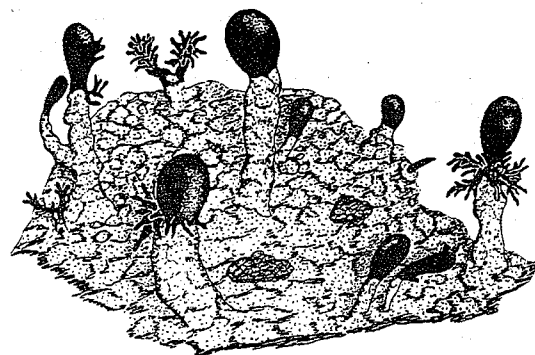


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IAL membership is open to anyone who has an active interest in the study and use of lichens. The subscription is US \$ 20.00 or S.Fr. 32.00 for the six-year period between successive International Botanical Congresses. Subscriptions should be sent to the Treasurer or Deputy Treasurer:

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## Naming mechanical and sexual hybrids in lichen-forming fungi

Since the ability of one lichen thallus to develop from more than a single propagule was carefully demonstrated in *Cladia retipora* by Jahns (1972), lichenologists have had a heightened awareness of this phenomenon. Where propagules arise from different species, the resultant thalli have been referred to as "mechanical hybrids" (Hawksworth, 1978). Such mechanical hybrids can occur at the interspecific level, as elegantly demonstrated between *Physcia adscendens* and *P. tenella* by Schuster, Ott & Jahns (1985), and *Cladonia rangiferina* and *C. squamosa* (Jahns, 1987). Furthermore, in some circumstances these can arise at the intergeneric level as in *P. tenella* and *Xanthoria parietina* (Ott, 1987). Such combined phenotypes do not represent true or "sexual hybrids" as there is no exchange of genetic material (Bowler, 1976), but sexual recombination has been suggested as a possible cause of rare thalli with characters exchanged between *Alectoria sarmentosa* and *A. vancouverensis* in particular (Brodo, 1978). A most exciting paper by Culbertson, Culbertson & Johnson (1988) has now conclusively established that *Cladonia grayi* and *C. merochlorophaea* interbreed in the Appalachians, and further that *C. cryptochlorophaea* and *C. perlomera* form sexual hybrids in the Coastal Plain. Genetic exchange has also this year been postulated to occur between *Aspicilia contorta* and *A. hoffmannii* (Ekman & Fröberg, 1988).

As lichenologists detect more examples of both categories of hybrids, there will be an increasing need for a consistent method of referring to these in literature. All too frequently specialists in one subject adopt their own terms to describe characters or phenomena, which then prove to be barriers to interdisciplinary communications (Savile, 1984). Fortunately in this case parallels exist in the vascular plants, and the object of this editorial is to recommend that lichenologists wishing to refer to mechanical and sexual hybrids follow the internationally agreed rules prepared for graft and sexual hybrids in vascular plants. The essential provisions of these are summarized below.

### Mechanical Hybrids

The International Code of Nomenclature for Cultivated Plants (Brickell *et al.*, 1980) provides for the nomenclature of graft-chimeras, defined as "... composed of tissues in intimate association from two different plants" (Art. 20). This definition can appropriately therefore encompass the mechanical hybrid situation in lichens. Under this Code, a plus (+) sign is used to signify the two components (Art. 21): -e.g.

*Physcia adscendens* + *P. tenella*

*Physcia tenella* + *Xanthoria parietina*

Provision is also made in this Code for the introduction of a new collective epithet when species of the same genus are involved, which is then preceeded by a "plus" sign (Art. 22); or a new generic name when species belonging to different genera are involved, in which case the new generic name is preceeded by a "plus" sign and normally formed by combining both generic names (Art. 23). Such names should not of course be homonyms of previously validly published binomials for independent species or sexual hybrids. In the two examples given above, one might consider proposing names such as "*Physcia +schusteri*" and "*+Physcioxanthoria ottae*" respectively; however, this is not considered appropriate at this time as both phenomena seem to be exceptionally rare in nature. It is not my intention to validate either the special genera or specific names here, even though the only requirement for valid publication is the statement of the components (Art. 20)! Regrettably no equivalent to Art. 34.1 of the Botanical Code exists in that for Cultivated Plants.

### Sexual Hybrids

Appendix I (Arts. H.1 through H.12) of the International Code of Botanical Nomenclature (Greuter *et al.*, 1988) is devoted to hybrids. By implication this Appendix covers all groups of organisms covered by this Code, therefore including lichen-forming fungi. These provisions therefore appear to be mandatory for sexual hybrids in lichens. Sexual hybrids between named taxa are indicated by using a multiplication (x) sign between the names of the taxa concerned (Art. H.2.1): -e.g.

*Alectoria sarmentosa* x *A. vancouverensis*

*Cladonia cryptochlorophaea* x *C. perlomera*

As in the case of mechanical or graft hybrids, novel collective epithets can be used in the case of interspecific and intergeneric hybrids (Art. H.3) in which case the multiplication sign preceeds the collective name e.g. *Alectoria xbrodoi*. In order to

validly publish such names, only a statement of the parents is required, but rules of effective publication (Art. 29) and acceptance (Art. 34.1) do apply as they are not specifically exempted. This collective epithet is thus clearly not validated here (Art. 34.1). No intergeneric sexual hybrid in lichens is known, but similar criteria would apply to them.

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- D.L. Hawksworth (CMI, Kew)

## RESEARCH NEWS & NOTES

Hansen, Eric Steen (Copenhagen, Denmark) spent two months (June-July 1988) in the northernmost land of the world, viz. Peary Land in Northeast Greenland, to collect lichens for his general study of the lichen flora of Greenland. One additional week in August was spent in Central East Greenland, near Kuhn Ø, to collect lichens for the next fascicle of "Lichenes Groenlandici Exsiccati". This fascicle will also include collections made by ESH in northernmost Greenland and around Scoresbysund in Central East Greenland in 1987.

Holtan-Hartwig, Jon (Oslo, Norway) took his cand. scient. degree on a taxonomic study, '*Peltigera*, exclusive of the *P. canina* group, in Norway' early this autumn. He is now engaged as a research assistant on the Norwegian crustose lichen project, and is preparing his cand. scient. thesis for publication.

Kantvilas, Gintaras (Hobart, Tasmania, Australia) has been appointed as Curator of Cryptogamic Botany at the Tasmanian Herbarium [HO]. He plans to continue his study of Tasmanian cool temperate rainforest lichens. Between June and September he had a Sydney Royal Botanic Gardens Trust Research Fellowship to work at the Sydney Herbarium [NSW] on NSW lichens, particularly those in *Nothofagus moorei* rainforest. This provided an excellent opportunity to compare the lichens of these forests with those of analogous *Nothofagus* forests in Tasmania.

Krog, Hildur (Oslo, Norway) is planning a study of the macrolichens of low montane rainforests in eastern Tanzania. She will visit Morogoro in October-November this year and again for a longer period during a one-year sabbatical in 1989.

Kyselová, Zuzana (Tatranská Lomnica, Czechoslovakia) is continuing her research on lichens as indicators of air pollution in the Tatra National Park. In the future she will be studying the *Caliciales* in the High Tatras.

Lackovicová, Anna and Pisút, Ivan (Bratislava, Czechoslovakia) are preparing a study on the influence of atmospheric pollution on epiphytic lichens in the NE Slovakian industrial area (Krompachy region).

Lai, Ming-Jou (Taichung, Taiwan, China) visited the South China Botanical Institute and Chungshan (Sun Yat-sen) University in Guangzhou (Canton) in July 1988 on the way to Helsinki, where he studied cetrarioid lichens with Prof. Teuvo Ahti and lichen collections from Mt. Morrison, Taiwan, with Soili Stenroos. Taking the new convenient non-stop flight from Helsinki to Beijing he visited the Institute of Microbiology, Academia Sinica, and worked on *Cetraria* with Prof. Wei's lichenology group.

Liska, Jirí (Prague, Czechoslovakia) is interested in bioindication and monitoring of air pollution using lichens. He is continuing his work on the mapping of epiphytic lichens in Bohemia (grid system mapping scheme).

Özdemir, Aysen (Eskisehir, Turkey) finished her thesis successfully. Title: "Eskisehir ili'nde bulunan bazı liken türlerinin - taksonomisi, ekolojisi ve yayılış alanları" (in Turkish). 120 Taxa from various groups and substrates are treated. In spring 1988 she stayed with Volker Johns in Bad Dürkheim for seven weeks to study Turkish lichens, especially those from the mountains around Izmir (Yamanlar Dağı, Nif Dağı, Spil Dağı). Fieldwork in this area was done together with Volker John, and was supported by Prof. Necmettin Zeybek and the Forestry service.

Timdal, Einar (Oslo, Norway) continues his studies on *Toninia* for his degree of dr.phil, and will spend the autumn in Boulder (USA) with Bill Weber, mainly to undertake fieldwork in the western USA.

Vezda, Antonín (Brno, Czechoslovakia) is continuing his taxonomic research on foliicolous and corticolous lichens from various tropical regions. In preparation are treatments of lichens from the Neotropis (together with K. Kalb), East Africa (with Edit Farkas) and Australia (with J. Hafellner). The next fascicles of his Lichenes Selecti Exsiccati will be distributed in November 1988, bringing the total to 2000 numbers.

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#### Sonoran Desert Field Meeting 27 Dec., 1988 to 12 Jan., 1989

Those interested in participating in this meeting (announced in ILN 21(1): 18-19 and 21(2): 38-39, where a tentative schedule is given) should send reservations using a photocopy of the form on p. 38 together with \$100.00 deposit (or payment in full) to:

Dr. T.H. Nash III,  
Dept. of Botany,  
Arizona State University,  
Tempe, AZ 85287-1601,  
USA

by Oct. 1, 1988.

Full payment in US dollars will be due by no later than Dec. 1, 1988. Payment should be made to Arizona State University.

#### Meeting on Lichen Mapping in Europe

A workshop (conference?) of two or three days will be held on 22.-24. September 1989 (not in 1988, as earlier announced), at the Staatliches Museum für Naturkunde in Stuttgart/FRG. Aim is to contribute to an exchange of thoughts and experience in mapping projects and the initiation of a supranational, if possible Europa-wide mapping of lichen species. Those interested in participating should contact V. Wirth, Naturkundemuseum, Rosenstein 1, D-7000 Stuttgart, FRG. Lectures on the topic are welcome.

#### News from the Lichen Flora of the Guianas Project

In 1988 the first publications came out: A checklist of all species reported from the Guianas before 1987 (Willdenowia 17: 193-228); and a treatment of the family Pyxinaceae by A. Aptroot (Flora of the Guianas, Ser. E, Fasc.1. 1988, see also under New Literature). This is the first issue of the Flora dealing with Cryptogams.

Two collaborators started further treatments: L. Brako

(Washington) began a treatment of the genus *Phyllopsora*, and a treatment of the genus *Ramalina* was started just recently by H. Kashiwadani (Tokyo).

Additional collections were made during a fieldtrip to French Guiana in January 1988 by H. Sipman, who paid special attention to foliicolous lichens. Also during the fieldmeeting in French Guiana of the Advisory Board of the Flora of the Guianas in June 1988 new lichen collections were made.

### New Literature

André APTROOT. *Pyxinaceae*, in: A.R.A. Görts-Van Rijn (ed.), Flora of the Guianas, Ser. E, Fasc. 1. 1988 ("1987"). 59 pages. (First fascicle dealing with lichens; 48 species in 7 genera are treated with keys and descriptions of genera and species; since most of the treated species are wide-spread, this volume might be of use to anybody who wants to identify tropical lowland lichens)

Rex B. FILSON. Checklist of Australian Lichens. Third Edition. National Herbarium of Victoria. 1988. 196 pages.

W. GREUTER et al. International Code of Botanical Nomenclature adopted by the Fourteenth International Botanical Congress, Berlin, July-August 1987. Regnum veg. 118. 1988. xiv + 328 pages. (The traditional upgraded edition of the Code prepared after all International Botanical Congresses. Remarkable features are: the Code is presented only in english; versions in other languages will be produced locally; following the move of the Bureau of the International Association of Plant Taxonomists to Berlin, this volume of Regnum Vegetabile has been produced in Berlin, and is printed by Koelz Scientific Books in Königstein, FRG. Use of new electronic techniques made it possible to issue the new Code at a record speed within one year after the Congress. A major part of the book consists of lists of nomina conservanda et rejicenda)

Klaus KALB & Antonin VEZDA. Neue oder bemerkenswerte Arten der Flechtenfamilie Gomphillaceae in der Neotropis. Bibliotheca Lichenologica 29. 1988. 80 pages + 39 figs. (Treatment of 10 genera and 41 species, of which 28 are newly

described; includes keys to all known neotropical representatives of the genera, most of them foliicolous)

MASING, Viktor. Bibliography of the Published Papers of Professor Hans Trass. Tartu State University. 1988. 82 pages. (dedicated to Hans Trass on occasion of his 60th birthday; contains a biography in english and an indexed list of 440 titles, some 100 of special lichenological interest)

P.M. McCARTHY & M.E. MITCHELL. Lichens of the Burren Hills and the Aran Islands. Galway, Officina Typographica. 1988. 123 pages. Available from: LBHAI Project, Department of Botany, University College, Galway, Ireland. (A neatly hard-bound booklet containing an introduction to the area and substrate-related keys with short descriptions to all 349 species)

P. RASSI & R. VÄISÄNEN (Editors). Threatened Animals and Plants in Finland. English summary of the report of the Committee for the Conservation of the Threatened Animals and Plants in Finland. Government Printing Centre, P.O.Box 516, SF-00101 Helsinki. 1987. 82 pages. (A summary of a three-volume edition published in Finnish in 1985. Includes a list of 79 lichen taxa, among them 10 extinct and 12 endangered species, and a discussion on causes of decline of lichens in Finland)

T.D.V. Swinscow & H. Krog. Macrolichens of East Africa. British Museum (Natural History). 1988. VIII + 390 pages. ISBN 0-565-01039-5. (Contains descriptions, keys and data on chemistry of all macrolichens known from an area mainly comprising Kenya and Tanzania; it constitutes the first lichen flora on a modern base for a tropical country; most is based on personal revisions by the authors; includes keys to such poorly-known genera as *Leptogium*, *Ramalina*, *Sticta*, *Usnea*)

### In memory of Otto Degener

Otto Degener died on 18. January 1988 in Honolulu, Hawaiian Islands, in the age of 88. Degener, famous among all plant taxonomists by the family *Degeneriaceae* named after him, worked mainly on the phanerogam flora of the Hawaiian Islands.

He published the "New Illustrated Flora of the Hawaiian Islands", also known as "Flora Hawaiiensis".

He also had an interest in lichens. His Flora contains a key to the genera of lichens made by O. Klement. The intention to include treatments of the genera could not be realized unfortunately. Degener was in contact with several lichenologists apart from O. Klement, e.g. K. Kalb, F. Mattick, A. Vezda, V. Wirth, who received ample Hawaiian lichen collections from him. This material is under study and kept in their respective herbaria. Several numbers were so rich that they could be distributed in the "Lichenes selecti exsiccati" issued by A. Vezda and the "Lichenes Neotropici" of K. Kalb. A publication by O. Klement (1966), "Zur Kenntniss der Flechtenflora und -vegetation des Hawaii-Archipels" (in Nova Hedwigia 11) is based on Degener's collections. Several new species are based on his collections: *Bacidia violascens* Kalb & Vezda, *Buellia multispora* Kalb & Vezda, *Dimerella degeneri* Kalb & Vezda, *D. frederici* Kalb.

Degener, son of a German emigrant from Braunschweig, was born in Orange, New Jersey, USA, and moved to Hawaii in 1922. He got his master's degree from the University of Hawaii and did doctoral work at the University of Massachusetts and Columbia University. He taught botany at the University of Hawaii from 1925 to 1927 and was later a naturalist for the Hawaii National Park. His wife from Berlin, Germany, also a botanist, contributed considerably to his work and is coauthor of many of his publications. Degener accumulated many honours, including the Distinguished Service Award of the New York Botanical Garden, the Willdenow Medal of the Berlin Botanical Garden and Museum, and the Linné Medal from Stockholm.

One of his main aims was the preservation of the Hawaiian environment and flora. In his letters he repeatedly complained about the destruction of the native flora and fauna of Hawaii. "Es ist unbeschreiblich traurig, daß wir Menschen solche Last der Welt sind" (it is indescribably sad that we human beings are such a burden for the world).

---Volkmar Wirth

## PERSONALIA

### Honours

Rex Filson has been awarded a honorary D.Sc. by Monash University for his extensive contributions to Australian lichenology.

Gintaras Kantvilas will be appointed Curator of Cryptogamic Botany at the Tasmanian Herbarium [HO] in Hobart, Tasmania, Australia, beginning at the end of September 1988.

Patrick McCarthy (presently at the Department of Botany, University College, Galway, Ireland) has been appointed as a lichenologist at the National Herbarium of Victoria [MEL], Australia. He will begin in early 1989.

### Deaths

Prof. Zygmunt Tobolewski, Poznan University, Poland, died in August 1988. Further details will appear in the next issue of the Newsletter.

Prof. Flordeliz R. Uyenco, Natural Science Research Institute, Diliman, Quezon City, Philippines, died suddenly on May 4, 1988. She obtained her Ph.D. degree at the Michigan State University under Prof. Henry Imshaug in 1963. Her thesis was entitled "Studies on the genus *Coenogonium* Ehrenberg". Later she worked primarily on fungi other than lichens.

### Changes of address

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### Back issues of ILN

The following back issues of ILN are still available: 9(1), 9(2), 10(1), 10(2), 11(1), 11(2), 12(1), 12(2), 13(1), 13(2), 14(1), 14(2), 15(1), 15(2), 16(1), 16(2), 17(1), 20(1), 20(2), 20(3), 21(1). In photocopy available are: vol. 1(1), 1(2+supp.), 1(3), 2(1), 3(2), 6(2), 7(1-2), 8(1-2). Moreover two indexes are available: Index to vol. 1-8, Index to vol. 9-13.

According to a resolution of the IAL Executive Council, published in ILN 16(1), April 1983, the following charges will be levied for back issues of ILN:

Vol. 1: US\$ 0.25 per number (3 per volume); vol. 2-8: US\$ 0.50 per number (2 per volume); vol. 9-13: US\$ 1.00 per number (2 per volume); vol. 14-17: US\$ 1.50 per number (2 per volume).

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New members will receive free only copies of the numbers constituting the volume issued for the calendar year in which they join IAL.

Orders to be sent to the editor H. Sipman.

### LIST OF THE SOCIETIES

**Australasia:** Society of Australasian Lichenologists (SAL). Info: Dr. J. A. Elix, Dept. of Chemistry, The Australian National University, GPO Box 4, Canberra ACT 2601, Australia.

**Central Europe:** Bryologisch-Lichenologische Arbeitsgemeinschaft für Mitteleuropa (BLAM). Info: Dr. G. Philippi, Landes-sammlungen für Naturkunde, Erbprinzenstrasse 3, Postfach 3949, D-7500 Karlsruhe 1, Western Germany (FRG).

**France:** Association Française de Lichénologie (AFL). Info: Dr. Richard Lallement, Université de Nantes, Laboratoire de Biologie et Cytophysiologie Végétales, 2 Rue de la Houssinière, F-44072 Nantes Cedex, France.

**Great Britain:** British Lichen Society (BLS). Info: Secretary of the British Lichen Society, Botany Department, British Museum (Natural History), Cromwell Road, London SW7 5BD, UK.

**Italy:** Società Lichenologica Italiana. Info: Secretary, Prof. Giovanni Caniglia, Dipartimento di Biologia, Via Orto Botanico 15, I-35123 Padova, Italia.

**Japan:** Lichenological Society of Japan (LSJ). Info: Dr. M. Nakanishi, Dept. of Biology, Faculty of Education, Hiroshima University, 3-1-33-Shinonome-cho, Minami-ku, Hiroshima-City 734, Japan.

**Netherlands:** Bryologische en Lichenologische Werkgroep der KNNV (BLW). Info: P. Hovekamp, Eiberoord 3, NL-2317 XL Leiden, The Netherlands.

**Nordic Countries:** Nordisk Lichenologisk Forening (NLF). Info: Ulrik Søchting, Institut for Sporeplanter, Ø. Farimagsgade 2 D, DK-1353 København K, Denmark.

**Poland:** Lichenological Section of the Polish Botanical Society (Polskie Towarzystwo Botaniczne). Secretary: Dr. W. Faltynowicz, Department of Plant Ecology, University of Gdansk, ul. Czołgistow 46, 81-378 Gdynia, Poland.

**Switzerland:** Schweizerische Vereinigung für Bryologie und Lichenologie (SVBL). Info: K. Ammann, Systematisch-Geobotanisches Institut der Universität Bern, Altenbergrain 21, CH-3013 Bern, Switzerland.

**USA:** American Bryological and Lichenological Society (ABLS). Info: Dale M.J. Mueller, Dept. of Botany, Texas A & M University, College Station, Tx 77843-3258, USA.