韓國鬱陵島から蘚類植物相の新たな記録

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Si He[1] and Jong-Suk Song[2]: **New records of mosses from Ulleung Island, Korea**

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On our field trip in 2000, supported by the National Geographic Society, the authors collected bryophytes in Ulleung Island (37°27′–33′ N ; 130°47′–55′ E). The island is just ca. 137 km east of mainland Korea and ca. 300 km west from Japan. It is of volcanic origin with a total area of 73 km^2 and the highest peak (Mt. Seongin -bong) measures 983 m in altitude. The forest vegetation of the island is dominated by *Persea thunbergii*, *Pinus thunbergii*, and *Quercus salicina* in lower altitudes and by *Acer okamotoanum*, *A. takesimense*, *Fagus japonica* var. *multinervis*, *Pinus parviflora* and *Tsuga sieboldii* in higher altitudes above ca. 400 m. Phytogeographically, the vascular plant flora of the island is especially interesting because the endemism is very high. Its floristic composition represents an intermediate characteristic of Korea and Japan (Nakai 1919). Although the climatic conditions in Ulleung Island tend to be moderate and somewhat humid, the bryophyte flora of the island in general is not very rich in species diversity. This is probably one of the reasons why it has attracted few interests in the study of its bryophyte flora. Studies on the mosses of Ulleung Island have been very scanty with only one publication by Deguchi et al. (1998), which documents 17 families, 29 genera, and 37 species of mosses. The present paper significantly increases our knowledge of the moss flora of Ulleung Island with a report of 22 families, 44 genera, and 74 species/varieties. Nearly all of the currently known mosses from the island are common to Japan. Of twenty-eight species of mosses that are restricted to Ulleung Island in the moss flora of Korea, twenty-five of them are common to Japan, but not in elsewhere of Korean mainland. Additional fact that some Japanese endemic species were also present in Ulleung Island indicates that the moss flora of the island exhibits a much closer affinity to that of Japan than Korean mainland. All voucher specimens are deposited at the Missouri Botanical Garden and at the herbarium of Andong National University.

Below is a list of the species arranged systematically by families followed by citations of the voucher specimens. New Korean records are indicated by double asterisk marks, and new records to Ulleung Island are marked with an asterisk. Collections were made mainly from Mt. Seongin-bong (300–980 m) and around the Bongnae waterfall (100–260 m).

1. Fissidentaceae
Fissidens taxifolius Hedw.
(nos. 00280, 00373).
**F. teysmannianus* Dozy et Molk.
(nos. 00262, 00313, 00315, 00366, 00385).

2. Ditrichaceae
***Ditrichum heteromallum* (Hedw.) Britt.
(no. 00294).

3. Bryoxiphiaceae
Bryoxiphium norvegicum (Brid.) Mitt. subsp. *japonicum* (Berggr.) A. Löve et D. Löve
(nos. 00263, 00296, 00340).

4. Dicranaceae
**Dicranella heteromalla* (Hedw.) Schimp.

(nos. 00318, 00337, 00361, 00377, 00388).
**Dicranum nipponense* Besch.
(nos. 00323, 00332 a).
**Dicranum viride* (Sull. et Lesq.) Lindb. var. *hakkodense* (Cardot) Tak.
(no. 00363).
Trematodon longicollis Michx.
(no. 00321).

5. *Leucobryaceae
****Leucobryum bowringii*** Mitt.
(no. 00342).

6. Pottiaceae
**Barbula convoluta* Hedw.
(no. 00297).
****B. indica*** (Hook.) Spreng.
(no. 00290 a).
**Tortella tortuosa* (Hedw.) Limpr.
(no. 00326).
**Weissia controversa* Hedw.
(no. 00275).

7. Grimmiaceae
**Schistidium apocarpum* (Hedw.) Bruch et Schimp. (nos. 00343, 00344).
****S. liliputanum*** (Müll. Hal.) Deguchi
(no. 00345).

8. Funariaceae
Funaria hygrometrica Hedw.
(no. 00271).

9. *Bryaceae
**Rosulabryum capillare* (Hedw.) J. R. Spence
(nos. 00265 a, 00268, 00271 a, 00336, 00350).
****Bryum dichotomum*** Hedw.
(nos. 00304 a, 00322, 00327 a).
**B. paradoxum* Schwägr.
(no. 00265).
****Orthodontium pellucens*** (Hook.) B. S. G.
(no. 00330)
**Pohlia fauriei* (Cardot) Iisiba
(nos. 00289, 00368, 00391).
**P. longicollis* (Hedw.) Lindb.
(no. 00378).
**P. nutans* (Hedw.) Lindb.
(no. 00325).
****P. otaruensis*** (Cardot) Iisiba
(no. 00346 a).
****P. pseudodefecta*** Ochi
(no. 00329).
**P. wahlenbergii* (F. Weber et Mohr) A. L. Andrews
(no. 00384).

10. Mniaceae
**Plagiomnium cuspidatum* (Hedw.) T. J. Kop.
(nos. 00272, 00301).
P. vesicatum (Besch.) T. J. Kop.
(nos. 00264, 00266).
****Rhizomnium hattorii*** T. J. Kop.
(no. 00292 c).
**Trachycystis flagellaris* (Sull. et Lesq.) Lindb.
(no. 00376).

11. *Bartramiaceae
**Philonotis falcata* (Hook.) Mitt.
(no. 00285).
****P. fontana*** var. *tenuicaulis* (Cardot) Nog.
(no. 00281).
**P. thwaitesii* Mitt.
(no. 00382).

12. Neckeraceae
**Homalia trichomanoides* (Hedw.) Bruch et Schimp.
(no. 00319).
Thamnobryum alopecurum (Hedw.) Nieuwl.
(no. 00307).
**T. coreanum* (Cardot) Nog. et Z. Iwats.
(no. 00369).
**T. subseriatum* (Sande Lac.) B. C. Tan
(no. 00334 a).

13. *Hookeriaceae
**Hookeria acutifolia* Hook. et Grev.
(no. 00292 b).

14. Theliaceae
Fauriella tenuis (Mitt.) Cardot
(nos. 00304, 00327, 00332).

15. *Leskeaceae
**Leskea polycarpa* Ehrh ex Hedw.
(no. 00349).
****Pseudoleskea patens*** (Lindb.) Kindb.
(no. 00362 b).

16. Anomodontaceae
**Anomodon longifolius* (Brid.) Hartm.
(no. 00367).
**A. rugelii* (Müll. Hal.) Keissl.
(no. 00362 c).

17. Thuidiaceae
Claopodium pellucinerve (Mitt.) Best.
(no. 00335).
Haplocladium angustifolium (Hampe et Müll. Hal.) Broth.
(no. 00279).
**Haplohymenium longinerve* (Broth.) Broth.
(nos. 00292, 00320).
Thuidium kanedae Sakurai
(nos. 00324, 00364).
***Pelekuim versicolor* (Müll. Hal.) Touw
(no. 00383).

18. *Amblystegiaceae
***Leptodictyum humile* (P. Beauv.) H. A. Crum
(no. 00339).

19. Brachytheciaceae
* *Brachythecium helminthocladum* Broth. et Paris
(nos. 00273, 00293, 00372).
**Bra. plumosum* (Hedw.) Bruch et Schimp.
(nos. 00276 a, 00310).
Bra. populeum (Hedw.) Bruch et Schimp.
(nos. 00268 a, 00290, 00374, 00381).
**Bra. pulchellum* Broth. et Paris (no. 00362).
Bryhnia novae-angliae (Sull. et Lesq.) Grout
(nos. 00270, 00278, 00311, 00390).
***Bry. tokubuchii* (Broth.) Paris
(nos. 00269, 00375, 00379).
**Cirriphyllum piliferum* (Hedw.) Grout
(nos. 00284, 00317, 00341, 00347).
**Eurhynchium eustegium* (Besch.) Dixon
(no. 00306).
**E. laxirete* Broth. ex Cardot
(no. 00261).
Oxyrrhynchium savatieri (Schimp. ex Besch.) Broth.
(nos. 00283, 00292 a, 00314).
Myuroclada maximoviczii (Boroszcz.) Steere et W. B. Schofield
(nos. 00277, 00282, 00305).
Rhynchostegium riparioides (Hedw.) Cardot
(no. 00291).
**R. contractum* Cardot
(nos. 00371, 00389).
***R. inclinatum* (Mitt.) A. Jaeger
(no. 00287).
**R. pallidifolium* (Mitt.) A. Jaeger
(no. 00334).

20. Plagiotheciaceae
**Plagiothecium cavifolium* (Brid.) Z. Iwats.
(nos. 00348, 00380).
P. nemorale (Mitt.) A. Jaeger
(nos. 00267, 00308, 00309, 00328, 00365).

21. Hypnaceae
**Taxiphyllum aomoriense* (Besch.) Z. Iwats.
(nos. 00302, 00333).
T. taxirameum (Mitt.) M. Fleisch.
(nos. 00276, 00338).
Vesicularia flaccida (Sull. et Lesq.) Z. Iwats.
(no. 00387).
***V. montagnei* (Bel.) Broth.
(no. 00274).

22. *Polytrichaceae
***Atrichum crispum* (James) Sull.
(nos. 00295, 00316, 00370).
**A. rhystophyllum* (Müll. Hal.) Paris
(no. 00288).
**Pogonatum contortum* (Brid.) Lesq.
(no. 00331).
**Polytrichastrum formosum* (Hedw.) G. L. Sm.
(no. 00352).

Three liverworts were identified in our collections: *Marsupella sphacelata* (Giesecke ex Lindenb.) Dum. (no. 00346); *Porella grandiloba* Lindb. (nos. 00303, 00362 a); and *Pellia endiviifolia* (Dicks.) Dumort. (no. 00386).

Discussion

Seven new additions of the families include: the Amblystegiaceae, Bartramiaceae, Bryaceae, Hookeriaceae, Leskeaceae, Leucobryaceae, and Polytrichaceae. Only two families, the Orthotrichaceae and Lembophyllaceae, and four additional genera reported by Deguchi et al. (1998), were not recollected in our trip. Twenty-one gen-

era are new to Ulleung Island, including *Atrichum*, *Bryum*, *Cirriphyllum*, *Dicranella*, *Ditrichum*, *Homalia*, *Hookeria*, *Hygroamblystegium*, *Haplohymenium*, *Leskea*, *Leucobryum*, *Orthodontium*, *Philonotis*, *Pogonatum*, *Pohlia*, *Polytrichastrum*, *Pseudoleskea*, *Rhizomnium*, *Rhynchostegium*, *Tortella*, and *Trachycystis*. Fifty-six mosses are reported as new to Ulleung Island, including 18 species new to the moss flora of Korea and three species that are not found in Japan: *Hygroamblystegium tenax*, *Orthodontium pellucens*, and *Pseudoleskea patens*. It was noticed that overall habitats in the island are more favorable to mosses than to liverworts, and the bryophyte species mostly grow on rocks.

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何　思[1]・宋　鍾碩[2]：韓國鬱陵島から蘚類植物相の新たな記録

本研究により，韓國鬱陵島の蘚類植物相は，24 科 50 属 93 種からなることが判明した。これは過去に鬱陵島で記録されていた種数のほぼ 3 倍にあたる。本研究によってはじめて韓國の蘚類植物相に追加された 18 種を含め，鬱陵島ではこの度の研究により，新たに 7 科 21 属 56 種が見つかった。この島の蘚類植物相は，朝鮮半島よりも日本にはるかに近いことが判った。

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