

processing methods to the recording of data on the distribution of the vascular plants of Ontario, Canada.—[D.H.K.]

TITZ, W., 1964, Karyologische, Anatomie und Chromosomenzahlen einiger Angiospermen, *Österr. Bot. Zeitschr.*, **111**, 618-620. Notes on *Lotus corniculatus* subsp. *corniculatus*, $2n=24$; *Arabis hirsuta*, $2n=16$ and 32 , and *Valeriana officinalis* L. *sensu lato*.—[D.H.K.]

VAN DER PLOEG, D. T. E., 1964, Enkele floristische aanwinsten voor de Zuidwesthoek van Friesland, *Gorteria*, **2**, 61-63. New localities are given for *Scirpus rufus*, *Trifolium micranthum* and *Juncus inflexus* in southwest Friesland.—[D.H.K.]

VAN LEEUWEN, C. G., 1965, Het verband tussen natuurlijke en antropogene landschapsvormen gezien vanuit de betrekkingen in grensmilieus, *Gorteria*, **2**, 93-105. Studies in the isomorphy of natural and anthropogeneous landscapes with regard to the environmental condition in border areas.—[D.H.K.]

VAN OOSTSTROOM, S. J. & REICHELDT, T. J., 1964, Aanwinsten voor de Nederlandse adventif-flora, *Gorteria*, **2**, 65-67. Adventives new to the Netherlands are *Acaena ovalifolia* Ruiz & Pav., *Amsincka retrorsa* Suksd., *Bidens frondosa* var. *anomala* Porter, *Silene rupestris* L. and *Trillium grandiflorum* (Michx.) Salisb.—[D.H.K.]

VOGEL, S., 1964, Flower-ecotypes and formation of taxa, *Tenth Internat. Bot. Congr. Abstr. Pap.*, 115.

WALTERS, S. M., 1965, 'Improvement' versus stability in botanical classification, *Taxon*, **14**, 6-10.

WILLIAMS, W. T., 1964, The analysis of large scale botanical survey data, *Tenth Internat. Bot. Congr. Abstr. Pap.*, 131.

WILLIAMS, W. T., 1964, The mathematic treatment of phytosociological data, *Tenth Internat. Bot. Congr. Abstr. Pap.*, 286-287.

LOCAL OFFICERS' CONFERENCE, 1964

Compiled by Mr. D. E. ALLEN

The idea of a special week-end conference to which all the Society's local officers would be invited for a mutual exchange of views and suggestions was first put to the Development and Rules Committee by its Honorary Secretary, A. C. Jermy, in March 1963. The completion of the main part of the Distribution Maps Scheme seemed likely to leave a hiatus in local activity and made the moment an appropriate one for a thorough re-examination of the aims and functions of the Society's long established system of District Secretaries and Recorders. A continual weakness of this system, it was felt, was the lack of contact between the many local officers which prevented common aims and a sense of identity emerging; while the Committee itself had long felt handicapped in its attempts to build up the Local Organisation by the tenuousness of its contacts with those on whom the task of transforming its paper schemes into local realities inevitably depended. Mr. Jermy accordingly envisaged a kind of summer school for local officers which might, if found useful, become a regular event. The Committee had considerable misgivings about the likely support for such a venture and proposed that the relevant members should first be circularised and asked for their opinion.

In the event the response was highly encouraging and plans were put in hand for the conference, which was duly held in the Laboratory of the Botanic Garden, Cambridge, by kind permission of the Director, on Saturday and Sunday, September 26 and 27, 1964. Twenty-five local officers, very representative of the country geographically, were able to accept the invitation to attend and a further fifteen other members of the Society, mainly officers and committee members, were present on one or both days.

The programme of nine talks was grouped for convenience into three distinct sessions, each covering a separate aspect of potential local activity.

SATURDAY**SESSION 1. STRUCTURE. Chairman: Dr. F. H. PERRING**

D. E. ALLEN opened the Conference with an introductory talk tracing the history and development of the present Local Organisation since its origin in 1932 when W. H. Pearsall succeeded Dr. Druce as Honorary Secretary of the Society. He drew attention to the major reform worked out in 1956-60 which had resulted in the creation of a three-tier structure consisting of:—

7 (now 8) Regions, electing *Regional Representatives* to Council.

15 (now 13) Districts, looked after by *District Secretaries* (replacing the former Local Secretaries).

155 vice-counties or portions of vice-counties, looked after by *Recorders* (absorbing the former office of Referee).

One hundred and forty-four positions were currently filled by members acting as Recorders, so that a considerable proportion of the Society was involved in the Local Organisation, quite apart from the fact that the adoption of the Regional Representative system had in effect placed the Council and thus the management of the Society on a substantially regional basis.

He stressed that the Development and Rules Committee, of which he was the Acting Secretary, had long felt that it was acting in the dark in trying to promote regional and local activities that would help to vitalise the Local Organisation as it existed on paper. In the past there had been very little feed-back of ideas and one of the primary purposes of the present conference was to go some of the way towards remedying this. The recent emergence of active regional committees in Scotland, Wales and Ireland had been welcomed unreservedly, as it was recognised that local activity stood the best chance of being aroused by a national or regional sense of identity. These committees were already functioning as autonomous segments of the Local Organisation and were in a position to initiate and co-ordinate local activities far more effectively than would ever be possible from a single centralised source. It was hoped that some at least of the English regions would soon be encouraged to follow their example. If this were to come about, the Local Organisation would be transformed and the Society would achieve the essentially federal structure that it had recognised for some years as desirable as one of its ultimate aims.

The Distribution Maps Scheme had demonstrated to the Society's members the feasibility and scientific value of nationwide co-operative ventures, and he himself would like to see field botanists following the impressive lead of British ornithologists in carrying out a continuing programme of centrally-directed "network research". The Local Organisation was the obvious vehicle for this. Possible suitable subjects included the comparative floristics of certain ecological formations, such as the flora of British dunes, and the study of various infraspecific variants with, perhaps, the mapping of polymorph-ratio clines as a primary objective. "Enquiries" of this type would need to be concentrated on things that were both clear-cut and reasonably simple while at the same time promising to yield far more fruitful results than if undertaken by individuals working in isolation. It would also be important to guard against trying to initiate too much, lest enthusiasm wilt by too much diffusion of effort.

Dr. J. P. SAVIDGE followed with a detailed account of the activities and plans of one of the recently-established regional committees—that in Wales. Of about eighty B.S.B.I. members in Wales (a total roughly doubled since the Welsh Committee came into being) only about twenty were at present reasonably active. Twelve of these composed the Committee, the three different parts of Wales each being represented by four members. The Committee meets in the centre of its area, at Aberystwyth.

It viewed itself as having four tasks: to bring together all botanists in Wales; to increase the membership of the B.S.B.I. in Wales; to undertake a

number of surveys on various aspects of the Welsh flora; and to promote the cause of conservation in Wales. To these ends it had begun by instituting an annual programme of indoor and outdoor meetings, each of which had so far been attended by 75-90% of the Committee. The office of District Secretary had been dispensed with; instead Recorders were to be made more use of, in particular in arranging meetings and in attracting new members. Each Recorder was to be supplied with a card-index in which to keep a note of records for his area; these would be the property of the Committee, which would ensure that the records were passed on whenever a Recordership changed hands.

At the outset it had been felt that there was no suitable publication that could be given to prospective members. The Society's Prospectus was insufficient, while *Watsonia* and *Proceedings* seemed liable to put people off. The Committee had therefore instituted its own Bulletin, which it was intended to issue three times a year. Partly printed and partly duplicated, it was sent free to members resident in Wales and was available to B.S.B.I. members outside Wales for a nominal sum. The primary purpose was to keep Welsh amateurs in touch and accordingly it aimed at an informal, friendly approach in its style and contents.

The region was co-operating in the National Museum of Wales's survey of Welsh lakes, which it was hoped would form part of a wider survey of various types of habitat in Wales with a view to publishing a semi-popular book in due course. This would include a discussion of the factors controlling distribution and summarise the findings of these surveys. In connection with this a survey was planned of the details of frequency and cover of species, and of the ecological factors involved, in a sample of one-kilometre grid squares.

J. E. LOUSLEY concluded the morning session with a paper on "The Botanical Network", dealing with the problems of liaison with different bodies. Speaking in the light of his experience as an officer of two national bodies, of the largest local natural history society and of a county naturalists' trust, he said that in practice he had never found any conflict between the *objects* of these various organisations, although there was of course a very considerable overlap of interests. In so far as disputes sometimes arise, these are normally due to petty jealousies between individuals or when organisations are in competition for time and money. The sensible view is that it does not matter who does a particular piece of work as long as it is done to the best advantage. Common aims should be furthered by the body most competent to carry them out, and it could well be that on occasions the *objects* of the B.S.B.I. were best furthered by a local officer working through some other body.

The two types of body with which local officers were most likely to need to liaise were county trusts and local natural history societies. Most county trusts were at present severely handicapped by lack of botanical information about the areas they are striving to preserve and local botanists could help them a great deal. Conservation matters considered of national importance, however, should be reported as well to the B.S.B.I. Conservation Committee, which was sometimes in a better position than county trusts to deal with these at the national level. Assistance to local

natural history societies was also a very important function of the Society's local officers, not least because those with a strong botanical nucleus provided a steady flow of new members for the B.S.B.I., which in turn increased the flow of new records and helped to bring threats to the Society's notice more quickly.

DISCUSSION

Dr. J. G. DONY said he found it a constant problem trying to decide which threats were of local and which of national importance.

There was general agreement that responsibility for conservation matters might be better transferred from District Secretaries to Recorders in view of the more convenient size of area covered by the latter.

J. KIERNAN, speaking as one of the four District Secretaries present, remarked that the members in a District are generally not aware who their District Secretary is. If it was felt that the only way to correct this was to inform them individually, who should be responsible for doing this, the District Secretary or the Development and Rules Committee? District Secretaries in their turn needed to be kept informed of changes of address and of new members in their District. Much of their effectiveness depended on their being prepared to send out considerable numbers of circulars; this could be costly and time-consuming, and he felt they would welcome help in this direction. Was there any chance of their being able to draw on addressograph facilities, for instance?

Dr. PERRING wondered if grants to cover the cost of sending our circulars could not be made to each District, perhaps in proportion to the number of new members each recruited so that payments matched activity. He added that he was currently investigating the possibility of putting the names and locations of all B.S.B.I. members on to punched cards. If this proved practicable, the membership list could be sorted very speedily by vice-counties or any larger grouping and the resulting batches of names passed straight on to local officers.

It was agreed that notices of local activities ought to go out from a local address. Circularising these to the whole Society would be inappropriate; the quantity, moreover, was likely to prove overwhelming and the expense insupportable at £25-30 for each *ad hoc* mailing. On the other hand, circularising only those members living in each District or Region concerned meant that non-residents who for some reason might be specially interested in a particular area and keen to attend some of its functions would be liable not to hear of them.

J. C. GARDINER suggested that a possible solution to this last problem was to make more use of the Society's *Proceedings* to publicise local and regional activities. Alternatively, or in addition, a notice could be published regularly informing members that they could apply to be placed on regional mailing lists. A similar notice might also be inserted in the Calendar, together with the names and addresses of the appropriate local officers to whom members should write for this purpose.

On the subject of recruiting new members, E. A. ELLIS said he had found commercial travellers a surprisingly neglected but rewarding source. Dr. PERRING also mentioned the National Agricultural Advisory Service.

SESSION 2. ADMINISTRATION. *Chairman: J. C. GARDINER.*

The first talk after lunch was by Dr. PERRING on "The Functions of a Recorder". He began by stressing that the task of a Recorder must vary enormously depending on how much work both has been and is being done in the area concerned. For little-known areas the problems could be very great.

He supported the Welsh Committee's idea of vesting an official card-index of the local flora in an appropriate local organisation, so that it would be available to the public at large. In this connection he drew attention to the convenience of registers as a method of record-keeping, such as those made on a parish-by-parish basis, of which Trail's *Flora of Buchan* was a good example. In compiling the *Flora of Cambridgeshire* they had devised a register on the basis of presence or absence in each ten-kilometre grid-square, with a special system of notation to indicate extinctions, backing of the record by a herbarium specimen, the existence of a Maps Scheme individual record card, etc.

In collecting records care should be taken to search all local herbaria and as many of the national herbaria as possible. The latter was often a daunting task and he felt the Society could well assist by trying to recruit a panel of members willing to go through the larger herbaria not at present sorted by counties or vice-counties and take down the details from the sheets. He wondered if any system had been adopted for depositing the voucher specimens supporting records published by the Society in a central place, on the lines of H. C. Watson's herbarium at Kew.

Turning to the problems of searching the published literature, he emphasised the great value of N. D. Simpson's *Bibliographical Index of the British Flora* for this purpose and mentioned that a comprehensive list of potentially useful works would be appearing as an appendix to the "Guide for Local Flora Writers" (1964, *Proc. B.S.B.I.*, 5, 283-302). He suggested that the Society keep a library of these key works together with interleaved copies of published county floras, which could go out on long loan to Recorders. His own personal dream was a Biological Information Centre which would be engaged in compiling all the records ever published. For the purpose of the Maps Scheme he had already extracted all those in the Botanical Exchange Club reports back to 1932.

In collecting additions for the Maps Scheme, Recorders were recommended to consolidate these in batches of at least fifty before sending them in periodically. These would always be welcome in view of the prospect of a new edition of the *Atlas* in about 1980.

Dr. Perring closed by mentioning that the Conservation Committee was compiling an index of national rarities (defined as species with only about five existing localities in the British Isles) considered potentially in need of protection. This was just the kind of special task with which Recorders should be asked to assist.

DISCUSSION

E. B. BANGERTER reported that the full collection of records published by the Society in recent years was kept at the Natural History Museum but was inadequately sorted at present.

J. E. LOUSLEY felt it was not practical to insist on a single central repository for voucher specimens; local institutions were often more appropriate for this purpose.

To rectify the present position whereby Recorders have next to no say in the Plant Records that are published, while at the same time usefully passing through to their files the data that appear, he suggested that standard forms on NCR (no carbon required) paper should be printed and issued on which all Plant Records could in future be entered, with space for noting the location of any supporting specimens. The copies so produced could be sent as a matter of routine to Recorders, who would then have a chance of noting the record and recommending whether it was worth publishing in the light of their local knowledge. Since there would always be two copies of every record, published or unpublished, they could be sorted both systematically and geographically.

J. C. GARDINER remarked that the expense of a library such as Dr. Perring had suggested was a serious deterrent.

J. E. LOUSLEY drew attention to the exchange system practised by public libraries, which allowed rare works to be borrowed for up to three weeks. Other members, however, had found there was very often a veto on taking such volumes home.

D. E. ALLEN mentioned that the London Library, which possesses many county floras and more or less complete runs of periodicals such as the *Journal of Botany*, allowed its members to borrow almost any volume for several months at a time—if need be, by post. The ten-guinea subscription, however, would probably deter the majority of Recorders.

E. B. BANGERTER was sure the Society would be quite willing to lend back-numbers of its own publications to *bona fide* borrowers such as Recorders.

Dr. PERRING reminded members that it was up to the B.S.B.I. to ensure that the Nature Conservancy was made aware of botanical Sites of Special Scientific Interest. E. B. BANGERTER added that the Nature Conservancy already had an unpublished list of these, which needed to be notified to local officers.

Dr. MARGARET BRADSHAW spoke next on "Recruiting the New Entry". In her experience relatively few persons becoming interested in botany could be recommended to join the Society. Its publications were beyond their scope and few of its meetings were held in places reasonably accessible for those who lived in the more out-of-the-way parts of the country. At present those who could be recruited were likely to be drawn from four main sources: university students, most of whom intended to become professional botanists; the Wild Flower Society, which was not keen to expand its membership; local natural history societies, an over-rated source in her view, as few had botanist members competent enough to train beginners; and training colleges, which at the moment were being almost completely neglected.

She suggested various means by which the intake of beginners might be improved. The Society, for example, could set up in each Region a panel of leaders for special "teaching field meetings" made up of ten to twenty people. These leaders would need to be reasonably competent in

the field without necessarily being experts. A panel of lecturers would similarly be useful. In both respects the Society might find it helpful to work very closely with university extramural departments and the Workers' Educational Association, which would be able to assist with secretarial work.

Apart from these ways in which the B.S.B.I. could offer a range of special services to local societies, there were various functions of its own of a local nature, both existing and potential, to which beginners could be invited without necessarily being expected to join as members. Besides the now well-established week-end Regional Meetings, with their combined programme of lectures, exhibits and a field excursion, there was a need for series of instructional field meetings in different parts of each region, one or more of which could be devoted to groups such as grasses and sedges that caused special difficulty to the beginner.

DISCUSSION

E. F. GREENWOOD said that school biology teachers in general had a very deficient knowledge of plants. He knew that the Association for Science Education would welcome help in this direction and suggested that its local secretaries be contacted. Dr. Bradshaw agreed that this might prove very fruitful.

E. A. ELLIS felt that there was something lacking in the overall incentive offered to beginners and especially to young people. A wider approach was needed laying emphasis on the ecological interrelations of animals, birds and plants.

Dr. BRADSHAW considered it was essential for people to be able to identify their plants. We needed more trained botanists in order to carry out more ambitious co-operative projects. It was the B.S.B.I.'s special duty to provide this initial training.

J. E. LOUSLEY thought people needed to be told something interesting about plants, such as details about their history or biology, as well as being told their names. He agreed with Mr. Ellis that there was a need for more specific incentives, for better thought-out themes of study, and for challenging organised projects.

Dr. PERRING questioned whether working through local societies was really worth the time and effort involved.

Mrs. A. H. SOMMERVILLE mentioned that in Aberdeen a large benefaction exists for promoting just such a training service in fieldwork, which has proved highly successful. She suggested that every local officer might be made responsible for organising one local meeting in the course of the next year.

Dr. C. T. PRIME rounded off the theme with a talk on "Books for the Beginner". He began by recalling his own experience as a schoolboy botanist and cited the books which had helped—and those which had not. The beginner, he emphasised, lacks the eye and the necessary background of experience to be able to spot the plants he wishes to see. As far as he was concerned, he would have been glad of much more help than he was able to obtain.

The position to-day had much improved and there was now a whole series of excellent books for every grade of field botanist. There was still, however, a noticeable gap in the literature between the highly scientific and the ultra-popular, and he felt there was a good case for the new, more popular type of journal that the Society currently had under consideration. Such a journal, he was convinced, would need to have a wide, all-embracing approach, providing a corrective to the excessively compartmentalised character of professional botany to-day. It should not be restricted to taxonomy, for the intellectual qualities needed to produce good taxonomists are relatively rare in the population at large and the appeal of this particular type of approach was unlikely to be widely shared. If the B.S.B.I. did not cater in some way for the new public for botany that was coming into being, he was sure another society would.

Dr. Prime closed by showing a 'mock-up' of the first number of the proposed new journal and gave an outline of its contents.

DISCUSSION.

E. A. ELLIS, greeting the idea of a new journal with enthusiasm, suggested possible future topics might include plant galls, teratology and distribution by slugs.

Miss M. A. TURNER thought it might be better to aim at a more ephemeral magazine than the rather impressive format currently being considered. Dr. B. SEDDON, on the other hand, found this format appealing and remarked on the resemblance to that of high-quality journals like *Discovery*.

Mrs. B. H. S. RUSSELL stressed that if a new journal was to be launched, it must fill a genuine gap and not compete with the Society's two existing journals.

D. E. ALLEN said there was a great need for more low-priced local 'Floras' consisting of little more than a checklist with localities. These could be purchased in quantity and distributed free to schools and others in an area who were known to be interested. They were a great stimulus to beginners. E. A. ELLIS instanced the recent checklist of the flora of Herm.

At the end of the session members were shown round the Botanic Garden by the Director, J. S. L. Gilmour, a former President of the Society. In the evening a reception was held in the Cory Room in the Botanic Garden offices, at which J. Faulkner showed colour slides of Cambridgeshire species with special emphasis on those of interest from a conservation point of view.

SUNDAY

The morning of the second day was spent visiting two sites in the care of the Cambridgeshire Naturalists' Trust. Hayley Wood, an Educational Nature Reserve, was toured under the guidance of Dr. Perring and Mr. Faulkner, while at Thriplow Meadows Mrs. G. Crompton described the grazing-and-cutting experiment on a *Dactylorhiza* population that she had been carrying out.

SESSION 3. FIELD-WORK. *Chairman: J. E. LOUSLEY.*

Opening the afternoon session with a paper on "Rare Species and their Management for Survival", Dr. A. S. WATT reminded us that the amount of knowledge which we possess about the biology of flowering plants which can help in a scientific policy of conservation is ridiculously small. Conservers are obliged, for a variety of reasons, to rely on simple agricultural practices in the management of nature reserves, such as grazing, burning, felling, etc. Yet in very few cases did we know the precise effects of these activities on our rare species. If we are ever to be able to control the populations of our plants, we must learn as much as possible about their biology, life history and ecological requirements.

The outsider might regard the Breckland group of rarities as a homogeneous collection all limited to that region for similar reasons, but detailed investigation had shown that they fell into six categories, different types of management being required for the conservation of species within each.

Dr. Watt maintained that members of the B.S.B.I. could help in the acquisition of this knowledge if they would make continuous observations on the population changes of rare species and correlate these with changes in treatment and fluctuations in the weather.

Dr. B. FORMAN opened his paper "Conservation: How can the B.S.B.I. help?" with a plea for a greater increase in the education of the public in general and naturalists in particular on the modern approach to conservation. We had to attempt to control our extremists whilst not dampening their enthusiasm. We had to learn to co-ordinate the interests of all those who use the countryside for recreation and in this respect naturalists must not overassess their own relative importance. We had to try to find the maximum diversity in the minimum number of sites, and B.S.B.I. members could play an important part in selecting the best sites for conservation. With this information the Conservancy would be in a position to present a balanced account of natural history requirements when regional plans for land use were being prepared.

Dr. Forman also mentioned some other ways in which amateur botanists could be of assistance. The new survey of the Breckland flora, initiated by the Nature Conservancy, was being carried out under the chairmanship of E. L. Swann, B.S.B.I. Recorder for Norfolk. The survey had already, after only two years, revealed several unsuspected new sites of importance. This might be work for experts, but the relative beginner could help by taking some responsibility for the management of nature reserves and sites of scientific interest, especially in collaboration with his local naturalists' trust.

DISCUSSION

It was pointed out that the schedules provided for contributors to the "Biological Flora" in the *Journal of Ecology* gave an admirable summary of the type of information required about our native species. There was a feeling that for some this type of approach would be too demanding, and a simpler project in which observations might be made throughout the

country by many members on the change in population and reproductive capacity of one species was suggested.

E. A. ELLIS remarked on how little was known of the subtle interplay of factors responsible for the composition of the weed flora of arable fields. Careful and continuous observation might tell us much.

Dr. SEDDON, under the title "Group Projects: Value and Design", told of the progress of the Welsh Lakes Survey and the reasons behind its commencement, which was initially independent of the Welsh Committee. As a continuation in depth of the work of the Distribution Maps Scheme it was possible either to study the distribution of all species on a much larger scale in a smaller area, or it was possible to select a small group of species to study in greater detail over a large area. Most people appeared to have adopted the first of these alternatives. He had chosen the second. His reason had been that this method gave bigger ranges of soil and climate with which correlations in plant distribution might be made. The small group of species might be a taxonomic one or an ecological one. He had chosen the latter, as this restricted the number of sites to be visited and made choice an objective process which could be related, in the case of lakes, to the number shown to exist on the 1" Ordnance Survey maps. They proved to be very unevenly distributed in Wales with three centres: in Snowdonia, in Mid-Wales, and at the heads of the South Wales valleys.

Dr. Seddon gave details of the preparation of the maps and showed how distribution patterns which appeared to be similar in Wales in the *Atlas of the British Flora* revealed different possible interpretations when analysed on this much larger scale.

There was little time for discussion, but the Chairman remarked that there was obviously great scope for similar studies in other parts of the British Isles.

After thanking all those who had spoken, the Hon. General Secretary then declared the Conference at an end.

Special thanks are due to Mrs. M. Briggs, the Hon. Meetings Secretary, A. C. Jermy and Dr. F. H. Perring (who kindly contributed the account of the last afternoon's proceedings) for organising this successful and enjoyable week-end which, perhaps, may prove to have been the forerunner of many more of its kind.

LOCAL OFFICERS ATTENDING

Regional Representatives on Council: Mrs. B. H. S. Russell, Mrs. H. R. H. Vaughan.

District Secretaries: Dr. M. E. Bradshaw, Miss V. Gordon, Dr. R. B. Ivimey-Cook, J. A. Kiernan.

Recorders: D. E. Allen, Miss E. P. Beattie, T. A. W. Davis, Miss D. E. de Vesian, Dr. J. G. Dony, E. A. Ellis, F. Fincher, E. F. Greenwood, Miss N. Hamilton, J. E. Lousley, Miss M. McCallum Webster, D. J. McCosh, Dr. F. H. Perring, Mrs. M. E. Pugh, Dr. B. Seddon, Mrs. A. H. Sommerville, E. L. Swann, Miss M. A. Turner, Mrs. F. L. Woodman.

EXHIBITION MEETING, 1964

An Exhibition Meeting was held at the Botany Department, British Museum (Natural History), South Kensington, London, S.W.7, on Saturday, November 28, 1964, from 2.00 p.m. to 5.30 p.m.

About 250 members and guests attended, and exhibits were arranged by 28 individuals and institutions. An account of these exhibits, based on notes supplied by exhibitors, is given below.

RANGE PATTERNS IN MANX RUBI

In the years 1958-63 the brambles of the Isle of Man, previously almost unknown, were studied in detail and the distribution of all but the commonest species mapped with some precision. The island has now been searched fairly exhaustively and it is not expected that the picture that has emerged will alter now except in minor details.

Some 40 species have so far been detected, though some of these cannot as yet be named. This compares with about 82 found by Mr. E. S. Eedes in the much larger county of Staffordshire. Most of the Manx species are blatantly distinct even to a novice and only a few occur with any frequency. Four are very common and generally distributed: *Rubus ulmifolius*, *R. polyanthemus*, *R. nemoralis* and the northerly *R. errabundus*. Rather less common but also generally distributed are *R. sublustris* (partly adventive) and a very distinct bramble only recently recognised as *R. monensis* (ironically named after the other 'Mona', Anglesey).

Almost all the other species, from locally abundant to a mere bush or two, exhibit distinct distributions. In many other parts of the British Isles the diversity of soils and discontinuity of suitable habitats tend to hide range patterns in *Rubi*. But in Man the surface geology is largely uniform, suitable habitats continuous and little varied, and the main differentiating factors are rainfall and exposure. Idiosyncracies in soil preference are, in fact hard to find: *R. vestitus*, a southern species and well known in England as one of the few to thrive on basic soils, is largely confined to the relatively dry and less acid south-east corner; and *R. dumnoniensis*, a western species, shows a marked liking for the banks of streams.

R. hylocharis and *R. hebeticaulis*—both western in their Britannic range—form a neat species pair, the former being abundant in all the glens in the wettest north-central part of the island, the latter progressively replacing it in the glens in the rather less wet southern and eastern parts.

Each corner of the island tends to have its own special one or two species. This is in strong contrast to the pattern in almost all other vascular plants in Man; and indeed 'good' localities for *Rubi* are seldom productive of other plants of interest. These 'good' localities, where several local or rare species are met with together, are principally either old demesnes (which have escaped more recent clearing and alteration), or hedges bounding ancient trackways, or gently sloping cliffs sheltered