**LINEAGES OF THE LICHEN-FORMING FUNGUS *Stereocaulon alpinum* Laurer AND THEIR PHOTOBIONTS IN SOUTHERN SOUTH AMERICA AND MARITIME ANTARCTICA**

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Lichens occur in most terrestrial ecosystems and are abundant in alpine and polar habitats subjected to challenging conditions of humidity, temperature, and irradiation. Lichenized fungi present in maritime Antarctica (ca. 280 species) have different distribution patterns, 40% of which are endemic, 40% bipolar, 11% cosmopolitan, and 9% restricted to the southern hemisphere. Many cosmopolitan or bipolar species present in Antarctica maritime are also found in southern South America. One of the most common lichens of the region, *Stereocaulon* *alpinum* Laurer forms thalli clusters among bryophytes and is considered a bipolar species. DNA-based analyses frequently reveal multiple lineages within bipolar species, sometimes morphologically and chemically indistinguishable. Our goal was to discuss the circumscription of *S*. *alpinum* and its geographic distribution, including data from the mycobiont and its symbiotic partners. Chemical components were identified with Thin Layer Chromatography, Microcrystallization, Nuclear Magnetic Resonance, and Mass Spectrometry. We analyzed genetic markers from the mycobiont (ITS and β-tubulin gene), the cyanobiont (16S), and the chlorobiont (actin gene) using specific primers in PCR amplifications. Bayesian and maximum likelihood phylogenetic reconstructions indicated that the specimens from the southern hemisphere (maritime Antarctica and South America) formed a well-supported clade with specimens from Finland, Greenland, and Canada. Another clade of *S*. *alpinum* was found, including only specimens restricted to the northern hemisphere. DNA sequences also confirmed that the photobionts are *Nostoc* (a symbiotic lineage) and *Asterochloris irregularis.* With the phenotypic differences observed in the specimens, we showed that *S*. *alpinum* presents wide morphological variation, hindering the identification based only on morphological characters. Finally, we did not detect phenotypic differences among the specimens from South America and Maritime Antarctica and the descriptions of *S. alpinum,* indicating that the bipolar and the northern clades probably correspond to cryptic species. Funding: PROANTAR (MCTI/CNPq/FNDCT), CAPES (Finance Code 001).