

Newsletter of the International Association of Bryologists

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Dear bryologists,

Haji Mohamed, Amru Nasrulhag Boyce, Benito C. Tan and Yong Kian Thai are busily preparing the IAB Conference and have proposed a diverse and very interesting programme. I hope that many of you will have the opportunity to attend the conference and to take part in the excursions. Whereas the latest newsletter had a lot of information of new IAB members, I received over the last months several ^country reports".

I wish all of you an excellent people and urge you to consult the conference website for the latest news.

Geert Raeymaekers



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The International Association of Bryologists (IAB) is an organisation open for all interested in bryophytes. For membership, contact Geert Raeymaekers or Blanka Shaw. Visit the IAB web site: http://bryology.org for further information. The Bryological Times is issued 3 to 4 times per year.

OBITUARY

Deisi Reyes Montoya (1942 – 2007)

Dr Deisi Reyes Montoya died on February 7th, 2007, at 65 years. She was very involved in the knowledge of the bryophytes (mainly liverworts) in Cuba. Since 1976, she was working in bryology and was the main animator of our bryology group here. As one excellent Botany teacher she encouraged me and other biologists to study and appreciate these fascinating plants. Her numerous field trips resulted in one of the most important collections of our herbarium BSC. She obtained the doctorate degree in 1981 on a dissertation on the taxonomy and distribution of Cololejeuneae in Cuba, described three species of

Diplasiolejeunea and published numerous papers of Cuban liverworts. We gratefully remember her by the invaluable contribution to the development of bryology in Cuba.

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IAB NEWS

Progress in the preparation of the IAB WORLD CONFERENCE OF BRYOLOGY 2007 23-27 July 2007 at Crystal Crown Hotel, Petaling Jaya, Malaysia

Haji Mohamed, Amru Nasrulhag Boyce, Benito C. Tan and Yong Kian Thai

The preparation is well underway in the organization of the IAB World Conference of Bryology 2007 to be held

in Kuala Lumpur in July of this year. A variety of programmes has been drawn up to educate, elucidate, enlighten, as well as There will be to entertain. cultural performance of Malaysian dances accompanied by traditional music at the opening ceremony of the conference, a whole day tour of the University of Malaya and the city of Kuala Lumpur on the third day of the conference, plus the offer of post conference field trips to a number of bryophyte rich

number of bryophyte rich nature parks in SE Asia. The aim is get all participants to enjoy the five days conference and return home with a lasting memory of this important, biennial gettogether of bryologists and students in bryology from around the world. Truly, the hosting institution, University of Malaya, headed by Profs. Haji Mohamed and Amru Nasrulhaq Boyce, and their committee members, are eager and ready to show all participants the warm Malaysian hospitality.

Although the main theme of this conference is focused on "Bryology in Asia in the New Millennium", the conference has managed to organize six other sessions dealing with the latest advances in all fields of Bryology: Molecular Phylogeny of Bryophytes (Convenor: Prof. Dietmar Quandt, Germany),

Bryophyte Eco-physiology (Convenor: Prof. Janice M. Glime, USA), Bryophyte Morphology, Ultrastructure and Ontogeny (Convenor: Prof. Jeffrey Duckett, UK), Bryophyte Genome Project and Genomic Studies (Convenor: Prof. **Brent** Mishler, USA), Bryophyte Conservation and Economic Importance (Convenor: Hallingbäck, Mr. **Tomas** (Sweden). **Bryophyte** and Chemistry (Convenor: Prof. Yoshinori Asakawa, Japan).



To date, more than 80 participants from 22 countries in Europe, Asia, Australasia, North America, Central and South America, and Africa, have already signed up to participate in this IAB World Conference of Bryology 2007 which promises to be another great and successful meeting in the history of IAB. At the moment, the list of speakers, which is still increasing in number, reads like Who's Who in many active fields of research in Bryology today.

To encourage more participants to register for the meeting, as there is still time to do so, we reproduce a partial list of the main speakers and the titles of their talks below:

- _____
- 1. María Arróniz-Crespo Age-specific physiological responses to UV radiation in the aquatic liverwort *Jungermannia exsertifolia* subsp. cordifolia;
- Yoshinori Asakawa Hepaticophyta: A good source of biologically active compounds;
- 3. Jeffrey W. Bates Salinity tolerance and survival of rocky seashore bryophytes
- 4. Neil Bell Current developments in the phylogeny of the Polytrichopsida;
- 5. Nils Cronberg Attraction of microarthropods to fertile moss shoots;
- Jeff Duckett An overview of liverwort-fungus symbioses;
- 7. Janice Glime Environmental effects on bryophyte morphology;
- 8. Robbert Gradstein (keynote speech) Neotenic bryophytes;
- 9. Tomas Hallingbäck Bryophytes and the global plant conservation strategy.
- 10. Xiaolan He-Nygrén Dating the origin and diversification of liverworts;
- Lars Hedenäs Morphological and molecular data suggest different relationships among species of Acroporium and closely related genera (Sematophyllaceae);
- 12. Masanobu Higuchi Diversity of mosses in the Hengduan Mountains, Southwestern China;
- 13. Annika K. Jägerbrand Phenotypic variation in bryophytes: effects of spatial scales, environmental variation, and other factors;
- 14. Matt von Konrat Early land plants today: Global patterns of liverwort diversity, distribution, and floristic knowledge;
- 15. Nadezda Konstantinova On distribution of worldwide rare hepatics in Siberia (Russia):
- 16. Helena Korpelainen Isolation of microsatellite loci and screening of genetic variation in twenty common bryophyte species;
- 17. David Long Bryological exploration of the Gaoligong Shan, Yunnan;
- David Nicholas McLetchie The relationship between spatial segregation of the sexes and sex specific photosynthetic rates in the liverwort *Marchantia inflexa*;
- 18. Kai F, Mueller Reconstructing phylogenetic trees: models, algorithms, problems;
- 19. Brent Mishler The uses of phylogenetics in comparative genomics, with special reference to the *Physcomitrella* Genome Project;
- 20. Angela Newton The Southeast Asian genus *Pterobryella* and the identity of *Pterobryon australiense* Dixon;
- 21. Dietmar Quandt Recent advances in the phylogeny of diplolepidous-alternate mosses;
- 22. Karen Renzaglia The evolution of chloroplasts in hornworts:
- 23. Noris Salazar Allen Endophytes in the thalloid liverwort *Cyathodium* (Marchantiales);

- 24. Dinesh. K. Saxena Biomapping studies from India: Use of moss *Isopterygium elegans* for measuring seasonal metal precipitation in Garhwal by transplant technique;
- Nancy Slack Rare moss research in New York State, USA;
- 26. Lars Söderström Species richness and richness of range restricted species among Malesian hepatics: implications for conservation;
- Hiromi Tsubota A preliminary phylogenetic study on bryophytes based on a large-scale dataset of chloroplast rbcL gene sequence;
- 28. Alain Vanderpoorten The barriers to oceanic island radiation in bryophytes: insights from a phytogeography of the moss *Grimmia montana*;
- 29. Zhu Rui-Liang Diversity and flora of the Chinese liverworts and hornworts.

In addition, there will be a film showing the private life of Silver Moss, *Bryum argenteum*, prepared by Hans Berggren, from Sweden.

Also, there will be round table discussion, workshop and meeting scheduled at the end of every afternoon meeting. These include - a discussion on "The completion of the Handbook of Malesian Mosses" to be chaired by Angela Newton (UK), and another one on the role of bryophytes in environmentally oriented management of tropical forestry to be chaired by Lena Gustafsson (Sweden). All participants are invited to attend these round table discussions and workshops.

Another exciting piece of information update for the IAB conference 2007: the organizing committee at the University of Malaya has managed to find recently a four stars hotel, the Crystal Crown Hotel (http://www.crystalcrown.com.my/), near the University of Malaya, that has agreed to serve as the conference site, and in addition, to offer very reasonable room charges to conference participants who choose to stay in this hotel. The room rate is about US \$50 per night per single occupancy, including three meals, and about US\$ 33 per night per person for double occupancy.

Considering also the low registration fees of IAB World Conference 2007 set at US \$250 per person (student rate at US\$150), there are more than a hundred good reasons to participate in this conference and be part of the history making of IAB. Furthermore, IAB has just announced the opening of application for eight slots of travel subsidy of US \$200 per post graduate student applicant who likes to attend the meeting and present a talk or poster. For more details of the latest information, please visit the conference website at http://www.bryology2007.net.

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Yong Kian Thai: e-mail: yongkt@um.edu.my

IAB COUNCIL NEWS

New IAB vice-president and Council Members

The following persons were elected in the 2007 IAB elections. Thank you to Lars Hedenäs for chairing the elections committee, to members Bill Buck and Niels Klazenga, and to Rod Seppelt for acting as Judge of Elections. Congratulations to all, and thank you to everyone who was willing to stand in this election.

<u>First Vice President:</u> Masanobu HIGUCHI: Japan

Council Members (2007-2011) Min CHUAH-PETIOT: Kenya Efrain DE LUNA: Mexico

Zhang LI: China

Emma PHARO: Australia Rosa ROS: Spain

Council Meeting announcement

The Council of the IAB will meet during the week of paper sessions in Kuala Lumpur, Malaysia, 23-27 July 2007. Members of the IAB are welcome to submit proposals and suggestions to the President or any Council member for inclusion in the agenda and discussion or vote by the Council. It is possible that we will also have a general meeting of the IAB where all members are encouraged to attend. We hope to provide more opportunities for participation by the membership, and we welcome your ideas about the direction that IAB should be taking. The organizing committee has made it much easier for us to meet each other by their change of venue to the Crystal Crown Hotel where hopefully we will have many opportunities to meet each other informally. It is especially helpful that the hotel accommodations will include our meals, where meeting others will be especially convenient.

Janice Glime, IAB President

THESES IN BRYOLOGY 18

As reported in a previous issue of The Bryological Times (99: 17. 1999), the International Association of Bryologists has decided to begin a repository of bryological theses. These theses are being housed in the Library of The New York Botanical Garden. They are available via interlibrary loan. The NYBG Library online catalog (CATALPA) may be viewed at: http://opac.nybg.org:211/screens/opacmenu.html. As theses arrive, bibliographic data and a brief synopsis will be published in this column (see examples below). Bryological theses for any degree, covering any aspect of bryology, in any language, will be included. Please send theses to Bill Buck at the address above. Please refer to the preliminary notice (cited above) for information on financial assistance from IAB for reproduction of theses. The current IAB Treasurer is Blanka Shaw (blanka@duke.edu).

Groth, Henk. 2005. Molecular phylogeny and morphological reconstructions of Plagiochilaceae (Jungermanniopsida) with hypotheses on biogeography and divergence times. Dissertation zur Erlangung des Doktorgrades, Georg-August-Universität, Göttingen, Germany. In English. 178 pp. Address of author: Karl-Grüneklee Str. 1, 37077 Göttingen, Germany. E-mail: hgroth@gwdg.de. This doctoral dissertation aimed to construct a

phylogenetic tree of the Plagiochilaceae, using three different genetic markers, ITS, rps4 and rbcL. The primary focus was Plagiochila itself (120 spp. examined). well as Acrochila biserialis. as Chiastocaulon dendroides, Pedinophyllopsis abdita, Pedinophyllum interruptum, Plagiochilon mayebarae, P. oppositum, Proskauera fruticella and P. pleurata. Some sequences of the rps4 and rbcL datasets, together with other sequences from GenBank, were used to evaluate the morphological concept of the Plagiochilaceae against molecular data. Based on rbcL data, the placement of Acrochila in the Plagiochilaceae seems doubtful. Pedinophyllum is polyphyletic and P.

truncatum should be excluded from the genus. Plagiochila is the crown group in the family. Although Plagiochila can be broken into clades based on molecular data, the clades cannot be defined on morphological characters. Another aim of the study was to identify the possible geographic origin and favoured dispersal routes and mechanisms of the family. It appears as if the family originated in Australasia. Subsequently, Plagiochila extended its range over South America and Africa, finally colonizing Asia. Asia and South America have the most diversity in the family. Finally, the study tested the possibility of calibrating a molecular clock. It appears that the family has always extended its range to the closest landmasses. It is also shown that while liverworts are assumed to be the oldest extant lineage of land plants, the Plagiochilaceae are relatively young.

Weckman, Judith Elaine Rozeman. 1999. A preliminary moss flora of Blanton Forest, an old growth ecosystem on Pine Mountain, Kentucky. Master's Thesis, Eastern Kentucky University,

Richmond, KY, U.S.A. In English. vii + 70 pp. Address of author: Director, Office of Institutional Research and Assessment, CPO 2177, Berea College, Berea, KY 40404. E-mail: judith weckman@berea.edu.

This master's thesis examined the mosses in an old-growth forest in southeastern Kentucky in the Cumberland Mountains of Harlan County. The study area was approximately 920 hectares (2300 acres) with an elevational gradient of 396–867 m. A total of 98 taxa were collected, representing 68 genera and 34 families; over half were new county records. Of the mosses collected, 75.5% grew on only one kind of substrate; nearly a quarter of the mosses were generalists, occurring on more than one substrate. Eastern North American endemics comprised 13.3% of the species.

Wynns, Justin. 2006. Taxonomic studies in the aquatic moss genus *Platyhypnidium* (Brachytheciaceae). Master's thesis, Appalachian State University, Boone, North Carolina, U.S.A. In English. xiii + 224 pp. Address of author: 478 Greer

Lane, Vilas, NC & Department of Biology, Appalachian State University, Boone, NC 28608-2027, U.S.A. E-mail: jwynns@hotmail.com.

This master's thesis examined *Platyhypnidium* using light microscopy, phenetic analyses and phylogenetic analyses of morphological and molecular data. ITS was used as a molecular marker. The genus is not monophyletic. *Platyhypnidium aquaticum* and *P. riparioides* are closely related to *Rhynchostegium*. *Platyhypnidium fuegianum* shares features of both *Rhynchostegium* and *Eurhynchium*. *Platyhypnidium pringlei* belongs in *Oxyrrhynchium*, and a genetic basis for recognition of this genus is provided. Both *P. pringlei* and *Eurhynchium selaginellifolium* (from Hawaii) are transferred to *Oxyrrhynchium*.

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RESEARCH NEWS

New Hepatic Catalogues of Ecuador and Colombia

Ecuador and Colombia, in the northern Andean biodiversity hotspot, are among the biologically most diverse countries on Earth. Because of the great climatic and elevational variation, these countries have a highly diverse vegetation and flora. Covering a total area of about 1.4 million km², Ecuador and Colombia hold together almost 40.000 species of vascular plants (Jörgensen & Ulloa 2006, Bernal et al. 2006) and more than 2000 of bryophytes (Gradstein, Churchill & Salazar Allen 2001). Endemism at species level is about 30% in vascular plants and probably about 10% in bryophytes (the latter estimate is a conservative and preliminary one, many more species are presently only known from the area but how many of these are "good" ones, and endemic, is still very difficult to determine). The area is also very rich in endemic or subendemic genera; for a listing of these endemics see Gradstein et al. (2001).

Recently, the hepatic flora's of Ecuador and Colombia have been catalogued as part of larger efforts to catalogue the total flora of these megadiverse countries. The Colombian hepatic catalogue is the second update of previously published ones (Gradstein & Hekking 1979, Uribe & Gradstein 1998) and available in draft form (Gradstein et al., in Bernal et al. 2006). The one of Ecuador is a fully new one and has recently been published in book form by the Herbarium of the Pontificia Universidad Católica del Ecuador in Quito (Léon Yanez, Gradstein & Wegner 2006). These

new catalogues show the occurrence of 749 species of liverworts in Colombia and 695 in Ecuador; in addition, there are about 10-15 species of hornworts. Highest species diversity is found at mid-montane elevations, between 1500 – 2500 m, but endemism is highest in the treeless alpine tundra or páramo (3200-4700 m) where over twenty percent of the liverwort species are found nowhere else (see also Gradstein 1998).

As expected, Lejeuneaceae are the most speciose family with more than a third of all species recorded, followed by Plagiochilaceae, Frullaniaceae, and Lepidoziaceae. For each species, up-to-date information on synonymy, published references, geographical distribution in the country, world wide range, habitat, and voucher specimen are provided. Introductions to hepatic diversity in the country, listings of doubtful and excluded records, and up-to-date bibliographies are also provided. These catalogues may be of great practical use to bryologists in view of the many taxonomic changes that have occurred in neotropical liverworts in recent years.

The draft hepatic catalogue of Colombia may be obtained from the author on request, that of Ecuador may be ordered from the Herbarium of the Pontificia Universidad Católica del Ecuador in Quito (email: scleon@puce.edu.ec).

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Research funding opportunity for European natural history scientists



Europe's foremost natural history institutions invite scientists based in European member, candidate, and associated states to visit and access their collections and analytical facilities.

Twenty institutions, including museums and botanical gardens, have joined together to form **SYNTHESYS**. The ambition is to create a single 'virtual' museum service consisting of many physical collections and analytical facilities, together with integrated databases of information about those collections. Main beneficiaries are the European research communities in the biosciences and geosciences, and particularly those researchers with an interest in biodiversity.

The co-operating institutions are organized in 11 national Taxonomic Facilities (TAFs). As one important element, the project comprises a <u>visiting researcher</u> <u>programme</u>. It enables European scientists to access more than 337 million specimens housed in the partners' collections, state-of-the-art equipment, and

internationally renowned expertise, and provides training and supervision in relevant fields. The institutions also collaborate in network activities aiming to improve the coordination, accessibility and high-standard preservation of natural history collections.

The SYNTHESYS visiting researcher programme covers costs for research and accommodation whilst based at the institution, plus international travel costs, and offers a per diem to contribute towards living costs during short visits (maximum of 60 working days) at one or more TAF.

Please visit www.synthesys.info for full details on how to apply for funding including a list of all SYNTHESYS partners and their facilities, applicant eligibility criteria, and the application form.

The next deadline will be Friday 28 September 2007, 17.00 GMT.

A final call will be arranged in approximately 6 months.

About the OPTIMA Bryophyte Commission

The Organization for the Phyto-Taxonomic Investigation of the Mediterranean Area (OPTIMA) is an international association of botanists interested in the Mediterranean area. OPTIMA encompasses

botany in its widest sense and deals with all groups of plants and all disciplines which have an impact on systematic studies.

Specific commissions and committees are created upon decision of the International Board, on a temporary or unlimited basis, to fulfil the purposes of OPTIMA. Among them a Bryophyte Commission exists. The present commission was created in 2002, and Rosa María Ros (University of Murcia, Spain) was proposed as Secretary. It is composed of about 30 bryologists not only from the countries on the periphery of the Mediterranean Sea (Egypt, Israel, Italy, Portugal, Serbia, Spain, and Turkey) but also from other European countries as Bulgaria, Germany and the United Kingdom.

The aims of the Commission are to promote studies and research programs of on different bryological topics, such as:

- biodiversity and conservation: production of bryophyte catalogues in all the Mediterranean countries:
- species monitoring and mapping of species with restricted areas such as endemics;
- taxonomic studies in order to clarify their identity after comparison with other geographical areas;
- elaboration of occurrence-distribution data and redlists:
- systematics and phylogeny of taxa of special interest
- bryophyte vegetation studies including cataloguing, description, ecology and interest of each bryophyte community;

- ecophysiology, particularly adaptation mechanisms to xericity;
- population genetics and speciation processes: especially in some genera in which diversity in the Mediterranean area is very high.

As in other OPTIMA Cryptogamic Commissions, every 6 years a Bryophyte Symposium is held within the OPTIMA Meeting (that occurs every three years). Each symposium is composed of several lectures that are proposed by the Secretary to those bryologists that are active in the last years, but also giving the opportunity to different nationalities in the successive Symposia. Also a general poster session is held, where every interested researcher can participate. In September 2007 the XII OPTIMA Meeting will be held at Pisa.

Within the more interesting activities of the OPTIMA Bryophyte Commission is the elaboration of a checklist of Mediterranean bryophytes, which was accorded during the meeting held at Palermo in September 2001. The publication was proposed in two stages: initially for liverworts and subsequently for mosses. The first is finished and will be published at the beginning of 2008.

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COUNTRY REPORTS

Bryological news from Australasia

NEW ZEALAND

Hepatic Flora of New Zealand. The first volume of this eagerly awaited flora – a collaboration between John Engel (Field Museum, Chicago) and David Glenny (Landcare Research, Christchurch) is in the final stages of editing and proof reading. It is scheduled to be published around the middle of 2007.

John Engel and Matt von Konrat joined David Glenny in New Zealand this austral summer searching for hepatics in preparation for Volume 2 of the flora.

Allan Fife remains busily working on his Moss Flora and this is now scheduled to be published in 2008. It is a huge undertaking and will comprise the third major treatise on the New Zealand mosses, after Dixon and Sainsbury.

When these floras are complete New Zealand will be bryologically the most thoroughly researched region in the southern hemisphere.

AUSTRALIA

Hidden in Plain View – the forgotten flora is a remarkable exhibition of cryptogams currently touring four galleries in regional Victoria. In 2008 the exhibition will travel interstate to Canberra and Launceston

(Tasmania). This exhibition, from the National Herbarium of Victoria, Royal Botanic Gardens, Melbourne, focuses on the 'forgotten flora'; the bryophytes, fungi and lichens. It is the first time holdings from the State Botanical Collection have been toured or exhibited outside the Royal Botanic Gardens. Botanical illustrations from former and contemporary artists and specimens, historical and contemporary writing, and artefacts (including Ferdinand von Mueller's microscope), have been brought together in this exhibition to reveal the fascinating world of the forgotten flora. A highlight of the exhibition is a containing many curiosity cabinet cryptogamic curiosities and riddles. Karen Beckmann has been responsible for co-ordinating the exhibition.

Awareness of the 'plants' we usually tread on is spreading as people of many diverse interests - artists, field naturalists, gardeners, schools and families - have been attracted to the exhibition. Visitors leave excited by the whole new world they have to investigate and be inspired by.

For information on dates and venues refer to the website www.rbg.vic.gov.au and follow the links to the Forgotten Flora.

Simpson Desert Scientific Expedition, Northern Territory

In early July 2007, two bryologists from the Royal Botanic Gardens Melbourne; Pina Milne and Karen Beckmann, will attend a scientific expedition hosted by the Australian Geographic Society. This expedition will investigate the remote, little studied area on Atnetye (Aboriginal people) land along the Hay River in the northern Simpson Desert, about 300 km east of Alice Springs. Pina and Karen will be recording the composition and abundance of soil crust bryophytes and lichen species and vascular flora in the diverse vegetation communities found in the area including dune country, arid zone plains, claypans and the river banks.

The aim of Australian Geographic is to undertake worthwhile research for the indigenous owners, the individual scientists and the scientific community at large and to provide volunteers with the experience of working alongside scientists in the field. An extensive feature on the expedition will be printed in Australian Geographic magazine.

News from the Western Australian Herbarium

Louise Biggs, who recently completed her doctoral studies, is now based at the Herbarium, at present undertaking databasing and curatorial work. After April, the work will entail more specifically cryptogam curation. It is refreshing to have someone with strong bryological interests employed at the Herbarium in Western Australia.

News from Tasmania

Several students have commenced applied bryological research programs this year.

David Tng, from Singapore, is studying bryophyte diversity and abundance in glacial refugia *Nothofagus* dominated forests in north east Tasmania.

Belinda Browning, in a joint project with Botany and Forestry, is studying the succession of bryophytes on decaying logs after clear felling. The forest industry has become more concerned with successional and diversity issues in harvested forests, and this project builds on the work of Pep Turner.

Clare Brooker will be using molecular techniques to examine the relationship of Tasmanian and New Zealand populations of the introduced invasive moss *Rhytidiadelphus triquetrus*.

News from New South Wales

At the Herbarium, Elizabeth Brown has been working on problems in Australian Lepidoziaceae for some years and is now supervising a student, Endymion Cooper, who is doing an Honours year working on *Telaranea centipes* and its relatives *fragilifolia, tubifera* and *elegans*. He will be using a mix of molecular and morphological characters to investigate their relationships. Another student, Matt Renner, is undertaking a doctoral study looking at species limits within Lejeuneaceae.

News from Victoria

Helen Jolley, who has been working with Pina Milne at the Herbarium, has just had her project on Pottiaceae: Pottioideae accepted as a M. Sc. study at the University of Melbourne. Helen's re-evaluation of *Breutelia pendula* and *Breutelia elongata* in Australia (with Niels Klazenga) has also just been published in Australian Systematic Botany (20: 82-91).

Australasian Bryological Workshop

This will be held from Monday December 03 until Saturday 08 at Maydena, in Tasmania's south west. Habitats to be visited are subalpine heath, button grass moorland, wet sclerophyll forest and cool temperate rainforest. The workshop has an exciting program of field sites, workshops and identification sessions lined up but numbers will be limited. For further details see the separate announcement in this issue of the Times.

Country report from Panama

New publication

Biodiversidad de Guatemala Vol. I. Edited by Enio B. Cano and published by the Universidad del Valle de Guatemala with the cooperation of the National Fund for Nature Conservation (FONACON), the Ministry of Environment and Natural Resources (MARN), the National Science and Technology Council (CONCYT) and the National Secretariat for Science and Technology of Guatemala. This book contains three contributions about the origins of the Guatemalan biota, fourteen articles about plant diversity including bryophytes and nineteen on faunal diversity. Bryological contributions provide an introduction to the

bryoflora diversity of Guatemala (by Virginia Freire & Noris Salazar Allen, pgs 49-53), an overview of the liverwort and hornwort diversity in Guatemala (by Virginia Freire, pgs. 55-68) and a contribution to the Moss checklist of Guatemala (by Noris Salazar Allen, José E. De Gracia y Clementina Chung, pgs. 69-146).

Symposium news

As part of the First Symposium on the Biodiversity in Western Panama (5-9 February 2007) at the Universidad Autónoma de Chiriquí (UNACHI), a workshop on "Taxonomic Characters Useful for Identification of Bryophytes" was organized and

directed by Mgstr. Clotilde Arrocha. Panamanian bryologists contributed significantly to the success of this symposium. Noris Salazar Allen was invited to gave a "Conferencia Magistral" on the Diversity of Bryophytes in Panama. Also Indira Ramírez, a student of Salazar Allen, presented a joint poster on the Diversity of Lichens of Fortuna and Volcano Barú. Indira's participation was financed by NORAD (Norwegian government grant to INBio to develop capacities and expertise in herbaria in Central America Project for Central American herbaria). Cascante, Esther Valdés, Clotilde Arrocha and Eyvar Rodríguez reported on a research project that focused on altitudinal moss distribution between 2.300 and 2.800 m along the Eastern slope of Volcano Barú (Prov. Chiriquí, Panamá). This project has been coordinated by Clotilde Arrocha and her students of the Universidad de Chiriquí. Arrocha was the general coordinator of this symposium. The symposium was organized by UNACHI and the J.W. Goethe University of Frankfurt am Main with support from the National Authority of the Environment (A.N.A.M.), the German Academic Exchange Service (DAAD), The Nature Conservancy, Fortuna Hydroelectric Project, IFARHU and the Technological University of Oteima.

Until recently, UNACHI was a regional centre of the University of Panama, but is now an autonomous university with a very nice and strong partnership with the German J.W. Goethe-Universität of Frankfurt am Main. Many of the UNACHI faculty and students has received training in Germany such as Eyvar Rodríquez, a student who went to Frankfurt and who is presently working with Clotilde on bryophytes in tropical mountain areas. Both universities also collaborate and exchange students and faculty members in mycology and other areas of biology. Dr. Meike Piepenbring, a mycologist working on smuts is the liaison officer for the University of Frankfurt.

On March 5th to the 9th, the Department of Botany of the University of Panama jointly with the National Authority of the Environment of Campana National Park organized a botanical training seminar for park rangers and community leaders. Noris Salazar Allen gave talks and demonstrations on bryophytes, fungi and lichens and participated in a field trip to show the participants the diversity of these organisms in their natural environment.

Noris Salazar Allen Email:salazarn@si.edu

Bryological news from Brazil

In 2004 was created the Specialists Group of Bryophytes in Brazil (NEB) in the Brazilian Botanical Society (SBB). This group have meeting every year during the Brazilian National Congress of Botany, and in the first meeting they decided to translate the Glossarium Polyglottum Bryologiae of the Missouri Botanical Garden with the collaboration of Robert E. Magill. Nowadays the Portuguese version of this glossary is able on the page of the Missouri Botanical Garden and also was published in 2006 by Juiz de Fora University, Minas Gerais, Brazil. The second project of the group represents collaboration with Steven Churchill, began in 2005, and it is a Guide for the Brazilian Mosses. Recently, in November the bryological team was involved during one week in a workshop at Rio de Janeiro Botanical Garden where 12 participants could discussed with Steven Churchill the main problems, doubts, and next steps to the moss guide. One week after the group was involved in a symposium about "Understanding the bryological biodiversity and its conservation status in Brazil" during the National Congress of Botany, in Gramado, Rio Grande do Sul, where Denise Pinheiro da Costa from Rio de Janeiro Botanical Garden, Paulo E.A.S. Câmara from Missouri Botanical Garden, and Steven

Churchill from Missouri Botanical Garden gave the following lectures: "The conservation status of the Brazilian bryoflora: a study of case", "The use and importance of the molecular systematic conservation: a study of case in Hypnales (Bryophyta)" and "How to develop diversity studies with bryophytes in tropical America". At the same time the group had its annual meeting discussing the new schedule to the moss guide, presenting the last publications, and choosing the place to the second workshop in 2007. In the Brazilian Moss Guide are involved the following Brazilian bryologists, Ana Luiza Ilkiu-Borges, Cid José Passos Bastos, Denise Pinheiro da Costa, Kátia Cavalcanti Pôrto, Paulo E.A.S. Câmara, and Silva Vila Boas-Bastos, and ca. 10 students.

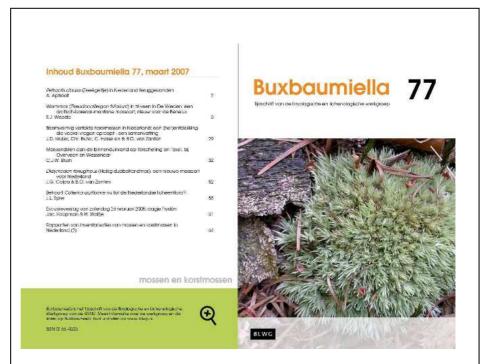
Denise Pinheiro da Costa
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News from the Netherlands

The Dutch Bryological and Society Lichenological (BLWG) publishes annually 3 issues of the journal Buxbaumiella. Buxbaumiella contains reports of field trips (also in foreign countries). notes taxonomical groups pertinent to the Netherlands and recent literature. The journal is in Dutch, but the editors welcome contributions in English. An English summary is provided for all articles. Starting from volume 77 (will appear in April 2007)

out had a serious make-over, with colour photographs on the cover and a larger size (17 x 24 cm). This change is one of the results of a extensive poll under society members, evaluating current activities and ideas for the future.

From: Laurens Sparrius Email: sparrius@blwg.nl]



Impression of the new cover of Buxbaumiella (front and back)

Bryological news from Spain

In Spain we are looking forward to the celebration of the next XVI Symposium of Cryptogamic Botany, that will be held in the historic city of Leon in September 2007. Every person interested may contact the organizers (under the head of the lichenologist Arsenio Terron) at the following webpage: http://www3.unileon.es/dp/dbv/SBC2007/index.htm Phycologists, mycologists, lichenologists, pteridologists and of course bryologists are welcome.

The Sociedad Española de Briología - Spanish Bryological Society (SEB) has opened a new divulgation section in its webpage: "Bryophytes for all" (in Spanish). You may join at:

http://www.uam.es/informacion/asociaciones/SEB/divul gacion.html. In addition, the issues 28 and 29 of the SEB's Bulletin were published in 2006, including a total of 16 papers on bryophytes from Spain and Portugal.

The Volume III (Pottiales and Encalyptales) and a new fascicle (Seligeriaceae: *Brachydontium, Blindia* and *Seligeria*) of the Project "Flora Briofítica Ibérica" (Iberian Bryophyte Flora) were published in 2006. *Brachydontium* was authored by Marta Infante and Patxi Heras, *Blindia* by Rosa Cros, and *Seligeria* by Felisa Puche. These publications are available from http://www.florabriofiticaiberica.com/.

Mobility news. Saúl Otero (Universidad de La Rioja) is developing a 3-month predoctoral stay in Oulu (Finland) with Prof. Satu Huttunen, with the objective of exploring the use of bryophytes as bioindicators of ultraviolet radiation.

Javier Martinez-Abaigar, Universidad de La Rioja (Spain)

javier.martinez@daa.unirioja.es

UPCOMING MEETINGS



IXth Australasian Bryophyte Workshop



The IXth Australasian Bryophyte Workshop will be held from 3rd to 8th December 2007. It will be based at Maydena (90 kms west of Hobart) on the edge of the southwest World Heritage area, Tasmania, Australia. Fully catered accommodation will be provided in cottage style facility, and laboratory spaces will be available for light microscope examination.

Participants will encounter bryophytes in a variety of vegetation types that include, Gondwanan cool temperate rainforests, sub-alpine communities, buttongrass sedgeland communities and wet eucalypt forests that contain the tallest hardwood trees in the world. As well, there will be sessions devoted to bryophyte groups for beginners and specialists, while some

evenings will be occupied with talks and poster presentations.

Interest in the Workshop has been overwhelming and we are currently at maximum capacity with all available accommodation fully booked. Therefore further enquiries will be placed on a waiting list and should be directed to Paddy Dalton, School of Plant Science, University of Tasmania.

P.J.Dalton@utas.edu.au

A second circular requiring confirmation from intending participants will be sent in April 2007.

MEETING ANNOUNCEMENTS

ABLS Meeting – Xalapa Mexico

You are invited to attend and participate in this year's the American Bryological meeting of Lichenological Society, which will be held in Xalapa, Veracruz State, Mexico, August 12-16. Our local organizer is Efrain de Luna of the Instituto de Ecologia AC (INECOL) in Xalapa, which is hosting the meeting. The on-site registration and check-in will be during the afternoon and early evening of Sunday, August 12th. Two days have been set aside for field trips and two days for contributed papers/posters and other meetings. This meeting should provide an exciting opportunity for all of us, but especially for those with limited experience in the tropics. Please note on the accompanying form that the discount rate for registration applies only up to July 1st.

In addition to taking advantage of the tropical locale to study and collect exotic lichens and bryophytes, we are also planning a full program of oral and poster presentations. Although no symposia are being organized, we do plan to have some invited Mexican speakers who will be able to enlighten us about various aspects of the Mexican biota. I encourage you to attend and to also consider sharing the results of your research by giving either an oral presentation or a poster in the contributed sessions. If you have

students, please encourage them to do likewise. Remember, the student travel awards that the society provides are available only to those who actually present a paper or a poster. In lieu of spending on symposia, the executive committee voted this year to dedicate extra money for the student travel awards, in an effort to encourage greater student participation at this somewhat more distant location.

Efrain de Luna has worked hard to arrange all local aspects of the meeting and has also planned some excellent field trip choices for us, as briefly described here (see meeting website for more information).

Patlanalán Lake. Tuesday, Aug. 14th. Fee: us\$40.00: full day trip will take us into the mountains between Pico de Orizaba and Cofre de Perote volcanoes; at least three stops will be made, in a variety of habitats.

Texolo Falls. Thursday, Aug. 16th. Fee: us\$25.00. A somewhat shorter trip (returning in the late afternoon) visits two localities between Xico and Teocelo, one at the falls itself.

Santuario Bosque de Niebla. Thursday, Aug. 16th. Fee: us\$7.00 A shorter local trip to land owned by the Instituto de Ecologia.

Further information regarding the field trips is available through links on the ABLS web site (www.abls.org and at the meeting web site maintained by Efrain de Luna: www.filogenetica.org/ABLS07/default.htm

In addition, a wide variety of other information is available on this web site, including methods and routes of travel to Xalapa, various choices for lodging, miscellaneous tourist information, and a tentative schedule of events. Efrain has worked out a special group price deal with one of the mid-range business class hotels, the Fiesta Inn hotel, and in order to simplify transportation and other logistics, we are strongly encouraging all attendees to reserve their

lodging there. This hotel will be the site of all of the social functions, such as the ABLS breakfast and the ABLS dinner, and also will be the point of departure and return for the field trips. In addition, round trip daily transportation between this hotel and INECOL will be

The A. J. Sharp award goes to the student giving the best oral presentation, as judged by a committee of three individuals who are normally appointed at the meeting by the president of the society. The amount of this award is \$500. Also, travel awards are available for students.

Please consult the conference website for further information.

European Committee for Conservation of Bryophytes : 7th Conference. Bryophyte Conservation - Status and Perspectives.

The 7th ECCB Conference will take place at the Babes-Bolyai University Cluj-Napoca, Faculty of Biology and Geology, Cluj Napoca, Romania from 2 to 4 September 2007

Members of the organising committee are: Prof. Dr. Nicolae BOSCAN (Rector of the University "Babes-Bolyai", Cluj Napoca), Prof. Dr. Octavian POPESCU (Dean of the Faculty of Biology and Geology), Prof. Dr. Vasile CRISTEA (Faculty of Biology and Geology) Dr. Irina GOIA (Faculty of Biology and Geology), Prof. dr. Lars SÖDERSTROM (Chairman of the ECCB), Alin MOŞ (Director of the Apuseni Mountains Natural Park), Dr. Sorin STEFĂNUŢ (Institute of Biology, Bucharest-Secretariat is secured by Dr. Milca PETROVICI (Apuseni Mountains Natural Park).

Contact address: igoia@grbot.ubbcluj.ro

The conference will explore the status, need and achievements of conservation of bryophytes in Europe with a special focus on southeastern Europe. The preliminary programme is as follows:

2.09.2007: am: Opening ceremony followed by a plenary session. At noon departure from Cluj-Napoca to Padiş (Apuseni Mountains), followed by lunch and visit to the "Molhaşul Mare de la Izbuc" peatbog. From ca 18.00 Oral presentation and discussions 3.09.2007: am and pm. Excursion to The Fortress of Ponor or to The Lost world). The Fortress of Ponor

(Cetățile Ponorului) is a longer trip, is the Romania's



most grand karstic complex; 3 grand dolinas, cave; is located at a half of hour walk from The Fortress of Ponor Chalet. The Lost world – is an easier trip, a quarter of hour walk from The Fortress of Ponor Chalet, with 3 vertical caves.. From ca 18.30 a ca one hour business meeting of ECCB.

4.09.2007: am. Travel back to Cluj – Napoca, followed by lunch and accommodation. Form 15.00 Poster session and from ca 17.00 to 19.00 oral presentations and discussions, followed by the closing session

The conference will take place at the Babeş-Bolyai University (BBU), Botanical Garden (http://www.cjnet.ro/t/gradinabotanica.html), Republicii street 42, 400015 Cluj-Napoca, Romania and in the Apuseni Mountain Natural Park (Cetățile Ponorului - Padiş) (http://www.padis.ro/news.htm)

Should you like to present your work in the poster or as a presentation the thematic workshop sessions, please submit your abstract (in English, no more than 150 words) to the address: igoia@grbot.ubbcluj.ro Preregistration between 15 March -15 May Registration between 15 May – 15 July The deadline for abstract submission is July 15th 2007.

Contact: Irina Goia igoia@grbot.ubbcluj.ro

XII OPTIMA MEETING

OPTIMA is the Organisation for Phyto-Taxonomic Information of the Mediterranean Area.

http://www.bgbm.fu-berlin.de/OPTIMA/organization/default.htm

OPTIMA holds from the 10th to 16th September, 2007 at Pisa, Italy, its XII Meeting.

Within this Meeting a Symposium entitled "Bryofloristics and bryotaxonomy" will take place the Friday, 14 September. The following lectures will be held:

Introductory lecture by Dr. Rosa María Ros, Secretary of the Symposium

Address: Universidad de Murcia, Facultad de Biología, Departamento de Biología Vegetal, Campus de Espinardo, 30100-Murcia, Spain. E-mail: rmros@um.es

Title: Advances in the Mediterranean bryology according to molecular data: present and future

Lecture 1 by Dr. Marko Sabovljevic

Address: Nees Institut für Biodiversität der Pflanzen, RFW Universität Bonn, Meckenheimer Alle 170, 53115 Bonn, Germany. E-mail: sabmar@hotmail.com Institute of Botany and Botanical Garden, Faculty of Biology, University of Belgrade, Takovska 43, 11000 Belgrade, Serbia.

Title: Peculiarities of the Balkan bryophyte flora

Lecture 2 by Dr. Juana María González-Mancebo Address: Universidad de La Laguna, Departamento de Biología Vegetal (Botánica), Calle Astrofísico

Francisco Sánchez s/n, 38071-La Laguna, Tenerife, Canary Islands, Spain. E-mail: <u>iglezm@ull.es</u>
Title: Evaluation of the Mediterranean component in the bryophyte flora of the Canary Islands

Lecture 3 by Dr. Harald Kürschner

Address: Institut für Biologie der Freien Universität Berlin, Systematische Botanik und Pflanzengeographie, Altensteinstraße 6, D-14195 Berlin. E-mail: kuersch@zedat.fu-berlin.de Title: Bryoflora and bryovegetation of South Arabia and Socotra Island

Lecture 4 by Dr. Adnan Erdağ

Address: Adnan Menderes University, Faculty of Arts & Sciences, Biology Department, 09010, Aydin, Turkey. E-mail: aerdag@adu.edu.tr

Title: A case report on bryofloristical researches in Turkey.

You can find general information about the meeting in the web page: http://www.biologia.unipi.it/optima2007. A poster session will be held the Wednesday, 12th September. The Meeting of the OPTIMA Bryophyte Commission will take place also the Friday, 14th September

All the bryologists are kindly invited to participate.

Rosa María Ros Universidad de Murcia, Facultad de Biología, Departamento de Biología Vegetal, Campus de Espinardo, 30100-Murcia, Spain. E-mail: rmros@um.es

Nordic Bryological Society - annual summer excursion

This year's summer excursion is planned to take place at Lammi Biological Station (15-19 September). The station belongs to the University of Helsinki. It is situated 150 km N of Helsinki. The excursion is planned in cooperation with the Finnish Bryological Society.

The surrounding nature has varied boreal zone vegetation including old-growth forests, rich-herb forests, lakes and different types of bogs and mires, also cultural landscapes. A description of the excursion sites will be distributed later. The cost for food and lodging is 50 € per day, including breakfæst, packed lunch and evening meal, lodging in two-bed rooms, and access to localities for microscopic work. Of course, there is a sauna situated just beside a lake.

Transportation to the excursion sites will take place in rented minibuses or private cars, if available. The cost for transportation to the excursion sites will be shared by the participants.

The annual meeting of the NBS will take place August 18, 20.00.

Detailed information about the biological station and how to reach it by car or public transportation can be found from its homepage. For further information about the program you can contact Sanna Laaka-Lindberg or Viivi Virtanen.

Send your application to Nils Cronberg: Nils.Cronberg@ekol.lu.se before the 1st of May.

LITERATURE COLUMN

The Encyclopaedia of the Swedish Flora and Fauna: Bryophytes

Hallingbäck, T, Lönnell, N., Weibull, H., Hedenäs, L. & von Knorring, O. 2006. Nationalnyckeln till Bladmossor: Sveriges flora and fauna. Sköldmossor - blåmossor. Bryophyta: Buxbaumia - Leucobryum. ArtDatabanken, SLU, Uppsala. 28 x 23 cm. 416 pages. Illustrated throughout in colour with watercolours and photographs, distribution maps, an English summary with keys in Swedish and English. ISBN 91-88506-55-X.

In recent years Sweden has really invested in taxonomic research. This bryophyte book is part of the project aiming to produce a series of identification handbooks with keys in Swedish and English to the ca. 50 000 Swedish plant, fungus and animal species – "The Encyclopaedia of the Swedish Flora and Fauna". The project is conveyed by ArtDatabanken (Swedish Species Information Centre); it started in 2002 and the last volumes will probably be printed in 2020. This volume of bryophytes covers 262 species of Nordic mosses.



All species in the families Buxbaumiaceae, Diphysciaceae, Timmiaceae, Encalyptaceae, Funariaceae. Disceliaceae. Brvoxiphiaceae. Ptychomitriaceae. Seligeriaceae. Archidiaceae, Fissidentaceae. Ditrichaceae. Bruchiaceae. Rhabdoweisiaceae

Schistostegaceae,
Dicranaceae, and
Leucobryaceae
occurring in
Sweden, Denmark,
Finland, Island and
Norway are
treated.

Each species is described in detail, including information on distribution and biology. For each species distribution maps as well as illustrations e.g. watercolours are also provided. In the beginning of the book the authors clarify the basics of systematics, classification, naming, and collecting bryophytes. They also advice how to identify these organisms, and the



morphology of the bryophytes is nicely presented with illustrations.

The book is most enjoyable if one can read Swedish but there is much to enjoy for others also. The images by themselves make the book valuable for a bryologist. The keys are also very good; the manner in which they are presented is very helpful for identifying. The Swedish key is in one column and the English key is in a parallel column, and photographs or drawings illustrative of the alternative character states are between the columns - so these are in essence illustrated identification keys.

The series of handbooks are intended for all Swedish people who would like to identify the not so well-known organisms. However, this book gives a lot to professionals as well. It is an excellent work by excellent authors providing much taxonomical information for a variable target group from amateurs to professional bryologists.

This book has already been advertised in Bryonet by some colleagues as "I strongly recommend its acquisition. The price is low for such a well designed and produced resource". And could any book have a better recommendation: "Even though I live about as far from Sweden as is possible and have a language impediment, I have learned much from this book. In part, this is because I cannot resist browsing through it".

I agree with my colleagues that the book is an excellent reference and truly an enjoyable one too! A semi-serious warning might be at place however: the book is heavy and big and it is not a field guide at all. So, enjoy it at home or at the office.

In addition to the authors and illustrators of the book I would like to thank her highness princess Victoria, who is the benefactor of the project. Congratulations for the authors!

Viivi Virtanen

Bryophytes – An introduction ('Moose – Eine Einführung')

Jan-Peter Frahm (2006), 237 pages, ca. 260 colour photographs, Language: German. Weissdorn-Verlag Jena (ISBN 3-936055-53-X). Price: Paperback (149 x 210 mm) 17,90 €. Website: http://www.weissdorn-verlag.de

Jan-Peter Frahm has been studying bryophytes for more than 40 years now and he has an enormous knowledge on these organisms. He's a good observer of what's happening in the field and he often formulates new and interesting hypotheses in various fields of bryology. In his new book he gives an introduction to bryophytes to the interested reader (see Frahm 2006), or, as stated on the back cover of the book, to the naturalist ('Naturliebhaber'). To make it an easily accessible introduction, the author avoided an academic language and any references. Topics cover a wide range of bryology and are appropriate for an introduction. They include systematics, bryodiversity, of bryology, bryophytes as indicators, biogeography, zoophagy, climate change, ecology, conservation of bryophytes and many more. There are lots of mostly good quality colour photographs, which give the book a very attractive appearance. I was thus quite curious and keen to start reading it.

However, reading the book turned out to be rather disappointing. Many parts of the book give the impression that they were written in a great hurry. The content of some of the chapters seems not very well planned and one gets the impression that the author has just written down what was in his mind at the time of writing. The chapter on bryophyte dispersal, for example, contains a sub-chapter on extinct mosses, which seems guite out of context. In this sub-chapter on extinct mosses there is a longer paragraph on how bryologists in the 19th century attempted excursions without cars and trains. Although interesting, it remains unclear what this has to do with the extinction of bryophytes. The chapter entitled "Bryophytes as antibiotics and fish poison" starts with a subchapter on bryophytes as mattress filling which obviously has nothing to do with the title. There are also many small mistakes and discrepancies. Just some examples: On the first page Sagina sp. is said to be a 'Kreuzblütler' (= Brassicaceae), while in fact it belongs to the Caryophyllaceae. On page 29 Frahm writes that Marchantia thalli can be as wide as 10 cm. According to Schofield (1985), however, the largest thallose hepatics are the Monocleales which have a thallus that can be up to 5 cm wide. On page 63 it is mentioned that the yearly mean temperatures in tropical mountains between 3000 and 3800 m a.s.l. correspond to those in Europe. On page 79, however, the same statement is made, but the corresponding altitude range is given as 2000 to 3000 m.a.s.l. On page 129, it says that snails never eat bryophytes; Fig. 135 shows

a snail eating bryophytes. On page 202, he mentions a *Palustriella multistratosa*. This name doesn't exist yet, but there is a *Palustriella pluristratosa* which has been described by Stech & Frahm (2001).

Although most of the photographs are very attractive, they sometimes do not illustrate what they are intended to. For example, Fig.2 is meant to show how the sporophytes 'sit' on the gametophytes, but the photo does not show the gametophyte. To illustrate the difference between acrocarpous and pleurocarpous mosses. photos of Bryum torauescens Brachythecium velutinum are presented. Because neither of the photos shows where the sporophytes exactly originates from, they are not helpful to show the difference between the two groups. Furthermore, the photographs are often not in the same order as they are cited in the text, which is not very readerfriendly.

A further weak point is the style of language used. The grammar is often clumsy and there are many typos. Nevertheless, can the book be recommended to naturalists interested in bryophytes? I doubt it (though it is not so easy to judge for a bryologist). Although written in a casual style, the information content of the text is sometimes very high which probably will discourage many potential readers. Complex things like the sexual cycle of bryophytes are explained very curtly and illustrations are missing or hard to understand. In some chapters a good knowledge of biology or natural sciences in general is necessary to comprehend the content.

Despite the style and the shortcomings, there are many interesting bryological facts to be discovered in this book and I did learn several interesting things. For this reason, I can recommend this colourful and inexpensive book to bryologists.

References

Frahm, J.-P. 2006. Introduction to bryophytes. *Bryological Times*, 121: 16-17.

Schofield, W.B. 1985. *Introduction to Bryology*. MacMillan, New York, London.

Stech, M. & Frahm, J.-P. 2001. *Palustriella pluristratosa* spec. nov. (Amblystegiaceae, Bryopsida), a new aquatic moss species with pluristratose lamina from Switzerland. *Botanica Helvetica*, 111: 139-150.

Ariel Bergamini, Swiss Federal Research Institute WSL, FE Biodiversity & Conservation Biology, Zürcherstrasse 111, CH-8903 Birmensdorf, Switzerland, ariel.bergamini@wsl.ch

Digital Library RBG Madrid

The Royal Botanic Garden at Madrid has got a substantial grant to digitize books during 2007 and increase the items in its Digital Library: http://bibdigital.rib.csic.es/ing/index.php

It is my idea to scan as many bryological books as possible, and I would appreciate receiving suggestions of items that should be available to the bryological community. Also important, if any of you have scanned works, we could include them in the digital library; in this case, contact me for the details.

The following publications are presently being scanned:

Hooker, W.J. & Taylor, T. 1818. Muscologia britannica (1st ed)

Hooker, W.J. & Taylor, T. 1827. Muscologia britannica (2nd ed)

Hübener, J.W. 1833. Muscologia germanica Renauld & Cardot, Mousses. In: Grandidier & Grandidier, Histoire physique, naturelle et politique de Madagascar. 1 vol of text, and 6 vols of illustrations Roth, G. 1911. Die Aussereuropaischen Laubmoose

Sullivant, W.S. 1864. Icones muscorum

Sullivant, W.S. 1875. Icones muscorum, Supplentum Wilson, W. 1855. Bryologia britannica

Goebel, K. 1905. Organography of plants: V. 2. Special organography (authorized English edition)

But I am sure that there are many items that people would like to have access to through this way and are not in the above list. Please, send me an email with the items that would be more important to digitize, and if we have it, we'll scan it.

Besides, there are two items we don't have in Madrid but I would very much appreciate to scan:

Jacob, J. 1798-1835. Deutschlands Flora in Abbildungen. Abtheilung II, Crypotogamie Nees von Esenbeck, C.G.D., Hornschuch, J. & Sturm, J. 1823-1831. Bryologia germanica (2 vols.)

If somebody has these works and agrees to send them to Madrid, we will pay for the shipping by the safest way the owner decides, scan it and return as it came in the shortest time (e.g., Nees' would take two days to scan, and two-three to process the pdf files). Moreover, we would provide the owner with a high-quality digital copy of the book.

Jesus Muñoz

Email: imunoz@rib.csic.es

Handbook of Malaysian Mosses – still available

I have had difficulty locating a set of Alan Eddy's invaluable & highly illustrated volumes on Malesian Mosses, but have recently located a distributor for the same. Perhaps other IAB-members would be interested. The relevant references are:

Eddy, A. 1988: A Handbook of Malesian Mosses. Vol. 1. Sphagnales to Dicranales. London, British Museum (Natural History). 204p. Eddy, A. 1990: A Handbook of Malesian Mosses. Vol. 2. Leucobryaceae to Buxbaumiaceae. London, Natural History Museum Publications. 256p. [no

publication date in book] Eddy, A. 1996: A Handbook of Malesian Mosses. Vol. 3. Splachnobryaceae to Leptostomataceae. London, Natural History Museum and HMSO. 256p.

I finally discovered that the backlog of these volumes was sold to Turpin Distribution Services Ltd of

Biggleswade, UK. They are available at a cost of 30, 35,40 pounds sterling (plus P&P) for volumes 1,2,3, respectively. If anyone else is searching for these volumes, the contact details for Turpin Distribution Services are below. To make matter slightly more complicated the volumes have been assigned new ISBN numbers. I.e., Volume 1 is now ISBN 9780113100507; volume 2 is now 9780113100514; volume 3 is now 9780113100521 Contact details: Angie Howard, customer service advisor, customer services department, Turpin Distribution Services LTD, Pegasus Drive, Stratton Business Park, Biggleswade, Bedfordshire, SG 18 8TQ

To order: angie.howard@turpin-distribution.com

Allan Fife

Translation into Italian of the GLOSSARIUM POLYGLOTTUM BRYOLOGIAE (GPB).

The translation into Italian of the GPB is in its final part, and it will be made available, both electronically and in print, soon.

The main aim has been to make available to Italian speaking bryologists the exact definition of each English scientific term, as well as the closest Italian term. This is not always been possible, though, as some differences in usage and terminology do exist between English and Italian. These differences will be pointed out in the introduction, and in notes added to the definitions, in the case the usage does indeed differ. The main areas of disagreement seem to be related to terms dealing with the position of leaves in reference to stems, for instance, and of the occasional

use of different Greek or Latin roots in the two languages. A few differences exist also between general botanical usage, and the particular bryological one, these differences have been pointed out too. It is hoped these matters will be sooner or later tackled by the International Bryological Community as a way to standardize bryological terminology even more.

Dr. Carmine Colacino – Laboratory of Bryology, University of Basilicata-Potenza, Italy Email: carmine.colacino@unibas.it or

colacino@bryology.eu

Tropical bryology on CD (Volumes 1-27)

The journal Tropical Bryology was founded in 1989 as the first bryological journal which was produced on a computer. From the beginning, the contents (text only) of the volumes was made available electronically, at first on a 3,5" disk in MS-Write format. From vol. 10 on, the journal was produced on CD as pdf-file, now with illustrations. The CD version was sold at half price. Since subscribers from tropical countries paid only half price for the journal, the CD cost only 25% of the normal price, which in some cases did not even cover the price for the postage.

In the recent years it became desirable to have also the older volumes available on CD, especially because they were no more on stock in print version. Therefore attempts were made to complete the journal. There were, however, unexpected problems because part of the files preserved on disks could no more be read. In addition, illustrations were originally glued into the typescript for offset printing and lacked. In addition, the old volumes were prepared with Pagemaker 3 and had to be converted in two steps into the recent version. Some contributions had to be newly set up. Then the lacking files were scanned, converted into pdf-files and incorporated, a work which took weeks. Therefore part of the contributions in the earlier volumes are in graphics format and not in text format. This means that text cannot be copied and pasted and no text strings can be searched for. In spite of this small inconvenience, it is a great advantage to have a journal with 4777 pages completely on CD.

To make use of Tropical Bryology on CD:

open Acrobat Reader.

- 2. Load the cover page of the volume you are going to use by loading the file volx.pdf in the according subdirectory (x stands for the volume).
- Click the title you want to read on the cover page.
 The according Acrobat Reader file is opened. You may scroll through he pages by clicking the forward/backward button, search for text strings, copy parts of the text (e.g. bibliographies) in your word processor or print pages.

If the contents on CD is copied to a harddisk and the free program Google Desktop is installed, the whole contents of the journal (with the exception of the scanned pages, less than 3%) is indexed. If one searches for names (for example Mascarenes or Chorisodontium), all contributions in the journal containing one of these words is displayed and a click upon this link opens the according pdf-file.

The price of the printed version of vols. 1-27 was about 480 USD. The CD versions on 27 CDs would cost 240 US\$. As a special offer (valid to end of February), all 27 volumes can be purchased on one CD for 50 Euros (approx. USD 63.--).

Also available is a small stock of Hedwig's Species Muscorum on CD. The CD contains the book as well as all supplement volumes, 1647 pages plus more than 400 coloured tables in print quality. Price 60 Euros. (approx. 75 US\$).

Both can be ordered in a bundle for 80 Euros (approx. 100 US\$). Prices include postage. Payments can be made internationally by PayPal without costs. Orders can be submitted by e-mail to Jan-Peter Frahm

Jan-Peter Frahm: frahm@uni-bonn.de

COURSES AND WORKSHOPS

Summer school – Ecole d'eté: Bryophytes et lichens de la forêt boréale

Bi-lingual (French-English) post-graduate courses for forest scientists and botanists (3 credits) in the summer of 2007 from 28 May to 3 June in the Forêt Montmorency. Professors Alison Munson, Serge Payette, and Line Rochefort and invited professor Kate Frego, UNB.





1.La biologie, la structure et la taxonomie des principales mousses et lichens de la forêt boréale 2.Le rôle des mousses, lichens dans le fonctionnement des écosystèmes boréaux

3.Le rôle des mousses dans la régénération des essences forestières

4.La réponse des mousses aux perturbations naturelles et anthropiques

5.La restauration utilisant les mousses

Please contact:

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CONSERVATION COLUMN

Forest moss harvest: request for collaboration

Jeri Peck, Sue Studlar, Pat Muir, and others are spearheading an effort to develop (global) commercial forest-moss harvest guidelines for discussion at the IAB conference this summer. We will try to draft some general guidelines, but would be happy to pass along tailored guidelines for specific regions if anyone has such developed.

If anyone has anything at all they would like to share on this topic, from example guidelines for other NTFPs to specific recommendations for moss, please send it along to peckj@psu.edu. Thanks!

Jeri Peck

JeriLynn E. Peck

207 Forest Resources Building, Penn State University Park, PA 16802 (814) 865-4508

http://silv.cas.psu.edu/jp.htm www.strengthinperspective.com/JPmoss

WEB NEWS

Moss types image database

We would like to draw your attention to the Moss Types Image Database which is now available online. This searchable database provides information about the moss collections housed at the Natural History Museum, London, including specimen images and scanned protologues. This dataset is the work of Gisela Oliván, with funding from the Global Biodiversity Inventory Facility (GBIF).

The database is accessible through the NHM website, or directly at:

http://www.nhm.ac.uk/research-curation/projects/moss-types/

Digitisation work is continuing at the NHM with projects to digitise the moss type collections from Africa and Latin America underway, funded by the Andrew Mellon Foundation. The data from these projects will be made available in due course.

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Ricciaceae descriptions

I would like to inform you about a website database with Ricciaceae descriptions. The website address is: http://abiris.snv.jussieu.fr/hepatiques/riccia.html

The principle is similar to other Computer Assisted Identification or CAI-tools: from a taxon-character matrix, the interface proposes some applications:

- An identification tool: you can begin by any of the character proposed. As indicated on the first page, 40 of them have been arbitrarily chosen to present the easier one for the first identification. You have to choose then again if you begin a new identification from the starting page.
- A description tool: the pages are generated at each time from the matrix;
- A key-generation and -testing tool: You can choose the character for each node, even if the keys can be generated automatically, but experience has shown that the naturalist's eyes remain the best tool for the character choice.!

Help pages are built upon a Chiroptera base, the last application with this tool http://abiris.snv.jussieu.fr/chiropteres/chiropteres.html. I nevertheless hope I hope it will be comprehensive as a beta version, considering that the taxonomy of the Ricciaceae is not yet solved. This tool has not aim to replace a printed flora, but aims to satisfy many naturalists! Consider it as a new and different approach, with its advantages and disadvantages. One of the advantages is that if a character is changed for a species (if you find an error, or a bad description), every application will be changed at once, because they are dynamically built from the matrix.

If you want to see all the illustration for the time being, please take the options "afficher tous les caractères" at the end of the list and select character "serveur_images...". and following one

Catherine Reeb http://prepagreg.snv.jussieu.fr

A new moss checklist of sub-Saharan Africa

A new version of the sub-Saharan African moss checklist is now available for download. This is the 5th version (the first was in 1995) and as well as including the changes over the last couple of years, it contains every moss name (valid or not) used in relation to sub-Saharan Africa – amounting to 7697 synonyms and unaccepted names, as well as 2746 accepted names. This makes for a very large document (252 pages), but I hope the additional data will be helpful. The publication reference is:

O'Shea, B.J. 2006. Checklist of the mosses of sub-Saharan Africa (version 5,12/06). Tropical Bryology Research Reports 6: 1-252.

To download a copy, go to: www.TropicalBryologyResearch.co.uk

and click on the third button labelled 'TBR Reports'. Go to the last (6th) entry and click on 'Download'. This will

take you to a page which explains that two different versions are available - a pdf file, or a condensed Word file, and you need only to click on one of these two options to complete the download.

Although bound copies of the document are needed for me to register the

publication, no printed copies are being made available for sale, as the cost is too high per copy (over USD 100), but you can of course do this locally.

I already know of some small omissions, but I would be very pleased to

Hear of any errors or omissions (however small) that you find.

Brian O'Shea

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The Bryological Times, founded in 1980 by S.W. Greene (1928-1989), is a newsletter published for the *International Association of Bryologists*. Items for publication in The Bryological Times are to be sent to the Editor or country contacts or column editors.

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UPCOMING MEETINGS

2007

- June 17 23: 2007 Seminars at the Humboldt Institute on the coast of Maine Advanced Sphagnum Studies: Integrating Field and Lab Observations; Richard Andrus (randrus@binghamton.edu)
- June 24 30: 2007 Seminars at the Humboldt Institute on the coast of Maine Bryophytes and Bryophyte Ecology, Nancy G. Slack (slacknan@aol.com)
- July 7 14 (tbc) BBS Summer field meeting. Mull & Lewis. Contact: Mark Lawley, email: m.lawley@virgin.net..

- July 8 14: 2007 Seminars at the Humboldt Institute on the coast of Maine Pleurocarpous Mosses of the North Woods, William R. Buck (bbuck@nybg.org)
- July 15 21: 2007 Seminars at the Humboldt Institute on the coast of Maine Bryophytes for Naturalists, Nat Cleavitt (nlc4@cornell.edu)
- **July 14-28**: Summer field meeting 2007 of British Bryological Society, Mull & Lewis Islands, UK
- July 23-27 IAB meeting in Kuala Lumpur, Malaysia. See this issue of the BT 120, page 2). Organizers: Dr. H. Mohamed and Dr. Amru N. Boyce, Fac. of Science, University of Malaya, Kuala Lumpur 50603
- **August 12-16:** ABLS meeting: Xalapa, Mexico. See BT 122 and www.abls.org
- August 15-19: Nordic Bryological Society. Annual summer excursion. Lamni Biological Station. Contact Nils Cronberg: Nils.Cronberg@ekol.lu.se
- August 29 2 September: BLAM annual excursion, Oberen Gaital; Kärnten, Austria. Contact: Ch. Berg. <u>christian.berg.graz@inode.at</u> or BLAM website.
- September 14-16: 32nd annual A. Leroy Andrews Foray in and around the White Mountains of New Hampshire. Contact Betsy Newcomer at newcomer@psouth.net
- September 29-30: BBS Annual General Meeting and paper-reading session; World Museum Liverpool . Contact: John Edmondson, e-mail: john.edmondson @liverpoolmuseums.org.uk.
- **December 3–8:** IXth Australasian Bryophyte Workshop, Maydena Tasmania. See BT 122. Contact: Paddy Dalton, P.J.Dalton@utas.edu.au.

2008

July 12–19: BBS Summer Field meeting 2008. Shetland Isles. Paul Harvey. Contact sbrc@zetnet.co.uk