

ENCEPHALARTOS

JOURNAL OF THE
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SOUTH AFRICA

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VAN SUID-AFRIKA

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COVER / VOORBLAD : *Encephalartos middelburgensis* with three stems of which one was clearly chopped off; Suikerbos Hiking Trail, Middelburg, Mpumalanga, South Africa / *E. middelburgensis* met drie stamme waarvan een klaarblyklik afgekap is; Suikerboswandelpad, Middelburg, Mpumalanga, Suid-Afrika.

Photo / Foto: Pieter van der Walt

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FROM THE PRESIDENT



VAN DIE PRESIDENT

There are changes in the Board of the Society. Isabella Claassen, our Editor for 11 years, has finally stood down, but we intend to keep tapping her knowledge, her wisdom of the cycad world, and her benevolence. She started editing *ENCEPHALARTOS* in December 1992 after her retirement as lecturer in Botany at Pretoria University. She taught herself to do page layout, in itself an enormous task. Later, with all the difficulties it entails, she mastered another word processing program because our printer did not support the earlier program. The change-over was so successful that no one even guessed that there was a profound change in procedure. However, the time has now come that she can no longer continue, due to health problems. We understand it, and when I say "thank you", I know that no money in the world can pay for what she did for us. Our new Editor is Wynand van Eeden in Cape Town, and future contributions should be sent directly to him. In the next issue we will introduce him in more detail.

Guillaume Theron, our Secretary-Treasurer, is still with us. My own term has however expired and I function in acting capacity.

The mere mention of nature conservation bodies is sufficient to rub up many of our members. Some members prefer to stay literally underground in the belief, rightly or wrongly, that Nature Conservation will attack and prosecute them if it becomes known that they are members of the Society, or possess cycads. Other members are intrinsically serious about the principle of nature conservation, and feel hurt by the attitude of nature conservation bodies towards members of our Society. It is not understood what enormous contribution our Society has already made to conservation. Today there must be hundreds of times more cycads as 30 or 40 years ago as a result of the seedlings produced by our members in their backyard nurseries. Each of these plants means less pressure on the wild plants. In nature there are also species which don't perform well and apparently produce few or no seeds. Here our members can make a huge contribution by applying their expertise to hand-pollinate plants and germinate the seeds in nurseries, but Nature Conservation emphatically refuses to involve our members or to make seed available to us, and in the process many seeds of species like *E. hirsutus*, *E. heenanii*, and *E. latifrons* go waste. Furthermore, a desponding member from the Eastern Cape recently 'phoned me: he would like to produce seedlings from wild *E. latifrons* on his farm, but Nature Conservation won't allow him to sell them unless he puts aside 50% for re-establishment, which simply is not a practical proposition. Lastly, the Western Cape Nature Conservation authorities now charge R50 for every permit, and we all know how many permits are involved. Never mind that no cycads are indigenous to the Western Cape. If R50 is added each time a seedling is donated, exchanged, or sold, I foresee that growers will commit their seedlings to the compost heap rather than continue the good work.

Piet Vorster

Piet Vorster

Daar is veranderinge in die Raad van die Vereniging. Isabella Claassen, ons Redaktrise vir 11 jaar, het finaal die tuig neergelê, maar ons gaan haar nog gedurig pla ter wille van haar kundigheid, kennis van die broodboomwêreld, en haar goeie gesindheid. Sy het in Desember 1992 begin om *ENCEPHALARTOS* te redigeer na haar aftrede as dosent in Plantkunde by die Universiteit van Pretoria. Sy het haarself geleer om die bladsy-uitleg te doen, 'n enorme taak op sigself. Later het sy, met moeite en ergenis, 'n ander woordverwerkingsprogram bemeester omdat ons drukker nie die vroeëre program ondersteun het nie. Die oorgang was so suksesvol dat niemand kon agterkom dat daar 'n verandering in prosedure was nie. Die tyd het egter nou gekom dat sy weens gesondheidsredes nie meer kan voortgaan nie. Ons begryp dit, en as ek sê "baie dankie", dan weet ek dat geen geld in die wêreld kan betaal vir wat sy vir ons gedoen het nie. Ons nuwe Redakteur is Wynand van Eeden van Kaapstad, en toekomstige bydraes moet asb. direk aan hom gestuur word. In die volgende uitgawe sal ons hom bekendstel in meer besonderhede.

Guillaume Theron, ons Sekretaris-Tessourier, is nog by ons. My eie termyn het egter verstryk en ek tree op in 'n waarnemende hoedanigheid.

Die blote noem van natuurbewaringsinstansies is genoeg om baie van ons lede se hare te laat rys. Party lede verkies om letterlik ondergronds te bly in die geloof dat, reg of verkeerd, Natuurbewaring hulle gaan aanval en vervolg as dit hoegenaamd bekend word dat hulle lid van die Vereniging is of broodbome besit. Ander lede dra die beginsel van natuurbewaring op die hart, en voel seergemaak deur die houding van natuurbewaringsliggame teenoor lede van ons Vereniging. Dit word nie besef watter enorme bydrae ons Vereniging reeds gemaak het tot bewaring nie. Vandag moet daar etlike honderde broodbome meer bestaan as 30 of 40 jaar gelede as gevolg van die saailinge wat ons lede in hulle agterplaaskwekerye produseer. Elkeen van hierdie plante beteken verminderde druk op die wilde plante. In die veld is daar ook soorte wat nie goed presteer nie en skynbaar min of geen saad produseer nie. Hier kan ons lede 'n groot bydrae lewer deur hulle kundigheid toe te pas om die plante te handbestuif en die saad in kwekerye te ontkiem, maar Natuurbewaring weier volstrek om ons lede te betrek of om saad aan ons beskikbaar te stel, en in die proses gaan baie saad van soorte soos *E. hirsutus*, *E. heenanii*, en *E. latifrons* verlore. Verder het 'n moedelse lid uit die Oos-Kaap my onlangs gelui: hy wil graag saailinge produseer van wilde *E. latifrons* op sy plaas, maar Natuurbewaring wil hom nie toelaat om dit te verkoop tensy hy 50% daarvan beskikbaar stel vir hervestiging, wat eenvoudig net nie werk nie. Laastens, die Wes-Kaapse Natuurbewaringsowerhede vra nou R50 vir elke permit, en ons weet almal hoeveel perमितte betrokke is. Intussen kom broodbome nie eers natuurlik voor in die Wes-Kaap nie. As daar R50 bykom elke keer as 'n plantjie geskenk, geruil, of verkoop word, voorsien ek dat mense hulle saailinge op die komposhoop gaan gooi eerder as om die goeie werk voort te sit.

Piet Vorster

Piet Vorster

FROM COUNCIL / VAN DIE RAAD

CYCAD SOCIETY OF SOUTH AFRICA: MEMBERSHIP FEES FOR 2004 BROODBOOM VERENIGING VAN SUID-ARIKA: LEDEGELD VIR 2004

Local members (residents of the Republic of South Africa) / Plaaslike lede (inwoners van die Republiek van Suid-Afrika)
R135.00

Members in other countries in Southern Africa / Lede woonagtig in ander lande in Suidelike Afrika (e.g. Namibia, Swaziland, Zimbabwe) **R206.00** (Airmail/Lugpos) or/of **R192.00** (Surface mail/Landpos)

Foreign members / Oorsee lede **R230.00** (Airmail/Lugpos) or/of **R200.00** (Surface mail/Seepos)
US\$33.00 (Airmail/Lugpos) or/of **US\$29.00** (Surface mail/Seepos)
AU\$46.00 (Airmail/Lugpos) or/of **AU\$40.00** (Surface mail/Seepos)

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	<u>South Africa / Suid-Afrika</u>	
	Members/Lede	Non-members/Nie-lede
Black and white / Swart en wit	R18.00	R18.00
With colour / Met kleur	R30.00	R35.00

Other countries in Southern Africa / Ander lande in Suidelike Afrika

	Airmail / Lugpos		Surface mail / Landpos	
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Black and white/Swart en wit	R30.00	R30.00	R27.00	R27.00
With Colour / Met kleur	R42.00	R47.00	R39.00	R44.00

Foreign / Oorsee

	Airmail / Lugpos		Surface mail / Seepos	
	Members / Lede	Non-members / Nie-lede	Members / Lede	Non-members / Nie-lede
Black and white/Swart en wit	R39.00	R39.00	R32.00	R32.00
	US\$6.00	US\$6.00	US\$5.00	US\$5.00
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With Colour / Met kleur	R51.00	R56.00	R44.00	R49.00
	US\$7.00	US\$8.00	US\$6.00	US\$7.00
	AU\$10.00	AU\$11.00	AU\$9.00	AU\$10.00

NEW CYCAD PUBLICATIONS

AXSMITH, B.J., SERBET, R., KRINGS, M., TAYLOR, T.N., TAYLOR, E.L. & MAMAY, S.H. 2003. **The enigmatic Paleozoic plants *Spermopteris* and *Plasmato-cycas* reconsidered.** *American Journal of Botany* 90(11): 1585–1595.

[Ovule-bearing leaves from the Paleozoic of North America assigned to *Spermopteris* and *Phasmato-cycas* have been interpreted as primitive cycad megasporophylls. According to this hypothesis, *Cycas* megasporophylls were derived from a *Spermopteris*-like ancestor via *Phasmato-*

cycas and various other taeniopterid forms. This putative transformation entailed the phyletic shift of ovule attachment from the abaxial lamina surface of *Spermopteris* to the leaf midrib in *Phasmatocycas*. However, re-examination of the original *Spermopteris* specimens from the Lawrence shale of Kansas has shown that the ovules are attached to the leaf midrib. Therefore, *Spermopteris* and *Phasmatocycas* differ only in a few details of lamina morphology. The apical cleft of the ovules of both forms is interpreted as an original feature rather than a preservational artifact; however, the abaxial flange is probably a result of compression of a terete midrib. *Spermopteris* is typified by sterile specimens of *Taeniopteris coriacea* from Europe, which are of uncertain affinity to the fertile leaves. Therefore, we propose that the ovule-bearing leaves now known as *Spermopteris coriacea* be named as a new species of *Phasmatocycas* (*Phasmatocycas bridwellii* sp. nov.). The new concept of *Phasmatocycas* is less cycad-like than previously thought, and the phylogenetic position of the genus is unclear.]

First author's address: Univ S Alabama, Dept Biol Sci, LSCB 124, Mobile, AL 36688, USA.

BRENNER, E.D., STEVENSON, D.W., McCOMBIE, R.W., KATARI, M.S., RUDD, S.A., MAYER, K.F.X., PALENCHAR, P.M., RUNKO, S.J., TWIGG, R.W., DAI, G., MARTIENSSEN, R.A., BENFEY, P.N. & CORUZZI, G.M. 2001. **Expressed sequence tag analysis in *Cycas*, the most primitive living seed plant.** *Genome Biology* 4(12):R78: 1–11.

[Cycads are ancient seed plants (living fossils) with origins in the Paleozoic. Cycads are sometimes considered a 'missing link' as they exhibit characteristics intermediate between vascular non-seed plants and the more derived seed plants. Cycads have also been implicated as the source of 'Guam's dementia', possibly due to the production of S(+)-beta-methyl-alpha, beta-diaminopropionic acid (BMAA), which is an agonist of animal glutamate receptors.

A total of 4,200 expressed sequence tags (ESTs) were created from *Cycas rumphii* and clustered into 2,458 contigs, of which 1,764 had low-stringency BLASTS similarity to other plant genes. Among those cycad contigs with similarity to plant genes, 1,718 cycad 'hits' are to angiosperms, 1,310 match genes in gymnosperms and 734 match lower (non-seed) plants. Forty-six contigs were found that matched only genes in lower plants and gymnosperms. Upon obtaining the complete sequence from the clones of 37/46 contigs, 14 still matched only gymnosperms. Among these cycad contigs common to higher plants, ESTs were discovered that correspond to those involved in development and signalling in present-day flowering plants. We purified a cycad EST for a glutamate receptor (GLR)-like gene, as well as ESTs potentially involved in the synthesis of the GLR agonist BMAA.

Analysis of cycad ESTs uncovered conserved and potentially novel genes. Furthermore, the presence of a glutamate receptor agonist, as well as a glutamate receptor-like gene in cycads, supports the hypothesis that such neuroactive plant products are not merely herbivore

deterrents but may also serve a role in plant signalling.

First author's address: The New York Botanical Garden, 200th Street and Kazimiroff, Bronx, NY 10458-5126, USA.

BRENNER, E.D., STEVENSON, D.W. & TWIGG, W. 2003. **Cycads: evolutionary innovations and the role of plant-derived neurotoxins.** *Trends in Plant Science* 8(9): 446–452.

[Cycads are an important relic from the past and represents the oldest living seed plants. Cycads have been instrumental in our understanding the evolution of angiosperms and gymnosperms because they have recognizable morphological characteristics intermediate between less-recently evolved plants such as ferns and more-derived (advanced) plants including the angiosperms. Cycads also produce several compounds that are carcinogenic and neurotoxic. Because of their unique placement in terrestrial plant evolution, molecular studies should help to define the origins of structures that led to the rise of seed plants and the role of neurotoxic compounds that are found in cycads.]

First author's address: The New York Botanical Garden, 200th St. and Kazimiroff, Bronx, NY 10458-5126, USA.

BROOME, T., HAYNES, J., SCHUTZMAN, B., LANDRY, G. & CHEMNICK, J. 2003. **Cycad Focus: *Ceratozamia hildae* – "Bamboo cycad".** *The Cycad Newsletter* 26(2): 10–13.

[In this composite article about *Ceratozamia hildae*, Tom Broome deals with the "Cultivation of *Ceratozamia hildae*", Jody Haynes with the "Phenology in South Florida", Bart Schutzman with the "Taxonomy & Nomenclature", while Garrie Landry tells us "How the Scientific Description of *C. hildae* came about" and Jeff Chemnick provides additional "Notes on *Ceratozamia hildae*".]

First author's address: The Cycad Jungle, P.O. Box 325, Polk City, FL 33868, USA.

CASTILLO-GUEVARA, C. & RICO-GRAY, V. 2003. **The role of macrozamin and cycasin in cycads (Cycadales) as antiherbivore defenses.** *Journal of the Torrey Botanical Society* 130(3): 206–217.

[Macrozamin and cycasin are very toxic azoxyglycosides of the Cycadales. Caterpillars (Lepidoptera) and weevils (Coleoptera) feed on cycad root, stem, leaf, and reproductive tissues. Azoxyglycosides may have played an important ecological role as antiherbivore defences. We evaluated the association between herbivory and the amount of azoxyglycosides in the Cycadales using phylogenetic independent contrasts. We hypothesized that herbivory types should be related to the presence of macrozamin and cycasin, thus herbivory should be lower in species with higher concentrations of azoxyglycosides. We gathered information available on the literature of these two characters as well as life form, geographic distribution, height, and seed volume for the majority of cycad species, in order to assess correlated evolution and control of possible allometric effects. Herbivory types and macrozamin were negatively correlated, suggesting a possible

defensive function for macrozamin against herbivores. No significant correlation was observed between cycasin percent and herbivory type. However, when analysed using phylogenetic independent contrasts and thus removing the historical effect, the association did not hold. This suggests that the presence of metabolites in plants may have evolved for some other reason, and has been maintained among cycads perhaps by phylogenetic inertia. The presence of macrozamin should then be explained as an exaptation, playing today an important role in defense against herbivores. Furthermore, this analysis showed that macrozamin has independently and repeatedly (*Bowenia*, *Macrozamia*, *Stangeria*) increased over evolutionary time.]

First author's address: Inst Ecol, Dept Ecol Vegetal, AC, Apdo 63, Xalapa 91070, Veracruz, Mexico.

CHEMNICK, J. 2003. **Cycad ecotouring in Vietnam.** *The Cycad Newsletter* 26(2): 3–8.

[In this paper the author presents a well-illustrated report of the post-conference excursion that followed on the 2002 International Cycad Conference that was held in Thailand.]

Author's address: 114 Conejo Road, Santa Barbara, CA 93103, USA.

GONZALES-ASTORGA, J., VOVIDES, A.P., FERRER, M.M. & IGLESIAS, C. 2003. **Population genetics of *Dioon edule* Lindl. (Zamiaceae, Cycadales): biogeographical and evolutionary implications.** *Biological Journal of the Linnean Society* 80(3): 457–467.

[*Dioon edule* Lindl. (Zamiaceae) is a cycad endemic to Mexico, that occurs as one species *D. edule* and the geographical variety *D. edule* var. *angustifolium* (Miq.) Miq. *Dioon edule* has a north to south distribution in eastern Mexico. In this study, we analysed 14 allozymic loci in eight populations of *D. edule* from its total distribution range by sampling all known populations. Patterns of diversity and genetic variability, within and among populations, were obtained. The mean number of alleles per locus (A) was 1.44 and the percentage of polymorphic loci was relatively high ($P = 54.78$). The mean observed (H-O) and expected heterozygosity (H-E) were 0.27 and 0.24 respectively. F-statistics revealed an excess of heterozygous genotypes, locally and globally ($F = -0.17$ and $f = -0.27$ respectively). The genetic variation explained by differences among populations was only 7.5%. We also detected a negative relationship between genetic diversity and latitude. On average, the gene flow between population pairs was relatively high ($Nm = 2.98$); furthermore, gene flow between population pairs was significantly correlated with geographical distances ($r = 0.38$, $P = 0.025$). Therefore, patterns of genetic diversity in *D. edule* appear to be associated with the post-Pleistocene spread of the species, from its southerly (origin) to its northerly range (derived populations, including its central distribution). The biogeographical and evolutionary aspects of the results of this study are discussed. We recognize *Dioon angustifolium* Miq. for the northermore disjunct populations.]

Second author's address: Inst. Ecol. Lab. Genet. Poblaciones, AC Km 2-5 Antigua Carretera Coatepec No 351, Xalapa 91070, Veracruz, Mexico.

GREGORY, T. 2003. ***Dioon holmgrenii*, Then and Now.** *The Cycad Newsletter* 26(3): 5–7.

[The author reports mainly on relatively recent explorations in Mexico that led to the discovery of at least two new populations of this distinct but highly variable species.]

Author's address: 564 Shoal Cr, Redwood City, CA 94065, USA.

LOBAKOVA, E.S., ORAZOVA, M.K. & DOBROVOL'SKAJA, T.G. 2003. **Microbial complexes occurring on the apogeotropic roots and in the rhizosphere of cycad plants.** *Microbiology* 72(5): 628–633.

[The microbial complexes of soil, the rhizosphere, and the rhizoplane of the apogeotropic (coralloid) roots of cycad plants were comparatively studied. The aseptically prepared homogenates of the surface-sterilized coralloid roots did not contain bacterial microsymbionts, indicating that in the root tissues the symbiosis is a two-component one (plant-cyanobacteria). At the same time, associated bacteria belonging to different taxonomic groups were detected in increasing amounts in the cycad rhizoplane, rhizosphere, and the surrounding soil. The bacterial communities found in the cycad rhizoplane and the surrounding soil were dominated by bacteria from the genus *Bacillus*. The saprophytic bacteria and fungi colonizing the cycad rhizosphere and rhizoplane were dominated by microorganisms capable of degrading the plant cell walls. The local degradation of the cell wall was actually observed on the micrographs of the thin sections of cycad roots in the form of channels through which symbiotic cyanobacterial filaments can penetrate into the cortical parenchyma.]

First author's address: Moscow MV Lomonosov State Univ, Fac. Soil Sci, Vorobevy Gory, Moscow 119899, Russia.

OSBORNE, R. 2003. **In memoriam: Knut Norstog 1921–2003 – My memories of Knut.** *The Cycad Newsletter* 26(3): 10–11.

RAI, H.S., O'BRIEN, H.E., REEVES, P.A., OLMSTEAD, R.G. & GRAHAM, S.W. 2003. **Inference of higher-order relationships in the cycads from a large chloroplast data set.** *Phylogenetics & Evolution* 29(2): 350–359.

[We investigated higher-order relationships in the cycads, an ancient group of seed-bearing plants, by examining a large portion of the chloroplast genome from seven species chosen to exemplify our current understanding of taxonomic diversity in the order. The regions considered span similar to 13.5kb of unaligned data per taxon, and comprise a diverse range of coding sequences, introns and intergenetic spacers dispersed throughout the plastid genome. Our results provide substantial support for most of the inferred backbone of cycad phylogeny, and weak evidence that the sister-group of the cycads among living seed plants is *Ginkgo biloba*. *Cycas* (representing Cycadaceae) is the sister group of the remaining cycads; *Dioon* is part of the next most basal split. Two of the three commonly recognized families of cycads (Zamiaceae and

Stangeriaceae) are not monophyletic; *Stangeria* is embedded within Zamiaceae, close to *Zamia* and *Ceratozamia*, and not closely allied to the other genus of Stangeriaceae, *Bowenia*. In contrast to the other seed plants, cycad chloroplast genomes share two features with *Ginkgo*: a reduced rate of evolution and an elevated transition: transversion ratio. We demonstrate that the latter aspect of their molecular evolution is unlikely to have affected inference of cycad relationships in the context of seed-plant wide analyses.]

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SHORT COMMUNICATIONS / KORT MEDEDELINGS

ENCEPHALARTOS STRIATUS AND *E. UMBELUZIENSIS*

Nat Grobbelaar

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Received 7 January 2004

When I wrote the book, "Cycads – with special reference to the southern African species" (2002), I was shown a manuscript that was written by P.J.H. Hurter & H.F. Glen, in which it was argued that *Encephalartos umbeluziensis* R.A. Dyer, is a synonym of *E. striatus* Stapf & Burt Davy. Because the manuscript was said to have been sent to the journal *Taxon* about a year before and had been approved for publication, I used the name *E. striatus*, rather than *E. umbeluziensis* for the taxon in question and cited the manuscript that I had seen as being "In press".

The paper referred to above still has not appeared in print. In the meantime the National Botanical Institute published a list of the valid names of all the South African plants (G. Germishuizen & N.L. Meyer, 2003). In the section dealing with the Zamiaceae on page 90, which is written by H.F. Glen & P.J.H. Hurter, the cycad which R.A. Dyer in 1951 described as *Encephalartos umbeluziensis* is named *E. striatus* in accordance with the description of the plant by O. Stapf & J. Burt Davy in 1926. As far as the National Botanical Institute is concerned, *E. striatus* is therefore the valid name of the plants which were known as *E. umbeluziensis* since 1951.

Dr O. Leistner recently drew my attention to a sentence in the introduction of a publication by Dyer (1965) which reads as follows: "*E. friderici-guilielmi* has been reinstated and distinguished from *E. cycadifolius*, whereas *E. striatus* (possibly equal to *E. villosus* or *E. umbeluziensis*), has been

excluded because of inadequate information for its certain identification with any known species." This prompted me to read the original description of *E. striatus* (Stapf & Burt Davy, 1926) and to inspect its herbarium type specimen, which apparently was derived from a Pretoria garden plant. To my dismay, both the description and type specimen were found to be so deficient in certain respects that it is impossible to identify it with certainty with any known cycad species. Consequently, I have to concur with Dyer's comments about *E. striatus* that are quoted above. Therefore, I do not agree with the inclusion of *E. umbeluziensis* in the synonymy of *E. striatus*, as reflected in Germishuizen & Meyer's book. The name *E. umbeluziensis*, should therefore be retained for the plants concerned – as indeed I hope to do in the next printing of my book.

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CYCAD HIKING TRAIL, MIDDELBURG, MPUMALANGA – *ENCEPHALARTOS LANATUS*, 17 DECEMBER 2003

Pieter and Celeste van der Walt
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After reading about “Doornkop, home of *E. middelburgensis* and *E. lanatus*”, in a previous issue of “*Encephalartos*” (No. 74, June 2003) and again in “Hiking trails of South Africa” by Willie and Sandra Olivier (2003, Struik). We decided to go hiking in the Elephant’s River Valley, Middelburg, Mpumalanga, and experience this first hand!

We booked well in advance with Narissa Smit on 013 282 6101 who also informed me that only the Suikerbos trail is open to the public. The other two routes, namely the Cycad Trail and the Baboon Route, are currently closed due to new land ownership and that she is busy negotiating with the new owner to reopen these trails to the public.

The site is located approximately 20 km just outside Middelburg, off the N11 towards Groblersdal (see Figure 1). Accommodation is very basic and consists of a few A-frame units with four mattresses per unit. Braai facilities, fire wood, clean water and an outside bathroom/shower at the main house are provided. You need to take your own sleeping bag, food, cutlery, mosquito repellent, and lots of sun screen!!



Figure 1 Cycad Hiking Trails, Middelburg, Mpumalanga.

Narissa gave us a sketch map marking the different trails. The Suikerbos Trail is a circular route, approximately 9 km and should take 4 to 5 hours to complete.

We left the following morning at 08:00 towards the Scheepersdal farmhouse as the first beacon. Already the sun was heating up the veld around us.

After Scheepersdal you approach the valley and gradually walk down through bush and boulders. Without any warning large specimens of *Encephalartos lanatus* appear in front of you between the bush and boulders (Colour Figure 1 on p. 9).

There was evidence of recent veld fires with almost all the stems burnt pitch black. There was also evidence of some mature plants completely destroyed by either the veld fires or some other means which can only be left to speculation (Figure 2; Colour Figure 2 on p. 9).



Figure 2 *Encephalartos lanatus*; evidence of complete destruction by fire or other means.

No cones were visible and we were later informed by Narissa that very little rain has fallen in the past few months and conditions were overall very dry. New leaves have just started to harden and amongst the scrub and between some rocks single leafed seedlings were visible.

Towards the river one could see hundreds, if not thousands, of small and large specimens between the boulders. Some even as tall as 2.5–3.0 m and with prolific suckering taking place as well (Colour Figures 3 and 4 on p. 9). Colour Figure 4 shows a cluster consisting of four stems approximately 5 m across!

After a few hours we reached the top again and then headed across a flat plain towards a few *E. middelburgensis* specimens (Front Cover and Colour Figure 5 on p. 9). This was a bit disappointing as there were not that many specimens to view, but definitely worth the walk.

We returned around 13:00 to the main house and by that time the heat was unbearable! Luckily there is a swimming pool to cool off!

Overall the walk was relatively easy to do, however, I should warn would-be followers that December is probably not a very good time to go unless you take lots of sunscreen and water along with you.



Colour Figure 1 A large specimen of *Encephalartos lanatus* with a very attractive skirt of older leaves; Suikerbos Hiking Trail, Middelburg, Mpumalanga. Photo: Pieter van der Walt.



Colour Figure 4 Another cluster of *E. lanatus* specimens. Photo: Pieter van der Walt.



Colour Figure 2 *E. lanatus*; evidence of destruction. Photo: Pieter van der Walt.



Colour Figure 5 A four-headed male *E. middelburgensis*. Photo: Pieter van der Walt.



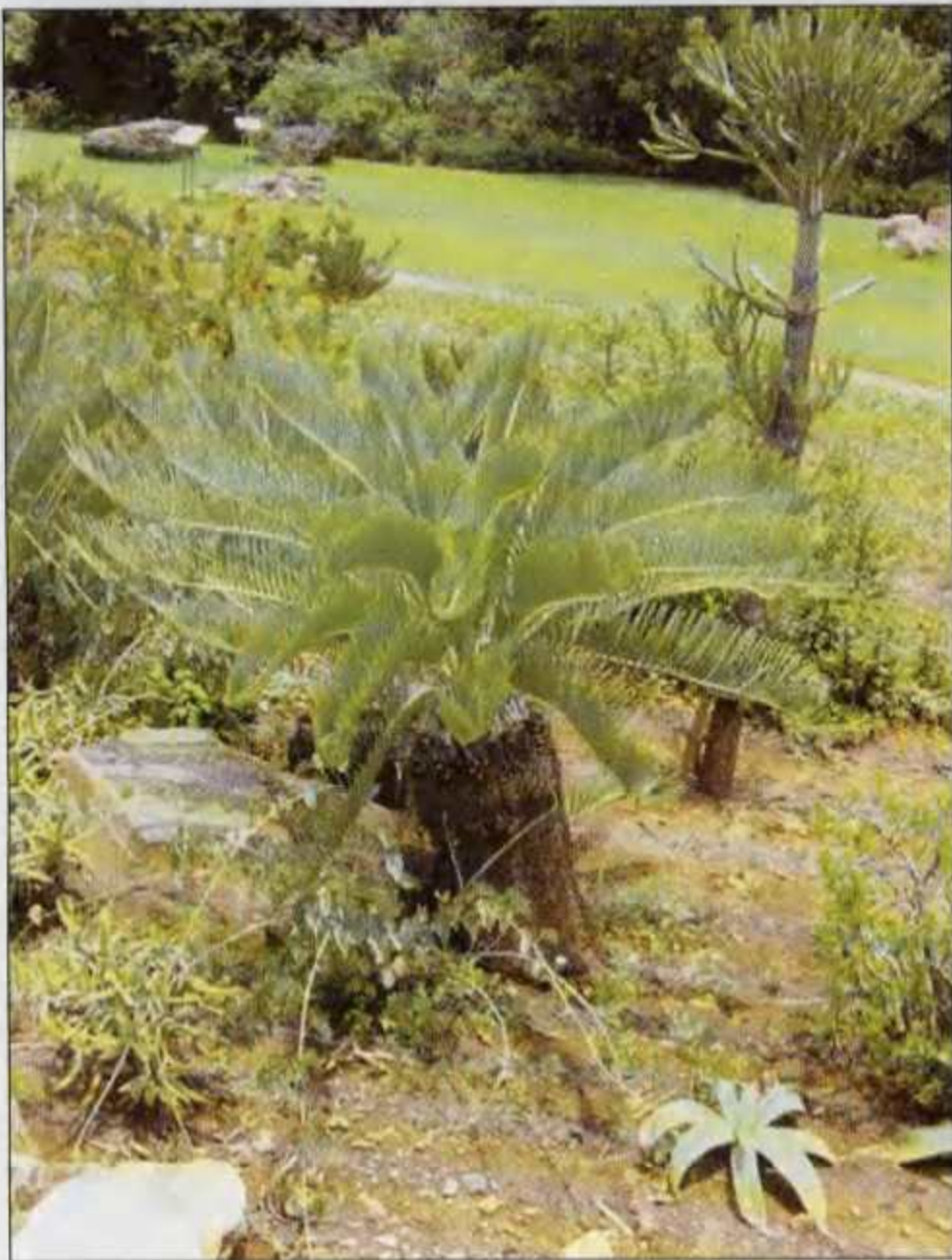
Colour Figure 3 Large clustering of specimens of *E. lanatus*. Photo: Pieter van der Walt.



Colour Figure 6 A coning *Encephalartos cupidus* in the Witwatersrand National Botanical Gardens. Photo: Pieter van der Walt.



Colour Figure 7 Specimens of *E. dyerianus*. Photo: Pieter van der Walt.



Colour Figure 8 A specimen of *E. eugene-maraisii*. Photo: Pieter van der Walt.



Colour Figure 9 Top view of an *E. cycadifolius* specimen. Photo: Pieter van der Walt.



Colour Figure 10 One of the only few "exotics": *E. manikensis*.

**CYCAD COLLECTION AT THE WITWATERSRAND NATIONAL
BOTANICAL GARDENS, MALCOLM ROAD, POORTVIEW, ROODEPOORT**
(Web site: <http://www.nbi.ac.za/frames/witsfram.htm>)

Pieter van der Walt
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The following photos were taken at the Witwatersrand National Botanic Gardens in Roodepoort, Gauteng. The gardens are located between cliffs, which have some fascinating geology. The highlight is probably the breeding pair of black eagles with their nest high up on the rock face alongside the Witpoortjie waterfall.

The garden has also a magnificent collection of cycads of which I have included a selection of photographs taken over a period of time. The collection seems to be gradually

expanding with specimens ranging from *Encephalartos horridus*, *E. lehmannii*, *E. longifolius*, *E. nubimontanus*, *E. paucidentatus*, *E. laevifolius*, *E. cupidus* (Colour Figure 6 on p. 10), *E. dyerianus* (Colour Figure 7 on p. 10), *E. eugene-maraisii* (Colour Figure 8 on p. 10), *E. villosus*, *E. transvenosus*, *E. lebomboensis*, *E. cycadifolius* (Colour Figure 9 on p. 10), *E. ghellinckii*, *E. manikensis* (Colour Figure 10 on p. 10), and more. Congratulations to the staff of the garden for maintaining such a wonderful assortment of plants!

JAAREINDFUNKSIE VAN DIE TRANSVAALSE STREEKTAK VAN DIE BROODBOOM VERENIGING

Derik Minnaar
Privaatsak X8, 0047 Elarduspark, R.S.A.

Ontvang 13 Januarie 2004

Die jaareindfunksie van die Transvaalse Streektak van die Broodboom Vereniging was 1 November 2003 by die pragtige lapa op die perseel van AA Cycads gehou. Vroeg-aand is die funksie deur voorsitter Derik Minnaar geopen.

Die vergadering is geopen met spesiale verwelkoming aan prof Nat Grobbelaar, 'n erelid van die vereniging, en eregas Cornia Hugo van departement Natuurbewaring. Na 'n kort bespreking is eenparig besluit dat die komitee vir die volgende tweejaar termyn dieselfde sal bly. 'n Debat het gevolg insake voorstelle vir die komende jaar se aktiwiteite. Die belangrikste is dat daar besluit is om 'n opedag te reël waar enige party broodbome kan verkoop sonder uitermate winsbejag, om die publiek meer bloot te stel en belangstelling te kweek. 'n Vaste bedrag word dan tipies gehef vir die huur van die verkoopruiimte. Laubser de Kock het ingewillig om 2004 se opedag te reël met dien verstande dat hy 'n klein komitee sal saamstel om hom by te staan. John Kloppers sal die jaareind vergadering 2004 reël en hy het beloof om 'n heel nuwe lewe in hierdie hoogtepunt aktiwiteit te blaas. Hanneke Grobbelaar sal ook poog om 'n praatjie te reël. Die lokaliteit wat besoek gaan word, sal *E. eugene-maraisii* by Entabeni reservaat of *E. dyerianus* wees. Derik sal dit vir Oktober reël. 'n Tuinbesoek sal deur Ita van der Walt gedurende Maart gereël word wanneer die meeste plante keël en die beste vertoon.

Cornia Hugo van departement Natuurbewaring is aan die

woord gestel om die nuutste wetgewing duidelik te stel. Sy het weereens benadruk dat die mannekrag maar skraps is en die kundigheid soms ontbreek. 'n Poging gaan aangewend word om lede van die publiek te betrek by die beskerming van beskermdede plante. Daar gaan ook gepoog word om meer uniforme wetgewing in al die provinsies te verkry sodat die einddoel is om een nasionale wetgewing te verkry. Die Broodboom Vereniging se lede het hul kommer uitgespreek dat Natuurbewaring te veel tyd spandeer om private versamelings en transaksies op te volg in plaas van om die plante in habitat te teel en te bewaar. Daar is besluit om van die Broodboom Vereniging se kant 'n skakelbeampte na Natuurbewaring te bewerkstellig, asook om meer betrokke by die Botaniese tuine te raak.

Nadat die vergadering afgesluit is, het die 12 lede 'n heerlike aandmaal geniet en tot laat gekuier.

Tentatiewe jaarprogram:

Tuinbesoek	Ita van der Walt	Einde Maart
Opedag	Laubser de Kock	1 Mei 2004
Praatjie	Hanneke Grobbelaar	
Lokaliteit besoek	Derik Minnaar	Oktober
Jaarvergadering	John Kloppers	7-9 Augustus
Belangstellendes, kontak	Derik (082 4131025 na-ure)	

asseblief so vroeg moontlik om teleurstelling te voorkom.

Dear Editor

REGIONAL MEETINGS AND CYCAD CONSERVATION

At our year-end function that was held at AA-Cycads Nursery in Pretoria on 1 November 2003 I was saddled with the task of organizing the next year-end function of 2004. It was decided that our year-end would be in the form of an outing to Nelspruit in Mpumalanga on the weekend of 7, 8 and 9 August 2004. The members of the Society will visit the Botanical Garden, and a few interesting private gardens in the Nelspruit and White River area. The exact itinerary will be published closer to the above date. The poor attendance of the year-end function on 1 November 2003 compelled me to write this letter.

It seems that cycad collectors and members of the Cycad Society are under the misconception that regional branches of the Society are in cahoots with Nature Conservation, and that attending these meetings would expose them to persecution. This is utter nonsense. At these meetings we usually have interesting speakers that enlighten the members on cycad related topics. We as a society endeavour to promote the collection and propagation of cycads within the rules laid down by the conservation laws.

Cycads are the legacy of the nation and do not belong to the officers of the Parks Boards, they are owned by the nation. To conserve cycads in the wild, Nature Conservation and members of the Cycad Society will have to work together to lay down laws that are workable, and that suit both the collector and the law enforcers. If they make laws without consulting the cycad lovers these laws will remain unworkable. Why each province has its own laws concerning endangered plants is a mystery, why do officers bury themselves in tons of paperwork? There must be a more simple way of dealing with this problem. Nature departments do not have the manpower to register each and every specimen in gardens throughout the country. I think the emphasis should be to conserve the remaining plants in nature. As long as there is unemployment in Africa, people will remove and sell plants out of nature. Problems can only be solved by ideas, not by force. Here are a few suggestions that may help:

- At our annual meeting Prof. Nat Grobbelaar suggested that the critically endangered species be moved to National Parks, with a different species at each camp to rule out the possibility of hybridizing.
- The collectors can be asked to help with the relocation of these plants, like the Operation Noah's Arc they had at Kariba Dam in Zimbabwe.
- Hand picked cycad collectors that are members of the Cycad Society should be deputized and made honorary conservation officers, so that they can help Nature Conservation in the implementation of their tasks.
- Parks Boards could pollinate cones in the wild and sell seed to collectors to generate funds; this could help to employ more officers to make their task easier. The

sale of seed could generate vast amounts of capital.

- More Parks Board nurseries should be built to relieve the strain on the plants in the wild; this could also help fund conservation projects and ideas,
- Private cycad nurseries should be encouraged to propagate cycads. Nature Conservation should sell fertile seed to these nurseries so that collectors do not need to purchase stolen plants.
- To stop the sale of large plants will be impossible, if not unlawful and unconstitutional. So it stands to reason that Nature Conservation must take an active part at these sales, to prevent unlawful sales. The encouragement of orderly and proper private-collection sales will help satisfy the demand, and also minimize theft of plants in the wild.
- The micro-chipping of plants will not help, I understand that these chips can easily be located and destroyed.
- The paper work between collectors should be minimized, especially on suckers taken off garden plants. It must be realized that cycads have a prestige value connected to them, and the more difficult Nature Conservation make it to own these plants, the more the prestige value is added to these plants.
- It must be realized that the price tag connected to different species is directly in correlation with the rarity of the plants. This stands to reason that an endeavour should be made to encourage cultivation and sales of the rare species.

I am certain that the collectors can come up with workable ideas if they are consulted. It may be a good idea to have them published in our "Encephalartos" journal.

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Received 5 November 2003

Dear Readers / Geagte Lesers

THANK YOU CONTRIBUTORS TO OUR JOURNAL / DANKIE BYDRAERS AAN ONS TYDSKRIF

I thank all our readers who have contributed articles, letters, etc., to keep our journal going during the 11 years that I have been the editor. A special word of thanks to our regular contributors Nat Grobbelaar, Roy Osborne, Willie Tang and Piet Vorster whose articles time and again made it possible to bring out an issue of our journal. Without contributions from you, our readers, it will be impossible to publish a journal. Thank you Guillaume Theron for compiling the Membership List every year, a most time-consuming task, as well as for some of the "From Council" contributions.

Ek bedank alle lesers wat bygedra het in die vorm van artikels, briewe, ens., om ons tydskrif aan die gang te hou

gedurende die 11 jaar dat ek die redaktrise was. 'n Spesiale woord van dank aan ons gereelde bydraers Nat Grobbelaar, Roy Osborne, Willie Tang en Piet Vorster wie se artikels herhaaldelik daartoe bygedra het dat uitgawes van ons tydskrif uitgebring kon word. Sonder bydraes van u, ons lesers, sal dit onmoontlik wees om 'n tydskrif uit te gee.

Dankie ook aan Guillaume Theron vir die jaarlikse samestelling van die Ledelys wat 'n uiters tydrovende taak is, asook vir sommige "Van die Raad" bydraes..

Isabella Claassen, P.O. Box/Posbus 25688, 0105 Monumentpark R.S.A.

CYCAD SOCIETY OF SOUTH AFRICA BROODBOOM VERENIGING VAN SUID-AFRIKA

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2833	COETZER, Prof I A	Dept of Educational Studies, P O Box 392, UNISA, 0003
2958	CONRADIE, Mnr G	Tiluwu 103, Britsweg 770, PRETORIA-NOORD, 0182
2778	COOPER, Mr H A B	19 Bosonia Street, KUILS RIVER, 7580

1302 CORBETT, Mrs F J
 2449 CORNELIUS, Mnr A H P D
 1910 COWLEY, Mr V W (Cape Flora)
 2895 CRONJÉ, Cobus & Dr Marianne
 2789 CROUS, Mrs H
 2212 DALZELL, Mr C G M
 2612 DANIEL, Ms A N
 0192 DAVIDSON, Mr I A
 2247 DAY, Mnr G L
 2267 DE BEER, Mr C M
 2494 DE BEER, Wouter & Retha
 2704 DE BEER, Adv Z H & C
 2760 DE BRUIN, Mnr C
 2892 DE BRUIN, Mnr J F
 2891 DE BRUYN, Mnr Piet J
 2884 DEETLEFS, Mnr M A
 0410 DE HAAS, Dr G N
 1675 DE JAGER, Prof F J
 2923 DE JAGER, Chris J
 2241 DE JAGER, Mnr Lourens
 1962 DE JAGER, Mnr S
 0080 DE JONG, J J
 2095 DE JONGE, Mr H
 1838 DEKKER, Ds D J M
 2940 DE KLERK, André
 2801 DE KLERK, Dr B J
 0664 DE KLERK, Dr J A
 0452 DE KOCK, Mnr C V
 2622 DE KOCK, Dr G C
 0404 DE KOCK, Prof G de V
 2621 DE KOCK, Mnr G L
 0851 DE KOCK, Dr J A
 1062 DE LA REY, Mnr A le R
 2935 DE VILLIERS, Desmond D
 2472 DE VILLIERS, Mnr Tielman
 2889 DE VILLIERS, Mnr T A
 2592 DE VOS, Mev M E
 2952 DE WITT, Philippus
 2039 DIEDERICKS, Mnr W J
 2828 DI RAGO, Mrs Lynn
 0085 DIXON, Mr Ian
 1649 DOEPEL, Mr W R
 1464 DONALDSON, Dr J S
 2227 DROTSKY, Mnr Buch
 2881 DUFFIELD, Denise
 0806 DUNCAN, Mrs Lorraine
 SPES DU PLESSIS, Mej A
 1298 DU PLESSIS, Mnr André
 2619 DU PLESSIS, Chris H
 2377 DU PLESSIS, Mnr Johan P
 2826 DU PLESSIS, Mnr L M
 2845 DU PLESSIS, Mnr Shane
 2578 DU PLESSIS, Mev S C
 6335 DU PREEZ, Mnr D vdM
 2218 DU PREEZ, Mnr H K
 2703 DU PREEZ, Jaco
 1577 DU PREEZ, Mnr J C
 1428 DU RAND, Mr L
 1810 DU TOIT, Mnr Biem
 2716 DU TOIT, Mnr Cornelis G
 2358 DU TOIT, Mnr C L
 2730 DU TOIT, G S
 1064 DU TOIT, Mev H J
 1271 DU TOIT, Mnr H X N
 0971 DU TOIT, Mnr K P
 0082 DU TOIT, Neethling & Erica
 2040 DU TOIT, Mnr P J & VAN DER WESTHUIZEN, Mnr P
 2873 DU TOIT, Mnr Richter
 1040 EALES, Mr L E
 2571 EDWARDS, A J
 2785 EKSTEEN, C D
 1630 EKSTEEN, Mnr L J
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 P O Box 101195, MEER EN SEE, Richards Bay, 3901
 30 Liza Street, Kilner Park Extension, PRETORIA, 0186
 Posbus 2043, ROODEPOORT, 1725
 P O Box 1107, WHITE RIVER, 1240
 Franzinastraat 272, ELOFFSDAL, Pretoria, 0084
 Posbus 68561, BRYANSTON, 2021
 Posbus 92140, MOOIKLOOF, 0059
 Posbus 230, HECTORSPRUIT, 1330
 Posbus 3896, POTGIETERSRUS, 0600
 Alkaliënlaan 22, Swartkops Uitbr 8, CENTURION, 0151
 Posbus 1897, PIETERSBURG, 0700
 Posbus 524, AUCKLANDPARK, 2006
 Posbus 33175, GLENSTANTIA, 0010
 Posbus 52011, DORANDIA, 0188
 Posbus 1092, HILTON, 3245
 P O BOX 934, NORTH RIDING, 2162
 P O Box 374, MOOINOOL, 0325
 Posbus 4036, WITRIVIER, 1240
 Ridge Road 115, LA LUCIA, 4051
 Posbus 18, DENDRON, 0715
 Posbus 2234, PIETERSBURG, 0700
 Posbus 7222, TZANENG MALL, 0855
 Posbus 4677, PIETERSBURG, 0700
 Posbus 5836, WALMER, 6065
 Posbus 74367, LYNNWOODRIF, 0040
 Posbus 21, FAUNA PARK, 0787
 27 ste Laan 318, VILLIERIA, Pretoria, 0186
 65 Hereford Circle, MEADOWS, Pietermaritzburg, 3201
 Posbus 73400, LYNNWOODRIF, 0040
 Posbus 1016, MILNERTON, 7435
 Posbus 14724, NELSPRUIT, 1200
 Posbus 1147, AUCKLANDPARK, 2006
 p/a G K Theron, Posbus 1790, GROENKLOOF, 0027
 Private Bag 10015, SANDTON, 2146
 20 Varley Road, Hayfields, PIETERMARITZBURG, 3201
 P O Box 1127, HONEYDEW, 2040
 NBI, Private Bag X7, CLAREMONT, 7735
 Posbus 1202, CARLETONVILLE, 2500
 P O Box 64, KENTON ON SEA, 6191
 10 7th Street, Linden, JOHANNESBURG, 2195
 Engelbertusstraat3, Uitbreiding 12, DORANDIA, 0182
 Essenhoutweg 9, Wilkoppies, KLERKSDORP, 2570
 Roosstraat 16, MONUMENT, Krugersdorp, 1739
 Posbus 3173, PRETORIA, 0001
 Posbus 3388, MONTANAPARK, 0159
 Posbus 3305, DURBANVILLE, 7551, Kaapstad
 Rigellaan 337 A, WATERKLOOFRIF, 0181
 Posbus 31, Patensie, 6335
 Dikbaslaan 59, WONDERBOOM, 0182
 Posbus 828, GROBLERSDAL, 0470
 Posbus 5452, Onverwacht, ELLISRAS, 0557
 P O Box 44153, Linden, 2104
 Posbus 3942, PIETERSBURG, 0700
 Posbus 4404, RIETVALLEIRAND, 0174
 Terblanchstraat 5, De Zoete Inval, SUIDER PAARL, 7646
 Posbus 341, KROONDAL, 0350
 Wydgelegen BREDASDORP, 7282
 Posbus 22, BREDASDORP, 7280
 Posbus 15, BURGERSFORT, 1150
 Posbus 3922, NELSPRUIT, 1200
 Posbus 5856, DORINGKRUIJN, 2576
 Posbus 1536, HERMANUS, 7200
 263 Lewisham Road, BLACKHEATH, Johannesburg, 2195
 P O Box 10431, MEERENSEE, 3901
 P O Box 252, FAERIE GLEN, 0043
 Posbus 4496, EMPANGENI, 3880
 45 Grenville Avenue, SAVOY ESTATE, 2090
 Posbus 75702, LYNNWOODRIF, 0040
 Posbus 12609, CLUBVIEW, 0014
 Posbus 257, GERMISTON, 1400

2426	ENGELBRECHT, Mev A W	Posbus 424, GROBLERSDAL, 0470
0817	ERASMUS, Dr C S	77 Rustenburg Road, EMMARENTIA, Johannesburg, 2195
2132	ERASMUS, Mnr H J	Posbus 180, DUIWELSKLOOF, 0835
1863	ERASMUS, Mnr P M S J	Posbus 31231, TOTIUSDAL, 0134
2941	ERASMUS, Mr W A G	Tipperarystraat 12, KENMARE X4, 1739
2847	ESTERHUIZEN, Mnr W G	Posbus 151, ALEXANDRIA, 6185
0793	EVERETT, Mr W A	P O Box 238, CONSTANTIA, 7848
2638	EVERT, Mnr John G	Posbus 13170, LERAATSFONTEIN, 1038
2360	EXLEY, Mnr Schalk	Posbus 1913, RICHARDSBAAI, 3900
2504	FERREIRA, Mnr M P	Weinstraat 413, PRETORIA-TUINE, Pretoria, 0082
2787	FARRIMOND, Mr Michael	29 Ada Avenus, ADAMAYVIEW, Klerksdorp, 2571
2637	FEY, Mnr Joggie N	Maskewstraat 21, VANDERBIJLPARK, 1911
1961	FLETCHER, Colin M	P O Box 200, PORT ALFRED, 6170
2695	FLETT, Dr Brad C	25 Maree Street, POTCHEFSTROOM, 2520
9015	FLORA CONSERVATION COMMITTEE	Botanical Society of SA, Kirstenbosch, CLAREMONT, 7735
1963	FOKKENS, Mr J F	P O Box 14504, NELSPRUIT, 1200
2909	FOUCHE, Johan	Posbus 721, DELMAS, 2210
2662	FOURIE, Mnr Joop	Posbus 102444, MORELETA PLAZA, 0044
2044	FOURIE, Mnr J J A	Posbus 908541, MONTANA, 0151
0689	FOURIE, Mnr M J	Hobsonstraat 9, STILFONTEIN, 2551
0542	FRITZ, Mnr G	Posbus 139, HEIDELBERG, 1438
1632	FUGLISTER, Mr F J	P O Box 121, HALFWAY HOUSE, 1685
2927	FUHRI, Eddie	44A Jan Smuts Ave, WINSTON PARK, 3610
2875	GALLOWAY, Elmarie	Posbus 445, MENLYN, 0063
2890	GAUL, Mr William J	28 Escombe Ave, PARKTOWN, 2193
0200	GERBER, Mr Harry	45 Anleno Road, Montclair, DURBAN, 4001
0812	GERICKE, Dr S J	P O Box 931, MTUBATUBA, 3935
2113	GIELINK, Mr C C	P O Box 3786, DURBAN, 4000
1614	GNEITING, C F H	P O Box 72188, LYNNWOOD RIDGE, 0040
1466	GOLDSCHMIDT, Dr R P	P O Box 68332, BRYANSTON, 2021
0046	GOODE, Douglas	10 Hudson Bennett Crescent, GILLITS, 3610
2665	GOOSEN, Mnr R N	Posbus 25426, GEZINA, 0031
1335	GOULD, Mr & Mrs T	P O Box 132, PENNINGTON, 4184
2844	GREENAWAY, Neill	P O Box 2806, PINETOWN, KZN, 3600
2781	GREYLING, Dr J H	posbus 199, PIETERSBURG, 0700
1789	GREYLING, Mnr J J	21ste Laan 760, RIETFONTEIN, 0084
1720	GRIESEL, Mnr C L B	Queens Crescent 427, LYNNWOOD, Pretoria, 0081
1400	GROBBELAAR, Mev Hanneke	Tarentaalkloof, Posbus 15357, LYNN-OOS, 0039
0097	GROBBELAAR, Prof N (Erelid)	Tarentaalkloof, Posbus 15357, LYNN-OOS, 0039
2285	GROBLER, Mnr Phil	Posbus 236, PIETERSBURG, 0700
2502	GROENEWALD, Mnr D M	Willsonstraat 161, FAIRLAND, 2195
2959	GROVÉ, Mnr Eddie J J	Henrettastraat 508, Dorandia Uitbr 10, PRETORIA-NOORD, 0182
2899	HAARHOFF, Nick	Posbus 39192, MORELETAPARK, Pretoria, 0044
0420	HANACZECK, Mr H W	P O Box 44, DUIWELSKLOOF, 0835
2864	HANEKOM, A C	Posbus 12380, BENDORPARK, Pietersburg, 0699
1178	HARRIS, Mr M V	64 Robertson Road, WARMBARTHS, 0480
1600	HARRIS, Mnr R	Posbus 16514, VERWOERDBURG, 0140
0296	HARRY MOLTENO LLIBRARY	The Librarian, Kirstenbosch, Private Bag X7, CLAREMONT, 7735
0601	HART, Mr G B	P O Box 72727, LYNNWOOD RIDGE, 0040
2042	HARTZENBERG, Carol M S	P O Box 4359, BRITS, 0250
0130	HARTZENBERG, Louw	Posbus 4, NORTH RIDING, 2162
2271	HATTINGH, Mev Elza	Posbus 797, HONEYDEW, 2040
2318	HATTINGH, Mnr J F	Posbus 13717, SINOVILLE, 0129
2863	HATTINGH, Michelle	Postnet Suite #28, Privaatsak X5091, BRITS, 0250
2678	HECKL, Wolfram	P O Box 1383, HONEYDEW, 2040
2326	HELM, Marius	Posbus 9612, QUEENSTOWN, 5320
0115	HENMAN, Mr Enrico	12 Dhlinsa Street, ESHOWE, 3815
2096	HENNING, Dr J C	Posbus 1168, ELLISRAS, 0555
0433	HENNING, Dr N G C	Cantonmentsweg 80, LYTTELTON MANOR, Centurion, 0157
2417	HILLS, Mnr G	Posbus 64, HENNEMAN, 9445
2846	HOLDEN, Mr Alex	P O Box 267, BALLITO, 4420
1711	HOLLANDER, Prof W J	RAU, Posbus 524, AUCKLANDPARK, 2006
2556	HOLZTRÄGER, Dr F A	P O Box 29561, SUNNYSIDE, 0132
9002	HOOFDIREKTORAAT NATUURBEWARING	Privaatsak X209, PRETORIA, 0001
0086	HOOLE, Mr James	P O Box 7958, NEWTON PARK, Port Elizabeth, 6055
2741	HOPLEY, Mr Rowland & Mrs Michelle	6 Waaiboorn Street, FREEWAY PARK, Boksburg, 1459
0295	HORNE, Mnr C	P O Box 6819, WELGEMOED, 7530
2236	HOWES, Cobie & Julie	55 Homestead Avenue, HILLCREST, 3610
0498	HULSHOF, Mr A	P O Box 1526, KLERKSDORP, 2570
2802	HUMAN, Mnr P G	Posbus 5335, Onverwacht, ELLISRAS, 0557
2718	HURLY, Michael	P O Box 11438, MAROELANA, 0161
1155	ISACKS, Mr G A	8 Medway Road, WESTVILLE, 3630
1168	ISACKS, Mr G R	44 Windham Avenue, HILLARY, 4094
2917	ITELITECH cc	Posbus 1849, PIETERSBURG, 0700
2834	JACKSON, Dr A G M	188A Pine Street, ARCADIA, Pretoria, 0083
2906	JANSEN, Jaco	Royal Oakstraat 45, KENSINGTON, 2094, Johannesburg

2178	JANSEN, Mnr Zandberg	Kerkstraat 88, WELLINGTON, 7654
2902	JANSEN VAN VUUREN, L C	Betzstraat 100, POLOKWANE (PIETERSBURG) 0699
2448	JANSE VAN RENSBURG, Mr J B	Gen E R Snymanslot 3, WELGELEGEN, 7500
1002	JANSE VAN RENSBURG, Mnr J M	Posbus 92, VRYHEID, 3100
2731	JANSE VAN RENSBURG, M E	Posbus 132, ALEXANDRIA, 6185
2732	JANSE VAN RENSBURG, Mnr Rene J	Posbus 26841, LANGENHOVENPARK, Bloemfontein, 9330
2816	JONKER, C v N	46 Lois Botha Singel, SUMMERSTRAND, Port Elizabeth, 6001
2857	JOOSTE, Mr Roaland	P O Box 3322, BENONI, 1500
1527	JORDAAN, Past Ben	P O Box 55884, PIETERSBURG, 0700
2485	JORDAAN, Mr J A	22 Paradysvink Street, BIRCH ACRES, Kempton Park, 1619
0146	JORDAAN, Sakkie & Anna	Posbus 104, WARRENTON, 6530
2861	JOUBERT, Mnr J D	Posbus 48249, HERCULES, 0030
2880	JOUBERT, Johan (Snr)	Posbus 9, DELMAS, 2210
2292	JOUBERT, J J	Posbus 21991, Helderkruijn, ROODEPOORT, 1730
2948	JOUBERT, J J	Posbus 41, MALELANE, 1320
1355	JOUBERT, Mnr W	Posbus 376, WARMBAD, 0480
1462	KABLE, Mr A J	12 Orchid Road, TYGERDAL, Goodwood, 7460
1791	KADWA, Dr M A	Plastic Surgeon, Parklane Clinic, Private Bag X40500, HOUGHTON, 2041
0010	KEMP, Mev P	51 Constance Road, BROADWOOD, Port Elizabeth, 6070
2151	KENDALL, L	P O Box 11324, HATFIELD, 0028
0081	KENNEDY, Mnr H C	Blok A-E 17, Huis Vergenoegd, Hoofstraat 188, PAARL, 7646
1134	KIRTON, Doug L	P O Box 2550, DURBAN, 4000
2900	KLEU, Thomas D	KLEU, VRYHEID, 3100
0745	KLOPPERS, Mnr John S	Posbus 24, GROBLERSDAL, 0470
1358	KOFMAN Mnr J H	Posbus 1106, Montana Park, PRETORIA, 0159
1939	KORKIE, Mnr E S	Vampirestraat 569, ELARDUSPARK, 0181
1812	KRIEL, Mnr W J	Rupertlaan 34, SOMERSET-WES, 7130
2945	KRIGE, Mnr A Ben	Posbus 6091, WELGEMOED, 7538
2605	KRUGER, Mnr A P	Posbus 863, PHALABORWA, 1390
2311	KRUGER, Mnr Johasn	Posbus 911343, ROSSLYN, 0200
2547	KRUGER, Mnr J C	Posbus 5552, WINKLESPRUIT, 4145
2943	KRUGER, Marthli	Posbus 2114, SWAVELPOORT, 0036
2921	KRUGER, Mnr P	Posbus 3922, PRETORIA, 0001
0853	KRUGER, Dr P W B	Posbus 36766, MENLOPARK, 0102
1140	KRUGER, Mnr S R	Buitestraat 48, La Provance, BETHLEHEM, 9701
1672	KUSCHKE, Mev M M	Posbus 54, HAZYVIEW, 1242
1832	KUUN, Mnr P J C	Posbus 39718, MORELETAPARK, 0044
9001	KZN WILDLIFE	The Librarian, KZN Wildlife, P O Box 13053, CASCADES, 3202
2692	LABUSCHAGNE, Dieter	Posbus 912464, SILVERTON, 0127
2475	LABUSCHAGNE, D L	Posbus 174, HEILBRON, 9650
2420	LAMBRECHTS, Dr A H D	Amandelweg 51, AMANDA GLEN, Durbanville, 7550
2343	LAMBSON, Mr B	P O Box 411521, CRAIGHALL, 2024
2627	LESLIE, Mr Bruce D	P O Box 11124, SILVERLAKES, 0054
0890	LE ROUX, Cobus	Cerarwood Kompleks No 21, Corneliusstraat, WELTEVREDENPARK, 1746
2947	LEVINE, Dr Leonora S	P O Box 180, FLORIDA, 1710
2743	LIEBENBERG, Karl	Posbus 280, TZANEEN, 0850
1927	LILTVED, William R	P O Box 372, NOORDHOEK, 7979
0645	LOTTER, Mnr W J	Posbus 48520, Hercules, PRETORIA, 0030
0159	LOUBSER, Prof J D	Posbus 11315, QUEENSWOOD, 0121
2219	LOURENS, Mnr A J	Posbus 9455, ELSBURG, 1407
2620	LOURENS, D C J	Hansweg 10, VALHALLA, 0185
2491	LOURENS, Mev S	Posbus 68, PONGOLA, 3170
2840	LOUW, Mnr Daan J	Botterblomstraat 116, VIERLANDEN, Durbanville, 7550
1676	LOUW, Mr J P	P O Box 21433, VALHALLA, 0137
1272	LOUW, Mnr W H	Posbus 1646, FAERIE GLEN, 0250
1324	LOVATT, Mr M	P O Box 338, EMPANGENI, 3880
2209	LOVE, Mr C F M	P O Box 1861, EMPANGENI, 3880
2814	MALAN, Mnr G M	Posbus 40825, Veld & Vlei, RICHARDS BAY, 3900
2831	MALAN, Mr P F	34 Melsetter Road, LOVEMORE HEIGHTS, 6070
2792	MALAN, Stefan	P O Box 91297, AUCKLANDPARK, 2006
0561	MARAIS, Mnr A J	Posbus 28006, SUNRIDGEPARK, 6008
2376	MARAIS, Dr D D	Posbus 13948, HATFIELD, Pretoria, 0028
0568	MARAIS, Mev Emmerine	Posbus 546, TZANEEN, 0850
2768	MARAIS, Mnr E W	Posbus 38224, GARSFONTEIN, 0060
2473	MARAIS, Mnr M J	Posbus 73400, LYNNWOODRIF, 0040
425	MARITZ, Mnr Faan	Posbus 60539, VAALPARK, 9573
2203	MARITZ, Mnr H P	Posbus 39156, GARSFONTEIN-OOS, 0060, Pretoria
2274	MARTEN, Mr M	32 A G Visser Street, Brackenhurst, ALBERTON, 1448
2709	MARTIN, Adv C H	P O Box 4040, RIVONIA, 2128
2925	MARX, Mnr Manie	Posbus 91, RADANNA, 0704
2946	MASSYN, Charl	Posbus 38341, FAERIE GLEN, 0043
2411	McINTOSH, Mev H	Posbus 1327, PIETERSBURG, 0700
2023	McMASTER, Cameron & Rhoda	P O Box 26, NAPIER, 7270
1575	MEYER, Prof J J M	Dept Plantkunde, Universiteit van Pretoria, PRETORIA, 0002
1107	MIDDELMANN, Mr W J W	402 CPOA, 231 Main Road, RONDEBOSCH, 7700

2048	MILLAR, Mrs R E	P O Box 49300, ROSETTENVILLE, 2130
2150	MINNAAR, Dr & Mev D	PostNet Suite 5, Private Bag X8, ELARDUSPARK, 0047
2702	MINNIE, Mr J D	P O Box 1071, RUMSIG, 1732, Roodepoort
0006	MINNIE, Dr Ollie J	P O Box 137, MTUBATUBA, 3935
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2951	MOMSEN, Mr & Mrs P J	P O Box 149, RANDPARK RIDGE, 2156
1210	MOODIE, Mnr S T	Posbus 72215, LYNNWOODRIF, 0040
0489	MORRIS, S F	P O Box 837, RUSTENBURG, 0300
2375	MORRISON, Bruce	P O Box 1560, SPRINGS, 1560
2879	MOSS, Mnr George F	Posbus 9851, ELSBURG, 1407
1957	MOSTERT, Mev Cassandra	Posbus 687, KEMPTONPARK, 1620
2486	MOSTERT, Mnr J I	Deborahstraat 9, WESTERLING, Port Elizabeth, 6025
2086	MOSTERT, Mnr P J	Keeling Place 6, ESCOMBE, Queensburgh, 4093
9019	MPUMALANGA PARKS BOARD	Att J de Beer, Private Bag X11338, NELSPRUIT, 1200
0741	MULDER, Mnr I B	Saffraanlaan 10, Weltevredenpark X9, ROODEPOORT, 1709
1965	MULDER, Mnr H F	Kahlerstyaat 64, Idasvallei, STELLENBOSCH, 7600
1722	MULLER, Mnr T I	POSBUS 11074, UNIVERSITAS, Bloemfontein, 9321
2949	MYBURGH, Errol	Wenningstraat 17, SONSTRAAT, Durbanville, 7550
2304	MYBURGH, Dr Jan G	Victorstraat 43, MURRAYFIELD, Pretoria, 0184
0397	MYBURGH, Mej J S	Departement Plantkunde, Universiteit van Pretoria, PRETORIA, 0002
2476	MYBURGH, Mnr L M	Linkstraat 6, TRIOMF, 2092
2848	MYBURGH, Mnr M J	Posbus 100, RANDPARKRIDGE, 2156
9011	NATAL HERBARIUM	The Curator, Botanic Gardens Road, DURBAN, 4001
9016	NATALSE BIBLIOTEEK	Die Bibliotekaris, (Afd Pligeksemplare), Posbus 415, PIETERMARITZBURG, 3200
2191	NATIONAL BOTANICAL GARDEN NELSPRUIT	The Library, P O Box 1024, NELSPRUIT, 1200
0065	NATIONAL BOTANICAL INSTITUTE	Kirstenbosch National Botanic Garden, Private Bag X7, CLAREMONT, 7735
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1865	NATIONAL BOTANICAL INSTITUTE	THE Curator (Nursery), Private Bag X101, PRETORIA, 0001
9018	NATUURBEWARING NOORDELIKE PROVINSIE	(Riaan de Jager), Posbus 494, PIETERSBURG, 0700
1570	NAUDE, Mnr J J	Posbus 157, TZANEEN, 0850
2220	NAUDE, Mnr L J	Durbanweg 90, MOWBRAY, Kaapstad, 7700
2837	NEAVE, David Michael	25 Philips Road, ESCOMBE, 4093
2913	NEGRAO, Mr John A B	P O Box 17283, SUNWARD PARK, 1470
2725	NEL, Dr Allan M & Mev Jolanda	Posbus 60497, PIERRE VAN RYNEVELD, 0045
0261	NEL, Danie & Avis	P O Box 45, UMLAAS ROAD, 3730
2853	NEL, Mnr Diderik J	Privaatsak X507, HECTORSPRUIT, 1330
1423	NEL, Mnr J J G	Jan van Riebeeckweg 300, OUDTSHOORN, 6625
0227	NEL, Mnr William	Posbus 87, MTUNZINI, 3867
2124	NELL, Dr Johan	Posbus 2787, RANDBURG, 2125
1943	NELL, Mnr J F	Posbus 100386, MORELETTA PLAZA, 0167
2780	NIELSEN, Mr Desmond L	P O Box 394, KLOOF, 3640
1194	NIEMAND, Mr & Mrs H & D	50 Judges Avenue, Cresta Extention 1, RANDBURG, 2194
2346	NIENABER, Mev H J	Posbus 20045, RICHARDSBAAI, 3900
2639	NIEUWENHUIS, Mnr M Johan	Posbus 14713, WEST ACRES, 1211
2849	NIEUWOUDT, Mnr C L	Posbus 3388, PAARL, 7620
1503	NIEUWOUDT, J & L	P O Box 292, SKEERPOORT, N W Province, 0232
2956	NORTJE, Mnr Rudi	Posbus 9431, NEWCASTLE, 2940
1968	OBERHOLZER, Niël & Thea	Posbus 44622, LINDEN, 2104
1588	OCHSE, Mr A L	P O Box 310, HONEYDEW, 2040
0094	OLIVIER, Mnr L	Posbus 288, KIRKWOOD, 6120
2832	OLIVIER, Trevor	36 Hillbrow Road, UMGENI PARK, 4051
2779	OOSTHUIZEN, Brenza	Posbus 7823, CENTURION, 0046
0872	OOSTHUIZEN, Mnr J C	Posbus 59911, KAREN PARK, 0118
2869	OOSTHUIZEN, Mr R T	96 Begeman Street, HEIDELBERG, 1441
2446	OSMERS, Mev Rita	Posbus 102, TZANEEN, 0850
2843	OTTO, Gerhard	P O Box 1965, NORTHCLIFF, Johannesburg, 2115
2257	PAGE, Mnr & Mev C & A	Posbus 32167, GLENSTANTIA, 0100
2878	PAKENDORF, Dr U W	Posbus 8060, NELSPRUIT, 1200
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2215	PARKER, Mr K	Sydneys Hope, Po SIDBURY, 6131
0357	PARSONS, Mr J S	P O Box 41652, CRAIGHALL, 2024
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2300	PAUTZ, Mr M J	Cycads for Africa, P O Box 209, KNYSNA, 6570
2854	PAYNE, Peter W	P O Box 2598, NELSPRUIT, 1200
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2904	PETERSEN, Peter Albert	P O Box 704, KLOOF, 3540
0024	PIENAAR, Mr Leon	626 Jan Visse Avenue, ROSEVILLE, 0084
2606	PIENAAR, Mev Liné	Lusitaniastraat 6, SALDANHA, 7395
2207	PIENAAR, Mnr M G	Posbus 1300, NELSPRUIT, 1200
2287	PIENAAR, Mnr W J	Posbus 2169, MONTANAPARK, 0159
1323	PIETERSE, Mnr Frans P	Emus Erasmuslaan 278, ERASMUSRAND, Pretoria, 0181
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0078	PINKER, Mr Colin	P O Box 2115, NELSPRUIT, 1200
2859	PINNOY, Kevin K	5 Liebenberg Road, CONSTANTIAKLOOF, Florida, 1709

2817	POTGIETER, Yana	P O Box 2228, PIETERSBURG, 0700
2185	POWELL, J B	Dowlingweg 2, Warner Beach, KINGSBURG, 4126
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 0213 STRYDOM, Dr Dawid
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0906	BRUNNER, Mr Julius	Postfach 4, A-2326 MARIA LAZENDORF
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2809	CAMERON, Mr Barry	P O Box 30156, NAIROBI, GPO 00100
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2609	PIETERS, Mnr A J	Posbus 1516, WINDHOEK
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1912	SPENCER-JONES, Mr A	12 The Brooklands, TARBOCK ROAD, Liverpool L36 5YD
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1747	BIAGI, Louis	2000 Hoover Avenue, OAKLAND, California 94602-1924
2865	BIRD, Joseph	2216 Warmouth Street, SAN PEDRO, CA 90732
1734	BLAUER, John	418 Pirate Road, NEWPORT BEACH, California 92663
2944	BRITTON, Paul	P O Box 1824, NORWALK, CA 90651
1394	BROWN, Mr E D	10712 Lippizan Drive, JACKSONVILLE, Florida 32257
1288	BURNETT, Mr W L	P O Box 17908, NORTH LITTLE ROCK, Arkansas 72117-0908
2928	CARADINE, J Chris	148 South Nardo Ave, SOLANA BEACH, CA 92075
1771	CARLSON, E J	485 Nieuport Drive, VERO BEACH, Florida 32968
0844	CARNEY, Mr Jack	411 Indianapolis Avenue, HUNTINGTON BEACH, California 92648
0598	CAUDRY, Mr J	264 Almyra Drive, LAKE MARY, Florida 32746
0709	CHEEK, Mr Bane W	2813 Country Club Rd North, WINTER HAVEN, Florida 33881

1595	CHEMNICK Mr J	114 Conejo Road, SANTA BARBARA, California 93103
2617	CORTNER, Mark E	18218 Knotty Green, HOUSTON, TX 77084
2258	DAVIES, Stanton W	444 Tustin Avenue, NEWPORT BEACH, CA 92663
2511	DE LAUBENFELS, David J	107 Will-O-Wind Dr, JAMESVILLE, NY 13078
1954	DELEVORYAS, Dr Ted	1820 Forestdale Drive, ENCINITAS, CA 92024
1801	DOWDY, Mr T V	1018 Hayes Avenue, SAN DIEGO, California 92103
1568	DUDENHOEFFER, Mr J	P O Box 1391, BONSALL, CA 92003
1591	ECKEL, Mr D	2119 Victoria Drive, FULLERTON, California 92631
1772	ERICKSON, B	5408 Santa Teresa Avenue, SANTA ROSA, California 95409
9005	FAIRCHILD TROPICAL GARDEN	Library, 11935 Old Cutler Road, MIAMI, Florida 33156
2335	FOSTER, Phillip A	11521 Augusta Dr, BALCH SPRINGS, TX 75180
1300	FRANCIS-ERHARD, Dr Doris	38 Tano Alto Road, SANTA FE, New Mexico 87501
1748	FROEHLICH, Mr D	13219 Stern Avenue, LA MIRADA, California 90638-2454
2823	GABRIE, James	5228 Hartwick Street, LOS ANGELES, CA 90041
2157	GARDNER, Ted	1600 West Mountain Drive, SANTA BARBARA, CA 93103
2746	GOTO, Henry	749 Oakglade Dr, MONROVIA, CA 91016
2646	GREEN, Ed	27703 Ortega Highway SPC 41, SAN JUAN CAPISTRANO, CA 926-1958
0471	GREGORY, Dr T J	414 Pinehill Road, HILLSBOROUGH, California 94010
1594	GUILIANO, Merle	3115 Grove Road, PALM BEACH GARDENS, Florida 33410
1860	HENNELL, Mr Ken	38555 Harris Trail, FALLBROOK, California 92028
2158	HODDS, William C W	5492 N Palm Avenue Suite B, FRESNO, CA 93704
1773	HOLTON, D F	5221 3 rd Road, LAKE WORTH, Florida 33467
2669	HORTICULTURAL CONSULTANTS, Inc	5300 N. Brasswood PMB 382, HOUSTON, TX 77096
2098	HOWARD, Mr Bob	2514 North Lanchmont Ave, SANTA ANA, Ca 92706
1051	HUNTINGTON LIBRARY	Acquisitions Dept/Bot/, 1151 Oxford Road, SAN MARINO, CA 91108
2020	IRONMONGER, Bruce & Suzanne	P O Box 754, BONSALL, CA 92003
1427	KOPFSTEIN, Mr R	6903 Kellyn Lane, VISTA, CA 92084
0918	LEWIS, Mr H W	P O Box 195, FORT OGDEN, Florida 34267-0195
1750	MAEROWITZ, Mr Todd	742 Sleeping Indian Rd, OCEANSIDE, CA 92057-2113
2866	MAISNER, Steve	205 N. Enrose Ave, SAN PEDRO, CA 90732
2557	MARTIN, Robert E	32389 Corte Coronado, TEMECULA, CA 92592
2914	MASTERSON, Michael	2038 Arborwood Pl, ESCONDIDO, CA 92029
1635	McDANIEL, Mr I	4034 Crest Heights, FALLBROOK, California, 92028
2887	MINKS, David W	28969 Mountain Meadow Rd, ESCONDIDO, CA 92026
2396	MISSOURI BOTANICAL GARDEN	The Library, P O Box 299, ST LOUIS, Missouri 63166
0570	MOLDOCH, Mr W	2711 Summerwaview Way #202, ANNAPOLIS, MD 21403
2905	ORTANIQUE	35314 Rutland Ct, NEWARK, CA 94560
2876	ORTIZ-MARQUEZ, April	527 S. Reese Place, BURBANK, CA 910506
2099	PENCALL, Mr Ed	13636 Mulberry Dr, WHITTIER, CA 90605
0562	PERRY, Mr M	1631 Columbia Drive, ENGLEWOOD, Florida 34223-1517
2387	POULSEN, Chris	8749 Almond Rd, LAKESIDE, Ca 92040
2512	PROKOPIJ, John	16422 Paseo de Rocha, HACIENDA HEIGHTS, CA 91745
2164	RICE, David A	4851 Marguerita Ln, LA MESA, CA 91941
2434	RIEDLER Mark	1150 Cambria Way, ENCINITAS, CA 92024
2196	ROSS, Mary Jo & Terry	2579 Brust Court, EL CAJON, CA 92019
2558	SCHELLENBERG, Hans K	18420 Wayne Rd, ODESSA, FL 33556-4744
1814	SHAFFER, Richard	82-751 Boston Court, INDIO, California 92201
2101	SLAVINSKI, Anthony J	1403-R Bedford St, CUMBERLAND, MD 21502-1004
1898	SMITH, Mark & Linda	P O Box 622, RANCHO SANTA FE, California 92067
2867	SPARKS, Kenneth	5416 Bedford Ave, LOS ANGELES, CA 90056
1899	STERNBERG, Karen & Paul	2124 Camino Cantera, VISTA, California 92084
2080	TALLEY, Mr H Ray	133 Eagle Rock Avenue, SILVER STRAND BEACH, CA 93035
0188	TANG, Mr Willie (HON)	65 Corydon Drive, MIAMI SPRINGS, FLORIDA 33166
2587	TERRY, Irene & ROEMER, Robert	University of Utah, Dept of Biology, 257 South 1400 East, SALT LAKE CITY, UT 84112
2748	THOMPSON, Jim	1115 Cemetery Rd, HAINES CITY, FL 33844
2749	TOMONO, Mits	1090 Valley View, PASADENA, CA 91107
0919	TURLO, Mr A	5521 Towers Street, TORRANCE, California 90503
1439	WAGNILD, Mr Gary	405 Olive Street, INGLEWOOD, California 90301-2217
0657	WALSKA, GANNA LOTUSLAND FOUNDATION	695 Ashley Road, SANTA BARBARA, CA 93108
1552	WALTERS, Dr T	Montgomery Botanical Center, 11901 Old Cutler Road, MIAMI, Florida 33156
2574	WARNEY, Tony M	492 Dewane Drive, EL CAJON, CA 92020
0284	WHITELOCK, Mr Lorán M	4524 Toland Way, LOS ANGELES, California 90041
2412	WILLIAMS, Glen	742 E Palm Ave, MONROVIA, CA 91016
0989	WILLIAMSON, Mr Eddie	433 66th Avenue South, ST PETERSBURG, Florida 33705
0485	WRINKLE, Mr G	8034 Altavan Ave, LOS ANGELES, CA 90045

ZIMBABWE

1626	ALOE & CACTUS SOCIETY OF ZIMBABWE, (The Cycad Branch)	P O Box CY 300, Causeway, HARARE
1991	GILLESPIE, Mr M D	128 Larmenier Village, 4 Ridgeway North, P.O. CHISIPITE, Harare
1315	LAPHAM, Mrs E	P O Box H.G. 960, Highlands, HARARE
2295	McLAUGHLAN, Miss G M	1 Lloyd Close, Ballantyne Park, HARARE

1218 MÜLLER, Mrs D
 2380 RIVRON, B D
 2281 SCHLACHTER, Brian
 2825 THACKRAY, Mr M
 0096 TURNER, Mr Ian S
 2068 WATERS, Mr I R

P O Box 246, RUSAPE
 4 Shiri Road, Greendale, HARARE
 Box B E 174, Belvedere, HARARE
 8 Cheshire Road, Mt Pleasant, HARARE
 c/o Mrs Lorna Pearson, 45 Court Road, Greendale-North, HARARE
 29 Ridge Road, Avondale, HARARE

THE CYCAD SOCIETY OF SOUTH AFRICA
INCOME STATEMENT FOR THE YEAR ENDED 31 DECEMBER 2001

	2001 RAND	2000 RAND	1999 RAND
INCOME	129,518	94,090	103,225
Subscriptions	106,690	72,645	79,692
Donations	7,035	8,497	6,599
Sales - back issues	3,295	1,932	3,968
Interest received on bank balances	11,926	10,199	12,108
Sundry income	572	817	858
LESS: EXPENSES	106,668	91,837	97,193
Bank charges	1,120	1,184	1,118
Branch transfers	3,572	2,288	2,276
Depreciation	793	793	1,929
Grants and subsidies	-	-	7,000
Encephalartos' publication and printing costs	65,574	54,019	55,847
Postage and photo copies	35,357	32,258	27,791
Sundry expenditure	252	1,295	1,232
NET SURPLUS FOR THE YEAR	22,850	2,253	6,032
ACCUMULATED RESERVES AT BEGINNING OF THE YEAR	109,645	107,392	101,360
ACCUMULATED RESERVES AT END OF THE YEAR	132,495	109,645	107,392

**THE CYCAD SOCIETY OF SOUTH AFRICA
BALANCE SHEET AS AT 31 DECEMBER 2001**

	2001 RAND	2000 RAND	1999 RAND
ASSETS			
Non-current assets			
Property, plant and equipment, net	716	1,509	2,302
Current assets			
Inventory - back issues	8,800	9,801	9,771
Fixed deposits	32,605	32,605	32,605
Bank balances	123,576	100,969	81,580
Petty cash float	-	36	-
TOTAL ASSETS	165,697	144,920	126,258

EQUITY AND LIABILITIES

Capital and reserves

Accumulated reserves 132,495 109,645 107,392

Current liabilities

Sundry creditors 1,961 - 516
Accruals and other current liabilities 31,241 35,275 18,350

TOTAL EQUITY AND LIABILITIES

165,697 144,920 126,258

I hereby declare that I am a member of the Cycad Society of South Africa, but that I have no interest in its financial affairs. These financial statements have been compiled from information and explanations received from the President and Officials of the Society.

I therefore certify that the Balance Sheet and Income Statement for the year ended 31 December 2001 are in accordance with the accounting records.



WJ DIEDERICKS

Pretoria, 14 November 2003