**Editorial**

This year marks the centenary of the death of Gregor Mendel—the Moravian monk who put heredity on a secure mathematical foundation. It also marks George Orwell’s vision of brutalized and manipulated humanity.

Since 1945 Britain has lost between 30 and 50% of its ancient woodlands (those which existed prior to 1700). Now much of the remainder is under threat as a consequence of the EEC agricultural policy which makes available substantial subsidies for the conversion of woodland to agricultural use. Local authorities are often powerless to intervene unless they are prepared to use ratepayers’ money to compensate those landowners whom they prevent developing woodlands. Perhaps what we need are some of the land reforms proposed by Alfred Russel Wallace.

As Britain’s oldest biological society, we possess many items of interest relating to our own history as well as numerous manuscripts and letters of other 18th and 19th century naturalists. Among the Society’s treasures are a set of Wallace’s notebooks. These cover not only the years he spent as a natural history collector in Malaysia (1854–1862) but also much later events such as his American lecture tour of 1886. In these notebooks he recorded personal observations and thoughts, entomological notes and vignettes. A short extract from one of Wallace’s early notebooks is included in this issue.

So far, comments on the *Linnean* have been favourable, though some Fellows thought the cover a little funereal. The use of a single ink throughout, however, keeps the printing costs to a minimum.

Finally, may I reiterate that the quality and interest of the *Linnean* depends on your response. Please send us your news, views, reports and comments.

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**SOCIETY NEWS**

**Important Notices**

**Annual Contributions**

Now that we are not making regular mailings we shall not be sending Fellows invoices for their Annual Contributions. Fellows who do not pay by Direct Debit Mandate or Banker’s Order are therefore reminded that their next Contributions are due to arrive at Burlington House by 24 May 1984 at the latest. Please ensure that your payment is in good time, both to save work and to assist with our cash flow. The rates, which have remained unchanged for 4 years, are: Fellow £25, Associate £12.50, Student Associate £2.50. There is a rebate of £1.00 for each of the journals not taken by Fellows, 50p in the case of Associates.

Late payers should note that journals will be stopped soon after the Anniversary date and will only be re-started on receipt in the office of back payments in full.

Those Fellows who have to have an invoice for exchange control or other
financial reasons are asked to write to us as soon as possible, stating their needs and whether this will be an annual requirement. Our aim is to improve the efficiency of the office but without penalizing those Fellows who require supporting documentation.

Records and society business

A further change occasioned by the demise of the billet is the alteration in the method of issuing the Minutes of Meetings. In future, copies of Minutes will be available for personal collection at Burlington House, both at the designated General Meeting, and at appropriate previous Meetings. Fellows are asked to check the notice board at the entrance to the Meeting Room prior to attending Meetings. The procedure for agreeing the Minutes will remain the same but timings have been adjusted to meet the new deadlines.

Room Closure

Members should note that the Rooms will be closed over the Public Holidays as follows: 20–22 April; 26–29 May and 25–28 August 1984.

Celebration

To honour Professor Irene Manton, F.R.S., President 1973–76, Trail Award and Medal 1954, Linnean Medal 1969, in her 80th year there will be an evening reception in the Library on 12 July 1984 at 6.30 pm. Members of the Royal Microscopical Society Pteridological Society will be joining us. Those wishing to attend should apply to Burlington House enclosing a cheque payable to the Linnean Society for £2.50 per person.

Notes

Addresses

Thank you for helping with the ‘lost sheep’. Please continue to keep us right up to date with your own addresses.

New Member of Council

Following the resignation of Mr S. A. Manning, Dr Robert A. D. Cameron of the Extra Mural Department, University of Birmingham, has been elected to replace him on Council. Dr Cameron took his seat in January.

The Society for Experimental Biology

As recent visitors to the Rooms will have realized, a fourth resident Society, the Society for Experimental Biology, the SEB, has joined the British Ecological Society, and the Mammal Society with us here. We welcomed the SEB and Mrs Jacqueline Elliott, who is their secretary, on 10 January 1984.

Appeal

The Royal Horticultural Society Garden Club has launched an appeal for a memorial to Mr Bob Legge, F.L.S. who died on 21 January 1983 at the age of 46. Having studied at Wisley he progressed through the Royal Parks, finally becoming the Superintendent in charge of Regents Park. Anyone wishing to contribute to the Memorial Fund should write, with cheques payable to the RHS Garden Club, to Mr E. M. Upsand, Lye End Link, St Johns, Woking, Surrey GU21 18W.
Christmas Greetings

All in the Rooms would like to thank the many Fellows and friends at home and abroad for their cards and good wishes.

'The Daily Mail'

Every morning at the Society we, like everyone else, arrive to the postman’s daily delivery. Anticipation of the contents fills our hearts—what news of, Fellows from overseas?—what heartening words of encouragement from someone we have been able to help?—perhaps a note from one of whom we have lost track. Perhaps a few Recommendation for Fellowship forms, a cheque or two. Yes, these we get, but there is more!

There’s an envelope marked “Gone Away”, we look up the records and find he takes the Biological and Zoological Journals, those haven’t been returned . . . where have they gone?!

There’s a perplexed Fellow who can’t remember whether he has paid his contribution or not and could we let him know how much he should pay if he hasn’t.

There’s a Bank who “regrets due to a computer error” they have paid their customer’s Banker’s Order monthly instead of annually, could they have a refund of £75 please?

There’s the Fellow who hasn’t received any journals for over a year, could it be that he didn’t let us know his change of address—he can’t remember.

There’s the Bank statement with an entry “Foreign Credit—£25”. On looking at the relevant slip we see it came from India—we’ve a lot of Fellows in India, which one?

Ah! Here’s a change of address—no it isn’t, it just says “please note I’m moving to New Zealand, I’ll let you know my address when I get there”.

There’s someone asking if we can supply them with photograph of J. C. Bose giving a lecture to the Society in 1902—did he?—No!

A Botanist in Spain would like to borrow 29 specimens from the Linnaean Collection. He will take very good care of them and let us have them back as soon as possible!

Here’s a reply from a Fellow’s bank. We wrote to them to see if they knew where he had moved to (he’s a “Gone Away”)—Oh dear, they don’t know where he is either.

Seriously. We love the mail we get—please keep writing.

Bryology

It is intended to form a Correspondence Circle for the exchange of information and news on this subject. Would any Fellows interested please write to: J. H. Field, F.L.S., 34 Wells Green Rd, Solihull, West Midlands B92 7PG.

Contributions to Palaeobotany

The retirement tribute to Professor W. S. Lacey—Contributions to Palaeobotany edited by M. W. Dick and D. Edwards is available to members at £7.50.
Events from the Past

We have just been informed that the East Kilbride History Museum intends to mount an exhibition later this year to commemorate the untimely death 150 years ago of David Douglas F.L.S. (he was trampled by a bull in an animal trap). Douglas was a great plant collector and was elected an Associate before becoming a Fellow in 1828.

In another instance of researching the archives to satisfy a correspondent we looked at the life and times of George Druce F.L.S. quoted in the Proceedings of 1931–1932 as at that time “the best known figure in botany”. He was also memorable in another way:

“... Moreover, he was a voluminous correspondent, and to most botanists his handwriting was recognizable at sight; its main characteristic was that it was always open to several interpretations”.

Membership

We welcome the following who were elected Fellows on 16 February 1984:

Prof. Sven-Axel Birger Bengtson
Peter David Armstrong Boyd, B.Sc.
Anthony John Braund
John Arthur Burgess, M.A., B.Sc.
Prof. Mauro Cresti
Prof. Alfred W. Crompton, Ph.D., D.Sc.
Alan John Gray, Ph.D.
Bernard Joseph Hephrun
Susan Brenda Jepson, B.S., Ph.D.
Byron Barnard Lamont, Ph.D.
Prof. Frederick Thomas Last, F.R.S.E.
Prof. Sin-Che Lee, Ph.D.
Alan Christopher Leslie, M.A., Ph.D. (from Associate)
David McClintock Newbery, B.Sc., Ph.D.
Claus Nielsen, Ph.D.
Simon James Owens, B.Sc., Ph.D.
David Thomas Parkin, B.Sc., Ph.D.
David Michael Penter, B.Sc., Ph.D.
Paula Rudall, B.Sc., Ph.D.
Jameson Henry Seyani, B.Sc., M.Sc., Ph.D.
Mohammad Rafiq Siddiqi, D.Sc.
George Raymond Speed
Melanie Stiassny, B.Sc., Ph.D. (from Associate)
Timothy John Turvey, B.Sc.
Caroline Elizabeth Gaskell Tutin, B.Sc., Ph.D.
David John Ward, M.R.C.V.S.
Dennis Woodland
Meetings

29 March 1984 at 16.45. Tea will be served at 16.15.

1. Admission of Fellows.
2. General Notices.

Dr V. K. Brown (Department of Pure and Applied Biology, Imperial College)—Successional Patterns in Plant and Insect Communities.

Abstract

Three stages in a temperate, secondary succession are represented by recently harrowed fields in which the vegetation is allowed to recolonize naturally, an area of mixed grassland with herbs and predominantly birch woodland. The composition and ecological characteristics of the plant communities along the successional gradient are discussed. The associated insect fauna is related to both the plant species composition and its structural attributes. Furthermore, the life-cycle strategies of the insect species are tuned to the successional plant communities.

Dr P. S. Hyman (Department of Pure and Applied Biology, Imperial College)—Phytophagous Coleoptera: Successional Communities and Characteristics.

Abstract

Communities of phytophagous Coleoptera from the superfamilies Curculionoidea (weevils) and Chrysomeloidea (leaf-beetles) are defined by the use of the multivariate statistical method of Reciprocal Averaging. These communities are closely related to the plant assemblages of similar successional age. Changes in abundance, species-richness and diversity of the beetle communities are discussed in terms of certain successional characteristics of the vegetation. The feeding specificity of weevils changes markedly during succession and shows some interesting differences from predicted patterns.

Dr H. C. J. Godfray (Department of Pure and Applied Biology, Imperial College)—Leaf-Mining Insects and Plant Succession.

Abstract

The characteristics of leaf-mining insects attacking plants of different successional stages are compared. Particular attention is paid to the absolute abundance of miners on different types of plant, measured in comparable units. Mines are found to be at higher densities on early successional plants when compared with late successional plants. Within a late successional tree species, mines are commoner on seedlings in comparison to mature plants. The relevance of these findings to recent ecological theories of insect–plant relationships and life-history strategies is discussed.

Dr C. S. A. Stinson (Department of Pure and Applied Biology, Imperial College)—The Influence of Insect Herbivores on Early Successional Plant Communities.

Abstract

The experimental exclusion of insects, by the regular use of a non-persistent insecticide, enables the effects on the taxonomic composition, cover and structure of the vegetation to be monitored and compared with controlled sites. The results show that insect herbivores may have a considerable impact on the development and structure of early successional plant communities. From such studies the influence of insect grazing on the dynamics of plant succession can be ascertained.
12 April 1984 at 17.00. Tea will be served at 16.30.

2. Admission of Fellows.
3. Second reading of Certificates of Recommendation for election of Foreign Members.
5. Communication: *Diversity within the Tropical Rain Forests.*
   Introduced by Dr J. Dransfield, F.L.S. (Royal Botanic Gardens, Kew).

Dr B. S. Parris (Royal Botanic Gardens, Kew)—Ecological aspects of distribution and speciation in Old World tropical ferns.

Abstract

The number of fern species in various countries in the Old World tropics is examined and explanation for very rich and very poor fern floras are given. Borneo and New Guinea are the two richest areas, with an estimated 1000 and 2000 species respectively; the difference in number is probably due to the much greater area of land at high altitudes in the latter. Aspects of geographical and ecological speciation in the genus *Grammitis* within New Guinea are discussed, and the means by which such speciation may have been promoted are outlined.

Dr C. Pannell F.L.S. (Forest Herbarium, Oxford)—Diversity in Aglaia.

Abstract

The genus *Aglaia* consists of approximately 100 species of understorey and canopy trees in the moist tropical forests of the Indo-Malesian region. Over parts of the range, such as the Malay Peninsula, Sumatra and Borneo, up to fourteen species may occur in one site. Differences between species which contribute to this diversity include: height and architecture of the adult tree, the timing of flowering and fruiting, flower structure and pollination, and fruit form and seed dispersal.

Dr D. Snow (British Museum (Natural History) Tring)—Diversity in fruit/frugivore relationships

Abstract

An attempt is made to assess the ‘operational diversity’ of interactions between frugivorous birds and fruits in rain-forest, and to compare it with the diversity in other habitats. ‘Operational diversity’ is defined as the diversity, as indicated by the numbers of species of both fruits and frugivores, obtaining within a local population, and is thus more or less equivalent to the diversity in the interactions experienced by individual birds or plants. Data gathered from wider areas, e.g. whole biomes or extensive tracts of forest, give diversity figures that are much higher, and hard to interpret. So far, there are few detailed local studies from which measures of operational diversity can be extracted.

The great diversity of bird-dispersed fruits in rain-forest must be a result of long-continued processes of speciation and diversification that cannot be related directly to diversity (or lack of diversity) of frugivores in the present avifaunas. Coevolution between frugivorous birds and their food-plants seems to have been, in the main, a ‘loose’ process, resulting in few of the specializations seen in the relations between nectarivorous birds and their food-plants.
THE LINNEAN

This will take the usual form of an Evening Reception. The President and Mrs Berry will receive Fellows, members, their guests and the Society’s guests at the entrance to the Library.

The theme is Technology in Biology, but exhibits on other topics will also be displayed. Any Fellow wishing to contribute an exhibit is asked to contact the Executive Secretary as soon as possible.

Dress: Informal but elegant
Cost: £4.00 per head
Entrance: This will be by ticket only. Applications from members of the Society should be made in writing by not later than Friday 13 April—see below.

Afternoon visit: The Royal Geographical Society has very kindly agreed to entertain a party of up to 30 from 14.30 to 16.30 with a talk, a tour of their Rooms at Kensington Gore, and tea. Members interested are asked to apply as below.

23 May 1984 at 19.00. Lecture: From Kashmir to Katmandu.
This is a public lecture in memory of Sir Joseph Hooker, F.L.S., being given at the Royal Geographical Society to raise funds for the planting of a Garden of Exploration. It is an illustrated account of twenty years of botanical travels in Kashmir and Western Nepal by Mr David Sayers who collected in the hills around Simla and along Thomson’s Himalayan Route. Anyone interested should apply for tickets (£1.50) with s.a.e. to the General Office, the R.G.S., Kensington Gore, London SW7 2AR.

To: The Executive Secretary, Linnean Society, Burlington House, Piccadilly, W1V 0LQ
I wish to attend the Conversazione on 3 May 1984 and to bring ..... guests.
I enclose my cheque for £......... (for ..... persons at £4.00 per ticket).
I wish/do not wish to visit the Royal Geographical Society with ......... guest.

Name (block letters) .................................................................................................
Address ................................................................................................................
............................................................................................................................

Cheques should be made payable to The Linnean Society of London and crossed.
24 May 1984 at 16.00. Tea will be served at 15.30. Anniversary Meeting

1. Admission of Fellows.
2. Reading of the Bye-Laws governing the election of new Members of Council and of Officers, and appointment by the President of the Scrutineers of the Ballots for new Members of Council and for the Officers.
4. Presentation of Medals and Awards.
   LINNEAN MEDALS TO: Professor J. S. Kennedy, F.R.S. and Professor J. G. Hawkes, F.L.S.
   The BICENTARY MEDAL to: Dr P. R. Crane, F.L.S.
   The TRAIL-CRISP AWARD to: Professor Carl Fredga.
7. Ballots for Officers.
10. Result of Ballot for Officers.

21 June 1984 at 17.00. Tea will be served at 16.30.

1. Admission of Fellows.
2. Communication: Can a ‘nuclear spring’ follow a ‘nuclear’ ‘winter’?

Introduced by
Professor Peter Gaham, F.L.S. (Queen Elizabeth College).
Professor Ian Percival (Queen Mary College)—The impact of a nuclear exchange on the atmosphere.
Dr Norman Myers (Oxford)—The impact of a changed atmosphere on the environment and life-forms.

Abstract
Recent studies (e.g. Science 23 December 1983) indicate that whether a nuclear exchange involves a low level (100 megaton) nuclear warhead exchange, or a high level (5000 megaton) exchange, the dust and smoke cloud formed will completely cover a hemisphere of the world. The result will be severely reduced sunlight levels and a drop in temperature of as much as 40°C in the centre of large landmasses, to 5–10°C in more coastal regions, i.e. a nuclear winter lasting from a few to many months will occur. This will have a severe impact on the animal and plant life on our planet and survivors emerging from their shelters will find a drastically changed environment in which to seek diminished food reserves. Can there be a ‘nuclear spring?’

18.00. General Discussion
Green and pleasant Liverpool

Having joined the Merseyside County Museums staff, I soon realized that Liverpool offers much to interest botanists and horticulturalists. The City itself can boast many beautiful parks and gardens and there are a further 18 important parks within a 50-mile radius.

Sefton Park

Sefton Park—the largest in the city—provides 269 acres of landscaped open spaces, woods and waterways. The key attraction is the elegant octagonal Palm House, built in Victorian times in the grand ‘crystal palace’ style. On guard outside are a number of statues including Captain Cook and a venerable Charles Darwin peering absent-mindedly at a plant fragment. Of special interest is the statue of Linnaeus in Lapland costume, complete with a specimen

Figure 1. *Monstera deliciosa*. A fine example of swiss cheese plant can be seen in the Palm House, Sefton Park.
of *Linnaea borealis* in hand. This image of Linnaeus is apparently sculpted after Martin Hoffman’s famous oil painting of 1737, but it lacks the Laplander’s drum and other items suspended from the body girdle. Inside the Palm House the banana and Swiss cheese plants are magnificent.

*Calderstones Park*

Roughly ten minutes drive east of Sefton Park lies Calderstones Park. This is an impressive botanical garden, with extensive glasshouses containing the biggest plant collection in northern England. The actual ‘Calderstones’ were part of a neolithic burial chamber. The stones once stood in a ring at the park entrance, but the adverse effects of air pollution caused fears for their safety. Because of this they were withdrawn from the main gates and are now on view under cover in the entrance to the glasshouses.

Calderstones is especially famous for its orchids, which are certainly outstanding. The bromeliad house is also beautiful because of its ingenious layout. The floor of the house is set at more than one level and the bromeliads are planted on trees, rocks and around pools of water. After a tour of all the ‘steaming jungles’ the fernery offers a cool and welcome diversion. Plant fronds cascade out from every crevice, often to cover the rocky surface. There is a marvellous selection of both tropical and local species.

The Japanese Garden is worth a visit, as is the adjoining Old English Garden, with its informal layout of herbaceous plants complete with a quaint fish pond at the centre.

![Figure 2. *Odontoglossum roezlii*. Calderstones Park is famous for its orchids.](image)

**Original Liverpool Botanic Garden**

The historic Liverpool Botanic Garden was not located at Calderstones. The first site lies deep in the City in a triangle bounded by Olive Street, Laurel Street and Myrtle Street. It opened in 1802, following vigorous campaigning by
William Roscoe and others. Roscoe, a keen botanist and horticulturalist, was a friend of Sir James Edward Smith, Founder and First President of the Linnean Society of London. Sir James made regular trips to Liverpool to give open lectures and to provide encouragement and support for botanical developments in the north-west. At that time, 'stove house' cultivation was in its infancy. It was only by raising certain exotic species to fruition that it was possible to resolve questions of their taxonomy. As expertise developed in propagating a wide variety of rare plants, some specimens were sacrificed for the Herbarium Collection. This important Herbarium was (after a few adventures) transferred for safekeeping to the Liverpool Museums in 1909 and has remained there since. It contains a few of Roscoe’s specimens with manuscript descriptions, some of Smith’s material and even original pressings from the collection of Linnaeus (marked “ex herb. Linn.” and including type specimens).

Figure 3. The glasshouses of the original Liverpool Botanic Garden.

Croxteth Country Park

Croxteth Country Park—500 acres of woodland, meadows and cultivated grounds—is located about five miles north-east of the City centre. Dominating the park is Croxteth Hall, once the family home of the Earls of Sefton but now administered by the Merseyside County Museums. The main horticultural feature is the Walled Garden, which adjoins the Hall and which was built in the early 19th century. The late Earl of Sefton and his American born wife were both keen gardeners and many introductions of North American plants to the Estate were at Lady Sefton’s behest. By all accounts, a strict eye was kept on the apprentice gardeners when it came to harvesting the fruit. The Head Gardener required the young lads to whistle as they worked their way up the rows of strawberries. Changes of tone, spluttering or periods of silence would alert the boss as to which boy was yielding to temptation!

As mentioned before hothouse cultivation was uncommon at the beginning of the 19th century. Nevertheless, some of the more delicate trees and vines such as peaches, apricots and grapes need extra warmth in the spring to prevent frost damage. The necessary extra warmth was first provided by a hollow, internally
heated Flue Wall about 73 m long. The advent of glasshouses soon made the Flue Wall redundant, but it remains intact as one of the more curious structures to fascinate the visitor to Croxteth. Some of the apple and pear trees in the Walled Garden are over 100 years old and trained to growth in peculiar shapes. Fan-like ‘espalier’ forms, for example, provide pattern to the walls while twisted ‘goblets’ characterize open spaces. There is a project to identify the particular varieties of fruit trees present, as many of them are not commonly found elsewhere, while ancient strains of vegetables are cultivated in conjunction with the Henry Doubleday Research Association.

**County Museums Plant Room**

Back in central Liverpool, there are living plants on show at the County Museum, William Brown Street. These are concentrated in the Plant Room in the Natural History Gallery. The displays are unique, although the room itself—at 9 × 7 m—is not especially large. There is no source of natural light and the entire collection is grown in special frames under fluorescent tubes. The exhibits are educational and they vary greatly in content.

The centrepiece of the Plant Room is undoubtedly the ‘Sand dunes’ exhibit which occupies two growing frames. The idea is to recreate in miniature the habitat seen in the Ainsdale Sand Dunes National Nature Reserve. This is a coastal area just north of Liverpool, set up in 1965 by the Nature Conservancy Council to protect 1200 acres of woods, dunes and beach.

![Figure 4: *Hydrocotyle vulgaris*. Pennyworth thrives in the wet slack of an Ainsdale sand dunes display in the Plant Room, County Museums.](image)

**International Garden Festival**

No version of a ‘green and pleasant Liverpool’ would be complete without mention of the International Garden Festival soon to be held on the banks of the Mersey. The 100 acre site will open between May and October of this year. It will be the largest event of its kind ever held in the United Kingdom. There is a miniature railway to help visitors round an immense variety of attractions, including: a remarkable Exhibition Hall, the tropical greenhouses, international gardens, theme gardens, a Beatles maze, economic botany displays, rose gardens and a gardeners’ market. Horticultural organizations from Britain and overseas are participating and everything is set for a gala opening in the early summer. Members of the Linnean Society are encouraged to sample this and other botanical delights of the northwest. Follow James Edward Smith’s example and make the journey. You will not regret it!

**GORDON McG REID**
The role of the local naturalist in conserving our threatened plants

25–27 June, 1982 Regional Meeting held at the University of Bristol. Dr D. Gledhill, F.L.S. in the Chair.

Lynne Farrell (Nature Conservancy Council)—The field ecologist and conservation.

J. H. Scott (Bristol University)—Some problems of conservation in the genus Orobanche.

C. Johnson (Avon Wildlife Trust)—Rare plants and the reserve acquisition policies of County Conservation Trusts.

Captain R. G. B. Roe, R.N. (Retd.) (Somerset Archeological and Natural History Society)—Changes in the Somerset flora over the past 50 years.

L. C. Frost (Bristol University)—Effects of weather variation on rare plants in SW England.

C. D. Brickell (Royal Horticultural Society)—Conserving cultivated plants.

M. C. Smith (Bristol University)—Conservation of wild plants by garden culture.

Sir Eric Smith, F.R.S. (Saltash)—The Linnean Society and the needs of Natural History Societies.

Darwin—a hundred years on

This was the first of two Symposia to be held in the Linnean Society’s Rooms in celebration of the centenary of Darwin’s death. It was held as a joint meeting with the Systematics Association on 16 and 17 September 1982. The papers were concerned with current views on topics which interested Darwin. Eight of the papers given were published in the Biological Journal of the Society Vol. 20, No. 1. Abstracts of others presented were as follows.

Mr M. W. Holdgate (Director General of Research, Department of the Environment)—Scientific exploration from the Beagle to the International Biological Programme.

Abstract

Most expeditions have mixed motives. Commerce—the acquisition of new lands or trade—inspired many pioneer voyages, while scientific curiosity and simple enjoyment were commonly intermingled. The changing balance is well illustrated in Antarctic regions, where commercial (sealing) voyages predominated in the nineteenth century but scientific ventures have steadily increased, to dominate the scene today.

The type of scientific expedition has altered. Darwin’s voyage in HMS Beagle typifies the ‘solo’ expedition by a naturalist covering a very broad range of interests. Hooker, Banks, and Huxley made journeys of like character. Such explorers provided valuable general descriptions of the phenomena they observed (in Darwin’s case, ranging through geology and geomorphology to the biology of a wide range of groups), but they could not be expected to work up
more than a part of their collections themselves. Darwin’s monograph on Cirripedia was his only detailed foray into taxonomy based on his *Beagle* material. As time passed, ‘team’ expeditions, of a multi-disciplinary character, became more common and were partly able to overcome this problem, but even these remained heavily dependent on taxonomic specialists for the identification of material. Modern developments have been toward expeditions of specialists working on more narrowly defined research projects (hence side-stepping dependence on others), often in ‘relays’ occupying a permanent or semi-permanent field station. This trend towards the field laboratory has been marked in the Antarctic and was a feature of the IBP, and it has brought a convergence of ‘exploration’ and more orthodox ‘research’.

In recent years, however, the value of expeditions as experience for young scientists—especially ecologists—has been recognized and more and more student parties have taken the field. It has also been recognized that one-person travels, by expert naturalists can be invaluable in appraising the potential of environmental resources, or highlighting the problems of unsound development. Such travels can pave the way for more detailed examination by larger teams. But the lack of taxonomists, aggravated by the continued disparagement of taxonomy as a discipline, may be the limiting factor preventing proper evaluation of the resources being lost in the areas of tropical rain forest undergoing clearance.

Finally, scientific exploration continues to be important because, as well as yielding information, it provides insight to those undertaking it. The voyage of the *Beagle* gave Darwin a new personal view of the natural world, and journeys—especially to the tropics—continue to be invaluable to the development of environmental scientists today.

Dr R. D. Martin (Department of Anthropology, University College London)—*Adaptive radiation in Madagascan lemurs: a reappraisal.*

*Abstract*

Although Charles Darwin never visited Madagascar in his travels, and apparently made no mention of its plants and animals in his writings, his interest in islands and many of his evolutionary concepts are directly relevant. Madagascar may be seen either as a small continent or as a large island, but in any event this land-mass certainly bears out Darwin’s generalizations about oceanic islands both in the depauperate nature of its flora and fauna and in the high proportion of endemic species. Only five mammalian orders are now naturally represented on Madagascar (bats; rodents; insectivores; carnivores; primates) and—with the notable exception of the bats, which have a far greater potential for colonization because of their powers of flight—the evidence suggests that the living species are derived from a very small number of founding forms. This certainly seems to be true of the endemic primates of Madagascar, the lemurs, which are specifically considered here.

There are three major questions concerning the Madagascar lemurs which are important in general evolutionary terms. Firstly, there is the question of reconstruction of likely phylogenetic relationships among the lemurs and between lemurs and other primates. Secondly, there is the question of the likely number of transfers of early primate species across the Mozambique Channel,
involving consideration of modern evidence concerning continental drift and the isolation of Madagascar. With both of these questions, it must be borne in mind that there are a large number of known subfossil lemur species which until quite recent times constituted a significant part of the primate fauna of Madagascar. Finally, there is the question of the mode of speciation of the lemurs, which must surely have taken place largely or exclusively within Madagascar.

At present, there are two main competing hypotheses concerning the origin and adaptive radiation of the Madagascar lemurs. The first hypothesis requires only a single invasion of Madagascar by primates and involves the interpretation of the lemurs as a genuinely monophyletic group. The second hypothesis requires at least two transfers of primates across the Mozambique Channel and is based on the inference that the lemurs are polyphyletic, with species of the mouse lemur group (family Cheirogaleidae) sharing a more recent common ancestry with the Afro–Asian bushbabies and lorises (family Lorisidae). Resolution of the conflict between the two opposing hypotheses depends upon the definition of reliable methods for inferring phylogenetic relationships and upon accurate assessment of available evidence. The key question is whether the similarities shared by cheirogaleids and lorisids are essentially based on retention of primitive characters, or whether the similarities represent derived characters. Re-assessment of the evidence from comparative morphology (of the orbit, ear region and carotid circulation) and from comparative seriology suggests that the former interpretation is the correct one. (Hence, a variety of cladist-inspired new classifications of lemurs and lorises seem to be inappropriate.)

Professor A. Fahn (Hebrew University, Jerusalem)—Nectarits: ultrastructure and secretion.

Abstract

Two types of nectaries are distinguished by their location and function:

1. **Floral nectaries** occur within the flower and are directly associated with pollination.
2. **Extrafloral nectaries** occur on vegetative organs or on the abaxial surface of outer floral parts and are not directly associated with pollination.

The nectariferous tissue of both types is similar. It consists of an epidermis with or without trichomes and of a specialized parenchyma substanding this epidermis. The nectaries either abut the regular vascular bundles or are connected to them by special strands.

The extrafloral nectaries seem to have an earlier evolutionary origin than the floral ones. On the basis of the distribution of the location of floral nectaries in various taxonomic groups it appears that there has been an evolutionary shift of nectaries towards the inner parts of the flower.

Nectar is exuded from the nectary by secretory cells, either epidermal or nectariferous parenchyma. The parenchyma cells secrete into intercellular spaces and the nectar then reaches the outer surface through modified stomata. The secreted nectar is of phloem origin. Its composition usually differs from the phloem sap as a result of enzymatic activity and reabsorption, of some substances in the nectariferous tissue. The pre-nectar (the secretory substance present in nectariferous tissue) moves towards the secretory cells via the symplast.

Based on the electron microscopical studies carried out in my laboratory and
on some other investigations, it has been suggested that the endoplasmic reticulum (ER) and in some plants the Golgi apparatus as well are involved in the process of nectar secretion.

One of the debated questions regarding the processes of secretion concerns the elimination from the secretory cell: do the secreted substances pass the plasmalemma by a molecular process (ecrine secretion) or in vesicles moving toward the plasmalemma and finally fusing with it (granulocrine secretion). Our evidence points to granulocrine secretion of nectar.

Dr J. Taylor (British Museum (Natural History), London)—Feeding relations among reef organisms.

Abstract

In 'Coral Reefs' Darwin recognized that the activities of grazing fish could affect the growth of corals and reefs, but was otherwise little concerned about the feeding habits of reef animals. Studies of such activities, in their seemingly endless variety, are today a major preoccupation of reef ecologists. In this brief lecture I will examine two different aspects of feeding interactions amongst reef organisms, which I believe are important to our understanding of reef ecosystems and the evolution of reef organisms.

Grazing animals, in particular fish and echinoids, have been shown by various workers, using manipulative experiments, to be major determinants of the species composition, distribution and abundances of algal, coral and sponge communities upon reefs. Moreover, some major features of the morphology of reefs and of the prey organisms may result from grazing activities. High levels of primary productivity associated with reefs are enhanced by the activities of grazers, which maintain productive algal turfs and prevent competitive dominance by macroalgae. Removal of the predators of the grazers by overfishing can have large-scale effects on the communities.

Coral reefs are frequently presented as supporting large numbers of stenotopic, stenophagous, specialized species, which have evolved in the supposed predictable, temporally stable reef environment. Detailed analysis of the habits of reef animals shows a mosaic of characters, often amongst closely related species, from the truly specialized to the broad generalist. In many cases the specializations appear immutable but at certain localities apparent specialists become generalists. Such changes have been attributed to character release from competition, but there is increasing evidence that the activities of predators and natural catastrophes may be more important controls.

Professor W. G. Chaloner (Bedford College, London)—Is plant evolution gradualistic?—The fossil evidence.

Abstract

Darwin's best known (and over-quoted) comment on the fossil plant record involved his concern with the perplexing rapidity of evolution shown by the angiosperms. Contributions from palynology and such items as the recently-discovered Cretaceous flowers sharpen the details of this evolutionary burst, rather than weakening its reality. There is no doubt that the appearance and diversification of the flowering plants represents one of the major 'evolutionary surges' seen in the fossil plant record. But does this (or any other) part of the
fossil record provide evidence of the process of evolution, rather than the products of its having occurred? In addition to the occurrence of such evolutionary bursts, we have ample evidence of stasis—of fossil species and genera of long duration. However, we have little, if any, evidence of gradational change. We can only conclude that the environments that favour the preservation of land plants are highly selective of large well-established populations and that there deny the palaeobotanist the opportunity of observing the 'fine scale' of the evolutionary process.

Dr S. Smith (University of Cambridge)—*Cryptophilus*.

Abstract

*Cryptophilus minutus*—"This my first Cirripede" was found inhabiting the thinner part of the shell of the Gastopod *Concholepas peruvianae* the more substantial part of which housed numerous *Pholas*. Specimens were collected in the Chonos Archipelago early in January 1835, earlier that same week they had found the carcass of a whale "... it was not very putrid; the barnacles and great parasitical crabs being alive . . .". These Coronula are listed immediately before *Cryptophilus* in his specimen book. So why did Darwin say "this my first Cirripede"? A rich harvest had already been gathered from the cleaning operations at Santa Cruz. I think the clue is in the word "my". It was clearly his—nothing like it had been found at the time and it has rarely been seen since.

Darwin examined it alive and brought immense quantities back. He mastered the technique of dissolving them out with dilute acids and enlisted Joseph Hooker to demonstrate dissection to him and supply drawings, engraved by G. B. Sowerby Jr to illustrate the monograph of 1854.

Darwin was already skilled in Marine Zoology from his Edinburgh days with Coldstream and Grant and his courting of the Newhaven fishermen to show him rarities.

The story of W. S. McLeay and his Naturphilosophien phantom schemes, words already published 1968 *Actes du Xle Congres International D'Histoire des Sciences* T.V. 97–100 “Charles Darwin and Cirripedes”.

**Evolution in the Galapagos Islands**

This symposium was held in association with the Charles Darwin Foundation on 8 December 1982. The full proceedings is published in the *Biological Journal of the Linnean Society* (Vol. 21, parts 1 and 2).

**Biology of Marine Invertebrates**

This meeting on 16 December 1982 was in honour of Emeritus Professor E. W. Knight-Jones, F.L.S. (Department of Zoology, University College Swansea). It was organized in conjunction with Professor J. S. Ryland, F.L.S.

D. J. Crisp and K. Ekaratne—*Polymorphisms in Pomatoceros*.

Phyllis K. Knight-Jones and C. M. Thorp—*The opercular brood chambers of Spirorbidae (Sabellida: Polychaeta)*.

Peter J. Vine and Julie H. Brock—*The taxonomy and ecology of coral-reef associated Serpulidae from the Sudanese Red Sea*.

W. Clifford Jones—*Spicule dimensions as taxonomic criteria in the identification of haplosclerid sponges from the shores of Anglesey*. 
J. Moyse—Some observations on the swimming and feeding of the nauplius larvae of Lepas pectinata.

Elfed Morgan—Pressure responses of marine invertebrates—is there a case for a pressure receptor?

Ernest Naylor and Barbara G. Williams—Environmental entrainment of tidally rhythmic behaviour in marine animals.


A. R. D. Stebbing and G. Heath—An evolutionary view of some invertebrate growth control mechanisms.

Dennis L. Taylor—Algal-invertebrate symbiosis as an ecological determinant in shallow-water marine communities.

John S. Ryland and Angus Muirhead—Growth and ecology of some reef-dwelling didemnid ascidians.

P. E. King and M. R. Fordy—Insects of a Fijian Reef.

A. Nelson-Smith and Rosalyn Case—Sublittoral ecology of Milford Haven.

**Early Mammals**

Professor K. A. Kermack, F.L.S. and Dr Doris M. Kermack, F.L.S. ran a three-day meeting on 20–22 April 1983. This took the form of a discussion meeting in Burlington House on 20 April at which a series of short papers were read, followed by discussion of exhibits, specimens and photographs at University College, London on 21 April, and a field trip to South Wales on 22 April. This symposium attracted an international audience.

**Conversazione**

**29 April 1983.** The President and Mrs Berry received guests in the Library.

This was the first conversazione held with the British Ecological Society present in the Rooms. In the Council Room the B.E.S. mounted exhibits of the ecological taxonomy of water crowfoot, and the circulation of radionuclides in the environment. In the Library there were four poster exhibits: James Bruce's 'Travels in Ethiopia', Mr F. N. Hepper (Royal Botanic Gardens, Kew) 'The identification of roots of trees and shrubs', Dr D. F. Cutler, F.L.S., Mr R. Gale, Dr P. J. Rudall, and Mr P. E. Gasson. 'Typification of Linnaean plant names', Dr N. K. B. Robson, F.L.S., and Dr C. E. Jarvis. 'Vessel size, distribution and percentage conductive areas in Quercus robur L xylem', Mr P. E. Gasson.

There was also an exhibit of tanks of blind cave fish from the British Museum (Natural History) by Dr K. E. Bannister.

On the ground floor the diversity in spiders and the family Salticidae was demonstrated by Mr. F. R. Wanless (British Museum (N.H.)).
## Balance sheet and accounts for the year ended 31 December 1982

**ASSETS**

<table>
<thead>
<tr>
<th>Item</th>
<th>£</th>
<th>£</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investments (as per schedule)</td>
<td>115,097</td>
<td>121,637</td>
</tr>
<tr>
<td>(Market Value 31st December, 1982: £189,064)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sundry Debtors</td>
<td>20,310</td>
<td>15,227</td>
</tr>
<tr>
<td>Share of Stock held on Joint Publishing Account (at valuation)</td>
<td>835</td>
<td>3,706</td>
</tr>
<tr>
<td>Deposit and Current Account balances</td>
<td>15,747</td>
<td>16,673</td>
</tr>
<tr>
<td></td>
<td>151,989</td>
<td></td>
</tr>
</tbody>
</table>

**Less: Current Liabilities**

<table>
<thead>
<tr>
<th>Item</th>
<th>£</th>
<th>£</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contributions received for future years</td>
<td>14,730</td>
<td>15,014</td>
</tr>
<tr>
<td>Provision for repairs and improvements (note 1)</td>
<td>19,192</td>
<td>10,483</td>
</tr>
<tr>
<td>Sundry creditors and provisions</td>
<td>5,679</td>
<td>4,106</td>
</tr>
<tr>
<td></td>
<td>39,601</td>
<td>29,603</td>
</tr>
<tr>
<td></td>
<td>112,388</td>
<td></td>
</tr>
</tbody>
</table>

**Trust Funds**

<table>
<thead>
<tr>
<th>Item</th>
<th>£</th>
<th>£</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investments (as per schedule)</td>
<td>48,460</td>
<td>67,223</td>
</tr>
<tr>
<td>(Market value 31st December, 1982: £87,631)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deposit and Current Account balances</td>
<td>26,464</td>
<td>17,346</td>
</tr>
<tr>
<td></td>
<td></td>
<td>84,569</td>
</tr>
<tr>
<td></td>
<td>187,912</td>
<td>212,209</td>
</tr>
</tbody>
</table>

**Represented by:**

### General Funds

<table>
<thead>
<tr>
<th>Item</th>
<th>£</th>
<th>£</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Fund (Note 2)</td>
<td>97,646</td>
<td>111,366</td>
</tr>
<tr>
<td>Publications Fund (Note 3)</td>
<td>14,742</td>
<td>16,274</td>
</tr>
<tr>
<td></td>
<td>112,388</td>
<td></td>
</tr>
</tbody>
</table>

### Trust Funds

<table>
<thead>
<tr>
<th>Item</th>
<th>£</th>
<th>£</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance of Funds</td>
<td>74,924</td>
<td>84,569</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>187,912</td>
<td>212,209</td>
</tr>
</tbody>
</table>

---

C. M. Hutt  Treasurer  
J. C. Gardiner  
K. A. Joysey  
A. R. Stone  
A. S. Vaughan  

Audit Committee
## Income and Expenditure Account for the year ended 31st December 1982

### INCOME

<table>
<thead>
<tr>
<th>£</th>
<th>£</th>
</tr>
</thead>
<tbody>
<tr>
<td>34,790</td>
<td>34,947</td>
</tr>
<tr>
<td>Annual</td>
<td></td>
</tr>
<tr>
<td>contributions received</td>
<td></td>
</tr>
<tr>
<td>Income tax recoverable on convenanted</td>
<td></td>
</tr>
<tr>
<td>contributions (year to 5th April, 1982)</td>
<td></td>
</tr>
<tr>
<td>867</td>
<td>781</td>
</tr>
<tr>
<td>Dividends and interest</td>
<td>14,560</td>
</tr>
<tr>
<td>13,730</td>
<td></td>
</tr>
<tr>
<td>Dividends and interest</td>
<td>1,168</td>
</tr>
<tr>
<td>4,453</td>
<td></td>
</tr>
<tr>
<td>Donations received</td>
<td>5,651</td>
</tr>
<tr>
<td>4,342</td>
<td></td>
</tr>
<tr>
<td>Use of rooms</td>
<td>1,591</td>
</tr>
<tr>
<td>1,422</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous receipts</td>
<td>9,803</td>
</tr>
<tr>
<td>6,078</td>
<td></td>
</tr>
<tr>
<td>Publications (Note 6)</td>
<td></td>
</tr>
<tr>
<td><strong>Total INCOME</strong></td>
<td><strong>£63,386</strong></td>
</tr>
</tbody>
</table>

### EXPENDITURE

<table>
<thead>
<tr>
<th>£</th>
<th>£</th>
</tr>
</thead>
<tbody>
<tr>
<td>33,425</td>
<td>33,880</td>
</tr>
<tr>
<td>Salaries and National Insurance</td>
<td></td>
</tr>
<tr>
<td>4,465</td>
<td>4,839</td>
</tr>
<tr>
<td>Electricity and gas</td>
<td></td>
</tr>
<tr>
<td>1,825</td>
<td>2,733</td>
</tr>
<tr>
<td>General rates (£6,521 less grant £3,788)</td>
<td></td>
</tr>
<tr>
<td>2,000</td>
<td>1,462</td>
</tr>
<tr>
<td>Repairs, renewals and insurance</td>
<td></td>
</tr>
<tr>
<td>3,807</td>
<td>4,720</td>
</tr>
<tr>
<td>Printing, stationery, postage and telephone</td>
<td></td>
</tr>
<tr>
<td>1,265</td>
<td>1,495</td>
</tr>
<tr>
<td>Audit fee</td>
<td></td>
</tr>
<tr>
<td>2,059</td>
<td>2,810</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td></td>
</tr>
<tr>
<td>3,037</td>
<td>2,214</td>
</tr>
<tr>
<td>Books and periodicals</td>
<td></td>
</tr>
<tr>
<td>451</td>
<td>976</td>
</tr>
<tr>
<td>Binding, repairs and cleaning books</td>
<td></td>
</tr>
<tr>
<td>814</td>
<td>985</td>
</tr>
<tr>
<td>Cost of cataloguing</td>
<td></td>
</tr>
<tr>
<td><strong>Total EXPENDITURE</strong></td>
<td><strong>£56,114</strong></td>
</tr>
</tbody>
</table>

**Transfer to provision for repairs and improvements**  
8,000

**Excess of Income over Expenditure**  
for the year  
£4,748

---

## NOTES TO ACCOUNTS—31ST DECEMBER, 1982

### Balance Sheet

<table>
<thead>
<tr>
<th>Note 1. Provision for Repairs and Improvements</th>
<th>£</th>
<th>£</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance at 1st January 1982</td>
<td>19,192</td>
<td></td>
</tr>
<tr>
<td>Transfer from Income and Expenditure Account</td>
<td>8,000</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>27,192</td>
<td></td>
</tr>
</tbody>
</table>

Expenditure during year on office refurbishing and library grilles  
16,709

Balance at 31st December 1982  
£10,483
## Note 2. General Fund

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance at 1st January, 1982</td>
<td>97,646</td>
</tr>
<tr>
<td>Composition fees received during the year</td>
<td></td>
</tr>
<tr>
<td>Donation</td>
<td>2,500</td>
</tr>
<tr>
<td>Gain on changes of investments during the year</td>
<td>6,472</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>106,618</strong></td>
</tr>
<tr>
<td><strong>Add: Excess of income over expenditure for the year</strong></td>
<td><strong>4,748</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>£111,366</strong></td>
</tr>
</tbody>
</table>

## Note 3. Publications Fund

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance at 1st January, 1982</td>
<td>14,742</td>
</tr>
<tr>
<td>Transfer from Joint Publishing Account</td>
<td>5,387</td>
</tr>
<tr>
<td>(less due to other Societies £604)</td>
<td></td>
</tr>
<tr>
<td>Refund from Academic Press</td>
<td>214</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20,343</strong></td>
</tr>
<tr>
<td><strong>Less: Transfer to Income and Expenditure Account (Note 6)</strong></td>
<td><strong>4,069</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>£16,274</strong></td>
</tr>
</tbody>
</table>

## Note 4.

The value of the Library, furniture and stock of unsold Journals is not included in this Balance Sheet.

## Note 5.

Annual contributions in arrear at 31st December, 1982 amounted to £1,853 (31st December, 1981: £1,550, 65% of which was paid in 1982).

### Income and expenditure account

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
<th>Amount</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>3,685</td>
<td></td>
<td>Transfer from Publications Fund</td>
<td>4,069</td>
</tr>
<tr>
<td>1981</td>
<td></td>
<td></td>
<td>Cambridge University Press</td>
<td>349</td>
</tr>
<tr>
<td></td>
<td>30,662</td>
<td></td>
<td></td>
<td>36,437</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Less:</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Contributions to Joint Publishing Account and distribution cost for Journals - Fellows</td>
<td>26,069</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Editorial expenses</td>
<td>565</td>
</tr>
<tr>
<td></td>
<td>24,334</td>
<td></td>
<td></td>
<td>26,634</td>
</tr>
<tr>
<td></td>
<td>6,378</td>
<td></td>
<td>Surplus transferred to Income and Expenditure Account</td>
<td>9,803</td>
</tr>
</tbody>
</table>
The Linnean Society of London joint publishing account with Academic Press Inc. (London) Ltd.

Income and expenditure account for the publishing year ended 31st December, 1982

<table>
<thead>
<tr>
<th></th>
<th>£</th>
<th>£</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td></td>
<td></td>
</tr>
<tr>
<td>£</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>151,124</td>
<td>Journal (including Linnean Society contributions)</td>
<td>163,963</td>
</tr>
<tr>
<td>26,789</td>
<td>Books</td>
<td>24,135</td>
</tr>
<tr>
<td>£177,913</td>
<td></td>
<td>£188,098</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stock at 1st January, 1982</td>
<td></td>
<td>1,670</td>
</tr>
<tr>
<td>11,517</td>
<td>Production costs—</td>
<td>99,925</td>
</tr>
<tr>
<td>97,170</td>
<td>Journal</td>
<td>17,897</td>
</tr>
<tr>
<td>6,649</td>
<td>Books</td>
<td></td>
</tr>
<tr>
<td>£115,335</td>
<td>Less: Stock at 31st December, 1982</td>
<td>119,492</td>
</tr>
<tr>
<td>1,670</td>
<td></td>
<td>7,413</td>
</tr>
<tr>
<td>£113,665</td>
<td></td>
<td>£112,079</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Profit for year—</td>
<td></td>
<td>38,009</td>
</tr>
<tr>
<td>32,124</td>
<td>Academic Press</td>
<td></td>
</tr>
<tr>
<td>26,977</td>
<td>Linnean Society—</td>
<td>32,019</td>
</tr>
<tr>
<td>5,147</td>
<td>Journals</td>
<td>5,991</td>
</tr>
<tr>
<td></td>
<td>Books: Publications Fund</td>
<td></td>
</tr>
<tr>
<td>£64,248</td>
<td></td>
<td>£76,019</td>
</tr>
</tbody>
</table>
### Special Accounts (Trust and Reserve Funds) for the year ended 31st December, 1982

<table>
<thead>
<tr>
<th></th>
<th>Deposit and Current Account Balances at 1st January, 1982</th>
<th>Dividends and Interest Income Tax Recovered</th>
<th>Royalties or Other Receipts</th>
<th>Grants, Awards Transfers and Sundry Expenses</th>
<th>Purchase of Investments</th>
<th>Administration Contribution</th>
<th>Deposit and Current Account Balances at 31st December, 1982</th>
<th>Investments at Book Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>P. Appleyard Bequest</td>
<td>2,143</td>
<td>1,162</td>
<td>—</td>
<td>700</td>
<td>1,053</td>
<td>115</td>
<td>1,437</td>
<td>7,724</td>
</tr>
<tr>
<td>The H. H. Bloomer Award Trust</td>
<td>166</td>
<td>277</td>
<td>—</td>
<td>104</td>
<td>11</td>
<td>22</td>
<td>256</td>
<td>1,068</td>
</tr>
<tr>
<td>Bonhote Fund</td>
<td>1,516</td>
<td>806</td>
<td>—</td>
<td>1,000</td>
<td>44</td>
<td>82</td>
<td>1,196</td>
<td>5,586</td>
</tr>
<tr>
<td>Goodenough Fund</td>
<td>268</td>
<td>87</td>
<td>150(b)</td>
<td>25</td>
<td>399</td>
<td>7</td>
<td>74</td>
<td>873</td>
</tr>
<tr>
<td>Hooker Lecture Fund</td>
<td>529</td>
<td>136</td>
<td>—</td>
<td>—</td>
<td>499</td>
<td>14</td>
<td>152</td>
<td>983</td>
</tr>
<tr>
<td>Minchin Fellowship Fund</td>
<td>—</td>
<td>23</td>
<td>—</td>
<td>23(a)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>120</td>
</tr>
<tr>
<td>Dennis Stanfield Memorial Fund</td>
<td>267</td>
<td>145</td>
<td>—</td>
<td>—</td>
<td>4</td>
<td>14</td>
<td>394</td>
<td>1,099</td>
</tr>
<tr>
<td>Trail – Crisp Award Fund</td>
<td>200</td>
<td>61</td>
<td>—</td>
<td>72</td>
<td>99</td>
<td>6</td>
<td>84</td>
<td>337</td>
</tr>
<tr>
<td>Westwood Fund</td>
<td>211</td>
<td>83</td>
<td>—</td>
<td>—</td>
<td>207</td>
<td>7</td>
<td>80</td>
<td>670</td>
</tr>
<tr>
<td>Jane Jackson Bequest</td>
<td>—</td>
<td>1,189</td>
<td>—</td>
<td>1,189(a)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>4,088</td>
</tr>
<tr>
<td>Flora Europaea Fund</td>
<td>20,160</td>
<td>4,144</td>
<td>5,257(c)</td>
<td>958</td>
<td>15,203</td>
<td>352</td>
<td>13,048</td>
<td>35,992</td>
</tr>
<tr>
<td>Omer – Cooper Fund</td>
<td>1,004</td>
<td>955</td>
<td>—</td>
<td>—</td>
<td>1,244</td>
<td>90</td>
<td>625</td>
<td>8,683</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>£26,464</strong></td>
<td><strong>£9,018</strong></td>
<td><strong>£5,407</strong></td>
<td><strong>£4,071</strong></td>
<td><strong>£18,763</strong></td>
<td><strong>£709</strong></td>
<td><strong>£17,346</strong></td>
<td><strong>£67,223</strong></td>
</tr>
</tbody>
</table>

**NOTES:**
(a) Income transferred to General Income Account
(b) Donation
(c) Royalties
### Schedule of Investments on 31 December 1982

<table>
<thead>
<tr>
<th>Nominal Value £</th>
<th>General Account</th>
<th>Book Value £</th>
<th>Nominal Value £</th>
<th>Trust Funds</th>
<th>Book Value £</th>
</tr>
</thead>
<tbody>
<tr>
<td>9,000.00</td>
<td>Treasury 12% Stock 1986</td>
<td>8,688</td>
<td>4,042 Units</td>
<td>The Equities Investment Fund for Charities (Omer-Cooper Fund)</td>
<td>6,593</td>
</tr>
<tr>
<td>3,600.00</td>
<td>Treasury 13% Stock 1990</td>
<td>3,624</td>
<td>6,496</td>
<td>(Jane Jackson Bequest)</td>
<td>4,088</td>
</tr>
<tr>
<td>7,000.00</td>
<td>Treasury 12% Stock 1993</td>
<td>6,465</td>
<td>5,891</td>
<td>(Appleyard Bequest)</td>
<td>7,266</td>
</tr>
<tr>
<td>10,000.00</td>
<td>Treasury 9% Stock 1994</td>
<td>7,272</td>
<td>1,180</td>
<td>(Bloomer Award Fund)</td>
<td>971</td>
</tr>
<tr>
<td>5,000 Shares</td>
<td>Allied Lyons PLC 25p Ordinary Shares</td>
<td>4,696</td>
<td>626</td>
<td>(Goodenough Fund)</td>
<td>873</td>
</tr>
<tr>
<td>1,972.00</td>
<td>Barclays Bank PLC Ordinary Stock</td>
<td>2,326</td>
<td>843</td>
<td>(Hooker Lecture Fund)</td>
<td>983</td>
</tr>
<tr>
<td>1,600 Shares</td>
<td>B.A.T. Industries PLC 25p Ordinary Shares</td>
<td>5,968</td>
<td>126</td>
<td>(Minchin Fund)</td>
<td>120</td>
</tr>
<tr>
<td>9,375 Shares</td>
<td>B.O.C. Group PLC 25p Ordinary Shares</td>
<td>5,703</td>
<td>715</td>
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</tr>
<tr>
<td>4,000 Shares</td>
<td>Boots Co. PLC 25p Ordinary Shares</td>
<td>10,475</td>
<td>6,496</td>
<td>(Stanfield Memorial Fund)</td>
<td>1,062</td>
</tr>
<tr>
<td>12,000 Shares</td>
<td>Cadbury Schweppes PLC 25p Ordinary Shares</td>
<td>9,240</td>
<td>371</td>
<td>(Tral-Crisp Award Fund)</td>
<td>337</td>
</tr>
<tr>
<td>3,000 Shares</td>
<td>Distillers Co. PLC 50p Ordinary Shares</td>
<td>5,419</td>
<td>494</td>
<td>(Westwood Fund)</td>
<td>613</td>
</tr>
<tr>
<td>2,000 Shares</td>
<td>Glaxo Holdings PLC 50p Ordinary Shares</td>
<td>5,418</td>
<td>494</td>
<td></td>
<td></td>
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<tr>
<td>3,320.00</td>
<td>10% Convertible Unsecured Loan Stock 1990/95</td>
<td>4,868</td>
<td>1,786</td>
<td>(Flora Europaea Fund)</td>
<td>11,851</td>
</tr>
<tr>
<td>393 Shares</td>
<td>£1 Ordinary Shares</td>
<td>828</td>
<td>4,165.58</td>
<td>(Flora Europaea Fund)</td>
<td>11,851</td>
</tr>
<tr>
<td>5,250 Shares</td>
<td>Northern Foods PLC 25p Ordinary Shares</td>
<td>3,880</td>
<td>19,014.18</td>
<td>(Bonhote Fund)</td>
<td>2,143</td>
</tr>
<tr>
<td>1,478 Units</td>
<td>Royal Insurance PLC 25p Stock Units</td>
<td>3,235</td>
<td>7,467</td>
<td>(Flora Europaea Fund)</td>
<td>7,398</td>
</tr>
<tr>
<td>11,000.00</td>
<td>Scottish Mortgage &amp; Trust PLC 8-14% Stepped Deb.</td>
<td>11,083</td>
<td>9,300</td>
<td>(Bonhote Fund)</td>
<td>3,063</td>
</tr>
<tr>
<td>2,000 Shares</td>
<td>25p Ordinary Shares</td>
<td>5,568</td>
<td>16,711</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10,730 Units</td>
<td>The Equities Investment Fund for Charities</td>
<td>16,711</td>
<td>62,361</td>
<td>(Flora Europaea Fund)</td>
<td>7,398</td>
</tr>
</tbody>
</table>

**National Savings Bank—Investment Account**

121,267

**£121,637**

(Market Value 31st December 1982 £189,064)

(Market Value 31st December 1982 £87,631)
Christopher Amyas Wright (1928–1983)

Chris Wright, F.L.S. since 1967 and a member of Council between 1967 and 1970, died in June 1983, aged 54. He was head of the Experimental Taxonomy Unit in the British Museum (Natural History), and was distinguished for his work on African schistosomiasis. He was born in Montevideo and spent his early childhood in Rio de Janeiro. After school in Canada and at Shrewsbury, he went to Imperial College in London, where he graduated with first-class honours in zoology (parasitology), and within two years gained his Ph.D. for work on the trematode Renicola. In 1954 he went to the B.M.(N.H.) as a Research Fellow to work on the systematics of the snail hosts of African schistosomes, the field to which he devoted most of his professional life. Finding that conventional anatomical characters did not meet his needs, he entered the then embryonic discipline of biochemical systematics, and was soon awarded a U.S. National Institute of Health grant to set up an experimental taxonomy unit in the B.M.(N.H.). He led that unit for the rest of his life, producing innovative and fruitful work in serology, protein electrophoresis and other novel approaches to systematics and variation. By the time of his death, he had published about 100 papers and in 1971 book Flukes and snails (Allen & Unwin). His professional excellence was recognized by a London D.Sc. and an individual merit promotion to Senior Principal Scientific Officer in 1968, and by membership (since 1964) of the World Health Organization panel on tropical diseases.

Chris Wright’s positive and sensible outlook was in demand from other societies, as well as the Linnean. He served on many committees, was Secretary-General of the International Union of Biological Sciences between 1973 and 1976, served as Vice-President of the Institute of Biology, Royal Society of Tropical Medicine and Hygiene, and the Zoological Society of London, and at the time of his death was President of the British Society of Parasitology. Chris will be sorely missed in the biological world. The loss of a man of such talent in his prime is a blow to us all, and his widow, Pam, has all our sympathy.

For further obituaries see The Times, 22.6.83. and The Lancet, 2.7.83.

LIBRARY

Visitors to the Library will have noticed labels on the spines of books in the cases opposite the windows, and a growing number on those on the Piccadilly side. These labels carry numbers related to the subject classification of each volume and will eventually be applied to all post-1750 books. This will permit the eventual re-arrangement of the books in subject order and make it possible to see at a glance the complete holding in a particular subject. The work is being undertaken by a team of part-time assistants founded by the Community Programme of the Manpower Services Commission. As far as possible the labels
are colour-toned to match the book cover and, whilst off the shelf, each book is also being cleaned and treated with leather dressing and polish. The re-arrangement of the stock will start when most of the labels have been applied.

May we ask Fellows to consider the Society when thinking of the distribution of their own works, or when disposing of review copies or other surplus books? In its notes on the Library the very first Newsletter (No. 1, November 1973) drew attention to the number of books presented in the past by Fellows. We continue to be most grateful to those donors who maintain this long standing tradition and, unless we hear to the contrary, we will continue to acknowledge their generosity by mentioning donors by name in The Linnean. For those who are interested, a full record of such provenances is in any case kept in the catalogue. We are particularly interested in British and North-West European fauna and flora and important titles in general taxonomy, evolution, and the history of biology.

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Freeman, D. W., Functional cranial analysis of large animaliverous bats (Microchiroptera).
Mikkola, K., On the selective forces acting in the industrial melanism of Biston and Oligia moths (Lepidoptera: Geometridae and Noctuidae).
Reed, T. M., The numbers of landbird species on the Isles of Scilly.
Cowie, R. H., Shell thickness in the land snail Theba pisana (Pulmonata: Helicidae).

Volume 22, Number 1, May 1984
Brakefield, P. M. & Larsen, T. B., The evolutionary significance of dry and wet season forms in some tropical butterflies.
Radinsky, L., Basicranial axis length v. skull length.
Roth, V. L., On homology.
Williamson, M., Sir Joseph Hooker’s lecture on insular floras.

Volume 22, Number 2, June 1984
Prentice, H. C., Enzyme polymorphism, morphometric variation and population structure in a restricted endemic, Silene diclinis (Caryophyllaceae).
Kat, P. W. & Davis, G. M., Molecular genetics of peripheral populations of Nova Scotian Unionidae (Mollusca: Bivalva).
Botanical Journal

Volume 22, Numbers 1 & 2, a collection of papers in tribute to Dr K. M. Sporne


Raven, J. A., Physiological correlates of the morphology of early vascular plants.

Edwards, D. & Rose, V., Cuticles of Nematophallus: a further enigma.

Stebbins, G. L., Mosaic evolution, mosaic selection and angiosperm phylogeny.

Sigee, D. C., Some observations on the structure, cation content and possible evolutionary status of dinoflagellate chromosomes.

Hughes, N. F., Cretaceous plant taxonomy and angiosperm ancestors: sources of difficulty.


Volume 22, Number 3, April 1984

Galil, J., Ficus religiosa L.—The tree splitter.

Negbi, M., The structure and function of the scutellum of the gramineae.

Kirkpatrick, J. B. & Brown, M. J., A numerical analysis of Tasmanian higher plant endemism.

Elaiasson, N. E., Chromosome number of Macraea lavici folio.

Miller, I. M. et al., Structure and function of trichomes in the shoot tip of Ardisia crispa (Thunb.) A.DC. (Myrosinaceae).


Mathew, L. & Shah, G. L., Crystals and their taxonomic significance in some verberiaeae.

Liddle M. J. & Elgar, M. A., Multiple pathways in dispersal.

Edmonds, J., Pollen morphology of Solanum L. section Solanum.

Zoological Journal

Volume 80, Number 4, April 1984


Bruce, N. L., A new family for the isopod crustacean genus Tridentella Richardson, 1905, with description of a new species from Fiji.

McAndrew, B. J. & Majumdar, K. C., Evolutionary relationship within three Tilapiine Genera (Pisces: Cichlidae).

Volume 81, Number 1, May 1984

Barnwell, F. H. & Thurman, C. L., Taxonomy and biogeography of fiddler crabs.


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To be held at University College, London, 17–21 September 1984.

For information please apply to Prof. K. A. Kermack, Department of Zoology U.C.L.

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in association with

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The International Union of Forest Research Organisations
The International Board for Plant Genetic Resources
An International Symposium on

INFRASPECIFIC CLASSIFICATION OF
WILD AND CULTIVATED PLANTS

September 26–28, 1984
at the Department of Zoology, University of Oxford, U.K.

The aim is to stimulate discussion of fundamental aspects of infraspecific classification of wild and cultivated plants. Contributors from agriculture, botany, forestry and horticulture have been invited to discuss:– the nature of infraspecific variation; the possibilities for classification structures; practical, trade and legal constraints; and the difficulties of nomenclature. It is hoped to promote communication between the disciplines involved.

For further details please contact the conference secretary: Dr B. T. Styles, Department of Forestry, Commonwealth Forestry Institute, South Parks Road, Oxford OX1 3RB.