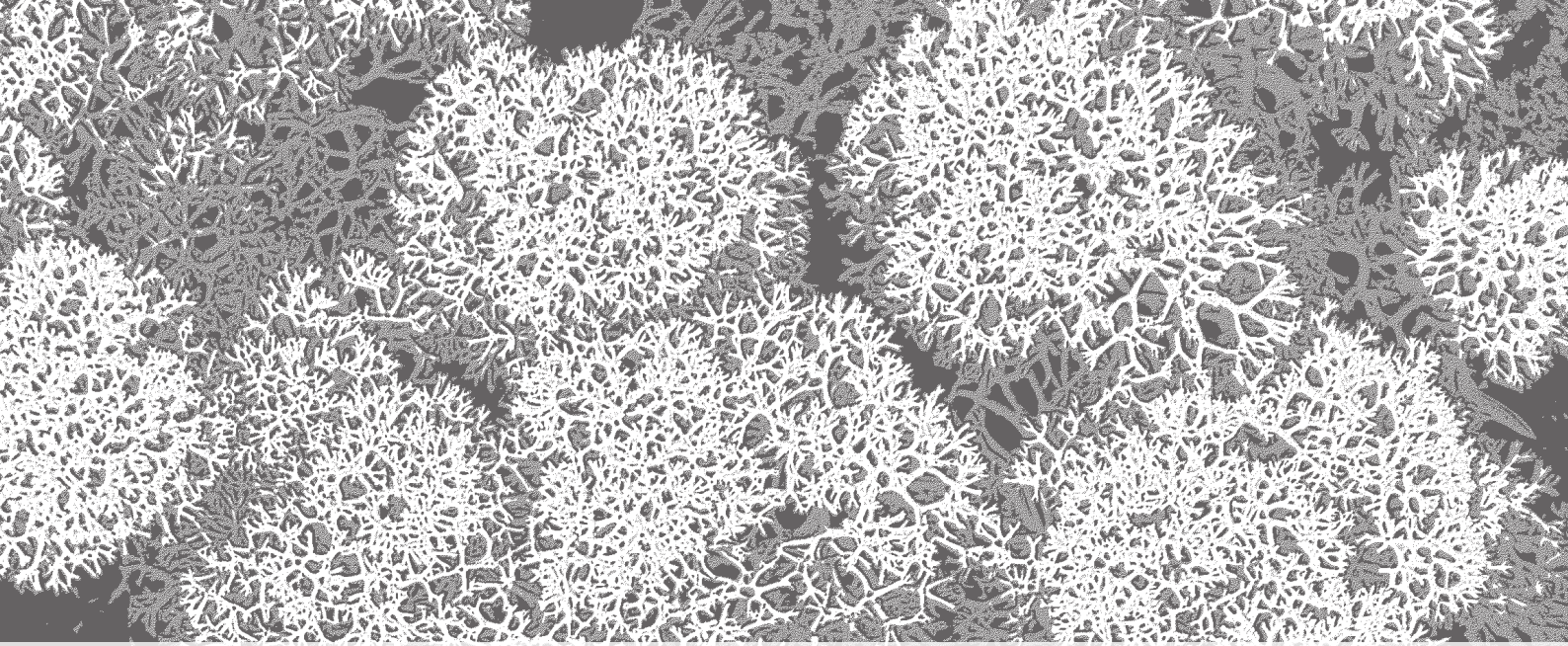

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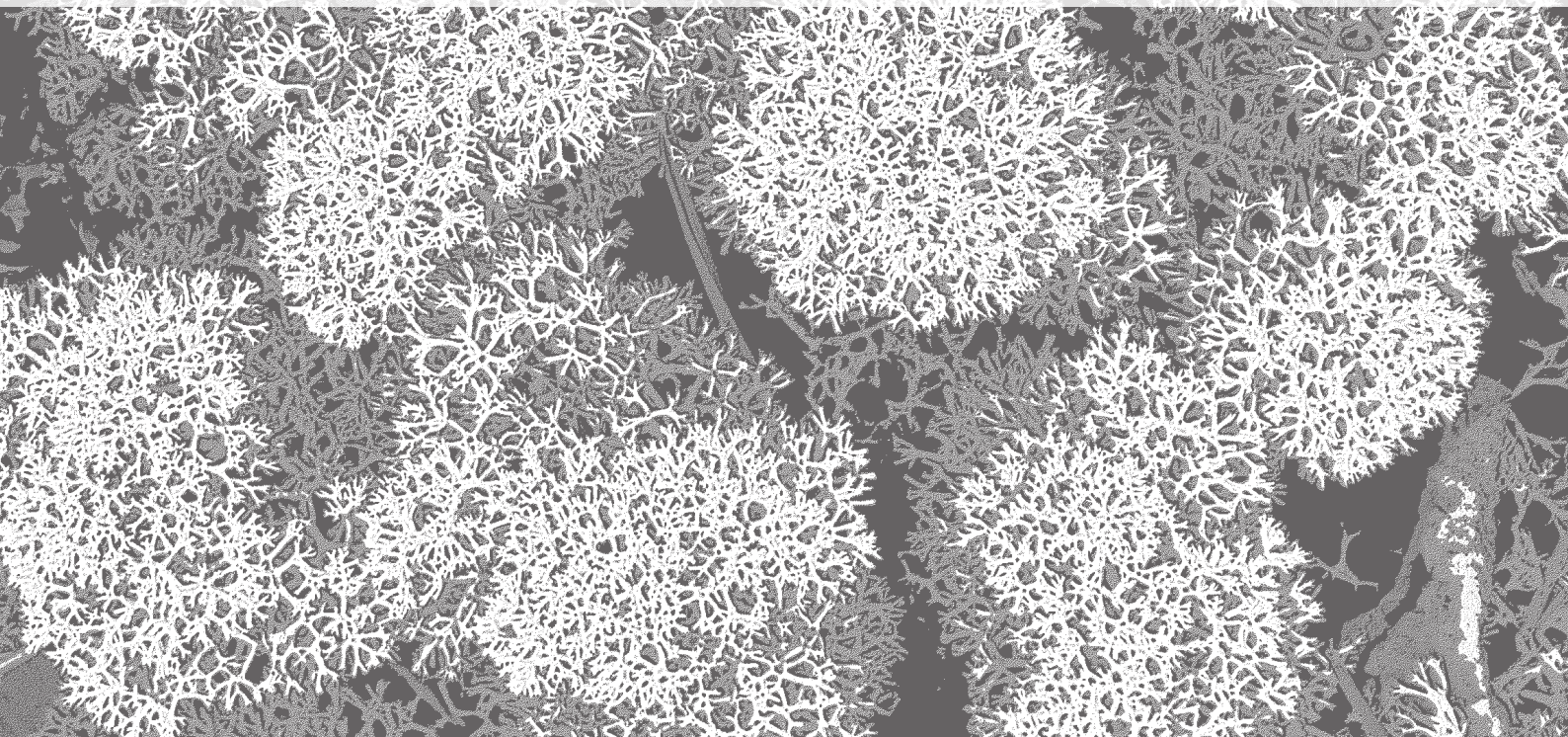

Influence of barbatic acid on sandy soils and vegetation growth from Brazilian Northeast

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About 180 millions hectares of Brazilian area are occupied by savannah-like vegetation where the occurrence of Cladoniaceae is common. This study focused on how *C. salzmannii*, lichen specie known for the production of barbatic acid, change soil biological processes in savannah-tropical ecosystem. Soil analysis, measurements arbuscular mycorrizal colonization (AMF) and growth of *Genipa americana* were analyzed. Samples of soil were collected under pillows of *C. salzmannii* thalli or in open spaces without lichen. *G. americana* seedlings were grown under greenhouse condictions, the experiment was done in a factorial randomized design of 4 treatments: control, lichen, lichen +AMF and AMF. Through TLC assays it was detected in the soil the presence of barbatic acid which influenced on soil chemical and physical characteristics. AMF and number of spores were higher in lichen covered soil. The inoculated plants either with lichens+AMF presented higher growth parameters, as well as a higher number of spores. The results could be indicate that the lichens substances are capable of provide the association between plants and AMF, that is one of the most important symbioses on earth, linking the root and the soil system. This arrangement will improve a positive feedback loop establishes between lichen-AMF and vascular plant.

Dispersal in epiphytic lichens; the answers are blowing in the wind

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The dispersal ecology of lichenized fungi is challenging because of the microscopic size of reproductive propagules. A good understanding of dispersal is critical to conservation biology however, particularly in the case of epiphytic lichens which occur as patch tracking metapopulations. Uncertainties become even more pronounced with the current emphasis on ecosystem function and services which promotes a landscape approach to addressing conservation issues, e.g. if species are able to frequently disperse over long distances, the management consequences at one site can be traded off against another, alternately, the implications of management activity must be considered for the individual site only. Existing literature is largely based on a single species, *Lobaria pulmonaria*, and draws on a variety of methods to infer a dispersal kernel for its combined sexual and asexual propagules. The results are conflicting however, some concluding frequent long distance dispersal over many kilometers, others concluding a steep decay rate over distances of up to 50 m. Here the results of a novel study combining spore trapping with genetic methods are used to infer dispersal distances for a suite of 6 sexual and asexual epiphytic lichen species. The implications for species ecology, land management and response to global change are discussed.

Celebrating lichens and their uses

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This poster demonstrates the air-pollution sensitivity of lichens and their value to humans, wildlife, and forests. Because lichens are often unfamiliar to policy and decision-makers tasked to protect or improve air quality, our goal is to 'put a face' on lichens and their roles—and to illustrate various species and their association with wildlife and ecological services that we as humans value. We hope to add dimension to the rationale for protecting species that may require cleaner air than that which directly protects human health. At the same time, we hope that our audience will discover in the poster illustration, text, and photographs something new to appreciate of the beauty, complexity, and vulnerability of lichens and their associated wildlife and ecosystems, or be intrigued by their remarkable pharmaceutical properties, environmental monitoring uses, and traditional uses.

Towards taxonomy, phylogeography and ecology of *Solenopsora* species (Leprocaulaceae) – elements with a strong link to Mediterranean-type ecosystems

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Mediterranean ecosystems are well-known for high species richness, which has been triggered by the interplay among various environmental and bioclimatic factors. Despite a lot of data on evolution and ecology of Mediterranean biota, little is known about symbiotic systems like lichens. We analysed material from all the Mediterranean area, together with specimens from North America and Australia, aiming at investigating: 1) phylogenetic position of the genus *Solenopsora* within Leprocaulales, proper delimitation of which is needed (nrITS, Mcm7, PKS sequence data); 2) phylogeography of *S. candicans* (nrITS and β-tubuline sequences), and 3) species ecology (by mean of ecological niche modelling). Preliminary analyses of phylogeographic dataset suggest several centres of genetic diversity, mostly in the Mediterranean area. Two larger groups of ubiquitous, and more ancestral ribotypes occur across Europe. Certain accessions of *S. candicans* from Turkey and Morocco are more closely related, forming a well delimited lineage, which is clearly distinct from the rest of the material. Unexpectedly, samples from Pannonia are heterogeneous. This might indicate that Pannonia has represented an important connection between centres of species distribution in the Mediterranean, and in the Western Carpathians, representing northern periphery of distribution range, where few rare ribotypes were also revealed.