

Invasive Alien Species in Japan: The Status Quo and the New Regulation for Prevention of their Adverse Effects

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Abstract

A huge amount of alien species have been introduced into Japan and some have become 'invasive,' having adverse effects on ecosystems, human safety, or agriculture, forestry and fisheries. Considering that the Japanese regulatory system has not dealt with the issue comprehensively, taking into account various suggestions from many entities concerned, and aiming to materialize the provisions of Article 8 (h) stipulated by the Convention on Biological Diversity, the Japanese Cabinet finalized a draft of the Invasive Alien Species Act and submitted it to the Japanese Diet (= Parliament) on March 10, 2004.

The framework consists of the following three main points: (1) Invasive Alien Species (IAS) shall be designated in the Cabinet Ordinance of the Act as having adverse effects on ecosystems, human safety, or agriculture, forestry and fisheries. Various actions dealing with IAS such as raising, planting, storing, carrying, and importing shall be prohibited in Japan with the exception of specified cases such as by obtaining permission from the competent ministers. (2) National/local governments, Non-Profit Organizations, and other entities concerned shall take appropriate measures to mitigate the impact of IAS that already exist in Japan. (3) Uncategorized Alien Species (UAS), which may possibly be categorized as IAS through detailed investigation, shall need detailed investigation by the Japanese government in order to be allowed to be imported into Japan. The period for determining categorization shall be within six months from requests by importers or exporters of UAS into Japan.

The Diet passed the draft and the new Invasive Alien Species Act was promulgated as of June 2, 2004. Following the establishment, the Japanese Cabinet made a basic policy on October 15, 2004, for effective implementation of the Act. The Act shall be enforced within one year from its promulgation and IAS and UAS shall be designated before the enforcement based on suggestions by academic experts. Tens of IAS and thousands of UAS are expected to be designated in the first step.

All related information is available in English at the following website:
<http://www.env.go.jp/en/topic/as.html>

Key words: alien species, biodiversity, IAS, importation, invasive alien species, mitigation, regulation, UAS, uncategorized alien species

1. Introduction

1.1 Invasive Alien Species in Japan: the status quo

1.1.1 Introduction of alien species and their pathways

Japan is importing an enormous number of living organisms. For example, about 620 million live animals were brought into Japan in 2003 alone (Japanese Customs, 2003). Although more than 90% of these are classified as worms for fishing bait, a variety of species ranging from vertebrates to insects are brought in every year. Also, as the Japanese economy is strongly

sustained by international trade, it is thought that many alien species are unintentionally introduced into Japan via seaports and airports along with imported goods and containers, and by staff members.

Due to this mass introduction, some of the alien species have established habitations in Japan. So far, according to preliminary statistics the Japanese Ministry of the Environment gathered and announced on October 27, 2004, 111 species of vertebrates (17 mammals, 38 birds, three amphibians, 11 reptiles, and 42 fish), 584 species of invertebrates (including 433 insects), and 1,556 species of plants (including 1,552

vascular plants) have been recognized to be established in Japan or found in the Japanese wild (Japanese Ministry of the Environment, 2004a. See Table 1 for the translation).

1.1.2 Adverse effects by invasive alien species

Among alien species introduced into Japan, some are invasive. The invasive alien species (IAS) are causing three main types of damage. One is destruction of ecosystems. A typical example is the Java mongoose (*Herpestes javanicus*). It was intentionally introduced to southern islands in Japan in order to eradicate yellow-spotted lance-head snakes (*Trimeresurus flavoviridis*), but the effort resulted in decreased habitats for endangered native animals such as Okinawa rails (*Rallus okinawae*). The second category is threat to human safety. Snapping turtles (*Chelydra serpentina*) were originally introduced as pets from the American continent but some were and still are discarded into the wild due to difficulty of keeping. The turtles are posing risks of biting and injuring humans. The third category of damage is to agriculture, forestry and fisheries. For instance, the raccoon (*Procyon lotor*) was intentionally introduced as a pet, but, like the snapping turtle, some were discarded into the wild due to their fierce temperament. Some agricultural products have been decimated by the raccoons in the wild.

1.2 Current measures against IAS

1.2.1 Legal framework

Unfortunately, the existing legal framework was rather fragmentary regarding the issue of IAS and insufficient for dealing comprehensively with the damages. For example, the Phytosanitary Act only prevents damage to agricultural plants and the Infectious Diseases Prevention Act only prevents damage to human health caused by infectious diseases. Similarly, the Living Modified Organisms (LMOs) Act controls importation of all living modified organisms, but the act only targets damage to ecosystems and it does not restrict living 'unmodified' organisms at all.

1.2.2 Importation control

Importation control is conducted mainly by customs officers, phytosanitary officers, and quarantine officers. For instance, in fiscal year (FY) 2004, 8,427 customs officers were working at the headquarters and the branch offices. Plant protection stations consist of five main offices with more than 50 branch offices. Quarantine stations for human health have ten main offices and ten branch offices. Additionally, there were 312 animal quarantine officers in FY 2004 working at one headquarters and six branch offices.

It should be pointed out, however, that none of the above importation control officers have comprehensive authority and assignment to prevent introduction of IAS. This is the reason a new regulation to control all aspects of damage by IAS has been proposed recently.

1.2.3 Mitigation

Although there is no national strategy yet, there already exist some mitigation efforts to prevent various damage from IAS in Japan. The typical case is a project attempting to mitigate problems from Java mongooses established on Amami Island.

Yamada (2002) explains that 30 individuals of the Java mongoose (*Herpestes javanicus*) were originally released on Amami Island, Japan, in 1979 in order to control the venomous lance-head snake (*Trimeresurus flavoviridis*) and the black rat (*Rattus rattus*). Rather than controlling the snakes, however, the mongoose has had a major negative impact on agriculture and the native animals in mountainous areas.

According to Ishii (2003), the mitigation project conducted by the Japanese Ministry of the Environment started with a survey of the distribution of the Java mongoose. The survey was implemented from FY 1996 to FY 1999 and the result led to estimation of around 5,000 to 10,000 mongooses inhabiting, with an annual growth rate of about 40% in 1999 before enforcement of actual mitigation. 9,469 mongooses were eradicated in total by a trapping campaign with a bounty for three years from FY 2000, and a subsequent monitoring survey indicated that the population size and density had decreased to less than half the peak seen in 1999. Nevertheless, we face a most difficult situation for success in the project as a decrease in trapping efficiency has led to a decline in trapping, while the range of the mongoose has continued spreading.

2. Toward Prevention of Damage from IAS

2.1 Invasive Alien Species Act (1): background information

2.1.1 Convention on Biological Diversity

The significance of IAS issues was evoked by the Convention on Biological Diversity (CBD). Article 8 (h) of the convention encourages each contracting party to prevent the introduction of alien species, and to control or eradicate those alien species which threaten ecosystems, habitats or species as far as possible and as appropriate.

Additionally, Decision VI/23 adopted by the Sixth Meeting of the Conference of Parties under the CBD created detailed guiding principles for the implementation of Article 8 (h) (CBD, 2002). The primary principle is stated as follows in the annex:

Guiding principle 2: Three-stage hierarchical approach

2. Priority should be given to preventing the introduction of invasive alien species, between and within States. If an invasive alien species has been introduced, early detection and rapid action are crucial to prevent its establishment. The preferred response is often to eradicate the organisms as soon as possible... In the event that eradication is not feasible or resources are not available for its eradication, containment...and long-term control measures...should be implemented. Any

examination of benefits and costs (environmental, economic and social) should be done on a long-term basis.

2.1.2 Policymaking in the Japanese Government

Based on Article 8 (h) of the CBD, the Japanese Government set up ‘the National Strategy for the Conservation and Sustainable Use of Biological Diversity.’ The latest strategy was drafted in 2002 and clarified that IAS are one of the most serious problems facing biodiversity in Japan.

In December 2003, the Central Environment Council, an official advisory group to the Japanese Government, reported that a new framework would be necessary to tackle issues regarding alien species efficiently. The report also presented key elements which the new system needed to consider such as regulating importation and possession of IAS. Under the leadership of the Japanese Ministry of the Environment and the

Ministry of Agriculture, Forestry and Fisheries of Japan, the Japanese Cabinet finalized a draft of the new Invasive Alien Species Act on March 9, 2004, and submitted it to the Japanese Diet.

2.2 Invasive Alien Species Act (2): framework

2.2.1 Ban on various actions regarding IAS

The Invasive Alien Species Act was approved by the Japanese Diet at the end of May 2004 and promulgated on June 2 of the same year (Law No. 78). The purposes of this act are to control IAS properly and to prevent the damage to ecosystems, human safety, and agriculture, forestry and fisheries. The framework consists of three main points: 1) Ban on various actions with regard to IAS, 2) Mitigation of IAS in Japan, and 3) Judgment of Uncategorized Alien Species before their importation (see Fig. 1 for the outline).

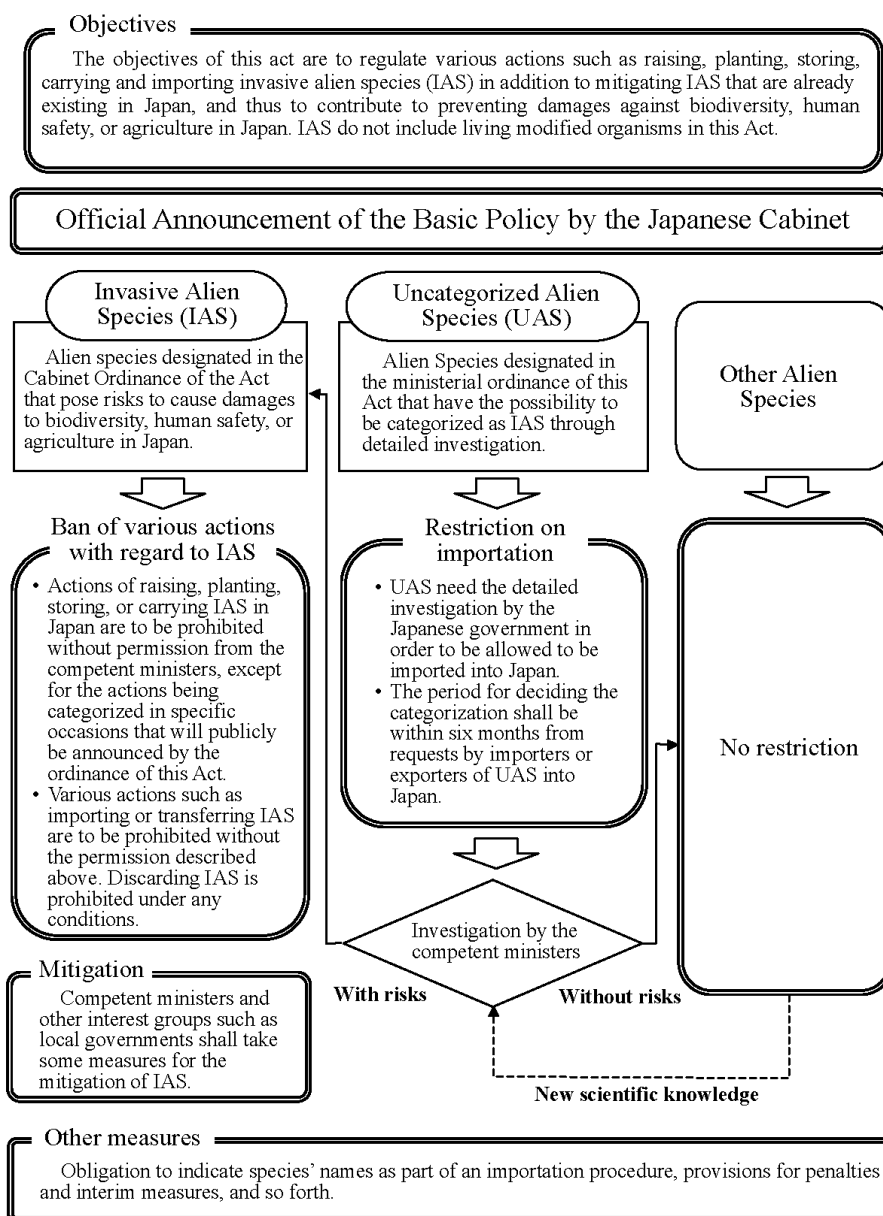


Fig. 1 Outline of the Invasive Alien Species Act.

The first point is to ban various actions regarding IAS. Raising, planting, storing, or carrying IAS will be prohibited unless competent ministers (i.e., the Minister of the Environment, but for matters related to the prevention of adverse effects on agriculture, forestry and fisheries, the Minister of Agriculture, Forestry and Fisheries shall be added) give permission for these actions. Permission will be issued only when the applicants can prevent invasion of the IAS into ecosystems of Japan. Permission is also prerequisite for importing or transferring IAS. Discarding IAS into the wild in Japan will not be allowed at any time. Additionally, microchips will be required to be implanted in some IAS for identification.

Imposing severe penalties is another characteristic of the first main point. Offenders face imprisonment for up to three years or fines of up to three million yen (equivalent to USD 28,000). Corporations that violate the Act will be charged up to 100 million yen (equivalent to USD 940,000). These penalties are much more stringent than existing regulations for protecting biodiversity. It seems that the importance of protecting ecosystems is gradually becoming better recognized in Japan.

2.2.2 Mitigation of IAS existing in Japan

The second point is to mitigate IAS that already exist in Japanese ecosystems. The competent ministers will announce official national mitigation strategies for respective IAS to conduct efficient mitigation. Various mitigation measures such as capturing, collecting, or killing IAS will be taken based on those strategies. The mitigation will be performed by the competent ministers with other active organizations such as other national government agencies, local governments and private organizations. When setting up the mitigation strategies, priority-setting is recognized as crucial to effective enforcement of the mitigation due to limited funds and staff members necessary for the implementation.

2.2.3 Judgment of Uncategorized Alien Species before their importation

The third point is to judge Uncategorized Alien Species (UAS) before their importation. UAS are alien species which may be categorized as IAS after detailed investigation. In short, UAS are suspected of being IAS. They are expected to be designated in groups of species because names of some UAS are unknown. According to this Act, importers and exporters of UAS into Japan must request a detailed investigation of UAS from the competent ministers. Then, for up to six months, importation of the UAS will be restricted while they complete the investigation. After the investigation, UAS posing risks of damage will be designated as IAS immediately, while UAS posing no risks will not be regulated by this Act as long as no new evidence shows up that indicates the alien species pose risks of damage.

2.2.4 Additional features

In addition to the three main points mentioned

above, the new act has two features. One is establishment of basic policy. The Japanese Cabinet will determine this policy for efficient implementation of this act. The contents include the basic framework of the regulation, principles concerning the selection of IAS, principles concerning the handling of IAS, principles concerning the mitigation of IAS, and so on.

The second feature is attachment of a certificate for import. IAS, UAS and similar alien species will be required to have a certificate attached verifying their types as part of importation procedures. It is hoped this certificate will become a powerful tool for customs officers in preventing illegal importation of IAS and UAS.

2.3 Preventative measures against invasive species of domestic origin

Experts including the Central Environment Council point out that some species introduced to a different place from their original habitats located in Japan can also be invasive and cause damage to the ecosystem. As IAS are defined as species from abroad, the new Invasive Alien Species Act cannot deal with invasive species of domestic origin. Generally speaking, protecting local ecosystems from introduction of invasive species of domestic origin is extremely difficult as we cannot assume that the introductions occur at limited points such as seaports and airports. The Japanese Government, however, will revise existing regulations such as the Natural Parks Law to prevent adverse effects as much as possible and at least preserve valuable ecosystems.

3. Conclusion

3.1 Schedule for law enforcement and establishment of basic policy

As previously mentioned, the IAS Act was promulgated on June 2, 2004, and the Cabinet Decision on the basic policy was made recently (October 15, 2004). After designating IAS and UAS, the Japanese government will enforce the Act within one year from the promulgation (see Fig. 2).

When the public consultation procedure on the first draft of the basic policy was conducted between July 8 and August 7, we received around 10,000 comments agreeing or disagreeing with the draft. Public awareness on this issue is very strong as typically only a few

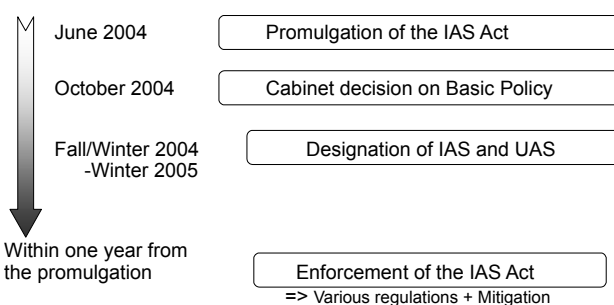


Fig. 2 Prospected schedule for enforcement of the Act.

comments are made during public consultation procedures in general. The following are key elements from the finalized basic policy (Japanese Ministry of the Environment, 2004b):

Section 1: The basic framework for the prevention of adverse effects on ecosystems, etc., caused by Invasive Alien Species

3. Basic measures toward damage prevention

...for Alien Species that have not been designated as IAS, efforts shall be made to understand the situation surrounding said species. If it is confirmed that a species has (or may have) adverse effects, appropriate study toward its selection as an IAS shall be made based on measures taken under the existing system.

For IAS that have been abandoned or have escaped to the outdoors, early mitigation efforts taken prior to diffusion are highly effective in preventing adverse effects. Monitoring and other efforts shall thus be made to discover IAS at an early stage and to take early measures.

For IAS that are already established and causing adverse effects, complete eradication from the environment, isolation, or other measures of mitigation shall be implemented systematically and flexibly in accordance with scale of adverse effects and necessity...

...Various persons are involved in adverse effects caused by IAS, from the species' introduction into Japan to the occurrence of adverse effects. Thus, in order to effectively implement countermeasures, it is important to gain the wide-ranging understanding and cooperation of citizens in Japan...

Section 2: Principles concerning the selection of IAS

1. Preconditions for selection

a. Given the fact that biosystematics, which is the basis for identifying species, has been developed in Japan and that material flow between Japan and other countries has been increasing since the Meiji Period (1868 to 1912), it is thought that, in principle, species that are commonly considered to have been introduced into Japan in 1868 or later will be targeted, in principle, for selection as IAS.

2. Approach to determining adverse effects on Ecosystems

(1) Determining adverse effects on Ecosystems

Alien Species that apply to any of the following shall be selected as IAS.

a. Alien Species that cause (or may cause) significant damage to the continuance of Indigenous Species or ecosystems in Japan by 1) preying upon Indigenous Species, 2) driving out Indigenous Species through competition with Indigenous Species for habitats or food plants/animals, etc., 3) damaging the bases of ecosystems by destroying or altering vegetation, etc., or 4) disrupting the genetics of native species through crossbreeding, etc., shall be selected as Alien Species that have (or may have) adverse effects on ecosystems.

b. Alien Species that are poisonous and cause serious harm to human beings or may cause serious injury and that are considered to be extremely dangerous due to lack of experience in danger avoidance or treatment methods shall be selected as Alien Species that are rec-

ognized or feared to have adverse effects on human safety.

However, based on other legal measures, adverse effects on human safety shall not include damage related to infectious diseases.

c. Alien Species that cause (or may cause) serious damage to agriculture, forestry, or fisheries through feeding, etc., on agricultural, forestry, or fisheries products (but not simply through their habitually feeding on Japan's agricultural, forestry, or fisheries products) shall be selected as Alien Species that are recognized or feared to have adverse effects on agriculture, forestry, or fisheries.

However, based on other legal measures, adverse effects on agriculture, forestry, and fisheries shall not include matters such as infectious diseases of livestock.

(2) Approach to knowledge used in determining adverse effects

Determining adverse effects shall progress using the following:

a. Use of scientific knowledge in Japan related to adverse effects (or possibility of adverse effects) to Ecosystems.

Possibility of adverse effects shall be analyzed by using existing knowledge that indicates high possibilities of adverse effects even when actual adverse effects are not recognized.

b. In the event that no adverse effects (or possibility of adverse effects) on Ecosystems have been identified in Japan, scientific knowledge on confirmed actual adverse effects on overseas Ecosystems or on the possibility of adverse effects on overseas Ecosystems shall be used. Said knowledge shall be used if it is confirmed that there is a possibility of adverse effects occurring in Japan, taking natural environmental conditions in Japan (climate, topography, etc.) or its social circumstances into account.

3. Items to consider when making selections

When selecting IAS, as a rule, the prevention of adverse effects on Ecosystems shall be the first priority. Selections shall be then made as needed after considering ecological characteristics of Alien Species, current conditions surrounding scientific knowledge related to the adverse effects, maintenance of an appropriate administrative framework, and social and economic impacts that arise from designation as IAS (possibilities for obtaining substitutes for Alien Species that play an active social role, etc.).

Reasons for the selection shall be clarified and announced to the degree possible.

4. Obtaining opinions on selection of IAS

(1) Obtaining opinions from academic experts on properties of living organisms

a. Opinions shall be heard from academic experts specializing in properties of living organisms (ecology, agriculture, forestry, fisheries, etc.).

Section 3: Principles concerning the handling of IAS

(2) Purpose of Raising

Permission for Raising shall be granted only for academic research, display and education, and business activities, etc., where sufficient deterrent effects can be

expected to control abandonment, escape, etc., of IAS through enforcement of approved regulations.

Purposes such as Raising as pets, which have led to abandonment or escape of Alien Species in the past due to careless Raising and that have led to Alien Species becoming established in the wild and thereby having adverse effects on Ecosystems, shall not be permitted.

Section 4: Principles concerning the mitigation of IAS by the national government and other entities

2. Items concerning implementation of mitigation

When mitigating IAS, it is important to adopt the most appropriate method that matches the conditions of adverse effects. In cases where IAS that have adverse effects on human safety are discovered outdoors, cases where IAS that have aggressive feeding or breeding habits are found in regions where many rare forms of wildlife are thriving, etc., it is important to implement emergency mitigation. On the other hand, in cases where IAS are already having (or may be having) widespread adverse effects on Ecosystems, it is important to move forward with systematic mitigation that is based on consideration of regions and methods that should take priority.

Section 5: Other important matters concerning prevention of adverse effects on Ecosystems caused by IAS

1. Uncategorized Alien Species

(2) Alien Species that are eligible for selection

With regard to an Alien Species that, despite not having been cited as having (or having the possibility to have) adverse effects in the same way as IAS, nonetheless has ecological characteristics that are similar to a particular IAS and for which there is concern that said Alien Species may have adverse effects that are similar to those caused by the IAS, in principle, said Alien Species shall be selected as a UAS within the genus to which the particular IAS belongs, with species being used as the standard unit for selection (specified taxonomic classifications [genus, family, etc.] shall be used when necessary).

2. Organisms that need not be accompanied by a certificate bearing the type name

(1) Approach to selection

Organisms that can be easily distinguished by external appearance as not being eligible for selection as IAS or UAS need not be accompanied by a certificate bearing the type name. Regardless of their status as alien or indigenous, in principle, organisms that are not in a genus to which an IAS belongs shall be selected, and organisms that are in a genus to which an IAS belongs shall be selected as necessary...

(2) Issuance of certificates

Efforts shall be made to obtain the cooperation of government agencies in other countries in the issuance of certificates bearing type names of targeted organisms. At the same time, existing certificates issued based on other laws and conventions and certificates of organizations that have the same knowledge and impartiality of government agencies shall be used as certificates recognized by this law. Consideration shall be given to ensure that the burden on importers does not increase excessively.

3. Amplification of scientific knowledge

In accurately and effectively promoting countermeasures against Alien Species, it is most important to enhance scientific knowledge of the characteristics of the species and the ecosystems that are affected by the species' introduction. Thus, efforts must be made to collaborate with pertinent ministries and agencies, academic experts, non-governmental organizations (NGOs), etc., to study the existence, living and growth conditions, and ecological characteristics of Alien Species, and to promote survey research in each field needed to support countermeasures (development of technology for evaluating adverse effects of Alien Species, technology related to mitigation methods, etc.). It is also important to promote the accumulation of knowledge and study research in each region by local public entities, NGOs, etc., and the national government must work to support these approaches.

5. Other matters

(2) Approach to handling of animals

When importing, Raising or otherwise handling or mitigating animals designated as IAS, care shall be taken to handle individual animals in an appropriate manner that is in line with the philosophy of the Law Concerning the Protection and Management of Animals (Law No. 105 (1973)) and based on consideration of the fact that the animal is a living being.

Based on the above basic policy, the first general expert meeting to discuss what should be designated as IAS and UAS was held on October 27, 2004. The meeting decided to establish six small working groups to deal with each group of alien species (i.e. mammals and birds, herptiles, fishes, insects, invertebrates, and plants). Each working group is expected to have a few meetings during November and December of 2004 and make recommendations on designations to the general expert meeting. Following the final report of the general expert meeting, the Japanese Cabinet will set up a Cabinet ordinance to designate IAS (at the same time, the competent ministers will designate UAS by ministerial ordinance). Also, public consultation procedures and World Trade Organization Treaty notification procedures are necessary for a few months before the ordinances can be established. Thus, the ordinances will be promulgated in the spring of 2005 at the earliest.

3.2 Challenges

In order to realize efficient implementation of this new act, some challenges must be overcome. For instance, we need to widen the act's target range as much as possible. More specifically, tens of IAS and thousands of UAS are expected to be designated in the first step. In the same way, there are several challenges such as arranging enough staff members for enforcement of this Act, preparing effective countermeasures against unintentional introduction of IAS and UAS, setting permission criteria that secure IAS out of ecosystems, and establishment of efficient mitigation techniques.

To solve the above issues, thorough research, database creation, consensus building, fund raising, education, international cooperation, etc., will be essential. Specifically, when considering the fact that all alien species come from abroad, international cooperation for exchanging related knowledge, data, techniques, and so forth, are inevitable. The Japanese government hopes to propagate this new regulation both nationally and internationally, and to obtain international understanding and cooperation.

All the related information is available in English at the following website:

<http://www.env.go.jp/en/topic/as.html>

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Table 1 Alien species recognized to be established in Japan or found in the Japanese wild (as of October 27, 2004)

	Mammals	Birds	Fishes	Insects(a)	Insects(b)	
1	<i>Erinaceus europaeus</i>	<i>Cygnus olor</i>	<i>Acheliognathus macropterus</i>	<i>Autographa gamma</i>	<i>Tineola bisselliella</i>	1
2	<i>Macaca cyclopis</i>	<i>Bambusicola thoracica thoracica</i>	<i>Aristichthys nobilis</i>	<i>Chlumetia brevisigna</i>	<i>Trichophaga tapetzella</i>	2
3	<i>Macaca fascicularis</i>	<i>Phasianus colchicus karpowi</i>	<i>Ctenopharyngodon idellus</i>	<i>Helicoverpa armigera</i>	<i>Yponomeuta malinellus</i>	3
4	<i>Macaca mulatta</i>	<i>Colinus virginianus</i>	<i>Danio albolineatus</i>	<i>Pericyma cruegeri</i>	<i>Hypoderma bovis</i>	4
5	<i>Saimiri sciureus</i>	<i>Bambusicola thoracica sonorivox</i>	<i>Danio rerio</i>	<i>Hyphantria cunea</i>	<i>Hypoderma lineatus</i>	5
6	<i>Sciurus vulgaris</i>	<i>Melopsittacus undulatus</i>	<i>Hypophthalmichthys molitrix</i>	<i>Daphnis nerii</i>	<i>Phormia regina</i>	6
7	<i>Callosciurus erythraeus thaiwanensis</i>	<i>Myiopsitta monachus</i>	<i>Mylopharyngodon piceus</i>	<i>Artona martini</i>	<i>Photophormia terraenovae</i>	7
8	<i>Tamias sibiricus barberi</i>	<i>Psittacula eupatria</i>	<i>Rhodeus ocellatus ocellatus</i>	<i>Athyma perius</i>	<i>Musca crassirostris</i>	8
9	<i>Ondatra zibethicus</i>	<i>Psittacula krameri manillensis</i>	<i>Tinca tinca</i>	<i>Phalanta phalantha</i>	<i>Fannia canicularis</i>	9
10	<i>Rattus exulans</i>	<i>Psittacula alexandri fasciata</i>	<i>Paramisgurnus dabryanus</i>	<i>Cupha erymanthis</i>	<i>Drosophila melanogaster</i>	10
11	<i>Myocastor coypus</i>	<i>Pycnonotus jocosus</i>	<i>Clarias fuscus</i>	<i>Pachiopta aristolochiae</i>	<i>Drosophila simulans</i>	11
12	<i>Procyon lotor</i>	<i>Pycnonotus sinensis</i>	<i>Clarias batrachus</i>	<i>Sericinus montela</i>	<i>Leptocera fuscipennis</i>	12
13	<i>Mustela furo</i>	<i>Garrulax perspicillatus</i>	<i>Ictalurus punctatus</i>	<i>Troides aeacus kaguya</i>	<i>Milichiella lacteipennis</i>	13
14	<i>Mustela sibirica</i>	<i>Garrulax sannio</i>	<i>Liposarcus disjunctivus</i>	<i>Appias lyncida formosana</i>	<i>Liriomyza dianthicola</i>	14
15	<i>Mustela vison</i>	<i>Garrulax canorus</i>	<i>Oncorhynchus kisutch</i>	<i>Leptostia nina niobe</i>	<i>Liriomyza sativae</i>	15
16	<i>Herpestes javanicus</i>	<i>Leiothrix lutea</i>	<i>Oncorhynchus mykiss</i>	<i>Pieris brassicae</i>	<i>Liriomyza trifolii</i>	16
17	<i>Muntiacus reevesi</i>	<i>Paroaria coronata</i>	<i>Salmo trutta</i>	<i>Erionota torus</i>	<i>Piophila casei</i>	17
18		17 spp. <i>Estrilda melpoda</i>	<i>Salvelinus fontinalis</i>	<i>Hasora badra badra</i>	<i>Bactrocera cucurbitae</i>	18
19		<i>Estrilda troglodytes</i>	<i>Salvelinus namaycush</i>	<i>Suastus gremius</i>	<i>Bactrocera dorsalis</i>	19
20	Amphibians	<i>Lonchura punctulata</i>	<i>Coregonus lavaretus maraena</i>	<i>Thymelicus lineola</i>	<i>Ceratitidis capitata</i>	20
21	<i>Bufo marinus</i>	<i>Lonchura malacca</i>	<i>Odontesthes bonariensis</i>	<i>Darna pallivitta</i>	<i>Bactrocera tryoni</i>	21
22	<i>Rana catesbeiana</i>	<i>Lonchura atricapilla</i>	<i>Gambusia affinis</i>	<i>Parasa lepida</i>	<i>Eumerus tuberculatus</i>	22
23	<i>Polypedates leucomystax</i>	<i>Lonchura striata</i>	<i>Poecilia reticulata</i>	<i>Aglossa dimidiata</i>	<i>Merodon equestris</i>	23
24		3 spp. <i>Lonchura maja</i>	<i>Poecilia sphenops</i>	<i>Corcyra cephalonica</i>	<i>Diploneura cornuta</i>	24
25		<i>Amandava amandava</i>	<i>Xiphophorus helleri</i>	<i>Crocidolomia binotalis</i>	<i>Hermetia illucens</i>	25
26		<i>Vidua paradisaea</i>	<i>Xiphophorus maculatus</i>	<i>Doloessa viridis</i>	<i>Nealsomyia rufella</i>	26
27		<i>Vidua macroura</i>	<i>Pseudambassis ranga</i>	<i>Ephestia elutella</i>	<i>Allocontarinia sorghicola</i>	27
28		<i>Ploceus manyar</i>	<i>Lateolabrax sp.</i>	<i>Ephestia kuehniella</i>	<i>Contarina maculipennis</i>	28
29		<i>Ploceus intermedius</i>	<i>Lepomis macrochirus</i>	<i>Ephestia cautella</i>	<i>Mycophila speyeri</i>	29
30	Reptiles	<i>Euplectes afer</i>	<i>Micropterus dolomieu</i>	<i>Leucimodes orbonalis</i>	<i>Procontarinia sp.</i>	30
31	<i>Cheylra serpentina</i>	<i>Euplectes orix</i>	<i>Micropterus salmoides</i>	<i>Omphisa anastomosalis</i>	<i>Mayetiola destructor</i>	31
32	<i>Macrolemys temmincki</i>	<i>Sturnus contra</i>	<i>Cichlasoma nigrofasciatum</i>	<i>Paralipsa gularis</i>	<i>Scatpse fuscipes</i>	32
33	<i>Trachemys scripta elegans</i>	<i>Acridotheres tristis</i>	<i>Oreochromis mossambicus</i>	<i>Parallelia palumba</i>	<i>Scatpse notata</i>	33
34	<i>Hemidactylus frenatus</i>	<i>Acridotheres ginginianus</i>	<i>Oreochromis niloticus</i>	<i>Parapediasia teterrella</i>	<i>Clogmia albipunctatus</i>	34
35	<i>Hemiphyllodactylus typus typus</i>	<i>Acridotheres fuscus javanicus</i>	<i>Otopharynx lithobates</i>	<i>Plodia interpunctella</i>	<i>Tinearia alternata</i>	35
36	<i>Anolis carolinensis</i>	<i>Acridotheres cristatellus cristatellus</i>	<i>Tilapia buttkoferi</i>	<i>Pyralis farinalis</i>	<i>Aedes aegypti</i>	36
37	<i>Anolis sagrei</i>	<i>Pica pica</i>	<i>Tilapia zillii</i>	<i>Scripophaga incertulas</i>	<i>Culex pipiens molestus</i>	37
38	<i>Iguana iguana</i>	<i>Urocissa caerulea</i>	<i>Macropodus chinensis</i>	<i>Anatrachyntis rileyi</i>	<i>Chironomus tainanus</i>	38
39	<i>Elaphe taeniura friesi</i>		38 spp. <i>Macropodus opercularis</i>	<i>Phthorimaea operculella</i>	<i>Echidnophaga gallinacea</i>	39
40	<i>Boiga irregularis</i>		<i>Channa argus</i>	<i>Sitotroga cerealella</i>	<i>Pulex irritans</i>	40
41	<i>Trimeresurus mucrosquamatus</i>		<i>Channa asiatica</i>	<i>Anchonoma xaraula</i>	<i>Xenopsylla cheopis</i>	41
42		11 spp.	<i>Channa maculata</i>	<i>Conopomorpha litchiella</i>	<i>Apis mellifera ssp.</i>	42
43				42 spp. <i>Conopomorpha sinensis</i>	<i>Apis dorsata</i>	43
44				<i>Grapholita molesta</i>	<i>Bombus terrestris</i>	44
45				<i>Grapholita dimorpha</i>	<i>Xylocopa sonorina</i>	45
46				<i>Statherotis discana</i>	<i>Ampulex amoena</i>	46
47				<i>Cydia pomonella</i>	<i>Prionyx viduatus</i>	47
48				<i>Nemapogon granellus</i>	<i>Sceliphron deforne nipponicum</i>	48
49				<i>Opogona sacchari</i>	<i>Sceliphron madraspatanum kohli</i>	49
50				<i>Tinea translucens</i>	<i>Sceliphron caementarium</i>	50

Insects(c)	Insects(d)	Insects(e)	Insects(f)	Insects(g)	
1 <i>Delta pyriforme</i>	<i>Araecerus fasciculatus</i>	<i>Rhysobius lophanthae</i>	<i>Attagenus japonicus</i>	<i>Agriosphodrus dohrni</i>	1
2 <i>Tachypompilus analis</i>	<i>Acanthoscelides obtectus</i>	<i>Holoparamecus depressus</i>	<i>Attagenus fasciatus</i>	<i>Amphibolus venator</i>	2
3 <i>Linepithema humile</i>	<i>Acanthoscelides pallidipennis</i>	<i>Holoparamecus regusae</i>	<i>Attagenus pellio</i>	<i>Pergrinator biannulipes</i>	3
4 <i>Monomorium pharaonis</i>	<i>Bruchus pisorum</i>	<i>Euxestus parki</i>	<i>Dermestes ater</i>	<i>Cimex letularius</i>	4
5 <i>Salenopsis geminata</i>	<i>Bruchus rufimanus</i>	<i>Murmidius ovalis</i>	<i>Dermestes frischii</i>	<i>Corytucha ciliata</i>	5
6 <i>Solenopsis invicta</i>	<i>Bruchus loti</i>	<i>Cyrtophagus acutangulus</i>	<i>Dermestes haemorrhoidalis</i>	<i>Corytucha marmorata</i>	6
7 <i>Wasmannia auropunctata</i>	<i>Callosobruchus maculatus</i>	<i>Cyrtophagus cellaris</i>	<i>Dermestes maculatus</i>	<i>Dulinius conchatus</i>	7
8 <i>Cephalonomia gallicola</i>	<i>Zabrotes subfasciatus</i>	<i>Cartodere nodifer</i>	<i>Dermestes vorax</i>	<i>Fulvius anthocoroides</i>	8
9 <i>Chrysis shanghaiensis</i>	<i>Oides bowringii</i>	<i>Cartodere elongata</i>	<i>Dermestes lardarius</i>	<i>Cryptotympana atrata</i>	9
10 <i>Dryocosmus kuriphilus</i>	<i>Brontispa longissima</i>	<i>Cartodere constricta</i>	<i>Trogoderma inclusum</i>	<i>Perkinsiella saccharicida</i>	10
11 <i>Aneristus ceroplastae</i>	<i>Cassida obtusata</i>	<i>Dienerella filum</i>	<i>Trogoderma granarium</i>	<i>Acythosiphon argus</i>	11
12 <i>Aphytis yanonensis</i>	<i>Diaachus auratus</i>	<i>Dienerella argus</i>	<i>Trogoderma varium</i>	<i>Acythosiphon chelidonii</i>	12
13 <i>Aphelinus mali</i>	<i>Ophraella communa</i>	<i>Dienerella costulata</i>	<i>Gibbium psylloides</i>	<i>Aphis fabae fabae</i>	13
14 <i>Coccobius fulvus</i>	<i>Batocera rubus</i>	<i>Ahasverus advena</i>	<i>Ptinus fur</i>	<i>Aphis fabae solanella</i>	14
15 <i>Encarsia formosa</i>	<i>Callipogon relictus</i>	<i>Cryptamorpha desjardinsi</i>	<i>Ptinus japonicus</i>	<i>Aphis hederiae</i>	15
16 <i>Encarsia smithi</i>	<i>Ceresium sinicum</i>	<i>Monanus coccinulus</i>	<i>Ptinus clavipes</i>	<i>Aphis nerii</i>	16
17 <i>Anicetus beneficus</i>	<i>Cephalallus unicolor</i>	<i>Oryzaephilus mercator</i>	<i>Pseudeurostus hilleri</i>	<i>Aphis oenotherae</i>	17
18 <i>Eupelmus sp.</i>	<i>Mesosa perplexa</i>	<i>Silvans bidentatus</i>	<i>Lasioderma serricorne</i>	<i>Aphis taraxacicola</i>	18
19 <i>Tamarixia radiata</i>	<i>Moechotypa diphysis</i>	<i>Silvans lewisi</i>	<i>Nicobium hirtum</i>	<i>Dysaphis tulipae</i>	19
20 <i>Torymus sinensis</i>	<i>Paraglenea fortunei</i>	<i>Cryptolestes ferrugineus</i>	<i>Oligomerus ptilinoides</i>	<i>Eriosoma lanigerum</i>	20
21 <i>Bruchophagus gibbus</i>	<i>Ropica dorsalis</i>	<i>Cryptolestes pusilloides</i>	<i>Stegobium paniceum</i>	<i>Hysteroneura setariae</i>	21
22 <i>Phytalia fletcheri</i>	<i>Triachys orientalis</i>	<i>Cryptolestes pusillus</i>	<i>Pyropyga sp.</i>	<i>Illinoia lambersi</i>	22
23 <i>Eumicrosoma blissae</i>	<i>Alphitobius diaperinus</i>	<i>Cryptolestes turcicus</i>	<i>Buprestis aurulenta</i>	<i>Illinoia liliodendri</i>	23
24 <i>Blastophaga sp.</i>	<i>Alphitobius laevigatus</i>	<i>Monotoma longicollis</i>	<i>Cyclommatus metallifer</i>	<i>Longistigma liquidambarus</i>	24
25 <i>Diapus aculeatus</i>	<i>Alphitophagus bifasciatus</i>	<i>Monotoma picipes</i>	<i>Dorcus alcides</i>	<i>Macrosiphum euphorbiae</i>	25
26 <i>Cosmopolites sordidus</i>	<i>Coelopalorus foveicollis</i>	<i>Monotoma quodrifoveolata</i>	<i>Dorcus antaeus</i>	<i>Metopolophium dirhodum</i>	26
27 <i>Diocalandra frumenti</i>	<i>Gnathocerus cornutus</i>	<i>Monotoma spinicollis</i>	<i>Dorcus bucephalus</i>	<i>Myzus ornatus</i>	27
28 <i>Myocalandra exarata</i>	<i>Latheticus oryzae</i>	<i>Carpophilus dimidiatus</i>	<i>Dorcus grandis</i>	<i>Therioaphis trifolii</i>	28
29 <i>Odoiporus longicollis</i>	<i>Palorus ratzeburgi</i>	<i>Carpophilus marginellus</i>	<i>Dorcus hopei</i>	<i>Uroleucon nigrotuberculatum</i>	29
30 <i>Polytus mellerborgi</i>	<i>Palorus subdepressus</i>	<i>Carpophilus hemipterus</i>	<i>Dorcus taurus gypaetus</i>	<i>Uroleucon erigeronensis</i>	30
31 <i>Rhynchophorus ferrugineus</i>	<i>Tenebrio obscurus</i>	<i>Carpophilus pilosellus</i>	<i>Dorcus titanus palawanicus</i>	<i>Uroleucon taraxaci</i>	31
32 <i>Rhabdoscelus lineatocollis</i>	<i>Tenebrio molitor</i>	<i>Carpophilus freemani</i>	<i>Dorcus titanus titanus</i>	<i>Microceropsylla nigra</i>	32
33 <i>Rhabdoscelus obscurus</i>	<i>Tribolium confusum</i>	<i>Necrobia rufipes</i>	<i>Dorcus vertinus</i>	<i>Heteropsylla incisa(cubana)</i>	33
34 <i>Sitophilus oryzae</i>	<i>Tribolium destructor</i>	<i>Necrobia ruficollis</i>	<i>Lamprima adolphinae</i>	<i>Ceroplastes rubens</i>	34
35 <i>Sphenophrus venatus</i>	<i>Tribolium madens</i>	<i>Necrobia vilacea</i>	<i>Odontolabis siva</i>	<i>Ceroplastes floridensis</i>	35
36 <i>Aclees hirayamai</i>	<i>Tribolium freemani</i>	<i>Korynetes caeruleus</i>	<i>Phalacrognathus muelleri</i>	<i>Coccus longulus</i>	36
37 <i>Amorphoidea lata</i>	<i>Anthicus floralis</i>	<i>Tarsostenus unvittatus</i>	<i>Alissonotum pauper</i>	<i>Coccus viridis</i>	37
38 <i>Euscepes postfasciatus</i>	<i>Necerdes melanula</i>	<i>Thaneroclerus buqueti</i>	<i>Chalcosoma atlas</i>	<i>Eucalymnatus tessellatus</i>	38
39 <i>Hypera punctatus</i>	<i>Typhaea stercorea</i>	<i>Lophocateres pusillus</i>	<i>Chalcosoma caucasus</i>	<i>Milviscutulus mangiferae</i>	39
40 <i>Hypera postica</i>	<i>Adalia bipunctata</i>	<i>Tenebrioides mauritanicus</i>	<i>Dicronorhina derbyana</i>	<i>Parasaissetia nigra</i>	40
41 <i>Lissorhopterus oryzophilus</i>	<i>Brumoides ohotai</i>	<i>Heterobostrychus hamatipennis</i>	<i>Dynastes hercules</i>	<i>Pulvinaria psidii</i>	41
42 <i>Listroderes costirostris</i>	<i>Cryptolaemus montrouzieri</i>	<i>Rhizopertha dominica</i>	<i>Oryctes rhinoceros</i>	<i>Saissetia oleae</i>	42
43 <i>Otiorynchus sulcatus</i>	<i>Epilachna varivestis</i>	<i>Dinoderus minutus</i>	<i>Protoetia fusca</i>	<i>Saissetia coffeae</i>	43
44 <i>Phantomorus cervinus</i>	<i>Epilachna pusillanima</i>	<i>Lyctus africanus</i>	<i>Xylotrupes gideon</i>	<i>Antonina graminis</i>	44
45 <i>Rhinoncus albicinctus</i>	<i>Hyperaspis leechi</i>	<i>Lyctoxylon dentatum</i>	<i>Lebia viridis</i>	<i>Dysmicoccus brevipes</i>	45
46 <i>Sitona hispidulus</i>	<i>Jauravia limbata</i>	<i>Minthea rugicollis</i>	<i>Micromalthus debilis</i>	<i>Hypogeococcus spinosus</i>	46
47 <i>Sitona flavescens</i>	<i>Olla v-nigrum</i>	<i>Lyctus sinensis</i>	<i>Carcinops pumilio</i>	<i>Planococcus citri</i>	47
48 <i>Sitona cylindricollis</i>	<i>Psyllobora vigintimaculata</i>	<i>Lyctus llinearis</i>	<i>Caverelius saccharivorus</i>	<i>Phenacoccus madeirensis</i>	48
49 <i>Stenopelmus rufinasus</i>	<i>Rodolia cardinalis</i>	<i>Lyctus brunneus</i>	<i>Erythesina fullo</i>	<i>Rhizoecus cacticans</i>	49
50 <i>Cylas formicarius</i>	<i>Rhizobius forestieri</i>	<i>Anthrenus nipponensis</i>	<i>Notobius meleagris</i>	<i>Aleurocanthus spiniferus</i>	50

Insects(h)	Insects(i)	Arthropods other than insects	Mollusks(a)	Mollusks(b)	
1 <i>Aleurothrixus floccosus</i>	<i>Thrips simplex</i>	<i>Aponychus firmianae</i>	<i>Pomacea canaliculata</i>	<i>Deroceras laeve</i>	1
2 <i>Bemisia argentifolii</i>	<i>Thrips tabaci</i>	<i>Panonychus osmanthi</i>	<i>Stenothyra</i> sp.	<i>Lehmannia valentiana</i>	2
3 <i>Bemisia tabaci</i>	<i>Gynaikothrips ficorum</i>	<i>Eotetranychus lewisi</i>	<i>Potamopyrgus jenkinsi</i>	<i>Milax gagates</i>	3
4 <i>Trialeurodes packardii</i>	<i>Ponticulothrips packardii</i>	<i>Eutetranychus orientalis</i>	<i>Semisulcospira</i> sp.	<i>Limax maximus</i>	4
5 <i>Trialeurodes vaporariorum</i>	<i>Merothrips laevis</i>	<i>Oligonychus orthius</i>	<i>Thiara scabra</i>	<i>Arion ater</i>	5
6 <i>Kermes galliformis</i>	<i>Merothrips floridensis</i>	<i>Oligonychus coffeae</i>	<i>Melanoides tuberculata</i>	<i>Lehmannia nyctelia</i>	6
7 <i>Aphanostigma iaksuiense</i>	<i>Frankliniopsis vespiformis</i>	<i>Tetranychus neocaledonicus</i>	<i>Crepidula onyx</i>	<i>Helix aspersa</i>	7
8 <i>Moritzia castaneivora</i>	<i>Liposcelis bostrychophilus</i>	<i>Brevipalpus californicus</i>	<i>Paludinellassiminea?</i> <i>taiwanensis</i>	<i>Eleutherocaulis alte</i>	8
9 <i>Viteus vitifolii</i>	<i>Liposcelis crrodens</i>	<i>Brevipalpus russulus</i>	<i>Euspira fortunei</i>	<i>Euglandina rosea</i>	9
10 <i>Eriococcus coccineus</i>	<i>Liposcelis entomophilus</i>	<i>Dolichotetranychus floridanus</i>	<i>Nassarius sinarus</i>	<i>Parmarion martensi</i>	10
11 <i>Abgrallaspis cyanophylli</i>	<i>Liposcelis simulans</i>	<i>Tenuipalpus pacificus</i>	<i>Urosalpinx cinerea</i>	<i>Bradybaena similis</i>	11
12 <i>Abgrallaspis palmae</i>	<i>Liposcelis kidderi</i>	<i>Trisetacus thujivagrans</i>	<i>Umbonium thomasi</i>	<i>Acusta mighelsiana</i>	12
13 <i>Aulacaspis tubercularis</i>	<i>Lepinotus reticulatus</i>	<i>Cisaberoptus kenya</i>	<i>Cuthona perca</i>	<i>Mytilus galloprovincialis</i>	13
14 <i>Andaspis hawaiiensis</i>	<i>Trogium pulsatorium</i>	<i>Aceria ficus</i>	<i>Aglaja</i> sp. ?	<i>Perna viridis</i>	14
15 <i>Aonidiella aurantii</i>	<i>Tapinella africana</i>	<i>Aceria litchii</i>	<i>Physa acuta</i>	<i>Xenostrobus securis</i>	15
16 <i>Aonidiella citrina</i>	<i>Grylloides sigillatus</i>	<i>Aceria tulipae</i>	<i>Physa fontinalis</i>	<i>Limnoperna fortunei</i>	16
17 <i>Aonidiella orientalis</i>	<i>Acheta domestica</i>	<i>Aceria paradianthi</i>	<i>Physa heterostropha</i>	<i>Pinctada fucata</i>	17
18 <i>Aspidiotus excisus</i>	<i>Calyptotrypus hibinonis</i>	<i>Aculus fockeui</i>	<i>Physa</i> sp.	<i>Hyriopsis cumingii</i>	18
19 <i>Chrysomphalus dictiospermi</i>	<i>Phyllium</i> sp.	<i>Aculus schlechtendali</i>	<i>Aplexa hypnorum</i>	<i>Mytilopsis sallei</i>	19
20 <i>Chrysomphalus aonidum</i>	<i>Cryptotermes brevis</i>	<i>Aculops lycopersici</i>	<i>Galba truncatula</i>	<i>Corbicula fluminea form insularis</i>	20
21 <i>Diaspis boisduvalii</i>	<i>Incisitermes minor</i>	<i>Spinacus pagonis</i>	<i>Pseudosuccinea columella</i>	<i>Corbicula fluminea</i>	21
22 <i>Diaspis bromeliae</i>	<i>Reticulitermes kanmonensis</i>	<i>Phytonemus pallidus</i>	<i>Pseudisidora</i> sp.	<i>Corbicula</i> spp.	22
23 <i>Diaspis echinocacti</i>	<i>Coptotermes formosanus</i>	<i>Crossopriza lyoni</i>	<i>Austropeplea</i> sp.	<i>Mercenaria mercenaria</i>	23
24 <i>Fiorinia fioriniae</i>	<i>Neostylopyga rhombifolia</i>	<i>Badumna insignis</i>	<i>Lymmanea</i> sp.	<i>Meretrix petechialis</i>	24
25 <i>Gymnaspid aechmeae</i>	<i>Periplaneta americana</i>	<i>Latrodectus geometricus</i>	<i>Indoplanrobis exustus</i>	<i>Ptericola</i> sp. cf. <i>lithophaga</i>	25
26 <i>Ischnaspis longirostris</i>	<i>Periplaneta australasiae</i>	<i>Latrodectus hasseltii</i>	<i>Helisoma trivolvis</i>	<i>Potamocorbula laevis</i>	26
27 <i>Kuwanaspis howardi</i>	<i>Periplaneta brunnea</i>	<i>Uncinocythere occidentalis</i>	<i>Biomphalaria?</i> sp.	<i>Potamocorbula</i> sp.	27
28 <i>Lepidosaphes beckii</i>	<i>Imblattella orchidae</i>	<i>Triops longicaudatus</i>	<i>Pettancylus pettardi</i>	<i>Sepharca broughtonii</i>	28
29 <i>Lepidosaphes cupressi</i>	<i>Supella longipalpa</i>	<i>Triops granarius</i>	<i>Amerianna carinata</i>	<i>Anadara</i> sp.	29
30 <i>Lepidosaphes ulmi</i>	<i>Nauphoeta cinerea</i>	<i>Triops cancriformis</i>	<i>Succineidae</i> gen. et sp.	<i>Ostrea edulis</i>	30
31 <i>Melanaspid bromiliae</i>	<i>Blaberus discoidalis</i>	<i>Balanus glandula</i>	<i>Pupisoma orcula</i>	<i>Ostrea lurida</i>	31
32 <i>Melanaspid obscura</i>	<i>Lepisma saccharina</i>	<i>Balanus improvisus</i>	<i>Pupoides albilabris</i>	<i>Crassostrea angulata</i>	32
33 <i>Morganella longispina</i>	<i>Thermobia domestica</i>	<i>Balanus venustus</i>	<i>Gastrocopta procera</i>	<i>Crassostrea virginica</i>	33
34 <i>Parlatoria proteus</i>		433 spp. <i>Balanus variegatus cirratus</i>	"Punctum" sp.	<i>Mystilopsis leucophaeta</i>	34
35 <i>Parlatoria ziziphi</i>		<i>Megabalanus tintinnabulum</i>	<i>Vertigo</i> sp.	<i>Ruditapes philippinarum</i>	35
36 <i>Pinnaspis hibisci</i>		<i>Megabalanus zebra</i>	<i>Vallonia pulchella</i>	85 spp.	36
37 <i>Pseudoparlatoria parlatoriodes</i>		<i>Balanus eburneus</i>	<i>Achatina fulica</i>		37
38 <i>Thysanofiorinia nephelii</i>		<i>Procambarus clarkii</i>	<i>Gunella bicolor</i>		38
39 <i>Unaspis yanonensis</i>		<i>Pacifastacus l. trowbridgii</i>	<i>Subulina octona</i>		39
40 <i>Icerya purchasi</i>		<i>Pacifastacus l. leniusculus</i>	<i>Paropeas achatinaceum</i>		40
41 <i>Icerya seychellarum</i>		<i>Pyromaia tuberculata</i>	<i>Lamellaxis gracilis</i>		41
42 <i>Dorcadothrips xanthius</i>		<i>Carcinus aestuarii</i>	<i>Rumina decorata</i>		42
43 <i>Echinothrips americanus</i>		<i>Callinectes sapidus</i>	<i>Zonitoides arboreus</i>		43
44 <i>Frankliniella occidentalis</i>		<i>Penaeus orientalis</i>	<i>Hawaiiia minuscula</i>		44
45 <i>Heliothrips haemorrhoidalis</i>		<i>Homarus americanus</i>	<i>Oxychilus cellaria</i>		45
46 <i>Hercinothrips femoralis</i>		<i>Homarus gammarus</i>	<i>Helicodiscus inermis</i>		46
47 <i>Selenothrips rubrocinctus</i>		<i>Chamberlinius hualienensis</i>	<i>Helicodiscus</i> sp.		47
48 <i>Taeniothrips inoconsequens</i>		<i>Trigoniulus lumbricinus</i>	<i>Helicodiscus</i> sp.		48
49 <i>Thrips hawaiiensis</i>		<i>Artemia franciscana</i>	<i>Meghimatium bilineatum</i>		49
50 <i>Thrips palmi</i>		<i>Artemia parthenogenetica</i>	<i>Limax flavus</i>		50

50 spp.

	Other invertebrates	Vascular plants(a)	Vascular plants(b)	
1	<i>Craspedacusta sowerbyi</i>	<i>Azolla caroliniana</i> Willd.	<i>Rumex maritimus</i> L.	1
2	<i>Platydemus manokwari</i>	<i>Salvinia molesta</i> Mitch.	<i>Rumex obtusifolius</i> L. var. <i>agrestis</i> (Fries) Celak	2
3	<i>Bipalium nobile</i>	<i>Selaginella biformis</i> A. Br. ex Kuhn	<i>Rumex pratensis</i> Mert. et Koch	3
4	<i>Bipalium kewense</i>	<i>Selaginella moellendorffii</i> Hieron	<i>Rumex pulcher</i> L.	4
5	<i>Pectinatella magnifica</i>	<i>Selaginella uncinata</i> Spring	<i>Rumex sanguineus</i> L.	5
6	<i>Globodera rostchiensis</i>	<i>Adiantum capillus-venensis</i> L.	<i>Boerhavia diffusa</i> L.	6
7	<i>Globodera tabacum</i>	<i>Pityrogramma calomelanos</i> Link	<i>Boerhavia erecta</i> L.	7
8	<i>Bursaphelenchus xylophilus</i>	<i>Casuarina equisetifolia</i> L.	<i>Mirabilis jalapa</i> L. var. <i>dichlamydomorpha</i> Makino	8
9	<i>Ficopomatus enigmaticus</i>	<i>Pterocarya stenoptera</i> DC.	<i>Mirabilis jalapa</i> L. var. <i>jalapa</i>	9
10	<i>Hydroides elegans</i>	<i>Populus × canadensis</i>	<i>Phytolacca americana</i> L.	10
11	<i>Perinereis aibuhitensis</i>	<i>Populus × euroamericana</i> Rehder	<i>Phytolacca esculenta</i> Van Houtte	11
12	<i>Molgula manhattensis</i>	<i>Populus alba</i> L.	<i>Rivina humilis</i> L.	12
13	<i>Polyandrocarya zorritensis</i>	<i>Populus angulata</i> Aiton	<i>Mollugo verticillata</i> L.	13
14	<i>Aiptasia cf. insignis</i>	<i>Salix matsudana</i> Koidz. var. <i>tortuosa</i> Vilm.	<i>Sesubium portulacastrum</i> L.	14
15	<i>Aiptasiomorpha minuta</i>	<i>Ulmus pumila</i> L.	<i>Trianthema portulacastrum</i> L.	15
16	<i>Anthopleura kurogane</i>	<i>Boehmeria nivea</i> (L.) Gaud. var. <i>tenacissima</i> (Gaud.) Miq.	<i>Montia perfoliata</i> Howell	16
17		16 spp. <i>Parietaria diffusa</i> Mert. et Koch	<i>Portulaca grandiflora</i> Hook.	17
18		<i>Parietaria pensylvanica</i> Muhl.	<i>Portulaca pilosa</i> L.	18
19		<i>Pilea microphylla</i> Liebm.	<i>Talinum crassifolium</i> Willd.	19
20		<i>Pilea serpyllifolia</i> Wedd.	<i>Basella alba</i> L.	20
21		<i>Urtica dioica</i> L.	<i>Basella rubra</i> L.	21
22		<i>Urtica urens</i> L.	<i>Boussingaultia cordifolia</i> Ten.	22
23		<i>Coccoloba uvifera</i> L.	<i>Agrostemma githago</i> L.	23
24		<i>Emex spinosa</i> Campd.	<i>Cerastium arvense</i> L.	24
25		<i>Fagopyrum cymosum</i> Meisn.	<i>Cerastium glomeratum</i> Thuill.	25
26		<i>Fagopyrum tataricum</i> Gaertn.	<i>Cerastium grandiflorum</i> Waldst et Kit.	26
27		<i>Fallopia convolvulus</i> (L.) A. Love	<i>Cerastium tomentosum</i> L.	27
28		<i>Fallopia dentato-alatum</i> Fr. Schm.	<i>Dianthus armeria</i> L.	28
29		<i>Fallopia dumetorum</i> (L.) Holub	<i>Dianthus barbatus</i> L.	29
30		<i>Persicaria bungeana</i> Nakai	<i>Dianthus chinensis</i> L.	30
31		<i>Persicaria capitata</i> (Buch.-Ham. ex D. Don) H. Gross	<i>Dianthus deltoides</i> L.	31
32		<i>Persicaria lapathifolia</i> S. F. Gray subsp. <i>lanigera</i> (Danser) Sugimoto	<i>Drymaria cordata</i> (L.) Willd. ex Roem. et Schult. var. <i>pacifica</i> M. Mizush	32
33		<i>Persicaria orientalis</i> (L.) Assenov	<i>Drymaria diandra</i> Blume	33
34		<i>Persicaria pennsylvanica</i> Small var. <i>pennsylvanica</i>	<i>Grysophila muralis</i> L.	34
35		<i>Persicaria thunbergii</i> H. Gross var. <i>stellatomentosa</i> Sm. et Ram.	<i>Gypsophila elegans</i> M. B	35
36		<i>Persicaria viscosa</i> (Hamilt.) H. Gross	<i>Herniaria glabra</i> L.	36
37		<i>Pleuropterus multiflorus</i> (Thunb.) Turcz.	<i>Leprodicris holosteoides</i> Fenzl	37
38		<i>Polygonum arenastrum</i> Boreau	<i>Lychnis chalconica</i> L.	38
39		<i>Polygonum aviculare</i> L. var. <i>condensatum</i> Beck.	<i>Lychnis coronaria</i> (L.) Desr.	39
40		<i>Polygonum aviculare</i> L. var. <i>monspeliense</i> Thibaud.	<i>Petrorrhagia nanteuilii</i> (Burnat) P. W. Ball et Heywood	40
41		<i>Polygonum plebeium</i> R. Br.	<i>Petrorrhagia prolifera</i> Ball et Heyw.	41
42		<i>Polygonum ramosissimum</i> Michx.	<i>Polycarpon tetraphyllum</i> (L.) L.	42
43		<i>Polygonum sp.</i>	<i>Sagina apetala</i> Ard.	43
44		<i>Rumex acetosella</i> L.	<i>Sagina procumbens</i> L.	44
45		<i>Rumex aquaticus</i> L.	<i>Saponaria officinalis</i> L.	45
46		<i>Rumex brownii</i> Campd.	<i>Scleranthus annuus</i> L.	46
47		<i>Rumex conglomeratus</i> Murr.	<i>Silene antirrhina</i> L.	47
48		<i>Rumex crispus</i> L.	<i>Silene armeria</i> L.	48
49		<i>Rumex hastatulus</i> Muhl	<i>Silene coeli-rosa</i> (L.) Gordon	49
50		<i>Rumex hydrolapathum</i> Huds.	<i>Silene conica</i> L.	50

Vascular plants(c)	Vascular plants(d)	
1 <i>Silene conoidea</i> L.	<i>Alternanthera nodiflora</i> R. Br.	1
2 <i>Silene deiica</i> (L.) Clairv.	<i>Alternanthera philoxeroides</i> Griseb.	2
3 <i>Silene dichotoma</i> Ehrh.	<i>Alternanthera repens</i> O. Kuntze	3
4 <i>Silene dioica</i> (L.) Clairv.	<i>Alternanthera sessilis</i> (L.) DC.	4
5 <i>Silene gallica</i> L. var. <i>gallica</i>	<i>Amaranthus albus</i> L.	5
6 <i>Silene gallica</i> L. var. <i>quinquevulnera</i> (L.) W. D. J. Koch	<i>Amaranthus arenicola</i> I. M. Johnst	6
7 <i>Silene giraldii</i> Guss.	<i>Amaranthus blitoides</i> S. Wats.	7
8 <i>Silene latifolia</i> Poir. subsp. <i>alba</i> (Mill.) Greuter et Burdet	<i>Amaranthus caudatus</i> L.	8
9 <i>Silene noctiflora</i> L.	<i>Amaranthus crassipes</i> Schlecht.	9
10 <i>Silene pendula</i> L.	<i>Amaranthus cruentus</i> L.	10
11 <i>Silene vulgaris</i> (Moench) Garcke	<i>Amaranthus deflexus</i> L.	11
12 <i>Spergula arvensis</i> L. var. <i>arvensis</i>	<i>Amaranthus galii</i> Semen et Gonzalo ex Priszter	12
13 <i>Spergula arvensis</i> L. var. <i>maxima</i> (While) Mert. et W. D. J. Koch	<i>Amaranthus gracilis</i> Desf.	13
14 <i>Spergula arvensis</i> L. var. <i>sativa</i> (Boenn.) Mert. et W. D. J. Koch	<i>Amaranthus graecizanus</i> L.	14
15 <i>Spergularia bocconii</i> Grisebach	<i>Amaranthus hybridus</i> L.	15
16 <i>Spergularia rubra</i> (L.) J. Presl et C. Presl	<i>Amaranthus mangostanus</i> L.	16
17 <i>Stellaria alsine</i> Grimm var. <i>alsine</i>	<i>Amaranthus palmeri</i> S. Wats.	17
18 <i>Stellaria graminea</i> L.	<i>Amaranthus powellii</i> S. Wats.	18
19 <i>Stellaria holostea</i> L.	<i>Amaranthus retroflexus</i> L.	19
20 <i>Stellaria media</i> (L.) Villars	<i>Amaranthus</i> sp.	20
21 <i>Stellaria pallida</i> (Dumort) Pire	<i>Amaranthus spinosus</i> L.	21
22 <i>Vaccaria hispanica</i> (Mill.) Rauschert	<i>Amaranthus viridis</i> L.	22
23 <i>Atriplex nitens</i> Schkuhr.	<i>Celosia argentea</i> L. var. <i>argentea</i>	23
24 <i>Atriplex prostrata</i> Boucher ex DC.	<i>Celosia argentea</i> L. var. <i>childsii</i> Hort.	24
25 <i>Atriplex suberecta</i> I. Verd.	<i>Froelichia gracilis</i> Moq.	25
26 <i>Axyris amaranthoides</i> L.	<i>Gomphrena celosioides</i> Mart.	26
27 <i>Chenopodium</i> × <i>preissmanii</i> J. Murray	<i>Asimina triloba</i> (L.) Dun.	27
28 <i>Chenopodium</i> × <i>zahnii</i> J. Murray	<i>Opuntia ficus-indica</i> Mill.	28
29 <i>Chenopodium album</i> L. var. <i>centrorubrum</i> Makino	<i>Lindera strychnifolia</i> F. Vill.	29
30 <i>Chenopodium ambrosioides</i> L.	<i>Anemone hupehensis</i> Lemoine var. <i>japonica</i> Bowles et Stearn	30
31 <i>Chenopodium anthelminticum</i> L.	<i>Aquilegia flavellata</i> Sieb. et Zucc. var. <i>flavellata</i>	31
32 <i>Chenopodium aristatum</i> L.	<i>Aquilegia vulgaris</i> L.	32
33 <i>Chenopodium ficifolium</i> Sm.	<i>Clematis florida</i> Thunb.	33
34 <i>Chenopodium glaucum</i> L.	<i>Delphinium anthriscifolium</i> Hance	34
35 <i>Chenopodium hybridum</i> L.	<i>Nigella damascena</i> L.	35
36 <i>Chenopodium leptophyllum</i> Nutt.	<i>Ranunculus acris</i> L.	36
37 <i>Chenopodium murale</i> L.	<i>Ranunculus arvensis</i> L.	37
38 <i>Chenopodium opulifolium</i> Schrad. ex Koch et Ziz.	<i>Ranunculus bulbosus</i> L.	38
39 <i>Chenopodium pratericola</i> Rydb	<i>Ranunculus ficaria</i> L.	39
40 <i>Chenopodium pumilio</i> R. Br.	<i>Ranunculus muricatus</i> L.	40
41 <i>Corispermum hyssopifolium</i> L.	<i>Ranunculus repens</i> L.	41
42 <i>Kochia scoparia</i> (L.) Schrad. var. <i>sieversiana</i> (Pall.) Ulbr. ex Asch et Graebn	<i>Ranunculus sardous</i> Crantz	42
43 <i>Kochia trichophylla</i> Bayley	<i>Mahonia fortunei</i> Fedde	43
44 <i>Monolepis nuttalliana</i> Greene	<i>Cabomba caroliniana</i> A. Gray	44
45 <i>Salicornia virginica</i> L.	<i>Nymphaea hybrida</i> Hort.	45
46 <i>Salsola kali</i> L. var. <i>kali</i>	<i>Piper retrofractum</i> Vahl.	46
47 <i>Salsola kali</i> L. var. <i>tenuifolia</i> Tausch	<i>Chloranthus spicatus</i> Makino	47
48 <i>Salsola ruthenica</i> Ilijin	<i>Actinidia chinensis</i> Planch.	48
49 <i>Acnida altissima</i> Ridd. et Schult. var. <i>betzickiana</i> Backer	<i>Hypericum chinense</i> L. var. <i>salicifolium</i> Y. Kimura	49
50 <i>Alternanthera ficoidea</i> R. Br. ex Roem.	<i>Hypericum majus</i> (A. Gray) Britton	50

Vascular plants(e)	Vascular plants(f)	
1 <i>Hypericum mutilum</i> L.	<i>Descurainia sophia</i> (L.) Webb	1
2 <i>Hypericum perforatum</i> L. var. <i>angustifolium</i> DC.	<i>Diplotaxis tenuifolia</i> (L.) DC.	2
3 <i>Hypericum perforatum</i> L. var. <i>perforatum</i>	<i>Draba nemorosa</i> L. var. <i>hebecarpa</i> Ledeb. form. <i>leiocarpa</i> Kitag.	3
4 <i>Norysca patula</i> (Thunb.) Voigt	<i>Erophila verna</i> (L.) Chevall.	4
5 <i>Drosera intermedia</i> Hayne	<i>Eruca sativa</i> Mill.	5
6 <i>Argemone mexicana</i> L.	<i>Erucastrum gallicum</i> O. E. Schulz	6
7 <i>Eomecon chionantha</i> Hance	<i>Erucastrum</i> sp.	7
8 <i>Eschscholzia californica</i> Cham.	<i>Erysimum repandum</i> L.	8
9 <i>Fumaria capreolata</i> L.	<i>Hesperis matronalis</i> L.	9
10 <i>Fumaria muralis</i> Sonder	<i>Hirschfeldia incana</i> (L.) Lagr.-Foss.	10
11 <i>Fumaria officinalis</i> L.	<i>Iberis sempervirens</i> L.	11
12 <i>Glaucium flavum</i> Crantz.	<i>Iberis umbellata</i> L.	12
13 <i>Papaver commutatum</i> Fisch. et Mey	<i>Lepidium bonariense</i> L.	13
14 <i>Papaver dubium</i> L.	<i>Lepidium campestre</i> (L.) R. Br.	14
15 <i>Papaver hybridum</i> L.	<i>Lepidium densiflorum</i> Schrad.	15
16 <i>Papaver orientale</i> L.	<i>Lepidium latifolium</i> L.	16
17 <i>Papaver rhoeas</i> L.	<i>Lepidium africanum</i> (Burm. f.) DC.	17
18 <i>Papaver somniferum</i> (DC.) Corb. subsp. <i>setigerum</i> (DC.) Corb.	<i>Lepidium perfoliatum</i> L.	18
19 <i>Papaver somniferum</i> (DC.) Corb. subsp. <i>somniferum</i>	<i>Lepidium ruderales</i> L.	19
20 <i>Cleome hassleriana</i> L.	<i>Lepidium sativum</i> L.	20
21 <i>Cleome rutidosperma</i>	<i>Lepidium virginicum</i> L.	21
22 <i>Cleome viscosa</i> L.	<i>Lobularia maritima</i> (L.) Desv.	22
23 <i>Alyssum alyssoides</i> L.	<i>Lunaria annua</i> L.	23
24 <i>Alyssum saxatile</i> L.	<i>Moricandia arvensis</i> DC.	24
25 <i>Arabidopsis thaliana</i> (L.) Heynh.	<i>Myagrum perfoliatum</i> L.	25
26 <i>Armoracia rusticana</i> Gaert., Mey. et Scherb.	<i>Nasturtium microphyllum</i> Reichb.	26
27 <i>Barbarea verna</i> Aschers.	<i>Nasturtium officinale</i> R. Br.	27
28 <i>Barbarea vulgaris</i> R. Br.	<i>Neslia paniculata</i> Desv.	28
29 <i>Berteroa incana</i> (L.) DC.	<i>Orychophragmus violaceus</i> O. E. Schulz var. <i>lasiocarpus</i> Migo	29
30 <i>Brassica juncea</i> (L.) Czern.	<i>Orychophragmus violaceus</i> O. E. Schulz var. <i>violaceus</i>	30
31 <i>Brassica napus</i> L.	<i>Raphanus raphanistrum</i> L.	31
32 <i>Brassica nigra</i> W. D. J. Koch	<i>Rapistrum rugosum</i> (L.) All.	32
33 <i>Cakile edentula</i> Hook.	<i>Rhynchosinapis erucastrum</i> Dandy.	33
34 <i>Camelina alyssum</i> (Mill.) Thell.	<i>Rorippa amphibia</i> (L.) Besser	34
35 <i>Camelina microcarpa</i> Andr. ex DC.	<i>Rorippa austriaca</i> (Crantz) Besser	35
36 <i>Camelina sativa</i> (L.) Crantz	<i>Rorippa curvisiliqua</i> Bessey ex Britt.	36
37 <i>Capsella bursa-pastoris</i> Medik. var. <i>bursa-pastoris</i>	<i>Rorippa islandica</i> Borbas var. <i>hispida</i> Butl et Abbe	37
38 <i>Capsella grandiflora</i> (Fauch et Chaub) Boiss	<i>Rorippa obtusa</i> Britt.	38
39 <i>Capsella rubella</i> Reuter	<i>Rorippa sylvestris</i> (L.) Besser	39
40 <i>Capsella</i> sp.	<i>Sinapis alba</i> L.	40
41 <i>Cardamine cheiri</i> L.	<i>Sinapis arvensis</i> L. var. <i>arvensis</i>	41
42 <i>Cardamine hirsuta</i> L.	<i>Sinapis arvensis</i> L. var. <i>orientalis</i> Koch et Ziz.	42
43 <i>Cardamine parviflora</i> L.	<i>Sinapis arvensis</i> L. var. <i>svhkuhiana</i> L. C. WHEELA	43
44 <i>Cardamine pratensis</i> L.	<i>Sisymbrium altissimum</i> L.	44
45 <i>Cardaria draba</i> (L.) Desv.	<i>Sisymbrium irio</i> L.	45
46 <i>Carrichtera annua</i> Asch.	<i>Sisymbrium loeselii</i> Jusl.	46
47 <i>Chorispora tenella</i> (Pall.) DC.	<i>Sisymbrium officinale</i> (L.) Scop. var. <i>leiocarpum</i> DC.	47
48 <i>Conringia orientalis</i> (L.) Dumort.	<i>Sisymbrium officinale</i> (L.) Scop. var. <i>officinale</i>	48
49 <i>Coronopus didymus</i> (L.) Smith	<i>Sisymbrium orientale</i> L.	49
50 <i>Descurainia pinnata</i> Britt.	<i>Thlaspi arvense</i> L.	50

Vascular plants(g)	Vascular plants(h)	
1 <i>Reseda odorata</i> L.	<i>Cassia occidentalis</i> L.	1
2 <i>Reseda alba</i> L.	<i>Cassia sophera</i> L.	2
3 <i>Reseda lutea</i> L.	<i>Cassia tora</i> L.	3
4 <i>Reseda luteola</i> L.	<i>Cassia torosa</i> Cav.	4
5 <i>Bryophyllum pinnatum</i> Kurz.	<i>Coronilla scorpioides</i> W. D. J. Koch	5
6 <i>Kalanchoe tubiflora</i> Hamet	<i>Coronilla varia</i> L.	6
7 <i>Kalanchoe verticillata</i> Elliot	<i>Crotalaria anagyroides</i> H. B. K.	7
8 <i>Sedum dasyphyllum</i> L.	<i>Crotalaria assamica</i> Benth.	8
9 <i>Sedum hispanicum</i> L.	<i>Crotalaria bialata</i> Schrank.	9
10 <i>Sedum mexicanum</i> Britt.	<i>Crotalaria incana</i> L.	10
11 <i>Sedum oryzifolium</i> Makino var. <i>pumilum</i> H. Ohba	<i>Crotalaria juncea</i> L.	11
12 <i>Sedum sarmentosum</i> Bunge	<i>Crotalaria pallida</i> Ait.	12
13 <i>Sedum</i> sp.	<i>Crotalaria quinquefolia</i> L.	13
14 <i>Ribes rubrum</i> L.	<i>Crotalaria uncinella</i> Lam.	14
15 <i>Ribes uva-crispa</i> L.	<i>Crotalaria zangibarica</i> Benth.	15
16 <i>Aphanes arvensis</i> L.	<i>Cytisus leucanthus</i> Wald. et Kit.	16
17 <i>Fragaria</i> × <i>ananassa</i> Duchesne	<i>Cytisus scoparius</i> Link	17
18 <i>Fragaria vesca</i> L.	<i>Desmanthus illinoensis</i> (Michx.) MacMill. ex B. L. Rob. et Fernald	18
19 <i>Potentilla amurensis</i> Maxim.	<i>Desmanthus virgatus</i> (L.) Willd.	19
20 <i>Potentilla anglica</i> Laicharding	<i>Desmodium canum</i> Schinz et Thell.	20
21 <i>Potentilla etomentosa</i> Rydb.	<i>Desmodium illinoense</i> A. Gray	21
22 <i>Potentilla norvegica</i> L. var. <i>labradorica</i> (Lehm.) Fernald	<i>Desmodium intortum</i> Urb.	22
23 <i>Potentilla norvegica</i> L. var. <i>norvegica</i>	<i>Desmodium paniculatum</i> (L.) DC.	23
24 <i>Potentilla recta</i> L.	<i>Desmodium purpureum</i> Fawc. et Rendle	24
25 <i>Potentilla supina</i> L.	<i>Desmodium rigidum</i> DC.	25
26 <i>Potentilla verna</i> L. subsp. <i>vularis</i>	<i>Desmodium sandwicense</i> E. Mey.	26
27 <i>Prunus campanulata</i> Maxim.	<i>Desmodium scorpiurus</i> Desv.	27
28 <i>Pyracantha angustifolia</i> Schneid.	<i>Dolichos lablab</i> L.	28
29 <i>Pyracantha coccinea</i> M. Roem.	<i>Erythrina variegata</i> L.	29
30 <i>Pyracantha crenulata</i> (D. Don) M. Roem.	<i>Indigofera kirilowii</i> Maxim.	30
31 <i>Rosa grauca</i> Pour.	<i>Indigofera spicata</i> Forsk.	31
32 <i>Rubus allegheniensis</i> Portf.	<i>Indigofera suffruticosa</i> Mill.	32
33 <i>Rubus argutus</i> Link.	<i>Indigofera tinctoria</i> L.	33
34 <i>Rubus armeniacus</i> Focke	<i>Lathyrus aphaca</i> L.	34
35 <i>Rubus exsul</i> Focke	<i>Lathyrus clymenum</i> L.	35
36 <i>Rubus flagellaris</i> Willd.	<i>Lathyrus inconspicuus</i> L.	36
37 <i>Sanguisorba minor</i> Scop.	<i>Lathyrus latifolius</i> L.	37
38 <i>Abrus precatorius</i> L.	<i>Lathyrus ochrus</i> DC.	38
39 <i>Acacia confusa</i> Merr.	<i>Lathyrus pratensis</i> L.	39
40 <i>Acacia dealbata</i> Link	<i>Lespedeza juncea</i> Pers.	40
41 <i>Acacia sinuata</i> Merr.	<i>Lespedeza liukuensis</i> Hatus.	41
42 <i>Aeschynomene americana</i> L.	<i>Lespedeza stuevei</i> Nutt.	42
43 <i>Amorpha fruticosa</i> L.	<i>Leucaena leucocephala</i> (Lam.) de Wit	43
44 <i>Anthyllis vulneraria</i> L.	<i>Lotus corniculatus</i> L. var. <i>corniculatus</i>	44
45 <i>Aptios americana</i> Medik.	<i>Lotus subbiflorus</i> Lag	45
46 <i>Azukia radiata</i> Ohwi	<i>Lotus tenuis</i> Wald. et Kit.	46
47 <i>Caragana chamlagu</i> Lam.	<i>Lotus uliginosus</i> Schk.	47
48 <i>Cassia floribunda</i> Cav.	<i>Lupinus luteus</i> L.	48
49 <i>Cassia mimosoides</i> L. subsp. <i>leschenaultiana</i> Ohashi	<i>Lupinus polyphyllus</i> Lindl.	49
50 <i>Cassia obtusifolia</i> L.	<i>Macroptilium atropurpureum</i> L.	50

Vascular plants(i)	Vascular plants(j)	
1 <i>Macroptilium lathyroides</i> Urban	<i>Trifolium pratense</i> L.	1
2 <i>Medicago arabica</i> Huds.	<i>Trifolium repens</i> L. var. <i>nigricans</i> G. Don	2
3 <i>Medicago carstiensis</i> Wulfen	<i>Trifolium repens</i> L. var. <i>repens</i>	3
4 <i>Medicago ciliaris</i> (L.) All.	<i>Trifolium resupinatum</i> L. var. <i>majus</i> Boiss.	4
5 <i>Medicago hispida</i> Gaertn.	<i>Trifolium resupinatum</i> L. var. <i>resupinatum</i>	5
6 <i>Medicago laciniata</i> (L.) Mill.	<i>Trifolium resupinatum</i> L. var. <i>suaveolens</i> (Willd.) Dinsm.	6
7 <i>Medicago lupulina</i> L.	<i>Trifolium striatum</i> L.	7
8 <i>Medicago minima</i> (L.) L.	<i>Trifolium subterraneum</i> L.	8
9 <i>Medicago murex</i> var. <i>aculeata</i> Urban subvar. <i>sphaerica</i> Urban	<i>Trifolium tomentosum</i> L.	9
10 <i>Medicago orbicularis</i> Bartal.	<i>Trifolium tridentatum</i> Lindl.	10
11 <i>Medicago polymorpha</i> L. var. <i>confinis</i> (W. D. J. Koch)	<i>Trifolium vesiculosum</i> Savi	11
12 <i>Medicago polymorpha</i> L. var. <i>lapponica</i> Burnet	<i>Ulex europaeus</i> L.	12
13 <i>Medicago polymorpha</i> L. var. <i>microdon</i> (Ehr.)	<i>Vicia angustifolia</i> L. var. <i>minor</i> Ohwi	13
14 <i>Medicago polymorpha</i> L. var. <i>polymorpha</i>	<i>Vicia dasycarpa</i> Ten.	14
15 <i>Medicago sativa</i> L. subsp. <i>falcata</i> L.	<i>Vicia grandiflora</i> Scop.	15
16 <i>Medicago sativa</i> L. subsp. <i>sativa</i>	<i>Vicia lathryoides</i> L.	16
17 <i>Medicago scutellata</i> Miller	<i>Vicia lutea</i> L.	17
18 <i>Melilotus albus</i> Medik.	<i>Vicia monantha</i> Retz.	18
19 <i>Melilotus altissima</i> Thuill.	<i>Vicia sativa</i> L.	19
20 <i>Melilotus indicus</i> (L.) All.	<i>Vicia sepium</i> L.	20
21 <i>Melilotus officinalis</i> Lam. var. <i>micranthus</i> O. E. Schulz.	<i>Vicia villosa</i> Roth	21
22 <i>Melilotus officinalis</i> Lam. var. <i>officinalis</i>	<i>Vigna hosei</i> Backer	22
23 <i>Melilotus suaveolens</i> Pallas.	<i>Vigna mungo</i> Hepper	23
24 <i>Mimosa pudica</i> L.	<i>Astragalus sinicus</i> L.	24
25 <i>Neptunia triquetra</i> Benth.	<i>Oxalis articulata</i> Savigny	25
26 <i>Ornithopus sativus</i> Brot.	<i>Oxalis bowieana</i> Lodd.	26
27 <i>Ornithopus compressus</i> L.	<i>Oxalis brasiliensis</i> Lodd.	27
28 <i>Ornithopus perpusillus</i> L.	<i>Oxalis corymbosa</i> DC.	28
29 <i>Psoralea corylifolia</i> L.	<i>Oxalis dillenii</i> Jacq.	29
30 <i>Pueraria thomsonii</i> Benth.	<i>Oxalis pes-caprae</i> L.	30
31 <i>Robinia pseudoacacia</i> L.	<i>Oxalis tetraphylla</i> Cav.	31
32 <i>Sesbania bispinosa</i> (Jacq.) E. F. Wight	<i>Oxalis variabilis</i> Jacq.	32
33 <i>Sesbania cannabina</i> Pers.	<i>Erodium botrys</i> (Cav.) Bertol.	33
34 <i>Sesbania exaltata</i> Cory	<i>Erodium cicutarium</i> (L.) L'Her. var. <i>cutarium</i>	34
35 <i>Smithia sensitiva</i> W. Ait.	<i>Erodium cicutarium</i> (L.) L'Her. var. <i>pimpinellifolium</i> Smith	35
36 <i>Sophora japonica</i> L.	<i>Erodium crinitum</i> Carol.	36
37 <i>Trifolium angulatum</i> Waldst. et Kit.	<i>Erodium moschatum</i> (L.) L'Her.	37
38 <i>Trifolium angustifolium</i> L.	<i>Geranium carolinianum</i> L.	38
39 <i>Trifolium arvense</i> L.	<i>Geranium dissectum</i> L.	39
40 <i>Trifolium aureum</i> Pollich	<i>Geranium molle</i> L.	40
41 <i>Trifolium campestre</i> Schreb.	<i>Geranium pusillum</i> L.	41
42 <i>Trifolium carolinianum</i> Michx.	<i>Geranium pyrenacium</i> Burm form. <i>medium</i>	42
43 <i>Trifolium dubium</i> Sibth.	<i>Geranium sibiricum</i> L.	43
44 <i>Trifolium fragiferum</i> L.	<i>Tribulus cistoides</i> L.	44
45 <i>Trifolium fucatum</i> Lindl.	<i>Linum flavum</i> L.	45
46 <i>Trifolium glomeratum</i> L.	<i>Linum medium</i> (Planch.) Britton	46
47 <i>Trifolium hirtum</i> All.	<i>Linum perenne</i> L.	47
48 <i>Trifolium hybridum</i> L.	<i>Linum striatum</i> Walt.	48
49 <i>Trifolium incarnatum</i> L.	<i>Linum usitatissimum</i> L.	49
50 <i>Trifolium medium</i> L.	<i>Reinwardtia trigyna</i> Dum.	50

Vascular plants(k)	Vascular plants(l)	Vascular plants(m)	
1 <i>Acalypha gracilens</i> A. Gray	<i>Abutilon striatum</i> Dickson	<i>Ammannia baccifera</i> L.	1
2 <i>Acalypha indica</i> L.	<i>Abutilon theophrasti</i> Medik.	<i>Ammannia coccinea</i> Rottb.	2
3 <i>Aleurites cordata</i> R. Br.	<i>Alcea rosea</i> Cav.	<i>Cuphea carthagenensis</i> Macbr.	3
4 <i>Aleurites fordii</i> Hemsl	<i>Althaca armeniaca</i> Ten.	<i>Lythrum hyssopifolia</i> L.	4
5 <i>Euphorbia cyathophora</i> Murray	<i>Anoda cristata</i> (L.) D. F. K. Schldl.	<i>Rotala ramosior</i> (L.) Koehne	5
6 <i>Euphorbia cyparissias</i> L.	<i>Anoda hastata</i> Cav.	<i>Trapa bispinosa</i> Roxb. var. <i>bispinosa</i>	6
7 <i>Euphorbia heterophylla</i> L.	<i>Hibiscus cannabinus</i> L.	<i>Psidium guajava</i> L.	7
8 <i>Euphorbia hirta</i> L.	<i>Hibiscus coccineus</i> (Medik.) Waly.	<i>Psidium littorale</i> Raddi	8
9 <i>Euphorbia hyssopifolia</i> L.	<i>Hibiscus mutabilis</i> L.	<i>Syzygium jambos</i> Alston	9
10 <i>Euphorbia lathyris</i> L.	<i>Hibiscus syriacus</i> L.	<i>Clidemia hirta</i> Don.	10
11 <i>Euphorbia maculata</i> L.	<i>Hibiscus trionum</i> L.	<i>Quisqualis indica</i> L.	11
12 <i>Euphorbia makinoides</i> Hayata	<i>Horsfordia newberryi</i> A. Gray	<i>Gaura biennis</i> L.	12
13 <i>Euphorbia natans</i> Lag.	<i>Malva involucrata</i> Torr. et A. Gray.	<i>Gaura lindheimeri</i> Englem. et. Gray	13
14 <i>Euphorbia neriifolia</i> L.	<i>Malva moschata</i> L.	<i>Gaura parviflora</i> Dougl.	14
15 <i>Euphorbia peplus</i> L.	<i>Malva neglecta</i> Wallr.	<i>Jussiaea pepiloides</i> (Kunth) Raven	15
16 <i>Euphorbia prostrata</i> Aiton	<i>Malva parviflora</i> L.	<i>Ludwigia decurrens</i> Walter	16
17 <i>Euphorbia</i> sp.	<i>Malva pusilla</i> Sm.	<i>Ludwigia linearis</i> Walt.	17
18 <i>Euphorbia thymifolia</i> L.	<i>Malva rotundifolia</i> L.	<i>Ludwigia micrantha</i> Hara	18
19 <i>Euphorbia vachellii</i> Hook. et Arn.	<i>Malva sylvestris</i> L. var. <i>mauritiana</i> Mill.	<i>Ludwigia octovalvis</i> (Jacq) P. H. Raven subsp. <i>octovalvis</i>	19
20 <i>Phyllanthus debilis</i> Klein	<i>Malva sylvestris</i> L. var. <i>sylvestris</i>	<i>Ludwigia repens</i> J. R. Forst	20
21 <i>Phyllanthus reticulatus</i> Poir.	<i>Malva verticillata</i> L. var. <i>crispa</i> Mak.	<i>Oenothera acaulis</i> Cav.	21
22 <i>Phyllanthus tenellus</i> Roxb.	<i>Malva verticillata</i> L. var. <i>verticillata</i>	<i>Oenothera biennis</i> L.	22
23 <i>Ricinus communis</i> L.	<i>Malvastrum coromandelianum</i> (L.) Garke	<i>Oenothera erythrosepala</i> Borbs	23
24 <i>Sapium sebiferum</i> Roxb.	<i>Modiola caroliniana</i> (L.) Garcke	<i>Oenothera fallax</i> Renner	24
25 <i>Citrus iriomotensis</i> T. Tanaka	<i>Pavonia hastata</i> Cav.	<i>Oenothera fruticosa</i> L.	25
26 <i>Citrus rokugatsu</i> Hort. ex Y. Tanaka	<i>Sida acuta</i> Burm. fil.	<i>Oenothera glauca</i> Michx.	26
27 <i>Euodia rutaecarpa</i> (Juss.) Benth.	<i>Sida cordifolia</i> L.	<i>Oenothera grandiflora</i> L'Hr. ex Ait.	27
28 <i>Fortunella crassifolia</i> Swingle	<i>Sida rhombifolia</i> L. subsp. <i>retusa</i> Borss.	<i>Oenothera grandis</i> (Britton) Smyth, Trans.	28
29 <i>Ruta graveolens</i> L.	<i>Sida rhombifolia</i> L. subsp. <i>rhombifolia</i>	<i>Oenothera humifusa</i> Nutt.	29
30 <i>Ailanthus altissima</i> (Mill.) Swingle	<i>Sida spinosa</i> L.	<i>Oenothera laciniata</i> Hill var. <i>grandiflora</i> (S. Waston) B. L. Rob.	30
31 <i>Cedrela sinensis</i> Juss.	<i>Sida subspicata</i> F. v. M.	<i>Oenothera laciniata</i> Hill var. <i>laciniata</i>	31
32 <i>Polygala ambigua</i> Nutt.	<i>Urena lobata</i> L.	<i>Oenothera missouriensis</i> Sims	32
33 <i>Polygala paniculata</i> L.	<i>Begonia evansiana</i> Andreus	<i>Oenothera parviflora</i> L.	33
34 <i>Polygala sanguinea</i> L.	<i>Viola diffusa</i> Gingins var. <i>glabella</i> H. Boiss.	<i>Oenothera perennis</i> L. var. <i>perennis</i>	34
35 <i>Polygala senega</i> L. var. <i>latifolia</i> Torrey et A. Gray	<i>Viola odorata</i> L.	<i>Oenothera perennis</i> L. var. <i>rectipillis</i> S. F. Blake	35
36 <i>Polygala verticillata</i> L.	<i>Viola palmata</i> L.	<i>Oenothera rosea</i> L'Hr.	36
37 <i>Schinus terebinthifolius</i> Raddi	<i>Viola palmata</i> Schwein.	<i>Oenothera speciosa</i> Nutt. var. <i>childsii</i> Munz	37
38 <i>Acer buergerianum</i> Miq.	<i>Viola sororia</i> Willd.	<i>Oenothera speciosa</i> Nutt. var. <i>speciosa</i>	38
39 <i>Acer negundo</i> L.	<i>Viola tricolor</i> L.	<i>Oenothera stricta</i> Ledeb. ex Link	39
40 <i>Impatiens balfourii</i> Hook. form.	<i>Viola variegata</i> Fisch.	<i>Oenothera strigosa</i> Mke et Bush	40
41 <i>Impatiens biflora</i> Walt.	<i>Passiflora foetida</i> L.	<i>Oenothera tetraptera</i> Cav.	41
42 <i>Impatiens glandulifera</i> Royle	<i>Passiflora minima</i> L.	<i>Myriophyllum brasilense</i> Cambess.	42
43 <i>Zizyphus jujuba</i> Mill.	<i>Passiflora suberosa</i> L.	<i>Tetrapanax papyriferum</i> (Hook.) K. Koch	43
44 <i>Cardiospermum halicacabum</i> L. var. <i>halicacabum</i>	<i>Carica papaya</i> L.	<i>Aegopodium podagraria</i> L.	44
45 <i>Cardiospermum halicacabum</i> L. var. <i>microcarpum</i> Bl.	<i>Melothria mucronata</i> Cogn.	<i>Aethusa cynapium</i> L.	45
46 <i>Parthenocissus quinquefolia</i> Pl.	<i>Melothria pendula</i> L.	<i>Ammi majus</i> L.	46
47 <i>Corchorus aestuans</i> L.	<i>Sechium edule</i> Sw.	<i>Anthriscus caucalis</i> Bieb.	47
48 <i>Corchorus olitorius</i> L.	<i>Sicyos angulatus</i> L.	<i>Apium graveolens</i> L.	48
49 <i>Abelmoschus esculentus</i> (L.) Moench	<i>Thladiantha dubia</i> Bunge	<i>Apium leptophyllum</i> (Pers.) F. Muell. ex Benth.	49
50 <i>Abelmoschus manihot</i> (L.) Medik.	<i>Ammannia auriculata</i> Willd.	<i>Bifora testiculata</i> (L.) Spreng. ex Roem et Schult.	50

Vascular plants(n)	Vascular plants(o)	
1 <i>Bunium bulbocastanum</i> L.	<i>Richardia scabra</i> L.	1
2 <i>Bupleurum fontanesii</i> Guss. ex Caruel	<i>Rubia tinctorum</i> L.	2
3 <i>Bupleurum lancifolium</i> Hornem	<i>Sherardia arvensis</i> L.	3
4 <i>Bupleurum rotundifolium</i> L.	<i>Spermacoce articularis</i> (L. f.) F. N. Will.	4
5 <i>Caucalis daucoides</i> L.	<i>Spermacoce asuuregens</i> Ruiz et Pav.	5
6 <i>Chaerophyllum reflexum</i> Lindl.	<i>Spermacoce glabra</i> Michx.	6
7 <i>Conium maculatum</i> L.	<i>Spermacoce latifolia</i> (Aubl.) K. Schum.	7
8 <i>Coriandrum sativum</i> L.	<i>Spermacoce prostrata</i> Aubl.	8
9 <i>Daucus carota</i> L.	<i>Collomia linearis</i> Nutt.	9
10 <i>Daucus glochidiatus</i> (Lindl.) Fisch., C. A. Mey. et Av-Lall.	<i>Phlox paniculata</i> L.	10
11 <i>Foeniculum vulgare</i> Gaertn.	<i>Phlox subulata</i> L.	11
12 <i>Hydrocotyle pseudoconferta</i> Masam.	<i>Argyrea nervosa</i> Bojer	12
13 <i>Hydrocotyle verticillata</i> Thunb. var. <i>triradiata</i> (A. Rich.) Fernald	<i>Calonyction aculeatum</i> House	13
14 <i>Hydrocotyle vulgaris</i> L.	<i>Calystegia fraterniflora</i> Burmon	14
15 <i>Pastinaca sativa</i> L.	<i>Convolvulus althaeoides</i> L.	15
16 <i>Petroselinum crispum</i> Nym. ex A. W. Hill	<i>Convolvulus arvensis</i> L.	16
17 <i>Scandix pecten-veneris</i> L.	<i>Convolvulus cantabricus</i> L.	17
18 <i>Torilis leptophylla</i> (L.) Reichenb. f.	<i>Convolvulus pilosellifolius</i> Desr.	18
19 <i>Torilis nodosa</i> Gaertn.	<i>Cuscuta epilinum</i> Weihe	19
20 <i>Anagallis arvensis</i> L. form. <i>arvensis</i>	<i>Cuscuta epithymum</i> Murr. subsp. <i>trifolli</i> Hegi	20
21 <i>Androsace filiformis</i>	<i>Cuscuta pentagona</i> Engelm.	21
22 <i>Lysimachia ciliata</i> L.	<i>Dichondra carolinensis</i> Michx.	22
23 <i>Lysimachia nummularia</i> L.	<i>Ipomoea</i> × <i>multifida</i> (Raf.) Shinn.	23
24 <i>Lysimachia vulgaris</i> L.	<i>Ipomoea alba</i> L.	24
25 <i>Primula farinosa</i> L.	<i>Ipomoea aquatica</i> Forsk.	25
26 <i>Forsythia suspensa</i> (Thunb.) Vahl	<i>Ipomoea cairica</i> (L.) Sweet	26
27 <i>Ligustrum lucidum</i> Ait.	<i>Ipomoea coccinea</i> L.	27
28 <i>Ligustrum vulgare</i> L.	<i>Ipomoea digitata</i> L.	28
29 <i>Centaurium erythraea</i> Raf.	<i>Ipomoea eriocarpa</i> R. Br.	29
30 <i>Centaurium floribundum</i> Robins.	<i>Ipomoea hardwickii</i> Benth.	30
31 <i>Centaurium tenuiflorum</i> (Hoffmanns. et Link) Fritsch	<i>Ipomoea hederacea</i> (L.) Jacq. var. <i>hederacea</i>	31
32 <i>Nymphoides aquatica</i> Ktze.	<i>Ipomoea hederacea</i> (L.) Jacq. var. <i>integriuscula</i> A. Gray	32
33 <i>Catharanthus roseus</i> G. Don	<i>Ipomoea hederifolia</i> L.	33
34 <i>Nerium oleander</i> L. var. <i>indicum</i> (Mill.) O. Deg. et Greenwell	<i>Ipomoea horstollii</i> Hook.	34
35 <i>Vinca major</i> L.	<i>Ipomoea lacunosa</i> L.	35
36 <i>Vinca minor</i> L.	<i>Ipomoea muricata</i> Jacq.	36
37 <i>Asclepias curassavica</i> L.	<i>Ipomoea nil</i> Roth	37
38 <i>Asclepias fruticosus</i> (L.) R. Br. ex W. Tait.	<i>Ipomoea obscura</i> Ker. Gawl.	38
39 <i>Diodia teres</i> Walt.	<i>Ipomoea pandulata</i> G. F. W. Meyer	39
40 <i>Diodia virginiana</i> L.	<i>Ipomoea pes-tigridis</i> L.	40
41 <i>Galium bifolium</i> Wats.	<i>Ipomoea pileata</i> Roxb.	41
42 <i>Galium divaricatum</i> Pourr. ex Lam.	<i>Ipomoea pulchella</i> Roxb.	42
43 <i>Galium mollugo</i> L.	<i>Ipomoea purpurea</i> (L.) Roth	43
44 <i>Galium spurium</i> L.	<i>Ipomoea quamoclit</i> L.	44
45 <i>Galium tricornutum</i> Dandy	<i>Ipomoea quinata</i> R. Br.	45
46 <i>Galium verum</i> L.	<i>Ipomoea trichocarpa</i> Ell.	46
47 <i>Hedyotis corymbosa</i> (L.) Lam.	<i>Ipomoea triloba</i> L.	47
48 <i>Houstonia caerulea</i> L.	<i>Jacquemontia tamnifolia</i> (L.) Griseb.	48
49 <i>Ixora chinensis</i> Jacq.	<i>Merremia hederacea</i> (Burm. f.) Hallier f.	49
50 <i>Richardia brasiliensis</i> Gomez	<i>Merremia tridentata</i> (L.) Hall. subsp. <i>hastata</i> (Desr.) Ooststr.	50

Vascular plants(p)	Vascular plants(q)	Vascular plants(r)	
1 <i>Operculina turpethum</i> S. Manzo	<i>Galeopsis tetrahit</i> L.	<i>Nicotiana trigonophylla</i> Dunal	1
2 <i>Amsinckia barbata</i> Greene	<i>Glechoma hederacea</i> L.	<i>Petunia hybrida</i> Vilm.	2
3 <i>Amsinckia lycopsoides</i> Lehm.	<i>Lagopsis supina</i> (Stephan ex Willd.) Ikonn.-Gal. ex Knorring	<i>Petunia parviflora</i> Juss.	3
4 <i>Amsinckia tessellata</i> A. Gray	<i>Lamium hybridum</i> Vill.	<i>Physalis acutifolia</i> (Miers) Sandw.	4
5 <i>Anchusa arvensis</i> (L.) M. Bieb.	<i>Lamium purpureum</i> L. var. <i>incisum</i> Peterm.	<i>Physalis angulata</i> L. var. <i>angulata</i>	5
6 <i>Asperugo procumbens</i> L.	<i>Lamium purpureum</i> L. var. <i>purpureum</i>	<i>Physalis angulata</i> L. var. <i>lanceifolia</i> (Nees) Waterf.	6
7 <i>Borago officinalis</i> L.	<i>Leonotis cardiaca</i> L.	<i>Physalis angulata</i> L. var. <i>pendula</i> (Rydb.) Waterf.	7
8 <i>Echium plantagineum</i> L.	<i>Leonotis nepetifolia</i> R. Br.	<i>Physalis greenei</i> Vasey et Rose.	8
9 <i>Echium vulgare</i> L.	<i>Marrubium vulgare</i> L.	<i>Physalis heterophylla</i> Nees	9
10 <i>Heliotropium curassavicum</i> L.	<i>Melissa officinalis</i> L.	<i>Physalis longifolia</i> Nutt. var. <i>subglabrata</i> (Mack. et Bush) Cronquist	10
11 <i>Heliotropium indicum</i> L.	<i>Mentha</i> × <i>cardiaca</i> Bak.	<i>Physalis peruviana</i> L.	11
12 <i>Lappula echinata</i> Gilib.	<i>Mentha</i> × <i>piperita</i> L.	<i>Physalis phyladelphica</i> Lam.	12
13 <i>Lithospermum arvense</i> L.	<i>Mentha aquatica</i> L.	<i>Physalis pruinosa</i> L. J. Bailey	13
14 <i>Lithospermum officinale</i> L.	<i>Mentha arvensis</i> L. var. <i>arvensis</i>	<i>Physalis pubescens</i> L. var. <i>pubescens</i>	14
15 <i>Myosotis arvensis</i> (L.) Hill.	<i>Mentha arvensis</i> L. var. <i>canadensis</i> Briquet	<i>Salpishroa origanifolia</i> (Lam.) Baill.	15
16 <i>Myosotis baltica</i> Sam.	<i>Mentha longifolia</i> (L.) Huds.	<i>Solanum</i> × <i>stoloniferum</i> Tawada	16
17 <i>Myosotis discolor</i> Pers.	<i>Mentha pulegium</i> L.	<i>Solanum americanum</i> Mill.	17
18 <i>Myosotis scorpioides</i> L.	<i>Mentha spicata</i> L. var. <i>crispa</i> Benth.	<i>Solanum carolinens</i> L.	18
19 <i>Nonnea lutea</i> Reichb.	<i>Mentha spicata</i> L. var. <i>spicata</i>	<i>Solanum ciliatum</i> Lam.	19
20 <i>Plagiobothrys scouleri</i> Johnst.	<i>Mentha suaveolens</i> Ehrh.	<i>Solanum elaeagnifolium</i> Cav.	20
21 <i>Plagiobothrys stipitatus</i> (Greene) I. M. Johnst.	<i>Monarda fistulosa</i> L.	<i>Solanum glaucophyllum</i> Desf	21
22 <i>Symphytum</i> × <i>uplandicum</i> Nyman	<i>Monarda punctata</i> L. var. <i>occidentalis</i> Palmer ex Steyerem	<i>Solanum integrifolium</i> Poir.	22
23 <i>Symphytum asperum</i> Lepech.	<i>Monarda punctata</i> L. var. <i>punctata</i>	<i>Solanum lasiostylum</i> Tawada	23
24 <i>Symphytum officinale</i> L.	<i>Nepeta cataria</i> L.	<i>Solanum linnaeanum</i> Hepper et P. M. Jaeger	24
25 <i>Bouchea agristis</i> Schauer et Mart.	<i>Physostegia virginiana</i> (L.) Benth.	<i>Solanum macaonense</i> Dunal	25
26 <i>Clerodendron bungei</i> Steud.	<i>Prunella vulgaris</i> L. subsp. <i>vulgaris</i>	<i>Solanum memphiticum</i> Mart.	26
27 <i>Clerodendron lindleyi</i> Decne.	<i>Pycnanthemum flexuosum</i> Britt., Sterns et Pogg.	<i>Solanum nigrescens</i> Mart. et Gal.	27
28 <i>Clerodendrum japonicum</i> Sweet	<i>Salvia coccinea</i> L.	<i>Solanum physalifolium</i> Rusby var. <i>nitidibaccatum</i> (Bitter) Edmonds	28
29 <i>Lantana camara</i> L. var. <i>aculeata</i> (L.) Moldenke	<i>Salvia napifolia</i> Jacq.	<i>Solanum pseudocapsicum</i> L.	29
30 <i>Lantana camara</i> L. var. <i>camara</i>	<i>Salvia officinalis</i> L.	<i>Solanum ptycanthum</i> Dunal ex DC.	30
31 <i>Phyla incisa</i> Small	<i>Salvia reflexa</i> Hornem.	<i>Solanum rostratum</i> Dunal	31
32 <i>Stachytarpheta dichotoma</i> Vahl	<i>Salvia splendens</i> Ker-Gawl.	<i>Solanum sarrachoides</i> Sendt.	32
33 <i>Stachytarpheta indica</i> Vahl	<i>Salvia verbenaca</i> L.	<i>Solanum sisymbriifolium</i> Lam.	33
34 <i>Stachytarpheta jamaicensis</i> Vahl	<i>Scutellaria baicalensis</i> Georgi	<i>Solanum</i> sp.	34
35 <i>Stachytarpheta urticaefolia</i> Sims	<i>Stachys annua</i> L.	<i>Solanum</i> sp.	35
36 <i>Verbena bonariensis</i> L.	<i>Stachys arvensis</i> L.	<i>Solanum spirale</i> Roxb.	36
37 <i>Verbena bracteata</i> Cav. ex Lag. et Rodr.	<i>Stachys palustris</i> L.	<i>Solanum suffruticosum</i> Schrousboe ex Willd.	37
38 <i>Verbena brasiliensis</i> Vell.	<i>Stachys sieboldii</i> Miq.	<i>Solanum torvum</i> Swartz	38
39 <i>Verbena incompta</i> Michael	<i>Thymus serpyllum</i> L.	<i>Solanum triflorum</i> Nutt.	39
40 <i>Verbena litoralis</i> Hunb., Bonpl. et Kunth	<i>Browallia viscida</i> H. B. K.	<i>Solanum villosum</i> L.	40
41 <i>Verbena rigida</i> Spreng.	<i>Capsicum frutescens</i> L.	<i>Solanum villosum</i> Mill. subsp. <i>miniatum</i> (Bernh. ex Willd.) Edmonds	41
42 <i>Verbena stricta</i> Vent.	<i>Datura ferox</i> L.	<i>Solanum villosum</i> Mill. subsp. <i>villosum</i>	42
43 <i>Verbena tenera</i> Spreng.	<i>Datura metel</i> L.	<i>Buddleja curviflora</i> Hook. et Arn.	43
44 <i>Verbena tenuisecta</i> Briq.	<i>Datura stramonium</i> L. var. <i>inermis</i> (Juss. ex Jacq.) Schinz et Thell	<i>Buddleja davidii</i> Franch.	44
45 <i>Vitex cannabifolia</i> Sieb. et Zucc.	<i>Datura stramonium</i> L. var. <i>stramonium</i>	<i>Antirrhinum majus</i> L.	45
46 <i>Callitriche stagnalis</i> Scop.	<i>Datura stramonium</i> L.	<i>Antirrhinum odoratum</i>	46
47 <i>Callitriche terrestris</i> Raf.	<i>Datura suaveolens</i> Humb. et Bonpl.	<i>Antirrhinum orontium</i> L.	47
48 <i>Ajuga reptans</i> L.	<i>Datura wrightii</i> Regel	<i>Bacopa monnieri</i> Pennell	48
49 <i>Amethystea caerulea</i> L.	<i>Lycopersicon esculentum</i> Mill. var. <i>cerasiforme</i> Bailey	<i>Bacopa procumbens</i> (Mill.) Greenm.	49
50 <i>Galeopsis bifida</i> Boenn.	<i>Nicandra physalodes</i> (L.) Gaertn.	<i>Bacopa rotundifolia</i> (Michx.) Wettst.	50

Vascular plants(s)	Vascular plants(t)	Vascular plants(u)	
1 <i>Bellardia trixago</i> All.	<i>Saintpaulia ionantha</i> Wendl.	<i>Arctotis acaulis</i> L.	1
2 <i>Chaenorrhinum minus</i> Lange	<i>Proboscidea louisianica</i> (Mill.) Thell.	<i>Artemisia absinthium</i> L.	2
3 <i>Cymbararia muralis</i> Gaertn., Mey. et Schreb.	<i>Orobanche minor</i> Sm.	<i>Artemisia annua</i> L.	3
4 <i>Digitalis purpurea</i> L.	<i>Utricularia gibba</i> Le Conte subsp. <i>gibba</i>	<i>Artemisia selengensis</i> Turcz. ex Besser	4
5 <i>Kichxia elatine</i> Dumortier	<i>Utricularia inflata</i> Walt.	<i>Artemisia sieversiana</i> Willd.	5
6 <i>Legazia polygonoides</i> Yamazaki	<i>Plantago amplexicaulis</i> Cav.	<i>Aster koraiensis</i> (Nakai) Kitam.	6
7 <i>Linaria bipartita</i> (Vent.) Willd.	<i>Plantago arenaria</i> Waldst. et Kit.	<i>Aster novae-angliae</i> L.	7
8 <i>Linaria canadensis</i> (L.) Dum. Cours. var. <i>canadensis</i>	<i>Plantago aristata</i> Michx.	<i>Aster novi-belgii</i> L.	8
9 <i>Linaria canadensis</i> (L.) Dum. Cours. var. <i>texana</i> (Scheele) Pennell	<i>Plantago coronopus</i> L.	<i>Aster pilosus</i> Willd.	9
10 <i>Linaria dalmatica</i> Mill.	<i>Plantago depressa</i> Willd.	<i>Aster</i> sp.	10
11 <i>Linaria maroccana</i> Hook. fil.	<i>Plantago heterophylla</i> Nutt.	<i>Aster subulatus</i> Michx. var. <i>ligilatus</i> Shinner	11
12 <i>Linaria vulgaris</i> L.	<i>Plantago indica</i> L.	<i>Aster subulatus</i> Michx. var. <i>sadviceuss</i> A. G. Jones	12
13 <i>Lindernia anagallidea</i> (Michx.) Pennell	<i>Plantago lanceolata</i> L. var. <i>lanceolata</i>	<i>Bellis perennis</i> L.	13
14 <i>Lindernia dubia</i> (L.) Pennell var. <i>dubia</i>	<i>Plantago lanceolata</i> L. var. <i>mediterranea</i> Pilger	<i>Bidens aristosa</i> Britt.	14
15 <i>Lindernia dubia</i> (L.) Pennell var. <i>major</i> Pennell	<i>Plantago major</i> L. var. <i>major</i>	<i>Bidens aurea</i> (Aiton) Sherff	15
16 <i>Mimulus guttatus</i> DC.	<i>Plantago spinulosa</i> Dcne.	<i>Bidens bipinnata</i> L.	16
17 <i>Mimulus luteus</i> L.	<i>Plantago squarrosa</i> Murray	<i>Bidens frondosa</i> L.	17
18 <i>Mimulus moniliformis</i> Greene	<i>Plantago virginica</i> L.	<i>Bidens laevis</i> (L.) Britton, Sterns et Poggenb.	18
19 <i>Nemecia strumosa</i> Benth.	<i>Valerianella coronata</i> DC.	<i>Bidens parviflora</i> Willd.	19
20 <i>Parentucellia viscosa</i> Caruel	<i>Valerianella locusta</i> (L.) Laterr.	<i>Bidens pilosa</i> L. var. <i>bisetosa</i> Ohtani et Shig. Suzuki	20
21 <i>Pedicularis spicata</i> Pallas	<i>Valerianella radiata</i> (L.) Dufur.	<i>Bidens pilosa</i> L. var. <i>intermedia</i> Ohtani et Shig. Suzuki	21
22 <i>Penstemon cobaea</i> Nutt.	<i>Sphenoclea zeylanica</i> Gaertn.	<i>Bidens pilosa</i> L. var. <i>minor</i> (Blume) Sherff	22
23 <i>Scoparia dulcis</i> L.	<i>Scabiosa columbaria</i> L.	<i>Bidens pilosa</i> L. var. <i>pilosa</i>	23
24 <i>Torenia fournieri</i> Linden ex E. Fourn.	<i>Adenophora stricta</i> Miq.	<i>Bidens pilosa</i> L. var. <i>radiata</i> Sherff	24
25 <i>Verbascum blattaria</i> L.	<i>Campanula allariaefolia</i> Willd.	<i>Bidens polylepsis</i> Blake	25
26 <i>Verbascum phoeniceum</i> L.	<i>Campanula glomerata</i> L.	<i>Boltonia asteroides</i> L'Hr.	26
27 <i>Verbascum thapsus</i> L.	<i>Campanula rapunculoides</i> L.	<i>Breea arvensis</i> (L.) Less.	27
28 <i>Verbascum virgatum</i> Stokes	<i>Lobelia erinus</i>	<i>Calendula arvensis</i> L.	28
29 <i>Veronica</i> × <i>myriantha</i> Tos. Tanaka	<i>Lobelia inflata</i> L.	<i>Calendula officinalis</i> L.	29
30 <i>Veronica anagalloides</i> Guss.	<i>Triodanis biflora</i> (Ruiz et Pav.) Greene	<i>Calotis cuneifolia</i> R. Br.	30
31 <i>Veronica angallis-aquatica</i> L.	<i>Triodanis perfoliata</i> (L.) Nieuwl.	<i>Carduus pycnocephalus</i> L.	31
32 <i>Veronica aquatica</i> Bernh.	<i>Acanthospermum hispidum</i> DC.	<i>Carduus tenuiflorus</i> Curt.	32
33 <i>Veronica arvensis</i> L.	<i>Achillea filipendulina</i> Lam.	<i>Carthamus lanatus</i> L.	33
34 <i>Veronica beccabunga</i> L.	<i>Achillea millefolium</i> L.	<i>Carthamus</i> sp.	34
35 <i>Veronica chamaedrys</i> L.	<i>Achillea ptarmica</i> L.	<i>Carthamus tinctorius</i> L. var. <i>spinus</i> Kitamura	35
36 <i>Veronica cymbalaria</i> Bodard	<i>Achillea stricta</i> (W. D. J. Koch) Schleicher ex Greml.	<i>Centaurea calcitrapa</i> L.	36
37 <i>Veronica hederifolia</i> L.	<i>Acmella ciliata</i> (Humb., Bonpl et Kunth) Cass	<i>Centaurea cyanus</i> L.	37
38 <i>Veronica opaca</i> Fries	<i>Acmella oppositifolia</i> (Lam.) R. K. Jansen	<i>Centaurea jacea</i> L.	38
39 <i>Veronica persica</i> Poir.	<i>Ageratum conyzoides</i> L.	<i>Centaurea melitensis</i> L.	39
40 <i>Veronica serpyllifolia</i> L. subsp. <i>serpyllifolia</i>	<i>Ageratum houstonianum</i> Mill.	<i>Centaurea nigra</i> Willd.	40
41 <i>Veronica triphyllos</i> L.	<i>Ambrosia elatior</i> L.	<i>Centaurea salmantica</i> L.	41
42 <i>Campis radicans</i> Seem.	<i>Ambrosia psilostachya</i> DC.	<i>Centaurea solstitialis</i> L.	42
43 <i>Catalpa bignonioides</i> Walter	<i>Ambrosia trifida</i> L.	<i>Centaurea</i> sp.	43
44 <i>Catalpa ovata</i> G. Don	<i>Antennaria rosea</i> Greene	<i>Chrysanthemum cinerariaefolium</i> Visiani	44
45 <i>Ruellia squarrosa</i> (Fenzl) Cufod.	<i>Anthemis arvensis</i> L.	<i>Chrysanthemum coelestinum</i> Willd.	45
46 <i>Ruellia brittoniana</i> Leonard	<i>Anthemis cotula</i> L.	<i>Chrysanthemum frutescens</i> L.	46
47 <i>Strobilanthes cusia</i> O. Kuntze	<i>Anthemis nobilis</i> L.	<i>Cichorium intybus</i> L.	47
48 <i>Strobilanthes japonica</i> Miq.	<i>Anthemis tinctoria</i> L.	<i>Cirsium hupehense</i> Pamp.	48
49 <i>Thunbergia alata</i> Bojer	<i>Arctotheca calendula</i> (L.) Levyns	<i>Cirsium vulgare</i> (Savi) Ten.	49
50 <i>Thunbergia fragrans</i> Roxb.	<i>Arctotheca prostrata</i> (Salisb.) Britten	<i>Cnicus benedictus</i> L.	50

Vascular plants(v)	Vascular plants(w)	Vascular plants(x)	
1 <i>Conyza bonariensis</i> (L.) Cronquist	<i>Helianthus × multiflorus</i> L.	<i>Senecio viscosus</i> L.	1
2 <i>Conyza sumatrensis</i> (Retz.) Walker	<i>Helianthus annuus</i> L.	<i>Senecio vulgaris</i> L.	2
3 <i>Coreopsis basalis</i> (A. Doetr.) S. F. Blake	<i>Helianthus argophyllus</i> Torr. et A. Gray	<i>Siegesbeckia glabrescens</i> Makino var. <i>leucoclada</i> Nakai	3
4 <i>Coreopsis grandiflora</i> Hogg.	<i>Helianthus cucumerifolius</i> Torr. et A. Gray	<i>Silphium perfoliatum</i> L.	4
5 <i>Coreopsis lanceolata</i> L.	<i>Helianthus laevigatus</i> Torr. et A. Gray	<i>Silybum marianum</i> (L.) Gaertn.	5
6 <i>Coreopsis tinctoria</i> Nutt.	<i>Helianthus tuberosus</i> L.	<i>Solidago altissima</i> L.	6
7 <i>Cosmos bipinnatus</i> Cav.	<i>Heliopsis helianthoides</i> (L.) Sweet	<i>Solidago canadensis</i> L. var. <i>canadensis</i>	7
8 <i>Cosmos sulphureus</i> Cav.	<i>Heterotheca grandiflora</i> Nutt.	<i>Solidago canadensis</i> L. var. <i>gilbocanescens</i> Rydb.	8
9 <i>Cotula anthemoides</i> L.	<i>Heterotheca subaxillaris</i> Britt. et Rusby	<i>Solidago gigantea</i> Aiton var. <i>leiophylla</i> Fernald	9
10 <i>Cotula australis</i> (Sieber ex Spreng.) Hook. f.	<i>Hieracium aurantiacum</i> L.	<i>Solidago graminifolia</i> Sal.	10
11 <i>Cotula coronopifolia</i> L.	<i>Hieracium maculatum</i> Sm.	<i>Solidago juncea</i> Aiton	11
12 <i>Crassocephalum crepidioides</i> (Benth.) S. Moore	<i>Hieracium pratense</i> Tausch.	<i>Solidago luteus</i> (Evetett) Green	12
13 <i>Crepis capillaris</i> Wallr.	<i>Hypochoeris glabra</i> L.	<i>Solidago sempervirens</i> L. var. <i>mexicana</i> Fernald	13
14 <i>Crepis setosa</i> Hall. f.	<i>Hypochoeris radicata</i> L.	<i>Solidago sempervirens</i> L. var. <i>sempervirens</i>	14
15 <i>Crepis tectorum</i> L.	<i>Iva xanthifolia</i> Nutt.	<i>Soliva anthemifolia</i> R. Br.	15
16 <i>Cynara scolymus</i> L.	<i>Lactuca formosana</i> Maxim.	<i>Soliva sessilis</i> Ruiz. et Pav.	16
17 <i>Dendranthema boreale</i> (Makino) Kitam.	<i>Lactuca pulchella</i> DC.	<i>Sonchus arvensis</i> L.	17
18 <i>Eclipta alba</i> (L.) Hassk.	<i>Lactuca sativa</i> L.	<i>Sonchus asper</i> (L.) Hill	18
19 <i>Emilia sagittata</i> DC.	<i>Lactuca scariola</i> L.	<i>Spilanthes iabadicensis</i> A. H. Moore	19
20 <i>Erechtites hieracifolia</i> (L.) Raf. ex DC. var. <i>cacalioides</i> Griseb.	<i>Lactuca virosa</i> L.	<i>Spilanthes paniculata</i> Wall. ex DC.	20
21 <i>Erechtites hieracifolia</i> (L.) Raf. ex DC. var. <i>hieracifolia</i>	<i>Lapsana communis</i> L.	<i>Stenactis annuus</i> (L.) Cass.	21
22 <i>Erechtites valerianaefolia</i> DC.	<i>Leontodon taraxacoides</i> (Vill.) Mrat	<i>Stenactis pseudo-annuus</i> (Makino) Ohba, comb. nov.	22
23 <i>Erigeron canadensis</i> L. var. <i>canadensis</i>	<i>Leucanthemum paludosum</i> (Poir.) Bonnet et Barratte	<i>Stenactis strigosus</i> (Muhl. ex Willd.) DC.	23
24 <i>Erigeron canadensis</i> L. var. <i>glabratus</i> Gray	<i>Leucanthemum vulgare</i> Lam.	<i>Stevia rebaudiana</i> (Bertoni) Bertoni	24
25 <i>Erigeron karvinskianus</i> DC.	<i>Matricaria chamomilla</i> L.	<i>Synedrella nodiflora</i> Gaertn.	25
26 <i>Erigeron mucronatus</i> DC.	<i>Matricaria inodora</i> L.	<i>Tagetes minuta</i> L.	26
27 <i>Erigeron philadelphicus</i> L. var. <i>glaber</i> Henry	<i>Matricaria matricarioides</i> (Less.) Porter	<i>Tanacetum bipinnatum</i> (L.) Sch. Bip.	27
28 <i>Erigeron philadelphicus</i> L. var. <i>philadelphicus</i>	<i>Mikania cordata</i> B. L. Robinson	<i>Tanacetum parthenium</i> C. H. Schultz	28
29 <i>Erigeron pusillus</i> Nutt.	<i>Onopordum acanthium</i> L.	<i>Tanacetum vulgare</i> L.	29
30 <i>Eupatorium odoratum</i> L.	<i>Onopordum illyricum</i> L.	<i>Taraxacum formosanum</i> Kitam.	30
31 <i>Eupatorium rugosum</i> Houtt.	<i>Parthenium hysterophorus</i> L.	<i>Taraxacum officinale</i> agg.	31
32 <i>Eupatorium</i> sp.	<i>Picris echinoides</i> L.	<i>Taraxacum officinale</i> Weber	32
33 <i>Facelis retusa</i> Schult-Bip.	<i>Pluchea indica</i> Less.	<i>Tithonia diversifolia</i> (Hensl.) A. Gray	33
34 <i>Flaveria bidentis</i> Kuntze	<i>Pluchea odorata</i> Less.	<i>Tithonia rotundifolia</i> S. F. Blake	34
35 <i>Flaveria campestris</i> J. R. Johnson	<i>Rudbeckia fulgida</i> Ait.	<i>Tragopogon porrifolius</i> L.	35
36 <i>Flaveria ramosissima</i> F. W. Klatt.	<i>Rudbeckia hirta</i> L. var. <i>sericea</i> (T. V. Moore) Fernald	<i>Tragopogon pratensis</i> L.	36
37 <i>Gaillardia pulchella</i> Foug.	<i>Rudbeckia laciniata</i> L. var. <i>hortensis</i> Bailey	<i>Tridax procumbens</i> L.	37
38 <i>Galinsoga parviflora</i> Cav.	<i>Rudbeckia laciniata</i> L. var. <i>laciniata</i>	<i>Tussilago farfara</i> L.	38
39 <i>Galinsoga quadriradiata</i> Ruiz et Pav.	<i>Rudbeckia triloba</i> L.	<i>Verbesina alternifolia</i> Britt.	39
40 <i>Gnaphalium calviceps</i> Fernald	<i>Sanvitalia procumbens</i> Lam	<i>Verbesina occidentalis</i> Walt.	40
41 <i>Gnaphalium luteoalbum</i> L.	<i>Schkuhria pinnata</i> (Lam.) Kuntze	<i>Vernonia patula</i> Merr.	41
42 <i>Gnaphalium pensylvanicum</i> Willd.	<i>Scolymus hispanicus</i> L.	<i>Vittadinia triloba</i> DC.	42
43 <i>Gnaphalium purpureum</i> L.	<i>Scorzonera hispanica</i> L.	<i>Wedelia lundii</i> DC.	43
44 <i>Gnaphalium spicatum</i> Lam.	<i>Senecio blochmaniae</i> E. L. Green	<i>Wedelia trilobata</i> Hitchc.	44
45 <i>Gnaphalium sylvaticum</i> L.	<i>Senecio inaequidens</i> DC. var. "daikoku"	<i>Xanthium canadense</i> L.	45
46 <i>Guizotia abyssinica</i> (L. f.) Cass.	<i>Senecio inaequidens</i> DC. var. <i>inaequidens</i>	<i>Xanthium italicum</i> Moretti	46
47 <i>Gynura bicolor</i> DC.	<i>Senecio jacobaea</i> L.	<i>Xanthium spinosum</i> L.	47
48 <i>Gynura japonica</i> Juel	<i>Senecio madagascariensis</i> Poir.	<i>Zinnia elegans</i> Jacq.	48
49 <i>Helenium autumnale</i> L.	<i>Senecio sylvaticus</i> L.	<i>Sagittaria graminea</i> Michx.	49
50 <i>Helenium tenuifolium</i> Nutt.	<i>Senecio vernalis</i> Waldst. et Kit.	<i>Egeria densa</i> Planch.	50

Vascular plants(y)	Vascular plants(z)	
1 <i>Elodea nuttallii</i> (Planch.) H. St. John	<i>Sisyrinchium exile</i> Bickn.	1
2 <i>Lymnobia stoloniferum</i> Griseb.	<i>Sisyrinchium rosulatum</i> E. P. Bicknell	2
3 <i>Vallisneria gigantea</i> Graebn.	<i>Sisyrinchium</i> sp.	3
4 <i>Vallisneria spiralis</i> L.	<i>Sisyrinchium</i> sp.	4
5 <i>Allium chinense</i> G. Don	<i>Sisyrinchium</i> sp.	5
6 <i>Allium moly</i> L.	<i>Tritonia</i> × <i>crococmaeflora</i> Lemoine	6
7 <i>Allium tuberosum</i> Rottler var. <i>latifolium</i> Kitam.	<i>Juncus articulatus</i> L.	7
8 <i>Asparagus officinalis</i> L.	<i>Juncus dudleyi</i> Wiegand	8
9 <i>Brodiaea californica</i> Lindl.	<i>Juncus</i> sp.	9
10 <i>Chionodoxa luciliae</i> Boiss.	<i>Juncus</i> sp.	10
11 <i>Chlorophytum comosum</i> (Thunb. ex Murray) Jacq.	<i>Juncus tenuis</i> Willd. var. <i>antheratus</i> Wiegand	11
12 <i>Convallaria majalis</i> L.	<i>Juncus tenuis</i> Willd. var. <i>nakaii</i> Satake	12
13 <i>Fritillaria verticillata</i> Willd. var. <i>thunbergii</i> (Miq.) Baker	<i>Gibasis geniculata</i> Rohw.	13
14 <i>Ipheion uniflorum</i> (Lindl.) Raf.	<i>Rhoeo spathacea</i> Stearn	14
15 <i>Lilium</i> × <i>formolongo</i> hort	<i>Tradescantia flumiensis</i> Vell.	15
16 <i>Lilium formosanum</i> Wall.	<i>Tradescantia ohioensis</i> Raf.	16
17 <i>Muscari armeniacum</i> Leichtlin ex Baker	<i>Tradescantia virginiana</i> L.	17
18 <i>Muscari botryoides</i> (L.) Mill.	<i>Zebrina pendula</i> Schnizl.	18
19 <i>Muscari neglectum</i> Guss. et Ten.	<i>Musa basjoo</i> Sieb.	19
20 <i>Nothoscordum bivalve</i> Brit.	<i>Musa liukuensis</i> (Matsumura) Makino	20
21 <i>Nothoscordum gracile</i> (Aiton) Stearn	<i>Musa uranoscopos</i> Loureiro	21
22 <i>Ornithogalum tenuifolium</i> Ten.	<i>Canna coccinea</i> Mill.	22
23 <i>Ornithogalum umbellatum</i> L.	<i>Canna generalis</i> Bailey	23
24 <i>Ruscus aculeatus</i> L.	<i>Canna indica</i> L. var. <i>flava</i> Roxb.	24
25 <i>Scilla bifolia</i> L.	<i>Canna indica</i> L. var. <i>rubra</i> Aiton	25
26 <i>Tricyrtis formosana</i> Baker	<i>Thalia dealbata</i> Traser	26
27 <i>Agave americana</i> L.	<i>Aegilops cylindrica</i> Host	27
28 <i>Sansevieria zeylanica</i> Willd.	<i>Aegilops triuncialis</i> L.	28
29 <i>Galanthus nivalis</i> L.	<i>Agrostis alba</i> L.	29
30 <i>Leucojum vernum</i> L.	<i>Agrostis avenacea</i> Gmel.	30
31 <i>Lycoris squamigera</i> Maxim.	<i>Agrostis canina</i> L.	31
32 <i>Narcissus poeticus</i> L.	<i>Agrostis hyemalis</i> (Walter) Britton, Sterns et Poggenb.	32
33 <i>Narcissus pseudonarcissus</i> L.	<i>Agrostis nigra</i> With.	33
34 <i>Narcissus tazetta</i> L. var. <i>chinensis</i> M. Roem.	<i>Agrostis stolonifera</i> L.	34
35 <i>Narcissus tazetta</i> L. var. <i>plenus</i> Nakai	<i>Agrostis tenuis</i> Sibth.	35
36 <i>Zephyranthes candida</i> Herb.	<i>Agrostis verticillata</i> Vile	36
37 <i>Zephyranthes grandiflora</i> Lindl.	<i>Aira caryophyllea</i> L. subsp. <i>multiculmis</i> (Dumort.) Bonnier et Layens	37
38 <i>Dioscorea bulbifera</i> L. form. <i>domestica</i> Makino et Nemoto	<i>Aira elegans</i> Willd. ex Gaudin subsp. <i>amabiqua</i> (Arcang.) Holub	38
39 <i>Eichhornia azurea</i> Kunth	<i>Aira elegans</i> Willd. ex Kunth subsp. <i>elegans</i>	39
40 <i>Eichhornia crassipes</i> (Mart.) Solms-Laub.	<i>Alopecurus aequalis</i> Sobol. var. <i>aequalis</i>	40
41 <i>Heteranthera limosa</i> (Sw.) Willd.	<i>Alopecurus myosuroides</i> Huds.	41
42 <i>Heteranthera peduncularis</i> Benth.	<i>Alopecurus pratensis</i> L.	42
43 <i>Pontederia cordata</i> L.	<i>Amnophila breviligulata</i> Fern.	43
44 <i>Alophia amoena</i> (Griseb.) O. Kuntze	<i>Andropogon virginicus</i> L.	44
45 <i>Crocus neapolitanus</i>	<i>Anthoxanthum aristatum</i> Boiss.	45
46 <i>Freesia hybrida</i> Hort.	<i>Anthoxanthum odoratum</i> L. subsp. <i>alpinum</i> (A. et D. Love) Hult.	46
47 <i>Gladiolus hybridus</i> Hort.	<i>Anthoxanthum odoratum</i> L. subsp. <i>glabrescens</i> Celakovsky	47
48 <i>Iris germanica</i> L.	<i>Anthoxanthum odoratum</i> L. subsp. <i>odoratum</i>	48
49 <i>Iris pseudoacorus</i> L.	<i>Apera interrupta</i> Beauv.	49
50 <i>Sisyrinchium angustifolium</i> Mill.	<i>Apera spica-venti</i> Beauv.	50

Vascular plants(aa)	Vascular plants(bb)	Vascular plants(cc)	Vascular plants(dd)	
1 <i>Aristida adscensionis</i> L.	<i>Capillipedium parviflorum</i> Stapf var. <i>spicigera</i>	<i>Festuca ovina</i> L. var. <i>duriuscula</i> (L.) Koch	<i>Paspalum longifolium</i> Roxb.	1
2 <i>Aristida longispica</i> Poir.	<i>Cenchrus brownii</i> Roem. et Schult.	<i>Festuca pratensis</i> Huds.	<i>Paspalum minus</i> Fourn.	2
3 <i>Arrhenatherum elatius</i> (L.) J. et C. Presl var. <i>biaristatum</i> Peterm	<i>Cenchrus echinatus</i> L.	<i>Festuca rubra</i> L. form. <i>vivipara</i> S. Kawano	<i>Paspalum notatum</i> Flugge	3
4 <i>Arrhenatherum elatius</i> (L.) J. et C. Presl var. <i>bulbosum</i> Spenner	<i>Cenchrus longispinus</i>	<i>Festuca rubra</i> L. var.	<i>Paspalum paniculatum</i> L.	4
5 <i>Arrhenatherum elatius</i> (L.) J. et C. Presl var. <i>elatiusglabrescens</i> Celakovsky	<i>Cenchrus tribloides</i> L.	<i>Festuca rubra</i> L. var. <i>commutata</i> Gaudin	<i>Paspalum urvillei</i> Steud.	5
6 <i>Arrhenatherum elatius</i> (L.) J. et C. Presl var. <i>nodosum</i>	<i>Chloris barbata</i> Sw.	<i>Festuca rubra</i> L. var. <i>musashiensis</i> Ohwi	<i>Pennisetum glaucum</i> R. Br.	6
7 <i>Arrhenatherum elatius</i> (L.) J. et C. Presl var. <i>subhirsutum</i> Ascherson	<i>Chloris divaricata</i> R. Br.	<i>Glyceria occidentalis</i> (Piper) J. C. Nelson	<i>Pennisetum latifolium</i> Spreng.	7
8 <i>Arthraxon lanceolatus</i> Hochst.	<i>Chloris dolichostachya</i> Lagasca	<i>Heteropogon triticeus</i> (R. Br.) Stapf	<i>Pennisetum orientale</i> Rich. var. <i>triflorum</i> Stapf	8
9 <i>Arundo donax</i> L. var. <i>versicolor</i> Stokes	<i>Chloris gayana</i> Kunth	<i>Hierochloa odorata</i> Beauv.	<i>Pennisetum purpureum</i> Schum.	9
10 <i>Avena barbata</i> Pott ex Link	<i>Chloris pectinata</i> Benth.	<i>Holcus lanatus</i> L.	<i>Pennisetum setosum</i> L. C. Rich.	10
11 <i>Avena fatua</i> L. var. <i>glabrata</i> Peterm.	<i>Chloris radiata</i> Sw.	<i>Holcus mollis</i> L.	<i>Phalaris aquatica</i> L.	11
12 <i>Avena fatua</i> L.	<i>Chloris truncata</i> R. Br.	<i>Hordeum brachyantherum</i> Nevski	<i>Phalaris arundinacea</i> L. var. <i>picta</i> L.	12
13 <i>Avena ludviciana</i> Durieu	<i>Chloris virgata</i> Sw.	<i>Hordeum distichon</i> L.	<i>Phalaris canariensis</i> L.	13
14 <i>Avena nuda</i> L.	<i>Coix lacryma-jobi</i> L. var. <i>maxima</i> Makino	<i>Hordeum hystrix</i> Roth	<i>Phalaris minor</i> Retz.	14
15 <i>Avena sativa</i> L.	<i>Cortaderia selloana</i> Asch. et Graebn.	<i>Hordeum jubatum</i> L.	<i>Phalaris paradoxa</i> L. var. <i>paradoxa</i>	15
16 <i>Avena schelliana</i> Durieu	<i>Crypsis aculeata</i> Ait.	<i>Hordeum leporinum</i> Link	<i>Phalaris paradoxa</i> L. var. <i>praemorsa</i> Coss. et Dur.	16
17 <i>Avena strigosa</i> Schreb.	<i>Crypsis schoenoides</i> (L.) Lam.	<i>Hordeum marinum</i> Huds.	<i>Phleum pratense</i> L.	17
18 <i>Axonopus affinis</i> Chase	<i>Cynodon plectostachyum</i> Pilger	<i>Hordeum murinum</i> L.	<i>Poa annua</i> L. var. <i>reptans</i> Hausskn.	18
19 <i>Axonopus compressus</i> Beauv.	<i>Cynosurus cristatus</i> L.	<i>Hordeum pusillum</i> Nutt.	<i>Poa bulbosa</i> L. var. <i>bulbosa</i>	19
20 <i>Bothriochloa intermedia</i> A. Camus var. <i>punstata</i> Keng	<i>Cynosurus echinatus</i> L.	<i>Lagurus ovatus</i> L.	<i>Poa bulbosa</i> L. var. <i>vivipara</i> Koel.	20
21 <i>Bothriochloa ischaemum</i> Keng	<i>Dactylis glomerata</i> L.	<i>Leptochloa fascicularis</i> Beauv.	<i>Poa compressa</i> L.	21
22 <i>Bouteloua curtipendula</i> Torr.	<i>Deschampsia danthonioides</i> (Trin.) Munro ex Benth.	<i>Leptochloa fusca</i> (L.) Kunth	<i>Poa humilis</i> Ehrh. ex. Hoffm.	22
23 <i>Brachiaria eruciformis</i> Griseb.	<i>Dichanthium annulatum</i> Stapf	<i>Leptochloa uninervia</i> (C. Presl) Hitchc. et Chase	<i>Poa nemoralis</i> L.	23
24 <i>Brachiaria extensa</i> Chase	<i>Dichanthium sericeum</i> A. Camus	<i>Leptochloa filiformis</i> (Lam.) P. Beauv.	<i>Poa palustris</i> L.	24
25 <i>Brachiaria mutica</i> (Forsk.) Stapf	<i>Digitaria setigera</i> Roem.	<i>Lolium</i> × <i>hybridum</i> Haussknecht	<i>Poa pratensis</i> L. var. <i>angustifolia</i> Smith	25
26 <i>Brachiaria platyphylla</i> Nash	<i>Dinebra arabica</i> Jacq.	<i>Lolium multiflorum</i> Lam.	<i>Poa pratensis</i> L. var. <i>hirsuta</i> Asch. et Graebn.	26
27 <i>Brachiaria reptans</i> Gardn. et Hubb.	<i>Echinochloa colona</i> (L.) Link.	<i>Lolium perenne</i> L.	<i>Poa pratensis</i> L. var. <i>pratensis</i>	27
28 <i>Brachypodium distachyon</i> P. Beauv.	<i>Elymus caninus</i> (L.) L.	<i>Lolium remotum</i> Schrank	<i>Poa trivialis</i> L.	28
29 <i>Briza maxima</i> L.	<i>Elymus repens</i> (L.) Gould var. <i>aristatum</i> Baumg.	<i>Lolium rigidum</i> Gaud.	<i>Puccinellia distans</i> (L.) Parl.	29
30 <i>Briza media</i> L.	<i>Elymus repens</i> (L.) Gould var. <i>repens</i>	<i>Lolium subulatum</i> Vis.	<i>Rhynchelytrum repens</i> C. E. Hubb.	30
31 <i>Briza minor</i> L.	<i>Eragrostis chariis</i> Hitchc.	<i>Lolium temulentum</i> L. var. <i>leptochaeton</i> A. Br.	<i>Rostraria cristata</i> (L.) Tzvelev	31
32 <i>Bromus arvensis</i> L.	<i>Eragrostis ciliaris</i> R. Br.	<i>Lolium temulentum</i> L. var. <i>temulentum</i>	<i>Rottboellia exaltata</i> L. var. <i>appendiculata</i> Hack.	32
33 <i>Bromus brizaeformis</i> Fisch. et Mey.	<i>Eragrostis curvula</i> (Schrad.) Nees	<i>Melinis minutiflora</i> P. Beauv.	<i>Saccharum arundinaceum</i> Retz.	33
34 <i>Bromus carinatus</i> Hook. et Arn.	<i>Eragrostis glomerata</i> L. H. Dewey	<i>Molinia caerulea</i> Moench	<i>Scleropoa rigida</i> Griseb.	34
35 <i>Bromus catharticus</i> Vahl.	<i>Eragrostis intermedia</i> Hitchc.	<i>Monerma cylindrica</i> Coss. et Dur.	<i>Secale cereale</i> L.	35
36 <i>Bromus commutatus</i> Schrad.	<i>Eragrostis pilosa</i> Beauv.	<i>Muhlenbergia schreberi</i> J. F. Gmel.	<i>Setaria barbata</i> Kunth	36
37 <i>Bromus danthoniae</i> Trin.	<i>Eragrostis poaeoides</i> Beauv.	<i>Orthoraphium coreanum</i> Ohwi	<i>Setaria gracilis</i> Kunth	37
38 <i>Bromus inermis</i> Leyss.	<i>Eragrostis silveana</i> Swallen.	<i>Oryzopsis miliacea</i> (L.) Benth. et Hook.	<i>Setaria nigriostriis</i> Durand et Schinz	38
39 <i>Bromus macrostachys</i> Desf.	<i>Eragrostis superba</i> Peyr.	<i>Panicum capillare</i> L.	<i>Setaria rariflora</i> Hikan	39
40 <i>Bromus madritensis</i> L.	<i>Eragrostis tef</i> (Zucc.) Trotter	<i>Panicum dichotomiflorum</i> Michx.	<i>Setaria sphacelata</i> Stapf et Hubb. ex Moss	40
41 <i>Bromus molliformis</i> Lloyd.	<i>Eragrostis tenella</i> Beauv. ex Roem et Schult.	<i>Panicum gaminatum</i> Forsk	<i>Setaria verticillata</i> (L.) Beauv. var. <i>ambigua</i> Parl.	41
42 <i>Bromus mollis</i> L.	<i>Eragrostis virescens</i> J. Presl	<i>Panicum lanuginosum</i> Ell.	<i>Setaria verticillata</i> (L.) Beauv. var. <i>verticillata</i>	42
43 <i>Bromus pacificus</i> Shear	<i>Eremochloa ophiuroides</i> (Munro) Hack.	<i>Panicum maximum</i> Jacq.	<i>Sorghum bicolor</i> (L.) Moench.	43
44 <i>Bromus ramosus</i> L.	<i>Erianthus formosanus</i> Stapf var. <i>pollinioides</i> Ohwi	<i>Panicum scoparium</i> Lam.	<i>Sorghum halepense</i> (L.) Pers.	44
45 <i>Bromus rigidus</i> Roth	<i>Eriochloa contracta</i> Hitchc.	<i>Panicum tenue</i> Muhl.	<i>Sphenopholis obtusata</i> (Michx.) Scribn.	45
46 <i>Bromus rubens</i> L.	<i>Eriochloa gracilis</i> (E. Fourn.) Hitchc	<i>Parapholis incurva</i> (L.) C. E. Hubb.	<i>Sporobolus cryptandrus</i> (Torr.) A. Gray	46
47 <i>Bromus secalinus</i> L.	<i>Eulalia leschenaultiana</i> (Decne.) Ohwi	<i>Paspalum dilatatum</i> Poir.	<i>Sporobolus vaginiflorus</i> (Torr. ex A. Gray) A. W. Wood.	47
48 <i>Bromus sterilis</i> L.	<i>Festuca arundinacea</i> Sch.	<i>Paspalum distichum</i> L. var. <i>distichum</i>	<i>Stenotaphrum secundatum</i> Kuntze	48
49 <i>Bromus tectorum</i> L. var. <i>glabratus</i> Spenner	<i>Festuca gigantea</i> Vill.	<i>Paspalum distichum</i> L. var. <i>indutum</i> Shinnors	<i>Stipa spartea</i> Trin.	49
50 <i>Bromus tectorum</i> L. var. <i>tectorum</i>	<i>Festuca heterophylla</i> Lam.	<i>Paspalum fimbriatum</i> H. B. K.	<i>Tragus berteronianus</i> Schult.	50

Vascular plants(ee)	Vascular plants(ff)	Plants other than vascular plants	
1 <i>Vetiveria zizanioides</i> Nash	<i>Scirpus georgianus</i> R. M. Harper	<i>Lunularia cruciata</i> (L.)	1
2 <i>Vulpia bromoides</i> S. F. Gray	<i>Scirpus microcarpus</i> Presl	<i>Caulerpa taxifolia</i>	2
3 <i>Vulpia myuros</i> C. C. Gmel. var. <i>megalura</i> Rydb.	1552 spp.	<i>Ulva fasciata</i> Delile	3
4 <i>Vulpia myuros</i> C. C. Gmel. var. <i>myuros</i>		<i>Cutleria multifida</i> (Smith) Greville	4
5 <i>Vulpia octoflora</i> Rhdb.		4 spp.	5
6 <i>Bambusa multiplex</i> Raeusch.			6
7 <i>Rhapis humilis</i> Bl.			7
8 <i>Trachycarpus fortunei</i> (Hook.) H. Wendl.			8
9 <i>Alpinia speciosa</i> (Wendl.) K. Schum.	TAXA	The Number of Species	9
10 <i>Curcuma aromatica</i> Salisb.	Mammals	17	10
11 <i>Hedychium coronarium</i> Koenig	Birds	38	11
12 <i>Kaempferia atrovirens</i> N. E. Br.	Amphibians	3	12
13 <i>Pistia stratiotes</i> L. var. <i>cuneata</i> Engler	Reptiles	11	13
14 <i>Scindapsus aureus</i> Engler	Fishes	42	14
15 <i>Lemna gibba</i> L.	Insects	433	15
16 <i>Lemna minima</i> Phil.	Arthropods other than insects	50	16
17 <i>Lemna valdiviana</i> Phil.	Mollusks	85	17
18 <i>Spirodella oligorhiza</i> Hegelm.	Other invertebrates	16	18
19 <i>Wolffia arrhiza</i> (L.) Wimmer			19
20 <i>Typha laxmanni</i> Lepechin	Vascular plants	1,552	20
21 <i>Carex brachyglossa</i> Mack.	Plants other than vascular plants	4	21
22 <i>Carex brevior</i> (Dewey) Mack. ex Lunell			22
23 <i>Carex leavenworthii</i> Dewey	TOTAL	2,251	23
24 <i>Carex nebraskensis</i> Dewey			24
25 <i>Carex ovalis</i> Good.			25
26 <i>Carex pansa</i> Bailey			26
27 <i>Carex unilateralis</i> Mackenzie			27
28 <i>Carex vulpinoidea</i> Michx.			28
29 <i>Cyperus aggregatus</i> (Wild.) Endl.			29
30 <i>Cyperus alopecuroides</i> Rottb.			30
31 <i>Cyperus alternifolius</i> L.			31
32 <i>Cyperus articulatus</i> L.			32
33 <i>Cyperus congestus</i> Vahl			33
34 <i>Cyperus engekmannii</i> Steud.			34
35 <i>Cyperus eragrostis</i> Lam.			35
36 <i>Cyperus esculentus</i> L.			36
37 <i>Cyperus ferruginescens</i> Boeckl.			37
38 <i>Cyperus longus</i> L.			38
39 <i>Cyperus malaccensis</i> Lamk. var. <i>brevifolius</i> Boeckl.			39
40 <i>Cyperus ovularis</i> Torr.			40
41 <i>Cyperus oxylepis</i> Steudel			41
42 <i>Cyperus prolifer</i> Lamark			42
43 <i>Cyperus sphacelatus</i> Rottb.			43
44 <i>Cyperus strigosus</i> L.			44
45 <i>Cyperus tenuiculmis</i> Boeck.			45
46 <i>Eleocharis engelmanni</i> Steud. var. <i>detonsa</i> A. Gray			46
47 <i>Eleocharis engelmanni</i> Steud. var. <i>engelmanni</i>			47
48 <i>Eleocharis erythropoda</i> Steud.			48
49 <i>Eleocharis macrostachya</i> Btitt			49
50 <i>Leipironia articulata</i> Domin.			50