



A checklist of vascular plants in limestone areas on the Korean Peninsula

Jung-Hyun KIM, Gi-Heum NAM¹, Seung-bae LEE², Sookyung SHIN³ and Jin-Seok KIM^{4*}

Plant Resources Division, National Institute of Biological Resources, Incheon 22689, Korea

¹*Strategic Planning Division, National Institute of Biological Resources, Incheon 22689, Korea*

²*Geological Museum, Korea Institute of Geoscience and Mineral Resources, Daejeon 34132, Korea*

³*Exhibition and Education Division, National Institute of Biological Resources, Incheon 22689, Korea*

⁴*Geumsugangsan, Uijeongbu 11625, Korea*

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ABSTRACT: Limestone areas are sedimentary rock outcrops consisting of calcium carbonate created several hundreds of millions of years ago by calcium-secreting marine organisms and subsequently lifted above sea level by tectonic movement. Limestone areas support very high levels of endemic species of plants and are recognized as biodiversity areas with much biological information. The purpose of this study is to devise a strategy for the comprehensive conservation of the vegetation of limestone areas through analyses of the floristics and plant species compositions in ten limestone areas on the Korean Peninsula. The results of 153 field surveys from April of 2010 to October of 2016 identified 1,202 taxa in total, representing 1,096 species, 18 subspecies, 84 varieties, 2 forms, and 2 hybrids in 530 genera and 133 families. Among them, 55 taxa were endemic plants to Korea, and 38 taxa were red data plants. The floristic target plants amounted to 102 taxa, specifically 27 taxa of grade V and 75 taxa of grade IV. In all, 121 alien plants were recorded in the investigated area. Calciphilous plants amounted to 102 taxa, specifically 14 taxa of calciphilous indicator plants, 30 taxa of superlative most calciphilous plants, and 58 taxa of comparative more calciphilous plants. A cluster analysis showed a high degree of similarity between sites that are geographically adjacent with similar habitat environments. Limestone areas also supported groups distinct from those in non-limestone areas, demonstrating the specificity of limestone flora. Plant geography approaches therefore appear to be crucial to gain a better understanding of the level of biodiversity in limestone areas, not only at the interspecific but also at the intraspecific level. These results highlight the importance of protecting limestone habitats to preserve not only their interspecific but also the intraspecific diversity, which is highly threatened.

Keywords: limestone, calciphilous, checklist, biodiversity

탄산염 기반의 퇴적암(이하 석회암)은 중량 50% 이상이 탄산염 광물로 이루어진 퇴적암을 가리키며(Bates and Jackson, 1987), 크게 석회암(limestone)과 돌로스톤(dolostone)으로 분류된다. 석회암은 주로 탄산칼슘(CaCO_3) 성분의 방해석(calcite) 또는 아라고나이트(aragonite)로, 돌로스톤은 주로 돌로마이트($\text{CaMg}(\text{CO}_3)_2$)로 구성된다. 50% 이상의 탄산칼슘과 현저한 양의 돌로마이트를 함유한 탄산염암을 돌로마이트질 석회암(dolomitic limestone), 50% 이상의 돌로마이트와 현저한 양의 탄산칼슘을 함유한 탄산염암을 석회질 돌로스톤(calcareous dolostone)이라 부른다. 탄산칼슘은 광물 격자 내에 흔히 마그네슘, 철, 망간 등을 소량 포함한다(Blatt et al., 1980; Dromgoole and Walter, 1990).

한반도의 석회암은 후기 고생대 또는 중생대 백악기 지층 내에도 존재하나 지층의 두께가 얇고 연장성이 불량하여 넓은 면적을 차지하지 않는다. 그에 비해 전기 고생대 동안(약 5억 2,000만 년 전부터 4억 6,000만 년 전까지) 퇴적된 지층의 다발인 조선누층군 내에 석회암 지층이 우세하게 발달하였다. 특히 충청북도 제천시, 단양군, 강원도 영월군, 정선군, 평창군, 태백시, 삼척시, 강릉시 지역과 경상북도 문경시 일대에 석회암이 널리 분포한다(Fig. 1). 석회암을 자세히 세분할 때, 지역별로 암상(lithology)과 암상조합(lithologic succession)에 차이가 있어 이 넓은 지역의 조선누층군을 태백층군, 영월층군, 용탄층군, 평창층군, 문경층군으로 구분한다(Choi, 1998).

*Author for correspondence: webdogam@naver.com

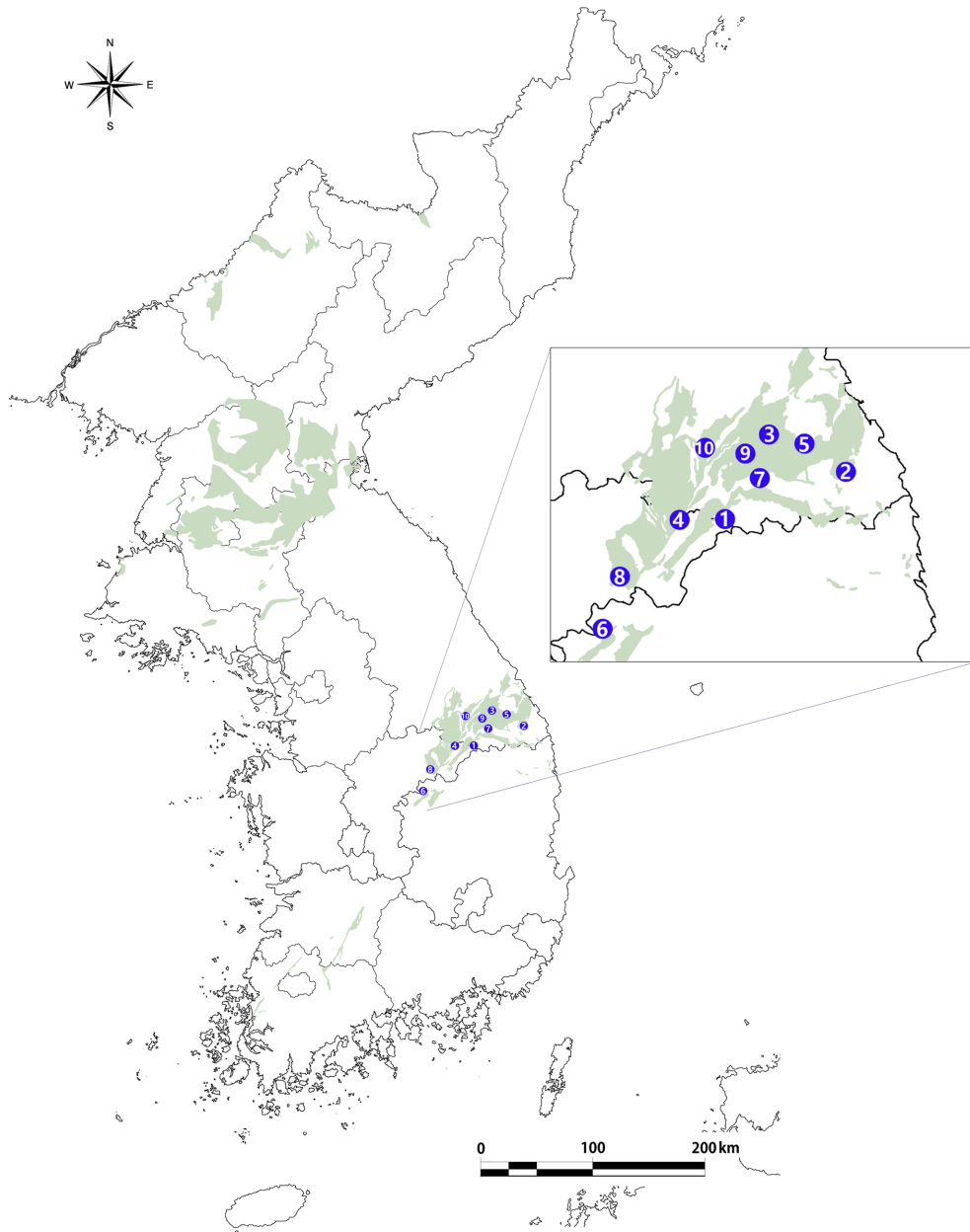


Fig. 1. The distribution map of limestone areas and investigated areas in Korea. 1, Taehwa mountain; 2, Osip stream; 3, Goyang mountain; 4, Samtae mountain; 5, Golji stream; 6, Wopung stream; 7, Jungnyeom mountain; 8, Dumu mountain; 9, Baeki mountain; 10, Nambyeong mountain.

우리나라에 분포하는 석회암지대는 생성 시기에 따라 크게 4가지 유형으로 구분된다. 첫째, 충청북도 및 강원도 일대에 광범위하게 분포하는 캄브로-오르도비스기 (Cambrian-Ordovician) 대석회암통의 석회암층(조선계 대석회암통), 둘째, 전라남북도 및 충청남도 일대의 옥천계 변성 퇴적암류 내에서 맥상 또는 층상으로 나타나는 시대 미상의 석회암층(옥천계 시대 미상의 석회암층), 셋째, 주로 경기도, 강원도, 경상북도에서 선캄브리아기 편마암체 내에서 소규모 렌즈상으로 분산 분포하는 고기 석회암층(선캄브리아기 석회암), 그리고 대석회암통의 상부에 부정

합으로 피복하며, 주로 대석회암통 분포지역의 연변부에 집중적으로 분포하는 석탄기의 홍점 석회암층(평안계 홍점통) 등이다(Lee and Sunwoo, 2010; Korea National Arboretum, 2012). 이 가운데 우리나라 조선계 대석회암통으로 불리는 석회암 지층이 충청북도와 강원도에 걸쳐 광범위한 지역에 걸쳐 분포하고 전체 석회암지대 면적의 80% 이상을 차지한다(Fig. 1).

석회암지대는 다량의 탄산칼슘을 함유하고 있어 pH가 높고 단립구조가 발달하여 다른 토양보다 쉽게 건조해지는 토양의 물리적, 화학적 특징으로 인해 비석회암지대와

는 다른 생태계 구조를 갖는 것으로 알려져 있다(Kim et al., 2005). 이러한 생태계 구조의 특이성으로 한반도를 포함하여 동남아시아, 중국, 뉴질랜드, 유럽 등지의 석회암 지대는 비석회암지대에 비해 생물종 다양성이 높은 지역으로 알려져 있으며, 특히 고유종 및 희귀식물의 구성비율이 높은 것으로 평가하고 있다(Karim et al., 2004; Latinne et al., 2011; Zhang et al., 2017; Liu et al., 2018; Rogers et al., 2018; Kiew and Rafidah, 2021). 동남아시아 말레이반도의 석회암지대는 말레이시아 전체 식물상의 약 14%가 이 지역에 분포하며, 석회암과 관련된 식물 가운데 말레이반도의 고유종이 21%이고 이 석회암지대에서만 발견되는 고유종이 11%를 차지한다(Clements et al., 2006). 중국 구이저우성의 석회암지대는 우리나라의 면적과 비슷한 105,230 km²에 불과하지만, 이 지역에 분포하는 식물은 총 7,505분류군이며, 그 가운데 고유종이 171분류군에 달해 생물다양성이 높은 지역으로 꼽힌다(Liu et al., 2018). 또한 뉴질랜드 전체 식물상의 약 5.6% (152분류군)가 석회암지대에 분포하는 호석회성 식물이며, 그 식물의 95%가 고유종이고 29% (43분류군)는 희귀식물에 포함된다(Rogers et al., 2018).

식물의 생리생태학 적응 및 분포학적 출현 여부 등 석회암 환경의 선호성을 근거로 석회암지대에 출현하는 식물을 호석회성 식물과 혐석회성 식물로 분류하는 것은 현재까지도 식물학자들에게 관심을 끌고 있는 난제이다(Kim et al., 1992; Choo and Song, 1998; Kim and Oh, 2000; Ewald, 2003; Kim et al., 2005). 전 세계적으로 나타나는 석회암지대의 고유한 식물상적 특이성으로 인해 석회암과 관련된 식물지리학적 연구는 활발히 진행되어 왔다. Shimizu (1963)와 Chin (1977)은 석회암지대와 비석회암지대의 분포 여부 및 출현 빈도를 기준으로 종 특성에 따라 출현하는 식물의 그룹화를 시도하였다. Shimizu (1963)는 일본과 대만에 분포하는 석회암지대의 식물상적 연구 결과를 바탕으로 5개 그룹: (1) 한정종(限定種, 석회암지대에서만 나타나는 종), (2) 선택종(選擇種, 주로 석회암지대에서 분포하지만 비석회암지대에서도 일부 분포하는 종), (3) 기호종(嗜好種, 비석회암지대에서 분포하지만 석회암지대에 비교적 더 많이 분포하는 종), (4) 비관련종(非關聯種, 석회암지대와 연관성 없이 분포하는 종), (5) 혐오종(嫌惡種, 석회암지대에 전혀 분포하지 않거나 드물게 출현하는 종)으로 구분하였다. 또한 Chin (1977)은 말레이시아에 분포하는 석회암지대의 식물상적 연구 결과를 바탕으로 4개 그룹: (1) 절대종(exclusives, 석회암지대에서만 분포하는 지표종), (2) 선호종(preferents, 비석회암지대에도 분포하지만 석회암지대에서 더 많이 분포하는 종), (3) 비관련종(indifferents, 석회암지대와 비석회암지대에 모두 분포하는 종), (4) 우연종(strangers, 비석회암지대에 흔히 분포하지만 석회암지대에서는 드물게 분포하는 종)으로 세분하였다.

전 세계적으로 석회암지대의 식생은 지역적 또는 국지적 분포 양상에서 전형적인 비대칭 분포(azonal distribution)를 보이며, 그 지역에 발달하는 식물종 역시 지역 고유성과 특이성이 잘 나타난다(Ryu, 2016). 우리나라의 석회암지대에서도 비석회암지대와 다른 식생뿐만 아니라 고산식물의 격리 또는 북방계 희귀식물들의 분포, 그리고 석회암이라는 특수한 생육환경에 고립 및 적응하여 새로운 종분화가 일어나는 등의 특성이 이를 뒷받침한다(Kim et al., 2005; Korea National Arboretum, 2012; Nam et al., 2012). 이러한 식물지리학적 특이성으로 인해 여러 생태분류학자들에게 연구중심의 대상지가 되었으며(Chung, 1994; Hong and Im, 1997; Kim et al., 2005; Korea Teacher's Plant Research Association, 2011; Moon et al., 2013; Oh, 2013; Nam et al., 2014; Song et al., 2016; Chae et al., 2019; Park et al., 2020), 최근까지도 신종 및 미기록종 등의 식물이 지속적으로 발견되고 있다(National Institute of Biological Resources, 2011, 2017). 그러나 생태계 다양성의 중요한 지역임에도 불구하고 석회석 생산이라는 명분아래 일부 석회암지대의 산지 대부분은 소실되어 그 원형을 알아보기 힘들고 생태학적 기능은 상실된 상태이다.

본 연구는 우리나라의 주요 석회암지대 10개 지역에 대한 식물상적 조사를 종합하여 종조성 특징과 식물지리학적 중요성을 밝히고 특이식물의 분포, 호석회성 식물의 구분, 유사도 분석을 토대로 석회암지대의 체계적인 보전 방안 수립을 위한 기초자료를 제시하고자 한다.

재료 및 방법

우리나라 석회암지대의 식물다양성 조사는 2010년부터 2016년까지, 총 7년간 석회암 대표 산지 7개 지역, 대표 하천 3개 지역 등 10개 지역(Fig. 1, Table 1)을 중심으로 153회 229일간 현지조사를 수행하였다(Table 2). 조사지역 내에 생육하는 모든 관속식물은 건조 또는 액침표본으로 제작하여 국립생물자원관 표본수장고(KB)에 보관하였다. 조사경로는 등산로를 중심으로 산지, 능선, 평지, 계곡, 사면, 하천 등의 주요 생태학적 생육지를 포함하였으며, 일부는 등산로를 벗어나 무작위로 채집하였다. 채집된 식물의 동정은 Lee (1980), Lee (1996), Park (2009), Cho et al. (2016), Lee and Lee (2018), Kim and Kim (2018), Kim et al. (2018) 등의 식물도감을 이용하였다.

관속식물의 목록은 증거표본을 바탕으로 작성하고 속이하의 계급은 알파벳순으로 정리하였으며(Appendix 1), 중복 채집품은 목록 간소화를 위해 대표 번호를 부여하였다. 식물목록의 학명과 배열은 국가생물종목록집(National Institute of Biological Resources, 2019a)을 따랐으며, 주요 식물의 선별은 한반도 고유식물(특산식물) (Chung et al. 2017), 적색목록(National Institute of Biological Resources, 2021), 식물구계학적 특정식물(National Institute of Ecology,

Table 1. Investigated localities and sites of limestone areas in Korea.

No.	Survey site	Localities
1	Taehwa mountain	Gangwon-do, Youngwol-gun and Chungcheongbuk-do, Danyang-gun
2	Osip stream	Gangwon-do, Samcheok-si and Taebaek-si
3	Goyang mountain	Gangwon-do, Jeongseon-gun
4	Samtae mountain	Chungcheongbuk-do, Danyang-gun
5	Golji stream	Gangwon-do, Jeongseon-gun, Samcheok-si and Taebaek-si
6	Wonpung stream	Chungcheongbuk-do, Goesan-gun
7	Jungnyeom mountain	Gangwon-do, Jeongseon-gun
8	Dumu mountain	Chungcheongbuk-do, Jecheon-si
9	Baeki mountain	Gangwon-do, Jeongseon-gun
10	Nambyeong mountain	Gangwon-do, Pyeongchung-gun

Table 2. Investigation dates and sites of limestone areas in Korea.

No.	Survey site	Dates
1	Taehwa mountain	1 Apr 2010; 2 Apr 2010; 6 May 2010; 7 May 2010; 26 May 2010; 27 May 2010; 3 Jun 2010; 14 Jun 2010; 15 Jun 2010; 14 Jul 2010; 15 Jul 2010; 16 Jul 2010; 27 Jul 2010; 28 Jul 2010; 6 Aug 2010; 1 Sep 2010; 2 Sep 2010; 10 Sep 2010; 5 Oct 2010; 11 Oct 2010; 12 Oct 2010; 13 Oct 2010; 14 Oct 2010; 22 Oct 2010
2	Osip stream	29 Mar 2011; 25 Apr 2011; 26 Apr 2011; 27 Apr 2011; 7 Jun 2011; 8 Jun 2011; 21 Jun 2011; 22 Jun 2011; 20 Jul 2011; 21 Jul 2011; 24 Aug 2011; 25 Aug 2011; 5 Oct 2011; 6 Oct 2011; 7 Oct 2011
3	Goyang mountain	17 Apr 2012; 18 Apr 2012; 16 May 2012; 17 May 2012; 18 May 2012; 12 Jun 2012; 13 Jun 2012; 14 Jun 2012; 16 Jul 2012; 17 Jul 2012; 18 Jul 2012; 19 Jul 2012; 20 Aug 2012; 21 Aug 2012; 22 Aug 2012; 6 Sep 2012; 7 Sep 2012; 25 Sep 2012; 26 Sep 2012; 10 Oct 2012; 11 Oct 2012; 12 Oct 2012
4	Samtae mountain	24 Mar 2012; 14 Apr 2012; 15 Apr 2012; 28 Apr 2012; 12 May 2012; 13 May 2012; 26 May 2012; 9 Jun 2012; 16 Jun 2012; 23 Jun 2012; 14 Jul 2012; 23 Jul 2012; 10 Aug 2012; 11 Aug 2012; 22 Sep 2012; 6 Oct 2012; 21 Oct 2012
5	Golji stream	22 Apr 2013; 23 Apr 2013; 24 Apr 2013; 10 Jun 2013; 11 Jun 2013; 12 Jun 2013; 13 Jun 2013; 15 Jul 2013; 16 Jul 2013; 17 Jul 2013; 18 Jul 2013; 19 Aug 2013; 20 Aug 2013; 21 Aug 2013; 22 Aug 2013; 10 Sep 2013; 11 Sep 2013; 12 Sep 2013; 14 Oct 2013; 15 Oct 2013; 16 Oct 2013; 17 Oct 2013
6	Wonpung stream	2 Apr 2014; 1 May 2014; 12 May 2014; 13 May 2014; 14 May 2014; 15 May 2014; 4 Jun 2014; 5 Jun 2014; 6 Jun 2014; 7 Jun 2014; 17 Jun 2014; 19 Jun 2014; 16 Jul 2014; 17 Jul 2014; 5 Aug 2014; 15 Aug 2014; 18 Aug 2014; 20 Aug 2014; 21 Aug 2014; 1 Sep 2014; 13 Sep 2014; 14 Sep 2014; 17 Sep 2014; 22 Sep 2014; 24 Sep 2014; 25 Sep 2014; 18 Oct 2014; 30 Oct 2014; 31 Oct 2014
7	Jungnyeom mountain	4 Apr 2015; 25 Apr 2015; 9 May 2015; 10 May 2015; 13 May 2015; 14 May 2015; 16 May 2015; 26 May 2015; 27 May 2015; 28 May 2015; 6 Jun 2015; 14 Jun 2015; 15 Jun 2015; 16 Jun 2015; 20 Jun 2015; 23 Jun 2015; 24 Jun 2015; 25 Jun 2015; 28 Jun 2015; 15 Jul 2015; 16 Jul 2015; 17 Jul 2015; 18 Jul 2015; 20 Jul 2015; 25 Jul 2015; 27 Jul 2015; 2 Aug 2015; 3 Aug 2015; 10 Aug 2015; 12 Aug 2015; 15 Aug 2015; 19 Aug 2015; 20 Aug 2015; 22 Aug 2015; 23 Aug 2015; 29 Aug 2015; 2 Sep 2015; 3 Sep 2015; 4 Sep 2015; 16 Sep 2015; 17 Sep 2015; 19 Sep 2015; 9 Oct 2015
8	Dumu mountain	31 Mar 2015; 27 Apr 2015; 28 Apr 2015; 26 May 2015; 27 May 2015; 29 Jun 2015; 30 Jun 2015; 27 Jul 2015; 28 Jul 2015; 24 Aug 2015; 25 Aug 2015; 21 Sep 2015; 22 Sep 2015; 19 Oct 2015; 20 Oct 2015
9	Baeki mountain	19 Apr 2016; 20 Apr 2016; 12 May 2016; 13 May 2016; 30 May 2016; 31 May 2016; 1 Jun 2016; 18 Jul 2016; 19 Jul 2016; 31 Aug 2016; 1 Sep 2016; 12 Oct 2016; 13 Oct 2016
10	Nambyeong mountain	9 Apr 2016; 13 Apr 2016; 23 Apr 2016; 24 Apr 2016; 25 Apr 2016; 26 Apr 2016; 27 Apr 2016; 29 Apr 2016; 5 May 2016; 16 May 2016; 17 May 2016; 18 May 2016; 21 May 2016; 23 May 2016; 4 Jun 2016; 18 Jun 2016; 26 Jun 2016; 27 Jun 2016; 2 Jul 2016; 14 Jul 2016; 23 Jul 2016; 24 Jul 2016; 11 Aug 2016; 13 Aug 2016; 15 Aug 2016; 3 Sep 2016; 11 Sep 2016; 24 Sep 2016; 15 Oct 2016

2018), 외래식물(Kang et al., 2020)을 참조하여 제시하였다. 일부 자료가 부족하거나 최근 보고되어 누락된 좋은 논문과 문헌을 참고하여 추가하였다.

호석회성 식물의 그룹은 Shimizu (1963)와 Chin (1977)이

제시한 기준을 일부 수정하여(Table 3), 우리나라 석회암 지대에서 확인된 호석회성 식물을 3가지 그룹(지표종, 극선호종, 선호종)으로 구분하였다. 석회암지대 호석회성 식물의 선정 기준은 다음과 같다. 첫째, 지표종(calciphilous

Table 3. Groups of calciphilous plants on limestone areas in Korea.

Groups of calciphilous plants	Criteria
Calciphilous indicator plants (석회암 지표종)	Plants which occur only on limestone areas in the World
Superlative most calciphilous plants (석회암 극선호종)	Plants restricted to limestone areas in the South Korea, but occur on non-limestone areas in another country
Comparative more calciphilous plants (석회암 선호종)	Plants dominant on limestone, which have a preference for limestone areas, appearing in both limestone and non-limestone in the South Korea

indicator plants)은 전 세계적으로 석회암지대에만 분포하는 분류군과 국내의 석회암지대에만 분포하는 고유식물(특산식물), 둘째, 극선호종(superlative most calciphilous plants)은 전 세계적인 분포에서는 석회암지대와 비석회암지대에 분포하지만 국내에서는 석회암지대에만 분포하는 식물, 셋째, 선호종(comparative more calciphilous plants)은 국내 남부지역(경상누중군) 또는 아고산지대, 풍혈지 등의 비석회암지대에도 일부 분포하지만 석회암지대에서 개체수 및 개체군이 더 많은 식물이다. 이상의 기준들을 바탕으로 현지조사, KB표본관에 보관중인 소장표본, 그리고 국립수목원의 분포도(Korea National Arboretum, 2016)를 참조하여 호석회성 식물을 제시하였다.

석회암지대 간 종조성의 유사도 분석은 MVSP (Multi Variate Statistical Package) ver. 3.1. software (Kovach, 2007)를 활용하였다. 분석 대상지는 자체 조사지역 10개 지역(Table 1), 석회암지대 10개 지역(도담삼봉(Chung, 1994), 자병산(Hong and Im, 1997), 덕향산(Kim et al., 2005), 각희산(Korea Teacher's Plant Research Association, 2011), 응봉산(Moon et al., 2013), 석문봉(Oh, 2013), 면산-묘봉(Nam et al., 2014), 석병산(Song et al., 2016), 동강(Chae et al., 2019), 대덕산-금대봉(Park et al., 2020)), 인근의 비석회암지대 10개 지역(공덕산(Chung et al., 2008), 갈라산(Chung et al., 2010), 청태산(Ji et al., 2011), 흥정산(Han et al., 2012), 청량

산(Nam et al., 2015), 백암산(Cheon et al., 2016), 자암산(Kim et al., 2019), 부용봉(National Institute of Biological Resources, 2019b), 무이산(National Institute of Biological Resources, 2020), 구룡산(Sung et al., 2019)이다. UPGMA (Unweighted Pair-Group Method using Arithmetic averages) 방법으로 군집분석을 수행하였고, Sørensen의 유사도 지수(similarity index)를 기반으로 dendrogram을 작성하였다.

결 과

관속식물 분포

한반도 석회암지대에 분포하는 관속식물을 조사 및 종합한 결과, 133과 530속 1,096종 18아종 84변종 2품종 2교잡종, 총 1,202분류군으로 구성되었다(Table 4, Appendix 1). 이는 우리나라 관속식물 4,552분류군의 26.4%에 해당된다. 종 다양성이 높은 지역은 태화산(773분류군), 남명산(768분류군), 골지천(731분류군), 고양산(705분류군), 원풍천(685분류군)의 순으로 나타났으며, 주로 강원권역의 석회암지대가 상위에 포함되었다(Table 4). 석회암지대에서 확인된 관속식물의 분포는 지형, 토양 및 지질의 특성이 잘 반영돼 있다. 특히 바위종덩굴(*Clematis calcicola* J. S. Kim) (Fig. 2C), 동강할미꽃(*Pulsatilla tongkangensis* Y. N. Lee & T. C. Lee) (Fig. 2D), 긴털맹강나무(*Zabelia densipila*

Table 4. The number of vascular plants investigated on limestone areas in Korea.

Limestones	Fam.	Gen.	Sp.	Ssp.	Var.	For.	Hybr.	Total
Taehwa mountain	125	412	702	15	54	2	-	773
Osip stream	114	353	538	9	41	1	-	589
Goyang mountain	109	379	647	12	46	-	-	705
Samtae mountain	100	250	327	7	33	-	1	368
Golji stream	116	390	665	12	53	1	-	731
Wonpung stream	119	378	622	11	51	1	-	685
Jungnyeom mountain	108	345	552	10	41	1	1	605
Dumu mountain	102	300	435	8	38	1	-	482
Baeki mountain	107	337	522	13	46	1	-	582
Nambyeong mountain	119	409	687	14	65	1	1	768
Total	133	530	1,096	18	84	2	2	1,202

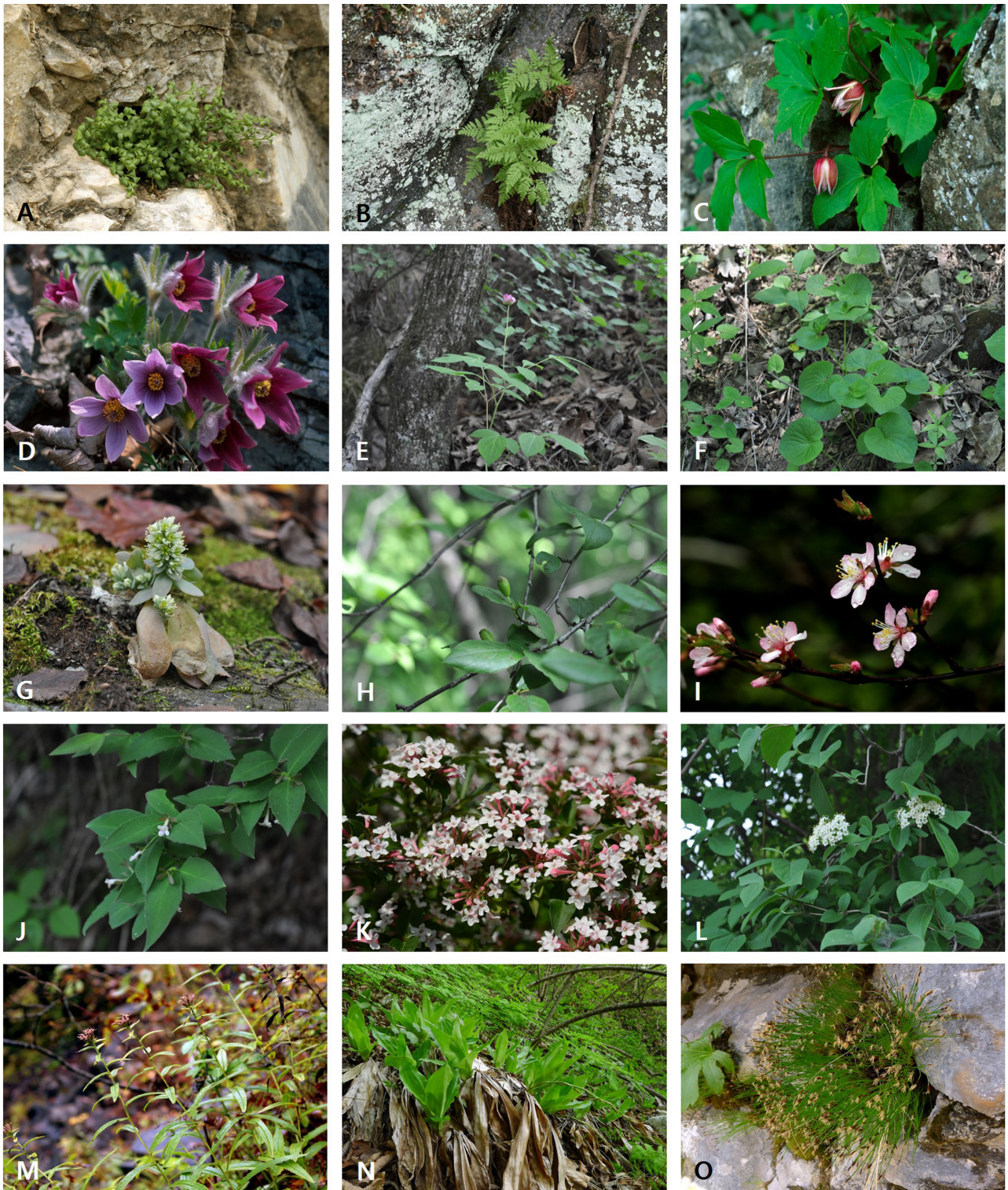


Fig. 2. The photograph of calciphilous plants in Korea. **A.** *Asplenium tura-muraria* L. **B.** *Hypodematium glanduloso-pilosum* (Tagawa) Ohwi. **C.** *Clematis calcicola* J. S. Kim. **D.** *Pulsatilla tongkangensis* Y. N. Lee & T. C. Lee. **E.** *Paeonia obovata* Maxim. **F.** *Viola mirabilis* L. **G.** *Orostachys chongsunensis* Y. N. Lee. **H.** *Cotoneaster integrimus* Medik. **I.** *Prunus choreiana* Nakai ex H. T. Im. **J.** *Zabelia densipila* M. P. Hong, Y. C. Kim & B. Y. Lee. **K.** *Zabelia tyaihyonii* (Nakai) Hisauti & H. Hara. **L.** *Viburnum burejaeticum* Regel & Herd. **M.** *Saussurea chabyoungsanica* H. T. Im. **N.** *Carex splendidissima* U. Kang & J. M. Chung. **O.** *Trichophorum polygamum* D. C. Son & K. S. Chang.

M. P. Hong, Y. C. Kim & B. Y. Lee) (Fig. 2J), 반들대사초(*Carex splendentissima* U. Kang & J. M. Chung) (Fig. 2N), 동강고랭이(*Trichophorum polygamum* D. C. Son & K. S. Chang) (Fig. 2O) 등 고유식물이 석회암이라는 특수한 환경에서 새로운 종 분화가 일어난 것, 가래고사리(*Phegopteris connectilis* (Michx.) Watt), 산겨릅나무(*Acer tegmentosum* Maxim.), 산가막살나무(*Viburnum wrightii* Miq.), 개쭈부쟁이(*Aster meendorffii* (Regel & Maack) Voss) 등 북방계 고산식물이 저지대에 분포하는 것, 소사나무(*Carpinus turczaninowii* Hance), 병아리꽃나무(*Rhodotypos scandens* (Thunb.) Makino), 등대풀(*Euphorbia helioscopia* L.), 반디지치(*Lithospermum zollingeri* A. DC.) 등 해안성 식물이 본 지역에 격리 분포하는 것이 석회암지대의 식물분포학적인 특징이다(Kim et al., 2005; Korea National Arboretum, 2012; Nam et al., 2012).

한반도 고유식물

한반도 고유식물은 총 55분류군(Table 5)으로 무늬족도리풀(*Asarum chungbuensis* (C. S. Yook & J. G. Kim) B. U. Oh), 홀아비바람꽃(*Anemone koraiensis* Nakai), 연잎팽의다리(*Thalictrum coreanum* H. Lév.), 덕우기름나무(*Sillaphyton podagraria* (H. Boissieu) Pimenov), 한국얇은부채(*Symplocarpus koreanus* J. S. Lee, S. H. Kim & S. C. Kim), 한라사초(*Carex erythrobasis* H. Lév. & Vaniot), 푸른마(*Dioscorea coreana* (Prain & Burkill) R. Knuth) 등이며, 한반도 고유식물 360분류군의 15%에 해당된다. 이 가운데 바위종덩굴, 동강할미꽃, 방울제비꽃(*Viola breviflora* J. Lee & M. Kim), 정선바위솔(*Orostachys chongsunensis* Y. N. Lee) (Fig. 2G), 복사앵도(*Prunus choreiana* Nakai ex H. T. Im) (Fig. 2I), 긴털댕강나무, 줄댕강나무(*Zabelia tyaihyonii* (Nakai) Hisauti & H. Hara)

Table 5. The list of the endemic plants investigated on limestone areas in Korea.

Family	Taxa
Aristolochiaceae	<i>Asarum chungbuensis</i> (C. S. Yook & J. G. Kim) B. U. Oh 무늬족도리풀
Aristolochiaceae	<i>Asarum koreanum</i> J. Kim & C. Yook ex B. U. Oh 자주족도리풀
Ranunculaceae	<i>Aconitum pseudolaeve</i> Nakai 진범
Ranunculaceae	<i>Anemone koraiensis</i> Nakai 홀아비바람꽃
Ranunculaceae	<i>Cimicifuga heracleifolia</i> var. <i>bifida</i> Nakai 세잎승마
Ranunculaceae	<i>Clematis brachyura</i> Maxim. 외대으아리
Ranunculaceae	<i>Clematis calcicola</i> J. S. Kim 바위종덩굴
Ranunculaceae	<i>Clematis fusca</i> var. <i>flabellata</i> (Nakai) J. S. Kim 요강나무
Ranunculaceae	<i>Clematis trichotoma</i> Nakai 할미밀망
Ranunculaceae	<i>Pulsatilla tongkangensis</i> Y. N. Lee & T. C. Lee 동강할미꽃
Ranunculaceae	<i>Thalictrum coreanum</i> H. Lév. 연잎팽의다리
Berberidaceae	<i>Berberis koreana</i> Palib. 매자나무
Fumariaceae	<i>Corydalis grandicalyx</i> B. U. Oh & Y. S. Kim 갈퀴현호색
Fumariaceae	<i>Corydalis hirtipes</i> B. U. Oh & J. G. Kim 털현호색
Fumariaceae	<i>Corydalis maculata</i> B. U. Oh & Y. S. Kim 점현호색
Fumariaceae	<i>Corydalis ohii</i> Lidén 선현호색
Caryophyllaceae	<i>Pseudostellaria setulosa</i> Ohwi 숲개별꽃
Polygonaceae	<i>Aconogonon microcarpum</i> (Kitag.) H. Hara 참개싱아
Violaceae	<i>Viola breviflora</i> J. Lee & M. Kim 방울제비꽃
Violaceae	<i>Viola seoulensis</i> Nakai 서울제비꽃
Salicaceae	<i>Salix koriyanagi</i> Kimura ex Goerz 키버들
Primulaceae	<i>Lysimachia coreana</i> Nakai 참좁쌀풀
Crassulaceae	<i>Orostachys chongsunensis</i> Y. N. Lee 정선바위솔
Crassulaceae	<i>Sedum latiovalifolium</i> Y. N. Lee 태백기린초
Saxifragaceae	<i>Chrysosplenium barbatum</i> Nakai 흰털팽이눈
Rosaceae	<i>Potentilla squamosa</i> Soják 털양지꽃
Rosaceae	<i>Prunus choreiana</i> Nakai ex H. T. Im 복사앵도
Fabaceae	<i>Vicia chosenensis</i> Ohwi 노랑갈퀴
Apiaceae	<i>Angelica reflexa</i> B. Y. Lee 강활
Apiaceae	<i>Sillaphyton podagraria</i> (H. Boissieu) Pimenov 덕우기름나무
Lamiaceae	<i>Ajuga spectabilis</i> Nakai 자란초
Lamiaceae	<i>Salvia chanryoenica</i> Nakai 참배암차즈기
Oleaceae	<i>Forsythia ovata</i> Nakai 만리화
Oleaceae	<i>Forsythia saxatilis</i> (Nakai) Nakai 산개나리
Scrophulariaceae	<i>Melampyrum setaceum</i> var. <i>nakaiianum</i> (Tuyama) T. Yamaz. 새머느리밥풀
Linnaeaceae	<i>Zabelia tyaihyonii</i> (Nakai) Hisauti & H. Hara 줄댕강나무
Linnaeaceae	<i>Zabelia densipila</i> M. P. Hong, Y. C. Kim & B. Y. Lee 긴털댕강나무
Diervillaceae	<i>Weigela subsessilis</i> (Nakai) L. H. Bailey 병꽃나무
Caprifoliaceae	<i>Lonicera subsessilis</i> Rehder 청괴불나무

Table 5. Continued.

Family	Taxa
Asteraceae	<i>Cirsium setidens</i> (Dunn) Nakai 고려영경취
Asteraceae	<i>Dendranthema jeongseonensis</i> M. Kim & H. Jo 정선국화
Asteraceae	<i>Leontopodium coreanum</i> Nakai 솜다리
Asteraceae	<i>Saussurea calcicola</i> Nakai 사창분취
Asteraceae	<i>Saussurea chabyoungsanica</i> H. T. Im 자병취
Asteraceae	<i>Saussurea eriophylla</i> Nakai 솜분취
Asteraceae	<i>Saussurea macrolepis</i> (Nakai) Kitam. 각시서덜취
Araceae	<i>Symplocarpus koreanus</i> J. S. Lee, S. H. Kim & S. C. Kim 한국얇은부채
Cyperaceae	<i>Carex erythrobasis</i> H. Lév. & Vaniot 한라사초
Cyperaceae	<i>Carex splendidissima</i> U. Kang & J. M. Chung 반들대사초
Cyperaceae	<i>Trichophorum polygamum</i> D. C. Son & K. S. Chang 동강고랭이
Liliaceae	<i>Heloniopsis koreana</i> S. Fuse, N. S. Lee & M. N. Tamura 처녀치마
Liliaceae	<i>Hemerocallis hakuunensis</i> Nakai 백운산원추리
Liliaceae	<i>Hosta minor</i> (Baker) Nakai 좀비비추
Iridaceae	<i>Iris odaesanensis</i> Y. N. Lee 노랑무늬붓꽃
Dioscoreaceae	<i>Dioscorea coreana</i> (Prain & Burkill) R. Knuth 푸른마

(Fig. 2K), 정선국화(*Dendranthema jeongseonensis* M. Kim & H. Jo), 자병취(*Saussurea chabyoungsanica* H. T. Im) (Fig. 2M), 반들대사초, 동강고랭이 11분류군은 우리나라의 석회암지대에서만 관찰되는 지표식물이다. 이들의 공통된 특징은 석회암의 노두가 노출된 바위틈이나 그 주변 언저리에 분포하는 점으로 미루어 석회암이라는 특수한 생육 환경에 적응 진화하여 발생한 것으로 판단된다.

외대으아리(*Clematis brachyura* Maxim.), 서울제비꽃(*Viola seoulensis* Nakai), 키버들(*Salix koriyanagi* Kimura ex Goerz) 3분류군은 모든 조사지역에 분포하고 할미밀망(*Clematis trichotoma* Nakai), 노랑갈퀴(*Vicia chosenensis* Ohwi), 청괴불나무(*Lonicera subsessilis* Rehder), 백운산원추리(*Hemerocallis hakuunensis* Nakai) 4분류군은 9개 지역에서 확인되었으며, 이들은 분포역이 넓고 개체수 및 개체군도 많은 편이다. 반면에 무늬족도리풀, 자주족도리풀(*Asarum koreanum* J. Kim & C. Yook ex B. U. Oh), 바위종덩굴, 요강나물(*Clematis fusca* var. *flabellata* (Nakai) J. S. Kim), 연잎평의다리, 매자나무(*Berberis koreana* Palib), 방울제비꽃, 강활(*Angelica reflexa* B. Y. Lee), 자란초(*Ajuga spectabilis* Nakai), 솜다리(*Leontopodium coreanum* Nakai), 솜분취(*Saussurea eriophylla* Nakai), 한국얇은부채 등의 9분류군은 1개 지역에서만 분포가 확인되었으며, 이들은 분포역이 좁고 개체수 및 개체군도 적은 편이다(Korea National Arboretum, 2016).

멸종위기 II급 및 적색목록

멸종위기 II급에 해당하는 식물은 백부자(*Aconitum coreanum* (H. Lév.) Rapaics), 연잎평의다리, 분홍장구채(*Silene capitata* Kom.), 산작약(*Paeonia obovata* Maxim.) (Fig. 2E), 넓은잎제비꽃(*Viola mirabilis* L.) (Fig. 2F), 왕제비꽃(*Viola websteri* Hemsl.), 개병풍(*Astilboides tabularis* (Hemsl.) Engl.), 큰바늘꽃(*Epilobium hirsutum* L.), 가시오갈

피나무(*Eleutherococcus senticosus* (Rupr. & Maxim.) Maxim.), 대성쓴풀(*Anagallidium dichotomum* (L.) Griseb.), 산분꽃나무(*Viburnum burejaeticum* Regel & Herd.) (Fig. 2L), 대홍란(*Cymbidium macrorhizon* Lindl.), 복주머니란(*Cypripedium macranthos* Sw.), 구름병아리난초(*Neottianthe cucullata* (L.) Schltr.) 등 14분류군이 확인되었다(Table 6). 또한 석회암지에서 생육이 확인된 관속식물 가운데 멸종우려 범주(threatened categories)에 속하는 위급(critically endangered, CR), 위기(endangered, EN), 취약(vulnerable, VU)으로 평가된 분류군은 암공작고사리(*Adiantum capillus-junonis* Rupr.), 애기가물고사리(*Woodsia hancockii* Baker), 산국수나무(*Physocarpus amurensis* (Maxim.) Maxim.), 나도여로(*Zigadenus sibiricus* (L.) A. Gray) 등 총 18분류군이다(Table 6, Appendix 1). 한편 준위협(near threatened, NT)은 향나무(*Juniperus chinensis* L.), 꽃평의다리(*Thalictrum petaloideum* L.), 좁은잎덩굴용담(*Pterygocalyx volubilis* Maxim.), 검은도루박이(*Scirpus orientalis* Ohwi) 등 20분류군이다(Table 6, Appendix 1).

지역적색목록 평가는 IUCN의 세계적색목록 기준에 따라 예비범주를 획득한 뒤 지역 개체군의 상대적인 절멸위험을 판단하기 위해 고유종 여부, 인근 지역 동일 분류군의 개체군에 미치는 영향 등을 고려하여 예비범주를 상향 또는 하향 조정하여 최종범주를 도출한다. 이러한 평가 기준으로 멸종위기 II에 속하는 대다수의 분류군과 분포역이 좁은 고유식물들은 적색목록에서도 취약 이상의 멸종위기 범주에 포함된다. 근래 우리나라에서 신종 발표된 바위종덩굴, 방울제비꽃, 정선바위솔, 긴털대강나무, 정선국화, 자병취, 반들대사초, 동강고랭이는 전 세계적으로 국내의 석회암지대에서만 자라는 고유식물임과 동시에 지표식물들로 적색목록 범주에 등재되도록 평가할 필요가 있다. 최근 개정된 적색목록에서 이들을 다루고 있지 않은 만큼, 추후 예비범주에 포함시켜 더 많은 자생지

Table 6. The list of the endangered plants (grade II) and red data vascular plants investigated on limestone areas in Korea.

Family	Taxa	Grade	Criteria
Adiantaceae	<i>Adiantum capillus-junonis</i> Rupr. 암공작고사리		EN
Woodsiaceae	<i>Woodsia hancockii</i> Baker 애기가물고사리		VU
Cupressaceae	<i>Juniperus chinensis</i> L. 향나무		NT
Ranunculaceae	<i>Aconitum barbatum</i> var. <i>hispidum</i> (DC.) Ser. 넓은잎노랑투구꽃		NT
Ranunculaceae	<i>Aconitum coreanum</i> (H. Lévl.) Rapaics 백부자	II	VU
Ranunculaceae	<i>Pulsatilla tongkangensis</i> Y. N. Lee & T. C. Lee 동강할미꽃		VU
Ranunculaceae	<i>Thalictrum coreanum</i> H. Lévl. 연잎평의다리	II	VU
Ranunculaceae	<i>Thalictrum petaloideum</i> L. 꽃평의다리		NT
Berberidaceae	<i>Jeffersonia dubia</i> (Maxim.) Benth. & Hook. f. ex Baker & S. Moore 깽깽이풀		NT
Chenopodiaceae	<i>Chenopodium aristatum</i> L. 바늘명아주		NT
Caryophyllaceae	<i>Gypsophila pacifica</i> Kom. 가늠대나물		NT
Caryophyllaceae	<i>Silene capitata</i> Kom. 분홍장구채	II	VU
Paeoniaceae	<i>Paeonia lactiflora</i> var. <i>trichocarpa</i> (Bunge) Stern 참작약		NT
Paeoniaceae	<i>Paeonia obovata</i> Maxim. 산작약	II	EN
Violaceae	<i>Viola mirabilis</i> L. 넓은잎제비꽃	II	EN
Violaceae	<i>Viola websteri</i> Hemsl. 왕제비꽃	II	VU
Saxifragaceae	<i>Astilboides tabularis</i> (Hemsl.) Engl. 개병풍	II	NT
Rosaceae	<i>Physocarpus amurensis</i> (Maxim.) Maxim. 산국수나무		VU
Rosaceae	<i>Prunus choreiana</i> Nakai ex H. T. Im 복사앵도		NT
Thymelaeaceae	<i>Daphne pseudomezereum</i> var. <i>koreana</i> (Nakai) Hamaya 두메닥나무		NT
Thymelaeaceae	<i>Diarthron linifolium</i> Turcz. 아마풀		NT
Onagraceae	<i>Epilobium hirsutum</i> L. 큰바늘꽃	II	NT
Araliaceae	<i>Eleutherococcus senticosus</i> (Rupr. & Maxim.) Maxim. 가시오갈피나무	II	VU
Gentianaceae	<i>Anagallidium dichotomum</i> (L.) Griseb. 대성쓴풀	II	EN
Gentianaceae	<i>Pterygocalyx volubilis</i> Maxim. 좁은잎덩굴용담		NT
Lamiaceae	<i>Dracocephalum rupestre</i> Hance 벌개풀		NT
Oleaceae	<i>Forsythia ovata</i> Nakai 만리화		
Oleaceae	<i>Forsythia saxatilis</i> (Nakai) Nakai 산개나리		
Linnaeaceae	<i>Zabelia tyaihyonii</i> (Nakai) Hisauti & H. Hara 줄댕강나무		VU
Viburnaceae	<i>Viburnum burejaeticum</i> Regel & Herd. 산분꽃나무	II	NT
Potamogetonaceae	<i>Potamogeton perfoliatus</i> L. 넓은잎말		VU
Cyperaceae	<i>Scirpus orientalis</i> Ohwi 검은도루박이		NT
Liliaceae	<i>Zigadenus sibiricus</i> (L.) A. Gray 나도여로		CR
Orchidaceae	<i>Cymbidium macrorhizon</i> Lindl. 대홍란	II	VU
Orchidaceae	<i>Cypripedium macranthos</i> Sw. 복주머니란	II	VU
Orchidaceae	<i>Epipactis papillosa</i> Franch. & Sav. 청닭의난초		NT
Orchidaceae	<i>Herminium monorchis</i> (L.) R. Br. 나도씨눈란		NT
Orchidaceae	<i>Neottianthe cucullata</i> (L.) Schltr. 구름병아리난초	II	EN
Orchidaceae	<i>Platanthera japonica</i> (Thunb.) Lindl. 갈매기란		NT
Orchidaceae	<i>Pogonia minor</i> (Makino) Makino 방울새란		NT

및 개체군 조사를 통해 범주를 평가하고 적용할 필요가 있다.

식물구계학적 특성식물

국내에서 일부 지역에만 제한적으로 분포하는 특성으로 식물지리학적 가치가 높게 평가되는 식물구계학적 특성식물 IV등급과 V등급은 총 102분류군이 조사되었다 (Table 7, Appendix 1). V등급은 백부자, 동강할미꽃, 분홍장구채, 왕제비꽃, 큰바늘꽃 등 27분류군이며, IV등급은 돌좁고사리(*Asplenium ruta-muraria* L.) (Fig. 2A), 개버무리(*Clematis serratifolia* Rehder), 몽고뽕나무(*Morus mongolica* (Bureau) C. K. Schneid), 꼬리진달래(*Rhododendron micranthum* Turcz.), 층실사초(*Carex remotiuscula* Wahlenb.), 나도씨눈

란(*Herminium monorchis* (L.) R. Br) 등 75분류군이다. 그 외 III등급은 개부처손(*Selaginella stauntoniana* Spring), 주저리고사리(*Dryopteris fragrans* (L.) Schott), 만주바람꽃(*Isopyrum manshuricum* Kom.), 돌뽕나무(*Morus tiliaefolia* Makino) 등 101분류군, II등급은 고비고사리(*Coniogramme intermedia* Hieron.), 퍼진고사리(*Dryopteris expansa* (C. Presl) Fraser-Jenk. & Jermy), 등취(*Aristolochia manshuriensis* Kom.), 채고추나물(*Hypericum attenuatum* Fisch. ex Choisy), 가지더부살이(*Phacellanthus tubiflorus* Siebold & Zucc.) 등 84분류군, I등급은 금죽제비고사리(*Dryopteris gymnohylla* (Baker) C. Chr.), 개비자나무(*Cephalotaxus harringtonia* (Knight ex Forbes) K. Koch), 터리풀(*Filipendula glaberrima* Nakai), 삿갓나리(*Tricyrtis macropoda* Miq.), 범부채(*Iris domestica*

Table 7. The list of the floristic target plants (grade IV-V) investigated on limestone areas in Korea.

Family	Taxa	Grade
Aspleniaceae	<i>Asplenium pekinense</i> Hance 사철고사리	IV
Aspleniaceae	<i>Asplenium ruta-muraria</i> L. 돌좁고사리	IV
Woodsiaceae	<i>Woodsia macrochlaena</i> Mett. ex Kuhn 참우드풀	IV
Dryopteridaceae	<i>Dryopteris goeringiana</i> (Kunze) Koidz. 바위틈고사리	IV
Cupressaceae	<i>Platyclusus orientalis</i> (L.) Franco 측백나무	IV
Ranunculaceae	<i>Aconitum coreanum</i> (H. Lév.) Rapaics 백부자	V
Ranunculaceae	<i>Anemone koraiensis</i> Nakai 홀아비바람꽃	IV
Ranunculaceae	<i>Anemone reflexa</i> Stephan 회리바람꽃	IV
Ranunculaceae	<i>Cimicifuga heracleifolia</i> var. <i>bifida</i> Nakai 세잎승마	IV
Ranunculaceae	<i>Clematis calcicola</i> J. S. Kim 바위종덩굴	IV
Ranunculaceae	<i>Clematis serratifolia</i> Rehder 개버무리	IV
Ranunculaceae	<i>Delphinium maackianum</i> Regel 큰제비고깔	IV
Ranunculaceae	<i>Pulsatilla tongkangensis</i> Y. N. Lee & T. C. Lee 동강활미꽃	V
Ranunculaceae	<i>Thalictrum coreanum</i> H. Lév. 연잎평의다리	V
Ranunculaceae	<i>Thalictrum ichangense</i> Lecoy. ex Oliv. 꼭지연잎평의다리	IV
Ranunculaceae	<i>Thalictrum petaloideum</i> L. 꽃평의다리	IV
Berberidaceae	<i>Berberis koreana</i> Palib. 매자나무	IV
Berberidaceae	<i>Jeffersonia dubia</i> (Maxim.) Benth. & Hook. f. ex Baker & S. Moore 꺽쟁이풀	IV
Ulmaceae	<i>Ulmus macrocarpa</i> Hance 왕느릅나무	IV
Ulmaceae	<i>Ulmus pumila</i> L. 비술나무	IV
Moraceae	<i>Morus mongolica</i> (Bureau) C. K. Schneid 몽고뽕나무	IV
Urticaceae	<i>Girardinia diversifolia</i> subsp. <i>suborbiculata</i> (C. J. Chen) C. J. Chen & Friis 큰췌기풀	IV
Phytolaccaceae	<i>Phytolacca acinosa</i> Roxb. 자리공	IV
Chenopodiaceae	<i>Chenopodium aristatum</i> L. 바늘명아주	IV
Caryophyllaceae	<i>Moehringia lateriflora</i> (L.) Fenzl 개벼룩	IV
Caryophyllaceae	<i>Pseudostellaria setulosa</i> Ohwi 숲개별꽃	IV
Caryophyllaceae	<i>Silene capitata</i> Kom. 분홍장구채	V
Polygonaceae	<i>Aconogonon microcarpum</i> (Kitag.) H. Hara 참개싱아	IV
Paeoniaceae	<i>Paeonia lactiflora</i> var. <i>trichocarpa</i> (Bunge) Stern 참작약	IV
Paeoniaceae	<i>Paeonia obovata</i> Maxim. 산작약	V
Violaceae	<i>Viola mirabilis</i> L. 넓은잎제비꽃	V
Violaceae	<i>Viola websteri</i> Hemsl. 왕제비꽃	V
Cucurbitaceae	<i>Schizopepon bryoniifolium</i> Maxim. 산외	IV
Ericaceae	<i>Rhododendron micranthum</i> Turcz. 꼬리진달래	IV
Monotropaceae	<i>Monotropa hypopitys</i> L. 구상난풀	V
Primulaceae	<i>Lysimachia coreana</i> Nakai 참좁쌀풀	IV
Crassulaceae	<i>Sedum latiovalifolium</i> Y. N. Lee 태백기린초	IV
Saxifragaceae	<i>Astilboides tabularis</i> (Hemsl.) Engl. 개병풍	V
Saxifragaceae	<i>Chrysosplenium ramosum</i> Maxim. 가지쟁이눈	IV
Saxifragaceae	<i>Rodgersia podophylla</i> A. Gray 도깨비부채	IV
Rosaceae	<i>Cotoneaster integerrimus</i> Medik. 개야광나무	V
Rosaceae	<i>Prunus choreiana</i> Nakai ex H. T. Im 복사앵도	IV
Rosaceae	<i>Prunus sibirica</i> L. 시베리아살구나무	IV
Rosaceae	<i>Rosa davurica</i> Pall. 생열귀나무	IV
Rosaceae	<i>Rosa spinosissima</i> L. 둥근인가목	IV
Rosaceae	<i>Spiraea trichocarpa</i> Nakai 갈기조팝나무	IV
Rosaceae	<i>Waldsteinia ternata</i> (Stephan) Fritsch 나도양지꽃	IV
Fabaceae	<i>Caragana fruticosa</i> (Pall.) Besser 참골담초	IV
Fabaceae	<i>Vicia bungei</i> Ohwi 들완두	IV
Thymelaeaceae	<i>Daphne pseudomezereum</i> var. <i>koreana</i> (Nakai) Hamaya 두메닥나무	IV
Thymelaeaceae	<i>Diarthron linifolium</i> Turcz. 아마풀	V
Onagraceae	<i>Epilobium hirsutum</i> L. 큰바늘꽃	V
Rhamnaceae	<i>Rhamnus parvifolia</i> Bunge 돌갈매나무	IV
Linaceae	<i>Linum stelleroides</i> Planch. 개아마	IV
Polygalaceae	<i>Polygala sibirica</i> L. 두메애기풀	IV
Polygalaceae	<i>Polygala tatarinowii</i> Regel 병아리풀	IV
Aceraceae	<i>Acer tegmentosum</i> Maxim. 산겨릅나무	IV
Araliaceae	<i>Eleutherococcus divaricatus</i> (Siebold & Zucc.) S. Y. Hu 개가시오갈피나무	V

Table 7. Continued.

Family	Taxa	Grade
Araliaceae	<i>Eleutherococcus senticosus</i> (Rupr. & Maxim.) Maxim. 가시오갈피나무	V
Araliaceae	<i>Panax ginseng</i> C. A. Mey. 인삼	V
Apiaceae	<i>Aegopodium alpestre</i> Ledeb. 왜방풍	IV
Apiaceae	<i>Libanotis seseloides</i> (Fisch. & C. A. Mey. ex Turcz.) Turcz. 가는잎방풍	IV
Apiaceae	<i>Sillaphyton podagraria</i> (H. Boissieu) Pimenov 덕우기름나물	IV
Gentianaceae	<i>Anagallidium dichotomum</i> (L.) Griseb. 대성쓴풀	V
Gentianaceae	<i>Pterygocalyx volubilis</i> Maxim. 좁은잎덩굴용담	V
Lamiaceae	<i>Dracocephalum rupestre</i> Hance 별개풀	V
Lamiaceae	<i>Salvia chamryoenica</i> Nakai 참배암차즈기	IV
Oleaceae	<i>Forsythia ovata</i> Nakai 만리화	V
Oleaceae	<i>Forsythia saxatilis</i> (Nakai) Nakai 산개나리	IV
Oleaceae	<i>Syringa fauriei</i> H. Lévl. 버들개회나무	IV
Oleaceae	<i>Syringa wolfii</i> C. K. Schneid. 꽃개회나무	IV
Rubiaceae	<i>Galium boreale</i> L. 긴잎갈퀴	IV
Linnaeaceae	<i>Zabelia tyaihyonii</i> (Nakai) Hisauti & H. Hara 줄댕강나무	V
Caprifoliaceae	<i>Lonicera tatarinowii</i> Maxim. 흰괴불나무	IV
Viburnaceae	<i>Viburnum burejaeticum</i> Regel & Herd. 산분꽃나무	V
Valerianaceae	<i>Patrinia rupestris</i> (Pall.) Juss. 들마타리	IV
Asteraceae	<i>Artemisia sieversiana</i> Ehrh. ex Willd. 산흰썩	IV
Asteraceae	<i>Leontopodium coreanum</i> Nakai 솜다리	V
Asteraceae	<i>Saussurea calcicola</i> Nakai 사창분취	IV
Asteraceae	<i>Saussurea chabyoungsanica</i> H. T. Im 자병취	IV
Asteraceae	<i>Tephrosieris phaeantha</i> (Nakai) C. Jeffrey & Y. L. Chen 바위솜나물	V
Cyperaceae	<i>Carex longirostrata</i> var. <i>pallida</i> (Kitag.) Ohwi 실피사초	IV
Cyperaceae	<i>Carex remotiuscula</i> Wahlenb. 충실사초	IV
Cyperaceae	<i>Carex stipata</i> Muhl. ex Willd. 양덕사초	IV
Cyperaceae	<i>Scirpus orientalis</i> Ohwi 검은도루박이	IV
Cyperaceae	<i>Trichophorum polygamum</i> D. C. Son & K. S. Chang 동강고랭이	IV
Poaceae	<i>Festuca japonica</i> Makino 산목새	IV
Poaceae	<i>Festuca rubra</i> L. 왕김의털	IV
Poaceae	<i>Poa nemoralis</i> L. 선포아풀	IV
Liliaceae	<i>Hemerocallis middendorffii</i> Trautv. & C. A. Mey. 큰원추리	IV
Liliaceae	<i>Lilium cernuum</i> Kom. 솔나리	IV
Liliaceae	<i>Lilium leichtlinii</i> var. <i>maximowiczii</i> (Regel) Baker 중나리	IV
Liliaceae	<i>Polygonatum stenophyllum</i> Maxim. 층층둥굴레	IV
Liliaceae	<i>Trillium camschatcense</i> Ker Gawl. 연영초	IV
Liliaceae	<i>Veratrum maackii</i> var. <i>parviflorum</i> (Maxim. ex Miq.) H. Hara 파란여로	IV
Liliaceae	<i>Zigadenus sibiricus</i> (L.) A. Gray 나도여로	V
Iridaceae	<i>Iris odaesanensis</i> Y. N. Lee 노랑무늬붓꽃	IV
Orchidaceae	<i>Cymbidium macrorhizon</i> Lindl. 대홍란	V
Orchidaceae	<i>Cypripedium macranthos</i> Sw. 복주머니란	V
Orchidaceae	<i>Epipactis papillosa</i> Franch. & Sav. 청답의난초	IV
Orchidaceae	<i>Herminium monorchis</i> (L.) R. Br. 나도씨눈란	IV
Orchidaceae	<i>Neottianthe cucullata</i> (L.) Schltr. 구름병아리난초	V

(L.) Goldblatt & Mabb.) 등 72분류군이다(Appendix 1). 결과적으로 식물구계학적 특성식물은 총 359분류군으로 한반도 전체 특정식물 1,476분류군의 24.3%, 석회암지대 전체 출현식물 1,202분류군의 29.9%에 해당하는 높은 수치로 나타남에 따라 우리나라 석회암지대가 한반도 식물상을 구성하는 식물지리학적 주요지역 가운데 하나로 확인되었다.

백부자는 강원도 및 경상북도에 걸쳐 석회암지대 산지에 집중적으로 분포하고 경기도 및 충청북도 일부 지역에

도 출현한다. 전 세계적으로 북한, 중국, 러시아 등지에 분포한다. 강원도 석회암지대에서는 비교적 많은 개체가 확인되지만 다른 지역에서는 매우 드물다. 영월군 태화산, 제천시 두무산 2개 산지의 능선부에서 10여 개체가 산발적으로 생육하고 있다. 약용이나 상업을 목적으로 한 무분별한 채취로 인해 개체가 급감한 것으로 추정된다. 동강할미꽃은 전 세계적으로 강원도와 충청북도 석회암지대에만 제한적으로 분포하는 한반도 고유식물이며, 현재까지 확인된 자생지는 10여 개 지역에 불과하다(Oh et al.,

2014). 삼척시 오십천, 정선군 덕산기계곡의 석회암지대 바위틈에서 소수 개체가 확인되었다. 관광 및 상업을 목적으로 한 무분별한 채취와 자생지 교란이 개체 감소로 이어지고 있다. 연잎평의다리는 강원도 깊은 숲 속에 불연속적으로 분포하는 한반도 고유식물이며, 자생지 및 개체수도 극히 드물다. 기존에 알려진 자생지 외의 범위에서 확인된 출현정보는 꼭지연잎평의다리와 혼동되었을 가능성이 많다. 평창군 대덕사의 바위틈 또는 근처의 양지바른 풀밭에서 10여 개체가 확인되었다. 나도씨눈란은 강원도 및 경상도 일대 고산지대의 숲 속이나 나무그늘에서 자란다. 정선군 반문산, 채천시 두무산 2개 지역에서 10여 개체가 산발적으로 생육하고 있다. 주변포역과 떨어진 채천시 두무산(해발고도 400 m)에서 발견된 것은 수직분포적 측면에서도 특이하다.

그 외 국내에서는 드물게 분포하는 바위종덩굴, 꽃평의다리, 바늘명아주(*Chenopodium aristatum* L.), 참작약(*Paeonia lactiflora* var. *trichocarpa* (Bunge) Stern), 개병풍, 개아광나무(*Cotoneaster integerrimus* Medik.) (Fig. 2H), 둥근인가목(*Rosa spinosissima* L.), 대성손풀, 벌개풀(*Dracocephalum rupestre* Hance), 바위솜나물(*Tephrosia phaeantha* (Nakai) C. Jeffrey & Y. L. Chen), 구름병아리난초 등이 석회암지대에서 생육하고 있다.

외래식물

석회암지대에서 확인된 외래식물은 애기수영(*Rumex acetosella* L.), 가시박(*Sicyos angulatus* L.), 돼지풀(*Ambrosia artemisiifolia* L.), 단풍잎돼지풀(*Ambrosia trifida* L.) 등을 포함하여 총 121분류군이 확인되었으며(Table 8, Appendix 1), 한반도 전체 외래식물 619분류군의 19.5%, 석회암지대 전체 출현식물 1,202분류군의 10.1%에 해당하였다. 말냉이(*Thlaspi arvense* L.), 아까시나무(*Robinia pseudoacacia* L.), 달맞이꽃(*Oenothera biennis* L.), 미국쭉부쟁이(*Aster pilosus* Willd.), 지느러미영경귀(*Carduus crispus* L.), 개망초(*Erigeron annuus* (L.) Pers.), 서양민들레(*Taraxacum officinale* F. H. Wigg.)는 10개 지역에서 모두 관찰되었으며, 명아주(*Chenopodium album* L.), 긴털비름(*Amaranthus hybridus* L.), 수박풀(*Hibiscus trionum* L.), 복사나무(*Prunus persica* (L.) Batsch.), 족제비싸리(*Amorpha fruticosa* L.), 흰전동싸리(*Melilotus albus* Medik.), 전동싸리(*Melilotus suaveolens* Ledeb.), 큰땅빈대(*Euphorbia hypericifolia* L.), 망초(*Coryza canadensis* (L.) Cronquist), 개쭉갓(*Senecio vulgaris* L.), 털립새귀리(*Bromus tectorum* L.), 오리새(*Dactylis glomerata* L.), 구주개밀(*Elymus repens* (L.) Gould), 큰김의털(*Festuca arundinacea* Schreb.), 왕포아풀(*Poa pratensis* L.)은 9개 지역에서 확인되었다. 반면에 털비름(*Amaranthus retroflexus* L.), 털여뀌(*Persicaria orientalis* (L.) Spach), 들다닥냉이(*Lepidium campestre* (L.) R. Br.), 길다닥냉이(*Lepidium densiflorum* Schrad.), 가새잎개갓냉이(*Rorippa sylvestris* (L.)

Table 8. The list of the alien plants investigated on limestone areas in Korea.

Family	Taxa
Moraceae	<i>Morus alba</i> L. 뽕나무
Phytolaccaceae	<i>Phytolacca acinosa</i> Roxb. 자리공
Phytolaccaceae	<i>Phytolacca americana</i> L. 미국자리공
Chenopodiaceae	<i>Chenopodium album</i> L. 명아주
Chenopodiaceae	<i>Chenopodium ficifolium</i> Sm. 줄명아주
Amaranthaceae	<i>Amaranthus hybridus</i> L. 긴털비름
Amaranthaceae	<i>Amaranthus lividus</i> L. 개비름
Amaranthaceae	<i>Amaranthus retroflexus</i> L. 털비름
Caryophyllaceae	<i>Cerastium glomeratum</i> Thuill. 유럽접나도나물
Caryophyllaceae	<i>Silene alba</i> (Mill.) E. H. L. Krause 달맞이장구채
Caryophyllaceae	<i>Silene armeria</i> L. 끈끈이대나물
Caryophyllaceae	<i>Stellaria media</i> (L.) Vill. 별꽃
Polygonaceae	<i>Persicaria orientalis</i> (L.) Spach 털여뀌
Polygonaceae	<i>Rumex acetosella</i> L. 애기수영
Polygonaceae	<i>Rumex crispus</i> L. 소리쟁이
Polygonaceae	<i>Rumex obtusifolius</i> L. 돌소리쟁이
Polygonaceae	<i>Rumex patientia</i> L. 부령소리쟁이
Malvaceae	<i>Abutilon theophrasti</i> Medik. 어저귀
Malvaceae	<i>Hibiscus trionum</i> L. 수박풀
Cucurbitaceae	<i>Sicyos angulatus</i> L. 가시박
Brassicaceae	<i>Barbarea vulgaris</i> R. Br. 유럽나도냉이
Brassicaceae	<i>Descurainia sophia</i> (L.) Webb ex Prantl 재쭉
Brassicaceae	<i>Lepidium campestre</i> (L.) R. Br. 들다닥냉이
Brassicaceae	<i>Lepidium densiflorum</i> Schrad. 길다닥냉이
Brassicaceae	<i>Lepidium virginicum</i> L. 콩다닥냉이
Brassicaceae	<i>Nasturtium officinale</i> W. T. Aiton 물냉이
Brassicaceae	<i>Rorippa sylvestris</i> (L.) Besser 가새잎개갓냉이
Brassicaceae	<i>Thlaspi arvense</i> L. 말냉이
Rosaceae	<i>Potentilla supina</i> L. 개소시랑개비
Rosaceae	<i>Prunus persica</i> (L.) Batsch. 복사나무
Rosaceae	<i>Prunus tomentosa</i> Thunb. 앵도나무
Fabaceae	<i>Amorpha fruticosa</i> L. 족제비싸리
Fabaceae	<i>Astragalus sinicus</i> L. 자운영
Fabaceae	<i>Indigofera bungeana</i> Walp. 큰나야초
Fabaceae	<i>Lespedeza lichiyuniae</i> T. Nemoto, H. Ohashi & T. Itoh 자주비수리
Fabaceae	<i>Lotus corniculatus</i> L. 서양별노랑이
Fabaceae	<i>Medicago lupulina</i> L. 잔개자리
Fabaceae	<i>Medicago polymorpha</i> L. 개자리
Fabaceae	<i>Medicago sativa</i> L. 자주개자리
Fabaceae	<i>Melilotus albus</i> Medik. 흰전동싸리
Fabaceae	<i>Melilotus suaveolens</i> Ledeb. 전동싸리
Fabaceae	<i>Robinia pseudoacacia</i> L. 아까시나무
Fabaceae	<i>Trifolium pratense</i> L. 붉은토끼풀
Fabaceae	<i>Trifolium repens</i> L. 토끼풀
Fabaceae	<i>Vicia villosa</i> Roth 벻치
Onagraceae	<i>Oenothera biennis</i> L. 달맞이꽃
Euphorbiaceae	<i>Euphorbia hypericifolia</i> L. 큰땅빈대
Euphorbiaceae	<i>Euphorbia maculata</i> L. 애기땅빈대
Simaroubaceae	<i>Ailanthus altissima</i> (Mill.) Swingle 가층나무
Oxalidaceae	<i>Oxalis dillenii</i> Jacq. 들팽이밥
Solanaceae	<i>Datura stramonium</i> L. 독말풀
Solanaceae	<i>Nicandra physalodes</i> (L.) Gaertn. 페루파리
Solanaceae	<i>Physalis angulata</i> L. 망파리
Solanaceae	<i>Solanum americanum</i> Mill. 미국까마중
Convolvulaceae	<i>Cuscuta campestris</i> Yunck. 미국실새삼
Convolvulaceae	<i>Ipomoea hederacea</i> Jacq. 미국나팔꽃

Table 8. Continued.

Family	Taxa
Convolvulaceae	<i>Ipomoea lacunosa</i> L. 애기나팔꽃
Convolvulaceae	<i>Ipomoea purpurea</i> (L.) Roth 둥근잎나팔꽃
Convolvulaceae	<i>Ipomoea rubriflora</i> O'Donell 둥근잎유홍초
Boraginaceae	<i>Symphytum officinale</i> L. 킴프리
Plantaginaceae	<i>Plantago lanceolata</i> L. 창질경이
Scrophulariaceae	<i>Lindernia dubia</i> (L.) Pennell 미국의풀
Scrophulariaceae	<i>Paulownia tomentosa</i> (Thunb.) Steud. 참오동 나무
Scrophulariaceae	<i>Verbascum thapsus</i> L. 우단담배풀
Scrophulariaceae	<i>Veronica anagallis-aquatica</i> L. 큰물칭개나물
Scrophulariaceae	<i>Veronica arvensis</i> L. 선개불알풀
Scrophulariaceae	<i>Veronica peregrina</i> L. 문모초
Scrophulariaceae	<i>Veronica persica</i> Poir. 큰개불알풀
Asteraceae	<i>Achillea millefolium</i> L. 서양톱풀
Asteraceae	<i>Ambrosia artemisiifolia</i> L. 돼지풀
Asteraceae	<i>Ambrosia trifida</i> L. 단풍잎돼지풀
Asteraceae	<i>Aster pilosus</i> Willd. 미국쭈부쟁이
Asteraceae	<i>Aster subulatus</i> Michx. 비짜루국화
Asteraceae	<i>Bidens frondosa</i> L. 미국가막사리
Asteraceae	<i>Bidens pilosa</i> L. 울산도깨비바늘
Asteraceae	<i>Carduus crispus</i> L. 지느러미영경귀
Asteraceae	<i>Conyza canadensis</i> (L.) Cronquist 망초
Asteraceae	<i>Coreopsis lanceolata</i> L. 큰금계국
Asteraceae	<i>Coreopsis tinctoria</i> Nutt. 기생초
Asteraceae	<i>Erechtites hieracifolia</i> (L.) Raf. ex DC. 붉은서나물
Asteraceae	<i>Erigeron annuus</i> (L.) Pers. 개망초
Asteraceae	<i>Erigeron philadelphicus</i> L. 봄망초
Asteraceae	<i>Galinsoga parviflora</i> Cav. 별꽃아재비
Asteraceae	<i>Galinsoga quadriradiata</i> Ruiz & Pav. 털별꽃아재비
Asteraceae	<i>Helianthus tuberosus</i> L. 뚱딴지
Asteraceae	<i>Lactuca scariola</i> L. 가시상추
Asteraceae	<i>Leucanthemum vulgare</i> Lam. 불란서국화
Asteraceae	<i>Matricaria matricarioides</i> (Less.) Porter ex Britton 족제비쭈
Asteraceae	<i>Senecio vulgaris</i> L. 개쭈갓
Asteraceae	<i>Sonchus asper</i> (L.) Hill 큰방가지뚱
Asteraceae	<i>Sonchus oleraceus</i> L. 방가지뚱
Asteraceae	<i>Tagetes minuta</i> L. 만수국아재비
Asteraceae	<i>Taraxacum laevigatum</i> (Willd.) DC. 붉은씨서양민들레
Asteraceae	<i>Taraxacum officinale</i> F. H. Wigg. 서양민들레
Asteraceae	<i>Tragopogon dubis</i> Scop. 쇠채아재비
Asteraceae	<i>Verbesina alternifolia</i> (L.) Britton ex Kearney 나래가막사리
Asteraceae	<i>Xanthium orientale</i> L. 큰도꼬마리
Asteraceae	<i>Xanthium strumarium</i> L. 도꼬마리
Poaceae	<i>Agrostis gigantea</i> Roth 흰겨이삭
Poaceae	<i>Alopecurus aequalis</i> Sobol. 뚝새풀
Poaceae	<i>Alopecurus japonicus</i> Steud. 털뚝새풀
Poaceae	<i>Alopecurus pratensis</i> L. 큰뚝새풀
Poaceae	<i>Bromus catharticus</i> Vahl 큰이삭풀
Poaceae	<i>Bromus inermis</i> Leyss. 좁쌀새귀리
Poaceae	<i>Bromus mollis</i> L. 털참새귀리
Poaceae	<i>Bromus rigidus</i> Roth 긴까락뱃새귀리
Poaceae	<i>Bromus sterilis</i> L. 까락뱃새귀리
Poaceae	<i>Bromus tectorum</i> L. 털뱃새귀리

Table 8. Continued.

Family	Taxa
Poaceae	<i>Chloris virgata</i> Sw. 나도바랭이
Poaceae	<i>Dactylis glomerata</i> L. 오리새
Poaceae	<i>Elymus repens</i> (L.) Gould 구주개밀
Poaceae	<i>Eragrostis curvula</i> (Schrad.) Nees 능수참새그령
Poaceae	<i>Festuca arundinacea</i> Schreb. 큰김의털
Poaceae	<i>Festuca heterophylla</i> Lam. 사방김의털
Poaceae	<i>Lolium multiflorum</i> Lam. 쥐보리
Poaceae	<i>Lolium perenne</i> L. 호밀풀
Poaceae	<i>Panicum dichotomiflorum</i> Michx. 미국개기장
Poaceae	<i>Phleum pratense</i> L. 큰조아재비
Poaceae	<i>Poa pratensis</i> L. 왕포아풀
Poaceae	<i>Vulpia myuros</i> (L.) C. C. Gmel. 들묵새
Liliaceae	<i>Allium tuberosum</i> Rottler ex Spreng. 부추

Besser), 자운영(*Astragalus sinicus* L.), 자주비수리(*Lespedeza lichiyuniae* T. Nemoto, H. Ohashi & T. Itoh), 개자리(*Medicago polymorpha* L.), 벻치(*Vicia villosa* Roth), 독말풀(*Datura stramonium* L.), 페루파리(*Nicandra physalodes* (L.) Gaertn.), 땅파리(*Physalis angulata* L.), 미국의풀(*Lindernia dubia* (L.) Pennell), 우단담배풀(*Verbascum thapsus* L.), 문모초(*Veronica peregrina* L.), 서양톱풀(*Achillea millefolium* L.), 단풍잎돼지풀, 봄망초(*Erigeron philadelphicus* L.), 족제비쭈(*Matricaria matricarioides* (Less.) Porter ex Britton), 쇠채아재비(*Tragopogon dubis* Scop.), 털뚝새풀(*Alopecurus japonicus* Steud.), 큰이삭풀(*Bromus catharticus* Vahl), 좁쌀새귀리(*Bromus inermis* Leyss.), 털참새귀리(*Bromus mollis* L.), 긴까락뱃새귀리(*Bromus rigidus* Roth), 나도바랭이(*Chloris virgata* Sw.), 능수참새그령(*Eragrostis curvula* (Schrad.) Nees), 들묵새(*Vulpia myuros* (L.) C. C. Gmel.)는 1개 지역에 서만 조사되었다. 외래식물들은 주로 비의도적으로 유입되고 교란된 지역에서 발생되며, 대부분 자생종의 생육지 파괴, 생태계 교란 및 생물다양성 감소 등 부정적인 영향을 미친다(Kang et al., 2020). 석회암지대에서도 도로 주변, 하천변과 인접한 숲 가장자리, 고랭지밭 경작지 부근의 교란된 지역에서 출현빈도가 높게 나타났으며, 일부 광역 분포종은 산지 숲에서도 관찰되었다.

호석회성 식물

석회암지대에 분포하는 식물들의 분포 특성을 분석하여 호석회성 식물을 지표종, 극선호종, 선호종으로 구분하였다. 석회암지대 지표종은 전 세계적으로 석회암지대에만 분포하는 분류군과 국내의 석회암지대에만 분포하는 한반도 고유식물이 포함된다(Table 9). 지표종의 범주에는 돌좁고사리, 바위종덩굴, 동강할미꽃, 줄냉간나무, 자명취, 반들대사초 등 14분류군이 속한다. 극선호종은 전 세계적인 분포에서는 석회암지대와 비석회암지대에 분포하지만 국내에서는 석회암지대에서만 분포하는 식물이 포함된다(Table 10). 극선호종의 범주에는 개부처순,

Table 9. The list of the calciphilous indicator plants investigated on limestone areas in Korea.

Family	Taxa
Aspleniaceae	<i>Asplenium tura-muraria</i> L. 돌좁고사리
Hypodematiaceae	<i>Hypodematium glanduloso-pilosum</i> (Tagawa) Ohwi 금털고사리
Hypodematiaceae	<i>Hypodematium squamuloso-pilosum</i> Ching 흰금털고사리
Ranunculaceae	<i>Clematis calcicola</i> J. S. Kim 바위종덩굴
Ranunculaceae	<i>Pulsatilla tongkangensis</i> Y. N. Lee & T. C. Lee 동강할미꽃
Violaceae	<i>Viola breviflora</i> J. Lee & M. Kim 방울제비꽃
Crassulaceae	<i>Orostachys chongsunensis</i> Y. N. Lee 정선바위솔
Rosaceae	<i>Prunus choreiana</i> Nakai ex H. T. Im 복사앵도
Linnaeaceae	<i>Zabelia densipila</i> M. P. Hong, Y. C. Kim & B. Y. Lee 긴털댕강나무
Linnaeaceae	<i>Zabelia tyaihyonii</i> (Nakai) Hisauti & H. Hara 줄댕강나무
Asteraceae	<i>Dendranthema jeongseonensis</i> M. Kim & H. Jo 정선국화
Asteraceae	<i>Saussurea chabyoungsanica</i> H. T. Im 자병취
Cyperaceae	<i>Carex splendentissima</i> U. Kang & J. M. Chung 반들대사초
Cyperaceae	<i>Trichophorum polygamum</i> D. C. Son & K. S. Chang 동강고랭이

Table 10. The list of the superlative most calciphilous plants investigated on limestone areas in Korea.

Family	Taxa
Selaginellaceae	<i>Selaginella stauntoniana</i> Spring 개부처순
Adiantaceae	<i>Adiantum capillus-junonis</i> Rupr. 암공작고사리
Athyriaceae	<i>Gymnocarpium jessoense</i> (Koidz.) Koidz. 산토끼고사리
Woodsiaceae	<i>Woodsia hancockii</i> Baker 애기가물고사리
Ranunculaceae	<i>Aconitum barbatum</i> var. <i>hispidum</i> (DC.) Ser. 넓은잎노랑투구꽃
Ranunculaceae	<i>Clematis brevicaudata</i> DC. 줄사위길쌈
Moraceae	<i>Morus mongolica</i> (Bureau) C. K. Schneid. 몽고뽕나무
Urticaceae	<i>Pilea oligantha</i> Nakai 강계큰물통이
Chenopodiaceae	<i>Chenopodium aristatum</i> L. 바늘명아주
Caryophyllaceae	<i>Gypsophila pacifica</i> Kom. 가는대나물
Caryophyllaceae	<i>Minuartia verna</i> var. <i>leptophylla</i> (Rchb.) Nakai 삼수개미자리
Violaceae	<i>Viola mirabilis</i> L. 넓은잎제비꽃
Rosaceae	<i>Cotoneaster integrissimus</i> Medik. 개야광나무
Rosaceae	<i>Potentilla rugulosa</i> Kitag. 당양지꽃
Rosaceae	<i>Rosa spinosissima</i> L. 둥근인가목
Rosaceae	<i>Physocarpus amurensis</i> (Maxim.) Maxim. 산국수나무
Fabaceae	<i>Astragalus penduliflorus</i> var. <i>dahuricus</i> (DC.) X. Y. Zhu 황기
Fabaceae	<i>Caragana fruticosa</i> (Pall.) Besser 참꿀담초
Euphorbiaceae	<i>Euphorbia fischeriana</i> Steud. 낭독
Rhamnaceae	<i>Rhamnus parvifolia</i> Bunge 돌갈매나무
Polygalaceae	<i>Polygala sibirica</i> L. 두메애기풀
Apiaceae	<i>Angelica czernaevia</i> (Fisch. & C. A. Mey.) Kitag. 잔잎바디
Apiaceae	<i>Libanotis seseloides</i> (Fisch. & C. A. Mey. ex Turcz.) Turcz. 가는잎방풍
Gentianaceae	<i>Anagallidium dichotomum</i> (L.) Griseb. 대성쓴풀
Lamiaceae	<i>Dracocephalum rupestre</i> Hance 별개풀
Rubiaceae	<i>Galium kinuta</i> Nakai & H. Hara 민둥갈퀴
Asteraceae	<i>Saussurea mongolica</i> (Franch.) Franch. 북분취
Cyperaceae	<i>Carex ussuriensis</i> Kom. 싸래기사초
Haemodoraceae	<i>Anemarrhena asphodeloides</i> Bunge 지모
Liliaceae	<i>Zigadenus sibiricus</i> (L.) A. Gray 나도여로

산토끼고사리(*Gymnocarpium jessoense* (Koidz.) Koidz.), 넓은잎노랑투구꽃(*Aconitum barbatum* var. *hispidum* (DC.) Ser.), 개야광나무, 낭독, 가는잎방풍(*Libanotis seseloides* (Fisch. & C. A. Mey. ex Turcz.) Turcz.) 등 30분류군이 속한다. 선호종은 국내 남부지역(경상누층군) 또는 아고산지대 및 풍혈지 등의 비석회암지대에도 일부 분포하지만 석회암지대에서 개체수 및 개체군이 더 많은 식물이 포함된다

(Table 11). 선호종의 범주에는 왜구실사리(*Selaginella helvetica* (L.) Link), 바위틈고사리(*Dryopteris goeringiana* (Kunze) Koidz.), 강화황기(*Astragalus sikokianus* Nakai), 덕우 기름나물, 만리화(*Forsythia ovata* Nakai), 사창분취(*Saussurea calcicola* Nakai), 장군대사초(*Carex poculisquama* Kük.) 등 58분류군이 속한다. 이상의 기준들을 통하여 호석회성 식물은 총 102분류군이며, 석회암지대 전체 출현

Table 11. The list of the comparative more calciphilous plants investigated on limestone areas in Korea.

Family	Taxa
Selaginellaceae	<i>Selaginella helvetica</i> (L.) Link 왜구실사리
Ophioglossaceae	<i>Botrychium strictum</i> Underw. 긴꽃고사리삼
Aspleniaceae	<i>Asplenium varians</i> Wall. ex Hook. & Grev. 애기꼬리고사리
Dryopteridaceae	<i>Dryopteris goeringiana</i> (Kunze) Koidz. 바위틈고사리
Dryopteridaceae	<i>Polystichum craspedosorum</i> (Maxim.) Diels 뉘시고사리
Cupressaceae	<i>Platycladus orientalis</i> (L.) Franco 측백나무
Ranunculaceae	<i>Aconitum coreanum</i> (H. Lévl.) Rapaics 백부자
Ranunculaceae	<i>Cimicifuga heracleifolia</i> var. <i>bifida</i> Nakai 세잎승마
Ranunculaceae	<i>Thalictrum coreanum</i> H. Lévl. 연잎평의다리
Ranunculaceae	<i>Thalictrum ichangense</i> Lecoy. ex Oliv. 꼭지연잎평의다리
Ranunculaceae	<i>Thalictrum petaloideum</i> L. 꽃평의다리
Ulmaceae	<i>Ulmus macrocarpa</i> Hance 왕느릅나무
Celtidaceae	<i>Celtis koraiensis</i> Nakai 왕팽나무
Urticaceae	<i>Parietaria micrantha</i> Ledeb. 개물통이
Paeoniaceae	<i>Paeonia lactiflora</i> var. <i>trichocarpa</i> (Bunge)
Paeoniaceae	Stern 참작약
Crassulaceae	<i>Paeonia obovata</i> Maxim. 산작약
Saxifragaceae	<i>Sedum latiovalifolium</i> Y. N. Lee 태백기린초
Rosaceae	<i>Astilboides tabularis</i> (Hemsl.) Engl. 개병풍
Rosaceae	<i>Exochorda serratifolia</i> S. Moore 가침박달
Rosaceae	<i>Neillia uyekii</i> Nakai 나도국수나무
Rosaceae	<i>Spiraea chinensis</i> Maxim. 당조팝나무
Fabaceae	<i>Spiraea trichocarpa</i> Nakai 갈조팝나무
Fabaceae	<i>Astragalus sikokianus</i> Nakai 강화황기
Fabaceae	<i>Lathyrus vaniotii</i> H. Lévl. 산새콩
Thymelaeaceae	<i>Vicia bungei</i> Ohwi 들완두
Thymelaeaceae	<i>Daphne pseudomezereum</i> var. <i>koreana</i> (Nakai)
Buxaceae	Hamaya 두메닥나무
Euphorbiaceae	<i>Diarthron linifolium</i> Turcz. 아마풀
Linaceae	<i>Buxus microphylla</i> var. <i>koreana</i> Nakai ex Rehder 회양목
Polygalaceae	<i>Euphorbia ebracteolata</i> Hayata 붉은대극
Apiaceae	<i>Linum stelleroides</i> Planch. 개아마
Gentianaceae	<i>Polygala tatarinowii</i> Regel 병아리풀
Asclepiadaceae	<i>Sillaphyton podagraria</i> (H. Boissieu) Pimenov 덕우기름나물
Boraginaceae	<i>Pterygocalyx volubilis</i> Maxim. 좁은잎덩굴용담
Lamiaceae	<i>Cynanchum inamoenum</i> (Maxim.) Loes. 선백미꽃
Lamiaceae	<i>Lithospermum erythrorhizon</i> Siebold & Zucc. 지치
Oleaceae	<i>Nepeta cataria</i> L. 개박하
Oleaceae	<i>Teucrium veronicoides</i> Maxim. 괄향
Rubiaceae	<i>Forsythia ovata</i> Nakai 만리화
Linnaeaceae	<i>Forsythia saxatilis</i> (Nakai) Nakai 산개나리
Caprifoliaceae	<i>Galium boreale</i> L. 긴잎갈퀴
Viburnaceae	<i>Zabelia biflora</i> (Turcz.) Makino 털댕강나무
Valerianaceae	<i>Lonicera tatarinowii</i> Maxim. 흰괴불나무
Dipsacaceae	<i>Viburnum burejaeticum</i> Regel & Herd. 산분꽃나무
Asteraceae	<i>Patrinia rupestris</i> (Pall.) Juss. 돌마타리
Asteraceae	<i>Dipsacus japonicus</i> Miq. 산토끼꽃
Asteraceae	<i>Aster maackii</i> Regel 좁개미취
Asteraceae	<i>Aster meyerendorffii</i> (Regel & Maack) Voss 개쑥부쟁이

Table 11. Continued.

Family	Taxa
Asteraceae	<i>Saussurea calcicola</i> Nakai 사창분취
Asteraceae	<i>Saussurea odontolepis</i> Sch. Bip. ex Herder 빗살서덜취
Asteraceae	<i>Tephrosia phaeantha</i> (Nakai) C. Jeffrey & Y. L. Chen 바위습나물
Cyperaceae	<i>Carex longirostrata</i> var. <i>pallida</i> (Kitag.) Ohwi 실피사초
Cyperaceae	<i>Carex poculisquama</i> Kük. 장군대사초
Cyperaceae	<i>Carex remotiuscula</i> Wahlenb. 충실사초
Liliaceae	<i>Hemerocallis middendorffii</i> Trautv. & C. A. Mey. 큰원추리
Liliaceae	<i>Veratrum nigrum</i> L. 참여로
Orchidaceae	<i>Epipactis papillosa</i> Franch. & Sav. 청닭의난초
Orchidaceae	<i>Herminium monorchis</i> (L.) R. Br. 나도씨눈란
Orchidaceae	<i>Neottianthe cucullata</i> (L.) Schltr. 구름병아리난초

식물의 8.5%에 해당되었다. 기존 Korea National Arboretum (2012)에서 제시한 호석회성 식물 목록 109분류군과 비교하여, 돌좁고사리, 금털고사리(*Hypodematium glandulosopilosum* (Tagawa) Ohwi) (Fig. 2B), 동강할미꽃, 동강고랭이, 삼수개미자리(*Mimuartia verna* var. *leptophylla* (Rchb.) Nakai), 나도여로 등 58분류군은 공통적으로 적용한 종들이다. 이와 별개로 문헌(Korea National Arboretum, 2012)에서 제시한 51분류군, 그리고 본 연구에서 제시한 44분류군을 서로 다르게 적용시켜 총 95분류군이 차이 나는 것으로 나타났다. 문헌의 목록에서는 부싯깃고사리(*Cheilanthes argentea* (S. G. Gmel.) Kunze), 거미고사리(*Asplenium ruprechtii* Sa. Kurata), 노간주나무(*Juniperus rigida* Siebold & Zucc.), 굴참나무(*Quercus variabilis* Blume), 화살나무(*Euonymus alatus* (Thunb.) Siebold), 회목나무(*Euonymus pauciflorus* Maxim.), 부추(*Allium tuberosum* Rottler ex Spreng.), 방울비짜루(*Asparagus oligoclonos* Maxim.), 청가시덩굴(*Smilax sieboldii* Miq) 등 전국적으로 분포하는 식물들이 포함되어 이들을 제외시켰다. 본 연구에서 제시한 흰금털고사리(*Hypodematium squamuloso-pilosum* Ching), 방울제비꽃, 긴털댕강나무, 정선국화, 반들대사초는 문헌 발표 이후, 최근 석회암지대에서 보고된 신종 또는 미기록종들이며, 좁사위질빵(*Clematis brevicaudata* DC.), 몽고뽕나무, 개야광나무, 둥근인가목, 낭독, 가는잎방풍, 지모(*Anemarrhena asphodeloides* Bunge), 개물통이(*Parietaria micrantha* Ledeb.), 장군대사초 등은 비교적 최근에 국내 분포가 확인된 분류군(National Institute of Biological Resources, 2017)으로써 이들을 목록에 포함시켜 처리한 결과에서 차이가 나는 것으로 판단된다.

유사도

본 연구에서 조사한 석회암지대 10개 지역 간 종조성의 유사도를 분석한 결과(Fig. 3), 3번 지역(고양산)과 5번 지역(골치천)의 유사도가 77.6%로 가장 높게 나타났다(node

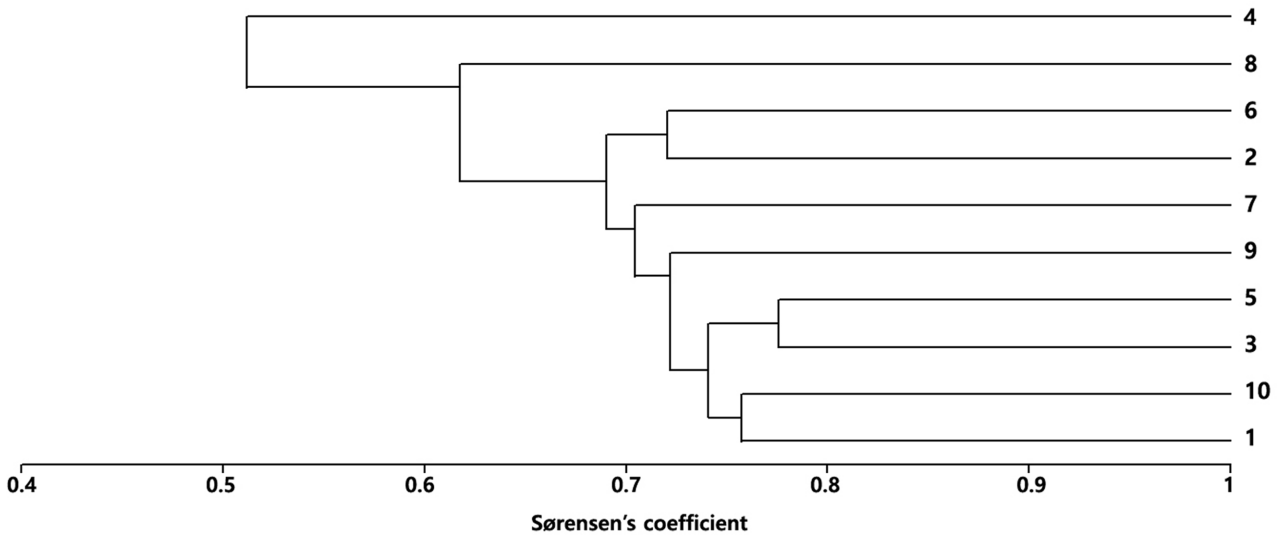


Fig. 3. UPGMA (Unweighted Pair-Group Method using Arithmetic averages) dendrogram of plant species composition on the 10 survey sites of limestone areas in Korea based on Sørensen's similarity index. 1, Taehwa mountain; 2, Osip stream; 3, Goyang mountain; 4, Samtae mountain; 5, Golji stream; 6, Wopung stream; 7, Jungnyeom mountain; 8, Dumu mountain; 9, Baeki mountain; 10, Nambyeong mountain.

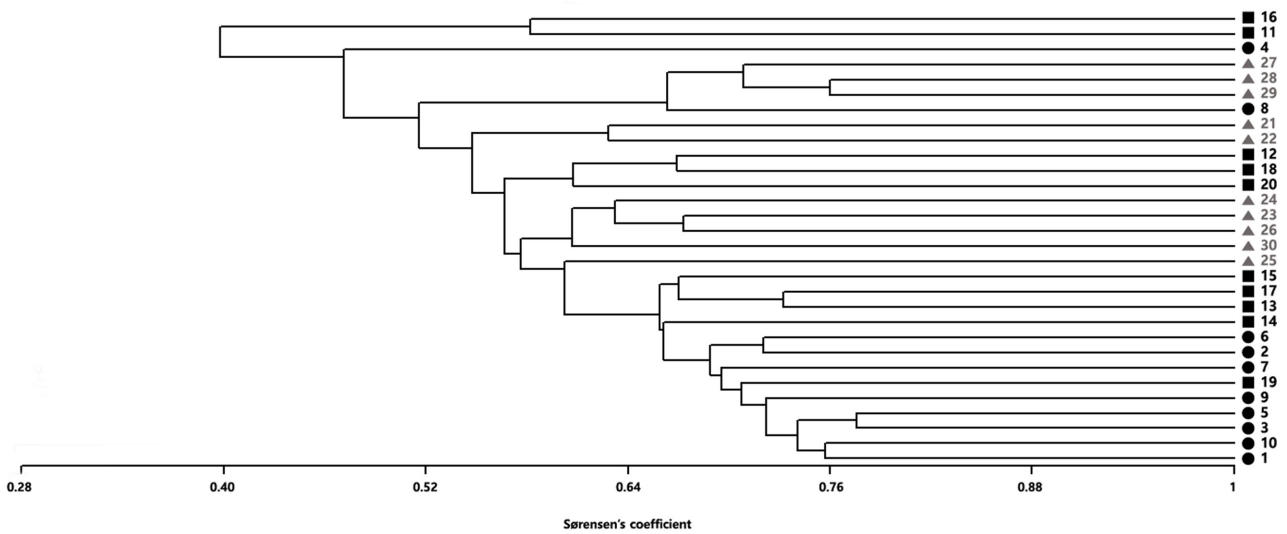


Fig. 4. UPGMA (Unweighted Pair-Group Method using Arithmetic averages) dendrogram of plant species composition on limestone areas including our survey sites (black circle, 1–10) and literature sites (black square, 11–20), and non-limestone areas (grey triangle, 21–30) in Korea based on Sørensen's similarity index. 1, Taehwa mountain; 2, Osip stream; 3, Goyang mountain; 4, Samtae mountain; 5, Golji stream; 6, Wopung stream; 7, Jungnyeom mountain; 8, Dumu mountain; 9, Baeki mountain; 10, Nambyeong mountain; 11, Todam Sambong; 12, Chabyong mountain; 13, Deokhang mountain; 14, Gakhui mountain; 15, Eungbong mountain; 16, Seokmunbong; 17, Myeon mountain-Myobong; 18, Seokbyeong mountain; 19, Donggang; 20, Daedeok mountain-Geumdaebong; 21, Gongdeok mountain; 22, Galla mountain; 23, Cheongtae mountain; 24, Heungjeong mountain; 25, Cheongnyang mountain; 26, Baegam mountain; 27, Jaam mountain; 28, Buyongbong; 29, Mui mountain; 30, Guryong mountain.

1). 1번 지역(태화산)과 10번 지역(남병산)은 75.7% (node 2), node 1과 node 2는 74.1% (node 3), node 3과 9번 지역(백이산)은 72.2%로 그 뒤를 이었다. 2번 지역(오십천)과 6번 지역(원풍천)의 종조성은 72.1% 유사한 것으로 나타났다.

자체 조사지역 외 문헌을 통해 수집한 석회암지대(11-

20번 지역)와 비석회암지대(21-30번 지역)의 종목록을 통합하여 유사도 분석을 수행한 결과(Fig. 4), 석회암지대인 3번 지역(고양산)과 5번 지역(골지천)의 유사도가 77.6% (node 1), 비석회암지대인 28번 지역(부용산)과 29번 지역(무이산)이 76.0% (node 2)로 유사도가 높게 나타났다. 1

번 지역(태화산)과 10번 지역(남병산)이 75.7% (node 3), node 1과 node 3가 74.1% (node 4), 13번 지역(덕항산)과 17번 지역(면산·묘봉)이 73.2%, node 4와 9번 지역(백이산)이 72.2% (node 6)로 그 뒤를 이어 석회암지대 내 지역끼리 높은 유사도를 보여주었다. 27번 지역(자암산)은 비석회암지대 그룹인 node 2와 70.9% 유사한 것으로 나타나 주요 node들은 석회암지대와 비석회암지대의 지역들을 다른 군집으로 구분하였다.

고찰

본 연구의 조사결과, 한반도 석회암지대에서 확인된 관속식물은 133과 530속 1,096종 18이중 84변종 2품종 2교잡종, 총 1,202분류군이 확인되었다. 무늬족도리풀, 홀아비바람꽃, 덕우기름나물, 한국얇은부채, 푸른마 등 한반도 고유식물이 55분류군이고, 백부자, 연잎평의다리, 넓은잎제비꽃, 개병풍, 큰바늘꽃 등 멸종위기 II급 및 적색목록 멸종우려에 해당되는 식물이 40분류군이다. 분홍장구채, 왕제비꽃, 개병풍, 좁은잎덩굴용담, 바위솜나물, 꽃평의다리, 참작약, 가는잎방풍, 검은도루박이 등 식물지리학적 주요종으로 평가되는 식물구계학적 특정식물 IV-V등급 식물이 102분류군이다. 외래식물은 생태계 교란식물인 애기수영, 가시박, 돼지풀, 단풍잎돼지풀 등을 포함하여 121분류군이 확인되었다. 호석회성 식물 범주에 포함되는 지표종 가운데 바위종덩굴, 동강할미꽃, 복사앵도, 긴털덩굴나무, 자병취, 반들대사초 등 11분류군은 전 세계적으로 우리나라 석회암지대에서만 관찰되는 희귀식물이다. 또한 개부처손, 암공작고사리, 좁사위질빵, 개야광나무, 낭독, 나도여로 등 30분류군은 국내에서 석회암지대에만 관찰되는 극선호종이며, 바위툼고사리, 백부자, 강화황기, 산새콩(*Lathyrus vaniotii* H. Lév.), 아마풀(*Diarthron linifolium* Turcz.), 덕우기름나물 등 58분류군은 국내 남부지역(경상누층군), 아고산지대 및 풍혈지 등의 비석회암지대에도 분포하지만, 석회암지대에서 분포역이 넓은 선호종이다. 특히 지표종과 극선호종에 범주에 속하는 종들은 자생지가 알려져 있지 않거나 2-3곳에 불과해 분포지 보호 및 모니터링이 필요한 분류군이다. 석회암지대 내 군집분석은 지리적으로 인접한 지역 간 높은 유사도를 보여주었다(Fig. 3). 2번 지역(오십천, 강원도 삼척시)과 6번 지역(원풍천, 충청북도 괴산군)은 지리적 거리에도 불구하고 높은 유사도(72.1%)로 유집되었다. 지리적 인접성 뿐만 아니라 자생지 특성(산지 또는 하천)이 석회암지대 내에서도 지역 간 종조성에 영향을 미치는 것으로 나타난 만큼 이러한 결과는 추후 석회암지대 관리 및 보전전략 수립에 고려되어야 할 것이다. 지리적으로 인접한 지역이더라도 석회암지대와 비석회암지대는 서로 다른 군집을 이루는 것으로 나타났다(Fig. 4). 비석회암지대의 23번(청태산), 24번(홍정산), 26번(백암산) 지역들은 모두 강원도에 위치하

지만 동일지역의 석회암지대와는 다른 군집을 형성하였다. 이러한 결과는 석회암지대 식물상의 고유성과 특이성(Kim et al., 2005; Ryu, 2016)을 보여준다.

한반도 석회암지대의 대부분은 탄산칼슘 성분을 갖는 퇴적암으로 우리나라의 화산암지대, 화강암지대, 변성암지대와 다른 식생의 분포유형을 가지고 있는 생태적으로 매우 중요한 지역이다(Kim et al., 2005; Korea National Arboretum, 2012). 석회암지대의 식물상적 특징으로 수직적 분포면에서 주로 아고산대 산지 능선 또는 정상부에 분포하는 가래고사리, 산겨릅나무, 산가막살나무, 개쑥부쟁이 등의 북방계 고산식물들이 해발고도가 낮은 하천변(해발고도 200-500 m)에서 생육하고 있다. 또한 정선군 백이산 능선(해발고도 900 m)에서는 등근인가목, 선백미꽃(*Cynanchum inamoenum* (Maxim.) Loes.), 참여로(*Veratrum nigrum* L.) 등 북방계 식물들의 상층에서 남방계 식물인 소사나무가 생육하는 독특한 식물군락 구조를 보이고 있다. 수평적 분포면에서도 병아리꽃나무, 등대풀, 반디치치, 대홍란 등 해안성 또는 남방계 식물이 내륙지역에 격리 분포한다. 이러한 식물지리학적 분포유형이 석회암지대의 특성이다(Kim et al., 2005; Korea National Arboretum, 2012; Nam et al., 2012). 또한 석회암지대는 지역 고유성과 특이성이 잘 나타날 뿐만 아니라 희귀식물들의 분포 비율이 매우 높은 한반도 생태계의 핵심축 가운데 하나이다. 석회암지대는 식물지리학적으로 중요한 지역임에도 불구하고 일부 지역은 석회석 채굴로 인해 산지 정상부가 소실되어 생태학적 기능이 상실되었으며, 현재에도 채굴이 진행되고 있어 보존대책과 방안마련이 시급하다.

본 연구에서는 한반도 석회암지대의 식물상적 현황 조사를 통하여 석회암이라는 특수성을 지닌 식물지리적 가치를 밝히고 석회암지대의 보전의 중요성과 시급성을 강조하고자 하였다. 석회암지대의 생물학적인 가치와 함께 경관 보전에 대한 시급성을 인식하여 체계적인 관리방안이 마련되어야 할 것으로 생각된다.

ORCID: Jung-Hyun KIM <https://orcid.org/0000-0003-2699-5635>; Gi-Heum NAM <https://orcid.org/0000-0002-3497-8870>; Seung-bae LEE <https://orcid.org/0000-0003-3368-2506>; Sookyung SHIN <https://orcid.org/0000-0002-8076-438X>; Jin-Seok KIM <https://orcid.org/0000-0002-4474-1244>

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Conflict of Interest

The authors declare that there are no conflicts of interest.

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한반도 석회암지대의 관속식물 목록

김중현 · 남기흠¹ · 이승배² · 신수경³ · 김진석^{4*}

국립생물자원관 식물자원과, ¹국립생물자원관 전략기획과,
²한국지질자원연구원 지질박물관, ³국립생물자원관 전시교육과, ⁴금수강산

적 요: 석회암지대는 수억만년 전 칼슘 분비 해양 생물에 의해 생성되고 탄산칼슘으로 구성된 퇴적암 노두이며, 지각 운동에 의해 해수면 위로 상승하였다. 석회암지대는 고유식물의 비율이 매우 높고 생물학적 정보가 많은 생물다양성 지역으로 알려져 있다. 본 연구는 10개 지역의 석회암지대에 대한 식물상과 식물 종조성의 조사를 통하여 석회암 식생에 안정적인 보전계획 수립을 위한 기초자료를 제시하고자 한다. 2010년 4월부터 2016년 10월까지 153회에 걸쳐 조사한 결과, 관속식물은 133과 530속 1,096종 18아종 84변종 2품종 2교잡종으로 총 1,202분류군이 확인되었다. 이 가운데 한반도 고유식물은 55분류군, 적색목록식물은 38분류군이었다. 식물구계학적 특정식물은 총 102분류군으로 V등급에 27분류군, IV등급에 75분류군이 포함되었다. 외래식물은 121분류군이었다. 호석회성 식물은 총 102분류군으로 지표종에 14분류군, 극선호종에 30분류군, 그리고 선호종에 58분류군이 포함되었다. 군집분석은 석회암지대 내에서 지리적으로 인접하고, 자생지 환경(하천지역)이 유사한 지역 간에 높은 유사도를 보여주었다. 또한 석회암지대는 인근지역의 비석회암지대와 구별되는 종조성을 갖는 것으로 나타나 석회암지대 식물상의 고유성과 특이성을 보여주었다. 식물지리학적 접근은 석회암지대 생물다양성의 수준을 잘 이해하기 위해 매우 중요하다. 이러한 결과는 석회암 생육지를 보호하고 그 상호 특이적 생물다양성뿐만 아니라 고도로 위협받는 종내 생물다양성 보존의 중요성을 강조한다.

주요어: 석회암, 호석회, 목록, 생물다양성

Appendix 1. The list of vascular plants investigated on limestone areas in Korea.**Selaginellaceae 부처손과**

Selaginella helvetica (L.) Link 왜구실사리(II, LC); 245240, 359468, 433134, 528487, 590728 (1, 3, 4, 6, 7)

Selaginella rossii (Baker) Warb. 구실사리; 305767, 451851, 487952, 574438, 599744 (2, 4, 5, 9, 10)

Selaginella stauntoniana Spring 개부처손(III); 234893, 520300, 568257, 552179 (1, 6, 7, 8)

Selaginella tamariscina (P. Beauv.) Spring 바위손; 468835 (5)

Ophioglossaceae 고사리삼과

Botrychium nipponicum Makino 단풍고사리삼; 599126 (10)

Botrychium strictum Underw. 긴꽃고사리삼(II, LC); 235515, 385513, 441346, 553167, 576435, 579005, 585363 (1, 3, 4, 7, 8, 9, 10)

Botrychium ternatum (Thunb.) Sw. 고사리삼; 324013, 388063, 482681, 551762 (2, 3, 5, 9)

Equisetaceae 속새과

Equisetum arvense L. 쇠뜨기; 234950, 284278, 354989, 433262, 488070, 552117, 577118, 577791, 585712 (1, 2, 3, 4, 5, 7, 8, 9, 10)

Equisetum hyemale L. 속새(III); 433284 (4)

Equisetum ramosissimum Desf. 개속새(II); 234941, 305294, 385336, 446439, 487858, 523989, 552917, 580459 (1, 2, 3, 4, 5, 6, 7, 8, 9)

Osmundaceae 고비과

Osmunda cinnamomea L. 꿩고비(II); 235332, 359093, 569628, 578527 (1, 3, 9, 10)

Osmunda japonica Thunb. 고비; 235362, 469084 (1, 5)

Dennstaedtiaceae 잔고사리과

Dennstaedtia hirsuta (Sw.) Mett. ex Miq. 잔고사리; 243197, 387747, 433330, 472719, 552645, 576451, 578810 (1, 3, 4, 5, 8, 9, 10)

Dennstaedtia wilfordii (T. Moore) H. Christ 황고사리; 235505, 305362, 387588, 446768, 472752, 528470, 575698, 578864, 585752 (1, 2, 3, 4, 5, 6, 7, 9, 10)

Pteridium aquilinum var. *latiusculum* (Desv.) Underw. ex A. Heller 고사리; 236969, 284567, 385670, 441284, 472613, 524567, 585345, 599778 (1, 2, 3, 4, 5, 6, 7, 10)

Pteridaceae 봉의꼬리과

Cheilanthes argentea (S. G. Gmel.) Kunze 부싯깃고사리(I); 245121, 323896, 441608, 463980, 520294, 553120, 576427, 580390, 354930 (1, 2, 3, 4, 5, 6, 8, 9)

Coniogramme intermedia Hieron. 고비고사리(II); 243410, 309900, 385421, 451556, 576462, 585745, 599314 (1, 2, 3, 4, 7, 9, 10)

Adiantaceae 공작고사리과

Adiantum capillus-junonis Rupr. 암공작고사리(EN); 575651, 645879 (1, 9)

Aspleniaceae 꼬리고사리과

Asplenium incisum Thunb. 꼬리고사리; 235119, 385712, 433183, 487913, 520318, 576437, 577555 (1, 3, 4, 5, 6, 9, 10)

Asplenium pekinense Hance 사철고사리(IV); 552176, 566119 (7, 8)

Asplenium ruprechtii Sa. Kurata 거미고사리; 234900, 284439, 354911, 433117, 487940, 520278, 552007, 565981, 577109, 577695 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Asplenium ruta-muraria L. 들쭌고사리(IV, LC); 236834, 305526, 394133, 433137, 520937, 552175, 566102, 599633 (1, 2, 3, 4, 6, 7, 8, 10)

Asplenium scolopendrium L. 골고사리(II, LC); 385437, 433229, 569735 (3, 4, 9)

Asplenium varians Wall. ex Hook. & Grev. 애기꼬리고사리; 245120, 305561, 433273, 551896, 577692, 580491 (1, 2, 4, 7, 9, 10)

Asplenium × *castaneoviride* Baker 거미꼬리고사리(II); 553535 (8)

Thelypteridaceae 처녀고사리과

Macrothelypteris oligophlebia var. *elegans* (Koidz.) Ching 각시고사리; 536240 (6)

Phegopteris connectilis (Michx.) Watt 가래고사리(II); 451863 (4)

Thelypteris palustris (A. Gray) Schott 처녀고사리; 243255, 395842, 536436, 574428, 591158, 599264 (1, 3, 6, 7, 9, 10)

Woodsiaceae 우드풀과

Woodsia hancockii Baker 애기가물고사리(VU); 441436 (4)

Woodsia macrochaena Mett. ex Kuhn 참우드풀(IV); 553062, 574441 (8, 9)

Woodsia manchuriensis Hook. 만주우드풀; 243833, 387746, 446742, 481373, 551891, 599144 (1, 3, 4, 5, 9, 10)

Woodsia polystichoides D. C. Eaton 우드풀; 235600, 284648, 446781, 482130, 552643, 575937, 578856 (1, 2, 4, 5, 8, 9, 10)

Woodsia subcordata Turcz. 산우드풀(II); 243819, 446426, 552495, 574803 (1, 4, 8, 9)

Athyriaceae 개고사리과

Athyrium niponicum (Mett.) Hance 개고사리; 235797, 305460, 387580, 449804, 487848, 528482, 551959, 590112, 599141 (1, 2, 3, 4, 5, 6, 7, 9, 10)

Athyrium sinense Rupr. 참새발고사리; 235474, 305510, 359064, 446761, 495751, 576441, 578836, 585393 (1, 2, 3, 4, 5, 7, 9, 10)

Athyrium yokoscense (Franch. & Sav.) H. Christ 뱀고사리; 243830, 305570, 387572, 451110, 482635, 530462, 578827, 590816 (1, 2, 3, 4, 5, 6, 7, 10)

Cornopteris crenulatoserrulata (Makino) Nakai 응달고사리; 578826, 309902, 385733, 495460 (2, 3, 5, 10)

Deparia coreana (H. Christ) M. Kato 곱새고사리; 235745, 305519, 385419, 451555, 524007, 552493, 575529, 585899 (1, 2, 3, 4, 6, 7, 8, 9)

Deparia pycnosora (H. Christ) M. Kato 털고사리; 243829, 309901, 385436, 451583, 487994, 551895, 552660, 591989, 598961 (1, 2, 3, 4, 5, 7, 8, 9, 10)

Deparia pycnosora var. *albosquamata* M. Kato 흰털고사리; 599854 (10)

Deparia × *angustata* Nakaike 개좁진고사리; 575642, 599072 (9, 10)

Gymnocarpium jessoense (Koidz.) Koidz. 산토끼고사리; 244446, 385594, 441197, 552496, 576467, 579006, 585391 (1, 3, 4, 8, 9, 10)

Onocleaceae 야산고비과

Matteuccia struthiopteris (L.) Tod. 청나래고사리(II); 244395, 324030, 390501, 441203, 585143, 599273 (1, 2, 3, 4, 7, 10)

Onoclea sensibilis L. 야산고비(I); 235409, 395838, 446452 (1, 3, 4)

Pentarhizidium orientale (Hook.) Hayata 개면마; 243681, 310127, 385752, 441469, 574979, 585351, 599074 (1, 2, 3, 4, 7, 9, 10)

Appendix 1. Continued.

Dryopteridaceae 관중과

- Cyrtomium fortunei* J. Sm. 쇠고비; 244125, 284256, 385659, 520339, 576439, 578577 (1, 2, 3, 6, 9, 10)
Dryopteris bissetiana (Baker) C. Chr. 산죽제비고사리; 242396, 552184 (1, 8)
Dryopteris chinensis (Baker) Koidz. 가는잎죽제비고사리; 243317, 284636, 385668, 433238, 472741, 524500, 553058, 569453, 578811 (1, 2, 3, 4, 5, 6, 8, 9, 10)
Dryopteris crassirhizoma Nakai 관중; 235208, 284667, 359156, 441191, 495768, 575929, 580488, 599556 (1, 2, 3, 4, 5, 7, 9, 10)
Dryopteris expansa (C. Presl) Fraser-Jenk. & Jermy 퍼진고사리(II); 385415, 578834 (3, 10)
Dryopteris fragrans (L.) Schott 주저리고사리(III); 243827, 387752, 552494, 599858 (1, 3, 8, 10)
Dryopteris goeringiana (Kunze) Koidz. 바위틈고사리(IV, LC); 235726, 385461, 441266, 524519, 575930, 585440 (1, 3, 4, 6, 7, 9)
Dryopteris gymnohylla (Baker) C. Chr. 금죽제비고사리(I); 577954, 591988 (7, 10)
Dryopteris lacera (Thunb.) Kuntze 비늘고사리; 244098, 305478, 451883, 482823, 524496, 574544, 579156, 585529 (1, 2, 4, 5, 6, 7, 9, 10)
Dryopteris monticola (Makino) C. Chr. 왕지네고사리; 385734, 578831 (3, 10)
Dryopteris sacrosancta Koidz. 애기죽제비고사리; 243300, 576452 (1, 9)
Dryopteris saxifraga H. Itô 바위죽제비고사리; 451715, 495860, 577707 (4, 5, 10)
Leptorumohra borealis Shmakov 약살고사리; 235684, 585450, 599863 (1, 7, 10)
Polystichum braunii (Spenn.) Fée 좁나도히초미(II); 235215, 433180, 359071, 551894, 585383, 599065 (1, 3, 4, 7, 9, 10)
Polystichum craspedosorum (Maxim.) Diels 님시고사리; 234903, 305528, 354956, 433243, 488048, 520336, 565939, 575859, 577829 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Polystichum ovato-paleaceum var. *coraiense* (H. Christ) Sa. Kurata 참나도히초미(I); 385499, 433166, 575827, 578804, 580489 (3, 4, 7, 9, 10)
Polystichum tripterum (Kunze) C. Presl 십자고사리; 235313, 305509, 385420, 451707, 495304, 569627, 578470, 580487 (1, 2, 3, 4, 5, 7, 9, 10)

Hypodematiaceae 금털고사리과

- Hypodematium glanduloso-pilosum* (Tagawa) Ohwi 금털고사리(II, LC); 552644, 590693, 599634, 242133, 441723, 472831, 520320 (1, 4, 5, 6, 7, 8, 10)
Hypodematium squamuloso-pilosum Ching 흰금털고사리; 555435 (1)

Davalliaceae 넉줄고사리과

- Davallia mariesii* T. Moore ex Baker 넉줄고사리; 242146, 481377, 530421, 574821 (1, 5, 6, 9)

Polypodiaceae 고란초과

- Lepisorus ussuriensis* (Regel & Maack) Ching 산일엽초; 235613, 387554, 433356, 468978, 575839, 577747 (1, 3, 4, 5, 9, 10)
Pleurosoriopsis makinoi (Maxim. ex Makino) Fomin 좁고사리(II); 242170, 359147, 577731 (1, 3, 10)
Pyrrosia linearifolia (Hook.) Ching 우단일엽; 243818, 309886, 433300, 495854, 520936, 553060, 574917, 577780, 585431 (1, 2, 4, 5, 6, 7, 8, 9, 10)
Pyrrosia petiolosa (H. Christ) Ching 애기석위(II); 235242, 463969, 524529, 552154, 566113, 598868 (1, 5, 6, 7, 8, 10)

Pinaceae 소나무과

- Abies holophylla* Maxim. 전나무(II); 324123, 387629, 433247 (2, 3, 4)
Pinus densiflora Siebold & Zucc. 소나무; 235371, 324116, 359402, 441540, 468928, 520854, 554083, 585458, 599780 (1, 2, 3, 4, 5, 6, 7, 8, 10)
Pinus koraiensis Siebold & Zucc. 잣나무(II); 244393, 305458, 385508, 433381, 468893, 585129 (1, 2, 3, 4, 5, 7)
Pinus thunbergii Parl. 곰솔; 235034, 433357 (1, 4)

Cupressaceae 측백나무과

- Juniperus chinensis* L. 향나무(III, NT); 242082, 284581, 394093, 433370, 577072, 599651 (1, 2, 3, 4, 9, 10)
Juniperus rigida Siebold & Zucc. 노간주나무; 235492, 324138, 395915, 433355, 488046, 520306, 552000, 585475, 599163 (1, 2, 3, 4, 5, 6, 7, 8, 10)
Platycladus orientalis (L.) Franco 측백나무(IV, LC); 243782, 305643, 495356, 520357, 552973, 579184 (1, 2, 5, 6, 8, 10)

Cephalotaxaceae 개비자나무과

- Cephalotaxus harringtonia* (Knight ex Forbes) K. Koch 개비자나무(I); 488045 (5)

Magnoliaceae 목련과

- Magnolia sieboldii* K. Koch 함박꽃나무(II); 235261, 284525, 385384, 441538, 469059, 553028, 575636, 578373, 586032 (1, 2, 3, 4, 5, 8, 9, 10)

Lauraceae 녹나무과

- Lindera erythrocarpa* Makino 비목나무(I); 472547 (5)
Lindera glauca (Siebold & Zucc.) Blume 감태나무(I); 284545, 481410, 523972 (2, 5, 6)
Lindera obtusiloba Blume 생강나무; 243209, 305452, 354919, 433140, 463986, 520280, 552021, 565935, 577699, 583016 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Chloranthaceae 홀아비꽃대과

- Chloranthus japonicus* Siebold 홀아비꽃대(I); 235025, 284325, 359090, 441582, 488066, 520975, 553531, 566008, 569610, 577813 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Aristolochiaceae 쥐방울덩굴과

- Aristolochia contorta* Bunge 쥐방울덩굴(I); 243448, 395909, 472875, 552413, 590960, 599754 (1, 3, 5, 7, 8, 10)
Aristolochia manshuriensis Kom. 등칠훈(II); 284549, 359151, 441459, 495271, 591113 (2, 3, 4, 5, 7)
Asarum chungbuensis (C. S. Yook & J. G. Kim) B. U. Oh 무늬족도리풀(E); 583050 (9)
Asarum koreanum J. Kim & C. Yook ex B. U. Oh 자주족도리풀(E); 469070 (5)
Asarum mandshuricum (Maxim.) M. Kim & S. So 털족도리풀(III); 359095, 441366, 578023, 585434 (3, 4, 7, 10)

Appendix 1. Continued.

Asarum sieboldii Miq. 죽도리풀; 235305, 354993, 433186, 469033, 569675, 577786 (1, 3, 4, 5, 9, 10)

Schisandraceae 오미자과

Schisandra chinensis (Turcz.) Baill. 오미자(II); 235226, 359084, 441472, 524019, 575934, 578035, 580370 (1, 3, 4, 6, 7, 9, 10)

Ranunculaceae 미나리아재비과

Aconitum barbatum var. *hispidum* (DC.) Ser. 넓은잎노랑투구꽃(NT); 243717, 388029, 449617, 551802, 598939 (1, 3, 4, 9, 10)

Aconitum ciliare DC. 늦것가락나물; 449828, 583277, 590187 (4, 7, 9)

Aconitum coreanum (H. Lévl.) Rapaics 백부자(V, VU); 243722, photo15001 (1, 6)

Aconitum jaluense Kom. 투구꽃(I); 244072, 395928, 449770, 488064, 536423, 591672, 599056 (1, 3, 4, 5, 6, 7, 10)

Aconitum longecassidatum Nakai 흰진범(I); 591153, 599192 (7, 10)

Aconitum pseudolaevae Nakai 진범(E); 242288, 323898, 390231, 449608, 495874, 590499, 599054 (1, 2, 3, 4, 5, 7, 10)

Actaea asiatica H. Hara 노루삼(III); 305520, 359086, 441444, 495423, 553169, 575643, 577785, 585451 (2, 3, 4, 5, 7, 8, 9, 10)

Adonis amurensis Regel & Radde 복수초; 354990, 433207, 577726 (3, 4, 10)

Anemone koraiensis Nakai 홀아비바람꽃(E, IV, LC); 433286, 569725, 577710 (4, 9, 10)

Anemone raddeana Regel 평의바람꽃; 354983, 433191, 577688, 583032 (3, 4, 9, 10)

Anemone reflexa Stephan 회리바람꽃(IV); 235315, 359456, 433159, 566175, 577157, 577689 (1, 3, 4, 7, 9, 10)

Aquilegia buergeriana var. *oxysepala* (Trautv. & C. A. Mey.) Kitam. 매발톱(III); 235388, 441764, 578382 (1, 4, 10)

Caltha palustris L. 동의나물(II); 578020, 583012 (9, 10)

Cimicifuga dahurica (Turcz. ex Fisch. & C. A. Mey.) Maxim. 눈빛승마; 242153, 309899, 388028, 449648, 590136, 599061 (1, 2, 3, 4, 7, 10)

Cimicifuga heracleifolia var. *bifida* Nakai 세잎승마(E, IV); 243691, 324129, 387528, 449615, 495677, 536489, 551731, 591649, 599802 (1, 2, 3, 4, 5, 6, 7, 9, 10)

Cimicifuga simplex (DC.) Wormsk. ex Turcz. 쫓대승마(I); 449771 (4)

Clematis apiifolia DC. 사위질뽕; 242208, 310091, 387994, 449385, 481807, 528361, 551899, 556080, 598967 (1, 2, 3, 4, 5, 6, 8, 9, 10)

Clematis brachyura Maxim. 외대으아리(E, III); 235420, 284603, 385730, 446800, 468817, 523770, 552969, 575707, 578256, 585468 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Clematis brevicaudata DC. 좁사위질뽕; 590776 (7)

Clematis calcicola J. S. Kim 바위종덩굴(E, V); 218724

Clematis fusca var. *flabellata* (Nakai) J. S. Kim 요강나물(E, III); 578416 (10)

Clematis fusca var. *violacea* Maxim. 종덩굴(III); 235743, 387577, 446925, 553258, 576411, 585979, 599329 (1, 3, 4, 7, 8, 9, 10)

Clematis heracleifolia var. *urticifolia* (Nakai ex Kitag.) U. C. La 병조희꽃(III); 244479, 305433, 387507, 446770, 495756, 552636, 576683, 585970, 599399 (1, 2, 3, 4, 5, 7, 8, 9, 10)

Clematis koreana Kom. 세잎종덩굴(III, LC); 576464 (9)

Clematis patens C. Morren & Decne. 큰꽃으아리(I); 235204, 284672, 387648, 446549, 468808, 553831, 578381, 580457 (1, 2, 3, 4, 5, 7, 8, 10)

Clematis serratifolia Rehder 개버무리(IV); 244433, 323855, 390270, 451193, 552411, 590051 (1, 2, 3, 4, 7, 8)

Clematis terniflora var. *mandshurica* (Rupr.) Ohwi 으아리; 245210, 305347, 387598, 446739, 472835, 524355, 552975, 575593, 585830, 599497 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Clematis trichotoma Nakai 활미말뽕(E); 235399, 284645, 385390, 441322, 469060, 523985, 575865, 578371, 580367 (1, 2, 3, 4, 5, 6, 7, 9, 10)

Delphinium maackianum Regel 큰제비고깔(IV, LC); 236887, 495668, 528420, 574978, 599147 (1, 5, 6, 9, 10)

Eranthis stellata Maxim. 너도바람꽃(III); 235589, 354985, 433217, 577681, 583046 (1, 3, 4, 9, 10)

Hepatica asiatica Nakai 노루귀(I); 235109, 284261, 354955, 433194, 495294, 565927, 577112, 577728 (1, 2, 3, 4, 5, 7, 9, 10)

Isoopyrum manshuricum Kom. 만주바람꽃(III, LC); 568247 (7)

Isoopyrum raddeanum (Regel) Maxim. 나도바람꽃(III); 359437, 433161, 577600 (3, 4, 10)

Pulsatilla cernua (Thunb.) Bercht. & J. Presl 활미꽃; 245164, 284418, 359247, 433345, 496005, 520291, 552181, 566072, 577713, 583023 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Pulsatilla tongkangensis Y. N. Lee & T. C. Lee 동강활미꽃(E, V, VU); 359487, Photo001 (2, 3)

Ranunculus cantoniensis DC. 털개구리미나리; 575814, 585791 (7, 9)

Ranunculus chinensis Bunge 젓가락나물; 235464, 385572, 441751, 468900, 523826, 556087, 569655, 578846, 585372 (1, 3, 4, 5, 6, 8, 9, 10)

Ranunculus japonicus Thunb. 미나리아재비; 245165, 359069, 441491, 468855, 520917, 575900, 577755, 580356 (1, 3, 4, 5, 6, 7, 9, 10)

Ranunculus sceleratus L. 개구리자리; 553861, 578422 (8, 10)

Ranunculus tachiroei Franch. & Sav. 개구리미나리; 305501, 553863 (2, 8)

Thalictrum coreanum H. Lévl. 연잎평의다리(E, V, VU); 244466 (1)

Thalictrum filamentosum Maxim. 산평의다리; 385507, 441565, 495422, 578830 (3, 4, 5, 10)

Thalictrum ichangense Lecoy. ex Oliv. 꼭지연잎평의다리(IV, LC); 235390, 394165, 523967, 553158, 575907, 578105, 591143 (1, 3, 6, 7, 8, 9, 10)

Thalictrum minus var. *hypoleucum* (Siebold & Zucc.) Miq. 좁평의다리; 245291, 309904, 388045, 446798, 472818, 528311, 552615, 574966, 585848, 599217 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Thalictrum petaloideum L. 꽃평의다리(IV, NT); 552971 (8)

Thalictrum rochebrunnianum Franch. & Sav. 금평의다리(III); 388097, 599245 (4, 10)

Berberidaceae 매자나무과

Berberis amurensis Rupr. 매발톱나무(II); 385442, 449830, 583044 (3, 4, 9)

Berberis koreana Palib. 매자나무(E, IV); 359479 (3)

Caulophyllum robustum Maxim. 평의다리아재비(II); 237014, 385441, 495443, 569722, 591114, 599343 (1, 3, 5, 7, 9, 10)

Appendix 1. Continued.

Jeffersonia dubia (Maxim.) Benth. & Hook. f. ex Baker & S. Moore 갯쟁이풀(IV, NT); 569648 (9)

Lardizabalaceae 으름덩굴과

Akebia quinata (Houtt.) Decne. 으름덩굴; 578095, 234965, 284398, 481845, 520837 (1, 2, 5, 6, 10)

Menispermaceae 새모래덩굴과

Cocculus trilobus (Thunb.) DC. 땡땡이덩굴; 235755, 305648, 472832, 523993, 552563, 590165, 599504 (1, 2, 5, 6, 7, 8, 10)

Menispermum dauricum DC. 새모래덩굴; 235456, 284650, 385496, 441662, 468796, 523970, 578192, 579205, 583045 (1, 2, 3, 4, 5, 6, 7, 9, 10)

Papaveraceae 양귀비과

Chelidonium majus var. *asiaticum* (H. Hara) Ohwi 애기똥풀; 234912, 284387, 359171, 433094, 463977, 520809, 552220, 569635, 577762, 566044 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Hylomecon vernalis Maxim. 피나물(II); 235132, 284354, 359370, 495320, 577834 (1, 2, 3, 5, 10)

Fumariaceae 현호색과

Corydalis grandicalyx B. U. Oh & Y. S. Kim 갈퀴현호색(E, III); 433209, 577727 (4, 10)

Corydalis hirtipes B. U. Oh & J. G. Kim 털현호색(E); 284352, 433177 (2, 4)

Corydalis maculata B. U. Oh & Y. S. Kim 점현호색(E, III); 245127, 284419, 354909, 433110, 552087, 565920, 577113, 577680 (1, 2, 3, 4, 7, 8, 9, 10)

Corydalis ohii Lidén 선현호색(E); 566182, 577549 (7, 10)

Corydalis pauciovulata Ohwi 산괴불주머니; 244006, 305461, 387998, 449680, 481795, 528495, 551882, 591978, 599016 (1, 2, 3, 4, 5, 6, 7, 9, 10)

Corydalis remotata Fisch. ex Maxim. 현호색; 235133, 284280, 354987, 433160, 464004, 520285, 552098, 577647 (1, 2, 3, 4, 5, 6, 8, 10)

Corydalis speciosa Maxim. 산괴불주머니; 235175, 284297, 354907, 433197, 463975, 520928, 552026, 565993, 569630, 577703 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Corydalis turtschaninovi Besser 조선현호색; 234984, 520895, 577809 (1, 6, 10)

Ulmaceae 느릅나무과

Hemiptelea davidii (Hance) Planch. 시무나무(I); 244505, 284706, 359296, 441226, 468756, 520840, 553843, 566038, 569456, 577827 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Ulmus davidiana Planch. 당느릅나무(I); 234979, 359200 (1, 3)

Ulmus davidiana var. *japonica* (Rehder) Nakai 느릅나무(I); 235264, 284310, 387350, 441314, 481109, 524032, 552030, 568261, 577729 (1, 2, 3, 4, 5, 6, 7, 8, 10)

Ulmus laciniata (Trautv.) Mayr 난티나무(III); 385440, 446749, 495368 (3, 4, 5)

Ulmus macrocarpa Hance 왕느릅나무(IV); 245217, 284339, 396065, 446910, 468758, 523929, 578030, 579196 (1, 2, 3, 4, 5, 6, 7, 10)

Ulmus parvifolia Jacq. 참느릅나무(I); 481774 (5)

Ulmus pumila L. 비술나무(IV); 284476, 359074, 433385, 566041, 577583, 583118 (2, 3, 4, 7, 9, 10)

Celtidaceae 팽나무과

Celtis koraiensis Nakai 왕팽나무(III); 235573, 284626, 385521, 446615, 463967, 523941, 578052, 591537 (1, 2, 3, 4, 5, 6, 7, 10)

Celtis sinensis Pers. 팽나무; 237023, 482229 (1, 5)

Cannabaceae 삼과

Humulus japonicus Siebold & Zucc. 환삼덩굴; 242083, 305597, 387793, 449358, 481786, 530348, 552586, 574528, 590171, 599146 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Moraceae 뽕나무과

Broussonetia papyrifera (L.) L'Hér. ex Vent 꾸지나무; 235352, 284649, 359339, 481121, 523911, 575918, 579210 (1, 2, 3, 5, 6, 7, 9)

Fatoua villosa (Thunb.) Nakai 뽕모시풀; 242085, 324102, 395959, 482311, 530418, 590091 (1, 2, 3, 5, 6, 7)

Morus alba L. 뽕나무(A); 235462, 284613, 385409, 472819, 523867, 553899, 578537, 585374 (1, 2, 3, 5, 6, 7, 8, 10)

Morus bombycis Koidz. 산뽕나무; 235190, 284566, 359070, 441120, 468709, 575939, 578060, 580339 (1, 2, 3, 4, 5, 9, 10)

Morus mongolica (Bureau) C. K. Schneid 몽고뽕나무(IV); 578056, 585340, 394402, 441879, 495344, 523903 (3, 4, 5, 6, 7, 10)

Morus tiliaefolia Makino 들뽕나무(III); 284853 (2)

Urticaceae 췌기풀과

Boehmeria gracilis C. H. Wright 풀거북꼬리; 387564, 449792, 524520, 553155, 575539, 599547 (3, 4, 6, 8, 9, 10)

Boehmeria japonica (L. f.) Miq. 왜모시풀; 235714, 305493, 387477, 472529, 537618, 552657, 598957 (1, 2, 3, 5, 6, 8, 10)

Boehmeria spicata (Thunb.) Thunb. 좁개잎나무; 235631, 309945, 387647, 446369, 472754, 528397, 553267, 585878 (1, 2, 3, 4, 5, 6, 7, 8)

Girardinia diversifolia subsp. *suborbiculata* (C. J. Chen) C. J. Chen & Friis 큰췌기풀(IV); 309971, 537671 (2, 6)

Laportea bulbifera (Siebold & Zucc.) Wedd. 흑췌기풀; 244138, 387584, 451789, 574797, 585845, 599017 (1, 3, 4, 7, 9, 10)

Parietaria micrantha Ledeb. 개물통이; 236876 (1)

Pilea japonica (Maxim.) Hand.-Mazz. 산물통이(I); 242142, 309975, 390375, 451324, 495894, 530401, 552662, 574486, 590190, 599070 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Pilea mongolica Wedd. 모시물통이; 242440, 323879, 395905, 449401, 482820, 536243, 574536, 590542, 599078 (1, 2, 3, 4, 5, 6, 7, 9, 10)

Pilea oligantha Nakai 강계큰물통이; 642882 (4)

Pilea peploides (Gaudich.) Hook. & Arn. 물통이; 242189 (1)

Urtica angustifolia Fisch. ex Hornem. 가느잎췌기풀(III); 235637, 309980, 387533, 446666, 552502, 576445, 599005 (1, 2, 3, 4, 8, 9, 10)

Urtica laetevirens Maxim. 애기췌기풀; 244117, 310068, 449498, 585893 (1, 2, 4, 7)

Juglandaceae 가래나무과

Juglans mandshurica Maxim. 가래나무(I); 243182, 305356, 359201, 441605, 566043, 577842 (1, 2, 3, 4, 7, 10)

Appendix 1. Continued.

Platycarya strobilacea Siebold & Zucc. 굴피나무; 242098, 468754, 524491, 553124 (1, 5, 6, 8)

Fagaceae 참나무과

Castanea crenata Siebold & Zucc. 밤나무; 305511, 387624, 441679, 481114, 574913, 590142, 599646 (2, 3, 4, 5, 7, 9, 10)

Quercus acutissima Carruth. 상수리나무; 242274, 395899, 441113, 468793, 520814 (1, 3, 4, 5, 6)

Quercus aliena Blume 갈참나무; 234978, 309903, 394352, 468716, 520776, 577994, 590630 (1, 2, 3, 5, 6, 7, 10)

Quercus dentata Thunb. 떡갈나무; 235490, 395895, 441179, 481164, 520918, 551727, 554110, 578038, 580346 (1, 3, 4, 5, 6, 7, 8, 9, 10)

Quercus mongolica Fisch. ex Ledeb. 신갈나무; 245196, 284323, 395831, 441278, 468976, 520934, 552282, 577797, 590037 (1, 2, 3, 4, 5, 6, 7, 8, 10)

Quercus serrata Murray 졸참나무; 235624, 284773, 394118, 468977, 520915 (1, 2, 3, 5, 6)

Quercus variabilis Blume 굴참나무; 236839, 305611, 395829, 441693, 468719, 578055, 583063, 585483 (1, 2, 3, 4, 5, 7, 9, 10)

Betulaceae 자작나무과

Alnus hirsuta Turcz. ex Rupr. 물오리나무; 235349, 284437, 359300, 433255, 468892, 552069, 583028, 598955 (1, 2, 3, 4, 5, 8, 9, 10)

Alnus japonica (Thunb.) Steud. 오리나무; 583103 (9)

Betula chinensis Maxim. 개달달나무(III); 235416, 284587, 385687, 441110, 468941, 552288, 574520, 578110, 585486 (1, 2, 3, 4, 5, 8, 9, 10)

Betula costata Trautv. 거제수나무(III); 578000 (10)

Betula dahurica Pall. 물박달나무(III); 305631, 394244, 524586, 568263, 577059, 577816 (2, 3, 6, 7, 9, 10)

Betula ermanii Cham. 사스래나무(II); 577924 (10)

Betula schmidtii Regel 박달나무(III); 243210, 284468, 359422, 446407, 495863, 552390, 577058, 577749 (1, 2, 3, 4, 5, 8, 9, 10)

Carpinus cordata Blume 까치박달; 243187, 284524, 387410, 441495, 495324, 578145, 585371 (1, 2, 3, 4, 5, 7, 10)

Carpinus laxiflora (Siebold & Zucc.) Blume 서어나무; 284557, 472690, 583112 (2, 5, 9)

Carpinus turczaninowii Hance 소사나무(I); 236849, 284655, 387827, 433235, 566094, 569699 (1, 2, 3, 4, 7, 9)

Corylus heterophylla Fisch. ex Trautv. 개암나무; 235598, 387750, 433139, 472593, 552006, 574893, 577537 (1, 3, 4, 5, 8, 9, 10)

Corylus sieboldiana Blume 참개암나무; 394192, 441104, 472726, 553291, 578820 (3, 4, 5, 8, 10)

Corylus sieboldiana var. *mandshurica* (Maxim.) C. K. Schneid. 물개암나무; 305455, 579069, 585353 (2, 7, 10)

Phytolaccaceae 자리공과

Phytolacca acinosa Roxb. 자리공(IV, A); 305619, 449924 (2, 4)

Phytolacca americana L. 미국자리공(A); 305446, 472585, 598970 (2, 5, 10)

Chenopodiaceae 명아주과

Chenopodium album L. 명아주(A); 244528, 324024, 387848, 451113, 482388, 536453, 574916, 590527, 599835 (1, 2, 3, 4, 5, 6, 7, 9, 10)

Chenopodium aristatum L. 바늘명아주(IV, NT); 555669 (1)

Chenopodium ficifolium Sm. 쯤명아주(A); 242378, 441804, 468744, 523837, 552887, 569448 (1, 4, 5, 6, 8, 9)

Salsola collina Pall. 솔장다리(III); 590692 (7)

Amaranthaceae 비름과

Achyranthes bidentata var. *japonica* Miq. 쇠무릎; 242250, 310103, 481787, 528416 (1, 2, 5, 6)

Amaranthus hybridus L. 긴털비름(A); 235742, 324095, 387609, 451531, 472788, 528332, 576434, 591152, 599836 (1, 2, 3, 4, 5, 6, 7, 9, 10)

Amaranthus lividus L. 개비름(A); 242415, 395956, 590545 (1, 3, 7)

Amaranthus retroflexus L. 털비름(A); 773270 (1)

Portulacaceae 쇠비름과

Portulaca oleracea L. 쇠비름; 242408, 305315, 387612, 446404, 472797, 552556, 585920 (1, 2, 3, 4, 5, 7, 8)

Molluginaceae 석류풀과

Mollugo stricta L. 석류풀; 242162, 472863, 528346 (1, 5, 6)

Caryophyllaceae 석죽과

Arenaria serpyllifolia L. 벼룩이자리; 2344973, 359192, 441180, 463970, 520815, 552221, 566053, 577988 (1, 3, 4, 5, 6, 7, 8, 10)

Cerastium fontanum subsp. *vulgare* (Hartm.) Greuter & Burdet 점나도나물; 234925, 284349, 359109, 520819, 552387, 566172, 575817, 577768 (1, 2, 3, 6, 7, 8, 9, 10)

Cerastium glomeratum Thuill. 유럽점나도나물(A); 441402, 468857, 579193, 583020 (4, 5, 7, 9)

Dianthus chinensis L. 패랭이꽃; 236911, 305567, 449373, 552850, 599589 (1, 2, 4, 8, 10)

Dianthus longicalyx Miq. 슬패랭이꽃; 524511, 576698, 579086 (6, 9, 10)

Gypsophila oldhamiana Miq. 대나물; 237006, 310128, 482272, 552856, 585911, 598864 (1, 2, 5, 7, 8, 10)

Gypsophila pacifica Kom. 가는대나물(NT); 738443

Lychnis cognata Maxim. 동자꽃(II); 235645, 387503, 446611, 495656, 574786, 586083, 599389 (1, 3, 4, 5, 7, 9, 10)

Minuartia verna var. *leptophylla* (Rchb.) Nakai 삼수개미자리; 340628 (2)

Moehringia lateriflora (L.) Fenzl 개벼룩(IV, LC); 234931, 578189 (1, 10)

Pseudostellaria davidii (Franch.) Pax 덩굴개별꽃; 235028, 566115, 578024, 583154, 359406 (1, 3, 7, 9, 10)

Pseudostellaria heterophylla (Miq.) Pax 개별꽃; 463993, 520771, 552373, 578061, 354964 (3, 5, 6, 8, 10)

Pseudostellaria japonica (Korsh.) Pax 긴개별꽃; 575922, 578043 (9, 10)

Pseudostellaria palibiniana (Takeda) Ohwi 큰개별꽃; 235202, 284560, 359103, 433242, 469067, 565922, 577684, 583124 (1, 2, 3, 4, 5, 7, 9, 10)

Pseudostellaria setulosa Ohwi 숲개별꽃(E, IV); 577734, 583037 (9, 10)

Sagina japonica (Sw.) Ohwi 개미자리; 481137, 553297, 575851 (5, 8, 9)

Silene alba (Mill.) E. H. L. Krause 달맞이장구채(A); 385626, 575549, 585739 (4, 7, 9)

Appendix 1. Continued.

- Silene armeria* L. 끈끈이대나물(A); 235511, 284608, 441648, 482329, 537591, 575525 (1, 2, 4, 5, 6, 9)
Silene baccifera (L.) Roth 덩굴별꽃(I); 305489, 488030, 552663, 574483, 599137 (2, 5, 8, 9, 10)
Silene capitata Kom. 분홍장구채(V, VU); 242158 (1)
Silene firma Siebold & Zucc. 장구채; 236942, 324018, 395916, 449442, 482072, 528400, 590166, 599023 (1, 2, 3, 4, 5, 6, 7, 10)
Silene koreana Kom. 끈끈이장구채(III, LC); 449718 (4)
Silene seoulensis Nakai 가는장구채; 235709, 387536, 451884, 482124, 574952, 590061, 599259 (1, 3, 4, 5, 7, 9, 10)
Stellaria alsine var. *undulata* (Thunb.) Ohwi 벼룩나물; 284381, 359268, 495239, 552359, 568248, 577767 (2, 4, 5, 7, 8, 10)
Stellaria aquatica (L.) Scop. 쇠별꽃; 235013, 359223, 441474, 468760, 566099, 578867 (1, 3, 4, 5, 7, 10)
Stellaria media (L.) Vill. 별꽃(A); 244400, 284576, 354982, 433126, 463971, 577116, 577670 (1, 2, 3, 4, 5, 9, 10)
- Polygonaceae 마디풀과**
Aconogonon alpinum (All.) Schkuhr 싱아; 576446, 599012 (9, 10)
Aconogonon microcarpum (Kitag.) H. Hara 참개싱아(E, IV); 235702, 449513 (1, 4)
Bistorta officinalis Delarbre 넓은잎범꼬리(II); 236951, 553278, 575594, 599618 (1, 8, 9, 10)
Fallopia ciliinervis (Nakai) K. Hammer 나도하수오; 446501, 574851, 599545 (4, 9, 10)
Fallopia dentatoalata (F. Schmidt) Holub 큰닭의덩굴; 242285, 323860, 395845, 451244, 481783, 536462, 574872, 590489, 599867 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Fallopia dumetorum (L.) Holub 닭의덩굴; 309967, 395945, 472864, 524472, 585865, 599077 (2, 3, 5, 6, 7, 10)
Persicaria dissitiflora (Hemsl.) H. Gross ex T. Mori 가시여뀌; 235784, 309896, 387575, 446685, 553271, 574539, 585894 (1, 2, 3, 4, 7, 8, 9)
Persicaria filiformis (Thunb.) Nakai ex T. Mori 이삭여뀌; 242434, 310120, 482695 (1, 2, 5)
Persicaria hydropiper (L.) Delarbre 여뀌; 244353, 323939, 451309, 482355, 599748 (1, 2, 4, 5, 10)
Persicaria japonica (Meisn.) H. Gross ex Nakai 흰꽃여뀌; 242121, 324180, 388075 (1, 2, 4)
Persicaria lapathifolia (L.) Delarbre 흰여뀌; 244409, 309985, 388014, 449409, 472874, 524026, 575551, 590180, 599686 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Persicaria longiseta (Bruijn) Kitag. 개여뀌; 242421, 310080, 387631, 446825, 481775, 524581, 590677, 599733 (1, 2, 3, 4, 5, 6, 7, 10)
Persicaria maculosa Gray 봄여뀌; 236948, 385620, 575557, 578851 (1, 4, 9, 10)
Persicaria muricata (Meisn.) Nemoto 넓은잎미꾸리늪시; 551768 (9)
Persicaria nepalensis (Meisn.) H. Gross 산여뀌; 244359, 309953, 388011, 449780, 495686, 552695, 574485, 590745, 599006 (1, 2, 3, 4, 5, 7, 8, 9, 10)
Persicaria orientalis (L.) Spach 털여뀌(A); 599669 (10)
Persicaria perfoliata (L.) H. Gross 머느리배꼽; 243658, 451749 (1, 4)
Persicaria posumbu (Buch.-Ham. ex D. Don) H. Gross 장대여뀌; 244131, 309955, 390306, 451118, 482816, 574538, 590518, 599053 (1, 2, 3, 4, 5, 7, 9, 10)
Persicaria pubescens (Blume) H. Hara 바보여뀌; 552467 (8)
Persicaria sagittata var. *sieboldii* (Meisn.) Nakai 미꾸리늪시; 236947, 451175, 472703, 551766, 552463, 599015 (1, 4, 5, 8, 9, 10)
Persicaria senticosa (Meisn.) H. Gross ex Nakai 머느리뺨셋개; 235642, 309893, 390328, 451638, 472558, 552551, 576416, 585377, 598958 (1, 2, 3, 4, 5, 7, 8, 9, 10)
Persicaria thunbergii (Siebold & Zucc.) H. Gross 고마리; 243240, 323891, 449494, 482353, 599099 (1, 2, 4, 5, 10)
Persicaria viscofera (Makino) H. Gross 끈끈이여뀌; 243242 (1)
Persicaria viscofera var. *robusta* (Makino) Makino 큰끈끈이여뀌; 482137, 599833 (5, 10)
Polygonum aviculare L. 마디풀; 235454, 305664, 387623, 441599, 481103, 552612, 576429, 599774 (1, 2, 3, 4, 5, 8, 9, 10)
Rumex acetosa L. 수영; 235120, 284281, 359178, 441093, 468838, 523995, 569711, 578080 (1, 2, 3, 4, 5, 6, 9, 10)
Rumex acetosella L. 에기수영(A); 284411, 441558, 575721, 578528 (2, 4, 9, 10)
Rumex crispus L. 소리쟁이(A); 235452, 284860, 441611, 468721, 523796, 569641, 578544 (1, 2, 4, 5, 6, 9, 10)
Rumex japonicus Houtt. 참소리쟁이; 235566, 305345, 441732, 481080, 523768, 552838 (1, 2, 4, 5, 6, 8)
Rumex maritimus L. 금소리쟁이; 523863 (6)
Rumex obtusifolius L. 돌소리쟁이(A); 305464, 481461, 524357 (2, 5, 6)
Rumex patientia L. 부령소리쟁이(A); 385589, 467809, 575543, 578539, 585200 (3, 6, 7, 9, 10)
- Paeoniaceae 작약과**
Paeonia japonica (Makino) Miyabe & Takeda 백작약(II, LC); 284343, 359382, 583039, 591716 (2, 3, 7, 9)
Paeonia lactiflora var. *trichocarpa* (Bunge) Stern 참작약(IV, NT); 284591 (2)
Paeonia obovata Maxim. 산작약(V, EN); 235446, Photo002 (1, 3)
- Actinidiaceae 다래과**
Actinidia arguta (Siebold & Zucc.) Planch. ex Miq. 다래; 305591, 385413, 441208, 472763, 523999, 575702, 585168, 599483 (2, 3, 4, 5, 6, 7, 9, 10)
Actinidia kolomikta (Maxim. & Rupr.) Maxim. 쥐다래(III); 236898, 385480, 441321, 495462, 569671, 585749, 599143 (1, 3, 4, 5, 7, 9, 10)
Actinidia polygama (Siebold & Zucc.) Maxim. 개다래; 244436, 305487, 385407, 441264, 472693, 575441, 578450, 585503 (1, 2, 3, 4, 5, 7, 9, 10)
- Clusiaceae 물레나물과**
Hypericum ascyron L. 물레나물; 235611, 305599, 387504, 446682, 472531, 524570, 585966, 599403 (1, 2, 3, 4, 5, 6, 7, 10)
Hypericum attenuatum Fisch. ex Choisy 채고추나물(II, LC); 528523 (6)
Hypericum erectum Thunb. 고추나물; 235658, 305454, 387513, 446480, 472589, 528442, 551890, 552656, 590979, 599007 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
- Tiliaceae 피나무과**
Corchoropsis psilocarpa Harms & Loes. 까치깨(III); 310111, 528501, 552607, 574417, 599208 (2, 6, 8, 9, 10)
Corchoropsis tomentosa (Thunb.) Makino 수까치깨; 245359, 309890, 390366, 451372, 472869, 530403, 574412, 590032, 599158 (1, 2, 3, 4, 5, 6, 7, 9, 10)

Appendix 1. Continued.

- Tilia amurensis* Rupr. 피나무(II); 245197, 390337, 441503, 495438, 569614, 586012, 599346 (1, 3, 4, 5, 7, 9, 10)
Tilia mandshurica Rupr. & Maxim. 찰피나무(II); 242157, 305293, 385498, 441883, 482205, 523890, 574873, 585996 (1, 2, 3, 4, 5, 6, 7, 9)
- Malvaceae 아욱과**
Abutilon theophrasti Medik. 어저귀(A); 243144, 528404 (1, 6)
Hibiscus trionum L. 수박풀(A); 244042, 310086, 387492, 450001, 530358, 552589, 574942, 590092, 598944 (1, 2, 3, 4, 6, 7, 8, 9, 10)
- Violaceae 계비꽃과**
Viola acuminata Ledeb. 줄방계비꽃; 235293, 284333, 359082, 441342, 468833, 520781, 552226, 577182, 580342 (1, 2, 3, 4, 5, 6, 7, 8, 9)
Viola albida Palib. 태백계비꽃; 243941, 468989, 552392, 577148, 577740 (1, 5, 8, 9, 10)
Viola albida var. *chaerophylloides* (Regel) F. Maek. 남산계비꽃; 284450, 433261, 469029, 552086, 565946, 577060, 577683 (2, 4, 5, 7, 8, 9, 10)
Viola betonicifolia var. *albescens* (Nakai) F. Maek. & T. Hashim. 흰들계비꽃; 520857, 578137 (6, 10)
Viola breviflora J. Lee & M. Kim 방울계비꽃(E); 593886 (3)
Viola collina Besser 등근털계비꽃; 244442, 284304, 354908, 433092, 469073, 520317, 552036, 566056, 577553, 583017 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Viola diamantiaca Nakai 금강계비꽃(III, LC); 359386, 495878, 577733, 583036 (3, 5, 9, 10)
Viola hirtipes S. Moore 흰털계비꽃; 468988, 583067 (5, 9)
Viola keiskei Miq. 잔털계비꽃; 235136, 284522, 354912, 463997, 552269, 577077, 577775 (1, 2, 3, 5, 8, 9, 10)
Viola lactiflora Nakai 흰젓계비꽃; 468842 (5)
Viola mandshurica W. Becker 계비꽃; 234922, 359381, 433146, 469058, 520355, 566054, 577751 (1, 3, 4, 5, 6, 7, 10)
Viola mirabilis L. 넓은잎계비꽃(V, EN); 235138 (1)
Viola orientalis (Maxim.) W. Becker 노랑계비꽃(II); 235339, 284289, 359130, 433214, 468949, 552287, 569717, 577732 (1, 2, 3, 4, 5, 8, 9, 10)
Viola phalacrocarpa Maxim. 털계비꽃; 468986, 520284, 552256, 565925, 577752, 583121 (5, 6, 7, 8, 9, 10)
Viola rossii Hemsl. 고깔계비꽃; 284301, 468987, 552356, 577160, 577742, 520923 (2, 5, 6, 8, 9, 10)
Viola selkirkii Pursh ex Goldie 뽕계비꽃; 244001, 284475, 359104, 577145 (1, 2, 3, 9)
Viola seoulensis Nakai 서울계비꽃(E); 235135, 284848, 354910, 433328, 463968, 520277, 552009, 565983, 577812, 583019 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Viola tokubuchiana var. *takedana* (Makino) F. Maek. 민둥뽕계비꽃(II); 235299, 354988, 469072, 552053, 565924, 577061, 577687 (1, 5, 7, 8, 9, 10)
Viola variegata Fisch. ex Link 알록계비꽃; 235014, 284298, 359455, 441432, 463981, 520307, 552033, 565923, 577175, 577776 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Viola verecunda A. Gray 콩계비꽃; 235116, 284305, 441554, 495679, 577772, 583068 (1, 2, 4, 5, 9, 10)
Viola websteri Hemsl. 왕계비꽃(V, VU); 235486 (1)
Viola yedoensis Makino 호계비꽃; 284412, 359175, 463983, 520356, 552100, 565984, 577581 (2, 3, 5, 6, 7, 8, 10)
- Cucurbitaceae 박과**
Schizopepon bryoniifolius Maxim. 산외(IV); 244136, 387653, 449918, 495712, 590967, 599493 (1, 3, 4, 5, 7, 10)
Sicyos angulatus L. 가시박(A); 242303, 482298, 599684 (1, 5, 10)
Trichosanthes kirilowii Maxim. 하늘타리; 241997, 310205, 472808, 524534 (1, 2, 5, 6)
- Salicaceae 버드나무과**
Populus davidiana Dode 사시나무; 243762, 396064, 449739, 577853 (1, 3, 4, 10)
Salix babylonica L. 수양버들; 284424, 468848 (2, 5)
Salix caprea L. 호랑버들; 234927, 284474, 354959, 433320, 469053, 520322, 552024, 568272, 577702, 583026 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Salix chaenomeloides Kimura 왕버들(I); 235008, 468845 (1, 5)
Salix gracilistyla Miq. 갯버들; 235105, 284302, 354903, 433179, 469054, 552011, 566046, 577712, 583029 (1, 2, 3, 4, 5, 7, 8, 9, 10)
Salix koriyanagi Kimura ex Goerz 키버들(E); 245146, 284353, 354905, 433322, 463984, 520853, 552067, 566031, 577101, 577704 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Salix pierotii Miq. 버드나무; 234947, 284313, 354904, 433109, 495824, 520295, 566034, 577150, 577562 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Salix rorida Laksch. 분버들(III); 433108 (4)
Salix siuzevii Seemen 참오클잎버들(III); 433107 (4)
Salix triandra subsp. *nipponica* (Franch. & Sav.) A. K. Skvortsov 선버들; 234948, 354906, 433149, 495211, 566045, 577722 (1, 3, 4, 5, 7, 10)
Salix xerophila Flod. 여우버들(III); 237034 (3)
- Brassicaceae 십자화과**
Arabis gemmifera (Matsum.) Makino 산장대; 441164, 578392, 583010 (4, 9, 10)
Arabis glabra (L.) Bernh. 장대나물; 235436, 284826, 385587, 441153, 468798, 520885, 553857, 575925, 578059, 580386 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Arabis hirsuta (L.) Scop. 털장대; 234992, 359061, 441242, 575692, 578026, 580387 (1, 3, 4, 7, 9, 10)
Arabis pendula L. 느러진장대(III); 242443, 305574, 390330, 449348, 482815, 599333 (1, 2, 3, 4, 5, 10)
Barbarea orthoceras Ledeb. 나도냉이; 284322, 359256, 433122, 468789, 566035, 578216 (2, 3, 4, 5, 7, 10)
Barbarea vulgaris R. Br. 유럽나도냉이(A); 359187, 441330, 577753, 583125, 585134 (3, 4, 7, 9, 10)
Berteroella maximowiczii (Palib.) O. E. Schulz 장대냉이; 305533, 387618, 446819, 482340, 528405, 552854, 576701, 578996, 585913 (2, 3, 4, 5, 6, 7, 8, 9, 10)
Capsella bursa-pastoris (L.) Medik. 냉이; 284366, 359168, 433095, 463991, 520335, 552039, 566029, 577766, 583025 (2, 3, 4, 5, 6, 7, 8, 9, 10)
Cardamine fallax (O. E. Schulz) Nakai 쫄쌀냉이; 359228, 464008, 520778, 552163, 566127, 577179, 577765 (3, 5, 6, 7, 8, 9, 10)
Cardamine flexuosa With. 황새냉이; 284269, 394083, 451819, 463973, 577180, 599071 (2, 3, 4, 5, 9, 10)
Cardamine impatiens L. 짜리냉이; 284348, 359062, 441550, 495396, 577764, 580345, 583009 (2, 3, 4, 5, 7, 9, 10)
Cardamine komarovii Nakai 논쟁이냉이(III); 577156 (9)

Appendix 1. Continued.

- Cardamine leucantha* (Tausch) O. E. Schulz 미나리냉이; 284372, 359105, 441769, 495272, 520833, 552229, 566117, 577806, 583061 (2, 3, 4, 5, 6, 7, 8, 9, 10)
- Descurainia sophia* (L.) Webb ex Prantl 재쑥(A); 284330, 468746 (2, 5)
- Dontostemon dentatus* (Bunge) Ledeb. 가는장대; 387625, 441771, 599591 (3, 4, 10)
- Draba nemorosa* L. 꽃다지; 284360, 354915, 433090, 463972, 520304, 552041, 565970, 577114, 577769 (2, 3, 4, 5, 6, 7, 8, 9, 10)
- Erysimum macilentum* Bunge 쑥부지깻이(III, LC); 523782, 592919 (6, 9)
- Lepidium campestre* (L.) R. Br. 들다닥냉이(A); 441774 (4)
- Lepidium densiflorum* Schrad. 길다닥냉이(A); 585735 (7)
- Lepidium virginicum* L. 콩다닥냉이(A); 385531, 441669, 468800, 575940, 578141, 585355 (3, 4, 5, 7, 9, 10)
- Nasturtium officinale* W. T. Aiton 물냉이(A); 523794, 552994, 578877 (6, 8, 10)
- Rorippa globosa* (Turcz. ex Fisch. & C. A. Mey.) Hayek 구슬갓냉이(III); 245274, 552834, 579131 (1, 8, 10)
- Rorippa indica* (L.) Hiern 개갓냉이; 235560, 284824, 441091, 468885, 523766, 575560 (1, 2, 4, 5, 6, 9)
- Rorippa palustris* (L.) Besser 속속이풀; 235570, 359257, 441183, 472793, 523856, 568246, 578848 (1, 3, 4, 5, 6, 7, 10)
- Rorippa sylvestris* (L.) Besser 가새잎개갓냉이(A); 441798 (4)
- Sisymbrium luteum* (Maxim) O. E. Schulz 노란장대(I); 284662, 359258, 441318, 495430, 569716, 585381 (2, 3, 4, 5, 7, 9)
- Thlaspi arvense* L. 말냉이(A); 234914, 284700, 354947, 433318, 463976, 520331, 552045, 566187, 577117, 577730 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
- Ericaceae 진달래과**
- Rhododendron micranthum* Turcz. 꼬리진달래(IV); 235670, 468937, 520319, 553032, 575785 (1, 5, 6, 8, 9)
- Rhododendron mucromulatum* Turcz. 진달래; 243917, 309917, 354922, 433304, 468969, 520323, 552051, 565936, 577700, 583098 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
- Rhododendron schlippenbachii* Maxim. 철쭉; 235316, 284286, 359120, 441106, 468971, 553533, 575706, 577798, 585482 (1, 2, 3, 4, 5, 7, 8, 9, 10)
- Rhododendron yedoense* f. *poukhanense* (H. Lévl.) M. Sugim. 산철쭉; 245144, 441884, 469017, 520876, 583042 (1, 4, 5, 6, 9)
- Vaccinium hirtum* var. *koreanum* (Nakai) Kitam. 산앵도나무(III); 235329, 359146, 441463, 468940, 553026, 575920, 598985 (1, 3, 4, 5, 8, 9, 10)
- Pyrolaceae 노루발과**
- Chimaphila japonica* Miq. 매화노루발; 243333, 390471, 433368, 468980, 520312, 575819, 599645 (1, 3, 4, 5, 6, 9, 10)
- Pyrola japonica* Klentze ex Alef. 노루발; 235669, 305750, 385665, 441293, 468982, 552640, 575818, 578344, 585491 (1, 2, 3, 4, 5, 8, 9, 10)
- Monotropaceae 수정난풀과**
- Monotropa hypopitys* L. 구상난풀(V, LC); 236922, 305285, 387387, 495847, 574884 (1, 2, 3, 5, 9)
- Monotropastrum humile* (D. Don) H. Hara 나도수정초(II, LC); 578835 (10)
- Ebenaceae 감나무과**
- Diospyros lotus* L. 고욤나무; 235705, 305321, 472824, 523771, 553033 (1, 2, 5, 6, 8)
- Styracaceae 때죽나무과**
- Styrax japonicus* Siebold & Zucc. 때죽나무; 481418 (5)
- Styrax obassis* Siebold & Zucc. 쪽동백나무; 284536, 446917, 469064, 578363 (2, 4, 5, 10)
- Symplocaceae 노린재나무과**
- Symplocos sawafutagi* Nagam. 노린재나무; 243232, 441678, 468932, 575919, 599541 (1, 4, 5, 9, 10)
- Primulaceae 앵초과**
- Androsace filiformis* Retz. 애기봄맞이; 599244 (10)
- Androsace barbata* (Lour.) Merr. 봄맞이꽃; 234924, 284413, 359173, 464009, 520330, 552149, 566057, 575794, 577770 (1, 2, 3, 5, 6, 7, 8, 9, 10)
- Lysimachia barystachys* Bunge 까치수염(I); 243323, 305559, 524371, 553269 (1, 2, 6, 8)
- Lysimachia clethroides* Duby 큰까치수염; 235536, 305304, 387495, 446535, 472590, 524499, 552935, 576688, 585960, 599538 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
- Lysimachia coreana* Nakai 참좁쌀풀(E, IV, LC); 235617, 387496, 446423, 579175 (1, 3, 4, 10)
- Lysimachia davurica* Ledeb. 좁쌀풀(III); 245207, 446370, 495726, 552940, 576423, 599608 (1, 4, 5, 8, 9, 10)
- Primula jesoana* var. *pubescens* (Takeda) Takeda & H. Hara 큰앵초(II); 385387, 495467, 569623 (3, 5, 9)
- Hydrangeaceae 수국과**
- Deutzia glabrata* Kom. 물참대(I); 235459, 284639, 359127, 441312, 495297, 553840, 569695, 578045, 580362 (1, 2, 3, 4, 5, 7, 8, 9, 10)
- Deutzia parviflora* Bunge 말밭도리(I); 245204, 305629, 385529, 441249, 468820, 523969, 569691, 578170, 585151 (1, 2, 3, 4, 5, 6, 7, 9, 10)
- Deutzia uniflora* Shirai 매화말밭도리(I); 234906, 359116, 433121, 481163, 520827, 552258, 565991, 577141 (1, 3, 4, 5, 6, 7, 8, 9)
- Hydrangea serrata* var. *acuminata* (Siebold & Zucc.) Nakai 산수국; 235472, 324127, 449416, 472769, 599369 (1, 2, 4, 5, 10)
- Philadelphus tenuifolius* Rupr. 얇은잎고광나무; 235145, 284541, 385410, 441248, 495400, 523983, 553892, 575924, 578372, 580335 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
- Grossulariaceae 까치밥나무과**
- Ribes fasciculatum* var. *chinense* Maxim. 까마귀밥나무; 449711 (4)
- Ribes komarovii* Pokrj. 꼬리까치밥나무; 433163, 495478, 569728, 577682, 585133 (4, 5, 7, 9, 10)
- Ribes mandshuricum* (Maxim.) Kom. 까치밥나무(III); 385423, 578407 (3, 10)
- Crassulaceae 돌나물과**
- Hylotelephium erythrosticktum* (Miq.) H. Ohba 평의비름; 451240, 495788, 551767, 599735 (4, 5, 9, 10)
- Hylotelephium viviparum* (Maxim.) H. Ohba 새끼평의비름(II); 387936, 446747, 552661, 575533 (3, 4, 8, 9)
- Orostachys chongsunensis* Y. N. Lee 정선바위솔(E); 398633, 551739 (3, 9)
- Orostachys japonica* (Maxim.) A. Berger 바위솔; 394152, 482626 (3, 5)

Appendix 1. Continued.

- Orostachys minuta* (Kom.) A. Berger 좁바위솔; 243934, 451499, 599737 (1, 4, 10)
Penthorum chinense Pursh 낙지다리(II, LC); 237035, 324174, 441736, 552897, 599756 (1, 2, 4, 8, 10)
Sedum aizoon L. 가는기린초; 236957, 284657, 387500, 441546, 481820, 552933, 575783, 578529, 585152 (1, 2, 3, 4, 5, 8, 9, 10)
Sedum kamtschaticum Fisch. & C. A. Mey. 기린초; 235554, 284708, 385514, 441260, 472811, 523975, 569642, 580400, 599447 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Sedum latiovalifolium Y. N. Lee 태백기린초(E, IV); 385756, 446582 (3, 4)
Sedum polytrichoides Hemsl. 바위채송화; 243886, 387433, 451279, 481374, 552497, 574980, 598902 (1, 3, 4, 5, 8, 9, 10)
Sedum sarmentosum Bunge 돌나물; 235460, 284709, 385396, 441698, 523877, 553171, 569658, 578600, 585193 (1, 2, 3, 4, 6, 8, 9, 10)
Saxifragaceae 범의귀과
Astilbe chinensis (Maxim.) Franch. & Sav. 노루오줌; 235630, 305289, 387406, 446381, 472611, 552944, 576686, 585903, 599549 (1, 2, 3, 4, 5, 7, 8, 9, 10)
Astilbe koreana (Kom.) Nakai 숙은노루오줌; 245222, 284874, 387526, 578855 (1, 2, 3, 10)
Astilboides tabularis (Hemsl.) Engl. 개병풍(V, NT); 385417 (3)
Chrysosplenium barbatum Nakai 흰털팽이눈(E); 385428, 577545 (3, 4)
Chrysosplenium flagelliferum F. Schmidt 애기팽이눈; 245126, 354948, 433173, 495278, 552052, 577686, 580480, 583109 (1, 3, 4, 5, 7, 8, 9, 10)
Chrysosplenium japonicum (Maxim.) Makino 산팽이눈(I); 245137, 433228, 552004, 577693, 583151 (1, 4, 8, 9, 10)
Chrysosplenium pseudofauriei H. Lév. 선팽이눈(I); 235113, 284681, 359098, 433116, 495488, 565950, 577701, 583013 (1, 2, 3, 4, 5, 7, 9, 10)
Chrysosplenium ramosum Maxim. 가지팽이눈(IV); 234902, 385429 (1, 3)
Chrysosplenium valdepilosum (Ohwi) S. H. Kang & J. W. Han 천마팽이눈(II); 433171, 577691 (4, 10)
Mukdenia rossii (Oliv.) Koidz. 돌단풍(II); 234910, 284337, 354971, 433128, 464010, 524479, 552112, 565942, 577170, 577698 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Rodgersia podophylla A. Gray 도깨비부채(IV, LC); 235348, 284554, 385398, 441239, 575690, 578484, 585794 (1, 2, 3, 4, 7, 9, 10)
Saxifraga fortunei var. *alpina* (Matsum. & Nakai) Nakai 바위떡풀; 243219, 451710, 495855, 551736, 599096 (1, 4, 5, 9, 10)
Parnassiaceae 물매화과
Parnassia palustris var. *multisetata* Ledeb. 물매화; 245366, 323950, 395811, 451731, 482623, 530333, 590806, 599724 (1, 2, 3, 4, 5, 6, 7, 10)
Rosaceae 장미과
Agrimonia coreana Nakai 산질신나물; 236996, 305456, 387556, 446551, 496054, 524575, 586082, 599539 (1, 2, 3, 4, 5, 6, 7, 10)
Agrimonia pilosa Ledeb. 질신나물; 235606, 305627, 387573, 449378, 472538, 530279, 552609, 574956, 585843, 599464 (1, 2, 3, 4, 5, 6, 8, 9, 10)
Aruncus dioicus var. *kamtschaticus* (Maxim.) H. Hara 눈개승마(III); 235247, 359091, 441406, 553867, 575862, 578396, 580385 (1, 3, 4, 7, 8, 9, 10)
Cotoneaster integerrimus Medik. 개야광나무(V); 441446, 574516 (4, 9)
Crataegus pinnatifida Bunge 산사나무; 441529, 523919, 576425, 578380, 580360 (4, 6, 7, 9, 10)
Duchesnea indica (Andr.) Focke 뽕딸기; 235056, 284391, 359063, 468861, 520792, 553829, 575699, 580388, 599068 (1, 2, 3, 5, 6, 7, 8, 9, 10)
Exochorda serratifolia S. Moore 가침박달(III, LC); 235031, 359236, 441100, 495354, 552976 (1, 3, 4, 5, 8)
Filipendula glaberrima Nakai 터리풀(I); 284530, 441581, 495681, 599443 (2, 4, 5, 10)
Geum aleppicum Jacq. 큰뽕; 236917, 284616, 385591, 441107, 472762, 524440, 552937, 569680, 578839, 585873 (1, 2, 3, 4, 5, 6, 8, 9, 10)
Geum japonicum Thunb. 뽕; 235563, 385504, 446714, 495740 (1, 3, 4, 5)
Malus baccata (L.) Borkh. 야광나무(I); 235339, 284660, 359066, 441125, 495250, 520768, 552261, 568254, 574411, 577978 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Neillia uyekii Nakai 나도국수나무(III, LC); 235243, 468715, 523907, 552844 (1, 5, 6, 8)
Physocarpus amurensis (Maxim.) Maxim. 산국수나무(VU); 479014 (3)
Potentilla centigrana Maxim. 줍딸기(III); 235500, 359283, 578183 (1, 4, 10)
Potentilla chinensis Ser. 딱지꽃; 245279, 305355, 387534, 446660, 472764, 524370, 552906, 574899, 579121, 585925 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Potentilla cryptotaeniae Maxim. 물양지꽃(III); 236900, 387582, 446388, 495714, 576409, 578849, 585887 (1, 3, 4, 5, 7, 9, 10)
Potentilla dickinsii Franch. & Sav. 돌양지꽃(II); 235667, 305745, 394072, 481381, 553165, 575810, 577989 (1, 2, 3, 5, 8, 9, 10)
Potentilla discolor Bunge 숨양지꽃(LC); 495525 (5)
Potentilla fragarioides L. 양지꽃; 235081, 284415, 359101, 433290, 468959, 520297, 552034, 565945, 577107, 577711 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Potentilla freyniana Bornm. 세잎양지꽃; 235045, 520947, 552293 (1, 6, 8)
Potentilla kleiniana Wight & Arn. 가락지나물; 235507, 481422 (1, 5)
Potentilla rosulifera H. Lév. 민눈양지꽃(II); 235143, 359353, 578040 (1, 3, 10)
Potentilla rugulosa Kitag. 당양지꽃; 242130, 284604, 387779, 441713, 524517, 552858, 569617, 585328, 598948 (1, 2, 3, 4, 6, 7, 8, 9, 10)
Potentilla squamosa Sojak 털양지꽃(E); 284514, 433380, 468962, 520790, 566168, 577174 (2, 4, 5, 6, 7, 9)
Potentilla supina L. 개소시랑개비(A); 441729, 552842, 576430 (4, 8, 9)
Prunus choreiana Nakai ex H. T. Im 복사앵도(E, IV, NT); 245255, 305753, 394185, 433367, 574556 (1, 2, 3, 4, 9)
Prunus jamasakura Siebold ex Koidz. 빛나무; 284410, 441677, 481136, 520989, 577885, 583128, 585825 (2, 4, 5, 6, 7, 9, 10)
Prunus japonica var. *nakaii* (H. Lév.) Rehder 이스라지; 235060, 469046, 552274, 577859 (1, 5, 8, 10)
Prunus maackii Rupr. 개벚지나무(III); 441567, 578220, 583052 (4, 9, 10)
Prunus mandshurica (Maxim.) Koehne 개살구나무(III); 385412, 433113, 552291, 577154 (3, 4, 8, 9)
Prunus padus L. 귀룽나무; 235146, 284686, 359072, 441485, 566118, 577773 (1, 2, 3, 4, 7, 10)
Prunus persica (L.) Batsch. 복사나무(A); 235022, 305529, 354966, 463965, 520836, 552268, 565953, 577757, 592922 (1, 2, 3, 5, 6, 7, 8, 9, 10)
Prunus sargentii Rehder 산벚나무(III); 234915, 469020, 577831 (1, 5, 10)
Prunus serrulata var. *pubescens* (Makino) Nakai 잔털벚나무; 245261, 359153, 468924, 520829, 552265, 566059, 577746, 583096 (1, 3, 5, 6, 7, 8, 9, 10)
Prunus sibirica L. 시베리아살구나무(IV, LC); 235033, 284296, 354972, 520955, 552032, 577171, 578125, 580445 (1, 2, 3, 6, 7, 8, 9, 10)
Prunus tomentosa Thunb. 앵도나무(A); 235083, 433387, 481125, 523966, 566067, 577169, 577866 (1, 4, 5, 6, 7, 9, 10)

Appendix 1. Continued.

- Pyrus ussuriensis* Maxim. 산돌배나무(I); 284624, 394184, 441349, 495452, 523956, 565976, 577763, 583158 (2, 3, 4, 5, 6, 7, 9, 10)
Rhodotypos scandens (Thunb.) Makino 병아리꽃나무(III); 284802, 495339 (2, 5)
Rosa acicularis Lindl. 인가목(II); 394300 (3)
Rosa davurica Pall. 생열귀나무(IV); 451867, 599682 (4, 10)
Rosa multiflora Thunb. 쩌레나무; 284619, 385585, 441096, 468717, 523799, 552987, 569679, 578421 (2, 3, 4, 5, 6, 8, 9, 10)
Rosa spinosissima L. 둥근인가목(IV); 585496 (7)
Rubus coreanus Miq. 복분자딸기; 235549, 481072, 523805, 553261 (1, 5, 6, 8)
Rubus crataegifolius Bunge 산딸기; 235160, 284678, 359483, 441196, 468757, 523908, 575897, 580358, 599449 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Rubus oldhamii Miq. 줄딸기; 235212, 284282, 359215, 441192, 468783, 520832, 566039, 577795, 583120 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Rubus parvifolius L. 명석딸기; 242100, 284671, 385588, 441745, 468714, 523843, 552983, 569472, 578547, 590110 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Rubus phoenicolasius Maxim. 붉은가시딸기; 245231, 305421, 387661, 441544, 472668, 575628, 578860, 585756 (1, 2, 3, 4, 5, 7, 9, 10)
Sanguisorba officinalis L. 오이풀; 243795, 309883, 390297, 449446, 482185, 528390, 552484, 574903, 586046, 599157 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Sanguisorba tenuifolia Fisch. ex Link 가는오이풀(I); 244493 (1)
Sorbaria sorbifolia (L.) A. Braun 쉬땅나무(III); 396043, 441778, 599470 (3, 4, 10)
Sorbus alnifolia (Siebold & Zucc.) K. Koch 팔배나무; 446646, 495907, 578499, 591111 (4, 5, 7, 10)
Sorbus commixta Hedl. 마가목(II); 495852, 578377 (5, 10)
Spiraea blumei G. Don 산조팝나무(I); 235021, 284854, 359471, 441193, 468752, 523928, 553156, 575936, 578109, 585194 (1, 2, 3, 4, 5, 6, 8, 9, 10)
Spiraea chamaedryfolia L. 인가목조팝나무(III); 441572 (4)
Spiraea chinensis Maxim. 당조팝나무(III); 235037, 305323, 359190, 441148, 495345, 520968, 554070, 575591, 578025, 580357 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Spiraea fritschiana C. K. Schneid. 참조팝나무(III); 284546, 441560, 495359 (2, 4, 5)
Spiraea prunifolia var. *simpliciflora* (Nakai) Nakai 조팝나무; 234940, 284405, 359262, 441482, 468922, 520846, 552360, 577758, 565969 (1, 2, 3, 4, 5, 6, 7, 8, 10)
Spiraea pubescens Turcz. 아구장나무(I); 359117, 468818 (3, 5)
Spiraea salicifolia L. 꼬리조팝나무(II); 245298, 441784, 599046 (1, 4, 10)
Spiraea trichocarpa Nakai 갈기조팝나무(IV); 235252, 284805, 385391, 441094, 523803, 553897, 569638, 578418 (1, 2, 3, 4, 6, 8, 9, 10)
Stephanandra incisa (Thunb.) Zabel 국수나무; 235284, 305603, 385405, 441228, 468794, 523846, 569469, 578367, 585173 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Waldsteinia ternata (Stephan) Fritsch 나도양지꽃(IV); 433203 (4)
- Fabaceae 콩과**
Aeschynomene indica L. 자귀풀; 244385 (1)
Amorpha fruticosa L. 죽제비싸리(A); 235448, 284609, 385337, 441147, 472844, 523835, 569442, 579198, 599843 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Amphicarpea bracteata subsp. *edgeworthii* (Benth.) H. Ohashi 새콩; 243457, 390317, 449592, 495762, 574509, 590590, 599138, 552582 (1, 3, 4, 5, 7, 8, 9, 10)
Astragalus penduliflorus var. *dahuricus* (DC.) X. Y. Zhu 황기; 396041
Astragalus sikokianus Nakai 강화황기(III, LC); 284867, 385557, 441533, 569640 (2, 3, 4, 9)
Astragalus sinicus L. 자운영(A); 235386 (1)
Caragana fruticosa (Pall.) Besser 참꿀담초(IV); 235254, 385533, 568251 (1, 3, 7)
Chamaecrista nomame (Siebold) H. Ohashi 차풀; 242366, 387892, 451330, 482344, 530285, 552654, 574852, 590109, 599049 (1, 3, 4, 5, 6, 7, 8, 9, 10)
Crotalaria sessiliflora L. 활나물; 552614 (8)
Gleditsia japonica Miq. 주엽나무; 235228 (1)
Glycine soja Siebold & Zucc. 돌콩; 242229, 309949, 388023, 449372, 481846, 530282, 574858, 590177, 598950 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Hylodesmum oldhamii (Oliv.) H. Ohashi & R. R. Mill 큰도독놈의갈고리; 242289, 323907, 495869, 574948, 585987, 598910 (1, 2, 5, 7, 9, 10)
Hylodesmum podocarpum (DC.) H. Ohashi & R. R. Mill 개도독놈의갈고리; 242261, 309870, 395826, 449754, 528526, 574860, 590078, 598924 (1, 2, 3, 4, 6, 7, 9, 10)
Hylodesmum podocarpum subsp. *oxyphyllum* (DC.) H. Ohashi & R. R. Mill 도독놈의갈고리; 244093, 310122, 446596, 552601, 574943, 585853, 599397 (1, 2, 4, 7, 8, 9, 10)
Indigofera bungeana Walp. 큰낭아초(A); 528355, 553115 (6, 8)
Indigofera kirilowii Maxim. ex Palib. 땅비싸리; 242071, 468814, 523800, 552978 (1, 5, 6, 8)
Kummerowia stipulacea (Maxim.) Makino 둥근매듭풀; 242375, 472544, 530329, 599307 (1, 5, 6, 10)
Kummerowia striata (Thunb.) Schindl. 매듭풀; 387814, 449763, 481843, 552611, 591003, 598951 (3, 4, 5, 7, 8, 10)
Lathyrus davidii Hance 활랑나물; 245339, 310045, 387498, 441490, 482719, 528441, 575701, 585860, 599319 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Lathyrus quinquerivius (Miq.) Litv. 연리초(III); 235758 (1)
Lathyrus vaniotii H. Lév. 산새콩; 235445, 284341, 359113, 441181, 569714, 578732, 580333 (1, 2, 3, 4, 7, 9, 10)
Lespedeza bicolor Turcz. 싸리; 235729, 305521, 387619, 446503, 481815, 524407, 552659, 576454, 585828, 599390 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Lespedeza cuneata (Dum. Cours.) G. Don. 비수리; 242368, 310024, 388061, 449919, 487772, 590133, 599840 (1, 2, 3, 4, 5, 7, 10)
Lespedeza cyrtobotrya Miq. 참싸리; 237021, 305747, 387905, 446432, 472568, 528517, 574965, 585930, 599391 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Lespedeza davurica (Laxm.) Schindl. 호비수리(III); 242219, 528365, 556083 (1, 6, 8)
Lespedeza lichiyumiae T. Nemoto, H. Ohashi & T. Itoh 자주비수리(A); 390382 (3)
Lespedeza maximowiczii C. K. Schneid. 조록싸리; 243884, 309934, 387630, 441746, 472587, 523944, 553030, 575777, 585366 (1, 2, 3, 4, 5, 6, 7, 8, 9)
Lespedeza thunbergii (DC.) Nakai 풀싸리; 390230, 449589, 472610, 599749 (3, 4, 5, 10)
Lespedeza tomentosa (Thunb.) Siebold ex Maxim. 개싸리; 242210, 310014, 390460, 530271, 590966, 599080 (1, 2, 3, 6, 7, 10)
Lespedeza virgata (Thunb.) DC. 좁싸리; 243781, 309861, 482196, 530390 (1, 2, 5, 6)

Appendix 1. Continued.

- Lotus corniculatus* L. 서양별노랑이(A); 305368, 441792, 585731 (2, 4, 7)
Lotus corniculatus var. *japonicus* Regel 별노랑이; 387745, 446832, 495511, 524483, 552985 (3, 4, 5, 6, 8)
Maackia amurensis Rupr. 다릅나무; 385408, 441388, 472620, 585474 (3, 4, 5, 7)
Medicago lupulina L. 잔개자리(A); 284611, 385380, 441250, 523848, 553916, 569712, 578285, 579208 (2, 3, 4, 6, 7, 8, 9, 10)
Medicago polymorpha L. 개자리(A); 385526 (3)
Medicago sativa L. 자주개자리(A); 243283, 305367, 385357, 441696, 575852 (1, 2, 3, 4, 9)
Melilotus albus Medik. 흰전동싸리(A); 235539, 305480, 385379, 441219, 524448, 552945, 569449, 585384, 599581 (1, 2, 3, 4, 6, 7, 8, 9, 10)
Melilotus suaveolens Ledeb. 전동싸리(A); 235763, 305479, 387634, 446811, 472781, 530434, 552564, 575788, 585886 (1, 2, 3, 4, 5, 6, 7, 8, 9)
Pueraria lobata (Willd.) Ohwi 칩; 235774, 309873, 446406, 472849, 524533, 574892, 585932, 599501 (1, 2, 4, 5, 6, 7, 9, 10)
Robinia pseudoacacia L. 아까시나무(A); 235384, 305498, 385555, 441199, 468718, 523984, 553855, 569688, 580398, 598965 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Sophora flavescens Aiton 고삼; 235528, 305583, 385704, 446933, 481115, 524368, 552878, 575779, 578882, 591856 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Trifolium pratense L. 붉은토끼풀(A); 235214, 340635, 394355, 441156, 481139, 575911, 578761, 585408 (1, 2, 3, 4, 5, 7, 9, 10)
Trifolium repens L. 토끼풀(A); 235149, 385535, 441089, 468748, 553901, 575704, 578186, 585153 (1, 3, 4, 5, 7, 8, 9, 10)
Vicia amoena Fisch. ex Ser. 갈퀴나물; 237043, 528360, 552909, 569657 (1, 6, 8, 9)
Vicia amurensis Oett. 별완두; 244503, 305503, 385567, 441355, 481158, 528471, 576700, 578875, 585388 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Vicia bungei Ohwi 들완두(IV); 284331, 441613 (2, 4)
Vicia chosonensis Ohwi 노랑갈퀴(E, III); 235249, 284571, 359121, 441341, 495445, 553020, 569710, 578733, 580453 (1, 2, 3, 4, 5, 7, 8, 9, 10)
Vicia nipponica Matsum. 네잎갈퀴나물; 551725 (9)
Vicia pseudorobus Fisch. & C. A. Mey. 큰등갈퀴(I); 244468, 390459, 482088, 590758, 599365 (1, 3, 5, 7, 10)
Vicia sativa subsp. *nigra* (L.) Ehrh. 가늘살갈퀴; 468872, 523792, 578083 (5, 6, 10)
Vicia tetrasperma (L.) Schreb. 얼치기완두; 245150, 495529, 520866 (1, 5, 6)
Vicia unijuga A. Braun 나비나물; 242256, 305366, 387540, 441200, 488051, 530347, 576412, 585445, 598964 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Vicia venosa var. *cuspidata* Maxim. 광릉갈퀴; 235664, 387545, 575632, 578460 (1, 3, 9, 10)
Vicia villosa Roth 벳지(A); 245284 (1)
Vigna angularis var. *nipponensis* (Ohwi) Ohwi & H. Ohashi 새팥; 242077, 310125, 530283, 552655, 590183, 599771 (1, 2, 6, 7, 8, 10)
Vigna minima (Roxb.) Ohwi & H. Ohashi 좁돌팥; 481793 (5)
- Elaeagnaceae 브리수나무과**
Elaeagnus umbellata Thunb. 브리수나무; 235234, 284808, 395950, 441115, 469024, 523873, 554097, 575917, 580338 (1, 2, 3, 4, 5, 6, 7, 8, 9)
- Lythraceae 부처꽃과**
Lythrum anceps (Koehne) Makino 부처꽃; 449969, 599229 (4, 10)
Lythrum salicaria L. 털부처꽃; 243671, 446442, 552948, 599230 (1, 4, 8, 10)
- Thymelaeaceae 팔꽃나무과**
Daphne pseudomezereum var. *koreana* (Nakai) Hamaya 두메닥나무(IV, NT); 354984, 433224 (3, 4)
Diarthron linifolium Turcz. 아마풀(V, NT); 235537, 324136, 387990, 524462, 552911 (1, 2, 3, 6, 8)
- Onagraceae 바늘꽃과**
Circaea alpina L. 쥐털이슬(II); 552499 (8)
Circaea canadensis subsp. *quadrisulcata* (Maxim.) Boufford 말털이슬(II); 236875, 449820 (1, 4)
Circaea cordata Royle 쇠털이슬(I); 242311, 305628, 387510, 449380, 552489, 574785 (1, 2, 3, 4, 8, 9)
Circaea erubescens Franch. & Sav. 붉은털이슬(III); 574962 (9)
Circaea mollis Siebold & Zucc. 털이슬; 244004, 305449, 449595, 495872, 552664, 586065, 599128 (1, 2, 4, 5, 7, 8, 10)
Epilobium amurense subsp. *cephalostigma* (Hausskn.) C. J. Chen, Hoch & P. H. Raven 돌바늘꽃; 236889, 310070, 390235, 449495, 495770, 551971, 590974, 599370 (1, 2, 3, 4, 5, 7, 9, 10)
Epilobium hirsutum L. 큰바늘꽃(V, NT); 387641 (3)
Epilobium pyrricholophum Franch. & Sav. 바늘꽃; 236937, 449462 (1, 4)
Ludwigia epilobioides Maxim. 여뀌바늘; 237044, 481833, 556081, 599764 (1, 5, 8, 10)
Oenothera biennis L. 달맞이꽃(A); 243244, 305466, 387633, 446375, 472782, 528304, 552560, 574922, 585876, 599548 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
- Alangiaceae 박쥐나무과**
Alangium platanifolium var. *trilobum* (Miq.) Ohwi 박쥐나무; 235732, 305557, 385490, 441225, 495328, 523889, 575646, 578850, 580364 (1, 2, 3, 4, 5, 6, 7, 9, 10)
- Cornaceae 층층나무과**
Cornus controversa Hemsl. 층층나무; 235778, 284651, 387397, 441297, 469061, 524027, 553859, 569670, 578520 (1, 2, 3, 4, 5, 6, 8, 9, 10)
Cornus walteri Wangerin 말채나무; 235174, 305328, 394173, 441238, 495640, 523802, 575823, 578768 (1, 2, 3, 4, 5, 6, 9, 10)
- Santalaceae 단향과**
Thesium chinense Turcz. 제비꽃; 237034, 324151, 359059, 441846, 468964, 520938, 553910, 568243, 569476, 578028 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Viscum coloratum (Kom.) Nakai 겨우살이; 235304, 359139, 433154, 577062, 577741, 586044 (1, 3, 4, 7, 9, 10)
- Celastraceae 노박덩굴과**
Celastrus flagellaris Rupr. 훈지나무; 390483, 441499, 472645, 553837, 575935, 578103 (3, 4, 5, 8, 9, 10)
Celastrus orbiculatus Thunb. 노박덩굴; 235432, 305305, 385414, 446939, 468791, 523992, 551909, 553905, 580366, 599450 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Euonymus alatus (Thunb.) Siebold 화살나무; 244058, 305507, 359250, 451693, 468710, 520777, 554086, 577178, 577830, 580372 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Euonymus hamiltonianus Wall. 참빗살나무; 244406, 385657, 441665, 578828 (1, 3, 4, 10)

Appendix 1. Continued.

Euonymus hamiltonianus var. *maackii* (Rupr.) Kom. 좁은잎참빗살나무(I); 244349, 310215, 537585, 552849, 578424 (1, 2, 6, 8, 10)

Euonymus macropterus Rupr. 나래회나무(II); 235301, 284531, 359160, 495496, 575932, 577782 (1, 2, 3, 5, 9, 10)

Euonymus oxyphyllus Miq. 참회나무; 243937, 305764, 385673, 441438, 469023, 569734, 586035, 599730 (1, 2, 3, 4, 5, 7, 9, 10)

Euonymus pauciflorus Maxim. 회목나무(II); 245213, 309957, 359123, 441439, 495395, 552646, 569732, 585147 (1, 2, 3, 4, 5, 7, 8, 9)

Euonymus sachalinensis (F. Schmidt) Maxim. 회나무(I); 446777, 574827, 578463 (4, 9, 10)

Tripterygium regelii Sprague & Takeda 미역줄나무(II); 243217, 305374, 387454, 441358, 481388, 552938, 575716, 578845 (1, 2, 3, 4, 5, 8, 9, 10)

Buxaceae 회양목과

Buxus microphylla var. *koreana* Nakai ex Rehder 회양목(I); 234895, 284599, 385747, 433435, 463987, 520316, 552170, 565932, 569618, 577719 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Euphorbiaceae 대극과

Acalypha australis L. 깨풀; 235727, 309960, 388038, 449369, 482787, 599844 (1, 2, 3, 4, 5, 10)

Euphorbia ebracteolata Hayata 붉은대극(III); 284259, 463988 (2, 5)

Euphorbia fischeriana Steud. 낭독(DD); 815549

Euphorbia helioscopia L. 등대풀; 284356 (2)

Euphorbia humifusa Willd. 땅빈대; 244391, 309924, 387476, 446877, 472839, 528410, 552914, 585888, 599203 (1, 2, 3, 4, 5, 6, 7, 8, 10)

Euphorbia hypericifolia L. 큰땅빈대(A); 235632, 310151, 396046, 472804, 528363, 552598, 576461, 585941, 599772 (1, 2, 3, 5, 6, 7, 8, 9, 10)

Euphorbia maculata L. 애기땅빈대(A); 237049, 472546, 524029, 574921, 599575 (1, 5, 6, 9, 10)

Euphorbia pekinensis Boiss. 대극(I); 235058, 520303, 554104 (1, 6, 8)

Euphorbia sieboldiana C. Morren & Decne. 개감수; 235203, 387516, 441461, 495372, 552105, 565999, 576692, 577708 (1, 3, 4, 5, 7, 8, 9, 10)

Flueggea suffruticosa (Pall.) Baill. 팽대싸리; 235618, 385598, 441537, 472825, 524422, 552986, 576410, 585877, 599842 (1, 3, 4, 5, 6, 7, 8, 9, 10)

Phyllanthus ussuriensis Rupr. & Maxim. 여우주머니; 242425, 310038, 472557, 574838, 599292 (1, 2, 5, 9, 10)

Rhamnaceae 갈매나무과

Hovenia dulcis Thunb. 헛개나무(I); 284661, 395834, 575625 (2, 3, 9)

Rhamnus parvifolia Bunge 돌갈매나무(IV); 242069, 284580, 385370, 495464, 585487 (1, 2, 3, 5, 7)

Rhamnus ussuriensis J.-J. Vassal 참갈매나무(III); 235433, 482347, 523801, 554075, 580354, 599795 (1, 5, 6, 7, 8, 10)

Rhamnus yoshinoi Makino 짝자래나무; 245288, 284699, 390384, 441098, 481122, 520839, 554084, 569729, 578032, 586066 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Vitaceae 포도과

Ampelopsis brevipedunculata (Maxim.) Trautv. 개머루; 242431, 310099, 395968, 449489, 472740, 524406, 552616, 575793, 590101, 599045 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Parthenocissus tricuspidata (Siebold & Zucc.) Planch. 담쟁이덩굴; 305364, 441670, 472588, 523950 (2, 4, 5, 6)

Vitis amurensis Rupr. 왕머루; 235288, 359226, 441241, 469021, 553263, 578234, 580369 (1, 3, 4, 5, 7, 8, 10)

Vitis flexuosa Thunb. 새머루; 235547, 394220, 446886, 472780, 523998, 578992, 590052 (1, 3, 4, 5, 6, 7, 10)

Linaceae 아마과

Linum stelleroides Planch. 개아마(IV); 242213, 309855, 390444, 482702, 530297, 574537, 590779, 599153 (1, 2, 3, 5, 6, 7, 9, 10)

Polygalaceae 원지과

Polygala japonica Houtt. 애기풀; 245228, 310197, 468951, 552974 (1, 2, 5, 8)

Polygala sibirica L. 두메애기풀(IV); 235245, 575904, 585454, 599569 (1, 7, 9, 10)

Polygala tatarinowii Regel 병아리풀(IV, LC); 242057, 323943, 390457, 488052, 530334, 552610, 574495, 585856, 599075 (1, 2, 3, 5, 6, 7, 8, 9, 10)

Staphyleaceae 고추나무과

Staphylea bumalda DC. 고추나무; 235171, 284539, 385493, 441112, 495323, 520825, 575641, 585361, 599494 (1, 2, 3, 4, 5, 6, 7, 9, 10)

Aceraceae 단풍나무과

Acer barbinerve Maxim. 청시닥나무(III); 385424, 583015 (3, 9)

Acer komarovii Pojark. 시닥나무(III); 359414, 495848 (3, 5)

Acer mandshuricum Maxim. 복장나무(III); 390336, 578004 (3, 10)

Acer pictum var. *mono* (Maxim.) Franch. 고로쇠나무; 235350, 284849, 359205, 441255, 472770, 520981, 577184, 577759, 585195 (1, 2, 3, 4, 5, 6, 7, 9, 10)

Acer pseudosieboldianum (Pax) Kom. 당단풍나무; 235318, 305422, 395897, 441333, 472735, 553524, 577783, 583117, 585386 (1, 2, 3, 4, 5, 7, 8, 9, 10)

Acer tataricum subsp. *ginnala* (Maxim.) Wesm. 신나무; 235192, 305481, 394388, 441149, 468792, 523816, 554101, 575717, 580332, 599823 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Acer tegmentosum Maxim. 산겨릅나무(IV); 385447, 578236 (3, 10)

Acer triflorum Kom. 복자기(III); 245208, 284473, 385720, 441348, 495492, 552138, 568260, 577846 (1, 2, 3, 4, 5, 7, 8, 10)

Anacardiaceae 옷나무과

Rhus javanica L. 붉나무; 236986, 309865, 387606, 446411, 481782, 528450, 552590, 574496, 586041, 598952 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Toxicodendron trichocarpum (Miq.) Kuntze 개옷나무; 235527, 284517, 359154, 441133, 468930, 523931, 552991, 569629, 585180, 598959 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Simaroubaceae 소태나무과

Ailanthus altissima (Mill.) Swingle 가중나무(A); 236940, 284868, 446365, 524395, 553054, 578546 (1, 2, 4, 6, 8, 10)

Picrasma quassioides (D. Don) Benn. 소태나무; 235796, 305283, 394264, 441496, 468755, 523821, 553257, 578006, 585530 (1, 2, 3, 4, 5, 6, 7, 8, 10)

Rutaceae 운향과

Dictamnus dasycarpus Turcz. 백선(I); 235373, 310034, 468712, 523779, 554076, 599571 (1, 2, 5, 6, 8, 10)

Phellodendron amurense Rupr. 황벽나무(II); 446765 (4)

Appendix 1. Continued.

- Tetradium daniellii* (Benn.) T. G. Hartley 쉬나무; 387717, 482731, 528354 (3, 5, 6)
Zanthoxylum piperitum DC. 초피나무; 323876, 468846 (2, 5)
Zanthoxylum schinifolium Siebold & Zucc. 산초나무; 235677, 284834, 394373, 449940, 472594, 524546, 574859, 585829, 599502 (1, 2, 3, 4, 5, 6, 7, 9, 10)
- Oxalidaceae 썩이밥과**
Oxalis corniculata L. 썩이밥; 481101, 553146, 575845 (5, 8, 9)
Oxalis dilleni Jacq. 들썩이밥(A); 578730, 591918 (7, 10)
Oxalis obtusangulata Maxim. 큰썩이밥; 235255, 359453, 569737, 577685 (1, 3, 9, 10)
Oxalis stricta L. 선썩이밥; 284698, 468806, 585521 (2, 5, 7)
- Geraniaceae 쥐손이풀과**
Geranium koreanum Kom. 둥근이질풀(II); 574958, 599386 (9, 10)
Geranium sibiricum L. 쥐손이풀; 242064, 324026, 449865, 481789, 524431, 551904, 590491, 599029 (1, 2, 4, 5, 6, 7, 9, 10)
Geranium thunbergii Siebold ex Lindl. & Paxton 이질풀; 235770, 305581, 387377, 446659, 472779, 528485, 574971, 590103, 598922 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Geranium wilfordii Maxim. 세잎쥐손이; 243456, 390334, 449933, 528419, 551969, 591039, 598963 (1, 3, 4, 6, 7, 9, 10)
- Balsaminaceae 봉선화과**
Impatiens nolitangere L. 노랑물봉선(I); 235555, 309950, 387576, 441691, 495402, 536352, 552651, 586067, 599022 (1, 2, 3, 4, 5, 6, 7, 8, 10)
Impatiens textori Miq. 물봉선; 236903, 309951, 387660, 446908, 488067, 530354, 551722, 590038, 599021 (1, 2, 3, 4, 5, 6, 7, 9, 10)
- Araliaceae 두릅나무과**
Aralia cordata var. *continentalis* (Kitag.) Y. C. Chu 독활; 235635, 305590, 387394, 446581, 482227, 537668, 574977, 585948, 599042 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Aralia elata (Miq.) Seem. 두릅나무; 235620, 387371, 441758, 468942, 556089, 574439, 590058, 599025 (1, 3, 4, 5, 7, 8, 9, 10)
Eleutherococcus divaricatus (Siebold & Zucc.) S. Y. Hu 개가시오갈피나무(V); 390265 (3)
Eleutherococcus senticosus (Rupr. & Maxim.) Maxim. 가시오갈피나무(V, VU); 359293 (3)
Eleutherococcus sessiliflorus (Rupr. & Maxim.) S. Y. Hu 오갈피나무(I); 244046, 305469, 395953, 446856, 495456, 551778, 580330 (1, 2, 3, 4, 5, 7, 9)
Kalopanax septemlobus (Thunb.) Koidz. 음나무; 359085, 451561, 495924, 590143 (3, 4, 5, 7)
Panax ginseng C. A. Mey. 인삼(V, NA); 591684 (7)
- Apiaceae 미나리과**
Aegopodium alpestre Ledeb. 왜방풍(IV); 236926, 578832 (1, 10)
Angelica amurensis Schischk. 지리강활; 446604 (4)
Angelica cartilaginomarginata (Makino ex Y. Yabe) Nakai 처녀바디; 482079, 530301, 552602, 599200 (5, 6, 8, 10)
Angelica czernaevia (Fisch. & C. A. Mey.) Kitag. 잔잎바디; 242186, 388034, 449573, 574846, 586033, 599211 (1, 3, 4, 7, 9, 10)
Angelica dahurica (Fisch. ex Hoffm.) Benth. Hook. f. ex Franch. & Sav. 구릿대; 236890, 310060, 387502, 446748, 481803, 530472, 574550, 590821 (1, 2, 3, 4, 5, 6, 7, 9)
Angelica decursiva (Miq.) Franch. & Sav. 바디나물; 243248, 310216, 390253, 449826, 482147, 530412, 551724, 591632, 599401 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Angelica gigas Nakai 당귀(III); 310044, 390275, 599097 (2, 3, 10)
Angelica polymorpha Maxim. 궁궁이; 242393, 323905, 388025, 449773, 495911, 551770, 590734, 599031 (1, 2, 3, 4, 5, 7, 9, 10)
Angelica reflexa B. Y. Lee 강활(E); 599364 (10)
Anthriscus sylvestris (L.) Hoffm. 전호; 235248, 359174, 441117, 468787, 553057, 569452, 577864, 579204 (1, 3, 4, 5, 8, 9, 10)
Bupleurum komarovianum Lincz. 시호; 237010, 324133, 395856, 482191, 528474, 574391, 585834, 598905 (1, 2, 3, 5, 6, 7, 9, 10)
Bupleurum longiradiatum Turcz. 개시호(II); 390298, 446623, 495664, 599410 (3, 4, 5, 10)
Cnidium monnieri (L.) Cusson 별사상자(III); 390344, 449545, 523858, 552500, 590538 (3, 4, 6, 7, 8)
Conioselinum tenuissimum (Nakai) Pimenov & Kljuykov 고본(II); 449939 (4)
Cryptotaenia japonica Hassk. 파드득나물; 305554, 387560, 446396, 481117, 585857, 599039 (2, 3, 4, 5, 7, 10)
Cymopterus melanotilingia (H. Boissieu) C. Y. Yoon 큰참나물(II); 243206, 324132, 390290, 449610, 482122, 591069 (1, 2, 3, 4, 5, 7)
Heraclium moellendorffii Hance 어수리; 236840, 390280, 449621, 495742, 574963, 585946, 599388 (1, 3, 4, 5, 7, 9, 10)
Libanotis seseloides (Fisch. & C. A. Mey. ex Turcz.) Turcz. 가는잎방풍(IV); 388040, 451786 (3, 4)
Oenanthe javanica (Blume) DC. 미나리; 237040, 449694, 528507, 552883, 574940, 599796 (1, 4, 6, 8, 9, 10)
Osmorhiza aristata (Thunb.) Rydb. 긴사상자; 385474, 441422, 578907 (3, 4, 10)
Ostericum grosseserratum (Maxim.) Kitag. 신감채; 242187, 309888, 390329, 446547, 482226, 530393, 552600, 574877, 590043, 599038 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Ostericum sieboldii (Miq.) Nakai 뿔미나리; 242307, 449539, 482343, 537607, 590602, 599677 (1, 4, 5, 6, 7, 10)
Peucedanum terebinthaceum (Fisch. ex Trevir.) Ledeb. 기름나물; 242066, 309915, 390343, 446676, 482157, 530469, 574779, 586058, 599105 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Pimpinella brachycarpa (Kom.) Nakai 참나물; 236994, 324117, 387916, 449601, 495687, 574794, 586027, 599383 (1, 2, 3, 4, 5, 7, 9, 10)
Sanicula chinensis Bunge 참반디; 244421, 305447, 387565, 446792, 524443, 552409, 575606, 578904, 585818 (1, 2, 3, 4, 6, 7, 8, 9, 10)
Sanicula rubriflora F. Schmidt ex Maxim. 붉은참반디(II); 441418 (4)
Sanicula tuberculata Maxim. 애기참반디(III); 235330 (1)
Sillaphyton podagraria (H. Boissieu) Pimenov 덕우기름나물(E, IV); 236845, 309916, 390255, 446527, 495683, 576689, 585952, 599002 (1, 2, 3, 4, 5, 7, 9, 10)
Torilis japonica (Houtt.) DC. 사상자; 243687, 305491, 388051, 446519, 468763, 523921, 552565, 575850, 585905 (1, 2, 3, 4, 5, 6, 7, 8, 9)

Appendix 1. Continued.

Loganiaceae 마전과

Mitrasacme pygmaea R. Br. 큰벼룩아재비; 482624 (5)

Gentianaceae 용담과

Anagallidium dichotomum (L.) Griseb. 대성쓴풀(V, EN); 655659 (4)

Gentiana scabra Bunge 용담; 243947, 395869, 451588, 487997, 537648, 551750, 591561, 599762 (1, 3, 4, 5, 6, 7, 9, 10)

Gentiana squarrosa Ledeb. 구슬봉이; 235118, 359159, 441576, 468958, 520848, 552299, 575837, 578014, 580347 (1, 3, 4, 5, 6, 7, 8, 9, 10)

Gentiana zollgeri Fawc. 큰구슬봉이; 245148, 495317, 520927, 552225, 577155, 577951 (1, 5, 6, 8, 9, 10)

Pterygocalyx volubilis Maxim. 좁은잎덩굴용담(V, NT); 390232, 591644 (3, 7)

Swertia pseudochensis H. Hara 자주쓴풀; 243403, 324112, 395795, 482299, 536368, 551738, 591567, 599688 (1, 2, 3, 5, 6, 7, 9, 10)

Asclepiadaceae 박주가리과

Cynanchum ascyrifolium (Franch. & Sav.) Matsum. 민백미꽃(I); 385724, 468990, 553022, 575602, 599626 (3, 5, 8, 9, 10)

Cynanchum atratum Bunge 백미꽃; 569601 (9)

Cynanchum inamoenum (Maxim.) Loes. 선백미꽃(III, LC); 243916, 385443, 441376, 495432, 569615, 585478, 599000 (1, 3, 4, 5, 7, 9, 10)

Cynanchum paniculatum (Bunge) Kitag. 산해박; 245241, 305716, 385603, 387378, 481407, 528322, 552913, 575711, 579008, 586018 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Cynanchum wilfordii (Maxim.) Hemsl. 큰조롱; 243343, 305327, 387574, 472757, 524436, 575801, 590691 (1, 2, 3, 5, 6, 7, 9)

Metaplexis japonica (Thunb.) Makino 박주가리; 235675, 310101, 387494, 446410, 472861, 528368, 552912, 576426, 590637, 598919 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Tylophora floribunda Miq. 왜박주가리(I, LC); 310132, 390472, 451295 (2, 3, 4)

Solanaceae 가지과

Datura stramonium L. 독말풀(A); 528494 (6)

Nicandra physalodes (L.) Gaertn. 페루파리(A); 236974 (1)

Physalistrum echatum (Yatabe) Makino 가시파리; 528531, 579001 (6, 10)

Physalis angulata L. 땅파리(A); 536401 (6)

Scopolia japonica Maxim. 미치광이풀(III); 495299, 578130 (5, 10)

Solanum americanum Mill. 미국까마중(A); 451474, 574377, 591787, 599753 (4, 7, 9, 10)

Solanum lyratum Thunb. 배풍등; 309880, 487876, 524471 (2, 5, 6)

Solanum nigrum L. 까마중; 244419, 324188, 449917, 472858, 536326, 552698, 576432, 590583, 599829 (1, 2, 4, 5, 6, 7, 8, 9, 10)

Convolvulaceae 메꽃과

Calystegia dahurica (Herb.) Choisy 선메꽃(III); 599653 (10)

Calystegia hederacea Wall. 애기메꽃; 235575, 387721, 446372, 523836, 578449 (1, 3, 4, 6, 10)

Calystegia pubescens Lindl. 메꽃; 235688, 390305, 472842, 556078, 574868, 599160 (1, 3, 5, 8, 9, 10)

Cuscuta campestris Yunck. 미국실새삼(A); 235733, 305612, 446823, 472816, 524450, 552966, 586042, 599226 (1, 2, 4, 5, 6, 7, 8, 10)

Cuscuta japonica Choisy. 새삼; 243241, 310088, 387884, 449998, 482328, 574432, 590034, 599041 (1, 2, 3, 4, 5, 7, 9, 10)

Ipomoea hederacea Jacq. 미국나팔꽃(A); 472878, 528377, 590662, 599767 (5, 6, 7, 10)

Ipomoea lacunosa L. 애기나팔꽃(A); 243284, 482369, 530296, 598877 (1, 5, 6, 10)

Ipomoea purpurea (L.) Roth 둥근잎나팔꽃(A); 237017, 310131, 390310, 451321, 472806, 530433, 590749, 599766 (1, 2, 3, 4, 5, 6, 7, 10)

Ipomoea rubriflora O'Donnell 둥근잎유홍초(A); 244488, 472805, 528376, 552919, 599845 (1, 5, 6, 8, 10)

Boraginaceae 지치과

Bothriospermum tenellum (Hornem.) Fisch. & C. A. Mey. 꽃받이; 385628, 395954, 468769, 585342 (3, 4, 5, 7)

Brachybotrys paridiformis Maxim. ex Oliv. 당개지치(III); 235106, 359162, 441593, 495490, 575895, 578049, 580396 (1, 3, 4, 5, 7, 9, 10)

Lithospermum arvense L. 개지치(LC); 284326, 468731 (2, 5)

Lithospermum erythrorhizon Siebold & Zucc. 지치(LC); 245233, 284601, 387544, 441281, 481371, 523814, 554049, 575869, 578447, 580448 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Lithospermum zollingeri A. DC. 반디지치(I); 284342, 495237, 520858 (2, 5, 6)

Symphytum officinale L. 컴프리(A); 236880, 385530, 441633, 575914, 585183, 599024 (1, 3, 4, 7, 9, 10)

Trigonotis peduncularis (Trevir.) Steven ex Palib. 꽃마리; 234920, 284378, 359219, 433316, 468767, 520351, 552042, 577080, 577771 (1, 2, 3, 4, 5, 6, 8, 9, 10)

Trigonotis radicans (Turcz.) Steven 거센털꽃마리(III); 578119 (10)

Trigonotis radicans var. *sericea* Thunb. 참꽃마리; 235523, 566120, 577781 (1, 7, 10)

Verbenaceae 마편초과

Callicarpa japonica Thunb. 작살나무; 235546, 284527, 451492, 472669, 524588, 552653, 574423, 590146, 599819 (1, 2, 4, 5, 6, 7, 8, 9, 10)

Clerodendrum trichotomum Thunb. 누리장나무; 235676, 323927, 472597, 524539, 552649, 585969, 599498 (1, 2, 5, 6, 7, 8, 10),

Tripura divaricata (Maxim.) P. D. Cantino 누란내풀; 242400, 310184, 552412, 574436, 598875 (1, 2, 8, 9, 10)

Vitex negundo var. *heterophylla* (Franch.) Rehder 줌목형(III); 472672 (5)

Phrymaceae 파리풀과

Phryma leptostachya var. *oblongifolia* (Koidz.) Honda 파리풀; 243862, 305435, 387514, 446563, 472533, 528426, 552968, 574945, 585880, 599398 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Lamiaceae 꿀풀과

Agastache rugosa (Fisch. & C. A. Mey.) Kuntze 배초향; 243251, 309869, 390228, 446769, 482116, 530398, 552485, 574924, 590523, 599372 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Appendix 1. Continued.

- Ajuga multiflora* Bunge 조개나물; 284445, 469000 (2, 5)
Ajuga spectabilis Nakai 자란초(E, II); 235683 (1)
Amethystea caerulea L. 개차즈기; 242061, 324161, 390247, 451251, 472865, 536202, 574386, 590081, 599190 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Clinopodium chinense var. *parviflorum* (Kudô) H. Hara 층층이꽃; 242114, 309862, 387491, 446568, 482282, 528385, 552605, 574426, 585855, 599652 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Clinopodium chinense var. *shibetchense* (H. Lév.) Koidz. 산층층이; 236938, 390266, 449905, 482690, 528483, 574923, 590184, 599010 (1, 3, 4, 5, 6, 7, 9, 10)
Dracocephalum rupestre Hance 별개풀(V, NT); 738444
Elsholtzia ciliata (Thunb.) H. Hyl. 향유; 243778, 323880, 395800, 451471, 482372, 536282, 551732, 591498, 599090 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Elsholtzia splendens Nakai ex F. Maek. 꽃향유; 243816, 323914, 395870, 451686, 537621, 551760, 552486, 591480, 599093 (1, 2, 3, 4, 6, 7, 8, 9, 10)
Glechoma grandis (A. Gray) Kuprian. 긴병꽃풀; 245142 (1)
Isodon excisus (Maxim.) Kudô 오리방풀; 243305, 387508, 449578, 599381 (1, 3, 4, 10)
Isodon inflexus (Thunb.) Kudô 산박하; 235685, 324150, 394417, 451376, 482176, 552617, 574880, 585956, 598960 (1, 2, 3, 4, 5, 7, 8, 9, 10)
Isodon japonicus (Burm. f.) H. Hara 방아풀; 244451, 309961, 390234, 449549, 481799, 536208, 590028, 599871 (1, 2, 3, 4, 5, 6, 7, 10)
Lamium album var. *barbatum* (Siebold & Zucc.) Franch. & Sav. 광대수염; 235244, 284644, 385453, 441229, 468780, 577807, 580482, 583047 (1, 2, 3, 4, 5, 7, 9, 10)
Lamium amplexicaule L. 광대나물; 284272, 395960, 463979, 520346, 552157, 566092, 577093, 577571 (2, 3, 5, 6, 7, 8, 9, 10)
Leonurus japonicus Houtt. 익모초; 235749, 309998, 387790, 449371, 472826, 530281, 552599, 574542, 585900, 599026 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Leonurus macranthus Maxim. 송장풀; 237019, 309858, 388022, 449565, 481818, 528532, 574506, 590169 (1, 2, 3, 4, 5, 6, 7, 9)
Lycopus charkeviczii Prob. 산썩싸리; 243249, 495767, 574910, 598997 (1, 5, 9, 10)
Lycopus lucidus Turcz. ex Benth. 썩싸리; 446497 (4)
Meehania urticifolia (Miq.) Makino 별개덩굴; 245156, 359166, 441294, 577778, 580373, 583152 (1, 3, 4, 7, 9, 10)
Mentha canadensis L. 박하; 237041, 310043, 395947, 449357, 472867, 574857, 590723, 599685 (1, 2, 3, 4, 5, 7, 9, 10)
Mosla dianthera (Buch.-Ham. ex Roxb.) Maxim. 쥐개풀; 243113 (1)
Mosla punctulata (J. F. Gmel.) Nakai 들개풀; 242388, 390423, 451200, 482674, 536306, 574430, 590594, 598953 (1, 3, 4, 5, 6, 7, 9, 10)
Nepeta cataria L. 개박하(DD); 305645, 395943, 481132 (2, 3, 5)
Phlomis umbrosa Turcz. 속단; 235640, 310192, 387530, 574960, 599394 (1, 2, 3, 9, 10)
Prunella asiatica Nakai 꿀풀; 235421, 284607, 385483, 441090, 481352, 523778, 552989, 569444, 578531, 585137 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Salvia chamryoenica Nakai 참배암차즈기(E, IV, LC); 305749, 387522, 495692, 575857, 585999, 599311 (2, 3, 5, 7, 9, 10)
Salvia plebeia R. Br. 배암차즈기; 235578, 305568, 472798, 523842 (1, 2, 5, 6)
Scutellaria dependens Maxim. 애기골무꽃(II); 599247 (10)
Scutellaria pekinensis var. *transitra* (Makino) H. Hara 산골무꽃; 235428, 284602, 385310, 441397, 481400, 523899, 553153, 575815, 578551, 585811 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Scutellaria pekinensis var. *ussuriensis* (Regel) Hand.-Mazz. 호골무꽃; 495373, 569664, 578852, 585420 (5, 7, 9, 10)
Stachys japonica Miq. 석잠풀; 244522, 305579, 387499, 441602, 481152, 575723, 578883, 585884 (1, 2, 3, 4, 5, 7, 9, 10)
Teucrium japonicum Houtt. 개곽향; 235720, 309968, 388024, 446963, 472650, 528417, 552880, 574379, 585833 (1, 2, 3, 4, 5, 6, 7, 8, 9)
Teucrium veronicoides Maxim. 곽향(III); 417606 (1)
Teucrium viscidum var. *miquelianum* (Maxim.) H. Hara 덩굴곽향; 235609, 472660, 599040 (1, 5, 10)
Thymus quinquecostatus Celak. 백리향(III); 284585, 441371 (2, 4)
- Plantaginaceae 질경이과**
Plantago asiatica L. 질경이; 235218, 310189, 395893, 446930, 468735, 575826, 578357 (1, 2, 3, 4, 5, 9, 10)
Plantago depressa Willd. 털질경이; 242419, 385532, 441220, 481082, 523789, 575532, 585376 (1, 3, 4, 5, 6, 7, 9)
Plantago lanceolata L. 창질경이(A); 305373, 551804 (2, 9)
- Oleaceae 물푸레나무과**
Forsythia ovata Nakai 만리화(E, V, NT); 354921, 433244, 585998 (3, 4, 7)
Forsythia saxatilis (Nakai) Nakai 산개나리(E, IV, NT); 245140, 387439, 433141, 520332 (1, 3, 4, 6)
Fraxinus rhynchophylla Hance 물푸레나무; 305516, 441159, 482271, 520942, 575588, 578525, 580371 (2, 4, 5, 6, 7, 9, 10)
Fraxinus sieboldiana Blume 쇠물푸레; 305555, 441375, 468967, 569682, 578411 (2, 4, 5, 9, 10)
Ligustrum obtusifolium Siebold & Zucc. 쥐똥나무; 244084, 305658, 481098, 523812, 552990 (1, 2, 5, 6, 8)
Syringa fauriei H. Lév. 버들개회나무(IV); 385371 (3)
Syringa pubescens subsp. *patula* (Palib.) M. C. Chang & X. L. Chen 털개회나무(I); 236984, 305441, 385742, 441381, 495268, 553865, 569672, 578108, 580458 (1, 2, 3, 4, 5, 7, 8, 9, 10)
Syringa reticulata subsp. *amurensis* (Rupr.) P. S. Green & M. C. Chang 개회나무(III, LC); 235542, 309891, 441218, 575635, 578772, 580365 (1, 2, 4, 7, 9, 10)
Syringa wolfii C. K. Schneid. 꽃개회나무(IV); 235738 (1)
- Scrophulariaceae 현삼과**
Lindernia dubia (L.) Pennell 미국외풀(A); 599179 (10)
Lindernia procumbens (Krock.) Borbás 발독외풀; 552843, 599180 (8, 10)
Mazus pumilus (Burm. f.) Steenis 주름잎; 243946, 284455, 359206, 441185, 488113, 520811, 552384, 568241, 575548, 578085 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Appendix 1. Continued.

- Melampyrum roseum* Maxim. 꽃머느리밥풀; 235614, 309946, 387547, 446688 (1, 2, 3, 4)
Melampyrum roseum var. *ovalifolium* (Nakai) Nakai ex Beauverd 알머느리밥풀; 324140, 387824, 482268, 524561, 556090, 574967, 585923, 599037 (2, 3, 5, 6, 7, 8, 9, 10)
Melampyrum setaceum (Maxim. ex Palib.) Nakai 예기머느리밥풀(III); 309911 (2)
Melampyrum setaceum var. *nakaianum* (Tuyama) T. Yamaz. 새머느리밥풀(E, III); 242068, 449677, 495661 (1, 4, 5)
Mimulus nepalensis Benth. 물파리아재비; 284828, 387898, 553298, 574488, 599269 (2, 3, 8, 9, 10)
Paulownia tomentosa (Thunb.) Steud. 참오동나무(A); 243959, 305497, 387885, 441885, 468784, 574869 (1, 2, 3, 4, 5, 9)
Pedicularis resupinata L. 송이풀; 390277, 446684, 495887, 599387 (3, 4, 5, 10)
Phtheospermum japonicum (Thunb.) Kanitz 나도송이풀; 236977, 323854, 390322, 451199, 530338, 551726, 591040, 599100 (1, 2, 3, 4, 6, 7, 9, 10)
Pseudolysimachion linariifolium (Pallas ex Link) Holub 꼬리풀; 242245, 309856, 482127, 528455, 556077, 598976 (1, 2, 5, 6, 8, 10)
Pseudolysimachion rotundum var. *subintegrum* T. Yamaz. 산꼬리풀; 599553 (10)
Scrophularia kakudensis Franch. 큰개현삼(II); 599414 (10)
Siphonostegia chinensis Benth. 절국대; 245335, 310096, 388084, 482100, 556095 (1, 2, 4, 5, 8)
Verbascum thapsus L. 우단담배풀(A); 585917 (7)
Veronica anagallis-aquatica L. 큰물칭개나물(A); 235567, 305346, 441509, 468772, 523762, 575523, 578881 (1, 2, 4, 5, 6, 9, 10)
Veronica arvensis L. 천개불알풀(A); 284689, 468727, 520962, 578124 (2, 5, 6, 10)
Veronica peregrina L. 문모초(A); 523807 (6)
Veronica persica Poir. 큰개불알풀(A); 235115, 284327, 464014, 552162, 577085 (1, 2, 5, 8, 9)
Veronica undulata Wall. 물칭개나물; 481156, 552993, 585817 (5, 7, 8)
Veronicastrum sibiricum (L.) Pennell 냉초(II); 235686, 305740, 396020, 599671 (1, 2, 4, 10)
- Orobanchaceae 열당과**
Phacellanthus tubiflorus Siebold & Zucc. 가지더부살이(II); 574908, 585963 (7, 9)
- Acanthaceae 쥐꼬리망초과**
Justicia procumbens L. 쥐꼬리망초; 310199, 482230 (2, 5)
- Campanulaceae 초롱꽃과**
Adenophora divaricata Franch. & Sav. 넓은잔대; 235698, 309867, 388048, 446678, 482104, 530372, 556091, 574950, 586043 (1, 2, 3, 4, 5, 6, 7, 8, 9)
Adenophora polyantha Nakai 수원잔대; 243935 (1)
Adenophora remotiflora (Siebold & Zucc.) Miq. 모시대; 245331, 387538, 449581, 495684, 574543, 591038, 599379 (1, 3, 4, 5, 7, 9, 10)
Adenophora verticillata Fisch. 층층잔대; 243933, 387777, 441555, 482685, 530380, 574390, 590773 (1, 3, 4, 5, 6, 7, 9)
Adenophora verticillata var. *hirsuta* F. Schmidt 털잔대; 243302, 530477 (1, 6)
Asyneuma japonicum (Miq.) Briq. 영아자; 235628, 305604, 387966, 449898, 495967, 574911, 585838, 599374 (1, 2, 3, 4, 5, 7, 9, 10)
Campanula glomerata subsp. *speciosa* (Hornem. ex Spreng.) Domin 자주꽃방망이(III); 244489, 390299, 530383, 591148, 599076 (1, 3, 6, 7, 10)
Campanula punctata Lam. 초롱꽃(I); 235458, 284695, 385402, 441105, 495355, 523951, 569674, 578269, 585321 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Codonopsis lanceolata (Siebold & Zucc.) Trautv. 더덕; 235712, 284865, 359141, 530423, 574389, 580344, 599127 (1, 2, 3, 6, 7, 9, 10)
Lobelia chinensis Lour. 수염가래꽃; 472856, 599510 (5, 10)
Platycodon grandiflorum (Jacq.) A. DC. 도라지; 235657, 305515, 387615, 446890, 472554, 528415, 552596, 574895, 585881, 599523 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
- Rubiaceae 꼭두선이과**
Galium boreale L. 긴잎갈퀴(IV, LC); 284677, 446674, 552846, 578997 (2, 4, 8, 10)
Galium bungei var. *trachyspermum* (A. Gray) Cufod. 네잎갈퀴; 305638, 441458, 552970, 599808 (2, 4, 8, 10)
Galium dahuricum Turcz. ex Ledeb. 큰잎갈퀴; 242279, 309885, 387570, 451219, 575709, 578859, 585790 (1, 2, 3, 4, 8, 9, 10)
Galium kinuta Nakai & H. Hara 민둥갈퀴(II); 244096, 305281, 387509, 441394, 524547, 553166, 575856, 585849, 599149 (1, 2, 3, 4, 6, 7, 8, 9, 10)
Galium maximowiczii (Kom.) Pobed. 개갈퀴; 235531, 305451, 387655, 446538, 472608, 551902, 585859, 599373 (1, 2, 3, 4, 5, 7, 9, 10)
Galium odoratum (L.) Scop. 선갈퀴(III); 359110, 441573 (3, 4)
Galium paradoxum Maxim. 두메갈퀴(II); 385386, 441429, 578481 (3, 4, 10)
Galium pogonanthum Franch. & Sav. 산갈퀴; 235438, 305320, 385560, 441433, 469049, 523892, 575781, 578854, 585145 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Galium spurium L. 갈퀴덩굴; 441251, 468743 (4, 5)
Galium verum var. *asiaticum* Nakai 솔나무; 245280, 305654, 387611, 446578, 481424, 524382, 552830, 576406, 579078, 585870 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Rubia argyi (H. Lév. & Vaniot) H. Hara ex Lauener & D. K. Ferguson 꼭두선이; 236901, 310108, 387865, 446929, 537669, 574835, 591838, 599605 (1, 2, 3, 4, 6, 7, 9, 10)
Rubia chinensis Regel & Maack 큰꼭두선이; 243861, 284572, 387583, 441403, 495283, 569631, 578483, 585437 (1, 2, 3, 4, 5, 7, 9, 10)
Rubia cordifolia L. 갈퀴꼭두선이; 236924, 310026, 388017, 446403, 481798, 524542, 552595, 574834, 590097 (1, 2, 3, 4, 5, 6, 7, 8, 9)
- Linnaeaceae 린네풀과**
Zabelia biflora (Turcz.) Makino 털맹강나무(III); 235020, 310037, 359261, 441099, 495208, 554108, 574896, 578054, 580329 (1, 2, 3, 4, 5, 7, 8, 9, 10)
Zabelia densipila M. P. Hong, Y. C. Kim & B. Y. Lee 긴털맹강나무(E); 235088, 359466, 590711 (1, 3, 7)
Zabelia tyaihyonii (Nakai) Hisauti & H. Hara 줄맹강나무(E, V, VU); 235382, 554047 (1, 8)
- Diervillaceae 병꽃나무과**
Weigela florida (Bunge) A. DC. 붉은병꽃나무(II); 235035, 284319, 359125, 441486, 468931, 520935, 553284, 575592, 578078, 580331 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Appendix 1. Continued.

- Weigela subsessilis* (Nakai) L. H. Bailey 병꽃나무(E); 244453, 284597, 441449, 469048, 577792 (1, 2, 4, 5, 10)
- Caprifoliaceae 인동과**
- Lonicera japonica* Thunb. 인동; 244371, 284710, 394098, 441747, 481155, 575787, 578885, 585812 (1, 2, 3, 4, 5, 7, 9, 10)
- Lonicera maackii* (Rupr.) Maxim. 괴불나무(I); 235213, 305432, 385459, 441134, 537638, 553833, 575916, 580352 (1, 2, 3, 4, 6, 7, 8, 9)
- Lonicera praeflorens* Batal 울괴불나무; 235274, 284404, 354954, 433372, 468933, 520283, 552023, 566000, 577592, 583030 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
- Lonicera subsessilis* Rehder 청괴불나무(E, II); 235320, 305722, 385717, 441345, 495308, 552639, 569731, 578100, 580451 (1, 2, 3, 4, 5, 7, 8, 9, 10)
- Lonicera tatarinowii* Maxim. 흰괴불나무(IV); 665752
- Lonicera vesicaria* Kom. 구슬댕이(III); 385389, 441409, 495658 (3, 4, 5)
- Lonicera vidalii* Franch. & Sav. 왕괴불나무(II); 235089, 577980 (1, 10)
- Viburnaceae 산분꽃나무과**
- Viburnum burejaeticum* Regel & Herd. 산분꽃나무(V, NT); 235114 (1)
- Viburnum carlesii* var. *bitchiuense* (Makino) Nakai 분꽃나무; 235018, 309995, 359065, 441119, 552264, 565957, 577173, 577828, 495329, 520835 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
- Viburnum erosum* Thunb. 덜꿩나무; 469056 (5)
- Viburnum opulus* var. *sargentii* (Koehne) Takeda 백당나무(I); 235185, 385392, 441387, 495491, 575928, 578161, 580463 (1, 3, 4, 5, 7, 9, 10)
- Viburnum wrightii* Miq. 산가막살나무; 385745 (3)
- Adoxaceae 연복초과**
- Adoxa moschatellina* L. 연복초(I); 235042, 284299, 354926, 433091, 552091, 566137, 577084, 577694 (1, 2, 3, 4, 7, 8, 9, 10)
- Sambucus williamsii* Hance 딱총나무; 235365, 284548, 359075, 441313, 495483, 575712, 578409, 585748 (1, 2, 3, 4, 5, 7, 9, 10)
- Valerianaceae 마타리과**
- Patrinia rupestris* (Pall.) Juss. 돌마타리(IV); 236931, 305662, 387352, 441790, 472817, 528388, 552594, 574497, 586014, 598869 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
- Patrinia scabiosifolia* Fisch. ex Trevir. 마타리; 235655, 309948, 388047, 446698, 472731, 528437, 574976, 585847, 599366 (1, 2, 3, 4, 5, 6, 7, 9, 10)
- Patrinia villosa* (Thunb.) Juss. 똑갈; 243306, 310041, 387669, 446673, 472599, 528413, 552604, 574826, 586004, 599317 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
- Valeriana fauriei* Briq. 쥐오줌풀; 245152, 340630, 359126, 441187, 495463, 520838, 553835, 565948, 577172, 577756 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
- Dipsacaceae 산토끼꽃과**
- Dipsacus japonicus* Miq. 산토끼꽃(III, LC); 237037, 309882, 449518, 472790, 574856, 598929 (1, 2, 4, 5, 9, 10)
- Scabiosa tschiliensis* Grüning 솔채꽃(III); 236930, 324106, 446677, 528509, 552592, 586047, 599150 (1, 2, 4, 6, 7, 8, 10)
- Asteraceae 국화과**
- Achillea alpina* L. 톱풀(II); 387324, 449964, 495607, 574919 (3, 4, 5, 9)
- Achillea alpina* var. *discoidea* (Regel) Kitam. 산톱풀; 395810, 449849, 590732 (3, 4, 7)
- Achillea millefolium* L. 서양톱풀(A); 574435 (9)
- Adenocaulon himalaicum* Edgew. 열가치; 242430, 324110, 390415, 449689, 574793, 592003, 599395 (1, 2, 3, 4, 7, 9, 10)
- Ainsliaea acerifolia* var. *subapoda* Nakai 가야단풍취; 243185, 390263, 446701, 482259, 586029, 599392 (1, 3, 4, 5, 7, 10)
- Ambrosia artemisiifolia* L. 돼지풀(A); 242181, 323859, 449419, 552691, 590111, 599747 (1, 2, 4, 7, 8, 10)
- Ambrosia trifida* L. 단풍잎돼지풀(A); 590553 (7)
- Artemisia annua* L. 개똥쑥; 481781, 530350, 591051 (5, 6, 7)
- Artemisia capillaris* Thunb. 사철쑥; 245119, 323923, 390438, 449399, 481808, 530331, 556082, 576424, 585891, 599794 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
- Artemisia codonocephala* Diels 참쑥; 243179, 390316, 449512, 482113, 530473, 590699, 599185 (1, 3, 4, 5, 6, 7, 10)
- Artemisia gmelinii* Weber ex Stechm. 더위지기; 241998, 449031, 390324, 449715, 482399, 536210, 551801, 590033, 599727 (1, 2, 3, 4, 5, 6, 7, 9, 10)
- Artemisia indica* Willd. 쑥; 235765, 310160, 390321, 449410, 482304, 536198, 552613, 590639, 599781 (1, 2, 3, 4, 5, 6, 7, 8, 10)
- Artemisia japonica* Thunb. 제비쑥; 243678, 324141, 390239, 449702, 482195, 530340, 552491, 591163, 599036 (1, 2, 3, 4, 5, 6, 7, 8, 10)
- Artemisia keiskeana* Miq. 맑은대쑥; 243180, 310116, 390369, 449836, 472684, 536360, 552696, 590534, 599827 (1, 2, 3, 4, 5, 6, 7, 8, 10)
- Artemisia lancea* Vaniot 뺨쑥; 242280, 309921, 387844, 449379, 495738, 530414, 574926, 590698, 599789 (1, 2, 3, 4, 5, 6, 7, 9, 10)
- Artemisia rubripes* Nakai 담불쑥(I); 242246, 309976, 390325, 449364, 482418, 530352, 574928, 590022, 599014 (1, 2, 3, 4, 5, 6, 7, 9, 10)
- Artemisia sieversiana* Ehrh. ex Willd. 산흰쑥(IV, LC); 451247, 591666 (4, 7)
- Artemisia stolonifera* (Maxim.) Kom. 넓은잎외잎쑥; 243716, 324128, 390294, 449547, 488065, 528516, 574533, 590130, 599034 (1, 2, 3, 4, 5, 6, 7, 9, 10)
- Aster ageratoides* Turcz. 까실쑥부쟁이; 242291, 324167, 390240, 449577, 482324, 530406, 551764, 590082, 599662 (1, 2, 3, 4, 5, 6, 7, 9, 10)
- Aster hispidus* Thunb. 갯쑥부쟁이; 243220, 324181, 390326, 482302, 536246, 552910, 585892, 599092 (1, 2, 3, 5, 6, 7, 8, 10)
- Aster incisus* Fisch. 가새쑥부쟁이; 236902, 323899, 472845, 528391, 599813 (1, 2, 5, 6, 10)
- Aster maackii* Regel 좁개미취(III); 243447, 395990, 449877, 590712, 598884 (1, 3, 4, 7, 10)
- Aster meyerdorffii* (Regel & Maack) Voss 개쑥부쟁이; 598884 (4)
- Aster pilosus* Willd. 미국쑥부쟁이(A); 244500, 324160, 395875, 451370, 495943, 536235, 552689, 574549, 590055, 599094 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
- Aster scaber* Thunb. 참취; 235659, 309920, 388018, 446696, 472745, 530467, 552603, 574504, 590025, 599102 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
- Aster subulatus* Michx. 비짜루국화(A); 242325, 324099, 451813, 482313 (1, 2, 4, 5)
- Aster tataricus* L. f. 개미취; 242180, 309866, 388007, 449490, 495711, 552583, 574440, 590106, 599030 (1, 2, 3, 4, 5, 7, 8, 9, 10)
- Atractylodes ovata* (Thunb.) DC. 잡쑥; 235644, 309929, 387427, 446539, 488047, 524518, 574523, 586005, 598861 (1, 2, 3, 4, 5, 6, 7, 9, 10)
- Bidens bipinnata* L. 도깨비바늘; 472786, 599828 (5, 10)
- Bidens biternata* (Lour.) Merr. & Sherff 털도깨비바늘; 244523, 323922, 387988, 481841, 537583, 576433, 590087, 599166 (1, 2, 3, 5, 6, 7, 9, 10)
- Bidens frondosa* L. 미국가막사리(A); 242371, 324175, 395906, 451204, 482362, 524449, 591478, 599089 (1, 2, 3, 4, 5, 6, 7, 10)

Appendix 1. Continued.

- Bidens parviflora* Willd. 까치말; 243397, 390487, 482346, 590059, 599765 (1, 3, 5, 7, 10)
Bidens pilosa L. 울산도깨비바늘(A); 324182, 482378, 536397 (2, 5, 6)
Bidens tripartita L. 가막사리; 244384, 482382, 599678 (1, 5, 10)
Breca segeta (Bunge) Kitam. 조뱅이; 244040, 284675, 385703, 441184, 468810, 523790, 553145, 569651, 578887, 579201 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Carduus crispus L. 지느러미영경귀(A); 235053, 284811, 359180, 441157, 468771, 523765, 553114, 569446, 578378, 579211 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Carpesium abrotanoides L. 담배풀; 243850, 310208 (1, 2)
Carpesium cernuum L. 좁담배풀; 309947, 387929, 482341, 530363, 556092, 574413, 591564, 599304 (2, 3, 5, 6, 7, 8, 9, 10)
Carpesium divaricatum Siebold & Zucc. 긴담배풀; 235634, 310193, 388066, 472789, 590049, 599400 (1, 2, 3, 5, 7, 10)
Carpesium macrocephalum Franch. & Sav. 여우오줌(I); 242435, 390315, 446514, 551966, 591975, 599047 (1, 3, 4, 7, 9, 10)
Carpesium triste Maxim. 두메담배풀; 390238, 449785, 495763, 591089, 599120 (3, 4, 5, 7, 10)
Centipeda minima (L.) A. Braun & Aschers. 중대가리풀; 243969, 310169, 395955, 472855, 528334, 552836, 574443, 590822, 599527 (1, 2, 3, 5, 6, 7, 8, 9, 10)
Cirsium japonicum var. *maackii* (Regel) Kitam. 영경귀; 235450, 284682, 385559, 441673, 468901, 523753, 575708, 585181, 598956 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Cirsium pendulum Fisch. ex DC. 큰영경귀(I); 242194, 390500, 449753, 482394, 530349, 552688, 591529, 599095 (1, 3, 4, 5, 6, 7, 8, 10)
Cirsium setidens (Dunn) Nakai 고려영경귀(E, I); 242176, 310010, 388049, 449626, 487973, 528489, 551729, 590681, 599052 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Conyza canadensis (L.) Cronquist 땅초(A); 244532, 310106, 388043, 446878, 472872, 528302, 552561, 574782, 585885 (1, 2, 3, 4, 5, 6, 7, 8, 9)
Coreopsis lanceolata L. 큰금계국(A); 284820, 441735, 468961, 575828, 579116, 585406 (2, 4, 5, 7, 9, 10)
Coreopsis tinctoria Nutt. 기생초(A); 446883, 579118 (4, 10)
Crepidiastrum chelidoniifolium (Makino) Pak & Kawano 까치고들빼기; 243208, 390276, 451425, 482662, 551730, 599826 (1, 3, 4, 5, 9, 10)
Crepidiastrum denticulatum (Houtt.) Pak & Kawano 이고들빼기; 243237, 309984, 390376, 449837, 482348, 536376, 551775, 591157, 599091 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Crepidiastrum sonchifolium (Bunge) Pak & Kawano 고들빼기; 234976, 284618, 359230, 441188, 468770, 520796, 568273, 569460, 578068 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Dendranthema boreale (Makino) Ling 산국; 244513, 323919, 395823, 451482, 488037, 537589, 551742, 552490, 591477, 599785 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Dendranthema indicum (L.) Des Moul. 감국; 395890, 591955 (3, 7)
Dendranthema jeongseonensis M. Kim & H. Jo 정선국화(E); 395995, 451592, 551743, 591481 (3, 4, 7, 9)
Dendranthema zawadskii (Herbich) Tzvelev 산구절초; 243207, 487832, 536366 (1, 5, 6)
Dendranthema zawadskii var. *latilobum* (Maxim.) Kitam. 구절초; 243769, 323949, 395797, 451601, 482361, 536274, 551744, 591504 (1, 2, 3, 4, 5, 6, 7, 9)
Dendranthema zawadskii var. *tenuisectum* (Kitag.) Pak 가늘구절초; 243955, 552488, 599719 (1, 8, 10)
Echinops setifer Iljin 절골대; 243985, 323944, 395853, 451892, 598906 (1, 2, 3, 4, 10)
Eclipta prostrata (L.) L. 한련초; 237047, 310015, 472854, 556079, 590688, 599283 (1, 2, 5, 7, 8, 10)
Erechtites hieracifolia (L.) Raf. ex DC. 붉은서나물(A); 243438, 482367, 536406, 590532, 599732 (1, 5, 6, 7, 10)
Erigeron annuus (L.) Pers. 개망초(A); 235424, 284577, 385394, 441155, 468736, 523971, 553110, 575816, 585142, 599459 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Erigeron philadelphicus L. 봄망초(A); 578431 (10)
Eupatorium lindleyanum DC. 골등골나물; 244434, 387782, 472742, 528381, 552566 (1, 3, 5, 6, 8)
Eupatorium makinoi var. *oppositifolium* (Koidz.) Kawah. & Yahara 등골나물; 236950, 309930, 387487, 446412, 472548, 524551, 552606, 574964, 590119, 599499 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Eupatorium tripartitum (Makino) Murata & H. Koyama 향등골나물; 482636, 574900, 585862 (5, 7, 9)
Galinsoga parviflora Cav. 별꽃아재비(A); 395835, 446484, 575545, 578865, 586075 (3, 4, 7, 9, 10)
Galinsoga quadriradiata Ruiz & Pav. 털별꽃아재비(A); 235783, 309988, 387889, 446361, 481161, 575782, 599445 (1, 2, 3, 4, 5, 9, 10)
Gnaphalium uliginosum L. 왜떡쭈; 396089 (4)
Helianthus tuberosus L. 땅만지(A); 243751, 323886, 451462, 482411 (1, 2, 4, 5)
Hemistepta lyrata Bunge 지칭개; 234999, 284693, 359255, 441152, 468768, 523759, 568245, 569466, 578246 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Hieracium umbellatum L. 조밥나물; 243214, 388044, 449667, 482111, 530376, 574832, 590154, 599768 (1, 3, 4, 5, 6, 7, 9, 10)
Inula britannica var. *japonica* (Thunb.) Franch. & Sav. 금불초; 242244, 310081, 388016, 449492, 482077, 528411, 552618, 574854, 590179, 599129 (1, 2, 3, 4, 5, 6, 8, 9, 10)
Inula salicina L. 버들금불초; 482197, 524559, 574395, 598862 (5, 6, 9, 10)
Ixeridium dentatum (Thunb.) Tzvelev 씌바귀; 385729, 441888, 472815, 568284, 575842, 578554 (3, 4, 5, 7, 9, 10)
Ixeris chinensis (Thunb.) Kitag. 노랑선씀바귀; 234975, 284338, 359239, 451459, 468739, 520877, 575811, 577852, 579202 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Ixeris chinensis subsp. *strigosa* (H. Lév. & Vaniot) Kitam. 선씀바귀; 495522, 552980 (5, 8)
Ixeris polyccephala Cass. 별씀바귀; 234974, 359316, 441759, 468778, 520789, 552165, 578067, 580376 (1, 3, 4, 5, 6, 7, 8, 10)
Lactuca indica L. 왕고들빼기; 242347, 310158, 390262, 449356, 481777, 530481, 551769, 590129, 599815 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Lactuca raddeana Maxim. 산씀바귀; 243264, 390338, 446905, 482139, 528520, 551809, 599368 (1, 3, 4, 5, 6, 9, 10)
Lactuca scariola L. 가시상추(A); 310157, 482309 (2, 5)
Lactuca triangulata Maxim. 두메고들빼기; 387434, 446542, 495421, 591036, 599058 (3, 4, 5, 7, 10)
Leibnizia andriana (L.) Turcz. 습나물; 245154, 284316, 359426, 433240, 468960, 520314, 552018, 565917, 577750, 583111 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Leontopodium coreanum Nakai 솜다리(E, V); 236929 (1)
Leucanthemum vulgare Lam. 불란서국화(A); 235530, 585405, 594611 (1, 7, 9)
Ligularia fischeri (Ledeb.) Turcz. 곰취(II); 243709, 305639, 387527, 449485, 591538, 599377 (1, 2, 3, 4, 7, 10)
Matricaria matricarioides (Less.) Porter ex Britton 족제비쭈(A); 578383 (9)

Appendix 1. Continued.

- Parasenecio auriculatus* var. *kamtschaticus* (Maxim.) H. Koyama 나래박귀나물(III); 599057 (10)
Parasenecio firmus (Kom.) Y. L. Chen 병풍쌈(IV); 395924 (3)
Petasites japonicus (Siebold & Zucc.) Maxim. 머위; 284258, 354949, 433362, 481131, 520828, 552047, 577103, 577865, 580393 (2, 3, 4, 5, 6, 7, 8, 9, 10)
Picris hieracioides subsp. *japonica* (Thunb.) Hand.-Mazz. 쇠서나물; 236928, 305490, 395903, 446746, 487969, 530465, 574527, 590675, 599032 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Rhaponticum uniflorum (L.) DC. 뽕꼭채(I); 235041, 284402, 359243, 441128, 468983, 520869, 554106, 566040, 578053, 583056 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Saussurea calcicola Nakai 사창분취(E, IV); 243451, 390257, 495718, 591063, 599087 (1, 3, 5, 7, 10)
Saussurea chabyoungsanica H. T. Im 자병취(E, IV); 243704, 390447, 446558, 585994 (1, 3, 4, 7)
Saussurea eriophylla Nakai 숨분취(E); 449643 (4)
Saussurea gracilis Maxim. 은분취; 482208 (5)
Saussurea grandifolia Maxim. 서덜취; 323917, 390333, 451680, 551797, 590495, 599051 (2, 3, 4, 7, 9, 10)
Saussurea macrolepis (Nakai) Kitam. 각시서덜취(E); 243235, 390252, 449772, 495814 (1, 3, 4, 5)
Saussurea maximowiczii Herder 버들분취; 451792 (4)
Saussurea mongolica (Franch.) Franch. 북분취; 323947, 387924, 449596, 495670, 551813, 591067, 599872 (2, 3, 4, 5, 7, 9, 10)
Saussurea odontolepis Sch. Bip. ex Herder 빗살서덜취(I); 243334, 323864, 390283, 449664, 482713, 536434, 551811, 590807 (1, 2, 3, 4, 5, 6, 7, 9)
Saussurea pulchella (Fisch.) Fisch. ex Colla 각시취; 243289, 323910, 395993, 449499, 495804, 536248, 590162, 599124 (1, 2, 3, 4, 5, 6, 7, 10)
Saussurea tanakae Franch. & Sav. ex Maxim. 당분취; 244432, 390249, 449777, 495662, 599864 (1, 3, 4, 5, 10)
Scorzonera albicaulis Bunge 쇠채; 236932, 284628, 385706, 523757, 552992, 569652, 578548, 585938 (1, 2, 3, 6, 7, 8, 9, 10)
Senecio argunensis Turcz. 쑥방망이(I, LC); 245368, 324159, 390494, 536250, 551912, 599197 (1, 2, 3, 6, 9, 10)
Senecio vulgaris L. 개쑥갓(A); 234996, 284376, 395844, 433311, 468779, 552860, 566098, 574973, 599574 (1, 2, 3, 4, 5, 7, 8, 9, 10)
Serratula coronata subsp. *insularis* (Iljin) Kitam. 산비장이; 245343, 323875, 390295, 449941, 482215, 574402, 590795, 599009 (1, 2, 3, 4, 5, 7, 9, 10)
Sigesbeckia glabrescens (Makino) Makino 진득찰; 243319, 482775, 536340, 591949 (1, 5, 6, 7)
Sigesbeckia pubescens (Makino) Makino 털진득찰; 242262, 323872, 395840, 449473, 482409, 536324, 551774, 591026, 599013 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Solidago virgaurea subsp. *asiatica* Kitam. ex H. Hara 미역취; 243211, 390281, 451084, 482611, 536387, 552642, 574429, 591494, 599011 (1, 3, 4, 5, 6, 7, 8, 9, 10)
Sonchus asper (L.) Hill 큰방가지뚥(A); 284806, 387603, 446826, 482314, 537598 (2, 3, 4, 5, 6)
Sonchus brachyotus DC. 사데풀; 243759, 388058, 487963, 530396, 574905, 591005, 599873 (1, 3, 5, 6, 7, 9, 10)
Sonchus oleraceus L. 방가지뚥(A); 243780, 446855, 472877 (1, 4, 5)
Syneilesis palmata (Thunb.) Maxim. 우산나물; 244013, 305459, 387512, 446532, 472622, 552953, 576450, 585139, 599820 (1, 2, 3, 4, 5, 7, 8, 9, 10)
Synurus excelsus (Makino) Kitam. 큰수리취; 243679, 309938, 395801, 446626, 482136, 530420, 551719, 590075, 599098 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Tagetes minuta L. 만수국아재비(A); 323937, 482714 (2, 5)
Taraxacum coreanum Nakai 흰민들레; 245139, 284293, 354938, 468803, 520343, 552153, 566042, 577761, 583021 (1, 2, 3, 5, 6, 7, 8, 9, 10)
Taraxacum laevigatum (Willd.) DC. 붉은씨서양민들레(A); 235224, 441138, 468765, 520365, 565989 (1, 4, 5, 6, 7)
Taraxacum officinale F. H. Wigg. 서양민들레(A); 234929, 284350, 354937, 433097, 463989, 520363, 552044, 566028, 577804, 583018 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Taraxacum ohwianum Kitam. 산민들레; 245138, 359263, 433099, 552386, 566060, 577075, 577899 (1, 3, 4, 7, 8, 9, 10)
Tephrosia kirilowii (Turcz. ex DC.) Holub 숨쑥방망이; 235063, 284416, 359068, 433376, 468912, 520774, 552217, 565992, 577754, 583114 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Tephrosia phaeantha (Nakai) C. Jeffrey & Y. L. Chen 바위숨나물(V, LC); 235183, 359473 (1, 3)
Tephrosia pierotii (Miq.) Holub 숨쑥방망이; 235471, 284513, 578153 (1, 2, 10)
Tragopogon dubis Scop. 쇠채아재비(A); 553106 (8)
Verbesina alternifolia (L.) Britton ex Kearney 나래가막사리(A); 243654, 524540, 599683 (1, 6, 10)
Xanthium orientale L. 큰도꼬마리(A); 243122, 324179, 390425, 482726, 536199, 590658 (1, 2, 3, 5, 6, 7)
Xanthium strumarium L. 도꼬마리(A); 242270, 590634, 599209 (1, 7, 10)
Youngia japonica subsp. *elstonii* (Hochr.) Babc. & Stebbins 뿌리뱅이; 235156, 359274, 359315, 468741, 520779, 578117, 579216 (1, 3, 4, 5, 6, 7, 10)
- Alismataceae 택사과**
Alisma canaliculatum A. Braun & C. D. Bouché 택사(II); 451306 (4)
Alisma orientale (Sam.) Juz. 질경이택사(II); 388085, 552891 (4, 8)
Sagittaria trifolia L. 붓풀; 244416, 310017, 449464, 599242 (1, 2, 4, 10)
- Potamogetonaceae 가래과**
Potamogeton distinctus A. Benn. 가래; 244517, 446463, 599514 (1, 4, 10)
Potamogeton perfoliatus L. 넓은잎말(VU); 441856 (4)
Potamogeton wrightii Morong 대가래; 235725, 599530 (1, 10)
- Najadaceae 나자스말과**
Najas marina L. 민나자스말; 244521, 446958, 599535 (1, 4, 10)
- Araceae 천남성과**
Arisaema amurense Maxim. 둥근잎천남성; 234983, 284448, 359115, 495285, 569632, 578133, 580483 (1, 2, 3, 5, 7, 9, 10)
Arisaema amurense f. *serratum* (Nakai) Kitag. 천남성; 235311, 284308, 577818, 580475 (1, 2, 7, 10)
Arisaema serratum (Thunb.) Schott 점백이천남성; 243942, 284526, 359299, 441417, 495437, 569681, 578374, 580476 (1, 2, 3, 4, 5, 7, 9, 10)
Pinellia ternata (Thunb.) Ten. ex Breitenb. 반하; 243135, 284680, 359211, 468737, 552552, 577940, 580495 (1, 2, 3, 5, 7, 8, 10)

Appendix 1. Continued.

Symplocarpus koreanus J. S. Lee, S. H. Kim & S. C. Kim 한국얇은부채(E, III); 284290 (2)

Symplocarpus nipponicus Makino 애기얇은부채(III, LC); 433270 (4)

Lemnaceae 개구리밥과

Lemna perpusilla Torr. 좁개구리밥; 305318, 441819, 481170, 528351 (2, 4, 5, 6)

Commelinaceae 닭의장풀과

Commelina communis L. 닭의장풀; 243380, 305524, 387316, 446820, 472809, 552905, 574847, 590529, 599542 (1, 2, 3, 4, 5, 7, 8, 9, 10)

Murdannia keisak (Hassk.) Hand.-Mazz. 사마귀풀; 451385, 599082 (4, 10)

Streptolirion volubile Edgew. 덩굴닭의장풀; 242149, 309881, 394361, 449931, 482249, 530409, 574418, 590493, 599140 (1, 2, 3, 4, 5, 6, 7, 9, 10)

Juncaceae 골풀과

Juncus decipiens (Buchenau) Nakai 골풀; 243726, 396044, 441124, 553142, 575522, 578489, 585821 (1, 3, 4, 7, 8, 9, 10)

Juncus diastrophanthus Buchenau 별날개골풀; 446488, 552923, 590959, 599759 (4, 7, 8, 10)

Juncus papillosus Franch. & Sav. 청비녀골풀; 236936, 387780, 446470, 472700 (1, 3, 4, 5)

Juncus tenuis Willd. 길골풀; 236879, 441109, 553140, 575546, 578840 (1, 4, 8, 9, 10)

Luzula capitata Kom. 평의밥; 284275, 433374, 468891, 578329 (2, 4, 5, 10)

Luzula multiflora (Ehrh.) Lej. 산평의밥(II); 235410, 575898 (1, 9)

Cyperaceae 사초과

Bolboschoenus fluviatilis (Torr.) Soják 큰매자기; 310165, 441850 (2, 4)

Bulbostylis barbata (Rottb.) C. B. Clarke 모기골; 528347 (6)

Carex augustinowiczii Meinsh. ex Korsh. 복사초(II); 235280, 284663, 354953, 441309, 566169, 577705 (1, 2, 3, 4, 7, 10)

Carex bivenensis Franch. 솔잎사초; 245122 (1)

Carex bostrychostigma Maxim. 길뚝사초; 235181, 284634, 359136, 441476, 469010, 523942, 578050, 585453, 588541 (1, 2, 3, 4, 5, 6, 7, 9, 10)

Carex breviculmis R. Br. 청사초; 245168, 284692, 359057, 433151, 468887, 520360, 565977, 577760, 589697 (1, 2, 3, 4, 5, 6, 7, 9, 10)

Carex brevispicula G. H. Nam & G. Y. Chung 좁목포사초; 284562, 359089, 433237, 468947, 577744, 585149, 588530 (2, 3, 4, 5, 7, 9, 10)

Carex brownii Tuck. 흰꼬리사초(I); 235532 (1)

Carex ciliatomarginata Nakai 털대사초; 235322, 305365, 354914, 433239, 468943, 520920, 565997, 577953, 588529 (1, 2, 3, 4, 5, 6, 7, 9, 10)

Carex cinerascens Kük. 회색사초(II); 234932 (1)

Carex dimorpholepis Steud. 이삭사초; 553300 (8)

Carex egena H. Lév. & Vaniot 나래사초; 359295, 569724, 577697 (3, 9, 10)

Carex erythrobasis H. Lév. & Vaniot 한라사초(E, II); 577696, 588542 (9, 10)

Carex fernaldiana H. Lév. & Vaniot 실사초; 588543 (9)

Carex forficula Franch. & Sav. 산뚝사초; 245167, 284268, 441514, 520807, 577706, 588527 (1, 2, 4, 6, 9, 10)

Carex fusanensis Ohwi 부산사초; 245123, 354920, 433285, 553915 (1, 3, 4, 8)

Carex gibba Wahlenb. 나도별사초; 235512, 284564, 481427, 575528 (1, 2, 5, 9)

Carex glabrescens (Kük.) Ohwi 곱슬사초; 235393, 441217 (1, 4)

Carex heterolepis Bunge 산비늘사초; 284687, 441252, 520784, 566027, 578027, 588526 (2, 4, 6, 7, 9, 10)

Carex holotricha Ohwi 난사초(III); 284394, 359119, 433156 (2, 3, 4)

Carex humilis var. *nana* (H. Lév. & Vaniot) Ohwi 가는잎그늘사초; 234905, 284257, 354916, 433104, 463992, 552002, 566009, 569604, 577748 (1, 2, 3, 4, 5, 7, 8, 9, 10)

Carex jaluensis Kom. 참삿가사초(II); 385500, 441483, 578837, 588535 (3, 4, 9, 10)

Carex japonica Thunb. 개쩌버리사초; 235148, 284575, 359079, 441214, 495419, 523939, 553286, 578039, 580394, 588548 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Carex laevissima Nakai 애팽이사초; 236388, 385592, 569660, 578494 (1, 3, 9, 10)

Carex lanceolata Boott 그늘사초; 234961, 284287, 394106, 433135, 463974, 520305, 565966, 577743, 588545 (1, 2, 3, 4, 5, 6, 7, 9, 10)

Carex leiorhyncha C. A. Mey. 산팽이사초; 235172, 359264, 441262, 469006, 523954, 575829, 578843, 585509 (1, 3, 4, 5, 6, 7, 9, 10)

Carex longirostrata var. *pallida* (Kitag.) Ohwi 싹피사초(IV); 359137, 520861 (3, 6)

Carex maackii Maxim. 타래사초; 235569 (1)

Carex mira Kük. 꼬랑사초; 235328, 354962, 433101, 566062, 577533, 588536 (1, 3, 4, 7, 9, 10)

Carex mitrata var. *aristata* Ohwi 까락겨사초(I); 284365, 359183, 385640, 520875, 580361 (2, 3, 4, 6, 7)

Carex miyabei Franch. 용단사초; 245275, 385684, 433129, 468850, 520803, 577990 (1, 3, 4, 5, 6, 10)

Carex nervata Franch. & Sav. 양지사초; 359244, 468880 (3, 5)

Carex neurocarpa Maxim. 팽이사초; 441845, 523839, 552921, 578884 (4, 6, 8, 10)

Carex onoei Franch. & Sav. 바늘사초(II); 235468, 385479, 433363, 578048 (1, 3, 4, 10)

Carex pediformis var. *pedunculata* Maxim. 왕그늘사초(II); 359078, 359284, 520281, 565985, 578034 (3, 4, 6, 7, 10)

Carex pilosa Scop. 털사초(III); 385452, 577737 (3, 10)

Carex planiculmis Kom. 그늘흰사초(II); 359150, 446904, 495498, 578838, 579199, 588544 (3, 4, 5, 7, 9, 10)

Carex pulchrisquama Kük. 장군대사초(II); 523763 (6)

Carex polyschoena H. Lév. & Vaniot 가지청사초; 234956, 284408, 359087, 433153, 463978, 520813, 565929, 577774, 588532 (1, 2, 3, 4, 5, 6, 7, 9, 10)

Carex quadriflora (Kük.) Ohwi 녹빛사초(II); 245135, 354958, 566176, 577604 (1, 3, 7, 10)

Carex remotiuscula Wahlenb. 층실사초(IV); 385505, 441274, 575855, 580477 (3, 4, 7, 9)

Carex sabyensis Less. ex Kunth 실청사초; 245129, 578016 (1, 10)

Appendix 1. Continued.

- Carex siderosticta* Hance 대사초; 234904, 284472, 359058, 441385, 469066, 520924, 565918, 569663, 577564 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Carex splendentissima U. Kang & J. M. Chung 반들대사초(E); 356730, 385444, 591102 (1, 3, 7)
Carex stipata Muhl. ex Willd. 양덕사초(IV); 441524 (4)
Carex subbracteata (Kük.) Ohwi 부리실청사초; 235142, 284420, 577738 (1, 2, 10)
Carex tegulata H. Lévl. & Vaniot 구슬사초(III); 578138 (10)
Carex ussuriensis Kom. 싸라기사초(III); 235396, 284345, 354917, 433155, 520308, 565973, 578029, 588528 (1, 2, 3, 4, 6, 7, 9, 10)
Cyperus amuricus Maxim. 방동사니; 243275, 390347, 446808, 481826, 528342, 552555, 590720, 599134 (1, 3, 4, 5, 6, 7, 8, 10)
Cyperus difformis L. 알방동사니; 244056, 310150, 482384, 591920, 599763 (1, 2, 5, 7, 10)
Cyperus flavidus Retz. 드렁방동사니; 243116, 310164, 552464, 599760 (1, 2, 8, 10)
Cyperus glomeratus L. 물방동사니; 243110, 310179, 451344, 599757 (1, 2, 4, 10)
Cyperus iria L. 참방동사니; 236944, 387808, 446947, 481842 (1, 3, 4, 5)
Cyperus microiria Steud. 금방동사니; 236935, 324100, 387893, 446865, 481832, 530360, 552554, 574840, 590088, 599135 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Cyperus nipponicus Franch. & Sav. 푸른방동사니; 242324, 396082, 481834, 599172 (1, 4, 5, 10)
Cyperus orthostachyus Franch. & Sav. 쇠방동사니; 451290, 482252, 599761 (4, 5, 10)
Eleocharis kuroguwai Ohwi 올방개; 451389, 482349 (4, 5)
Fimbristylis dichotoma (L.) Vahl 하늘지기; 242318, 575654 (1, 9)
Fimbristylis stauntonii Debeaux & Franch. 발하늘지기; 244535, 310178 (1, 2)
Kyllinga brevifolia var. *leiolepis* (Franch. & Sav.) H. Hara 파대가리; 244531, 388081, 482263, 552466, 599758 (1, 4, 5, 8, 10)
Schoenoplectiella hotarui (Ohwi) J. Jung & H. K. Choi 좁을챙이고랭이; 446473, 599239 (4, 10)
Schoenoplectiella juncooides (Roxb.) Lye 올챙이고랭이; 243133, 441821, 482383, 579186 (1, 4, 5, 10)
Scirpus karuizawensis Makino 술방울고랭이; 451796 (4)
Scirpus orientalis Ohwi 검은도루박이(IV, NT); 579126 (10)
Scirpus radicans Schkuhr 도루박이; 235572, 441808 (1, 4)
Scirpus wichurae Boeckeler 방울고랭이; 310114, 446465 (2, 4)
Trichophorum polygamum D. C. Son & K. S. Chang 동강고랭이(E, IV); 234890, 385683, 552177, 568252, 578419 (1, 3, 7, 8, 10)
- Poaceae 벼과**
Agrostis clavata var. *nukabo* Ohwi 겨이삭; 284701, 385552, 441121, 495493, 523938, 575719, 578833, 580497 (2, 3, 4, 5, 6, 7, 9, 10)
Agrostis gigantea Roth 흰겨이삭(A); 235767, 441543 (1, 4)
Alopecurus aequalis Sobol. 뚝새풀(A); 234997, 359203, 468733, 523844, 553841, 569677, 578496, 585436 (1, 3, 5, 6, 7, 8, 9, 10)
Alopecurus japonicus Steud. 털뚝새풀(A); 235513 (1)
Alopecurus pratensis L. 큰뚝새풀(A); 359286, 575677, 585717 (4, 7, 9)
Arthraxon hispidus (Thunb.) Makino 조개풀; 243250, 323862, 390318, 536290, 591934, 599722 (1, 2, 3, 6, 7, 10)
Arundinella hirta (Thunb.) Tanaka 새; 472847, 530302, 552588 (5, 6, 8)
Arundinella hirta var. *ciliata* (Thunb.) Koidz. 털새; 235653, 284844, 387785, 446433, 482366, 528380, 576420, 576420, 599155 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Beckmannia syzigachne (Steud.) Fernald 개피; 235476, 441269, 523878, 552840, 579133 (1, 4, 6, 8, 10)
Bothriochloa ischaemum (L.) Keng 바랭이새; 310102, 487887, 528534 (2, 5, 6)
Bromus catharticus Vahl 큰이삭풀(A); 310095 (2)
Bromus inermis Leyss. 좁참새귀리(A); 579031 (10)
Bromus japonicus Thunb. 참새귀리; 235457, 284813, 385517, 441141, 468725, 523786, 552904, 569645, 578542, 585140 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Bromus mollis L. 털참새귀리(A); 578880 (10)
Bromus remotiflorus (Steud.) Ohwi 꼬리새; 235574, 305440, 387319, 446821, 481452, 524438, 585879, 599637 (1, 2, 3, 4, 5, 6, 7, 10)
Bromus rigidus Roth 긴까락뱃새귀리(A); 284377 (2)
Bromus sterilis L. 까락뱃새귀리(A); 578261 (10)
Bromus tectorum L. 털뱃새귀리(A); 235376, 284380, 359182, 441222, 468795, 553912, 575631, 578033, 579188 (1, 2, 3, 4, 5, 7, 8, 9, 10)
Bromus tectorum var. *glabratus* Spenn. 민뱃새귀리; 284388 (2)
Calamagrostis arundinacea (L.) Roth 실새풀; 242173, 323888, 390289, 449662, 482106, 536265, 590138, 599790 (1, 2, 3, 4, 5, 6, 7, 10)
Calamagrostis epigeios (L.) Roth 산조풀; 387358, 446863, 481426, 552879, 574902 (3, 4, 5, 8, 9)
Capillipedium parviflorum (R. Br.) Stapf 나도기름새; 530321 (6)
Chloris virgata Sw. 나도바랭이(A); 242327 (1)
Cleistogenes hackelii (Honda) Honda 대새풀; 242089, 309990, 390427, 451257, 482386, 528323, 590054, 599156 (1, 2, 3, 4, 5, 6, 7, 10)
Cymbopogon goeringii (Steud.) A. Camus 개솔새; 242092, 310042, 481784, 530322, 599798 (1, 2, 5, 6, 10)
Dactylis glomerata L. 오리새(A); 235220, 284382, 385538, 441135, 468867, 523973, 575694, 579054, 579218 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Diarrhena fauriei (Hack.) Ohwi 광릉용수염; 387460, 446520, 574829, 578888, 585826 (3, 4, 7, 9, 10)
Diarrhena mandshurica Maxim. 꺾질용수염; 235482, 305761, 387459, 446600, 575535, 578896, 585907 (1, 2, 3, 4, 7, 9, 10)
Digitaria ciliaris (Retz.) Koeler 바랭이; 242230, 449403, 481836, 528317, 574864, 586073, 598916 (1, 4, 5, 6, 7, 9, 10)
Digitaria violascens Link 민바랭이; 243365, 310130, 390319, 451842, 482811, 599723 (1, 2, 3, 4, 5, 10)
Echinochloa crus-galli (L.) P. Beauv. 돌피; 243437, 446852, 481828, 524580, 552468, 574853 (1, 4, 5, 6, 8, 9)
Echinochloa crus-galli var. *praticola* Ohwi 좁돌피; 590660, 599516 (7, 10)
Eleusine indica (L.) Gaertn. 왕바랭이; 242267, 472794, 524420, 552462, 574865, 599243 (1, 5, 6, 8, 9, 10)

Appendix 1. Continued.

- Elymus ciliaris* (Trin.) Tzvelev 속털개밀; 235422, 284574, 385519, 441160, 468777, 569646, 579058, 585144 (1, 2, 3, 4, 5, 7, 9, 10)
Elymus repens (L.) Gould 구주개밀(A); 235443, 284843, 385590, 441176, 481165, 524530, 575554, 578866, 585897 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Elymus tsukushiensis Honda 개밀; 235475, 284664, 387622, 441520, 523817, 575607, 578543, 585185 (1, 2, 3, 4, 6, 7, 9, 10)
Eragrostis cilianensis (All.) Vignolo ex Janch. 참새그렁; 310163, 481780, 536318 (2, 5, 6)
Eragrostis curvula (Schrud.) Nees 능수참새그렁(A); 481444 (5)
Eragrostis ferruginea (Thunb.) P. Beauv. 그렁; 235687, 323887, 395966, 446658, 481805, 524017, 590766, 599136 (1, 2, 3, 4, 5, 6, 7, 10)
Eragrostis minor Host 좁새그렁; 472631, 530300 (5, 6)
Eragrostis multicaulis Steud. 비노리; 242369, 387620, 451188, 472880, 528344, 590686, 599173 (1, 3, 4, 5, 6, 7, 10)
Eragrostis pilosa (L.) P. Beauv. 큰비노리; 243272, 395952, 446861, 482406, 551905, 590663 (1, 3, 4, 5, 7, 9)
Eriochloa villosa (Thunb.) Kunth 나도개피; 235693, 309963, 387794, 446951, 472801, 524358, 576417, 585863, 599181 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Eulalia speciosa (Debeaux) Kuntze 개역새; 244352, 324170 (1, 2)
Festuca arundinacea Schreb. 큰김의털(A); 245229, 284712, 385518, 441170, 468773, 523936, 569643, 578376, 579191 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Festuca extremiorientalis Ohwi 왕김의털아재비; 385506, 441352 (3, 4)
Festuca heterophylla Lam. 사방김의털(A); 305358, 441788, 575526, 578816 (2, 4, 9, 10)
Festuca japonica Makino 산목새(IV); 385677 (3)
Festuca ovina L. 김의털; 385501, 441122, 468954, 580447 (3, 4, 5, 7)
Festuca parvigluma Steud. 김의털아재비; 284814, 385503, 441101, 468868, 523869, 575531 (2, 3, 4, 5, 6, 8)
Festuca rubra L. 왕김의털(IV); 585813 (7)
Glyceria leptolepis Ohwi 왕미꾸리광이(II); 237036 (1)
Hemarthria sibirica (Gand.) Ohwi 쇠치기풀; 236888, 388001, 481778, 528533 (1, 3, 5, 6)
Hierochloa odorata (L.) P. Beauv. 향모; 235001, 284369, 359209, 433100, 520925, 552110, 577090, 580485 (1, 2, 3, 4, 6, 7, 8, 9)
Imperata cylindrica (L.) Raeusch. 띪; 235239, 441243, 523760, 552988, 578598 (1, 4, 6, 8, 10)
Isachne globosa (Thunb.) Kuntze 기장대풀; 387696 (4)
Koeleria macrantha (Ledeb.) Schult. 도랭이피; 468957, 523832 (5, 6)
Lolium multiflorum Lam. 쥐보리(A); 284519, 575831, 578822 (2, 9, 10)
Lolium perenne L. 호밀풀(A); 446707, 481102, 524354, 575555, 578842 (4, 5, 6, 9, 10)
Melica grandiflora Koidz. 청쌀새; 359220, 577739 (3, 10)
Melica nutans L. 왕쌀새(II); 234908, 359152, 433193, 578051, 588549 (1, 3, 4, 9, 10)
Melica onoei Franch. & Sav. 쌀새; 244030, 305616, 388010, 449425, 482190, 590063, 599159 (1, 2, 3, 4, 5, 7, 10)
Melica scabrosa Trin. 참쌀새(III); 481129 (5)
Microstegium vimineum var. *polystachyum* (Franch. & Sav.) Ohwi 큰듬성이삭새; 243196, 323857, 451106, 482677, 536314, 590726, 599852 (1, 2, 4, 5, 6, 7, 10)
Milium effusum L. 나도겨이삭; 235217, 359100, 575923, 578403 (1, 3, 9, 10)
Miscanthus sacchariflorus (Maxim.) Hack. 물억새; 244506, 323889, 449429 (1, 2, 4)
Miscanthus sinensis Andersson 억새; 242120, 310064, 390282, 449388, 482099, 530336, 551728, 590175, 599035 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Molinia japonica Hack. 진피리새; 576440 (9)
Muhlenbergia huegelii Trin. 큰쥐꼬리새; 245332, 309909, 388006, 449386, 482818, 536482, 574783, 585889 (1, 2, 3, 4, 5, 6, 7, 9)
Muhlenbergia japonica Steud. 쥐꼬리새; 243427, 599145 (1, 10)
Oplismenus undulatifolius (Ard.) Roem. & Schult. 주름조개풀; 235604, 310170, 387798, 451092, 472549, 528445, 574862, 590147, 599048 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Oplismenus undulatifolius var. *japonicus* (Steud.) Koidz. 민주름조개풀; 599165 (10)
Panicum bisulcatum Thunb. 개기장; 242380, 310051, 387894, 451421, 482391, 574830, 591160, 599132 (1, 2, 3, 4, 5, 7, 9, 10)
Panicum dichotomiflorum Michx. 미국개기장(A); 451293, 528394, 590705, 599176 (4, 6, 7, 10)
Paspalum thunbergii Kunth ex Steud. 참새피; 243961, 310126, 482089 (1, 2, 5)
Pennisetum alopecuroides (L.) Spreng. 수크령; 245329, 387807, 449904, 495862, 530276, 552585, 590710, 599199 (1, 3, 4, 5, 6, 7, 8, 10)
Phalaris arundinacea L. 갈풀; 235429, 305291, 385486, 441212, 481167, 523871, 552965, 569451, 578815, 585367 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Phleum pratense L. 큰조아재비(A); 235437, 385566, 441531, 576449, 578878 (1, 3, 4, 9, 10)
Phragmites japonica Steud. 달뿌리풀; 242238, 309987, 390303, 446873, 472838, 530337, 585883, 599793 (1, 2, 3, 4, 5, 6, 7, 10)
Poa acroleuca Steud. 실포아풀; 385338, 441478, 472572, 585390 (3, 4, 5, 7)
Poa annua L. 새포아풀; 284384, 395969, 441136, 464002, 588556 (2, 3, 4, 5, 9)
Poa hisauchii Honda 구내풀; 578042, 585356, 588552 (7, 9, 10)
Poa nemoralis L. 선포아풀(IV); 575538, 585500 (7, 9)
Poa nipponica Koidz. 큰꾸러미풀; 575544 (9)
Poa pratensis L. 왕포아풀(A); 234935, 284389, 359222, 441168, 468732, 523829, 575808, 578134, 580446 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Poa sphondylodes Trin. 포아풀; 235158, 284665, 385399, 441150, 468742, 523830, 552964, 579190, 600669 (1, 2, 3, 4, 5, 6, 7, 8, 9)
Schizachne purpurascens subsp. *callosa* (Turcz. ex Griseb.) T. Koyama & Kawano 호오리새(II); 235198, 385344 (1, 3)
Setaria faberi R. A. W. Herrm. 가을강아지풀; 235728, 388037, 528375, 590700 (1, 3, 6, 7)
Setaria pallide-fusca (Schumach.) Stapf & C. E. Hubb. 가는금강아지풀; 599028 (10)
Setaria pumila (Poir.) Roem. & Schult. 금강아지풀; 242410, 309925, 395967, 449423, 482187, 528398, 591159, 598911 (1, 2, 3, 4, 5, 6, 7, 10)

Appendix 1. Continued.

- Setaria pycnocomma* (Steud.) Henrard ex Nakai 수강아지풀; 236973, 310053, 387600, 449767, 481849, 530342, 575847, 590036, 599027 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Setaria viridis (L.) P. Beauv. 강아지풀; 242231, 309986, 385599, 446358, 472829, 524351, 551735, 552553, 585837 (1, 2, 3, 4, 5, 6, 7, 8, 9)
Spodipogon cotulifer (Thunb.) Hack. 기름새; 242265, 309974, 482090, 530305, 591749 (1, 2, 5, 6, 7)
Spodipogon sibiricus Trin. 큰기름새; 242005, 310011, 390267, 446833, 481830, 530379, 574836, 586038, 599033 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Stipa pekinensis Hance 나래새; 242151, 310087, 390261, 449604, 481816, 530400, 590139, 599125 (1, 2, 3, 4, 5, 6, 7, 10)
Themeda triandra Forssk. 솔새; 234898, 305651, 395855, 449997, 472830, 528319, 590789, 599152 (1, 2, 3, 4, 5, 6, 7, 10)
Trisetum bifidum (Thunb.) Ohwi 잡자리피; 235354, 284837, 385545, 441162, 468722, 523880, 569633, 578857, 585135 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Vulpia myuros (L.) C. C. Gmel. 들복새(A); 578862 (10)
- Typhaceae 부들과**
Typha angustifolia L. 애기부들; 446461, 552885, 599791 (4, 8, 10)
Typha orientalis C. Presl. 부들; 243106, 446460, 552882, 579136 (1, 4, 8, 10)
- Pontederiaceae 물옥잠과**
Monochoria vaginalis (Burm. f.) C. Presl 물달개비; 242328, 472859, 556085, 599278 (1, 5, 8, 10)
- Haemodoraaceae 지모과**
Anemarrhena asphodeloides Bunge 지모; 593891 (1)
- Liliaceae 백합과**
Allium longistylum Baker 강부추(LC); 244076 (1)
Allium macrostemon Bunge 산달래; 235510, 284696, 385701, 441594, 468728, 523868, 553113, 569656, 578530, 585402 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Allium monanthum Maxim. 달래; 354981, 433164, 566005, 577690, 583034 (3, 4, 7, 9, 10)
Allium sacculiferum Maxim. 참산부추; 243685, 395989, 449855, 488063, 599782 (1, 3, 4, 5, 10)
Allium thunbergii G. Don 산부추; 243922, 395794, 451856, 482601, 551733, 599817 (1, 3, 4, 5, 9, 10)
Allium tuberosum Rottler ex Spreng. 부추(A); 242193, 309876, 387987, 449376, 530326, 574437, 590149, 599151 (1, 2, 3, 4, 6, 7, 9, 10)
Asparagus oligoclonos Maxim. 방울비짜루(I); 235002, 324137, 359198, 441488, 495571, 523924, 554091, 569686, 578172, 580359 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Asparagus schoberioides Kunth 비짜루; 390279, 441356, 468836, 575843, 599681 (3, 4, 5, 9, 10)
Barnardia japonica (Thunb.) Schult. & Schult. f. 무릇; 236913, 310107, 388046, 449362, 481823, 528314, 551892, 552587, 590640, 598975 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Convallaria keiskei Miq. 은방울꽃; 245242, 359163, 441452, 524016, 569713, 599008 (1, 3, 4, 6, 9, 10)
Disporum smilacinum A. Gray 애기나리; 235233, 284533, 359099, 469076, 569707, 578182 (1, 2, 3, 5, 9, 10)
Disporum uniflorum Baker 윤관나물; 234971, 305325, 359292, 520844, 552158, 577937, 580368 (1, 2, 3, 6, 7, 8, 10)
Disporum viridescens (Maxim.) Nakai 큰애기나리; 359143, 569665, 585465, 599670 (3, 7, 9, 10)
Erythronium japonicum Decne. 일레지; 284344, 433168, 569726, 577709 (2, 4, 9, 10)
Gagea nakaiana Kitag. 중의무릇; 354986, 433190, 577736 (3, 4, 10)
Heloniopsis koreana S. Fuse, N. S. Lee & M. N. Tamura 처녀치마(E, II); 243873, 284666, 354950, 552049, 577066, 577551, 591562 (1, 2, 3, 7, 8, 9, 10)
Hemerocallis hakuunensis Nakai 백운산원추리(E); 242125, 305728, 446373, 472776, 524468, 552920, 574878, 585868, 599345 (1, 2, 4, 5, 6, 7, 8, 9, 10)
Hemerocallis middendorffii Trautv. & C. A. Mey. 큰원추리(IV); 385656, 495459 (3, 5)
Hosta capitata (Koidz.) Nakai 일월비비추(I); 243257, 387670, 446683, 472746, 576695, 586001, 599309 (1, 3, 4, 5, 7, 9, 10)
Hosta clausa Nakai 주걱비비추(III); 243098, 388005, 449439, 590787 (1, 3, 4, 7)
Hosta minor (Baker) Nakai 줄비비추(E, I); 387650, 574843 (3, 9)
Lilium amabile Palib. 털중나리; 245243, 305280, 394421, 441739, 481083, 524346, 553063, 575437, 578807, 585810 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Lilium cernuum Kom. 솔나리(IV, LC); 387531, 446697, 495717, 576687, 586019 (3, 4, 5, 7, 9)
Lilium concolor var. *pulchellum* (Fisch.) Baker 하늘나리(I); 245220, 441131, 575609, 578975 (1, 4, 9, 10)
Lilium distichum Nakai 말나리(III, LC); 599044 (10)
Lilium lancifolium Thunb. 참나리; 235776, 446420, 472820, 574845, 585832, 599258 (1, 4, 5, 7, 9, 10)
Lilium leichtlinii var. *maximowiczii* (Regel) Baker 중나리(IV); 242099 (1)
Lilium tsingtauense Gilg 하늘말나리; 235646, 305725, 387506, 446500, 482206, 528468, 552951, 579180, 585981 (1, 2, 3, 4, 5, 6, 7, 8, 10)
Liriope spicata (Thunb.) Lour. 개맥문둥; 310118, 472850, 586081 (2, 5, 7)
Lloydia triflora (Ledeb.) Baker 나도개감채(II); 284351, 552097, 578022 (2, 8, 10)
Maianthemum japonicum (A. Gray) La Frankie 풀솜대; 385422, 441416, 495386, 565954, 578031 (3, 4, 5, 7, 10)
Paris verticillata M. Bieb. 샷갓나물; 236990, 359297, 441363, 495453, 578406, 582992, 585804 (1, 3, 4, 5, 7, 9, 10)
Polygonatum humile Fisch. ex Maxim. 각시등굴레; 234939, 359060, 441172, 520908, 575927, 578094 (1, 3, 4, 6, 9, 10)
Polygonatum inflatum Kom. 통등굴레; 235325, 284518, 359134, 441585, 495288, 583053, 585438, 599020 (1, 2, 3, 4, 5, 7, 9, 10)
Polygonatum involucreatum (Franch. & Sav.) Maxim. 용등굴레; 235162, 284637, 359207, 441336, 495252, 524564, 553294, 566069, 575647, 578046 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Polygonatum lasianthum Maxim. 죽대; 243846, 481414, 553288 (1, 5, 8)
Polygonatum odoratum var. *pluriflorum* (Miq.) Ohwi 등굴레; 234982, 284586, 359081, 441139, 468952, 520979, 553527, 577177, 578121, 580363 (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Polygonatum stenophyllum Maxim. 층층등굴레(IV, LC); 235477 (1)
Polygonatum thunbergii C. Morren & Decne. 산등굴레; 235526, 284632, 387423, 441687, 468775, 520864 (1, 2, 3, 4, 5, 6)
Streptopus ovalis (Owhi) F. T. Wang & Y. C. Tang 금강죽대아재비(II); 235341, 359097, 441414, 553281, 578391, 593690 (1, 3, 4, 8, 9, 10)

Appendix 1. Continued.

- Tricyrtis macropoda* Miq. 뽕꼭나리(I, LC); 243425, 395807, 574494, 599868 (1, 3, 9, 10)
Trillium camschatcense Ker Gawl. 연영초(IV, LC); 578412 (10)
Tulipa edulis (Miq.) Baker 산자고; 284399, 359111, 463998, 520358 (2, 3, 5, 6)
Veratrum maackii Regel 여로(III); 235665, 387542, 446575, 495455, 599415 (1, 3, 4, 5, 10)
Veratrum maackii var. *parviflorum* (Maxim. ex Miq.) H. Hara 파관여로(IV); 235643, 387419, 446608, 482767, 552635, 574951 (1, 3, 4, 5, 8, 9)
Veratrum nigrum L. 참여로(III); 243740, 390418, 449554, 551958, 591092 (1, 3, 4, 7, 9)
Veratrum oxysepalum Turcz. 박새(I); 578511 (10)
Veratrum versicolor Nakai 흰여로; 528439, 585991 (6, 7)
Zigadenus sibiricus (L.) A. Gray 나도여로(V, CR); 592792

Iridaceae 붓꽃과

- Iris domestica* (L.) Goldblatt & Mabb. 범부채(I, LC); 388035, 528367 (3, 6)
Iris minotaurea Makino 금붓꽃(I, LC); 359392 (3)
Iris odaesanensis Y. N. Lee 노랑무늬붓꽃(E, IV, LC); 359131, 446652, 495793, 583011 (3, 4, 5, 9)
Iris rossii Baker 각시붓꽃; 235019, 284320, 354940, 468979, 520849, 552259, 565937, 577176, 577810 (1, 2, 3, 5, 6, 7, 8, 9, 10)
Iris sanguinea Donn ex Hornem. 붓꽃; 235529, 441781, 578155 (1, 4, 10)

Smilacaceae 청미래덩굴과

- Smilax china* L. 청미래덩굴; 284873, 468965 (2, 5)
Smilax nipponica Miq. 선밀나물; 235321, 359107, 441368, 468939, 578106, 580442 (1, 3, 4, 5, 9, 10)
Smilax riparia A. DC. 밀나물; 235383, 284429, 359350, 580442 (1, 2, 3, 7)
Smilax sieboldii Miq. 청가시덩굴; 243807, 385597, 441097, 468919, 523804, 554072, 575866, 578425, 580337 (1, 3, 4, 5, 6, 7, 8, 9, 10)

Dioscoreaceae 마과

- Dioscorea coreana* (Prain & Burkill) R. Knuth 푸른마(E); 235719, 310203, 396050 (1, 2, 3)
Dioscorea nipponica Makino 부채마; 235718, 305429, 394248, 446395, 495619, 524470, 575439, 578976, 585844 (1, 2, 3, 4, 5, 6, 7, 9, 10)
Dioscorea polystachya Turcz. 마; 243331, 472833, 528330, 552908, 574831, 590815, 598954 (1, 5, 6, 7, 8, 9, 10)

Orchidaceae 난초과

- Amitostigma gracile* (Blume) Schltr. 병아리난초; 235649, 305502, 387753, 446400, 472704, 524507, 552637, 576407 (1, 2, 3, 4, 5, 6, 8, 9)
Cephalanthera erecta (Thunb.) Blume 은난초; 305734, 359122, 441455, 469002, 569727 (2, 3, 4, 5, 9)
Cephalanthera longibracteata Blume 은대난초; 235232, 284529, 385475, 441103, 468955, 523952, 554082, 569667, 578370, 585425 (1, 2, 3, 4, 5, 6, 8, 9, 10)
Cephalanthera longifolia (L.) Fritsch 김의난초(III); 520943, 575931 (6, 9)
Cymbidium macrorhizon Lindl. 대홍란(V, VU); 310094 (2)
Cypripedium macranthos Sw. 복주머니란(V, VU); Photo003 (3)
Epipactis papillosa Franch. & Sav. 청담의난초(IV, NT); 243394, 284852, 387541, 446627, 495608, 524460, 574508, 585955 (1, 2, 3, 4, 5, 6, 7, 9)
Goodyera rosulacea Y. N. Lee 로켓사철란; 236983, 387754, 488001, 524458, 586078 (1, 3, 5, 6, 7)
Herminium monorchis (L.) R. Br. 나도씨눈란(IV, NT); 387385, 528498 (3, 6)
Liparis kumokiri F. Maek. 옥잠난초; 237015, 305741, 387559, 446443, 576696, 578903, 585949 (1, 2, 3, 4, 7, 9, 10)
Liparis makinoana Schltr. 나리난초(I); 576453 (9)
Neottianthe cucullata (L.) Schltr. 구름병아리난초(V, EN); 593996
Oreorchis patens (Lindl.) Lindl. 감자난초; 359132, 441360, 569723, 578467 (3, 4, 9, 10)
Platanthera chlorantha (Custer) Rehb. f. 제비난초; 235538, 385711, 441456, 468963, 553304 (1, 3, 4, 5, 8)
Platanthera japonica (Thunb.) Lindl. 갈매기란(NT); 578738 (10)
Platanthera mandarinorum Rehb. f. 산제비란; 576404 (9)
Pogonia minor (Makino) Makino 방울새란(NT); 387646 (3)
Spiranthes sinensis (Pers.) Ames 타래난초; 235597, 310055, 387667, 472591, 576405, 579181 (1, 2, 3, 5, 9, 10)

[Abbreviation] E, endemic plants; CR, critically endangered plants; EN, endangered plants; VU, vulnerable plants; NT, near threatened plants; LC, least concern plants; DD, data deficient plants; NA, not applicable plants; I-V, grade of floristic target plants; A, alien plants; Italic numbers are voucher specimens; 1, Taehwa mountain; 2, Osip stream; 3, Goyang mountain; 4, Samtae mountain; 5, Golji stream; 6, Wopung stream; 7, Jungnyeom mountain; 8, Dumu mountain; 9, Baeki mountain; 10, Nambyeong mountain.