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CONTENTS/INHOUD

In Memoriam R.A. Dyer	101
BRI Annual Report 1985/86 (Part I)	104
In Memoriam J.F.V. Phillips	116
Letter to the Editor	118
13th Annual Congress of SAAB	119

IN MEMORIAM R.A. DYER, 1900 - 1987

Robert Allen Dyer was born in Pietermaritzburg on 21 September 1900 and received most of his early education at Michaelhouse. From 1919 to 1923 he attended Natal University College, graduating with the degree of M.Sc. under Prof. J.W. Bews. After a year as an analytical chemist at a sugar mill in Zululand, he was appointed in 1925 to the Division of Botany and Plant Pathology. He was placed as assistant to Prof. S. Schönland of Rhodes University College, who was a member of the Botanical Survey Advisory Committee. On Prof. Schönland's retirement the following year, he was put in charge of the Botanical Survey of the Eastern Cape and made Honorary Curator of the Albany Museum Herbarium.

His dual role as field worker and herbarium botanist gave him a sound botanical background, and his exposure to the rich succulent flora of the Eastern Cape gave him his life-long interest in the Euphorbieae, Stapelieae and Crassulaceae. It was, though, an ecological thesis, entitled 'The Vegetation of the Divisions of Albany and Bathurst' which earned him the degree of D.Sc. from Natal University in 1937. This was published as Botanical Survey Memoir No. 17.

From 1931 - 1923, R.A. Dyer served as South Africa's Liaison Officer at the Royal Botanic Gardens, Kew, undoubtedly gaining vast botanical experience. On his return to South Africa, he was stationed at the National Herbarium, Pretoria. In 1937 he was able to visit Tristan da Cunha and made some 200 botanical collections. In 1944 he succeeded Dr E.P. Phillips as Chief of the Division of Botany and Plant Pathology and Director of the Botanical Survey. In this capacity his farsightedness and perseverance soon had their impact on the ecological and taxonomic scene in South Africa. One of his first achievements was to re-activate the Botanical Survey by succeeding in obtaining additional posts. The increased survey activity then necessitated additional staff to be appointed to the National Herbarium. Dr Dyer had a vision of a 'pan-African botanical policy', therefore, by means of exchange and purchase, collections were acquired from other African territories south of the Sahara, so that the herbarium developed as an African one rather than a purely national one.

Dr Dyer saw the need for a Botanic Garden, and initiated negotiations in 1945. Various properties were bought in about 1960. The Garden was planned on ecological lines and not only satisfies the scientific needs of the Institute, but also provides Pretoria with an attractive natural spot. In 1950, Dr Dyer started planning a new building to be situated in the Garden. Unfortunately this materialized only about twenty years later. Concerning the library of the Botanical Research Institute, he foresaw the necessity of an independent fund for the purchasing of rare books. Because of this, a collection of botanical works unrivalled in South Africa and of international repute was built up. As Director, he pressed for a new series to replace the old standard work on the flora, namely Flora Capensis. The first volume of the new Flora of Southern Africa appeared in 1963. After his retirement in that year, he was re-appointed, mainly to produce the 2 volume Genera of Southern African Flowering Plants. After his final retirement in 1979, he still came to the Institute regularly to do research and write and saw the publication of his 'Ceropegia, Brachystelma and Riocreuxia in Southern Africa' in 1983.

The total of more than 450 publications which stand to his credit, which includes the text for over 300 plates in 'Flowering Plants of Africa', will be difficult to equal. His main contributions have been in plant taxonomy especially in groups such as Amaryllidaceae and succulent plants. The major works include the two volumes of 'The Succulent Euphorbieae' (1941) in collaboration with White and Sloane, 'The South African Cycads'

(Bothalia 1965) and several families in the 'Flora of Southern Africa'.

The work of Dr Dyer has not been without its appropriate recognition. He was elected Fellow of the American Cactus and Succulent Society in 1941, Fellow of the Royal Society of South Africa in 1945, and was awarded the Herbert Medal by the American Amaryllis Society in 1948. He was President of the S.A. Biological Society in 1948 and received their Senior Capt. Scott Memorial Medal in 1942. In 1951 he received the S.A. Medal and grant from the S.A. Association for the Advancement of Science and was President of the Association in 1960/61. For more than twenty years he served as a member of the Board of Trustees of the Transvaal Museum. In 1976 the University of the Witwatersrand conferred on him an honorary D.Sc. degree. In 1973 Dr Dyer became the first recipient of their premier award, the South African Medal for Botany (Gold), of the South African Association of Botanists. He was also one of their Honorary Members.

As South African representative, Dr Dyer attended many congresses, and became well-known internationally. He attended the International Botanical Congresses of 1954 (Paris) and 1959 (Montreal). In Paris he was awarded the medal of the Botanical Society of France. He also attended the International Symposium on Antarctic Research held in Paris in 1962. Dr Dyer is commemorated in the genus Radyera Bullock, and a number of species e.g. Aridaria dyeri N.E. Br., Hereroa dyeri L. Bol. and Berkheya radyeri Roessl. His collections number more than 6 000, with the originals deposited in PRE.

Dr Dyer was a keen and talented bowler. Another hobby was gardening and he was President of the Pretoria Horticultural Society from 1961 - 1972. In his working life he was an outstanding civil servant whose great energy and vision secured respect and recognition for Botany and Botanists. He was a warm, kind, helpful and eminently human person who offered encouragement to many young people.

When Dr R.A. Dyer passed away on 25 October 1987, a distinguished life of more than 60 years' valuable and permanent contributions to botanical science in southern Africa, came to an end.

W.G. WELMAN

REVIEW OF THE WORK OF THE BOTANICAL RESEARCH INSTITUTE 1ST APRIL 1986 -
31ST MARCH 1987

INTRODUCTION

During the year under review a departmental committee was appointed to look into the state of botany in the Department of Agriculture and Water Supply. This action is to be welcomed because it implies that a close look will be taken at the mandate, performance and productivity of the Botanical Research Institute, an organization which supplies national research and other services in spite of being accommodated in an 'own affairs' Department. Botany, as practised by different state departments, is highly fragmented and it is to be hoped that an investigation of this pressing issue will be undertaken in the near future.

It cannot be doubted that the numerous adjustments made in recent years within our Department as well as the appointment of the abovementioned committee has engendered uncertainties which have been extremely unsettling to our staff. It is with satisfaction, therefore, that we can report that the scientific productivity of the Institute has, nevertheless, remained on par. Ninety publications varying from very short to long, from high level scientific contributions to extensive general purpose reference works appeared during the year. The definitive publication on the South African biomes will remain a standard work on the subject for some time to come and the ecological bibliography, as well as the problem plant catalogue, are examples of valuable general reference works.

Special attention is being devoted to the highly important grass family in order to support the developing Pasture Research Centre in its activities. Grasses are now being studied in depth from the anatomical and cytogenetic points of view and a start has been made with the taxonomic aspects.

At the same time the BRI has consolidated its position as a botanical institute in the forefront of computer applications. Two of our staff participate in international databank operations and we have acquired the DELTA databank system (Descriptive Language for Taxonomy) as a co-operating institute. In addition, the herbarium computerized management system is in partial operation and will, when complete, be one of the most advanced of its kind in the world.

Exploration of our flora is continuing and Namaqualand, which ex-

perienced good rains this year, as well as Lesotho, where the important Highlands Water Scheme is being developed, were singled out for special attention. Research on our indigenous plants is advancing on a broad front and the Institute can look back on a successful year.

ADMINISTRATION DIVISION

In June 1986, Mrs D.J. Gerber, head of the division, was transferred to the Commission for Administration on promotion. For seven months the Institute was without an administrative head and Mrs. J. Rautenbach, the State Accountant, assumed the role of acting head. In January 1987, Mr J.T.C. Snyman from the Highveld Region, Potchefstroom, was appointed as head, thus finally resolving a difficult situation.

We acknowledge with gratitude the determination and loyalty of the staff which kept the Administration Division operational.

HERBARIUM DIVISION

Understaffing continues to be a major problem for the four herbaria of the Institute affecting all areas of activity, namely curation, research and the information services. It is unlikely that any meaningful relief will be forthcoming for at least another 12 months or longer.

National Herbarium, Pretoria (PRE)

Curation

Approximately 140 scientific journals were scanned for taxonomic and nomenclatural changes covering the FSA region. Of these 56 contained articles of direct significance to southern Africa. Statistics available for the monocotyledon families show that over 113 new names were adopted - including 77 new taxa, 27 old names re-adopted and 9 existing names new to the FSA region.

The updating of the PRECIS databank continued with 7 000 specimens having undergone name changes and 4 500 specimens having had their grid reference added or corrected. Other miscellaneous changes affected 1 300 specimens.

Distribution records were significantly extended for 63 taxa, mostly at the provincial level, and include a number of new records for southern Africa.

Computerization

The Burroughs B26 multi-user computer system is proving to be a tremendous asset despite many of the applications for which it was purchased still being in the developmental stage. The most important application currently in use is the capture of specimen label data and the printing of single or multi labels for each specimen. This application alleviates the need to type long and difficult plant and author names. The system was extended during the year with the purchase of an additional 40Mb hard disc and a 60Mb tape streamer for general data backup and the storage of archival data. A link by modem to the B7900 mainframe, housing the PRECIS database, has been established with the successful downloading of data from the mainframe to the B26 system.

Accommodation

There has been no progress with the installation of three working bays on the south side of each herbarium wing or the two-room prefab building to accommodate deep freezers and driers for decontaminating and drying specimens. These should hopefully be installed during the coming year. Another minor work also in the pipeline is a new SEM room. No new herbarium cabinets were purchased. The funds for these were used for computer equipment and dissecting microscopes. Plans to install fire protection and air conditioning in the herbarium are progressing well. This major work should commence in about June 1987.

Collecting expeditions

These included trips to the Cape — Calvinia District; Natal — Nkandla and Ngeli Forests; north-eastern OFS and western Transvaal (general collecting); Transkei — Mkambati Nature Reserve (co-operative general collecting with Botany Dept., UNITRA); southern OFS (Hepaticae and general collecting); south-western and eastern Cape; Natal and south-eastern Transvaal (Cyperaceae, Polygonaceae and general collecting); eastern Transvaal — Barberton (Vigna and Ozoroa); eastern Lesotho (Bryophyta and general collecting).

Research and related activities

The family Polygonaceae (G. Germishuizen). The genera Polygonum, Bilderdykia and Reynoutria have been rewritten in the new flora format and submitted to the editor. Work on Oxygonum, Fagopyrum, Emex and Rumex is nearing completion.

Studies in the genus Riccia (Hepaticae) (S.M. Perold). The spore ultra-structure study was completed and will be incorporated in a revision of the family Ricciaceae. Seven papers were published. Another on R. campbelliana Howe was submitted for publication. Papers on R. nigrella DC. and R. capensis Steph. and on two new white-scaled species are nearing completion.

Revision of Vigna (Fabaceae) (B.J. Pienaar). The recognition of three varieties within V. vexillata (L.) A. Rich. for the Flora of tropical Africa (FTA) region, based on calyx lobe characteristics, appears not to hold good for southern Africa. Wing sculpturing as well as SEM studies of the stigma are proving to be taxonomically useful at the species level.

Revision of Carex (Cyperaceae) (C. Reid). Work on this project is now well under way. Much of the field work has been completed, with herbarium and anatomical material having been collected for most taxa. Fieldwork has shown that C. drakensbergensis and C. cognata are probably conspecific.

Revision of the broad-leaved species of Asclepias (A. Nicholas). The holdings of the tribe Asclepiadeae in seven southern African herbaria were examined and specimens selected for study. This includes two thirds of the required type specimens. 12 of the 38 taxa have been collected and photographed in the field.

Contributions to the moss flora (J. van Rooy). Work on the family Orthotrichaceae for the 3rd fascicle of Bryophyta for the Flora of southern Africa (FSA) is progressing well. Revisions of Macrocoma, Cardotiella, Macromitrium and Schlotheimia have been completed.

Transvaal wild flowers (vol. 2) (G. Germishuizen). This work is progressing slowly with 120 plants (22% of total) having been illustrated and 40 descriptions completed.

Plant species and synonym list (various contributors). Corrections, additions and changes were made to the manuscripts of Edition 2, Part 2 (Dicotyledons). This has now been submitted for publication.

Research support

Scanning electron microscope (S.M. Perold). 2 745 micrographs were prepared for various BRI and outside workers. These include fossil leaf surfaces, Lythraceae seeds, Cucurbitaceae fruits, Polygonaceae leaves and pollen, Ericaceae pollen and seeds, Euphorbia leaves and seeds, Restionaceae

pollen, Vigna leaves and inflorescences, Solanaceae leaves, Ehrharta leaves, Macromitrium leaves, Orthotrichaceae capsules, lichen thalli and Riccia spores and thalli.

Determination of priority collecting areas (various contributors). Efforts are under way to predict the species density per 1/4° grid for southern Africa. These data will be compared with actual collecting records extracted from National Herbarium PRECIS data bank. The difference between the actual and predicted values for each 1/4° grid will form the basis for assigning priorities to areas poorly represented by collections in the National Herbarium.

Expansion of collections from poorly represented areas (various contributors). Western Transvaal — holdings for four 1/4° grids were increased from 18 to 329 collections; north-eastern OFS — holdings for two 1/4° grids increased from 5 to 386 collections; Mkambati Reserve — holdings for three 1/4° grids increased from 1 708 to 2 224 collections; Calvinia — holdings for seven 1/4° grids increased from 118 to 315 collections.

Expansion of the fruit and seed collection (E. Retief). This has been contributed to largely from material collected during fieldwork for other projects. The fruit collection was extended by 346 to 4 681 collections, the seed collection by 365 to 4 368 collections.

Special collecting vehicle (M.D. Panagos). Fitting the Nissan Ekonovan as a collecting vehicle is complete. Some of the special features added are — a custom-made roofrack to house and assist in drying 12 plant presses, exterior roll-up awning attached to side over door, interior shelving system with removable plastic storage bins, large fixed bin for camping equipment, compartmentalized box for food, cooking utensils, gas bottles, detachable working surface and two-way FM radio.

Publications

29 articles appeared in local (22) as well as overseas (7) publications. A further 24 articles are in press.

Contributions to outside publications

Various members of the Division contributed to the following publications by checking the texts: La Croix — Growing scented plants in south-

ern Africa: E. van Wyk — Practical book of herbs; A. Batten — Flowers of southern Africa; Courtenay-Latimer et al. — Die blomplante van die Tsistsikambos en -Seekus Nasionale Park.

Plant identification services

20 385 specimens were identified for officers of this Institute, various State Departments, Provincial Administrations, universities and neighbouring states. In addition, identifications for 247 visitors numbered 1 176. Enquiries received by telephone totalled 1 098. New accessions to the herbarium numbered 21 235. In January 1987 a start was made using the computer to input and print specimen labels. The result is a noticeable reduction in the 12-month typing backlog.

Visitors

In addition to numerous local visitors from various universities, Government institutes, Nature Conservation etc., together with members of the general public, the herbarium was also utilized by officers and personnel from Lesotho, Botswana, Swaziland, Bophuthatswana, Venda and Transkei.

Many overseas visitors visited the Institute and Herbarium. These included Prof. D. Wiens (Utah, USA); Dr R.M. Polhill (Kew, England); Prof. O.H. Volk (Mürzburg, W. Germany); Prof. and Mrs. D. and U. Müller-Doblies (Berlin, W. Germany); Dr R.S. Wallace (Piscataway, USA); Dr W. Jürgens (Hamburg, W. Germany); Mrs D. Goble (Perth, Australia); Dr C. Laude (Liège, Belgium); Mr H. Breyne (Kinshasa, Zaire); Dr M.E. Hale (Washington, USA); Dr U. Meve (Münster, W. Germany); Dr K. Winter (Illinois, USA); Mr C.H. Stirton (Kew, England) and Prof. F. Sandberg (Uppsala, Sweden).

Loans and exchanges

59 loans (comprising 4 112 specimens) were sent out and 100 loans (9 718 specimens) returned. The total number of outstanding loans is 291 (29 428 specimens) 7 955 specimens were despatched as part of exchange agreements and 3 115 were received by PRE.

Natal Herbarium, Durban (NH)

Mrs M. Jordaan continued to act as curatrix of the herbarium and officer-in-charge of the unit and was supported administratively by Mrs H.

Noble. Mr A. Nicholas was transferred to the herbarium for six months (April to September) to assist Mrs. Jordaan who was on leave for three months. Mr A. Ngwenya is now assisting with a large proportion of the identifications allowing senior staff to proceed with more important work. Mr C. Buthelezi, after 9 1/2 years of service, resigned at the end of January and his post was filled by Mr B. Ntombela.

During the last year a record 6 596 plant identifications were done (almost double the number for the previous year), 323 visitors received, 951 telephone enquiries dealt with, 294 letters written, 324 specimens sent out on loan, 3 398 specimens mounted and 3 015 specimens accessioned.

Removal of western Cape taxa continued with 593 specimens being sent to the National Herbarium, Pretoria and 389 to the Stellenbosch Herbarium. The sorting and refining of Natal taxa continued and in this connection visits were made to both the National Herbarium and the University of Natal Herbarium, Pietermaritzburg. Collecting trips were undertaken to Nkandla Forest and Nsuze Valley, Weza State Forest and the Mkambati Nature Reserve.

The Department was one of 14 recipients to receive the first conservation awards presented by the Durban City Council for the preservation and maintenance of historic buildings in the city. The building in question is the house built for John Medley Wood, the first Curator of the Natal Herbarium. It is built in redbrick with verandas of fine detailing, was completed in 1890 and is a fine example of a late Victorian building. It is now used as offices and also houses a unique museum containing botanical articles, photographs and equipment of historic interest.

Government Herbarium, Grahamstown (GRA)

This year has seen a number of staff changes. Mrs E. Brink continues to curate the herbarium, and Dr A. Jacot Guillarmod retired at the end of January; Mrs. M.L. Furlong left at the end of November and her post was filled by Miss S.A. Olivier who joined the staff in February. Mr A. Palmer, of the Ecology Division, joined the unit in March.

Despite the upheaval caused by these changes the unit continued to function efficiently with 1 754 specimens being identified, 822 visitors received, 484 telephone enquiries answered, 1 577 specimens mounted,

1 437 specimens accessioned, 48 specimens sent out on loan and 118 specimens sent out as exchanges. A function peculiar to GRA is the arrangement of displays, mainly for the Albany Museum, of which 57 were set up this past year.

The scanning and sorting of specimens continued in order to rename misidentified specimens. In the process more homogeneous taxa are created within the cupboards. In this connection, 229 genera involving some 2 400 specimens were examined.

Mrs R. Hart, who occupies a part-time post funded by the Pocock Bequest to the Albany Museum, continued the work of curating the Pocock Marine Algae collection. The Unit is indebted to Mr N. Abrahams for his continued assistance in the herbarium in a voluntary capacity as well as to Dr Jacot Guillarmod since her retirement date.

Three collecting trips were undertaken this year, the most important being a three week trip to South West Africa/Namibia by Dr Jacot Guillarmod.

The block clearing of alien plants on the Grahamstown Nature Reserve remains an endless problem and work has continued throughout the year. Mrs. Brink visited the reserve 78 times during the year to carry out routine inspections and to consult with the reserve manager.

Government Herbarium, Stellenbosch (STE)

Mr R.O. Moffett, the former curator, resigned in July to take up a lecturing post at the University of the North, QwaQwa Branch. Miss P. Burger took up his post until her transfer to the Wine Research Institute in January. Since February the post of curator has been filled by Mr E.G.H. Oliver. Mrs. J.B.A. Beyers joined the staff in February. Due to the modernization of the Natural Sciences Building by the University of Stellenbosch, the unit had to vacate its accommodation at the end of September. The herbarium is now housed in the old Carnegie Library (where it is likely to stay for some time). The move allowed staff to re-organize the herbarium layout and service room procedures.

Despite a rather unsettled year, services and curatorial activities were maintained at a high level with 4 039 specimens being identified, 229 visitors and 3 groups of students received, 210 telephone enquiries

answered. 117 letters written, 989 specimens sent out on loan and 6 463 specimens accessioned.

Collecting trips were undertaken to an area north of Calvinia (under-collected quarter degree squares as gauged from PRECIS printouts), to the northern slopes of the Langeberg near Barrydale (staff accompanied Mr D. McDonald of the BRI Ecology Division), and several short weekend trips were made during the spring months. It was on one of these weekend trips that the new species, Ronulea unifolia De Vos, was collected. Mr Oliver also represented the herbarium at the Herbarium Curators Meeting held in Pretoria in November.

Mr Oliver continued his work in the Ericaceae. Research was centred on the four minor ericaceous genera: Acrostemon, Syndesmanthus, Thoracosperma and Simocheilus.

FLORA RESEARCH DIVISION

Flora of southern Africa (FSA)

The FSA subproject has continued to have impact outside the Institute in several ways. There are about 190 potential contributors to the FSA, the majority of whom are overseas specialists in their plant groups. Thus, the FSA helps to maintain scientific contacts with other countries. The Department continued the research contract with the University of Cape Town, for the Orchidaceae volume, with Prof. A.V. Hall leading the research. The fifth meeting of the FSA working group was held during the congress of the South African Association of Botanists at Durban in January 1987. News of interest to FSA contributors was circulated in Forum Botanicum, the newsletter of SAAB.

Two Flora fascicles were published, Pteridophyta, by the late Prof. E.A. Schelpe and N.C. Anthony, covers 28 families, 74 genera and 275 species of ferns. Volume 18,3 covers the families Simaroubaceae (by K.L. Immelman of the BRI), Burseraceae (by Prof. J.J.A. van der Walt of Stellenbosch University), Ptaeroxylaceae and Meliaceae (by F. White & B.T. Styles of Oxford University and Malpighiaceae (by P.D. de Villiers & B.J. Botha of Potchefstroom University and K.L. Immelman), and includes 13 ge-

nera and 131 species. To date, the total number of species treated in published parts of the FSA is 2 790, which amounts to 12,7% of the total of 22 000 species in the southern African flora.

The List of species of southern African plants, edn 2, part 2, covering dicots, is in press. The List of species is a precursor to the FSA that presents up-to-date coverage of all taxa at increasing levels of approximation. Edition 2 includes for each genus the name and author, the current reviser and the literature necessary to identify specimens to species and to determine important synonymy; and for each species the name and authors of currently accepted names and of important synonyms since the completion of Flora capensis are given. During this time, about 12 000 commonly used names have gone into synonymy for our 24 000 taxa. Future editions will contain additional species information, such as distribution, conservation status and life form.

Institute staff members, and outside contributors on contract made the following progress with volumes and fascicles for the FSA:

Bryophyta: The genus Bryum was completed by Mr J. van Rooy, and Fascicle 2 of the treatment of mosses, by Dr R.E. Magill of the Missouri Botanical Garden, has gone to press. Work is now well under way for the third fascicle on mosses by Dr Magill and Mr van Rooy.

Vol. 2: Poaceae — Oryzoideae, Centostecoideae and Bambusoideae. A paper by Dr G.E. Gibbs Russell and Dr R.P. Ellis, 'Species groups in Ehrharta of southern Africa' was presented in July 1986 at the International Symposium on Grass Systematics and Evolution at the Smithsonian Institution, Washington, D.C., which was attended by both these officers. Species-level data for Ehrharteae is being entered in the DELTA computer system for comparative descriptive information. Details of this new approach are covered in the Data Subdivision report.

Vol. 5: Liliaceae — Aloinae—Aloe. The FSA manuscript for Aloe by Dr H.F. Glen and Mr D.S. Hardy is completed. Dr Glen, assisted by Mrs S.M. Perold, has examined all southern African species for leaf epidermal types using the scanning electron microscope. Six papers supporting or extending the FSA manuscript have been prepared, and several more are expected. A paper describing variation in A. dichotoma was read at the SAAB Annual Congress in January 1987 by Dr Glen.

Vol. 5: Liliaceae — Asparagoideae. Miss K.L. Immelman is finalizing the manuscript and reviewing the keys for Protasparagus and Myrsiphyllum left incomplete on the retirement of Mrs. A.A. Mauve (Obermeyer).

Vol. 8: Orchidaceae. Prof. A.V. Hall, is University Contractor for this volume, and Dr H.P. Linder, formerly of the BRI but now on the staff of the University of Cape Town, is co-operating. A student, Mr T. Gericke, has been employed to work on the 65 species in 17 genera that still require attention. So far 46 species in 7 genera have been completed, and about 100 species completed in past years have been re-written in the new FSA format.

Vol. 9: Salicaceae, Fagaceae, Urticaceae and Piperaceae. FSA manuscripts have been prepared by Miss Immelman for all genera, and the Urticaceae awaits final alterations by the collaborator, Dr I. Friis of the Botanical Museum and Herbarium, Copenhagen.

Vol. 11: Mesembryanthemaceae. A treatment of Astridia, Acrodon and Ebracteola was published in Bothalia 16,2 by Dr Glen.

Vol. 16: Fabaceae. Mr B.D. Schrire's account of the tribe Desmodieae, as well as the conspectus of Tephrosia subgenus Barbistyla in the tribe Millettieae, are in press in Bothalia. Mr Schrire has been designated world co-ordinator for the tribe Indigoferae for the ILDIS (International Leguminosae Database and Information Service) project being initiated from the University of Southampton. In July 1986, Mr Schrire attended the conference on 'The biology of the Leguminosae' held at the Missouri Botanical Garden, St Louis, USA, and delivered a paper, 'Floral biology of the Leguminosae'.

Vol. 23: Lythraceae. Miss Immelman has begun the FSA treatment of this family, to complement research being done in Myrtales by contributors to the FSA outside the BRI. Preliminary taxon concepts and trial keys are being developed.

Vol. 25: Ericaceae. Mr E.G.H. Oliver has continued studies in the 'minor genera', concentrating on the last complex of four minor genera in the Ericoideae. A major step taken was the inclusion of the pan-African genera Philippia and Blaeria within Erica, making it a genus of 650 species in southern Africa.

Vol. 30: Acanthaceae — Justicia. Miss Immelman's completed FSA manus-

cript is with the editor, and awaits contributions from researchers from other institutions before the fascicle can be published.

Pretoria Flora

Dr O.A. Leistner constructed keys to the 141 plant families in the Pretoria area, using 295 couplets designed to be easily distinguishable. Trees, ferns, water plants and parasitic plants were specially treated, using vegetative keys. The Pretoria Flora will cover about 1 780 species, and only about 100 are still outstanding.

Palaeoflora of southern Africa

Drs J.M. Anderson and H.M. Anderson are now preparing the second volume in the Molteno Formation series, dealing with all the 22 genera and 88 species of gymnosperms (except Dicroidium, which was published in Volume 1). This work is a review of 75 assemblages plus all published information from the Gondwana Triassic Realm, and includes plates, figures, maps and tables, as well as detailed cuticular analyses, which revealed much new and unexpected data relevant to taxonomy, classification and palaeoecology. The study has led to new insights into speciation processes, diversity trends and phytogeography of Gondwanaland.

Liaison Officer, Kew

Mr Schrire is in his second year of duty as South African Liaison Officer. He has continued to provide information about taxonomic and related subjects to researchers on the southern African flora, and to pursue his research in Fabaceae, which is detailed above. He privately visited the herbarium at Trinity College in Dublin where most of Harvey's specimens for the early volumes of Flora capensis are housed, but are in desperate need of modern study.

Exhibition of botanical art

A second exhibition of botanical art by the Botanical Research Institute was held in the Pretoria Art Museum from 4—22 March 1987. This time over 200 water colour paintings plus numerous pen drawings were exhibited representing the work of 11 artists over the last 14 years. All the studies exhibited were executed for the Institute's several publications. The exhibition, which was very well attended, was opened by Dr R.J. van Niekerk, Director of the Directorate of Agricultural Information, Department of Agriculture and Water Supply.

Miss G. Condy was responsible for the mounting of the plates for display, the arrangement of the display, the production of a catalogue and advertising the exhibition in the press and radio.

To be continued.

IN MEMORIAM J.F.V. PHILLIPS, 1899 - 1987

When Prof. John Phillips of Blue Bird Farm, Hekpoort in the Transvaal, passed away early this year, a long, distinguished and fruitful career in ecology came to an end.

John Frederick Vicars Phillips was born in Grahamstown on 15 March 1899. After his initial education at Dale College in King William's Town he joined the Department of Forestry and received a bursary to Edinburgh University. He attended that university from 1919-1922 and obtained a B.Sc. degree with Forestry and Botany at Honours level. He was then appointed Research Officer by the South African Department of Forestry and stationed at Knysna where he was involved in ecological research and management of the indigenous forests until 1927. In that year he was awarded a D.Sc. degree by the University of Edinburgh for a thesis he presented on Forest succession and ecology in the Knysna region. It was published in 1931 as Memoirs of the Botanical Survey of South Africa No. 14.

He moved to Tanganyika (Tanzania) where he worked from 1927 - 1931 as ecologist and later as Deputy Director (Research) in the Department of Tsetse Fly Research. He was responsible for a very comprehensive programme on the ecology of the tsetse fly.

In 1931 John Phillips returned to South Africa as Professor of Botany at the University of the Witwatersrand. A strong school of ecology was established through his endeavours and in 1933 he started the Frankenwald Research Station where pasture research workers, some from other countries, were trained.

After World War II he was instrumental in introducing two courses in soil conservation at the university. These were crash courses of three or four years for returned soldiers and were not available elsewhere. Some hundred-and-twenty ex-servicemen graduated from the course, with a B.Sc. degree in Soil Conservation.

Early in 1947 Phillips was asked to help with the Groundnut Scheme

in Tanganyika which had been initiated by the colonial government in that country to provide oil for Britain. He did not accept until in 1948. His participation came too late to save the scheme, which was probably doomed in any case. The authorities, however, accepted his reports, drawn up in 1950, in which he recommended that the scheme should be reduced to a 'pilot' enterprise. From 1948 - 1951 Prof. Phillips also acted as Adviser to the Ministry of Food of the British Government in Tanganyika. In 1951 he was approached to act as Dean and to start a Faculty of Agriculture at the University of Ghana where he stayed until 1960. During this time he was also consultant on agricultural and forestry matters to the World Bank. In 1960 he went to Southern Rhodesia (Zimbabwe) to become Adviser to the Ministry of Agriculture until 1963.

His career then took him to Natal where he assumed duty as Senior Research Fellow for the Town and Regional Planning Commission of the province. His work there was published in Pietermaritzburg in 1973 as Report 19 of the Commission and entitled The agricultural and related development of the Tugela Basin and its influent surrounds. Since then much of the agricultural planning in the province has been based on his well known map of the bioclimatic regions of Natal which was included in the publication.

Furthermore Prof. Phillips was Honorary Visiting Professor in Applied Ecology at the University of Pennsylvania in 1966 and during a period in 1966 - 67 he headed a United Nations mission to the hill tribes of Thailand. After his retirement in the mid-seventies he still served as technical adviser on the rehabilitation of mine dumps and related matters to the Anglo American Corporation.

He travelled the world and through his ecological research he made contact with scientists and policy-makers of many countries. His research led to numerous publications which deal mainly with the ecology of forests, grasslands and wooded savanna in subSaharan Africa, and the application of Ecological principles to agricultural systems on this continent.

The biological specimens he collected in the Knysna vicinity and elsewhere in South Africa are housed in BOL, SAAS, NU, PRE and PREM. He also collected in the former Tanganyika, Ghana and Rhodesia when he was stationed there. His name is commemorated in Morenoella phillipsii, a fungus from Knysna.

Prof. Phillips was a Fellow of the Royal Society of Edinburgh, a Fellow of the Royal Society of South Africa and was President of the South African Association for the Advancement of Science in 1969. In the same year Rhodes University conferred an honorary D.Sc. degree on him.

He died at Hekpoort on 17 January 1987 after a long illness. Prof. J.D. Scott, a family friend, has fond memories of John Phillips: 'he had an engaging personality, immense energy and drive, both physically and mentally. He had the ability to inspire not only students but colleagues and others with whom he came into contact'. His daughter, Mrs Jean Paterson, refers to 'his terrific sense of humour and his kindness to animals and man'.

His passing away has left a void in the lives of his family, and his many friends and scientific associates, but he will long be remembered by those whose lives he touched.

EMSIE DU PLESSIS

LETTER TO THE EDITOR - COMMENT ON RECENT SAAB MEETING AT STELLENBOSCH

The Western Cape SAAB organizers provided a treat when producing a topic on 'Ecology and conservation in planning and development' at an earlier meeting this year. SAAB evenings are often dull affairs with speakers droning on about the importance and merits of their research. The meeting was thus a refreshing change and dealt with a subject which is being thrust to the fore in conservation, planning and ecological circles. But what are botanists doing about the very real conflicts between urbanization and conservation? The usual request for information on ecologically sensitive areas was made to an audience, many of whom had little knowledge of the regions in question, let alone the appropriate expertise. What has happened to SAAB's conservation sub-committee? Clearly there is an URGENT need for a team of ecologists which would provide reconnaissance and survey work for planners. Input to planners at present trickles in from occasional sources-but is by no means adequate nor does it cover all areas concerned.

SAAB must become involved in areas where development threatens natural habitats. It is in our own interests to do so. However, rather than trying to respond to sweeping requests for ecological information

on certain areas, let us rather pressurize Government to create the necessary task groups which will provide the planners with the correct information. I believe this should be a prime role of the SAAB conservation sub-committee.

BARRIE LOW

13TH ANNUAL CONGRESS OF SAAB

The 1987 Congress was held at the Durban Campus of the University of Natal from Tuesday 13th - Friday 16th January 1987. Delegates were accommodated in hostels on the campus while the various sessions of the Congress took place in the Science Lecture Theatre Complex. The Opening Address was given by Prof. C. de V. Webb (Vice Principal, University of Natal, Durban) while delegates were welcomed by Prof. J. Meester. The theme of the congress was 'Contemporary Aspects of Seed Biology'. The Keynote Address was delivered by Prof. Y. Guterman of the Desert Research Institute, Ben Gurion University of the Negev, Israel. He spoke on 'Some ecological and ecophysiological aspects of seed germination. About 285 delegates attended; a record number for a SAAB congress.

At times, four lecture sessions ran concurrently. The congress of the Phycological Society of Southern Africa was integrated with this SAAB congress and took place on the last two days. Altogether about 177 papers and 70 posters were presented. The following sub-disciplines were covered: Seed Biology, Ecology, Taxonomy, Morphology, Mycology, Tissue Culture, Hormonal Studies, Physiology, Fynbos Biology, Enzymology, Nitrogen Metabolism, Ethno-economic Botany, Plankton Ecophysiology, Micro- and Macro-algae, Rhodophyceae and Phaeophyceae. A number of workshops and meetings of various groups were held before and during the Congress; namely the PSSA and SAAB Council and Annual General Meetings and the SAAB Trustees Meeting, the Soil Classification, Systematic Wood Anatomy Group and National Working Group for Vegetation Ecology Workshops, the Educational Committee, Flora Working Group, Herbarium Curators, Editorial Committee of the S.A. Journal of Botany and the S.A. Syntaxonomic Nomenclature Committee Meetings. The following subjects were discussed at special sessions: the FRD Stimulation Programme (Plant Systematics) and the National Priority of Botany.

Once again there were several social events to enable delegates to relax and meet friends. On the Monday night the University gave an informal welcoming reception on the campus. The Civic Reception took

place in the Durban City Hall on the next night. On Wednesday night, a fish braai, partly sponsored by the Natal Parks Board, was held at Beachwood. The PSSA dinner was held at the Caister Hotel on Thursday evening, while the SAAB dinner was held at the Athlone Hotel on Friday night when the after-dinner speech was delivered by Mrs. S. Hotz, chairperson of the Management Committee of the Durban City Council. At this event the SAAB awards were presented. The bronze SAAB Junior Medal for the best Ph. D. thesis in Botany went to Dr K.H. Rogers (University of Natal, Pietermaritzburg) for 'The role of Potamogeton crispus L. in the Pongola River floodplain ecosystem'. His research leader was Prof. C. Breen. The Young Scientist Award for the best paper delivered at the Congress by a person under 30 years of age, was presented to Miss F.C. Blakeway (University of Natal, Durban) for 'The use of wood anatomy in the identification of fragments in faecal and archaeological samples'.

As usual, field trips were undertaken after the congress. A one-day excursion was undertaken to the Beachwood Mangrove Swamp. It concentrated on mangrove ecology, plant taxonomy and the influence of heterotrophs on the ecosystem. (Leader Prof. P. Berjak). On the same day, a Scuba Diving Trip was undertaken at Park Rynie. The reef is rich in corals, algae and many forms of invertebrate and vertebrate life. (Leaders Dr G. Lambert and Mr D. Smith). A three-day trip was undertaken to the Mtunzini Coastal Forest, the Ngoye Forest and the Hluhluwe Game Reserve. Attention was focussed on species diversity and vegetation dynamics in different seral stages of coastal and inland forest patches. Natal Parks Board research staff demonstrated management techniques used to control bush encroachment and promote establishment of different vegetation types. Mr I. Garland demonstrated the Ngoye forest. (Leader Dr N. Pammenter). Another three-day trip was undertaken to the Umtamvuna Forest. Accommodation was at the Police Camp at Port Edward. The forest, containing many endemic species, is unusual in that it occurs on Table Mountain Sandstone at low altitude and latitude. The Mzamba River Gorge was visited as well as the Stanards' farm Blencathra (Leader Prof. A.E. van Wyk et al).

Many thanks are due to Dr A.M. Amory and the rest of his Committee for organizing a most successful and enjoyable congress.

W.G. WELMAN

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