

Bryophyte Diversity (continued from page 4)

encouraged to analyse the impact of climate change on species, to document species responses and to incorporate the assessments into the national Red Lists. 'Red List Climate Change Guidelines' and 'Best practice guidelines for assessing species susceptibility and adaptation to climate change' are expected to be available by 2016.

Based on the targets listed in the Species Strategic Plan and discussion with a IUCN program officer and focal point for plants from the IUCN headquarter in Gland, we decided to focus the efforts of the **BSG during the current Quadrennium on two priorities**, (1) to enlarge the Global Red List of Threatened Bryophytes, and (2) to become an active Specialist Group that

works concerted for the global conservation of bryophytes and for the promotion of bryological diversity.

We hope that we caught your interest for the work of the BSG and we are looking forward to inform you in the future about our achievements. Please do not hesitate to contact us with ideas, suggestions where to put special efforts, need for support, reports of successful bryophyte conservation, or if you intend to get engaged in one or the other way.

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Useful links

IUCN Species Strategic Plan:
http://cmsdata.iucn.org/downloads/2013_2016_species_strategic_plan_final.pdf

IUCN Bryophyte Specialist Group web site:

<http://www.slu.se/en/collaborative-centres-and-projects/bryoconservation/>

The IUCN Red List of Threatened Species:

<http://www.iucnredlist.org/>

European Committee for Conservation of Bryophytes, **ECCB:**
<http://eccbbryo.nhmus.hu/>

BRIEF ACCOUNT ON THE ANNUAL MEETING ON CRYPTOGRAMIC BOTANY 2014 (Chile)

by Jorge Cuvertino-Santoni and Carolina León

In Chile, the Annual Meeting on Cryptogamic Botany was successfully held from 26th and 27th September 2014 at Universidad Bernardo O'Higgins in Santiago. This unprecedented joint initiative with local bryologists, lichenologists and mycologists was organized by local bryologists Carolina León, Victor Ardiles, Felipe Osorio and Jorge Cuvertino-Santoni. The meeting was sponsored by the Research Center in Natural Resources and Sustainability (CIRENYS-UBO), the Faculty of Agronomy and Forestry Engineering (Pontificia Universidad Católica de Chile) and Museo Nacional de Historia Natural (MNHN-Santiago), with the support of

the firm BIOTA Gestión y Consultorias Ambientales Ltda., Huilo-Huilo Biological Reserve and NGO Aculeufu.

More than 80 participants from different regions, consulting firms and universities along Chile attended the Symposium that was also broadcast live over the Internet. The topic of the meeting was "Cryptogams in the new Environmental Impact Regulation" that entered into force in December 2013.

There were 16 lectures in the symposium, including a keynote address entitled "Briófitas lati-

noamericanas – diversidad, ecología, impacto humano y cambio climático", delivered by Prof. Dr. Stephan Robbert Gradstein. The lectures covered Environmental Impact Assessment, Threatened Categories and Chilean Bryophytes, Sustainable Management of Sphagnum moss, Artificial Production of *Sphagnum magellanicum*, Peatland Restoration and Ecophysiology of Antarctic Bryophytes, amongst other. After the closing program, 40 participants visited Altos de Cantillana Private Reserve, which provided the participants with the opportunity to learn about cryptogams from experts that gave talks and showed the diversity of these

Continued on page 8

THESES continued

Wagner, Sebastian. 2013. The altitudinal gradient of tropical bryophytes: unraveling the causes and projecting climate change effects. Ph.D. dissertation, Carl von Ossietzky Universität, Oldenburg, Germany. [ii] V + 172 pp. In English with German and Spanish summaries. Current address of author: unknown.

In this doctoral dissertation the author addresses the temperature-centered hypothesis that in the warm tropics high carbon losses due to high respiration rates in warm nights and low carbon gains due to high temperatures and dark (understory) or desiccating (outer canopy) conditions compromise carbon balances, thus restricting bryophyte growth. If temperature really has such a central role in determining bryophyte growth, this also has important implications for the effects of climatic warming on bryophyte distributions and abundance. However, up to recently this hypothesis had remained untested. The fieldwork was done in Panama. To address both the altitudinal pattern and climate-change effects, environmental responses of CO₂ exchange and estimated carbon balances were determined, desiccation tolerance was tested as an alternative explanation and bryophytes were experimentally transplanted to lower altitudes to simulate warming and study the acclimatization potential. The most important findings were:

1. Metabolic temperature responses appear well-adapted to the respective altitudes (between 0 and 1200m), so that carbon exchange rates per se could not explain altitudinal patterns.
2. Photosynthesis and respiration of montane bryophyte species did not acclimatize measurably to increased temperatures, yet some individuals of many species could survive these temperatures for nearly two years, suggesting acclimation. This issue is thus not fully resolved and could not be tested yet for lowland species because no warmer sites were available to transplant these species to.

3. Desiccation tolerance was high in both montane and lowland bryophytes and could not explain altitudinal patterns and should not become limiting under mild climate change. It was concluded that neither desiccation tolerance nor metabolic temperature responses can explain current bryophyte abundance patterns. More likely, the timing and duration of moss hydration and resulting metabolic activity patterns are the main factors distinguishing lowland and highland habitats. Climate-change effects on lowland bryophytes will depend on changes in these hydration patterns and on the metabolic acclimation potential, both of which need further field studies as well as improved modelling to allow informed predictions on the future of bryophytes in the tropics.

Yang, Jia-Dong. 2014. Taxonomic studies of Lejeuneaceae subfamily Lejeuneoideae in Taiwan. Ph.D. dissertation, Department of Life Science, Tunghai University, Taichung, Taiwan. [iii] xii + 716 pp. In English with Chinese abstract. Address of author: Taiwan Endemic Species Research Institute, C.O.A., 1 Ming-Shen East Road, JiJi, Nantou County, Taiwan, R.O.C. 55244. E-mail: jdYang@tesri.gov.tw.

This doctoral dissertation treats the 125 species in 14 genera of Lejeuneaceae subfam. Lejeuneoideae that occur in Taiwan. The author previously published on the Taiwanese Ptychanthoideae. For this study ca. 4500 specimens were examined. The genera included are *Cheilolejeunea* (14 spp.), *Lejeunea* (25 spp.), *Microlejeunea* (3 spp.), *Metalejeunea* (1 sp.), *Lepidolejeunea* (1 sp.), *Leptolejeunea* (7 spp.), *Drepanolejeunea* (11 spp.), *Dactylophorella* (1 sp.), *Ceratolejeunea* (2 spp.), *Pycnolejeunea* (2 spp.), *Tuyamaella* (1 sp.), *Diplasiolejeunea* (1 sp.), *Colura* (5 spp.) and *Cololejeunea* (51 spp.). 91 plates of line-drawings illustrate the taxa. Two new species were previously published, as well as new national records. The bryogeography of the taxa is discussed.

Cryptogamic botany (continued from page 6)

organisms along a trail running through the sclerophyll forests and Matorral of central Chile.

Prof. Gradstein also gave lessons on bryophyte taxonomy and ecology at Pontificia Universidad Católica and Museo Nacional de Historia Natural, and realized 4 field excursions with local bryologists. Within the results of this collecting activity we highlight the finding of new records for *Gongylanthus dusenii* Steph. in central Chile.

Lectures are available at Youtube.com as "Reunión Anual de Botánica Criptogámica".

Group pictures are available on Page 11! Note, no legends were provided.

Cryptogamic Botany (continued from page 8)

