

Transferred from Journal of the National Academy of Science,
R.O.K., not. sci. ser. vol. xxi (1982)

Endemic Plants and Their Distribution in Korea

Tchang Bok Lee*

우리나라 特産植物과 分布

李 昌 福

摘 要

우리나라의 管束植物에 대하여 發表한 原記載文獻과 各國標本館에서 所藏하고 있는 基準標本을 調査하여 筆者는 우리나라의 特産管束植物이 다음 表와 같이 407 種類로서 61科, 172屬, 339種, 46變種 및 22品種임을 밝혔다.

우리나라 特産植物의 種類數

Class	Family	Genus	Species	Varietas	Forma
Filicineae	4	5	11	—	—
Gymnospermae	3	5	3	6	7
Angiospermae	54	142	325	40	15
Monocotyledoneae	8	4	45	7	—
Dicotyledoneae	46	138	280	33	15
Total	61	172	339	46	22

Number of Endemic Taxa in Korea

위표에 나타난 바와 같이 特産羊齒植物 11種은 5種씩이 우리나라와 북한에 分布하고 1種은 남에서 북쪽까지 자라고 있다. 特産裸子植物은 16種類中에서 11종류가 우리의 領域에서 자라고 特産單子葉植物은 33종류가 우리가 갈 수 있는 곳에서 자라고 16종류가 북한에 한정되었으며, 3종류가 남북에 걸쳐서 자라고 있다. 特産雙子葉植物은 175종류가 우리의 손이 미칠만한 곳에서 자라고 81종류가 북한에 한정되었으며 72종류가 남북한에 걸쳐서 자란다.

以上 特産植物全般에 걸쳐서 볼 때 407종류의 特産植物中 224종류가 大韓民國領內에

*Director of Kwanak Arboretum,
College of Agriculture, Seoul National University, Suwon.

서 자라고 107종류가 北韓에 한정되었으며, 76종류가 남에서 북쪽까지 자람으로 우리나라에는 300종류의 특산 관속식물이 있음을 밝혔다.

특산식물은 남쪽 한라산에서 북쪽으로 白頭山까지 分布되어 있는데 特産植物이 알려진 地域中에서 75종류가 자라는 한라산이 제일 많고 다음은 지리산(46), 백두산(42), 울릉도(36), 금강산(34), 설악산(23), 서울(22), 백양산(16), 광능(16), 낭림산(16), 槐山郡의 君子山(14), 속리산(14), 赴戰高原(12), 冠帽峯(12), 白雲山(12) 등의 順으로 많다.

現植生上으로 볼 때 以上 地域에 나타난 數字는 다소 애매한 점이 있으나 그러나 지난 100年間에 걸쳐서 많은 分類學者와 植物蒐集家들이 이와같이 蒐集한 것만은 確實하다. 例컨대 산개나리(*Forsythia saxatilis*)는 처음 北漢山에서 수집되었으나 只今은 찾아보기 힘이 든다. 그러나 近者 서울 남쪽에 있는 冠岳山頂 신갈나무와 雜木이 자라는 숲속에서 살아남은 몇 그루가 발견되었다. 서울 近郊에서 자라던 서울제비꽃(*Viola seoulensis*)과 분취(*Saussurea seoulensis*) 등도 生育地의 喪失로서 마찬가지로 하나 하나 사라져 가고 있다.

筆者는 滅種危機에 처한 망개나무(*Berchemia berchemiaefolia*)와 비선나무(*Abeliophyllum distichum*)의 復元例를 提示하여 特産植物保護는 植物分類學者와 全 國民의 協助로서 비로소 所期의 目的을 達成할 수 있음을 示唆 하였다. 우리 特産植物의 效率的인 保護指針을 만드는데 도움을 주고자 한 植物分類學者로서 오랜 經驗에 따라 文獻의 所在와 生育場所를 明示한 特産植物 407종류에 대한 目錄을 밝혔다.

It was possible to reintroduce *Abeliophyllum distichum* to its original habitat in 1976¹⁾ with the cooperation of the Bureau of Cultural Properties and Korean Association for Conservation of Nature. The genus *Abeliophyllum*, an endemic and monotypic genus of Korea, is growing only at the foot of Mt. Gunja, Goesan-gun, Chungchong-bugdo but almost disappeared from the original habitat due to greedy diggings by plant collectors.

Recently an outlier population was found in the environs of Seoul but these are probably escapees from the nursery "Ihyojawon" nearby. Nevertheless, the habitat of the latter is very similar to the original one in that both are located

1) Conservation of Nature and Natural Resources No. 12, 6~10 (1976)

on gravelly land at the foot of mountains and not far from rice paddies.

The natural habitat in Chungchong-bugdo as well as in the Seoul area are piles of stones and gravel where no other plants grow except for a few *Sedum kamtschaticum* on the rock surface. *Alangium*, *Securinega*, *Spiraea blumei* and *Stephanandra incisa* are seen between stones and *Equisetum hyemale* at the lower margin of the habitat. This seems to indicate that *Abeliophyllum* can stand or likes to grow under an alteration of high and low temperatures as accompanied with high content of soil water enough to support evaporation during summer.

Abeliophyllum has been successfully propagated by both soft and hard wood cutting, as well as from seed. The seed needed to be stratified before sowing but the seed collected in early spring was also germinated well though it took two months. Our arboretum, through the Association for Conservation of Nature, distributed 2000 plants grown from cuttings and seed to primary schools to serve both for educational value and for reintroduction to its original habitat.

In 1976 the author noticed that, because of unsuitable environment *Berchemia berchemiaefolia*, a rare species in Korea, was disappearing from its natural habitat. The total *Berchemia* population in Korea numbered less than 1000 individuals even though it fruits well every year.²⁾ Almost existing trees are growing or along streams which perhaps accounts for its failing to survive. The former did not have any space to germinate while the latter were washed away as soon as germinated or before. No seedlings were seen in the natural habitat except for two places there was enough soil for germination.

Berchemia berchemiaefolia grows in Mts. Sogni, Worak, Joryong, Juwang and Naeyon, and is also distributed in southern Japan and central China. Its survival in Korea is threatened because of the continuous erosion of the surface soil. Besides *Berchemia* there are many threatened plant species in Korea, and our taxonomists have a clear responsibility to the botanical world to ensure that no endemic species is lost.

2) Journ. Kor. Pl. Tax. 9 : No. 1, 1~6 (1979)

3) T. Nakai, Synoptical Sketch of Kor. Flora, 1~152 (1952)

In 1952, Nakai, a Japanese taxonomist, reported 1118 taxa of plants were endemic to Korea, among which 642 were included at the species level. The author reviewed original descriptions and type specimens of those endemic taxa wherever possible, and concluded that 407 taxa which belong to 172 genera, 339 species, 46 varieties and 22 forms were endemic to Korea as are presented below.

<u>Class</u>	<u>Family</u>	<u>Genus</u>	<u>Species</u>	<u>Varietas</u>	<u>Forma</u>
Filicineae	4	5	11		
Gymnospermae	3	5	3	6	7
Angiospermae	54	162	325	40	15
Monocotyledoneae	8	24	45	7	—
Dicotyledoneae	46	138	280	33	15
Total	61	172	339	46	22

The endemic taxa are distributed from Quelpart Island up to Mt. Baegdu, among those localities where endemic members are found in order Mt. Halla has 75 endemic taxa, Mt. Jiri 46 endemics, Mt. Baegdu (42), Dagelet Isl. (36), Mt. Diamond (34), Mt. Seorak (23), Seoul (22), Baegyang (16), Gwangnung (16), Nangrim (16), Mt. Gunja of Goesan (14), Mt. Sogni (14), Bujon plateau (12), Mt. Gwanmo (12), Mt. Baeg-un (12). The numbers in parentheses are the endemic taxa reported from the areas, for example, 22 endemic taxa have been collected in the Seoul area including Mts. Bughan and Namsan.

The type locality of *Forsythia saxatilis* is Mt. Bughan but I have been unable to find it there although I could see several living plants at the summit of Mt. Kwanak located in the southern suburbs of Seoul. *Viola seoulensis* and *Saussurea seoulensis* were common around Seoul and Suwon but it is becoming hard to find them these days.

1. *Endemic Ferns*

Since Charles Wilford made a collection of *Athyrium wardii*⁴⁾ from the southern Korean archipelago in 1858. 257 taxa of pteridophytes, belonging to 21 families,

4) J. Palibin, *Conspetus Florae Kor.* 3: 42 (1901)

61 genera, 241 species, 12 varieties and 4 forms have been enumerated from Korea. Among these 46 taxa were treated as endemic ferns by T. Nakai, Japanese taxonomist, in his Synoptical Sketch of Korean Flora in 1952. These comprise 17 genera, 44 species, one variety and one form.

No endemic genus of ferns is known from Korea and 35 taxa of the conjectured 46 endemic members have since been found growing in various other places in Eastern Asia. Therefore only 11 species belonging to 5 genera remain as endemic under our present knowledge.

One endemic species each is included in the genera *Lycopodium*, *Adiantum* and *Asplenium* while 11 species of *Lycopodium*, 4 species of *Adiantum*, and 17 species of *Asplenium* are growing in Korea. Two species of the genus *Woodsia* and 6 species of *Athyrium* are known to be endemic to Korea among 10 species of *Woodsia* and 32 species of *Athyrium* reported from Korea.

Of the endemic taxa two species each are found in Quelpart Isl, Mt. Jiri and Gwangnung area, one taxon each in Mts. Baegyang and Sogni, Dagelet Isl, and near the Buddhist Temple Yujom-sa in Mt. Diamond and four species in Ham-gyong-bugdo.

As mentioned above all endemic members are restricted to narrow localities except *Athyrium acutipinnulum* and *A. excelsius*. The former is distributed in Gangwon province and on Dagelet Isl, while the latter extends from Mts. Jiri and Baegyang of south to Yangdok in the northern part of Korea. It is urgent to preserve them from disappearance by the ignorant disturbances of natural vegetation as well as to clear the taxonomic position among related groups. Since *Adiantum coreanum*, *Athyrium nakaii* and *A. subimbricatum*, *Woodsia pseudo-ilvensis* and *W. saitoana* among the conjectured endemic members are not known from the present territory of Korea, their taxonomic relationship as well as proper protection will only be solved by cooperation by plant taxonomists and administrative efforts of north and south Korea.

Lycopodiaceae

Lycopodium integrifolium Matsuda et Nakai, B.M.T. 27 : 513(1913) et 28 : 102 (1914)
Mt. Halla

Pteridaceae

Adiantum coreanum Tagawa, Acta Phytot. Geobot. 1: 159 (1932)
Habsu (Hamgyong-bukdo)

Aspidiaceae

Athyrium acutipinnulum Kodama ex Nakai, Veg. Dagelet Isl. 13 (1918)
Dagelet Isl. Mt. Taebaeg. Jechon

Athyrium concinnum Nakai, B.M.T. 45 : 92 (1931)
Gwangnung. Mt. Sogni

Athyrium excelsius Nakai, B.M.T. 28 : 517 (1914)
Mt. Jiri. Mt. Baegyang. Yangdeog

Athyrium koryoense Tagawa. based on *A. fasciculatum* Nakai, B.M.T.45 : 94 (1931)
Gwangnung

Athyrium nakaii Tagawa based on *A. triangulare* Nakai, B.M.T. 45 : 91 (1931)
Mt. Diamond (near Buddhist Temple Pyohunsa)

Athyrium subimbricatum Nakai, B.M.T. 35 : 131 (1921)
Juil hot sping (Daedongsu-gog)

Woodsia sailoana Tagawa, Acta Phytot. Geobot. 5 : 251 (1936)
Mt. Gwanmo

Woodsia pseudo-ilvensis Tagawa, Acta Phytot. Geobot. 5 : 251 (1936)
Eoryudong (Hamgyong-bugdo)

Aspleniaceae

Asplenium anogrammoides H. Christ, Fedde Rep. 5 : 11 (1908)
Jejudo (Quelpart)

2. Endemic Gymnosperms

Pinus koraiensis appeared first in the botanical literature among Korean gymnosperms. In 1842 Siebold and Zuccarini⁵⁾ named *Pinus koraiensis* in their *Flora Japonica* with descriptions and a line drawing of specimens collected in Japan where it was brought into cultivation from Korea. Before this new name Thunberg applied *Pinus strobus* for this species in his *Flora Japonica* published in 1784. The first collector of gymnosperm was Richard Oldham attached to Kew Botanical Gardens who collected *Pinus thunbergii* from the southern archipelago in 1863. Since then 67 taxa excluding exotic species of gymnosperms have identified in Korea, they belong to 4 families, 11 genera, 26 species, 19 varieties and 22 forms. Among these native species 16 taxa which belong to 3 species, 6 varieties and 7 forms have so far been treated as endemic to Korea.

Larix gmelinii var. *principis-ruprechtii*, *Picea koraiensis*, *Picea pungsanensis* var. *intercedens* and *Thuja koraiensis* as supposed to be endemic but are distributed into Manchuria from northern alpine area of Korea. The last taxon is the only species which comes down to our present territory. It is fortunate that some of the northern elements are in cultivation, including *Larix* with its form, *for. purpurea* and *Picea koraiensis*.

Picea pungsanensis and its variety, *Juniperus rigida* var. *modesta*, two forms of *Larix* (*for. rubescens* and *for. viridis*) and *Abies nephrolepis* *for. chlorocarpa* are not yet known to be growing in the south.

Endemic taxa are strictly restricted to a narrow locality or localities, tend to disappear from their natural habitats both by the ignorant disturbances of vegetation and by environmental changes caused by rapid industrial development. Preserving original habitats is urgently needed to make clear their taxonomic positions with related groups.

Taxus caespitosa grows only on the windy summit of Mt. Seorag associated

5) Ph. Fr. de Siebold and Zuccarini, J. G. *Flora Japonica* sec. prim. fasc. 3:28 (1842)

with *Pinus pumila*. *Abies koreana* with its forms is distributed on Mts. Halla, Jiri, Gaji, and Deogyu. On Mt. Halla, this taxon forms a big population from 1500 m above sea level up to the population of *Juniperus chinensis var. sargentii* at the summit, *Abies koreana* grows in association with *Taxus cuspidata*, *Betula ermani* and *Prunus maximowiczii* as well as such shrubs as *Rhododendron mucronulatum*, *R. schlippenbachii*, *Lonicera chrysantha var. crassipes* etc. At higher elevations we see *Diapensia* on rocks. This is disappearing gradually from the only locale, this mountain top, in Korea.

On the number of endemic gymnosperms distributed in Korea Mt. Halla has 4 taxa followed by Mts. Jiri, Diamond, Pungsan and Musan. Mts. Seorag, Deogyu, Odae and areas around Ichon. Andong, Suwon, Seoul, Pyonggang and Jangsangot also are important for endemic taxa. Among those places Andong is where the oldest *Juniperus chinensis var. horizontalis* is growing while its original place was Ichon, Gyonggido.

Taxaceae

Taxus caespitosa Nakai, Journ. Kor. For. Soc. no. 158, 40 (1938)

Mt. Seorag

Pinaceae

Abies koreana Wilson, Journ. Arn. Arb. 1 : 188 (1920)

Mt. Jiri. Mt. Halla. Mt. Deogyu

Abies koreana for. chlorocarpa T. Lee, Journ Kor. For. 10 : 5 (1970)

Mt. Halla

Abies koreana for. nigrocarpa Hatus, Rep. Exp. For. Kyushu Univ. 40 (1934)

Mt. Jiri. Mt. Halla

Abies koreana for. rubrocarpa T. Lee, Journ. Kor. For. 10 : 5 (1970)

Mt. Halla

Abies nephrolepis for. chlorocarpa Wilson, Journ. Arn. Arb. 3 : 189 (1920)

Mt. Diamond (600—1600m)

Larix gmelinii var. principis-ruprechtii for. purpurea, T.Lee, Ill. Woody Pl. Kor.

233 (1966)

Mt. Odae. Musan.

Larix gmelinii var. *principis-ruprechtii* for. *rubescens*, T. Lee, l. c.

Musan. Pungsan

Larix gmelinii var. *principis-ruprechtii* for. *viridis*, T. Lee, l. c.

Mt. Diamond

Picea pungsanensis Uyeki, Kor. Tim. Trees 99 (1926)

Mt. Pungsan

Cupressaceae

Juniperus chinensis var. *horizontalis* Nakai ex Uyeki, Timb. Trees 136 (1926)

Ichon. Andong

Juniperus rigida var. *koreana* T. Lee, l. c. 237

Jangsangot, Seon-gabdo

Juniperus rigida var. *longicarpa* Uyeki, Timb. Trees 143 (1926)

Suwon

Juniperus rigida var. *modesta* Nakai, Journ, Kor. For. Soc. 158, 5 (1938)

Pyong-gang

Juniperus rigida var. *pendula* Nakai, Synopt. Sketch. 23 (1952), *nom. nud.*

Juniperus rigida var. *seoulensis* Nakai, Joseon no. 158. 25 (1938), based on *J. seoulensis* Nakai, B.M.T. 31 : 23 (1917)

Seoul

3. *Endemic Monocots*

The first collection of monocots of Korea was made in 1858 by Charles⁶⁾ Wilford, a botanist attached to the Kew Royal Botanical Gardens, who arrived in Korea as a crew member on the ship "Actaeon" when the British were surveying the coastlines of East Asia. Wilford collected 21 species of monocots from Busan to Geomun-do, off the southern coast of Korea. Among 21 species collec-

6) J. Palibin, Consp. Fl. Kor. pars prima 3 (1898)

ted, 8 species of the genus *Carex* were included, and *C. brownii* from Busan seems to be the first collection of the monocot specimen from Korea.

Since the first collection of monocots was made by Wilford, 882 taxa have been enumerated from Korea, which belong to 23 families, 203 genera, 723 species, 136 varieties and 23 forms. Sixty five in 882 Korean monocot taxa have generally been treated as endemic plants, and the following 51 taxa which belong to 23 genera, 45 species and 6 varieties are presented as probable candidates being endemic to Korea though some of them, such as *Carex valleculosa*, *Coeloglossum coreanum*, *Diplolabelum coreanum*, *Eriocaulon sphagnicola*, *Mondo taquetii*, *Platanthera taquetii*, *Polygonatum koreanum* and *P. quelpaertense*, *Tofieldia fauriei* and *T. nuda* var. *koreana* will need further study to support their identities among related groups.

Endemic monocots so far known are all restricted to a narrow locality or localities, which will be needed both to preserve their habitat to prevent them from disappearing and to make taxonomic studies with related groups.

They are distributed from Quelpart Isl. to Mt. Baegdu area, among which 14 species are restricted to Mt. Baegdu, 9 species each to the Quelpart Isl. and Mt. Jiri, 5 species each in the Seoul area and on Mt. Diamond, 4 species each Dagelet Isl. and Mt. Baegyang, 3 taxa in the Gwangnung area and 2 each in Suwon, Daetaeg and Seosura

One species is distributed each at Mt. Mireuk, Busan, Changwon, Dongnae, Gapyong, Geomun Island, Geoje Island, and Anmin Island, Hamyang, and Mts. of Mudung, Deogyu, Gaya, Baegun, and Seorag in the south while in the north Jangjon, Pyongyang, Wonsan, Hoeryon, Ganjangmuri, Sorryong, Nangog Myongchon, Sorai Beach, and Mts. Nangrim and Baeg-byog.

Among those localities Mts. Halla, Jiri, Baegyang of our present territory as well as Mts. Diamond and Baegdu are very important places to preserve our endemic resources. Dagelet Island has 4 endemic monocots together with many northern and southern elements while Seoul suburbs include many historical plant resources together with 4 species of endemic monocots. *Carex glabrescens*,

Smilacina bicolor and *Aletris fauriei* are growing from Mt. Jiri up to Mt. Baeg-du.

Gramineae

Calamagrostis hymenoglossa Ohwi, Acta Phytot. 10 : 261 (1941)

Calamagrostis paishanensis Nakai, B.M.T. 40 : 491 (1926)

Mt. Baegdu

Calamagrostis subacrochaeta Nakai, B.M.T. 40 : 490 (1926)

Mt. Nangrim

Poa deschampsoides Ohwi, B.M.T. 45 : 195 (1931)

Mt. Gwanmobong

Poa kanboensis Ohwi, Acta Phytot. 10 : 125 (1941)

Mt. Gwanmobong

Poa kumkangsani Ohwi, Acta Phytot. Geobot. 4 : 62 (1935)

Mt. Diamond. Shinpo. Gapsan (Hamgyong-namdo)

Poa takeshimana Honda, B.M.T. 42 : 133, 180 (1928)

Dagelet Isl.

Agropyron yezeoense var. *koryoense* (Honda) Ohwi, Acta Phytot. 11 : 179 (1942)

Gwangnung

Sasa coreana Nakai, B.M.T. 31 : 4 (1917)

Unmandae, Myongchon-gun. Hambugdo

Sasa quelpaertensis Nakai, Rikakyoiku 15, No. 6; 73 (1932)

Mt. Halla

Sasa borealis var. *chiisanensis* (Nakai) T. Lee. Bull. Kwanak Arb. No. 1, 109 (1976)

Mt. Jiri

Cyperaceae

Carex ligulata var. *austrokoreensis* Ohwi, Cyp. Jap. 1 : 505 (1936)

Mt. Jiri. Jindo

Carex blepharicarpa var. *insularis* Nakai, B.M.T. 31 : 287 (1917)

Dagelet Isl.

Carex chosonica Ohwi, Acta Phytot. et Geobot 1 : 73 (1932)

Daetaeg

Carex fusanensis Ohwi, Acta Phytot. et Geobot 1 : 74 (1932)

Busan. Masan

Carex glabrescens Ohwi, Cyp. Jap. 1 : 509 (1936)

Mt. Jiri. Seoul Mt. Diamond. Pyongyang. Hamgyongdo.

Carex gotoi Ohwi, Cyp. Jap. 1 : 489 (1936)

Hoeryong

Carex humbertiana Ohwi, Acta Phytot. et Geobot 2 : 102 (1933)

Carex nakasimae Ohwi, Cyp. Jap. 2 : 171 (1941)

Huasan, Suwon

Carex ochrochlamys Ohwi, Cyp. Jap. 1 : 240 (1936)

Mt. Gwanmo. Mt. Chailbong. Mt. Bugsoryong

Carex okamotoi Ohwi, Cyp. Jap. 1 : 429 (1936)

Mt. Jiri. Mt. Joryong

Carex phaeothrix Ohwi, Cyp. Jap. 1 : 463 (1936)

Mt. Baegmu (Hamgyong-bugdo)

Carex pseudochinensis Levelle & Vaniot, Bull. Acad. Intern. Geogr. Bot. 11 : 306
(1902) —Ohwi, Cyp. Jap. 1 : 483 (1936)

Suwon. Seoul. Changwon

Carex subumbellata var. *koreana* Ohwi, Cyp. Jap. 1 : 349 (1936)

Sorryong

Carex valleculosa Ohwi ex Nakai, Synopt. Sketch 132 (1952)

Scleria mutoensis Nakai, J.J.B. 18 : 421 (1942)

Mt. Mudung

Araceae

Arisaema takesimense Nakai, B. M.T. 43 : 538 (1929)

Dagelet Isl.

Arisaema convolutum Nakai, B.M.T. 43 : 534 (1929)

Mt. Bughan. Mt. Baegbyog

Eriocaulaceae

Eriocaulon sphagnicolum Ohwi, B.M.T. 45 : 196(1911)

Eriocaulon tenuissima Nakai, B.M.T. 31 : 97 (1917)

Jangjeon

Liliaceae

Asparagus verrucosus Nakai, B.M.T. 37 : 69 (1923)

Sorai Beach

Ophiopogon taquetii Leveille in Fedde Rep. no. 8, 171 (1910)

Mt. Halla

Polygonatum humillimum Nakai, in Fedde Rep. 13 : 248 (1914) et B.M.T. 28 : 518 (1914)

Mt. Halla

Polygonatum koreanum Nakai, Synopt. Sketch 145(1952) *nom. nud.*—? *P. lasianthum* *cr. koreanum* Nakai in Fedde Rep. 13 : 247(1914)

Mt. Baegyang. Maegdo

Polygonatum quelpaertense Ohwi ex Nakai, l. c.

Mt. Halla

Polygonatum robustum Nakai, B.M.T. 31 : 282 (1917)

Dagelet Isl.

Polygonatum stenanthum Nakai, B.M.T. 27 : 34 (1913)

Collected by Faurie in 1906 with no locality described

Smilacina bicolor Nakai, in Fedde Rep. 13 : 247 (1914)

Mt. Jiri. Gwangnung. Mt. Nobong. Mt. Chailbong

Tofieldia fauriei Leveille & Vaniot in Fedde Rep. 5 : 283(1908)

Mt. Halla

Tofieldia nuda var. *koreana* Ohwi ex Nakai, l. c

Tricyrtis dilatata Nakai, B.M.T. 28 : 518 (1914)

Mt. Baegyang. Mt. Halla. Mt. Jiri. Gwangnung. Anmin Isl.

Veratrum bohmhofii var. *latifolium* Nakai in Rep. Inst. Sci. Manch. 1, 336 (1937)

Mt. Yisungryong

Aletris fauriei Leveille et Vaniot, Fedde Rep, 5 : 283 (1908)

Mt. Jiri, Mt. Gava, Mt. Diamond, mt. Seorag

Hemerocallis hakuunensis Nakai, J.J.B. 19 : 315 (1943)

Mt. Baegun

Hemerocallis micrantha Nakai, J.J.B. 19 : 315 (1943)

Hamyang

Amaryllidaceae

Lycoris koreana Nakai, B.M.T. 44 : 516 (1930)

mt. Baegyang

Iridaceae

Iris koreana var. *albiflora*, grad. nov.

Iris koreana for. *albiflora* Chung et Lee. Rep. on Study of a New Forms of *Iridaceae*, Seoul Agr. Coll. 1~4 (1964)

Iris odaesanensis Y. Lee, Kor. Journ. Bot. 17 no. 1: 33~35 (1974)

Mt. Omi (Kyongbugdo) Daegwallyong, Mt. Odae, Mt. Palgong,
Mt. Taebaeg.

Orchidaceae

Calanthe coreana Nakai, B.M.T. 28 : 519 (1914)

Mt. Halla

Coeloglossum coreanum (Nakai) Schlechter ex Nakai, Synopt. Sketch 149 (1952)

Mt. Jangbaeg

Diplolabellum coreanm Maekawa ex Nakai, l. c.

Mt. Halla

Liparis koreana Nakai based on *Liparis makinoana* v. *koreana*. Nakai, B.M.T. 45 : 107 (1931)

From Hyesanjin to Samsu

Platanthera taquetii Schlechter ex Nakai, Synopt. Sketch 152 (1952)

4. Endemic Dicots

The first collection of dicots was made by Alexander Schlippenbach,⁶⁹ a German admiral in April of 1854 when he was surveying eastern coast line of Korea,

since then 2932 taxa of dicots have been found so far in Korea.^{7,8)} They belong to 122 families, 621 genera, 1920 species, 7 subsp. 753 varieties and 4 forms. *Artemisia vulgaris*, *Dictamnus dasycarpus*, *Euphorbia esula*, *Gentiana zollingeri*, *Hedera rhombea*, *Lonicera hispidula*, *Parthenocissus tricuspidatus*, *Prunus japonicus*, *Rhododendron schlippenbachii*, *Rosa luciae*, *Rubus crataegifolius*, *Rubus oldhami*, *Salix koreensis*, *Viburnum dilatatum* and *Weigela florida* were included in Shhlippenbach's first collection.

Five genera, *Abetiophyllum*, *Echinosophora*, *Hanabusaya*, *Megaleranthis* and *Pentactina* are considered endemic to Korea while some authors additionally include *Coreanomecon* and *Dystaenia*.

Coreanomecon, a monotypic genus, was established by Nakai separating it from genus *Hylomecon* while sometimes it is included in the genus *Chelidonium* of Europe and Asia. *Coreanomecon* is distinguished from *Hylomecon* by the axillary leafless scape which bears 5-10 flowers while the genus *Hylomecon* produces a leafy scape with 3-5 flowers. Nevertheless most taxonomists include it under either the genus *Hylomecon*⁹⁾ or *Chelidonium*.

The genus *Dystaenia* sometimes treated as *Angelica* or *Ligustichum*, consists of two species, *D. takeshimana* of Dagelet Isl. of Korea and *D. ibukiensis* of Japan, and thus is not restricted to Korea. Among endemic genera, *Homopteryx* and *Pentactina* are restricted to north Korea though there is a probability to find the latter genus in coastal area of Mt. Seorag because its type locality is not far north of Mt. Seorag.

Below the genus level 710 taxa which belong to 209 genera 355 species, 1 subsp. 301 varieties and 53 forms are treated as endemic to Korea. After the 2nd World War, many northern elements were collected from the northern alpine area of Gangwon-do and along the west coast.

Some of these endemics have been discovered growing in Japan or China through Manchuria but the following 328 taxa which belong to 138 genera, 280

7) Bull. Kwanak Arboretum no. 1, 1~137 (1976)

8) T. B. Lee, Ill. Flora of Korea, 1~990 (198, 2nd ed. 1982)

9) T. B. Lee, Plant Resources of Korea, Seoul Univ. Journ. B. and Agr. 89~228 (1969)

species, 33 varieties and 15 forms seem to be endemic from the standpoint of our present knowledge. Of this total 81 grow only in the north and 175 are limited to our present territory while 72 grow in both areas.

Some northern endemics, such as *Ulmus macrocarpa* and *Leontice microrhyncha*, are important from the stand point of plant resources because of their unsuitable habitat at the margin of their distribution.

Some of the endemics are restricted to a narrow locality or localities and are tending to disappear due to destruction of their habitat or environmental changes caused by the rapid industrial development.

Mt. Halla has 54 endemic taxa from the foot of the mountain to the top at 1950 m above sea level. This is followed by Dagelet Isl. of the East Sea where *Fagus crenata var. multinervis* and *Tsuga sieboldii* are growing along with 27 endemic taxa and many northern and southern elements mixed. Next to these areas are Mts. Baegdu (23) and Gwanmo comprising mostly northern and alpine elements.

Mts. Jiri (26), Diamond (19), Seorag (15), Nangrim (9), Gunja (8), Seoul (8), and Bujeon plateau (7) follow in that order. In the early epoch of plant exploration plant collectors botanized mostly in the suburbs of Seoul including Mts. Bughan, and Namsan where they discovered 8 or more endemic species.

Mts. Sogni, Baegyang and Baegun have 6 endemic taxa each while the Islands of Hugsan and Geoje have 5 taxa each. The following places have 4 each: Gwangnung, Mt. Odae, Geomundo and Wando, Gangge, Pyongyang, Hyesanjin while the following places have 3 endemic taxa each: Ryosu, Joryong, Mt. Deogyu, Seoheung, Jangsangot and Seollyong. Two taxa each are scattered in 10 localities and places having one taxon total 50.

Chloranthaceae

Chloranthus japonicus var. koreanus (Nakai) T. Lee, Bull. Kwanak Arb. 1. 108 (1969) — *C. Koreanus* Nakai, Sylv. Kor. 18 : 16 (1930)

Geojedo

Salicaceae

Salix bicarpa Nakai, B.M.T. 31 : 111 (1917)

Mt. Nangrim

Salix blinii Leveille (*S. Taquetii* Leveille), Fedde Rep. 10 : 435 (1912)

Mt. Halla. Chungchongdo. Gyonggido. Gyongsando. Huanghaedo. Hamgyongdo.

Salix dependens Nakai, Bull. Soc. Dendl. France no. 66, 49 (1928)

Chungju

Salix hallaisanensis Leveille, Fedde Rep. 10 : 436 (1912)

Mt. Halla

Salix hulteni Floderus in Archiv. Bot. 20.A no 6 : 51 (1926)

Common

Salix hulteni var. *elongata* Nakai, Syn. Sketch 78 (1952)

Minmagdong (Hambugdo)

Salix ishidoyana Nakai, B.M.T. 31 : 25 (1917)

Dagelet Isl.

Salix kangensis Nakai, B.M.T. 30 : 275 (1916)

Gangge. Hamgyondo

Salix metaformosa Nakai, B.M.T. 33 : 42 (1919)

Mt. Baegdu

Salix orthostemma Nakai, B.M.T. 33 : 43 (1919)

Pyongbugdo. Hamgyongdo

Salix sericeo-cinerea Nakai, B.M.T. 33 : 44 (1919)

Seollyong

Betulaceae

Alnus vermicularis Nakai, B.M.T. 33 : 46 (1919)

Seollyong

Betula cyclophylla Nakai, B.M.T. 17 : 4 (1941)

Daetaeg. Jangji

Betula fusenensis Nakai, J.J.B. 14 : 743 (1938)

Bujon plateau

Betula microphylla var. *coreana* Nakai, B.M.T. 33 : 5 (1919)

Mt. Baegdu

Betula ermani var. *saitoana* Hatus. Bull. Exp. For. Kyushu No. 5,46 (1934)

based on *Betula saitoana* Nakai, Veg. Quelp. 36 (1914) et Fedde Rep. 13 : 249 (1914)

Mt. Halla. Mt. Jiri

Betula paishanensis Nakai, B.M.T. 33 : 5 (1919)

Hamgyongdo

Carpinus coreana Nakai, B.M.T. 40 : 162 (1926)

South to Huanghae-do

Carpinus coreana var. *major* Nakai, B.M.T. 40 : 163 (1926)

Ongjin, Baeg-a Isl.

Carpinus coreana var. *multiflora* Nakai ex Hand. Seonman For. 92 (1932)

Geomun Isl. Baeg-a Isl.

Carpinus tschonoskii var. *eximia* Hatus. Rep. Exp. For. Kyushu U. no. 5 : 48 (1934)

Mt. Jiri

Ulmaceae

Celtis chosoniana Nakai, Joseon Sanrim no. 59 : 21 fig. 1 aaa (1930)

South to Huanghaedo

Celtis edulis Nakai, Joseon Sanrim no. 59, 23 t. 2 (1930)

Mt. Taegi (Gangwondo). Myongchon (Hambugdo)

Ulmus macrocarpa var. *macrophylla* (Nakai) T. Lee. Ill. F. Kor. 281 (1981)

Sachang

Urticaceae

Boehmeria hirtella Satake (*Duretia hirtella* Nakai) ex Nakai, Synopt. Sketch 42 (1952)

Mt. Halla

Boehmeria nakaiana Satake (*Duretia nakaiana* Satake) ex Nakai, l. c.

Mt. Halla

Boehmeria quelpaertensis Satake (*Duretia quelpaertensis* Satake) ex Nakai, l. c.

Mt. Halla

Boehmeria taquetii Nakai, Fedde Rep. 13 : 267 (1914)

Mt. Halla

Pilea oligantha Nakai, B.M.T. 35 : 140 (1921)

Gangge. Samsu

Pilea taquetii Nakai, B.M.T. 35 : 141 (1921)

Mt. Jiri. Mt. Halla

Aristolochiaceae

Asarum maculatum Nakai, in Fedde Rep. 13 : 267 (1914)

Mt. Halla. Wando

Polygonaceae

Bistorta globispica Nakai, J.J.B. 14 : 736 (1938)

Mt. Baegdu

Aconogonum mollifolium Hara, Fl. East. Himalaya, 632 (1966)

Mt. Nangrim. Bujon plateau

Rheum coreanum Nakai, B.M.T. 33 : 47 (1919)

Mt. Baegdu

Phytolaccaceae

Phytolacca insularis Nakai, B.M.T. 32 : 217 (1918)

Dagelet Isl.

Caryophyllaceae

Cerastium furcatum var. *koreanum* Ohwi based on *C. koreanum* Nakai, J.J.B. 14 : 44 (1938)

Bujon plateau. Unseonryong

Dianthus morii Nakai, B.M.T. 28 : 302 (1914)

Mt. Baegdu

Melandryum seoulense Nakai ex Mori based on *Silene seoulense* Nakai, Fl. Kor. 1 : 77 (1909)

South to Gangwondo

Melandrium seoulense var. *ramosum* Nakai, J.J.B. 13 : 872 (1937)

Mt. Ilwol

Melandrium umbellatum Nakai, B.M.T. 33 : 48 (1919)

Mt. Chilbo (Hambugdo)

Minuartia imbricata var. *koreana* Nakai, B.M.T. 43 : 453 (1929)

Mt. Baegdu

Pseudostellaria coreana (Nakai) Ohwi based on *Krasheninnikowia coreana* Nakai in Fedde Rep. 13 : 268 (1914) et B.M.T. 28 : 520 (1914)

South to Gyonggido

Pseudostellaria okamotoi Ohwi, J.J.B. 12, 387 (1936)

Mt. Jiri

Silene fasciculata Nakai, B.M.T. 27 : 129 (1913)

Mt. Halla

Silene jensseensis Willd. En. Pl. Hort. Berol 154 (1809)

North to Mt. Seorag

Nymphaeaceae

Nymphaea minima Nakai based on *Nymphaea pygmaea* v. *minima* Nakai, J.J.B. 14 : 746 (1938)

Jangsangot

Ranunculaceae

Thalictrum coreanum Leveille. Bull. du L' Acad. Int. Geo. Bot. 297 (1902)

North to Mt. Seorag. Mt. Juwang

Thalictrum osmorhizoides Nakai, B.M.T. 33 : 50 (1919)

Mt. Gwanmo

Thalictrum punctatum Leveille, Rep. Sp. Nov. Regn. Veg. fase. 10 : 376-377(1922)

Mt. Halla. Hongdo. Eochongdo.

Thalictrum raphanorhizon Nakai in Matsum. Icon. Pl. Koishikav. 4-2, 23 : 224(1919)

Mt. Halla

Thalictrum rochebrunianum var. *grandisepalum* Nakai, Joseon Sikmul vol. 1, 42 (1914)

North to Gyonggido

Thalictrum spirostigmum Nakai, B.M.T. 33 : 51 (1919)

Gangge. Huanghaedo. Mt. Gwanmo

Anemone koraiensis Nakai, B.M.T. 33 : 7 (1919)

Sepo, Gangwondo

Clematis chiisanensis Nakai, B.M.T. 27 : 128 (1912) et in Fedde Rep. 13 : 270 (1914)

North to Mt. Jiri

Clematis nobilis Nakai, B.M.T. 23 : 303 (1914)

North to Mt. Nangrim. Mt. Baedu

Clematis subtriterinata Nakai, B.M.T. 33 : 48 (1919)

Mt. Baegdu

Clematis subtriterinata var. *tenuifolia* Nakai, B.M.T. 33 : 49 (1919)

Mt. Gwanmo

Clematis trichotoma Nakai, B.M.T. 26 : 323 (1912)

North to Jonnam-do

Hepatica insularis Nakai, J.J.B. 13 : 308 (1937)

Mt. Halla. Jido. Geojedo. Jeobdo (Jindo-gun)

Hepatica maxima (Nakai,) Nakai in Veg. Dagelet 19, 35 (1919)

Anemone maxima Nakai, B.M.T. 31 : 27 (1917)

Dagelet Isl.

Pulsatilla nivalis Nakai, B.M.T. 33 : 50 (1919)

Mt. Baegdu

Aconitum austro-koraiense Koidzumi, Hatsus., Prel. Rep. Exp. For. 69 (1934)

Mt. Baegun. Mt. Jiri

Aconitum chiisanense Nakai, Veg. Jirisan 32 (1915) et J.J.B. 11 : 147 (1935)

Mt. Jiri. Gyonggido. Gangwondo. Jangjin

Aconitum neotortuosum Nakai, Rep. 1st Sci. Exp. sec. 4 pt. 2, 154 (1935)

Gangwondo. Hamgyongdo. Bujon plateau

Aconitum pteropus Nakai, J.J.B. 13 : 400 (1937)

Nan-gog (Gangwondo)

Berberidaceae

Berberis amurensis var. *quelpaertensis* Nakai, B.M.T. 27 : 31 (1913)

Mt. Halla

Berberis koreana Palibin, Consp. Fl. Kor. 1 : 22 (1899)

North to Gyonggido

Papaveraceae

Hylomecon hylomeconoides T. Lee, Plant Res. Kor. 128 (1969)

Mt. Jiri

Papaver coreanum Nakai, Sci. Knowl. 8. no. 1, 42 (1928)

Mt. Baegdu

Fumariaceae

Corydalis chosenensis Ohwi ex Nakai, Synopt. Sketch 51 (1952)

Corydalis filistipes Nakai, B.M.T. 32 : 104 (1918)

Dagelet Isl.

Cruciferae

Arabis columnalis Nakai in Fedde Rep. 13 : 271 (1914)

Mt. Jiri

Arabis ligulifolia Nakai, B.M.T. 33 : 51 (1951)

Juul Hot spring (Hambudo)

Arabis serrata var. *hallaisanensis*(Nakai) Ohwi based on *A. hallaisanensis* Nakai,
B.M.T. 27 : 129 (1913)

Mt. Halla

Arabis takesimana Nakai, B.M.T. 32 : 244 (1918)

Dagelet Isl.

Cardamine amaraeformis Nakai, B.M.T. 26 : 324 (1912)

North to Mt. Jiri upto Mt. Gwanmo

Cardamine koreana Nakai, Synopt. Sketch 49 (1952)—*C. leucantha* var. *koreana*
Nakai, B.M.T. 27 : 129(1913)

Yangdeog

Cardamine leucantha var. *toensis* T. Lee, Ill. Fl. Kor. 391 (1981)

Chungmu

Cardamine millsiana Nakai, B.M.T. 27 : 129 (1913)

Gangge. Chongjin

Wasabia koreana Nakai, J.J.B. 11 : 150 (1935)

Dagelet Isl.

Crassulaceae

Orostachys filifer Nakai, J.J.B. 18 : 215 (1942)

Orostachys saxatilis Nakai, J.J.B. 18 : 215 (1942)

Mt. Gwanmo

Rhodiola angusta Nakai (*Sedum fenzelii* Froderstrom) B.M.T. 28 : 304 (1914)

Mt. Baegdu

Rhodiola ramosa Nakai, B.M.T. 28 : 304 (1914)

North to Mt. Nangrim, Mt. Baegdu

Sedum viridescens Nakai in Fedde Rep. 13 : 273 (1914)

Mt. Jiri. Geomun Isl.

Sedum zokuriense Nakai (*S. prostratum* Nakai) J.J.B. 15 : 674 (1939)

Mt. Sogni

Saxifragaceae

Kirengeshoma koreana Nakai, J.J.B. 11 : 152 (1935)

Mt. Baegun

Astilbe divaricata Nakai, J.J.B. 13 : 395 (1937)

Mt. Sogni

Chrysosplenium barbatum Nakai (*C. pilosum* var. *valdepilosum* Ohwi), Joseon
Sikmul 334 (1914)

Mt. Baegyang. Gwangnung. Gyongnamdo

Chrysosplenium flaviflorum Ohwi, Fedde Rep. 36 : 51 (1934)

Mt. Baegdu

Chrysosplenium hallaisanense Nakai, Fedde Rep. 13 : 273 (1914)

Mt. Halla

Aceriphyllum acanthifolium T. Lee based on *Mukdenia acanthifolia* Nakai J. J.B.

17 : 684 (1941)

Maengsan

Saxifraga furumii Nakai, B.M.T. 32 : 33 (1918)

Mt. Gwanmo

Saxifraga oblongifolia Nakai, Joseon Sikmul 331 (1914)

Mt. Deogyu. North to Mt. Jiri

Saxifraga octopetala Nakai, B.M.T. 32 : 230 (1918)

North to Mt. Diamond

Deutzia coreana Leville & Vaniot in Fedde Rep. 8 : 283 (1910)

South to Hamgyong-namdo and Huanghaedo

Deutzia coreana var. *tozawae* (Nakai) Hatus. Rep. Exp. For. Kyushu U. 7 et 88 (1934)

Goesan. Haenam

Deutzia coreana var. *triradiata* (Nakai) Hatus. l. c. 7 et 88 (1934)

Gyongsangdo. Mt. Seorag

Deutzia paniculata Nakai, B.M.T. 27 : 31 (1913)

Gyongsangdo. Jonbugdo. Daegu. Mt. Gaji. Wonsan. Hamnamdo.

Hamamelidaceae

Corylopsis coreana Uyeki, Suwon Hagbo no. 41, 8 (1924)

Mt. Jiri. Mt. Baegun. Mt. Joge

Corylopsis coreana Uyeki var. *pubescens* Nakai, J.J.B. 15 : 736 (1939)

Mt. Jiri

Rosaceae

Aruncus aethusifolius (Leveille) Nakai, B.M.T. 26 : 324 (1912)

Mt. Halla

Pentactina rupicola Nakai, B.M.T. 31 : 17 (1917)

Gangwondo

Spiraea chartacea Nakai, B.M.T. 42 : 467 (1928)

Hugsan Isl.

Spiraea prunifolia var. *simpliciflora* Nakai, B.M.T. 29 : 74 (1915)

Common

Filipendula formosa Nakai, B.M.T. 29 : 30 (1915)

Mt. Jiri

Filipendula glaberrima Nakai, B.M.T. 29 : 30 (1915)

Mt. Deogyu. Mt. Jiri and North to Gyonggido

Rosa kokusanensis Nakai, B.M.T. 36 : 64 (1922)

Hugsan Isl. Jangsan-got

Rosa silenidiflora Nakai, l.c. 327 (1940)

Daichong Isl.

Rubus longisepalus Nakai, Handb. Kor. For. 138 (1939)

Ryosu. Chungmu

Rubus longisepalus var. *tozawai* (Nakai) T. Lee, Bibl. Woody Pl. 282 (1966)

Geomun Isl. Geoje Isl.

Rubus schizostylus Leveille in Fedde Rep. 5. 280 (1908)

Mt. Halla

Rubus takesimensis Nakai, B.M.T. 32 : 105 (1918)

Dagelet Isl. Odongdo

Sanguisorba argutidens Nakai, B.M.T. 47 : 249 (1933)

Bujon plateau. Mt. Baegdu

Sanguisorba unsanensis Nakai in Fedde Rep. 13 : 278 (1914)

Unsan

Sibbaldia coreana Nakai in Sci. Knowledge 8 no. 1. 41 (1928)

Mt. Halla. Mt. Baegdu

Prunus ishidoyana Nakai, B.M.T. 33 : 8 (1919)

Hyesanjin

Prunus takesimensis Nakai, B.M.T. 32 : 106 (1918)

Dagelet Isl.

Pyrus ussuriensis var. *diamantica* Uyeki, Bull. Agr. For. Coll. Suwon no. 1, 146, 10 (1925)

North to Mt. Seorag

Pyrus ussuriensis var. *hakunensis* T. Lee, Ill. Fl. Kor. 461 (1981)

Mt. Baegun

Pyrus ussuriensis var. *macrostipes* T. Lee, Ill. Woody Pl. Kor. 275 (1966)

Pyong-an-namdo

Pyrus ussuriensis var. *seoulensis* (Nakai) T. Lee, Bibl. Ill. Woody Pl. 276 (1966)

based on *P. seoulensis* Nakai B.M.T. 49 : 348 (1935)

Seoul

Pyrus ussuriensis var. *nankaiensis* T. Lee, Bill. Ill. Woody Pl. Kor. 275 (1966)

Namhae

Crataegus komarovii Sargent, Pl. Wils. 2 : 183 (1912)

North to Mt. Seorag

Leguminosae

Albizzia coreana Nakai, B.M.T. 33 : 201 (1919)

Mt. Yudal. Hugsan Isl. Eochong Isl.

Astragalus adsurgens var. *alpinus* Nakai, Veg. Quelp. 54 (1914)

Mt. Halla

Astragalus setsureianus Nakai, B.M.T. 33 : 58 (1919)

Seolryong. Bujon plateau

Caragana koreana Nakai, in shed Herb. Exp. For. St. Seoul et Synopt. Sketch 63

(1952)

North to Gangwondo

Echinosophora koreensis Nakai, B. M. T. 37 : 34 (1923)

North to Yanggu (Gangwondo)

Gleditsia japonica var. *koraiensis* (Nakai) Nakai, Synopt. Sketch 63(1952)

Common except Hamgyong-budgo

Gleditsia japonica var. *stenocarpa* (Nakai) Nakai, Synop. Sketch 63(1952)

Sompa (Jonnamdo)

Lathyrus nomuranus Ohwi, J. J. B. 12: 330 (1936)

Mt. Banryong (Hamnamdo)

Lathyrus vaniotti Leveille in Fedde Rep. 7 : 270 (1909)

Ryosu. North to Mt. Diamond

Lespedeza thunbergii var. *intermedia* (Nakai) T. Lee, Bull. Seoul U. For. no. 634
(1969)

Common

Lespedeza thunbergii var. *intermedia* for. *alba* (Nakai) T. Lee, Lesp. Kor. 1 : 16
(1965)

Tongchon (Gangwondo)

Lespedeza thunbergii var. *intermedia* for. *retusa* (Nakai) T. Lee, Lesp. Kor 1 : 17
(1965)

Mt. Bul-am (Seoul). Mt. Halla

Lespedeza maximowiczii var. *tricolor* Nakai, Lesp. Jap. Kor. 37 et 40 (1927)

Jindo

Lespedeza bicolor var. *melanantha* (Nakai) T. Lee, Bull. Seoul U. For. no. 6, (1969)

Mt. Jiri. Mt. Sogni

Maackia fauriei (Leveille) Takeda, Note Roy. Bot. Gard. Edinb. 8, 191 t. 27,
fig. 39~43 (1913)

Mt. Halla

Trifolium lupinaster var. *alpinum* Nakai, Veg. Quelp. 56 (1914)

Mt. Halla

Vicia angustipinnata Nakai, B. M. T. 28 : 329 (1914)

Mt. Baegyang. Mt. Naejang. Namhae Isl. Hamgyon-bugdo

Vicia chosenensis Ohwi, Acta Phytot. 5 : 182 (1936)

Vicia hirticalycina Nakai, B. M. T. 28 : 329 (1914)

Mt. Jiri, Wando

Vicia unijuga var. *angustifolia* Nakai, B. M. T. 37 : 17 (1923)

South to Danyang

Vicia unijuga var. *venusta*, Nakai, B. M. T. 49 : 350 (1935)

Mt. Baegun

Vicia venosa var. *cuspidata* Max. in Bull. Acad. Sci, St.-Petersb. 31 : 33 (1887)

Gwangnung. Chungchong-do, Jonlado. Pyong-an-bugdo

Vicia venosissima Nakai, B. M. T. 27 : 131 (1913)

North to Mts. Taebaeg and Seorag

Geraniaceae

Geranium knuthii Nakai, B. M. T. 26 : 263 (1912)

Not so rare, not common up to the north

Geranium koraiense Nakai, B. M. T. 25 : 54 (1911) et Joseon Sikmul 188 (1914)

Inchon. Pyongyang

Euphorbiaceae

Euphorbia hakutosanensis Hurusawa, J. J. B. 16 : 583 (1940)

Mt. Baegdu

Euphorbia octoradiatus Leveille & Vaniot in Fedde Rep. Nov. Sp. 5 : 281 (1908)

Euphorbia pekinensis var. *fauriei* (Leveille & Vaniot) Hurusawa in J. J. B. 16 : 638 (1940) based on *E. fauriei* Lvl. et Vnt., in Fedde Rep. Nov. Sp. 5 : 281 (1908)

Mt. Halla

Euphorbia pekinensis var. *subulatifolius* (Hurusawa) T. Lee, *comb. Nov.*

E. subulatifolius Hurusawa, J. J. B. 16 : 573 (1940)

Mogpo

Buxaceae

Buxus microphylla var. *koreana* Nakai ex Wilson, Journ. Arn. Arb. 1 : 35 (1920)

Common on calcareous area

Buxus microphylla var. *koreana* for. *elongata* (Nakai) T. Lee, Bibl. Woody

Pl.300 (1966)

Mt. kwanak

Celastraceae

Euonymus quelpaertensis Nakai, B. M. T. 28 : 307 (1914)

Jejudo. Hamgyong-bugdo

Euonymus trapococcus Nakai, B. M. T. 28 : 307 (1914)

South to Huanghaedo

Aceraceae

Acer okamotoanum Nakai, B. M. T. 31 : 28 (1917)

Dagelet Isl.

Acer takesimense Nakai, B. M. T. 32 : 107 (1918)

Dagelet Isl.

Rhamnaceae

Rhamnus koraiensis C. K. Schneider, Notizb. Konigl. Bot. Gazt. Mus. Berl.-Dahl
77 (1908)

Common

Rhamnus koraiensis var. *subglabra* Nakai, Synopt. Sketch 74 (1952)

Hugsando. Wando. Geojedo. Mt. Baegbyog.

Mt. Sogni. Namhaedo. Jindo. Chongsando

Rhamnus shozyoensis Nakai, B. M. T. 28 : 309 (1914)

Changseong (Pyong-an-bugdo)

Rhamnus taquetii Leveille, Fedde Rep. 10 : 431 (1912)

Mt. Halla.

Tiliaceae

Tilia koreana Nakai, B. M. T. 27 : 130 (1913)

North to Mt. Diamond

Tilia insularis Nakai, B. M. T. 31 : 27 (1917)

Dagelet Isl.

Tilia megaphylla Nakai, B. M. T. 27 : 130 (1913)

Mt. Sogni and north to Gangwondo

Tilia megaphylla for. *subintegra* Nakai, B. M. T. 35 : 14 (1921)

Bugchong

Tilia ovalis Nakai, B. M. T. 25 : 15 (1921)

North to Mt. Diamond

Tilia rufa Nakai, B. M. T. 35 : 15 (1921)

Gyongsangdo and north to Chungchong-bugdo

Tilia semicostata Nakai, B. M. T. 27 : 130 (1913)

North to Gyongsang-bugdo

Tilia taquetii C. K. Schneider, Fedde Rep. 7 : 200 (1909)

Pyong-an bugdo and south to Gangwondo

Sterculiaceae

Corchoropsis intermedia Nakai, B. M. T. 28 : 311 (1914)

Violaceae

Viola diamantiaca Nakai, B. M. T. 33 : 205 (1919)

North to Mt. Diamond

Viola kamibayashii Nakai, B. M. T. 30 : 287 (1916)

Gwangnung

Viola kapsanensis Nakai, B. M. T. 36 : 35 (1922)

Gapyong. Gapsan. Bugchong

Viola koraiensis Nakai, B. M. T. 30 : 281 (1916)

Pyong-an-bugdo. Hamgyongdo

Viola oldhamiana Nakai, B. M. T. 42 : 559 (1928)

Geomundo

Viola seoulensis Nakai, B. M. T. 32 : 218 (1918)

Seoul. Suwon

Viola takesimana Nakai, B. M. T. 36 : 34 (1922)

Dagelet Isl.

Thymeleaceae

Stellera rosea Nakai, B. M. T. 34 : 147 (1920)

Jejudo. North to Seohung

Lythraceae

Rotala koreana Nakai, Mori En. 261(1922)

Mt. Jeongryong

Araliaceae

Acanthopanax chiisanense Nakai, Journ. Arn. Arb. 5 : 5 (1924)

Mt. Jiri. Jollado. Gyongsang-namdo. Chungchong-bugdo. Gyonggido.

Gangwondo. Hamgyongdo.

Acanthopanax koreanum Nakai, Journ. Arn. Arb. 5 : 5 (1924)

Jejudo

Acanthopanax rufinerve Nakai, Sylv. Kor. 16 : 25 (1927)

Gyongsang-bugdo. Huanghaedo. Pyongbugdo. Hamgyongdo

Acanthopanax seoulense Nakai, Sylv. Kor. 16 : 24 (1927)

Seoul

Echinopanax horridum Kom. Acta Hort. Petrop. 25 : 119 (1907)

Mt. Jiri. Mt. Seorag. Mt. Diamond. Pyong-ando. Hamgyongdo

Dendropanax morbifera Lev. Fedde. Rep. 8 : 493 (1910)

Jejudo. Wando. Hugsando. Eochongdo. Gyongsand-namdo

Umbelliferae

Angelica fallax H. De Boissieu Bull. Soc. Bot. Fr. 59 : 199 (1912)

Peucedanum taquetii Wolff, Fedde Rep. 21 : 245 (1925)

Mt. Halla

Angelica jaluana Nakai, B. M. T. 28 : 314 (1914)

Hyesanjin

Bupleurum euphorbioides Nakai, B. M. T. 28 : 313 (1914)

North to Mt. Seorag

Bupleurum latissimum Nakai, B. M. T. 31 : 28 (1917)

Dagelet Isl.

Dystaenia takesimana (Nakai) Kitagawa, B. M. T. 51 : 807 (1937)

Dagelet Isl.

Homopteryx nakaiana Kitagawa, B. M. T. 51 : 809 f. 2 (1937)

Bujon plateau

Libanotis coreana (Wolff) Kitagawa, B. M. T. 51 : 657 (1937)

Mt. Halla

Peucedanum coreanum Nakai, B. M. T. 31 : 100 (1917)

Mt. Diamond

Peucedanum hakuunense Nakai, J. J. B. 15 : 740 (1939)

Mt. Baegun

Pimpinella koreana (Yabe) Nakai, Fl. Kor. 1, 262 (1909)

Common

Ericaceae

Rhododendron saisiuense Nakai, B. M. T. 49 : 587 (1935)

Mt. Halla

Vaccinium koreanum Nakai, Trees Shrubs Jap. 1 : 191 (1922)

Common on the edge line of mountains

Primulaceae

Androsace cortusaefolia Nakai, B. M. T. 31 : 104 (1917)

North to Mt. Seorag

Lysimachia coreana Nakai, B. M. T. 23 : 106 (1909)

Gyongsang-bugdo. Gyonggido. Gangwondo

Oleaceae

Abeliophyllum distichum Nakai, B. M. T. 33 : 153 (1919)

Mt. Gunja, Goesan-Gun, Chungchong-bugdo

Abeliophyllum distichum for. *lilacinum* Nakai, B. M. T. 36 : 26 (1972)

Mt. Gunja

Abeliophyllum distichum for. *eburneum* T. Lee, Journ. Kor. Pl. Tax. 7. no.1:22
(1976)

Mt. Gunja

Abeliophyllum distichum for. *viridicalycinum* T. Lee, 1. c.

Mt. Gunja

Abeliophyllum distichum var. *obtuscarpum* T. Lee, 1. c.

Mt. Gunja

Forsythia nakaii T. Lee, Bibliogr. Woody Pl. Kor. 330 (1966)

Mt. Jangsu

Forsythia koreana Nakai, B. M. T. 40 : 471 (1926)

Common in cultivation

Forsythia ovata Nakai, B. M. T. 31 : 104 (1917)

Mt. Seorag. Mt. Diamond. Mt. Guwol

Forsythia saxatilis Nakai, Fl. Sylv. Kor. 10 : 21 (1921)

Mt. Kwanak. Mt. Bughan

Ligustrum foliosum Nakai, B. M. T. 32 : 212 (1918)

Dagelet Isl.

Ligustrum foliosum for. *ovale* Nakai, 1. c. 212

Dagelet Isl.

Syringa dilatata Nakai, B. M. T. 32 : 28 (1918)

Huanghae-do. Pyong-an-namdo. Hamgyong-namdo

Syringa velutina var. *venosa* (Nakai) T. Lee, Bibl. Woody Pl. Kor. 333 (1966)

Dagelet Isl.

Syringa velutina var. *venosa* for. *lactea* (Nakai) T. Lee, 1. c. 333

Dagelet Isl.

Borraginaceae

Bothriospermum imaii Nakai, B. M. T. 23 : 189 (1909)

Pyongyang

Labiatae

Ajuga spectabilis Nakai, B. M. T. 30 : 290 (1916)

Mt. Baegyang. Gyonggido

Elscholtzia minima Nakai, Veg. Quelp. 77(1914) et B. M. T. 29 : 1 (1915)

Mt. Halla

Lamium takesimense Nakai, Veg. Dag. 25, 40(1910) et B. M. T. 35 : 174 (1926)

Dagelet Isl.

Phlomis koraiensis Nakai, Veg. Mt. Waigalbong 37(1916) et B. M. T. 31 : 106 (1917)

Pyong-ando. Hamgyongdo

Salvia chanroenica Nakai, B. M. T. 23 : 190 (1909)

Mt. Jeongryong. Mt. Bughan. Gangwondo

Scutellaria asperiflora Nakai, B. M. T. 35 : 194 (1921)

From Samsu to Hyesanjin

Scutellaria insignis Nakai, B. M. T. 29 : 2 (1915)

Gwangnung. Mt. Cheongge

Stachys palustris var. *imaii* Nakai, B. M. T. 34 : 48 (1920)

Jairyong. Pyongyang. Sun-an

Solanaceae

Physalis repens Nakai, B. M. T. 29 : 3 (1915)

Jejudo

Scrophulariaceae

Euphrasia coreana W. Becker, Fedde Rep. 17 : 126 (1921)

Mt. Halla

Euphrasia coreanalpina Nakai ex Y. Kimura, J. J. B. 17 : 530 (1941)

Bujon plateau

Euphrasia mucronulata Nakai ex Y. Kimura, J. J. B. 17 : 530 (1941)

Bujon plateau

Euphrasia retrotricha Nakai ex Yemazaki Acta Phytot. Geobot. 19 : 166 (1963)

North to Bujon plateau

Paulownia coreana Uyeki, Bull. Agr. For. Coll. Suwon 1, 20 t. 16 f. 1-10 (1925)

Pyong-an namdo and south to Gyonggido

Pedicularis ishidoyana Koidzumi, Act. phytot. 6 : 291 (1937)

Gaeseong

Pedicularis lunaris Nakai, B. M. T. 34 : 49 (1920)

Mt. Gwanmo

Pedicularis nigrescens Nakai, B. M. T. 30 : 145 (1916)

Mt. Waegal-bong (2,200 m)

Scrophularia alata var. *borealikoreana* Kitagawa in Neolineam. Fl. Mansh. 570 (1979)

Dagelet Isl. Gangwondo. Hamgyong-bugdo

Scrophularia koraiensis Nakai, B.M.T. 23 : 189 (1909)

Common

Scrophularia koraiensis var. *velutina* Sakata, Acta. Phytot. Geobot. 7 : 16 (1938)

Mt. Taehong. Mt. Ilwol

Scrophularia takesimensis Nakai, J.J.B. 14 : 635 (1938)

Dagelet Isl.

Pseudolysimachion insulare (Nakai) Yamazaki, l.c. (1968)—*Veronica insularis* Nakai in

B.M.T. 31 : 29 (1917)—*Veronica nakaiana* Ohwi in Acta Phytot. Geobot. 7 : 29 (1938).

Dagelet Isl.

Pseudolysimachion kiusianum var. *diamantiacum* (Nakai) Yamazaki in J.J.B. 43 : 409 (1968)—*Veronica diamantiaca* Nakai in B.M.T. 31 : 29 (1917).

Mt. Diamond, Mt. Seorag

Pseudolysimachion linariifolium var. *villosulum* (Nakai) Yamazaki—*Veronica villosula* Nakai in B.M.T. 29 : 4 (111) (1915).

Mt. Halla

Pseudolysimachion ovatum (Nakai) Yamazaki in J.J.B. 43 : 409 (1968)—*Veronica ovata* Nakai in B.M.T. 29 : 3 (1915).

Mt. Halla

Pseudolysimachion pyrethrinum (Nakai) Yamazaki in J.J.B. 43 : 410 (1968)—*Veronica pyrethrina* Nakai in J.J.B. 19 : 160 (1943).

Daegu, Gyung-ju

Pseudolysimachion rotundum (Nakai) Holub in Fol. Geobot. Phytot. (Praha) 2 : 423 (1967)—*Veronica rotunda* Nakai in B.M.T. 32 : 228 (1918).

Mt. Halla

Pseudolysimachion rotundum var. *coreanum* (Nakai) Yamazaki in J.J.B. 43 : 411 (1968)—*Veronica coreana* Nakai in B.M.T. 32 : 228 (1918).

Mt. Jiri, Mt. Mudung

Orobanchaceae

Orobanche filicicola Nakai, Synopt. Sketch 104 (1952)

Mt. Baegyang

Rubiaceae

Asperula lasiantha Nakai, J. J. B. 14 : 120 (1938)

Mt. Jiri, Seongchon

Galium koreanum Nakai, B. M. T. 25 : 55 (1911)

South to Chungchong-do

Galium pusillum Nakai, Veg. Quelp. 82 (19114) et B. M. T. 29:4(111) (1915)

Mt. Halla

Galium remotiflorum Leveille et Vnt. in Bull. Soc. Bot. Fr. 55 : 58 (1908)

Mt. Halla

Rubia pubescens Nakai, J. J. B. 13:783 (1937)

Jangsan-got

Caprifoliaceae

Abelia insularis Nakai, B. M. T. 32 : 109 (1918)

Dagelet Isl.

Abelia mosanensis Chung ex Nakai, B. M. T. 40 : 171 (1926)

Maengsan

Abelia taihyoni Nakai, Sylv. Kor. 11 : 51 (1921)

Danyang

Lonicera cerasoides Nakai, Sylv. Kor. 11 : 78 t.33 (1921)

Mt. Jiri

Lonicera coreana Nakai, B. M. T. 29 : 6 (1915)

Mt. Baegyang. Mt. Geryong. Jolla-budgo.

Chungchong-budgo. Gapyong

Lonicera insularis Nakai, B. M. T. 31 : 30(1917)

Dagelet Isl.

Lonicera monantha Nakai, Sylv. Kor. 11 : 73 t.29(1921)

Pyong-an-budgo. Hamgyongdo

Lonicera okamotoana Ohwi, J. J. B. 13 : 340 (1937)

Mt. Jiri. Mt. Diamond

Lonicera subhispidia Nakai, Sylv. Kor. 11 : 74 (1921)

Jolla-namdo. Gyonggido. Hamgyongdo

Sambucus latipinna Nakai, Sylv. Kor. 11 : 25 (1921) et B. M. T. 30 : 290 (1916)

Geojedo. Haenam. Pyongyang. Mt. Baegdu

Sambucus sieboldiana var. *pendula* (Nakai) T. Lee, Bibl. Woody Pl. 342(1966)

Dagelet Isl.

Sambucus sieboldiana for. *glaberrima* Hara based on var. *glaberrima* Nakai,

Tr. Shrubs Jap. rev. ed. 1 : 572 (1927)

Mt. Halla

Sambucus sieboldiana var. *miquelii* for. *velutina* T. Lee based on *S. velutina*

Nakai, B. M. T. 40 : 478(1926)

North to Mt. Gebang

Weigela florida f. *alba* Rehder. Journ. Arn. Arb. 20 : 421(1939)

Mt. Kwanak. Pyong-namdo. Hambugdo

Weigela florida for. *candida* Rehder, l.c. (1939)

Mt. Halla. Mt. Kwanak. Hamnamdo

Weigela florida f. *subtricolor* Nakai, J. J. B. 12 : 11(1936)

Mt. Halla. Pyong-bugdo. Hamnamdo

Weigela subsessilis (Nakai) Bailey. Gentes Herbarum 2 : 51(1929)

Common

Weigera toensis Nakai, J. J. B. 12 : 12 (1926)

Mt. Mireug

Valerianaceae

Patrinia saniculaefolia Hemsley ex Nakai, Synopt. Sketch 109 (1952)

Gyong-namdo. Gyonggido. Gangwondo. Pyongbugdo. Hamgyongdo.

Valeriana officinalis var. *latifolia* Nakai, based on *V. dageletiana* Nakai ex

Maekawa, B. M. T. 47 : 618(1933)

Dagelet Isl.

Dipsacaceae

Scabiosa mansenensis f. *alpina* Nakai, J.J.B. 19 : 269, 272 (1943)

Mt. Halla. and North to Mt. Myohyang

Scabiosa mansenensis f. *pinnata* Nakai, l. c. 269, 273

North to Mt. Seorag

Scabiosa zuikoensis Nakai, l. c. 267

Seohung

Campanulaceae

Adenophora grandiflora Nakai, B. M. T. 23 : 188(1909)

North to Mt. Gebang

Adenophora koreana Kitamura, Acta Phytot. 5 : 205 (1936)

Mt. Diamond. Mt. Chonbul. Gangge

Adenophora kayasanensis Kitamura *l. c.* 247

Mt. Gaya

Adenophora obovata Kitamura *l. c.* 247

Adenophora pulchra Kitamura *l. c.* 247

Adenophora taquetii Leveille, Fedde Rep. 12 : 11 no. 1076(1913)

Mt. Halla

Campanula takesimana Nakai, Veg. Dagelet. Isl. 42 (1919)

Dagelet Isl.

Codonopsis minima Nakai, Veg. Quelp. 85(1914) et B. M. T. 29 : 7 (1915)

Mt. Halla

Hanabusaya asiatica Nakai, Fl. Kor. 2 : 62 (1911)

North to Mt. Seorag

Hanabusaya latisejala Nakai, B. M. T. 35 : 147(1921)

North to Mt. Nangrim

Compositae

Achillea sibirica subsp. *rhodoptarmica* (Nakai) Kitamura, Acta Phytot. Geobot. 8 :

121(1939)

Gaema plateau. Myongchon

Anaphalis sinica subsp. *morii* Kitamura, Acta Phytot. Geobot 7 : 100(1943)

Mt. Halla

Artemisia brachyphylla Kitamura, Acta Phytot. Geobot. 5 : 97 (1936)

Mt. Diamond. Mt. Nangrim. Mt. Baegdu

Artemisia japonica var. *angustissima* (Nakai) Kitamura, Comp. Jap. pars sec. 386

(1940)

Busan

Artemisia japonica var. *hallaisanensis* Kitamura, Comp. Jap. pars sec. 386 (1940)

Mt. Halla

Aster rupicola Vnt. et Levl., Bull. Acad. Intern. Geogr. Bot. 20 Mem. 142 (1909)

Jejudo

Aster koraiensis Nakai, B. M. T. 23 : 186 (1909)

Chungchong-namdo. Mt. Sogni. Mt. Geryong. Mt. Baegyong. Paju. Jangdan
Aster altaicus var. *uchiyamai* (Nakai) Kitamura, Comp. Jap. pars prima 367(1937)

Danyang

Cacalia pseudo-taimingasa Nakai, B. M. T. 29 : 8 (1915)

Mt. Jiri. Mt. Deogyu

Chrysanthemum leiophyllum Nakai, B. M. T. 35 : 147 (1921)

Seohung

Chrysanthemum zawadskii var. *alpinum* (Nakai) Kitamura, Acta Phytot. Geobot.
7 : 210(1938)

Mt. Baegdu

Cirsium chanroenicum Nakai, B. M. T. 26 : 368(1912)

Mt. Jiri. Mt. Gaya. Mt. Joryong. Mt. Seorag

Cirsium maackii var. *nakaianum* (Leveille) Nakai, Fl. Sylv. 14 : 109(1923) et B. M.
T. 46 : 624 (1932)

Mt. Halla

Cirsium rhinoceros Nakai, B. M. T. 26 : 364 (1912)

Mt. Halla

Cirsium rhinoceros f. *albiflorum* Sakata Acta Phytot. 7 : 16 (1938)

Mt. Halla

Cirsium setidens Nakai, B. M. T. 34 : 54 (1920)

Mt. Bughan. Mt. Namsan. Inchon

Leontopodium coreanum Nakai, B. M. T. 31 : 109 (1917)

Mt. Seorag. Mt. Diamond

Leontopodium leirolepis Nakai, in Matsumura, Icon. Pl. Koisikav. 4-4 75, Pl. 250
(1920)

North to Mt. Seorag

Ligularia jamesii (Hemsley) Komarov. Fl. Mansh. III, 697(1907)

Mt. Nangrim. Mt. Baegdu

Ligularia taquetii Nakai, Rep. Quelp. 90(1914)

Jejudo

- Saussurea alpicola* Kitamura, Acta Phytot. Geobot. 2 : 46(1933)
North to Mt. Nangrim
- Saussurea calcicola* Nakai, B. M. T. 45 : 513(1931)
Mt. Odae. Sachang
- Saussurea conandrifolia* Nakai, B. M. T. 29 : 196(1915)
Pyong-bugdo. Mt. Baegdu
- Saussurea diamantiaca* Nakai, B. M. T. 23 : 185 (1909)
North to Mt. Odae
- Saussurea diamantiaca var. longifolia* Nakai, B. M. T. 29 : 196(1915)
North to Mt. Odae
- Saussurea eriophylla* Nakai, B. M. T. 27 : 35 (1913)
Mt. Diamond
- Saussurea koidzumiana* Kitamura, Acta Phytot. Geobot. 4 : 9 et 75 (1935)
Gyongseong
- Saussurea myokoensis* Kitamura, Acta Phytot. Geobot. 5 : 246 (1936)
Mt. Myohyang
- Saussurea neoserrata* Nakai, B. M. T. 45 : 519 (1931)
Pyong-an-bugdo. Hamgyongdo
- Saussurea nomurae* Kitamura, Acta Phytot. Geobot. 4 : 77 (1935)
Mt. Jiri. Habsu
- Saussurea nutans* Nakai, B. M. T. 431 : 110 (1917)
Mt. Odae. Mt. Diamond
- Saussurea polylepis* Nakai, B. M. T. 45 : 522 (1931)
Hongdo Isl.
- Saussurea pseudogracilis* Kitamura, Acta Phytot. Geobot. 5 : 246(1936)
Mt. Gaya. Mt. Diamond
- Saussurea rectinervis* Nakai, B. M. T. 46 : 618 (1932)
Mt. Baegseol (Pyongbugdo)
- Saussurea rorinsanensis* Nakai, B. M. T. 36 : 72(1922)

Mt. Nangrim

Saussurea saxatilis Komarov, Acta Horti Petrop. 18 : 422 (1900)

Hamgyong-bugdo

Saussurea seoulensis Nakai, B. M. T. 25 : 58(1911)

Seoul

Saussurea triangulata var. *alpina* Nakai, B. M. T. 29 : 203 (1915)

Mt. Baegdu

Saussurea triangulata var. *pinnatifida* Kitamura, Comp. Jap. pars prima 201(1937)

Hyesanjin

Saussurea uchiyamana Nakai, B. M. T. 29 : 197(1915)

Mt. Diamond

Saussurea umbrosa var. *herbicola* Nakai, B. M. T. 29 : 201 (1915)

Bochonbo (Hambugdo)

Senecio birubonensis Kitamura, Acta Phytot. Geobot. 6 : 270 (1937)

Mt. Diamond

Senecio koreanus Komarov, Acta Horti-Petrop. 18 : 421 (1900)

Chupungryon. Mt. Seorag. Mt. Gwanmo

Serratula insularis var. *koreana* Kitamura, Gomp. Jap. pars prima 29 (1937)

Mt. Halla

Hieracium coreanum Nakai, B. M. T. 29 : 9 (1915)

Mt. Baegdu. Mt. Gwanmo. Mt. Chailbong. Mt. Mudubong

Taraxacum hallaisanense Nak. Veg. Quelp. 92(1914) et B. M. T. 29 : 11(1915)

Mt. Halla

SUMMARY

With a general review of original descriptions and results of studies on type specimens of Korean material the author concluded that 407 taxa which belong to 61 families 172 genera, 339 species, 46 varieties, 22 forms are endemic to Korea as presented below.

Class	Family	Genus	Species	Varietas	forma
<i>Filicinae</i>	4	5	11	—	—
<i>Gymnospermae</i>	3	5	3	6	7
<i>Angiospermae</i>	51	162	325	40	15
<i>Monocotyledoneae</i>	8	24	45	7	—
<i>Dicotyledoneae</i>	46	138	280	33	15
Total	61	172	359	46	22

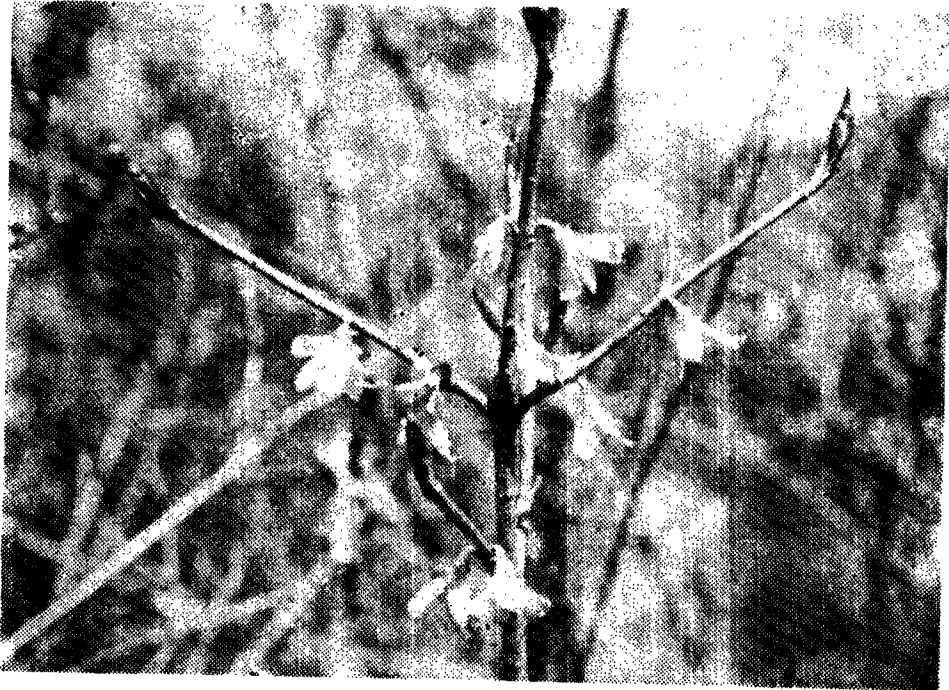
Of the endemic ferns 5 taxa each are growing in the south and north Korea with one species in common. Eleven in 16 endemic gymnosperma taxa are growing within our present territory while 32 endemic monocots are distributed in the south and 16 in the north with 3 taxa in common. Of the endemic dicots, 175 taxa are limited to our territory and 81 to the north while 72 taxa are in common. As a conclusion 224 in 407 of total endemic vascular plants are growing in the Republic of Korea and 107 in the north with 76 taxa in common.

Endemic taxa are distributed from Quelpart Island to Mt. Baegdu, among these localities where endemic members are found Mt. Halla has 75 endemic taxa followed in order by Mt. Jiri (46), Mt. Baegdu (42), Dagelet Island (36), Mt. Diamond (34), Mt. Seorag (23), Seoul (22), Mt. Baegyang (16), Gwangnung (16), Mt. Nangrim (16) Mt. Gunja of Goesan (14), Mt. Sogni (14), Bujeon plateau (12), Mt. Gwanmo (12) and Mt. Baeg-ua (12).

These numbers of endemic taxa for given localities are very doubtful at present but it is true that these numbers of endemics were collected from these areas ascribed during the last century by various taxonomists and plant collectors. For example, *Forsythia saxatilis* was at first collected from Mt. Bughan, Seoul but it is not found now. Recently it was found at the summit of Mt. Kwanak, in the southern suburbs of Seoul, where several plants are survived under a bush of *Quercus mongolica* etc. The same is true of *Viola seoulensis* and *Saussurea seoulensis* are disappearing gradually from the Seoul area because of the destruction of their habitats.

The author presented examples of the threat posed to *Berchemia berchemiae-folia* and the successful reintroduction of the genus *Abeliophyllum* to its original

habitat, success of which can be attained by joint efforts of taxonomists and the whole people of Korea. As a taxonomist he presented herein a list of presently known endemic plants together with their original references and localities based on his long experience in studying the Korean flora, which will serve as a tool for the effective protection of all Korean endemics.



Forsythia saxatilis flowered normally at the summit of the Mt. Kwanak, a corner of the Kwanak Arboretum, S.N.U.