

PREBA3 81 1-143 (1982)

Volume 81 (Parts 1/2)

# THE ROYAL SOCIETY OF EDINBURGH



# PROCEEDINGS

Section B (Biological Sciences)

ISSN-0308-2113

PUBLISHED BY THE ROYAL SOCIETY OF EDINBURGH  
22 GEORGE STREET, EDINBURGH, EH2 2PQ

1982

## EDITORIAL BOARD

W. W. FLETCHER  
University of Strathclyde

W. C. BOWMAN  
University of Strathclyde

J. MORTON BOYD  
Nature Conservancy Council

R. I. CURRIE  
Dunstaffnage Marine Research  
Laboratory, Oban, Argyll

G. J. F. DUTTON  
University of Dundee

C. H. GIMINGHAM  
University of Aberdeen

J. C. GOULD  
Central Microbiological Laboratory,  
Western General Hospital, Edinburgh

K. E. HALNAN  
Hammersmith Hospital, London

J. HAWTHORN  
University of Strathclyde

R. M. S. SMELLIE  
*General Secretary*  
Royal Society of Edinburgh

D. M. HENDERSON  
Royal Botanic Garden, Edinburgh

A. M. MACLEOD  
Edinburgh

J. D. MATTHEWS  
University of Aberdeen

R. J. ROBERTS  
University of Stirling

F. W. ROBERTSON  
University of Aberdeen

J. A. F. ROOK  
Agricultural Research Council, London

J. E. SMITH  
University of Strathclyde

A. WATSON  
Institute of Terrestrial Ecology,  
Blackhall, Banchory

W. H. RUTHERFORD  
*Executive Secretary*  
Royal Society of Edinburgh

# BRACKEN IN SCOTLAND

A Symposium held in the Society's Rooms  
22, 24 George Street, Edinburgh  
on Friday, 20 March 1981

*Chairmen:*

Dr J. MORTON BOYD, Director (Scotland), Nature Conservancy Council  
Principal N. F. ROBERTSON, Edinburgh School of Agriculture  
Dr A. F. DYER, Department of Botany, University of Edinburgh  
and  
J. D. FRYER, Director, A.R.C. Weed Research Organisation, Oxford

## CONTENTS

Introduction by Sir KENNETH BLAXTER	1
The history and spread of bracken in Britain by C. N. PAGE	3
The bracken problem in the Highlands and Islands by A. MACLEOD	11
Forestry and bracken by P. BIGGIN	19
Acute bracken poisoning in homogastric and ruminant animals by W. CHARLES EVANS, M. C. PATEL and Y. KOOHY	29
The carcinogenic, mutagenic and teratogenic toxicity of bracken by I. ANTICE EVANS, J. H. PROROK, R. C. COLE, M. H. AL-SALMANI, A. M. H. AL-SAMARRAI, M. C. PATEL and R. M. N. SMITH	65
Bracken and cancer by W. F. H. JARRETT	79
Studies on the mode of action of asulam in bracken ( <i>Pteridium aquilinum</i> ) L. Kuhn) by R. C. KIRKWOOD, P. VEERASEKARAN and W. W. FLETCHER	85
Fundamental studies in bracken control—the use of additives to enhance herbicide uptake and translocation by G. T. COOK, N. H. STEPHEN and H. J. DUNCAN	97
Bracken control by asulam by B. J. HEYWOOD	111

Field trials in south-west Scotland by D. J. MARTIN and CAROLE J. SPARKE	117
The bracken problem and its control in northern Scotland by E. B. SCRAGG	125
Some reflections and projections on bracken control by JOHN B. McCREAETH	135

*(Issued 15 June 1982)*