

Fungal Flora of Ullung Island (VI) — on ascomycetous, auriculariaceous, and gasteromycetous fungi —

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울릉도의 균류상 (VI)

— 자낭균류, 목이류, 및 복균류에 대하여 —

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ABSTRACT: Fleishy fungi were collected during ten field trips to Ullung Island from October of 1989 to October of 1993. Through the observation of ascomycetous, auriculariaceous, and gasteromycetous fungi, 17 fungi were identified to the species and are listed below. Among them, four species *Dasyscyphus virgineus*, *Hypoxylon serpens*, *Hypoxylon rubiginosum*, and *Eutypa scabrosa* were confirmed new to Korea and are registered here with descriptions.

KEYWORDS: Ullung Island, ascomycetous fungi, auriculariaceous fungi, gasteromycetous fungi

Following the fifth report (Jung, 1994) of "Fungal Flora of Ullung Island" series, some additional miscellaneous fungi were collected through ten field trips to Ullung Island of the Gyung-sangbuk-do, which were made for several days each trip from October of 1989 to October of 1993 along the Do-dong to Seonginbong course of Ullung-eup and the Cheonbu to Seonginbong course of Bukmyeon and between Namyang and Taehwa areas of Seo-myeon.

A total of 72 specimens belonging to ascomycetous, auriculariaceous, and gasteromycetous fungi were examined, and about four fifths which counted 57 specimens were identified to the species. The rest of the fungi were reserved for later works. For the observation of specimens, laboratory techniques of Largent *et al.* (1977) and microscopic methods of Jung (1987) were employed. Total iden-

tified fungi amounted to 6 orders, 10 families, 14 genera, and 17 species. Among them, 1 genus *Dasyscyphus* and 4 species *Dasyscyphus virgineus*, *Hypoxylon serpens*, *Hypoxylon rubiginosum*, and *Eutypa scabrosa* were confirmed new to Korea and are presented here with Korean names and English descriptions.

Taxonomy

The fungi treated here consist of 14 genera belonging to 10 families of 4 ascomycetous orders Pezizales, Helotiales, Clavicipitales, and Sphaeriales, 1 auriculariaceous order Auriculariales, and 1 gasteromycetous order Lycoperdales. And the genera studied were *Cyathipodia* in the Helvellaceae, *Scutellinia* and *Aleuria* in the Humariaceae, *Bisporella* and *Chlorosplenium* in the Helotiaceae, *Dasyscyphus* in the Hyaloscyphaceae, *Cordyceps* in the Clavicipitaceae, *Hypoxylon* and *Daldinia* in the

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Sphaeriaceae, *Eutypa* in the Diatrypaceae, *Auricularia* in the Auriculariaceae, *Calvatia* and *Lycoperdon* in the Lycoperdaceae, and *Geastrum* in the Geastraceae.

For the taxonomy of identified taxa, the system of Dennis (1981) was followed for the ascomycetous fungi and the classification of McNabb (1973) was employed for the auriculariaceous fungi, and

Table 1. List of ascomycetous, auriculariaceous, and gasteromycetous fungi published before and presented here from Ullung Island.

Family	Scientific name	References	Family	Scientific name	References
Ascomycotina				<i>Eutypa scabrosa</i>	this study
Discomycetes			Basidiomycotina		
Pezizales			Hymenomycetes		
Helvellaceae			Auriculariales		
<i>Cyathipodia villosa</i>		this study	Auriculariaceae		
Pezizaceae			<i>Auricularia auricula-judae</i>		Lee
<i>Peziza vesiculosa</i>		Hong & Jang			Hong & Jang
<i>Wynnea gigantea</i>		Hong & Jang	<i>Auricularia polytricha</i>		Lee
Humariaceae					this study
<i>Scutellinia scutellata</i>		this study	Gasteromycetes		
<i>Scutellinia kerguelensis</i>		this study	Phallales		
<i>Aleuria aurantia</i>		this study	Phallaceae		
Helotiales			<i>Phallus impudicus</i>		Hong & Jang
Helotiaceae			Clathraceae		
<i>Bulgaria polymorpha</i>		Hong & Jang	<i>Pseudocolus schellenbergiae</i>		Hong & Jang
<i>Bisporella citrina</i>		this study	Lycoperdales		
<i>Chlorosplenium aeruginosum</i>		this study	Lycoperdaceae		
Hyaloscyphaceae			<i>Calvatia craniiformis</i>		this study
<i>Dasyscyphus virgineus</i>		this study	<i>Lycoperdon gemmatum</i>		Lee
Pyrenomycetes					Hong & Jang
Clavicipitales			<i>Lycoperdon pyriforme</i>		Hong & Jang
Clavicipitaceae					this study
<i>Cordyceps militaris</i>		this study	Geastraceae		
<i>Isaria japonica</i>		Hong & Jang	<i>Geastrum triplex</i>		this study
Sphaeriales			<i>Geastrum mirabile</i>		this study
Sphaeriaceae			Hymenogastrales		
<i>Hypoxylon serpens</i>		this study	Rhizopogonaceae		
<i>Hypoxylon rubiginosum</i>		this study	<i>Rhizopogon rubescens</i>		Hong & Jang
<i>Daldinia concentrica</i>		Hong & Jang	Sclerodermatales		
		this study	Astraeaceae		
Diatrypaceae			<i>Astraeus hygrometricus</i>		Hong & Jang

Scientific names and old synonyms were cited as they appeared in references. Total enumerated taxa were 2 subdivisions, 4 classes, 9 orders, 15 families, 22 genera, and 27 species.

the key of Dring (1973) was used for the gasteromycetous fungi. The colored illustrations of Breitenbach and Kränzlin (1984, 1986), Imazeki and Hongo (1965, 1989), and Imazeki *et al.* (1988) and the literature of Ito (1959) were very useful for the detailed identification and descriptions of specimens and were frequently consulted for confirmation and the guide books of Arora (1986) and Linkoff (1981) were often cited for remarks.

In the past, Lee (1959) first reported 1 auriculariaceous fungus *Auricularia auricula-judae* and 1 gasteromycetous fungus *Lycoperdon gemmatum* in his list of 16 higher fungi from Dagelet Island (=Ullung Island). And, 22 years later, Hong and Jang (1981) surveyed Ulreung Island and listed 55 fleshy fungi among which there were 5 ascomycetous fungi, 2 auriculariaceous fungi, and 5 gasteromycetous fungi. Including the species counted at least more than once before, total confirmed taxa of ascomycetous, auriculariaceous, and gasteromycetous fungi from Ullung Island amounted to 2 subdivisions, 4 classes, 9 orders, 15 families, 22 genera, and 27 species (Table 1).

Helvellaceae 안장버섯과

1. *Cyathipodia villosa* (Hedw.: O. Kuntze) Boud. 솜털대주발버섯

Habitat : solitary on roadside sandy soil.

Remarks : This mushroom occurs on sandy soil by the trail and is apparently a rare one in Ullung Island and, compared with a related species *Macroscyphus macrophus*, has a slightly darker fruitbody, a less hairy stalk, and a shallower cup.

Specimens : along the mountain ridge trail to Seonginbong from the direction of Nari Basin, Seo-myeon, SNU 930825-25.

Humariaceae 접시버섯과

2. *Scutellinia scutellata* (L.: St. Amans) Lambotte 접시버섯

Habitat : gregarious on exposed humus under *Sorbus commixta* or on damp humus associated with wood remains.

Remarks : For a cup fungus, this species is not uncommon in mainland forests but seems to be

uncommon in the island. It has a scarlet disk with the margin ciliated with brown bristles and has been known as a collective species due to its great variation in morphology (Breitenbach and Kränzlin, 1984).

Specimens : between the north of Kwanmobong and the mountain ridge to Seonginbong, Ullung-eup, SNU 910923-33; below Seonginbong on the boundary between Ullung-eup and Seo-myeon, SNU 920911-47.

3. *Scutellinia kerguelensis* (Berk.) O. Kuntze 짧은 털접시버섯

Fruitbody 3–8 mm wide, initially cushion-shaped, becoming flattened and disk-shaped; hymenium smooth, orange-red; margin and outer surface covered with dark brown bristles.

Ascospores 18–24.5×11–13.5 μm, broadly ellipsoid, hyaline, finely and faintly warted, with oil drops; asci 210–245×15–18.5 μm, 8-spored, uniseriate, cylindrical; paraphyses up to 8.5 μm wide, filiform, septate, with clavate apex; bristles 210–260 (–440)×23–50 μm, subulate, thick-walled, sparsely septate, reddish brown, sometimes forked at the base.

Habitat : gregarious on rotten wet wood and wet ground at the stump of *Sorbus commixta*.

Remarks : This cup fungus is very similar to *S. scutellata* in general appearance but has morphologically smaller fruitbodies and microscopically smaller asci and its bristles are just one third the size of those of the latter species. This species is apparently uncommon in the island.

Specimens : between the north of Kwanmobong and the mountain ridge to Seonginbong, Ullung-eup, SNU 931002-12.

4. *Aleuria aurantia* (Fr.) Fuckel 들주발버섯

Habitat : solitary on sloped soil among grasses by the trail.

Remarks : This fungus has a beautiful golden grange cup which soon expands and becomes irregularly flat and fragile. It is known to occur usually on bare soil or broken sandy soil along roads and paths (Arora, 1986).

Specimens : Virgin Forest valley, Buk-myeon, SNU 931002-19.

Helotiaceae 고무버섯과**5. *Bisporella citrina* (Batsch: Fr.) Korf et Carpenter 황색고무버섯**

Habitat : gregarious on rotten wood, fallen branches, half-buried branches, or on rotten wet wood at the stump of *Sorbus commixta*.

Remarks : This bright lemon-yellow fungus is somewhat common throughout the island and usually occurs in densely gregarious forms sometimes covering whole surface of branches.

Specimens : between the north of Kwanmobong and the mountain ridge to Seonginbong, Ullung-eup, SNU 931002-9, 931002-13; along the mountain ridge trail to Seonginbong from the direction of Nari Basin, Seo-myeon, SNU 930825-23; between the communal habitat of *Tsuga sieboldii*, *Pinus parviflora*, and *Fagus crenata* var. *multinervis* and Taehwa-ri, Seo-myeon, SNU 930826-34.

6. *Chlorosplenium aeruginosum* (Fr.) de Not. 녹청균

Habitat : gregarious on a fallen branch of an unknown hardwood.

Remarks : This blue green fungus is a famous one because its mycelium always stains the wood blue green and must be uncommon in the island even though it is rather common in the mainland. A very similar species called *C. aeruginascens* (Nyl.) Karst. is interpreted as a different one from the present species in spore size by European authors (Dennis, 1981).

Specimens : beyond the 2nd rest place, Ullung-eup, SNU 891015-57.

Hyaloscyphaceae 거미줄종지버섯과**7. *Dasyscyphus virgineus* S.F. Gray 솜털종지버섯 (新稱)**

Fruitbody up to 1 mm across, goblet-shaped, then remaining cup-shaped, distinctly stalked and sometimes branched; stalk up to 1 mm long; hymenium smooth, white to cream-colored; margin and outer surface densely covered with white hairs.

Ascospores $5.5-7 \times 1.5-2 \mu\text{m}$, fusiform to oblong, hyaline; asci $50 \times 5 \mu\text{m}$, 8-spored, uniseriate, oblong-clavate; paraphyses $50-55 \times 3.5-4 \mu\text{m}$, lanceolate, sparsely septate, projecting beyond asci;

hairs 5-6 μm wide, filiform, apically blunt or slightly clavate, finely encrusted, sparsely septate.

Habitat : gregarious to caespitose on rotten wood of an unknown hardwood branch.

Remarks : This minute cup fungus which can be easily overlooked has a typical goblet-shaped fruitbody with hairy outer surface stereomicroscopically. There are several similar species to the present one in shape and size but they are usually cup- or saucer- or plate-shaped in appearance (Breitenbach and Kränzlin, 1984).

Specimens : Taehwa Pass on Namseo-ri side, Seo-myeon, SNU 930826-38.

Clavicipitaceae 동충하초과**8. *Cordyceps militaris* (L.: St. Amans) Link 동충하초**

Habitat : solitary or clustered on buried butterfly pupae in humus.

Remarks : This scarlet caterpillar fungus is one of most dominant fungi throughout the island and can be easily identified due to its unique habitat and clavate orange yellow fruitbody.

Specimens : between the 2nd rest place and the north of Kwanmobong, SNU 910923-24, 910923-26; between the north of Kwanmobong and the mountain ridge to Seonginbong, Ullung-eup, SNU 930825-11; below Seonginbong on the boundary between Ullung-eup and Seo-myeon, SNU 930825-14, 930825-17, 930825-18; along the mountain ridge trail to Seonginbong from the direction of Nari Basin, Seo-myeon, SNU 930825-19, 930825-20; between Virgin Forest rest place and Virgin Forest valley, Buk-myeon, SNU 930825-26.

Sphaeriaceae 콩꼬투리버섯과**9. *Hypoxylon serpens* (Pers.: Fr.) Fr. 주름방석꼬투리버섯 (新稱)**

Fruitbody confluent, forming a crust, tuberculate and uneven, grayish black; perithecia about $0.8 \times 0.5 \text{ mm}$, black, arranged in a layer and embedded in a dark stroma, perithecial ostioles projecting as dots on the surface.

Ascospores $10.5-13.5 \times 5.5-7.5 \mu\text{m}$, ellipsoid, adaxially flattened on one side, dark brown, with an oil drop; asci $125-150 \times 5.5-8 \mu\text{m}$, 8-spored,

uniseriate, cylindrical; paraphyses up to 3 μm wide, filiform, slightly clavate at the apex, sparsely septate.

Habitat : confluent on rotten wood of *Alnus maximowiczii*, *Acer okamotoanum*, or unknown hardwoods.

Remarks : This fungus is believed to be uncommon in the island and often covers the whole surface of host wood. There are several members looking alike to the present one in *Xylaria* but they can be mostly differentiated from one another under the microscope.

Specimens : between the 1st and 2nd rest places, Ullung-eup, SNU 931002-4; between the 2nd rest place and the north of Kwanmobong, SNU 930825-6, 930825-7, 930825-10.

10. *Hypoxylon rubiginosum* (Pers.: Fr.) Fr. 갈색방석꼬투리버섯 (新稱)

Fruitbody confluent, forming a thin crust, tuberculate and uneven, brick-red, becoming dark brown; perithecia up to 0.5 mm across, black, irregularly embedded in a dark brown stroma, perithecial ostioles projecting as dots on the surface.

Ascospores (9-) 10-11.5 \times 4.5-5 μm , ellipsoid with a flattened side to bean-shaped, dark brown, with an oil drop, usually with a germination cleft; asci 105-115 \times 7.5-8.5 μm , 8-spored, uniseriate, cylindrical; paraphyses up to 2 μm wide, filiform.

Habitat : confluent on dead wood of unknown hardwoods.

Remarks : This fungus is known to be very common and world-wide in distribution and highly polymorphic in morphology (Breitenbach and Kränzlin, 1984). Depending on the age, it also develops various colors from brick-red, reddish or purplish brown, to blackish ones (Dennis, 1981).

Specimens : Wildlife Reservation of Nari Basin, Buk-myeon, SNU 900807-7-3; between the communal habitat of *Tsuga sieboldii*, *Pinus parviflora*, and *Fagus crenata* var. *multinervis* and Taehwa-ri, Seo-myeon, SNU 930826-35.

11. *Daldinia concentrica* (Bolt.: Fr.) Ces. et Not. 콩버섯

Habitat : gregarious on dead or rotten stumps of unknown hardwoods or trunks of *Morus bombycis* and *Acer okamotoanum*.

Remarks : This crampball is very common and can be found everywhere on dead wood and bark of hardwood trees in mainland forests and, likewise, is one of most dominant fungi occurring throughout Ullung Island.

Specimens : between the 2nd rest place and the north of Kwanmobong, SNU 930825-9; between Cheonbu and Nari Basin, Buk-myeon, SNU 910719-24; Wildlife Reservation of Nari Basin, Buk-myeon, SNU 900807-4, 910924-72; between Wildlife Reservation and the log-mud house of Nari Basin, Buk-myeon, SNU 910719-31; between Nari Basin and Seonginbong, Buk-myeon, SNU 900807-17, 900807-18; between the communal habitat of *Tsuga sieboldii*, *Pinus parviflora*, and *Fagus crenata* var. *multinervis* and Taehwa-ri, Seo-myeon, SNU 930826-30, 930826-32, 930826-33; between Taehwa Pass and communal habitat of *Tsuga sieboldii*, *Pinus parviflora*, and *Fagus crenata* var. *multinervis*, Seo-myeon, SNU 931003-28.

Diatrypaceae 마른버짐버섯과

12. *Eutypa scabrosa* (Bull.) Fuckel 돌기마른버짐버섯 (新稱)

Fruitbody densely gregarious, coarsely warty, grayish black; perithecia 0.3-0.8 mm across, black, singly embedded in a warty stroma; stroma crustose, superficially black, pale brownish within, spreading out on bare wood.

Ascospores 7.5-8.5 \times 2-2.5 μm , allantoid; asci 50-60 \times 11-13 μm , 8-spored, biseriate, fusiform clavate; paraphyses none.

Habitat : gregarious on dead wood of *Fagus crenata* var. *multinervis* or an unknown hardwood.

Remarks : This warty fungus appears to be uncommon in the island and has a characteristic stroma of warty structure spreading out on bare wood and is differentiated from a similar species *E. flavovirens* by the color of stroma. The SNU specimens have unusually larger asci and more thickened ascus walls compared with those in the literature (Breitenbach and Kränzlin, 1984).

Specimens : between Virgin Forest rest place and Virgin Forest valley, Buk-myeon, SNU 931002-20; Taehwa Pass on Namseo-ri side, Seo-myeon, SNU 931003-29.

Auriculariaceae 목이과

13. *Auricularia polytricha* (Mont.) Sacc. 털목이

Habitat : gregarious on trunks or branches of dead *Sambucus sieboldiana* var. *pendula*.

Remarks : This jelly fungus is one of the most common fungi in the island and occurs only on *Sambucus sieboldiana* var. *pendula* which is called "auricularia tree" by local people and seems to be well-adapted to the forests of island environments.

Specimens : beyond Daewonsa Temple, Ullung-eup, SNU 891015-4; between Daewonsa Temple

and the 1st rest place, SNU 930825-1; forest by the brook across Cheonyeon Air-Con area of Jeodong, Ullung-eup, SNU 891017-71-1, 891017-71-2, 891017-71-3, 891017-71-4, 891017-71-5, 891017-87; between Virgin Forest valley and the mountain ridge to Seonginbong, Buk-myeon, SNU 900807-40; between the communal habitat of *Tsuga sieboldii*, *Pinus parviflora*, and *Fagus crenata* var. *multi-nervis* and Taehwa-ri, Seo-myeon, SNU 930826-28; around Araet Tonggumi area, Seo-myeon, SNU 900808-70, 900808-73.

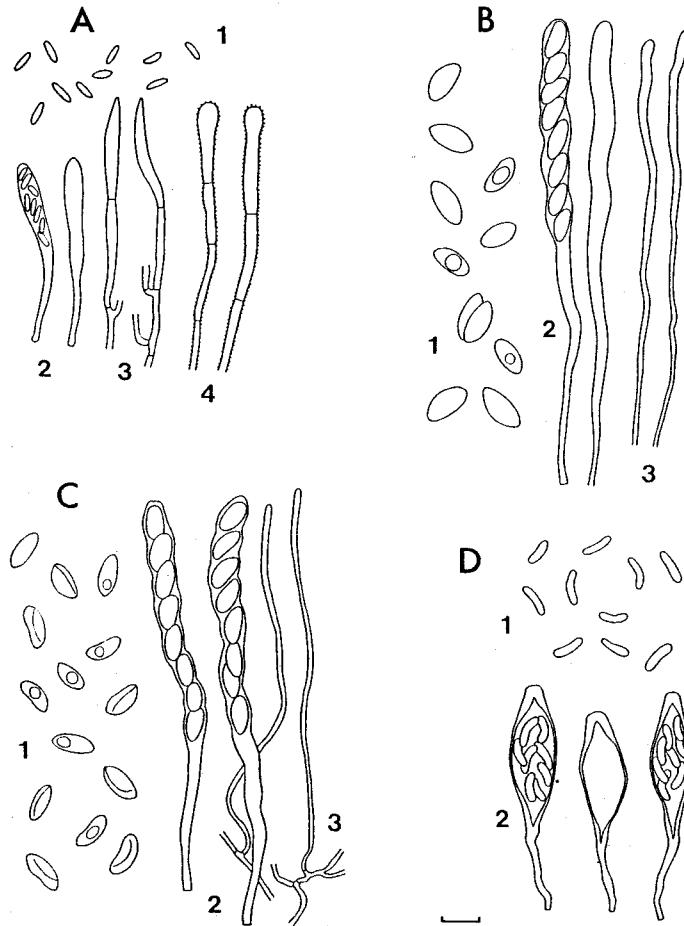


Fig. 1. Microscopic structures (bar=10 μ m)

- A. *Dasyctyphus virgineus*: 1) ascospores, 2) asci, 3) paraphyses, 4) hairs
 B. *Hypoxylon serpens*: 1) ascospores, 2) asci, 3) paraphyses
 C. *Hypoxylon rubiginosum*: 1) ascospores, 2) asci, 3) paraphyses
 D. *Eutypha scabrosa*: 1) ascospores, 2) asci

Lycoperdaceae 말뚝버섯과**14. *Calvatia craniiformis* (Schw.) Fr. 말뚝버섯**

Habitat : solitary on sandy soil of a mixed forest of *Pinus densiflora* and *Robinia pseudo-acacia*.

Remarks : For a member of *Calvatia*, this medium-sized puffball has a well-developed sterile base and a granular to wrinkled peridium with yellow green spore mass within and must be a rare one in the island.

Specimens : around Tonggumi area, Seo-myeon, SNU 900807-65

15. *Lycoperdon pyriforme* Pers.: Pers. 좀말뚝버섯

Habitat : gregarious on dead wood of a fallen branch of *Fagus crenata* var. *multinervis*.

Remarks : This pear-shaped puffball is well-known and most common in the mainland but is apparently rare in the island. It usually occurs on rotting wood of stumps, bases, or exposed roots into which white rhizomorphs penetrate and its fruitbody has no prominent spines on the surface nor a narrow or stemlike base below like *L. perlatum* (= *L. gemmatum*).

Specimens : between the 1st and 2nd rest places, Ullung-eup, SNU 910923-10.

Geastraceae 방귀버섯과**16. *Geastrum triplex* (Jungh.) Fisch. 목도리방귀버섯**

Habitat : solitary or in groups on roadside humus.

Remarks : This earthstar has 5 to 6 rays which are not hygroscopic and split circularly forming a cup or saucer around the spherical endoperidium and seems to be uncommon in the island. This species is known to have a great variation in the degree to which the rays crack to form a saucer (Arora, 1986).

Specimens : between the 1st and 2nd rest places, Ullung-eup, SNU 910923-6, 910923-7; between Virgin Forest rest place and Virgin Forest valley, Buk-myeon, SNU 910924-112.

17. *Geastrum mirabile* (Mont.) Fisch. 애기방귀버섯

Habitat : in groups on roadside humus.

Remarks : This fungus is usually differentiated from other earthstars by its small size, beaklike

apical pore, and short thick pedicel and must be rare in the island.

Specimens : Virgin Forest valley, Buk-myeon, SNU 910924-118

Conclusion

More than 70 specimens of ascomycetous, auriculariaceous, and gasteromycetous fungi were collected from Ullung Island through ten collection field trips from October of 1989 to October of 1993 and were examined to detect the species according to the recent classification systems. They represented 17 species from 14 genera in 10 families of 6 orders under 4 classes of 2 subdivisions, which were 4 species from Pezizales, 3 species from Helotiales, 1 species from Clavicipitales, 4 species from Sphaeriales, 1 species from Auriculariales, and 4 species from Lycoperdales. Among them, 1 genus and 4 species were confirmed as unrecorded taxa to Korea, which were *Dasyscyphus* and *Dasyscyphus virgineus*, *Hypoxylon serpens*, *Hypoxylon rubiginosum*, and *Eutypha scabrosa*. When the species listed or reported from Ullung Island before were added to the present list, the total ascomycetous, auriculariaceous, and gasteromycetous fungi from Ullung Island were enumerated as 27 species from 22 genera in 15 families of 9 orders under 4 classes of 2 subdivisions.

Compared with the ascomycetous, auriculariaceous, and gasteromycetous flora of the mainland, the fungal diversity of the island showed very limited distribution. The common taxa of the mainland like *Helvella*, *Morchella*, and *Xylaria* in the Ascomycotina and *Tremella*, *Scleroderma*, and *Cyathus* in the Basidiomycotina were not discovered yet but, on the other hand, *Cordyceps militaris*, *Daldinia concentrica*, and *Auricularia polytricha* were always collected as dominant species during the five year collection period. Especially, *A. polytricha* was occurring only on dead trees of *Sambucus sieboldiana* var. *pendula* which was called "auricularia tree" by local people and seemed to be well-adapted to the forest environments of the island. Most fungi were growing on roadside humus, sandy soil, wet ground, dead or rotten wood

of trunks, stumps, and branches of several hardwood trees. The floral study of the island demonstrated that only several dominant species developed successful habitats and were constantly found throughout the island but the fungal diversity of the island was very poor and limited in size and number compared with that of the mainland, which fact seems to characterize the typical isolated fungal flora of Ullung Island very well.

摘 要

1989년 10월부터 1993년 10월까지 도합 10차례에 걸쳐 울릉도 전역을 탐색하여 채집한 70 여점의 목이류, 복균류, 및 자낭균류의 표본을 분류 동정한 결과 자낭균아문의 반균강 주발버섯목이 3속 4종, 반균강 고무버섯목이 2속 1미기록속 2종 1 미기록종, 핵균강 맥각균목이 1속 1종, 핵균강 콩버섯목이 3속 1종 3 미기록종, 담자균아문의 균심강 목이목이 1속 1종, 및 복균강 말발버섯목이 3속 4종으로서 2 아문, 4 강, 6 목, 10 과, 13속 1 미기록속에 13 기록종과 4 미기록종으로 확인되었다. 확인된 미기록속은 *Dasyphyphus* (新稱, 털중지버섯屬)으로, 미기록종은 *Dasyphyphus virgineus* (新稱, 솜털중지버섯), *Hypoxylon serpens* (新稱, 주름방석고투리버섯), *Hypoxylon rubiginosum* (新稱, 갈색방석고투리버섯), 및 *Eutypa scabrosa* (新稱, 돌기마른버짐버섯)으로 판명되었다. 본 목록에다 기존에 발표된 보고서의 기록종을 합하면 울릉도의 목이류, 복균류, 및 자낭균류는 도합 2 아문, 4 강, 9 목에 15 과, 22 속, 27종으로 집계되었다.

울릉도의 목이류, 복균류, 및 자낭균류에 대한 전반적인 균류상은 육지의 경우에 비하여 매우 제한된 종류의 분포상을 보이고 있었다. 육지의 산림에서 흔히 채집되는 자낭균류의 안장버섯, 금보버섯, 콩고투리버섯, 담자균류의 흰목이, 어리알버섯, 찻잔버섯과 같은 종류들은 아직 발견되지 않았으며, 반면에 동충하초, 콩버섯, 및 털목이 종류가 우점종으로 주로 발견되었다. 특히 털목이는 전적으로 말오줌때의 죽은 나무에 서식하고 있으며 울릉도의 주민들은 이 나무를 "목이나무"라고 부르고 있어서 섬지방의 산림환경에 잘 적응된 균류로 사료되었다. 이들 균류들은 울릉도의 부식토, 토양, 나무가지, 죽은 나무 등지에서 주로 발견되었으며, 이 지역에 적응하여 서식하는 우점종들은 섬의 도처에서 주기적으로 채집되었으나 이들을 제외하 나머지 종류들

은 단지 육지에서 찾아 볼 수 있는 균류상의 일부분에 지나지 않아 육지로부터 고립된 도서지방의 균류상의 한계성을 찾아 볼 수 있었다.

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