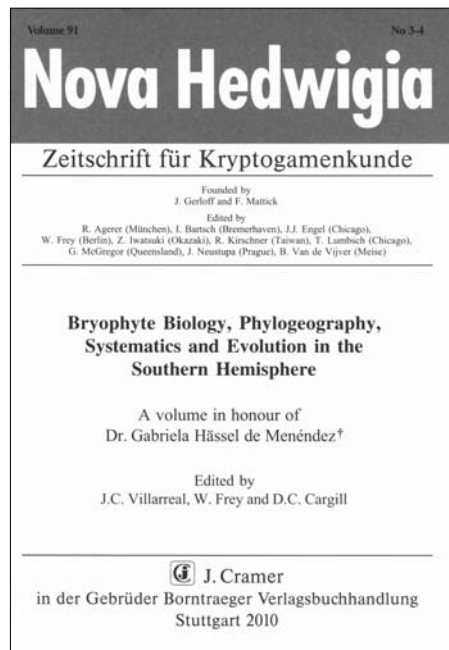


J. C. VILLAREAL, W. FREY & D. C. CARGILL (eds) 2010. *Bryophyte Biology, Phylogeography, Systematics and Evolution in the Southern Hemisphere. A Volume in Honour of Dr. Gabriela Hässel de Menéndez*†. Nova Hedwigia Vol. 91, No. 3–4. J. Cramer in der Gebr. Borntraeger Verlagsbuchhandlung, Stuttgart, 333 pp., 127 figures, 5 photographs. Paperback, size 24 × 17 cm. ISSN 0029-5035. Price: 145 €.

Studies on bryophytes in the Southern Hemisphere have a long tradition beginning in the second half of the eighteenth century. Some collections of these plants had been made by naturalists accompanying major exploratory expeditions and subsequently were delivered to bryologists in Europe. They described them either as new species or reported them under names of well known Holarctic species because of their ostensible resemblance to them. This situation continued practically until the latter half of the twentieth century and as a result the vast majority of mosses, hepatics and hornworts from the Southern Hemisphere were described by European or North American bryologists. The first commendable, of very few, exception was C. P. Thunberg, a disciple of Carl Linné who, in 1772–1775, personally collected bryophytes in the Cape region in South Africa. He reported several species under European names, but also described one new species of a thallose liverwort, now well known as *Symphyogyna podophylla* (Thunb.) Mont. & Nees.

There were only a few students of bryophytes resident in various areas in the Southern Hemisphere, mostly in former colonies of the British Empire. They made important contributions to local bryology, although their interest in bryophytes was usually not as a professional. For instance, T. R. Sim in South Africa, L. Rodway in Tasmania, and K. W. Allison and G. O. K. Sainsbury in New Zealand. The situation was much worse in South America where local bryologists were dramatically missing, the only exceptions being C. Housseus and O. Kühnemann in Argentina. The latter compiled catalogues of Argentine mosses and hepatics which, however, did not present any new taxonomic concepts. His disciple was Gabriela Hässel de Menéndez (1927–2009), the first professional bryologist in South America. She gained international fame as a specialist in hepaticology and for the most of her long scientific career was associated with the Museo Argentino de Ciencias Naturales ‘Bernardino Rivadavia’ in Buenos Aires. The results of her investigations were presented in about one hundred research papers, the most important being ‘Catalogue of Marchantiophyta and Anthocerotophyta of southern South America [Chile, Argentina and Uruguay, including Easter Is., (Pascua I.), Malvinas Is. (Falkland Is.), South Georgia Is., and the subantarctic South Shetland Is., South Sandwich Is., and South Orkney Is.]’. It was published shortly before her death on 4 July 2009, which



crowned her bryological studies on temperate South American Hepaticae and Anthocerotae. In recognition of her significant contributions to bryology, a collection of papers dealing with austral bryophytes was published in a single issue of *Nova Hedwigia*.

The Hässel de Menéndez Gedenkschrift consists of 14 articles contributed by an international group of 37 authors. They are preceded by an introductory tribute comprising her biography and a list of publications written by the two disciples, Elena Reiner-Drehwald and M. Magdalena Schiavone, and Marta Rubies, the last collaborator of the deceased celebrant.

The 12 contributions in this volume deal with taxonomy and phylogeography, thus sharing Hässel de Menéndez’ main interest in bryology. The other two articles have also strong connections with taxonomy. The first presents interesting results of cryo-scanning electron microscope studies on remarkable cell walls in the austral moss *Rhacocarpus purpurascens* and the second deals with investigations on development of multicellular spores in the hornwort genus *Dendroceros* with some general remarks on endospory in bryophytes.

There are seven accounts dealing with taxonomy and

nomenclature of bryophytes. Five of these are devoted to liverworts, including a taxonomic revision of *Lejeunea deplanata* in the Neotropics, studies on *Plagiochila* in New Zealand and *Frullania* in Australasia and a detailed treatment on the morphology, systematics and phylogeny of *Noteroclada*. This is a monotypic genus of thallose hepatics, widespread in the American Cordillera from Mexico to Tierra del Fuego, with some extensions to the Tristan da Cunha group in the South Atlantic Ocean. Taxonomy of mosses is represented by two accounts covering *Pohlia* sect. *Apalodictyon* and *Dicranella* in Latin America, whereas hornworts are dealt with in a single paper on *Phaeomegaceros* in South America. All these contributions offer some taxonomic and nomenclatural novelties, including descriptions of new taxa, new synonymies and new combinations. Of special interest is the description of *Phaeomegaceros squamuliger* subsp. *hassellii* from Chile, dedicated to the eponym of this volume. Unfortunately, the subspecific epithet is incorrect because, according to Art. 60.6 of the Code, the 'ä' which appears in the first part of her name should be transliterated as 'ae'. Thus, the present epithet distorts the eponym's name but it cannot be corrected according to the rules of the Code.

The remaining five articles are phytogeographical treatments. Three of these address new bryophyte records for widely separated areas, including *Prasanthus suecicus* in the subantarctic Prince Edward Islands and the Sino-Himalayan region, *Iwatsukia bifida* in Costa Rica and *Grimmia incrassicapsulis* in Papua New Guinea. Finally, there is an innovative paper on modeling the distribution of *Hypopterygium tamarisci* in Latin America and a valuable review of new insights into the distribution patterns and divergence of Gondwanan bryophytes incorporating molecular data.

The present volume is an important contribution to the bryological literature, clearly illustrating the remarkable progress in research on bryophytes in the austral regions. Such studies have long been neglected and Gabriela Hässel de Menéndez played an important role in stimulating them in southern South America. Therefore, as nobody else, she deserved special recognition for her outstanding contributions to austral bryology. All students of southern bryophytes should find this book to be both interesting and valuable reading, providing plenty of important information to stimulate further studies.

Ryszard OCHYRA

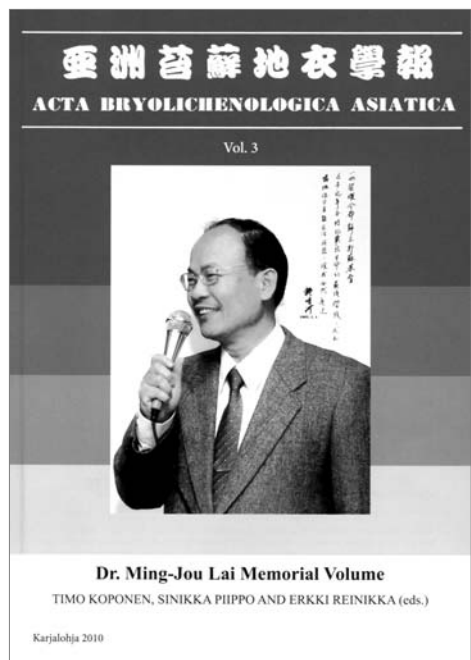
TIMO KOPONEN, SINIKKA PIIPPO & ERKKI REINIKKA (eds) 2010. *Dr. Ming-Jou Lai Memorial Volume*. Acta Bryolichenologica Asiatica Vol. 3. Finnish-Chinese Botanical Foundation, Karjalohja, 175 pp., 53 figures. Paperback, size 25.1 × 17.7 cm. ISBN 978-952-67464-0-1; ISSN 1016-6181. Price: 40 €.

The last three decades have been strongly marked with exceptional progress in bryological research both in Taiwan and continental China. This has been largely as a result of the broad opening of the latter to the external world after the closed years of the cultural revolution and contact between Chinese bryologists and experienced colleagues in Europe and North America during visits to the major world herbaria. One of the pioneers in this movement of change for Chinese bryology was Dr. Ming-Jou Lai (1949–2007). He was born in Taiwan and in 1981 defended his doctoral thesis at the University of Helsinki, Finland, on the basis of seven bryological and three lichenological articles.

With his broad interests in botany, but especially in bryophytes and lichens, Dr. M.-J. Lai was not only a competent scientist but he proved to be a talented businessman. He was a specialist in horticulture and developed new methods for cultivating bryophytes on a large scale. He also invented a method to transform waste textile material into a soil substitute which could

be used in cultivation of ornamental plants and vegetables. His business enterprises were profitable and made him a wealthy person and this allowed him to sponsor many botanical projects, especially in mainland China, and to obtain financial support for continental Chinese scientists through personal efforts and funding at a time when it was politically difficult to do so. A man of great vision, he established the Finnish-Chinese Botanical Foundation in Helsinki in 1998. Thanks to this sponsorship many young Chinese bryologists have been able to visit the University of Helsinki and other scientific centres in Europe and develop their botanical abilities.

In 1989, Dr. M.-J. Lai established a new journal, *Acta Bryolichenologica Asiatica*, which was to be a place for publication of short scientific notes and brief articles devoted to Asiatic bryophytes and lichens. Only two issues were published in 1990 and it appeared it was only an ephemeral venture, just like several other efforts of this kind which have appeared in the history



of bryology. However, after two decades the journal was resurrected and in 2010 the third issue was published under the auspices of the Finnish-Chinese Botanical Foundation. Alas, the title of this issue *Dr. Ming-Jou Lai Memorial Volume* tells its own tale – it is a Gedenkschrift dedicated to its founder in testimony to his vision for the future of bryology in China, his generosity as a benefactor of younger Chinese botanists and his own eminence as a botanist and bryologist.

The volume consists of 21 articles covering a broad spectrum of topics which, for practical reasons, are divided into four sections; additionally, in two cases they are subdivided into two subsections. The first section comprises four accounts which are dedicated to the memory of Dr. M.-J. Lai and present an interesting sketch of his biography (T. Koponen), a memorial account by two leading Chinese bryologists, C. Gao and T. Cao, concerning their successful cooperation with the deceased celebrant and an annotated bibliography of his papers (E. Reinikka). In most volumes of this kind, the person to whom they are dedicated serves as an eponym for newly described taxa. The fourth article in the first section provides a description of a new fungal species from Yunnan Province, China (*Cordyceps laii* M. Zang, X.-J. Li & J.-Y. Chen). In the third section, another new species dedicated to Dr. M.-J. Lai, the moss *Philonotis laii* T. J. Kop. from Hunan Province, is described.

The body of the book consists of 12 articles. The majority refer to various aspects of the taxonomy, nomenclature and phytogeography of Asiatic bryophytes. There are two accounts in which new records of mosses and liverworts from the Philippines and Mayotte Island in the French Comoros are provided. A dendroid form of *Pogonatum cirratum* is also described from Mt. Kinabalu on Borneo. A number of new moss records for China are given, including three species of *Neckera*, two of *Ulota*, *Plaubelia involuta* and *Syntrichia amphidiacea*. An overview of *Philonotis* species in Mitten's *Musci Indiae Orientalis* with a key to taxa in Southeast Asia is of special importance. A new key to Chinese species of *Ulota* is also provided. Several new reductions of names to synonyms are presented in taxonomic accounts and two taxa are described as new, namely *Philonotis lizangii* T. J. Kop. and *Ph. sect. Yezoanae* T. J. Kop. (the author used the name sect. *Yezoana* but it is incorrect according to Art. 21.2 of the Code and should be changed following Art. 32.7). The final paper in this section provides information on average spore numbers per capsule obtained from 24 selected Asian species, ranging from 1450 in *Trocholejeunea sandvicensis* to 8,983,000 in *Polytrichum commune*.

The third part of the book consists of four papers which cover the flora of Hunan Province of China. Three are serial accounts documenting the bryoflora of this province. There is an overview of the Pterobryaceae, description of a new species, *Philonotis laii*, and a treatment of five selected genera of liverworts (*Asterella*, *Fossombronia*, *Isotachis*, *Jubula*, and *Metzgeria*). The fourth paper in this section deals with the lichen genus *Peltigera* in Hunan Province.

In the fourth and final section of the book only a single account is included. It is the 72<sup>nd</sup> paper in the well known series 'The bryophyte flora of the Huon Peninsula, Papua New Guinea' which covers the Spiridontaceae. This moss family is represented in the study area by the single genus *Spiridens* with three species. Two species from the Pacific region are newly considered as conspecific with *S. reinwardtii*.

Ming-Jou Lai was a great visionary, stimulating, encouraging and providing much needed support for the study of cryptogamic botany in China. The resurrection of *Acta Bryolichenologica Asiatica*, which he founded, is a noteworthy event and hopefully the journal will now be regularly published. It should provide a timely stimulus for the continuance of the upsurge in bryological and lichenological studies in Asia. This volume, dedicated to its founder, is a fitting tribute indeed.

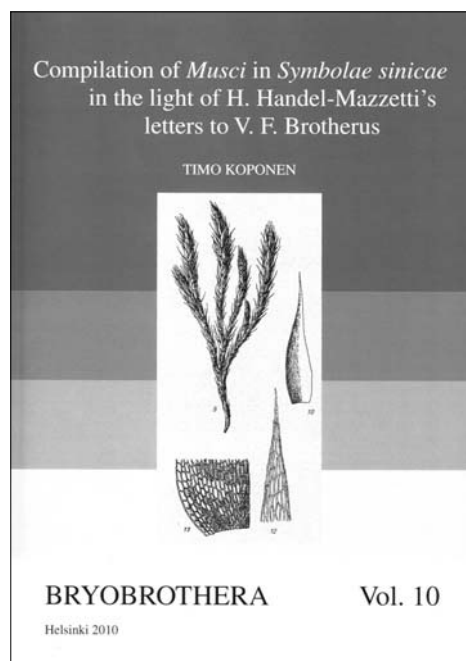
Ryszard OCHYRA

TIMO KOPONEN 2010. *Compilation of Musci in Symbolae sinicae in the light of H. Handel-Mazzetti's letters to V. F. Brotherus*. Bryobrothera Vol. 10. Finnish Bryological Society, Helsinki, 78 pp., 8 figures. Paperback, size 25.1 × 17.7 cm. ISBN 978-952-67345-2-1; ISSN 1235-3949. Price: 40 €.

Users of scientific treatments usually take cognisance of the results of studies which are often written in dry technical language. On the other hand, it is nearly impossible to find out about the inner history of their origin: for example, in which way material was obtained, how the final results were developed, what kind of indecision an author experienced and what kind of problems emerged during the work. Knowledge of the circumstances and conditions in which some opera originated is essential in some types of work for interpretation of the results. It refers, among others, to taxonomic works in which new taxa are described when it is not quite clear to whom the authorship of a given name should be ascribed. In Article 46.6 of the *International Code of Botanical Nomenclature*, Note 3 allows the use of 'external evidence' showing the true authorship of names which can be found, for example, in correspondence and other sources. Thanks to the meticulous work of Professor Timo Koponen bryologists are able to know, at least in part, the history of the coming into being of Brotherus' account on mosses published in 1929 in *Symbolae sinicae*, one of the basic works in Chinese muscology.

In 1914 the Austrian botanist and explorer Dr. Heinrich Freiherr von Handel-Mazzetti (1882–1940) organised, under the auspices of the Academy of Sciences in Vienna, an expedition to Yunnan in south-western China aimed at botanical exploration of this province. While in China he was taken aback by the outbreak of First World War and consequently the expedition, initially planned for a few months, extended to nearly five years. During that time Handel-Mazzetti traveled extensively in south-western China, making large collections of plants and fungi in Yunnan, Sichuan, Guizhou and Hunan provinces. The collections included 1484 specimens of mosses. He presented them to V. F. Brotherus (1849–1929) in Helsinki, Finland, one of the most outstanding muscologists at that time who had just completed his treatment of mosses for the famous series *Die natürlichen Pflanzenfamilien* founded and edited by A. Engler.

Brotherus immediately started work on the collection and soon published two preliminary accounts (Brotherus 1922, 1924) in which he described several new genera and many new species of moss discovered in China by Handel-Mazzetti. The final results of examination of the Chinese collections were presented in Handel-Mazzetti's *Symbolae sinicae*, an opus consisting



of eight parts dealing with algae, fungi, lichens, mosses, liverworts and hornworts, pteridophytes and vascular plants published in 1929–1937. This series was initiated by the treatment of mosses completed by Brotherus shortly before his death on 9 February 1929 and published by the end of March 1929 as the fourth part of this opus. For many decades it was the basic source of information on the mosses of south-western China.

In total, Brotherus (1929) described nine genera, 232 species, 28 varieties and three forms of mosses new to science. Of these, seven genera and about one quarter of the species are still accepted in modern bryology. An annotated list of all taxa of mosses described in *Symbolae sinicae* was published by Cao and Koponen (2004). Six years after publication of this catalogue, a complementary work appeared which contains an historical background of the origin of the treatment of mosses in *Symbolae sinicae* in the light of the letters of Handel-Mazzetti sent to Brotherus and which are now deposited in the National Library of Finland in Helsinki. Due to the copyright regulations of letters, the manuscript of this work, prepared by Timo Koponen in the early 2000's, could be published only 70 years after the death of Handel-Mazzetti. He died on 1 February

1940 after a tragic accident when a German military vehicle hit him on the street in the evening dusk by the Botanical Institute in Vienna.

Handel-Mazzetti corresponded with Brotherus for over twenty years and between 1907 and 1928 sent to him 40 letters, postcards and printed documents. The tenor of them is published in the present account and all are accompanied by the author's annotations. For practical reasons they are divided into three parts, six letters including first contacts (1907–1913), 13 letters referring to cooperation on new taxa from China (1921–1924), and 21 letters at the completion of *Symbolae sinicae* (1925–1928). The work presents only one-sided correspondence, i.e. letters of Handel-Mazzetti to Brotherus. Handel-Mazzetti was noted for his critical assessment and he carefully verified all Brotherus' determinations and names and did not refrain from suggesting possible inaccuracies and mistakes. Unfortunately, it is unknown whether the letters of Brotherus to Handel-Mazzetti are still available. They could throw some light if Brotherus felt troubled by criticism of Handel-Mazzetti and how he reacted to it.

A perusal of Handel-Mazzetti's letters discloses the inner history of the origin of some taxonomic concepts and some data are of importance for nomenclature. In the letter of 22 February 1923 Handel-Mazzetti clearly stated that eleven specimens are unicates and the entire material should be returned to him after description. It has serious nomenclatural implications because it clearly indicates that the material eligible for lectotypification of some species names is actually that preserved in the herbarium at Vienna. This is the case for example with *Brachymeniopsis gymnostoma*, a genus and species endemic to Yunnan, whose rich material with many mature capsules is preserved in W, whereas in his private herbarium Brotherus retained only some scraps of this moss including detached leaves and a few shoots. These were incorrectly indicated by some authors as the holotype, whereas the correspondence provides external evidence that lectotypification is needed and in fact the specimen housed in W must be chosen as lectotype.

A very interesting story is associated with the generic name *Handeliobryum* which was proposed by Brotherus (1924) to honour Handel-Mazzetti. It is evident from the correspondence between Handel-Mazzetti and Brotherus and the label data on the type specimens that the original plan of Brotherus regarding the choice of a taxon for dedication of its name to the eponym was different. In his letter of 28 October 1923 Handel-Mazzetti thanked Brotherus for his intention to describe 'Handeliobryum incurvatum'. Although no specimen is given in the letter, this name exists on the label of the type material of

the species finally described as *Leptopterigynandrum incurvatum* Broth. which bears No. 4743 (Brotherus 1924). Brotherus used the generic name *Handeliobryum* for another new species which he described as *Handeliobryum setschwanicum*, although initially he had intended to name it 'Pseudolimbella densiretis' as seen on the label of the type specimen No. 923.

In the introductory part of the present work brief biographical sketches of V. F. Brotherus and H. Handel-Mazzetti are presented, including portraits of both correspondents. The body of the work contains the letters of Handel-Mazzetti, accompanied by the author's comments. It is followed by the listing of persons mentioned by Handel-Mazzetti in his letters. These are outstanding bryologists of the time (J. Cardot, Th. Herzog, C. Müller, V. F. Schiffner and F. Stephani) and collectors of mosses in China (J. Cavalerie, J. F. Duthie and G. Giraldi). For each person a short biographical note is provided and in some cases their letters to Brotherus are also quoted, including A. Engler, Th. Herzog and V. F. Schiffner.

The epilogue of the work consists of a brief account on the treatment of the mosses in *Symbolae sinicae* and three appendices. The first of them presents a list of bryophytes mentioned by Handel-Mazzetti in his various works describing his 'Iter sinense' and including the published diary of the expedition (Handel-Mazzetti 1927) which recently was translated into English (Winstanley 1996). The second appendix provides a list of mosses mentioned as *nomina nuda* in Handel-Mazzetti's diary. One species, *Hymenostylium densirete* Hand.-Mazz., was validly published in this work and at present it is considered to be conspecific with *Reimersia inconspicua* (Griff.) P. C. Chen. Finally, the third appendix includes some additions to the annotated list of taxa in Cao and Koponen's (2004) work.

The present work is an excellent document which uncovers the inner history of origin of one of the most important treatments on Chinese mosses. Such works do not need special recommendation for all those interested in history of bryology and one would wish to see similar treatments on other major bryological opera.

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Ryszard OCHYRA