

FORUM BOTANICUM

Vol. 11, No. 8

August, 1973
Augustus 1973

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

ANNUAL SCIENCE CONGRESS: The 71st annual congress of the South African Association for the Advancement of Science was held at Pretoria University from 25th to 29th June. Prof. C. Cresswell of Witwatersrand University was president of Section B which was organised by SAAB.

The following papers of botanical interest were read at the congress:-

1. Engelbrecht, Prof. A.H.P. : Intranuclear particles in streak infected maize.
2. Robbertse, Prof. P.J. : 'n Skandeer-elektron mikroskopiese studie van die stuifmeel van Suid-Afrikaanse *Acacia*-soorte.
3. Jacot-Buillarmod, Dr. A. : Studies of the epidermis of cycads.
4. Engelbrecht, Prof. A.H.P. : The ultrastructure of *Tetraselmis (Platymonas)*
5. Pretorius, J. : 'n Oopbloei van *Tetraselmis (Platymonas)* in die Vaalrivier-barrage.
6. Willcox, A.R. : Archaeology and afforestation.
7. Chutter, Dr. F.M. : An ecological account of the past and future of South African rivers.
8. Cresswell, Prof. C. : Some recent aspects of photosynthesis and photorespiration (Presidential Address to Section B).
9. Plumstead, Dr. E.P. : Trees in the past. Consideration of trees in relation to the earliest discovered traces of carbon to the Gondwana floral province.
10. De Winter, Dr. B. : South African Trees, a semipopular survey.
11. Visser, Dr. J.H. : Translokasie van pikloram.
12. Grobbelaar, Prof. N. : Fisiologiese aspekte van die groeiwyse van xerophyta.

13. Groenewald, E.G. & Visser, Dr. J.H. : Effect of certain inhibitors of Prostaglandin biosynthesis on the flowering of *Pharbitis nil*.
14. Visser, Dr. J.H. & Kruger, G.H.T. : Dekarboksilasie van dikloram as ontgiftingsmeganisme.
15. Schütte, Dr. K.H. : The influence of micronutrient imbalance upon the water relations in the sunflower.
16. Grobbelaar, Prof. N. & Van der Merwe, S.P. : Die endofiet van die blaarknoppies van inheemse *Pavetta*-soorte.
17. Tew, A.J. : The influence of the growing media and light intensity on enzyme activities, the carbon dioxide compensation point, the incorporation of $C^{14}O_2$ and rate of senescence with time in the first leaf of *Hordeum vulgare*.
18. Mitchell, Dr. D.S. : The shoreline vegetation of Lake Kariba.
19. Lee, Dr. R.E. & Reavill, P. : Hydrobotanical studies in the lower part of the Okavango Swamps in Botswana.
20. Scott, W.E. : Studies on planktonic blue-green algae in two Transvaal dams.
21. Von Teichman, mej. I. : Die bou en ontkieming van die sade van die *Dioscorea*-soorte in die Transvaal.
22. Small, Prof. J.G.C. & Ferreira, D.P. : Preliminary studies on seed germination of *Drosera aliciae* Hamet.
23. Small, Prof. J.G.C. & Van der Walt, H.A. : Studies on respiration and certain respiratory enzymes of *Strelitzia reginae* seeds.
24. Strauss, J.H. : Veroudering van angelier-blomme.
25. Rycroft, Prof. H.B. : The proposed Transvaal Botanic Garden at Krugersdorp.
26. Wenger, Dr. M.J.A. : The Zurich-Montpellier approach to the study of vegetation.
27. Theron, G.K. : Die ordening van die plantegroei van die Loskondam-natuurreservaat.
28. Boucher, C. : Aspects of the vegetation in the Cape Hanglip area of the South-Western Cape.
29. Coetzee, B.J. : A comparison of Association- and Braun-Blanquet-analyses of the vegetation of the Jack Scott Nature Reserve.

30. Lewis, Prof. O.A.M., Pate, Prof. J.S. & Schütte, Dr. K.H.: Studies on the nutrition of transpirationally-derived nitrogen in protein synthesis of fruiting plants of *Pisum*.
31. Pate, Prof. J.S., Schütte, Dr. K.H. & Lewis, Prof. O.A.M. : Studies on the nutrition of legume plants: (2) The contribution of phloem and xylem transport to the nourishment of fruits.
32. Henning, P.A. & Lee, Dr. P.E. : A study of the algal pathogen *Prototheca wickerhamii*.
33. De Swardt, Dr. G.H.: Sekere verouderings-aspekte in rywordende tamaties.
34. Heslop-Harrison, Dr. J. : The physiology of the pollen-stigma interaction and the incompatibility response.
35. Hall-Martin, A. : Aspects of the vegetation of the Lengwe National Park in Malawi.
36. Cutler, Dr. D.E. : Anatomical diversity in Restionaceae from South Africa, Australasia and South America in relation to continental drift.
37. Henderson, D. : The development of surface ornamentation of rust fungus spores.
38. Von dem Bussche, G.H. : Conservation management of the indigenous forests in the Southern Cape Forest Region.
39. Strey, R. : South African Araliaceae.
40. Bowmaker, : *Salvinia* mats on Lake Kariba.

SAAB SYMPOSIUM: At the S₂A₃ Congress the final day was devoted to a symposium organised by SAAB in honour of the Botanical Research Institute and the opening of its new building. The theme was the four major activities of the Institute and their relevance to modern botany. The following were the speakers:-

Prof. N. Grobbelaar (Professor of Plant Physiology in Pretoria University):
The relevance of plant physiological studies to other branches of botany.

Dr. M. Godron (Ecological Research Centre, Montpellier, France): The use of transition matrices to model forest and grassland dynamics on a regional scale.

Prof. H. Ellenberg (Director of Geobotanical Institute of Gottingen University, Germany): How does research fit in with the Zurich-Montpellier syntaxonomy?

Dr. Quentin Jones (USA Dept. of Agriculture): Screening plants for economic potential in the USA.

Dr. L.E. Codd (Director of the Botanical Research Institute, Pretoria): The role of botanical gardens in research, conservation and education.

Dr. P.H. Raven (Director of Missouri Botanical Garden, St. Louis, USA): Biological systematics, -prospects for the future.

Dr. O.A. Leistner (Curator of National Herbarium, Pretoria): The National Herbarium. A discussion of the role and function of herbaria in a present-day context.

Mr. J.W. Morris (Botanical Research Institute, Pretoria): Computerisation of herbarium procedures - a review and account of progress at the National Herbarium.

Prof. H. Merxmüller (Director, Botanische Staatssammlung, München): Floras, are they necessary?

Dr. B. de Winter (Deputy Director, Botanical Research Institute): The Flora of Southern Africa.

Prof. F.A. Stafleu from Utrecht who was to have spoken on the historical aspects of the South African Flora was unable to attend due to sudden ill-health.

BOTANICAL RESEARCH INSTITUTE: For many years the Institute was housed in inadequate, cramped conditions with a high fire risk in the grounds of the Union Buildings in Pretoria. After more than two decades the ideals of consecutive directors have at last become a reality, and a magnificent new building houses the herbarium collections, library and laboratories. To add to the attraction of this building it has a superb setting on a ridge in the Botanic Gardens overlooking the nearby CSIR complex. Vantage points offer views to the north and south of the garden and the surrounding countryside.

The garden and herbarium together produce the ideal combination of living and dried collections of plants for study by the research staff attached to the herbarium and the anatomical and cytogenetical research laboratories.

The building is both aesthetically pleasing as well as functional. All floors throughout the building are on the same level to ensure easy transport of material. Every attempt has been made to relate function to the layout.

The building spreads across a shallow neck in the ridge which allows for a basement under the central part of the building. The basement consists of an office for a storeman overlooking the off-loading ramp and service entrance, a workroom and storeroom, the photographic studio and darkroom, and instrument workshop.

On the ground floor is situated the main entrance which leads to the combined museum and auditorium on the one side and on the other to the reception, the cafeteria, committee room and directors' offices. The Botanical Survey Section is housed in the west wing and the laboratories as well as the administrative offices in the east wing.

The first floor houses the library, two herbarium wings, artists' studio and offices for the research team mainly responsible for the preparation of the Flora of Southern Africa.

The second floor repeats the layout of the first except for an additional six offices above the library which house the Economic Botany Section.

Together the four herbarium wings will be able to house a maximum of 1,5 million specimens. At present the collection consists of about 6000 000 specimens. The increase is about 20 000 specimens annually.

Adequate provision has been made for future expansion, the structure of the building allowing an additional two floors to be added, which would double the present herbarium accommodation.

Official opening: Monday 2nd July was a very important day in the history of the Institute. In the presence of a large gathering of distinguished visitors the new building was officially opened by the Minister of Agriculture, Hon. H. Schoeman. The main introduction and welcome came from the Secretary for Agriculture, Dr. W. Verbeek. Dr. L.E. Codd, present Director of the Institute, introduced the Minister who was then thanked by Prof. H.P. van der Schijff of Pretoria University and Past President of the Association. In his thanks the professor congratulated the Department on providing the Institute with such excellent facilities for working on the flora but made an urgent plea for an increase in staff to deal with producing the Flora of Southern Africa. He stressed very strongly the basic role of the Flora which is so vital to the

agricultural work in South Africa. The specially invited guests from overseas then came forward to bring best wishes from their respective institutes, Prof. J. Heslop-Harrison (Kew), Mr. D. Henderson (Edinburgh), Prof. H. Merxmüller (Münich), Prof. H. Ellenberg (Göttingen), Dr. M. Godron (Montpellier), Dr. Q. Jones (Dept. Agric., USA), Dr. P.H. Raven (Missouri). Some of them added to Prof. van der Schijff's plea for the Flora. A slide show with commentary covering all the aspects of the Institute was shown to the gathering. After the opening in one of the herbarium wings everyone moved downstairs for a cheese and wine party.

New appointments: At the opening ceremony the Secretary for Agriculture, Dr. Verbeek, announced that the present Director, Dr. L.E. Codd, would be retiring in September and that his successor would be Dr. B. de Winter who is the present Deputy Director. Dr. D.J.B. Killick would then become Deputy Director and Dr. D. Edwards Assistant Director.

Banquet: In honour of the opening of the new building the Association of Botanists held a banquet at the Pretoria Country Club on Friday 29th June. The special guests for the evening were Dr. W.A. Verbeek, Secretary for Agriculture and Dr. C. Brink, President of the Council for Scientific and Industrial Research and Dr. R.A. Dyer former Director of the Institute. 131 members and friends attended the banquet. The President of the SAAB, Prof. C. Cresswell of Witwatersrand University welcomed everyone. Dr. J. Heslop-Harrison, Director of Kew, was the guest speaker and the Hon. Secretary of SAAB, Dr. A. Eicker gave the thanks. Mr. E.G.H. Oliver was MC for the evening.

Highlight of the evening was the presentation of SAAB's first South African Medal for Botany to Dr. R.A. Dyer by Dr. L.E. Codd. Dr. B. de Winter read the citation in recognition of Dr. Dyer's outstanding contributions to South African Botany.

All those present signed cards which were sent to Prof. Frans Stafleu of Utrecht who was to have been present, but could not come at the last moment due to ill-health. Best wishes were sent to him from everyone and were very much appreciated by him.

SAAB. POST S₂A₂ EXCURSION TO THE MAGALIESBERG: A convoy of westward bound vehicles left Pretoria during the early hours of Saturday 30th June. The large tour group of about 50 people then proceeded to play spot-the-leader with the various vehicles taking devious routes to either Utopia where we were to stay, or to the farm Puddin-and-Poke of Adv. H.F. Junod for the day's excursion.

After morning tea, the various lost sheep were shepherded over the rough terrain of the northern slopes of the Magaliesberg to the head of Tonkwane Kloof. The fibrous stump-like stems with the long grass-like leaf blades protruding from the top of the *Vellozia* species, drew particular attention in the sour bushveld vegetation with *Faurea saligna*, *Combretum zenheri*, *C. molle*, *Protea caffra*, *P. gagedi*, and others giving a savanna effect.

Of interest was a nearby ravine which was pointed out. This was called Cedarberg Kloof. Was this named by a homesick Capetonian?

A slip on the descent into Tonkwane Kloof, resulted in Mrs. Lütjeharms getting emergency medical treatment from firstly the stalwart Mrs. Bertish, then the local doctor and finally from a Pretoria plastic surgeon. (The surgery appears to have been successful.)

In the kloof itself a further drama was meanwhile being enacted. Our leader, Ben, shyly introduced himself to one of the distinguished, but eligible, members of the party who had got separated from the rest. Hands were held to transverse the stream. A dismal return to reality - unfortunately - when both experienced the sobering powers of the cold mountain stream.

The bungalows at Utopia were delightfully secluded, being sparingly distributed through fairly dense lower valley slope savanna. Some who enjoyed the evening braai rather much, soon found this out when wanting to retire for the night.

Prof. Cresswell led us further west on the Sunday to the Bartlett's farm where Mrs. Bartlett guided us on a stroll through open savanna to kloof vegetation. Masses of *Aloe davyana* were in full bloom.

Mr. & Mrs. Hodgson of Pietersfield Nurseries killed the proverbial fatted, not calf, but sheep for our lunch presenting us with a magnificent spread. The local kumquat jam on homemade wholewheat bread was an instant hit. After the

large meal, most spent the rest of the afternoon relaxing at Utonia.

The next morning saw everyone packed off early to attend to radio interviews and such like in connection with the opening of the new Botanical Research Institute Building. (C.B.)

DR. E.J. MOLL takes up the new post of Senior Lecturer in Ecology in the Botany Department, University of Cape Town this month. He was formerly Botanical Survey Officer in the Botanical Research Institute and stationed at the Unit in Durban.

MR. A.R. JACOBS for 38 years Senior Laboratory Attendant in the Botany Department, University of Cape Town, died on 30th July at the age of 66 after only one and a half years of retirement. Many generations of South African botanists experienced the wisdom and help of Mr. Jacobs. The Editors both knew him well and appreciated his friendship. On several occasions he did the duplicating of Forum in its early years.

BOTHALIA: Vol. 11, Parts 1 and 2 appeared in print on 14th June 1973. This issue, which runs to 205 pages, has a new format (A4) and cover designed by artists of the Department of Agricultural Technical Services. The main articles are revisions of *Zantedeschia* by Cythna Letty, the Southern African species of *Crinum* by Dr. I.C. Verdoorn and *Corriphora* by Dr. J.J.A. van der Walt. The first two articles are illustrated by 14 colour plates. The remaining articles deal with a variety of subjects including taxonomy, ecology, economic botany, mycology and phytogeography. The price is R6 and the journal is obtainable from the Division of Agricultural Information, Department of Agricultural Technical Services, Private Bag X 144, Pretoria.

EXHIBITION OF BOTANICAL ART, PRETORIA: An exhibition of botanical art work of the Botanical Research Institute will be held in the Pretoria Art Museum, Arcadia Park, from 8th August - 8th September, 1973. The exhibition will be opened by Mrs. H.F. Verwoerd at 8 pm on 8th August. Paintings by Cythna Letty, who contributed over 600 plates to the Flowering Plants of Africa series, Edith Burges, Kathleen Landsdell, Stella Gower, Betty Connell, Peter Bally,

Fay Anderson, Adele Walters, Irma Kerr, Jillian Hulme and other artists will be exhibited. In addition to the colour work, a variety of black and white illustrations will be shown.

NEW BOOK ON GRASSES: For many years there has been a need among our farmers and other interested persons for a simple guide to our common veld grasses. Recently this need has been met by the publication of Prof. Brian Roberts' book COMMON GRASSES OF THE ORANGE FREE STATE which has been published by the Provincial Administration of the Orange Free State. Both English and Afrikaans ("Algemene Grasse van die Oranje-Vrystaat") editions have been published simultaneously and are available free of charge.

The author has limited the guidebook to the 60 most common grasses of the inland region of South Africa. For this reason the book should be useful far beyond the borders of the Free State. The guide groups the grasses into simple categories on the basis of their type of inflorescence and full page illustrations of the most useful distinguishing features accompany each grass. It is the only guide which gives not only simple descriptions of each grass but also information on the distribution, soil preference, palatability, successional stage and general usefulness of each. Appendices include information on nutritive value, common names and botanical names. This joint contribution by Prof. Roberts and the artist, Mrs. Walpole, should make this a useful addition to the books on South African plants. The book is available from: Director of Nature Conservation, P.O. Box 517, Bloemfontein.

INDEX HERBARIORUM AUSTRO-AFRICANORUM: Copies of this work are still available at 50c each from the editor, Mr. H. Tölken, Bolus Herbarium, University of Cape Town, Rondebosch, Cape. The work of 66 pages covers all the main herbaria in South Africa and was published by the S.W. Cape Branch of SAAB.

UNIVERSITY TECHNICAL POST WANTED: Miss Carole A. Spurdon, B.Sc. (Hons.) (Nott.) is looking for a post as Technician at a South African University. Her present position is Senior Technician grade 5 at the Botany Department, Royal Holloway College, University of London. Her duties there include responsibility for operation and use of electron microscope and ancillary

equipment and class practicals in physiology and virology. She is also involved in research for a member of staff in plant virology, involving use of E.M., ultracentrifuge and other equipment and techniques for this field of study.

Further details of experience and qualifications may be obtained from:

Dr. R.A. Lubke
Department of Botany
University of the Witwatersrand
JOHANNESBURG.

or from: Miss Spurdon at
16 Willow Walk
Englefield Green
SURREY, U.K.

EDITORS/REDAKSIE:

E.P. du Plessis, CSIR, Pretoria

E.G.H. Oliver, Botanical Research Unit, Stellenbosch

CORRESPONDENCE/KORRESPONDENSIE

Mrs. E.P. du Plessis
Science Co-operation Division
CSIR, P.O. Box 395
PRETORIA