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

CONTENTS/INHOUD

Gold Medal for Botanical Research Institute	1
Jaarverslag van die President van SAGP vir 1985	
Annual Report of the President of SAAB for 1985	2
Noord-Transvaal Streektak : Jaarverslag vir 1985	11
Oranje-Vrystaatstreek : Jaarverslag vir 1985	13
Suidwes-Kaapstreek : Jaarverslag vir 1985	14
Suidwes-Afrikatak : Jaarverslag vir 1985	16
12th Annual Congress of SAAB.	17
Annual Report of Scientific Editor, S. Afr. J. Botany	
Jaarverslag van Wetenskaplike Redakteur, S. Afr. Tydsk.	19
Plantkunde	
Botanical Research Institute, Annual Report for 1984/85	
(continued)	21
International Association for Plant Physiology, Newsletter	
1985	28
Recognition of Bothalia under SAPSE - 110 Subsidy	
Formula	32

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GOLD MEDAL FOR BOTANICAL RESEARCH INSTITUTE

The Botanical Research Institute has been awarded its third gold medal for an exhibit of botanical art displayed at the Royal Horticultural Society Exhibition held in London on 28th January 1986. The exhibit consisted of paintings of Madagascan plants executed by Miss Gillian Condy and prepared for the Institute's journal Flowering Plants of Africa. The BRI has an important living collection of Madagascan plants, some endangered species, collected some years ago by Dave Hardy on his several expeditions to Madagascar.

JAARVERSLAG VAN DIE PRESIDENT VAN S.A.G.P. VIR 1985

Die afgelope jaar is weereens deur 'n aantal hoogtepunte in die bestaan van die S.A.G.P. gekenmerk, wat ten spyte van 'n aantal bedankings en skorsings nogtans deur 'n stadige groei in die ledetal en 'n meer doeltreffende funksionering van die bestuur gekenmerk is. So het dit gebeur dat die volledige Raad met die Raadsvergadering in Augustus 1985 teenwoordig was. Dit is met groot genoë dat ek verslag kan doen oor die aktiwiteite van u Genootskap, wat ek graag onder die volgende hoofde nader wil toelig.

1. VERGADERINGS VAN DIE RAAD EN UITVOERENDE KOMITEE

1.1 Raadsvergaderings. Die Raadsvergaderings was beperk tot drie te wete (a) 'n Raadsvergadering direk na die afloop van die Algemene Jaarvergadering op 17 Januarie 1985 aan die Universiteit van Potchefstroom vir C.H.O. (b) Op 9 Augustus 1985 is die tweede Raadsvergadering aan die Universiteit van Pretoria gehou. Hierdie Raadsvergadering is deur al die raadslede bygewoon, seker 'n eerste maal in die geskiedenis. (c) Die derde Raadsvergadering is gehou op 20 Januarie 1986 aan die Universiteit van Transkei. Dit is die eerste keer dat ons buite die grense van die Republiek van Suid-Afrika vergader.

1.2 Uitvoerende komitee. Drie uitvoerende komitee vergaderings is gehou waar alle lede teenwoordig was nl. op 15 Maart 1985, 7 Junie 1985 en 8 Oktober 1985.

2. LEDETAL

Die ledetal het sedert 1984 min gegroei en staan tans op 562. Gedurende die afgelope jaar het 28 gewone, 16 studente en 11 affiliaatlede tot die Genootskap toegetree. Ongelukkig het daar ook 22 lede bedank en 21 lede is volgens die konstitusie geskors aanesien hulle nie hulle verpligtinge nagekom het nie of glad nie meer opgespoor kon word nie. 'n Verdere 15 lede loop gevaar om geskors te word indien hulle nie teen Maart 1986 hulle verpligtinge nagekom het nie of nie opgespoor kan word nie. Gedurende die afgelope finansiële jaar het dit die Genootskap meer as R200 gekos aan posgeld om lede op te spoor en herhaalde aanmanings uit te stuur.

'n Verdere drie lede het ons deur die dood ontval, Proff. P.J. Botha, E.A.C.L.E. Schelpe en dr. J.P.M. Brenan en ons betuig graag ons meegevoel met hulle naasbestandes en vriende.

Weens talle probleme wat met die lidmaatskap van studente ondervind is, is 'n nuwe lidmaatskapvorm vir studente ontwerp en moet studente

nou jaarliks aansoek doen om lidmaatskap. In die toekoms sal nuwe lede ook eers die voordele van die genootskap geniet nadat ledegeld vir die spesifieke jaar betaal is. Ledegeld is ook nie meer vooruit betaalbaar nie tensy die lid aansluit as lewenslid.

3. MEDALS

3.1 S.A.A.B. Junior Medal. The Junior Medal is awarded to Dr.V.M. Gray of the University of the Witwatersrand for his thesis "Nitrogen assimilation in chlorophyllous and non-chlorophyllous tissue".

3.2 Certificate for young Botanists. The successful candidates for 1986 are Cadman, M.J. and Drennan, P.M.

3.3 Best poster. From 1987 the young Botanist who presents the best poster will also receive a certificate and a cash award.

4. CONGRESS MATTERS

The 1986 Congress has, once again emphasized the valuable role that this annual event fulfills in bringing together botanists from various branches of Botany and creating the opportunity for the exchange of ideas, not only on a formal level but also informally. On behalf of all botanists I would like to thank the University of Transkei for the facilities they made available as well as a special word of thanks to the organizing committee for what they have done. It was a very enjoyable congress; the first outside the boundaries of the Republic of South Africa. The next congress is planned for Durban during January 1987. The following congresses are planned for Kirstenbosch in 1988 and Pretoria in 1989. The 1985 congress was very favourably evaluated by those who attended the annual general meeting. It was decided that the evaluation procedure as for the 1985 congress should be continued. Valuable criticism was received and applied during the 1986 congress.

5. PUBLICITY

Unfortunately the publicity the Association is getting at present is still not nearly enough to ensure that S.A.A.B. is recognised for what it really is - the professional body to look after the interests of botanists in this country. With a membership of over 550 it is imperative that every one of us should do our utmost to bring to notice what we stand for. In the meantime a letter went out to the directors of nature conservation to bring under their attention that S.A.A.B. represents the professional botanists. Through the Joint Council of

Scientific Societies the S.A.B.C. was approached to include scientific programmes on Radio South Africa, Radio Suid-Afrika and on the TV-network. The S.A.B.C. TV did contact S.A.A.B. in connection with a programme. "A day in the life of a botanist", Prof. Christo Pienaar will attend to this in co-operation with the S.A.B.C.

6. BROSJURE

Die Afrikaanse verbeterde weergawe van die brosjure is ontvang en saam met die Engelse weergawe versprei word.

7. SNO BEOORDELING VAN PLANTKUNDIGES

Daar word 'n beroep op alle plantkundiges gedoen om te besin oor hoekom plantkundiges so sleg gevaar het tydens die evaluering en alle plantkundiges, maar veral die jong plantkundiges, moet aangemoedig word om beter te presteer.

8. VERSLAE

8.1 Liaison committee. The president was in contact with the ministers of environmental affairs and agriculture in connection with the future of the Baviaans-Kouga Mountain Complex. The assistance of botanists was also offered to the directors of nature conservation in connection with the "muti"-trade. At the same time the involvement of S.A.A.B members in Nature Reserves was raised. The success of this committee is in the hands of the botanists. If you know of anything that needs the attention or comments of S.A.A.B. please inform the president.

8.2 S.A.G.P.-natuurbewaringskomitee. Dr A.E. van Wyk is gevra om die voorsitterskap oor te neem. Min natuurbewaringsaangeleenthede is gedurende die jaar deur S.A.G.P.-lede te berde gebring - miskien as gevolg van die groeiende bewaringsbewustheid van die bevolking. Aandag is egter gegee aan die ontbossingsprobleem in die Oos-Kaap, die "muti"-handel en aan "n vriend vir 'n natuurreservaat".

8.3 Habitat Council. S.A.A.B. is represented by Dr.J.C. Scheepers or Dr. G.E. Gibbs Russell. The Habitat Council, as ever, continues to actively involve itself in matters concerning the environment. Highlights of the past year concerned the Forest Act, de Hoop Nature Reserve, the bridge over the Kaaimans River and the transfer and management of Nature Reserves in the National States.

8.4 Suid-Afrikaanse Raad vir Natuurwetenskaplikes: SARN/SACNAS

Die plantkundiges word verteenwoordig deur prof. N. Grobbelaar met dr. B. de Winter as sukundus. Prof. Grobbelaar is weereens verkies as Voor-sitter van die Advieskomitee vir Plantkunde.

8.5 International Association of Plant Physiologists. Prof. Grobbelaar reported that one of the future meetings to be sponsored by IAPP is the African Meeting with the theme of "Eco-physiological problems and research in Africa and the Arab countries", to be held probably in Cairo. IAPP will further promote a number of activities at the fourteenth International Botanical Congress in 1987 namely:

1. A series of discussion meetings on topical subjects in plant physiology
2. A meeting of Editors of plant physiological journals
3. An information desk to encourage the founding of new associations of plant physiologists especially in developing countries.

8.6 Internasionale Unie van Biologiese Wetenskappe (IUBW/IUBS). Prof. N. Grobbelaar was tot September 1985 lid van die Uitvoerende Komitee. Suid-Afrika word nie vir die volgende drie jaar op hierdie komitee verteenwoordig nie. Prof. Grobbelaar berig dat die projek oor die "Dekade van die trope" goed vorder maar meld dat die Suid-Afrikaanse deskundiges op die gebied van die savanna-ekologie waarskynlik weens politieke redes nie die prominensie ontvang wat hulle toekom nie. Hy vermeld voorts dat die "Bioscience Networks" vir Asië en Afrika goed vorder en dat die "Biology International" goed doen as 'n tipe nuusbrief cum populêr-wetenskaplike publikasie.

8.7 Gesamentlike Raad van Natuurwetenskaplike Verenigings (GRNV/JCSS) Prof. N. Grobbelaar berig dat die lesing van prof. Woods oor genetiese manipulering baie stimulerend was. Die GRNV beywer hulle tans om deur middel van televisieprogramme groter publisiteit aan natuurwetenskappe te gee en om 'n finale verslag saam te stel oor die moontlikheid van die stigting van 'n Raad of Instituut vir Fundamentele Biologiese Navorsing wat 'n wye belangstelling onder bioloë geniet. Die GRNV het ook hulle kommer uitgespreek oor die feit dat die wetenskaplike gemeenskap nie meer soos vroeër deur middel van 'n toonaangewende wetenskaplike raadgever van die eerste minister, direkte toegang tot die kabinet het nie. Wysies om die huidige toedrag van sake te verander sal na 'n deeglike studie van moontlikhede hoe om die saak aan te pak, deur die GRNV onderneem word.

8.8 South African Syntaxonomic Nomenclature Committee. Dr. J.C. Scheepers reported that the committee met once in Pretoria and the minutes are available to any interested parties. The code had been finalised and submitted for publication. Good progress is made with Data Banking and Processing. Of 24 data sets encoded so far, 22 have been loaded. Eight sets of monitoring data are to hand of which two sets are encoded but not loaded as yet. A further 27 data sets of raw field data is available of which 17 sets can be said to be phytosociological and eight sets of which have been encoded and loaded. Aspects of the data are linked to the data base for projects and researchers of the National Working Group for Vegetation Ecology as well as to the ESLI literature database of the Botanical Research Institute.

8.9 National Working Group for Vegetation Ecology. The canvassing of interested organisations and persons was very successful in providing a good round-up of current vegetation - ecology activity throughout the country. The inaugural meeting of this working group co-incided with the first workshop arranged by the National Working Group for Vegetation Ecology. The first workshop concentrated on Minimum Environmental Parameters to be recorded in Vegetation - Ecology work. The decisions on minimum parameters can be summarised under the following headings:

1. Parameters required for all samplings
2. Parameters recommended but not mandatory for all vegetation sampling
3. Parameters required for specific research purposes
4. Parameters of low applicability

A special word of thanks to Bobby Westfall for his hard work.

8.10 Koördinerende komitee vir Sistematiese Houtanatomie. Die komitee is steeds aktief en hulle aktiwiteite sentreer hoofsaaklik om die reël van 'n jaarlikse byeenkoms van sistematiese houtanatomie en ander belangstellendes, tydens die S.A.G.P.-jaarvergadering.

8.11 Herbarium Curators Working Group. Dr. B. de Winter reported that during a working group held during October 1985 the following items were discussed:

1. Second edition of Index Herbariorum Austro-Africanorum
2. List of southern African species and synonyms-Edition 2, part 2.
3. Scanning literature for and publishing recent changes in nomenclature.
4. Wholesale purchasing of standard herbarium requirements.
5. Loans to local and overseas herbaria.
6. Standardization of field labels for collectors.
7. Herbarium hygiene.
8. National programme for planned cost effective extension of herbarium collections.
9. Copying types in overseas and local herbaria.
10. Compilation of an index of types deposited in southern African herbaria.
11. Reporting herbarium news in Forum Botanicum.
12. Compilation of a South African herbarium manual.
13. Charging for routine identifications.
14. The use of computers in herbaria.
15. Tracing old collectors localities and updating the existing gazetteer.

8.12 Advieskomitee vir Plantkundige Navorsing. Prof. J.G.C. Sml berig dat hierdie komitee weens 'n besparingsmaatreël nooit vergader het nie. Van die volgende 13 persone sal sewe op die Advieserende Komitee vir Plantkundige Navorsing dien: Proff. J.G.C. Small, G.K. Theron, O.A.M. Lewis, J.J.A. van der Walt, H.A. van de Venter, P.J. Robbertse, R.A. Lubke, R.N. Pienaar, G.C. Bate, G.J. Bredenkamp, C.E.J. Botha, T.D. Steinke en F.M. Getliffe-Norris.

8.13 Flora Conservation Committee. This committee of the Botanical Society of South Africa is still very active. In the report received from Mrs. P.A. Bean reference is made to news of fifteen Nature Reserves and Nature Areas, reports from the Bredasdorp, Villiersdorp and Betty's Bay branches, environmental education, scholarship awards, the wild flower trade and publications.

8.14 Raad vir Wetenskaplike Publikasies. Prof. N. Grobbelaar is weereens deur die Minister van Nasionale Opvoeding op die nuwe verkleinde Raad vir Wetenskaplike Publikasies aangestel. Tydens een van die vergaderings is dit herbeklemtoon dat die S. Afr. Nasionale tydskrifte navorsingsgerigte tydskrifte is en dat redakteurs moet toesien dat slegs materiaal wat ongetwyfeld oorspronklike navorsing van hoë gehalte is, gepubliseer word. Hierdie saak word deur die Wetenskaplike Redakteur van die Suid-Afrikaanse Tydskrif vir Plantkunde, Prof. J.N. Eloff, in sy verslag behandel.

Volume 52 van die S. Afr. Tydskrif vir Plantkunde word opgedra aan Prof. E.A.C.L.E. Schelpe. Die tydskrif word verder in die volgende indekseringstydskrifte opgeneem.

- a. Current Contents & Science Citation Index
- b. Cambridge Scientific Abstracts
- c. Current Awareness in Biological Sciences
- d. IBZ & IBR (Verlagsgruppe Zeller)
- e. Biosciences Information Service (Biological Abstracts)
- f. Field Crop Abstracts
- g. Weed Abstracts
- h. Herbage Abstracts

Artikels wat in die S. Afr. Tydskrif Plantk. gepubliseer word kwalifiseer ook vir subsidiëring van Universiteite onder die SANSO-skema van die Departement van Nasionale Opvoeding.

8.15 Working Group for the Flora of Southern Africa. According to Dr. Gibbs Russell twenty two persons attended the annual meeting at Potchefstroom in January 1985. At the AETFAT meeting in Missouri Botanical Garden it was resolved that the Botanical Research Institute should maintain a continuous Register of Plant Taxonomic and related Projects in Africa. Three volumes or sections of volumes together with a Palaeoflora volume, an Ancillary volume (List of species of South African Plants - Mem. Bot. Surv. S. Afr. 51) were published. A volume on Pteridophyta and Vol. 31,2 is in press. The manuscripts of a further 11 volumes or sections of volumes are with the editor. Research on groups to be published in a further eight volumes is in the pipeline.

8.16 Forum Botanicum. Mej. Welman berig dat ses tweemaandelikse uitgawes van Forum Botanicum verskyn het. Die persone en instansies wat gedurende die afgelope jaar nuus en berigte ingestuur het word hartlik bedank. Mej. Welman vermeld dat sommige Universiteite

nooit van hulle laat hoor nie en sy doen 'n vriendelike beroep op Raadslede asook alle S.A.G.P.-lede om nuus en verslae van hulle onderskeie instansies in te stuur.

8.17 Die Suid-Afrikaanse Tydskrif vir Plantkunde. Volume 51 was die eerste volume na die samesmelting van die Suid-Afrikaanse Tydskrif vir Plantkunde en "The Journal of South African Botany". Hierdie volume was opgedra aan prof. N. Grobbelaar. Die laaste nommer van Vol. 51 was in geheel 'n uitgawe ter herdenking van die 75ste verjaardagviering van die Universiteit van Natal. Die tydskrif toon steeds 'n gestadige groei en die standaard word steeds gehandhaaf. Daar word steeds gewerk aan verskeie probleme wat die vertraging van publisering van artikels veroorsaak. Daar word 'n beroep op alle plantkundiges gedoen om meer lede vir S.A.G.P. te werf om 'n groter verspreiding van die tydskrif te verseker. 'n Besondere woord van dank word aan prof. Eloff, die subredakteurs en ander persone verantwoordelik vir die verskyning van die tydskrif gerig.

8.18 Streeksverslae. Uit die verslae wat van die verskillende streke ontvang is, is dit duidelik dat al die streke 'n baie goeie aktiewe en suksesvolle jaar beleef het. Die Raad wil graag sy dank uitspreek teenoor die streke wat nie hulle ledegeldsubsidie aangevra het nie of wat bereid was om slegs met die helfte daarvan klaar te kom. Dit het positief bygedra dat 'n gunstige bankbalans op die finansiële staat van die S.A.G.P. aangedui kan word.

9. DIE RAAD

9.1. Samestelling van die Raad. Die verkleinde raad het goed gefunksioneer en saam met die omvattender notules en skriftelike verslae oor die vordering van die werksaamhede van onder andere die verskillende komitees en werksgroepe word daar nou meer volledig verslag gedoen oor die werksaamhede van die Raad wat vir alle lede ter insae is.

Die volgende raadslede tree na 'n dienstermyn van tweejaar uit:
Proff. J.N. Eloff, R. Lubke en J.H. Visser, drr. O.T. de Villiers, B. de Winter, G.E. Gibbs Russell en R. Verhoeven.

Die Raad vir 1986 sien soos volg daaruit:

President: Prof. G.K. Theron

Inkomende President: Moet aangewys word uit raadslede

Sekretaris: Dr. W.F. Reyneke

Tesourier: Dr. P.D.F. Kok
Raadslede: Proff. J.N. Eloff, R.Lubke en H.A. van de Venter,
drr. O.T. de Villiers, G.E. Gibbs Russell,
A.E. van Wyk en mnr T.H. Arnold.

Graag wil ek by hierdie geleentheid die uittrede Raadslede, sommige wat oor baie jare al 'n groot bydrae gelewer het, opreg bedank vir hulle bydraes tot die ordelike funksionering van die Raad en die Genootskap. Hierdie bydrae het nie ongemerk verbygegaan nie. Ons wens u 'n aangename rustyd toe en vir dié wat vir 'n tweede periode van twee jaar tot die Raad verkies is sê ek baie welkom terug.

9.2 Verkiesingsprosedure van Raadslede. Ten spyte van die feit dat die nominasievorm wat 'n kort curriculum vitae van 'n genomineerde moet insluit so ontwerp is dat dit maklik kan invul was daar slegs drie amptelike nominasies van raadslede vir 1986/87 ontvang, dit eers nadat die keurdatum met 'n paar weke uitgestel is. Dit het meegebring dat die uitvoerende komitee vier verdere persone moes benoem om die Raad voltallig te kry. Ek wil graag 'n beroep doen dat met die verkiesing van die volgende Raad die S.A.G.P.-lede meer aktief betrokke sal raak sodat ons seker is dat die mense wat op die Raad dien dié is wat die lede graag daar wil sien.

10. BEDANKINGS

Vergun my om, ten slotte, enkele persone uit te sonder aan wie 'n spesiale woord van dank gebring word. Die uittrede president prof. J.H. Visser wat as president ingestaan het terwyl my gesondheid nie na wense was nie, asook vir die periode wat hy die S.A.G.P. onselfsugtig gedien het. Die sekretaris, dr. W.F. Reyneke en die tesourier prof. P.D.F. Kok het deur hulle nougesette ywer en hulle hulp aan my tydens my ongesteldheid veel bygedra tot die doeltreffende funksionering van die Raad. Aan albei ons opregte dank en waardering vir 'n ondankbare taak wel verrig. Mej. W.G. Welman het as redaktrise van Forum Botanicum nie alleen die groot taak van mnr E.G.H. Oliver oorgeneem nie maar die goeie werk van hoogstaande gehalte voortgesit. Prof. J.N. Eloff het as redakteur van ons Tydskrif oorgeneem by prof. N. Grobbelaar en naas enkele groeipype met die samesmelting van twee tydskrifte het hy met sy ywer en entoesiasme daartoe bygedra dat die hoë standaard steeds gehandhaaf word. Baie dankie prof. Eloff. Ook aan mej. L. Bosman sonder wie die Tydskrif nie sal ver-

skyn nie, baie dankie en ons is bly dat dit ook weer beter gaan met u gesondheid. Laastens baie dankie aan alle komiteedele en werks-groepe vir julle bydraes asook my opregte dank aan alle lede wat deur hulle belangstelling die taak van die bestuur van die S.A.G.P. vergemaklik het. Mag die S.A.G.P. nog groot hoogtes bereik.

'n Besondere woord van dank aan die Organisasie-komitee van die 1986 kongress. Hierdie kongres aan die Universiteit van Transkei was baie suksesvol grotendeels as gevolg van die puik organisasie daarvan. Baie dankie vir julle harde werk.

G.K.T.

SAGP NOORD-TRANSVAAL STREEKTAK : JAARVERSLAG VIR 1985

1. Komitee: Voorsitter: Prof. H.A. van de Venter, Ondervoorsitter: mnr P. Herman, Sekretaresse: mej. A.P. Backer, Penningmeester: mnr. G. Germishuizen, Lede: mej. C. Reid, mej. I. von Teichman, dr. P.J. Weisser, mnr A.E. van Wyk (verteenwoordiger van natuurbewaringskomitee).
2. Lidmaatskap: Die ledetal staan tans op 155.
3. Lesings: Die volgende lesings is gedurende 1985 aangebied (bywonings-getalle word tussen hakies aangegee):
 - 7 Maart - Prof. J. Coetzee, dr. H. Glen en dr. I. Claassen - "Die gebruik van die aftaselektronmikroskoop in plantkundige navorsing". (Lede: 22; besoekers: 8; totaal: 30).
 - 18 April - Dr. P. Viljoen - "Leeus van die Savuti". (Saam met die S.A. Biologiese Vereniging). (Lede: 18; besoekers: 51; totaal: 69).
 - 2 Mei - Dr. R.P. Ellis - "Anatomy of the South African grasses with special reference to applied aspects". (Lede: 13; besoekers: 5; , totaal: 18).
 - 7 Junie - - Dr. C.J. Quinn - "Studies on the Australian aborescent monocotyledons". (Lede: 33; besoekers: 14; totaal: 47).
 - 1 Augustus - Dr. B de Winter, prof. N. Grobelaar, mnr P. van Wyk, dr. J. v.d.W. Jooste - "Is 'n loopbaan in plantkunde die moeite werd?". (Lede: 38; besoekers: 47; totaal 85).
 - 5 September - Mrs. D. Fourie - "Drought-tolerant indigenous plants for the garden"
 - Mr. G. Malan - "Planning water use in the garden". (Met die S.A. Biologiese Vereniging). (Lede: 40; besoekers: 60; totaal: 100).

2 Oktober - Dr. P. Weisser - "A botanist's dream: A visit to the giants of the plant kingdom in America". (Lede: 12; besoekers: 15; totaal: 27).

Gemiddelde bywoning:

	<u>Lede</u>	<u>Besoekers</u>	<u>Totaal</u>
1985	26	28	54
1984	20	10	31
1983	17	8	25

4. Ander aktiwiteite: Die hoogtepunt van die jaar was ongetwyfeld die "Dink Inheems / Go indigenous" uitstalling wat in samewerking met die Departement van Onderwys en Kultuur aangebied is. Inheemse plante wat geskik is vir aanplanting in die huistuin is vanaf 4 tot 7 September by die Menlyn Park-winkelsentrum, uitgestal. Terselfdertyd het verskeie kwekerie inheemse plante te koop aangebied. Die lesing oor waterbewaring in die huistuin (5 September) het met hierdie uitstalling saamgeval. Mev. Pat Mulder, 'n landskapsargitek wat haar hulp aangebied het, het gesorg dat die uitstalling baie professioneel vertoon het. Die bydraes vanaf Kirstenbosch en die Navorsingsinstituut vir Tuinbou het gesorg dat die uitstalling baie aandag trek en daar word gehoop dat hierdie "uitwaartse" poging van die SAGP in Noord-Transvaal 'n groter bewustheid van ons inheemse flora by die publiek laat posvat het. Die hoop word ook uitgespreek dat soortgelyke pogings in die toekoms aangepak sal word. Tydens die "Dink inheems"-program is waardevolle ondervinding, wat met vrug in die toekoms ingespan kan word, opgedoen.

5. Komiteevergaderings: Die Bestuur het 5 keer gedurende die jaar vergader om aktiwiteite te bespreek en lesings te reël.

6. Dankbetuigings: Die volgende persone en instansies word hartlik bedank vir hul bystand en samewerking:

- (a) Al die bestuurslede van die Noord-Transvaalse tak van die SAGP vir hulle hulp en ondersteuning die afgelope jaar. In besonder word die sekretaresse, mej. A. Backer, asook die penningmeester, mnr G. Germishuizen, vir hul groot insette bedank.
- (b) Die bestuur van die S.A. Biologiese Vereniging vir hul samewerking.
- (c) Die Fakulteit Opvoedkunde aan die Universiteit van Pretoria vir die gebruik van 'n lesingsaal en hul teelokaal.

- (d) Prof. N. Grobbelaar en dr. B. de Winter vir hul ondersteuning van ons tak se aktiwiteite deur die beskikbaarstelling van fasiliteite en personeelure.
- (e) Almal wat tot die "Dink Inheems"-uitstalling bygedra het. In besonder word die volgende persone en instansies bedank:
- Mnr. P. Herman en sy reëlingskomitee; Die Streekhoof: Kultuursake van die Departement van Onderwys en Kultuur; Mev. Pat Mulder van Decoplant; Mev. Beverley Spires van Menlyn Park; Dr. J.T. Mynhardt, Direkteur: Navorsingsinstituut vir Tuinbou; Prof. J.N. Eloff, Direkteur, Kirstenbosch; Effekto: borg vir die kaas-en-wyn; Mnr L.J.H. Backer; Aurora Veldblommekwekery; Cordia Kwekery; Bergsig Kwekery; Halfway House Nursery; Personeel van die Departement Plantkunde, U.P., en die Navorsingsinstituut vir Plantkunde vir bemanning van die uitstallings; Prof. P. Kok, tesourier, SAGP.
- (f) Almal wat as sprekers by vergaderings gedurende die jaar opgetree het, asook alle lede van ons tak wat vergaderings getrou bygewoon het.
- (g) Almal wat bygedra het om die jaarvergadering en gepaardgaande sosiale funksie 'n sukses te maak.

H.A.v.d.V.

SAGP ORANJE-VRYSTAATSTREEK : JAARVERSLAG 1985

Die Bestuur vir die termyn was soos volg saamgestel: Voorsitter: Prof. G.H.J. Krüger; Ondervoorsitter: Dr F.C. Botha; Sekretaresse/ Tesouriere: Mev. A.M. Joubert; Addisionele lid: Dr. L. Scott.

Die huidige ledetal van bog. streekstak is 46. Dit is vir my aangenaam om te kan rapporteer dat die bywoning van vergaderings deur lede werens baie goed was. Die gemiddelde bywoningsyfer was 60 persent.

Benewens enkele bestuursvergaderings het vier algemene vergaderings plaasgevind waartydens die volgende sprekers opgetree het:

- 21.3.1985 - Dr. F.C. Botha: "Die aard, funksies en voorkoms van fosfogliseromutase in die endosperm van Ricinus communis-sade".
- 23.5.1985 - Prof. A. Richmond: "Potential use of micro-algae for commercial purposes".
- 20.8.1985 - Prof. A. Richmond: "Tactics for the settlement of arid regions".

20.10.1985 - Prof. A.J.H. Pieterse: "Algoorte van die Vaalrivier - Klein plante van groot belang".

Die jaar se verrigtinge is afgesluit met 'n kaas-en-wynonthaal na afloop van die laaste algemene vergadering.

Die boekprys wat jaarliks deur ons streekstak uitgelooft word aan die beste derdejaarstudent in Plantkunde is vanjaar toegeken aan mej. L. du Plessis (1984). Hierdie prys is vir 'n tydperk van 3 jaar geborg deur Nasionale Boekwinkels. 'n Boekprysfonds is gestig, waartoe die lede addisioneel bydra, sodat kontinuïteit verseker kan word, indien die borgskap in die toekoms sou verval.

Nieteenstaande die huidige finansiële slapte is die finansiële posisie van die OVS-tak nog gesond. Die saldo is tans R110,63 benewens R25,00 in die boekprysfonds.

Laaste is dit aangenaam om op te merk dat die samewerking tussen lede van hierdie tak baie goed is en dat hierdie as 'n baie aktiewe tak beskou kan word.

G.H.J.K.

SAGP SUIDWES-KAAPSTREEK : JAARVERSLAG VIR 1985:

1. GELUKWENSINGS

Dr. D.J. Botha met sy aanstelling as Adjunk-direkteur van die Nasionale Botaniese Tuine van Suid-Afrika. Hartlik welkom in ons streek.

Prof. J.N. Eloff met sy aanstelling as Ere-professor in Plantkunde vir 1986 aan die Universiteit van Stellenbosch.

Prof. C.T. Johnson met sy aanstelling as Professor en Hoof van die Departement van Plantkunde aan die Universiteit van Wes-Kaapland.

Mnr. C. Boucher met sy aanstelling as lektor in die Departement van Plantkunde aan die Universiteit van Stellenbosch.

Prof. K. Pienaar van die Universiteit van Wes-Kaapland met sy boek: Plant inheems.

Mev. L. Burman en mev. A. Bean vir 'n publikasie van die Botaniese Vereniging: S.A. Veldblomgids nr. 5: Hottentots-Holland tot Hermanus.

Prof. D. Mitchell van die Universiteit van Kaapstad met sy boek: Field guide to the mushrooms of South Africa.

Mev. M. Jarman van die Universiteit van Kaapstad wat aangestel is as Voorster van die Koördinerende Raad vir Natuurbewaring in Kaapstad.

Dr. W.D. Stock wat sy Ph.D.-graad aan die Universiteit van Kaapstad behaal het.

Mnr. B. van Wilgen, mnr A. Cunningham en mej. V. Stacey wat die Ph.D.-graad aan die einde van die jaar van die Universiteit van Kaapstad sal ontvang.

2. LEDETAL: Die ledetal van ons streek is tans 136 wat 2 lede meer is as in 1984. Aan die nuwe lede sê ons baie welkom en ek vertrou dat hulle 'n positiewe bydrae tot die werksaamhede van die Vereniging sal lewer.

3. BESTUUR: Die Bestuur het vanjaar bestaan uit: Dr. O.T. de Villiers (Voorsitter); Mnr. J. Aalbers (Vise-voorsitter); Dr. J.E. Watts (Sekretaris/Penningmeester); Mev. M. Jarman, Mej. P. Perry, Dr. D. Koutnik, Mev. A. Bean wat as verteenwoordiger van die Koördinerende Raad vir Natuurbewaring in Kaapland op die komitee gekoöpteer is. Van hierdie lede verstryk die termyn van dr. O.T. de Villiers, dr. J.E. Watts en dr. D. Koutnik. Skriftelike nominasies vir die vakante poste is aangevra.

Gedurende die jaar is twee formele bestuursvergaderings gehou; die een by die Universiteit van Stellenbosch en die ander een by Kirstenbosch.

4. S.A.G.P.-RAAD: Prof. J.H. Visser, prof. J.N. Eloff en dr. O.T. de Villiers het vanjaar op die Raad van die S.A.G.P. gedien. Dr. O.T. de Villiers is gekies as Streeksverteenvoordiger vir die Suidwes-Kaapstreek op die Raad van die S.A.G.P.

5. VERGADERINGS: Gedurende 1985 is drie vergaderings gehou.

5.1 22 Mei 1985 by die Universiteit van Kaapstad (28 lede en 8 besoekers).

1. U.C.T. Botany Club. Projects and activities for 1985.
2. Mr. Clive McDowell: Co-operative conservation research of Protea odorata.
3. Dr. Ruth Smart. Mathematical modelling of branching patterns in trees.
4. Dr. Brian Hahn. Mathematical modelling of carbon metabolism in leaves.

5.2 31 Julie 1985 by die N.I.V.V. op Stellenbosch (16 lede en 2 besoekers).

1. Dr. H.J. van Zyl: Swak stoorvermoë van Bon Chretienpere.
 2. Dr. J. Steenkamp: Skilvernuwing by appels.
 3. Mnr. L.J. von Mollendorff: Voosheid by perskes.
- 5.2 18 September 1985 by die Bosbounavorsingsentrum in Jonkershoek (22 lede en 8 besoekers).
1. Mr. B. van Wilgen: "The effect of alien invasive species on fire hazars in the fynbos".
 2. Mr. P. Manders: The management of the Clanwilliam cedar".
 3. Mr. D. Richardson: "Hakea in the Fynbos".
 4. Mr.D. le Maitre: "Why *Watsonia pyramidata* only flowers en masse after summer or autumn burns".

& Buitelandse Plantkundiges: Die volgende buitelandse plantkundiges het ons streek gedurende die jaar besoek: Prof. E. Zohary, Hebreeuse Universiteit, Jerusalem, Israel. Prof. L.J. Musselman, Old Dominion University, Virginia, V.S.A. Dr. R.A. de Fossard, New England University, Armidale, Australië. Prof. H. Ziegler, Tegniiese Universiteit, München, Duitsland. Prof. B. Fineran, Universiteit van Canterbury, Christchurch, Nieu-Seeland. Prof. H. Lipps, Israel.

7. BEDANKINGS: Ek wil eerstens al die bestuurslede van harte bedank vir hulle goeie samewerking vanjaar asook gedurende 1984. En dan 'n spesiale woord vandank aan die Sekretaris/Penningmeester dr. J.E. Watts vir sy hulpvaardigheid en vir die bekwame wyse waarop hy al die werk gedurende die afgelope twee jaar gedoen het. Ook 'n woord vandank aan al die lede vir die wyse waarop hulle die aktiwiteite van die Vereniging gedurende die jaar ondersteun het, want 'n Vereniging is net so sterk soos wat sy lede is.

O.T.d.V.

SAGP-SWA-TAK : JAARVERSLAG VIR 1985

1. Ledetal: Die totale ledetal vir die hele Suidwes-Afrika is 16 lede. Vanweë die groot afstande is dit baie moeilik vir die lede wat buite Windhoek woon om vergaderings by te woon.
2. Program 1985: Die afgelope jaar is slegs twee keer vergader en tydens hierdie geleentheid is die volgende baie interessante lesings gelewer:

- 2.1 "Ontkiemingsvereistes van Alectra vogeli" deur mev E. Maas.
- 2.2 "Die Plantekologie van die Daan Viljoen Wildtuin met spesiale verwysing na die plase Claratal en Bergvlug". deur mnr K. Kellner.
3. Hierdie lesings is deur 25% van die lede bygewoon.
4. Ten slotte - daar is begin met 'n fondsinsamelingsveldtog om die tak se finansies op 'n gesonde grondslag te kry. Die SAGP-SWA-Tak het gedurende die jaar 1985 weinig finansiële bydraes of onkoste gehad. Gedurende Desember 1985 word 'n klein fondsinsamelingsveldtog geloods wanneer klei-afdrukke van plante wat deur ene mev. L. Wilson van Natal gedoen is verkoop word. Hierdie afdrukke sal by straatmarkte en winkels te koop aangebied word. 'n Skenking van R200 is van die Natuurlewevereniging van SWA ontvang.

W.J.J.

12TH ANNUAL CONGRESS OF SAAB; The 1986 Congress was held at the University of Transkei in Umtata from Monday 20th - Friday 24th January. This was the first time that the annual congress was held outside South Africa. Delegates were accommodated in one of the hostels and almost all congress activities took place on the campus. The Opening Address was given by the Deputy Minister of Agriculture and Forestry, Mr. P.M. Ntloko. The Keynote Address was delivered by Prof. J. Tew, Dean of the Faculty of Science, who spoke on the "Role of Plant Science in Developing Countries", with special reference to Transkei. This also was the theme of the congress. More than 160 delegates attended, which made this the largest SAAB Congress ever.

Two parallel sessions were held throughout most of the Congress. The following sub-disciplines were covered: Conservation, Ecology, Plant Development and Metabolism, Morphology, Taxonomy, Ecophysiology, Flora Studies, Tissue Culture, Anatomy and Plant Reproductive Biology. About 100 oral papers were read, while about 45 poster papers were exhibited during three poster sessions. A number of workshops and meetings of various groups were held before and during the Congress, of which the workshop for Pollination Biology, convened by Dr. H. Baijnath, found a wide interest. Other meetings were those of the Herbarium Curators, Flora Working Group, Working Group for Vegetation Ecology and Soil Classification, Syntaxonomic Nomenclature Committee, Systematic Wood Anatomy Group and the SAAB Trustees. The Annual General Meeting of SAAB was held at 14h00 on the last day of

the Congress, when it was announced that the 1987 Congress will be organized by the botanists of the University of Natal in Durban.

Apart from the nightly informal get togethers in the hostel, delegates to the Congress had other opportunities to relax and meet socially. The University function was in the form of a buffet supper, while a braai was held on the campus later in the week. Delegates were also privileged to enjoy the hospitality of the South African Ambassador and his wife, Mr. and Mrs. Marais Steyn. The traditional Annual SAAB Dinner was held in the dining hall on the campus. Prof. E. Mosothoane, Head of Religious and Biblical Studies at Unitra, was the guest speaker. On this occasion the SAAB prizes were presented. The SAAB Junior Medal (bronze) for the best doctoral thesis in Botany at a South African University in 1984, was presented to Dr. V.M. Gray (see President's Report). Two prizes were presented to students for their papers delivered at the congress namely Miss M.J. Cadman (University of Natal, Pietermaritzburg) for "Floral polymorphism in *Pseuderanthemum subviscosum*", and Miss P.M. Drennan (University of Natal, Durban) for "Effect of humidity and salinity on the water relations of *Avicennia marina*".

A pre-congress as well as a post-congress tour were arranged to the Mkambati Nature Reserve, which everyone found most worthwhile. Stops were made en route at Port St. Johns and Magwa Falls, so that a good part of Transkei was covered. The Mkambati Nature Reserve is a very well preserved area, due mainly to its history as a sanatorium. It is planned to develop a facility for providing field-based education in biology and geography to schools, training colleges and the university in Transkei. Apart from being introduced to the botanical research projects being done in the Reserve, delegates had a chance to enjoy the impressive scenery with rivers, waterfalls, beaches, ravines, kloofs, forests, grassveld and also watch the wide variety of game.

The Botany Department of the University of Transkei must be congratulated on organizing this most successful Congress. Special thanks are due to all the members of the Organizing Committee and particularly the Chairman, Prof. C. Johnson, the Secretary/Treasurer, Dr. B. McKenzie and Prof. E. Granger and Mr. C. Shackleton (tours).

W.G.W.

ANNUAL REPORT OF SCIENTIFIC EDITOR, S. AFR. J. BOTANY

Volume 51 of the South African Journal of Botany was the first volume of the amalgamated Journal of South African Botany and the S. Afr. J. Bot. and it was dedicated to Prof. N. Grobbelaar, the first Scientific Editor of the S. Afr. J. Bot. This volume was 22% longer than the previous volume, with a total of 490 pages. The last number of Volume 51 was an issue commemorating the 75th Anniversary of the University of Natal. All of the 14 papers published in this number were from the staff of the University of Natal.

In total 55 articles, 2 short communications and 5 book reviews were published. The average time for processing the 57 manuscripts, including the revision of papers by authors, was 160 days. All of the manuscripts handled during this period had to be revised to a certain extent. In total 10 manuscripts were rejected or withdrawn. Of the papers published in Volume 51, 24 were in the field of taxonomy, 15 in ecology, 7 in physiology, 5 in cryptogams and 4 in morphology. Five publications originated from overseas. The University of Natal was by far the best supporter of the journal with 21 publications (16 Pietermaritzburg, 5 Durban) followed by the Universities of Pretoria and Cape Town with 7 each, BRI and the University of Stellenbosch with 4 and the National Botanic Gardens with 3 publications. Several other universities and organizations had one or two publications each.

We used 72 different referees for the manuscripts, of which 14 were from overseas. Some referees were used for more than one paper. Three people refereed 5 papers, five people refereed 4 papers, six people refereed 3 papers, eleven people refereed 2 papers and the rest one paper. The Council should discuss the desirability of publishing a list of all referees who do not mind having their names included, at the end of each volume.

At present there are 15 national journals including the S. Afr. J. Bot., which is the only one having more than four numbers per year. The distribution of the S. Afr. J. Bot. is at present 373 to overseas institutions and individual subscribers, 99 to institutions and subscribers in South Africa. Members of SAAB in South Africa and overseas receive 570 copies. (Total 1142). It was disturbing to get a letter from a library in Sweden in which it was stated that, due to political reasons and a decision taken by the Umea University, they were not interested in receiving our journal any more.

Deur die loop van die jaar het ons taamlik baie ontwrigting in die

redaksionele kantoor gehad omdat mej. Lovell Bosman vir 'n paar maande in die hospitaal was. Komplikasies is ondervind toe twee ander persone met die aansienlike publikasie-administrasie (22 stappe per publikasie) moes help. Een van ons grootste probleme is die lang tydsverloop voor publikasie. Die saak is in besonderhede ondersoek. Ons kan niks doen aan die 114 dae wat dit neem nadat die Buro vir Wetenskaplike Publikasies die manuskrip ontvang totdat dit gepubliseer is nie. Pogings is aangewend om die tyd wat die manuskrip by Kirstenbosch gehou word tot die minimum te beperk. 'n Teleksdiens is byvoorbeeld ingestel sodat subredakteurs, referente en outeurs onmiddellik gekontak kan word. Omdat die grootste vertraging by die referente voorkom is besluit dat daar 'n uitgebreide paneel van referente opgebou sal word. Persone wat bereid is om op die paneel te dien moet onderneem om die een of twee publikasies wat ons per jaar na hom sal stuur binne 'n maand terug te stuur. 'n Stelsel is ook ontwerp wat sal verseker dat vertragings deur een persoon nie die manuskrip as 'n geheel vertraag nie.

Enkele probleme is met die Buro ondervind deurdat hulle die styl van die outeurs verander. Sommige outeurs het baie sterk hierteen beswaar gemaak omdat die wetenskaplike betekenis soms gewysig is. Na samesprekings met die Buro is besluit dat die outeur die reg het om enige verandering aan sy manuskrip, nadat dit deur die Wetenskaplike Redakteur goedgekeur is, terug te verander. Die Wetenskaplike Redakteur het dan die finale beslissing. Probleme is ook ondervind omdat daar twee keer die afgelope jaar 'n nuwe redakteur vir die S.Afr. Tydskr. Plantkunde aangestel is. Daar is ook enkele foute deur die drukkers gemaak. In die Augustus uitgawe is pp. 247 - 255 uitgelaat en in die Oktober uitgawe is pp. 331 - 338 en 355 - 363 uitgelaat, terwyl pp. 339 - 354 twee keer geplaas is. Hierdie foute is net in een van die talle duplikate wat ons by Kirstenbosch het gevind. Lede word versoek om na te gaan of die kopieë wat hulle ontvang het nie dieselfde foute het nie. Die Buro sal alle foutiewe kopieë vervang.

Die Raad het aanbeveel dat die ander lede van die Redaksionele Paneel na 7 vermeerder word (vier aangewys deur SAGP en 3 deur NBT) en ook dat daar 'n redaksionele adviespaneel van buitelandse wetenskaplikes moet wees. Die saak moet nog deur die Raad van die NBT goedgekeur word.

If we compare our journal with the other national journals, we are by far the largest, but our number of copies distributed, especially to

overseas scientists, is lower than many other national journals. The help of members in increasing our number of overseas subscribers will be appreciated. The Scientific Editor will be pleased to receive names to which complimentary copies could be sent. If all our members increase their support to the S. Afr. J. Bot. then the Journal could become the high quality international journal it should be.

I would like to thank all authors and referees for their support of the Journal. I would especially like to thank the sub-editors, Profs. C.E.J. Botha, R.N. Pienaar, G.K. Theron, J. van Staden and Dr. J.P. Rourke for all the time and effort they put into making the first volume of the amalgamated journal reasonably successful. I do not think the members of SAAB realize how much work and frustration is involved in being a sub-editor. We certainly owe them a big vote of thanks for their efforts.

J.N.E.

BOTANICAL RESEARCH INSTITUTE, ANNUAL REPORT FOR 1984/85 (CONTINUED)

PLANT STRUCTURE AND FUNCTION DIVISION

The facilities of this division were considerably improved with the acquisition of an automatic image analysis system. Equipment for wood anatomical studies was also purchased to enable Mr. P.P.J. Herman to commence his comparative studies of the southern African woody plants. Mrs. J.C.P. Spangenberg left us during December 1984 after doing valuable work for the National Transport Commission on the cytogenetics of Eragrostis curvula.

Comparative grass leaf anatomy

An exciting discovery was made by Dr. R.P. Ellis during a field trip to SWA/Namibia - Eragrostis walteri was found to be a C₃ plant. This is the first known non-Kranz member of the chloridoid subfamily. Further studies are being undertaken on plants transplanted into the greenhouses of the Pretoria National Botanical garden.

Cytogenetic studies

Mr. J.J. Spies and Mrs. H. du Plessis have completed their work on Rubus and have submitted a series of five papers outlining their findings. The cytogenetics team has now turned its attention to grass cytogenetics and has begun a study of all the southern African grass species. This should prove invaluable, together with the leaf anatomical information,

for the Poaceae volume of the Flora of Southern Africa. A sound start has been made to this study and successful chromosomal preparations have been obtained from many different taxa.

VEGETATION ECOLOGY DIVISION

The former Ecology Section has now been formally separated into the Vegetation Ecology Division (under Dr. J.C. Scheepers) and the Experimental Ecology Division (under Dr. M.C. Rutherford). 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 each other 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 and forest studies

In the preparatory phase of the research facet, 'The vegetation ecology of Sour Bushveld in the Transvaal Waterberg', Mr. R.H. Westfall has developed computerized field data capture, improved methods to increase collecting efficiency, improved plant identification aids, and an objective approach to vegetation sampling. Problems associated with minimum sample area and the hierarchical nature of plant communities have been overcome. A pocket-sized apparatus was also developed for estimating both basal and canopy cover.

Refinement of the Braun-Blanquet phytosociological classification of vegetation in the Sabie area of the Eastern Transvaal Escarpment by Mr. G.B. Deall resulted in 62 syntaxa arranged in an informal hierarchy, and comprising 53 plant communities (with 18 variants), 14 vegetation types and 4 ecological formation classes. Vegetation types were mapped. They appear to provide a useful basis for landscape classification of practical significance to land managers. Vegetation types were subsequently integrated with existing land-type map units to provide an alternative, broader basis for landscape classification.

Coastal studies

In the Kosi Bay - Sodwana area of KwaZulu, Dr. P.J. Weisser found that first-priority sites for conservation of vegetation occur mainly

on the dune barrier in the vicinity of Sibaya Lake. He discovered a previously unknown type of sand forest dominated by Drypetes natalensis, Chrysophyllum viridifolium and Cola greenwayi on the Mandosi Peninsula. After clearing in the course of Pereskia aculeata control, regeneration of vegetation is quick, the most common woody species being Albizia adianthifolia, Dalbergia obovata and Tabernaemontana elegans.

Mr. M.G. O'Callaghan has published articles on two estuarine systems in the Cape under the auspices of the Estuarine and Coastal Research Unit (CSIR). The vegetation-ecology component of this project is being wound up and a final report is being prepared.

Cape fynbos studies

Classification and description of western coastal lowland fynbos by Mr. C. Boucher is well advanced. The 137 plant communities identified are classified into a hierarchy of four orders, 10 alliances, 14 sub-alliances, 59 associations and 37 subassociations; 13 azonal wetland communities have not been ranked. The analysis of aerial photographs of selected sites indicated that the Sand Plain Fynbos and the West Coast Strandveld become invaded at similar but slower rates than West Coast Renosterveld and that annual manual eradication strategies can contain alien plant spread in West Coast Strandveld. Mr. Boucher attended the MEDECOS Conference in Australia in 1984. This proved to be a very valuable experience. The plant-ecological study of the Cape of Good Hope Nature Reserve by Mr. H.C. Taylor was completed with the final editing of five papers which were published during the report year. Two papers in Bothalia gave an account of methods and an analytical and descriptive account of the vegetation. Three publications in the South African Journal of Botany comprised an analysis of the flora, and the results of a survey and subsequent monitoring of the spread of invasive alien woody plants. Mr. D.J. McDonald has completed follow-up work on classification and description of the vegetation of Swartboskloof, Jonkershoek. Ordination of the vegetation data has given results which have re-inforced the conclusions drawn from the classification. Investigation of environmental gradients using detrended correspondence analysis showed that soil parent material has a major influence on the distribution of different plant communities, particularly in the Mountain Fynbos. The classification and description of the vegetation will serve as a basis for future experimental work at Swartboschkloof.

Preparatory work on ecological studies of mountain fynbos by Mr. H.C. Taylor and Mr. D.J. McDonald, in the Cedarberg and Langeberg respectively, is well under way.

Grassland studies

Miss B.J. Turner and Mr. C.W. Ries have commenced preliminary work on two key study areas in the grassland of the south-eastern and southern Transvaal. The key areas were selected for the range of variation that they contain and for the extrapolation value of the results.

EXPERIMENTAL ECOLOGY DIVISION

Fynbos germination studies

Miss F.M. Pressinger has investigated mechanisms to explain the sporadic nature of the germination of Protea repens seed in the western Cape. She has developed techniques to accelerate the germination of these seeds. Dr C.F. Musil has drawn up a detailed work plan to investigate the germination capacity of representative sets of fynbos and invasive alien plant species within mixed field communities.

Fynbos competition studies

A series of experiments to measure the effect of density, water regime and presence of Acacia saligna plants on the growth and performance of Protea repens seedlings has been completed and the results are being written up by Miss Pressinger.

Fynbos transformation studies

Mr. G.W. Davis is assessing the effects of substrate disturbance on fynbos systems as a result of marginal cultivation of fynbos ornamental plants. Details of the vegetation and soils of the experimental site have been recorded and a fire has been applied and quantitatively characterized. Parallel laboratory studies on selected soils are underway.

Karoo research

Mr. G.F. Midgley has completed the main part of an extensive literature survey of the plant growth and life forms of the winter rainfall area of the Karoo. This constitutes the basis for initial screening of plant forms for ecophysiological research on their main adaptations to water stress.

Biome studies

In a joint effort by the Experimental and Vegetation Ecology Divisions,

Dr. MC. Rutherford and Mr. R.H. Westfall have determined the biomes of southern Africa according to clearly defined criteria and methods. The objective result has led to re-assessment of previously recognized biomes and to clarification of biome borders. New perspectives on plant-environmental relations at biome scale have been obtained. These include the role of (1) the interaction of moisture and temperature, (2) the interaction of moisture levels and moisture seasonality in explaining certain biotic distributions.

PLANT EXPLORATION DIVISION

The Division, under Mr. M.J. Wells, completed its projects on timber sources and barrier plants, and is now concentrating entirely on food plant and weed research. Mr. T.H. Arnold continues to lead the food plants research team although he was transferred in October 1984 to the Herbarium Division.

Barrier Plants

The survey of barrier plants by Miss L. Henderson, which was completed in 1983/84, is still awaiting publication. It is scheduled to appear as a Botanical Survey Memoir during the 1986/87 financial year.

Indigenous Food Plants

A further 276 species were added to the national food plant databank by Mr. A.A. Balsinhas. He also added to the information records of 538 species that were already on the list. The bank has proved its value by providing most of the information needed to compile a paper on Khoisan (Hottentot and Bushman) foodplants. This paper, prepared by Mr. Arnold and Mr. Wells was presented by the former, at the Kew International Conference on Economic Plants for Arid Lands (KICEPAL), London, 23 - 27 July, 1984. The paper was very well received, and resulted in South Africa being regarded as a leading research-country in this field.

The research facet on indigenous food plants was given to Miss S. Chadwick, a contract worker from England, during June, 1984. She carried out intensive literature surveys on 14 priority species, Acanthosicyos horridus, A. naudinianus, Coccinia adoensis, C. rehmannii, C. sessilifolia, Cucumis anguria, C. africanus, C. kalahariensis, C. metuliferus, Citrullus lanatus, Bauhinia petersiana, Tylosema esculentum, Guibourtia coleosperma and Vigna lobatifolia. During this survey 586 literature references and 1 231 herbarium labels were consulted. Although writing up of the literature survey has not been

completed, it was sufficiently advanced to provide a basis for field-work. One major field trip was made to the northern Cape and SWA/Namibia. More than 100 collections and many observations on the priority food plant species were made.

Primitive Crop Plants of African Origin

No field trips were undertaken but studies on the diversity of primitive crop plants were continued by Mrs. K.J. Musil and Miss M. de Bruyn, using previously collected material.

Sorghum

38 characters were recorded for 61 collections, bringing the total number of collections completed to 124. These are all backed by permanently mounted spikelet dissections. Recordings were made of the seed colour and tannin content of 118 collections, bringing the total number of collections examined to 352.

Pennisetum

22 characters were recorded for 223 collections and a start was made with computer analysis of the results. A study of endosperm patterns showed that there are not 5 basic patterns, as reported in the literature. Seeds from a single inflorescence were found to exhibit up to 10 patterns.

Citrullus lanatus

Sugar content was found to vary gradually from sweet to bitter types, via semi- and non-sweet intermediates. No significant differences in leaf-stomata number or position were found between the various types.

The relationship between crop frequency and preference was confirmed by analyses of data collected in Bophuthatswana during 1983/84.

Mr. Arnold, who directed this work, presented a poster paper illustrating the wealth of diversity exhibited by primitive crops in South Africa, at the KICEPAL conference in London.

Conservation of Germ Plasm

Research on indigenous food plants and primitive crops yielded a total of 601 seed collections, i.e. Citrullus lanatus (347), other edible Cucurbitaceae (79), Pennisetum americanum (82), Sorghum bicolor (76), and others (17). Mrs. Musil was responsible for preparing and annotating the seed for storage and for handling gifts

and exchanges of material e.g. with ICRISAT in India.

Water Conservation Gardening

Mrs. D.M.C. Fourie's semi-popular publication on water conservation gardening has proved so popular with the gardening public that it has had to be re-printed. Mrs. Fourie has also given several talks on the subject, which is of great relevance in this time of drought.

Woody Invaders

The results of a survey of exotic woody invaders in the Transvaal, carried out by Miss L. Henderson and Mrs. K.J. Musil, have been published. This survey has revealed a disturbingly widespread and effective invasion of the veld by a wide range of exotics. These invaders threaten to change the landscape of grassy areas and to replace some indigenous woody communities such as streambank woodland.

National Weed List

Mrs. H. Joffe completed data sheets for the remaining 934 species in the weed list, which consisted of about 1 600 species as at June, 1984. It was then found necessary to add about 100 species in order to include all those covered either by new herbicide registrations or by new legislation on weeds and invaders. Data sheets on all \pm 1 700 species were checked by Mr. Wells and encoded by Mrs. H. Joffe and Miss L. Henderson. Camera-ready copy is being produced on the word processor/printer. The index to common names, compiled by Mr. A.A. Balsinhas, and the bibliography, compiled by Mrs. K.J. Musil are also ready for typing. Publication is scheduled for the end of 1985 or early 1986. An expanded data sheet for a second edition scheduled for production in several years time, has been drawn up by Mr. M.J. Wells.

PRETORIA NATIONAL BOTANICAL GARDEN

Under the curatorship of Mr. D.H. Dry the following developments took place. Mr. H.J. de Villiers and his staff landscaped and planted a woodland stream on the main ridge and completed the last link in a circular service road around the garden. Miss S.C. Kruger landscaped and supervised the planting of the koppies of the Karoo Biome, and the area in front of the Reynolds's gate. Huge specimens of Aloe bainesii donated by members of the public were planted to complement the aloe motif of the Reynolds's gates. Encephalartos species were established in their specific biomes throughout the garden. To conserve water, all the streams have been re-sealed and a system of channelling rain water towards the main streams and dams has been devised. A start was

made on reviewing and adjusting the landscaping in certain sections of the garden. Mr. M.J. Wells and all technicians participated.

A total of 1 320 accessions, including 580 research accessions (mainly grasses including Sorghum), was received and accessioned by the records team Mrs. B.C. de Wet and Mrs. K.P. Clarke. Mrs. D.S. Hardy collected 50 rare and endangered species for the new SWA/Namibia house. He also assisted Dr. H. Glen with a taxonomic revision of the genus Aloe.

INTERNATIONAL ASSOCIATION FOR PLANT PHYSIOLOGY, NEWSLETTER 1985

Subscriptions were received from the following national or regional members for 1984: Australia, Austria, Belgium, Czechoslovakia, Federal Republic of Germany, Italy, Japan, New Zealand, Scandinavia (Denmark, Finland, Norway, Sweden), Singapore, South Africa, Spain, Switzerland, United Kingdom, U.S.A., Yugoslavia.

Report on the Regional Meeting in Canberra: The IAPP and the Australian Society of Plant Physiologists co-sponsored and financially supported a Regional Meeting in Canberra, Australia during 13 - 16th May, 1985. The theme was "Plant Growth, Drought and Salinity". The meeting, attended by about 100 participants, was opened by Dr. M.G. Pitman, Director of the Institute of Biological Resources of the Commonwealth Scientific and Industrial Research Organisation, Canberra and Dr. Graham (Secretary-General/Treasurer of IAPP) welcomed participants on behalf of IAPP. Ten countries were represented including Australia (about 80 participants), China (5), Federal Republic of Germany (2), India (5), Pakistan (1), Phillipines (1), Thailand (1), United Kingdom (2), U.S.A. (5) and Venezuela (1). Many of these international participants were funded wholly or partially from funds raised through IAPP. The meeting was judged a thorough success and the Proceedings are to be published.

Future meetings sponsored by IAPP

1. Indian meeting. Professor S.K. Sinha of the Indian Agricultural Research Institute, New Delhi has undertaken to organise an International Congress of Plant Physiology to be held in New Delhi, India, probably in November or December, 1987. This meeting will be co-sponsored by the Indian Society for Plant Physiology and Biochemistry, the Indian National Science Academy, the Indian Society for Plant Nutrition and IAPP.

The themes of the meeting will be:

- I. Physiological basis of yield and yield improvement in crop plants (cereals, oil seeds, grain legumes and plantation crops)
- II. Pre-harvest and post-harvest physiology and biochemistry in relation to storage (grains, perishables and seeds)
- III. Environmental and nutritional stresses (responses and tolerance mechanisms, genetic basis to overcome stresses, physiological aspects of management of stress effects, and remote sensing of environmental and nutritional stresses).

Further details will be available from Prof. Sinha whose address is: Water Technology Section, Indian Agricultural Research Institute. New Delhi-110012.

2. Arabian/African Meeting. The President, Prof. Dr. H. Ziegler of Munich, F.R.G. has been negotiating with Prof. Battanouy of Egypt and his colleagues who are keen to organize a meeting with the theme of "Ecophysiological problems and research in Africa and the Arab countries" to be held probably in Cairo, Egypt late in 1987. Other venues for this meeting are also being considered. The meeting will be co-sponsored by IAPP.

3. IAPP at the XIVth International Botanical Congress 1987. IAPP will be promoting a number of activities at the IBC in Berlin, F.R.G. These include:

- a series of discussion meetings on topical subjects in plant physiology.
- a meeting of Editors of plant physiological journals for discussions on the problems and future of publications. This meeting has been initiated by Prof. A. Kylin, Editor of *Physiologia Plantarum* together with Prof. J. Guern (*Physiologie Vegetale*) and Prof. W. Schwabe (*Journal of Experimental Botany*).
- an information desk to encourage the founding of new associations of plant physiologists especially in developing countries, and to promote interchange between plant physiologists from the developed and developing countries.
- a General Meeting of IAPP.
- the Council Meeting of IAPP.

Policy Directions for IAPP

The developing Countries. A major theme of IAPP is to promote plant

physiology at the international level, with emphasis on the developing countries. The Secretary/Treasurer has been exploring the situation of plant physiology in the developing countries. As outlined in last year's newsletter the number of plant physiologists in the majority of developing countries is very low. It seems likely that the majority of plant physiological associations in the world are now members of IAPP, representing about 40 countries. This results from the membership drive over the last few years. (It must be said that only a proportion of members are fully financial members, for a variety of reasons including Government currency exchange controls). The question remains as to what can be done for the professionally isolated plant physiologists in many developing countries. Contact has been made with a number of these plant physiologists, particularly in Africa and South East Asia. Present IAPP policy does not permit individual membership but the possibility exists for the formation of regional associations.

Pan-Pacific Association of Post-Harvest Physiologists. A regional association of post-harvest physiologists for the Pacific Basin has been proposed by Prof. I. Uritani of Nagoya, Japan. This was discussed at the 4th Federation of Australasian and Oceanian Biochemists (FAOB) Symposium held in Manila, the Philippines in October 1984 and was received enthusiastically. It would provide a forum for the complex discipline of post-harvest physiology which comprises not only the basic science of grains, other staples, fruits and vegetables post-harvest but also applied technology relating to them. This field is of particular importance in developing countries, especially in the tropics where post-harvest losses can be very great.

Booklet on Terminology, Symbols and Units in Plant Physiology. Prof. Frank B. Salisbury of Utah, U.S.A., has formed a committee to produce the revision of this booklet for IAPP. It is planned to publish in time for the International Botanical Congress in 1987. The aim of the booklet is to standardize the use of terms, symbols and units in plant physiology. If all the plant physiological journals could adopt the standardized forms it would make research papers and articles easier to write and read!

Support from our 'old' members. It is recognized that the major part of the membership of (and therefore financial support for) IAPP continues to come from the advanced, industrialised nations. Many national associations must be questioning the value of belonging to IAPP, especially with increasing cost pressures on their finances. The holding of the next International Botanical Congress in Berlin in 1987 will

provide a focus for IAPP in Europe and IAPP intends to support an active programme of matters relating to plant physiology at IBC. The case for continued support for IAPP is set out below:

- IAPP - promotes plant physiology at the international level by, for example, our membership of the International Union of Biological Sciences, maintenance of entries in international directories, and the like,
- promotes information exchange world-wide on plant physiology through the IAPP Newsletter and through the IAPP Secretariat,
 - promotes regional/international meetings of plant physiologists, providing initial "seeding funds" and secretariat mechanisms for seeking international agency support,
 - provides an international focus for promoting plant physiological matters such as:
 - Booklet on Terminology, Symbols and Units in Plant Physiology (revision in preparation),
 - International Directory of Plant Physiologists (being updated),
 - forum for co-ordination and co-operation among Journals of plant physiology (discussion meeting proposed at IBC Berlin 1987),
 - activities relating to plant physiology at the International Botanical Congresses.
 - promotes interaction between plant physiologists internationally, particularly between the developed and the developing countries;
 - provides a formal structure to undertake International Congresses of Plant Physiology should the International Botanical Congresses not continue, due, for example, to the lack of a sponsoring host country.

IAPP is currently operating a successful programme following the above aims. It will only continue to be successful provided it receives active support from its constituent members.

Finances. The finances continue on a sound basis with A\$4187 available in our reserves. Future expenditure is likely to be heavier than in the recent past because of the forthcoming regional meetings in India and Egypt, as well as activities at the International Botanical Congress. Financial support will also be required for publication of the Booklet on Terminology, Symbols and Units.

International Directory of Plant Physiologists. IAPP holds a directory of about 10 000 plant physiologists world-wide on computer file with the American Society of Plant Physiologists. This was prepared in 1980 and should now be up-dated.

International Union of Biological Sciences. IUBS recently held its XXII General Assembly in Budapest, Hungary. Reports are available on the following IUBS Scientific Programmes:

The Decade of the Tropics which includes sections on

- Species diversity in tropical ecosystems
- Tropical mountain ecosystems
- Savanna responses to stress
- Biological monitoring of the state of the environment-bioindicators
- Biological education
- Medicinal plants project
- Biosystematics and biological nomenclature
- Vegetation map of Europe
- Biological oceanography
- New tests for new drugs
- Regional biosciences network in the Arab States

Members interested in joining any of these programmes should contact either the Secretary/Treasurer of IAPP or Dr. Talal Younes, Executive Secretary, IUBS Secretariat, 51, boulevard de Montmorency, 75016 Paris, France.

RECOGNITION OF BOTHALIA UNDER SAPSE-110 SUBSIDY FORMULA

The Botanical Research Institute has been informed that the Advisory Council for Universities and Technikon (AUT) has included Bothalia in the supplementary list of journals approved under the SAPSE-110 formula for subsidy purposes.

REDAKTRISE/EDITOR

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