

Convention on the Conservation of European Wildlife and Natural Habitats



Standing Committee

Recommendation No. 125 (2007) of the Standing Committee on trade in invasive and potentially invasive alien species in Europe

(adopted by the Standing Committee on 29 November 2007)

The Standing Committee of the Convention on the Conservation of European Wildlife and Natural Habitats, acting under the terms of Article 14 of the Convention,

Recalling that Article 11 paragraph 2 of the Convention Parties requires Parties to strictly control the introduction of non-native species;

Conscious of the harm that invasive alien species may cause to native species and natural habitats protected under the Convention;

Recalling Recommendation No. 99 (2003) of the Standing Committee on the European Strategy on Invasive Alien Species (IAS) and other recommendations concerning trade-related pathways for the introduction of invasive alien species, such as Recommendation No. 77 (1999) and Recommendation No. 91 (2002);

Recalling Decision VI/23 of the Convention on Biological Diversity and its annexed Guiding Principles for the prevention, introduction and mitigation of impacts of alien species that threaten ecosystem, habitats or species;

Recalling ISMP n° 11 on Pest Risk Analysis for Quarantine Pests, adopted under the International Plant Protection Convention;

Noting that trade provides increased opportunities for potentially invasive alien species to be transported to new locations, both intentionally and unintentionally;

Wishing to reduce the introduction or expansion through trade-related pathways of invasive alien species in the territory of Contracting Parties;

Recalling the reports “Overview of Existing International / Regional Mechanisms to Ban or Restrict Trade in Potentially Invasive Alien Species” by Ms Clare Shine [document T-PVS/Inf (2006) 8], and “Assessment of Existing Lists of Invasive Alien Species for Europe, with particular focus on species Entering Europe through Trade and Proposed Responses” by Mr Piero Genovesi and Riccardo Scalera [document T-PVS/Inf (2007) 2];

Welcoming the work of the European and Mediterranean Plant Protection Organisation (EPPO) and its Standards PM3/67 “Guidelines for the management of invasive alien plants or potentially invasive alien plants which are intended for import or have been intentionally imported” and PM5/3 “Decision-support scheme for quarantine pests”, existing animal health frameworks, the European Environment Agency’s programme *Streamlining European 2010 Biodiversity Indicators* (EEA/SEBI 2010), the European Union’s project *Delivering Alien Invasive Species Inventories for Europe* (EU DAISIE), the NEOBIOTA work, and, for the Nordic and Baltic states, the North European and Baltic Network on Invasive Alien Species (NOBANIS) portal, and recalling the need to avoid duplication of work with existing activities in other fora,

Recommends that Contracting Parties, in cooperation with other Parties where appropriate:

1. carry out in-depth analysis of and research into trade-related pathways, examining imports and international movements of species and commodities, to:

- detect invasive and potentially invasive alien species that are intentionally moved in trade and strengthen measures to prevent unwanted introductions,
- assess the extent of unintentional introduction of potentially invasive alien species through trade-related pathways and take integrated measures based on the precautionary principle to minimise such introductions;

2. examine, in particular, international trade liberalisation measures and intra-Community free movement of goods to assess their contribution to the introduction and spread of potentially invasive alien species;

3. review national standards and regulatory frameworks, species lists for consultation by potential importers and data on invasive and potentially invasive alien species that are currently imported to improve, where necessary, existing procedures and information systems to strictly control trade in invasive alien species;

4. strengthen and extend risk analysis prior to decision-making on the import of alien species that are invasive or potentially invasive, using risk analysis methodology and procedures based on objective and scientific criteria (such as EPPO Standard PM5/3);

5. regulate as appropriate the intentional introduction, possession and trade in their territory of the invasive or potentially invasive alien species listed in Appendix 1 to this Recommendation, herein referred to as the “metalist”, applying the precautionary principle and where necessary, prohibiting the introduction, possession of and/or trade in those species that present an unacceptable risk (i.e. there is sufficient evidence of their negative impact on ecosystems, habitats or species from a risk analysis or other objective sources). For species included in the metalist, which is an indicative alert list, consider the following management measures:

- species classified as A category - alien species intentionally introduced as the commodity itself for release into the environment (such as game species, freshwater fishes, tree species of interest for forestry, biocontrol agents, etc.) : if the species presents an unacceptable risk, consider a regional or national ban on trade in such species and/or apply internal measures,
- species classified as B category - alien species intentionally introduced as the commodity itself (such as ornamental plants, agricultural plants, pets, crayfish, etc.) in a containment facility or in a controlled environment (such as botanic gardens, greenhouses, agricultural land, zoos, animal-breeding establishments, fish farms, etc.) : if the species presents an unacceptable risk, consider regional or national regulation of trade and/or stringent regulation of containment facilities, or apply internal measures,
- species classified as C category - alien species unintentionally introduced as a contaminant of a specific commodity (such as *Anoplophora chinensis* introduced in Italy through import of bonsai; parasites of specific fish species, fruit flies, micro cell disease *Bonamia ostreae* transported with oyster shipments, etc): if the species presents an unacceptable risk, consider applying specific treatments and measures across all relevant sectors (i.e. transport, agriculture, fishery, etc.) to prevent unwanted entry,
- species classified as D category - alien species unintentionally introduced with movements of people or of machinery (such as pests in wood packaging, hull fouling, ballast waters, contaminants in containers, hitchhikers on planes, etc.) : if the species presents an unacceptable risk, monitor pathways of introduction and consider regulation of related vectors across all relevant sectors (such as transport, agriculture, fisheries, etc.);

6. ensure that trade regulations are accompanied - when feasible and appropriate - by stringent management provisions (such as regulation of containment facilities; eradication of already established populations; enforcement of control/containment campaigns, awareness raising at Customs points, effective communication campaigns, etc.);
7. propose, in the framework of the Convention, amendments that would permit the updating of the metalist presented in Appendix 1 of this Recommendation, taking account of work carried out by other organisations or based on risk analysis or other evidence of a species having negative effects on ecosystems, habitats or species, in order to build a comprehensive metalist of invasive alien species or potentially invasive alien species already present in Europe or expected to arrive in the next future, giving priority to species that are not yet widespread;
8. promote closer co-operation at the European and Mediterranean level to prevent introduction of invasive alien species through trade by exchanging information on trade, expanding species lists as appropriate and promoting coordinated risk assessment and other appropriate measures to control IAS movement and expansion.; in that context, support the development of international comprehensive registers of IAS, such as the Global Register of Invasive Species (GRIS) being developed by the World Conservation Union's Invasive Species Specialist Group (IUCN ISSG);
9. improve national and European information systems on IAS, in particular with respect to trade pathways and early warning systems; in this context, consider establishing more stringent reporting mechanisms for IAS in the framework of the Convention and other appropriate mechanisms,

Further invites Observer states to apply the recommendation above.

Appendix 1 Metalist of known invasive alien species for Europe

Species / Group of species *species listed in depoorted and pagad 2007	Trade category	EPPO A1 list	EPPO A2 list	EPPO list of invasive alien plants	EEA/ SEBI	Nobanis	Daisie	Reg. 338/97
Mammals								
Ammotragus lervia	A				1			
Callosciurus finlaysoni	B				1			
Castor canadensis	A				1	1		
Cervus nippon	A				1		1	
Eutamia sibiricus	B						1	
Herpestes javanicus *	A				1			
Muntiacus reevesii	A				1			
Mustela vison *	B				1	1	1	
Myocastor coypus	B				1		1	
Nyctereutes procyonoides	B				1	1	1	
Ondatra zibethicus	B				1	1	1	
Oryctolagus cuniculus *	B				1			
Procyon lotor	B				1		1	
Rattus norvegicus *	D				1		1	
Sciurus carolinensis	B				1		1	
Birds								
Acridotheres tristis	B				1			
Alopochen aegyptiacus	B				1			
Branta canadensis	B				1		1	
Corvus splendens	B				1			
Oxyura jamaicensis	A				1		1	1
Psittakula krameri	B						1	
Threskiornis aethiopicus	B				1		1	
Amphibians & reptiles								
Chrisemys picta	B							1
Rana catesbeiana	A				1		1	1
Trachemys scripta elegans	B				1	1	1	1
Xenopus laevis	B				1			

Fishes							
Ameiurus nebulosus	A				1		
Aphanius dispar	D						1
Carassius auratus gibelio	A				1		
Carpio haematopterus/Cyprinus carpio *	A				1		
Fistularia commersoni	D				1		1
Gambusia affinis	A				1		
Lepomis gibbosus *	A				1		
Liza haematocheila ex Mugil soiuy	A, B, D				1		
Micropterus salmoides	A				1		
Neogobius melanostomus *	D, C?				1	1	1
Oncorhynchus mykiss	A				1	1	
Perccottus glenii	B, D				1		
Phoxinus phoxinus	D					1	
Pseudorasbora parva	A				1	1	1
Salmo salar	A, B				1	1	
Salvelinus fontinalis	A				1		1
Sander lucioperca	A					1	
Saurida undosquamis	D				1		1
Seriola fasciata	D				1		
Siganus luridus	D				1		
Siganus rivulatus	D				1		1
Silurus glanis	A				1		
Sphoeroides pachygaster	D				1		
Crustaceans							
Acartia tonsa	D				1		1
Balanus improvisus	D						1
Cercopagis pengoi	D				1	1	1
Charbydis logicollis	D						1
Chelicorophium curvispinum	D				1		
Dikerogammarus villosus	A, D				1		1
Elminius modestus	D				1		
Eriocheir sinensis	D				1	1	1

<i>Gammarus tigrinus</i>	D				1		
<i>Homarus americanus</i>	B					1	
<i>Marsupenaeus japonicus</i>	A, B						1
<i>Metapenaeus (Marsupenaeus) japonicus</i>	A, B				1		
<i>Orconectes limosus</i> *	A				1		
<i>Pacifastacus leniusculus</i>	A				1	1	
<i>Paralithodes camtschatica</i>	A				1	1	1
<i>Percnon gibbesi</i>	B, D				1		1
<i>Pontogammarus robustoides</i>	A, D					1	
<i>Procambarus clarkii</i> *	A, B				1		1
Insects							
<i>Acleris gloverana</i> A1/281	C	1					
<i>Acleris variana</i> A1/32	C	1					
<i>Aculops fuchsiae</i> A1/185	C	1					
<i>Aedes albopictus</i>	D						1
<i>Aeolesthes sarta</i> A2/307	C		1				
<i>Agrilus planipennis</i> A1/322	C	1					
<i>Aleurocanthus spiniferus</i> A1/186	C	1					
<i>Aleurocanthus woglumi</i> A1/103	C	1					
<i>Amauromyza maculosa</i> A1/152	C	1					
<i>Anastrepha fraterculus</i> A1/229	C	1					
<i>Anastrepha ludens</i> A1/230	C	1					
<i>Anastrepha obliqua</i> A1/231	C	1					
<i>Anastrepha suspensa</i> A1/200	C	1					
<i>Anoplophora chinensis</i> A1/187	C	1			1		1
<i>Anoplophora glabripennis</i> A1/296	D, C	1			1		1
<i>Anthonomus bisignifer</i> A1/189	C	1					
<i>Anthonomus eugenii</i> A1/202	C	1					
<i>Anthonomus grandis</i> A1/34	C	1					
<i>Anthonomus signatus</i> A1/164	C	1					
<i>Aphis gossypi</i>	C						1
<i>Bactrocera cucumis</i> A1/203	C	1					
<i>Bactrocera cucurbitae</i> A1/232	C	1					

Bactrocera dorsalis A1/233	C	1					
Bactrocera minax A1/234	C	1					
Bactrocera tryoni A1/235	C	1					
Bactrocera tsuneonis A1/236	C	1					
Bactrocera zonata A1/302	C	1					
Bemisia tabaci A2/178	C		1				
Blitopertha orientalis A1/33	D, C	1					
Cacoecimorpha pronubana A2/104	C		1				
Cacyreus marshalli A2/181	C		1				
Cameraria ohridella	D, C				1		1
Carposina sasakii A2/163	C		1				
Ceratitis capitata A2/105	C		1				1
Ceratitis rosa A1/237	C	1					
Choristoneura conflictana A1/205	C	1					
Choristoneura fumiferana A1/206	C	1					
Choristoneura occidentalis A1/207	C	1					
Choristoneura rosaceana A1/208	C	1					
Conotrachelus nenuphar A1/35	D	1					
Corythucha arcuata	C				1		
Cydia inopinata A2/193	C, D		1				
Cydia packardi A1/209	C, D	1					
Cydia prunivora A1/36	C, D	1					
Dacus ciliatus A2/238	C		1				
Dendroctonus adjunctus A1/43	C	1					
Dendroctonus brevicomis A1/263	C	1					
Dendroctonus frontalis A1/264	C	1					
Dendroctonus ponderosae A1/265	C	1					
Dendroctonus pseudotsugae A1/266	C	1					
Dendroctonus rufipennis A1/267	C	1					
Dendrolimus sibiricus A2/308	C		1				
Dendrolimus superans A2/330	C		1				
Diabrotica barberi A1/210	C, D	1					
Diabrotica speciosa A1/303	C, D	1					
Diabrotica undecimpunctata A1/292	C, D	1					

Diabrotica virgifera A2/199	C, D		1				1
Diaphorina citri A1/37	C	1					
Dryocoetes confusus A1/268	C	1					
Dryocosmus kuriphilus A2/317	C		1				
Epitrix cucumeris A1/299	D	1					
Epitrix tuberis A1/165	D	1					
Erschoviella musculana A2/318	C, D		1				
Eutetranychus orientalis A2/288	C		1				
Frankliniella occidentalis A2/177	C		1				1
Gnathotrichus sulcatus A1/269	C	1					
Gonipterus gibberus A1/301	C, D	1					
Gonipterus scutellatus A2/38	C, D		1				
Harmonia axyridis	A				1		1
Helicoverpa armigera A2/110	C		1				
Helicoverpa zea A1/195	C	1					
Heteronychus arator A1/297	C, D	1					
Homalodisca coagulata A1/336	C	1					
Hyphantria cunea	C				1		
Ips calligraphus A1/270	C	1					
Ips confusus A1/271	C	1					
Ips grandicollis A1/272	C	1					
Ips hauseri A2/326	C		1				
Ips lecontei A1/273	C	1					
Ips pini A1/274	C	1					
Ips plastographus A1/275	C	1					
Ips subelongatus A2/325	C		1				
Lasius neglectus	D				1		
Lepidosaphes ussuriensis A2/319	C		1				
Leptinotarsa decemlineata A2/113	C		1				1
Limonius californicus A1/304	D, C	1					
Linepithema humile	D				1		1
Liriomyza huidobrensis A2/283	C		1				1
Liriomyza sativae A2/282	C		1				
Liriomyza trifolii A2/131	C		1				

Listronotus bonariensis A1/168	C, D	1					
Lopholeucaspis japonica A2/289	C		1				
Lymantria mathura A2/331	D, C		1				
Maconellicoccus hirsutus A1/314	C	1					
Malacosoma americanum A1/276	C	1					
Malacosoma disstria A1/213	C	1					
Malacosoma parallela A2/320	C		1				
Margarodes prieskaensis A1/214	D, C	1					
Margarodes vitis A1/215	D, C	1					
Margarodes vredendalensis A1/216	D, C	1					
Melanotus communis A1/305	D	1					
Naupactus leucoloma A1/293	C, D	1					
Numonia pirivorella A2/184	C		1				
Oligonychus perditus A1/217	C	1					
Opogona sacchari A2/154	C		1				
Orgyia pseudotsugata A1/218	C	1					
Paysandisia archon A2/338	C		1				
Pissodes nemorensis A1/44	C	1					
Pissodes strobi A1/258	C	1					
Pissodes terminalis A1/259	C	1					
Popillia japonica A2/40	D, C		1				
Premnotrypes latithorax, P. suturicallus & P. vorax A1/143	C	1					
Quadraspidiotus perniciosus A2/117	C		1				
Rhagoletis cingulata A2/239	C		1				
Rhagoletis fausta A1/241	C	1					
Rhagoletis indifferens A1/242	C	1					
Rhagoletis mendax A1/243	C	1					
Rhagoletis pomonella A1/41	C	1					
Rhizoecus hibisci A1/300	C	1					
Rhynchophorus ferrugineus A2/339	C		1		1		
Rhynchophorus palmarum A1/332	C	1					
Scirtothrips aurantii A1/221	C	1					
Scirtothrips citri A1/222	C	1					
Scirtothrips dorsalis A2/223	C		1				

Scolytus morawitzi A2/309	C		1				
Sirex ermak A2 327	D, C		1				
Spodoptera eridania A1/196	C	1					
Spodoptera frugiperda A1/197	C	1					
Spodoptera littoralis A2/120	C		1			1	
Spodoptera litura A1/42	C	1					
Sternochetus mangiferae A1/286	C	1					
Strobilomya viaria A2/333	D		1				
Tecia solanivora A2/310	C		1				
Tetropium gracilicorne A2/311	C		1				
Thrips palmi A1/175	C	1					
Toxoptera citricida A1/45	C	1					
Trialeurodes vaporarum	C					1	
Trioza erytrae A1/46	C	1					
Trogoderma granarium A2/121	D		1				
Tuta absoluta A1/321	C	1					
Unaspis citri A1/226	C	1					
Viteus vitifoliae A2/106	C		1				
Xylotrechus altaicus A2/312	C		1				
Xylotrechus namanganensis A2/328	C		1				
Anellids							
Artioposthia triangulata	C				1		
Ficopomatus enigmaticus	D				1		1
Hydroides dianthus	D				1		
Hydroides elegans	D				1		
Hydroides ezoensis	D				1		
Marenzelleria neglecta	D				1	1	
Marenzelleria viridis	D				1		1
Pileolaria berkeleyana	D				1		
Spirorbis marioni	D				1		

Molluscs							
Anadara spp inaequalvis/demiri	A, B				1		
Anodonta (Sinanodonta) woodiana	C, A				1		
Arion lusitanicus	C					1	
Arion vulgaris	C				1		1
Brachiodontes pharaonis	D						1
Corbicula fluminea	D				1		1
Crassostrea gigas	A, B					1	
Crepidula fornicata	C, D				1		1
Dreissena bugensis	D				1		
Dreissena polymorpha	D				1	1	1
Ensis americanus	D				1		
Musculista senhousia	A, B				1		1
Petricola pholadiformis	A, B				1		
Pinctada radiata	A, B, C, D				1		1
Potamopyrgus antipodarum	D				1		
Rapana venosa	C, D				1		1
Ruditapes philippinarum	A				1		
Teredo navalis	D						1
Comb jellies							
Beroe cucumi					1		
Blackfordia virginica					1		
Mnemiopsis leidyi	D				1		1
Hydroids, jellyfish, sea anemones & corals							
Cordylophora caspia	D				1		1
Craspedacusta sowerbyi	D					1	
Polypodium hydriforme					1		
Rhopilema nomadica	D				1		1
Ascidians and sessile tunicates							
Microcosmus squamifer					1		
Styela clava	D				1		1

Bryozoans							
Tricellaria inopinata					1		1
Victorella pavidia					1		
Flatworms							
Artioposthia triangulata (Arthurdendyus triangulatus)						1	
Fasciola gigantica					1		
Gyrodactylus salaris					1	1	1
Pseudodactylogyrus anguillae					1		
Cestoda							
Botriocephalus acheilognathi					1		
Nematodes							
Anguillicola crassus	C				1	1	1
Aphelenchoides besseyi A2/122	C		1				
Ashworthius sidemi	C				1		
Bursaphelenchus xylophilus and its vectors in the genus Monochamus A1/158	C, D	1			1		1
Ditylenchus dipsaci A2/174	C, D		1				
Globodera pallida A2/124	C		1				
Globodera rostochiensis A2/125	C		1				
Heterodera glycines A2/167	C, D		1				
Meloidogyne chitwoodii A2/227	C, D		1				
Meloidogyne fallax A2/295	C, D		1				
Nacobbus aberrans A1/144	C, D	1					
Radopholus citrophilus A1/161	C, D	1					
Radopholus similis A2/126	C, D		1				
Xiphinema americanum sensu stricto A1/150	D	1					
Xiphinema bricolense A1/260	D	1					
Xiphinema californicum A1/261	D	1					
Xiphinema rivesi A2/262	D		1				
Plants							
Acacia dealbata	A			1			1
Acacia saligna	A				1		

<i>Acer negundo</i> *	A				1	1		
<i>Acroptilon repens</i>	C, D			1				
<i>Ailanthus altissima</i> *	A			1	1		1	
<i>Ambrosia artemisiifolia</i> *	C, D			1	1		1	
<i>Amelanchier spicata</i>	A, B			1		1		
<i>Amorpha fruticosa</i> *	A, D			1	1			
<i>Anthriscus sylvestris</i>	Indigenous					1		
<i>Arceuthobium abietinum</i>	C	1						
<i>Arceuthobium americanum</i>	C	1						
<i>Arceuthobium campylopodum</i>	C	1						
<i>Arceuthobium douglasii</i>	C	1						
<i>Arceuthobium laricis</i>	C	1						
<i>Arceuthobium minutissimum</i>	C	1						
<i>Arceuthobium occidentale</i>	C	1						
<i>Arceuthobium pusillum</i>	C	1						
<i>Arceuthobium</i> spp. (non-European) A1/24	C	1						
<i>Arceuthobium tsugense</i>	C	1						
<i>Arceuthobium vaginatum</i>	C	1						
<i>Aster novi-belgii</i> agg.	A				1			
<i>Azolla filiculoides</i>	C, D			1	1	1		
<i>Baccharis halimifolia</i>	A			1				
<i>Bidens frondosa</i>	C, D			1	1			
<i>Buddleja davidii</i>	A			1				
<i>Bunias orientalis</i>	D				1	1		
<i>Campylopus introflexus</i>	C					1	1	
<i>Cabomba caroliniana</i>	B			1				
<i>Carpobrotus edulis</i> * & <i>C. spp.</i>	A			1	1		1	
<i>Cenchrus incertus</i>	D			1				
<i>Cenchrus longispinus</i>	D				1			
<i>Cortaderia selloana</i>	A			1	1		1	
<i>Crassula helmsii</i> A2/340 (A2 in 2006)	B, C, D		1	1	1		1	
<i>Cyperus esculentus</i>	C			1				
<i>Echinocystis lobata</i> *	C, D				1		1	
<i>Egeria densa</i>	B, C, D			1				

Elodea canadensis	C, D				1		1	
Elodea nuttallii	C, D			1	1			
Epilobium ciliatum	D				1			
Fallopia japonica *, F. sachalinensis, Fallopia x bohemica	A			1	1	1	1	
Galinsoga quadriradiata	C, D					1		
Grindelia squarrosa	B				1			
Halophila stipulacea	C				1		1	
Hedychium gardnerianum *	A				1		1	
Helianthus tuberosus *	A			1	1			
Heracleum mantegazzianum	A			1	1		1	
Heracleum sosnowskyi	A			1	1	1		
Hydrocotyle ranunculoides A2/334 (A2 in 2005)	A		1	1	1			
Impatiens glandulifera *	B, A			1	1	1	1	
Iva (Cyclachaena) xanthiifolia	C				1			
Lagarosiphon major	A			1				
Ludwigia peploides	A			1	1			
Ludwigia uruguayensis	A			1				
Lupinus nootkatensis *	A					1		
Lupinus polyphyllus *	A			1		1		
Lysichiton americanus A2/335 (A2 in 2005)	A, B		1	1	1			
Myriophyllum aquaticum	A, B, C			1				
Opuntia ficus-indica	A				1		1	
Oxalis pes-caprae	B, C, D			1	1		1	
Paspalum paspalodes (= P distichum)	C			1			1	
Pinus mugo *	A					1		
Prunus serotina *	A			1	1	1	1	
Pueraria lobata A2/341	A		1					
Pueraria montana var. lobata (A2 in 2006)	A			1				
Rhododendron ponticum *	A			1	1		1	
Robinia pseudoacacia *	A				1		1	
Rosa rugosa	A				1	1	1	
Sambucus nigra	Indigenous					1		
Senecio inaequidens	C, D			1	1	1		

Sicyos angulatus	C, D			1			
Solanum elaeagnifolium A2/342 (A2 in 2006)	C, A, D		1	1			
Solidago canadensis	A			1	1	1	
Solidago gigantea *	A			1	1		
Solidago nemoralis	A			1			
Spartina townsendi /anglica	A				1	1	
Bryophytes							
Campylopus introflexus					1		
Macroalgae							
Acrothamnion preisii					1		
Asparagopsis armata					1		
Asparagopsis taxiformis					1		
Bonnemaisonia hamifera							1
Caulerpa racemosa	D				1		1
Caulerpa taxifolia *	D				1		1
Codium fragile	D				1		1
Grateloupia doryphora					1		
Polysiphonia morrowii					1		
Sargassum muticum	C				1		
Styopodium schimperi					1		
Undaria pinnatifida	A, D				1		1
Womersleyella setacea					1		
Phytoplankton							
Alexandrium catenella	D				1		1
Alexandrium minutum	D				1		
Alexandrium tamarense	D				1		
Chattonella verruculosa	D				1	1	1
Coscinodiscus wailesii	D				1		1
Karenia mikimotoi	D				1		
Odontella sinensis	D						1
Phaeocystis pouchetii					1		
Prorocentrum minimum	D						1
Rhizosolenia calcar-avis					1		

Fungi							
<i>Alternaria mali</i> A1/277		1					
<i>Anisogramma anomala</i> A1/201		1					
<i>Aphanomyces astaci</i>	C				1	1	1
<i>Apiosporina morbosa</i> A1/10		1					
<i>Atropellis pinicola</i> A1/5		1					
<i>Atropellis piniphila</i> A1/280		1					
<i>Botryosphaeria laricina</i> A2/12			1				
<i>Ceratocystis fagacearum</i> and its vectors A1/6		1					
<i>Ceratocystis fimbriata</i> f.sp. <i>platani</i> A2/136	D		1				
<i>Chrysomyxa arctostaphyli</i> A1/8		1					
<i>Ciborinia camelliae</i> A2/190	C		1				
<i>Cronartium coleosporioides</i> A1/248		1					
<i>Cronartium comandrae</i> A1/249		1					
<i>Cronartium comptoniae</i> A1/250		1					
<i>Cronartium fusiforme</i> A1/9		1					
<i>Cronartium himalayense</i> A1/251		1					
<i>Cronartium kamschaticum</i> A2/18			1				
<i>Cronartium quercuum</i> A1/252		1					
<i>Cryphonectria parasitica</i> A2/69	C		1				
<i>Deuterophoma tracheiphila</i> A2/287			1				
<i>Diaporthe vaccinii</i> A1/211		1					
<i>Didymella ligulicola</i> A2/66			1				
<i>Endocronartium harknessii</i> A1/11		1					
<i>Fusarium oxysporum</i> f.sp. <i>albedinis</i> A2/70			1				
<i>Gibberella circinata</i> A1/306		1					
<i>Glomerella gossypii</i> A2/71			1				
<i>Guignardia citricarpa</i> A1/194		1					
<i>Gymnosporangium asiaticum</i> A2/13			1				
<i>Gymnosporangium clavipes</i> A1/253		1					
<i>Gymnosporangium globosum</i> A1/254		1					
<i>Gymnosporangium juniperi-virginianae</i> A1/255		1					
<i>Gymnosporangium yamadae</i> A1/257		1					

Melampsora farlowii A1/15		1					
Melampsora medusae A2/74			1				
Melampsoridium hiratsukanum					1		
Monilinia fructicola A2/153			1				
Mycosphaerella dearnessii A2/22			1				
Mycosphaerella gibsonii A1/7		1					
Mycosphaerella laricis-leptolepidis A1/16		1					
Mycosphaerella populorum A1/17		1					
Ophiostoma novo-ulmi					1		1
Ophiostoma wagneri A1/179		1					
Phaeoramularia angolensis A1/298		1					
Phellinus weirii A1/19		1					
Phialophora cinerescens A2/77			1				
Phoma andigena A1/141		1					
Phyllosticta solitaria A1/20		1					
Phymatotrichopsis omnivora A1/21		1					
Phytophthora cinnamomi					1		1
Phytophthora fragariae A2/79			1				
Phytophthora lateralis A1/337		1					
Phytophthora ramorum						1	
Pseudopityophthorus minutissimus		1					
Pseudopityophthorus pruinus		1					
Puccinia horiana A2/80			1				
Puccinia pittieriana A1/155		1					
Seiridium cardinale	C						1
Septoria lycopersici var. malagutii A1/142		1					
Sirococcus clavignenti-juglandacearum A1/329		1					
Stegophora ulmea A1/315		1					
Stenocarpella macrospora A2/67			1				
Stenocarpella maydis A2/68			1				
Synchytrium endobioticum A2/82	C		1				
Thecaphora solani A1/4		1					
Tilletia indica A1/23		1					

Verticillium albo-atrum & V. dahliae (hop-infecting strains) A2/85			1				
Protists							
Bonamia ostreae	C				1		
Prokaryotes							
Apple proliferation phytoplasma A2/87			1				
Burkholderia caryophylli A2/55			1				
Clavibacter michiganensis subsp. insidiosus A2/49			1				
Clavibacter michiganensis subsp. michiganensis A2/50			1				
Clavibacter michiganensis subsp. sepedonicus A2/51			1				
Curtobacterium flaccumfaciens pv. flaccumfaciens A2/48			1				
Elm phloem necrosis phytoplasma A1/26		1					
Erwinia amylovora A2/52			1				
Erwinia chrysanthemi A2/53			1				
Grapevine flavescence dorée phytoplasma A2/94			1				
Liberobacter africanum & L. asiaticum A1/151		1					
Palm lethal yellowing phytoplasma A1/159		1					
Pantoea stewartii pv. stewartii A2/54			1				
Peach rosette phytoplasma A1/138		1					
Peach X-disease phytoplasma A1/140		1					
Peach yellows phytoplasma A1/139		1					
Pear decline phytoplasma A2/95			1				
Potato purple-top wilt phytoplasma A1/128		1					
Pseudomonas syringae pv. persicae A2/145			1				
Ralstonia solanacearum A2/58			1				
Stolbur phytoplasma A2/100			1				
Vibrio cholerae					1		
Xanthomonas arboricola pv. corylina A2/134			1				
Xanthomonas arboricola pv. pruni A2/62			1				
Xanthomonas axonopodis pv. citri A1/1		1					
Xanthomonas axonopodis pv. dieffenbachiae A2/180			1				
Xanthomonas axonopodis pv. phaseoli A2/60			1				

Xanthomonas axonopodis pv. vesicatoria and Xanthomonas vesicatoria A2/157			1				
Xanthomonas fragariae A2/135			1				
Xanthomonas oryzae pv. oryzae A1/2		1					
Xanthomonas oryzae pv. oryzicola A1/3		1					
Xanthomonas translucens pv. translucens A2/183			1				
Xylella fastidiosa A1/166		1					
Xylophilus ampelinus A2/133			1				
Viruses							
American plum line pattern virus (Ilarvirus) A1/28		1					
Andean potato latent virus (Tymovirus) A1/244		1					
Andean potato mottle virus (Comovirus) A1/245		1					
Bean golden mosaic virus (Begomovirus) A1/204		1					
Beet leaf curl virus A2/90			1				
Beet necrotic yellow vein virus (Benyvirus) A2/160			1				
Blueberry leaf mottle virus (Nepovirus) A2/198			1				
Cherry rasp leaf virus (Cheravirus) A1/127		1					
Chrysanthemum stem necrosis virus (Tospovirus) A1/313		1					
Chrysanthemum stunt viroid (Pospiviroid) A2/92			1				
Citrus blight disease A1/278		1					
Citrus leprosis virus A1/284		1					
Citrus mosaic virus (Badnavirus) A1/285		1					
Citrus tatter leaf virus (Capillovirus) A1/191		1					
Citrus tristeza virus (Closterovirus) A2/93			1				
Coconut cadang-cadang viroid (Cocadviroid) A1/192		1					
Cucumber vein yellowing virus (Ipomovirus) A2/316			1				
Cucurbit yellow stunting disorder virus (Crinivirus) A2/324			1				
Impatiens necrotic spot virus (Tospovirus) A2/291			1				
Lettuce infectious yellows virus (Crinivirus) A1/212		1					
Peach mosaic virus (Trichovirus) A1/27		1					
Peach rosette mosaic virus (Nepovirus) A1/219		1					
Plum pox virus (Potyvirus) A2/96			1				
Potato black ringspot virus (Nepovirus) A1/246		1					
Potato spindle tuber viroid (Pospiviroid) A2/97			1				

Potato virus T A1/247		1					
Potato yellow dwarf virus (Nucleorhabdovirus) A1/29		1					
Potato yellow vein virus (Crinivirus) A1/30		1					
Potato yellowing virus A1/220		1					
Raspberry leaf curl virus (Nepovirus) A1/31		1					
Raspberry ringspot virus (Nepovirus) A2/98			1				
Satsuma dwarf virus (Sadwavirus) A2/279			1				
Squash leaf curl virus (Begomovirus) A2/224			1				
Strawberry latent C virus A1/129		1					
Strawberry veinbanding virus (Caulimovirus) A2/101			1				
Tobacco ringspot virus (Nepovirus) A2/228			1				
Tomato chlorosis virus (Crinivirus) A2/323			1				
Tomato mottle virus (Begomovirus - and other American Geminiviridae of capsicum and tomato) A1/225		1					
Tomato ringspot virus (Nepovirus) A2/102			1				
Tomato spotted wilt virus (Tospovirus) A2/290			1				
Tomato yellow leaf curl virus (Begomovirus) and related viruses A2/182			1				
Watermelon silver mottle virus (Tospovirus) A1/294		1					
Protozoa							
Eimeria sinensis					1		
Trichodina nobilis					1		

