

CONTRIBUTIONS TO THE BRYOPHYTE FLORA OF MT TAEBAEK, SOUTH KOREA

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During a field investigation carried out in October 2005 in Mt Taebaek Provincial Park (South Korea), a total of 144 bryophyte taxa (42 liverworts and 102 mosses) were collected. Among them, 13 taxa are recorded for the first time in Korea, and 108 taxa are reported for the first time in the Taebaek mountain range.

Key words: bryophytes, Mt Taebaek, South Korea

INTRODUCTION

In the checklist of bryophytes of Korea published by CHOE and CHOI (1980) 429 species, 5 subspecies, 51 varieties of mosses and 187 species, 8 subspecies, 10 varieties of hepatics are recorded from the peninsula. Later on, a checklist of mosses was given by HOANG (1991) for North Korea, which contains 540 species. More recent checklists for the Hepaticae and Anthocerotae of the Korean Peninsula were published by HONG (1997) and YAMADA and CHOE (1997). The first one listed 259 species, 4 subspecies and 3 varieties, the latter contains 222 species, 9 subspecies and 5 varieties. Most recently an identification key for the Hepaticae and Anthocerotae of the Korean Peninsula was compiled (HONG 2003). Inferred from these publications it is apparent that the hepatic flora of the Korean Peninsula is quite well known, but the investigation on the moss flora has been a neglected area.

MATERIALS AND METHODS

The investigated area

The Taebaek mountain range runs through the Korean Peninsula from north to south along the east coast. Mt Taebaek (1,567 m), one of the high mountains of this range is located 10 km southwest of Taebaek city, Kangwon province. The summers are hot and moist while the winters cold and dry. Mean temperatures at Taebaek city range from 20.8 °C in August to -4.9 °C in January and the mean annual precipitation was 1,300 mm during the last 30 years. Brown forest soil is prevalent and bedrock is composed of metamorphic rocks (Precambrian schist and phyllite) covered by Palaeozoic and Mesozoic sedimentary rocks and Mesozoic igneous rocks. The low to middle altitude ranges are covered by mixed forests composed of *Abies holophylla*, *Acer pictum* subsp. *mono*, *Acer pseudo-sieboldianum*, *Betula ermanii*, *Fraxinus sieboldiana*, *Malus baccata* var. *mandshurica*, *Pinus koraiensis*, *Quercus mongolica*, *Sorbus commixta*, *Taxus cuspidata*, and *Tilia amurensis*.

Methods

Collections were made in October of 2005. Different types of temperate deciduous forest and stream valleys were explored for bryophytes on various substrates (soil, exposed and shady rocks, tree barks and decaying wood). The collected material, shared by the respective institutions, have been deposited in the herbarium of the Hungarian Natural History Museum (BP) and in the collection of the Korean Lichen Research Institute of Suncheon National University (KoLRI). Several works have been used for identification and consulting the nomenclature (GAO and CROSBY 1999, 2003, LI and CROSBY 2001, WU and CROSBY 2002, 2005, NOGUCHI 1987, 1988, 1989, 1991, 1994, HILL *et al.* 2006, HONG 1997, 2003). The floristical results that appeared new for the country had been analysed according to the checklists of CHOE and CHOI (1980), HOANG (1991), HONG (1997), YAMADA and CHOE (1997) and the identification key for liverworts and hornworts (HONG 2003). Earlier data on the bryophyte flora of the Taebaek mountain range can be found in SONG (1999). This paper deals with the terricolous bryophyte communities of mixed coniferous and deciduous broadleaf forests and the evergreen coniferous forests of the mountain range with a record of 80 bryophyte taxa. The common species of this list and our findings are analysed.

Site details

1. South Korea, Kang-won-do, Mt Taebaek at Taebaek city, from Dangunseongjon towards Manggyeongsa, 910–970 m, N 37° 06' 48.8", E 128° 56' 51.0" and N 37° 06' 37.5", E 128° 56' 41.0", 13.10.2005.

2. South Korea, Kang-won-do, Mt Taebaek at Taebaek city, from Dangunseongjon towards Munsubong, 970–1,325 m, N 37° 06' 08.3", E 128° 57' 05.4" and , N 37° 06' 00.0", E 128° 56' 49.6", 14.10.2005.

RESULTS AND DISCUSSION

Altogether 144 bryophyte taxa (42 liverworts and 102 mosses) were collected during our field trip. The following 13 taxa are recorded for the first time in South Korea. Hundred eight taxa are reported for the first time in Mt Taebaek mountain range. Thirty-six bryophyte taxa, listed in SONG (1999) were also found during our investigation.

Species recorded for the first time in the country

Hepaticae

Conocephalum salebrosum Szweykowski, Buczkowska et Odrzykoski – This species has recently been described (SZWEYKOWSKI *et al.* 2005). It is closely related to *C. conicum*, but on the basis of morphological and anatomical characters it can be safely separated. *C. salebrosum* has a wider Holarctic distribution, whereas *C. conicum* is restricted to Europe. *Conocephalum conicum* is reported from Korea (HONG 2003), but the specimens collected in Mt Taebaek without doubt belong to *C. salebrosum*. According to the geographical distribution range of the two species, it is supposed that specimens under the name *Conocephalum conicum* collected in East Asia are mostly *C. salebrosum* (SZWEYKOWSKI *et al.* 2005).

Musci

Buxbaumia punctata P.-C. Chen et X.-J. Li – It lives on forest ground and decaying wood. In Mt Taebaek it was found on humus rich soil at 1,300 m altitude. Distribution: it was known as endemic to China (WU and CROSBY 2005). It is recorded for the first time on the Korean Peninsula.

Campylium squarrulosum (Besch. et Card.) Kanda – The main habitat of the species is decaying wood; in Mt Taebaek it was found also on bark of tree and on humus covered rocks. Distribution: Japan, Korea, China.

According to NOGUCHI (1991) it is known from Korea, but not mentioned in CHOE and CHOI (1980) or HOANG (1991).

Cyrto-hypnum tamariscellum (C. Müll.) Buck et Crum – It can be distinguished from the other species of the genus by having paraphyllia on the stems, but lacking on the branches. The stem leaves are acuminate or lanceolate above with multipapillose cells (WU and CROSBY 2002). It grows on forest ground, humus, moist soil, tree trunks; in Mt Taebaek it was collected from bark of trees and on humus rich soil. Distribution: Japan, Korea, China, India, Myanmar, Thailand (WU and CROSBY 2002). According to WU and CROSBY (2002) it is known from Korea, but not mentioned in CHOE and CHOI (1980) or in HOANG (1991).

Hygrohypnum eugyrium (Schimp.) Broth. – It is reported from some mountains of North Korea (HOANG 1991). The species lives on rocks in streams. In Mt Taebaek it was found in the streams of both valleys visited. Distribution: Japan, eastern Asia, northern and central Europe and eastern North America (NOGUCHI 1991). It is reported for the first time in South Korea.

Isopterygiopsis muelleriana (Schimp.) Iwats. – Usually it grows on rocks; in Mt Taebaek it was found on shaded rocks in both valleys. Distribution: Japan, China, Russia, Europe, North America (WU and CROSBY 2005). It is recorded for the first time on the Korean Peninsula.

Orthotrichum laevigatum Zett. var. *japonicum* Lewinsky – It occurs on bark of trees; in Mt Taebaek it was collected from the same substrate. Distribution: Japan, China (NOGUCHI 1989, www.mobot.org/MOBOT/moss/China/china-no.html). It is reported for the first time on the Korean Peninsula.

Paraleucobryum sauteri (Bruch et Schimp.) Loeske – This is a montane species, which grows on the bases of trees and rocks; in Mt Taebaek it was found on shaded rocks. Distribution: China, Russia (Siberia), Europe, and North America (GAO and CROSBY 1999). It is reported for the first time on the Korean Peninsula.

Plagiothecium curvifolium Schlieph. ex Limpr. – It occurs on various substrates as at the base of trees, soil, forest ground, decaying wood; in Mt Taebaek it was collected from soil among rocks. Distribution: Japan, Europe, Africa (NOGUCHI 1994). It is reported for the first time on the Korean Peninsula.

Pohlia proligera (Kindb.) Lindb. ex Arn. – It is reported from North Korea (HOANG 1991). It can be distinguished from the other *Pohlia* species by bearing numerous slender, fusiform gemmae on the upper parts of the shoots. Densely foliated glossy plant (NOGUCHI 1988, DEMARET and ARTS 1993). This species occurs on soil along roadsides, forest ground; in Mt Taebaek it was found on soil along the tourist path. Distribution: widely distributed in the northern hemisphere (NOGUCHI 1988). It is recorded for the first time in South Korea.

Polytrichastrum ohioense (Ren. et Card.) G. L. Smith – It is reported from North Korea (KIM *et al.* 1995). It occurs on soil along roadsides, forest ground; in Mt Taebaek it was collected from humus covered rocks. Distribution: Japan, China, North America (WU and CROSBY 2005). It is reported for the first time from South Korea.

Pylaisiella polyantha (Hedw.) Grout – It is known from North Korea (HOANG 1991). It grows on various substrates as on bark of trees, rotten logs, rarely on rocks or humus; in Mt Taebaek it was collected from bark of a tree. Distribution: Japan, Korea, China, Mongolia, Russia, Europe, Africa, North America (WU and CROSBY 2005). According to WU and CROSBY (2005) it is known from Korea, which probably refers the North Korean occurrence, but not mentioned in CHOE and CHOI (1980). It is reported for the first time in South Korea.

Warnstorfia exannulata (Schimp.) Loeske – It lives on damp soil at streams, in bogs; in Mt Taebaek it was collected along a stream. Distribution: Japan, northern Asia, Europe, Greenland, North America (NOGUCHI 1991). It is reported for the first time on the Korean Peninsula.

List of taxa collected

The species name is followed by the locality numbers and the substrates. The species new to the region (Mt Taebaek), not mentioned in the work of SONG (1999) about the terricolous bryophyte flora of the forests in the Taebaek mountain range, are marked by asterisk.

Hepaticae

- * *Apometzgeria pubescens* (Schrank) Kuwah. – 2: on rock
- * *Bazzania denudata* (Torrey) Trev. – 1: on rock
Bazzania tricrenata (Wahlenb.) Lindb. – 2: on rock
- * *Blepharostoma trichophyllum* (L.) Dum. – 2: on rock and soil
- * *Blepharostoma minus* Horik. – 2: on decaying wood and soil
- * *Calypogeia azurea* Stotler et Crotz – 1, 2: on decaying wood and soil
- * *Cephalozia bicuspidata* (L.) Dum. – 2: on soil
- * *Cephalozia lunulifolia* (Dum.) Dum. – 2: on decaying wood (det. Pócs, T.)
- * *Chiloscyphus pallescens* (Hoffm.) Dumort. – 2: on rock in the stream
- * *Cololejeunea kodamae* Kamim. – 2: on rock
- * *Conocephalum japonicum* (Thumb.) Grolle – 1: on soil
- * *Conocephalum salebrosum* Szweykowski, Buczkowska et Odrzykoski – 1: on soil and rock at the stream
- * *Frullania davurica* Hampe – 1: on rock
- * *Frullania inflexa* Mitt. – 1: on bark of tree
- * *Frullania muscicola* Steph. – 1: on rock
- * *Frullania schensiana* C. Massal – 1: on bark of *Quercus*
- * *Frullania tamarisci* (L.) Dum. subsp. *obscura* (Verd.) Hatt. – 1: on rock
- * *Herbertus aduncus* (Dicks.) S. F. Grey – 2: on irrigated rock
- * *Jamesoniella autumnalis* (DC.) Steph. – 1: on soil among rocks; 2: on decaying wood
- * *Lejeunea compacta* (Steph.) Steph. – 1: on rock
- * *Lejeunea japonica* Mitt. – 1: on rock
- * *Lophocolea compacta* Mitt. – 1: on bark of *Quercus*
- * *Lophocolea heterophylla* (Schrad.) Dum. – 2: on decaying wood and rock
- * *Lophocolea itoana* Inoue – 2: on decaying wood and rock
- * *Lophozia cornuata* (Steph.) Hatt. – 2: on rock
- * *Macvicaria ulophylla* (Steph.) Hatt. – 1: on rock
- * *Marsupella emarginata* (Ehrh.) Dum. – 2: on rock at the stream
Metzgeria conjugata Lindb. – 1, 2: on rock
- * *Metzgeria consanguinea* Schiffn. – 2: on rock (det. Pócs, T.)
- * *Pellia endiviifolia* (Dicks.) Dum. – 1, 2: on humid soil
- * *Plagiochila fruticosa* Mitt. – 1, 2: on rock
- * *Plagiochila porelloides* (Torr. ex Nees) Lindenb. – 1: on bark of tree; 2: on rock
- * *Porella caespitans* (Steph.) Hatt. var. *cordifolia* (Steph.) Hatt. – 1: on rock
Porella fauriei (Steph.) Hatt. – 2: on rock
- * *Porella grandiloba* Lindb. – 1: on rock and bark of tree
Porella vernicosa Lindb. – 1: on rock
- * *Radula constricta* Steph. – 1: on rock
- * *Reboulia hemisphaerica* (L.) Raddi subsp. *orientalis* Schust. – 1: on soil among rocks
- * *Riccardia latifrons* (Lindb.) Lindb. – 2: on decaying wood

- Scapania ampliata* Steph. – 2: on rock
 * *Scapania parvitexta* Steph. – 1: on rock
 * *Scapania undulata* (L.) Dum. – 2: on rock in the stream

Musci

- Amblystegium serpens* (Hedw.) Schimp. – 1: on rock
Anomodon giraldii C. Müll. – 1: on rock
Anomodon rugelii (C. Müll.) Keissler – 1, 2: on rock
Atrichum undulatum (Hedw.) P. Beauv. – 1: on soil
 * *Barbula unguiculata* Hedw. – 1: on soil
 * *Bartramia pomiformis* Hedw. – 1: on rock
Boulaya mittenii (Broth.) Card. – 1: on rock
Brachythecium plumosum (Hedw.) Schimp. – 1, 2: on rock in the stream
Brachythecium populeum (Hedw.) Schimp. – 1: on rock
 * *Brachythecium reflexum* (Stark.) Schimp. – 1, 2: on rock
Brachythecium rivulare Schimp. – 1, 2: on rock in the stream
 * *Brachythecium rutabulum* (Hedw.) Schimp. – 1: on rock and soil
 * *Brothera leana* (Sull.) C. Müll. – 1; 2: on decaying wood
 * *Bryhnia hultenii* Bartr. in Grout – 1: on rock
Bryhnia novae-angliae (Sull. et Lesq.) Grout – 1: on rock
 * *Bryonoguchia molkenboeri* (Sande Lac.) Iwats. et Inoue – 1: on rock
 * *Bryum capillare* Hedw. – 1, 2: on soil
 * *Buxbaumia aphylla* Hedw. – 2: on soil
 * *Campylium squarulosum* (Besch. et Card.) Kanda – 1: on bark of tree; 2: on rock
 * *Ceratodon purpureus* (Hedw.) Brid. – 1: on soil
 * *Claopodium pellucinerve* (Mitt.) Best – 1: on rock
 * *Climacium japonicum* Lindb. – 1: on soil
 * *Cyrto-hypnum pygmaeum* (Schimp.) Buck et Crum – 1: on rock
 * *Cyrto-hypnum tamariscellum* (C. Müll.) Buck et Crum – 1: on bark of tree
 * *Dicranella heteromalla* (Hedw.) Schimp. – 1: on soil
 * *Dicranum fulvum* Hook. – 2: on rock
 * *Dicranum mayrii* Broth. – 1: on rock; 2: on decaying wood
 * *Dicranum scoparium* Hedw. – 1: on rock
 * *Diphyscium fulvifolium* Mitt. – 1: on soil
Entodon flavescens (Hook.) Jaeg. (= *Entodon rubicundus* (Mitt.) Jaeg. et Sauerb.) – 1: on rock; 2: on decaying wood
 * *Fabronia ciliaris* (Brid.) Brid. – 1: on bark of tree and rock
Fauriella tenuis (Mitt.) Card. in Broth. – 1, 2: on rock; 2: on decaying wood
Fissidens dubius P. Beauv. – 1, 2: on rock
 * *Fissidens gymnogynus* Besch. – 1: on rock
 * *Fissidens taxifolius* Hedw. – 1: on soil

- * *Gollania ruginosa* (Mitt.) Broth. – 2: on decaying wood
Grimmia pilifera P. Beauv. – 1, 2: on rock
- * *Haplohymenium triste* (Ces.) Kindb. – 1: on bark of tree
- * *Hedwigia ciliata* (Hedw.) Ehrh. ex P. Beauv. – 1: on rock
- * *Herpetineuron toccocae* (Sull. et Lesq.) Card. – 1: on rock
- * *Herzogiella turfacea* (Lindb.) Iwats. – 2: on decaying wood
- * *Homalia trichomanoides* (Hedw.) Schimp. – 1, 2: on rock
Homalothecium laevisetum Sande Lac. – 2: on rock
- * *Hygrohypnum eugyrium* (Schimp.) Broth. – 1, 2: on rock in the stream
Hylocomiastrum pyrenaicum (Spruc.) Fleisch. in Broth. – 1: on rock
Hylocomiopsis ovicarpa (Besch.) Card. – 2: on rock
Hylocomium splendens (Hedw.) Schimp. – 1: on rock
- * *Hypnum fauriei* Card. – 2: on decaying wood and rocks
- * *Hypnum subimponens* Lesq. subsp. *ulophyllum* (C. Müll.) Ando – 1: on rock
- * *Isopterygiopsis muelleriana* (Schimp.) Iwats. – 1, 2: on rock
- * *Isothecium subdiversiforme* Broth. – 1: on rock
- * *Leucobryum glaucum* (Hedw.) Aongstr. in Fries – 1: on soil
- * *Leucodon pendulus* Lindb. – 1: on rock
Mnium lycopodioides Schwaegr. (= *Mnium laevinerve* Card.) – 1: on bark of tree and rock; 2: on rock
Myuroclada maximowiczii (Borszcz.) Steere et Schof. – 1: on rock
- * *Neckera konoii* Broth. ex Card. – 1: on rock
Okamuraea hakoniensis (Mitt.) Broth. – 1: on rock
- * *Oncophorus crispifolius* (Mitt.) Lindb. – 1: on rock
- * *Oncophorus crispifolius* (Mitt.) Lindb. var. *brevipes* (Card.) Thér. – 2: on rock
- * *Orthotrichum consobrinum* Card. – 1: on bark of tree; 2: on bark of *Salix*
- * *Orthotrichum laevigatum* Zett. var. *japonicum* Lewinsky – 1: on bark of tree
- * *Orthotrichum sordidum* Sull. et Lesq. – 2: on bark of *Salix*
- * *Paraleucobryum sauteri* (Bruch et Schimp.) Loeske – 2: on rock
- * *Plagiomnium acutum* (Lindb.) T. Kop. – 1, 2: on soil
Plagiomnium affine (Bland.) T. Kop. – 1: on soil
Plagiomnium cuspidatum (Hedw.) T. Kop. – 2: on rock
Plagiomnium maximoviczii (Lindb.) T. Kop. – 1: on rock in the stream
Plagiomnium vesicatum (Besch.) T. Kop. – 1, 2: on rock
Plagiothecium cavifolium (Brid.) Iwats. – 1, 2: on rock; 2: on decaying wood
- * *Plagiothecium curvifolium* Schlieph. ex Limpr. – 2: on soil among rocks
Plagiothecium neckeroideum Bruch et Schimp. – 1: on rock
- * *Plagiothecium nemorale* (Mitt.) Jaeg. – 1: on bark of *Quercus* and rocks
- * *Platyhypnidium riparioides* (Hedw.) Dix. – 2: on rock in the stream
Pleuroziopsis ruthenica (Weinm.) Kindb. – 1: on soil
- * *Pogonatum inflexum* (Lindb.) Sande Lac. – 1: on soil
Pogonatum spinulosum Mitt. – 2: on soil

- * *Poblia prolifera* (Kindb.) Lindb. ex Arn. – 1: on soil
- * *Poblia wahlenbergii* (Web. et Mohr) Andrews – 1: on soil
- * *Polytrichastrum ohioense* (Ren. et Card.) G. L. Smith – 1: on rock
- * *Pseudoleskeopsis zippelii* (Dozy et Molk.) Broth. – 1, 2: on rock in the stream
- * *Pylaisiella polyantha* (Hedw.) Grout – 1: on bark of tree and rock
- Racomitrium carinatum* Card. – 2: on rock
- * *Racomitrium ericoides* (Hedw.) Brid. – 1: on rock
- * *Racomitrium laetum* Besch. et Card. – 2: on rock
- Raiiella fujisana* (Par.) Reim. – 1: on bark of tree
- * *Rhabdoweisia crispata* (With.) Lindb. – 1, 2: on rock
- * *Rhizomnium striatulum* (Mitt.) T. Kop. – 1, 2: on rock
- * *Rhytidiadelphus subpinnatus* (Lindb.) T. Kop. – 1: on rock
- Rhytidiadelphus triquetrus* (Hedw.) Warnst. – 1, 2: on rock
- * *Schistidium apocarpum* (Hedw.) Bruch et Schimp. – 1, 2: on rock
- * *Schwetschkeopsis fabronia* (Schwaegr.) Broth. – 1, 2: on rock
- Taxiphyllum aomoriense* (Besch.) Iwats. – 1: on rock
- * *Tetraphis pellucida* Hedw. – 1, 2: on decaying wood
- * *Thamnobryum coreanum* (Card.) Nog. et Iwats. – 1: on rock
- * *Thuidium cymbifolium* (Dozy et Molk.) Dozy et Molk. – 1: on rock
- Thuidium glaucinum* (Mitt.) Bosch et Sande Lac. – 1: on rock
- * *Thuidium subglaucinum* Card. – 2: on rock
- * *Trachycystis flagellaris* (Sull. et Lesq.) Lindb. – 1: on rock
- * *Trachycystis microphylla* (Dozy et Molk.) Lindb. – 2: on rock
- * *Trichostomum tenuirostre* (Hook. et Tayl.) Lindb. – 1, 2: on rock, 1: on bark of *Quercus*;
 2: on decaying wood
- * *Ulota crispa* (Hedw.) Brid. – 2: on bark of *Salix*
- * *Warnstorfia exannulata* (Schimp.) Loeske – 2: on soil among rocks at the stream

Bryophyte vegetation

In Mt Taebaek the shaded, humid acidic rocks, boulders are the most important habitats for bryophytes, hence they maintain a very diverse bryoflora. Large, carpet forming pleurocarp bryophytes, e.g. *Anomodon rugelii*, *Brachythecium populeum*, *B. reflexum*, *Bryhnia novae-angliae*, *Climacium japonicum*, *Entodon flavescens*, *Fauriella tenuis*, *Homalia trichomanoides*, *Hylocomiastrum pyrenaicum*, *Hylocomium splendens*, *Isothecium subdiversiformae*, *Mnium lycopodioides*, *Plagiomnium vesicatum*, *Plagiothecium cavi-folium*, *P. neckeroideum*, *P. nemorale*, *Pleuroziopsis ruthenica*, *Rhizomnium striatulum*, *Rhytidiadelphus subpinnatus*, *R. triquetrus*, *Taxiphyllum aomoriense*, *Thamnobryum coreanum*, and *Thuidium cymbifolium* are very

characteristic. These are accompanied by several large acrocarp species such as *Bartramia pomiformis*, *Dicranum mayrii*, *D. scoparium*, *Grimmia pilifera*, *Hedwigia ciliata*, *Leucobryum glaucum*, *Polytrichum ohioense*, *Racomitrium ericoides*, *R. carinatum*, and *Trichostomum tenuirostre*. A few liverworts are also abundant like *Frullania jackii* subsp. *japonica*, *F. muscicola*, *F. tamarisci*, *Porella grandiloba*, *P. vernicosa*. On bare soil along the tourist paths *Dicranella heteromalla*, *Pogonatum spinulosum*, *Pohlia prolifera* moss species, and a few liverworts such as *Calypogeia azurea*, *Cephalozia bicuspidata* are the most frequent. The irrigated rocks along the streams are inhabited by several aquatic bryophytes as *Brachythecium plumosum*, *B. rivulare*, *Chiloscyphus pallescens*, *Hygrohypnum eugyrium*, *Marsupella emarginata*, *Platyhypnidium riparioides*, *Pseudoleskeopsis zippelii*, *Scapania undulata*. Higher up from the water level *Hylocomiopsis ovicarpa*, *Plagiochila fruticosa*, *P. porelloides*, *Plagiomnium acutum*, *P. vesicatum* are the most important elements. On tree barks *Anomodon rugelii*, *Cyrtohypnum sparsifolium*, *Entodon flavescens*, *Fabronia ciliaris*, *Orthotrichum consobrinum*, *Rauyiella fujisana*, *Ulota crispa* moss species and *Frullania* species (e.g. *F. inflexa*, *F. schensiana*), *Lophocolea itoana*, *Plagiochila porelloides* and *Porella grandiloba* liverworts are the most characteristic. Although decaying wood material is rather scarce in these forests, several liverwort species were found on this substrate, e.g. *Blepharostoma minus*, *B. trichophyllum*, *Calypogeia azurea*, *Cephalozia bicuspidata*, *C. lunulifolia*, *Jameconiella autumnalis*, *Lophocolea heterophylla*, *L. itoana*, *Riccardia latifrons*. These are accompanied by a number of mosses including *Brothera leana*, *Dicranum mayrii*, *D. scoparium*, *Fauriella tenuis*, *Gollania ruginosa*, *Herzogiella turfacea*, *Hypnum fauriei*, *Tetraphis pellucida*, *Trichostomum tenuirostre*.

CONCLUSIONS

In addition to several new regional data obtained during this very short field trip in Mt Taebaek, 13 taxa turned out to be first records in the country. These results reflect on the need of continuing bryological investigations in South Korea. Especially the knowledge of the moss flora is far from being complete. The habitats in the mountainous areas still are in

good condition and maintain a diverse bryophyte flora. As the Korean Peninsula forms a natural phytogeographical bridge between the Japanese islands and the continental areas of NE China, the bryophyte flora deserves further studies. It is believed that the occurrence of numerous species currently known as restricted to Japan or China will eventually be recorded on the Korean Peninsula.

Acknowledgements – This study was supported by the exchange program between the Hungarian Academy of Science and the KOSEF (Korean Science and Engineering Foundation). Many thanks to Prof. Jae-Seoun Hur (Korean Lichen Research Institute, Sunchon National University) for the organisation of the field trip and to Prof. T. Pócs (Eger, Hungary) for the determination of some liverwort specimens.

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(Received 11 March, 2008)