

Two complex typifications and a new name to unravel *Ulota germana* sensu Malta non (Mont.) Mitt. (Orthotrichaceae)

Ricardo Garilleti, Belén Albertos, Isabel Draper, Juan Antonio Calleja, Vicente Mazimpaka, Francisco Lara

2020 May 6. <https://doi.org/10.1639/0007-2745-123.2.163>

Ulota germana is an epiphytic moss moderately common in oceanic areas of Patagonia (southern South America), one of the regions of the world where *Ulota* reaches a peak of diversity. It is easily recognized by very long perichaetial leaves, which reach the capsule when wet, an endostome of eight segments and verrucose spores. In Nikolajs Malta's revision of South American *Ulota*, a species was described under this name with apparently similar long perichaetial leaves and spores but with a 16-segment endostome, an uncommon character in this genus. No further references to this particular combination of traits are found throughout the literature of South American *Ulota*. In the same work, Malta also published *U. germana* var. *brevisetata*. During the study of recent Patagonian collections, a moss similar to that described by Malta was repeatedly found, living together with *U. germana* s.str. To ascertain the name and taxonomic identity of the new specimens and Malta's moss, a detailed morphological comparative study was carried out. Original material of relevant names was analyzed, demonstrating that the gatherings on which those names are based were usually a mixture of several species, thus resulting in nomenclatural confusion. Having established that the plants described by Malta at both specific and varietal ranks are not *U. germana*, we formally describe them as *U. maltiana* with a complete description and illustration. *Ulota germana* s.str. is also illustrated for comparison. The reasons behind Malta's error are discussed. We demonstrate that the previous typification of *U. germana* was incorrect, and propose a new lectotypification for this species and for *U. germana* var. *brevisetata*.

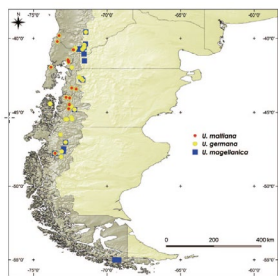


Figure 1. Known distribution of *Ulota maltiana* and origin of the studied specimens of *U. germana* and *U. magellanica*.

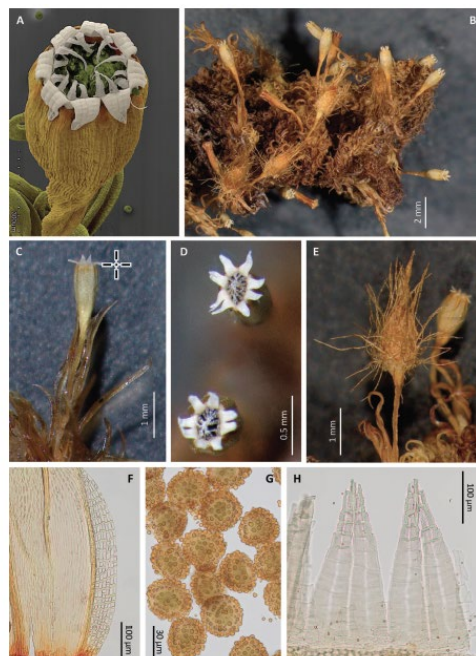


Figure 2. *Ulota maltiana*. A, Scanning Electron Microscope image of a mature capsule in false color. B, Habit with capsules of different ages. C, Wet mature plant showing the position and length of perichaetial leaves relative to seta. D, Upper view of the mouth of two capsules. E, Calyptra. F, Base of a leaf showing the basal marginal cells with transversal walls thickened disposed in more than 5 rows. G, Spores. H, Peristome in inner view, showing the hyaline endostome. (A, C, D, F, G, H from VAS-MOPO 11814; B, E, H from holotype VAS-MOPO 11822).

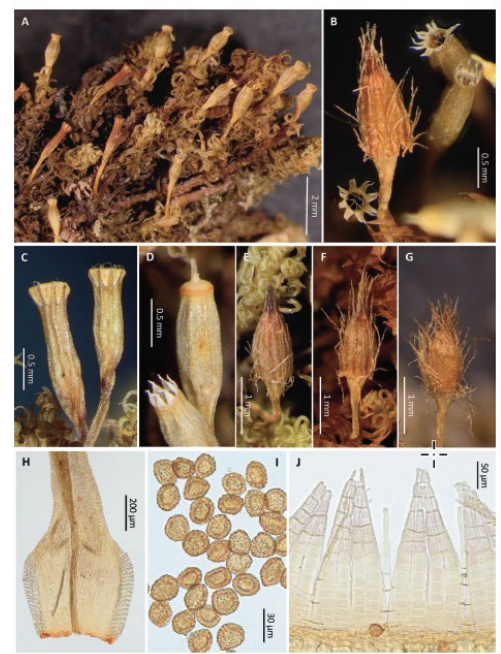


Figure 5. *Ulota germana*. A, Habit with capsules of different ages. B, Detail of a calyptra and the configuration of the endostome. C, Mature capsule after spore release. D, Mature capsule before spore release showing a mature operculum. E-G, Variability of calyptra hairiness completed with the calyptra of Fig. 4. H, Lower half of a vegetative leaf showing the bands of differentiated marginal cells. I, Spores. J, Peristome in inner view, showing the uniseriate hyaline endostome. (A, D, from VAS-BIOC 11849; B, from VAS-BIOC 11851; C, from VAS-MOPO 11850; E, F, from VAS-MOPO 11852; H, from VAS-MOPO 11826; I, from VAS-MOPO 11850; J, K, from MALM 3562).