Korean J. Pl. Taxon. 48(1): 48–64 (2018)
https://doi.org/10.11110/kjpt.2018.48.1.48
ORIGINAL ARTICLE

pISSN 1225-8318
eISSN 2466-1546
Korean Journal of
Plant Taxonomy

Flora of the vascular plants of Oeumsan Mountain (Hongcheon-gun and Hoengseong-gun, Gangwon-do)

Kyung-Ah KIM, Kyeong-Sik CHEON[1] and Ki-Oug YOO*

Department of Biological Sciences, Kangwon National University, Chuncheon 24341, Korea
[1]Department of Biological Science, Sangji University, Wonju 26339, Korea
(Received 3 January 2018; Revised 20 February 2018; Accepted 20 March 2018)

ABSTRACT: This study was carried out to investigate the flora of Oeumsan Mountain (Hongcheon-gun and Hoengseong-gun, Gangwon-do) from March of 2016 to September of 2017. The vascular plants were summarized into 509 taxa, including 98 families, 301 genera, 436 species, 4 subspecies, 57 varieties and 12 forms. Among the 509 investigated taxa, 9 Korean endemic, 1 endangered plant, 8 rare plants and 57 floristic regional indicator plants were also included. The naturalized plants encompassed 35 taxa. The percentage of naturalized plants species and the urbanization index were estimated to be 6.9% and 10.9%, respectively.

Keywords: vascular plants, endemic, endangered plants, rare plants, naturalized plants

Hongcheon-gun and Hoengseong-gun at the southwestern part of Gangwon-do, where Oeumsan Mountain (elev. 930 m) is located, span 37°37′–37°41′ N and 128°20′–128°51′ E, including a mountainous area extended from the Taebaeksanmaek range. They are bordered by Pyeongchang-gun, Gangneung-si, and Yangyang-gun to the east, Gyeonggi-do, Gapyeong-gun and Yangpyeong-gun to the west, Wonju-si and Yeongwol-gun to the south, and Chuncheon-si and Inje-gun to the north. Hongcheon-gun has the largest area with 1,819 km^2 among the city (si) and county (gun) in South Korea, in which the Hongcheongang River, a branch of Bukhangang River, flows through urban areas down to the west from the watershed of the Taebaeksanmaek range and merges with the Bukhangang River at Seorak-myeon of Gapyeong-gun in Gyeonggi-do, resulting in a small plain (Hongcheon-gun, 2014). In addition, Hoengseong-gun has an area of 998 km^2 and is a mountainous area with many mountains in its northeastern part, but the mountains become small and relatively wide in the southwestern part of this region, making it a fertile plain (Hoengseong-gun, 2015). The two regions are in Youngseo District, west of the Taebaeksanmaek range, which is the main mountain range in South Korea, and has a climate similar to the continental climate due to its location in the central inland of the Korean Peninsula. According to data collected between 2006–2016, the annual mean temperature of these regions ranges from 10.6–12.3°C. The annual mean precipitation is 703–2,140 mm, in which over 50% of the annual precipitation falls between July–September (Korea Meterological Administration, 2015).

Oeumsan Mountain, the target area of this survey, spans the region from Hongcheon-eup of Hongcheon-gun to Gonggeun-myeon of Hoengseong-gun in Gangwon-do, is part of the Taebaeksanmaek range, and is bordered by Maehwasan Mountain (elev. 750.8 m) to the west, Geummulsan Mountain (elev. 775.5 m) to the south, and Mandaesan Mountain (elev. 680.1 m) to the north (Hoengseong-gun, 2015). Previously, Lee and Jeon (2002) and Eom et al. (2009) studied the flora of Oeumsan Mountain; however, these studies were limited in accurate identification of the flora due to the simple survey routes and the number of surveys being just three. Thus, this study was carried out to identify distributions and characteristics of vascular plants based on voucher specimens through surveying vascular plants in the area around Oeumsan Mountain, and then to provide fundamental data for conservation of plant resources.

*Author for correspondence: yooko@kangwon.ac.kr

Materials and Methods

Floristic surveys were conducted a total of 17 times from March 2016 to September 2017, focusing on flowering seasons and fruiting seasons, and the collected voucher specimens were deposited in the herbarium of the Department of Biological Sciences in Kangwon National University (KWNU).

The survey schedule and route are presented in Fig. 1 and Table 1. Plant identification was based on literature of Lee (1996a, 1996b), Lee (2003a, 2003b), Lee (2006a, 2006b), Korea National Arboretum (2008a), and Lee and Lee (2015). In the plant list of family name and scientific names, names of ferns were listed following Lee and Lee (2015) and those of gymnosperms and angiosperms were referred to by names given in a synonymic list of vascular plants in Korea (Korea National Arboretum and The Korean of Plant Taxonomists, 2007). The list of plant species within family was summarized in the alphabetical order. Cultivated species were identified using "(cult.)" after the Korean name. Based on the plant list made, analyses were performed on Korean endemic plants (Chung et al., 2017), endangered wildlife plants (Ministry of Environment, 2012), rare plants (Korea National Arboretum, 2008b), and the floristic regional indicator plants (Ministry of Environment and National Institute of Environmental Research, 2014). Naturalized plants were indexed using data of Lee et al. (2011). Naturalized ratio (Numata, 1975) and the urbanization index (Yim and Jeon, 1980) were calculated using the following equations:

Naturalized ratio (the percent of naturalized plant species) = S/N·V × 100

(S is number of naturalized plant taxa in the survey area, N·V is total number of vascular plant taxa in the survey area)

Urbanization index = S/N × 100

(S is number of naturalized plant taxa in the survey area, N is total number of naturalized plant taxa in the country)

Results and Discussion

Species composition

Based on voucher specimens collected in Oeumsan Mountain area, vascular plants of this region were identified to be 509 taxa (436 species 4 subspecies 57 varieties 12 forms) that belong to 98 families, 301 genera (Table 2, Appendix 1), which corresponded to 12.5% of 4,071 vascular plant taxa of South Korea (Lee, 1996a), 28.3% of 1,796 vascular plant taxa in Gangwon-do (Gangwon-do, 2010) as well as 54.1% and 59.1% of 940 and 861 vascular plant taxa in Hongcheon-gun and Hoengseong-gun, respectively (Gangwon-do, 2010). Thus, species diversity in this region was found to be relatively high. On the other hand, these results were significantly different from 259 and 133 taxa in these regions reported by Lee and Jeon (2002) and Eom et al. (2009), respectively, which seemed to be due to the in-depth surveys conducted for this study through various routes over the course of 2 years.

Wild plants with the highest proportion of occurrence in

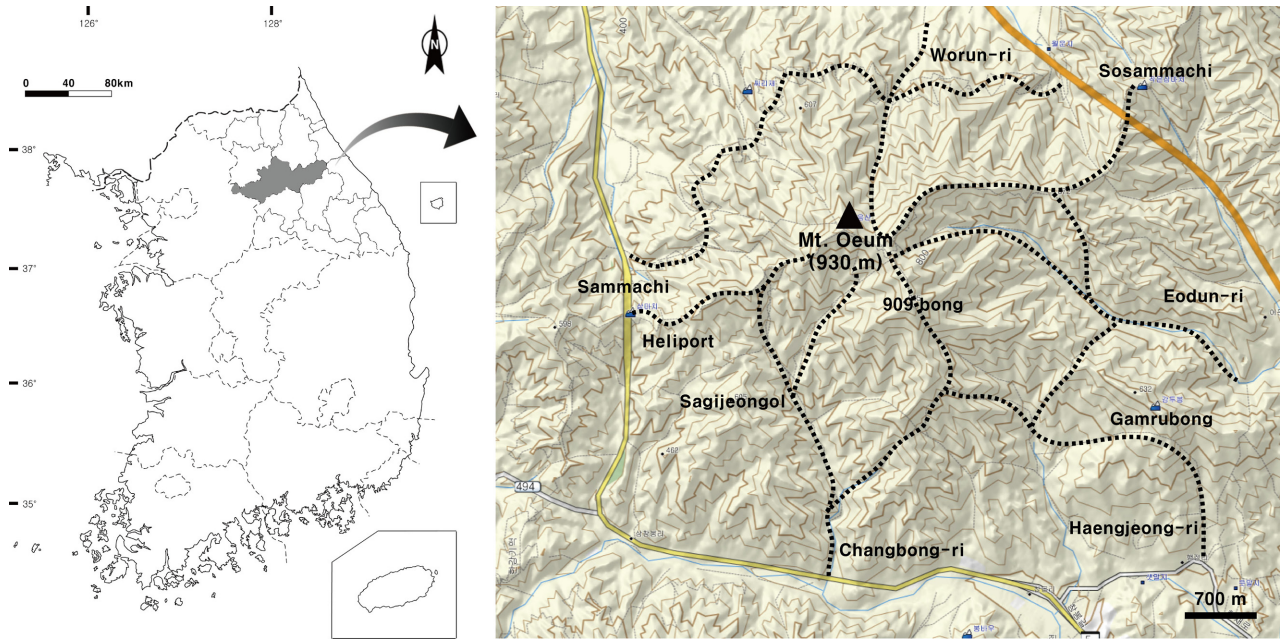

Fig. 1. Map of investigated area (left) and route (right).

Table 1. Investigation dates and routes of survey area.

Date	Routes of investigation
25 Mar 2016	Eodun-ri→Forest road→Summit→Forest road→Eodun-ri
8 Apr 2016	Sammachi→Heliport→Geobukbawi→Summit→909 bong→Changbong-ri
29 Apr 2016	Sammachi→Heliport→Geobukbawi→Summit→Geobukbawi→ Sammachi
20 May 2016	Sammachi→Heliport→Geobukbawi→Summit→Geobukgawi→ Sammachi
17 Jun 2016	Sosammachi→Forest road→Summit→909 bong→Changbong-ri
15 Jul 2016	Changbong-ri→Sagijeongol→Summit→Geobukbawi→Heliport→Sammachi
29 Jul 2016	Worun-ri→Forest road→Summit→Geobukbawi→Sagijeongol→Changbong-ri
12 Aug 2016	Sammachi→Heliport→Geobukbawi→Summit→909bong→Gamrubong→Haengjeong-ri
29 Aug 2016	Sammachi→Heliport→Geobukbawi→Summit→Sagijeongol→Changbong-ri
10 Sep 2016	Changbong-ri→909 bong→Summit→Forest road→Worun-ri
30 Sep 2016	Sammachi→Heliport→Geobukbawi→Summit→Forest road→Sosammachi
7 Oct 2016	Worun-ri→Forest road→Summit→Geobukbawi→Sagijeongol→Changbong-ri
28 Oct 2016	Sammachi→Heliport→Geobukbawi→Summit→909 bong→Gamrubong→Haengjeong-ri
13 May 2017	Eodun-ri→Forest road→Summit→Sammachi
18 Jun 2017	Changbong-ri→909 bong→Summit→Forest road→Worun-ri
22 Jul 2017	Sosammachi→Forest road→Summit→909 bong→Changbong-ri
2 Sep 2017	Sammachi→Heliport→Geobukbawi→Summit→Sagijeongol→Changbong-ri

Table 2. The abridged list of the plants in Oeumsan Mountatin.

Taxa	Fam.	Gen.	Sp.	Subsp.	Var.	F.	Total
Pteridophyta	9	15	24	-	4	-	28
Gymnospermae	3	4	4	-	-	-	4
Angiospermae	86	282	408	4	53	12	477
Dicotyledons	74	228	323	4	42	9	378
Monocotyledons	12	54	85	-	11	3	99
Total	98	301	436	4	57	12	509

Oeumsan Mountain were Compositae, including 52 taxa, followed by Gramineae with 39 taxa, Rosaceae with 27 taxa, Leguminosae with 25 taxa, both Ranunculaceae and Polygonaceae with 21 taxa, and Liliaceae with 20 taxa.

Among the vegetation of the Oeumsan Mountain forests, *Quercus mongolica*, *Quercus variabilis*, and *Acer pictum* subsp. *mono* were dominant, and climbing plants such as *Rubus coreanus*, *Rubus oldhamii*, and *Tripterygium regelii* were distributed in areas with a poor upper canopy. Previous studies also reported that Oeumsan Mountain had plant species mostly belonging to the family Fagaceae (Lee and Jeon, 2002), and *Rubus coreanus*, *Actinidia polygama*, *Tripterygium regelii*, and *Actinidia arguta* were also commonly found (Eom et al., 2009), which were similar to the results of our study.

Since Oeumsan Mountain is relatively perilous and steep, it seems that general climbers tended not to frequently visit this mountain. However, there are forest roads and military roads at the top of the southern slope, leading to military bases, and Jungang Expressway and a national highway are adjacent to the east and west from the peak, respectively. It is predicted that these would gradually increase indirect disturbance. Moreover, there were some shooting ranges, transmitting towers, heliports, and training fields inside and around the forests due to regional characteristics, and there were also military training facilities and human trampling in some areas, which have resulted in devegetation of herbaceous species. In addition, there were forest roads to military bases that were expanded at the top of the area, leaving cut slopes, where vegetation was poorly established. This led to collapses of soils and rocks, resulting in damage to vegetation of neighboring

forests. Therefore, these regions need to be multilaterally managed considering, regional characteristics, in order to conserve the plant resource of the region.

Endemic plants

In the 509 taxa identified from the survey area, there were 9 taxa of endemic plants that belong to a total of 7 families 9 genera including *Populus tomentiglandulosa*, *Salix koriyanagi*, *Aconitum pseudolaeve*, *Clematis trichotoma*, *Asarum versicolor*, *Corydalis lineariloba*, *Eleutherococcus divaricatus* var. *chiisanensis*, *Sillaphyton podagraria*, and *Abeliophyllum distichum* (Table 3), which corresponded to 2.5% of 360 taxa of endemic plants in South Korea (Chung et al., 2017). Of these, *Populus tomentiglandulosa* and *Salix koriyanagi* were found at low altitude areas near the beginnings of hiking trails, and *Aconitum pseudolaeve*, *Clematis trichotoma*, *Eleutherococcus divaricatus* var. *chiisanensis*, and *Sillaphyton podagraria* often were distributed in mid-forest areas inside forests and slopes of forest roads. *Asarum versicolor* and *Corydalis lineariloba* were found to inhabit around valleys in low-lying lands. On the other hand, *Abeliophyllum distichum*, known to inhabit in Gyeonggi-do, Chungcheongbuk-do, Gyeongsangbuk-do, and Jeollabuk-do (Chung et al., 2010; Shin et al., 2010; Lee et al. 2014) has been reported to maintain its population mostly through vegetative propagation (Kang et al., 2000; Kim and Kim, 2004; Shin et al., 2010), due to a low germination rate and no simultaneity in germination (Yoo and Kim, 1993). In addition, this species is known to inhabit in areas with relatively poor growing conditions, such as between the rocks, around farmlands, or boulder zones along mountain streams (Lee, 1976). The *Abeliophyllum distichum* plants found in Oeumsan Mountain during this study were the first documented case in Gangwon-do. Four individual plants were found between the rocks in a mountain stream at Sammachi-ri of Hongcheon-gun. According to an inquiry survey, a small number of plants of this species were introduced around buildings in a Buddhist temple nearby in the past, but there has been no artificial planting nearby the stream. To reveal the origin of *Abeliophyllum distichum* in Oeumsan Mountain, further investigation is needed to determine whether this species was originally planted as ornamentals at the Buddhist temple and then naturalized in the corresponding area resulting from rain spells and typhoons, or

Table 3. List of endemic plants in Oeumsan Mountain.

Family name/Korean name	Scientific name/Korean name
Salicaceae 버드나무과	*Populus tomentiglandulosa* T. B. Lee 은사시나무(cult.)
	Salix koriyanagi Kimura 키버들
Ranunculaceae 미나리아재비과	*Aconitum pseudolaeve* Nakai 진범
	Clematis trichotoma Nakai 할미밀망
Aristolochiaceae 쥐방울덩굴과	*Asarum versicolor* (K.Yamaki) Y. N. Lee 무늬족도리풀
Fumariaceae 현호색과	*Corydalis lineariloba* Siebold & Zucc. 선현호색
Araliaceae 두릅나무과	*Eleutherococcus divaricatus* var. *chiisanensis* (Nakai) C. H. Kim & B. Y. Sun 지리산오갈피
Umbelliferae 산형과	*Sillaphyton podagraria* (H.Boissieu) Pimenov 덕우기름나물
Oleaceae 물푸레나무과	*Abeliophyllum distichum* Nakai 미선나무

Table 4. List of endangered wild and rare plants in Oeumsan Mountain.

Family name	Scientific name/Korean name	Grade
Oleaceae 물푸레나무과	*Abeliophyllum distichum* Nakai 미선나무	2, CR
Ranunculaceae 미나리아재비과	*Eranthis stellata* Maxim. 너도바람꽃	LC
Aristolochiaceae 쥐방울덩굴과	*Aristolochia contorta* Bunge 쥐방울덩굴	LC
Saxifragaceae 범의귀과	*Rodgersia podophylla* A.Gray 도깨비부채	LC
Violaceae 제비꽃과	*Viola albida* Palib. 태백제비꽃	LC
	Viola diamantiaca Nakai 금강제비꽃	LC
Solanaceae 가지과	*Scopolia japonica* Maxim. 미치광이풀	LC
Araliaceae 두릅나무과	*Eleutherococcus divaricatus* var. *chiisanensis* (Nakai) C. H. Kim & B. Y. Sun 지리산오갈피	DD

2, endangered wild plants 2 grade; CR, critically endangered; LC, least concerned; DD, data deficient.

this region is the natural northern limit of this species. If this is found to be a natural population, it should be studied for genetic diversity and biogeographic characteristics, targeting the entire population of this species in South Korea.

Endangered and rare plants

Abeliophyllum distichum was the only endangered plant species found in the survey area, which was designated as a Grade 2 endangered species by the Ministry of Environment. There were 8 taxa of rare plants that belonged to 7 families and 7 genera, which accounted for 1.4% of the total 577 taxa of rare plants in South Korea (Korean National Arboretum, 2008b), as well as 20.0% and 32.0% of 40 and 25 taxa of rare plants in Hongcheon-gun and Hoengseong-gun, respectively (Gangwon-do, 2010). When classified according to the grades of rare plants, critically endangered species were *Abeliophyllum distichum*; least concerned species were *Eranthis stellata*, *Aristolochia contorta*, *Rodgersia podophylla*, *Viola albida*, *Viola diamantiaca*; and data deficient species was *Eleutherococcus divaricatus* var. *chiisanensis* (Table 4).

Of the identified taxa, *Aristolochia contorta* and *Eleutherococcus divaricatus* var. *chiisanensis* were found around beginnings of hiking trails, and *Abeliophyllum distichum* was detected in boulder areas of a mountain stream. In addition, *Eranthis stellata*, *Rodgersia podophylla*, and *Scopolia japonica* inhabited areas with various sizes of rocks in a valley within a forest, and *Viola albida* and *Viola diamantiaca* were on the slope to the mountaintops and ridge areas.

Floristic regional indicator plants

The floristic regional indicator plants specially designated by the Ministry of the Environment are useful taxa representing areas with similar environments, which are subdivided into 5 grades according to the area they inhabit (Ministry of Environment and National Institute of Environmental Research, 2014). Of the 509 taxa identified, 57 taxa were floristic regional indicator plants, which accounted for 4.5% of the entire 1,255 indicator plant taxa (Ministry of Environment and National Institute of Environmental Research, 2014). This result was significantly different from 19 and 9 taxa reported by Lee and Jeon (2002) and Eom et al., (2009), respectively.

Classifications of these floristic regional indicator plants are as follows: *Abeliophyllum distichum* for Grade V, habitats are discontinuous and isolated with the narrowest area of distribution; *Anemone reflexa*, *Chrysosplenium ramosum*, *Rodgersia podophylla*, and *Wisteria floribunda* for Grade IV, northern or southern plants usually found in one subdistrict; 9

Table 5. List of floristic regional indicator plants in Oeumsan Mountain.

Grade	Scientific name/Korean name
V	*Abeliophyllum distichum* Nakai 미선나무
IV	*Anemone reflexa* Steph. ex Willd. 회리바람꽃
	Chrysosplenium ramosum Maxim. 가지괭이눈
	Rodgersia podophylla A. Gray 도깨비부채
	Wisteria floribunda (Willd.) DC. 등
III	*Betula chinensis* Maxim. 개박달나무
	Aconitum longecassidatum Nakai 흰진범
	Eranthis stellata Maxim. 너도바람꽃
	Spiraea salicifolia L. 꼬리조팝나무
	Viola diamantiaca Nakai 금강제비꽃
	Angelica genuflexa Nutt. ex Torr. & A. Gray 왜천궁
	Scopolia japonica Maxim. 미치광이풀
	Diarrhena fauriei (Hack.) Ohwi 광릉용수염
	Carex phacota Spreng. 비늘사초
II	*Dryopteris expansa* (C. Presl) Fraser-Jenk. & Jermy 퍼진고사리
	Polystichum braunii (Spenn.) Fee 좀나도히초미
	Aquilegia buergeriana var. *oxysepala* (Trautv. & Meyer) Kitam. 매발톱
	Caltha palustris L. 동의나물
	Caulophyllum robustum Maxim. 꿩의다리아재비
	Potentilla dickinsii Franch. & Sav. 돌양지꽃
	Acer triflorum Kom. 복자기
	Viola orientalis (Maxim.) W. Becker 노랑제비꽃
	Viola tokubuchiana var. *takedana* (Makino) F. Maek. 민둥뫼제비꽃
	Eleutherococcus divaricatus var. *chiisanensis* (Nakai) C. H. Kim & B. Y. Sun 지리산오갈피
	Vaccinium hirtum var. *koreanum* (Nakai) Kitam. 산앵도나무
	Primula jesoana Miq. 큰앵초
	Galium paradoxum Maxim. 두메갈퀴
	Brachybotrys paridiformis Maxim. ex Oliv. 당개지치
	Weigela florida (Bunge) A. DC. 붉은병꽃나무
	Adoxa moschatellina L. 연복초
	Cirsium setidens (Dunn) Nakai 고려엉겅퀴
	Ligularia fischeri (Ledeb.) Turcz. 곰취
	Heloniopsis koreana Fuse & N. S. Lee & M. N. Tamura 처녀치마
I	*Dryopteris crassirhizoma* Nakai 관중
	Matteuccia struthiopteris (L.) Tod. 청나래고사리
	Polystichum ovatopaleaceum var. *coraiense* (H.Christ) Sa.Kurata 참나도히초미

Table 5. Continued.

Grade	Scientific name/Korean name
I	*Juglans mandshurica* Maxim. 가래나무
	Lychnis cognata Maxim. 동자꽃
	Aconitum jaluense Kom. 투구꽃
	Anemone raddeana Regel 꿩의바람꽃
	Chloranthus japonicus Siebold 홀아비꽃대
	Aristolochia contorta Bunge 쥐방울덩굴
	Hylomecon ernalis Maxim. 피나물
	Hylotelephium verticillatum (L.) H. Ohba 세잎꿩의비름
	Chrysosplenium japonicum (Maxim.) Makino 산괭이눈
	Ribes mandshuricum (Maxim.) Kom. 까치밥나무
	Malus baccata (L.) Borkh. 야광나무
	Potentilla cryptotaeniae Maxim. 물양지꽃
	Vicia pseudo-orobus Fisch. & C. A. Mey. 큰등갈퀴
	Oxalis obtriangulata Maxim. 큰괭이밥
	Impatiens nolitangere L. 노랑물봉선
	Buxus koreana Nakai ex Chung & al. 회양목
	Clinopodium micranthum (Regel) Hara 두메층층이
	Lonicera praeflorens Batalin 올괴불나무
	Cirsium pendulum Fisch. ex DC. 큰엉겅퀴
	Sagittaria aginashi Makino 보풀
	Carex maackii Maxim. 타래사초

taxa including *Betula chinensis*, *Aconitum longecassidatum*, *Eranthis stellata*, *Spiraea salicifolia*, and *Viola diamantiaca* for Grade III that inhabit in 2 subdistricts; 19 taxa including *Dryopteris expansa*, *Polystichum braunii*, *Aquilegia buergeriana* var. *oxysepala*, *Caltha palustris,* and *Caulophyllum robustum* were Grade II that are distributed nationwide, but mostly found in areas > 1,000 m in elevation; 24 taxa including *Dryopteris crassirhizoma*, *Matteuccia struthiopteris*, *Anemone raddeana*, *Impatiens nolitangere*, and *Lonicera praeflorens* for Grade I that are distributed in 3 subdistricts (Table 5).

Naturalized plants

Naturalized plants refer to plant species that are not native, but have been introduced to the country via artificial or natural ways, and propagate and reproduce in nature on their own (Koh et al., 1995). A total of 35 naturalized plant taxa that belong to 13 families 32 genera were identified in this study (Table 6) including ecosystem disturbing plants, such as *Rumex acetosella*, *Ambrosia artemisiifolia*, and *Aster pilosus*, and their naturalized ratio and urbanization index were calculated to be 6.9% and 10.9%, respectively. Considering the naturalized ratio of Korean forest areas is 14.0% (Oh et al., 2009), it seems that the vegetation of this area has been conserved relatively well. The naturalized plants were found mostly around private residences in low-lying lands and military facilities where vehicles frequently pass by during military movements and transportation of

Table 6. List of naturalized plants in Oeumsan Mountain.

Family name/Korean name	Scientific name/Korean name
Polygonaceae 마디풀과	*Fallopia dentatoalata* (F. Schmidt) Holub 큰닭의덩굴
	Fallopia dumetorum (L.) Holub 닭의덩굴
	Persicaria orientalis (L.) Spach 털여뀌
	Rumex acetosella L. 애기수영
Phytolaccaceae 자리공과	*Phytolacca americana* L. 미국자리공
Caryophyllaceae 석죽과	*Silene armeria* L. 끈끈이대나물
Amaranthaceae 비름과	*Amaranthus lividus* L. 개비름
	Amaranthus patulus Bertol. 가는털비름
Cruciferae 십자화과	*Brassica juncea* (L.) Czern. 갓(cult.)
	Lepidium virginicum L. 콩다닥냉이
Leguminosae 콩과	*Amorpha fruticosa* L. 족제비싸리(cult.)
	Melilotus alba Medicus ex Desv. 흰전동싸리
	Robinia pseudoacacia L. 아까시나무(cult.)
	Trifolium repens L. 토끼풀
Euphorbiaceae 대극과	*Euphorbia supina* Raf. 애기땅빈대

Table 6. List of naturalized plants in Oeumsan Mountain.

Family name/Korean name	Scientific name/Korean name
Simaroubaceae 소태나무과	*Ailanthus altissima* (Mill.) Swingle 가죽나무(cult.)
Onagraceae 바늘꽃과	*Oenothera biennis* L. 달맞이꽃
Solanaceae 가지과	*Solanum americanum* Mill. 미국까마중
Scrophulariaceae 현삼과	*Veronica arvensis* L. 선개불알풀
Compositae 국화과	*Ambrosia artemisiifolia* L. 돼지풀
	Aster pilosus Willd. 미국쑥부쟁이
	Bidens frondosa L. 미국가막사리
	Carduus crispus L. 지느러미엉겅퀴
	Conyza canadensis (L.) Cronquist 망초
	Cosmos bipinnatus Cav. 코스모스
	Erigeron annuus (L.) Pers. 개망초
	Erigeron strigosus Muhl. 주걱개망초
	Galinsoga ciliata (Raf.) S. F. Blake 털별꽃아재비
	Rudbeckia bicolor Nutt. 원추천인국
	Taraxacum officinale Weber 서양민들레
Gramineae 벼과	*Dactylis glomerata* L. 오리새
	Festuca arundinacea Schreb. 큰김의털
	Lolium perenne L. 호밀풀
	Panicum dichotomiflorum Michx. 미국개기장
	Phleum pratense L. 큰조아재비

military supplies. *Amorpha fruticosa*, *Robinia pseudoacacia* and *Ailanthus altissima* inhabited slopes of forest roads where vegetation of herbaceous species was poorly established, and *Lepidium virginicum*, *Trifolium repens*, and *Erigeron annuus* occupied relatively large areas in the open fields such as farmlands, pastures, and heliports.

Rumex acetosella, *Ambrosia artemisiifolia*, and *Aster pilosus* have been controlled because they are ecosystem disturbing plants that are harmful to humans. Nevertheless, only a small number of them were found in dry fallow lands located at the edge of relatively desolate forests in low-lying lands, so that they were not considered to have significant effects on the plant ecosystem.

Conflict of Interest

Authors declare that there is no conflict of interest.

Acknowledgments

This study was supported by 2016 Research Grant from Kangwon National University (No. 520160274).

Literature Cited

Chung, G. Y., K. S. Chang, J.-M. Chung, H. J. Choi, W.-K. Paik and J.-O. Hyun. 2017. A checklist of endemic plants on the Korean Peninsula. Korean Journal of Plant Taxonomy 47: 264–288. (in Korean)

Chung, G. Y., M. S. Park, B. M. Nam., K. N. Hong, J. Jang, H. J. Jeong and K. O. Yoo. 2010. Distribution of vascular plants in Gallasan (Andong-si, Uiseong-gun, Gyeongbuk). Korean Journal of Plant Resources 23: 99–114. (in Korean)

Eom, H. J., K. S. Chang and C. S. Chang. 2009. Flora of Hongcheon area of Gangwon-do. Bulletin of the Arboretum Seoul National University 27: 29–60. (in Korean)

Gangwon-do. 2010. Inhabitation and Distribution of Wild Animal and Plant in Gangwon-do. Gangwon-do, 215 pp. (in Korean)

Hongcheon-gun. 2014. Retrieved Dec 5, 2017, available from https://www.hongcheon.gangwon.kr.

Hoengseong-gun. 2015. Retrieved Dec 5, 2017, available from http://www.hsg.go.kr.

Kang, U., C.-S. Chang and Y. S. Kim. 2000. Genetic structure and conservation considerations of rare endemic *Abeliophyllum distichum* Nakai (Oleaceae) in Korea. Journal of Plant Research 113: 127–

138.
Kim, D.-K. and J.-H. Kim. 2004. Numerical taxonomy of tribe Forsythieae (Oleaceae) in Korea. Korean Journal of Plant Taxonomy 34: 189–203. (in Korean)
Koh, K. S., I. G. Kang, M. H. Suh, J. H. Kim, K. D. Kim, J. H. Kil, H. I. Rhu, D. S. Kong, E. B. Lee and E. S. Chun. 1995. Survey for Ecological Impact by Naturalized Organism (I). National Institute of Environmental Research, Incheon, 74 pp. (in Korean)
Korea Meterological Adminstration. 2015. Retrieved Dec 15, 2017, available from https://data.kma.go.kr.
Korea National Arboretum. 2008a. Illustrated Pteridophytes of Korea. Korea National Arboretum, Pocheon, 547 pp. (in Korean)
Korea National Arboretum. 2008b. Rare Plants Data Book in Korea. Korea National Arboretum, Pocheon, 332 pp. (in Korean)
Korea National Arboretum and The Korean Society of Plant Taxonomists. 2007. A Synonymic List of Vascular Plant in Korea. Korea National Arboretum, Pocheon, 534 pp. (in Korean)
Lee, C.-S. and K.-H. Lee. 2015. Pteridophytes of Korea: Lycophytes & Ferns. Geobook, Seoul, 471 pp. (in Korean)
Lee, H.-Y., T.-G. Kim and C.-H. Oh. 2014. Recently augmented natural habitat of *Abeliopyllum distichum* Nakai in Yeoju-si, Gyunggi-do, Korea. Korean Journal of Environment and Ecology 28: 62–70. (in Korean)
Lee, T. B. 1976. New forms of *Abeliophyllum distichum*. Korean Journal of Plant Taxonomy 7: 21–22. (in Korean)
Lee, T. B. 2003a. Coloured Flora of Korea. Vol. I. Hyangmunsa, Seoul, 914 pp. (in Korean)
Lee, T. B. 2003b. Coloured Flora of Korea. Vol. II. Hyangmunsa, Seoul, 910 pp. (in Korean)
Lee, W. B and Y. M. Jeon. 2002. Flora of Mt. Oeum (Hoengseong–Hongcheon) and Adjacent Areas. 2nd Natural Environment Survey. Ministry of Environment, Gwacheon. Pp. 46–71. (in Korean)
Lee, W. T. 1996a. Coloured Standard Illustrations of Korean Plants. Academy Publishing Co., Seoul, 624 pp. (in Korean)
Lee, W. T. 1996b. Lineamenta Florae Koreae. Academy Publishing Co., Seoul, 1688 pp. (in Korean)
Lee, Y.-M., S.-H. Park, S.-Y. Jung, S.-H. Oh and J.-C. Yang. 2011. Study on the current status of naturalized plants in South Korea. Korean Journal of Plant Taxonomy 41: 87–101. (in Korean)
Lee, Y. N. 2006a. New flora of Korea (I). Kyo-Hak Publishing Co., Seoul, 975 pp. (in Korean)
Lee, Y. N. 2006b. New flora of Korea (II). Kyo-Hak Publishing Co., Seoul, 888 pp. (in Korean)
Ministry of Environment and National Institute of Environmental Research. 2014. Forth Round of the National Natural Environmental Research Guidelines. Ministry of Environment and National Institute of Environmental Research, Gwacheon and Incheon. Pp. 173–226. (in Korean)
Ministry of Environment. 2012. Retrieved Dec. 5, 2017, available from http://www.me.go.kr.
Numata, M. 1975. Naturalized Plants. Dai Nippon Printing Co., Tokyo, 160 pp. (in Japanese)
Oh, C. H., Y. H. Kim, H. Y. Lee and S. H. Ban. 2009. The naturalization index of plant around abandoned military camps in civilian control zone. Journal of Korean Environment Research Technology 12: 59–76. (in Korean)
Shin, H.-T., M.-H. Yi, Y.-S. Kim, B.-C. Lee and J.-W. Yoon. 2010. Recently augmented natural habitats of *Forsythia koreana* (Rehder) Nakai and *Abeliophyllum distichum* Nakai in Korea. Korean Journal of Plant Taxonomy 40: 274–277. (in Korean)
Yim, Y. J. and E. S. Jeon. 1980. Distribution of naturalized plants in the Korean peninsula. Journal of Plant Biology 23: 69–83. (in Korean)
Yoo, Y. K. and K. S. Kim. 1993. Studies on the seed propagation of white Forsythia (*Abeliophyllum distichum* Nakai) 1. Physiology and condition of germination. Horticultural Science and Technology 10: 98–99. (in Korean)

오음산(강원, 홍천 및 횡성)의 관속식물상

김경아 · 천경식[1] · 유기억*
강원대학교 생명과학과, [1]상지대학교 생명과학과

적 요: 강원도 홍천군 및 횡성군에 위치한 오음산(930 m)에 대한 관속식물 조사를 2016년 3월부터 2017년 9월까지 수행하였다. 조사 결과 분포가 확인된 관속식물은 98과 301속 436종 4아종 57변종 12품종으로 총 509분류군이었다. 특산식물은 9분류군이었으며, 멸종위기야생식물은 2급에 1분류군이었고, 희귀식물은 8분류군이었다. 식물구계학적 특정식물로는 V등급 1분류군, IV등급 4분류군, III등급 9분류군, II등급 19분류군, I등급 24분류군으로 총 57분류군이 조사되었다. 귀화식물은 생태계교란야생식물 2분류군을 포함하여 총 35분류군이 확인되었으며, 도시화지수와 귀화율은 각각 6.9%와 10.9%로 산출되었다.

주요어: 관속식물, 특산, 멸종위기식물, 희귀식물, 귀화식물

Appendix 1. List of vascular plants of Oeumsan Mountain.

Scientific name/Korean name/Voucher number
Equisetaceae속새과
Equisetum arvense L. 쇠뜨기 KWNU91173
Osmundaceae 고비과
Osmunda cinnamomea (L.) C. Presl 꿩고비 WNU90636
Osmunda japonica Thunb. 고비 KWNU90635
Dennstaedtiaceae 잔고사리과
Dennstaedtia hirsuta (Sw.) Mett. ex Miq. 잔고사리 KWNU91327
Dennstaedtia wilfordii (T. Moore) Christ 황고사리 KWNU91110
Pteridium aquilinum var. *latiusculum* (Desv.) Underw. ex A. Heller 고사리 KWNU90505
Aspleniaceae 꼬리고사리과
Asplenium incisum Thunb. 꼬리고사리 KWNU91236
Asplenium ruprechtii Sa. Kurata 거미고사리 KWNU92689
Thelypteridaceae 처녀고사리과
Thelypteris palustris (Salisb.) Schott 처녀고사리 KWNU90677
Woodsiaceae 우드풀과
Woodsia manchuriensis Hook. 만주우드풀 KWNU90503
Woodsia polystichoides D. C. Eaton 우드풀 KWNU90632
Onocleaceae 야산고비과
Matteuccia struthiopteris (L.) Tod. 청나래고사리 KWNU91644
Onoclea sensibilis var. *interrupta* Maxim. 야산고비 KWNU91641
Pentarhizidium orientalis (Hook.) Hayata 개면마 KWNU91642
Athyriaceae 개고사리과
Athyrium brevifrons Nakai ex Kitagawa 참새발고사리 KWNU91246
Athyrium niponicum (Mett.) Hance 개고사리 KWNU90679
Athyrium yokoscense (Franch. & Sav.) Christ 뱀고사리 KWNU90509
Cornopteris crenulatoserrulata (Makino) Nakai 응달고사리 KWNU91233
Deparia japonica (Thunb.) M. Kato 진고사리 KWNU91627
Deparia orientalis var. *albosquamata* M. Kato 흰털고사리 KWNU91322
Dryopteridaceae 관중과
Dryopteris bissetiana (Baker) C. Chr. 산족제비고사리 KWNU91225
Dryopteris chinensis (Baker) Koidz. 가는잎족제비고사리 KWNU91223
Dryopteris crassirhizoma Nakai 관중 KWNU91239
Dryopteris expansa (Pr.) Franch.-Jenkins et Jermy 퍼진고사리 KWNU92727
Dryopteris monticola (Makino) C. Chr. 왕지네고사리 KWNU91636
Polystichum braunii (Spenn.) Fee 좀나도히초미 KWNU92692

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
Polystichum ovato-paleaceum var. *coraiense* (Christ) Sa.Kurata 참나도히초미 KWNU91227
Polystichum tripteron (Kunze) C. Presl 십자고사리 KWNU91637
Ginkgoaceae 은행나무과
Ginkgo biloba L. 은행나무(cult.) KWNU91174
Pinaceae 소나무과
Larix kaempferi (Lamb.) Carrière 일본잎갈나무(cult.) KWNU92735
Pinus densiflora Siebold & Zucc. 소나무 KWNU91331
Cupressaceae 측백나무과
Juniperus rigida Siebold & Zucc. 노간주나무 KWNU91329
Juglandaceae 가래나무과
Juglans mandshurica Maxim. 가래나무 KWNU91608
Salicaceae 버드나무과
Populus tomentiglandulosa T. B. Lee 은사시나무(cult.) KWNU93863
Salix caprea L. 호랑버들 KWNU91378
Salix gracilistyla Miq. 갯버들 KWNU91377
Salix koriyanagi Kimura 키버들 KWNU91450
Betulaceae 자작나무과
Alnus sibirica Fisch. ex Turcz. 물오리나무 KWNU90580
Betula chinensis Maxim. 개박달나무 KWNU90800
Betula platyphylla var. *japonica* (Miq.) H. Hara 자작나무 KWNU90799
Carpinus cordata Blume 까치박달 KWNU90824
Corylus heterophylla Fisch. ex Trautv. 개암나무 KWNU90796
Corylus sieboldiana var. *mandshurica* (Maxim.) C. K. Schneid. 물개암나무 KWNU90820
Fagaceae 너도밤나무과
Castanea crenata Siebold & Zucc. 밤나무(cult.) KWNU90629
Quercus aliena Blume 갈참나무 KWNU90534
Quercus dentata Thunb. 떡갈나무 KWNU90671
Quercus mongolica Fisch. ex Ledeb. 신갈나무 KWNU90670
Quercus serrata Thunb. 졸참나무 KWNU90627
Quercus variabilis Blume 굴참나무 KWNU90669
Ulmaceae 느릅나무과
Ulmus davidiana var. *japonica* (Rehder) Nakai 느릅나무 KWNU92690
Moraceae 뽕나무과
Fatoua villosa (Thunb.) Nakai 뽕모시풀 KWNU91463
Morus bombycis Koidz. 산뽕나무 KWNU91464
Urticaceae 쐐기풀과

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
Boehmeria longispica Steud. 왜모시풀 KWNU91401
Boehmeria platanifolia Franch. & Sav. 개모시풀 KWNU91573
Boehmeria spicata (Thunb.) Thunb. 좀깨잎나무 KWNU91403
Pilea mongolica Wedd. 모시물통이 KWNU91571
Polygonaceae 마디풀과
Fallopia dumetorum (L.) Holub 닭의덩굴 KWNU90463
Fagopyrum esculentum Moench 메밀(cult.) KWNU91381
Fallopia dentatoalata (F. Schmidt) Holub 큰닭의덩굴 KWNU90917
Fallopia dumetorum (L.) Holub 닭의덩굴 KWNU90463
Persicaria dissitiflora (Hemsl.) H. Gross ex Mori 가시여뀌 KWNU90967
Persicaria filiformis (Thunb.) Nakai ex Mori 이삭여뀌 KWNU90966
Persicaria hydropiper (L.) Spach 여뀌 KWNU90460
Persicaria lapathifolia (L.) Gray 흰여뀌 KWNU90697
Persicaria longiseta (Bruijn) Kitag. 개여뀌 KWNU90121
Persicaria nepalensis (Meisn.) H. Gross 산여뀌 KWNU90689
Persicaria orientalis (L.) Spach 털여뀌 KWNU92677
Persicaria perfoliata (L.) H. Gross 며느리배꼽 KWNU90970
Persicaria posumbu var. *laxiflora* (Meisn.) H. Hara 장대여뀌 KWNU90725
Persicaria sagittata (L.) H. Gross 미꾸리낚시 KWNU90722
Persicaria senticosa (Meisn.) H. Gross ex Nakai 며느리밑씻개 KWNU90719
Persicaria thunbergii (Siebold & Zucc.) H. Gross 고마리 KWNU90716
Persicaria viscofera var. *robusta* (Makino) Hiyama 큰끈끈이여뀌 KWNU90976
Polygonum aviculare L. 마디풀 KWNU90467
Rumex acetosa L. 수영 KWNU90465
Rumex acetosella L. 애기수영 KWNU90969
Rumex japonicus Houtt. 참소리쟁이 KWNU90920
Phytolaccaceae 자리공과
Phytolacca americana L. 미국자리공 KWNU92769
Portulacaceae 쇠비름과
Portulaca oleracea L. 쇠비름 KWNU91369
Caryophyllaceae 석죽과
Arenaria serpyllifolia L. 벼룩이자리 KWNU91375
Cerastium holosteoides var. *hallaisanense* (Nakai) Mizush. 점나도나물 KWNU91104
Dianthus chinensis L. 패랭이꽃 KWNU91448
Lychnis cognata Maxim. 동자꽃 KWNU91099

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
Pseudostellaria davidii (Franch.) Pax 덩굴개별꽃 KWNU91447
Pseudostellaria heterophylla (Miq.) Pax 개별꽃 KWNU91373
Sagina japonica (Sw.) Ohwi 개미자리 KWNU92744
Silene armeria L. 끈끈이대나물 KWNU92732
Silene firma Siebold & Zucc. 장구채 KWNU91099
Silene seoulensis Nakai 가는장구채 KWNU92699
Stellaria alsine var. *undulata* (Thunb.) Ohwi 벼룩나물 KWNU92764
Stellaria aquatica (L.) Scop. 쇠별꽃 KWNU91444
Stellaria media (L.) Vill. 별꽃 KWNU92420
Chenopodiaceae 명아주과
Chenopodium album var. *centrorubrum* Makino 명아주 KWNU91541
Amaranthaceae 비름과
Achyranthes japonica (Miq.) Nakai 쇠무릎 KWNU91108
Amaranthus lividus L. 개비름 KWNU92738
Amaranthus patulus Bertol. 가는털비름 KWNU91376
Schisandraceae 오미자과
Schisandra chinensis (Turcz.) Baill. 오미자 KWNU90872
Lauraceae 녹나무과
Lindera obtusiloba Blume 생강나무 KWNU90652
Ranunculaceae 미나리아재비과
Aconitum ciliare DC. 놋젓가락나물 KWNU92726
Aconitum jaluense Kom. 투구꽃 KWNU90637
Aconitum longecassidatum Nakai 흰진범 KWNU90602
Aconitum pseudolaeve Nakai 진범 KWNU90596
Actaea asiatica H. Hara 노루삼 KWNU92724
Anemone raddeana Regel 꿩의바람꽃 KWNU90812
Anemone reflexa Steph. ex Willd. 회리바람꽃 KWNU90593
Aquilegia buergeriana var. *oxysepala* (Trautv. & Meyer) Kitam. 매발톱 KWNU90811
Caltha palustris L. 동의나물 KWNU90592
Cimicifuga dahurica (Turcz. ex Fisch. & C. A. Mey.) Maxim. 눈빛승마 KWNU90809
Clematis apiifolia DC. 사위질빵 KWNU90573
Clematis fusca var. *violacea* Maxim. 종덩굴 KWNU90570
Clematis heracleifolia DC. 병조희풀 KWNU93406
Clematis terniflora var. *mandshurica* (Rupr.) Ohwi 으아리 KWNU90643
Clematis trichotoma Nakai 할미밀망 KWNU90786
Eranthis stellata Maxim. 너도바람꽃 KWNU90567
Hepatica asiatica Nakai 노루귀 KWNU93407

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
Ranunculus chinensis Bunge 젓가락나물 KWNU90783
Ranunculus japonicus Thunb. 미나리아재비 KWNU90781
Ranunculus tachiroei Franch. & Sav. 개구리미나리 KWNU90603
Thalictrum aquilegifolium var. *sibiricum* Regel & Tiling 꿩의다리 KWNU90564
Berberidaceae 매자나무과
Caulophyllum robustum Maxim. 꿩의다리아재비 KWNU90513
Menispermaceae 방기과
Menispermum dauricum DC. 새모래덩굴 KWNU90585
Chloranthaceae 홀아비꽃대과
Chloranthus japonicus Siebold 홀아비꽃대 KWNU91545
Aristolochiaceae 쥐방울덩굴과
Aristolochia contorta Bunge 쥐방울덩굴 KWNU90262
Asarum versicolor (K.Yamaki) Y. N. Lee 무늬족도리풀 KWNU90383
Actinidiaceae 다래나무과
Actinidia arguta (Siebold & Zucc.) Planch. ex Miq. 다래 KWNU90480
Actinidia polygama (Siebold & Zucc.) Planch. ex Maxim. 개다래 KWNU93415
Guttiferae 물레나물과
Hypericum ascyron L. 물레나물 KWNU92729
Hypericum erectum Thunb. 고추나물 KWNU91451
Hypericum laxum (Blume) Koidz. 좀고추나물 KWNU91538
Papaveraceae 양귀비과
Chelidonium majus var. *asiaticum* (H. Hara) Ohwi 애기똥풀 KWNU90367
Hylomecon vernalis Maxim. 피나물 KWNU90403
Fumariaceae 현호색과
Corydalis lineariloba Siebold & Zucc. 선현호색 KWNU90384
Corydalis pauciovulata Ohwi 선괴불주머니 KWNU90373
Corydalis remota Fisch. ex Maxim. 현호색 KWNU90282
Corydalis speciosa Maxim. 산괴불주머니 KWNU90370
Dicentra spectabilis (L.) Lem. 금낭화 KWNU91767
Cruciferae 십자화과
Arabis glabra Bernh. 장대나물 KWNU90412
Barbarea orthoceras Ledeb. 나도냉이 KWNU90411
Brassica juncea (L.) Czern. 갓(cult.) KWNU79933
Capsella bursapastoris (L.) L. W. Medicus 냉이 KWNU90265
Cardamine flexuosa With. 황새냉이 KWNU90358
Cardamine impatiens L. 싸리냉이 KWNU90357

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
Cardamine leucantha (Tausch) O. E. Schulz 미나리냉이 KWNU90409
Cardamine scutata Thunb. 큰황새냉이 KWNU92761
Draba nemorosa L. 꽃다지 KWNU92693
Lepidium virginicum L. 콩다닥냉이 KWNU90382
Rorippa indica (L.) Hiern 개갓냉이 KWNU90043
Rorippa palustris (Leyss.) Besser 속속이풀 KWNU90369
Crassulaceae 돌나물과
Hylotelephium verticillatum (L.) H. Ohba 세잎꿩의비름 KWNU90986
Sedum aizoon L. 가는기린초 KWNU90709
Sedum kamtschaticum Fisch. & Mey. 기린초 KWNU90731
Sedum polytrichoides Hemsl. 바위채송화 KWNU90482
Sedum sarmentosum Bunge 돌나물 KWNU90732
Saxifragaceae 범의귀과
Astilbe rubra Hook. f. & Thomson 노루오줌 KWNU90441
Chrysosplenium flagelliferum F. Schmidt 애기괭이눈 KWNU90737
Chrysosplenium japonicum (Maxim.) Makino 산괭이눈 KWNU90486
Chrysosplenium ramosum Maxim. 가지괭이눈 KWNU90942
Deutzia glabrata Kom. 물참대 KWNU90487
Deutzia grandiflora var. *baroniana* Diels 바위말발도리 KWNU92747
Deutzia uniflora Shirai 매화말발도리 KWNU90943
Hydrangea serrata f. *acuminata* (Siebold & Zucc.) E. H. Wilson 산수국 KWNU90443
Philadelphus tenuifolius Rupr. & Maxim. 얇은잎고광나무 KWNU90699
Ribes mandshuricum (Maxim.) Kom. 까치밥나무 KWNU90444
Ribes maximowiczianum Kom. 명자순 KWNU91251
Rodgersia podophylla A. Gray 도깨비부채 KWNU92122
Saxifraga fortunei var. *incisolobata* (Engl. & Irmsch.) Nakai 바위떡풀 KWNU90944
Rosaceae 장미과
Agrimonia coreana Nakai 산짚신나물 KWNU91255
Agrimonia pilosa Ledeb. 짚신나물 KWNU91028
Crataegus pinnatifida Bunge 산사나무 KWNU91027
Duchesnea indica (Andr.) Focke 뱀딸기 KWNU91249
Geum aleppicum Jacq. 큰뱀무 KWNU91024
Kerria japonica f. *pleniflora* (Witte) Rehder 죽단화(cult.) KWNU91077
Malus baccata (L.) Borkh. 야광나무 KWNU92700

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
Potentilla anemonefolia Lehm. 가락지나물 KWNU91023
Potentilla chinensis Ser. 딱지꽃 KWNU91074
Potentilla cryptotaeniae Maxim. 물양지꽃 KWNU91072
Potentilla dickinsii Franch. & Sav. 돌양지꽃 KWNU92520
Potentilla fragarioides var. *major* Maxim. 양지꽃 KWNU91020
Potentilla freyniana Bornm. 세잎양지꽃 KWNU91302
Prunus padus L. 귀룽나무 KWNU91018
Prunus persica (L.) Batsch 복사나무(cult.) KWNU91070
Prunus serrulata var. *pubescens* (Makino) Nakai 잔털벚나무 KWNU91017
Rosa multiflora Thunb. 찔레꽃 KWNU93405
Rubus coreanus Miq. 복분자딸기 KWNU91016
Rubus crataegifolius Bunge 산딸기 KWNU91068
Rubus oldhamii Miq. 줄딸기 KWNU91297
Rubus parvifolius L. 멍석딸기 KWNU92771
Rubus phoenicolasius Maxim. 곰딸기 KWNU91014
Sanguisorba officinalis L. 오이풀 KWNU91013
Sorbus commixta Hedl. 마가목 KWNU92668
Spiraea prunifolia f. *simpliciflora* Nakai 조팝나무 KWNU91065
Spiraea salicifolia L. 꼬리조팝나무 KWNU92671
Stephanandra incisa (Thunb.) Zabel 국수나무 KWNU91009
Leguminosae 콩과
Amorpha fruticosa L. 족제비싸리(cult.) KWNU91273
Amphicarpaea bracteata subsp. *edgeworthii* (Benth.) H. Ohashi 새콩 KWNU91272
Chamaecrista nomame (Siebold) H. Ohashi 차풀 KWNU90993
Desmodium podocarpum var. *oxyphyllum* (DC.) H. Ohashi 도둑놈의갈고리 KWNU92661
Glycine soja Siebold & Zucc. 돌콩 KWNU91036
Kummerowia striata (Thunb.) Schindl. 매듭풀 KWNU91267
Lathyrus davidii Hance 활량나물 KWNU91480
Lespedeza bicolor Turcz. 싸리 KWNU91264
Lespedeza cuneata G.Don 비수리 KWNU92767
Lespedeza cyrtobotrya Miq. 참싸리 KWNU91263
Lespedeza maximowiczii C. K. Schneid. 조록싸리 KWNU91032
Lespedeza maximowiczii var. *tomentella* Nakai 털조록싸리 KWNU90989
Lespedeza x *nakaii* T. B. Lee 꽃참싸리 KWNU91004
Lespedeza x *schindleri* T. B. Lee 잡싸리 KWNU91260
Maackia amurensis Rupr. 다릅나무 KWNU91284
Melilotus alba Medicus ex Desv. 흰전동싸리 KWNU91473

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
Pueraria lobata (Willd.) Ohwi 칡 KWNU91001
Robinia pseudoacacia L. 아까시나무(cult.) KWNU91000
Sophora flavescens Solander ex Aiton 고삼 KWNU90999
Trifolium repens L. 토끼풀 KWNU91279
Vicia amurensis Oett. 벌완두 KWNU90995
Vicia pseudo-orobus Fisch. & C. A. Mey. 큰등갈퀴 KWNU91277
Vicia unijuga A. Braun 나비나물 KWNU91044
Vigna angularis var. *nipponensis* (Ohwi) Ohwi & H. Ohashi 새팥 KWNU92293
Wisteria floribunda (Willd.) DC. 등(cult.) KWNU92765
Oxalidaceae 괭이밥과
Oxalis obtriangulata Maxim. 큰괭이밥 KWNU90960
Oxalis stricta L. 선괭이밥 KWNU90983
Geraniaceae 쥐손이풀과
Geranium sibiricum L. 쥐손이풀 KWNU93394
Euphorbiaceae 대극과
Acalypha australis L. 깨풀 KWNU92680
Euphorbia supina Raf. 애기땅빈대 KWNU92758
Securinega suffruticosa (Pall.) Rehder 광대싸리 KWNU90933
Rutaceae 운향과
Zanthoxylum schinifolium Siebold & Zucc. 산초나무 KWNU90703
Simaroubaceae 소태나무과
Ailanthus altissima (Mill.) Swingle 가죽나무(cult.) KWNU85605
Picrasma quassioides (D. Don) Benn. 소태나무 KWNU90702
Polygalaceae 원지과
Polygala japonica Houtt. 애기풀 KWNU90402
Anacardiaceae 옻나무과
Rhus javanica L. 붉나무 KWNU90795
Aceraceae 단풍나무과
Acer pictum subsp. *mono* (Maxim.) Ohashi 고로쇠나무 KWNU90867
Acer pseudosieboldianum (Pax) Kom. 당단풍나무 KWNU90865
Acer tataricum subsp. *ginnala* (Maxim.) Wesm. 신나무 KWNU90574
Acer triflorum Kom. 복자기 KWNU90862
Balsaminaceae 봉선화과
Impatiens nolitangere L. 노랑물봉선 KWNU90344
Impatiens textori Miq. 물봉선 KWNU90341
Celastraceae 노박덩굴과
Celastrus orbiculatus Thunb. 노박덩굴 KWNU90536
Euonymus alatus (Thunb.) Siebold 화살나무 KWNU90078

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
Euonymus alatus f. *ciliatodentatus* (Franch. & Sav.) Hiyama 회잎나무 KWNU90663
Tripterygium regelii Sprague & Takeda 미역줄나무 KWNU90494
Staphyleaceae 고추나무과
Staphylea bumalda DC. 고추나무 KWNU90665
Buxaceae 회양목과
Buxus koreana Nakai ex Chung & al. 회양목(cult.) KWNU90666
Vitaceae 포도과
Ampelopsis brevipedunculata f. *ciliata* (Nakai) T. B. Lee 털개머루 KWNU90498
Parthenocissus tricuspidata (Siebold & Zucc.) Planch. 담쟁이덩굴 KWNU90624
Vitis coignetiae Pulliat ex Planch. 머루 KWNU90667
Tiliaceae 피나무과
Tilia mandshurica Rupr. & Maxim. 찰피나무 KWNU91597
Sterculiaceae 벽오동과
Corchoropsis tomentosa (Thunb.) Makino 수까치깨 KWNU91554
Violaceae 제비꽃과
Viola acuminata Ledeb. 졸방제비꽃 KWNU91520
Viola albida f. *takahashii* (Makino) W. T. Lee 단풍제비꽃 KWNU91094
Viola albida Palib. 태백제비꽃 KWNU91093
Viola albida var. *chaerophylloides* (Regel) F. Maek. ex Hara 남산제비꽃 KWNU91441
Viola collina Besser 둥근털제비꽃 KWNU91517
Viola diamantiaca Nakai 금강제비꽃 KWNU91439
Viola hirtipes S.Moore 흰털제비꽃 KWNU91091
Viola japonica Langsd. ex Ging. 왜제비꽃 KWNU91516
Viola keiskei Miq. 잔털제비꽃 KWNU91515
Viola mandshurica W. Becker 제비꽃 KWNU91364
Viola orientalis (Maxim.) W. Becker 노랑제비꽃 KWNU91513
Viola phalacrocarpa Maxim. 털제비꽃 KWNU91089
Viola rossii Hemsl. 고깔제비꽃 KWNU91088
Viola tokubuchiana var. *takedana* (Makino) F. Maek. 민둥뫼제비꽃 KWNU91087
Viola tokubuchiana var. *takedana* f. *variegata* F. Maek. 줄민둥뫼제비꽃 KWNU91086
Viola variegata Fisch. ex Link 알록제비꽃 KWNU91507
Viola verecunda A. Gray 콩제비꽃 KWNU91083
Lythraceae 부처꽃과
Rotala indica (Willd.) Koehne 마디꽃 KWNU90425
Onagraceae 바늘꽃과
Ludwigia prostrata Roxb. 여뀌바늘 KWNU90940
Oenothera biennis L. 달맞이꽃 KWNU90484
Alangiaceae 박쥐나무과
Alangium platanifolium var. *trilobum* (Miq.) Ohwi 박쥐나무 KWNU92734
Cornaceae 층층나무과
Cornus controversa Hemsl. 층층나무 KWNU92745
Araliaceae 두릅나무과
Aralia cordata var. *continentalis* (Kitag.) Y. C. Chu 독활 KWNU90932
Aralia elata (Miq.) Seem. 두릅나무 KWNU91736
Eleutherococcus divaricatus var. *chiisanensis* (Nakai) C. H. Kim & B. Y. Sun 지리산오갈피 KWNU90475
Umbelliferae 산형과
Angelica dahurica (Fisch. ex Hoffm.) Benth. & Hook. f. ex Franch. & Sav. 구릿대 KWNU90337
Angelica decursiva (Miq.) Franch. & Sav. 바디나물 KWNU90255
Angelica genuflexa Nutt. ex Torr. & A. Gray 왜천궁 KWNU90223
Angelica polymorpha Maxim. 궁궁이 KWNU90274
Oenanthe javanica (Blume) DC. 미나리 KWNU90670
Osmorhiza aristata (Thunb.) Makino & Yabe 긴사상자 KWNU90363
Ostericum grosseserratum (Maxim.) Kitag. 신감채 KWNU90413
Peucedanum terebinthaceum (Fisch.) Fisch. ex DC. 기름나물 KWNU92525
Pimpinella brachycarpa (Kom.) Nakai 참나물 KWNU90330
Sanicula chinensis Bunge 참반디 KWNU90253
Sillaphyton podagraria (H. Boissieu) Pimenov 덕우기름나물 KWNU90332
Torilis japonica (Houtt.) DC. 사상자 KWNU90276
Pyrolaceae 노루발과
Pyrola japonica Klenze ex Alef. 노루발 KWNU90495
Ericaceae 진달래과
Rhododendron mucronulatum Turcz. 진달래 KWNU90501
Rhododendron mucronulatum var. *ciliatum* Nakai 털진달래 KWNU92236
Rhododendron schlippenbachii Maxim. 철쭉 KWNU90630
Vaccinium hirtum var. *koreanum* (Nakai) Kitam. 산앵도나무 KWNU90673
Primulaceae 앵초과
Androsace umbellata (Lour.) Merr. 봄맞이 KWNU91389
Lysimachia clethroides Duby 큰까치수염 KWNU91458

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
Lysimachia vulgaris var. *davurica* (Ledeb.) R. Kunth 좁쌀풀 KWNU91388
Primula jesoana Miq. 큰앵초 KWNU91600
Styracaceae 때죽나무과
Styrax obassia Siebold & Zucc. 쪽동백나무 KWNU91578
Symplocaceae 노린재나무과
Symplocos chinensis f. *pilosa* (Nakai) Ohwi 노린재나무 KWNU91427
Oleaceae 물푸레나무과
Abeliophyllum distichum Nakai 미선나무 KWNU90892
Gentianaceae 용담과
Gentiana zollingeri Faw. 큰구슬붕이 KWNU90971
Asclepiadaceae 박주가리과
Cynanchum ascyrifolium (Franch. & Sav.) Matsum. 민백미꽃 KWNU90890
Cynanchum paniculatum (Bunge) Kitag. 산해박 KWNU93864
Cynanchum wilfordii (Maxim.) Hemsl. 큰조롱 KWNU90888
Metaplexis japonica (Thunb.) Makino 박주가리 KWNU90886
Rubiaceae 꼭두서니과
Galium dahuricum Turcz. 큰잎갈퀴 KWNU91566
Galium koreanum (Nakai) Nakai 참갈퀴덩굴 KWNU91395
Galium paradoxum Maxim. 두메갈퀴 KWNU92793
Galium pogonanthum Franch. & Sav. 산갈퀴 KWNU91429
Galium spurium var. *echinospermon* (Wallr.) Hayek 갈퀴덩굴 KWNU92770
Galium trifloriforme Kom. 개선갈퀴 KWNU91568
Galium verum var. *asiaticum* Nakai 솔나물 KWNU91428
Rubia akane Nakai 꼭두서니 KWNU92538
Rubia chinensis Regel & Maack 큰꼭두서니 KWNU91394
Rubia cordifolia var. *pratensis* Maxim. 갈퀴꼭두서니 KWNU92766
Rubia chinensis Regel & Maack 큰꼭두서니 KWNU91374
Convolvulaceae 메꽃과
Calystegia sepium var. *japonicum* (Choisy) Makino 메꽃 KWNU91454
Cuscuta japonica Choisy 새삼 KWNU91383
Boraginaceae 지치과
Brachybotrys paridiformis Maxim. ex Oliv. 당개지치 KWNU91504
Trigonotis peduncularis (Trevir.) Benth. ex Hemsl. 꽃마리 KWNU91582
Trigonotis radicans var. *sericea* (Maxim.) H. Hara 참꽃마리 KWNU91082
Verbenaceae 마편초과

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
Callicarpa japonica Thunb. 작살나무 KWNU90897
Labiatae 꿀풀과
Agastache rugosa (Fisch. & Mey.) Kuntze 배초향 KWNU90446
Clinopodium micranthum (Regel) Hara 두메층층이 KWNU90882
Elsholtzia ciliata (Thunb.) Hyl. 향유 KWNU90879
Isodon inflexus (Thunb.) Kudo 산박하 KWNU90874
Isodon japonicus (Burm.) Hara 방아풀 KWNU90456
Lamium album var. *barbatum* (Siebold & Zucc.) Franch. & Sav. 광대수염 KWNU93402
Lamium amplexicaule L. 광대나물 KWNU84986
Leonurus japonicus Houtt. 익모초 KWNU92678
Lycopus lucidus Turcz. ex Benth. 쉽싸리 KWNU90454
Meehania urticifolia (Miq.) Makino 벌깨덩굴 KWNU90959
Mosla dianthera (Buch.-Ham. ex Roxb.) ex Maxim. 쥐깨풀 KWNU90453
Mosla punctulata (J. F. Gmelin) Nakai 들깨풀 KWNU90451
Prunella vulgaris var. *lilacina* Nakai 꿀풀 KWNU90449
Scutellaria pekinensis var. *transitra* (Makino) H. Hara 산골무꽃 KWNU90447
Stachys japonica Miq. 석잠풀 KWNU90953
Solanaceae 가지과
Scopolia japonica Maxim. 미치광이풀 KWNU90711
Solanum americanum Mill. 미국까마중 KWNU90691
Solanum nigrum L. 까마중 KWNU92746
Scrophulariaceae 현삼과
Lindernia procumbens (Krock.) Borbas 밭뚝외풀 KWNU90910
Mazus pumilus (Burm.f.) Steenis 주름잎 KWNU90907
Melampyrum roseum Maxim. 꽃며느리밥풀 KWNU90904
Phtheirospermum japonicum (Thunb.) Kanitz 나도송이풀 KWNU90901
Veronica arvensis L. 선개불알풀 KWNU90900
Bignoniaceae 능소화과
Campsis grandifolia (Thunb.) K. Schum. 능소화(cult.) KWNU92731
Phrymaceae 파리풀과
Phryma leptostachya var. *asiatica* H. Hara 파리풀 KWNU90369
Plantaginaceae 질경이과
Plantago asiatica L. 질경이 KWNU91387
Caprifoliaceae 인동과
Lonicera japonica Thunb. 인동덩굴 KWNU90583
Lonicera praeflorens Batalin 올괴불나무 KWNU90870

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
Sambucus sieboldiana var. *miquelii* (Nakai) Hara 지렁쿠나무 KWNU90606
Weigela florida (Bunge) A. DC. 붉은병꽃나무 KWNU90804
Weigela subsessilis (Nakai) L. H. Bailey 병꽃나무 KWNU90802
Adoxaceae 연복초과
Adoxa moschatellina L. 연복초 KWNU90584
Valerianaceae 마타리과
Patrinia scabiosaefolia Fisch. ex Trevir. 마타리 KWNU90651
Patrinia villosa (Thunb.) Juss. 뚝갈 KWNU92248
Valeriana fauriei Briq. 쥐오줌풀 KWNU90649
Campanulaceae 초롱꽃과
Adenophora verticillata Fisch. 층층잔대 KWNU91078
Asyneuma japonicum (Miq.) Briq. 영아자 KWNU91434
Campanula punctata Lam. 초롱꽃 KWNU91433
Codonopsis lanceolata (Siebold & Zucc.) Trautv. 더덕 KWNU92753
Lobelia chinensis Lour. 수염가래꽃 KWNU91499
Platycodon grandiflorum (Jacq.) A. DC. 도라지 KWNU92733
Platycodon grandiflorum f. *albiflorum* (Honda) H. Hara 백도라지 (cult.) KWNU93396
Compositae 국화과
Adenocaulon himalaicum Edgew. 멸가치 KWNU90686
Ainsliaea acerifolia Sch. Bip. 단풍취 KWNU93393
Ambrosia artemisiifolia L. 돼지풀 KWNU90556
Artemisia capillaris Thunb. 사철쑥 KWNU90662
Artemisia gmelini Weber ex Stechm. 더위지기 KWNU90618
Artemisia japonica Thunb. 제비쑥 KWNU90526
Artemisia keiskeana Miq. 맑은대쑥 KWNU90660
Artemisia princeps Pamp. 쑥 KWNU90659
Artemisia stolonifera (Maxim.) Kom. 넓은잎외잎쑥 KWNU90658
Aster ageratoides Turcz. 까실쑥부쟁이 KWNU90617
Aster incisus Fisch. 가새쑥부쟁이 KWNU90657
Aster meyendorfii (Regel & Maack) Voss 개쑥부쟁이 KWNU90641
Aster pilosus Willd. 미국쑥부쟁이 KWNU90615
Aster scaber Thunb. 참취 KWNU90654
Aster tataricus L. f. 개미취 KWNU90517
Atractylodes ovata (Thunb.) DC. 삽주 KWNU90557
Bidens bipinnata L. 도깨비바늘 KWNU92751
Bidens frondosa L. 미국가막사리 KWNU90267
Bidens radiata var. *pinnatifida* (Turcz. ex DC.) Kitam. 구와가막사리 KWNU90559
Bidens tripartita L. 가막사리 KWNU90560

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
Carduus crispus L. 지느러미엉겅퀴 KWNU90561
Centipeda minima (L.) A. Br. & Asch. 중대가리풀 KWNU90562
Cirsium japonicum var. *maackii* (Maxim.) Matsum. 엉겅퀴 KWNU90266
Cirsium pendulum Fisch. ex DC. 큰엉겅퀴 KWNU90309
Cirsium setidens (Dunn) Nakai 고려엉겅퀴 KWNU92242
Conyza canadensis (L.) Cronquist 망초 KWNU90833
Cosmos bipinnatus Cav. 코스모스(cult.) KWNU92736
Crepidiastrum denticulatum (Houtt.) Pak & Kawano 이고들빼기 KWNU90814
Crepidiastrum sonchifolium (Bunge) Pak & Kawano 고들빼기 KWNU90764
Dendranthema boreale (Makino) Ling ex Kitam. 산국 KWNU90765
Dendranthema zawadskii (Herb.) Tzvelev 산구절초 KWNU92234
Erigeron annuus (L.) Pers. 개망초 KWNU90838
Erigeron strigosus Muhl. 주걱개망초 KWNU90922
Eupatorium japonicum Thunb. 등골나물 KWNU92535
Galinsoga ciliata (Raf.) S. F. Blake 털별꽃아재비 KWNU90202
Hemistepta lyrata Bunge 지칭개 KWNU90395
Ixeridium dentatum (Thunb.) Tzvelev 씀바귀 KWNU90394
Ixeris polycephala Cass. 벌씀바귀 KWNU90393
Lactuca indica L. 왕고들빼기 KWNU90392
Ligularia fischeri (Ledeb.) Turcz. 곰취 KWNU89577
Parasenecio auriculata var. *matsumurana* Nakai 박쥐나물 KWNU92929
Petasites japonicus (Siebold & Zucc.) Maxim. 머위 KWNU90315
Picris hieracioides var. *koreana* Kitam. 쇠서나물 KWNU90390
Rudbeckia bicolor Nutt. 원추천인국(cult.) KWNU92749
Saussurea gracilis Maxim. 은분취 KWNU92237
Saussurea grandifolia Maxim. 서덜취 KWNU90240
Sigesbeckia glabrescens (Makino) Makino 진득찰 KWNU90235
Solidago virgaurea subsp. *asiatica* Kitam. ex H. Hara 미역취 KWNU90230
Syneilesis palmata (Thunb.) Maxim. 우산나물 KWNU90209
Taraxacum officinale Weber 서양민들레 KWNU90287
Taraxacum platycarpum Dahlst. 민들레 KWNU90286
Youngia japonica (L.) DC. 뽀리뱅이 KWNU90285
Alismataceae 택사과
Sagittaria aginashi Makino 보풀 KWNU91385
Liliaceae 백합과
Allium macrostemon Bunge 산달래 KWNU92725

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
Allium monanthum Maxim. 달래 KWNU90930
Allium thunbergii G. Don 산부추 KWNU90250
Convallaria keiskei Miq. 은방울꽃 KWNU90473
Disporum uniflorum Baker 윤판나물 KWNU92303
Disporum viridescens (Maxim.) Nakai 큰애기나리 KWNU90472
Heloniopsis koreana Fuse & N. S. Lee & M. N. Tamura 처녀치마 KWNU90471
Hemerocallis hakuunensis Nakai 백운산원추리 KWNU90269
Lilium amabile Palib. 털중나리 KWNU90469
Lilium lancifolium Thunb. 참나리 KWNU92667
Lilium tsingtauense Gilg 하늘말나리 KWNU90334
Polygonatum inflatum Kom. 퉁둥굴레 KWNU90420
Polygonatum involucratum (Franch. & Sav.) Maxim. 용둥굴레 KWNU90271
Polygonatum odoratum var. *pluriflorum* (Miq.) Ohwi 둥굴레 KWNU90220
Polygonatum thunbergii Morr. & Decne. 산둥굴레 KWNU90272
Scilla scilloides (Lindl.) Druce 무릇 KWNU92679
Smilax nipponica Miq. 선밀나물 KWNU90221
Smilax riparia var. *ussuriensis* (Regel) Hara & T. Koyama 밀나물 KWNU90221
Smilax sieboldii f. *intermis* (Nakai) H. Hara 민청가시덩굴 KWNU90347
Smilax sieboldii Miq. 청가시덩굴 KWNU92728
Dioscoreaceae 마과
Dioscorea batatas Decne. 마 KWNU90244
Dioscorea japonica Thunb. 참마 KWNU92695
Dioscorea nipponica Makino 부채마 KWNU90248
Dioscorea septemloba Thunb. 국화마 KWNU92719
Pontederiaceae 물옥잠과
Monochoria vaginalis var. *plantaginea* (Roxb.) Solms 물달개비 KWNU91552
Iridaceae 붓꽃과
Iris rossii Baker 각시붓꽃 KWNU90340
Iris sanguinea Donn ex Horn 붓꽃 KWNU93393
Juncaceae 골풀과
Juncus effusus var. *decipiens* Buchenau 골풀 KWNU90747
Juncus tenuis Willd. 길골풀 KWNU90539
Luzula capitata (Miq.) Miq. 꿩의밥 KWNU90538
Commelinaceae 닭의장풀과
Commelina communis L. 닭의장풀 KWNU91580

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
Commelina communis var. *angustifolia* Nakai 좀닭의장풀 KWNU92476
Streptolirion volubile Edgew. 덩굴닭의장풀 KWNU91459
Gramineae 벼과
Agropyron ciliare (Trin.) Franch. 속털개밀 KWNU91143
Agropyron tsukushiense var. *transiens* (Hack.) Ohwi 개밀 KWNU91188
Agropyron yezoense Honda 자주개밀 KWNU92748
Agrostis clavata var. *nukabo* Ohwi 겨이삭 KWNU91125
Alopecurus aequalis Sobol. 뚝새풀 KWNU91142
Arundinella hirta (Thunb.) Koidz. 새 KWNU89426
Arundinella hirta var. *ciliata* Koidz. 털새 KWNU91161
Calamagrostis arundinacea (L.) Roth 실새풀 KWNU90749
Dactylis glomerata L. 오리새 KWNU93437
Diarrhena fauriei (Hack.) Ohwi 광릉용수염 KWNU91131
Digitaria ciliaris (Retz.) Koel. 바랭이 KWNU91208
Echinochloa crusgalli (L.) P. Beauv. 돌피 KWNU91207
Eleusine indica (L.) Gaertn. 왕바랭이 KWNU91152
Eragrostis ferruginea (Thunb.) P. Beauv. 그령 KWNU91206
Eriochloa villosa (Thunb.) Kunth 나도개피 KWNU91205
Festuca arundinacea Schreb. 큰김의털 KWNU91163
Hierochloe odorata (L.) P. Beauv. 향모 KWNU91149
Lolium perenne L. 호밀풀 KWNU81148
Melica onoei Franch. & Sav. 쌀새 KWNU91147
Microstegium vimineum (Trin.) A. Camus 나도바랭이새 KWNU89417
Microstegium vimineum var. *imberbe* (Nees ex Steud.) Honda 큰듬성이삭새 KWNU91165
Milium effusum L. 나도겨이삭 KWNU91168
Miscanthus sinensis Andersson 참억새 KWNU91155
Miscanthus sinensis f. *gracillimus* (Hitchc.) Ohwi 가는잎억새 KWNU91156
Miscanthus sinensis var. *purpurascens* (Andersson) Rendle 억새 KWNU91210
Oplismenus undulatifolius (Ard.) P. Beauv. 주름조개풀 KWNU91342
Panicum bisulcatum Thunb. 개기장 KWNU92720
Panicum dichotomiflorum Michx. 미국개기장 KWNU91351
Phleum pratense L. 큰조아재비 KWNU91122
Phragmites japonica Steud. 달뿌리풀 KWNU91336
Poa acroleuca Steud. 실포아풀 KWNU92721
Poa hisauchii Honda 구내풀 KWNU91218

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
Poa sphondylodes Trin. 포아풀 KWNU91361
Setaria × *pycnocoma* (Steud.) Henrard ex Nakai 수강아지풀 KWNU91177
Setaria faberii Herrm. 가을강아지풀 KWNU91213
Setaria glauca (L.) P. Beauv. 금강아지풀 KWNU91180
Setaria viridis (L.) P. Beauv. 강아지풀 KWNU91160
Spodiopogon sibiricus Trin. 큰기름새 KWNU91117
Trisetum bifidum (Thunb.) Ohwi 잠자리피 KWNU91355
Araceae 천남성과
Arisaema amurense f. *serratum* (Nakai) Kitag. 천남성 KWNU91574
Arisaema peninsulae Nakai 점박이천남성 KWNU93403
Pinellia ternata (Thunb.) Breitenb. 반하 KWNU92760
Cyperaceae 사초과
Carex filipes Franch. & Sav. 낚시사초 KWNU92688
Carex glabrescens Ohwi 곱슬사초 KWNU90066
Carex hakonensis Franch. & Sav. 애기바늘사초 KWNU90212
Carex japonica Thunb. 개찌버리사초 KWNU90830
Carex laevissima Nakai 애괭이사초 KWNU90758
Carex leiorhyncha C. A. Mey. 산괭이사초 KWNU90829
Carex maackii Maxim. 타래사초 KWNU90687
Carex neurocarpa Maxim. 괭이사초 KWNU90742
Carex phacota Spreng. 비늘사초 KWNU90740
Carex polyschoena H. Lév. & Vaniot 가지청사초 KWNU90214
Carex siderosticta Hance 대사초 KWNU90755
Cyperus amuricus Maxim. 방동사니 KWNU92673
Cyperus difformis L. 알방동사니 KWNU90753
Cyperus hakonensis Franch. & Sav. 병아리방동사니 KWNU90826
Cyperus microiria Steud. 금방동사니 KWNU90326
Cyperus orthostachyus Franch. & Sav. 쇠방동사니 KWNU90752
Kyllinga brevifolia Rottb. 파대가리 KWNU90825
Lipocarpha microcephala (R. Br.) Kunth 세대가리 KWNU90543
Scirpus juncoides var. *hotarui* (Ohwi) Ohwi 올챙이고랭이 KWNU89178
Scirpus wallichii Nees 수원고랭이 KWNU90023
Orchidaceae 난초과
Cephalanthera longibracteata Blume 은대난초 KWNU91007
Liparis kumokiri F. Maek. 옥잠난초 KWNU91295