Kwang Hee MOONa and Hiroyuki KASHIWADANIb: Lobothallia alphoplaca (Wahlenb.) Hafellner (Megasporaceae) Found in Korea

ウロコクボミゴケは韓国にも産する（文 光喜a，柏谷 博之b）

Summary: Lobothallia alphoplaca (Wahlenb.) Hafellner was first reported from Korea, where it grew on lava distributed in rather restricted coastal area at NE side of Cheju (Jeju) Island. It has been reported from China and Japan in Asia.

As part of study on the lichen flora of Korea, we collected lichens in Cheju (Jeju) Island in 2001 and 2008. Among lichens collected on lava, we collected two specimens of Lobothallia, which comprises only four species. Detailed studies of them revealed that the specimens should be identified with L. alphoplaca (Wahlenb.) Hafellner as they have thick and tightly adnate lobes, green photobiont of Trebouxia, apothecia of lecanorine type, colorless simple spores, and produce norstictic and stictic acids as major chemical substances.

Although it is sporadically distributed in the Northern Hemisphere (Hafellner 1991), it has been reported from only one locality in Japan (Asahina 1958 as Lecanora) and from five provinces of China in Asia, Magnusson 1940, Wei 1991, Zahlbruckner 1930 as Aspicilia. This is a new record for the species in Korea.

The description of the species based on material from Korea is as follows. Thallus placodioid, pale grayish brown, tightly attached to the substratum, forming a rosette up to 4 cm broad; lobes thick, convex, radiating at periphery, more or less areolate towards the center, 0.3–1 mm wide; isidia or soredia absent; medulla white; lower surface pale, lacking rhizines. Thallus 120–150 µm thick; upper cortex paraplectenchymatous, composed of 3–5 layers of thin-walled hyphae (5–7 µm in diameter), 20–40 µm thick; gonidial layer continuous, irregularly thickened, 20–100 µm thick, gonidia 10–15 µm in diameter; medulla composed of more or less elongated and coalescent hyphae, 100–140 µm thick; lower cortex composed of perpendicularly or irregularly arranged hyphae, some of which penetrating into the substratum for up to 600 µm (Fig. 1). Apothecia lecanorine, superficial, constricted at the base, to 1.3 mm in diam.; disc reddish brown, epruinose; margin entire; paraphyses simple or branched, moniliform above, 75–80 µm high, hypothecium colorless, thin, 10–13 µm thick; spores simple, colorless, 10–12 × 8–10 µm. Chemistry: norstictic and stictic acids as major chemical substances.

The diagnostic characters of this species are the thick placodioid thallus, the absence of soredia or isidia, the white medulla, the paraphyses ending with 4–5 moniliform cells, the colorless simple spores, and the presence of norstictic and stictic acids. As described above, the morphological and chemical characters of the Korean material coincide very well with those found in exsiccate specimens of Lobothallia alphoplaca kept in TNS. This species might be confused with other Korean species of Aspicilia in having similar paraphyses of moniliforms cells and colorless simple spores. However, it is easily distinguished from other related species by the well developed placodioid thallus and superficial apothecia, and by the presence of norstictic and stictic acids.

In Korea, it has been known on lava along the coast at the very limited area on the NNE site of the island, where it grows with Caloplaca flavocitrina, Dirinaria applanata, Endocarpon neopalidum, Lecanora muralis.
Pyxine endochrysina, Ramalina yasuda, Xanthoparmelia coreana, etc.


Specimens examined. Korea. Prov. Cheju (Jeju) : En route from Sehwa to Shihung-ri, Hado-ri, Pukcheju-gun, Cheju Island, on rocks (lava) along the cost, elevation 1–2 m, June 1, 2001, H. Kashiwadani & K.H. Moon (No. 6045 TNS) around Gimnyong seaside, Donggimnyong-ri, Gujwa-up, Jeju Island, on rocks (lava) along the cost, elevation 2 m, October 1, 2001, K.H. Moon 10604 (NIBR).

Fig. 1. Lobothallia alphoplaca. A. Habit. B. Cross section of a thallus, showing hyphae of a lower cortex spreading downward to form a thick attachment strands. C. Cross section of a thallus, showing hyphae of medulla and lower. Bars, A = 1 mm, B = 100 µm, C = 10 µm.

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References


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Hiroyoshi OHASHIa and Kazuaki OHASHIB: New Combinations of Selliguea (Polypodiaceae) in Japan, Korea and Taiwan

Summary: New combinations are made on the East Asian species of Crypsinus to Selliguea in accordance with a recent treatment of the Selliguea in Flora Malesiana. Selliguea echinospora, S. engleri, S. falcatopinnata, S. hastata and its var. longissquama, S. quasidaviricata, S. rynchohylla, S. taiwanensis, S. veitchii, S. yakuinsularis and S. yakushimensis are proposed.

Crypsinus has been accepted in East Asia as a distinct genus of Polypodiaceae for which recent main references are Nakaike (1975), Shieh et al. (1994), Iwatsuki (1995), Nakaike and Yamamoto (1997), Boufford et al. (2003), Cheng (2005), Sun (2007) and Iwatsuki and Yonekura (2008). The genus was, however, pointed out by Airy Shaw (1966) as “possibly a composite genus, part to be transferred to Selliguea Bory”. These two genera were united by Hovenkamp (1998) and adopted Selliguea Bory (Dictionnaire classique