

南極・昭和基地周辺に産する蘚類数種の分子系統解析と分類学的再検討

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Molecular systematics and taxonomic revisions of some Antarctic mosses in Syowa station area, East Antarctica

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From terrestrial environment in the adjacent area of Syowa Station, eight species of mosses are identified as independent taxa, although some species have taxonomic uncertainties. Such uncertainties are noticeable in two species of aquatic mosses at the bottom of lakes and species in genus *Bryum* on ground. In the case of aquatic mosses, two species were identified as an aquatic form of *Bryum pseudotriquetrum* and species belong to genus *Leptobryum* based on morphological characters and presumption. However, the morphological characters of mosses show wide range of variation in the harsh terrestrial environment and in lakes of Antarctica. Therefore it is quite difficult to identify some of Antarctic mosses based on only morphological characters. In this study we attempt to resolve these taxonomic uncertainties and clarify accurate taxonomic position of these Antarctic mosses using molecular systematics.

Our data showed the DNA sequence of aquatic *B. pseudotriquetrum* is completely different from that of *B. pseudotriquetrum* on ground and is almost identical to *B. uliginosum*. This result suggests aquatic *Bryum* in the lakes should be aquatic form of *B. uliginosum*, which have been never found in Antarctica. In the case of aquatic *Leptobryum* sp., the DNA sequence is not identical to two other species in this genus, *L. pyriforme* and *L. wilsonii*. This result suggests aquatic *Leptobryum* sp. is a new and endemic species to Antarctica, because of only these two species are accepted in this genus. Moreover, our data also suggests that the species thought to be "*B. pseudotriquetrum* in Antarctica" is different from *B. pseudotriquetrum* in other region.