DRAFT - List of IAS Online Information Systems
 Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.



# - DRAFT -

# List of Invasive Alien Species (IAS) Online Information Systems

Elizabeth Sellers, Annie Simpson, Shelaine Curd-Hetrick, Invasive Species Information Node, National Biological Information Infrastructure, United States Geological Survey, 12201 Sunrise Valley Drive, MS 302, Reston VA 20192. (703) 648-4385. esellers@usgs.gov.

A preliminary draft document, prepared for the Experts Meeting Towards the Implementation of a Global Invasive Species Information Network (GISIN), Baltimore, Maryland, USA 6-8 April 2004

**UPDATED: Monday, July 1, 2010** 

# PLEASE READ THIS FIRST:

This document contains a list of Internet-accessible databases and information systems providing species, bibliographic, taxonomic, expertise, distributions, images and many other information types as they pertain to invasive, exotic, alien, introduced, non-native species and all other species of world flora and fauna.

NOTE: Information contained within this document is planned for future cataloguing. Databases are listed in no specific order or priority with the exception of the numbering and arrangement of databases into basic groups. This list of databases and related information is by no means intended to be comprehensive. If there is a database or information about a database that you feel should be included in this list, please do not hesitate to email Elizabeth Sellers at esellers@usgs.gov.

**Suggested Citation**: Sellers, E., Simpson, A., Curd-Hetrick, S. 2010 (Last Updated). List of Invasive Alien Species (IAS) Online Information Systems. A 'living document' based on a preliminary draft document, prepared for the Experts Meeting Towards the Implementation of a Global Invasive Species Information Network (GISIN), Baltimore, Maryland, USA, 6-8 April 2004. http://www.gisinetwork.org/Documents/draftiasdbs.pdf

# **Table of Contents**

	Context - IAS Databases	
1.	Global Invasive Species Database (GISD)	9
2.	100 of the World's Worst Invasive Alien Species (in GISD)	9
3.	Global Compendium of Weeds (GCW)	9
4.	World Weeds Database	
5.	Database of Global Marine Invasive Species Threats	
Non-US	SA Context - IAS Databases	10
6.	IABIN – Invasives Information Network (I3N) (Western Hemisphere)	10
7.	InfoNatura – Birds, Mammals and Amphibians of Latin America	12
8.	DAISIE European Invasive Alien Species Gateway	12
9.	European Information System on Invasive Alien Species – Regional Biological Inva	sions
	Centre (RBIC)	
10.	North European and Baltic Network on Invasive Alien Species (NOBANIS) Databa	se12
11.	Ellenic Network on Aquatic Invasive Species (ELNAIS)	13
12.	Estonian Alien Species Database	13
13.	Marine Alien Species of Estonia	13
14.	Danish Forest and Nature Agency – Invasive Species Lists (Denmark)	13
15.	Baltic Sea Alien Species Database	13
16.	Alien Species in Poland	
17.	Alien Animal Species in Poland	
18.	Lumonet - Finnish CHM of the CBD (Finland)	
19.	Introduction and Spread of Alien Organisms (Sweden)	14
20.	Alien Species in Swedish Seas and Archipelago Areas	
21.	BIOLFLOR – Vascular Plant Search and Information System (Germany)	
22.	Invasive Plant Species in Germany (NeoFlora) (Germany)	
23.	German National Flora Information System (Germany)	
24.	Invasive Species in Belgium	
25.	Introduced Plants and Animals (in Russia)	
26.	Invasive Non-Native Species in the UK	15
27.	Non-native Marine Species in British Waters	
28.	Chinese Mitten Crabs (NHM, UK)	16
29.	Biological Records Center (BRC) (British Isles)	
30.	EPPO (Pest) Alert List (Europe & Mediterranean)	16
31.	Mediterranean Region Invasive Plants	
32.	Atlas of Exotic Species in the Mediterranean Sea (CIESM)	
33.	Bibliography on Caulerpa taxifolia in the Mediterranean	
34.	Caulerpa taxifolia Web site (Mediterranean)	
35.	Caspian Sea Biodiversity database	
36.	Latvian Alien Species Database	
37.	Lithuanian Invasive Species Database	
38.	Introduction to Invasive Species In China	
39.	Alien Invasive Species in China	

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

40.	China Invasive Species Network	18
41.	Exotic Plants Information System of China	18
42.	Asia-Pacific Alien Species Database (APASD)	18
43.	Invasive Plants Database (Japan)	19
44.	Rod Randall's Big Weed List (Australia)	19
45.	Weeds Australia database	19
46.	Exotic Species Database (Australia)	19
47.	Weed Watcher (Australia)	19
48.	PlantNET (New South Wales, Australia)	19
49.	National Introduced Marine Pests Information System (NIMPIS) (Australia)	20
50.	Introduced Marine Aquatic Invaders (Australia)	20
51.	Australian Government Agriculture Portal	20
52.	Feral.org.au (Australia/New Zealand)	20
53.	Invasive Invertebrates in Natural Ecosystems (New Zealand)	
54.	New Zealand Weeds Database	
55.	Weed Index (New Zealand)	21
56.	Pest Animal Index (New Zealand)	21
57.	Aquatic Plant Management Species Guide (New Zealand)	21
58.	CARAPHIN Plant Pest Database (Caribbean)	
59.	CARAPHIN Animal Pest Database (Caribbean)	
60.	Invasive Plants of Canada (IPCAN)	
61.	Canadian Botanical Conservation Network	
62.	National Alien and Invasive Species Database (NAISD) (Canada)	
63.	Classical Biological Control of Weeds (Canada)	
64.	Nova Scotia Noxious Weeds (Canada).	
65.	Ontario Noxious Weeds (Canada)	
66.	Inventory of Canadian Agricultural Weeds	
67.	CIPM Noxious Weeds Database (U.S. and Canada)	
68.	Non-Native Mammals of the U.S. and Canada (NBII)	
69.	Invasive Species in Canada (Wildlife Federation Canada)	
70.	Purple Loosestrife InfoCenter (Canada)	
71.	Invasive Plant Program (Min. Forests / Canada)	
72.	NatureServe Explorer (USA & Canada)	
73.	399 Invasive Plants & Weeds in Canada & the U.S	
74.	Discover Life Global Mapper	
75.	Forest Invasive Species Network for Africa (FISNA)	
76.	Alien Invader Plants in South Africa	
77.	Swaziland's Alien Plants Database	
78.	Weeds and Invasive Plants (WIP) (South Africa)	
79.	Alien Invasive Species of Pakistan	
80.	(Aquatic) Non-Native Species in the Gulf of Mexico Region	
81.	Invasive species of Mexico (CONABIO)	
82.	Weeds of Mexico / Malezas de Mexico	
83.	Invasive Species of India (NCBI)	
		0

84.	Introduced Species in the Canary Islands	26
85.	Grupo de Aves Exóticas (GAE) / Exotic Bird Group (Spain and Europe)	
86.	Andalucía (Spain) Invasive Species Control Program	
87.	Alien Species (introduced into the Pertuis Charentais Sea)	
88.	Atlas of [Agricultural] Weed Distributions in France (ARAF)	27
89.	HYpermedia for Plant Protection (HYPPA) – Weeds – (Europe)	
90.	Exotic Plants of Sardinia (Mediterranean)	
91.	Pacific Islands Alien Snake Database	28
92.	Invasive Plants Checklist (Ethiopia)	28
93.	Aquatic Invaders of Belarus Alien Species Database	28
94.	Invasive Exotic Species in the Iberian Peninsula	
95.	Alien Plants in Korea	
96.	Alien Plants in Ireland	29
97.	Invasive Species Ireland	
98.	National Invasive Species Database (Ireland)	29
99.	Invasive Plant Species in Portugal	
1164 0	context - IAS Databases	
100.	Nonindigenous Species Database Network (NISbase) (SERC)	
100.	Invasive Species of the Central Southwest/Gulf Coast Region (NBII-CSWGCIN)	
102.	Invasive Grassland/Shrubland Bird Indicators (NBII-ISIN)	
102.	Yellowstone National Park Invasive Species (NBII-NRIN)	
103.	Interactive Maps of Hawaii (NBII)	
105.	Pacific Basin – Invasive Species (NBII-PBIN)	
106.	Exotic Species (in SERAMBO)	
107.	Guidebook of Introduced Marine Species of Hawaii (Bishop Museum)	
108.	INVADERS Database (Northwestern U.S.)	
109.	Alien Species in Hawaii (USGS)	
110.	Exotic Forest Pest Information System for North America (Forest Commission)	
111.	North American Non-Indigenous Arthropod Database (NANIAD) (USDA-APHIS)	
112.	Federal Noxious Weeds Database (USDA-APHIS)	
113.	APHIS Regulated Pest List (USDA-APHIS)	
114.	PestTracker (NAPIS USDA-APHIS)	
115.	Identified Plant Pests Regulated by APHIS (IPPRA) (USDA)	
116.	Federal and State Noxious Weeds in GRIN (USDA)	
117.	Team Leafy Spurge (USDA)	
118.	Global Pest and Disease Database (GPDD) (USDA / PPQ) (restricted access)	
119.	Invasive Species Information Center (NISIC) (USDA)	
120.	Slow the Spread Gypsy Moth Database (STS) (VA Tech)	
121.	Noxious & Nuisance Plant Management Information System (PMIS) (USArmy Con	
122.	Aquatic, Wetland & Invasive Plant Information Retrieval System (APIRS)	
123.	WeedUS: Database of Plants Invading Natural Areas in the U.S. (PCA-APWG)	
124.	Exotic Plant Information Center (EPICENTER) (Great Lakes region)	
125.	Exotic Plant Database (Florida)	
	,	

126.	Floristic Inventory of South Florida (FISF base) (Florida)	37
127.	Florida Exotic Species	37
128.	CalWeed Database (California)	37
129.	Cal-IPC California Invasive Plant Council	37
130.	CRISIS Maps - Weed Map and Data Center (NBII - CAIN)	38
131.	California EncycloWeedia	38
132.	Southwest Exotic Plant Information Clearinghouse (SWEPIC) (USGS)	38
133.	Southwest Exotic Mapping Program (SWEMP) (USGS)	38
134.	Invasive Plant Atlas of New England (IPANE) (New England)	38
135.	Alaska Exotic Plant Mapping Project (AKEPMP) (Alaska)	
136.	Invasive Plants (Alaska)	
137.	Minnesota Weed Biocontrol Project (Minnesota)	
138.	Center for Invasive Plant Management (CIPM)	
139.	Halting the Invasion: State Tools for Invasive Species Management (USA)	
140.	Exotic Forest Pest Information System for North America (EFPISNA) (Forest Cor	
141.	WeedWeb (USA)	39
142.	BLM Weeds Web site (BLM)	40
143.	Asian Longhorned Beetle (USA)	
144.	InvasivePlants.net	
145.	Invasive Species Forecasting System (NASA)	40
146.	N.J. (New Jersey Agricultural) Weed Gallery	
147.	Weed Identification Resources (Iowa)	
148.	Key to Common Weed Seedlings of Michigan	
149.	Noxious Weeds and Non-Native Plants (Colorado)	
150.	Invasive Plants in NYS (New York)	
151.	Catalog of Invasive Plant Species of the United States	
152.	Noxious Weed Lists and Monitor List (Washington State)	
153.	Invasive Species of Concern in Maryland	
154.	Idaho's Noxious Weeds	
155.	Weed Identification Guide (Virginia Tech.)	
156.	Weed Identification (Univ. Illinois)	
157.	Missouri Weeds	
158.	Weeds of lawns, yards, & flowerbeds in Mississippi	
159.	Invasive Species in Wisconsin	
160.	Common Weeds of No-Till Cropping Systems	
161.	Invasive Species Monitoring Resources	
162.	Electro. Data Info. Source on Insects, Plant Diseases, Pesticides & Weeds	
163.	Stevens County Noxious Weed List	
164.	Pest Plants of Hawaiian Natural Ecosystems	
165.	WeedAlert.com Turf Weed Control	
166.	Non-Native Ants database	
167.	Introduced Social Insects	
168.	The Bugwood Network	
169.	Native Gardening and Invasive Plants Guide	
•		

170.	Team Arundo del Norte (California)	45
171.	Catalog of Invasive Plant Species of the United States	45
172.	Delaware Invasive Species Tracking System	45
173.	TexasInvasives Plant Database	
LISA	Context – Aquatic IAS Databases	46
174.	Database on Introductions of Aquatic Species (DIAS) (FAO)	
175.	National Aquatic Nuisance Species Clearing House (NANSC) (USA)	
176.	National Exotic Marine & Estuarine Species Information System (NEMESIS)	
170. 177.	National Ballast Water Information Clearinghouse (NBIC) (SERC)	` '
178.	National Marine and Estuarine Invasions Database (NIS) (SERC)	
179.	Zebra Mussel Information System (ZMIS) (USArmyCorp)	
180.	100th Meridian Database	
181.	Sea Grant Nonindigenous Species (NOAA)	47 47
182.	Coastal Species Alien Warning System (NOAA)	
183.	Great Lakes Aquatic Nonindigenous Species Information System (GLANSIS)	
184.	Nonindigenous Aquatic Species (NAS) Database (USGS)	
185.	Washington's Freshwater Aquatic Plants Database (Washington state)	
186.	Aquatic Nuisance Species (Washington State)	
187.	Whirling Disease Data Base (WHDDB)	
188.	Aquatic Nuisance Species Program (South Carolina)	48
189.	MarineID	48
190.	Exotic Species of the Monterey Bay National Marine Sanctuary	
191.	Ruffe homepage	49 49
192.	Biological Control of Eurasian Water Milfoil	49
193.	Aquatic Plant Fact Sheets (Aquatic Plant Management Society)	
194.	Introduced and Cryptogrenic Species of Massachusetts (maps)	
195.	Invasive Species (Minnesota)	
196.	Exotic Aquatics on the Move (Illinois)	
197.	San Francisco Estuary Invasive Spartina Project	
198.	Guide to the Exotic Species of San Francisco Bay	
199.	Invasive Algae Database	
	mage Databases (international)	
200.	Weed Photo Gallery (UC IPM) (California state)	
201.	UC IPM Online – Identification: Weed Photo Gallery	
202.	Invasive Plant Images (Montana state)	
203.	TNC Invasive Species Photographic Library	
204.	Minnesota Weed Seedling Photo Collection	
205.	Plant Protection Photo Gallery (of) Noxious Weeds	
206.	Weed Manager Photo Library	
207.	(Weed) Photo Herbarium	
208.	Weed Herbarium	
209.	Grass, Sedge and Broadleaf Weed Photo Gallery	52

IAS Bi	bliographic Databases (international)	52
210.	Institute for Biological Invasions Bibliographic Databases (IBI)	
211.	Invasive Mammals Bibliography (NewZealand)	
212.	Catalog & Article Citation database (AGRICOLA)	52
213.	Web based Information System for Agricultural Research for Development (W	
214.	Minnesotal Bibliographic Databases	
IAS E	xpertise Databases (international)	53
215.	Eurasian Watermilfoil Resource List.	
216.	Ecological Information Network (EIN) Expertise Database (NBII)	
217.	Integrated Pest Management (IPM) Expertise Database	
218.	IGLAR Expert Directory	
219.	Taxonomic Resources and Expertise Directory (TRED) (NBII)	
220.	World Taxonomist Database (WTD)	
221.	Expert Center for Taxonomic Identification (ETI)	54
222.	Fauna Europea (FAEU) Expert Database	
IVOD	esearch, IPM, Databases (international)	
223.	Aquatic Invasions Research Directory (AIRD) (SERC)	54 54
223. 224.	Ballast Water Treatment R&D Directory (GLOBALLAST)	
22 <del>4</del> . 225.	Weed Research & Information Center (WeedRIC)	
226.	Database of IPM Resources (DIR)	55 55
220. 227.	UC IPM Online – Weed Identification Guide	
228.	California Weed Mapping Handbook (CAIN/NBII)	
229.	Agriculture Network Information Center (AgNIC)	55 55
230.	Organic Garden Weed Management - Weed Database	55
231.	TNC Invasive Species Management Library	
232.	Fire Effects Information System (FEIS) (USDA-Forest Service)	
233.	Biota of North America Program (BONAP)	
234.	Pearl Harbor Legacy Project Species List	
235.	Release of Beneficial Organisms in the United States & Territories (ROBO) (United States & Territories (ROBO))	
236.	Integrated Pest Management in the Northeast (USA)	57
237.	Bio-Integral Resource Center (BIRC)	57
238.	WeedScience – International Surveys of Herbicide Resistant Weeds	
239.	Weed Control Manual for the Bay of Plenty (New Zealand)	57
240.	Ranking Exotic Plants (Handbook) (USA-NPS)	57
241.	Guide to Monitoring Exotic and Invasive Plants (Canada)	57
242.	Gateway to Online IPM Resources	
243.	Biological Control: A Guide to Natural Enemies in North America (Cornell)	58
244.	Montana Integrated Pest Management Center	
Gener	al Fauna Databases Containing IAS Information (international)	58
245.	Mammal Species of the World	
246.	FishBase: A Global Information System on Fishes	
	•	

- DRAFT - List of IAS Online Information Systems Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

247.	Elasmo World (Sharks and Rays – elasmobranches)	58
248.	ReefBase	
249.	Avibase – the world bird database	59
250.	Applesnail.net	59
Gener	ral Flora Databases Containing IAS Information (international)	59
251.	Flora of North America (FNA)	
252.	FloraBase <sup>2</sup> the Western Australian Flora	
253.	Crop Profiles Database (USDA)	
254.	PLANTS Database (USDA)	60
255.	Aquatic Plant Information System Online (APIS) (USArmyCorp)	
256.	International Legume Database and Information Service (ILDIS)	60
257.	Flora Europaea	60
258.	eFloras.org	
259.	W3TROPICOS	



Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

#### Global Context - IAS Databases

#### 1. Global Invasive Species Database (GISD)

URL: http://www.issg.org/database and http://www.invasivespecies.net/database

Host/Originating Country: Invasive Species Specialist Group (ISSG) / New Zealand; National

Biological Information Infrastructure (NBII) / USA.

Language: English

**Description**: Provides global information on alien invasive species to agencies, resource managers, decision-makers, and interested individuals. Information is supplied by expert contributors from around the world and includes all types of species. Data includes species ecology, distribution (native and alien ranges), impacts, general and management references, links, and expert contacts.

# 2. 100 of the World's Worst Invasive Alien Species (in GISD)

URL: <a href="http://www.issg.org/database/species/search.asp?st=100ss&fr=1&sts="http://www.issg.org/database/species/search.asp?st=100ss&fr=1&sts="http://www.issg.org/database/species/search.asp?st=100ss&fr=1&sts="http://www.issg.org/database/species/search.asp?st=100ss&fr=1&sts="http://www.issg.org/database/species/search.asp?st=100ss&fr=1&sts="http://www.issg.org/database/species/search.asp?st=100ss&fr=1&sts="http://www.issg.org/database/species/search.asp?st=100ss&fr=1&sts="http://www.issg.org/database/species/search.asp?st=100ss&fr=1&sts="http://www.issg.org/database/species/search.asp?st=100ss&fr=1&sts="http://www.issg.org/database/species/search.asp?st=100ss&fr=1&sts="http://www.issg.org/database/species/search.asp."http://www.issg.org/database/species/search.asp.

Host/Originating Country: Invasive Species Specialist Group (ISSG) / New Zealand; National

Biological Information Infrastructure (NBII) / USA.

Language: English

**Description**: Species listing of information about 100 of the world's worst invasive alien species.

# 3. Global Compendium of Weeds (GCW)

URL: http://www.hear.org/gcw/alpha\_select\_gcw.htm

Host/Originating Country: U.S. Geological Survey, Hawaiian Ecosystems at Risk project

(HEAR) / USA. **Language**: English

**Description**: Reviews the information in the publication entitled "A Global Compendium of Weeds" by Rod Randall (Department of Agriculture of Western Australia [AgWest]). Contains

references to approximately 20,000 taxa of plants, citing information about "weedy"

characteristics of each.

# 4. World Weeds Database

URL: http://w3.to/weeds (NOTE: non-functioning URL).

Host/Originating Country: Oxford Forestry Institute, Oxford University, UK.

Language: English

**Description**: Displays information on more than 2400 weed species around the world, including non-native species, ranked according to the severity of infestation. Users can view data by country, plant, genus, or family.

# 5. Database of Global Marine Invasive Species Threats

**URL**: http://conserveonline.org/workspaces/global.invasive.assessment

Host/Originating Country: Conserveonline.org / USA.

Language: English

**Description**: Downloadable access database containing information on over 330 marine invasive species, including non-native distributions by marine ecoregion, invasion pathways, and ecological impact and other threat scores. This is an ongoing project and the database will be updated periodically.

- DRAFT - List of IAS Online Information Systems Experts Meeting Towards Implementation of a Global Invasive Species Informat Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

# Non-USA Context - IAS Databases

# 6. IABIN - Invasives Information Network (I3N) (Western Hemisphere)

URL: http://i3n.iabin.net/index.html

Host/Originating Country: National Biological Information Infrastructure (NBII), USA.

Language: English

**Description**: A regional network of invasive species knowledge bases, providing direct access to national knowledge bases throughout the Americas. Includes a data search capability across all contributing countries, list of country catalogs, value-added products, fact sheets, and presentations.

# i. I3N-Argentina

URL: Database - <a href="http://www.inbiar.org.ar/">http://www.inbiar.org.ar/</a>

and http://i3n.iabin.net/participants/argentina.html

Host/Originating Country: Universidad Nacional del Sur / Argentina.

Language: Spanish

#### ii. I3N-Bahamas

URL: http://i3n.iabin.net/participants/bahamas.html

**Description**: Includes invasive species lists for all species, plants and animals,

and a Pest List of Ministry.

#### iii. I3N-Brazil

URL: Database - <a href="http://i3n.institutohorus.org.br/">http://i3n.iabin.net/participants/brazil.html</a> Host/Originating Country: Instituto Horus / Brazil.

Language: Portuguese

#### iv. I3N-Chile

URL: http://i3n.iabin.net/participants/chile.html

#### v. I3N-Colombia

URL: Database - <a href="http://ef.humboldt.org.co/">http://ef.humboldt.org.co/</a> and <a href="http://i3n.iabin.net/participants/colombia.html">http://i3n.iabin.net/participants/colombia.html</a>

Host/Originating Country: Instituto Alexander von Humboldt / Colombia.

Language: Spanish

#### vi. I3N-Costa Rica

URL: Database - <a href="http://invasoras.acebio.org/">http://invasoras.acebio.org/</a> and <a href="http://i3n.iabin.net/participants/costarica.html">http://i3n.iabin.net/participants/costarica.html</a>

Host/Originating Country: Asociación para la Conservación y el Estudio de la

Biodiversidad, ACEBIO / Costa Rica

Language: Spanish

#### vii. I3N-Dominican Republic

URL: Database -

http://www.medioambiente.gov.do/inbidom/main/spanish/base\_datos/index.html and http://i3n.iabin.net/participants/dominicanrep.html

Host/Originating Country: Secretaría de Estado de Medio Ambiente y

Recursos Naturales / Dominican Republic

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

#### viii. I3N-Ecuador

URL: Database - http://www.invasorasecuador.org/ and

http://i3n.iabin.net/participants/ecuador.html

Host/Originating Country: Ministerio del Ambiente y CDC-Ecuador / Ecuador

#### ix. I3N-EI Salvador

URL: http://i3n.iabin.net/participants/elsalvador.html

#### x. I3N-Guatemala

URL: Database - <a href="http://www.geocities.com/otecbio\_especies/">http://www.geocities.com/otecbio\_especies/</a> and

http://i3n.iabin.net/participants/guatemala.html

Host/Originating Country: Oficina Tecnica de Biodiversidad / Guatemala.

Language: Spanish

**Description**: Lists of invasive species, experts, projects, databases, a photographic gallery, information on *Verticillata hydrilla*. I3N catalogs include the I3N-Guatemala catalog of information on invasive species research and activities in Guatemala.

#### xi. I3N-Jamaica

URL: Database - http://jamaica.paradigma.com.ar/ and

http://i3n.iabin.net/participants/jamaica.html

Host/Originating Country: Institute of Jamaica - Natural History Division /

Jamaica

Language: English

#### xii. I3N-Mexico

URL: Database - http://www.conabio.gob.mx/invasoras/index.php/Especies

and <a href="http://i3n.iabin.net/participants/mexico.html">http://i3n.iabin.net/participants/mexico.html</a> Host/Originating Country: CONABIO / Mexico

Language: Spanish

**Description**: Describes invasive species information system developments in Mexico, including the Biotica database # in this list, and the National System of Information on Biodiversidad (SNIB) as containing IAS information. I3N catalogs include species information, experts, projects and data sets.

#### Xiii. I3N-Paraguay

URL: Database - http://www.i3n.org.py/

and http://i3n.iabin.net/participants/paraguay.html

Host/Originating Country: Asociación Guyra Paraguay / Paraguay

Language: Spanish

#### xiv. I3N-Peru

URL: http://i3n.iabin.net/participants/peru.html

#### xv. I3N-Uruguay

**URL**: **Database** - <a href="http://uruguayi3n.iabin.net/">http://uruguayi3n.iabin.net/</a> and <a href="http://i3n.iabin.net/participants/uruguay.html">http://i3n.iabin.net/participants/uruguay.html</a>

Host/Originating Country: Facultad de Ciencias - Universidad de la

República / Uruguay **Language**: Spanish

#### xvi. I3N-USA

URL: http://i3n.iabin.net/participants/usa.html

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

**Description**: List of invasive species of concern of the NBII Invasive Species Information Node (clicking on the species name brings up a page, created from the XML, with the actual content of all the links): <a href="http://pick1.pick.uga.edu/cgi-bin/20q?act=x\_checklist&path=INVASIVES">http://pick1.pick.uga.edu/cgi-bin/20q?act=x\_checklist&path=INVASIVES</a> and a Partial Species List with ITIS links.

# 7. InfoNatura - Birds, Mammals and Amphibians of Latin America

URL: http://www.natureserve.org/infonatura/

**Host/Originating Country:** 

Language: English

**Description**: Information on bird, mammal and amphibian species of Latin America, including invasive species. Includes amphibian data for Mexico and Central America, bird and mammal range maps, photos, global conservation status, habitat description, distribution, population status, references, and maps.

# 8. DAISIE European Invasive Alien Species Gateway

URL: http://www.europe-aliens.org/

Host/Originating Country: DAISIE / Great Britain

Language: English

**Description**: A comprehensive European Invasive Alien Species Gateway, providing information on biological invasions in Europe, including species lists and profiles, experts, and information by region (aquatic, marine, and terrestrial). \* DAISIE = Delivering Alien Invasive Species Inventories for Europe.

# 9. <u>European Information System on Invasive Alien Species – Regional Biological</u> Invasions Centre (RBIC)

URL: http://www.zin.ru/rbic/

Host/Originating Country: Zoological Institute RAS / Russia

Language: English

**Description:** Web portal providing access to the global, regional and national internet resources on biological invasions. RBIC Information System is serving as a Regional Clearinghouse on invasive alien species and information hub of the Global Invasive Species Informational Network. Databases included in the RBIC are:

- i. Aquatic Invasive Species of Europe http://www.zin.ru/projects/invasions/gaas/AA\_IDB.HTM
- ii. GIS Invader http://www.zin.ru/rbic/projects/invader/default.asp
- iii. Alien Species of the Baltic Sea (#13 in this document)
- iv. European Research Network on Aquatic Invasive Species (ERNAIS) <a href="http://www.zin.ru/rbic/projects/ernais/default.asp">http://www.zin.ru/rbic/projects/ernais/default.asp</a>
- v. Alien Species of North-West Russia information system (under development)

# 10. North European and Baltic Network on Invasive Alien Species (NOBANIS) Database

URL: http://www.nobanis.org/Search.asp

Host/Originating Country: Danish Forest and Nature Agency / Denmark.

Language: English

**Description**: The NOBANIS is a gateway to databases on invasive species in the Nordic and Baltic region and houses the NOBANIS database, which provides access to invasive species information for the region. Each species profile contains distribution maps, common names, scientific names and synonyms, habitat information, and indications of biostatus or invasiveness.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

#### 11. Ellenic Network on Aquatic Invasive Species (ELNAIS)

URL: https://services.ath.hcmr.gr/

Host/Originating Country: Hellenic Centre for Marine Research (HCMR) / Greece

Language: English

**Description**: Includes a directory of aquatic invasive species projects, publications; 105 European experts (scientists and managers) in the area of aquatic invasions from 27 countries; and a database of 284 invasive aquatic invasive species with photographs and distribution maps.

#### 12. Estonian Alien Species Database.

URL: <a href="http://eelis.ic.envir.ee/voorliigid/">http://eelis.ic.envir.ee/voorliigid/</a> Host/Originating Country: Estonia. Language: Estonian, English.

Description: Provides access to PDF lists of aquatic invaders, introduced mammals, birds,

terrestrial invertebrates and plants.

# 13. Marine Alien Species of Estonia

URL: <a href="http://www.sea.ee/Sektorid/merebioloogia/eesti/Marine\_Alien\_Species\_of\_Estonia.htm">http://www.sea.ee/Sektorid/merebioloogia/eesti/Marine\_Alien\_Species\_of\_Estonia.htm</a> Host/Originating Country: Estonian Marine Institute, University of Tartu Tallinn / Estonia.

Language: Estonian, English

**Description**: Provides information on invasive alien species of plankton, benthic invertebrates and fishes. Each species profile includes scientific names, common names, digital images, identification/descriptive information, natural distribution, first Estonian introduction record, invasion history in the baltic sea, distribution and population dynamics in Estonian waters, distribution maps, ecological and economical impact, contacts for more information, and references.

# 14. Danish Forest and Nature Agency - Invasive Species Lists (Denmark)

URL: <a href="http://www.skovognatur.dk/Emne/Naturbeskyttelse/invasivearter/">http://www.skovognatur.dk/Emne/Naturbeskyttelse/invasivearter/</a>
Host/Originating Country: Danish Forest and Nature Agency / Denmark

Language: Danish, English

**Description**: Includes lists of invasive plant and animal species in Denmark and related information. Each species profile includes digital images and descriptive information.

#### 15. Baltic Sea Alien Species Database

URL: http://www.corpi.ku.lt/nemo/mainnemo.html

Host/Originating Country: Coastal Research and Planning Institute, Klaipeda University,

Lithuania.

Language: English

**Description**: Interactive tool, including DATABASE SEARCH, BALTIC SUB-REGIONS and SPECIES DIRECTORY. The information comprised in the Database comes from: a) members of the Baltic Marine Biologists Working Group on Non-indigenous Estuarine and Marine Organisms and other researchers involved in invasive biology studies; b) published papers, environmental reports, "grey literature", Internet sites; c) a Database Questionnaire (under construction).

#### 16. Alien Species in Poland

URL: http://www.iop.krakow.pl/ias/

Host/Originating Country: Instytut Ochrony Przyrody (IOP) PAN / Poland

Language: Polish, English

**Description**: A database of 403 alien species of plants, animals and fungi, describing pathways, place and time of introduction to Poland, current distribution, population trends and impact upon

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

native species, habitats and ecosystems. For some species, there are also suggested methods of control.

# 17. Alien Animal Species in Poland

URL: http://www.iop.krakow.pl/gatunkiobce/default.asp

Host/Originating Country: Instytut Ochrony Przyrody (IOP) PAN / Poland

Language: Polish, (English coming soon)

**Description**: A database of over 100 alien animal species in Poland. The searchable database provides species listed alphabetically or taxonomically by scientific name. Each scientific name is linked to a species profile that includes distribution maps, photographs, morphological and ecological descriptive information, introduction information, and bibliographic references.

#### 18. Lumonet - Finnish CHM of the CBD (Finland)

**URL**: http://www.ymparisto.fi/default.asp?node=8344&lan=en

Host/Originating Country: Finnish Environment Institute (SYKE) / Finland.

Language: Finnish, Swedish, English

**Description**: Biodiversity clearing-house mechanism of the CBD. Currently links to Baltic Sea Alien Species database, Nordic Network on Introduced Species (NNIS), Regional Biological Invasions Center (RBIC) and contains an RTF article by Petri Nummi on Alien Species in Finland.

# 19. Introduction and Spread of Alien Organisms (Sweden)

URL: http://www.svenskamiljonatet.se/miljonat/english/katalog/

Host/Originating Country: Swedish EnviroNet Environment Catalog – Environmental Threats /

Sweden.

Language: Swedish, English

**Description**: Catalog of environmental information (literature, research) and data for Sweden, including a section on introduction and spread of alien organisms under the 'Environmental

Threats' category.

#### 20. Alien Species in Swedish Seas and Archipelago Areas

URL: <a href="http://www.frammandearter.se/">http://www.frammandearter.se/</a> Host/Originating Country: / Sweden.

Language: Swedish, English

**Description**: A compilation of current knowledge on alien species in Swedish seas and archipelago areas, including the Skagerrak/Kattegat and the Baltic Sea. Includes lists of phytoplankton and microalgae, seaweeds, vascular plants, molluscs, crabs, crustaceans, worms and other invertebrates, fish, and mammals. Some species names in the list are linked to PDF fact sheets that contain digital images, common names (including in other languages, scientific name, size and appearance description, similar species or lookalikes, geographical origin, first observation in Swedish waters, occurrence in Swedish seas and coastal areas, occurrence in other sea areas, probable means of introduction, habitats, ecological and other effects, additional information and references.

# 21. BIOLFLOR - Vascular Plant Search and Information System (Germany)

URL: http://www.ufz.de/biolflor/index.jsp

Host/Originating Country: Centre for Environmental Research (UFZ), The German Federal

Agency for Nature Conservation (BFN) / Germany.

Language: German, English

Description: information system on vascular plants of Germany, including biological and

ecological traits of alien plant species.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Marvland, USA.

#### 22. Invasive Plant Species in Germany (NeoFlora) (Germany)

URL: <a href="http://www.neophyten.de/">http://www.neophyten.de/</a>

Host/Originating Country: The German Federal Agency for Nature Conservation (BFN) /

Germany.

Language: German

Description: Fact sheets on invasive alien plant species in Germany, including legal framework,

ecology, impacts and control measures.

#### 23. German National Flora Information System (Germany)

URL: www.floraweb.de

Host/Originating Country: German Federal Agency for Nature Conservation (BfN) / Germany.

Language: German

Description: National information system on biology, distribution, and threat of all wild growing

vascular plants of Germany, including alien plant species.

# 24. Invasive Species in Belgium

URL: http://ias.biodiversity.be/ias/

Host/Originating Country: Belgian Biodiversity Platform, Belgian Clearing-House Mechanism /

Belgium

Language: English, French, Dutch, German

**Description**: List of IAS that live in Belgium and that are known to have a detrimental impact on the environment. Includes species of terrestrial plants, molluscs, crustraceans, insects, fish, amphibians, reptiles, birds, and mammals. Species names link users to fact sheets/profiles containing taxonomic information (including common name in English, French, Dutch and German), photographic images, a description of origin and distribution (including map of belgium with location points of feral populations), ecology and life history traits (habit preferences, life cycle, dispersion capacity, competition & predation, defense mechanisms), detrimental effects, population control, references, internet links, and contact email for those responsible for preparing the fact sheet/species profile.

#### 25. Introduced Plants and Animals (in Russia)

URL: http://www.biodat.ru/db/intro/plant\_e.htm

**Host/Originating Country**: Global Environment Facility, Quarantine Institute of the Russian Ministry of Agriculture, Institute of geography of the Russian Academy of Sciences / Russia.

Language: Russian, English

**Description**: Two databases (one of 1119 introduced plant records, and the other of 3250 introduced animal records) searchable by latin name, russian name, order, family, country of origin, and region of introduction. Information provided for species includes latin name, russian name, kingdom, order, family, point of exportation, country of exportation, region of exportation, manner of encroachment, detection point, area of introduction, country of introduction, region of introduction, biotype of introduction, year of introduction, population, dispersal dynamics, type of introduction, purpose of introduction, target organism, enemies and competitors, introduction results, economic importance, information source, year and scientific institution.

# 26. Invasive Non-Native Species in the UK

URL: http://138.253.199.114/IAAP%20Web/IAAPwebsite/index.asp

Host/Originating Country: Applied Vegetation Dynamics Laboratory, University of Liverpool /

UK.

Language: English

**Description:** Information on all Alien or Non-native organisms that are invasive in the UK providing information regarding problem species, management strategies and control techniques. Includes all taxonomic groups of multicellular organisms, classified as plants or animals, and

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

aquatic (freshwater) or terrestrial. Marine species are included in a fifth section which includes; algae, higher plants and animals. Each species profile contains information on control methods, impacts, ecology, references, taxonomy, contacts, case histories, and fact sheets.

#### 27. Non-native Marine Species in British Waters

URL: http://www.jncc.gov.uk/marine/non\_native/

Host/Originating Country: Joint Nature Conservation Committee (JNCC) / UK.

Language: English

Description: An online listing of marine flora and fauna information sheets describing non-native

marine invertebrates, algae, and plants in the United Kingdom.

# 28. Chinese Mitten Crabs (NHM, UK)

**URL**: <a href="http://www.nhm.ac.uk/nature-online/life/other-invertebrates/chinese-mitten-crabs/chinese-mitten-crabs.html">http://www.nhm.ac.uk/nature-online/life/other-invertebrates/chinese-mitten-crabs/chinese-mitten-crabs/chinese-mitten-crabs.html</a>

Host/Originating Country: The Natural History Museum / UK

Language: English

**Description**: A web site profiling the Chinese Mitten crab (*Eriocheir sinensis*) with information on its identification, classification, life history, distribution and associated environmental problems.

# 29. Biological Records Center (BRC) (British Isles)

URL: <a href="http://www.brc.ac.uk/">http://www.brc.ac.uk/</a> Host/Originating Country: Language: English

Description: National custodian of wildlife distribution data for the British Isles. Provides species

distribution information, including introduced crayfish and other marine invasive species.

#### 30. EPPO (Pest) Alert List (Europe & Mediterranean)

URL: http://www.eppo.org/QUARANTINE/Alert\_List/alert\_list.htm

Host/Originating Country: European and Mediterranean Plant Protection Organization (EPPO) /

France

Language: English

Description: Information on pests selected because they may present a phytosanitary risk for the

EPPO region. Includes reports on pests that are new to science, new outbreaks, reports of

spread, etc.

#### 31. Mediterranean Region Invasive Plants

URL: <a href="http://www.ame-lr.org/plantesenvahissantes/">http://www.ame-lr.org/plantesenvahissantes/</a>

Host/Originating Country: Agence Méditerranéenne de l'Environnement / France.

Language: French

**Description:** Linked list of 15 plant species providing information on description, reproduction biology, history, habitat, impacts, control, culture, and mapped distributions/observations.

#### 32. Atlas of Exotic Species in the Mediterranean Sea (CIESM)

URL: http://www.ciesm.org/online/atlas/index.htm

Host/Originating Country: International Commission for the Scientific Exploration of the

Mediterranean Sea (CIESM) / Monaco.

Language: English

Description: Provides a comprehensive, group by group, survey of recent marine 'immigrants' in

the Mediterranean, which is undergoing drastic and rapid changes to its biota. Includes

crustacean decapods and stomatopods, fishes, and molluscs.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

#### 33. Bibliography on Caulerpa taxifolia in the Mediterranean

URL: http://www.com.univ-mrs.fr/basecaul/

Host/Originating Country: Center of Oceanology of Marseilles / France.

Language: French.

**Description**: Provides a bibliography of publications on Caulerpa taxifolia in the Mediterranean.

# 34. Caulerpa taxifolia Web site (Mediterranean)

URL: http://www.isima.fr/ecosim/ct.html

Host/Originating Country: Institut Supérieur d'Informatique de Modélisation et de leurs

Applications (ISIMA) / France.

Language: English

**Description**: Provides images showing the different stages for the simulation of Caulerpa taxifolia evolution in the north Mediterranean sea. Part of the Caulerpa modeling & simulation program.

# 35. Caspian Sea Biodiversity database

**URL**: http://www.caspianenvironment.org/biodb/eng/main.htm

Host/Originating Country: Caspian Environment Programme / Caspian Sea nations Language: English, Russian (Common names also in Kazakh, Turkmenian, Azerbaijani) Description: Information about aquatic alien invasive species in the Caspian Sea including taxonomic description (phylum, class, order, family, genus, synonyms), common names, photographic images or diagrams, description and map of distribution of species within the Caspian Sea (includes status as per International/National Red Data Books, references for the first record for the Caspian Sea and for the redescription of the species), general characteristics of the species, relation to abiotic environmental factors, feeding, reproduction, life history and development, interspecific relations, impacts, references, and name/affiliation of the record creator.

#### 36. Latvian Alien Species Database

URL: <a href="http://www.latvijasdaba.lv/">http://www.latvijasdaba.lv/</a>
Host/Originating Country: Latvia Language: Latvian, English

**Description**: Online Nature Encyclopedia (database) 5217 flora and fauna species of Latvia region including alien species. Species records are grouped into plants, mushrooms or fungi, extinct devonian fauna, molluscs, insects, butterflies, fishes, amphibians, reptiles, birds, and mammals. Each species profile contains common names, scientific names, illustrations, and descriptive information.

#### 37. Lithuanian Invasive Species Database

URL: http://www.ku.lt/lisd/

Host/Originating Country: Lithuania Language: Lithuanian, English

**Description**: Online database containing an invasive species inventory, listed alphabetically by scientific name, and including taxon, date first recorded, country of origin, and linked references. The user can narrow the list down by selecting terrestrial groupings of fungi, plants, and animals; inland waters groupings of plants and animals; and coastal waters groupings of plants and animals. The Web site also provides access to information and other resources related to the project including the project team members, Lithuanian legislative and administrative acts related to biological invasions, and a bibliography.

#### 38. Introduction to Invasive Species In China

URL: http://monkey.ioz.ac.cn/bwg-cciced/english/cesis/invasive.htm

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

**Host/Originating Country**: Zoological Division of Chinese Biodiversity Information Center / China

Language: English, Chinese

**Description**: Brief description of criteria for defining invasive alien species and a partial list of invasive species in china including mammals, birds, fishes, crustaceans, mollusks, insects, nematodes, fungi, wildlife disease, plants).

Host Web site also provides information on biodiversity in China including the following databases/lists: Taxonomic codes of Chinese fauna – Vertebrates, Species Inventory Database of Chinese Animals, Endangered and Protected Species Database of Chinese Animals, Catalogue Database of Chinese Biodiversity Reference, Database of Expert on Biodiversity Study in China, Database of Medicinal Animal in China, Chinese Biodiversity Bibliography Database, Chinese Biodiversity Database Index, Fauna Sinica, and Zoological Journals Published in China.

#### 39. Alien Invasive Species in China

URL: http://www.chinabiodiversity.com/shwdyx/ruq/ruq-index-en.htm

Host/Originating Country: XIE Yan, Institute of Zoology, Chinese Academy of Sciences / China

Language: Chinese, English

**Description**: Contains information and images of IAS in China as well as published articles and information on control strategies, mechanisms of introduction, human dimensions and IUCN Guidelines.

#### 40. China Invasive Species Network

URL: http://www.bioinvasion.org.cn:9090/xu716/index.jsp

**Host/Originating Country**: College of Biological Science, Beijing Normal University Institute of Animal and Plant Quarantine, General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China (AQSIQ) / China.

Language: Chinese, English

Description: Includes a database, species alerts, related literature, control methods, and

regulations.

# 41. Exotic Plants Information System of China

URL: http://weeds.njau.edu.cn/exowort/exoweeds.htm

Host/Originating Country: Nanjing Agricultural University / China

Language: Chinese

Description: Information on invasive flora in China including investigations of invasions,

regulations, and species lists.

#### 42. Asia-Pacific Alien Species Database (APASD)

URL: http://apasd-niaes.dc.affrc.go.jp/

Host/Originating Country: APASD Secretariat / Japan

Language: English

**Description**: Information on various invasive alien species (IAS) in Asia-Pacific countries and regions - searchable by organism group, country or region, year of invasion or detection. Database includes IAS groupings of plants, insects, nematodes, mammals, other animals, fungi, bacteria, viruses, and others. IAS information for 37 countries and regions currently listed. Data includes taxonomic name, English common name, year of invasion or detection, native region, situation of establishment, expansion of distribution area, environmental impact, economic damage, reproduction, growth, countermeasures, and writer's details. Users can retrieve information on similar species, host species, reference, habitat; and photos of IAS, similar species, and damage caused by IAS. Information can be compared among countries and regions.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

#### 43. Invasive Plants Database (Japan)

URL: http://invasive.m-fuukei.jp/

Host/Originating Country: YOSHIOKA Toshiya, Greenery Technology and Landscape Planning

/ Japan

Language: English

**Description**: This list is assembled landscaping plants that are mentioned escaping from nurseries, farms, flower beds, etc. or invading into natural/semi-natural area as secondary

forests, natural forests.

#### 44. Rod Randall's Big Weed List (Australia)

URL: <a href="http://tncweeds.ucdavis.edu/biglist.html">http://tncweeds.ucdavis.edu/biglist.html</a>

Host/Originating Host/Originating Country: The Nature Conservancy / USA.

Language: English

**Description**: A compilation of records relating to plants as weeds anywhere in the world. The list can be downloaded in Microsoft Word format, or browsed online alphabetically by scientific name.

#### 45. Weeds Australia database

URL: http://search.weeds.org.au/

Host/Originating Country: National Weeds Strategy Executive Committee / Australia

Language: English

**Description**: Search engine provides searchable access to weed-related web addresses, weed people, products, resources, current issues, weed management, training and materials, weed identification and a noxious weeds list. Assists in finding web based weed related information that is on Australian government and major community organization web sites. Information about weed species includes scientific name, other scientific names and declarations, preferred common name, other common names and a categorical description for its status in each Australian State where it is known to occur.

#### 46. Exotic Species Database (Australia)

URL: <a href="http://www.weeds.crc.org.au/projects/project-1-2-1.html">http://www.weeds.crc.org.au/projects/project-1-2-1.html</a>

Host/Originating Country: Cooperative Research Center for Weed Management / Australia.

Language: English

**Description**: Documents all introduced plants in Australia plus those potentially invasive species found in neighboring countries, allowing the calculation of the probability of certain plant species or groups becoming weeds. The aim of this project is to record all exotic species present in Australia and nearby countries, and use this information to calculate the probability of certain plant species or groups becoming weeds.

#### 47. Weed Watcher (Australia)

URL:

http://www.agric.wa.gov.au/pls/portal30/docs/FOLDER/IKMP/PW/WEED/WEEDWATCHER.HTM

Host/Originating Country: Department of Agriculture / Australia.

Language: English

**Description**: A web-based interface for finding or reporting weed infestations from a map displayed on your computer screen. Currently over 50 environmentally and agriculturally significant weeds can be mapped across the SW of the state of Western Australia.

# 48. PlantNET (New South Wales, Australia)

URL: http://plantnet.rbgsyd.nsw.gov.au/

Host/Originating Country: Royal Botanic Gardens, Sydney / Australia.

Language: English

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

**Description**: Search for information on New South Wales plant names, their distribution and their conservation status, accessing the following databases:- <a href="Freshwater Algae">Freshwater Algae</a>, <a href="Casuarinaceae">Casuarinaceae</a> <a href="Momenclature and distribution">nomenclature and distribution</a>, the <a href="Type Specimen Catalogue">Type Specimen Catalogue</a> of the National Herbarium of New South Wales, the <a href="MSWplants">MSWplants</a> (by NSW coastal region) system, a <a href="MeedAlert">WeedAlert</a> (by NSW coastal region) system, and <a href="WattleWeb">WattleWeb</a> (searchable database of Wattles of New South Wales).

#### 49. National Introduced Marine Pests Information System (NIMPIS) (Australia)

URL: http://crimp.marine.csiro.au/nimpis/

**Host/Originating Country**: Centre for Research on Introduced Marine Pests (CRIMP), and CSIRO Marine Research, Hobart, Australia.

Language: English

**Description**: Information on biology, ecology and distribution of introduced marine invertebrates, algae, plants and fishes in Australia, including potential control options for those designated as pests. Also contains information for those species that are considered to be likely future introductions ('next pests').

#### 50. Introduced Marine Aquatic Invaders (Australia)

URL: http://www.fish.wa.gov.au/hab/broc/marineinvader/index.html

Host/Originating Country: Western Australia Department of Fisheries / Australia.

Language: English

**Description**: Information on 12 introduced marine species found in Western Australian waters. Species profiles include photographs with diagnostic features highlighted, photographs of similar native species, information on Australian invasive populations, habitat description, identification features, distribution, mechanism of introduction, biology, habitat, impacts, control measures, and further reading. A toll free FISHWATCH phone number is also provided for users to call and report sightings of marine invasive species.

# 51. Australian Government Agriculture Portal

URL: http://www.agriculture.gov.au/nrm1.cfm

**Host/Originating Country:** 

Language: English

**Description**: Resource Management System or catalogue of Australian, State and Territory Government information and services for the agricultural, fisheries, processed food and forestry industries. Provides access to alerts, species fact sheets, general publications, and government programs on invasive species - grouped under subheadings such as Pests/Feral Animals, Weeds, Marine, Forests, Land and more.

#### 52. Feral.org.au (Australia/New Zealand)

URL: http://www.feral.org.au/

**Host/Originating Country**: Pest Animal Control Cooperative Research Center, University of Canberra, Bureau of Rural Sciences / Australia.

Language: English

**Description**: Information on vertebrate pest/invasive animal species in Australia and New Zealand including published and unpublished research, technical reports, management practices, threat abatement plans and legislation. Provides a short summary and link to full-text of relevant publications online elsewhere.

#### 53. Invasive Invertebrates in Natural Ecosystems (New Zealand)

URL: http://www.landcareresearch.co.nz/research/biocons/invertebrates/

Host/Originating Country: Manaaki Whenua Landcare Research / New Zealand.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

Language: English

Description: Information on invertebrate invasions in New Zealand including wasps, ants and

mosquitos.

#### 54. New Zealand Weeds Database

URL: http://weeds.massey.ac.nz/database.asp

Host/Originating Country: Massey University / New Zealand

Language: English

**Description**: Information on New Zealand important weed species including a database of weed species, an identification quiz, study zone and a list of links to related online resources. Information on the 70 species in the database includes photographs, common name, scientific name, comments (description), distinguishing features, and control methods.

#### 55. Weed Index (New Zealand)

URL: http://www.envbop.govt.nz/Weeds/Weed-Index.asp

Host/Originating Country: Environment Bay of Plenty Regional Council / New Zealand

Language: English

**Description**: Alphabetical index of weed species providing information on each species including basic taxonomy (common and scientific names), photographs, identification, habitats, impact to biota and ecosystems, dispersal routes, vectors, infestation sources, management, and comments.

#### 56. Pest Animal Index (New Zealand)

URL: http://www.envbop.govt.nz/Land/Animals/Pest-Animals.asp

Host/Originating Country: Environment Bay of Plenty Regional Council / New Zealand

Language: English

**Description**: Index of pest animal species providing information on each species including basic taxonomy (common and scientific names), ecology, infestation sources, management, and control.

#### 57. Aquatic Plant Management Species Guide (New Zealand)

URL: http://www.niwa.co.nz/rc/prog/aquaticplants/species/

Host/Originating Country: National Institute of Water and Atmospheric Research / New Zealand

Language: English

**Description**: Information on low-growing, tall-growing and floating aquatic plant species, free floating species and marginal aquatic species of invasive plants in New Zealand; including basic taxonomic information, description and photographs.

#### 58. CARAPHIN Plant Pest Database (Caribbean)

URL: http://infoagro.net/health/caraphin/plantpest.cfm

**Host/Originating Country**: Caribbean Animal & Plant Health Information Network (CARAPHIN), Caribbean Regional Center (CaRC), Inter-American Institute for Cooperation on Agriculture (IIC) / Trinidad and Tobago.

Languages: English

**Description**: Search for occurrence, outbreak frequency and testing information for pests of plant

species in Caribbean nations.

# 59. CARAPHIN Animal Pest Database (Caribbean)

URL: http://infoagro.net/health/caraphin/animalhealth.cfm

**Host/Originating Country**: Caribbean Animal & Plant Health Information Network (CARAPHIN), Caribbean Regional Center (CaRC), Inter-American Institute for Cooperation on Agriculture (IIC) /

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

Trinidad and Tobago. **Languages**: English

**Description**: Search for occurrence, outbreak frequency and testing information for diseases of animal species in Caribbean nations.

#### 60. Invasive Plants of Canada (IPCAN)

URL: http://24.43.80.213/nbs/IPCAN/ and http://www.plantsincanada.com/

Host/Originating Country: National Botanical Services, Environment Canada / Canada.

Language: English

**Description**: Compiles information on the biology, distribution and control of invasive exotic plants for computer mapping and analysis. Data is derived from; specimen records in national collections, from sight records made by naturalists and professional botanists, and from published reports. Provides a historical perspective on the origins and rate of spread of invasives and allows the determination of possible correlations with climatic and other environmental and land use factors using geographic information systems (GIS). Fact sheets, control case studies, invasive species of Canada survey 2002, invasive plants of Canada guide to species and methods control, documents, invasive plant alert bulletin and regional news.

#### 61. Canadian Botanical Conservation Network

URL: http://www.rbg.ca/cbcn/en/invasives/i\_list.html

Host/Originating Country: Canadian Botanical Conservation Network (CBCN) / Canada.

Language: English, French

**Description**: Provides an introduction to Invasive Plants of Canada, and links to a Bibliography on Invasive Plants, an Invasive Plant list, bibliographic lists, invasive plant alerts and invasive species information from the Federal of Ontario Naturalists.

#### 62. National Alien and Invasive Species Database (NAISD) (Canada)

URL: <a href="http://www.atl.cfs.nrcan.gc.ca:8080/cfsnet/naisd-e.html">http://www.atl.cfs.nrcan.gc.ca:8080/cfsnet/naisd-e.html</a> Host/Originating Country: Canadian Forest Service / Canada.

Language: English, French, Spanish.

Description: [Under construction]. Provides a central electronic facility for the storage,

organization, exchange and dissemination of information on exotic pests that are potential threats

to Canada's forests and to the trade of Canadian forest products.

#### 63. Classical Biological Control of Weeds (Canada)

URL: http://res2.agr.ca/lethbridge/weedbio/index\_e.htm

Host/Originating Country: Agriculture and Agri-Food / Canada

Language: English, French

**Description**: Information about the use of beneficial organisms for the control of weeds in Canada. Includes weed species lists by common name, species name or family name. Information on each species includes basic taxonomy, description, related problems, biological control, photographs, and references.

#### 64. Nova Scotia Noxious Weeds (Canada)

URL: <a href="http://www.gov.ns.ca/nsaf/rir/weeds/noxious.htm">http://www.gov.ns.ca/nsaf/rir/weeds/noxious.htm</a>

Host/Originating Country: Nova Scotia Department of Agriculture and Fisheries / Canada

Language: English

**Description**: Linked list of 10 invasive plant species providing information on description, photographic images, habitat, life cycle, impacts and control methods. Site also hosts a Weed Identification Guide <a href="http://www.gov.ns.ca/nsaf/elibrary/archive/ipm/weeds/990019.htm">http://www.gov.ns.ca/nsaf/elibrary/archive/ipm/weeds/990019.htm</a> for 49

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

invasive plant species that includes detailed descriptive information along with life stage photographic images for each species.

# 65. Ontario Noxious Weeds (Canada)

URL: http://www.ovma.on.ca/noxtable.htm

Host/Originating Country: Ontario Vegetation Management Association / Canada.

Language: English

**Description**: Linked list of 24 invasive plant species providing descriptive information about each species, it's growth habits, introduction, history, distribution, and including photographic images.

#### 66. Inventory of Canadian Agricultural Weeds

**URL**: http://res2.agr.ca/ecorc/weeds\_herbes/title-titre\_e.htm

Host/Originating Country: Stephen J. Darbyshire, Agriculture and Agri-Food / Canada

Language: English, French

**Description**: List of Agricultural Weeds including life history, habitat, abundance, distribution in Canadian provinces, toxicity, notes and comments, taxonomical or autecological references, and references indicating rare or endangered status, reported toxicity, phytogeography, or general ecology and biology in each species account.

#### 67. CIPM Noxious Weeds Database (U.S. and Canada)

**URL**: http://www2.montana.edu/weedcenter/queryweedsform.html

Host/Originating Country: Center for Invasive Plant Management (CIPM), Department of Land

Resources and Environmental Sciences, Montana State University / USA.

Language: English

**Description**: Search for noxious weeds throughout the U.S. and Canada. The CIPM site also provides information on weed profiles, organic weed management, fire and drought, early warnings, education, grants, restoration and current events relating to weed species.

# 68. Non-Native Mammals of the U.S. and Canada (NBII)

URL: http://invasivespecies.nbii.gov/speciesinfo/mammal\_list.html

**Host/Originating Country**: Invasive Species Information Node, National Biological Information Infrastructure (NBII) / USA.

Language: English

**Description**: A web-accessible and downloadable (excel format) list of non-native mammals introduced into the U.S. and Canada, compiled from the Integrated Taxonomic Information System (ITIS) as of August 2002.

# 69. Invasive Species in Canada (Wildlife Federation Canada)

URL: http://www.cwf-fcf.org/invasive/chooseSC.asp

Host/Originating Country: Canadian Wildlife Federation / Canada.

Language: English

**Description**: Species category and keyword search for information on invasive terrestrial and aquatic flora and fauna in Canada including species origin, invasive range, introduction method, and ecological impacts.

#### 70. Purple Loosestrife InfoCenter (Canada)

URL: http://www.ducks.ca/purple/

Host/Originating Country: Ducks Unlimited Canada and the Manitoba Purple Loosestrife

Project (MPLP) / Canada Language: English - DRAFT - List of IAS Online Information Systems
Experts Meeting Towards Implementation of a Global Invasive Species Information
Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

**Description**: Information center for ourple loosestrife (*Lythrum spp.*) management in Canada including newsletters and updates from the MPLP, lists of published papers and abstracts, bibliographies, relevant canadian research projects, brochures for download, information on biocontrol insect species used for manageing purple loosestrife, news releases, educational resources (e.g. posters), a photo gallery, and a list of ten frequently asked questions about the species.

#### 71. Invasive Plant Program (Min. Forests / Canada)

**URL**: http://www.for.gov.bc.ca/hfp/noxious/introduc.htm **Host/Originating Country**: Ministry of Forests / Canada.

Language: English

**Description**: Provides description of weed problems in British Colombia, information on methods of spread, prevention, IPM, weed biology, weed identification (by floral colors), biological control, emerging threats, weed facts, downloadable brochures, posters, and other educational materials, and links. Also provides access to the electronic fourth edition of the Field Guide to Noxious and Other Selected Weeds of British Colombia.

# 72. NatureServe Explorer (USA & Canada)

URL: <a href="http://www.natureserve.org/explorer/">http://www.natureserve.org/explorer/</a>
Host/Originating Country: NatureServe / USA

Language: English

**Description**: Contains conservation information on more than 50,000 plants, animals, and ecological communities of the United States and Canada including invasive, rare and endangered species. Information for non-native species includes taxonomic information, distribution, references, global range comments, life history, and management.

#### 73. 399 Invasive Plants & Weeds in Canada & the U.S.

URL: http://invasivespecies.nbii.gov/speciesinfo/399 list.html

**Host/Originating Country**: Invasive Species Information Node, National Biological Information Infrastructure (NBII) / USA.

Language: English

**Description**: A downloadable (Excel format) list of 399 records of invasive plants and noxious weeds in the United States and Canada; compiled by Rod Randall (per his weed list updated in 1998). Some names have been modified to agree with the Integrated Taxonomic Information System (ITIS) database.

#### 74. Discover Life Global Mapper

URL: http://www.discoverlife.org/nh/tx/INVASIVES/

Host/Originating Country: U.S. Geological Survey (USGS), National Biological Information

Infrastructure (NBII), University of Georgia Athens / USA.

Language: English

Description: Distribution maps of invasive species, information gathered from multiple online

sources and delivered in HTML format.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

# 75. Forest Invasive Species Network for Africa (FISNA)

URL:

 $\underline{\text{http://www.fao.org/forestry/foris/webview/fisna/index.jsp?siteId=6381\&sitetreeId=25470\&langId=1}\\ \underline{\text{\&geoId=0}}$ 

Host/Originating Country: Food and Agriculture Organization (FAO) of the United Nations,

Forestry Department through FORIS / Africa.

Language: English

**Description**: Web site providing information about projects on forest invasive species, new invasive species outbreaks, woody invasive species, events, references, experts, quarantine issues, and other information about forest invasive species in Africa.

#### 76. Alien Invader Plants in South Africa

**URL**: http://www.plantzafrica.com/miscell/aliens1.htm

\* Originally hosted at http://www.geocities.com/wessaaliens/index.htm

Host/Originating Country: Wildlife and Environment Society of South Africa / South Africa

Language: English (common names in Afrikaans, Zulu)

**Description**: Lists of 3 categories of plants that have been declared Weeds and Alien Invader Plants in South Africa in terms of the Regulations pertaining to the Conservation of Agricultural Resources Act 43 of 1983 as amended.

#### 77. Swaziland's Alien Plants Database

URL: http://www.kbraunweb.com/alienplants/

Host/Originating Country: Kate Brawn Freelance Web Design / Africa

Language: English

**Description**: Online database searchable by species botanical (scientific) name, common name, SiSwati name; with species lists of all plant species, by swaziland status, 8<sup>th</sup> degree grid squares; and including a Swaziland map showing 8<sup>th</sup> degree grid squares. Users can click on an individual grid square on the map to see a list of species currently recorded in that square. The database also provides a record submission for species sightings within Swaziland.

#### 78. Weeds and Invasive Plants (WIP) (South Africa)

URL: http://www.agis.agric.za/wip/

Host/Originating Country: South African Department of Agriculture / South Africa

Language: English

**Description**: Part of the Agricultural Geo-Referenced Information System and with contributions from the Southern African Plant Invaders Atlas (SAPIA) project, "information currently available in the WIP website includes distribution maps, species descriptions, species photos & [identification experts]. There is the option to view species distributions in relation to climate, soil types, vegetation (biomes, & Acocks Veld Types), land use & other variables. The site also includes a new template for entering localities of invasive alien plants online."

#### 79. Alien Invasive Species of Pakistan

URL: http://edu.iucnp.org/alist.htm

Host/Originating Country: Environment & Biodiversity of Pakistan, IUCN Pakistan, Sustainable

Development Networking Programme / Pakistan.

Language: English

Description: Spreadsheet list of invasive species of Pakistan including scientific, family, english

and local names, geographic origin and worst affected areas (in Pakistan).

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

#### 80. (Aquatic) Non-Native Species in the Gulf of Mexico Region

URL: http://nis.gsmfc.org/

Host/Originating Country: Gulf States Marine Fisheries Commission / USA.

Language: English

**Description**: Information and examples of non-native aquatic species in the gulf of Mexico including biological description, pictures, references and links to other online resources. Search

multiple U.S. State databases to see non-native or invasive species reports.

#### 81. Invasive species of Mexico (CONABIO)

URL:

http://www.conabio.gob.mx/conocimiento/info\_especies/especies\_invasoras/doctos/especiesinva

**Host/Originating Country**: Comisión Nacional para el Conocimiento y uso de la Biodiversidad (CONABIO) / Mexico.

Language: Spanish, English

Description: Database of invasive species in Mexico providing information for 665 plant species,

77 fish, 10 amphibian and reptile, 30 bird and 16 mammals species including origin,

commentaries (e.g. biogeography) and links to ITIS and Google resources on each species.

#### 82. Weeds of Mexico / Malezas de Mexico

URL: <a href="http://www.malezasdemexico.net/">http://www.malezasdemexico.net/</a>

Host/Originating Country: Comisión Nacional para el Conocimiento y uso de la Biodiversidad

(CONABIO) / Mexico.

Language: Spanish, English

**Description**: Information and digital images of Mexican plants of disturbed places (i.e. weeds) to help botanists and non-botanists with identification. Species profiles for over 600 species mainly from the south-center of the country include information on taxonomy, Spanish and indigenous species names, geographical distribution and introduction, biological status (e.g. native, nonnative), description, digital photographs, habitat, biology, ecology, impacts, laws and policies, control, and references.

# 83. Invasive Species of India (NCBI)

URL: http://www.ncbi.org.in/invasive/search/index.html

Host/Originating Country: National Chemistry Laboratory (NCL), Center for Biodiversity

Informatics (CBI) / India Language: English

**Description**: Search for invasive species by kingdom, common or scientific name, country of origin, and keywords to retrieve information including taxonomic heirarchy, redlist category, invasive and alien status, taxonomic scrutiny status, taxonomic synonyms, common names, genetics, DSN, biogeography, and Google Images.

#### 84. Introduced Species in the Canary Islands

URL: http://www.interreg-bionatura.com/especies/index.php

**Host/Originating Country**: Government of the Canary Islands / Canary Islands

Language: Spanish, English

**Description**: Includes searchable and browseable lists of introduced established, non-established, commercial, and translated native species of plants, animals, and algae (including seaweeds) in the Canary Islands. Additional information provided in species profiles includes taxonomy, digital photos, description, distribution, habitat, biology, ecology, introduction and dispersal mechanisms, impacts, legal status and more. Criteria for searching the database include scientific name; Spanish or English common name; region; vertebrates or invertebrates; terrestrial or marine or freshwater; and island names. This site also provides a glossary of

Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

explanations for terminology used throughout the site; a bibliography; and contact information for reporting sightings or occurrences of introduced species.

# 85. Grupo de Aves Exóticas (GAE) / Exotic Bird Group (Spain and Europe)

**URL**: <a href="http://www.seo.org/programa\_ficha.cfm?idPrograma=17">http://www.seo.org/programa\_ficha.cfm?idPrograma=17</a>

Host/Originating Country: BirdLife International / Spain

Language: Spanish, English

Description: "The Bird Watching Group (EAG) is a working group of the Spanish Ornithological Society (SEO / BirdLife), created with the aim of promoting the study of bird introductions and [disclosing] the problems that may arise." This web site provides access to a glossary of definitions associated with introduced species; a list of birds introduced in Spain and Europe; a photo gallery of introduced birds; records of introduced bird occurrences; documents, and additional information about legislation.

#### 86. Andalucía (Spain) Invasive Species Control Program URL:

http://www.juntadeandalucia.es/medioambiente/site/web/menuitem.a5664a214f73c3df81d889966 1525ea0/?vgnextoid=fd883570a1c4c110VgnVCM1000001325e50aRCRD&vgnextchannel=3259

b19c7acf2010VgnVCM1000001625e50aRCRD&lr=lang es Host/Originating Country: European Union / Spain

Language: Spanish

Description: Lists of species included in the Andalucía Invasive Species Control Program including vascular plants, inland aquatic invertebrates, freshwater fish, amphibians, reptiles, birds, and mammals. Species are listed by Spanish common name and scientific name and species profiles are available for download in PDF. Each species profile includes photographs, and information on the species' impact(s), control methods, and distribution in the region.

#### 87. Alien Species (introduced into the Pertuis Charentais Sea) URL:

http://www.ifremer.fr/crema/PGSauriau/Alien%20species/Index%20alien%20species/alien\_specie

Host/Originating Country: French National Center for Scientific Research / France

Language: English, French

Description: List of six molluscan species accidentally or intentionally introduced into the Pertuis Charentais Sea. This list is non-exhaustive and will be updated after the publication by Goulletquer et al. (in prep) of a global synopsis of the 104 alien species that have been reported along the European Atlantic (France to Portugal). Currently includes information on vectors, date of introduction and native range or origin.

# 88. Atlas of [Agricultural] Weed Distributions in France (ARAF)

URL: http://www.dijon.inra.fr/malherbo/araf/index.htm

Host/Originating Country: University of Bourgogne, Institut National de la Recherche Agronomique (INRA), Etablissement National d'Enseignement Superieur Agronomique de Dijon (ENESAD) / France

Language: French

Description: Information on 25 weed species listed by scientific or common name including regional descriptions and distributions (maps), photographs, and species descriptions.

#### 89. HYpermedia for Plant Protection (HYPPA) – Weeds – (Europe)

URL: http://www.dijon.inra.fr/malherbo/hyppa/

Host/Originating Country: Institut National de la Recherche Agronomique / France

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

Language: French, English

**Description**: Catalogues providing taxonomy, distribution, and ecological information for mature plant and seedling stages of the main weeds of western Europe (580 species). Searchable by scientific and common name.

#### 90. Exotic Plants of Sardinia (Mediterranean)

URL:

http://www.ceh.ac.uk/EPIDEMIE/EPIDEMIE%20test/Species%20descriptions/Species%20descriptions.htm

Host/Originating Country: Centre for Ecology and Hydrology, Natural Environment Research

Council / UK

Language: English

**Description**: Descriptions and photographs of 16 exotic plant species in the Mediterranean.

#### 91. Pacific Islands Alien Snake Database

URL: http://pbin.nbii.gov/databases/snakeindex.html

Host/Originating Country: National Biological Information Infrastructure / USA

Language: English

**Description**: Database of alien snake sightings on Pacific islands. Allows users to search by sighting date, country, state or territory name, island, town, percent certainty, and snake type

(species). Authorized users can also submit snake sighting information.

# 92. Invasive Plants Checklist (Ethiopia)

URL: http://members.lycos.co.uk/ethiopianplants/invasives/prosopis.html

Host/Originating Country: Lycos, Desalegn Desissa and Pierre Binggeli / Ethiopia.

Language: English

**Description**: Provisional checklist of invasive plant species (names) in Ethiopia.

# 93. Aquatic Invaders of Belarus Alien Species Database

URL: http://www.aliensinbelarus.com/index.php

Host/Originating Country: Belarusian State University/ Belarus

Language: English

**Description**: This site is on alien aquatic animals inhabiting waterbodies of the Republic of Belarus. It allows searches for species by scientific taxonomy and retrieval of information on their origin, distribution and potential ecological impacts. The database was composed as a result of analysis of literature published during the last century and the authors' unpublished data. One can find some general information on Belarusian waterbodies, history of construction and functioning of the interbasin shipping canals, links to related sites, etc. The site is in testing regime at present and only in English. However, a Russian version will also be available soon.

#### 94. Invasive Exotic Species in the Iberian Peninsula

URL: http://invasiber.org/

Host/Originating Country: University of Girona / Spain.

Language: Spanish

**Description**: Database of invasive species of seaweed or algae, other plants, insects, crustaceans, other invertebrates, fish, amphibian, reptile, bird, and mammals, found in the Iberian peninsula. Species profiles include information on photographs, taxonomic definition, description, habitat, native geographic distribution, distribution in the Iberian Peninsula, introduction mechanism, ecological impacts, socioeconomic impacts, management, profile author, other information sources, and bibliographic references.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

#### 95. Alien Plants in Korea

URL: http://alienplant.nier.go.kr/eng/index.html

Host/Originating Country: National Institute of Environmental Research (NIER) / Korea

Language: Korean / English

**Description**: Search for invasive species by family, common or scientific name, country of origin, blooming season, and introduction period to retrieve species profile information including family name, scientific name, synonyms, English name, Japanese name, country of origin, introduction period, life period, stem size, stem, leaf, leaf arrangement, leaves, blooming period, inflorescence (description), flower color, flower (description), fruits, seed, distribution, and digital photographs.

#### 96. Alien Plants in Ireland

URL: http://www.biochange.ie/alienplants/

Host/Originating Country: BioChange, Trinity College of Dublin / Ireland

Language: English

**Description**: Search 715 alien plant species "currently occurring in (semi) natural habitats in Ireland (both the Republic and Northern-Ireland) by family, invasive status, Irish vice-counties, and invasiveness elsewhere for information including species identity, invasiveness, and biological and ecological traits. "In addition, limited information is available for 198 extinct alien species (not recorded after 1970)."

#### 97. Invasive Species Ireland

URL: http://www.invasivespeciesireland.com/

Host/Originating Country: Environment and Heritage Service, National Parks and Wildlife

Service / Ireland Language: English

**Description**: A gateway to the Invasive Species in Ireland Project and also the invasive species problem in Northern Ireland and the Republic of Ireland. Contains facts and figures, and case studies of invasive species in Ireland; an online invasive species sighting report form; access to working groups and forums; and lists information for established and potential invasive species from freshwater, marine, and terrestrial environments. Species profiles include digital photographs, scientific and common names, habitat, type of threat, status, description, impact, origin, invasive distribution, method of introduction, method of dispersal, and action recommendations. "To date, risk assessments have been carried out for 385 established species and 171 potential invaders."

# 98. National Invasive Species Database (Ireland)

**URL**: http://invasivespecies.biodiversityireland.ie

Host/Originating Country: National Biodiversity Data Centre (NBDC) / Ireland

Language: English

**Description**: Established in 2008, the database displays thousands of spatially referenced records for risk assessed invasive and potentially invasive species via the National Biodiversity Data Centre's interactive GIS 'Biodiversity Maps'. There is also a supporting website for the National Invasive Species Database with species lists, Species Alerts and various mechanisms for submitting records etc.

#### 99. Invasive Plant Species in Portugal

URL: http://www1.ci.uc.pt/invasoras/index.php

Host/Originating Country: University of Coimbra / Portugal

Language: Portuguese, English

**Description**: Online database about biological invasions, research, and invasive plant species in Portugal including a list of 30 invasive plant species "considered invasive by Portuguese law and 3 other also invasive". Each species name in the list is linked to a PDF leaflet that contains

- DRAFT - List of IAS Online Information Systems Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

"photos, morphologic descriptions, control methodologies and some extra information about each species."



- DRAFT - List of IAS Online Information Systems
Experts Meeting Towards Implementation of a Global Invasive Species Information
Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

#### **USA Context - IAS Databases**

100. Nonindigenous Species Database Network (NISbase) (SERC)

URL: http://invasions.si.edu/nemesis/merge/SpSearch.jsp

Host/Originating Country: Smithsonian Environmental Research Center (SERC) / USA.

Languages: English

**Description**: A distributed database portal developed by SERC and the U.S. Geological Survey to provide simultaneous search access to multiple aquatic invasive species databases.

- i. Nonindigenous Aquatic Species database (NAS) <a href="http://nas.er.usgs.gov/">http://nas.er.usgs.gov/</a>
- ii. Chesapeake Bay Exotic Marine and Estuarine Species Information System (NEMESIS) <a href="http://invasions.si.edu/nemesis/index.html">http://invasions.si.edu/nemesis/index.html</a>
- iii. Nonindigenous Species in the Gulf of Mexico Exosystem http://nis.gsmfc.org/
- iv. National Introduced Marine Pest Information System (NIMPIS) http://crimp.marine.csiro.au/nimpis/
- v. Introduced Marine Species of Hawaii Guidebook http://www2.bishopmuseum.org/HBS/invertguide/index.htm

#### 101. Invasive Species of the Central Southwest/Gulf Coast Region (NBII-CSWGCIN)

URL: http://cswgcin.nbii.gov/(4kfjburecvpdln45gohh32ep)/issues/invasives/database.aspx

**Host/Originating Country**: Central Southwest / Gulf Cost Information Node, National Biological Information Infrastructure / USA.

Language: English

**Description**: An online list of invasive species of the central southwestern United States and gulf coast region. Species are grouped into virus, monera, plantae, fungi, and animalia. Some taxa listed do not have an entry in the ITIS database. Clicking on a species' scientific name provides access to general, classification, invasive datasets and inventories, bibliographic and in some instances photographic information.

# 102. Invasive Grassland/Shrubland Bird Indicators (NBII-ISIN)

URL: http://invasivespecies.nbii.gov/speciesinfo/bird\_indicators.html

**Host/Originating Country**: Invasive Species Information Node, National Biological Information Infrastructure / USA.

Language: English

**Description**: A web-accessible list of 15 invasive grassland/shrubland birds used as indicators in the Heinz Report on The State of the Nation's Ecosystems. Scientific names for each species are linked to the Integrated Taxonomic Information System so that when the species' name is selected, ITIS information about that species is displayed.

# 103. <u>Yellowstone National Park Invasive Species</u> (NBII-NRIN)

URL:

http://mapserver.giac.montana.edu/maps/arcims/website/ynpweeds/viewer.htm?Title=Yellowstone%20National%20Park%20Invasive%20Species

**Host/Originating Country**: Northern Rockies Information Node, National Biological Information Infrastructure / USA.

Language: English.

**Description**: Part of the Greater Yellowstone Area GIS Database, created by many partners including Montana State University. An online interactive map generated by selecting GIS layers and adding them to the map.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

104. Interactive Maps of Hawaii (NBII)

**URL**: <a href="http://66.91.142.167/imf/imf.jsp?site=hawaiian\_islands">http://66.91.142.167/imf/imf.jsp?site=hawaiian\_islands</a>

Host/Originating Country: Pacific Basin Information Node, National Biological Information

Infrastructure (NBII) / USA.

Language: English

**Description**: Interactive map page was designed using ESRI ArcIMS Internet Map Server software. The interactive map layers integrate a variety of GIS layers including incipient weeds, aquatic species distribution (both native and non-native), remaining native natural communities, a LANDSAT TM satellite imagery mosaic, USGS 1:24,000 quadrangles, and a parcel-level managed land layer with level of protection quantified using the National GAP Status definitions.

# 105. Pacific Basin - Invasive Species (NBII-PBIN)

URL: http://pgin.nbii.gov/invasives.asp

Host/Originating Country: Pacific Basin Information Node, National Biological Information

Infrastructure (NBII) / USA.

Language: English

Description: Species information, data & projects, organizations/researchers, management and

geographic area information about invasive species in the Pacific Basin.

#### 106. Exotic Species (in SERAMBO)

URL: <a href="http://www.main.nc.us/SERAMBO/exotic/">http://www.main.nc.us/SERAMBO/exotic/</a>

**Host/Originating Country**: South Eastern Regional Association of Medical and Biological Organizations, Mountain Area Information Network – The Community Network for Western North

Carolina / USA. Language: English

Description: Lists of exotic plants, information and photographs for species found in the

Southern Appalachian region of the United States.

# 107. Guidebook of Introduced Marine Species of Hawaii (Bishop Museum)

**URL:** http://www2.bishopmuseum.org/HBS/invertguide/index.htm

Host/Originating Country/Originating Country: Bishop Museum and University of Hawaii /

USA.

Language: English

**Description:** Searchable database separated into algae and invertebrates of the coastal waters

of Hawaii.

#### 108. INVADERS Database (Northwestern U.S.)

URL: http://invader.dbs.umt.edu/

Host/Originating Country: University of Montana / USA.

Language: English

**Description**: Exotic plant names and weed distribution records for five states in the northwestern United States. Users can query the system by scientific or common name, or by geographic region. Also includes a state/provincial noxious weeds query form, as well as a database of biocontrol measures. Researchers may also submit their own data to the database.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

109. Alien Species in Hawaii (USGS)

URL: http://www.hear.org/

Host/Originating Country: Hawaiian Ecosystems at Risk (HEAR), U.S. Geological Survey;

University of Hawaii / USA.

Language: English

**Description:** Provides technology, methods, and information to decision-makers, resource managers, and the general public to aid in the fight against harmful alien species in Hawaii through access to the Harmful Non-Indigenous Species (HNIS) database and maps of alien species distributions in Hawaii and the HEAR Island Matrix.

i. Noxious Weeds - Hawaii (images and online info).

URL: http://www.hear.org/hawaiinoxiousweeds/

Host/Originating Country: Hawaiian Ecosystems at Risk (HEAR), U.S.

Geological Survey; University of Hawaii / USA.

Language: English

Description: List of links to live, dynamic (Google) web searchers for images and other information regarding plant species officially declared as "noxious weeds" by the State of Hawaii.

ii. Harmful Non-Indigenous Species (HNIS) Database

URL: http://www.hear.org/hnis/index.html

Host/Originating Country: Hawaiian Ecosystems at Risk (HEAR), U.S.

Geological Survey; University of Hawaii / USA.

Language: English

**Description**: Online source of up-to-date information (names, locations, pictures, control methods) about harmful non-indigenous ("non-native", "exotic") species in Hawaii. Provides a medium to allow feedback from scientists, professional resource managers, and the general public. Information is available on plants, invertebrates and vertebrates.

iii. Maps of alien species distributions in Hawaii

URL: <a href="http://www.hear.org/AlienSpeciesInHawaii/AlienSpeciesMapIndex.htm">http://www.hear.org/AlienSpeciesInHawaii/AlienSpeciesMapIndex.htm</a> Host/Originating Country: Hawaiian Ecosystems at Risk (HEAR), U.S.

Geological Survey; University of Hawaii / USA.

Language: English

Description: Provides distribution maps for plants, vertebrates and

invertebrates.

iv. HEAR Island Matrix

URL: http://www.hear.org/matrix/index.html

Host/Originating Country: Hawaiian Ecosystems at Risk (HEAR), U.S.

Geological Survey; University of Hawaii / USA.

Language: English

**Description**: A cross-reference by island and species, containing expert opinions regarding the ISLANDWIDE controllability of selected alien plant

species by island.

v. Pacific Island Ecosystems at Risk

URL: <a href="http://www.hear.org/pier/">http://www.hear.org/pier/</a>

Host/Originating Country: Hawaiian Ecosystems at Risk (HEAR), U.S.

Geological Survey; University of Hawaii / USA.

Language: English

**Description**: Provides lists of plant species that are invasive (or potentially invasive) on Pacific Islands by scientific name, elevation, location, life form, and

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

common name. Information retrieved on each species includes recognition status as a PIER environmental invasive, presence/absence on Pacific Islands, threat status in relation to elevation, risk assessment results (pest score), other latin names, common names (English, French, Hawaiian), habit, description, habitat/ecology, propagation, native range, specific recorded presence, comments (notes), control methods, additional information, and references. Other resources include survey reports on invasive species on Pacific Islands and risk assessments for invasive and potentially invasive species.

#### 110. Exotic Forest Pest Information System for North America (Forest Commission)

URL: http://www.exoticforestpests.org/

Host/Originating Country: North American Forest Commission / USA.

Language: English, French, Spanish.

**Description:** Identifies exotic insects, mites, and pathogenic organisms that have the potential to cause significant damage to North American forest resources as well as background information on identified pests, serving as a resource for North American regulatory and forest protection agencies.

# 111. North American Non-Indigenous Arthropod Database (NANIAD) (USDA-APHIS)

URL: http://www.invasivespecies.org/NANIAD.html

**Host/Originating Country**: U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Plant Protection and Quarantine, Center for Plant Health Science and Technology / USA.

Language: English

**Description**: Contains the data for 2,273 species of non-indigenous insects and arachnids including classification, natural and immigrant distribution, economic and environmental impacts, disease vectors, establishment status, entry point and date, pathways, habitat, hosts, life history, and literature citations.

# 112. <u>Federal Noxious Weeds Database</u> (USDA-APHIS)

URL: http://www.invasivespecies.org/fedweeds.html

**Host/Originating Country**: U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Plant Protection and Quarantine, Center for Plant Health Science and Technology / USA.

Language: English

**Description**: Derived from the "Federal Noxious Weed Inspection Guide - Noxious Weed Inspection System." Contains fields such as scientific name, family name, synonym(s), common name(s), diagnostic characteristics, habitat, distribution outside of the U.S., distribution within the United States (if applicable), reason for listing as a Federal Noxious Weed (FNW), the form in which the plant is most likely to enter the United States, likely pathways of entry into the United States, general notes, photographs line drawings, and distribution maps.

#### 113. APHIS Regulated Pest List (USDA-APHIS)

URL: http://www.invasivespecies.org/NewInitiatives.html

**Host/Originating Country**: U.S. Department of Agriculture, Animal and Plant Health Inspection Service (APHIS) / USA.

Language: English

**Description**: Contains pest type, order, family, scientific name, author, common name, source,

illustration, data sheet, citation, update, comment, host, distribution, and regulated site

information.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

#### 114. PestTracker (NAPIS USDA-APHIS)

URL: http://ceris.purdue.edu/napis/

**Host/Originating Country**: U.S. Department of Agriculture, Animal and Plant Health Inspection Service Plant Protection and Quarantine Cooperative Agricultural Pest Survey; Purdue University, Entomology Department, Center for Environmental and Regulatory Information Systems / USA.

Language: English

**Description**: Public access web site providing information on pest species of insects, mites, and nematodes; plant pathogens; invasive weeds; bio-control agents; and Other (Mollusks, Slugs, etc.) including fact sheets; survey and distribution maps; regulations; related links and photos. Searchable by scientific and common name, and U.S. State.

# 115. Identified Plant Pests Regulated by APHIS (IPPRA) (USDA)

**URL**: http://www.invasivespecies.org/ippra.html

**Host/Originating Country:** U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Plant Protection and Quarantine, Center for Plant Health Science and Technology / USA.

Language: English

**Description:** The IPPRA is an interactive database of plant pests regulated by the U.S. Department of Agriculture, Animal and Plant Health Inspection Service. The focus of this database is at the species level. Several invasive insect species are also included in the database.

# 116. Federal and State Noxious Weeds in GRIN (USDA)

URL: http://www.ars-grin.gov/npgs/tax/taxweed.html

Host/Originating Country: U.S. Department of Agriculture, Agricultural Research Service,

National Genetic Resources Program / USA.

Language: English

**Description**: Provides taxonomic nomenclature for 37,000 plant taxa, and 14,000 plant genera.

# 117. <u>Team Leafy Spurge</u> (USDA)

URL: http://www.team.ars.usda.gov/v2/infoproducts.html

Host/Originating Country: U.S. Department of Agriculture / USA.

Language: English

Description: Access to publications, integrated pest management resources, databases,

manuals and biological information about Leafy Spurge (Euphorbia esula).

# 118. Global Pest and Disease Database (GPDD) (USDA / PPQ) (restricted access)

URL: http://www.apdd.info/

Host/Originating Country: U.S. Department of Agriculture Plant Protection and Quarantine /

USA.

Language: English

**Description**: The Global Pest and Disease Database (GPDD) is a compilation of exotic invasive species of key concern to the U.S that was developed from a number of sources. Selection of species for inclusion in the database is dependent on a number of factors, including their presence in other key lists and databases. The distributed web-based database system forms the conduit for a number of pest-oriented information systems and provides both external and internal APHIS information on key pest species not yet in the United States. The GPDD serves as a secure electronic warehouse or library of scientific information about exotic pests that is used to support the Agency's pest lists.

#### 119. <u>Invasive Species Information Center</u> (NISIC) (USDA)

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

URL: http://www.invasivespeciesinfo.gov/

**Host/Originating Country**: U.S. Department of Agriculture National Agricultural Library / USA.

Language: English

**Description**: "[A] gateway to invasive species information; covering Federal, State, local, and international sources." Browse this resource for information about invasive species in the United States by geography, or by subject - including aquatic species; plants; animals; microbes; economic impacts; laws and regulations; manager's tool kit; and resource library. Species profiles include scientific name; common names; geographic origin (native); date of U.S. introduction; images; means of introduction; impacts; current U.S. distribution; States where reported invasive; management plans; and selected Federal and State Government resources.

# 120. Slow the Spread Gypsy Moth Database (STS) (VA Tech)

URL: http://www.gmsts.org/operations/

Host/Originating Country: Virginia Tech, Department of Entomology / USA.

Language: English

**Description:** Provides data summaries by state, survey maps, and a decision-support system for reducing the rate of spread of gypsy moth in the U.S.

# 121. Noxious & Nuisance Plant Management Information System (PMIS) (USArmy Corp)

URL: http://www.wes.army.mil/el/pmis/pmishelp.htm

Host/Originating Country: U.S. Army Corps of Engineers, Engineer Research and Development

Center, Environmental Laboratory / USA.

Language: English

**Description**: Access to over 100 of the worst U.S. invasive plants, including detailed and summary information on plant biology, ecology, problems, identification, and associated management technologies.

#### 122. Aquatic, Wetland & Invasive Plant Information Retrieval System (APIRS)

URL: http://plants.ifas.ufl.edu/search80/NetAns2/

**Host/Originating Country**: University of Florida, Center for Aquatic and Invasive Plants, Bureau of Invasive Plant Management, Florida Department of Environmental Protection Aquatic Plant Control Research Program, U.S. Army Corps of Engineers / USA.

Language: English

**Description**: Includes annotated citations for more than 60,000 research articles, books and reports about plant ecology, physiology, utilization and control of freshwater aquatic, wetland, terrestrial and aquatic invasive plants. Items in many languages dating back to the 18th century are in this inclusive database.

#### 123. WeedUS: Database of Plants Invading Natural Areas in the U.S. (PCA-APWG)

Main URL: <a href="http://www.nps.gov/plants/alien/factmain.htm#pllists">http://www.nps.gov/plants/alien/factmain.htm#pllists</a>
URL: <a href="http://www.nps.gov/plants/alien/list/a.htm">http://www.nps.gov/plants/alien/list/a.htm</a> (web format)

URL: http://www.nps.gov/plants/alien/list/WeedUS.xls (excel file)

**Host/Originating Country**: National Park service and Plant Conservation Alliance (Alien Plant Working Group) / USA.

Language: English

**Description**: The WeedUS database is a national referenced list of plants reported to be invasive in natural areas in the U.S. (including Hawaii). Illustrated fact sheets linked to species names in the list include plant descriptions, native range, nativity status for U.S., states where invasive, national parks where invasive, scientific name, and selected common names, management options, suggested alternative native plants, and selected links to relevant people and organizations.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

#### 124. Exotic Plant Information Center (EPICENTER) (Great Lakes region)

URL: http://www.glifwc.org/epicenter/

Host/Originating Country: Great Lakes Indiana Fish and Wildlife Commission / USA.

Language: English

**Description**: Established to raise awareness of several invasive non-native plants and their ecological impacts in the upper Great Lakes region; to provide effective tools for educational, management, and research needs.

#### 125. Exotic Plant Database (Florida)

URL: http://www.fleppc.org/database/data\_intro.htm

Host/Originating Country: Florida Exotic Pest Plant Council (FLEPPC), Florida Department of

Environmental Protection, Bureau of Invasive Plant Management / USA.

Language: English

**Description**: Contains over 5,000 sight records of infestations of Exotic Pest Plant Council Category I and Category II species in Florida public lands and waters. Records are from local, state, and federal parks and preserves. Some records document infestations in regularly disturbed public lands such as highway or utility rights-of-way.

#### 126. Floristic Inventory of South Florida (FISF base) (Florida)

URL: http://www.regionalconservation.org/ircs/DatabaseChoice.asp

Host/Originating Country: The Institute for Regional Conservation / USA.

Language: English

**Description**: Lists exotic plant taxa on conservation lands in a 19 county area defined as the South Florida Ecosystem by the U.S. Fish and Wildlife Service. \* Requires registration.

#### 127. Florida Exotic Species

URL: http://www.wildflorida.org/critters/exotics/exotics.asp

Host/Originating Country: Florida Fish and Wildlife Conservation Commission / USA

Language: English

**Description**: Basic statistics on over numbers of exotic species, established and breeding exotic species populations, populations trends, lists of exotic species along with the number of Florida counties they occur in. Exotic species lists include 196 species of birds, 30 mammal species, 47 reptile species and 4 amphibian species. Species names in the lists are hyperlinks to species fact sheets containing information on year of introduction or first record, established status, estimated Florida range, statewide trend, threats to natives, species account, habitats, a distribution map, references and links to more information.

#### 128. CalWeed Database (California)

URL: http://endeavor.des.ucdavis.edu/weeds/

**Host/Originating Country**: California State Department of Food & Agriculture, California Interagency Noxious Weed Coordinating Committee, U.S. Bureau of Land Management; University of California-Davis / USA.

Language: English

**Description**: Contains weed eradication project profiles for invasive weeds, in California, including targeted invasive name(s); targeted species for (re)introduction; project location; lead and participating agencies; controls used; time frame for project; resource issues; and project contact information. Users can view the data by project, by targeted invasive, by county, or by control method.

#### 129. Cal-IPC California Invasive Plant Council

URL: http://groups.ucanr.org/ceppc/index.cfm

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

Host/Originating Country: California Invasive Plant Council / USA.

Language: English

**Description**: Includes a list of invasive plants in California based on information submitted by land managers, botanists, and researchers throughout the state, and on published sources; access to Invasive Plants of California Wildlands book online;

#### 130. CRISIS Maps - Weed Map and Data Center (NBII - CAIN)

URL: http://cain.nbii.gov/cgi-

bin/mapserv?map=../html/cain/crisis/crisismaps/crisis.map&mode=browse&layer=state&layer=co

<u>unty</u>

**Host/Originating Country**: California Information Node, National Biological Information

Infrastructure / USA. **Language**: English

Description: Maps of geo-referenced weed point observations and associated data in the North

American regions of California and the Southwest.

#### 131. California EncycloWeedia

URL: http://www.cdfa.ca.gov/phpps/ipc/encycloweedia/encycloweedia hp.htm

Host/Originating Country: California Department of Food and Agriculture, University of

California, Davis / USA **Language**: English

**Description**: Information on identification, biology, management of plants defined as noxious weeds by california State law. Includes list of weeds sorted by common and scientific name; noxious weed photographic gallery; list of weeds with country of origin, list of weeds sorted by pest rading; federal noxious weed list and other information resources related to weed species.

# 132. Southwest Exotic Plant Information Clearinghouse (SWEPIC) (USGS)

URL: http://sbsc.wr.usgs.gov/research/projects/swepic/swepic.asp

Host/Originating Country: U.S. Geological Survey / USA.

Language: English

Description: Database of exotic plant distribution and status for the Colorado Plateau and the

greater southwestern United States.

#### 133. Southwest Exotic Mapping Program (SWEMP) (USGS)

**URL**: http://sbsc.wr.usgs.gov/research/projects/swepic/swemp/swempA.asp

Host/Originating Country: U.S. Geological Survey, Colorado Plateau Field Station (CPFS) /

USA.

Language: English

**Description**: A regional database of non-native invasive plant distribution maps for the southwestern United States (Arizona, New Mexico and adjacent areas of adjoining states).

#### 134. Invasive Plant Atlas of New England (IPANE) (New England)

URL: http://nbii-nin.ciesin.columbia.edu/ipane/

Host/Originating Country: University of Connecticut / USA.

Language: English

**Description**: Provides access to invasive plant databases for the New England region, joined or linked to geographic boundary files for New England states, counties, towns, and other geographical areas, invasive plant species profiles, an invasive plant reporting system, distribution maps, and images.

# 135. Alaska Exotic Plant Mapping Project (AKEPMP) (Alaska)

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

URL: http://agdc.usgs.gov/akepic/

Host/Originating Country: U.S. Geological Survey, Alaska Science Center (ASC) / USA.

Language: English

**Description**: Regional database of GIS-based exotic plant distribution maps for Alaska.

# 136. Invasive Plants (Alaska) URL: http://cnipm.org/plants.html

Host/Originating Country: Alaska Committee for Noxious and Invasive Plants Management /

USA.

Language: English

Description: List of 24 invasive plant species. Provides information on each species including

photographs, basic taxonomy, description, and control methods.

# 137. Minnesota Weed Biocontrol Project (Minnesota)

URL: http://www.mda.state.mn.us/weedcontrol/

Host/Originating Country: Minnesota Department of Agriculture / USA.

Language: English

**Description**: A database of Minnesota state weed biocontrol project data, providing federal, state, and county agencies a means for assessing the status of natural enemy releases and the

effects they are having on their target weeds.

# 138. Center for Invasive Plant Management (CIPM)

URL: http://www.weedcenter.org/

Host/Originating Country: Montana State University / USA.

Language: English

**Description**: Includes the CIPM Noxious Weeds Database

#### 139. Halting the Invasion: State Tools for Invasive Species Management (USA)

URL: <a href="http://www2.eli.org/research/invasives/invasives form.cfm">http://www2.eli.org/research/invasives/invasives form.cfm</a> Host/Originating Country: Environmental Law Institute, USA

Language: English

Description: Searchable database, summarizing laws affecting invasive species management in

each of the 50 United States.

# 140. Exotic Forest Pest Information System for North America (EFPISNA) (Forest Com)

URL: http://www.exoticforestpests.org/

**Host/Originating Country**: North America Forest Commission / USA, United States Department of Agriculture (USDA) Forest Service / USA.

Language: English, French, Spanish

**Description**: Identifies exotic insects, mites and pathogens with potential to cause significant damage to North American forests. Contains background information and fact sheets for each

pest.

#### 141. WeedWeb (USA)

URL: http://extension.usu.edu/weedweb/

Host/Originating Country: Rangeland Resources Department of Utah State University, Utah

and Idaho Cooperative Weed Management Area / USA

Language: English

**Description**: Introduction and definition of noxious weeds, current status in North America, control methods, color photo library of weeds, identifying characteristics and ecology of 10 noxious weeds common "in the west".

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

#### 142. BLM Weeds Web site (BLM)

URL: http://www.blm.gov/weeds/

Host/Originating Country: Bureau of Land Management (BLM) / USA.

Language: English

Description: Access to weed species information by U.S. State (Alaska, California, Colorado,

Montana, Nevada, Oregon, Washington, Utah, Wyoming).

#### 143. Asian Longhorned Beetle (USA)

URL: http://www.uvm.edu/albeetle/

**Host/Originating Country**: University of Vermont / USA.

Language: English

**Description**: Provides description of the ALB problem, identification, host tree information, biological, management, infestation reports, distribution maps, research resources, contact

numbers, products and publications relating to the issue.

#### 144. InvasivePlants.net

URL: http://www.invasiveplants.net

Host/Originating Country: Cornell University Ecology & Management of Invasive Plants

Program / USA. **Language**: English

**Description**: Provides information on Phragmites, Purple Loosestrife, Garlic Mustard, Water Chestnut, Japanese Knotweed, Giant Hogweed including monitoring protocols, biocontrol

information, resources and related events.

#### 145. Invasive Species Forecasting System (NASA)

URL: http://bp.gsfc.nasa.gov/s2i.html

Host/Originating Country: National Aeronautics and Space Administration Office of Earth

Science, United States Geological Survey / USA.

Language: English

Description: A National Invasive Species Forecasting System for the early detection,

remediation, management, and control of invasive species on Department of Interior and adjacent

lands.

#### 146. N.J. (New Jersey Agricultural) Weed Gallery

URL: http://www.rce.rutgers.edu/weeds/

Host/Originating Country: Rutgers Cooperative Extension / USA.

Language: English

**Description**: A collection of photos and descriptions of 133 agricultural weeds found in New Jersey, indexed by common name, latin name, thumbnail images and contains selected

references. Includes a list of print resources for weed identification.

#### 147. Weed Identification Resources (Iowa)

URL: http://www.weeds.iastate.edu/weed-id/weedid.htm

Host/Originating Country: Iowa State University Extension, Department of Agronomy / USA.

Language: English

**Description**: Weed seedling identification images for 20 weed species. Includes *Identification of the weedy pigweeds and waterhemps of Iowa* <a href="http://www.weeds.iastate.edu/weed-id/waterhemp/default.htm">http://www.weeds.iastate.edu/weed-id/waterhemp/default.htm</a> guide.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

148. Key to Common Weed Seedlings of Michigan

URL: <a href="http://www.msue.msu.edu/msue/iac/e1363/e1363.htm">http://www.msue.msu.edu/msue/iac/e1363/e1363.htm</a> Host/Originating Country: Michigan State University / USA

Language: English

**Description**: Graphical identification key for grass and grasslike weeds.

#### 149. Noxious Weeds and Non-Native Plants (Colorado)

URL: http://www.cwma.org/2 bad weed.html

Host/Originating Country: Colorado Weed Management Council / USA.

Language: English

**Description**: Includes list of 43 'Troublesome Weeds'; 8 'Ornamental Weeds'; and 5 'Potential Invaders' plant species. Information provided for each species includes photographs and basic description, origin, invasive character and associated problems.

#### 150. Invasive Plants in NYS (New York)

URL: http://www.ipcnys.org/pages/top%2020.htm

Host/Originating Country: Invasive Plant Council of NYS / USA.

Language: English

**Description**: Primary list of invasive plants in New York State. Provides information on 24 plant species including photographs, biology, habitat, origin, NY range, spread, and associated problems.

# 151. Catalog of Invasive Plant Species of the United States

URL: <a href="http://sciweb.nybg.org/science2/hcol/inva/index.asp">http://sciweb.nybg.org/science2/hcol/inva/index.asp</a>

Host/Originating Country: The New York Botanical Garden, International Plant Science Center,

Virtual Herbarium / USA. Language: English

**Description**: Online catalog of invasive plant herbarium specimens providing brief information on each specimen including location where collected, collector name and collection date, description, habitat where collected, and other identication information such as specimen ID code. Search results can be downloaded in spreadsheet format (comma separated values – csv file).

# 152. Noxious Weed Lists and Monitor List (Washington State)

URL: http://www.nwcb.wa.gov/weed\_list/weed\_listhome.html

Host/Originating Country: Washington State Noxious Weed Control Board / USA

Language: English

**Description**: Access to several categorized weed species lists. Provides information on each species including photographs, basic taxonomy, description and variation, economic importance, habitat, geographical distribution, history (of introduction), growth and development, reproduction, response to herbicide, response to cultural methods, response to mechanical methods, biocontrol potentials, rationale for listing, and references.

#### 153. <u>Invasive Species of Concern in Maryland</u>

URL: http://www.mdinvasivesp.org/invasive\_species\_md.html

Host/Originating Country: Maryland Invasive Species Council / USA.

Language: English

**Description**: Lists of invasive insects, other invertebrates, vertebrates, aquatic plants, terrestrial plants, viruses, fungi and other organisms. Provides information on each species including scientific and common names, photographs, basic description and links to other related State resources.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

#### 154. Idaho's Noxious Weeds

URL: http://www.oneplan.org/Crop/noxWeeds/nxWeed00.htm

Host/Originating Country: Idaho State partners to the 'OnePlan' Program / USA

Language: English

**Description**: Information on 35 weed species indexed by common name, and including background (history of introduction and establishment), images, physical descriptions, distribution in the state of Idaho and control methods. Online version of *Idaho's Noxious Weeds*, by Robert H. Callihan and Timothy W. Miller.

#### 155. Weed Identification Guide (Virginia Tech.)

**URL**: <a href="http://www.ppws.vt.edu/weedindex.htm">http://www.ppws.vt.edu/weedindex.htm</a>

Host/Originating Country: Virginia Tech Department of Plant Pathology, Physiology & Weed

Science / USA Language: English

**Description**: Includes a Grass Weed Identification Key, and alphabetical weed index. Information provided for each weed species includes photographs (mature and seedling), description (mature and seedling), and identifying characteristics.

# 156. Weed Identification (Univ. Illinois)

URL: http://web.aces.uiuc.edu/weedid/

Host/Originating Country: University of Illinois, USA.

Language: English

**Description**: Online weed identification tool allowing users to describe type (grass, grass-like, broadleaf, both), foliage, floral, growth and life cycle characteristics to identify a weed species. Displays a list of weed species that is tailored as user's selections become narrow the possibilities for identification. Information provided on each species includes photographs, scientific name, brief morphological description, growth habit, life cycle, habitat and comments.

#### 157. Missouri Weeds

URL: <a href="http://www.psu.missouri.edu/fishel/Default.htm">http://www.psu.missouri.edu/fishel/Default.htm</a>
Host/Originating Country: University of Missouri / USA

Language: English

**Description**: Lists of Weeds of Field Crops and Pastures; Weeds of Ornamentals and Turfgrass; and Weeds of Aquatic Sites. Information provided for each weed species includes photographs and brief descriptive text. A Summer Broadleaf Plant Key; Grasses and Grasslike Plant Key; and a Winter and Early Spring Broadleaf Plant Key, also provide access to photographs and brief descriptive text.

#### 158. Weeds of lawns, yards, & flowerbeds in Mississippi

URL: http://www2.msstate.edu/~jbyrd/turfweed.html

Host/Originating Country: Mississippi State University / USA

Language: English

**Description**: List of weed species by common name. Information provided for each species includes photographs.

#### 159. Invasive Species in Wisconsin

**URL**: http://www.dnr.state.wi.us/org/land/er/invasive/index.htm

Host/Originating Country: Wisconsin Department of Nature Resources / USA.

Language: English

**Description**: Lists of non-native plants and animals. The plant list is divided into groups of trees, shrubs, vines, forbs, grasses, and aquatics, including indications of species that are currently sold

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

by plant nurseries in the U.S. State of Wisconsin. Species are listed by common and scientific name. Some names are linked to species profile pages containing detailed information on description, distribution and habitat, life history and impacts, control methods, and additional external links to information on each species. The list of non-native animals includes 15 species of vertebrate, invertebrate, terrestrial and aquatic organisms. Each organism's name is linked to a page that lists internal and external links to information on the species or programs/projects relating to the species.

160. Common Weeds of No-Till Cropping Systems

URL: http://www.btny.purdue.edu/Extension/Weeds/NoTillID/NoTillWeedID1.html

Host/Originating Country: Purdue University / USA

Language: English

**Description**: Common name index of 15 weed species including basic information on common and scientific name, life cycle, control methods and photos of flowers, seedlings, and specific morphological characteristics (e.g. stems, leaves etc.).

161. Invasive Species Monitoring Resources

URL: <a href="http://science.nature.nps.gov/im/monitor/invasives.htm">http://science.nature.nps.gov/im/monitor/invasives.htm</a> Host/Originating Country: National Park Service / USA

Language: English

**Description**: Includes information on the NPS Invasive Species Management Policy, monitoring guidelines for invasive plants, animals and other taxa, lists of prioritization tools, a list of databases, statistical resources, meetings and conferences, education and outreach, agencies and organizations, related websites and reports, research, references and invasive species bibliographies.

162. Electro. Data Info. Source on Insects, Plant Diseases, Pesticides & Weeds

URL: http://edis.ifas.ufl.edu/TOPIC Insects, Plant Diseases, Pesticides, and Weeds

Host/Originating Country: University of Florida Cooperative Extension / USA

Language: English

**Description**: Directory style information on Invasive Species in general (e.g. control), invasive insects, arachnids, molluscs and gastropods, weeds and animals. Information on each invasive species includes backgroun, description, range and habitat, food, reproduction, problems and solutions, control methods, legal aspects, suggested readings, and graphics.

# 163. Stevens County Noxious Weed List

URL: http://www.co.stevens.wa.us/weedboard/weed list.htm

Host/Originating Country: Stevens County Noxious Weed Control Board / USA

Language: English

**Description**: Information on identification, maps, biocontrol methods for weed species in Stevens **County**, Washington states, USA. Specific information includes photographic images, identifying traits, biology and ecology, control (prevention, biological, cultural, mechanical, chemical), and location of observations.

# 164. Pest Plants of Hawaiian Natural Ecosystems

URL: http://www.botany.hawaii.edu/faculty/cw\_smith/aliens.htm

Host/Originating Country: University of Hawaii, Botany Department / USA

Language: English

**Description**: HTML information pages for species listed by species and common names,

containing photographic images, plant and invasion population descriptions.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

165. WeedAlert.com Turf Weed Control

**URL**: <a href="http://www.weedalert.com">http://www.weedalert.com</a>

Host/Originating Country: PBI/Gordon, Inc./ USA.

Language: English

**Description**:. Online source for turf weed control options. Weed information for North America (divided into four major regions). Includes weed images, descriptions, control recommendations, germination dates, university links, links to weed and turf related societies, environmental issues (e.g. 2,4-D task force), research, and industry trade journals.

166. Non-Native Ants database

**URL**: <a href="http://home.sandiego.edu/~tmcglynn/exotic.htm">http://home.sandiego.edu/~tmcglynn/exotic.htm</a>

Host/Originating Country: Terrence P. McGlynn, Department of Biology,

University of San Diego / USA

Language: English

**Description**: Draft database of names and geographic distribution data of the known non-native

ant species of the world including historical observation and introduction records, maps,

references; and a directory of researchers (expertise).

#### 167. Introduced Social Insects

URL: <a href="http://research.amnh.org/entomology/social\_insects/introduced.html">http://research.amnh.org/entomology/social\_insects/introduced.html</a> Host/Originating Country: American Museum of Natural History / USA

Language: English

**Description**: Searchable database on introduced social insects (ants, bees, wasps, termites) providing taxonomic information, photographic images, biology, distribution, damage, control, and references for each species where available. A component of the Social Insects World Wide Web (SIWeb).

#### 168. The Bugwood Network

URL: http://www.bugwood.org/

**Host/Originating Country**: The Bugwood Network and Forestrylmages Image Archive and Database Systems, University of Georgia - Warnell School of Forest Resources and College of Agricultural and Environmental Sciences - Dept. of Entomology / USA

Language: English

**Description**: Distributes digital information in the fields of entomology, forestry, forest health and natural resources. Provides access to numerous databases containing digital images, fact sheets, publications, IMP resources, research information, and links to information relating to insect, fungal, herbaceous and other forest pest species including:-

# i. <u>Invasive and Exotic Species of North America – INVASIVE.ORG (USDA-FS)</u> **URL**: http://www.invasive.org/

**Description**: Over 8,300 images, including over 1,000 new images of invasive species (including many weeds) and their biological control agents. Although most images are North American in nature, the system also contains images of organisms that are "Non-U.S. Natives", or are considered to be "U.S. Invasives".

#### ii. Forest Pests of North America

URL: http://www.forestpests.org/

**Descripton**: Photographs of forest pests (insects, diseases & other damage agents) as well as linked access to online information, fact sheets, publications, etc. concerning forest pest species.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

#### iii. Georgia Integrated Pest Management

URL: http://www.gaipm.org/

**Description**: Photos and information on integrated pest management of agricultural crop pest species. Includes a list of the *Top 50 Insects Important to Agriculture in Georgi*a.

#### 169. Native Gardening and Invasive Plants Guide

URL: http://enature.com/native\_invasive/invasives.asp

Host/Originating Country: National Wildlife Federation / USA

Language: English

**Description**: Searchable online database lists of a selection of the plants that are best avoided in the U.S. garden because they can be weedy or invasive. The lists present a selection of plants for each State, rather than a comprehensive list of all the plants that might be undesirable in the State.

# 170. Team Arundo del Norte (California)

URL: <a href="http://www.teamarundo.org/">http://www.teamarundo.org/</a> Host/Originating Country: / USA.

Language: English

**Description**: Forum of local, state, and federal organizations dedicated to the control of Arundo donax (giant reed), in Central and Northern California. Includes and experts database, a projects inventory, survey and monitoring database, educational materials, reference library, and a listserv.

#### 171. Catalog of Invasive Plant Species of the United States

URL: <a href="http://www.nybg.org/bsci/hcol/inva/">http://www.nybg.org/bsci/hcol/inva/</a>

Host/Originating Country: New York Botanical Garden / USA.

Language: English

**Description**: Herbarium specimen-based database of invasive plant species in the U.S. according to Federal Noxious Weed List and/or the State List of Regulated Noxious Weeds, both published by the United States Department of Agriculture.

## 172. Delaware Invasive Species Tracking System

URL: http://www.lsc.usgs.gov/gis/dists/ViewSpecies.asp

Host/Originating Country: US Geological Survey Leetown Science Center / USA.

Language: English

Description: Online tracking system for reporting and mapping invasive species in the state of

Delaware. All plant records. Basic species profiles.

#### 173. TexasInvasives Plant Database

URL: http://www.texasinvasives.org/Invasives\_Database/Invasives.html

**Host/Originating Country**:

Language: English

**Description**: Database of plants known to occur in or around Texas that are suspected of causing invasive problems. Species profiles include digital images and information on taxonomy, habitat, description, history, biology and spread, ecological threat, look-alike or similar species, alternatives, management options, distribution, data sources, and references.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

#### **USA Context – Aquatic IAS Databases**

#### 174. Database on Introductions of Aquatic Species (DIAS) (FAO)

**URL**: http://www.fao.org/waicent/faoinfo/fishery/statist/fisoft/dias/index.htm

Host/Originating Country: Food & Agriculture Organization (FAO) of the United Nations.

Language: English

**Description**: Database of 3,150 records for introduced freshwater fish, mollusks, crustaceans,

and marine species.

#### 175. National Aquatic Nuisance Species Clearing House (NANSC) (USA)

**URL**: <a href="http://www.cce.cornell.edu/programs/nansc/nan\_ld.cfm">http://www.cce.cornell.edu/programs/nansc/nan\_ld.cfm</a>

Host/Originating Country: Cornell Cooperative Extension (CCE), Cornell University, National

Oceanic and Atmospheric Administration (NOAA), State University of New York / USA.

Language: English

**Description**: International library of research, public policy, and outreach education publications pertaining to invasive marine and fresh-water aquatic nuisance species in North America.

# 176. National Exotic Marine & Estuarine Species Information System (NEMESIS) (SERC)

URL: <a href="http://invasions.si.edu/nemesis/index.html">http://invasions.si.edu/nemesis/index.html</a>

Host/Originating Country: Smithsonian Environmental Research Center (SERC) / USA.

Languages: English

**Description**: Lists exotic marine and estuarine species in coastal bays of the continental United States. Currently provides access to the Chesapeake Bay Introduced Species Database.

#### 177. National Ballast Water Information Clearinghouse (NBIC) (SERC)

URL: http://invasions.si.edu/NBIC/ballast.html

Host/Originating Country: Smithsonian Environmental Research Center (SERC) / USA.

Languages: English

**Description**: Information on ballast water and ballast-mediated invasion including; spatial and temporal patterns of ballast water delivery and management, patterns and rates of marine and estuarine invasions, directory of ongoing and past research on ballast water and ballast-mediated invasions.

# 178. National Marine and Estuarine Invasions Database (NIS) (SERC)

URL: http://invasions.si.edu/NIS.htm

Host/Originating Country: Smithsonian Environmental Research Center (SERC) / USA.

Language: English

**Description**: Contains synonomy, common names, invasion history, invasion mechanism, date of introduction, source region, history of spread, population biology, life-history characteristics, abundance, community ecology, habitat utilization, environmental tolerances, ecological interactions, economic impacts and references for marine and estuarine alien species in U.S. waters, including organisms that occur in tidal waters of all salinities (i.e., freshwater to full marine salinities). Also includes the Chesapeake Bay Nonindigenous Species List (http://invasions.si.edu/NIS/NIS CBList.htm).

# 179. Zebra Mussel Information System (ZMIS) (USArmyCorp)

URL: http://www.wes.army.mil/el/zebra/zmis/zmishelp.htm

Host/Originating Country: U.S. Army Engineer Research and Development Center / USA.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

**Description**: Information identifying both adult and immature Zebra Mussels. Includes; life history, impact, monitoring and detection, management strategies, contaminant issues as well as an extensive bibliography.

180. 100th Meridian Database

URL: http://www.100thmeridian.org/database.asp

Host/Originating Country: University of Texas at Arlington / USA.

Language: English

**Description**: Part of a cooperative effort between state, provincial, and federal agencies to prevent the westward spread of zebra mussels and other aquatic nuisance species in North America. Contains zebra mussel-related information from infested states and provinces with summary data of areas surveyed, and records of boating movements across provincial borders within states.

#### 181. Sea Grant Nonindigenous Species (NOAA)

URL: http://www.sgnis.org/

Host/Originating Country: National Oceanic & Atmospheric Administration (NOAA), Great

Lakes Sea Grant Network / USA.

Language: English

**Description**: Research publications and education materials produced by Sea Grant programs and other research institutions across the country on zebra mussels and other aquatic nuisance

species.

#### 182. Coastal Species Alien Warning System (NOAA)

URL: http://www.ncddc.noaa.gov/MIS

Host/Originating Country: National Coastal Data Development Center, National Oceanic and

Atmospheric Administration / USA.

Language: English

**Description**: Digital Aquatic Inventory and System for the Early Detection of Invasive Species for detection, species confirmation, warning to managers, and information on aquatic alien species. Report a species not listed in the baseline atlas, get information on U.S. and Canadian aquatic species, map species distributions, and acquire biological survey and monitoring data. Natural resource managers and scientists can get critical species information to help them assess the potential impact and develop response strategies before an exotic species expands beyond its point of introduction. Detailed species information includes identification characteristics, photographs, physiological and ecological requirements, distribution ranges, and the region to which it is endemic.

#### 183. Great Lakes Aquatic Nonindigenous Species Information System (GLANSIS) (NOAA)

**URL**: http://www.glerl.noaa.gov/res/Programs/ncrais/glansis.html

**Host/Originating Country**: National Coastal Data Development Center, National Oceanic and Atmospheric Administration / USA.

Language: English

**Description**: As of 2007, over 180 nonindigenous species have been reported to have reproducing populations in the Great Lakes basin, i.e. lakes Superior, Michigan, Huron, St. Clair, Erie, Ontario, and their connecting channels and water bodies within their respective drainages (Mills et al. 1993, Ricciardi 2001, Ricciardi 2006, Ricciardi unpubl. data). The two most recent ANS reported and verified established in the Great Lakes basin were viral hemorrhagic septicemia (VHS), and *Hemimysis anomala*. The number of Great Lakes aquatic nonindigenous species documented in GLANSIS must be interpreted as a minimum. Identification depends on our ability to find, recognize, verify, and document new species, which is, in turn, dependent on our ability to adequately sample the Great Lakes ecosystem. The present database targets ANS

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

that are not considered to have been native to any part of the Great Lakes basin. Species that are documented as native to part of the basin, but invaded other parts of the basin due to human-expedited mechanisms or range expansions are not included in this database at the present time, except for the sea lamprey. GLANSIS functions as a Great Lakes specific node of the <u>USGS NAS</u> national database (also listed in this document). Information [in] GLANSIS automatically appears in NAS.

# 184. Nonindigenous Aquatic Species (NAS) Database (USGS)

URL: http://nas.er.usgs.gov/

**Host/Originating Country**: U.S. Geological Survey, Biological Resources Division, Florida Integrated Science Center, Center for Aquatic Resource Studies / USA.

Language: English

**Description**: Geo-spatially referenced biogeographic accounts of nonindigenous aquatic species in the United States, including scientific reports, online/real-time queries, spatial data sets, regional contact lists, and general information.

#### 185. Washington's Freshwater Aquatic Plants Database (Washington state)

URL: http://www.ecy.wa.gov/apps/watersheds/aquaticplants/listbywria.asp

Host/Originating Country: Washington State Department of Ecology, Water Quality Program /

Language: English

**Description**: Survey data from 1994 through 2001, for native and non-native aquatic plant

species in Washington, U.S.A.

#### 186. Aquatic Nuisance Species (Washington State)

URL: <a href="http://www.wdfw.wa.gov/fish/ans/ans1.htm">http://www.wdfw.wa.gov/fish/ans/ans1.htm</a>

Host/Originating Country: Washington Department of Fish and Wildlife / USA

Language: English

**Description**: Information on aquatic nuisance species in Washington State, including a list of non-indigenous marine species and their natural ranges, a list of taxonomic experts, contacts for location maps, a list of species of concern and related Web links.

## 187. Whirling Disease Data Base (WHDDB)

URL: http://www.esg.montana.edu/whddb/

**Host/Originating Country**: Montana State University, Environmental Statistics Group / USA.

Language: English

**Description**: Search a Whirling Disease Database and a Fish Database. Map the results. Fish-pathogen combinations are displayed as points and circles on a map.

#### 188. Aquatic Nuisance Species Program (South Carolina)

URL: http://water.dnr.state.sc.us/water/envaff/aquatic/index.html

Host/Originating Country: South Carolina Department of Natural Resources / USA.

Language: English

**Description**: Information about South Carolina aquatic nuisance species including SC Aquatic Plant Management Plan, Illegal Plant List, Habitat enhancement, and selected species such as Grass Carp and Zebra Mussel.

189. MarinelD

**URL**: <a href="http://www.marineid.org/marine/html/index.html">http://www.marineid.org/marine/html/index.html</a>

Host/Originating Country: Northeast Aquatic Nuisance Species Panel / USA.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

**Description**: An online tool for organizing and displaying information on marine invasive species and their distributions in the Northwest Atlantic (USA). Includes an interactive mapping and display of species distributions.

#### 190. Exotic Species of the Monterey Bay National Marine Sanctuary

**URL**: http://bonita.mbnms.nos.noaa.gov/sitechar/spex.html

Host/Originating Country: Monterey Bay National Marine Sanctuary / USA

Language: English

**Description**: List of terrestrial plant, algae, invertebrate, and vertebrate alien species of the Monterey Bay National Marine Sanctuary, including common and species name, origin, habitat and information source.

#### 191. Ruffe homepage

URL: http://www.fw.umn.edu/research/ruffe/default.html

**Host/Originating Country**: Northland College, University of Minnesota Department of Fisheries, Wildlife and Conservation Biology / USA.

Language: English

**Description**: Provides a general overview and literature synthesis on the ruffe (*Gymnocephalus cernuus*), detailing its geographic distribution, taxonomy and nomenclature, morphology, evolution and genetics, sensory physiology, habitat, reproduction and early life history, age and growth, diet and foraging behavior, egg predation, competition, predators, parasites and pathogens, introductions in Europe and Asia, and management. Other components of this site include Ruffe scientific resources (annoted bibliography, powerpoint presentations, field reports), a searchable Ruffe scientists list, and a categorized and searchable list of online resources on Ruffe.

# 192. Biological Control of Eurasian Water Milfoil

URL: http://www.fw.umn.edu/research/milfoil/milfoilbc.html

**Host/Originating Country**: Northland College, University of Minnesota Department of Fisheries, Wildlife and Conservation Biology / USA.

Language: English

**Description**: Provides descriptive information about Eurasian watermilfoil (*Myriophyllum spicatum L.*), its invasion history and biocontrol species including the milfoil weevil (*Euhrychiopsis lecontei*) with distribution maps and photographs; a bibliography, a list of related online resources, access to a searchable literature database, current research projects (summaries of current Eurasian watermilfoil biocontrol research at the University of Minnesota), and a list of relevant online reports and literature.

#### 193. Aquatic Plant Fact Sheets (Aquatic Plant Management Society)

**URL**: http://www.apms.org/plants/plants.htm

Host/Originating Country: Aquatic Plant Management Society / USA and International.

Language: English

**Description**: Fact sheets for elevent aquatic plant species including photographs, scientific and common names, taxonomic information, US distribution, Worldwide distribution, ecology, economic importance, ecological importance, and notes.

#### 194. Introduced and Cryptogrenic Species of Massachusetts (maps)

URL: http://massbay.mit.edu/exoticspecies/exoticmaps/

Host/Originating Country: MIT Sea Grant Center for Coastal Resources / USA

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

**Description**: Mapped observation data (interactive maps) and species descriptions for native and non-native species identified on and around floating docks and piers throughout the New England coast.

195. Invasive Species (Minnesota)

URL: http://www.dnr.state.mn.us/invasives/index.html

Host/Originating Country: Minnesota Department of Natural Resources (DNR) / USA

Language: English

**Description**: Lists of invasive aquatic and terrestrial animals and plants including photographic images, species descriptions, ID cards and guides for each species in the state of Minnesota.

196. Exotic Aquatics on the Move (Illinois)

URL: http://www.iisgcp.org/EXOTICSP/ans.htm

Host/Originating Country: Illinois-Indiana Sea Grant / USA.

Language: English

**Description**: Collection of online information about 31 species of vertebrate, invertebrate, and floral invasive species including photographic images, description, impacts, geographical information (origin, distribution), control methods, picture/image collections, related external Web sites, other educational resources, and references.

#### 197. San Francisco Estuary Invasive Spartina Project

URL: http://www.spartina.org/species.htm

**Host/Originating Country**: CALFED Bay-Delta Program, United States Fish and Wildlife Service Coastal Program, National Fish and Wildlife Foundation, and the California State Coastal Conservancy / USA.

Language: English

**Description**: Web site of a regionally coordinated project to address the rapid spread of four introduced and highly invasive Spartina (cordgrass) species in the San Francisco Estuary. Includes a species identification section containing photographs and field guides (PDF format), distribution maps, and project-specific documentation.

#### 198. Guide to the Exotic Species of San Francisco Bay

URL: http://www.exoticsguide.org/

Host/Originating Country: San Francisco Estuary Institute / USA.

Language: English:

**Description**: Web site guide containing photographs, descriptions and ecological information on common marine invaders (brown seaweeds, sponges, anemones, worms, snails, clams, mussels, barnacles, crabs, moss animals, and sea squirts) in the San Francisco Bay, California, USA.

199. Invasive Algae Database

**URL**: <a href="http://www2.bishopmuseum.org/algae/index.asp">http://www2.bishopmuseum.org/algae/index.asp</a> **Host/Originating Country**: Bishop Museum / USA

Language: English

**Description**: Taxonomic, descriptive, and collection site/report information in invasive and native algae species found in the waters around Hawaii.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

# IAS Image Databases (international)

200. Weed Photo Gallery (UC IPM) (California state)

URL: http://www.ipm.ucdavis.edu/PMG/weeds scientific.html

Cost/Originating Country: University of California (UC) statewide Integrated Pest Management

(IPM) program, Agriculture and Natural Resources / USA.

Languages: English

Description: Includes photos of weed species commonly found in California farms and

landscapes.

201. UC IPM Online – Identification: Weed Photo Gallery

URL: <a href="http://axp.ipm.ucdavis.edu/PMG/weeds">http://axp.ipm.ucdavis.edu/PMG/weeds</a> common.html
Host/Originating Country: University of California / USA

Language: English

**Description**: Photographic weed identification gallery listed by common or scientific name, and including brief physical and habit description, and labeled identification diagrams for weed group

identification.

202. Invasive Plant Images (Montana state)

URL: http://ag.msu.montana.edu/cipm/cipmpics.asp?type=list&flag=1

Host/Originating Country: Center for Invasive Plant Management (CIPM), Department of Land

Resources and Environmental Sciences, Montana State University / USA.

Language: English

Description: Lists of photographic and line-drawing images of native and non-native invasive

plant species in Montana, U.S.A.

203. TNC Invasive Species Photographic Library

URL: http://tncweeds.ucdavis.edu/photos.html

Host/Originating Country: The Nature Conservancy (TNC)/Wildland Invasive Species Team /

USA.

Language: English

**Description**: Inventory of invasive species images.

204. Minnesota Weed Seedling Photo Collection

URL: <a href="http://www.extension.umn.edu/distribution/cropsystems/DC7376.html">http://www.extension.umn.edu/distribution/cropsystems/DC7376.html</a>
Host/Originating Country: University of Minnesota Extension Service / USA

Language: English

**Description**: Close-up photographs of common Minnesota weed seedlings taken at the seedling and 3 - 5 leaf stages for 19 broadleaf weed species and 10 grass weed seedlings, indexed by

common name.

205. Plant Protection Photo Gallery (of) Noxious Weeds

URL: <a href="http://www.ks-agr.org/plantpest/list.asp?Folder=Noxious%20Weeds">http://www.ks-agr.org/plantpest/list.asp?Folder=Noxious%20Weeds</a> Host/Originating Country: Kansas Department of Agriculture / USA

Language: English

**Description**: Photographic images of 14 weed species, listed by common name.

206. Weed Manager Photo Library

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

URL: http://www.weedmanager.net/photo.html

Host/Originating Country: WeedManager.net / Australia

Language: English

**Description**: Photographic library of weed species.

207. (Weed) Photo Herbarium

URL: http://www.wssa.net/subpages/weed/herbarium0.html

Host/Originating Country: Weed Science Society of America / USA

Language: English

**Description**: Contains pictures of many plants that are common to North America. Some of the plant species listed are not generally considered weeds but may have toxic or poisonous properties, or are otherwise of general interest as wildflowers or herbs.

208. Weed Herbarium

URL: http://www.umassgreeninfo.org/fact\_sheets/weed\_herbarium/common\_name\_list.htm

Host/Originating Country: University of Massachusetts Amherst / USA

Language: English

Description: Photographic images of 129 plant/weed species listed (sortable by) scientific,

common and family name.

209. Grass, Sedge and Broadleaf Weed Photo Gallery

URL: http://cropsolutions.fmc.com/Crop Solutions/Insects Weeds/

Host/Originating Country: FMC Corporation / USA

Language: English

**Description**: Photographic/common name index of 11grass weed species, 16 broadleaf weed species, and 1 sedge weed species. Includes photos and information on common and scientific name, affected crops, identification, geographic distribution and products labeled for use as weed control agents.

# IAS Bibliographic Databases (international)

210. Institute for Biological Invasions Bibliographic Databases (IBI)

URL: http://invasions.bio.utk.edu/biblio\_data/index.html

Host/Originating Country/Originating Country: Institute for Biological Invasions (IBI),

University of Tennessee, Kentucky / USA.

Language: English

**Description**: Biological invasions library containing books, journal articles, government reports, conference proceedings, magazine and newspaper articles, and other 'gray' literature.

211. Invasive Mammals Bibliography (NewZealand)

URL: http://www.invasive-animals.org.nz/index.html

Host/Originating Country: Massey University and University of Waikato / New Zealand.

Language: English

**Description**: Provides scientific information including bibliographic databases of published research, including some abstracts, on five species of invasive mammals in New Zealand.

# 212. Catalog & Article Citation database (AGRICOLA)

URL: http://agricola.nal.usda.gov/

Host/Originating Country: National Agricultural Library, U.S. Department of Agriculture / USA.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

**Description**: Searchable database of books, serials, audiovisuals, journal articles, book chapters, short reports and reprints.

# 213. Web based Information System for Agricultural Research for Development (WISARD)

URL: http://www.wisard.org/wisard/home.asp

Host/Originating Country: WIS International / The Netherlands

Language: English

**Description**: A public domain information platform providing searchable information on experts, organizations, outputs and projects in the fields of Agricultural Research for Development (ARD), Natural Resource Management (NRM) and sustainable development (SD) from the mid-nineties to present.

#### 214. Minnesotal Bibliographic Databases

URL: http://www.fw.umn.edu:591/

**Host/Originating Country**: University of Minnesota Department of Fisheries, wildlife and conservation Biological Filemaker Pro Instant Web Portal / USA.

Language: English

**Description**: Provides access to six bibliographic databases including Weevilbib (92 citations on weevil species relating to weed biocontrol); ShallowlakeBibl (1675 citations relating to aquatic invasive species); SEBiblio00 (2422 citations relating to watershed management and health), MNDNRreps (671 citations for Minnesota State Department of Natural Resources reports), Exoticsbibl (1985 citations on exotic species), and Aquaticplantbib (1125 citations on aquatic plants).

# **IAS Expertise Databases (international)**

# 215. Eurasian Watermilfoil Resource List

URL: http://aquat1.ifas.ufl.edu/milfoil.html

**Host/Originating Country**: Compiled by John Madsen, Center for Aquatic and Invasive Plants, Institute of Food and Agriculture Sciences, University of Florida / USA.

Language: English

**Description**: List of taxonomists, ecologists, management experts, and resource managers or lake association activists with experience with the invasive Eurasian watermilfoil (*Myriophyllum spicatum*).

# 216. Ecological Information Network (EIN) Expertise Database (NBII)

URL: http://ein.nbii.gov/advsrch.html

Host/Originating Country: U.S. Geological Survey, National Biological Information Infrastructure

/ USA.

Language: English

**Description**: Search for ecological expertise on exotic/introduced species.

# 217. Integrated Pest Management (IPM) Expertise Database

URL: http://pestdata.ncsu.edu/ipmexperts/

Host/Originating Country: Center for Integrated Pest Management, U.S. Department of

Agriculture / USA Language: English

**Description**: Search for expertise in IPM.

#### 218. IGLAR Expert Directory

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

**URL**: http://www.iaglr.org/experts/directory.php

Host/Originating Country: International Association for Great Lakes Research (IGLAR) / USA

Language: English

Description: Search for experts on aquatic nuisance/exotic species

#### 219. Taxonomic Resources and Expertise Directory (TRED) (NBII)

URL: http://www.nbii.gov/datainfo/syscollect/tred/

Host/Originating Country: U.S. Geological Survey (USGS), National Biological Information

Infrastructure (NBII) / USA.

Language: English

Description: Search for experts by name, general or specific taxonomic expertise, geographic

expertise or habitat expertise.

# 220. World Taxonomist Database (WTD)

URL: http://www.eti.uva.nl/Database/WTD.html

Host/Originating Country: Expert Center for Taxonomic Identification (ETI) / The Netherlands

Language: English

Description: This database allows users to search the World Taxonomist Database for a name

(person or institute) and/or taxonomic specialization.

# 221. Expert Center for Taxonomic Identification (ETI)

URL: http://www.eti.uva.nl/. Host/Originating Country:

Language: English

**Description**: ETI is a non-governmental organisation (NGO) in operational relations with UNESCO. Our mission is to develop and produce scientific and educational computer-aided information systems, to improve the general access to and promote the broad use of taxonomic and biodiversity knowledge worldwide.

#### 222. Fauna Europea (FAEU) Expert Database

URL: http://www.faunaeur.org/partners/EXPERT\_DATABASE/experts.htm

Host/Originating Country: Fauna Europaea Secretariat, Zoological Museum Amsterdam / The

Netherlands.

Language: English

**Description**: Provides names and contact information of experts according to phylum.

# IAS Research, IPM, Databases (international)

(Weed Management, Integrated Pest Management etc.)

# 223. Aquatic Invasions Research Directory (AIRD) (SERC)

URL: http://invasions.si.edu/aird.htm

Host/Originating Country: Smithsonian Environmental Research Center (SERC) / USA.

Language: English

**Description**: Search for information on people, research, technology, policy, and management issues relevant to aquatic invasions, including the ecology of aquatic invasions (vectors, impacts, risk assessment and response), and the ecology of ballast water.

## 224. Ballast Water Treatment R&D Directory (GLOBALLAST)

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

**URL**: http://globallast.imo.org/index.asp?page=bwprojects.htm

Host/Originating Country: Programme Coordination Unit, Global Ballast Water Management

Programme, International Maritime Organization (IMO) / London.

Language: English

**Description**: Lists research and development projects focusing on the physical, mechanical or chemical treatment of ballast water to prevent/reduce the transfer of aquatic organisms.

#### 225. Weed Research & Information Center (WeedRIC)

URL: http://wric.ucdavis.edu/

Host/Originating Country: University of California (UC) / USA.

Language: English

**Description**: Search for; weed photographs/images, University of California Pest Notes, weed control and herbicide information sources, poisonous plants sources and weed-related publications.

# 226. Database of IPM Resources (DIR)

URL: http://www.ippc.orst.edu/cicp/

Host/Originating Country: Oregon State University, Integrated Plant Protection Center / USA.

Language: English

**Description**: Search for worldwide integrated pest management information on crops, pests, control tactics, regions, organizations and related topics.

#### 227. UC IPM Online – Weed Identification Guide

URL: <a href="http://axp.ipm.ucdavis.edu/index.html">http://axp.ipm.ucdavis.edu/index.html</a>

Host/Originating Country: University of California / USA

Language: English

**Description**: California State Weed Identification guide listing 22 species by common name and including information about identification, life cycle and biology, damage, management, and related publications for each species.

#### 228. California Weed Mapping Handbook (CAIN/NBII)

URL: http://cain.nbii.gov/weedhandbook

Host/Originating Country: California Information Node, National Biological Information

Infrastructure / USA Language: English

**Description**: Online book currently in downloadable PDF format only but planned for internet publishing. A training resource for local groups involved in wildland weed mapping providing shared data standards and instructions on mapping techniques.

# 229. Agriculture Network Information Center (AgNIC)

URL: <a href="http://www.agnic.org/">http://www.agnic.org/</a>

**Host/Originating Country:** A voluntary alliance of the National Agricultural Library (NAL), land-grant universities and other agricultural organizations, in cooperation with citizen groups and government agencies. USA.

Language: English

**Description:** Search for; publications, references, and online databases related to exotic/invasive species and agriculture.

#### 230. Organic Garden Weed Management - Weed Database

URL: http://www.css.cornell.edu/WeedEco/WeedDatabase/index2.html

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

**Host/Originating Country**: Center for Invasive Plant Management in the Western United States, Department of Crop and Soil Sciences, Cornell University / USA.

Language: English

**Description**: Lists ecological data and general weed management strategies for the most common and difficult to control weed species in the state of New York. Includes weed descriptions, color photographs of weed life history stages, tips on distinguishing the species from similar looking species, summaries of major control strategies, and statements about various aspects of the species' ecology.

#### 231. TNC Invasive Species Management Library

URL: http://tncweeds.ucdavis.edu/esadocs.html

**Host/Originating Country**: The Nature Conservancy (TNC), Wildland Invasive Species Team / USA.

Language: English

**Description**: Links to all TNC resources specific to individual invasive species including invasive plant ESAs (Element Stewardship Abstracts) written for The Nature Conservancy that summarize relevant aspects of an organism, including its ecology and control. Also includes species management abstracts and cultivar notes on invasive species.

#### 232. Fire Effects Information System (FEIS) (USDA-Forest Service)

URL: http://www.fs.fed.us/database/feis/index.html

Host/Originating Country: U.S. Department of Agriculture, Forest Service Rocky Mountain

Research Station, Fire Sciences Laboratory - Missoula, Montana / USA.

Language: English

**Description**: Literature reviews of botanical characteristics, life cycle, habitat, succession, distribution, impacts, fire ecology, and fire effects for 1000 plant and animal species, including 67 non-native invasive species.

## 233. Biota of North America Program (BONAP)

URL: http://www.bonap.org/ & http://www.invasivespecies.org/Bonap/

Host/Originating Country: North Carolina Botanical Garden; University of North Carolina at

Chapel Hill, USDA, APHIS / USA.

Language: English

**Description**: Search for information on all vascular plants and vertebrate species (native, naturalized, and adventive) of the United States and Canada.

#### 234. Pearl Harbor Legacy Project Species List

URL: http://www.bishopmuseum.org/research/natsci/invert/phlegacy.html

**Host/Originating Country**: Bishop Museum, The State Museum of Natural and Cultural History, Honolulu Hawaii / USA.

Language: English

**Description**: Lists taxonomic names and identifying authorities, collection dates, locations and references for 1141 taxa of marine algae, invertebrates and fishes that have been collected or observed in Pearl Harbor, Oahu, Hawaii since the first biological observations were made in the harbor in 1866. Species considered to be introduced or cryptogenic (not verifiably native or introduced) are so designated.

# 235. Release of Beneficial Organisms in the United States & Territories (ROBO) (USDA-ARS)

URL: http://www.ars-grin.gov/nigrp/robo.html

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

Host/Originating Country: U.S. Department of Agriculture (USDA), Agricultural Research

Service (ARS), Biological Control Documentation Center (BCDC) / USA.

Language: English

**Description**: Contains collection, introduction, release, culture, establishment, recolonization, and impact of non-indigenous organisms and pollinators on pests in the United States. Includes information on arthropods (insects, mites and ticks), nematode and other invertebrate pests, weedy plants, and microbial (bacteria, viruses, fungi, protozoa) pests.

#### 236. Integrated Pest Management in the Northeast (USA)

URL: <a href="http://northeastipm.org/">http://northeastipm.org/</a>

**Host/Originating Country**: Cooperative Extension and Land Grant University IPM programs of the Northeast, United States Department of Agriculture / USA.

Language: English

Description: Integrated Pest Management resources, information, methodology and research by

U.S. State.

# 237. Bio-Integral Resource Center (BIRC)

URL: http://www.birc.org/

Host/Originating Country: Bio-Integral Resource Center (BIRC), California / USA.

Language: English

Description: Information in integrated pest management, including publications, an Organic

Database, and a Pest Control Advisor Database.

#### 238. WeedScience - International Surveys of Herbicide Resistant Weeds

URL: http://www.weedscience.org/in.asp

**Host/Originating Country**: Herbicide Resistance Action Committee (HRAC), North American Herbicide Resistance Action Committee (NAHRAC), Weed Science Society of America (WSSA) / USA.

Language: English

**Description**: Monitors the evolution of herbicide-resistant weeds and assesses their impact throughout the world. Supported by global collaboration between weed scientists. Provides access to searchable lists of researchers, herbicides, weed photographs, and herbicide resistant weeds.

#### 239. Weed Control Manual for the Bay of Plenty (New Zealand)

URL: http://www.envbop.govt.nz/Weeds/Weeds.asp

Host/Originating Country: Environment Bay of Plenty Regional Council / New Zealand.

Language: English

**Description**: Terrestrial and aquatic weed plants in New Zealand.

#### 240. Ranking Exotic Plants (Handbook) (USA-NPS)

**URL**: http://www.nature.nps.gov/publications/ranking/ranking.html

Host/Originating Country: United States National Park Service (NPS) / USA

Language: English

Description: Handbook for ranking exotic plants for management and control by Ronald D.

Hiebert, National Park Service, Nebraska, USA.

# 241. Guide to Monitoring Exotic and Invasive Plants (Canada)

URL: http://www.eman-rese.ca/eman/ecotools/protocols/terrestrial/exotics/intro.html

Host/Originating Country: Environment Canada / Canada.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

**Description**: Online guide to monitoring exotic and invasive plants by Erich Haber, National Botanic Services, Ontario, Canada. Includes examples of monitoring projects.

242. Gateway to Online IPM Resources

**URL**: http://www.ippc.orst.edu/cicp/gateway/Index.htm

Host/Originating Country: Integrated Plant Protection Center, Oregon State University / USA.

Language: English

**Description**: Linked list of Internet resources on weeds and their control.

#### 243. Biological Control: A Guide to Natural Enemies in North America (Cornell)

URL: <a href="http://www.nysaes.cornell.edu/ent/biocontrol/">http://www.nysaes.cornell.edu/ent/biocontrol/</a> Host/Originating Country: Cornell University / USA.

Language: English, Spanish

**Description**: Photographs and descriptions of biological control (or biocontrol) agents of insect, disease and weed pests in North America (currently includes individual pages of approximately 100 natural enemies of pest species); A tutorial on the concept and practice of biological control and integrated pest management (IPM).

#### 244. Montana Integrated Pest Management Center

URL: http://scarab.msu.montana.edu/ipm/

Host/Originating Country: Montana State University Extension Service / USA

Language: English

Description: Provides integrated pest management information, guides, listings of diagnostics,

personnel, reports, species information, and pesticide information.

# General Fauna Databases Containing IAS Information (international) (Aquatic & Terrestrial)

#### 245. Mammal Species of the World

URL: http://nmnhgoph.si.edu/msw/

Host/Originating Country: Smithsonian National Museum of Natural History, Department of

Systematic Biology Vertebrate Zoology / USA.

Language: English

**Description**: Contains the names of the 4,629 currently recognized species of mammals, including invasive species, in a taxonomic hierarchy that includes Order, Family, Subfamily, and

Genus.

# 246. FishBase: A Global Information System on Fishes

URL: http://www.fishbase.org/home.htm & http://filaman.uni-kiel.de/home.htm

Host/Originating Country: The FishBase Project, The WorldFish Center / Philippines.

**Languages**: English, Spanish, Portuguese, French, German, Italian, Dutch, Swedish, Chinese. **Description**: Search for taxonomic and descriptive information, for fish species of the world,

including introduced species.

# 247. Elasmo World (Sharks and Rays - elasmobranches)

**URL:** <a href="http://209.35.44.130/elasmo/default.asp">http://209.35.44.130/elasmo/default.asp</a>

Host/Originating Country: Elasmoworld.org / location unspecified.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

Languages: English

**Description:** Contains over 4000 entries and over 10,000 keywords relating to elasmobranches,

including invasive elasmobranches.

248. ReefBase

URL: http://www.reefbase.org/

**Host/Originating Country**: ReefBase is a project by The WorldFish Center / Philippines, and the International Coral Reef Action Network (ICRAN) / UK, financial support by United Nations

Foundation (UNF) / USA. Languages: English

Description: Search for coral information including information about threats to coral reefs such

as IAS.

249. Avibase – the world bird database

URL: http://www.bsc-eoc.org/avibase/avibase.jsp?pg=home&lang=EN

Host/Originating Country: BirdLife International / UK

Language: English, Spanish, French, German, Italian, Dutch, Portuguese, Swedish

Description: Checklists of avian species by country - indicating total numbers of introduced

species by country and status of each species (e.g. introduced, threatened etc.).

250. Applesnail.net

**URL**: http://www.applesnail.net/

Host/Originating Country: Stijn Ghesquiere (PhD Student) University of Maastricht / The

Netherlands

Language: Chinese, Czech, German, Spanish, French, Italian, Korean, Hungarian, Dutch,

Norwegian, Polish, Portuguese, Russian, Romanian, Swedish, English.

**Description**: Comprehensive Web site providing detailed information about species in the apple snail family – Ampullariidae including care (as pets), ecology, species, anatomy, embryology, genetics, pest alerts, photographs, links, literature, graphics, and related cultural/socio-economic and agricultural issues.

# General Flora Databases Containing IAS Information (international) (Aquatic & Terrestrial)

251. Flora of North America (FNA)

URL: http://www.fna.org/FNA/

Host/Originating Country: Flora of North America Association / USA.

Language: English

**Description**: Search for information on the names, taxonomic relationships, continent-wide distributions, and morphological characteristics of all plants native and naturalized in North

America north of Mexico.

252. FloraBase<sup>2</sup> the Western Australian Flora

**URL:** http://www.calm.wa.gov.au/florabase/index.html

**Host/Originating Country**: Department of Conservation and Land Management, Government of Western Australia / Australia.

Languages: English

**Description**: Search for descriptive data for the families, genera and species of all vascular plants in the state of Western Australia, including names, images and distribution maps for weed species. \* Requires registration.

Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

#### 253. Crop Profiles Database (USDA)

**URL:** <a href="http://pestdata.ncsu.edu/cropprofiles/pmcropprofiles.cfm?usdaregion=National%20Site">http://pestdata.ncsu.edu/cropprofiles/pmcropprofiles.cfm?usdaregion=National%20Site</a>

Host/Originating Country: U.S. Department of Agriculture / USA.

Language: English

**Description:** Profiles various crop species grown in the U.S., and includes data about the arthropod and plant pests that affect them, including invasive species. Search by crop type, region, and/or key terms. Each crop profile includes listings of pest species and their potential damage, monitoring techniques, pest life history, and possible controls.

#### 254. PLANTS Database (USDA)

URL: http://plants.usda.gov/

**Host/Originating Country**: U.S. Department of Agriculture, Natural Resources Conservation

Service / USA. Language: English

**Description**: Provides names, checklists, automated tools, identification information, species abstracts, distributional data, crop information, plant symbols, plant growth data, plant materials information, plant links, references, and other plant information, a Federal Noxious Weeds List, a list of State Noxious Weed Reports, an Invasive Plants of the U.S. list; and an Introduced Plants of the U.S. list.

## 255. Aquatic Plant Information System Online (APIS) (USArmyCorp)

**URL**: http://www.wes.army.mil/el/aqua/apis/apishelp.htm

**Host/Originating Country**: U.S. Army Corp of Engineers, Engineer Research and Development Center, Environmental Laboratory / USA.

Language: English

**Description**: Provides information on five aquatic invasive plants (alligator weed, Eurasian water milfoil, hydrilla, water hyacinth, and water lettuce).

# 256. International Legume Database and Information Service (ILDIS)

URL: http://www.ildis.org/LegumeWeb/

Host/Originating Country: School of Biological Sciences, University of Southampton / UK

Language: English

**Description**: Catalogue of world legume species. Search for invasive legume species by scientific name. Results indicate existence of weedy populations, invasion impacts, invasive potential and status.

## 257. Flora Europaea

URL: http://rbg-web2.rbge.org.uk/FE/fe.html

Host/Originating Country: Royal Botanical Garden of Edinburgh / UK.

Language: English

**Description**: Searchable floral taxonomic database. Non-native species distributions are

indicated by symbology including square brackets.

# 258. eFloras.org

URL: http://www.efloras.org/

Host/Originating Country: Harvard University / USA.

Language: English (primary) but national resources in associated languages

**Description**: Web access to national floral lists and online taxonomic keys (by botanical family) for Flora of China, Flora of Missouri, Flora of North America, Flora of Pakistan, Moss Flora of China, Trees and Shrubs of the Andes and Ecuador. This site accesses or is sourced from: Harvard [ActKey, Botanical Publications, Botanical Specimens, Botanists, Flora of China, Flora of

- DRAFT - List of IAS Online Information Systems Experts Meeting Towards Implementation of a Global Invasive Species Information Network (GISIN), 6-8 April, 2004. Baltimore, Maryland, USA.

North America, Harvard University Herbaria, Hu Cards]; the California Academy of Sciences - Dept. of Botany; the International Plant Names Index (IPNI); Missour Botanical Garden; Museum National d'Histoire Naturelle – Paris; New York Botanical Garden, Royal Botanic Garden Edinburgh, Royal Botanic Gardens Kew ePIC, Smithsonian Institution – Dept. of Botany, Tropicos, and the Vascular Plant Type Catalog (NYBG).

#### 259. W3TROPICOS

URL: http://www.mobot.org/MOBOT/Research/alldb.shtml
Host/Originating Country: Missouri Botanical Garden / USA
Language: English, national resources in associated languages

Description: Access to international floral checklists and databases including VAST Nomenclature [VAScular Tropicos], VAST Bibliography, VAST Image Index, Exsiccatae Data Base [Specimen Data], Index to Plant Chromosome Numbers (IPCN), W3Most Nomenclature [MOSs Tropicos], W3Most Bibliography, Applied Research DNA Specimen Database, Bryological Glossary, Catalogue of New World Grasses [CNWG], Flora Mesoamerica Checklist [in Spanish], Flora of Panama Checklist, Peru Checklist, Catalogue of the Vascular Plants of Ecuador [W3CEC] Jatun Sacha Biological Station (Ecuador), Flora of Bilsa Biological Station (Ecuador), Flora of Yasuní National Park (Ecuador), Flora of the Cordillera del Cóndor Project (Ecuador), Checklist and Descriptions for the Flora de Nicaragua [Descriptions in Spanish], Flora of Madidi National Park (Bolivia), Flora of China Checklist, Bryophyte Flora of North America (http://ridgwaydb.mobot.org/bfna/bfnamenu.htm),

