

VOLUME 22

1990

PART 4

The Lichenologist

AN INTERNATIONAL JOURNAL
EDITED FOR THE
BRITISH LICHEN SOCIETY

BY

D. H. BROWN

V. AHMADJIAN, B. J. COPPINS, D. J. GALLOWAY,
D. L. HAWKSWORTH, R. HONEGGER, A. PENTECOST
and D. H. S. RICHARDSON



ACADEMIC PRESS

LONDON SAN DIEGO NEW YORK
BOSTON SYDNEY
TOKYO TORONTO

ISSN 0024-2829

BRITISH LICHEN SOCIETY

OFFICERS 1990

President

Professor D. H. S. Richardson, D.Phil., F.T.C.D., School of Botany, Trinity College,
University of Dublin, Dublin 2, Ireland.

Vice-President and Treasurer

F. S. Dobson, F.L.S., 57 Acacia Grove, New Malden, Surrey KT3 3BU.

Secretary

O. W. Purvis, Ph.D., Department of Botany, The Natural History Museum, Cromwell Road,
London SW7 5BD.

Acting Publicity Officer

T. H. Moxham, Department of Plant Sciences, University of Bath, Claverton Down, Bath,
Avon BA2 7AY.

Assistant Treasurer

J. M. Gray, Myrtle Cottage, Church Lane, Kingston St Mary, Taunton, Somerset TA2 8HR.

Regional Treasurer (N. America)

J. W. Sheard, Ph.D., Department of Biology, University of Saskatchewan, Saskatoon, Saskatchewan,
S7N 0W0 Canada.

Mapping Recorder

Professor M. R. D. Seaward, D.Sc., F.L.S., F.I.Biol., Department of Environmental Science,
The University, Bradford, West Yorkshire BD7 1DP.

Senior Editor, Librarian and Archivist

D. H. Brown, D.Sc., F.I.Biol., Department of Botany, The University, Woodland Road,
Bristol BS8 1UG.

Bulletin Editor

P. D. Crittenden, Ph.D., Department of Botany, The University, Nottingham NG7 2RD.

Conservation Chairman

F. H. Brightman, B.Sc., F.L.S., South London Botanical Institute, 323 Norwood Road,
London SE24 9AQ.

Conservation Officers

D. H. Dalby, Ph.D., F.L.S., 132 Gordan Road, Camberley, Surrey GU15 2JQ.
R. B. Jarman, M.Sc., The National Trust, Spitalgate Lane, Cirencester, Gloucestershire GL7 2DE.

Curator

R. K. Brinklow, B.Sc., Dundee Museums and Art Galleries, Albert Square,
Dundee DD1 1DA.

Field Meetings Secretary

C. J. B. Hitch, Ph.D., The Whin, Wadd Lane, Snape,
Saxmundham, Suffolk IP17 1QY.

Members of Council

T. G. C. Duke D. J. Galloway O. L. Gilbert A. M. O'Dare F. Rose M. Senior

Membership of the British Lichen Society is open to all persons anywhere in the world interested in any part of lichenology. Subscriptions, due on joining and afterwards on 1 January each year, are: ordinary members, £20; junior associate members, £5. Details of membership, activities of the Society and application forms may be obtained from the Secretary (address above). Members receive the *Bulletin* of the British Lichen Society and issues of *The Lichenologist* published in the year they join, and afterwards while they remain members of the Society, free of charge. Junior associate members do not receive *The Lichenologist*.

The Lichenologist: ISSN 0024-2829. Volume 22, 1990, published quarterly by Academic Press at 24-28 Oval Road, London NW1 7DX, UK. Annual subscription price including postage: £86 UK and US \$168 overseas. Subscription orders should be sent to Academic Press Limited, Foots Cray, Sidcup, Kent DA14 5HP, UK (Tel: 081-300 3322). Send notices of changes of address to the Assistant Treasurer (Members) and the publisher (Institutions) at least 6-8 weeks in advance, including both old and new addresses.

Second class postage rate paid at Jamaica, NY 11431, USA.

Air freight and mailing in the USA by Publications Expediting Inc., 200 Meacham Avenue, Elmont, NY 11003, USA.

USA POSTMASTERS: Send change of addresses to *The Lichenologist*, c/o Publications Expediting Inc., 200 Meacham Avenue, Elmont, NY 11003, USA.

Printed in UK.