**THE ENVIRONMENTAL CONTEXT INFLUENCES THE ASSOCIATION PATTERNS OF THE SYMBIONTS OF *Peltigera* LICHENS IN SOUTHERN CHILE**

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*Peltigera* lichens are bi- or tripartite associations widespread in several environments worldwide. In Chile, only bipartite *Peltigera* in association with *Nostoc* cyanobacteria as photobiont are reported. The level of specificity in the lichen association can be determined by elucidating the number of photosynthetic partners joined to one mycobiont species, which could be classified from strict specialist to broad generalist. Here, we studied the genetic diversity of 311 *Peltigera* specimens collected in forests and grasslands from the Coyhaique National Reserve and the Patagonia National Park (300 km away), and we evaluated their specificity. The mycobionts identity was confirmed by analyzing fungal LSU and ITS sequences, while cyanobionts were grouped in haplotypes (identical sequences) according to their SSU sequences. We found 10 *Peltigera* species, including a new species yet not described from the *P. rufescens* clade, associated with 24 different *Nostoc* haplotypes. In forests, the most abundant species were *P. fuscopraetextata* and *P. frigida*, while *P. antarctica* and *P. rufescens* predominate in grasslands. *Nostoc* H07 was the most common haplotype (45%), but it was only associated with *P. fuscopraetextata* and *P. frigida*. Some species (e.g. *P. frigida* and *P. truculenta*) were highly specific and were associated with only one or few *Nostoc* haplotypes, while others (e.g. *P. antarctica*, *P. fuscopraetextata* and *P. aubertii*) were associated with up to 6 different *Nostoc* haplotypes. Although some *Nostoc* haplotypes were widely distributed, most of them were only found in a specific environment, being several *Peltigera* species associated with the same *Nostoc* haplotype at each site. Altogether, these results suggest that the association patterns among lichen symbionts would be environmentally structured rather than phylogenetically constrained by the mycobiont identity, supporting functional lichen guilds as reported in other studies of cyanolichens. Funding: JO (FONDECYT-1181510), KA (ANID-PCHA/Doctorado Nacional/2016-21160637).