

FORUM BOTANICUM

VOL. 24, No. 6

ISSN 0015 - 847X

DECEMBER 1986
DESEMBER

NEWS-LETTER OF THE SOUTH AFRICAN ASSOCIATION OF BOTANISTS
NUUSBRIEF VAN DIE SUID-AFRIKAANSE GENOOTSKAP VAN PLANTKUNDIGES

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UNIVERSITY OF THE WITWATERSRAND, BOTANY DEPARTMENT

Professor R.N. Pienaar, formerly of the University of Natal in Pietermaritzburg will be moving to the University from the 1st January, 1987. He will be moving together with some of his research staff and will be establishing a Phycology Research Laboratory at the University of the Witwatersrand.

The work will be carried out in well equipped laboratories. Good facilities exist for cultural studies, and for both optical and electron microscopy. The Phycology Research Group will continue to work on marine and estuarine algae - both microscopic and macroscopic and will also initiate work on selected fresh water algae. Developmental biology of selected algae will be undertaken.

Associated with the Phycology Research Group are a number of vacancies available from the 1st January, 1987, namely two research studentships and a post for a Chief Technical/Scientific Assistant.

**REVIEW OF THE WORK OF THE BOTANICAL RESEARCH INSTITUTE PRETORIA
FOR 1985/86 (1st April 1985 - 31st March 1986)**

DATA SUBDIVISION

The Subdivision co-ordinates the work of the Institute on the Department's Burroughs 7900 mainframe computer. Two large systems maintained on this computer are the taxonomic database PRECIS and the ecological database PHYTOTAB. The Subdivision also maintains a Hewlett-Packard 9845B micro-computer, which was heavily used in the past. However, the present trend towards personal computers in each Division has lessened the use of the eight-year-old Hewlett-Packard.

PRECIS is managed by Mrs J.C. Mogford, and now consists of four components. Specimen-PRECIS contains herbarium specimen label data in 24 data fields for 615 000 specimens in PRE herbarium; taxon-PRECIS contains recent useful literature, synonymy, status as naturalized alien, and status of current taxonomic research for the 24 000 plant taxa in southern Africa; nomenclature-PRECIS has begun as a prototype for Poaceae, to be developed further when staff is available; and curatorial-PRECIS is to be developed on a Burroughs 25 microcomputer network to link information from specimen-PRECIS to the curatorial and administrative needs of the Herbarium Division.

PHYTOTAB, managed by Mr M.D. Panagos, has entered a phase of adding data from published ecological surveys, and 37 such datasets are now in the system. Fourteen additional datasets are actively being manipulated to analyse data for current research facets, and of these three are generating keys for vegetative identification of plant species in the areas of the surveys. The keys are designed for plants of the Waterberg, for grasses of the Amersfoort area, and for plant families of South West Africa/Namibia.

Smaller systems maintained on the Burroughs 7900 include the Garden Records system, developed by Mrs B.C. de Wet for data about all the plants in the botanical garden, and PHOTOS, developed by Miss A.P. Backer to record data about photographic vegetation records for the Vegetation Ecology Division.

BIOSYSTEMATICS DIVISION

Pending further developments, this new Division, with an effective

staff of three, devoted itself largely to the scientific and technical editing of the publications of the Institute. Mrs E.P. du Plessis, who was recently appointed, is doing all the translating into Afrikaans required by the Institute, including that for Flowering Plants of Africa and Pretoria Flora.

Bothalia

In future two separate numbers of this journal will be published, one in the middle and one at the end of the year. A new guide to authors was made available and will be published in Vol. 16,1. It agrees essentially with that of the South African Journal of Botany except for certain aspects of specimen citation. Vol. 15, 3 & 4 was published; 16,1 is in press and 16,2 and the index to Vol. 15 are at an advanced stage of editing.

Flora of southern Africa (FSA)

The following volumes or parts thereof were published: Vol. 4,2 dealing with Xyridaceae, Eriocaulaceae, Commelinaceae, Pontederiaceae and Juncaceae; and Vol. 14: Crassulaceae.

The following volumes or parts are in press: Pteridophyta; Vol. 18,3 with Simaroubaceae, Burseraceae, Ptaeroxylaceae, Meliaceae and Malpighiaceae; and Vol. 31,1,2 dealing with the Paederieae, Anthospermeae and Rubieae of Rubiaceae.

A new edition of the guide for authors was compiled.

Flowering Plants of Africa (FPA)

Vol. 48, 3 & 4 was published and 49, 1 & 2 is in the press.

Memoirs of the Botanical Survey of South Africa

All numbers of this series were produced in camera-ready form. The following were published: No. 50 A classification of the mountain vegetation of the Fynbos Biome (B.M. Campbell); No. 51 List of species of southern African plants. Edn. 2. Part 1 (G.E. Gibbs Russell et al.).

The following numbers are in press: No. 52 A plant ecological bibliography and thesaurus for southern Africa up to 1975 (A.P.

Backer et al.); No. 53 A catalogue of problem plants in southern Africa incorporating the National weed list of South Africa (M.J. Wells et al.); No. 54 Biomes of southern Africa -- an objective categorization (M.C. Rutherford & R.H. Westfall).

No. 55 Barrier plants of southern Africa (L. Henderson) is at an advanced stage of editing and a third edition of Veld types of South Africa (J.P.H. Acocks) is in preparation.

Palaeoflora of southern Africa

Prodromus of South African megafloras, Devonian to Lower Cretaceous by J.M. & H.M. Anderson was published by A.A. Balkema.

Pretoria Flora

The text of Asclepiadaceae and Poaceae was completed, translated into Afrikaans and typeset except for 10 pages of the Afrikaans text of Poaceae. Some 60 species of Asteraceae were written up. They were keyed out in 9 major groups. Three preliminary lists were compiled and put on word processor memory: 1, a list of scientific names in which families are alphabetically arranged and in which genera are again alphabetically arranged within their families; 2, a list in which families are arranged in the sequence in which they appear in the work, with taxa alphabetically arranged under their family; 3, a list of vernacular names. Altogether 303 English and 275 Afrikaans pages have now been typeset making a total of 578. Some 1 781 species are so far dealt with.

Declared weeds and exotic invader plants

Good progress was made with this publication in which invaders in South Africa are dealt with. Each of the more than 70 species is described in detail and depicted on a page-size line drawing of high quality. Notes are also provided on distribution, country of origin and control.

Flowers of southern Africa by Auriol Batten

Assistance was given with the editing and proof-reading of this work which is scheduled to appear by the middle of 1986.

PLANT STRUCTURE AND FUNCTION DIVISION

Dr J.J. Spies was awarded a Ph.D. degree for his work on the cytogenetics of Lantana camara, a sophisticated and detailed study

with important practical implications. Mrs A. Marks left us during October and Miss A. Jonker joined the cytogenetics team in January as a Research Technician.

Comparative grass leaf anatomy

Dr R.P. Ellis attended the XI AETFAT meeting in St Louis, Missouri, where he took part in a symposium on modern systematic studies in African botany. His paper dealt with the leaf anatomy and systematics of the African grasses, with special attention being paid to the genus Panicum. During the year attention was given to the genus Ehrharta, which exhibits unusual anatomical variation and appears to be in need of taxonomic re-evaluation.

Cytogenetics of the Poaceae

Dr Spies and his team are making excellent progress with the collection of material and 275 species from 115 genera have been transplanted to the Pretoria National Botanical Garden. From each of these accessions, root tips are collected for mitosis squashes, anthers for meiosis squashes, young embryo sacs for developmental studies and seed is fixed for studies of the embryo formula. This work holds exciting prospects for the future.

VEGETATION ECOLOGY DIVISION

The functions of the Vegetation Ecology Division are to study the vegetation of South Africa and its ecological relations. This work involves three main aspects: the identification, description, classification and mapping of the various kinds of vegetation; study of the ecological relationships between different kinds of vegetation — with one another and with the environment — and of the various processes and mechanisms that determine the behaviour of plant communities; and the application of such ecological knowledge to the management and utilization of vegetational resources.

Transvaal bushveld studies

The area designated for research on the vegetation ecology of Sour Bushveld in the Transvaal Waterberg was stratified by Mr R.H. Westfall for sampling efficiency. A scale-related, vegetation-enhanced satellite-imagery method was developed for this purpose and should

be of great interest for determining spatial patterns of vegetation and environment. Predictive expressions of species-area relation were established for determining subsample size. The initial 14 relevés sampled substantiate the validity of both the species-area expressions and the stratification.

Transvaal forest survey

The results of the study of the vegetation ecology and environment in the Sabie area were successfully submitted by Mr G.B. Deall as an M.Sc. thesis. These results together with follow-up work are being prepared for publication.

Coastal studies

Manuscripts on the dune vegetation between Richards Bay and the Mlalazi Lagoon and on the dry coastal ecosystems of the east coast of South Africa were finalized by Dr P.J. Weisser for publication. He has also prepared a report on the vegetation of the Mzingazi Lake for the CSIR, and has finalized detailed research planning for the study of the coastal-dune area between Kosi Bay and Sodwana.

Mr M.G. O'Callaghan has analysed vegetation data from in and around the estuaries entering False Bay. Three aquatic, semi-aquatic and 15 terrestrial communities were recognized on the basis of floristics. A structural analysis of the area yielded communities which did not correlate with environmental parameters. Temporal aerial photographic analysis showed that alien vegetation, recreational, residential and industrial areas have increased since 1936, whereas open sand and natural vegetation have decreased. These data can be used to guide management of the False Bay coast.

Cape fynbos studies

A semi-detailed regional ecological study of the western lowland fynbos. Mr C. Boucher is finalizing the text of the classification and description of the western coastal lowland fynbos for publication. Final editing in respect of inter alia the nomenclature of plant species is being attended to. All the maps have been completed and tables and photographs require finalizing for publication quality. The vegetation of the Cedarberg. Detailed facet proposals for the ecological studies of the mountain fynbos and other vegetation on the Cedarberg have been drawn up and approved. Mr H.C.

Taylor has concentrated his fieldwork in the northern Cedarberg where nested quadrats to determine optimum plot size indicate that a quadrat size of 5 m x 10 m, with a surround of 1,5 m to bring the total area to 100 m², is sufficient for most Cedarberg fynbos communities. Stratification of aerial photographs in the northern sector revealed some fourteen landscape units aligned along two distinct gradients, north-south and east-west, suggesting that two transects are needed in this sector.

The vegetation of the Langeberg. Mr D.J. McDonald's detailed facet proposals have also been drawn up and approved. Four transects for the sampling of the vegetation of the Langeberg have been selected. Fieldwork has commenced on the transect through the Boosmansbos Wilderness Area, Grootvadersbosch State Forest. To date, 55 relevés have been sampled in Mountain Fynbos vegetation. A further 80-100 samples are envisaged to complete sampling of this transect, which will include relevés in the remnant Afromontane forest communities.

Grassland studies

Detailed facet proposals for the ecological studies of the grassland vegetation of the Amersfoort area of the eastern Transvaal Highveld by Miss B.J. Turner have been drawn up. Field sampling has commenced with the assistance of Mr J.F. van Blerk and Miss K. Longley. An aid to the vegetative identification of grasses in the Amersfoort area has been compiled to assist in the identification of grasses when not flowering.

Ecological bibliography

The 'Ecological bibliography and thesaurus for southern Africa up to 1975' by Miss A.P. Backer, Dr D.J.B. Killick and Dr D. Edwards has now been completed. It has been published in the series Memoirs of the Botanical Survey of South Africa No. 52. This memoir aims to fulfil the need for a single publication containing most references of an ecological nature.

Ecological data bank

Steady progress is being made with the accession, storage and processing of vegetational and environmental data for the inventory of vegetational resources. Mrs B.J. Vermeulen is playing a key role. Data are obtained for accession as hard copy in the form

of unprocessed field data or in variously processed forms including published or unpublished papers, reports and maps. The PHYTOTAB program package is used for the classification and ordination of data sets.

EXPERIMENTAL ECOLOGY DIVISION

The division, under Dr M.C. Rutherford, has continued to concentrate its research on the disturbance of indigenous fynbos plants through alien plant competition and by substrate disturbance while maintaining active research on the water relations of Karoo plants. The whole division has been centred in Cape town to promote the effective study of these important aspects of the Fynbos and Karoo biomes. This also places the division in reasonable reach of examples of all the other biomes of southern Africa determined by the relevant research facet referred to below. Two facets on aquatic plant ecology have been successfully completed and terminated during the year following the appearance of several publications on these by Dr C.F. Musil.

Fynbos germination studies

Dr Musil's results to date indicate that seeds of several fynbos species show maximum germination under low temperatures. This is an important finding in that it suggests that germination is dependent on the cold, wet winter months, irrespective of the season of seed shedding. These and other findings of the germination requirements and reproductive capacities of fynbos plants are being compared with those for invasive alien plant species.

Fynbos competition studies

Miss F.M. Pressinger has determined that the presence of lone Acacia saligna seedlings had no significant effect on Protea repens seedlings when grown at close proximity at densities up to 2 346 plants m⁻² at this early stage of development. This suggests that the effects of Acacia saligna may be exerted on Protea repens at more advanced stages of development. The officer has also demonstrated the prediction of the pattern of seed dispersal of Acacia saligna in the field and therefore the direction of spread of thickets of this species.

Dr Rutherford has found that the main effects of heavy infestations

of alien plant species on the indigenous vegetation of the western Cape lowlands is a function of, at least, soil type, soil moisture, proximity to human settlements, and an interaction between mean annual rainfall and stock browsing pressure. Rhus laevigata appears to tolerate the environment created by dense Acacia saligna populations more effectively than many other indigenous species and this and other related phenomena are being further researched.

Fynbos transformation studies

Mr G.W. Davis's work has shown that during the summer following rotivation of burned mountain fynbos land, reflectivity of the soil surface was increased and higher soil moisture levels maintained with lowering of soil temperature. The treatment had no effect on the shoot extension of introduced Protea cynaroides and P. repens for this period but summer transpiration of P. cynaroides was greater on the disturbed sites.

Simulation studies in fynbos

Preliminary simulation to predict pressures on natural populations of fynbos ornamental plants within the wild flower picking industry, has high-lighted the problem of peak flowering demand and peak supply being often out of phase. A suitable model structure is currently being developed to make predictions as realistic as possible.

Karoo research

Field research results obtained for Karoo plants by Mr G.F. Midgley, have raised important hypotheses that relate reduction in leaf surface area, stomatal resistance and transpiration rates, xylem pressure potentials and root system morphologies to succulent and non-succulent plant forms. These hypotheses are to be expanded and tested in the next phase of the research.

Biome studies

The work on determination of biomes of southern Africa by Dr Rutherford and Mr R.H. Westfall has been concluded and is in press in the Memoirs of the Botanical Survey of South Africa series.

PLANT EXPLORATION DIVISION

The division, under Mr M.J. Wells, concentrated its attention on

weeds and food plant research. Mr. T.H. Arnold has continued to lead the food plant research team from his position as head of the Herbarium Division.

Conservation of germ plasm

The following seed collected by Mr Arnold, was included in the germ plasm bank; 569 collections of Sorghum bicolor subsp. bicolor and 764 collections of Pennisetum africanum. Primitive crop collections being held for potential breeding purposes now total 3 371. Despite the fact that we are splitting and distributing seed collections to various seed banks, we are still concerned about the long-term fate of this germ plasm.

Indigenous food plants

Mr A.A. Balsinhas added a further 80 species to the national food plant data-bank, bringing the total of species included to 1 589. Information was also added to the records of many species already listed. Information gathering by Miss S.E. Chadwick, on 14 priority food plants, mainly members of the Cucurbitaceae continued, with 30 more references being included. Observations on the shelf life of fruits, and on associated fungi and insects were included, as were soil analyses from areas where they were growing. Although not always as tasty as cultivated cucurbits, some of the indigenous species have a longer shelf life, better nutritional characteristics and greater ability to grow in arid, brackish soils.

Primitive crop plants of African origin

A great deal of material of primitive cereal crops grown in the Caprivi and Kavango was collected by Mr Arnold and labelled and catalogued by Miss A.E. Swanepoel. These regions proved to be extremely rich sources of primitive cereal germ plasm. Kavango had a notably high occurrence of Durra sorghums which are Asian in origin and rarely found elsewhere in southern Africa. The characteristics of 524 Sorghum collections were analysed in terms of inflorescence morphology, seed colour and tannin content. A survey of crop frequency and preference was also extended to Caprivi and Kavango. All except three of the priority areas for primitive cereal crops in South Africa and South West Africa/Namibia have now been included in the survey and collecting programme. Miss Swanepoel,

who joined our staff in February 1986, took over from Mrs K.J. Musil who resigned in July 1985, and assists Mr Arnold with his food plant research.

Barrier plants

The survey of barrier plants by Miss L. Henderson is complete and is scheduled for publication in 1986/87. The memoir will present information on 504 species (of which 220 are indigenous and 42 are illustrated) and suggests indigenous barrier plants that can be grown instead of invasive alien ones.

Woody invaders

A popular version of the report on woody plant invaders of the Transvaal with 16 colour illustrations has been prepared for publication by Miss Henderson. It will enable laymen to identify the worst plant invaders, and gives hints on their control. In July 1985 Miss Henderson transferred from our staff to that of the Plant Protection Research Institute, with whom we work closely, and will concentrate on surveys of invader plants in future.

National weed list

Preparation for publication of the expanded 'National weed list', now titled 'A catalogue of problem plants in southern Africa' was completed by Mr Wells and his team. It will appear shortly as number 53 in the Memoirs of the Botanical Survey of South Africa series. It provides basic information on 1 653 species and includes a list of 711 invasive alien species, and a common name index incorporating more than 8 000 names. Its appearance is expected to stimulate the collection of a great deal more data, which may result in the preparation of an enlarged, second edition in several years time. Already a great deal of data has been collected on the first records of alien invader plants in the subcontinent by Mrs Musil, Mr Bal-sinhas and others. This has been incorporated in a preliminary account of the history of introduction of invasive aliens (in press).

Declared weeds and invader plants

A publication has been prepared by Mrs D.M.C. Fourie and co-workers, to enable members of the public and law enforcement officers

to identify the 47 species of declared weeds and 9 species of declared alien invader plants, covered by the provisions of the 'Conservation of Agricultural Resources Act' of 1983. It is based on an earlier publication 'Common weeds in South Africa' by Henderson & Anderson (1966) and includes black and white illustrations, descriptions, a copy of the relevant legislation and advice on control.

Water conservation gardening

The drought has maintained public interest in water conservation gardening, resulting in continued demand for the publication by Mrs Fourie (Department of Agriculture and Water Supply, Bulletin 402), and for lectures on the subject.

Garden utilization

Mrs H. Joffe of the Plant Protection Research Institute, who had been assisting with the preparation of the catalogue of problem plants, transferred to our staff in June 1985. Her new task is to improve scientific utilization of the botanical garden in a range of ways including taking specimens and photographs.

Scientific information service

Mrs Fourie handled 255 written and 259 telephonic requests for information, often involving the identification of exotic plants. She also dealt with 39 visiting researchers and two groups.

Liaison service

Mrs S.D. Hewitt dealt with 1 172 non-scientific visitors including 28 groups (mainly of school children). The flow of visitors requiring educational services has fallen off markedly as a result of the economic situation.

Pretoria National Botanical Garden

Despite the drought and many staff changes, the garden under Mr D.H. Dry continued to prosper. Staff changes included the resignations of: Mr K.D. Panagos (July 1985), Miss S.C. Kruger (November 1985) and Mr H.J. de Villiers (December 1985), and Mr H.J.N. de Beer retired (April 1986). Mrs B.C. de Wet was transferred to Datametrics in January 1986 and Miss J.A. Taussig was transferred

to the Herbarium Division in September 1985. On the positive side, Mr N.A. Klapwijk was appointed in January 1985 and other vacant posts have been filled since the report year ended, but for many months the staff position in the garden was critical. We were fortunate that during this testing time our existing boreholes continued to deliver and a new one came into production.

Other new developments included the completion of most of the fencing and paving of the new eastern access road and completion of three paths along the nature trail. The living plant collection grew by 784 accessions, mostly collected for the Karoo Biome by Miss Kruger, who directed further development of the karoo koppies where 126 shrubs and 3 000 ground cover plants were established. Mr D.S. Hardy was responsible for the re-planting of a large shade house with rare and endangered species from Namaqualand and the Namib. A large amount of research material, including 317 grasses, was also accessioned. The garden records team, Mrs De Wet and Mrs K.P. Clarke, concentrated on upgrading the labelling of the savanna biome.

S.A. HERBARIUM NEWS/S.A. HERBARIUMNUUS

At a meeting of the Herbarium Curators' Working Group at the Botanical Research Institute on 31st October 1985, a proposal was accepted that, in order to promote communication between herbaria in this country, a regular newsletter should be established. It will occupy this space in Forum Botanicum, for which compilation begins about six to eight weeks before publication date.

The content will be similar to that of Herbarium News published by Missouri Botanical garden, and we would like to achieve the same informal style. The majority of working herbaria in the region have already been circularised, however anyone who has newsworthy items is naturally welcome to send their contributions.

The following headings are suggested:

1. Staff changes - also mention research interests of new staff.
2. Interesting new curatorial methods.
3. Large loans - which taxa, approximate size and to whom.
4. Important visitors - expected and received.
5. Field trips (undertaken and planned) - especially to interesting localities; mention interesting new records or other observations.

6. Anecdotes - amusing incidents in the herbarium or field.
7. Anything else you would like to report.

Please send your contributions (in English or Afrikaans) to: C. Reid, Botanical Research Institute, Private Bag X101, PRETORIA 0001

NOTE: Contributions will not be individually acknowledged.

Further points of discussion at the meeting included:

1. Index Herbarium Austro-Africanum - a second edition is being prepared, and will in future be regularly updated. Small private herbaria which were omitted from the recent survey carried out by the Botanical Research Institute, are invited to communicate with the Assistant Director, Herbarium, of the Institute at the above address.
2. Publishing recent changes in nomenclature - PRE will continue to publish name changes annually, however in view of the long delays involved PRE will endeavour to circulate copies of the name change list at the same time that it is submitted to Bothalia for publication.
3. Wholesale purchase of standard herbarium requirements - Mr T. Arnold and Dr J. Rourke will investigate the possibility of having superior quality mounting boards manufactured in South Africa
4. Handling of loans - loan material is frequently returned in very poor condition. Compton Herbarium is compiling a special label for distribution with each loan, which will clearly state the conditions of the loan. In addition, many loans are returned in inferior quality packing, resulting in damage to valuable specimens. Herbaria are requested to return material in the same boxes in which it was received.
5. Field labels - due to the poor quality of labels produced by some collectors, a standardized field label is required, with 'triggers' built in to ensure that adequate information is recorded. Mr R. Moffett, Dr T. Lowrey and Dr A.E. van Wyk will investigate the problem.

6. Insect control - this is a serious problem in many herbaria. Information about identification of insect pests, and means of eradication is required. Prof. A.V. Hall will investigate the problem. Herbaria are requested to submit to him data on
- (a) insect problems experienced;
 - (b) control measures taken; and
 - (c) degree of success.

His address is: Bolus Herbarium, University of Cape Town, Rondebosch, 7700.

7. Compilation of herbarium manual - this would be either in the form of a bibliography or an original document. Mr Arnold, Dr Rourke and Mr Moffett will investigate the feasibility of such an undertaking.
8. New gazetteer - at PRE all specimens in PRECIS have been listed alphabetically by locality and quarter degree references. All the map names from the old gazetteer are being checked; in addition the actual localities (farms etc.) where plants were collected will be listed. Any localities unaccounted for will be listed in this newsletter in the hope that readers can be of assistance.

Minutes of the meeting are available from Mr Arnold, Botanical Research Institute.

The next meeting will be held at the Botanical Research Institute on 11th and 12th November 1986.

H.G.W.J. SCHWEICKERDT-HERBARIUM (PRU)

Die herbarium van die Departement Plantkunde, Universiteit van Pretoria, word op die oomblik beman deur dr A.E. van Wyk as Kurator, wat sy doktorsgraad in April vanjaar behaal het. Hy is onlangs tot senior navorser bevorder. Een voltydse assistente, mej. Thea van Rensburg, voorheen werksaam by die Nasionale Parkeraad het op 1 Oktober 1985 diens in die herbarium aanvaar nadat mev. Emsie du Plessis bedank het. 'n Deeltydse pos word op die oomblik deur mev. Christina Malan gevul.

Prof. P.D.F. Kok is nou betrokke by die herbarium en ondersoek tans verteenwoordigers van die Rubiaceae, onder andere Pavetta, Pachystigma en Canthium. Twee nagraadse studente, mev. Sanet Boshoff

en mej Pat Tilney is onderskeidelik by lg. twee genusse betrokke. Mej. Tilney het haar verhandeling pas voltooi en sal dit eersdaags vir beoordeling voorlê. Dr van Wyk is onder andere met taksonomiese hersienings van die Suider-Afrikaanse Myrtaceae, Celastraceae, Heteropyxidaceae, Rhynchocalycaceae en Memecylaceae gemoeid. Hy is ook betrokke by die versameling en bestudering van plantmateriaal uit Suid-Natal en Pondoland. Mnr H.B. Nicholson en Tony Abbott, amateur plantkundiges van Suid-Natal is waardevolle skakels in dié gebied. Beide is entoesiastiese versamelaars en is daarvoor verantwoordelik dat beide die kriptogame- en saadplantversamelings gedurig uitbrei. Verskeie nuwe taksons is in die onlangse tyd uit die Suid-Natal/Pondoland gebied beskryf.

Die honneursstudente met Plantekologie as vak en ook die Natuurlewebestuurstudente onderneem jaarliks 'n ekskursie na die Kalahari-gemsbok Nasionale Park saam met proff. J. du P. Bothma en G. K. Theron en dr Noel van Rooyen. Die flora van hierdie gebied is nog swak versamel en die projek lewer dus 'n waardevolle bydrae tot die volledigheid van 'n spesielys vir die gebied.

Nagraadse studente wat tans aktief versamel in hulle studiegebiede en waarvan die planteksemlare deur PRU hanteer word, is onder andere Hans Bloem, 'n student van prof. G.K. Theron wat in die grasveld naby Belfast in die Verlore Vallei-natuurreservaat werk. Johan Pauw, natuurlewebestuurstudent, is werksaam in Noord-wes Transvaal waar hy riglyne vir die bestuur van die natuurlewe in die bosveldgemeenskappe van die Atherstone-natuurreservaat opstel. Dr Noel van Rooyen is mede-leier vir hierdie projek asook vir Francine van Heerden wat in die Hoedspruit-omgewing werk op die Lisitaba-wildsplaas waar sy onder andere ook na bestuursaspekte vir die gebied kyk. Ander aktiewe versamelaars is mnr Chris James in die Ben Lavinnatuurreservaat naby Louis Trichardt en mnr Henri Klopper wat in Blouberg-natuurreservaat naby Pietersburg werk.

'n Nagraadse ondersoek met 'n taksonomiese basis word verder deur mej. Marietjie van der Merwe onder leiding van dr van Wyk onderneem. Sy doen tans 'n taksonomiese hersiening van die Suider-Afrikaanse Lauraceae vir die F.S.A.

NEWS FROM THE HERBARIUM OF THE POTCHEFSTROOM UNIVERSITY FOR CHRISTIAN HIGHER EDUCATION (PUC)

PERSONNEL MATTERS

On 1 October 1985 Prof. D.J. Botha, previous Head of the Department of Botany at the PU for C.H.E., accepted a position as Deputy Director at the National Botanical Gardens, Kirstenbosch. With his departure Prof. Botha, who was primarily interested in Plant Systematics, left a great void in this field of Botanical research at the University. His contribution was, however, not restricted to taxonomic research and lecturing. Since the early 1970's and until his departure he also acted as curator of the herbarium of the PU for C.H.E. After Prof. Botha left, Prof. G.J. Bredenkamp temporarily held the post as curator. Prof. Bredenkamp, an ecologist, is no stranger to Plant Taxonomy and performed his duties with distinction. On behalf of the current curator, Mr G.F. Smith, and Prof. O.J.H. Bosch, the Head of the Department of Botany, a word of thanks is extended to Prof. Bredenkamp for his contribution towards expanding the herbarium.

On 1 July 1986 Mr G.F. Smith accepted a position as taxonomist in the Department of Botany. At the same time Mr Smith, an alumnus of the Universities of Port Elizabeth and Pretoria, also took over the curatorship of the PUC herbarium. He is mainly interested in the taxonomy of the tribe Aloineae (family Liliaceae sensu lato) which, among others, includes the genera Haworthia, Gasteria and Aloe. Mrs. H. van Vreden is currently employed as herbarium assistant in the Department of Botany. Not only is she responsible for the day to day administration of the PUC herbarium and the Departmental library, but she could also provide the all important continuity during the period which elapsed between the departure of Prof. Botha and Mr Smith's appointment.

LOANS

Herbarium specimens of the following taxa housed at PUC were recently sent to local as well as overseas researchers: Rhus (46), Bulbine (36), Pelargonium (6), Raphionacme (29) and Aneilema (3). The largest loans received were: Brachylaena (236) and Vitex (102). The figures which appear in brackets refer to the number of specimens included in the respective loans. During the past year acces-

sions to the herbarium totalled approximately 500. This brought the number of specimens kept in the herbarium up to 22 938.

COLLECTORS AND COLLECTING TRIPS

Mr B. Ubbink, the curator of the Botanical Garden of the PU for C.H.E., is currently engaged in the compilation of a species list of the riverside, marsh and aquatic vegetation of the Mooi River system in the Potchefstroom region. The compilation of a photographic record of taxa represented in the herbarium is also receiving his attention. This project is primarily aimed at allowing easy access to a set of slides of these plants as they occur in their natural habitat.

Mrs. C. Bredenkamp, a M.Sc.-student in the Department of Botany, is currently revising the genus Vitex L. In collaboration with Prof. G.J. Bredenkamp she has undertaken collecting trips to northern Natal, northern Transvaal and the Caprivi/Kavango regions. Together with Prof. D.J. Botha she has also been collecting material of the flowering plants of the Potchefstroom region. As a result of this research preliminary keys aimed at facilitating the identification of the flora of this area have already been drawn up.

The involvement of Prof. G.J. Bredenkamp in phytosociological research in the Grassveld biome project is evidenced by numerous contributions which he has recently made to the PUC-Herbarium. Similar research by Mr H. Bezuidenhout in the Faan Meintjes Nature Reserve at Klerksdorp has also resulted in the expansion of the herbarium. He is currently collecting plant material in the Ventersdorp, Carletonville and Westonaria regions.

Mr P.D. de Villiers, a lecturer in the Department of Botany, revised the genus Sphedamnocarpus Planch. ex Benth. & Hook. f. for his M.Sc.-degree and Mr S. Cilliers is engaged in similar research on the genus Brachylaena R. Br. Both researchers undertook collecting trips to various regions of southern Africa. Voucher specimens of the material studied were taken up in the herbarium.

Mr W.J.J. van der Merwe, the Head of the Department of General Science at the Potchefstroom Teachers' Training College, is currently completing his D.Sc.-degree in the Department of Botany at the PU for C.H.E. His research entails a taxonomic survey of the aquatic

Hyphomycetes which occur in the Mooi River from its origin in the Gerhard Minne Spring to its conjunction with the Vaal River. Autochthonous plants to be found on the riverside are important donors to this ecosystem. Therefore the species composition of this part of the flora is also receiving attention. Voucher specimens collected in the abovementioned area are being deposited in PUC.

Mrs. H. Kruger, lecturer in the Department of Botany at the PU for C.H.E., is reading for the D.Sc.-degree at the University of Pretoria. She carried out a morphological and cytological investigation of the ontogeny of the flower of Securidaca longepedunculata Fresen. Numerous voucher specimens of this taxon were deposited at PUC.

The Department of Botany plans to undertake a collecting trip to the Pilanesberg Nature Reserve during April 1987. The computerization of specimen label information will also receive attention during 1987.

PUBLICATIONS

Two books written by members of the personnel of the Department of Botany have recently appeared. They are "Die weiveld van die Faan Meintjes-natuurreservaat" by O.J.H. Bosch (ISBN 0620089172) and "Bome, struik en rankers van die Faan Meintjes-Natuurreservaat" by D.J. Botha and P.D. de Villiers (ISBN 062007938). These books are of interest to both the layman as well as the professional botanist. As an aid to the identification of herbarium specimens the abovementioned books have proved to be invaluable. Both publications are available from the Director of Parks, Klerksdorp Town Council.

STELLENBOSCH REGIONAL HERBARIUM (STE) ACTIVITIES JANUARY - SEPTEMBER 1986

The staff members include Mrs A. Fellingham, Miss K. Louw, Miss H. Steensma, Mrs J. Leith, Miss E. van Wyk and Miss P. Burger. Mr R. Moffett, the previous curator, left at the end of June and is now lecturing at the University of the North, Qwa Qwa Branch. Miss Burger joined the staff on 1 January 1986 and Miss Steensma on 1 March 1986.

In the period from 1 January we have undertaken two official collecting trips (1986.02.20 - 1986.03.05 and 1986.09.01 - 1986.09.05) as well as a few weekend trips (unofficial). The first trip was undertaken by Mr Moffett and Miss Steensma and covered Elandskloof (North of Ladismith), Beaufort West, Fraserburg, Sutherland, Montagu and Robertson. Two rare species were found namely Cliffortia arborea and Disa salteri. Miss Louw and Miss Burger went on the second trip to Calvinia District where we collected, among others, in the 3020 CC grid. PRE has no records of previous collections in the grid concerned.

Two major loans went out during this year. Athanasia spp. (207) were sent to M. Källersjö in Stockholm and 133 Pelargonium spp. to E.M. Marais at the University of Stellenbosch.

For the past \pm 2 weeks nearly all our time has been spent on what we call the 'Great Trek'. The BRU - STE moved from the 'Natuurwetenskappe Gebou' to the Carnegie Building (formerly the University Library). The actual move took place during the week of 22 - 26 September and at present we are still unpacking and settling down before we can get down to our normal activities.

Dr R.J. Poynton (PRF) contributes the following entitled The Mysterious World of Botany.

Overheard in the corridors of one of our higher Halls of Learning:

"Herbatorium"

"Herbarium"

"Herbatorium"

"Herbarium!"

"Then what's a Herbatorium?"

Good question.

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