**CONTRIBUTIONS TO THE PHYLOGENY OF *Lepraria* (Stereocaulaceae) SPECIES FROM THE SOUTHERN HEMISPHERE**

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The genus *Lepraria* includes crustose species with simple morphology, lacking reproductive structures. In contrast to the simple morphology, the genus has a large variety of secondary substances, used as an important character for the delimitation of species. Molecular studies of the genus have helped to clarify and delimit previously unknown species. Currently, over 80 *Lepraria* species are accepted. We studied the phylogenetic relationships of *Lepraria* species mainly collected in the southern Hemisphere, including Australia, Chile, New Zealand, and Antarctica. Morphological characters of the specimens were examined, such as the shape and margin of the thallus and the shape and size of thalline granules. Also, the secondary chemistry was studied using standardized HPTLC techniques. Molecular data were obtained through standard PCR and Sanger sequencing of ITS and mtSSU markers. Phylogenetic analyses were performed using Maximum Likelihood (ML) and Bayesian Analysis (BA). According to its morphology, chemistry, and phylogenetic analysis, we identified several lineages, including two possibly new species for science.