European Union through the Secretariat of the Convention on Biological Diversity within the framework of the **Global Invasive Alien Species Information Partnership (GIASIPartnership)** 

The GIASIPartnership has come together in order to assist Parties to the Convention on Biological Diversity, and others, implement Article 8(h) and Target 9 of the Aichi Biodiversity Targets - "By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment"

PARTNERS













Pathways/vectors schema, developed by IUCN ISSG, mapping exercise completed by CEH with DAISIE, CABI terms.

National Invasive Species Council, USA also working on mapping terms with schema

#### Invasive Alien Species Pathway Management Resource



Eastern Grey Squirrel Sciurus carolinensis has caused the extinction of the red squirrel in areas where their ranges overlap through competitive exclusion. It also damages woodland through bark stripping activity; systemore (Acer pseudoplantanus.) and beech (Fagus sylvatica) are particularly badly affected. Squirrels can be a garden pest by diggling up builbs and eating the bark of ornamental injusts.

Welcome to the Invasive Alien Species Pathway Management Resource

A framework of "Pathways/vectors of introduction and spread of Invasive Alien Species" was developed by the Invasive Species Specialist Group- ISSG of the Species Survival Commission - SSC of the International Union for Conservation of Nature - IUCN in consultation with global experts.

This classification is based on six main identified categories

- Release in Nature
- 2. Escape from confinement
- 3. Transport as a contaminant
- 4. Transport as a stowaway
- 5. Corridor Interconnected waterways/basins/sea
- 6. Othe

Each of these main categories has sub-categories that include known identified 'pathways/vectors'.

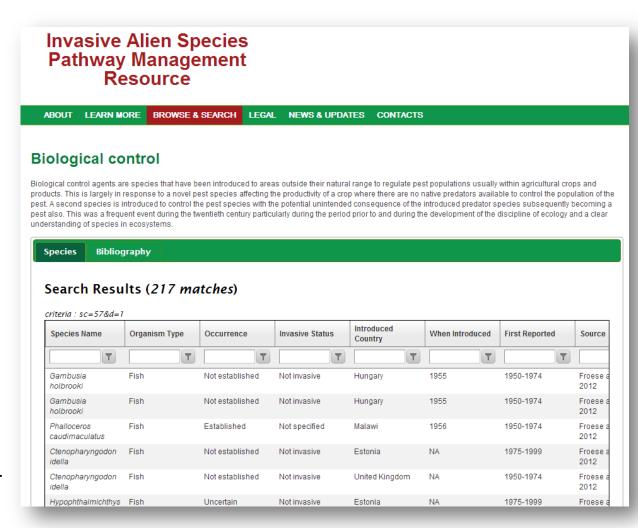
The framework is presented on the SEARCH page

Each of the sub-categories is treated in-depth. Selecting a sub-category for e.g. Pet/Aquarium Trade will take the user to a brief narrative of the description of the pathway. Users can click on the tabs on the page to view:

- . A list of species that are known to be introduced through this pathway;
- A list of legal instruments/regulations/codes of conduct that have been enacted/established globally, regionally, nationally, locally for the management of this
  pathway and
- A bibliography relevant to this 'pathway

#### Search on pathway term

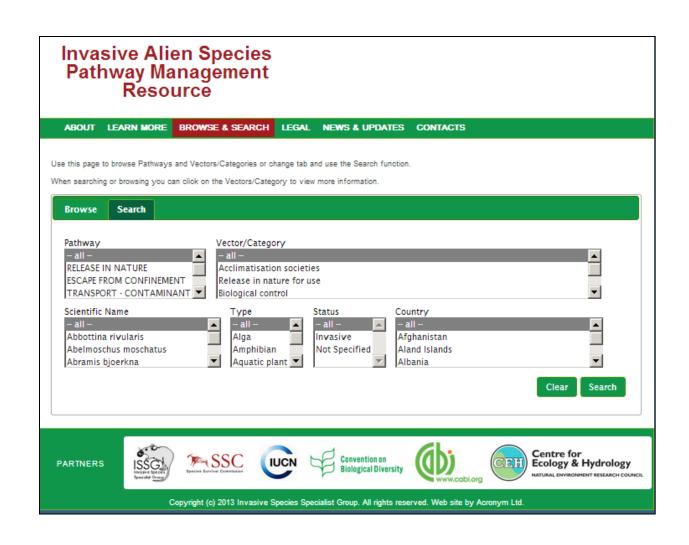
- A description of pathway/vector with some examples
- A grid presenting species records including species name, organism type, biological status in a country, date of introduction and date of first record, information on source country is being collated
- Comprehensive bibliography provided for each pathway term



#### **Search Box**

Can search on pathway terms, species names, organism type, biological status as well as country names

...results include a downloadable grid with all the data/information

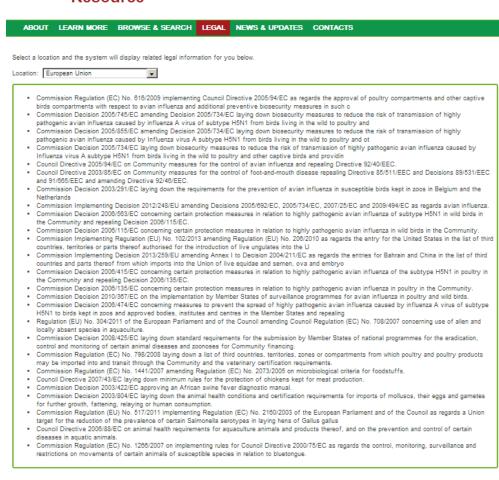


## Legal information can search by country

All legal information related to the management of pathway/vector for that country will be listed

This information needs to be developed, plans are to add a brief summary for each of the legislations/ regulations describing the intent of that legislation

#### Invasive Alien Species Pathway Management Resource



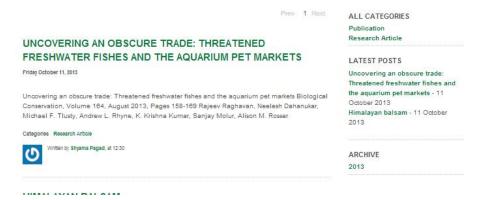
#### **News and updates**

New publications, legal information, news clips on novel pathways, new incursions and any incursion response

#### Invasive Alien Species Pathway Management Resource



Rhododendron Rhododendron ponticum has been introduced to areas outside its natural range of the Vivestern Mediterranean, india and China. This species creates intensive stands of vegetation shading out ground flora, out-competing other shrub species and preventing the regeneration of canopy species. The effects of this species have been to dominate areas of land and locally damage blodiversity.

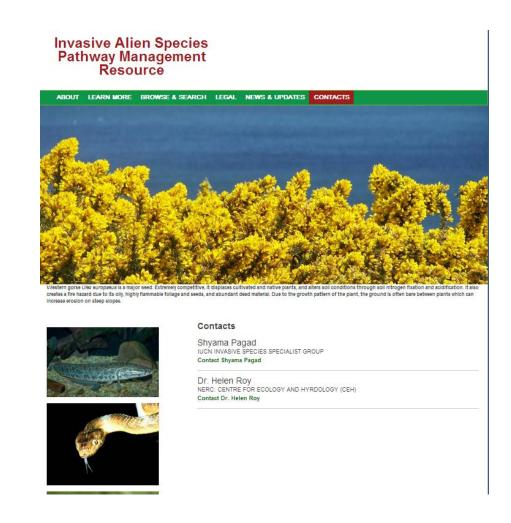


#### **Contact page**

Key contacts

Looking forward to have more partners and collaborators

Aim is to make this a one-stop shop for 'invasive species pathways of introduction and spread' management information







## Thank you!

Come visit as at the Kiosk on Invasive Alien Species and we will be glad to give you demos of GRIIS, Pathway tool, and revised GISD

17<sup>th</sup> meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA)— Montreal, Canada Global Invasive Alien Species Information Partnership (GIASIPartnership) event