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

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(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 km² 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 km² 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 Meteorological 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.

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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) = $S/N \cdot V \times 100$

(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 = $S/N \times 100$

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

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

Family name	Scientific name/Korean name	Grade
Oleaceae 물푸레나무과	<i>Abeliophyllum distichum</i> Nakai 미선나무	2, CR
Ranunculaceae 미나리아재비과	<i>Eranthis stellata</i> Maxim. 너도바람꽃	LC
Aristolochiaceae 쥐방울덩굴과	<i>Aristolochia contorta</i> Bunge 쥐방울덩굴	LC
Saxifragaceae 범의귀과	<i>Rodgersia podophylla</i> A.Gray 도깨비부채	LC
Violaceae 제비꽃과	<i>Viola albida</i> Palib. 태백제비꽃	LC
	<i>Viola diamantiaca</i> Nakai 금강제비꽃	LC
Solanaceae 가지과	<i>Scopolia japonica</i> Maxim. 미치광이풀	LC
Araliaceae 두릅나무과	<i>Eleutherococcus divaricatus</i> var. <i>chiisanensis</i> (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	<i>Abeliophyllum distichum</i> Nakai 미선나무
IV	<i>Anemone reflexa</i> Steph. ex Willd. 회리바람꽃 <i>Chrysosplenium ramosum</i> Maxim. 가지쟁이눈 <i>Rodgersia podophylla</i> A. Gray 도깨비부채 <i>Wisteria floribunda</i> (Willd.) DC. 등
III	<i>Betula chinensis</i> Maxim. 개박달나무 <i>Aconitum longecassidatum</i> Nakai 흰전범 <i>Eranthis stellata</i> Maxim. 너도바람꽃 <i>Spiraea salicifolia</i> L. 꼬리조팝나무 <i>Viola diamantiaca</i> Nakai 금강제비꽃 <i>Angelica genuflexa</i> Nutt. ex Torr. & A. Gray 왜천궁 <i>Scopolia japonica</i> Maxim. 미치광이풀 <i>Diarrhena fauriei</i> (Hack.) Ohwi 광릉용수염 <i>Carex phacota</i> Spreng. 비늘사초
II	<i>Dryopteris expansa</i> (C. Presl) Fraser-Jenk. & Jermy 퍼진고사리 <i>Polystichum braunii</i> (Spenn.) Fee 좁나도히초미 <i>Aquilegia buergeriana</i> var. <i>oxysepala</i> (Trautv. & Meyer) Kitam. 매발톱 <i>Caltha palustris</i> L. 동의나물 <i>Caulophyllum robustum</i> Maxim. 평의다리아재비 <i>Potentilla dickinsii</i> Franch. & Sav. 돌양지꽃 <i>Acer triflorum</i> Kom. 복자기 <i>Viola orientalis</i> (Maxim.) W. Becker 노랑제비꽃 <i>Viola tokubuchiana</i> var. <i>takedana</i> (Makino) F. Maek. 민둥피 제비꽃 <i>Eleutherococcus divaricatus</i> var. <i>chiisanensis</i> (Nakai) C. H. Kim & B. Y. Sun 지리산오갈피 <i>Vaccinium hirtum</i> var. <i>koreanum</i> (Nakai) Kitam. 산앵도나무 <i>Primula jesoana</i> Miq. 큰앵초 <i>Galium paradoxum</i> Maxim. 두메갈퀴 <i>Brachybotrys paridiformis</i> Maxim. ex Oliv. 당개지치 <i>Weigela florida</i> (Bunge) A. DC. 붉은병꽃나무 <i>Adoxa moschatellina</i> L. 연복초 <i>Cirsium setidens</i> (Dunn) Nakai 고려엉겅퀴 <i>Ligularia fischeri</i> (Ledeb.) Turcz. 곰취 <i>Heloniopsis koreana</i> Fuse & N. S. Lee & M. N. Tamura 처녀 치마
I	<i>Dryopteris crassirhizoma</i> Nakai 관중 <i>Matteuccia struthiopteris</i> (L.) Tod. 청나래고사리 <i>Polystichum ovatopaleaceum</i> var. <i>coraiense</i> (H.Christ) Sa.Kurata 참나도히초미

Table 5. Continued.

Grade	Scientific name/Korean name
I	<i>Juglans mandshurica</i> Maxim. 가래나무
	<i>Lychnis cognata</i> Maxim. 동자꽃
	<i>Aconitum jaluense</i> Kom. 투구꽃
	<i>Anemone raddeana</i> Regel 평의바람꽃
	<i>Chloranthus japonicus</i> Siebold 홀아비꽃대
	<i>Aristolochia contorta</i> Bunge 쥐방울덩굴
	<i>Hylomecon ernalis</i> Maxim. 피나무
	<i>Hylotelephium verticillatum</i> (L.) H. Ohba 세잎평의비름
	<i>Chrysosplenium japonicum</i> (Maxim.) Makino 산팽이눈
	<i>Ribes mandshuricum</i> (Maxim.) Kom. 까치밥나무
	<i>Malus baccata</i> (L.) Borkh. 야광나무
	<i>Potentilla cryptotaeniae</i> Maxim. 물양지꽃
	<i>Vicia pseudo-orobus</i> Fisch. & C. A. Mey. 큰등갈퀴
	<i>Oxalis obtriangulata</i> Maxim. 큰팽이밥
	<i>Impatiens nolitangere</i> L. 노랑물봉선
	<i>Buxus koreana</i> Nakai ex Chung & al. 회양목
	<i>Clinopodium micranthum</i> (Regel) Hara 두메충충이
	<i>Lonicera praeflorens</i> Batalin 울괴불나무
	<i>Cirsium pendulum</i> Fisch. ex DC. 큰엉겅퀴
	<i>Sagittaria aginashi</i> Makino 보풀
	<i>Carex maackii</i> 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	<i>Fallopia dentatoalata</i> (F. Schmidt) Holub 큰닭의덩굴
	<i>Fallopia dumetorum</i> (L.) Holub 닭의덩굴
	<i>Persicaria orientalis</i> (L.) Spach 털여뀌
	<i>Rumex acetosella</i> L. 애기수영
Phytolaccaceae 자리공과	<i>Phytolacca americana</i> L. 미국자리공
Caryophyllaceae 석죽과	<i>Silene armeria</i> L. 끈끈이대나물
Amaranthaceae 비름과	<i>Amaranthus lividus</i> L. 개비름
	<i>Amaranthus patulus</i> Bertol. 가는털비름
Cruciferae 십자화과	<i>Brassica juncea</i> (L.) Czern. 갓(cult.)
	<i>Lepidium virginicum</i> L. 콩다닥냉이
Leguminosae 콩과	<i>Amorpha fruticosa</i> L. 족제비싸리(cult.)
	<i>Melilotus alba</i> Medicus ex Desv. 흰전동싸리
	<i>Robinia pseudoacacia</i> L. 아까시나무(cult.)
	<i>Trifolium repens</i> L. 토끼풀
Euphorbiaceae 대극과	<i>Euphorbia supina</i> Raf. 애기땅빈대

Table 6. List of naturalized plants in Oeumsan Mountain.

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

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오음산(강원, 홍천 및 횡성)의 관속식물상

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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 509분류군이였다. 특산식물은 9분류군이였으며, 멸종위기야생식물은 2급에 1분류군이였고, 희귀식물은 8분류군이였다. 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
Equisetaceae 속새과
<i>Equisetum arvense</i> L. 쇠뜨기 KWN91173
Osmundaceae 고비과
<i>Osmunda cinnamomea</i> (L.) C. Presl 평고비 WNU90636
<i>Osmunda japonica</i> Thunb. 고비 KWN90635
Dennstaedtiaceae 잔고사리과
<i>Dennstaedtia hirsuta</i> (Sw.) Mett. ex Miq. 잔고사리 KWN91327
<i>Dennstaedtia wilfordii</i> (T. Moore) Christ 황고사리 KWN91110
<i>Pteridium aquilinum</i> var. <i>latiusculum</i> (Desv.) Underw. ex A. Heller 고사리 KWN90505
Aspleniaceae 꼬리고사리과
<i>Asplenium incisum</i> Thunb. 꼬리고사리 KWN91236
<i>Asplenium ruprechtii</i> Sa. Kurata 거미고사리 KWN92689
Thelypteridaceae 처녀고사리과
<i>Thelypteris palustris</i> (Salisb.) Schott 처녀고사리 KWN90677
Woodsiaceae 우드풀과
<i>Woodsia manchuriensis</i> Hook. 만주우드풀 KWN90503
<i>Woodsia polystichoides</i> D. C. Eaton 우드풀 KWN90632
Onocleaceae 야산고비과
<i>Matteuccia struthiopteris</i> (L.) Tod. 청나래고사리 KWN91644
<i>Onoclea sensibilis</i> var. <i>interrupta</i> Maxim. 야산고비 KWN91641
<i>Pentarhizidium orientalis</i> (Hook.) Hayata 개면마 KWN91642
Athyriaceae 개고사리과
<i>Athyrium brevifrons</i> Nakai ex Kitagawa 참새발고사리 KWN91246
<i>Athyrium niponicum</i> (Mett.) Hance 개고사리 KWN90679
<i>Athyrium yokoscense</i> (Franch. & Sav.) Christ 뱀고사리 KWN90509
<i>Cornopteris crenulatoserrulata</i> (Makino) Nakai 응달고사리 KWN91233
<i>Deparia japonica</i> (Thunb.) M. Kato 진고사리 KWN91627
<i>Deparia orientalis</i> var. <i>albosquamata</i> M. Kato 흰털고사리 KWN91322
Dryopteridaceae 관중과
<i>Dryopteris bissetiana</i> (Baker) C. Chr. 산족제비고사리 KWN91225
<i>Dryopteris chinensis</i> (Baker) Koidz. 가는잎족제비고사리 KWN91223
<i>Dryopteris crassirhizoma</i> Nakai 관중 KWN91239
<i>Dryopteris expansa</i> (Pr.) Franch.-Jenkins et Jermy 퍼진고사리 KWN92727
<i>Dryopteris monticola</i> (Makino) C. Chr. 왕지네고사리 KWN91636
<i>Polystichum braunii</i> (Spenn.) Fee 좀나도히초미 KWN92692

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
<i>Polystichum ovato-paleaceum</i> var. <i>coraiense</i> (Christ) Sa. Kurata 참나도히초미 KWN91227
<i>Polystichum tripterum</i> (Kunze) C. Presl 십자고사리 KWN91637
Ginkgoaceae 은행나무과
<i>Ginkgo biloba</i> L. 은행나무(cult.) KWN91174
Pinaceae 소나무과
<i>Larix kaempferi</i> (Lamb.) Carrière 일본잎갈나무(cult.) KWN92735
<i>Pinus densiflora</i> Siebold & Zucc. 소나무 KWN91331
Cupressaceae 측백나무과
<i>Juniperus rigida</i> Siebold & Zucc. 노간주나무 KWN91329
Juglandaceae 가래나무과
<i>Juglans mandshurica</i> Maxim. 가래나무 KWN91608
Salicaceae 버드나무과
<i>Populus tomentiglandulosa</i> T. B. Lee 은사시나무(cult.) KWN93863
<i>Salix caprea</i> L. 호랑버들 KWN91378
<i>Salix gracilistyla</i> Miq. 갯버들 KWN91377
<i>Salix koriyanagi</i> Kimura 키버들 KWN91450
Betulaceae 자작나무과
<i>Alnus sibirica</i> Fisch. ex Turcz. 물오리나무 KWN90580
<i>Betula chinensis</i> Maxim. 개박달나무 KWN90800
<i>Betula platyphylla</i> var. <i>japonica</i> (Miq.) H. Hara 자작나무 KWN90799
<i>Carpinus cordata</i> Blume 까치박달 KWN90824
<i>Corylus heterophylla</i> Fisch. ex Trautv. 개암나무 KWN90796
<i>Corylus sieboldiana</i> var. <i>mandshurica</i> (Maxim.) C. K. Schneid. 물개암나무 KWN90820
Fagaceae 너도밤나무과
<i>Castanea crenata</i> Siebold & Zucc. 밤나무(cult.) KWN90629
<i>Quercus aliena</i> Blume 갈참나무 KWN90534
<i>Quercus dentata</i> Thunb. 떡갈나무 KWN90671
<i>Quercus mongolica</i> Fisch. ex Ledeb. 신갈나무 KWN90670
<i>Quercus serrata</i> Thunb. 졸참나무 KWN90627
<i>Quercus variabilis</i> Blume 굴참나무 KWN90669
Ulmaceae 느릅나무과
<i>Ulmus davidiana</i> var. <i>japonica</i> (Rehder) Nakai 느릅나무 KWN92690
Moraceae 뽕나무과
<i>Fatoua villosa</i> (Thunb.) Nakai 뽕모시풀 KWN91463
<i>Morus bombycis</i> Koidz. 산뽕나무 KWN91464
Urticaceae 켜기풀과

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
<i>Boehmeria longispica</i> Steud. 왜모시풀 KWNNU91401
<i>Boehmeria platanifolia</i> Franch. & Sav. 개모시풀 KWNNU91573
<i>Boehmeria spicata</i> (Thunb.) Thunb. 좁개잎나무 KWNNU91403
<i>Pilea mongolica</i> Wedd. 모시물통이 KWNNU91571
Polygonaceae 마디풀과
<i>Fallopia dumetorum</i> (L.) Holub 닭의덩굴 KWNNU90463
<i>Fagopyrum esculentum</i> Moench 메밀(cult.) KWNNU91381
<i>Fallopia dentatolata</i> (F. Schmidt) Holub 큰닭의덩굴 KWNNU90917
<i>Fallopia dumetorum</i> (L.) Holub 닭의덩굴 KWNNU90463
<i>Persicaria dissitiflora</i> (Hemsl.) H. Gross ex Mori 가시여뀌 KWNNU90967
<i>Persicaria filiformis</i> (Thunb.) Nakai ex Mori 이삭여뀌 KWNNU90966
<i>Persicaria hydropiper</i> (L.) Spach 여뀌 KWNNU90460
<i>Persicaria lapathifolia</i> (L.) Gray 환여뀌 KWNNU90697
<i>Persicaria longiseta</i> (Bruijn) Kitag. 개여뀌 KWNNU90121
<i>Persicaria nepalensis</i> (Meisn.) H. Gross 산여뀌 KWNNU90689
<i>Persicaria orientalis</i> (L.) Spach 털여뀌 KWNNU92677
<i>Persicaria perfoliata</i> (L.) H. Gross 머느리배꼽 KWNNU90970
<i>Persicaria posumbu</i> var. <i>laxiflora</i> (Meisn.) H. Hara 장대여뀌 KWNNU90725
<i>Persicaria sagittata</i> (L.) H. Gross 미꾸리남시 KWNNU90722
<i>Persicaria senticosa</i> (Meisn.) H. Gross ex Nakai 머느리밧새 KWNNU90719
<i>Persicaria thunbergii</i> (Siebold & Zucc.) H. Gross 고마리 KWNNU90716
<i>Persicaria viscofera</i> var. <i>robusta</i> (Makino) Hiyama 큰끈끈이여뀌 KWNNU90976
<i>Polygonum aviculare</i> L. 마디풀 KWNNU90467
<i>Rumex acetosa</i> L. 수영 KWNNU90465
<i>Rumex acetosella</i> L. 애기수영 KWNNU90969
<i>Rumex japonicus</i> Houtt. 참소리쟁이 KWNNU90920
Phytolaccaceae 자리공과
<i>Phytolacca americana</i> L. 미국자리공 KWNNU92769
Portulacaceae 쇠비름과
<i>Portulaca oleracea</i> L. 쇠비름 KWNNU91369
Caryophyllaceae 석죽과
<i>Arenaria serpyllifolia</i> L. 벼룩이자리 KWNNU91375
<i>Cerastium holosteoides</i> var. <i>hallaisanense</i> (Nakai) Mizush. 점나도나물 KWNNU91104
<i>Dianthus chinensis</i> L. 패랭이꽃 KWNNU91448
<i>Lychnis cognata</i> Maxim. 동자꽃 KWNNU91099

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
<i>Pseudostellaria davidii</i> (Franch.) Pax 덩굴개별꽃 KWNNU91447
<i>Pseudostellaria heterophylla</i> (Miq.) Pax 개별꽃 KWNNU91373
<i>Sagina japonica</i> (Sw.) Ohwi 개미자리 KWNNU92744
<i>Silene armeria</i> L. 끈끈이대나물 KWNNU92732
<i>Silene firma</i> Siebold & Zucc. 장구채 KWNNU91099
<i>Silene seoulensis</i> Nakai 가는장구채 KWNNU92699
<i>Stellaria alsine</i> var. <i>undulata</i> (Thunb.) Ohwi 벼룩나물 KWNNU92764
<i>Stellaria aquatica</i> (L.) Scop. 쇠별꽃 KWNNU91444
<i>Stellaria media</i> (L.) Vill. 별꽃 KWNNU92420
Chenopodiaceae 명아주과
<i>Chenopodium album</i> var. <i>centrorubrum</i> Makino 명아주 KWNNU91541
Amaranthaceae 비름과
<i>Achyranthes japonica</i> (Miq.) Nakai 쇠무릎 KWNNU91108
<i>Amaranthus lividus</i> L. 개비름 KWNNU92738
<i>Amaranthus patulus</i> Bertol. 가는털비름 KWNNU91376
Schisandraceae 오미자과
<i>Schisandra chinensis</i> (Turcz.) Baill. 오미자 KWNNU90872
Lauraceae 녹나무과
<i>Lindera obtusiloba</i> Blume 생강나무 KWNNU90652
Ranunculaceae 미나리아재비과
<i>Aconitum ciliare</i> DC. 늦꽃가락나물 KWNNU92726
<i>Aconitum jaluense</i> Kom. 투구꽃 KWNNU90637
<i>Aconitum longecassidatum</i> Nakai 흰진범 KWNNU90602
<i>Aconitum pseudolaeve</i> Nakai 진범 KWNNU90596
<i>Actaea asiatica</i> H. Hara 노루삼 KWNNU92724
<i>Anemone raddeana</i> Regel 썩의바람꽃 KWNNU90812
<i>Anemone reflexa</i> Steph. ex Willd. 회리바람꽃 KWNNU90593
<i>Aquilegia buergeriana</i> var. <i>oxysepala</i> (Trautv. & Meyer) Kitam. 매발톱 KWNNU90811
<i>Caltha palustris</i> L. 동의나물 KWNNU90592
<i>Cimicifuga dahurica</i> (Turcz. ex Fisch. & C. A. Mey.) Maxim. 눈빛승마 KWNNU90809
<i>Clematis apiifolia</i> DC. 사위질빵 KWNNU90573
<i>Clematis fusca</i> var. <i>violacea</i> Maxim. 종덩굴 KWNNU90570
<i>Clematis heracleifolia</i> DC. 병조희풀 KWNNU93406
<i>Clematis terniflora</i> var. <i>mandshurica</i> (Rupr.) Ohwi 으아리 KWNNU90643
<i>Clematis trichotoma</i> Nakai 할미밀망 KWNNU90786
<i>Eranthis stellata</i> Maxim. 너도바람꽃 KWNNU90567
<i>Hepatica asiatica</i> Nakai 노루귀 KWNNU93407

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
<i>Ranunculus chinensis</i> Bunge 젓가락나물 KWN90783
<i>Ranunculus japonicus</i> Thunb. 미나리아재비 KWN90781
<i>Ranunculus tachiroei</i> Franch. & Sav. 개구리미나리 KWN90603
<i>Thalictrum aquilegifolium</i> var. <i>sibiricum</i> Regel & Tiling 평의다리 KWN90564
Berberidaceae 매자나무과
<i>Caulophyllum robustum</i> Maxim. 평의다리아재비 KWN90513
Menispermaceae 방기과
<i>Menispermum dauricum</i> DC. 새모래덩굴 KWN90585
Chloranthaceae 홀아비꽃대과
<i>Chloranthus japonicus</i> Siebold 홀아비꽃대 KWN91545
Aristolochiaceae 쥐방울덩굴과
<i>Aristolochia contorta</i> Bunge 쥐방울덩굴 KWN90262
<i>Asarum versicolor</i> (K. Yamaki) Y. N. Lee 무늬족도리풀 KWN90383
Actinidiaceae 다래나무과
<i>Actinidia arguta</i> (Siebold & Zucc.) Planch. ex Miq. 다래 KWN90480
<i>Actinidia polygama</i> (Siebold & Zucc.) Planch. ex Maxim. 개다래 KWN93415
Guttiferae 물레나물과
<i>Hypericum ascyron</i> L. 물레나물 KWN92729
<i>Hypericum erectum</i> Thunb. 고추나물 KWN91451
<i>Hypericum laxum</i> (Blume) Koidz. 좁고추나물 KWN91538
Papaveraceae 양귀비과
<i>Chelidonium majus</i> var. <i>asiaticum</i> (H. Hara) Ohwi 애기똥풀 KWN90367
<i>Hylomecon vernalis</i> Maxim. 피나물 KWN90403
Fumariaceae 현호색과
<i>Corydalis lineariloba</i> Siebold & Zucc. 선현호색 KWN90384
<i>Corydalis pauciovulata</i> Ohwi 선괴불주머니 KWN90373
<i>Corydalis remota</i> Fisch. ex Maxim. 현호색 KWN90282
<i>Corydalis speciosa</i> Maxim. 산괴불주머니 KWN90370
<i>Dicentra spectabilis</i> (L.) Lem. 금낭화 KWN91767
Cruciferae 십자화과
<i>Arabis glabra</i> Bernh. 장대나물 KWN90412
<i>Barbarea orthoceras</i> Ledeb. 나도냉이 KWN90411
<i>Brassica juncea</i> (L.) Czern. 갓(cult.) KWN97933
<i>Capsella bursapastoris</i> (L.) L. W. Medicus 냉이 KWN90265
<i>Cardamine flexuosa</i> With. 황새냉이 KWN90358
<i>Cardamine impatiens</i> L. 싸리냉이 KWN90357

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
<i>Cardamine leucantha</i> (Tausch) O. E. Schulz 미나리냉이 KWN90409
<i>Cardamine scutata</i> Thunb. 큰황새냉이 KWN92761
<i>Draba nemorosa</i> L. 꽃다지 KWN92693
<i>Lepidium virginicum</i> L. 콩다닥냉이 KWN90382
<i>Rorippa indica</i> (L.) Hiern 개갓냉이 KWN90043
<i>Rorippa palustris</i> (Leyss.) Besser 속속이풀 KWN90369
Crassulaceae 돌나물과
<i>Hylotelephium verticillatum</i> (L.) H. Ohba 세잎평의비름 KWN90986
<i>Sedum aizoon</i> L. 가는기린초 KWN90709
<i>Sedum kamtschaticum</i> Fisch. & Mey. 기린초 KWN90731
<i>Sedum polytrichoides</i> Hemsl. 바위채송화 KWN90482
<i>Sedum sarmentosum</i> Bunge 돌나물 KWN90732
Saxifragaceae 범의귀과
<i>Astilbe rubra</i> Hook. f. & Thomson 노루오줌 KWN90441
<i>Chrysosplenium flagelliferum</i> F. Schmidt 애기괭이눈 KWN90737
<i>Chrysosplenium japonicum</i> (Maxim.) Makino 산괭이눈 KWN90486
<i>Chrysosplenium ramosum</i> Maxim. 가지괭이눈 KWN90942
<i>Deutzia glabrata</i> Kom. 물참대 KWN90487
<i>Deutzia grandiflora</i> var. <i>baroniana</i> Diels 바위말발도리 KWN92747
<i>Deutzia uniflora</i> Shirai 매화말발도리 KWN90943
<i>Hydrangea serrata</i> f. <i>acuminata</i> (Siebold & Zucc.) E. H. Wilson 산수국 KWN90443
<i>Philadelphus tenuifolius</i> Rupr. & Maxim. 얇은잎고광나무 KWN90699
<i>Ribes mandshuricum</i> (Maxim.) Kom. 까치밥나무 KWN90444
<i>Ribes maximowiczianum</i> Kom. 명자순 KWN91251
<i>Rodgersia podophylla</i> A. Gray 도깨비부채 KWN92122
<i>Saxifraga fortunei</i> var. <i>incislobata</i> (Engl. & Irmsch.) Nakai 바위떡풀 KWN90944
Rosaceae 장미과
<i>Agrimonia coreana</i> Nakai 산짚신나물 KWN91255
<i>Agrimonia pilosa</i> Ledeb. 짚신나물 KWN91028
<i>Crataegus pinnatifida</i> Bunge 산사나무 KWN91027
<i>Duchesnea indica</i> (Andr.) Focke 뽕딸기 KWN91249
<i>Geum aleppicum</i> Jacq. 큰뽕나무 KWN91024
<i>Kerria japonica</i> f. <i>pleniflora</i> (Witte) Rehder 죽단화(cult.) KWN91077
<i>Malus baccata</i> (L.) Borkh. 야광나무 KWN92700

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
<i>Potentilla anemonefolia</i> Lehm. 가락지나물 KWN91023
<i>Potentilla chinensis</i> Ser. 딱지꽃 KWN91074
<i>Potentilla cryptotaeniae</i> Maxim. 물양지꽃 KWN91072
<i>Potentilla dickinsii</i> Franch. & Sav. 돌양지꽃 KWN92520
<i>Potentilla fragarioides</i> var. <i>major</i> Maxim. 양지꽃 KWN91020
<i>Potentilla freyniana</i> Bornm. 세잎양지꽃 KWN91302
<i>Prunus padus</i> L. 귀룽나무 KWN91018
<i>Prunus persica</i> (L.) Batsch 복사나무(cult.) KWN91070
<i>Prunus serrulata</i> var. <i>pubescens</i> (Makino) Nakai 잔털벚나무 KWN91017
<i>Rosa multiflora</i> Thunb. 찔레꽃 KWN93405
<i>Rubus coreanus</i> Miq. 복분자딸기 KWN91016
<i>Rubus crataegifolius</i> Bunge 산딸기 KWN91068
<i>Rubus oldhamii</i> Miq. 줄딸기 KWN91297
<i>Rubus parvifolius</i> L. 명석딸기 KWN92771
<i>Rubus phoenicolasius</i> Maxim. 곰딸기 KWN91014
<i>Sanguisorba officinalis</i> L. 오이풀 KWN91013
<i>Sorbus commixta</i> Hedl. 마가목 KWN92668
<i>Spiraea prunifolia</i> f. <i>simpliciflora</i> Nakai 조팝나무 KWN91065
<i>Spiraea salicifolia</i> L. 꼬리조팝나무 KWN92671
<i>Stephanandra incisa</i> (Thunb.) Zabel 국수나무 KWN91009
Leguminosae 콩과
<i>Amorpha fruticosa</i> L. 족제비싸리(cult.) KWN91273
<i>Amphicarpea bracteata</i> subsp. <i>edgeworthii</i> (Benth.) H. Ohashi 새콩 KWN91272
<i>Chamaecrista nomame</i> (Siebold) H. Ohashi 차풀 KWN90993
<i>Desmodium podocarpum</i> var. <i>oxyphyllum</i> (DC.) H. Ohashi 도독눔의갈고리 KWN92661
<i>Glycine soja</i> Siebold & Zucc. 돌콩 KWN91036
<i>Kummerowia striata</i> (Thunb.) Schindl. 매듭풀 KWN91267
<i>Lathyrus davidii</i> Hance 활랑나물 KWN91480
<i>Lespedeza bicolor</i> Turcz. 싸리 KWN91264
<i>Lespedeza cuneata</i> G.Don 미수리 KWN92767
<i>Lespedeza cyrtobotrya</i> Miq. 참싸리 KWN91263
<i>Lespedeza maximowiczii</i> C. K. Schneid. 조록싸리 KWN91032
<i>Lespedeza maximowiczii</i> var. <i>tomentella</i> Nakai 털조록싸리 KWN90989
<i>Lespedeza x nakaii</i> T. B. Lee 꽃참싸리 KWN91004
<i>Lespedeza x schindleri</i> T. B. Lee 잡싸리 KWN91260
<i>Maackia amurensis</i> Rupr. 다릅나무 KWN91284
<i>Melilotus alba</i> Medicus ex Desv. 흰전동싸리 KWN91473

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
<i>Pueraria lobata</i> (Willd.) Ohwi 쑥 KWN91001
<i>Robinia pseudoacacia</i> L. 아까시나무(cult.) KWN91000
<i>Sophora flavescens</i> Solander ex Aiton 고삼 KWN90999
<i>Trifolium repens</i> L. 토끼풀 KWN91279
<i>Vicia amurensis</i> Oett. 벌완두 KWN90995
<i>Vicia pseudo-orobus</i> Fisch. & C. A. Mey. 큰등갈퀴 KWN91277
<i>Vicia unijuga</i> A. Braun 나비나물 KWN91044
<i>Vigna angularis</i> var. <i>nipponensis</i> (Ohwi) Ohwi & H. Ohashi 새팥 KWN92293
<i>Wisteria floribunda</i> (Willd.) DC. 등(cult.) KWN92765
Oxalidaceae 팽이밥과
<i>Oxalis obtriangulata</i> Maxim. 큰팽이밥 KWN90960
<i>Oxalis stricta</i> L. 선팽이밥 KWN90983
Geraniaceae 쥐손이풀과
<i>Geranium sibiricum</i> L. 쥐손이풀 KWN93394
Euphorbiaceae 대극과
<i>Acalypha australis</i> L. 깨풀 KWN92680
<i>Euphorbia supina</i> Raf. 애기땅빈대 KWN92758
<i>Securinega suffruticosa</i> (Pall.) Rehder 광대싸리 KWN90933
Rutaceae 운향과
<i>Zanthoxylum schinifolium</i> Siebold & Zucc. 산초나무 KWN90703
Simaroubaceae 소태나무과
<i>Ailanthus altissima</i> (Mill.) Swingle 가축나무(cult.) KWN85605
<i>Picrasma quassioides</i> (D. Don) Benn. 소태나무 KWN90702
Polygalaceae 원지과
<i>Polygala japonica</i> Houtt. 애기풀 KWN90402
Anacardiaceae 옷나무과
<i>Rhus javanica</i> L. 붉나무 KWN90795
Aceraceae 단풍나무과
<i>Acer pictum</i> subsp. <i>mono</i> (Maxim.) Ohashi 고로쇠나무 KWN90867
<i>Acer pseudosieboldianum</i> (Pax) Kom. 당단풍나무 KWN90865
<i>Acer tataricum</i> subsp. <i>ginnala</i> (Maxim.) Wesm. 신나무 KWN90574
<i>Acer triflorum</i> Kom. 복자기 KWN90862
Balsaminaceae 봉선화과
<i>Impatiens nolitangere</i> L. 노랑물봉선 KWN90344
<i>Impatiens textori</i> Miq. 물봉선 KWN90341
Celastraceae 노박덩굴과
<i>Celastrus orbiculatus</i> Thunb. 노박덩굴 KWN90536
<i>Euonymus alatus</i> (Thunb.) Siebold 화살나무 KWN90078

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
<i>Euonymus alatus</i> f. <i>ciliatodentatus</i> (Franch. & Sav.) Hiyama 회잎 나무 KWN90663
<i>Tripterygium regelii</i> Sprague & Takeda 미역줄나무 KWN90494
Staphyleaceae 고추나무과
<i>Staphylea bumalda</i> DC. 고추나무 KWN90665
Buxaceae 회양목과
<i>Buxus koreana</i> Nakai ex Chung & al. 회양목(cult.) KWN90666
Vitaceae 포도과
<i>Ampelopsis brevipedunculata</i> f. <i>ciliata</i> (Nakai) T. B. Lee 털개머루 KWN90498
<i>Parthenocissus tricuspidata</i> (Siebold & Zucc.) Planch. 담쟁이덩굴 KWN90624
<i>Vitis coignetiae</i> Pulliat ex Planch. 머루 KWN90667
Tiliaceae 피나무과
<i>Tilia mandshurica</i> Rupr. & Maxim. 찰피나무 KWN91597
Sterculiaceae 벽오동과
<i>Corchoropsis tomentosa</i> (Thunb.) Makino 수까치개 KWN91554
Violaceae 제비꽃과
<i>Viola acuminata</i> Ledeb. 줄방제비꽃 KWN91520
<i>Viola albida</i> f. <i>takahashii</i> (Makino) W. T. Lee 단풍제비꽃 KWN91094
<i>Viola albida</i> Palib. 태백제비꽃 KWN91093
<i>Viola albida</i> var. <i>chaerophyllioides</i> (Regel) F. Maek. ex Hara 남산 제비꽃 KWN91441
<i>Viola collina</i> Besser 등근털제비꽃 KWN91517
<i>Viola diamantiaca</i> Nakai 금강제비꽃 KWN91439
<i>Viola hirtipes</i> S. Moore 흰털제비꽃 KWN91091
<i>Viola japonica</i> Langsd. ex Ging. 왜제비꽃 KWN91516
<i>Viola keiskei</i> Miq. 잔털제비꽃 KWN91515
<i>Viola mandshurica</i> W. Becker 제비꽃 KWN91364
<i>Viola orientalis</i> (Maxim.) W. Becker 노랑제비꽃 KWN91513
<i>Viola phalacrocarpa</i> Maxim. 털제비꽃 KWN91089
<i>Viola rossii</i> Hemsl. 고깔제비꽃 KWN91088
<i>Viola tokubuchiana</i> var. <i>takedana</i> (Makino) F. Maek. 민둥피제비꽃 KWN91087
<i>Viola tokubuchiana</i> var. <i>takedana</i> f. <i>variegata</i> F. Maek. 줄민둥피제비꽃 KWN91086
<i>Viola variegata</i> Fisch. ex Link 알록제비꽃 KWN91507
<i>Viola verecunda</i> A. Gray 콩제비꽃 KWN91083
Lythraceae 부처꽃과
<i>Rotala indica</i> (Willd.) Koehne 마디꽃 KWN90425
Onagraceae 바늘꽃과

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
<i>Ludwigia prostrata</i> Roxb. 여뀌바늘 KWN90940
<i>Oenothera biennis</i> L. 달맞이꽃 KWN90484
Alangiaceae 박쥐나무과
<i>Alangium platanifolium</i> var. <i>trilobum</i> (Miq.) Ohwi 박쥐나무 KWN92734
Cornaceae 층층나무과
<i>Cornus controversa</i> Hemsl. 층층나무 KWN92745
Araliaceae 두릅나무과
<i>Aralia cordata</i> var. <i>continentalis</i> (Kitag.) Y. C. Chu 독활 KWN90932
<i>Aralia elata</i> (Miq.) Seem. 두릅나무 KWN91736
<i>Eleutherococcus divaricatus</i> var. <i>chiisanensis</i> (Nakai) C. H. Kim & B. Y. Sun 지리산오갈피 KWN90475
Umbelliferae 산형과
<i>Angelica dahurica</i> (Fisch. ex Hoffm.) Benth. & Hook. f. ex Franch. & Sav. 구릿대 KWN90337
<i>Angelica decursiva</i> (Miq.) Franch. & Sav. 바디나물 KWN90255
<i>Angelica genuflexa</i> Nutt. ex Torr. & A. Gray 왜천궁 KWN90223
<i>Angelica polymorpha</i> Maxim. 궁궁이 KWN90274
<i>Oenanthe javanica</i> (Blume) DC. 미나리 KWN90670
<i>Osmorhiza aristata</i> (Thunb.) Makino & Yabe 긴사상자 KWN90363
<i>Ostericum grosseserratum</i> (Maxim.) Kitag. 신감채 KWN90413
<i>Peucedanum terebinthaceum</i> (Fisch.) Fisch. ex DC. 기름나물 KWN92525
<i>Pimpinella brachycarpa</i> (Kom.) Nakai 참나물 KWN90330
<i>Sanicula chinensis</i> Bunge 참반디 KWN90253
<i>Sillaphyton podagraria</i> (H. Boissieu) Pimenov 덕우기름나물 KWN90332
<i>Torilis japonica</i> (Houtt.) DC. 사상자 KWN90276
Pyrolaceae 노루발과
<i>Pyrola japonica</i> Klenze ex Alef. 노루발 KWN90495
Ericaceae 진달래과
<i>Rhododendron mucronulatum</i> Turcz. 진달래 KWN90501
<i>Rhododendron mucronulatum</i> var. <i>ciliatum</i> Nakai 털진달래 KWN92236
<i>Rhododendron schlippenbachii</i> Maxim. 철쭉 KWN90630
<i>Vaccinium hirtum</i> var. <i>koreanum</i> (Nakai) Kitam. 산앵도나무 KWN90673
Primulaceae 앵초과
<i>Androsace umbellata</i> (Lour.) Merr. 봄맞이 KWN91389
<i>Lysimachia clethroides</i> Duby 큰까치수염 KWN91458

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
<i>Lysimachia vulgaris</i> var. <i>davurica</i> (Ledeb.) R. Kunth 좁쌀풀 KWN91388
<i>Primula jesoana</i> Miq. 큰앵초 KWN91600
Styracaceae 때죽나무과
<i>Styrax obassia</i> Siebold & Zucc. 쪽동백나무 KWN91578
Symplocaceae 노린재나무과
<i>Symplocos chinensis</i> f. <i>pilosa</i> (Nakai) Ohwi 노린재나무 KWN91427
Oleaceae 물푸레나무과
<i>Abeliophyllum distichum</i> Nakai 미션나무 KWN90892
Gentianaceae 용담과
<i>Gentiana zollingeri</i> Faw. 큰구슬봉이 KWN90971
Asclepiadaceae 박주가리과
<i>Cynanchum ascyrifolium</i> (Franch. & Sav.) Matsum. 민백미꽃 KWN90890
<i>Cynanchum paniculatum</i> (Bunge) Kitag. 산해박 KWN93864
<i>Cynanchum wilfordii</i> (Maxim.) Hemsl. 큰조롱 KWN90888
<i>Metaplexis japonica</i> (Thunb.) Makino 박주가리 KWN90886
Rubiaceae 꼭두서니과
<i>Galium dahuricum</i> Turcz. 큰잎갈퀴 KWN91566
<i>Galium koreanum</i> (Nakai) Nakai 참갈퀴덩굴 KWN91395
<i>Galium paradoxum</i> Maxim. 두메갈퀴 KWN92793
<i>Galium pogonanthum</i> Franch. & Sav. 산갈퀴 KWN91429
<i>Galium spurium</i> var. <i>echinospermon</i> (Wallr.) Hayek 갈퀴덩굴 KWN92770
<i>Galium trifloriforme</i> Kom. 개선갈퀴 KWN91568
<i>Galium verum</i> var. <i>asiaticum</i> Nakai 솔나물 KWN91428
<i>Rubia akane</i> Nakai 꼭두서니 KWN92538
<i>Rubia chinensis</i> Regel & Maack 큰꼭두서니 KWN91394
<i>Rubia cordifolia</i> var. <i>pratensis</i> Maxim. 갈퀴꼭두서니 KWN92766
<i>Rubia chinensis</i> Regel & Maack 큰꼭두서니 KWN91374
Convolvulaceae 메꽃과
<i>Calystegia sepium</i> var. <i>japonicum</i> (Choisy) Makino 메꽃 KWN91454
<i>Cuscuta japonica</i> Choisy 새삼 KWN91383
Boraginaceae 지치과
<i>Brachybotrys paridiformis</i> Maxim. ex Oliv. 당개지치 KWN91504
<i>Trigonotis peduncularis</i> (Trevir.) Benth. ex Hemsl. 꽃마리 KWN91582
<i>Trigonotis radicans</i> var. <i>sericea</i> (Maxim.) H. Hara 참꽃마리 KWN91082
Verbenaceae 마편초과

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
<i>Callicarpa japonica</i> Thunb. 작살나무 KWN90897
Labiatae 꿀풀과
<i>Agastache rugosa</i> (Fisch. & Mey.) Kuntze 배초향 KWN90446
<i>Clinopodium micranthum</i> (Regel) Hara 두메충충이 KWN90882
<i>Elsholtzia ciliata</i> (Thunb.) Hyl. 향유 KWN90879
<i>Isodon inflexus</i> (Thunb.) Kudo 산박하 KWN90874
<i>Isodon japonicus</i> (Burm.) Hara 방아풀 KWN90456
<i>Lamium album</i> var. <i>barbatum</i> (Siebold & Zucc.) Franch. & Sav. 광대수염 KWN93402
<i>Lamium amplexicaule</i> L. 광대나물 KWN84986
<i>Leonurus japonicus</i> Houtt. 익모초 KWN92678
<i>Lycopus lucidus</i> Turcz. ex Benth. 썩싸리 KWN90454
<i>Meehanian urticifolia</i> (Miq.) Makino 벌개덩굴 KWN90959
<i>Mosla dianthera</i> (Buch.-Ham. ex Roxb.) ex Maxim. 쥐깨풀 KWN90453
<i>Mosla punctulata</i> (J. F. Gmelin) Nakai 들깨풀 KWN90451
<i>Prunella vulgaris</i> var. <i>lilacina</i> Nakai 꿀풀 KWN90449
<i>Scutellaria pekinensis</i> var. <i>transitra</i> (Makino) H. Hara 산골무꽃 KWN90447
<i>Stachys japonica</i> Miq. 석잠풀 KWN90953
Solanaceae 가지과
<i>Scopolia japonica</i> Maxim. 미치광이풀 KWN90711
<i>Solanum americanum</i> Mill. 미국까마중 KWN90691
<i>Solanum nigrum</i> L. 까마중 KWN92746
Scrophulariaceae 현삼과
<i>Lindernia procumbens</i> (Krock.) Borbas 발뚝외풀 KWN90910
<i>Mazus pumilus</i> (Burm.f.) Steenis 주름잎 KWN90907
<i>Melampyrum roseum</i> Maxim. 꽃머리리밥풀 KWN90904
<i>Phtheirospermum japonicum</i> (Thunb.) Kanitz 나도송이풀 KWN90901
<i>Veronica arvensis</i> L. 선개불알풀 KWN90900
Bignoniaceae 능소화과
<i>Campsis grandifolia</i> (Thunb.) K. Schum. 능소화(cult.) KWN92731
Phrymaceae 파리풀과
<i>Phryma leptostachya</i> var. <i>asiatica</i> H. Hara 파리풀 KWN90369
Plantaginaceae 질경이과
<i>Plantago asiatica</i> L. 질경이 KWN91387
Caprifoliaceae 인동과
<i>Lonicera japonica</i> Thunb. 인동덩굴 KWN90583
<i>Lonicera praeflorens</i> Batalin 올괴불나무 KWN90870

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
<i>Sambucus sieboldiana</i> var. <i>miquelii</i> (Nakai) Hara 지령쿠나무 KWN90606
<i>Weigela florida</i> (Bunge) A. DC. 붉은병꽃나무 KWN90804
<i>Weigela subsessilis</i> (Nakai) L. H. Bailey 병꽃나무 KWN90802
Adoxaceae 연복초과
<i>Adoxa moschatellina</i> L. 연복초 KWN90584
Valerianaceae 마타리과
<i>Patrinia scabiosaefolia</i> Fisch. ex Trevir. 마타리 KWN90651
<i>Patrinia villosa</i> (Thunb.) Juss. 똑갈 KWN92248
<i>Valeriana fauriei</i> Briq. 쥐오줌풀 KWN90649
Campanulaceae 초롱꽃과
<i>Adenophora verticillata</i> Fisch. 층층잔대 KWN91078
<i>Asyneuma japonicum</i> (Miq.) Briq. 영아자 KWN91434
<i>Campanula punctata</i> Lam. 초롱꽃 KWN91433
<i>Codonopsis lanceolata</i> (Siebold & Zucc.) Trautv. 더덕 KWN92753
<i>Lobelia chinensis</i> Lour. 수염가래꽃 KWN91499
<i>Platycodon grandiflorum</i> (Jacq.) A. DC. 도라지 KWN92733
<i>Platycodon grandiflorum</i> f. <i>albiflorum</i> (Honda) H. Hara 백도라지 (cult.) KWN93396
Compositae 국화과
<i>Adenocaulon himalaicum</i> Edgew. 멸가치 KWN90686
<i>Ainsliaea acerifolia</i> Sch. Bip. 단풍취 KWN93393
<i>Ambrosia artemisiifolia</i> L. 돼지풀 KWN90556
<i>Artemisia capillaris</i> Thunb. 사철쭉 KWN90662
<i>Artemisia gmelini</i> Weber ex Stechm. 더위지기 KWN90618
<i>Artemisia japonica</i> Thunb. 제비쭉 KWN90526
<i>Artemisia keiskeana</i> Miq. 맑은대쭉 KWN90660
<i>Artemisia princeps</i> Pamp. 쭉 KWN90659
<i>Artemisia stolonifera</i> (Maxim.) Kom. 넓은잎외쭉 KWN90658
<i>Aster ageratoides</i> Turcz. 까실쭉부쟁이 KWN90617
<i>Aster incisus</i> Fisch. 가새쭉부쟁이 KWN90657
<i>Aster meyerendorffii</i> (Regel & Maack) Voss 개쭉부쟁이 KWN90641
<i>Aster pilosus</i> Willd. 미국쭉부쟁이 KWN90615
<i>Aster scaber</i> Thunb. 참취 KWN90654
<i>Aster tataricus</i> L. f. 개미취 KWN90517
<i>Atractylodes ovata</i> (Thunb.) DC. 삽주 KWN90557
<i>Bidens bipinnata</i> L. 도깨비바늘 KWN92751
<i>Bidens frondosa</i> L. 미국가막사리 KWN90267
<i>Bidens radiata</i> var. <i>pinnatifida</i> (Turcz. ex DC.) Kitam. 구와가막사리 KWN90559
<i>Bidens tripartita</i> L. 가막사리 KWN90560

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
<i>Carduus crispus</i> L. 지느러미영경귀 KWN90561
<i>Centipeda minima</i> (L.) A. Br. & Asch. 중대가리풀 KWN90562
<i>Cirsium japonicum</i> var. <i>maackii</i> (Maxim.) Matsum. 영경귀 KWN90266
<i>Cirsium pendulum</i> Fisch. ex DC. 큰영경귀 KWN90309
<i>Cirsium setidens</i> (Dunn) Nakai 고려영경귀 KWN92242
<i>Conyza canadensis</i> (L.) Cronquist 망초 KWN90833
<i>Cosmos bipinnatus</i> Cav. 코스모스(cult.) KWN92736
<i>Crepidiastrum denticulatum</i> (Houtt.) Pak & Kawano 이고들빼기 KWN90814
<i>Crepidiastrum sonchifolium</i> (Bunge) Pak & Kawano 고들빼기 KWN90764
<i>Dendranthema boreale</i> (Makino) Ling ex Kitam. 산국 KWN90765
<i>Dendranthema zawadskii</i> (Herb.) Tzvelev 산구절초 KWN92234
<i>Erigeron annuus</i> (L.) Pers. 개망초 KWN90838
<i>Erigeron strigosus</i> Muhl. 주걱개망초 KWN90922
<i>Eupatorium japonicum</i> Thunb. 등골나물 KWN92535
<i>Galinsoga ciliata</i> (Raf.) S. F. Blake 털별꽃아재비 KWN90202
<i>Hemistepta lyrata</i> Bunge 지칭개 KWN90395
<i>Ixeridium dentatum</i> (Thunb.) Tzvelev 씹바귀 KWN90394
<i>Ixeris polycephala</i> Cass. 벌쭉바귀 KWN90393
<i>Lactuca indica</i> L. 왕고들빼기 KWN90392
<i>Ligularia fischeri</i> (Ledeb.) Turcz. 곰취 KWN89577
<i>Parasenecio auriculata</i> var. <i>matsumurana</i> Nakai 박취나물 KWN92929
<i>Petasites japonicus</i> (Siebold & Zucc.) Maxim. 머위 KWN90315
<i>Picris hieracioides</i> var. <i>koreana</i> Kitam. 쇠서나물 KWN90390
<i>Rudbeckia bicolor</i> Nutt. 원추천인국(cult.) KWN92749
<i>Saussurea gracilis</i> Maxim. 은분취 KWN92237
<i>Saussurea grandifolia</i> Maxim. 서덜취 KWN90240
<i>Sigesbeckia glabrescens</i> (Makino) Makino 진득찰 KWN90235
<i>Solidago virgaurea</i> subsp. <i>asiatica</i> Kitam. ex H. Hara 미역취 KWN90230
<i>Syneilesis palmata</i> (Thunb.) Maxim. 우산나물 KWN90209
<i>Taraxacum officinale</i> Weber 서양민들레 KWN90287
<i>Taraxacum platycarpum</i> Dahlst. 민들레 KWN90286
<i>Youngia japonica</i> (L.) DC. 뿌리뱅이 KWN90285
Alismataceae 택사과
<i>Sagittaria aginashi</i> Makino 보풀 KWN91385
Liliaceae 백합과
<i>Allium macrostemon</i> Bunge 산달래 KWN92725

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
<i>Allium monanthum</i> Maxim. 달래 KWN90930
<i>Allium thunbergii</i> G. Don 산부추 KWN90250
<i>Convallaria keiskei</i> Miq. 은방울꽃 KWN90473
<i>Disporum uniflorum</i> Baker 윤판나물 KWN92303
<i>Disporum viridescens</i> (Maxim.) Nakai 큰애기나리 KWN90472
<i>Heloniopsis koreana</i> Fuse & N. S. Lee & M. N. Tamura 처녀치마 KWN90471
<i>Hemerocallis hakuunensis</i> Nakai 백운산원추리 KWN90269
<i>Lilium amabile</i> Palib. 털중나리 KWN90469
<i>Lilium lancifolium</i> Thunb. 참나리 KWN92667
<i>Lilium tsingtauense</i> Gilg 하늘말나리 KWN90334
<i>Polygonatum inflatum</i> Kom. 통동굴레 KWN90420
<i>Polygonatum involucratum</i> (Franch. & Sav.) Maxim. 용동굴레 KWN90271
<i>Polygonatum odoratum</i> var. <i>pluriflorum</i> (Miq.) Ohwi 둥굴레 KWN90220
<i>Polygonatum thunbergii</i> Morr. & Decne. 산둥굴레 KWN90272
<i>Scilla scilloides</i> (Lindl.) Druce 무릇 KWN92679
<i>Smilax nipponica</i> Miq. 선밀나물 KWN90221
<i>Smilax riparia</i> var. <i>ussuriensis</i> (Regel) Hara & T. Koyama 밀나물 KWN90221
<i>Smilax sieboldii</i> f. <i>intermis</i> (Nakai) H. Hara 민청가시덩굴 KWN90347
<i>Smilax sieboldii</i> Miq. 청가시덩굴 KWN92728
Dioscoreaceae 마과
<i>Dioscorea batatas</i> Decne. 마 KWN90244
<i>Dioscorea japonica</i> Thunb. 참마 KWN92695
<i>Dioscorea nipponica</i> Makino 부채마 KWN90248
<i>Dioscorea septemloba</i> Thunb. 국화마 KWN92719
Pontederiaceae 물옥잠과
<i>Monochoria vaginalis</i> var. <i>plantaginea</i> (Roxb.) Solms 물달개비 KWN91552
Iridaceae 붓꽃과
<i>Iris rossii</i> Baker 각시붓꽃 KWN90340
<i>Iris sanguinea</i> Donn ex Horn 붓꽃 KWN93393
Juncaceae 골풀과
<i>Juncus effusus</i> var. <i>decipiens</i> Buchenau 골풀 KWN90747
<i>Juncus tenuis</i> Willd. 길골풀 KWN90539
<i>Luzula capitata</i> (Miq.) Miq. 꿩의밥 KWN90538
Commelinaceae 닭의장풀과
<i>Commelina communis</i> L. 닭의장풀 KWN91580

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
<i>Commelina communis</i> var. <i>angustifolia</i> Nakai 좁닭의장풀 KWN92476
<i>Streptolirion volubile</i> Edgew. 덩굴닭의장풀 KWN91459
Gramineae 벼과
<i>Agropyron ciliare</i> (Trin.) Franch. 속털개밀 KWN91143
<i>Agropyron tsukushiense</i> var. <i>transiens</i> (Hack.) Ohwi 개밀 KWN91188
<i>Agropyron yezoense</i> Honda 자주개밀 KWN92748
<i>Agrostis clavata</i> var. <i>nukabo</i> Ohwi 겨이삭 KWN91125
<i>Alopecurus aequalis</i> Sobol. 뚝새풀 KWN91142
<i>Arundinella hirta</i> (Thunb.) Koidz. 새 KWN98426
<i>Arundinella hirta</i> var. <i>ciliata</i> Koidz. 털새 KWN91161
<i>Calamagrostis arundinacea</i> (L.) Roth 실새풀 KWN90749
<i>Dactylis glomerata</i> L. 오리새 KWN93437
<i>Diarrhena fauriei</i> (Hack.) Ohwi 광릉용수염 KWN91131
<i>Digitaria ciliaris</i> (Retz.) Koel. 바랭이 KWN91208
<i>Echinochloa crusgalli</i> (L.) P. Beauv. 돌피 KWN91207
<i>Eleusine indica</i> (L.) Gaertn. 왕바랭이 KWN91152
<i>Eragrostis ferruginea</i> (Thunb.) P. Beauv. 그렁 KWN91206
<i>Eriochloa villosa</i> (Thunb.) Kunth 나도개피 KWN91205
<i>Festuca arundinacea</i> Schreb. 큰김의털 KWN91163
<i>Hierochloa odorata</i> (L.) P. Beauv. 향모 KWN91149
<i>Lolium perenne</i> L. 호밀풀 KWN81148
<i>Melica onoei</i> Franch. & Sav. 쌀새 KWN91147
<i>Microstegium vimineum</i> (Trin.) A. Camus 나도바랭이새 KWN89417
<i>Microstegium vimineum</i> var. <i>imberbe</i> (Nees ex Steud.) Honda 큰듬성이삭새 KWN91165
<i>Milium effusum</i> L. 나도겨이삭 KWN91168
<i>Miscanthus sinensis</i> Andersson 참억새 KWN91155
<i>Miscanthus sinensis</i> f. <i>gracillimus</i> (Hitchc.) Ohwi 가는잎억새 KWN91156
<i>Miscanthus sinensis</i> var. <i>purpurascens</i> (Andersson) Rendle 억새 KWN91210
<i>Oplismenus undulatifolius</i> (Ard.) P. Beauv. 주름조개풀 KWN91342
<i>Panicum bisulcatum</i> Thunb. 개기장 KWN92720
<i>Panicum dichotomiflorum</i> Michx. 미국개기장 KWN91351
<i>Phleum pratense</i> L. 큰조아재비 KWN91122
<i>Phragmites japonica</i> Steud. 갈퀴리풀 KWN91336
<i>Poa acroleuca</i> Steud. 실포아풀 KWN92721
<i>Poa hisauchii</i> Honda 구내풀 KWN91218

Appendix 1. Continued.

Scientific name/Korean name/Voucher number
<i>Poa sphondylodes</i> Trin. 포아풀 KWNNU91361
<i>Setaria × pycnocoma</i> (Steud.) Henrard ex Nakai 수강아지풀 KWNNU91177
<i>Setaria faberii</i> Herm. 가을강아지풀 KWNNU91213
<i>Setaria glauca</i> (L.) P. Beauv. 금강아지풀 KWNNU91180
<i>Setaria viridis</i> (L.) P. Beauv. 강아지풀 KWNNU91160
<i>Spodiopogon sibiricus</i> Trin. 큰기름새 KWNNU91117
<i>Trisetum bifidum</i> (Thunb.) Ohwi 잠자리피 KWNNU91355
Araceae 천남성과
<i>Arisaema amurense</i> f. <i>serratum</i> (Nakai) Kitag. 천남성 KWNNU91574
<i>Arisaema peninsulae</i> Nakai 점박이천남성 KWNNU93403
<i>Pinellia ternata</i> (Thunb.) Breitenb. 반하 KWNNU92760
Cyperaceae 사초과
<i>Carex filipes</i> Franch. & Sav. 뉘시사초 KWNNU92688
<i>Carex glabrescens</i> Ohwi 곱슬사초 KWNNU90066
<i>Carex hakonensis</i> Franch. & Sav. 애기바늘사초 KWNNU90212
<i>Carex japonica</i> Thunb. 개저머리사초 KWNNU90830
<i>Carex laevissima</i> Nakai 애랭이사초 KWNNU90758
<i>Carex leiorhyncha</i> C. A. Mey. 산랭이사초 KWNNU90829
<i>Carex maackii</i> Maxim. 타래사초 KWNNU90687
<i>Carex neurocarpa</i> Maxim. 뺨이사초 KWNNU90742
<i>Carex phacota</i> Spreng. 비늘사초 KWNNU90740
<i>Carex polyschoena</i> H. Lév. & Vaniot 가지청사초 KWNNU90214
<i>Carex siderosticta</i> Hance 대사초 KWNNU90755
<i>Cyperus amuricus</i> Maxim. 방동사니 KWNNU92673
<i>Cyperus difformis</i> L. 알방동사니 KWNNU90753
<i>Cyperus hakonensis</i> Franch. & Sav. 병아리방동사니 KWNNU90826
<i>Cyperus microiria</i> Steud. 금방동사니 KWNNU90326
<i>Cyperus orthostachyus</i> Franch. & Sav. 쇠방동사니 KWNNU90752
<i>Kyllinga brevifolia</i> Rottb. 파대가리 KWNNU90825
<i>Lipocarpa microcephala</i> (R. Br.) Kunth 세대가리 KWNNU90543
<i>Scirpus juncooides</i> var. <i>hotarui</i> (Ohwi) Ohwi 올챙이고랭이 KWNNU89178
<i>Scirpus wallichii</i> Nees 수원고랭이 KWNNU90023
Orchidaceae 난초과
<i>Cephalanthera longibracteata</i> Blume 은대난초 KWNNU91007
<i>Liparis kumokiri</i> F. Maek. 옥잠난초 KWNNU91295