INTERNATIONAL ASSOCIATION FOR LICHENOLOGY 9TH SYMPOSIUM

"UNLOCKING THE INNER LICHEN"

VIRTUAL - August 1-6 2021

IAL9 PROGRAM & ABSTRACT BOOK

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UNIVERSIDADE FEDERAL DE SERGIPE

FORT WORTH BOTANIC GARDEN
BOTANICAL RESEARCH INSTITUTE OF TEXAS

UFMS UNIVERSIDADE FEDERAL DE MATO GROSSO DO SUL

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INTERNATIONAL ASSOCIATION FOR LICHENOLOGY 9TH SYMPOSIUM

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genome. The result was a considerable improvement in the number of contigs, now 597, and their size, obtaining a definitive version of the genome of 59.7 Mb, which covers 100% of the estimated genome size and has a completeness of 96.7%. Furthermore, both the functional and structural annotation have been improved due to the integration of information from transcriptomes and the use of different annotation pipelines (BRAKER and MAKER-P). Regarding the structural annotation, the number of detected gene models is 16,391, and the functional annotation has been improved with a total of 7,068 different GO terms, 1,826 EC terms and 7,581 different gene annotations. Funding: PROMETEO/2017/039 (GVA).

HABITAT MODELLING

Crocodia SPECIES IN NORTHERN ARGENTINEAN FORESTS: DISTRIBUTION RANGE AND POTENTIAL DISTRIBUTION

MA. Pía Rodríguez, Andrea Michlig, Nicolás Niveiro, Lidia Ferraro

Abstract: This study aims to present a revision of *Crocodia* Link (*Peltigeraceae*, *Lobarioideae*) in northern Argentinean forests, to estimate its distribution range and potential geographic distribution in the region and to determine main factors affecting its distribution. *Crocodia* is a cosmopolitan genus with its highest diversity in the southern hemisphere in tropical and temperate regions. It is characterized by a foliose thallus, with green algae photobiont and internal cephalodia with cyanobacteria, yellow medulla, yellow pseudocyphellae on the lower surface, pedicellate and usually pubescent or verrucose apothecia, fusiform-ellipsoid, brown, and usually 3-septate ascospores, colorless bacilliform conidia, and triterpenoids as characteristic chemical components. A total of 114 specimens of CTES herbarium were studied, together with additional type specimens. Morphological and anatomical analyses were carried out using standard stereoscopic and compound light microscopes. Measurements were made with ImageJ software. Lichen substances were identified with spots tests. Based on occurrence data of material studied together with localities available in literature from northern Argentina and adjacent regions of bordering countries potential distribution was modeled with Maxent version 3.3.k. Cllimatic and topographic variables of WorldClim and Envirem were used and jackknife test was used to measure their importance. As a result, three species were identified from northern Argentinean forests: *C. arvidssonii*, *C. aurata*, and *C. clathrata.* Their distribution range is extended: *C. arvidssonii* is recorded for the first time for Argentina; *C. aurata* for Corrientes, Misiones, and Salta provinces; and *C. clathrata* for Corrientes and Jujuy provinces.

Species potential distribution models have shown that highest suitable areas are mostly coincident with the Yungas Province (northwestern Argentina), and the Paranaense Province (northeastern region), both dominated by subtropical rainforests. Most relevant environmental variables affecting these species distribution are SAGA-GIS topographic wetness index (*C. arvidsonii*), elevation (*C. aurata*), and mean monthly potential evapotranspiration of driest quarter (*C. clathrata*).

ECOLOGY

ECOLOGICAL REVISION ON THE LICHENICOLOUS FUNGI OF KOREA, WITH A NEW SPECIES *Hydropisphaera phaeophysciicola* AND THREE NEW RECORDS

Beeyoung Gun Lee, Seung-Yun Oh, Jae-Seoun Hur

Abstract: Lichenicolous fungi (LF) were unfascinated to mycologists and lichen taxonomists in the past. Studying the fungi is one of the most arduous tasks in collaboration of all morphological, anatomical, and molecular analyses, as well as detection of the fungi in the field. Difficulty in getting a nice hand-section due to their tiny size and little biomass of the fungi discourage microscopic and molecular works, respectively. This study comprehended all lichenicolous fungi records in Korea, and statistical analyses revealed significant positive relationships between the LF genera *Lichenochora*, *Lichenostigma*, *Rinodina* and *Taeniolella*, and the hosts *Heterodermia*, *Phaeophyscia* and *Pyxine* in the order *Caliciales* on barks in mid-elevated inlands, and between the LF genera *Endococcus*, *Lichenostigma*, and *Muellerella*, and the hosts *Aspicilia*, *Ochrolechia* and *Pertusaria* in the order *Pertusariales* on rocks in low-elevated areas of islands. *Hydropisphaera phaeophysciicola* Lee & Hur ad int. is described as a new lichenicolous fungus supported by morphological and molecular analyses. Three lichenicolous fungi, *Muellerella lichenicola*, *Stigmidium microspilum*, and *Vouauxiomyces santessonii* are introduced new to Korea. A surrogate key is provided to assist in the identification of all 31 taxa of *Hydropisphaera* in the world.

TRAIT AND COMMUNITY VARIATION ACROSS A FOG GRADIENT IN DESERT LICHENS

Daniel Stanton, Peter Nelson, Reinaldo Vargas Castillo

Abstract: The relationships between environment, functional traits and community composition are a central focus of plant ecology. However, the associations between particular traits and