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NUUSBRIEF VAN DIE SUID-AFRIKAANSE GENOOTSKAP VAN PLANTKUNDIGES

NATIONAL BOTANIC GARDENS, KIRSTENBOSCH - QUO VADIS?

Personeel

Na 'n loopbaan van bykans 30 jaar, het prof. H.B. Rycroft in Augustus 1983 as Direkteur van die Nasionale Botaniese Tuine van Suid-Afrika afgetree. Pauline Fairall, wat die afgelope tien jaar 'n baie groot bydrae tot die taksonomiese aktiwiteite van die Compton Herbarium gemaak het, het verlede maand afgetree en na Perth in Australië teruggekeer.

Dr. Kim Steiner, wat in bestuingsbiologie spesialiseer, mnr. Larry Leach, bekende sukkulenttaksonoom en prof. Kobus Eloff het onlangs by die Nasionale Botaniese Tuine aangesluit.

Aktiwiteite

In die koerante van die Skiereiland, is daar onlangs baie sterk publisiteit verleen aan die finansiële probleme van die Nasionale Botaniese Tuine en aan die stelling dat Kirstenbosch besig is om sy internasionale aansien as Botaniese Tuin te verloor. Op die versoek van die Natuurlewevereniging het die Direkteur 'n artikel in die April-uitgawe van Cape Wildlife (Vol. 2/84) geskryf om die agtergrond tot die publisiteit bekend te stel. 'n Deel van die artikel word met veranderings hier weergegee:

What is the National Botanic Gardens (NBG)?

Kirstenbosch was bequeathed "to the united South African nation" by Cecil John Rhodes in 1902. It was established in 1913 as the first National Botanic Garden with the aim "to collect, to cultivate, to study, to conserve and to make known our indigenous flora". It was the first botanic garden to devote itself to the study and cultivation of the indigenous flora of a specific region (the Southern African region). This was a departure from the universally accepted principle of collecting and acclimatizing plants from all over the world and similar botanic gardens have since then been established in a number of centres elsewhere in the world. Subsequently seven further gardens were also developed as regional gardens of the NBG in different climatic regions of South Africa: Karoo Botanic Garden (Worcester, 1946), Harold

Porter Botanic Garden (Betty's Bay, 1959), Orange Free State Botanic Garden (Bloemfontein, 1967), Drakensberg Botanic Garden (Harrismith, 1967), Lowveld Botanic Garden (Nelspruit, 1969), Natal Botanic Garden (Pietermaritzburg, 1969) and Transvaal Botanic Garden (Roodepoort, 1982).

The NBG is an autonomous state-aided cultural institution, managed by a Board of Trustees. Six members are appointed by the Minister of Environment Affairs and five by other funding organizations (Botanical Society of South Africa, University of Cape Town, representatives of other Universities, Municipalities and Provincial Administrations) supporting the NBG. The State at present funds 88% of the annual budget of ca. R3.4 million.

The Botanical Society was also established in 1913, with the sole aim of lending financial and moral support to the NBG. The 12 000 members and the quarterly journal, *Veld & Flora*, also play a vital role in acting as a channel to publicise NBG objectives.

What is a Botanic Garden?

Many people see a botanic garden as a beautiful place where some plants have names and where one can relax from the pressures of modern life. While this is one aspect of a botanic garden, its real purpose is very different from that of a park with named plants. According to the definition in *Hortus* (1977) -

"A botanical garden is a controlled and staffed institution for the maintenance of a living collection of plants under scientific management for purposes of education and research, together with such libraries, herbaria, laboratories and museums as are essential to its particular undertakings."

"The botanical garden may be an independent institution, a government operation, or affiliated with a college or university. If a department of an educational institution, it may be related to a teaching programme. In any case, it exists for scientific ends and is not to be restricted or diverted by other demands. It is not merely a landscaped or ornamental garden, although it may be artistic, nor is it an experiment station or yet a park with labels on the plants. The essential element is the intention of the enterprise, which is the acquisition and dissemination of botanical knowledge."

The functions of a botanic garden may be described at different levels. The basis is the horticultural component. Without establishing plants and maintaining them no botanic garden can exist, but the reasons for establishing the plants are to preserve the genetic variability of the flora (horticultural function), to study the plants (research function) and to disseminate the knowledge acquired (educational function), and to make people aware of the value of plants (conservation function).

To what extent has Kirstenbosch fulfilled these functions?

Horticulture:

Because the main accent in the past was on the horticultural aspects, Kirstenbosch as a garden has developed very well within the financial restraints that were imposed upon it. Our horticulturists have succeeded in growing a very large variety of Southern African plants in Kirstenbosch. At a recent estimate, more than a third of the 21 000 different South African flowering plants are grown at Kirstenbosch. There are many examples of plants that could not be cultivated elsewhere, that were successfully grown here. Cultivating plants without someone making active use of them for research or educational purposes is a non-rewarding exercise. Many horticulturists would put too much accent on the beautiful or spectacular plants under such conditions. Possibly this has been happening at Kirstenbosch as well.

On the whole we can be very proud of what our horticulturists have achieved at Kirstenbosch. It could very well be the most beautiful botanic garden in the world, but there is scope for improvement and expansion if additional finances can be found.

Research:

In taxonomic research much has been achieved. The Compton Herbarium has grown into one of the major herbaria in the country since it was started in 1939. Our scientists have made significant contributions to South African taxonomy. Due to insufficient funding, however, a major part of the work done on South Western Cape Flora is being done by overseas taxonomists in close co-operation with our scientists.

The Meiring Naudé Committee which investigated the National Botanic Gardens in 1976 had the following comment:

"... research does not actually exist at the National Botanic Gardens of South Africa. While it can be expected that research in widespread botanical spheres (this includes taxonomy, morphology, anatomy, plant physiology, ecology, plant pathology and horticulture) should be concentrated on, research is only being undertaken in the areas of taxonomy, and even here it is totally inadequate, especially in the light of the abundance of available material."

Education:

The school that the Provincial Administration of the Cape built in Kirstenbosch in 1969 is fulfilling a vital role. Pupils of Standards 3 - 5, mainly from Southern Suburbs, visit the school on every school day if the weather is favourable. During 1983, approximately 7 500 school children visited this

school. This is entirely a provincial administration facility and they pay the salaries of the two teachers. The facility is at present not available for other educational purposes and consequently only white pupils from the Cape Provincial Administration's schools may use it.

The Education Officer that the National Botanic Gardens has appointed, is fulfilling an important role, as can be seen from the more than 17 000 scholars of all races that were taken through Kirstenbosch in 1983. The fact that no interpretive centre is available makes it extremely difficult to make a significant educational contribution to the visitors.

The Botanical Society fulfils an important role in two ways. In the first place the voluntary guides are extremely important to visitors. Secondly, the publications of the Botanical Society provide a major educational contribution to its members (Veld & Flora) and to all nature lovers (Wild Flower Guides).

In general, however, Kirstenbosch is nowhere near fulfilling the educational role that could and should be one of its principal aims.

Conservation function:

As far as making people aware of the horticultural value of our plants, Kirstenbosch has been very successful. Not only in South Africa but all over the world, the beauty of especially the fynbos flora has made a big impact. At this year's international flower show at Chelsea, flowers from Kirstenbosch have for the fourth year running, won the Gold Medal and the Wilkinson Sword. The Protea industry is to a large extent a result of the efforts initiated at Kirstenbosch. There is, however, still scope for making people aware of the horticultural value of other flora. The non-horticultural value of our plants has hardly been touched and very much remains to be done.

Why have research and education lagged behind?

The first phase in the development of the NBG was the establishment of gardens in the different vegetation areas of the country. This excellent policy was a world first and has subsequently been copied by many other countries. Unfortunately the resources, especially people, facilities and finance, became very thinly spread and consequently research and education could not get the attention they warranted. This phase was however absolutely essential to serve as a foundation upon which the next phases, incorporating research, education and conservation, can be built. The research and education

efforts have been inhibited by the following limitations: (a) policy; (b) personnel; (c) facilities, and (d) finances available.

How can limitations be minimised?

The Board of Trustees has decided that much more accent should be placed on Research and Education. This may also be seen from the new Bill on National Botanic Gardens (1984) before Parliament, in which the objects of the NBG are stated, as follows:

"The objects of the board are to promote the conservation of, and research in connection with, Southern African flora, and to that end the board may -

- (a) collect and cultivate plants indigenous to the sub-continent in national botanic gardens;
- (b) undertake and promote research in connection with plants and related matters, and make indigenous plant material available for research;
- (c) study and cultivate endangered plant species;
- (d) investigate, utilise and promote the economic potential of indigenous plants among the public;
- (e) foster an appreciation of indigenous plants among the public;
- (f) establish non-indigenous plants for comparative studies and education purposes."

This change in policy will take some time to implement, mainly because of the personnel, research facilities and financial limitations.

At present only four scientists, three taxonomists and a recently-appointed plant pathologist (who has to work at the University of Stellenbosch because there are no facilities at Kirstenbosch), do research at the NBG. At least ten times more scientists are needed if the NBG is to fulfil its research work. The Meiring Naudé committee proposed that at least 35 scientists should be employed at the NBG. In August 1983, ten additional research positions were approved but due to financial restrictions these positions have not as yet been filled. One way in which research at Kirstenbosch can be promoted, even if there were no permanent positions available, would be by making use of guest researchers or post-graduate students working at Kirstenbosch. Funds are available to appoint post-graduate students for a two to three-year period to work on specific projects in order to obtain an M.Sc. or Ph.D. degree.

Even as long ago as 1922, in his Annual report, Prof. R.H. Compton, the second Director of the NBG stressed the importance of a laboratory as follows:

"The erection of a laboratory, as recommended by the National Botanic Gardens' Advisory Committee, should also be taken in hand as soon as possible in the interest of the scientific side of the Gardens. At present the only space even partially suitable for laboratory work - namely part of the Director's private study - is occupied as the Secretary's office. I cannot urge too strongly the desirability of fostering the scientific side of the work of the Gardens. It is this that distinguishes a botanic garden from a mere pleasure resort, and it is on this that the usefulness and reputation of a garden chiefly depends".

The planning of a research and education complex at Kirstenbosch that will cost several millions of rands, has progressed very well and if finances are available, the building may start in 1985. The final limiting factor is the absence of funds. The personnel and facilities required have been approved, but it has been stated that it is the function of the Government to finance the NBG.

Many of the most important botanic gardens in the world, such as the New York Botanic Garden, the Missouri Botanical Garden and the Arnold Arboretum, are funded completely by the private sector. Apart from 2,2% of the total contributed by the Botanical Society, no funds are obtained for NBG from the private sector.

The Development Fund for the National Botanic Gardens has been set up between the Botanical Society and the NBG in order to raise funds to help the National Botanic Gardens reach their objectives.

The funds that will be raised from the private sector will probably never be sufficient to finance all the additional requirements. Support at a significant level will, however, make it much easier to convince the Government to increase financial aid to help the National Botanic Gardens to reach its aims of horticulture, research, education and conservation.

Navorsingsbeplanning aan NBT

Soos in die wetsontwerp oor die NBT saamgevat is, sal die navorsing van die NBT op bedreigde plante en op tuinboukundige navorsing toegespits wees.

Die bedreigde plantnavorsing sal 'n geïntegreerde poging wees waarin nie slegs plantfisioloë nie, maar ook -taksonome, -ekoloë, -patoloë, fitochemici en selfs entomoloë betrokke by sal wees. Die doel van hierdie groep sal wees om soveel as moontlik inligting van geselekteerde bedreigde plante of plant-

groepe in te sament sodat die plante nie alleen in botaniese tuine gekweek kan word nie, maar die potensiële waarde van die plante ook ondersoek kan word. Dit wil op hierdie stadium voorkom asof die grootste inset van die kant van die plantfisiologie gaan kom. Hierdie tipe navorsing sal waarskynlik nie by die streekstuine nie, maar slegs in Kirstenbosch uitgevoer word.

Die tuinboukundige navorsing behels alle aspekte wat die kweek van inheemse plante in tuine aanbetref. In die verlede het die tuinboukundiges van Kirstenbosch al daarin geslaag om plante wat nêrens elders gekweek kan word nie suksesvol aan die groei te kry. Oor die algemeen is 'n empiriese benadering gebruik en die kweek van baie soorte plante is meer 'n kuns as 'n wetenskap omdat die meganisme waarvolgens faktore die groei beïnvloed nie bekend is nie. Om die tuinbou van ons inheemse plante op 'n meer rasionele basis te plaas, sal baie insette van plantfisioloë en ekofisioloë benodig word. 'n Verdere aspek wat baie sterk aandag sal kry is die verbetering van inheemse plante met tuinboukundige potensiaal deur seleksie en hibridisering. Dit strek Suid-Afrikaanse plantkundiges tot onoor dat so veel van ons wonderlike flora oorsee veredel word en dan met aansienlike finansiële winste versprei word.

Om te verseker dat die navorsingswerk gekoördineer word en dat daar nie onnodige duplisering plaasvind nie, is daar 'n navorsingskakeelkomitee tussen die Direkteure van die Nasionale Instituut vir Plantkunde, die Tuinbounavorsingsinstituut en die Nasionale Botaniese Tuine ingestel onder voorsitterskap van die Hoofdirekteur van Tuinbou, dr. Heyns.

Om die Direkteur van die NBT te adviseer en projekte te evalueer, is benewens die Navorsingskomitee van die Raad ook 'n Navorsingsadvieskomitee ingestel met verteenwoordigers van verskillende Universiteite, die NIP, die Nasionale Parkeraad, WNNR en Bosbou.

Opvoedingsbeplanning aan NBT

Die opvoedingskomponent is een van die heel belangrikste funksies van die NBT. Die doel is nie slegs om mense oor plante in te lig nie, maar veral om alle aspekte rakende omgewingsopvoeding onder die aandag van verskillende dele van die publiek te bring. Die teikengroepe sluit skoolkinders, algemene publiek, tuiniers, studente en wetenskaplikes in.

Die Raad van die NBT het ook goedgekeur dat daar 'n Opvoedingskomitee aangestel word om hierdie aktiwiteite te help inisieër en koördineer.

Die voorsiening van 'n inligtingsentrum wat as lewende museum sal dien, 'n reeks uitstalglashuise, asook 'n opvoedkundige kompleks wat benewens lesingsale, oornagfasiliteite vir 80 persone met werkskamer sal hê, is in beginsel goedgekeur. Die voorsiening van bogenoemde fasiliteite sal saam met die 60- en 250-sitplek-ouditoriums van Kirstenbosch 'n bruikbare konferensiesentrum maak.

Voorsiening van fasiliteite

Die eerste laboratorium waarin hoofsaaklik fitochemiese werk gedoen gaan word, is voltooi. Die apparaat in hierdie laboratorium is deur die Universiteit van Kaapstad en die WNNR voorsien en drie M.Sc.-studente, At. van Schalkwyk, Diane Prosch en Gill Scott het alreeds hierin begin werk. 'n Laboratorium-kompleks vir bedreigde plantnavorsing wat benewens die plantpatoloog, Linda Benić, ook nog 'n tiental ander navorsers sal kan huisves, sal binne 'n maand betrek kan word. Indien pogings om addisionele fondse te bekom om van die goedgekeurde poste te vul, slaag, sal daar binnekort advertensies geplaas word vir die benodigde personeel.

'n Kantoorgebou om die ernstige ruimteprobleme wat die Compton Herbarium het, op 'n tydelike basis op te los, word tans voltooi en dit sal binnekort betrek kan word. Ruimte word hierdeur vir tot vyf addisionele navorsers geskep.

Benewens die pragtige tweeslaapkamergastehuis waaroor Kirstenbosch beskik, word vier aparte enkelkamerwoonkwartiere met was- en kookgeriewe ook tans voltooi. Hierdie fasiliteite is spesifiek vir gasnavorsers bedoel en ons hoop dat navorsers nadat die laboratorium voltooi is, hiervan gebruik sal maak vir sabbatsverlofdoeleindes.

Publikasies

Benewens 'n aantal navorsingspublikasies deur verskillende lede van die personeel het twee omvangryke publikasies onlangs verskyn, nl. A revision of the genus *Haemanthus* L. (Amaryllidaceae), deur Deidré Snijman en Plants of the Cape Flora - a descriptive catalogue, deur Pauline Bond (Fairall) en Peter Goldblatt.

Die laaste uitgawe van die Jl S. Afr. Bot. verskyn in Oktober vanjaar wanneer die vyftigste volume voltooi sal wees. Vanaf 1985 smelt die twee tydskrifte saam en word dit 'n gesamentlike publikasie van die SAGP en die NBT, nl. Die S. Afr. Tydskrif vir Plantkunde (S. Afr. J. Botany). Die Redaksionele kantoor sal op Kirstenbosch wees met mej. Lovell Bosman as voltydse redaksionele assistent. Die Direkteur van die NBT is ampshalwe Redakteur. Die Redaksionele paneel bestaan uit vyf lede waarvan drie

deur die SAGP en twee deur die NBT genoem word. Die lede van die Redaksionele paneel vir die eerste termyn is Ted Botha (Fort Hare), Dick Pienaar (Natal), John Rourke (Kirstenbosch), Guillaume Theron (Pretoria) en Hannes van Staden (Natal). Hierdie redaksionele komitee sal ook verantwoordelik wees vir die laaste uitgawe van die S. Afr. Tydskr. vir Plantkunde voor amalgamering aangesien prof. Nat Grobbelaar en sy redaksie se dienstermyn aan die einde van Junie verstryk. Namens alle lede van SAGP en die volgende redaksie van SAGP, wil ek baie graag huldebring aan prof. Grobbelaar vir die uitstekende werk wat hy en sy redaksielede gedoen het om die S. Afr. Tydskr. vir Plantkunde te vestig.

Vir monografieë wat te omvangryk is om in n enkele volume van S. Afr. Tydskr. vir Plantk. te verskyn, word voorsien dat daar in die plek van die aanvullende (supplementary) volumes van die J1 S. Afr. Bot. soos in die verlede, n nuwe reeks sal ontstaan. Dit sal op ongereëide tye verskyn afhange van die aanbod van materiaal en in ooreenstemming met oorsese botaniese tuine, bekend staan as "Annals of Kirstenbosch Botanic Garden".

S.A. TYDSKRIF VIR PLANTKUNDE: Lede word in kennis gestel van die toekomstige adres vir enige bydraes vir die Tydskrif: Die Redakteur, Kirstenbosch NBT, Privaatsak X7, CLAREMONT 7735. Vir alle navrae kontak mej. Lovell Bosman (Tel. 021-771166).

VERSLAG OOR DIE AKTIWITEITE VAN DIE RAAD VIR WETENSKAPLIKE PUBLIKASIES:

1. Daar is besluit om die gratis voorsiening vir 4 of 5 jaar van die nasionale tydskrifte aan plaaslike en buitelandse instansies tot n totaal van 10 jaar te verleng as deel van die Raad se promosieveldtog.
2. n Nuwe nasionale tydskrif met die naam: "S. Afr. vir Plant en Grond" sal vanaf begin 1984 verskyn. Dit sal veral die vakgebiede akkerbou, tuinbou, weidingsleer en grondkunde bedien en grootliks Agropantae en Agrochemophysics van die Dept. van Landbou sowel as die vak-verenigings se tydskrifte oor gewasproduksie en weidingkunde vervang.
3. Die Raad vir Wetenskaplike Publikasies sal die publisering van die S. Afr. Tydskr. Wetenskap op n proefbasis vir n verdere drie jaar gedeeltelik steun. Genoemde tydskrif was nog nooit n volwaardige nasionale tydskrif nie. Dit is met geldelike ondersteuning van die WNNR deur die GRNV (Gesamentlike Raad van Natuurwetenskaplike Vereniging) uitgegee. Aangesien die WNNR sy hulp aan die einde van 1983 beëindig het, het die GRNV die Raad vir Weten. Publik. gevra om hom (die GRNV)

van sy verpligting jeens die tydskrif vry te stel. Die GRNV beskik nie oor die fondse om sonder die WNNR se hulp die tydskrif te finansier nie en meeste van die GRNV se lidverenigings was nie ten gunste van sy voortgesette betrokkenheid by die tydskrif nie.

Die GW & TV (Geassosieerde Wetenskaplike en Tegniese Verenigings) het nou, in samewerking met die Wetenskapbeplanningsafdeling van die Staat, die tydskrif by die GRNV oorgeneem en beplan om dit met die Raad vir Wetenskaplike Publikasies se hulp uit te gee. Daar word beplan om die Tydskrif deur die insluiting van baie meer nuuswaardighede en advertensies, aansienlik uit te brei en geldelik meer selfversorgend te maak.

4. Die bedrag wat lidverenigings soos die SAGP, per eksemplaar van die tydskrif wat aan hul lede gaan, moet betaal, sal vir 1984 op 70c en 1985 op R1-00 per eksemplaar per lid, konstant gehou word. 'n Verhoging in die tarief sal in die vervolg minstens een jaar vooruit aan die verenigings bekendgemaak word.
5. Die Raad van Wetenskaplike Publikasies het 'n lys van 39 vakgebiede opgestel waarvoor hulle hoop dat daar nasionale tydskrifte sal wees. Daar is 14 bestaande nasionale tydskrifte.
(Prof. N. Grobbelaar, SAGP-vertegenwoordiger).

PUBLICATIONS:

Plants of the Cape Flora - a descriptive catalogue, will be Supplementary Volume No. 13 of the Journal of South African Botany and is written by Pauline Bond (Mrs. Fairall) recently retired from the Compton Herbarium, Kirstenbosch, and Dr. Peter Goldblatt of the Missouri Botanical Garden, St. Louis, USA.

The vegetation of the south-western and southern Cape comprises one of the most distinctive and unusual assemblages of plants in the world. The flora is very rich, comprising some 8500 of the 21 200 species of recorded flowering plants in southern Africa, but in an area less than 4% of the land surface.

There is no current written record of the Cape Flora, the region being part of a much larger political unit and included in the Flora of Southern Africa, unlikely to be completed by the end of this century. This catalogue attempts to fill a need for a written treatment of the plant species of the Cape Flora. The volume treats in alphabetic sequence by family, genus and species the seed plants beginning with gymnosperms, then the flowering plants separated in the traditional way into monocots and dicots. Common names and well-known syno-

nyms are given with the basic species list and a synoptic description as well as flowering times and geographic distribution are provided. General aspects of the vegetation are illustrated in several colour figures.

Publication is expected during June 1984. Copies at R18-00 a copy (GST, handling and postage incl.) may be ordered from the National Botanic Gardens, Kirstenbosch, Private Bag X7, CLAREMONT 7735.

Lesotho Ferns by Raymond A. Zepp. 96 pages, line drawings, soft cover. ROMA: National University of Lesotho, 1982. Price: R6, postage included.

As in the case of grasses, there has not been a comprehensive handbook on ferns since 1915 when "The ferns of South Africa" by Sim appeared. To some extent, albeit a very limited one, this has been remedied by more modest works of a strictly regional nature, such as "The ferns of the Witwatersrand" by Hancock & Lucas (1973), "Cape Peninsula ferns" by Roux (1979), and the subject of this review.

The present book owes its modest size to the relative poverty of the Lesotho fern flora, which comprises only 45 species. It opens with a short and very elementary chapter on "Classification of ferns and their allies", followed by one on "Where to find ferns in Lesotho". There is an indented symbolic key to species, and a glossary of terms.

In the treatment of individual species there seems to be no uniformity of approach in the text, which is conversational in style. Some information is given on habitat and distribution in Lesotho, on how to distinguish it, and medicinal uses and vernacular names. For each species one page is devoted to a line drawing, which in many instances is of appallingly poor quality. Here I refer specifically to the plates of Psilotum nudum and Isoetes natalensis which are next to useless. In the case of other species it would have been so easy to show the sporangia and sori in greater detail, and to depict the all-important basal parts of the plants.

While the three books mentioned in this review will retain some value as regional guides, it may be mentioned that all three have been made redundant by Jacobsen's "The ferns and fern allies of southern Africa" which will be reviewed in a future issue. (PV)

Field Guide to the Eastern Cape Coast: This publication was noted in a recent edition of Forum Botanicum when sponsors and subscribers were invited to send their contributions to the Grahamstown Centre of the Wildlife Society at Box 73,

Grahamstown, before the end of February. The response from Wildlife Society members, naturalists and the general public has been excellent but unfortunately the response from industry and the commercial sector has not been good. The producers still require some R5 000 to publish this field guide which will be 400 pages long and contain 16 pages of colour illustrations. SAAB members are urged to assist Prof. Roy Lubke of Rhodes University, one of the three editors of this field guide, to obtain the necessary funds to make this publication possible.

The standard edition will be made available to students and sponsors or subscribers at a pre-publication price of R12-00.

THE VII SASQUA BIENNIAL CONFERENCE will be held on the campus of the University of Stellenbosch from the 29 March to the 3rd April 1985. The conference will survey recent progress in Quaternary and related Cenozoic studies in southern Africa and follows on the successful International Symposium on Late Cenozoic Palaeoclimates of the Southern Hemisphere held under the auspices of SASQUA and the Swaziland Trust in Swaziland, September 1983. The presentation of current research results in formal poster sessions will be arranged and in addition, there will be sessions devoted to presentation of general papers and reviews. One or more sessions will be given over to papers on the theme Historical Biogeography with emphasis on discussing changes in plant and animal distributions over time.

Contact: The Secretary, Department of Archaeology, University of Stellenbosch, Stellenbosch, 7600.

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