**UNRAVELLING THE SPECIFICITY PATTERNS OF LICHEN SYMBIOSIS ALONG A WIDE LATITUDINAL GRADIENT IN CHILE: EPIPHYTIC MACROLICHEN COMMUNITIES IN *Nothofagus pumilio* FORESTS AS A STUDY CASE**

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The study of the specificity patterns between lichen symbionts is essential to understand lichen symbiosis, but the factors that shape spatiotemporal patterns of this mutualistic association are still unknown. The specificity may range from strictly specialists, associated only with one partner, to broad generalists associated with several partners. This specificity between symbionts may vary across species and scales being determined by multiple factors (e.g. genetic and ecological). The aim of this study is to analyse the specificity patterns of all epiphytic macrolichen species associated with cyanobacteria (cyanolichens and cephalolichens) in *Nothofagus pumilio* forests in Chile. For that purpose, we have selected 11 forests along a wide latitudinal and climatic gradient, from Conguillío National Park to Navarino Island. To identify the different *Nostoc* genotypes involved in the lichen symbiosis, we have sequenced the rbcLX gene region for 1120 thalli corresponding to 87 lichen species. We have identified 64 *Nostoc* genotypes associated under different specificity patterns, from species associated with only one *Nostoc* genotype, to more generalist species associated up to 15 different genotypes. A similar pattern was observed in the photobiont specificity. We analysed the factors shaping the different specificity patterns found, including the reproductive strategy (horizontal vs. vertical transmission of the photobiont), the mycobiont identity, the presence of cephalodia, the availability of the photobiont and the micro and macro climatic variables. Funding: Ministry of Economy and Competitiveness of Spain, NOTHODIVERSITY PROJECT (CGL2016-80562-P).