

# TESTING THE $\alpha$ -DIVERSITY OF LICHENIZED FUNGI: A CASE STUDY WITH REUNION, A SMALL AND REMOTE ISLAND IN THE INDIAN OCEAN

Sérusiaux Emmanuël<sup>1</sup>, Simon Antoine<sup>1</sup>, Masson Didier<sup>2</sup> & Magain Nicolas<sup>1</sup>

<sup>1</sup> = InBios research center, University of Liège, Sart Tilman B22, Quartier Vallée 1, Chemin de la vallée 4, B-4000 Liège, Belgium. E-mail of first author: [e.serusiaux@uliege.be](mailto:e.serusiaux@uliege.be)

<sup>2</sup> = 386 rue des Flamboyants, F-40600 Biscarrosse, France

Access to molecular data of living beings and their treatment with advanced statistical methods now make it possible to scientifically assess the specific diversity of any territory. In almost all cases, the data show a much higher  $\alpha$ -diversity than empirical and classical data could support.

Reunion is a small and remote island in the Indian Ocean (2,512 km<sup>2</sup>; 207 km of coast line; highest summit at Piton des Neiges with 3071m; age: c. 2-5 Myrs); it is a part of the MIOI (Madagascar and Indian Ocean Islands) biodiversity hotspot. A checklist of lichens found on the island is available (van den Boom et al. 2011, *Herzogia* 24:235). It is mainly based on recent and large collections identified by experienced lichenologists not using any molecular data and inferences.

We tested the number of species in several genera based on extensive collecting on the island and production of molecular data (ITS-barcode or with several loci) and their treatment with statistical species delimitation methods. The following genera will be examined: *Cladonia*, *Hypotrachyna*, *Micarea*, *Nephroma*, *Parmotrema*, *Peltigera*, *Phyllopsora* s.l., *Pseudocyphellaria* and *Sticta*. Contrasting results were obtained and will be presented.

The diversity discovered on the tiny island of Reunion leads to argue that this young island is at its top in terms of availability of niches for any colonization from nearby islands and continents (GDM oceanic island model; Whittaker et al., *J. Biogeogr.* 35:997, 2008).