

# ENCEPHALARTOS

JOURNAL OF THE  
CYCAD SOCIETY OF  
SOUTH AFRICA

TYDSKRIF VAN DIE  
BROODBOOM VERENIGING  
VAN SUID-AFRIKA

NO. 51

SEPTEMBER 1997

ISSN 1012-9987



**CYCAD SOCIETY OF SOUTH AFRICA**

**BROODBOOM VERENIGING VAN SUID-AFRIKA**

**Council members / Raadslede**

President

**Prof. Hannes Robbertse**  
167 Astrid Street / Astridstraat 167  
0184 Meyerspark (Pretoria)  
Tel.: 012-833964

Secretary-treasurer

Sekretaris-tesourier

**Prof. Guillaume Theron**  
P.O. Box / Posbus 1790  
0027 Groenkloof (Pretoria)  
Tel.: 012-3439297

Editor of "Encephalartos"

Redakteur van "Encephalartos"

**Isabella Claassen**  
P.O. Box / Posbus 25688  
0105 Monumentpark (Pretoria)  
Tel.: 012-453350  
(later: 012-3477807)

Back copies officer

Beampte vir vorige uitgawes

**André Jordaan**  
36 Ponsford Crescent / Ponsfordsingel 36  
4093 Escombe  
Tel.: 031-442627

---

Regional officers / Streeksverteenvoordigers

Eastern Cape / Oos-Kaap

**Frank Marx**  
29 Kurumanskloof  
Summerstrand  
6000 Port Elizabeth  
Tel.: 041-532870

Natal

**Danie Nel**  
P.O. Box / Posbus 4726  
4000 Durban  
Tel.: 031-442505

Transvaal

**Hanneke Grobbelaar**  
P.O. Box / Posbus 15357  
0039 Lynn East / Lynn-oos  
(Pretoria)  
Tel.: 012-8080995

---

Pollen- and seedbank officers / Stuifmeel- en saadbankbeamptes

Eastern Cape / Oos-Kaap

**Corrie Meyer**  
20 Ralston Road / Ralstonweg 20  
6045 Fernglen  
Tel.: 041-313102

Natal

**Ollie Minnie**  
P.O. Box / Posbus 137  
3935 Mtubatuba  
Tel.: 035-5500646

Transvaal

**André de la Rey**  
318 27th Avenue / 27ste Laan 318  
0186 Villieria, Pretoria  
Tel. 012-3336470

---

Overseas correspondents / Buitelandse skakelbeamptes

Australia

**Paul Kennedy**  
21 Sierra Road  
Engadine  
New South Wales 2233  
Tel.: 02-520-7690

U.S.A. and Canada

**Willie Tang**  
Fairchild Tropical Garden  
11935 Old Cutler Road  
Miami, Florida 33156  
Tel.: 305-667-1651

**CHANGE OF ADDRESS / ADRESVERANDERING**

**When changing address, please notify the Secretary-treasurer.**

**Wanneer u van adres verander, laat weet asseblief die Sekretaris-tesourier.**

# ENCEPHALARTOS

JOURNAL OF THE  
CYCAD SOCIETY OF  
SOUTH AFRICA

TYDSKRIF VAN DIE  
BROODBOOM VERENIGING  
VAN SUID-AFRIKA

NO. 51

SEPTEMBER 1997

ISSN 1012-9987

**COVER / VOORBLAD :** *Encephalartos msinganus*

A large old plant hanging by its roots from a cliff in 1988.  
When we visited this place in 1995, we didn't see this plant again. Note  
the epiphytic ferns (*Polypodium*) on the stem.

Photo: Piet Vorster

---

## CONTENTS / INHOUD

FROM THE PRESIDENT / VAN DIE PRESIDENT .....	2
FOCUS ON / FOKUS OP ..... <i>ENCEPHALARTOS MSINGANUS</i>	
<b>P. Vorster</b> .....	4
SHORT COMMUNICATIONS / KORT MEDEDELINGS .....	9
Cycad sucker propagation	
<b>R. Osborne and S. Walkley</b> .....	9
Nuus oor die Transvaalse Streektak van die Vereniging	
<b>H. Grobbelaar</b> .....	10
<i>Encephalartos altensteinii</i> translocation: 2 year progress report on long-term <i>Encephalartos</i> survival rates	
<b>A. Vice</b> .....	11
Historical notes on the discovery of <i>Macrozamia moorei</i> (Zamiaceae)	
<b>P.I. Forster</b> .....	12
LETTERS TO THE EDITOR / BRIEWE AAN DIE REDAKTEUR .....	14
Broodbome in houers	
<b>I.J. van den Berg</b> .....	14
Skaars plante	
<b>W.J. Diedericks</b> .....	14
Ode aan die saadbank	
<b>T. du Preez</b> .....	15
FINANCIAL STATEMENT / FINANSIËLE STAAT .....	16

## CONTENTS / INHOUD (continued / vervolg)

CYCADS IN CONTAINERS / BROODBOME IN HOUERS .....	18
Cycads in containers	
G. Gittieson .....	18
Broodbome in potte en nuwe idees	
E. Rouwenhorst .....	19
NEW CYCAD PUBLICATIONS .....	21
INDEX TO ENCEPHALARTOS NUMBERS 1 TO 50 .....	23
NEWSPAPER CLIPPINGS / KOERANTUITKNIPSELS .....	51
Robbery case for special branch .....	51
Botanic garden for locals and tourists .....	52

---

### FROM THE PRESIDENT

---

As was mentioned in a letter "From the President" in *Encephalartos* 49: 3, the term of the present Council is expiring the end of this year. I had invited members to propose names for new Council members, but so far only one nomination for the vacancy of president and no other proposals have been received. With the exception of myself and Frank Marx, the existing members have indicated that they are available for re-election. Without other candidates to vote for, I must take it for granted that the available Council members have been re-elected unanimously. The new Council for the next two years will, therefore, be as follows:

President:	Prof. F.J. de Jager
Secretary-treasurer:	Guillaume Theron
Editor of " <i>Encephalartos</i> ":	Isabella Claassen
Printing and dispatch officer:	Piet Vorster
Back Copies officer:	André Jordaan

#### Regional Branch Representatives

Transvaal:	Hanneke Grobbelaar
Natal:	Danie Nel
Eastern Cape:	Vacant

Complaints have been received from foreign members about the Afrikaans articles in "*Encephalartos*". Council has decided that extended English summaries will in future be published together with all Afrikaans articles. The fact is that we do not get too many articles for publishing and we can not discourage members

---

### VAN DIE PRESIDENT

---

In 'n brief "Van die President" wat in *Encephalartos* 49: 3 verskyn het, is genoem dat die termyn van die huidige Raad aan die einde van die jaar verstryk. Ek het gevra vir voorstelle vir nuwe Raadslede, maar behalwe vir een voorstel vir 'n nuwe president het daar tot nou toe geen ander voorstelle gekom nie. Met die uitsondering van myself en Frans Marx, het die huidige Raadslede aangedui dat hulle weer herverkiesbaar is. Aangesien daar nie nou ander kandidate is wat verkies kan word nie, neem ek dit as vanselfsprekend dat die huidige Raadslede onbestrede verkies is. Die nuwe Raad vir die volgende termyn sal dan soos volg wees:

President:	Prof. F.J. de Jager
Sekretaris-tesourier:	Guillaume Theron
Redakteur van " <i>Encephalartos</i> ":	Isabella Claassen
Druk- en verspreidingsbeampte:	Piet Vorster
Beampte vir vorige uitgawes:	André Jordaan

#### Streektakverteenwoordigers

Transvaal:	Hanneke Grobbelaar
Natal:	Danie Nel
Oos-Kaap:	Vakant

Klagtes is van lede ontvang dat buitelandse lede nie die Afrikaanse artikels kan lees nie. Die Raad het besluit dat daar vir al die Afrikaanse artikels uitgebreide Engelse opsommings voorsien sal word. Die feit is dat ons nie baie artikels vir publisering ontvang nie en nie lede wat Afrikaanse artikels aanbied wil ontmoedig nie.

presenting Afrikaans articles.

Some members suggested that we should think about allowing full page or half page advertisements in the journal at a reasonable cost. I think this is a good idea for raising extra income for the Society as long as we don't deprive our members of the privilege of small, free advertisements. If anyone could persuade firms supplying items like fertilizers, insecticides, plant containers, etc., the cost of a full page advertisement will be R250.00 and a half page ad will be R125.00.

The financial report for 1996 is supplied on p. 16-17 of this issue. Compared to the previous financial year, we did much better during 1996 and I would like to take this opportunity to thank all the members for paying their subs. For local members there will not be a substantial increase in membership fees, except that we would like, for the sake of the treasurer, to make the amount R60.00 instead of R57.50. Due to the hike in overseas postage, however, we had no other option as to increase the overseas membership fees to US\$44.00 and A\$59.00 for air mail delivery of the journal and to US\$20.00 and A\$25.00 for surface mail delivery (R200.00 and R85.00).

At the moment we are paying R40.00 bank commission for every foreign cheque if the currency is not South African Rand. To solve this problem we have consulted with our auditor and have the following request: In future Guillaume Theron will receive money only in South African Rand. American members must please pay their subs to Willie Tang and Australian members to Paul Kennedy. Members of other countries must either pay in Rand to Guillaume Theron, or submit their membership fees in American dollar to Willie Tang or in Australian dollar to Paul Kennedy. I hope this will not cause you too much inconvenience, but it will save us a major amount of income.

Please make sure to supply your name and membership number in all correspondence and payments to the secretary-treasurer.

We have received several requests from members wanting to pay their subs by means of a credit card. Due to administrative problems, however, this is not possible at the moment.

**Hannes Robbertse**



Sommige lede het voorgestel dat ons daaraan moet dink om vol- en halfblad advertensies in die tydskrif toe te laat. Ek dink dit is 'n goeie idee wat ook bykomende inkomste vir die Vereniging sal beteken, met die voorwaarde dat die voorreg van lede om kleiner, gratis advertensies te plaas, nie ontnem sal word nie. Indien enige lid 'n instansie wat bemestingstowwe, spuitstowwe, planthouers, ens. voorsien, kan oortuig om in "Encephalartos" te adverteer, sal die koste vir 'n volblad advertensie R250.00 wees en vir 'n halfblad advertensie R125.00.

Die finansiële verslag vir 1996 word op p. 16-17 in hierdie uitgawe voorsien. In vergelyking met die vorige finansiële jaar het ons baie beter gevaar en ek wil van die geleentheid gebruik maak om lede te bedank vir die betaling van hul ledegeld. Vir plaaslike lede sal daar nie 'n groot verhoging in ledegeld wees nie, maar ter wille van die tesourier sal die bedrag R60.00 in plaas van R57.50 wees. As gevolg van die verhoging in posgeld, het ons egter nie 'n ander keuse gehad as om die ledegeld van buitelandse lede te verhoog nie. Ledegeld sal R200.00 (US\$44.00 en A\$59.00) vir lugposversending van die tydskrif wees en R85.00 (US\$19.00 en A\$25.00) vir seeposversending.

Op die oomblik betaal ons R40.00 kommissie op elke buitelandse tjek, ongeag die bedrag, as die geldeenheid nie in Suid-Afrikaanse Rand is nie. Om die probleem op te los het ons met die ouditeur oorleg gepleeg en wil die volgende versoek rig: Guillaume Theron sal voortaan geld slegs in Suid-Afrikaanse Rand ontvang. Amerikaanse lede moet asseblief hulle ledegeld aan Willie Tang stuur en Australiese lede moet hul geld aan Paul Kennedy stuur. Buitelandse lede van ander lande moet óf in Rand aan Guillaume Theron betaal óf hul geld in Amerikaanse dollar aan Willie Tang óf in Australiese dollar aan Paul Kennedy stuur. Ek vertrou dat hierdie reëling nie vir u te veel ongerief sal veroorsaak nie, maar dit sal vir ons 'n klomp geld spaar.

Ons het versoeke van lede ontvang wat graag per kredietkaart wil betaal. As gevolg van administratiewe probleme kan ons dit ongelukkig nie op die oomblik toelaat nie.

**Hannes Robbertse**



In each edition of ENCEPHALARTOS, we focus on one cycad species, in the form of an in-depth article in layman's language. In this edition the spotlight falls on:

In elke uitgawe van ENCEPHALARTOS fokus ons op een broodboomsoort, in die vorm van 'n in-diepte-artikel in leketaal. In hierdie uitgawe val die kollig op:

## ENCEPHALARTOS MSINGANUS Vorster

Piet Vorster

Botany Department, University of Stellenbosch, Private Bag X1, 7602 Matieland

### INTRODUCTION

Some years ago plants from the Msinga area in KwaZulu-Natal started appearing in the trade. These had traits of both *Encephalartos natalensis* and *E. lebomboensis*, and critical study of these plants led to the conclusion that a previously unknown species was involved. It was described as new in the *South African Journal of Botany* 62: 67–70 (1996), under the name *Encephalartos msinganus*.

### DESCRIPTION

#### 1. STEM

The *trunks* (Figures 3a, b) are well developed, often sprouting from the bases to form clumps. The trunk is erect but usually leaning to some extent, up to 3 m tall and about 350 mm thick, covered with the usual geometrical pattern of old leaf bases, and the crown is covered with dense brown wool (visible in Figure 2a).

#### 2. LEAVES

The *leaves* are of medium length, 1100–1500 mm long, rigid, usually straight but sometimes slightly arched (Figure 3), and dark glossy green. The *petioles* (leaf stalks) are thornless, hairless, and short at 20–100 mm long (Figure 1a). The *leaflets* at the basal end of the leaf are progressively reduced in size towards the base of the

leaf with the lowermost in the form of prickles (Figure 1a). The leaflets situated at about the middle of the leaf (Figure 1b) are pointed towards the apex of the leaf at an angle of about 60° with the leaf axis (rachis), opposing leaflets are placed with an angle of about 90° between them, they are spaced 15–25 mm apart, not overlapping or with the lower margin slightly overlapping the upper margin of the leaflet below it when viewing the upper surface. The leaflets are hard in texture, narrowly ovate, without teeth or with teeth on both margins, with the apices ending in sharp and hard spines. The leaflets are 140–170 mm long and 16–20 mm wide.

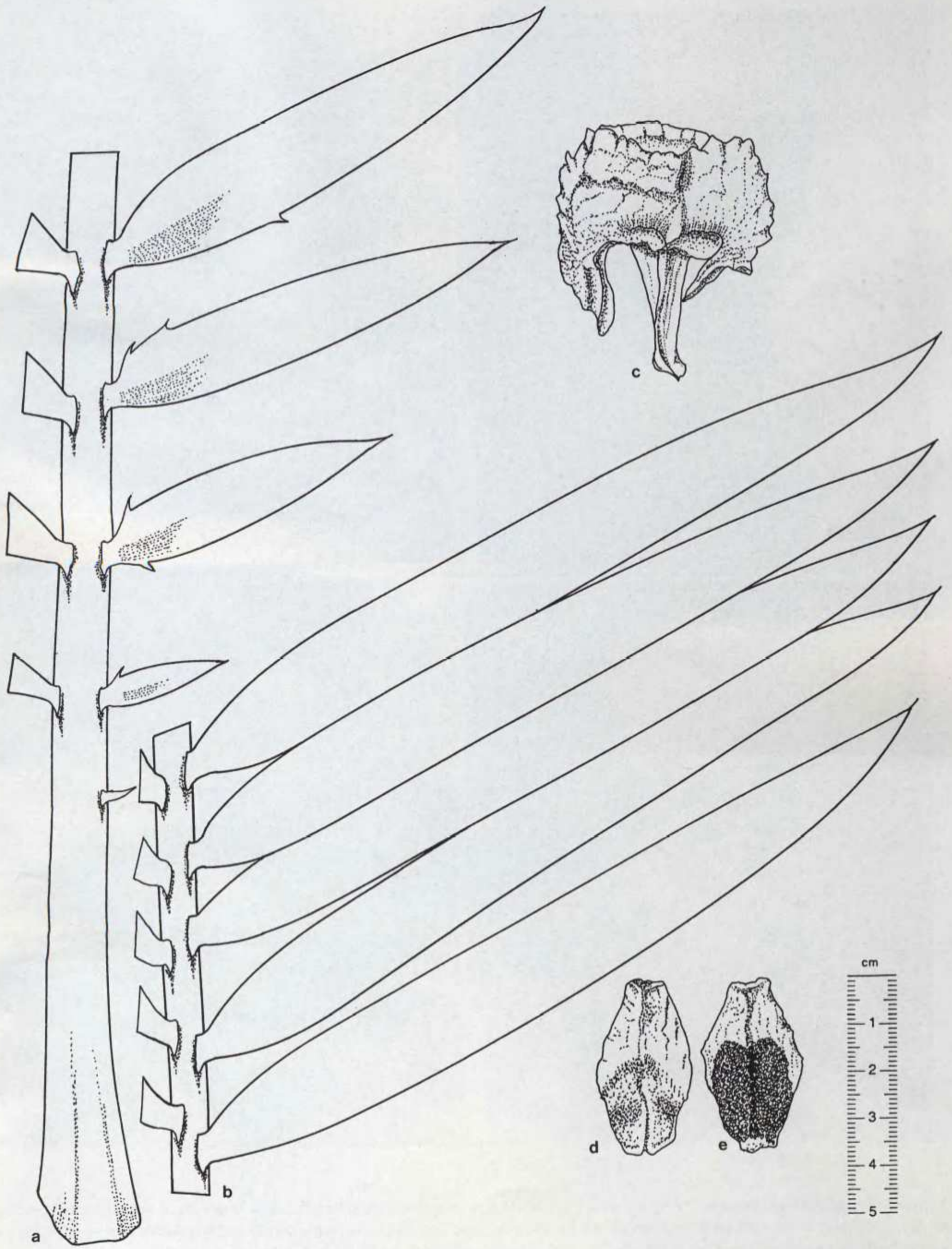
#### 3. CONES

The *male cones* (Figure 2a) are on stalks up to 70 mm long, 2 to 4 per stem, very narrowly egg-shaped, appearing hairless, pale yellow, and 300–400 mm long and 110–120 mm across. The *exposed faces of the cone scales* (Figure 2b) are rhombic, and drawn out into prominent drooping beaks towards their terminal facet which is the only facet to be clearly defined.

The *female cones* (Figure 2c) are sessile (*i.e.* not stalked), egg-shaped, one to two per stem, initially greenish yellow but turning brighter yellow as they become mature but with the colour to a greater or lesser extent masked by a cloak of brown, felt-like hair, and about 420 mm long and 220 mm across in the typical example measured. The *exposed faces of the cone scales* (Figure 2d) have poorly defined facets, are more or less



Figure 1 *Encephalartos msinganus*: (a) petiole (leafstalk) and lower part of leaf showing leaflets becoming progressively smaller towards leaf base, (b) leaflets from middle portion of leaf in view of upper surface, (c) lower surface view of female cone scale, (d, e) upper and lower surface views respectively of male cone scale. From Vorster 2949a (male) and b (female). Drawings by Elsa Vorster.



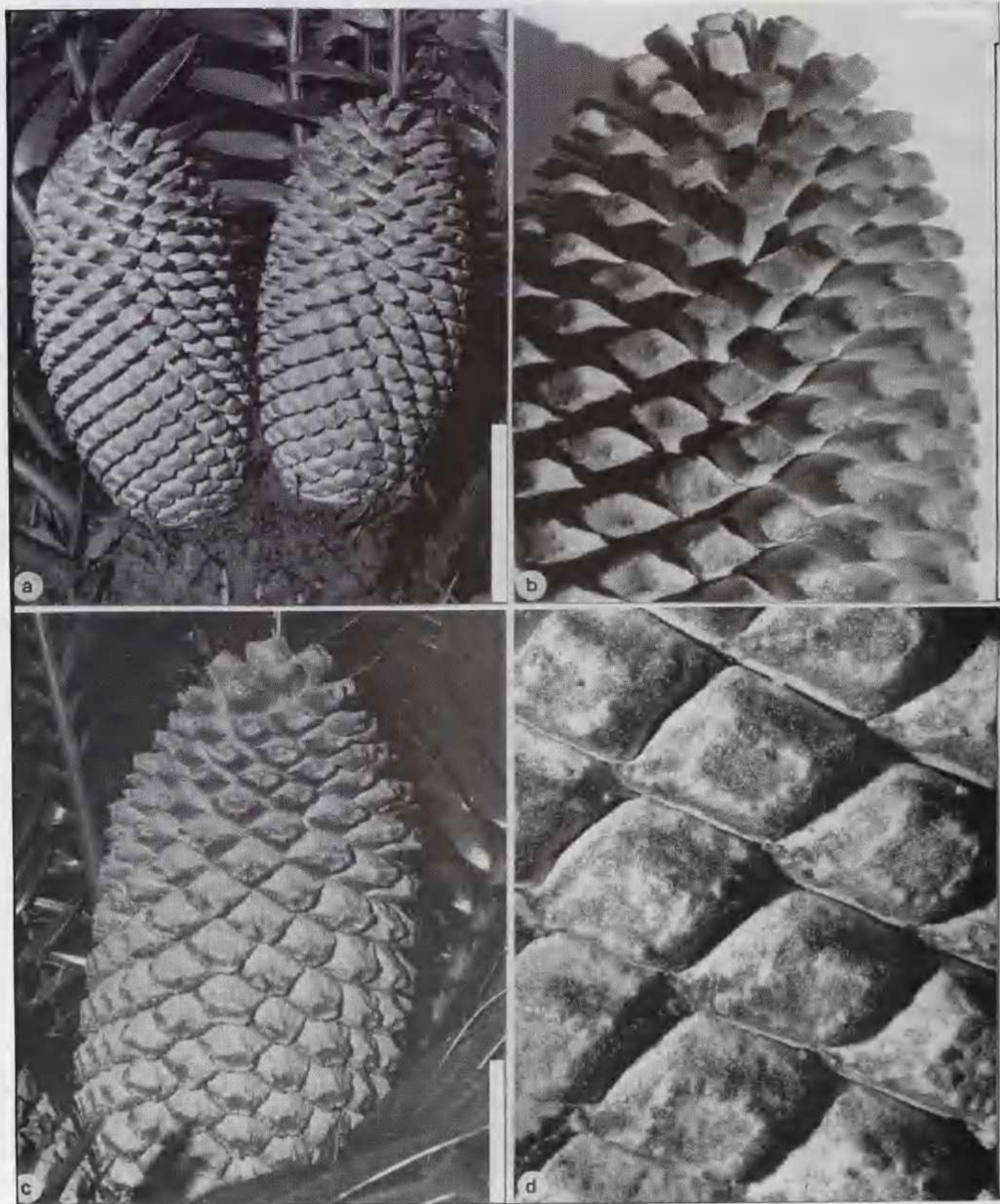


Figure 2 *Encephalartos msinganus*: (a) male cones, (b) detail of male cone showing how the cone scales are drawn out into drooping beaks, (c) female cone, (d) detail of female cone showing exposed faces of scales with poorly defined facets and warty surfaces covered with felt-like indumentum. From Vorster 2949 a (male) and b (female). Scale bar = 100 mm.



Figure 3 *Encephalartos msinganus*: (a, b) plants in habitat. Scale bar = 1 m.

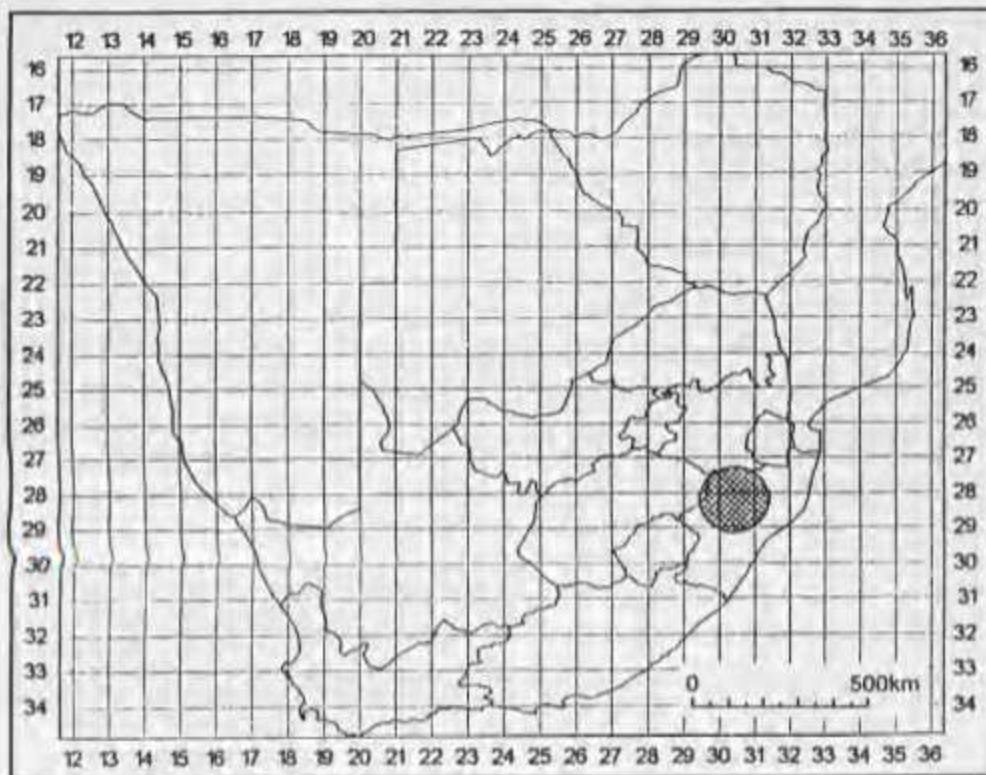


Figure 4 *Encephalartos msinganus*: known geographical location.

raised towards the terminal facet, and warty. The seeds have a bright red sarcotesta (fleshy covering layer).

#### CONING PATTERN

It seems as if coning takes place at more or less the same time as in species like *E. natalensis* and *E.*

*senticosus*. In mid-April female cones appeared to be full-grown, but male cones had not yet shed pollen. It seems likely that the cones appear at the end of February or early March, that pollination takes place in early May, and that the seeds are released in October. The habitat appears to be relatively undisturbed by grazing animals, but no sign of seedling regeneration was found. At least until fairly recently, the pollinating mechanism must still have been intact, as seed from the habitat germinated well in nurseries.

#### DIAGNOSTIC FEATURES

The appearance of the leaves and cones suggest that *E. msinganus* is part of a group of species comprising *E. aemulans*, *E. altensteinii*, *E. natalensis*, *E. lebomboensis*, and *E. senticosus*. The vegetative parts resemble those of *E. aemulans*, *E. lebomboensis*, and *E. senticosus* in its dark glossy green and rigid leaves, the hard, pungent, and relatively narrow leaflets usually (but not invariably) having teeth on both margins (Figure 1b), the lower leaflets becoming progressively smaller towards the leaf base, and only a very short petiole (Figure 1a). When not in cone, it is not at all easy to distinguish these species. The male cones resemble those of *E. altensteinii*, *E. natalensis*, and *E. senticosus* in respect of the exposed faces of the male cone scales being drawn out into drooping beaks towards the terminal facets

(Figure 2b). The female cones resemble those of *E. altensteinii* and *E. natalensis* by the warty surfaces of the exposed scale faces, and both as well as *E. senticosus* by the exposed cone scales being more or less raised towards the terminal facet with otherwise poorly defined facets. They differ from those of *E. lebomboensis* and *E. senticosus* by being warty rather than smooth, and additionally from those of *E. lebomboensis* where the scales are not raised. *Encephalartos msinganus* is therefore recognized by a combination of characteristics, namely relatively narrow leaflets (16–20 mm wide), and warty female cone scales.



Figure 5 *Encephalartos msinganus*: this lady happened to be going in the same direction as us scientists; and being fitter and more sure-footed, offered to transport some of our study material in return for a small investment in the local economy. The photograph conveys an impression of the terrain in which *E. msinganus* occurs.

#### GEOGRAPHICAL DISTRIBUTION AND HABITAT

It is known from a small area in the neighbourhood of Msinga in central KwaZulu-Natal, at altitudes of 900–1200 m (Figure 4). It grows in short grassland on steep north-facing slopes (see Figure 5), usually amongst

boulders in scrub clumps (Figure 3a), less commonly on sandstone cliff faces (see front cover and Figure 3b), more or less in direct sunlight.

This area is rich in *Encephalartos*. It was nearby that, some years ago, a single clump of *Encephalartos laevifolius* was found, some 300 km from the nearest known populations in Swaziland. (This clump has since been removed and is presently in private hands instead of the National Botanical Gardens. Molecular analysis at such a scientific institution may have told us much about past migrations). The type locality of *Encephalartos cerinus* is also not far from here; and *E. natalensis* and *E. villosus* grow almost within sight.

#### CONSERVATION STATUS

When first discovered in the late 1980's, there were several hundred rather widely scattered individuals. Since then, the activities of collectors, especially a handful of dealers who became widely known as sources of these plants, have almost eradicated them. The KwaZulu Bureau of Natural Resources, who until at least recently claimed jurisdiction over these plants, seems powerless to protect them. The species has become common in private collections (though not represented at either the National Botanical Garden at Kirstenbosch or the National Botanical Institute in Pretoria), but in habitat the numbers have dwindled to the extent that the species must be considered to be on the brink of extinction.

#### CULTIVATION

*Encephalartos msinganus* appears to be free from vices and tolerant of maltreatment. Plants grown from seed in Stellenbosch, a place with cool wet winters and short summers, grow about as fast as *E. aemulans*, *E. lebomboensis*, and *E. natalensis*. Like all cycads, *E. msinganus* grows under very well-drained conditions. In addition, temperatures are decidedly high, rainfall probably not much higher than 600 mm per year, and they grow more or less in blazing sunlight.

#### ACKNOWLEDGEMENT

Several friends accompanied me on field trips and assisted me in obtaining research material. They will surely forgive me for protecting their privacy by not thanking them by name in public.

#### REFERENCES

- DYER, R.A. 1965. The cycads of southern Africa. *Bothalia* 8: 405–515.

- DYER, R.A. 1966. *Zamiaceae*. Pages 3–34 in *Flora of southern Africa*, vol. 1.
- VORSTER, P. 1990. *Encephalartos aemulans* (*Zamiaceae*), a new species from northern Natal. *South African Journal of Botany* 56: 239–243.
- VORSTER, P. 1995. The identity of *Encephalartos lebomboensis*. Pages 245–254 in P. Vorster (ed.), *Proceedings of the Third International Conference on Cycad Biology*.

- The Cycad Society of South Africa, Stellenbosch.
- VORSTER, P. 1996. *Encephalartos senticosus* (*Zamiaceae*): a new species from northern KwaZulu-Natal and Swaziland. *South African Journal of Botany* 62: 76–79.
- VORSTER, P. 1996. *Encephalartos msinganus* (*Zamiaceae*): a new species from KwaZulu-Natal. *South African Journal of Botany* 62: 67–70.

---

## SHORT COMMUNICATIONS / KORT MEDEDELINGS

---

### CYCAD SUCKER PROPAGATION

Roy Osborne and Stan Walkley

Cycad Connections, P.O.Box 244, Burpengary, Queensland 4505, Australia

Received 21 April 1997



Figure 1 *Cycas revoluta* sucker, approximately 10 cm in diameter, removed from the parent plant and already having some root development.



Figure 2 The same sucker as in Figure 1 after having the bottom cut away with a sharp machete.



Figure 3 A *Cycas revoluta* sucker three months after being treated as described in the article. Note the copious root growth arising from the large cut surface.

This method of propagation is especially important for

rare plants or when seeds are just not available. A major advantage with this vegetative method of propagation is when gender of the parent plant is known, the sex of the progeny will be identified (except in the very unusual event of sex reversals).

Most cycad growers adopt a similar approach to propagation from suckers. Wait until the offset is large enough (e.g. caudex size being tennisball size or greater) (Figure 1); cut the sucker off as cleanly as possible; allow the wound to dry (often using sulphur or tree-seal to prevent possible rot problems); and then root the suckers in a sharp sandy mixture.

Although the above method works well, we have found that, quite often, the suckers produce only one or two small roots and the process of re-establishing a new plant can be quite time-consuming. As the result of some experimentation, we have now developed a new technique which has given better results for all cycad species tested. What we do is slice off the lower section of the sucker. This, the critical step in the operation, is done as a very clean cut using a single blow from a sharp machete (Figure 2). We allow this surface to dry for about 2-3 days in a dry, well-ventilated area. The caudex is then planted in a sandy loam and kept warm and slightly moist. Under these conditions, roots begin to form within a few weeks and become quite copious in 3-4 months (Figure 3). The theoretical basis is that the large cut area exposes a significant amount of cambium tissue from which the root primordia develop. Thus the large cut results in many more roots and more roots mean plants with greater vigour. We have now adopted this technique as standard practice in our nursery and recommend it to other cycad growers.

## NUUS OOR DIE TRANSVAALSE STREEKTAK VAN DIE VERENIGING

Hanneke Grobbelaar  
Posbus 15357, 0039 Lynn-oos

Ontvang 5 Julie 1997

### Toekomstige aktiwiteite:

**1 November 1997:** Afsluitingsfunksie en verkiesing van 'n bestuur vir 1998/1999. Praatjie deur Nat Grobbelaar oor "Eienaardighede van die keëlontwikkeling by *Encephalartos inopinus*". Die voorlesing sal om 16h00 in die hoofgebou van die Nasionale Botaniese Instituut in Pretoria aangebied word. Die praatjie sal deur 'n

bring-en-braai by Hollandhuis, in die tuin van die Nasionale Botaniese Instituut in Pretoria, aan die noordelike kant van die rant gevolg word. Die bestuur van die Streektak sal pap en vleis gratis voorsien, maar elke deelnemer moet sy/haar eie eet- en drinkgoed sowel as eetgereedskap voorsien. Bring gerus ook jou eie veldstoel en musiekinstrument saam as jy kans sien om die verrigtinge met 'n bietjie musiek op te vrolik.

Lede wie se vanne op A tot M begin moet asseblief mengelslaai bring terwyl diegene wie se vanne op N tot Z begin vrugteslaai moet bring. R.S.V.P. aan Hanneke by telefoon 012-8080995 voor 24 Oktober 1997.

Lede moet asseblief voorstelle maak van uitstappies waarin hulle belang sou stel.

### Summary

#### Verslae oor onlangse aktiwiteite:

Op Saterdag 3 Mei 1997 het 'n handjievol lede die voorreg gehad om Charles de Kock se Sjina-avontuur met hom te deel. Baie dankie aan Charles en May wat spesiaal van Duiwelskloof af gekom het. Almal het die video en kommentaar baie geniet.

Die uitstappie na Louis Trichardt wat beplan was vir Saterdag 5 Julie 1997 is om twee redes gekanselleer: 1) omtrent geen belangstelling van lede, en 2) nadat ons na die terrein gaan kyk het, het ons besef dat die paar *Encephalartos transvenosus*-eksemplare wat maklik bereik kon word, nie die moeite werd sou wees om so ver voor te ry nie.

#### Report on recent activities

On Saturday, 3 May 1997 a few members had the privilege to share Charles de Kock's China adventure with him. Thanks are rendered to Charles and May who came all the way from Duiwelskloof. Everybody enjoyed the video and Charles' comments.

The excursion to Louis Trichardt planned for Saturday, 5 July 1997 was cancelled because: 1) only a few members were interested in attending the excursion, and 2) on visiting the site it was found that only a few specimens of *Encephalartos transvenosus* could easily be reached and it was not worth the trouble to travel so far to see them.

## **ENCEPHALARTOS ALTENSTEINII TRANSLOCATION: 2 YEAR PROGRESS REPORT ON LONG-TERM ENCEPHALARTOS SURVIVAL RATES**

**Dr Ashton Vice**

The London Spine and Joint Clinic, 14 Norfolk Place, London W2 1QJ, United Kingdom

Received 30 April 1997

"*Encephalartos*" readers should refer to the original article as published in *Encephalartos* 44: 15-19 (Vice 1995a).

The 1 year follow up of the translocated cycad colony in the Grahamstown District (Thomas Baines Nature Reserve) was presented by the author at the Fourth World Cycad Conference in Panzhihua, China on 2nd May 1996 (Vice 1996) and will be published in the proceedings of that conference. A summary of the data is published below (Table 1).

### DISCUSSION

As alluded to earlier in the original article in *Encephalartos* 44: 15-19 (1995a), a mean South Africa survival rate of 32% or conversely a death rate of 67% was previously documented by the author citing 6 different exercises with 6 different *Encephalartos* species and the uniqueness of each project in South Africa.

As this paper deals primarily with the long term-recovery prospects of these translocated cycads Table 1 points A

and G are of specific interest revealing a 1 year activity survival rate of 72%. Whilst the 12 month cycad survival figure was indeed most encouraging as compared with the aforementioned mean long-term survival rate of 32% the author (1995b) had noted that previous translocation of very large mature *Encephalartos altensteinii* from the wild had a 100% death rate at 4 years (Vice 1995b) and cautioned the delegates at the China Conference in 1996 against early optimism in the long-term survival of this colony.

The second year progress report tabulated in Table 1 conveys a totally different cycad survival picture, possibly confirming the anecdotal evidence of amateur cycad gardeners in South Africa that *Encephalartos* species often produce cones and or produce new leaves in response to the stress of uprooting and replanting then lie dormant for a period. They either re-establish themselves or lie dormant until death.

The author strongly recommended at CYCAD '96, and the above evidence is equivocal that a minimum timescale of 4 years be taken into account when assessing the survival rate of translocated *Encephalartos*

RESULTS: Table 1 First and second year progress report: *Encephalartos altensteinii*

CATEGORY	CYCAD CHARACTERISTICS	1st YEAR	2nd YEAR
A	Total number of cycad trunks of branched "Heads" planted in 18 groups between 4 and 13 cycads each	108	103
B	Number of cycad cones produced	96	2
C	Number of male cones produced	82	0
D	Number of female cones produced	14	2
E	Number of cycads in which new leaves were produced	61	0
F	Number of cycads in which new basal leaves were produced	31	3
G	Number of cycads which produced no new leaves and no cones	30	101

species from the wild in South Africa.

The original colony of 31 tons of *E. altensteinii* whose relocation to the Thomas Bains Nature Reserve was unfortunately brought about by theft is indeed giving botanists an unexpected and rare opportunity to assess the long-term translocation survival rates of *Encephalartos* species in South Africa for many years to come.

REFERENCES

- VICE, A. 1995a. *Encephalartos altensteinii*: a massive rape but possible recovery. *Encephalartos* 44: 15-19.
- VICE, A. 1995b. *Encephalartos altensteinii*: removal from the wild becomes a death sentence. *Encephalartos* 44: 39-40.
- VICE, A. 1996. *Encephalartos altensteinii*: a massive rape but possible recovery. Proceedings of CYCAD 1996, the Fourth International Conference on Cycad Biology, Panzhihua, China 1996 (in print).

HISTORICAL NOTES ON THE DISCOVERY OF *MACROZAMIA MOOREI* (ZAMIACEAE)

Paul I. Forster

Queensland Herbarium, Dept. of Environment, Meiers Road, Indooroopilly, Queensland 4068, Australia

Received 17 May 1997

An account of *Macrozamia moorei* F. Muell. was recently published in the "Focus on ....." series by Roy Osborne (1997). This account provides information on its discovery, distribution and ecology, morphology, affinities, cultivation and conservation and is well illustrated. Readers may be interested in some of the early history concerning this species, particularly its first discovery and subsequent accounts by Ferdinand Mueller.

The first recorded European sighting of *M. moorei* was by Ludwig Leichhardt in his 1844 traverse of the Australian continent (Leichhardt 1847: p. 60) and is worth repeating here ....."The most remarkable feature in the vegetation, however, was an arborescent *Zamia*, with a stem from seven to eight or ten feet high, and about nine inches in diameter, and with elongated cones,

not yet ripe. In consequence of the prevalence of this plant, I called the creek 'Zamia Creek.' The *Zamia* Creek of Leichhardt is still known by this name today and occurs in inaccessible country to the north of Taroom.

In the "Flora Australiensis" Bentham (1873) does not mention this plant, but under his account of *M. spiralis* Miq., cited a specimen collected by Wuth at Springsure. This specimen would have been undoubtedly referable to *M. moorei*. Finally in 1881 Mueller (1881a) described *M. moorei* as a new species, apparently based on material cultivated by Charles Moore at the Royal Botanic Gardens, Sydney. Of its distribution Mueller stated that it was "with certainty known from the mountainous regions of Queensland at the verge of the tropics". Johnson (1959) is of the opinion that the name

can be typified with one of the two syntypes cited by Mueller (1881c), both from the Springsure district.

Mueller (1881b, c) went on to publish several notes on this cycad of which a specimen originating from the Springsure district was on display at the Melbourne International Exhibition. In the first (Mueller 1881b), he appended a letter by Mr J.E. McDonald that is worth repeating here because of its ecological and ethnobotanical observations ..... "In reply to your telegram, I beg to enclose a rough sketch of one of the *Macrozamia*s measured for your information, the height of the same being 15 feet, and about 2 feet in diameter. There were others that measured 20 feet in stem; length of fronds, 7 feet; circumference, about 6 feet 4 inches. The cones or fruit measure from 2 to 3 feet in length. In this locality, or within a radius of ten miles, they are numerous, and principally grow on high stony ridges. Beyond the distance about named from Springsure I know of none growing. They are of very slow growth. I should say the one from which the sketch is taken is over one hundred years old. I have been resident here for seven years, and know of several young trees near my residence, in which I have observed but little difference in size during that period; they appear, however, to be very hardy - in fact difficult to kill. I have observed many trees in this neighbourhood which have been attacked by bush fires, and their leaves are completely destroyed, but the stem again throws out fronds, and which appear to grow as vigorously as the former. There are also several trees from 15 to 20 feet high, which have almost fallen to the ground, the fronds of which turn up, and continue in growth. The nuts, when young, are said to be used by the opossums and other animals of that kind; but they are, when matured, said to be poisonous to human beings; although the blacks (indigenous Aboriginal Australians) make use of them by soaking them in water for two months, after which they break the outer shell; secondly they grate the nut on a rough stone, and form it into a kind of pulp, which they mix and bake, making it into a bread. I understand the nuts are but little used now by the natives; but in 1860, when I first visited this district as an explorer, the nuts were frequently found in the native's camps; at which time, and for some years subsequently, I believe they were regularly used when in season. J.E. McDonald".

In his final note on the species Mueller (1881d) must have had Leichhardt's account drawn to his attention as he stated "The noble *Macrozamia moorei*, which

sometimes attains a height of 20 feet, is the identical one after which LEICHHARDT named 'Zamia Creek' in 1844".

Osborne (1997) also states that "Little is known of the plant-insect relationships for this cycad". Larvae of the small moth *Conobrosis haplochroma* Common inhabit the dead male cones of *M. moorei*, as well as *M. communis*, *M. crassifolia*, *M. machinii* and *M. mcdonnellii* and are thought to feed on the microsporophylls and sporangia (Common 1997). Pollination biology of this species, as with most Australian cycads, remains to be studied.

Luckily for cycad lovers, despite continuing destruction of plants of *M. moorei* by graziers because of its toxic qualities to domestic livestock, the pessimistic prediction by Chamberlain (1913) that it could become extinct has yet to come to pass.

## REFERENCES

- BENTHAM, G. 1873. Cycadeae. *Flora Australiensis*. Vol. 6: 248-254. L. Reeve & Co., London.
- CHAMBERLAIN, C.J. 1913. *Macrozamia moorei*, a connecting link between living and fossil cycads. *Botanical Gazette* 55: 141-154.
- COMMON, I.F.B. 1997. Oecophorine Genera of Australia II. The *Chezala*, *Philobota* and *Eulechria* Groups (Lepidoptera: Oecophoridae). Monographs on Australian Lepidoptera Volume 5. CSIRO Australia, Melbourne.
- JOHNSON, L.A.S. 1959. The families of cycads and the Zamiaceae of Australia. *Proceedings of the Linnean Society of New South Wales* 84: 64-117.
- LEICHHARDT, L. 1847. Journal of an overland expedition in Australia, from Moreton Bay to Port Essington, a distance of upwards of 3000 miles, during the years 1844-1845. T. & W. Boone, London.
- MUELLER, F. 1881a. Notes on a hitherto undefined species of *Encephalartos*. *Chemist & Druggist of Australasia*, Supplement 3: 84-85.
- MUELLER, F. 1881b. *Encephalartos moorei*. *The Gardners' Chronicle new ser.* 15: 785.
- MUELLER, F. 1881c. *Fragmenta Phytographiae Australiae* 11(93): 107-132. Victorian Government Printer, Melbourne.
- MUELLER, F. 1881d. *Macrozamia moorei*. *The Gardners' Chronicle new ser.* 16: 758.
- OSBORNE, R. 1997. Focus on ..... *Macrozamia moorei* F. Muell. *Encephalartos* 49: 4-9.



Die Redaktrise

## BROODBOME IN HOUERS

Aangesien ek die versoek tot u gerig het vir 'n artikel oor broodbome in houers beskou ek dit as my voorreg om Piet Vorster hartlik te bedank vir 'n puik en omvattende artikel oor die onderwerp in *Encephalartos* 49, Maart 1997.

Soos wat hy dit duidelik gestel het, is daar baie probleme verbonde aan 'n praktyk om broodbome permanent in houers te probeer hou. Hy kon daarom ook nie my probleme oplos nie - maar hy het dit wel bevestig.

Uit die artikel is dit duidelik dat hy baie moeite en tyd daaraan bestee het - baie dankie!

Op grond van die artikel en my eie ervarings is dit duidelik: "Broodbome hoort in die aarde en nie in potte nie"!

Nieteenstaande die negatiewe aspekte wat daaraan verbonde is, kan 'n mooi plant van 20 of meer jaar in 'n gepaste houer, 'n buitengewone mooi vertoning maak wat 'n lus is vir die oog - veral van broodboom-liefhebbers.

Omdat broodbome in houers tydens die wintermaande (op die Hoëveld) na beskutte posisies verskuif kan word (totdat die houers te groot word), was dit my alternatief vir die jaarlikse "toemaak" van die plante - en tot tyd en wyl die omvang van die probleem my oorweldig, sal ek steeds my broodbome in hulle houers geniet en probeer om hulle mooi en gelukkig te hou.

Baie dankie.

Izak J. van den Berg, Williamsstraat 59, Wilkoppies, 2571 Klerksdorp.

Ontvang 20 Junie 1997

### Summary

#### Cycads in containers

Being the person who proposed this topic as a new column (*Encephalartos* 48: 34), the author expresses his thanks to Piet Vorster for his comprehensive article on the topic in *Encephalartos* 49: 31-35.

On the basis of Piet's article and his own experience he came to the conclusion that: "Cycads ought to be in the ground and not in containers"!

However in spite of all the negative aspects, he will still enjoy his cycads in their containers, since a plant of 20 or more years old in a suitable container can be a feast for the eyes.

Residing in the cold Highveld he prefers to shift the containers with cycads to sheltered positions during winter rather than a "cover up" of plants each year.

Geagte Redakteur

## SKAARS PLANTE



**Figuur 1** *Encephalartos ghellinckii*: die vroulike keël van naby.  
/ **Figure 1** *Encephalartos ghellinckii*: close-up of the female cone.



**Figuur 2** *Encephalartos ghellinckii*: vroulike plant met 'n keël in 'n tuin in Lynnwood Glen, Pretoria. / **Figure 2** *Encephalartos ghellinckii*: female plant in cone in a garden in Lynnwood Glen, Pretoria.

Onlangs het ek die voorreg gehad om 'n skaars verskynsel, wat 'n goeie vriend van my in Pretoria in sy tuin teëgekome het, te sien. Die vroulike *Encephalartos ghellinckii*-plant in sy tuin het 'n keël gestoot (Figuur 1, 2).

Voorts is ek ingelig dat keëls van hierdie spesie uiters skaars is, veral in privaat versamelings. My eerste reaksie was taamlik "o- ja" -georiënteerd totdat ek besef het dat geen stuifmeel in Transvaal, en selfs so ver as Natal, beskikbaar is nie.

Graag sou ek wou versoek dat die lesers wanneer hulle oor stuifmeel beskik dit te stoor en aan die stuifmeelbanke beskikbaar te stel, waar moontlik.

*Werner Diedericks, Posbus 17081, 0027 Groenkloof.*

*Ontvang 22 Mei 1997*

#### Summary

#### Rare plants

Recently the author had the privilege to see something

rare in the Pretoria garden of a friend. His friend's female *Encephalartos ghellinckii* coned (Figure 1, 2).

When told that *E. ghellinckii* specimens rarely cone in cultivation he was sceptical at first, until he realized that no pollen was available in the Transvaal, nor even in Natal.

He urges all readers to collect and store pollen and, if possible, to make the pollen available to the pollen banks.

.....  
Geagte Redaktrise

#### ODE AAN DIE SAADBANK

"Seedmen reckon their stock is not seed at all, it's optimism" — Geoff Hamilton.

*Tilania du Preez, Posbus 35875, 0102 Menlopark, Pretoria.*

*Ontvang 19 Februarie 1997*

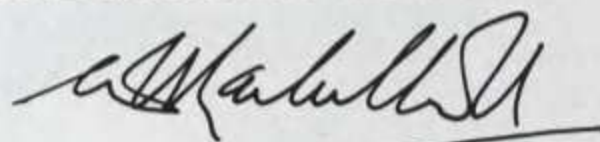
**FINANCIAL STATEMENT**  
**THE CYCAD SOCIETY OF SOUTH AFRICA**  
**INCOME AND EXPENDITURE STATEMENT FOR THE YEAR ENDED 31.12.96**

<b>INCOME</b>	58 755	50 912
Subscriptions	45 792	42 536
Donations	4 615	4 543
Interest Received	4 705	3 359
Sales Back Issues	3 643	474
<b>LESS EXPENDITURE :</b>	59 077	58 936
Bank Charges	615	282
Branch Transfers	2 395	1 904
Depreciation	2 018	2 018
Encephalartos Printing	25 439	27 338
Grants and Subsidies	5 500	-
Postage	22 054	25 909
Sundry Expenditure	1 056	1 485
<b>NET LOSS FOR THE YEAR</b>	322	8 024
<b>UNAPPROPRIATED SURPLUS - PRIOR YEARS</b>	35 835	43 859
<b>SURPLUS - CYCAD '93</b>	19 728	-
<b>UNAPPROPRIATED SURPLUS 31.12.96</b>	<b>R 55 241</b>	<b>R 35 835</b>
<b><u>BALANCE SHEET AT 31.12.96</u></b>		
<b>CAPITAL EMPLOYED:</b>		
Unappropriated Surplus	<b>R 55 241</b>	<b>R 35 835</b>
<b>EMPLOYMENT OF CAPITAL:</b>		
<b>FIXED ASSETS</b>	5 887	7 905
Educational & Computer Equipment		
<b>NET CURRENT ASSETS</b>	49 354	27 930
<b>CURRENT ASSETS</b>		
Bank	13 442	6 939
Fixed Deposits	45 304	23 900
Debtors	-	1 937
Stock - Back Issues	6 000	4 917
	64 746	37 693
<b>LESS: CURRENT LIABILITIES</b>	15 392	9 763
Prepaid Subscriptions	11 889	9 763
Creditors	3 503	-
<b>NET ASSETS</b>	<b>R 55 241</b>	<b>R 35 835</b>

I hereby declare that I am a member of the Society, but that I have no interest in its financial affairs. The Cash Book and Ledger of the Society have been written up from documents and information provided by the President and Officials of the Society.

I therefore certify that the attached Income and Expenditure Statement for the year ended 31st December 1996, and the Balance Sheet as at that date, are in accordance with the information provided.

Pretoria, 23rd May, 1997



N J Kachelhoffer

**CYCAD SOCIETY OF SOUTH AFRICA - NATAL BRANCH**

**INCOME STATEMENT FOR THE YEAR ENDED 31.12.96**

INCOME		695
Allocation from Head Office		
EXPENDITURE		525
Postage & Stationery	323	
Refreshments	92	
Sundry Expenditure	110	
	<hr/>	<hr/>
<b><u>SURPLUS FOR THE YEAR</u></b>		<b>R 170</b>
		<hr/> <hr/>
Signed: <u>A MERESMAN</u>	<u>D P NEL</u>	
Chairlady	Treasurer	

**CYCAD SOCIETY OF SOUTH AFRICA - TRANSVAAL BRANCH**

**INCOME STATEMENT FOR THE YEAR ENDED 31.12.96**

INCOME		1 799
Allocation from Head Office	1 700	
Interest Received	99	
	<hr/>	<hr/>
EXPENDITURE		1 556
Bank Charges	125	
Sundry Expenditure	337	
Guest Speakers	1 094	
	<hr/>	<hr/>
SURPLUS FOR THE YEAR		243
UNAPPROPRIATED SURPLUS - Prior Years		3 013
		<hr/>
<b><u>UNAPPROPRIATED SURPLUS at 31.12.96</u></b>		<b>3 256</b>
		<hr/> <hr/>
Signed: <u>M J FOURIE</u>		
Treasurer		

## CYCADS IN CONTAINERS

**Grant Gittleson**

31 Sunnyside Road, 2192 Orchards

*Received 10 May 1997*

In response to your invitation in December 1996 issue No. 48.

Before starting my article I must stress that all my comments are based on my personal experiences and not on scientific research. I did begin a scientific project about five years ago, but due to the slow growing nature of cycads and the number of external influences encountered over the years, my impatience led to more of a "gut-feel" approach.

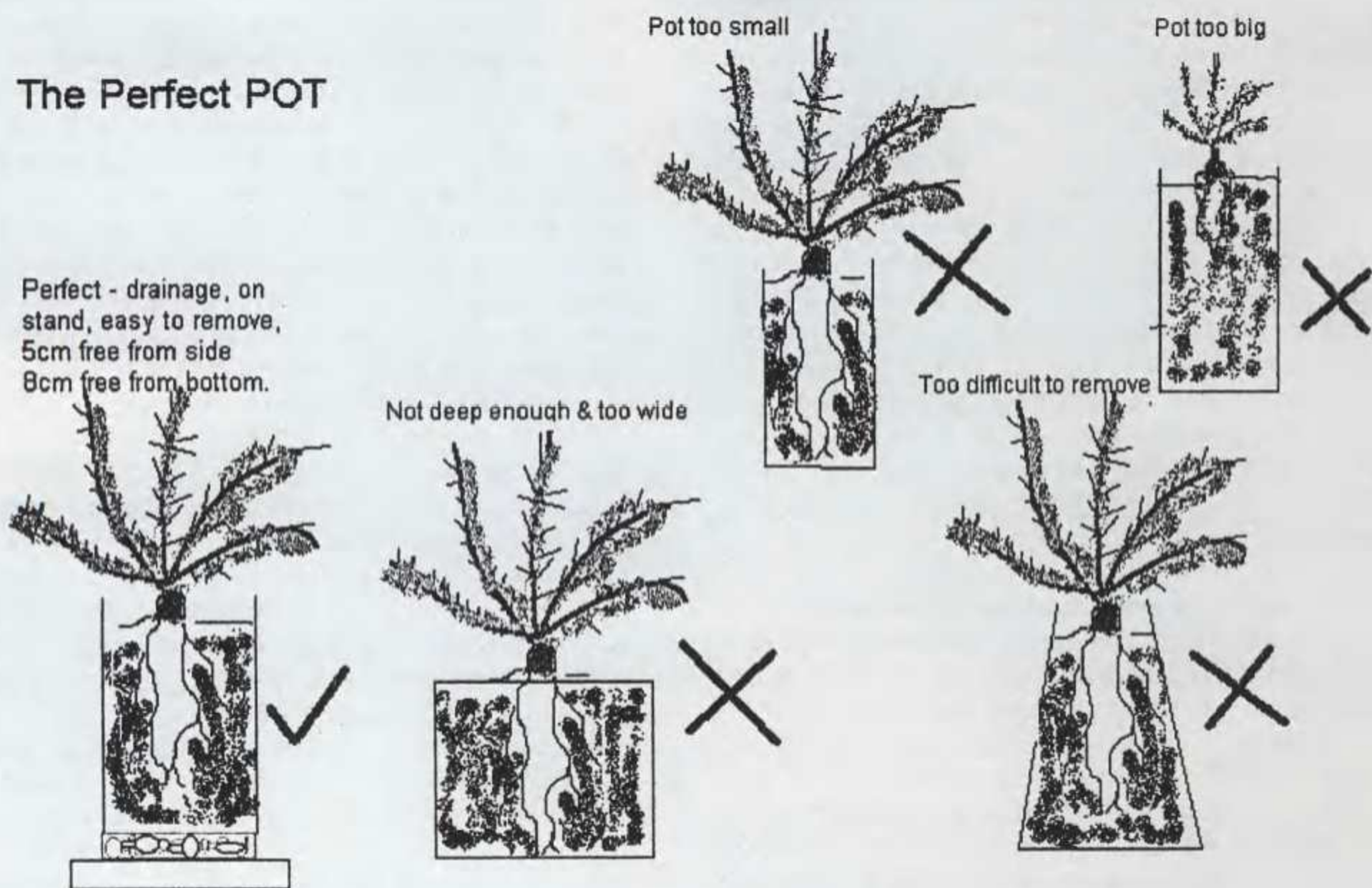
1. Best type of container: The type of container, i.e. terracotta or concrete, is not as important as the shape of the container.

- For mature cycads a large porous container is preferred. Even the largest of containers are too small for large cycads (even if they appear to be doing okay in them).
- Containers for smaller cycads:
  - The container must be deeper rather than wider. Cycad roots tend to grow like a taproot growing mainly vertically downwards. However, when cycads are removed from the wild a deep container may not initially be required because if the main root has been broken smaller adventitious type lateral roots first re-grow.
  - It must easily cater for the full root of the cycad and still allow for adequate growth. As a basic rule your new container must allow for at least 5–8 cm from trunk or root to container side and 10–15 cm from trunk or root to bottom. In addition do not forget about the draining material required at the bottom of the container.
  - It is important that the containers are able to drain easily. This is particularly a problem with plastic bags because the soil settles and obscures the drainage holes. It is often better to make special stands or supports to keep the containers off the ground.
  - Make sure the containers are durable and can withstand ultra violet radiation. You can leave cycads for up to two years in the same container but the cheaper type

containers start crumbling after a year and make moving, weeding or even reseating a problem.

- Space can also be a major consideration. If raising your own seedlings (500 little seedlings can soon take up the space of half a tennis court), make sure the containers are capable of stacking close to one another. In this instance the black bags are preferable for space as well as cost, but ensure good drainage.
  - Darker colour pots seem to be preferred. Keeps the soil warmer.
2. Best soil mix or other growing medium: The mix must drain well. I ensure at least four centimetres of drainage at the bottom, by using pebbles or concrete marble chips. I use potting soil mixed with slightly thicker river sand, which is obtainable from swimming pool shops (it is used in swimming pool filters). I mix approximately 75% soil to 25% river sand. I prefer the potting soil to garden soil because it is sterile and free of weeds. In addition I mix in a little peat and a bit of fertilizer or compost. I must admit that I have not noticed any perceivable differences in the various fertilizer mixtures on the growth rate of the cycads.
3. Fertilizer: I always add some fertilizer to the cycads especially in spring.
4. Watering: This will depend on the size of the cycad, and the amount of rainfall in your area. Monitor for dryness and water accordingly. It is better to give a thorough soaking less frequently. In summer, usually once a week and in winter once every two weeks. For seedlings, never let the soil dry out and try to use rain water to which you should add liquid fertilizer once a month from spring through summer.
5. Exposure to sun is obviously different for the different types of cycads. In general keep in full sun. If the sun is extremely hot give partial shade with shade cloth or place under a tree. Keep seedlings constantly under shade cloth and protect the sides as well if in a windy area. Protect cycads from extreme

## The Perfect POT



frost in winter by covering with a hessian cloth at night, and protect new pushes from hail in spring by making small umbrella-like covers for them with 20% shade cloth.

- It is obviously important to choose a pot for your cycad that is aesthetically appealing while still assuring it fulfills the cycad's basic needs for drainage and size. Your cycad will most likely need to be repotted every two years therefore it is important to buy pots which allow for easy removal. The cycad is usually more important than the pot so

when transferring from pot to pot try as hard as possible to keep all roots intact. Damage to roots will stunt the cycad growth. Should a cycad not require transfer after two years it is still a good idea to lift the cycad, carefully change the soil and reseat.

The nice thing about cycads in containers is that if they are not happy you can easily move them. Watch your cycad and move as necessary - out of the frost in winter, back into the open in summer. Take photographs and later compare.

## BROODBOME IN POTTE EN NUWE IDEES

**Erik Rouwenhorst**  
Posbus 620, 2940 Newcastle

*Ontvang 9 Junie 1997*

In *Encephalartos* 49 het 'n interessante artikel verskyn oor die kweek van broodbome in houers. Die artikel deur dr Piet Vorster het praktiese raad verskaf oor die kweek en algemene versorging van plante in houers. Ek

hoop die volgende inligting mag ook aan almal wat graag broodbome in houers kweek van hulp wees.

Die meeste van ons wat nie so gelukkig is om in 'n

gebied met 'n matige klimaat te woon nie, moet maar tevrede wees om ons plante in houers te kweek omdat dit maklik verskuif kan word as koue weer intree. Daar is natuurlik ook die nadeel dat sulke versamelaars nie so baie plante kan besit as wat andersins die geval sou wees nie. Verder mag daar ook ander voordele wees om broodbome in houers te kweek. Die meeste mense sal in hul leeftyd verskuif word en indien sulke mense broodbome in houers besit is dit soveel makliker om net die houers met plante van een gebied na 'n ander te skuif. Indien sulke mense broodbome in die tuin permanent geplant het is daar altyd die risiko dat party plante nie weer sal herstel nadat hulle uitgehaal is nie. Vir party spesies is die verskuiwing net te veel en sit die eienaars dan later met meer skade as wat die geval sou wees as hulle die plante maar daar gelos het. In die volgende stuk wil ek graag fokus op grond en verplanting.

Dit mag dikwels 'n probleem raak as versamelaars nie weet watter tipe grond die plante verkies nie en party is baie spesifiek as dit by grond kom. Daar word dikwels aanbeveel dat plante in 'n mengsel geplant word wat ryk aan organiese materiaal is. Toe ek met broodbome begin het, het ek al my plante in kompos geplant, maar later moes ek almal oorplant omdat geel kolletjies op die pinnas ontwikkel het. Ek is nog steeds nie seker wat die oorsaak was nie, moontlik die pH van die kompos of 'n tekort aan sekere elemente in daarin. Die probleem het egter verdwyn toe die plante in gewone leem geplant is. Ek het ook besluit om meer anorganiese plantvoeding te verskaf. Die voordeel met anorganiese voeding is dat dit 'n gebalanseerde hoeveelheid van al die nodige elemente bevat wat vir normale groei benodig word.

'n Tweede probleem wat opgeduik het in die komposmengsel is dat dit water behou en vir 'n lang tydperk nat bly. By plante wat gewoon was om onder droër toestande te groei het die probleem gou opsigtelik geword. By sulke plante het die wortels swak ontwikkel en soms heeltemal verrot, en weer het hierdie probleem verdwyn nadat ek die plante in gewone leem geplant het. Om te bewys hoe suksesvol leem was het ek plante geneem en een groep in kompos geplant en die ander groep in leem. Beide groepe is toe goed natgemaak en onder 'n afdak laat staan. Die plante is toe nie weer vir 40 dae natgemaak nie. Die eerste groep in die kompos het matige wortelontwikkeling getoon en die mengsel was effens klam. By die tweede groep was die mengsel baie droog en het ek verwag dat die plante sou onwortel as ek aan die blare trek. Dit het egter geblyk dat die droër omstandighede sterk wortelontwikkeling tot gevolg gehad het. Die eksperiment toon dus dat wortelontwikkeling traag was by toestande waar die grondmengsel te nat was en beter waar die mengsel droër was.\*

*Encephalartos cycadifolius* is een van die spesies wat swak verplant en waarvan die blare dikwels geel verkleur

nadat dit verplant is. Dit skep 'n probleem as plante van sulke spesies per pos bestel word (wat met my die geval was). Weer het ek die plante in leem geplant en byna nooit natgemaak nie. Die gevolg was baie goeie wortelontwikkeling, so goed dat die plante se wortels nie maklik afgeskeur het as ek aan die plante se kroon getrek het nie. Daarna het ek nie weer 'n plant verloor nie. Uit ondervinding kan ek getuig dat broodbome baie goed aangepas is om droë toestande te oorleef. Ek het eenkeer van 'n *Encephalartos senticosus*-plant vergeet wat onder 'n dak gestaan het. Die gevolg was dat die plant vir ongeveer twee maande sonder water moes klaarkom. Tog het die plant geen ernstige skade getoon nie en die blare was net effens droog na dié tydperk.

Met broodbome in houers kan ook interessante vorms verkry word soos al gesien met bonsai as plante dwergagtige groei toon. Daar is egter ook 'n ander tegniek wat plante 'n interessante vorm kan gee. Vir hierdie eksperiment moet die kweker egter geduld hê omdat dit tydsaam is. Een van die plante wat die beste geskik is hiervoor is *Cycas revoluta* omdat dit 'n vinnige groeier is en vinnig herstel nadat dit verplant is. In dié eksperiment word 'n groot houer benodig waarin 'n opening in een sy gesny word. Die houer word normaalweg met grond gevul en in 'n gunstige posisie geplaas. 'n Volwasse plant word nou geneem, met 'n stam van sowat 50 cm lank, en in die uitgesnyde holte geplant. Dit mag nodig wees om die plant te ondersteun totdat dit gevestig is. Deur hormoonwerking sal die plant jaarliks opwaarts groei en kromming toon. Die plant moet steeds voeding en water kry en word normaal benat.

Na 'n lang tydperk kan die plant verwyder word en sal dan 'n krom "nek" toon. Dit kan weer bo in die houer geplant word of dit mag geroteer word en op dieselfde plek geplant word. Dit sal afhang van watter vorm verlang word en 'n paar interessante vorms mag geskep word. Op dieselfde wyse sal die plant weer onder die invloed van gravitropisme en fototropisme (groei weg van die middelpunt van die aarde en na die ligprikkel), kromming toon. Dit sal egter jare neem om 'n unieke vorm te skep en sal slegs deur diegene met baie geduld gedoen kan word. Dit behoort tog interessant te wees om in tuine ook plante met unieke vorms te sien.

Die voordele wat broodbome in houers het sal nog lank deur versamelaars geniet kan word en ek beveel dus die kweek van broodbome in houers aan.

[\*Aangesien die twee behandelings met meer as een faktor verskil het, kan 'n mens nie sondermeer die verskil in groei net aan die verskil in die watergehalte van die twee substrate toeskryf nie. Deur byvoorbeeld in albei behandelings dieselfde soort grond te gebruik en die een natter te hou as die ander sou aandui wat die invloed van die voggehalte is. - Redaktrise.]

## Summary

### Cycads in containers and new ideas

Most cycad collectors not residing in areas with a temperate climate, have to be content to grow plants in containers because they can easily be shifted to sheltered positions during winter. If one has to move from one place to another it would be much easier just to remove the cycads in their containers. If one has to dig up and translocate cycads from one garden to another it is always at the risk that some plants will not survive.

It is often recommended to plant cycads in a soil mixture rich in organic matter. At first the author planted his cycads in compost, but after yellow spots appeared on the pinnae he transplanted them into loamy soil and the problem did not appear again. He also decided rather to use inorganic fertilizers because of their balanced content of the necessary elements.

Another problem with the compost mixture was that it retained water and remained wet for long periods. This resulted in poor root development or even root decay. Again the problem was resolved when the plants were transplanted into loamy soil.

To prove the advantage of using loamy soil the author then planted one group of cycads in compost and another group in loamy soil. Both groups were well watered and then placed under a lean-to and not watered again. After 40 days the compost was still somewhat moist and moderate root development could be observed on the plants. In the second group the loamy soil was dry and he expected the roots to tear off when pulling at the leaves of the plants. However, the plants could not be uprooted because of vigorous root development. His conclusion was that the drier soil mixture stimulated root development whereas the wetter compost mixture repressed root development. However, he based his conclusion only on differences in the moisture content of the two different substrates. To

really demonstrate the influence of moisture content on the development of the roots, he should have also have experimented with each substrate mixture separately, keeping some wetter than the others.

*Encephalartos cycadifolius* is one of the species that is difficult to establish in cultivation and the leaves often become yellow after transplanting the plants. He ordered some specimens of this species through the post and planted them also in loamy soil. Again vigorous root development occurred and he was unable to uproot the plants by pulling at their crowns. From experience he can confirm that cycads are well adapted to survive dry conditions. Once he completely forgot an *E. senticosus* specimen standing under a roof. Although the plant was not watered for about two months it survived and no serious damage could be observed, the leaves were only slightly dry.

Growing cycads in containers one can be instrumental in creating plants with interesting shapes, but one has to be very patient as this is an extremely long term experiment. *Cycas revoluta* is ideal for this kind of experiment because it is relatively fast growing and recovers well after transplanting. Cut an opening in one of the sides of a large container, place the container in a favourable position and fill with a soil mixture. Plant a mature specimen, with a stem of about 50 cm long, in the container so that the stem lies on its side through the opening. If necessary support the stem to keep it in the desired position. Normally supply fertilizer and water to the plant. Annual growth of the stem under influence of gravitropism and phototropism (growth away from the earth's centre and growth towards the light source) will result in the growing point turning upwards causing an elbow-like curvature in the stem after many years. In course of time such plants can be transplanted rotating the stems or placing them differently to create more "elbows" with different angles of curvature. It ought to be interesting to see some plants with unique shapes in gardens.

---

## NEW CYCAD PUBLICATIONS

---

GRILLI, CAIOLA, M. 1996. **Cyanobionts from cycad coralloid roots.** 13th Symposium of the International Association for Cyanophyte Research on Cyanobacteria: Morphology, Taxonomy, Ecology. Frascati, Italy, August 26 - December 3, 1995. *Archiv fuer Hydrobiologie Supplement*.

Unfortunately a summary of the publication which is in English, is not available.

Author's adress: Univ. Rome "Tor Vergata", Dep. Biol.,

*Via della Ricerca Scientifica, I-00133 Rome, Italy.*

JAEGGI, F. 1997. **Growing cycads in the ground in Phoenix.** *The Cycad Newsletter* 20(2): 31-33.

Phoenix, Arizona, lies in a hot dry valley in the U.S.A. with an annual rainfall of 7-8 inches. The summer temperatures can be high - most days in July and August go over 110°F. The soil is a sandy clay with a slightly alkaline pH. Various spp. of *Cycas*,

*Ceratozamia*, *Zamia*, *Dioon* and *Encephalartos* have been experimented with and many do well under those conditions. As a group, the *Encephalartos* species is said to be the least heat tolerant under the local conditions.

*Author's address:* P.O. Box 5061, Hauppauge, New York 11788, U.S.A.

KENNEDY, P. 1997. *Macrozamia communis*. *The Cycad Newsletter* 20(2): 17–22.

The article contains considerable information on such aspects of the species as its distribution, stand density, variability and morphology. Details about the climatic conditions of several *M. communis* localities are also provided.

*Author's address:* Unfortunately not provided.

KURTH, D. 1997. **The Cycad Society close up: Loran Whitelock**. *The Cycad Newsletter* 20(2): 23–30.

The establishment of Loran Whitelock's cycad collection at Eagle Rock, California, U.S.A. is described in a question and answer format. The collection includes 181 known taxa from 10 genera, plus many forms and varieties that have not, as yet, been described.

*Author's address:* Unfortunately not provided.

LUTHER, H.E. 1997. **Cycads at the Marie Selby Botanical Gardens**. *The Cycad Newsletter* 20(2): 4–5.

The garden of 14 acres is situated on sandy soil on the bayfront in downtown Sarasota on the West coast of Florida in the U.S.A. It was established in 1973 and opened to the public in 1975. It specialises in epiphytes. Approximately 70 cycad taxa are grown in the garden at present and it includes several specimens of *Zamia pseudoparasitica*. All of the cycads in the landscape have withstood varying periods of below-freezing temperatures. The all-time low was 24°F in 1983. No cycads were killed but several suffered defoliation.

*Author's address:* Unfortunately not provided.

MIYANO, L. 1997. **Observations on growing *Zamia pseudoparasitica***. *The Cycad Newsletter* 20(2): 14–16.

The author lives in Hawaii where the annual rainfall is 60–100 inches. According to his experience the male plants shed their pollen long before or after the cones of the female plants are receptive to pollination. The female plants do not cone every year and bear one to two cones per season whilst the males produce multiple cones, apparently regularly. The female cone is about the size of a kiwi fruit when receptive to pollination and is held upright with cracks between the scales. The female cone eventually attains the size of an average avocado fruit. The seeds have a sarcotesta which gelatinises within a few days after the female cone disintegrates spontaneously and it sloughs cleanly off the thin and papery sclerotesta. The seed kernels are bullet-shaped and about an inch long by a quarter of an inch in diameter. Germination commences within days but the seedlings are easily lost to microbial attack. Best results were attained by putting the seed kernels on

barely moist New Zealand sphagnum moss in a humid atmosphere. Upon root emergence the seedlings are transferred to short strand tree fern fibre and kept under 40% shade. After a year the seedlings are transplanted to wire baskets lined with coconut bast and filled with tree fern fibre. Established plants thrive in full sunlight and have pendant leaves that are 5 foot long.

*Author's address:* Unfortunately not provided.

OSBORNE, R. 1997. **Georg Schweinfurth and the discovery of *Encephalartos septentrionalis* - with some comments on the present distribution of this and allied species**. *The Cycad Newsletter* 20(2): 6–11.

Excerpts from Schweinfurth's paper and book published in 1871 and 1919 respectively which refers to the discovery of *Encephalartos septentrionalis* are presented in translated form. Later publications by Prain (1917), Melville (1957) and Heenan (1977) which has a bearing on the subject is also considered. It is concluded that the type locality of *E. septentrionalis* is at Gumango Hill in southwestern Sudan. A second population discovered by Schweinfurth, 500 km to the northwest, may or may not represent the same species. The plants and seeds present in most botanical gardens and in most private collections under the name *E. septentrionalis* are from a cycad population near Moyo in northern Uganda and may or may not be the same species. There are at least three cycad populations in the Imatong Mountains area, one of which may be allied to *E. septentrionalis*.

*Author's address:* Cycad Connections, P.O. Box 244, Burpengary, Queensland 4505, Australia.

SHEPARD, W.D. 1997. ***Lilioceris* sp. (Coleoptera: Chrysomelidae) herbivory on *Cycas siamensis* Miguel (Tracheophyta: Cycadales)**. *Pan-Pacific Entomologist* 73(1): 36–39.

The chrysomelid *Lilioceris* sp. was found feeding on the leaflets of cycads in northeastern Thailand. Many cycads were significantly damaged. Larval and adult *Lilioceris* sp. colouration suggests aposematic colouration.

*Author's address:* Dep. Biol. Sci., California State Univ., Sacramento, CA 95819, U.S.A..

WALLNOEFER, B. 1996. **New or noteworthy species of *Aegiphila*, *Styrax* and *Zamia* from Peru**. *Linzer Biologische Beitrage* 28(2): 1053–1060.

*Styrax nui* sp. nov. (Styraceae) and *Zamia urep* sp. nov. (Cycadaceae) from Peru are described. *Clerodendrum ulei* Hayek is transferred to the genus *Aegiphila* (Verbenaceae). New collections of *Styrax foveolaria* Perkins are reported.

*Author's address:* Naturhist. Mus., Burgring 7, Postfach 417, 1014 Wien, Austria.

*Compiled by Nat Grobbelaar, P.O. Box 15357, 0039 Lynn East, South Africa.*

# INDEX TO ENCEPHALARTOS NUMBERS 1 TO 50

Compiled by

Piet Vorster, Department of Botany, University of Stellenbosch, Private Bag X1, 7602 Matieland

## Publication dates

### NEWSLETTER FOR THE SOUTH AFRICAN PALM & CYCAD COLLECTOR

No. 1	December 1983
Volume 1, number 2	no date, but probably June 1984
Volume 1, number 3	no date, but probably December 1984

## ENCEPHALARTOS

No. 1	March 1985	No. 33	March 1993
No. 2	June 1985	No. 34	June 1993
No. 3	September 1985	No. 35	September 1993
No. 4	December 1985	No. 36	December 1993
No. 5	March 1986	No. 37	March 1994
No. 6	June 1986	No. 38	June 1994
No. 7	September 1986	No. 39	September 1994
No. 8	December 1986	No. 40	December 1994
No. 9	March 1987	No. 41	March 1995
No. 10	June 1987	No. 42	June 1995
No. 11	September 1987	No. 43	September 1995
No. 12	December 1987	No. 44	December 1995
No. 13	March 1988	No. 45	March 1996
No. 14	June 1988	No. 46	June 1996
No. 15	September 1988	No. 47	September 1996
No. 16	December 1988	No. 48	December 1996
No. 17	March 1989	No. 49	March 1997
No. 18	June 1989	No. 50	June 1997
No. 19	September 1989		
No. 20	December 1989		
No. 21	March 1990		
No. 22	June 1990		
No. 23	September 1990		
No. 24	December 1990		
No. 25	March 1991		
No. 26	June 1991		
No. 27	September 1991		
No. 28	December 1991		
No. 29	March 1992		
No. 30	June 1992		
No. 31	September 1992		
No. 32	December 1992		

## Appendices

List of members, as at 18 April 1993:	June 1993
List of members, as at 6 May 1994:	June 1994
List of members, as at 20 January 1995:	March 1995
[List of members, in January 1996:	45: 27--43]
[List of members, in April 1997:	50: 39--55]
DONALDSON, JOHN S. (ed.).	Cycad conservation in South Africa: issues, priorities and actions. Proceedings of a symposium held in Pretoria
	March 1995

## INDEX

The first figure is the issue number, the second the page number. Thus, 43:18 means issue 43 and page 18. Page references to illustrations are in **bold**. Names of authors are in CAPITALS. Unless stated otherwise, the issue numbers refer to ENCEPHALARTOS.

Abnormal cones on <i>Zamia furfuracea</i> (TANG, William)	41:29
Abnormaliteit: <i>Encephalartos ferox</i> frats? [sade sonder sarcotesta] (Brief van M. RAUTENBACH)	41:37
Abnormality (of seeds): Some observations on <i>Encephalartos inopinus</i> (GROBBELAAR, Nat)	35:25-26, 36:33
Abnormality: "Fishtail" <i>Encephalartos transvenosus</i> (CLAASSEN, Isabella)	35:20-21
Abnormality: "Fishtail: <i>Encephalartos transvenosus</i> (VORSTER, Piet)	38:32
Abnormality: Another case of Siamese twins amongst cycad cones [ <i>Encephalartos caffer</i> ] (CLAASSEN, Isabella)	37:26
Abnormality: Crested female cone of <i>Cycas revoluta</i>	1:11
Abnormality: Crested <i>Stangeria</i> cones (OSBORNE, Roy)	39:17
Abnormality: glabrous female cone in <i>Encephalartos heenanii</i>	40:5
Abnormality: Report on "Fishtail" <i>Encephalartos transvenosus</i> (CLAASSEN, Isabella) (comment by Piet VORSTER)	37:22, 38:32
Abnormality: Twin seed of <i>Ceratozamia [norstogii]</i> [Letter from Tom TURNER]	41:38
Abnormality: Twin seeds and seedlings (MERESMAN, Avis)	40:21
Abnormality: variegated leaflets in <i>Encephalartos manikensis</i>	38:9
Academic award for Osborne [Distinguished Teachers Award] (GROBBELAAR, Nat)	41:34
Accountant: In search of an honorary accountant	31:29
Activities in the American Cycad Society (GROBBELAAR, Nat)	39:17-18
Addisionele kommentaar oor "Broodboome floreer ook in kouer dele" (tydskrifuitknipsel) [GROBBELAAR, Nat: byvoegsel tot brief van Erik ROUWENHORST]	50:27-28
Adelaide Botanic Garden, cycads in (ROACH, Julie; and ROACH, John)	25:16-21
Advertensies: 32:30, 36: gekleurde bladsy 5, 40: gekleurde bladsy 4, 46: gekleurde bladsy 3, 47:36, 48:39-40, 50:56	
Advertensies: kyk ook <i>Gee en neem</i> , en <i>Nursery News</i>	
Advertisements: Newsletter 1:6, Newsletter 1:7, Newsletter 1:17, Newsletter 2:6, Newsletter 2:8, 2:17, 2:22, 3:23, 4:25, 4:26, 6:23, 7:26, 9:36, 10:34, 12:9, 12:33, 13:35, 13:37, 13:46, 14:27, 15:18, 15:22, 16:14, 16:17, 17:13, 17:30, 18:47, 19:53, 20:9, 20:39, 21:9, 21:29, 22:17, 25:23, 26:20, 26:21, 29:14, 29:15, 29:17, 30:12, 30:19, 30:22, 31:21, 31:28, 32: coloured page 2, 32:30, 33: coloured page 2, 33:39, 33:40, 35: coloured page 2; 36: coloured pages 4, 5, 6; 37: coloured pages 2, 7; 8, 38: coloured page 2, 39: coloured page 2, 40: coloured page 4, 41: coloured page 2; 43:44; 45: coloured pages 3, 4; 46: coloured page 3, 47:36, 48:39-40, 49: coloured pages 1 & 2, 50:56	
Advertisements: see also <i>Give and take</i> , and <i>Nursery News</i>	
Afnemende ledetalle [Brief van A.N. Pelzer]	39:25-26
Age of cycad plants: Letter by Piet VORSTER	22:24
Age: How old is that cycad? (COX, Graham)	21:16-17
"All about cycads": exhibition in Schönbrunn, Austria (BRUNNER, Julius)	34:23-25
<i>Aloe 88</i> (Congress)	8:25
America: Slide show and lecture on some south American cycads [Letter from Bernard FISCHER]	41:36
America: Tang and meso-American cycads	23:21
American Cycad Society, activities in the (GROBBELAAR, Nat)	39:17-18
AMMANN, Chris: letter	6:37
<i>Amorphocerus</i> [beetle]	50:24
<i>Amorphophallus titanum</i>	44:20
Ampsdraers (1989)	17:34
Amsterdam: Cycad collection at the Botanical Garden of Amsterdam, the (HINTERDING, Maurice M.)	42:18-23
An introduction to the genus <i>Cycas</i> in Australia [booklet by Len BUTT]	23:17
ANDERSON, H.M.: Letter: Anomalous cones in <i>Encephalartos [transvenosus]</i>	26:36-37
ANDERSON, J.L.: Letter: Trade in cycad seeds: CITES regulations	33:35
Andrew Vovides moves to FTG	20:31
ANDREWS, Susyn: The Palm House and cycad collection at the Royal Botanic Gardens, Kew	19:30-31
Anomalous cones in <i>Encephalartos [transvenosus]</i> [Letter by H.M. ANDERSON]	26:36-37
ANON.: Letter: Artificial hybrids involving <i>Cycas revoluta</i>	46:28
Another case of Siamese twins amongst cycad cones [ <i>Encephalartos caffer</i> ] (CLAASSEN, Isabella)	37:26
Another sex change [ <i>Encephalartos latifrons</i> ]	13:42
Another sex change [ <i>Encephalartos senticosus</i> , as <i>E. lebomboensis</i> ] (STEENKAMP, Kobus)	42:25
Antibodies to the rescue [ants collecting eggs of Leopard Moth] (OSBORNE, Roy)	34:31
<i>Antliarhinus</i> spp. en bestuiwing (ROUWENHORST, Erik)	48:24-25
Ants: Antibodies to the rescue [ants collecting eggs of Leopard Moth] (OSBORNE, Roy)	34:31
Apology	20:3
Apparent seed viability of <i>Encephalartos ferox</i> growing in sun and shade conditions in the wild, the (PHELON, Janet; VAN HENSBERGEN, Hubertus; and OSBORNE, Roy)	34:11-14
Arnoldi, R.	19:54
Artificial hybrids involving <i>Cycas revoluta</i> [Letter from Anon.]	46:28
Artificial propagation project: results of a recent survey (OSBORNE, Roy)	32:23-24
ASHTON, Marcella M.: see BOTHA, C.H.; NAUDÉ, T.W.; SWANN, G.E.; ASHTON, M.M.; and VAN DER WATEREN, J.F.	30:20-21
Asia, south-east: map showing distribution of <i>Cycas siamensis</i>	4:4
Asia: Cycads of Asia (PANT, Divya Darshan)	26:8-15
Aswan: Cycads at Aswan, Egypt (GROBBELAAR, Nat)	34:30-31
Atagawa Tropical & Alligator Garden, Japan (SHIMIZU, Hideo; and OSBORNE, Roy)	41:21-23
ATWATER, Douglas: letter	16:34
ATWATER, Douglas: The cycad garden at Madame Ganna Walska's Lotusland	18:12-18
Auction: Cycad auction called off	16:25
Auction: DBG [Durban Botanic Gardens] sales day success [auction of plants] (OSBORNE, Roy)	35:22
Auction: Impressions at a cycad auction (GIDDY, Cynthia)	15:21
<i>Aulacaspis yasumatsui</i> [scale insect]: New pest threatens <i>Cycas</i> (TANG William)	49:14-17
<i>Aulacocelis</i> [beetle]	29:23
Australia beckons Doug [Goode] down under! (CORPTALK)	23:23
Australia: Butt, L., <i>An introduction to the genus Cycas in Australia</i> [booklet]	28:21
Australia: map of cycad distribution in eastern half	25:10
Australia: map showing geographical distribution of <i>Macrozamia lucida</i>	43:24
Australian cycad seeds	27:38
Australian cycads - a worthy challenge (GIDDY, Cynthia)	31:12-17
Australian cycads [Letter from Piet VORSTER]	32:28
Australian cycads in habitat (LAUGHLAND, Bryan)	25:10-13
Austrian students join Society	3:5
Award: "Conserva Award" [to Cynthia Giddy] (OSBORNE, Roy)	41:34
Award: Natal Parks Board conservation award [to Cynthia Giddy]	31:10-11
Award: Presentation of Conservation Award to Cynthia Giddy (MERESMAN, Avis)	41:31-32
Award: Presentation of the Conservation Award to Roy Osborne (MERESMAN, Avis)	39:15-16
Award: World honour for Cynthia Giddy (OSBORNE, Roy) 35:24 (see also 35:40)	
Babcock Identification Systems (microchipping)	33:32
Back copies of ENCEPHALARTOS	5:17
Badge	19:10
BAKER, J.K.: Brief: Nuwe interim reëling vir sekere handelinge in spesiaal beskermde plante binne die Gauteng Provinsie	50:29
Balance sheet 1990 (VORSTER, L.M.D.)	26:43-46
BALDUZZI, Alberto: see DE LUCA, Paolo; MORETTI, Aldo; and BALDUZZI, Alberto	42:11-18
Barkhuizen, B.P.: <i>The cycad garden of UNISA</i> . [Review by Roy OSBORNE] 3:28	
Barnard, Tinus	21:23
Barnard, Yvonne	21:23
BARRETO, J: Letter: Cycad Manager Program price	47:23-24
Bees and cycads (GROBBELAAR, Nat)	19:43-44
Beetles and pollination in <i>Encephalartos altensteinii</i> (STOBART, Mike)	17:32-33
BEGINNER: letter	1:20
Benin: <i>Encephalartos barteri</i> [Focus on] (OSBORNE, Roy)	14:8,9-15
Besoek aan Lillie Natuur Reservaat (SMUTS, Nico)	24:16-20
Besse, Byron	33:32
Besse, Libby	33:32
Bestuiwing: <i>Antliarhinus</i> spp. en bestuiwing (ROUWENHORST, Erik)	48:24-25
Bewaring: Broodboombewaring in S.A. (verslag deur S.A.G.P.)	15:16-18
Bewaring: Nuwe wildernisgebied [Oos Kaap]	8:24
Bibliography: South African cycads - a bibliography (OSBORNE, Roy)	11:8-13
Bird's nest cycad? (CLAASSEN, Isabella)	35:26
Bits and pieces 1:13, 2:25, 3:12, 4: 19-20, 5:16-17, 6:11-13, 7:14-16, 8:24-25, 9:26-27, 10:28-29, 11:14-15, 12:4-8, 13:36-42, 14:20-24, 15:3-5, 16:12-15, 17:23-25, 18:34-39, 21:26-28, 22:21-23; 23:26-30	
<i>Bjuvia simplex</i> (fossil)	16:32

"Blue" cycads (GROBBELAAR, Nat)	35:24, 36:32
BMAA "no problem" [toxin in <i>Cycas</i> seed]	18:18
Boekbesprekings	46:32-33, 47:28-31
Bogor Botanic Garden, the	44:20-21
Bogor: Cycads at the Bogor Botanic Gardens, Indonesia (FORSTER, Paul I.)	41:19-20
Bonsai (mainly <i>Cycas revoluta</i> )	3:24-25
Book review: David L. Jones <i>Cycads of the world</i> [OSBORNE, Roy]	35:36
Book review: Guy Wrinkle's <i>Cycads: their cultivation and propagation</i> [GROBBELAAR, Nat]	46:33
Book review: William Tang's <i>Handbook of cycad cultivation and landscaping</i> [OSBORNE, Roy]	43:38
Book review: Jack Krempin's "Palms & cycads around the world" (LAMBERT, Ann)	28:18
Book review: Jack Krempin's "Palms & cycads around the world" (OSBORNE, Roy)	28:18
Book review: Keith Boyer's <i>Palms and cycads beyond the tropics</i> (OSBORNE, Roy)	33:37-38
Book review: Alec Blombery & Tony Rodd's <i>Palms</i>	Newsletter 2:3
Book review: P. Vorster (ed.), <i>Proceedings of the Third International Conference on Cycad Biology</i> [GROBBELAAR, Nat]	46:32-33
Book review: Roy Osborne's <i>The cycad collection of the Durban Botanic Gardens</i> [VORSTER, Piet]	35:37 (see also 36:42)
Book review: F. & J. von Breitenbach's <i>Tree atlas of southern Africa</i> [VORSTER, Piet]	40:23-24
Book reviews	46:32-33, 47:28-31
Book: <i>Cycad collection of the Durban Botanic Gardens, the</i> by Roy Osborne [reviewed by Piet VORSTER]	35:37 (see also 36:42)
Book: <i>Cycads in China</i> by Faxian Wang, Huibo Liang, Tanqing Chen, & Dingyue Wang [reviewed by Piet VORSTER]	47:29-32
Book: <i>Cycads of China</i> by Guan Zhongtian & Zhou Lin [reviewed by Piet VORSTER]	47:28-29
Book: <i>Cycads of the world</i> by David L. Jones [review by Roy OSBORNE]	35:36
Book: <i>Palms &amp; cycads around the world</i> by Jack Krempin [reviewed by Roy OSBORNE]	28:18
Book: <i>Palms &amp; cycads around the world</i> by Jack Krempin [reviewed by Ann LAMBERT]	28:18
Book: <i>Palms and cycads beyond the tropics</i> , by Keith Boyer (New palm and cycad book)	23:17
Booklet: <i>Cycas: An introduction to the genus Cycas in Australia</i> (booklet by Len Butt)	23:17
<i>Botanical exploration of South Africa</i> (Mary Gunn and L.E. Codd) [reviewed by Roy OSBORNE]	5:19
Botanical garden of Florence, Italy, the [Giardino dei Semplici di Firenze] (STAINER, Ottorino)	44:29-31
Botanical garden: Bogor Botanic Garden	44:20-21
Botanical garden: Cibodas Botanic Garden, the	44:21-22
Botanical Garden: Cycad collection at the Botanical Garden of Amsterdam, the (HINTERDING, Maurice M.)	42:18-23
Botanical garden: Cycad collection of the Durban Botanic Gardens, the (OSBORNE, Roy)	34:16-20
Botanical garden: Cycads at the Bogor Botanic Gardens, Indonesia (FORSTER, Paul I.)	41:19-20
Botanical garden: Cycads at the Karoo Botanic Garden (OSBORNE, Roy)	38:15-17
Botanical garden: Cycads in Dublin: the collection in the National Botanic Gardens, Glasnevin (NELSON, E. Charles)	33:12-16
Botanical garden: Durban Botanic Gardens - Cycad project nears completion (OSBORNE, Roy)	33:30-31
Botanical garden: Durban Botanic Gardens	35:32
Botanical garden: Durban Botanic Gardens - new initiatives in cycad collection	28:22
Botanical garden: Foster Botanic Gardens in Hawaii (MIYANO, Leland)	26:30-32
Botanical garden: Hurricane Andrew and Fairchild Tropical Garden (NORSTOG, Knut J.; and FAWCETT, Priscilla K.S.)	33:26-28
Botanical garden: Kirstenbosch Botanic Garden	35:33
Botanical garden: Living plants section of the Muscum National d'Histoire Naturelle, Paris, France, the (DU PUY, B.; & DELANGE, Y.)	30:10-12
Botanical Garden: Lowveld National Botanic Garden [Nelspruit]	35:31, 36:10
Botanical garden: Memories about the botanic garden of the Department of Botany, University of Pretoria (ROBBERTSE, Hannes)	37:10-14
Botanical garden: National Botanical Gardens, Pretoria	35:29
Botanical garden: Nong Nooch Botanic Garden	48:23
Botanical Garden: Note from the Director of the Honolulu Botanic Gardens, a (KRISTIANSEN, Michael S.)	27:33
Botanical Garden: Portici Botanic Garden, the (OSBORNE, Roy)	40:8-9
Botanical garden: Purwodadi Botanic Garden, the	44:21
Botanical Garden: Saving a <i>Cycas</i> [repairing transport damage] (OSBORNE, Roy; and MORETTI, Aldo)	39:22-23
Botanical garden: Schönbrunn	29:11-13
Botanical garden: Shenzhen Fairy Lake Botanic Garden, the (YANG, Si-Lin; WANG, Ding-Yue; and OSBORNE, Roy)	41:15-17, 41:16
Botanical garden: The cycad collection at the Naples Botanic Garden (OSBORNE, Roy)	31:18-20
Botanical garden: The evolution of a botanical garden collection: the cycads at Fairchild Tropical Garden (WALTERS, Terrence)	30:8-9
Botanical garden: The Rome Botanic Garden (OSBORNE, Roy)	39:12-14
Botanical garden: Xishuangbanna Botanic Garden	48:19
Botanical historical monuments (OSBORNE, Roy)	3:20-22
Botanical Research Institute, Pretoria: cycads in garden	15:24
Botanic gardens of Java, the (MARTA, Fadjar)	44:2
BOTHA, C.H.; NAUDÉ, T.W.; SWANN, G.E.; ASHTON, M.M.; and VAN DER WATEREN, J.F.: Suspected cycad ( <i>Cycas revoluta</i> ) intoxication in dogs	30:20-21
Botha, Con	31:10
BOTHA, T.J.R.: Brief: <i>Encephalartos villosus</i> : aantal vroulike keëls	35:38
Botshabelo cycad postcard	16:14
Botshabelo hiking trail	18:38
<i>Bowenia serrulata</i>	17:19
<i>Bowenia serrulata</i> : Variation in floristic characteristics of <i>Bowenia serrulata</i> (WILSON, Gary W.)	45:12-13
<i>Bowenia spectabilis</i>	17:18, 31:15, 37:15, 41:20
<i>Bowenia spectabilis</i> : Upside down <i>Bowenia</i> from Down Under (OSBORNE, Roy; and WALKLEY, Stan)	47:16-17
Bowles, Craig: In memoriam	27:9
BOWRING, Douglas: Cycads in Korea	11:17
Boyer, Keith: <i>Palms and cycads beyond the tropics</i> [New palm and cycad book]	23:17
Brabham, Terry	23:13
Branched leaflets in <i>Cycas</i> (TANG, William)	40:13-16
Bredenkamp, George	30:22
Brief aan die Redakteur	44:48
Brief description of CYDEX - a comprehensive index to ENCEPHALARTOS journal	50:26
Briewe: 1:20-21, 3:26-28, 4:11, 5:32-34, 6:37-39, 7:22-23, 8:34-35, 9:31, 10:32, 11:13, 12:28-29, 13:43-45, 14:34, 15:29, 16:34, 18:40-41, 19:52, 21:29, 22:24-26, 26:32-37, 29:24-26	
Briewe aan die Redakteur 33:34-37, 34:33-35, 35:37-39, 38:40-41; 39:25-26, 28; 40:24-25, 42:27-28, 43:34-38, 45:22-23, 46:28-32, 49:28-31, 48:34, 50:27-30	
Briewe aan/van die Redakteur	41:35-39
Broodbome by Harold Johnson Natuureservaat (ROUWENHORST, Erik)	49:19-21
Broodbome en die wet (KEMP, Maans)	10:29, 14:4-7, 15:19
Broodbome floreer ook in kouer dele [tydskrifuitknipsel]	50:35, 36, 37
Broodbome in potte [Brief van Izak J. VAN DEN BERG]	48:34
Broodboombewaring in S.A. (verslag deur S.A.G.P.)	15:16-18
BROOME, Tom: Letter: Multiple cones in <i>Ceratozamia</i>	46:28
BROOME, Tom: Letter: Twin seed of <i>Ceratozamia [norstogii]</i>	41:38
BROOME, Tom: More information on fertilizers	47:17-18
BROOME, Tom: Producing more seeds with a better fertilizer regime (see also VORSTER, Piet; HUNTER, Kobus; and CONRADIE, Kobus in 45:19-20)	44:25-26
BROWN, Ed: Letter: Notes on cold-hardiness	50:29-30
BRUCK, Detlef: Letter	7:22
BRUNNER, Julius: "All about cycads": exhibition in Schönbrunn, Austria	34:23-25
BRUNNER, Julius: Cycad seed pathogens	22:18-20
BRUNNER, Julius: Cycadaceae in the renovated "Palmenhaus" of the Österreichische Bundesgärten in Schönbrunn (Vienna)	29:11-13
BRUNNER, Julius: <i>Encephalartos altensteinii</i> - the oldest plant in the world?	29:10
BRUNNER, Julius: Letter	16:34
BRUNNER, Julius: Sowing cycad seed in a way that guarantees germination	21:18-19
BRUNNER, Julius: The Bundesgärten Schönbrunn	19:18-20
BUCHHOLZ, J.T.: Charles Joseph Chamberlain	34:15-16

Buckley, Alan	49:5	China: Note on the cycads in Yunnan, south-western China, a (YANG, Si-Lin; and YANG, Si-Yuan)	40:10-13
<i>Bunaea alcinoë</i> : New moth menace? [Emperor Moth]	23:26	China: Shenzhen Fairy Lake Botanical Garden, the (YANG, Si-Lin; WANG, Ding-Yue; and OSBORNE, Roy)	41:15-17, 41:16
Burchmore, John	13:5, 15:26	China: Xishuangbanna Botanical Garden	48:19
Burning issue investigated	1:5	Chirgwin, Sharon	23:10
Burning of <i>Encephalartos lanatus</i> to induce leaf formation (CLAASSEN, Isabella)	37:24-25, 38:32 (comment by Piet VORSTER)	Chromosome count of <i>Encephalartos woodii</i>	7:14
Burning of <i>Encephalartos lanatus</i> to induce leaf formation (VORSTER, Piet)	38:32	Chrysomelid larvae feeding on new leaf of <i>Cycas siamensis</i>	43:8
BURSEY, Bruce: Cycad sucker success	13:21	Chu, Yongxing	44:35
Burse, Bruce: In memoriam	31:24	Cibodas Botanic Garden, the	44:21-22
Burton, John	27:12	CITES regulations on trade in cycad seeds [Letter from Nat GROBBELAAR, Roy OSBORNE, & Piet VORSTER]	29:26
Butt, L., <i>An introduction to the genus Cycas in Australia</i> [booklet]	23:17, 28:21	CITES regulations: Trade in cycad seeds [Letter from J.L. ANDERSON]	33:35
Butt, L., <i>Cycads of Australia</i> , reviewed by Roy OSBORNE	4:9	CITES: Dominican Republic <i>Zamia</i> and CITES (TANG, William)	46:18-21
BUTT, Len: Cycads of Australia [article]	7:19, 8:36, 9:32-33, 10:30-31, 11:19, 12:25, 13:25, 14:17, 15:32, 16:15, 17:18-19, 18:19-21, 21:15	CITES: International trade in cycads, the (GIDDY, Cynthia)	28:20
Butt, Len: Len Butt - credibility gap [Letter from Paul KENNEDY]	46:29-32	CITES: Natalse Parkeraad reageer op president se versoek aangaande toestemming vir die uitvoer van broodboomsaad (GROBBELAAR, Nat)	36:35
BUTT, Len: Letter	11:13	CITES: Regulations controlling trade in cycad seeds [Letter from Roy OSBORNE]	43:36-37
Butterflies: Miriam Rothschild's butterfly studies (COMPTON, Stephen)	9:25	CITES: Report on the CITES plants committee meeting (GIDDY, Cynthia)	36:30-31
C.J. Chamberlain and the ladies (NORSTOG, Knut J.)	43:25-26	CITES: Report on the CITES Plants Committee meeting, Zomba, Malawi, April 15-17th, 1991 (GIDDY, Cynthia)	27:10-12
Caesarians for cycad seeds [assistance for emerging radicles] (GIDDY, Cynthia)	14:18-19	CITES: South African Department of Environment and CITES regulations [Letter from Cynthia GIDDY]	43:37
Cafe: <i>Zamia</i> Cafe	30:23	CITES: Trade in cycad seeds: CITES regulations (GIDDY, Cynthia)	31:32-33
<i>Callioratis abraxas</i> [cycad-associated moth]	40:16	CITES: Trade in cycad seeds: CITES regulations [Letter from Nat GROBBELAAR]	33:36-36
<i>Callioratis millari</i> [cycad-associated moth]	40:16, 40:17	CITES: What is CITES and how does it work? (McGOUGH, Noel)	30:13
Camp, Gerry	23:24	Claassen, Isabella	32:25, 44:4-9
Campbell, Robert	23:24	CLAASSEN, Isabella: "Fishtail" <i>Encephalartos transvenosus</i>	35:20-21
Cape Town: Kirstenbosch Botanical Garden	35:33	CLAASSEN, Isabella: Another case of Siamese twins amongst cycad cones [ <i>Encephalartos caffer</i> ]	37:26
CAROLL, George: Letter: <i>Cycas revoluta</i> : not entirely cold-hardy	45:22-23	CLAASSEN, Isabella: Bird's nest cycad?	35:26
Caution against the control of Leopard Moths in natural populations of cycads, a [Letter from John DONALDSON]	33:36	CLAASSEN, Isabella: Brief [tweeslagtige keël by <i>Encephalartos ferox</i> ]	12:29
Census, world cycad	29:15, 31:11	CLAASSEN, Isabella: Burning of <i>Encephalartos lanatus</i> to induce leaf formation	37:24-25, 38:32 (comment by Piet VORSTER)
Census: 1991 World cycad census - your co-operation requested (OSBORNE, Roy)	27:39-40	CLAASSEN, Isabella: <i>Encephalartos</i> plants in cultivation: unusual cone number	32:21-22, 34:31-32, 45:21-22
Census: 1991-1992 world cycad census: news and progress	30:25	CLAASSEN, Isabella: <i>Encephalartos sclavoi</i> : correct author citation and date of valid publication	37:9
Central Africa: A passing glance at central African cycads (KEMP, Maans)	32:13-14	CLAASSEN, Isabella: <i>Encephalartos</i> : leaves on cones	32:22
Central Africa: map of distribution of <i>Encephalartos</i> in central Africa (OSBORNE, Roy)	20:22-23	CLAASSEN, Isabella: Letter	32:28-29
<i>Ceratozamia euophyllidia</i>	6:12	CLAASSEN, Isabella: Letter: Computer equipment for use of the Editor	41:39
<i>Ceratozamia fuscoviridis</i>	33:13	CLAASSEN, Isabella: Notes on leaf variation in <i>Encephalartos longifolius</i>	37:19-21 (comment by Piet VORSTER)
<i>Ceratozamia hildae</i>	44:25	CLAASSEN, Isabella: Report on "Fishtail" <i>Encephalartos transvenosus</i>	37:22, 38:32 (comment by Piet VORSTER)
<i>Ceratozamia hildae</i> : Multiple cones in <i>Ceratozamia</i> [Letter from Tom BROOME]	46:28	CLAASSEN, Isabella: see HURTER, Johan; and CLAASSEN, Isabella	45:4-11, 48:4-8, 9
<i>Ceratozamia kuesteriana</i>	18:15	CLAASSEN, Isabella: see HURTER, Johan; GLEN, Hugh; and CLAASSEN, Isabella	44:4-9
<i>Ceratozamia</i> leaf pigments	12:6	CLAASSEN, Isabella: Siamese twins amongst cycad cones	32:23
<i>Ceratozamia mexicana</i>	30:10, 39:13, 42:front cover, 42:14	CLAASSEN, M.I.: Brief [ontkieming van saad]	26:32
<i>Ceratozamia mexicana</i> : Multiple cones in <i>Ceratozamia</i> [Letter from Tom BROOME]	46:28	CLAASSEN, M.I.: see OSBORNE, R.; ROBBERTSE, P.J., & CLAASSEN, M.I.	28:10-13
<i>Ceratozamia norstogii</i>	41:38	Cladistic diagram showing possible relationship between families and genera of Cycadales	10:7
<i>Ceratozamia whitelockiana</i>	49:10-13, 14	Classification: Formal classification of the cycads, a (STEVENSON, Dennis)	30:24
CHADWICK, C.E.: Coning in <i>Macrozamia communis</i> L. Johnson (Zamiaceae)	35:10-14	<i>Cocos nucifera</i>	Newsletter 2:5
Chairman's letter (OSBORNE, Roy)	Newsletter 3:2	Cold hardiness: <i>Cycas revoluta</i> : how cold hardy? [Letter from Piet VORSTER]	48:34
Chakavarika, Charles	23:16	Cold-hardiness: <i>Cycas revoluta</i> : not entirely cold-hardy [Letter from George CAROLL]	45:22-23
CHAKAVARIKA, Charles: The Ewanrigg Botanical Gardens of Zimbabwe	26:26-30	Cold-hardiness: Notes on [Letter from Ed BROWN]	50:29-30
Chamberlain, C.J.: C.J. Chamberlain and the ladies (NORSTOG, Knut J.)	43:25-26	Collecting and storing pollen (TANG, Willie)	7:4-6
Chamberlain, Charles Joseph (BUCHHOLZ, J.T.)	34:15-16	Collecting: Why does one collect cycads? (VORSTER, Piet)	48:29-31
Changes to the Natal Conservation Ordinance (GIDDY, Cynthia)	38:37-40	Collections [Beatriz Freitas' collection] [MANTHE, Cyril]	Newsletter 1:3-4
Charles Joseph Chamberlain (BUCHHOLZ, J.T.)	34:15-16	Collector, the [MANTHE, Cyril]	Newsletter 1:5-6
CHAUHAN, Deventra Kumar: see PANT, Divya Darshan; SINGH, Rita; and CHAUHAN, Deventra Kumar	38:17-30	COLLINS, Brian: Cycads as bonsai [mainly <i>Cycas revoluta</i> ]	3:24-25
CHEMNICK, Jeff; and GREGORY, Tim: <i>Ceratozamia whitelockiana</i>	49:10-14	COMMELIN, Jan	42:19
CHEN, Chia Jui: CYCAD '96 conference	43:31	Comments by Piet VORSTER [on Albert C. Smith's article on <i>Cycas rumphii</i> forma <i>seemannii</i> ]	19:48-49, 19:50
Chen, Chia-Jui	36:37, 48:22		
<i>Chigua restrepoi</i>	42:14		
China experience and CYCAD '96, the (GROBBELAAR, Nat)	47:12-13		
China: CYCAD '94, the First National Cycad Symposium of China (WANG, Dingyue)	39:24-25		
China: Cycads in China (TURNER, Ian)	21:11-14		
China: Encounters with Chinese cycads (VORSTER, Piet)	48:15-24		
China: map showing Piet Vorster's travels	48:16		

Comments on "From the president" [availability and price of seed and pollen] [Letter from Cynthia GIDDY] . . . . .	43:37-38	Cones: Siamese twins amongst cycad cones (GROBBELAAR, Nat) . . . . .	19:53
Comments on articles which appeared in "ENCEPHALARTOS" 36 (VORSTER, Piet) . . . . .	38:31-33	Cones: unusual number in <i>Ceratozamia mexicana</i> . . . . .	42:front cover
Comments on <i>Cycas revoluta</i> (VORSTER, Piet) . . . . .	42:25-26	Cones: Variation in female cones of <i>Zamia pumila</i> (TANG, Willie) . . . . .	19:35-37
Comments on <i>Cycas siamensis</i> and <i>Cycas segmentifida</i> [Letter from Ken HILL] . . . . .	45:22	Conference: see also Congress	
Comments on Dick Endt's article [on <i>Zamia in Ecuador</i> ] (STEVENSON, Dennis) . . . . .	19:15	Conference: Botanical diversity (OSBORNE, Roy) . . . . .	36:36
Comments on Dr. Schlegel's letter [on parthenocarpy] [Letter from Nat GROBBELAAR] . . . . .	38:40	Congress theme, CYCAD '93 [Letters from John DOWE, Knut NORSTOG, and Piet VORSTER] . . . . .	32:27-28
Comments on Dr. Schlegel's letter [on parthenocarpy] [Letter from Piet VORSTER] . . . . .	38:41	Congress, World Cycad . . . . .	8:24
Comments on some issues raised in "ENCEPHALARTOS" no. 35 ["Fishtail" <i>Encephalartos transvenosus</i> , "Blue" cycads, Observations on <i>Encephalartos inopinus</i> , Green cones in <i>Encephalartos lehmannii</i> , Yellow leaves] (VORSTER, Piet) . . . . .	36:32-33	Congress: 1992 S.A.A.B. Conference . . . . .	30:22
Comments on the magazine clipping "Cycads also flourish in cool areas" [summary of Erik ROUWENHORST's letter and Nat GROBBELAAR's additional comments] . . . . .	50:28-30	Congress: <i>Aloe 88</i> . . . . .	8:25
Committee 1985 . . . . . Newsletter 3:3		Congress: China experience and CYCAD '96, the (GROBBELAAR, Nat) . . . . .	47:12-13
Committee [1986] . . . . .	5:13	Congress: CYCAD '87 . . . . .	10:4-8
Committee, eastern Cape, 1987 . . . . .	8:32	Congress: CYCAD '87 proceedings . . . . .	23:21
Committee [1988/1989]: Meet your new committee . . . . .	13:3-7	Congress: CYCAD '90 - last plea . . . . .	21:28
Committee, eastern Cape . . . . .	4:21	Congress: CYCAD '90 - plans "looking good" . . . . .	22:21
Committee, Natal Section . . . . .	21:27	Congress: CYCAD '90 - the Second International Conference on Cycad Biology. A report on the meeting held in Queensland, Australia, July 1990 (OSBORNE, Roy) . . . . .	23:10-17
Competition . . . . .	15:23	Congress: CYCAD '90 . . . . .	17:15, 18:32, 19:9, 20:40
Competition, photo (GROBBELAAR, Nat) . . . . .	34:33	Congress: CYCAD '90: delegates . . . . .	23:13, 23:23
Competition: Cycad colour photo competition . . . . .	31:3	Congress: CYCAD '93 - dates decided . . . . .	27:13
Compton, Stephen: Entomologist joins Society . . . . .	6:39	Congress: CYCAD '93 . . . . .	23:15, 29:27, 31:22
COMPTON, Stephen: Insect pollination implications . . . . .	12:9	Congress: CYCAD '93 (OSBORNE, Roy) . . . . .	33:29
COMPTON, Stephen: Miriam Rothschild's butterfly studies . . . . .	9:25	Congress: CYCAD '93 Proceedings (OSBORNE, Roy) . . . . .	44:45
Computer equipment for use of the Editor [Letter from Isabella Claassen] . . . . .	41:39	Congress: CYCAD '93 update . . . . .	30:19
Computer identification of cycads . . . . .	28:21	Congress: CYCAD '94, the First National Cycad Symposium of China (WANG, Dingyue) . . . . .	39:24-25
Computer program: Cycad Manager Program price [Letter from J. BARRETO] . . . . .	47:23-24	Congress: CYCAD '96 . . . . .	35:33
Condolences [Brian Mann] . . . . .	18:25	Congress: CYCAD '96 (GIDDY, Cynthia) . . . . .	41:31
Cone development . . . . .	19:29	Congress: CYCAD '96 (GROBBELAAR, Nat) . . . . .	36:36
Cone exudates ( <i>Encephalartos</i> ) . . . . .	15:4	Congress: CYCAD '96 [report on] (VORSTER, Piet) . . . . .	47:8-11
Cone leaves 14:20, 20:20-21, 22:23, 26:36, 29:7, 29:25, 32:14, 32:22, 38:11, 41:29, 43:27-30		Congress: CYCAD '96 conference (CHEN, Chia Jui) . . . . .	43:31
Cone leaves . . . . .	16:13 [review of article]	Congress: Entomologists' conference . . . . .	19:10
Cone leaves in <i>Encephalartos villosus</i> [Letter from Colin & Charmaine PINKER] . . . . .	29:25	Congress: International Plant Conservation Congress (DONALDSON, John) . . . . .	17:16-17
Cone leaves: Abnormal cones on <i>Zamia furfuracea</i> (TANG, William) . . . . .	41:29	Congress: IV International Conference on Cycad Biology (CYCAD '96) to be held in Panzhihua, Sichuan, China from 1 to 5 May, 1996 . . . . .	45:20
Cone leaves: Leaves on cycad cones (ROBBERTSE, Hannes) . . . . .	43:27-30	Congress: Neopolitan botanical conference . . . . .	27:38
Cone number: <i>Encephalartos</i> plants in cultivation: unusual cone number (CLAASSEN, Isabella) . . . . .	45:21-22	Congress: Nice cycad congress . . . . .	9:27
Cone numbers, unusual [Letter from Stan WALKLEY and Roy OSBORNE] . . . . .	47:24	Congress: <i>Proceedings of the Third International Conference on Cycad Biology</i> by P. Vorster [book reviewed by Nat GROBBELAAR] . . . . .	46:32-33
Cone sculptures in southern Italy (OSBORNE, Roy) 39:24, 43:34-35 [Letter from Ottorino STAINER]		Congress: Report on the Third International Conference on Cycad Biology Pretoria, July 1993, a (OSBORNE, Roy) . . . . .	35:28-34, 36:37
Cone sculptures: Mediterranean cone sculptures [Letter from Ottorino STAINER] . . . . .	43:34-35	Congress: S.A.A.B. Congress (1987) . . . . .	9:27
Cone, abnormal 11:16 ( <i>Zamia furfuracea</i> ), 12:4 ( <i>Encephalartos longifolius</i> and <i>E. transvenosus</i> )		Congress: S.A.A.B. [1988] . . . . .	13:37
Cone, unusual number of: <i>Encephalartos</i> plants in cultivation: unusual cone number (CLAASSEN, Isabella) . . . . .	34:31-32	Congress: S.A.A.B. 1989 . . . . .	17:24
Cone: Odd coning in <i>Zamia</i> . . . . .	31:25	Congress: S.A.A.B. 1991 . . . . .	26:31
Cone: Unusual <i>Cycas thouarsii</i> coning . . . . .	22:23	Congress: S.A.A.B. Conference [1993] (OSBORNE, Roy) . . . . .	33:30
Cones, multiple: Multiple cones in <i>Ceratozamia</i> [Letter from Tom BROOME] . . . . .	46:28	Coning age of cycads . . . . .	21:27
Cones, number of: <i>Encephalartos villosus</i> : aantal vroulike keëls [Brief van T.J.R. BOTHJA] . . . . .	35:38	Coning and sex ratio of <i>Encephalartos transvenosus</i> . . . . .	18:37
Cones, number: Multiple male cones in <i>Cycas</i> (TANG, Willie) . . . . .	36:34-35	Coning cycle: Cycad coning cycle, the (GROBBELAAR, Nat) . . . . .	45:20
Cones, unusual number: Four-coned female <i>Encephalartos ferox</i> , the (NEL, Danie) . . . . .	35:25	Coning in <i>Macrozamia communis</i> L. Johnson (Zamiaceae) (CHADWICK, C.E.) . . . . .	35:10-14
Cones: Crested <i>Stangeria</i> cones (OSBORNE, Roy) . . . . .	39:17	Coning: Times of coning for the African cycads (OSBORNE, Roy) . . . . .	35:18-20
Cones: <i>Encephalartos</i> plants in cultivation: unusual cone number (CLAASSEN, Isabella) . . . . .	32:21-22	CONRADIE, Kobus: see VORSTER, Piet; HUNTER, Kobus; and CONRADIE, Kobus . . . . .	45:19-20
Cones: Evolutionary patterns in cycads cone shape and size (TANG, Willie) . . . . .	18:26-31	Consequences of collecting cycad seed from wild populations, the [Letter from John DONALDSON] . . . . .	34:33-35
Cones: Green cones in <i>Encephalartos lehmannii</i> (VORSTER, Piet) . . . . .	36:33	"Conserva Award" [to Cynthia Giddy] (OSBORNE, Roy) . . . . .	41:34
Cones: Male cycad cones. Structure and function (TANG, Willie) . . . . .	20:25-28	Conservation . . . . .	4:22
Cones: Roots on <i>Zamia</i> cones (TANG, Willie) . . . . .	28:14-15	Conservation [Letter from John DOWE] . . . . .	32:27
		Conservation [Letter from Knut NORSTOG] . . . . .	32:27
		Conservation award: Presentation of Conservation Award to Cynthia Giddy (MERESMAN, Avis) . . . . .	41:31-32
		Conservation award: Presentation of the Conservation Award to Roy Osborne (MERESMAN, Avis) . . . . .	39:15-16
		Conservation of cycads in Natal (SCOTT-SHAW, Rob) . . . . .	34:28-30
		Conservation status of <i>Macrozamia plurinervis</i> (Zamiaceae), The (FORSTER, Paul I.; JONES, David L.; and MACHIN, Peter J.) . . . . .	44:12-15
		Conservation: A more realistic conservation strategy for the South African cycads (GROBBELAAR, Nat) . . . . .	32:15-18
		Conservation: Consequences of collecting cycad seed from wild populations, the [Letter from John DONALDSON] . . . . .	34:33-35

Conservation: Conservation of cycads in Natal (SCOTT-SHAW, Rob)	34:28--30	Cultivation: Recent advances in the cultivation of cycads (GIDDY, Cynthia)	24:10--15
Conservation: Cycad conservation proposals	21:9	Cyanobacteria ( <i>Nostoc</i> sp.)	4:9
Conservation: Cycad conservation report	25:24	Cyanobacteria in <i>Encephalartos transvenosus</i>	22:22
Conservation: International Plant Conservation Congress (DONALDSON, John)	17:16--17	Cyanobacteria: Coralloid roots and Cyanobacteria	11:14--15
Conservation: Natal Parks Board conservation award [to Cynthia Giddy]	31:10--11	CYCAD '87 [congress]	10:4--8
Conservation: NBI's cycad conservation plan (OSBORNE, Roy)	34:20--21	CYCAD '87 [congress] Proceedings	23:21
Conservation: New approach to cycad conservation [letter from Greg HOLZMAN]	34:35	CYCAD '90 [congress]	17:15, 18:32, 19:9, 20:40
Conservation: New conservation act	21:28	CYCAD '90 - last plea	21:28
Conservation: New nature reserve [ <i>Starvation Creek Nature Reserve for Encephalartos laevifolius</i> ]	4:20	CYCAD '90 - plans "looking good"	22:21
Conservation: Preliminary assessment of cycad conservation and diversity in Queensland, Australia, a (FORSTER, Paul I.)	46:8--18	CYCAD '90 - the Second International Conference on Cycad Biology. A report on the meeting held in Queensland, Australia, July 1990 (OSBORNE, Roy)	23:10--17
Conservation: Problems of endangered species conservation in Mexico: cycads an example (VOVIDES, Andrew P.)	20:29--35	CYCAD '90 - who took the <i>Cycas</i> seeds from Queens Gardens?	24:26
Conservation: Regulations controlling trade in cycad seeds [Letter from Roy OSBORNE]	43:36--37	CYCAD '90 [Congress]: delegates	23:13, 23:23
Conservation: Save the cycads	21:26	CYCAD '90 [congress]: Proceedings (OSBORNE, Roy)	33:30
Conservation: Save the cycads! Part 2	22:21	CYCAD '90: Proceedings	23:14
Conservation: The relocation of two rare cycad plants [ <i>Encephalartos</i> cf. <i>E. laevifolius</i> ] (GIDDY, Cynthia)	27:17--19	CYCAD '93 [Congress]	23:15, 31:22
Conservation: The Society and conservation [Letter from Piet VORSTER]	33:34	CYCAD '93 (congress): <i>Proceedings of the Third International Conference on Cycad Biology</i> by P. Vorster [book reviewed by Nat GROBBELAAR]	46:32--33
Conservation: The Taiwan <i>Cycas</i> Nature Reserve (OSBORNE, Roy)	20:36--38	CYCAD '93 [congress] - dates decided	27:13
Conservation: To the rescue (GROBBELAAR, Nat)	27:16	CYCAD '93 [congress] (OSBORNE, Roy)	33:29
Conservation: World honour for Cynthia Giddy (OSBORNE, Roy)	35:24 (see also 35:40)	CYCAD '93 [congress] update	30:19
Constitution	3:22	CYCAD '93 conference	29:27
Constitution: amendment of	35:35, 50:34	CYCAD '93 Proceedings (OSBORNE, Roy)	44:45
Constitution, amendment to	36:4	CYCAD '93: Report on the Third International Conference on Cycad Biology Pretoria, July 1993, a (OSBORNE, Roy)	35:28--34, 36:37
Containers: Cycads in containers (VORSTER, Piet)	49:31--35	CYCAD '94, the First National Cycad Symposium of China (WANG, Dingyue)	39:24--25
Coralloid root metabolism	14:24	CYCAD '96 [congress]	35:33
Coralloid root physiology	19:50	CYCAD '96 [congress] (GIDDY, Cynthia)	41:31
Coralloid roots	17:22	CYCAD '96 [congress] (GROBBELAAR, Nat)	36:36
Coralloid roots again	22:17	CYCAD '96 [congress]: China experience and CYCAD '96, the (GROBBELAAR, Nat)	47:12--13
Coralloid roots and Cyanobacteria	11:14--15	CYCAD '96 [report on congress] (VORSTER, Piet)	47:8--11
Coralloid roots and white tubercles on secondary roots (SCHLEGEL, Helmut)	39:14--15	CYCAD '96 conference (CHEN, Chia Jui)	43:31
Corruptules: Cycads: their corruptules, omnules and omnels [Letter from Nat GROBBELAAR]	41:36--37	CYCAD '96: IV International Conference on Cycad Biology ... to be held in Panzhihua, Sichuan, China from 1 to 5 May, 1996	45:20
Council, nominations for [call for] (GROBBELAAR, Nat)	34:33	Cycad auction called off [press clipping]	16:25
Council: New council for the period Jan. 1994 - Dec. 1995 (GROBBELAAR, Nat)	36:29--30	Cycad beetles: <i>Amorphocerus</i> broadens its horizons (VORSTER, Piet)	50:24
Council: [Call for] Nominations for Council (ROBBERTSE, Hannes)	43:33--34	Cycad book and video [Knut Norstog's video cassette accompanying his book <i>The biology of cycads</i> ]	15:3
Council: News from our council (GROBBELAAR, Nat)	33:28--29	Cycad Centre [business] opens	29:15
Council: news from (GROBBELAAR, Nat)	36:36	Cycad Centre [Letter from Avis MERESMAN and Danie NEL]	49:29--30
Coutts visit Southern Africa	19:44	Cycad collection at the Botanical Garden of Amsterdam, the (HINTERDING, Maurice M.)	42:18--23
Coutts, Dave	19:44	Cycad collection at the Naples Botanical Garden, the (OSBORNE, Roy)	31:18--20
Coutts, Pat	19:44	Cycad collection of the Durban Botanic Gardens, the (OSBORNE, Roy)	34:16--20
Cox Peninsula: <i>Cycas</i>	12:6	<i>Cycad collection of the Durban Botanic Gardens, the</i> by Roy Osborne [booklet reviewed by Piet VORSTER]	35:37 (see also 36:42)
COX, Graham: How old is that cycad?	21:16--17	Cycad colour photo competition	31:3
Crested female cone of <i>Cycas revoluta</i>	41:11	Cycad cone development	19:29
Crested <i>Stangeria</i> cones (OSBORNE, Roy)	39:17	Cycad cone leaf outgrowths [review of paper]	16:13
Crime 5:30--31, 6:41--42, 7:24--25, 8:9:28--29, 10:27, 11:24--26, 12:30--31, 13:31, 14:23, 14:25, 18:43--46, 19:11--12, 19:42, 20:41--42, 21:24--25, 21:30--34, 25:25--31, 22:27--30, 23:29, 23:32--35, 24:26, 24:30, 26:39--42, 27:42--46, 28:24--25, 29:29, 30:28--29, 31:34--37, 32:31, 34:39, 37:31--32, 34:39, 37:31--32, 38:42, 39:27--28, 40:28, 41:44--47, 42:30--31, 43:40--43, 43:40, 44:15--19, 47:33--35, 49:38--39		Cycad coning cycle, the (GROBBELAAR, Nat)	45:20
Crime: Cycad criminals cause concern	1:19	Cycad conservation proposals	21:9
Crime: Cycad thefts continue	11:15	Cycad conservation report	25:24
Crime: More thefts	2:29	Cycad conundrum, the [toxins] (LAKE, Julie)	31:26--27
Crime: Plants inspected [Letter from Cynthia GIDDY]	39:28	Cycad crimes. Committee statement	5:31
Crime: The Van Zyl Commission of Enquiry - press release	26:17	Cycad criminals cause concern	1:19
Crosiers, Catherine	40:20	Cycad crossword	12:34--36
Cross pollination successful (hybrid between <i>Cycas siamensis</i> and <i>C. rumphii</i> ) [Letter from Shri DHAR]	48:34	Cycad exhibits [publicity]	15:5
Crossword, cycad	12:34--36	Cycad experience in Ecuador, a (ENDT, Dick)	19:13--15
Crown rot treatment	7:16	Cycad feature. Propagation [MANTHE, Cyril]	Newsletter 1:9--12
Cuba: map showing distribution of <i>Microcycas calocoma</i>	42:5	Cycad garden at Madame Ganna Walska's Lotusland, the (ATWATER, Douglas)	18:12--18
Cultivated cycads	6:12	<i>Cycad garden of UNISA, the</i> (B.P. Barkhuizen) [Review by Roy OSBORNE]	3:28
Cultivation: Domestic growing of cycads from seed to houseplant size (SCHLEGEL, Helmut)	26:22--25	Cycad half-truths?	24:26
Cultivation: Hollow stems in <i>Encephalartos</i> (TANG, William)	44:42--43	Cycad hit parade (OSBORNE, Roy)	7:7
		Cycad hybrids [Letter from Piet VORSTER]	42:27
		Cycad landscaping (MIYANO, Leland)	19:16--17
		Cycad Laundromat	28:19
		Cycad leaf waxes	17:14, 21:20

Cycad leaf waxes (OSBORNE, Roy)	12:26-27	(NELSON, E. Charles)	33:12-16
CYCAD LOVER: letter	3:26	Cycads in Europe [ <i>Encephalartos laurentianus</i> in Malaga]	14:21
Cycad Manager Program price [Letter from J. BARRETO]	47:23-24	Cycads in Korea (BOWRING, Douglas)	11:17
Cycad microscopy reveals a whole new world	26:18-19	Cycads in Pretoria gardens (OSBORNE, Roy)	15:24-25
Cycad mutants (OSBORNE, Roy)	17:26-30	Cycads in the Adelaide Botanic Garden (ROACH, Julie; and ROACH, John)	25:16-21
Cycad nurseries, specialist	Newsletter 3:8	Cycads in the air [article in South African Airways magazine]	7:15
Cycad Nursery - Henkie & Ita van der Walt	16:17	Cycads of Africa (Douglas Goode)	21:20, 21:21, 21:31, 23:22
Cycad phenology (NORSTOG, Knut J.)	32:11-13	Cycads of Asia (PANT, Divya Darshan)	26:8-15
Cycad pollen morphology	27:9	Cycads of Australia [article] (BUTT, Len)	7:19, 9:32-33, 10:30-31, 11:19, 12:25, 13:25, 14:17, 15:32, 16:15, 17:18-19, 18:19-21, 21:15
Cycad pollen progress [review of B. & N. Dehgan's paper, Comparative pollen morphology and taxonomic affinities in Cycadales]	18:18	<i>Cycads of Australia</i> by L. Butt	4:9 [reviewed by Roy OSBORNE] 6:13, 8:25
Cycad pollen studies	13:38	<i>Cycads of China</i> by Guan Zhongtian & Zhou Lin [book reviewed by Piet VORSTER]	47:28-29
Cycad pollen studies (WHITELOCK, Loran)	8:22-23	Cycads of Longwood Gardens, the (WINN, Thomas)	15:27-29
Cycad pollen survives ultra-low temperature	17:25	Cycads of the eastern Cape Province (KEMP, Maans)	Newsletter 3:5
Cycad posters (Douglas Goode)	12:5	<i>Cycads of the world</i> by David L. Jones [review by Roy OSBORNE]	35:36
Cycad prints [posters, by Priscilla Fawcett]	13:37	Cycads omitted in school biology syllabi (OSBORNE, Roy)	17:22
Cycad propagation [ <i>Encephalartos friderici-guilielmi</i> ] (FORRESTER, Len)	41:35	Cycads on Mauritius [ <i>Cycas thouarsii</i> ]	14:22
Cycad research funding available (ROBBERTSE, Hannes)	37:14	Cycads recovering well at Fairchild Tropical Garden (NORSTOG, Knut; and FAWCETT, Priscilla)	35:27
Cycad research in the 80's (OSBORNE, Roy)	6:26-34	Cycads: their corruptules, omnules and omnels [Letter from Nat GROBBELAAR]	41:36-37
Cycad seed dispersal	21:27	Cycads: tissue culture	19:29
Cycad seed exchange (OSBORNE, Roy)	Newsletter 2:8	<i>Cycads: their cultivation and propagation</i> by Guy Wrinkle [booklet reviewed by Nat GROBBELAAR]	46:33
Cycad seed kernel morphology (OSBORNE, Roy)	13:26-30	<i>Cycas angulata</i>	35:front cover
Cycad seed pathogens (BRUNNER, Julius)	22:18-20	<i>Cycas armstrongii</i>	21:18
Cycad seeds and seedlings (TANG, Willie)	9:8-11	<i>Cycas balansae</i>	48:20, 22
Cycad seeds for sale in Australia	29:14	<i>Cycas beddomei</i>	26:12, 50:32
Cycad Society of Southern Africa, the (OSBORNE, Roy)	Newsletter 2: 8-9	<i>Cycas brunnea</i>	33:30
Cycad Specialist Group meeting, the	35:33	<i>Cycas cairnsiana</i>	33:30, 46:9, 46:16
Cycad sucker success (BURSEY, Bruce)	13:21	<i>Cycas calcicola</i>	40:15
Cycad thefts continue	11:15	<i>Cycas circinalis</i>	19:19, 26:13, 13:14, 27:32, 33:27, 34:30, 35:27
Cycad toxicity [M.Sc. degree for J.J. Nair]	27:27	<i>Cycas circinalis</i> : new nerve poison from	12:8
Cycad toxin research (LAKE, Julie)	29:16	<i>Cycas couttsiana</i>	33:29
Cycad trade and conservation (TANG, Willie)	4:22	<i>Cycas "Cox Peninsula"</i>	12:6
Cycad trail	2:17	<i>Cycas desolata</i>	46:11
Cycad twins	16:14	<i>Cycas fairylakea</i>	48:23
Cycad weevils: comments on articles by P.I. Forster and E. Rouwenhorst (OBERPRIELER, Rolf)	49:25-26	<i>Cycas "Glen Idle Blue"</i> : see <i>Cycas couttsiana</i>	5:29, 23:11, 23:15, 33:29
Cycad weevils: The weevils associated with cycads - an overview [talk by Rolf OBERPRIELER at meeting of the Transvaal Regional Branch]	50:18-20	<i>Cycas guizhouensis</i>	43:14-16, 43:15
Cycadaceae in the renovated "Palmehaus" of the Österreichische Bundesgärten in Schönbrunn (Vienna) (BRUNNER, Julius)	29:11-13	<i>Cycas hongheensis</i>	40:11, 40:12
Cycad-associated geometrid moths in southern Africa (STAUDE, Hermann S.)	40:16-19	<i>Cycas inermis</i>	40:14
<i>Cycadeoidea</i> [fossil]	16:32	<i>Cycas kennedyana</i>	31:15
<i>Cycadeoidea dakotensis</i> [fossil]	34:23-24	<i>Cycas "Marlborough Blue"</i> : see <i>Cycas ophiolitica</i>	25:13, 33:29, 44:35-36
Cycad-insect interactions	24:29	<i>Cycas media</i>	21:15, 33:30, 46:11
Cycad-insect relationships (KENNEDY, Paul)	27:22-25	<i>Cycas megacarpa</i>	33:29
Cycad-insect relationships. Destruction (KENNEDY, Paul)	29:20-22	<i>Cycas micholitzii</i>	21:14, 26:15, 44:31-38
Cycadologists: Rhodes University versus Pretoria University [Letter from Piet VORSTER]	42:27	<i>Cycas micholitzii</i> var. <i>micholitzii</i>	22:26, 40:14
Cycads (GEECH, Bev)	27:36-38	<i>Cycas micholitzii</i> var. <i>simplicipinna</i> [correctly <i>C. simplicipinna</i> ]	36:24
Cycads also flourish in cool areas: Abstract magazine clipping	50:37	<i>Cycas "multifrondis"</i>	44:34
Cycads and the law (OSBORNE, Roy)	4:18	<i>Cycas multipinnata</i>	40:10, 40:14, 44:36-37, 47:10, 47:11, 48:31
Cycads are tough	6:22, 8:35	<i>Cycas ophiolitica</i>	33:29
Cycads as bonsai [mainly <i>Cycas revoluta</i> ] (COLLINS, Brian)	3:24-25	<i>Cycas panzhihuaensis</i>	21:14, 47:front cover, 47:9, 47:11; 48:front cover, 48:17-19, 48:31
Cycads at Aswan, Egypt (GROBBELAAR, Nat)	34:30-31	<i>Cycas parvulus</i>	40:10-11
Cycads at the Bogor Botanic Gardens, Indonesia (FORSTER, Paul I.)	41:19-20	<i>Cycas pectinata</i>	21:14, 26:12, 26:13; 38:18, 19, 21, 22, 24, 26, 27, 29; 47:11; 48:19, 21, 22, 31
Cycads at the Huntington (MUSIAL, Kathy)	18:22-23	<i>Cycas pectinata</i> : On <i>Cycas pectinata</i> Hamilton from north-east India (PANT, Divya Darshan; SINGH, Rita; and CHAUHAN, Deventra Kumar)	38:17-30
Cycads at the Karoo Botanic Garden (OSBORNE, Roy)	38:15-17	<i>Cycas "Petford Blue"</i> : see <i>Cycas platyphylla</i>	33:29
Cycads at the Museum National d'Histoire Naturelle, Paris, France, the (DU PUY, B.; & DELANGE, Y.)	30: 10-12	<i>Cycas platyphylla</i>	33:29, 46:11
Cycads for Africa (OSBORNE, Roy)	41:33-34	<i>Cycas pruinosa</i>	16:21, 25:22
Cycads from leaves [ <i>Encephalartos woodii</i> ]	40:22-23	<i>Cycas revoluta</i>	2:24, 3:24, 25; 17:28, 21:19, 25:20, 25:26, 29:8, 30:11, 30:21, 31:20, 31:23, 33:26, 34:18, 34:31, 37:13, 37:16, 39:14, 40:front cover, 40:15, 40:20, 41:front cover, 41:5-15, 41:6-14, 43:36, 45:23, 47:11, 48:31, 48:23, 48:33, 49:14, 49:40
Cycads from seed [ <i>Encephalartos paucidentatus</i> ]	7:21	<i>Cycas revoluta</i> in Walt Disney World [Letter from Kobus HUNTER]	41:35-36
Cycads from seed [growth rate of <i>Encephalartos natalensis</i> ]	11:22	<i>Cycas revoluta</i> , comments on (VORSTER, Piet)	42:25-26
Cycads from seed [ <i>Encephalartos transvenosus</i> ]	8:33	<i>Cycas revoluta</i> : Artificial hybrids involving <i>Cycas revoluta</i> [Letter from Anon.]	46:28
Cycads from seed: <i>Encephalartos transvenosus</i> for first time coning at age of 12 years	10:25	<i>Cycas revoluta</i> : how cold hardy? [Letter from Piet VORSTER]	48:34
Cycads grown from leaves?	6:12	<i>Cycas revoluta</i> : not entirely cold-hardy [Letter from George CAROLL]	45:22-23
Cycads in China (TURNER, Ian)	21:11-14	<i>Cycas revoluta</i> : Variegated forms of (TOMIYAMA, Hajime)	48:32-33
<i>Cycads in China</i> by Faxian Wang, Huibo Liang, Tanqing Chen, & Dingyue Wang [book reviewed by Piet VORSTER]	47:29-32		
Cycads in containers (VORSTER, Piet)	49:31-35		
Cycads in containers in Calcutta (DHAR, Shri)	50:31-32		
Cycads in Dublin: the collection in the National Botanic Gardens, Glasnevin			

<i>Cycas rumphii</i> .....	39:13, 39:22--23, 40:8, 42:20, 49:15, 16, 50:32
<i>Cycas rumphii</i> complex (Marianas Islands) .....	36:25
<i>Cycas rumphii</i> forma <i>seemannii</i> [correctly <i>C. seemannii</i> ] .....	17:14, 36:26
<i>Cycas rumphii</i> forma <i>seemannii</i> : Fiji's cycad (SMITH, Albert C.) ..	19:48--49
<i>Cycas rumphii</i> habitats plundered .....	28:23
<i>Cycas rumphii</i> var. <i>bifida</i> .....	4:32, 33, 34
<i>Cycas rumphii</i> : Interesting experiment in cross pollination between cycads, an [ <i>Cycas siamensis</i> x <i>C. rumphii</i> ] (DHAR, Shri) .....	46:22--23
<i>Cycas rumphii</i> [correctly <i>C. seemannii</i> ] .....	25:21
<i>Cycas scratchleyana</i> .....	40:15
<i>Cycas seemannii</i> [as <i>C. rumphii</i> ] .....	25:21
<i>Cycas seemannii</i> [ <i>C. rumphii</i> forma <i>seemannii</i> ] .....	36:26
<i>Cycas seemannii</i> : Golden cycad of Fiji, the, and the correct name for the native Fijian cycad (HILL, Ken D.) .....	36:11--13
<i>Cycas segmentifida</i> .....	43:11--14, 43:12--13, 48:22
<i>Cycas segmentifida</i> , a new species from China (WANG, Ding-yue; & DENG, Cao-yi) .....	43:11--14
<i>Cycas segmentifida</i> : Comments on <i>Cycas siamensis</i> and <i>Cycas segmentifida</i> [Letter from Ken HILL] .....	45:22
<i>Cycas siamensis</i> .....	43:4--10, 11
<i>Cycas siamensis</i> : "Flatfoot" <i>Cycas</i> (SCHLEGEL, Helmut) .....	37:27
<i>Cycas siamensis</i> : Comments on <i>Cycas siamensis</i> and <i>Cycas segmentifida</i> [Letter from Ken HILL] .....	45:22
<i>Cycas siamensis</i> : Elephant's foot cycad, the [ <i>Cycas siamensis</i> ] (GROBBELAAR, Nat) .....	35:23
<i>Cycas siamensis</i> : Interesting experiment in cross pollination between cycads, an [ <i>Cycas siamensis</i> x <i>C. rumphii</i> ] (DHAR, Shri) .....	46:22--23
<i>Cycas siamensis</i> : new leaves brown and twisted [Letter from Shri DHAR] .....	49:30--31
<i>Cycas silvestris</i> .....	33:29
<i>Cycas silvestris</i> does not have blue foliage! (FORSTER, P.I.) .....	44:3
<i>Cycas silvestris</i> ? [Letter from Helmut SCHLEGEL] .....	40:24--25
<i>Cycas simplicipinna</i> (as <i>C. micholitzii</i> var. <i>simplicipinna</i> ) .....	36:24
<i>Cycas simplicipinna</i> .....	40:13
<i>Cycas szechuanensis</i> .....	41:16
<i>Cycas taitungensis</i> - a new name for the widely known cycad species endemic to Taiwan (GROBBELAAR, Nat) .....	39:20
<i>Cycas taitungensis</i> .....	20:36--38 (as <i>C. taiwaniana</i> ), 26:19, 41:16, 48:24
<i>Cycas taiwaniana</i> : see <i>Cycas taitungensis</i> .....	20:36--38, 26:19
<i>Cycas thouarsii</i> .....	4:4, 6:front cover, 6:3--10, 6:4--5, 6:7--10, 6:34, 13:40, 14:22, 22:23, 34:19, 40:21, 43:17, 49:32
<i>Cycas thouarsii</i> : Giant <i>Cycas thouarsii</i> (VORSTER, Piet) .....	37:30
<i>Cycas thouarsii</i> : The Gondwanan <i>Cycas</i> (HENDRICKS, John) .....	10:24--25
<i>Cycas wadei</i> : seed morphology (OSBORNE, Roy) .....	32:19
<i>Cycas</i> : An introduction to the genus <i>Cycas</i> in Australia [booklet by Len Butt] ..	23:17
<i>Cycas and Cycadales</i> by D.D. Pant, D.D [revision of] (OSBORNE, Roy) ..	35:25
<i>Cycas and the Cycadales</i> (D.D. Pant), reviewed by Roy OSBORNE ..	7:19
<i>Cycas</i> : Branched leaflets in <i>Cycas</i> (TANG, William) .....	40:13--16
<i>Cycas</i> : Butt, L., <i>An introduction to the genus Cycas in Australia</i> [booklet] ..	28:21
<i>Cycas</i> , Chinese: Encounters with Chinese cycads (VORSTER, Piet) ..	48:15--24
<i>Cycas</i> : Cycads in China (TURNER, Ian) .....	21:11--14
<i>Cycas</i> : Cycads of Asia (PANT, Divya Darshan) .....	26:8--15
<i>Cycas</i> : Floating seed .....	17:24
<i>Cycas</i> pollination (WALKLEY, Stan) .....	31:22
<i>Cycas</i> , "Shimmering" .....	5:33
<i>Cycas</i> sp. (Thailand -- Chiang Mai) .....	36:23
<i>Cycas</i> taxonomy: Major advances in: review of a recent paper by Ken Hill (OSBORNE, Roy) .....	33:29--30
Cydex - a comprehensive index to ENCEPHALARTOS journal, brief description of .....	50:26
Cynthia Giddy on S.A.B.C. .....	6:13
Dalzell, Chris .....	33:31, 43:41
DALZELL, Christopher G.M.: <i>Encephalartos woodii</i> returns to Zululand ..	33:31
DALZELL, Christopher: see OSBORNE, Roy; & DALZELL, Christopher .....	45:16--17
DBG [Durban Botanic Gardens] sales day success [auction of plants] (OSBORNE, Roy) .....	35:22
De Bruyn, Thys: In memoriam (HARRIS, Ruan) .....	44:45
DE LUCA, Paolo; MORETTI, Aldo; and BALDUZZI, Alberto: Twenty five years of field studies on cycads at the Botanical Garden of Naples, Italy .....	42:11--18
De Luca, Paolo .....	10:4, 5, 6
De Villiers, Div .....	44:15, 16
Debruyne, Marion .....	5:24
DeBRUYNE, Marion: <i>Zamia</i> surprise [abnormal female cone] .....	11:16
Decorative use of <i>E[ncephalartos] lanatus</i> .....	17:25
Deficiency: Manganese deficiency in <i>Cycas revoluta</i> [Letter from Willie TANG] .....	43:35
Deficiency: Yellow leaf phenomenon, the (GROBBELAAR, Nat) ..	39:19--20
Deficiency: Yellow leaves in cycad seedlings (GROBBELAAR, Nat) ..	36:33--34, 37:15--16 (comment by Piet VORSTER)
Deficiency: Yellow leaves in cycad seedlings [Letter from R. SCHUTTE] .....	35:38, 36:33, 36:33--34
Deficiency: Yellow leaves on cycads (VORSTER, Piet) .....	37:15--16
Dehgan, Bijan: various publications reviewed by Roy OSBORNE) .....	14:29
DELANGE, Y.: see DU PUY, B.; & DELANGE, Y. ....	30:10--12
DENG, Cao-yi: see WANG, Ding-yue; & DENG, Cao-yi ..	43:11--14, 43:14--16
DHAR, Shri: An interesting experiment in cross pollination between cycads [ <i>Cycas</i> <i>siamensis</i> x <i>C. rumphii</i> ] .....	46:22--23
DHAR, Shri: Cycads in containers in Calcutta ..	50:31--32
DHAR, Shri: Letter: Cross pollination successful [hybrid between <i>Cycas siamensis</i> and <i>C. rumphii</i> ] .....	48:34
DHAR, Shri: Letter: <i>Cycas siamensis</i> : new leaves brown and twisted ..	49:30--31
DHAR, Shri: Letter: Maturation of cycad seeds .....	49:28--29
Die kandidate [vir Uitvoerende Komitee] .....	4:23--24
<i>Dioon califanoi</i> .....	42:12
<i>Dioon caputoi</i> .....	42:13
<i>Dioon edule</i> .....	18:13, 18:29; 20:33, 34; 25:18, 26:18, 26:19, 30:15, 30:18, 31:19, 38:front cover, 44:21
<i>Dioon edule</i> var. <i>edule</i> .....	42:14
<i>Dioon holmgrenii</i> .....	42:13
<i>Dioon mejiae</i> .....	37:13
<i>Dioon merolae</i> .....	42:13
<i>Dioon purpusii</i> .....	44:30
<i>Dioon spinulosum</i> .....	18:13, 30:18, 34:18, 42:12, 44:30, 50:front cover, 50:4--10, 11, 50:21--22--23
<i>Dioon tomasellii</i> var. <i>tomasellii</i> .....	18:15, 42:12
<i>Dioon</i> species .....	31:20
<i>Dioon</i> (unidentified) .....	19:19
<i>Diptychis geometrina</i> [cycad-associated moth] .....	40:16
Disappointing seedbanks [Letter from Michael LONG] .....	49:29
Disease: Cycad seed pathogens (BRUNNER, Julius) .....	22:18--20
Disease: <i>Cycas siamensis</i> : new leaves brown and twisted [Letter from Shri DHAR] .....	49:30--31
Dispersal, cycad seed .....	21:27
Dispersal: Seed displays in cycads (TANG, Willie) .....	14:30--33
Distribution of "ENCEPHALARTOS" (VORSTER, Piet.) .....	38:30
Distribution of <i>Encephalartos</i> in central Africa (OSBORNE, Roy) ..	20:22--23
Diversity: Preliminary assessment of cycad conservation and diversity in Queensland, Australia, a (FORSTER, Paul I.) .....	46:8--18
Doctorate for president [Roy Osborne] .....	17:14
Domestic growing of cycads from seed to houseplant size (SCHLEGEL, Helmut) .....	26:22--25
Dominican Republic <i>Zamia</i> and CITES (TANG, William) .....	46:18--21
Donaldson, John .....	23:10, 23:11, 23:16, 26:25, 31:28
DONALDSON, John: International Plant Conservation Congress ..	17:16--17
DONALDSON, John: Letter .....	13:45
DONALDSON, John: Letter: A caution against the control of Leopard Moths in natural populations of cycads .....	33:36
DONALDSON, John: Letter: The consequences of collecting cycad seed from wild populations .....	34:33--35
DONALDSON, John; and Nänni, Ingrid: A giant <i>Encephalartos cycadifolius</i> ..	89:18
Donasies ontvang .....	32:33--34, 36:43--44, 41:41--43, 45:24--25, 49:37--38
Donations received .....	32:33--34, 36:43--44, 41:41--43, 45:24--25, 49:37--38
"Double sex" in <i>Cycas revoluta</i> [bisexual plant] (TOMIYAMA, Hajime) ..	44:40--41
Doug's [Goode] book will be a collector's item .....	23:22
DOWE, John: Letter [conservation] .....	32:27
Draft policy: <i>Encephalartos</i> species in South Africa [legislation] ..	47:20--21
Du Preez, Eddie (Kloof): Visit to cycad nursery .....	9:13
Du Preez, Johan .....	37:28
DU PUY, B.; & DELANGE, Y.: The cycads at the Museum National d'Histoire Naturelle, Paris, France .....	30:10--12
Dublin: Cycads in Dublin: the collection in the National Botanic Gardens, Glasnevin (NELSON, E. Charles) .....	33:12--16
Durban Botanic Gardens .....	35:32
Durban Botanic Gardens - Cycad project nears completion (OSBORNE, Roy) .....	33:30--31

Durban Botanic Gardens: Booklet <i>The cycad collection of the Durban Botanic Gardens</i> by Roy Osborne [reviewed by Piet VORSTER] 35:37 (see also 36:42)	
Durban Botanic Gardens: Cycad collection of the Durban Botanic Gardens, the (OSBORNE, Roy) . . . . .	34:16-20
Durban Botanic Gardens: DBG [Durban Botanic Gardens] sales day success [auction of plants] (OSBORNE, Roy) . . . . .	35:22
Durban Botanic Gardens: [ <i>Encephalartos villosus</i> ] for sale . . . . .	30:19
Durban Botanic Gardens - new initiatives in cycad collection . . . . .	28:22
Durban Museum centenary [launching of Douglas Goode's cycad posters] . . . . .	13:39
Durban: Old Fort Garden, Durban . . . . .	35:31
Dyer and Verdoorn - life members . . . . .	1:14
Dyer, R.A. . . . .	1:14, 12:12-13, 13:24
Dyer, R.A. (VORSTER, Piet) . . . . .	12:12-15
East London Museum cycad collection, the (GUBB, Andrew; & VICE, Ashton) . . . . .	27:20-21
Eastern Cape cycads (MUNRO, Neil) . . . . .	19:45-47
Ecuador: see also Equador . . . . .	19-13-15, 20:24
Editor: Welcome to our new editor [Isabella Claassen] (GROBBELAAR, Nat) . . . . .	32:25
Editorial (MANTHE, Cyril) . Newsletter 1:1-2, Newsletter 2:2, Newsletter 3:2	
Egypt: Cycads at Aswan, Egypt (GROBBELAAR, Nat) . . . . .	34:30-31
Ehrhard, Louis . . . . .	35:30
<i>Elaeis guineensis</i> . . . . .	48:19
Election of Executive Committee: Result . . . . .	5:16
Electrophoresis: Elucidating evolutionary relationships among cycads: the application of electrophoresis (WALTERS, Terrence W.) . . . . .	28:9
Elephant's foot cycad, the [ <i>Cycas siamensis</i> ] (GROBBELAAR, Nat) . . . . .	35:23
Eloff, Kobus . . . . .	35:28
Elucidating evolutionary relationships among cycads: the application of electrophoresis (WALTERS, Terrence W.) . . . . .	28:9
Emblem . . . . .	29:27
Emblem for the Society (GROBBELAAR, Nat) . . . . .	27:16
Embryo: <i>Encephalartos</i> embryo's (GROBBELAAR, Nat) . . . . .	24:23
Emperor Moth: New moth menace? [ <i>Bunaea alcinoe</i> ] . . . . .	23:26
<i>Encephalartos aemulans</i> 28:front cover, 28:4-7, 28:4, 28:6, 28:8, 40:21, 49:21	
<i>Encephalartos altensteinii</i> Newsletter 2:10, 7:15, 13:front cover, 13:9-17, 17:29, 18:23, 19:19, 21:23, 23:27, 24:9, 25:18, 26:32-33, 33:33, 38:15, 39:13, 41:34, 42:21, 42:22, 44:22, 44:29, 44:39-40, 49:33	
<i>Encephalartos altensteinii</i> : a massive rape but possible recovery (VICE, Ashton) . . . . .	44:15-19
<i>Encephalartos altensteinii</i> - the oldest plant in the world? (BRUNNER, Julius) . . . . .	29:10
<i>Encephalartos altensteinii</i> , reaction of to natural disasters . . . . .	12:8
<i>Encephalartos altensteinii</i> : removal from the wild becomes a death sentence (VICE, Ashton) . . . . .	44:39-40
<i>Encephalartos aplanatus</i> . . . . .	46:4, 5, 6, 7, 8
<i>Encephalartos aplanatus</i> [Letter from Nat GROBBELAAR] . . . . .	46:28
<i>Encephalartos aplanatus</i> Vorster: the weevil perspective (OBERPRIELER, Rolf G.) . . . . .	8:10-12
<i>Encephalartos aplanatus</i> : Taxonomic ranking and <i>Encephalartos aplanatus</i> [Letter from Piet VORSTER] . . . . .	47:25
<i>Encephalartos "archeri" [kisambo]</i> . . . . .	18:16
<i>Encephalartos arenarius</i> . . . . .	11:front cover, 11:5-7, 34:32, 26:34
<i>Encephalartos barteri</i> . . . . .	14:front cover, 14:8-16, 14:9-16
<i>Encephalartos brevifoliolatus</i> . . . . .	47:4-7; 47:5, 6, 7 (map)
<i>Encephalartos bubalinus</i> . . . . .	38:13, 40:9, 43:18
<i>Encephalartos caffer</i> . . . . .	3:6-11, 3:7-11, 3:front cover, 37:26, 45:22
<i>Encephalartos caffer</i> : new locality [Letter from Cameron McMASTER] . . . . .	47:27
<i>Encephalartos caffer</i> , variation in (KEMP, Maans) . . . . .	32:18-19
<i>Encephalartos cerinus</i> . . . . .	19:10, 32:front cover, 32:4-7, 41:45,
<i>Encephalartos chimanimaniensis</i> . . . . .	13:39
<i>Encephalartos concinnus</i> . . . . .	18:15, 34:4-11, 34:4-8, 34:9
<i>Encephalartos concinnus</i> : Odour of male <i>Encephalartos concinnus</i> cones [Letter from Roy OSBORNE] . . . . .	43:35
<i>Encephalartos cone exudates</i> . . . . .	15:4
<i>Encephalartos cupidus</i> . . . . .	36:front cover, 36:5-10
<i>Encephalartos cycadifolius</i> Newsletter 3:5, 26:front cover, 26:3-7, 27:28-29, 37:13, 39:18	
<i>Encephalartos delucanus</i> . . . . .	44:9-12, 44:10-11
<i>Encephalartos dolomiticus</i> . . . . .	17:11, 30:front cover, 30:3-7
<i>Encephalartos dyerianus</i> 17:11, 24:front cover, 24:16-20, 24:17-20, 29:front cover, 29:3-6, 29:3 29:5, 29:7, 43:27, 45:21, 46:25	
<i>Encephalartos equatorialis</i> . . . . .	43:20, 43:21, 44:front cover, 44:4-9
<i>Encephalartos eugene-maraisii</i> . . . . .	28:26, 37:13
<i>Encephalartos eugene-maraisii</i> : distribution map . . . . .	17:10
<i>E.[ncephalartos] eugene-maraisii</i> uit veld gesteel (SCHOEMAN, Stef) . . . . .	18:41
[ <i>Encephalartos</i> ] <i>eugene-maraisii</i> [complex]: preview . . . . .	16:14
<i>Encephalartos eugene-maraisii</i> subsp. <i>eugene-maraisii</i> 17:5, 17:7, 17:9, 17:11, 17:12	
<i>Encephalartos eugene-maraisii</i> subsp. <i>middelburgensis</i> 17:front cover, 17:4, 17:6, 17:8	
<i>Encephalartos ferox</i> 9:front cover, 9:14-21, 14:3, 15:21, 18:23, 18:29, 26:28, 34:14, 40:21	
<i>Encephalartos ferox</i> : Apparent seed viability of <i>Encephalartos ferox</i> growing in sun and shade conditions in the wild, the (PHELON, Janet; VAN HENSBERGEN, Hubertus; and OSBORNE, Roy) . . . . .	34:11-14
<i>Encephalartos ferox</i> : Four-coned female <i>Encephalartos ferox</i> , the (NEL, Danie) . . . . .	35:25
<i>Encephalartos ferox</i> frats? [sade sonder sarcotesta] (Brief van M. RAUTENBACH) . . . . .	41:37
<i>Encephalartos ferox</i> [tweeslagtige keël] . . . . .	12:29
<i>Encephalartos friderici-guilielmii</i> 16:22, 18:front cover, 18:4, 5-7, 8, 9, 19:45-46, 21:18, 21:27, 23:26, 33:31, 37:13, 43:front cover, 44:30, 44:front cover	
<i>Encephalartos friderici-guilielmii</i> : Cycad propagation (FORRESTER, Len) 41:35	
<i>Encephalartos friderici-guilielmii</i> : seed for sale . . . . .	17:30
<i>Encephalartos ghellinckii</i> 2:26, 12:16-23, 12:17-23, 12:front cover, 16:18, 26:18, 31:28, 40:19	
<i>Encephalartos gratus</i> 18:16, 18:40, 24:26, 25:4-9, 25:4-5, 25:8-9, 27:11, 32:14, 40:21, 49:16	
<i>Encephalartos heenanii</i> . . . . .	18:30, 22:30, 40:4-7
<i>Encephalartos heenanii</i> : Hand-pollination of <i>Encephalartos heenanii</i> in the Songimvelo Game Reserve, Mphumalanga Province (STALMANS, M. J. C.) 23-24	
<i>Encephalartos hildebrandtii</i> 18:29, 22:6, 7, 8, 9-12, 32:14, 38:13, 39:11, 41:20 (see also 44:21 under <i>E. laurentianus</i> ), 41:27, 49:22	
<i>Encephalartos hildebrandtii</i> var. <i>dentatus</i> . . . . .	43:187
<i>Encephalartos hildebrandtii</i> (mistakenly identified as <i>E. villosus</i> ) . . . . .	50:31
<i>Encephalartos horridus</i> 7:front cover, 7:8-13, 7:9-13, 16:19, 17:30, 19:47, 27:21, 34:23, 38:15, 40:9, 44:22	
<i>Encephalartos horridus</i> x <i>E. longifolius</i> . . . . .	18:17, 38:31
<i>Encephalartos humilis</i> . . . . .	12:24, 21:27
<i>Encephalartos inopinus</i> 13:41, 14:22, 21:22-23, 27:32, 31:24, 31:front cover, 31:4-8, 33:33, 45:21	
<i>Encephalartos inopinus</i> : Some observations on <i>Encephalartos inopinus</i> (GROBBELAAR, Nat) . . . . .	35:25-26
<i>Encephalartos kisambo</i> . . . . .	39:4-7, 8
<i>Encephalartos kisambo</i> : new species from Kenya . . . . .	19:50
<i>Encephalartos laevifolius</i> 18:39, 19:front cover, 19:2-8, 21:24-25, 22:24-25, 28:16, 30:12, 4:20, 49:23	
<i>Encephalartos laevifolius</i> : Research [done by Kevin Zunckel] . . . . .	3:12
<i>Encephalartos</i> cf. <i>E. laevifolius</i> : The relocation of two rare cycad plants (GIDDY, Cynthia) . . . . .	27:17-19
<i>Encephalartos lanatus</i> 4:7 (koraalvormige wortels), 16:front cover, 16:3-9, 16:4-9, 16:20, 18:38, 23:31, 26:33, 34:front cover, 37:13	
<i>Encephalartos lanatus</i> : burning of, to induce leaf formation (CLAASSEN, Isabella) . . . . .	37:24-25, 38:32 (comment by Piet VORSTER)
<i>Encephalartos lanatus</i> : Burning of, to induce leaf formation (VORSTER, Piet) . . . . .	38:32
<i>Encephalartos lanatus</i> : decorative use of . . . . .	17:25
<i>Encephalartos latifrons</i> . . . . .	8:front cover, 8:8-15
<i>Encephalartos laurentianus</i> . . . . .	40:9, 44:21 (see also 41:20 as <i>E. hildebrandtii</i> )
<i>Encephalartos laurentianus</i> : Cycads in Europe [Malaga] . . . . .	14:21
<i>Encephalartos lebomboensis</i> 4:5 (wortels), 15:front cover, 15:6-15, 15:7-15, 17:29, 22:23	
<i>Encephalartos lebomboensis</i> (ROUWENHORST, Erik) . . . . .	48:25-27, 49:24
<i>Encephalartos lebomboensis</i> [correctly <i>E. senticosus</i> ] 23:19, 23:20, 23:28, 24:26, 31:24, 42:25	
<i>Encephalartos lebomboensis</i> [correctly <i>E. senticosus</i> ]: The cycad tragedy [ <i>Encephalartos senticosus</i> involved in road accident] (MERESMAN, Avis) 37:23	
<i>Encephalartos lebomboensis</i> : thefts . . . . .	14:23
<i>Encephalartos lehmannii</i> 4:front cover, 4:13-16, 10:6, 25:30, 32:22, 35:24, 37:10, 13; 38:16, 42:21	
<i>Encephalartos lehmannii</i> : green cones (VORSTER, Piet) . . . . .	36:33
<i>Encephalartos longifolius</i> Newsletter 3:6; 1:front cover, 6-13, 6, 7, 9, 10, 12, 17; 8:35, 10:8, 11:15, 14:24, 16:19, 27:21, 29:22, 32:22, 33:12, 34:26-27, 38:32	
<i>Encephalartos longifolius</i> x <i>E. horridus</i> . . . . .	37:21
<i>Encephalartos longifolius</i> : Hybrid <i>Encephalartos longifolius</i> or natural genetic	

diversity (SCHWELLNUS, Martin R.)	34:25--27	<i>Encephalartos whitelockii</i>	48:4--8, 9
<i>Encephalartos longifolius</i> : Notes on leaf variation in (CLAASSEN, Isabella)	37:19--21 (comment by Piet VORSTER)	<i>Encephalartos whitelockii</i> [as <i>Encephalartos</i> sp. "Lake George"]	43:19
<i>Encephalartos longifolius</i> : Variation in <i>Encephalartos longifolius</i> (VORSTER, Piet)	38:31--32	<i>Encephalartos woodii</i> 1:19 (theft), 2:20--22, 5:front cover, 5:4--10, 5:5, 5:6, 5:8--10, 7:14 (temperature increase in male cones), 7:14 (chromosome count), 7:15 (unusual cone), 16:23, 18:15, 21:32, 24:9, 26:27, 27:31, 27:34, 34:18, 40:22--23, 43:40--42	
<i>Encephalartos longifolius</i> - yet more variation (STRYDOM, Dawie)	37:17--18 (comment by Piet VORSTER)	<i>Encephalartos woodii</i> : far from home [in Longwood Gardens, Pennsylvania]	49:27
<i>Encephalartos macrostrobilus</i>	50:13--14--15--16--17	<i>Encephalartos woodii</i> : Potential propagation of <i>Encephalartos woodii</i> from excised leaves (OSBORNE, Roy; & DALZELL, Christopher)	45:16--17
<i>Encephalartos manikensis</i> 17:28, 26:29, 32:14, 38:front cover, 38:4--11, 49:16, 50:11-12		<i>Encephalartos woodii</i> returns to Zululand (DALZELL, Christopher G.M.)	33:31
<i>Encephalartos marunguensis</i>	9:22--23	<i>Encephalartos</i> sp. "Lake George" [correctly <i>Encephalartos whitelockii</i> ]	43:19
<i>Encephalartos middelburgensis</i> 18:33, 27:33, 32:17, 35:30, 37:front cover, 41:27, 41:33, 45:21, 50:20--21		<i>Encephalartos</i> species growing in Kenya and Tanzania (TURNER, Ian S.)	38:12--15
<i>Encephalartos middelburgensis</i> specimen declared a national monument (GROBBELAAR, Nat)	39:21	ENCEPHALARTOS: distribution of (VORSTER, Piet)	38:30
<i>Encephalartos middelburgensis</i> : unveiling of National Monument Council's plaque (GROBBELAAR, Nat)	41:32--33	<i>Encephalartos</i> embryo's (GROBBELAAR, Nat)	24:23
<i>Encephalartos msinganus</i>	41:45	<i>Encephalartos</i> in Perth (LANE, Alan)	14:3
<i>Encephalartos munchii</i>	35:4--8, 9	<i>Encephalartos</i> leaf waxes	29:9
<i>Encephalartos natalensis</i> 3:21 (type plant), 15:4, 17:27, 17:28, 17:29, 19:34, 19:54, 21:26, 24:15, 24:28, 26:38, 28:17, 37:13, 41:28, 49:20		<i>Encephalartos</i> : leaves on cones (CLAASSEN, Isabella)	32:22
<i>Encephalartos natalensis</i> [Brief van Erik ROUWENHORST]	47:27	<i>Encephalartos</i> plants in cultivation: unusual cone number (CLAASSEN, Isabella)	32:21--22
<i>Encephalartos natalensis</i> : growth rate	11:22	<i>Encephalartos</i> plants in cultivation: unusual cone number (CLAASSEN, Isabella)	34:31--32, 45:21--22
<i>Encephalartos natalensis</i> population under threat (OSBORNE, Roy)	28:17	Encounters with Chinese cycads [VORSTER, Piet]	48:15--24
[ <i>Encephalartos</i> ] <i>natalensis</i> as a potplant	27:12	<i>Endangered Wildlife</i> [magazine] - cycad article	26:31
<i>Encephalartos natalensis</i> : Verskillende vorme van	23:3--9, 23:3--6, 23:8--9	<i>Endangered Wildlife</i> [magazine] 23:25	
<i>Encephalartos ngoyanus</i>	34:32, 37:31	ENDT, Dick: A cycad experience in Ecuador	19:13--15
<i>Encephalartos nubimontanus</i>	45:front cover, 45:4--11	ENDT, Dick: <i>Zamia</i> in Ecuador	20:24
<i>Encephalartos paucidentatus</i> 27:front cover, 27:3-9, 27:4--8, 32:15, 37:14		Entomologist [Stephen Compton] joins Society	6:39
<i>Encephalartos paucidentatus</i> from seed	7:21	Entomologists' conference	19:10
<i>Encephalartos poggei</i>	35:14	Ecuador: see also Ecuador	
<i>Encephalartos princeps</i> 16:13, 16:26, 17:29, 24:3--7, 24:3, 24:7, 27:36, 38:16, 42:26		ESKOM: Cycads at Pinetown offices	23:25
<i>Encephalartos schmitzii</i>	9:23--23	<i>Eumaeus atala</i> (butterfly)	9:25
<i>Encephalartos sclavoi</i> 19:10, 37:4--8, 43:18		Europe: Cycads in Europe [ <i>Encephalartos laurentianus</i> in Malaga]	14:21
<i>Encephalartos sclavoi</i> : correct author citation and date of valid publication (CLAASSEN, Isabella)	37:9	Evidence of a sex change in <i>Encephalartos middelburgensis</i> (OSBORNE, Roy)	27:33
<i>Encephalartos</i> seeds [Letter from Mike MICHAELSEN]	42:27--28	Evidence of cycad poaching at Kaapsehoop (MUNRO, Neil)	21:24--25
<i>Encephalartos senticosus</i> [as <i>E. lebomboensis</i> ] 23:19, 23:20, 23:28, 24:26, 31:24, 42:25		Evolution: On the evolution of cycads (OSBORNE, Roy)	16:28--33
<i>Encephalartos senticosus</i> [as <i>E. lebomboensis</i> ]: The cycad tragedy [ <i>Encephalartos senticosus</i> involved in road accident] (MERESMAN, Avis)	37:23	Evolutionary patterns in cycads cone shape and size (TANG, Willie)	18:26--31
<i>Encephalartos septentrionalis</i> [Imatong Mountains]	43:20	Evolutionary relationships: Elucidating evolutionary relationships among cycads: the application of electrophoresis (WALTERS, Terrence W.)	28:9
<i>Encephalartos septentrionalis</i> [Moyo]	43:19	Ewanrigg Botanical Gardens of Zimbabwe, the (CHAKAVARIKA, Charles)	26:26--30
<i>Encephalartos tegulaneus</i>	38:12, 43:21	Ex press (press clippings) 5:30--31, 6:41--42, 7:24--25, 8:38, 9:28--29, 10:27, 11:24--26, 12:30--31, 13:31, 14:25, 15:30--31, 18:43--46, 19:11--12	
<i>Encephalartos transvenosus</i> 2:5, 3:22, 4:7 (koraalvormige wortels), 4:8 (koraalvormige wortels), 6:25, 16:13 (review of article), 20:front cover, 20:10--18, 20:10, 20:12--14, 20:17--18, 22:22, 24:21--23, 25:front cover, 27:21, 30:11, 35:26, 35:30, 37:13		Ex press: see also newspaper clippings and press clippings	
<i>Encephalartos transvenosus</i> : Coning and sex ratio of	18:37	<i>Excelsa</i> (journal) reviewed by Roy OSBORNE	6:17
<i>Encephalartos transvenosus</i> : "Fishtail" <i>Encephalartos transvenosus</i> (CLAASSEN, Isabella)	35:20--21, 36:32	<i>Excelsa</i>	8:25
<i>Encephalartos transvenosus</i> : "Fishtail: <i>Encephalartos transvenosus</i> (VORSTER, Piet)	38:32	Executive committee [nominations]	11:3
<i>Encephalartos transvenosus</i> (CLAASSEN, Isabella): Report on "Fishtail"	37:22, 38:32 (comment by Piet VORSTER)	Executive committee	12:3
<i>Encephalartos transvenosus</i> : growth over period of 14 years	10:9	Executive, new [call for nominations]	18:11
<i>Encephalartos transvenosus</i> (Growth rate)	10:25	Exhibition: "All about cycads": exhibition in Schönbrunn, Austria (BRUNNER, Julius)	34:23--25
<i>Encephalartos transvenosus</i> from seed	8:33	Exhibition: News from the Natal Regional Branch (MERESMAN, Avis)	43:33
<i>Encephalartos transvenosus</i> : Magic of the Cycad Forest [Modjadje] (MILNER, Frances)	19:21--22	Exhibition: PACSOA annual show and plant sale (OSBORNE, Roy)	46:26--27
<i>Encephalartos transvenosus</i> with porcupine damage	23:30	Exhibition: Wildlife Expo [Letter from Avis MERESMAN]	41:38--39
<i>Encephalartos trispinosus</i> Newsletter 3:6, 5:34 (insect-deformed leaf), 15:23, 18:34, 20:20--21, 33:front cover, 33:4--11, 12, 37:13, 44:31		Exhibition: Wildlife Expo '92: Natal Section exhibition (MERESMAN, Avis)	34:21
<i>Encephalartos trispinosus</i> [letter from Piet VORSTER]	35:37--38	<i>Exotica 91</i> [Exhibition]	27:13
<i>Encephalartos turneri</i>	15:4, 18:40	Exudates from <i>Encephalartos</i> cones	15:4
<i>Encephalartos umbeluziensis</i>	21:front cover, 21:3--9	Exudates from <i>Encephalartos</i> cones (Stephens, Daphne C.; and Stephen, Alistair M.) [reviewed by Roy OSBORNE]	13:22--24
<i>Encephalartos villosus</i> 10:front cover, 10:16--23, 10:17--23, 14:19, 19:44, 19:53, 23:19, 29:9, 29:25, 32:23, 35:15--17, 36:19, 43:30, 44:21, 46:7, 47:24, 49:20		Exudates: More on cycad cone gums	22:12
<i>Encephalartos villosus</i> : aantal vroulike keëls [brief van T.J.R. BOTHA]	35:38	Fabrini, Giuseppe	39:13
[ <i>Encephalartos</i> ] <i>villosus</i> for sale [Durban Botanic Gardens]	30:19	Fairchild Tropical Garden:	8:5
[ <i>Encephalartos</i> ] <i>villosus</i> survey at Krantzklouf, by Kevin Weerts	27:27	Fairchild Tropical Garden: Cycads recovering well at Fairchild Tropical Garden: FTG [50th] anniversary	14:20
<i>Encephalartos villosus</i> [mistaken identification of <i>E. hildebrandtii</i> ]	50:31	Fairchild Tropical Garden: Hurricane Andrew and Fairchild Tropical Garden (NORSTOG, Knut J.; and FAWCETT, Priscilla K.S.)	33:26--28
		Fairchild Tropical Garden (NORSTOG, Knut; and FAWCETT, Priscilla)	35:27
		Fairchild Tropical Garden: The evolution of a botanical garden collection: the cycads at Fairchild Tropical Garden (WALTERS, Terrence)	30:8--9
		Families: Cladistic diagram showing possible relationship between families and	

genera of Cycadales	10:7	Focus on <i>Encephalartos lanatus</i> (OSBORNE, Roy)	16:3-9
Family tree [ <i>Encephalartos transvenosus</i> over period of 14 years]	10:9	Focus on <i>Encephalartos latifrons</i> (KEMP, Maans)	8:8-15
Farewell to Neil Munro (GROBBELAAR, Nat)	31:3	Focus on <i>Encephalartos lebomboensis</i> (OSBORNE, Roy)	15:6-15
Fawcett, Priscilla	30:18	Focus on <i>Encephalartos lehmannii</i> (KEMP, Maans)	4:12-17
FAWCETT, Priscilla K.S.: see NORSTOG, Knut J.; and FAWCETT, Priscilla K.S.	19:38-42, 33:26-28	Focus on <i>Encephalartos longifolius</i> (KEMP, Maans)	1:6-13
FAWCETT, Priscilla: see NORSTOG, Knut; and FAWCETT, Priscilla	30:14-19	Focus on <i>Encephalartos manikensis</i> (OSBORNE, Roy)	38:4-11
Fawcett, Priscilla: see NORSTOG, Knut; and FAWCETT, Priscilla	35:27	Focus on <i>Encephalartos munchii</i> (OSBORNE, Roy)	35:4-9
Fawcett, Priscilla: posters	13:37	Focus on <i>Encephalartos ngoyanus</i> (GIDDY, Cynthia)	23:3-9
Feeding nitrogen to cycads (VORSTER, Piet; HUNTER, Kobus; and CONRADIE, Kobus)	45:19-20	Focus on <i>Encephalartos nubimontanus</i> (HURTER, Johan; and CLAASSEN, Isabella)	45:4-11
Feeding: Producing more seeds with a better fertilizer regime (BROOME, Tom)	44:25-26 (see also VORSTER, Piet; HUNTER, Kobus; and CONRADIE, Kobus in 45:19-20)	Focus on <i>Encephalartos paucidentatus</i> (OSBORNE, Roy)	27:3-9
Female sporophylls in different genera	16:29	Focus on <i>Encephalartos princeps</i> (KEMP, Maans)	24:3-7
Feral cycads (TANG, Willie)	39:10-12	Focus on <i>Encephalartos sclavoi</i> (SLABBERT, Riekie; and HURTER, Johan)	37:4-8
Field trip to Kawau Island, a (TOWERS, Brian)	Newsletter 2:4-5	Focus on <i>Encephalartos transvenosus</i> (OSBORNE, Roy)	20:10-18
Fiji: Golden cycad of Fiji, the, and the correct name for the native Fijian cycad (HILL, Ken D.)	36:11-13	Focus on <i>Encephalartos trispinosus</i> (KEMP, Maans)	33:4-12
Fiji's cycad	17:14	Focus on <i>Encephalartos umbeluziensis</i> (OSBORNE, Roy)	21:3-9
Fiji's cycad: <i>Cycas rumphii</i> forma <i>seemannii</i> (SMITH, Albert C.)	19:48-49	Focus on <i>Encephalartos villosus</i> (OSBORNE, Roy)	10:16-23
Financial report [1985] (NEL, W.D.)	5:20-21	Focus on <i>Encephalartos whitelockii</i> (HURTER, Johan; and CLAASSEN, Isabella)	48:4-9
Financial report [1986]	9:33-36	Focus on <i>Encephalartos woodii</i> (OSBORNE, Roy)	5:4-10
Financial state, 1989	22:4-5	Focus on <i>Macrozamia moorei</i> (OSBORNE, Roy)	49:4-9
Financial statement (VORSTER, L.M.D.)	34:36-38	Focus on <i>Microzamia calocoma</i> (OSBORNE, Roy; and SANTANA, Rafael Milanés)	42:4-11
Financial statement [for 1993] (VORSTER, L.M.D.)	38:35-36	Focus on <i>Stangeria eriopus</i> (VORSTER, Piet and Elsa)	2:8-17
Financial statement [for 1994] (KACHELHOFFER, N.J.)	44:46-47	Food for thought (TUVEL, David)	2:4
Financial Statement [1995] (KACHELHOFFER, N.J.)	47:14-15	For sale [seed of <i>Encephalartos friderici-guillielmi</i> ]	17:30
Finansiële staat (VORSTER, L.M.D.)	34:36-38	Formisano, Agostino	39:23
Finansiële verslag [1985] (NEL, W.D.)	5:20-21	Forrester, Len	19:45
Finansiële verslag [1986]	9:33-35	FORRESTER, Len: Cycad propagation [ <i>Encephalartos friderici-guillielmi</i> ]	41:35
Finansiële staat [1993] (VORSTER, L.M.D.)	38:35-36	FORSTER, P.I.: <i>Cycas silvestris</i> does not have blue foliage!	44:3
Finansiële staat [1994] (KACHELHOFFER, N.J.)	44:46-47	FORSTER, Paul I.: A preliminary assessment of cycad conservation and diversity in Queensland, Australia	46:8-18
Finansiële Staat [1995] (KACHELHOFFER, N.J.)	47:14-15	FORSTER, Paul I.: Cycads at the Bogor Botanic Gardens, Indonesia	41:19-20
Fioretti, Salvatore	39:23	FORSTER, Paul I.: <i>Lepidozamia hopei</i> (Zamiaceae), the world's tallest cycad	48:12-15
FISCHER, Bernard: Letter: Slide show and lecture on some south American cycads	41:36	FORSTER, Paul I.: What is the tallest species and individual of cycad? [ <i>Lepidozamia hopei</i> ?]	41:30
"Fishtail" <i>Encephalartos transvenosus</i> (CLAASSEN, Isabella)	35:20-21	FORSTER, Paul I.; and JONES, David L.: <i>Macrozamia lucida</i> (Zamiaceae) and its southern limit in New South Wales, Australia	43:23-25
"Fishtail": <i>Encephalartos transvenosus</i> (VORSTER, Piet)	38:32	FORSTER, Paul I.; JONES, David L.; and MACHIN, Peter J.: The conservation status of <i>Macrozamia plurinervis</i> (Zamiaceae)	44:12-15
"Fishtail": Report on "Fishtail" <i>Encephalartos transvenosus</i> (CLAASSEN, Isabella)	37:22	Fossil cycad stamps	21:19
"Flatfoot" <i>Cycas</i> ( <i>C. siamensis</i> ?) (SCHLEGEL, Helmut)	37:27	Fossil: <i>Bjuvia simplex</i>	16:32
Floating <i>Cycas</i> seed	17:24	Fossil: <i>Cycadeoidea</i>	16:32
Florence: Botanical garden of Florence, Italy, the [Giardino dei Semplici di Firenze] (STAINER, Ottorino)	44:29-31	Fossil: <i>Leptocycas gracilis</i>	16:32
Flower arrangement	18:36	Fossil: <i>Williamsonia gigas</i>	16:32
Focus on <i>Cycas revoluta</i> (OSBORNE, Roy; and TOMIYAMA, Hajime)	41:5-15	Fossil: <i>Williamsonia sewardiana</i>	16:32
Focus on <i>Cycas siamensis</i> (TANG, William; and YANG, Si-Lin)	43:4-11	Fossil: <i>Zamites fenconis</i>	16:30
Focus on <i>Cycas thourarii</i> (VORSTER, Piet, and VORSTER, Elsa)	6:3-10	Fossils	26:37
Focus on <i>Dioon spinulosum</i> (TANG, William)	50:4-10, 11	Fossils: "All about cycads": exhibition in Schönbrunn, Austria (BRUNNER, Julius)	34:23-25
Focus on <i>Encephalartos aemulans</i> (VORSTER, Piet)	28:4-8	Fossils: Pant's fossil paper	17:14
Focus on <i>Encephalartos aplanatus</i> (VORSTER, Piet)	46:4-8	Fossils: Royal cycads [fossil cycads] (ZEITNER, June Culp)	19:23-27
Focus on <i>Encephalartos arenarius</i> (KEMP, Maans)	11:4-7	Foster Botanic Gardens in Hawaii (MIYANO, Leland)	26:30-32
Focus on <i>Encephalartos barteri</i> (OSBORNE, Roy)	14:8-16	Four-coned female <i>Encephalartos ferox</i> , the (NEL, Danie)	35:25
Focus on <i>Encephalartos brevifoliolatus</i> (VORSTER, Piet)	47:4-5-7	Fourie, Giel	36:30, 37:28
Focus on <i>Encephalartos caffer</i> (KEMP, Maans)	3:6-11	Francis, Doris	35:30, 36:37
Focus on <i>Encephalartos cerinus</i> (GIDDY, Cynthia)	32:4-7	FREEMAN, Ian: Visit to Kaapschoop district Nelspruit	28:16
Focus on <i>Encephalartos concinnus</i> (OSBORNE, Roy)	34:4-11	Freitas: Beatriz Freitas' palm collection	Newsletter 1:3-4
Focus on <i>Encephalartos cupidus</i> (SLABBERT, Riekie; and HURTER, Johan)	36:5-10	From the author's mouth (quotation from L.G. Green, <i>These wonders to behold</i> , on <i>Encephalartos transvenosus</i> at Modjadje)	6:16, 7:17
Focus on <i>Encephalartos cycadifolius</i> (KEMP, Maans)	26:3-7	From the bookshelf 1:24 (R.A. Dyer, <i>The cycads of South Africa</i> ; S. Gilbert, <i>Cycads: status, trade, exploitation and protection, 1977-1982</i> ), 2:30 (C.J. Chamberlain, <i>The living cycads</i> ; B.P. Barkhuizen, <i>The cycad garden of UNISA</i> , reviewed by Roy OSBORNE), 3:28, 4:9 (L. Butt, <i>Cycads of Australia</i> , reviewed by Roy OSBORNE), 5:19 (Mary Gunn and L.E. Codd, <i>Botanical exploration of South Africa</i> , reviewed by Roy OSBORNE), 6:17, (journal <i>Excelsa</i> reviewed by Roy OSBORNE), 7:19 (D.D. Pant, <i>Cycas and the Cycadales</i> , reviewed by Roy OSBORNE), 14:29 (Various publications of Bijan Dehgan's reviewed by Roy OSBORNE), 17:23, 19:52	
Focus on <i>Encephalartos dolomiticus</i> (VORSTER, Piet)	30:3-7	From the chairman (OSBORNE, Roy)	2:4, 3:4-5, 4:10-11
Focus on <i>Encephalartos dyerianus</i> (VORSTER, Piet)	29:3-7	From the president (GROBBELAAR, Nat)	21:2, 22:2, 23:2, 26:2, 27:2, 28:3, 29:2, 30:2, 31:2, 32:3, 33:3, 34:3, 35:3, 36:3-4
Focus on <i>Encephalartos eugene-maraisii</i> (OSBORNE, Roy)	17:9-13		
Focus on <i>Encephalartos ferox</i> (OSBORNE, Roy)	9:14-21		
Focus on <i>Encephalartos friderici-guillielmi</i> (KEMP, Maans)	18:4-9		
Focus on <i>Encephalartos ghellinckii</i> (OSBORNE, Roy)	12:16-23		
Focus on <i>Encephalartos gratus</i> (OSBORNE, Roy)	25:4-9		
Focus on <i>Encephalartos heenanii</i> (HURTER, Johan)	40:4-7		
Focus on <i>Encephalartos hildebrandtii</i> (OSBORNE, Roy)	22:6-12		
Focus on <i>Encephalartos horridus</i> (KEMP, Maans)	7:8-13		
Focus on <i>Encephalartos inopinus</i> (OSBORNE, Roy)	31:4-8		
Focus on <i>Encephalartos kisambo</i> (HURTER, Johan)	39:4-8		
Focus on <i>Encephalartos laevifolius</i> (OSBORNE, Roy)	19:2-8		

From the president (OSBORNE, Roy) 5: 22--23, 6:14--15, 7:20--21, 8:20--21, 9:12--13, 10:26--27, 11: 18--19, 12:10--11, 13:34--35, 14:28--29, 15:20--21, 16:16--17, 17:2, 18:10, 19:9, 20:2	Gee en neem 2:23, 3:23, 4:25--26, 5: 12--13, 6:23, 7:26, 8:37, 9:30, 10:34, 11:23, 12:32, 13:46, 14:7, 15:18
From the president (ROBBERTSE, Hannes) 37:3, 38:3, 39:3, 40:3, 41:3--4, 42:3, 43:3, 44:3, 45:3, 46:3, 47:3, 48:3, 49:3, 50:3	GEECH, Bev: Cycads ..... 27:36--38
From the president (VORSTER, Piet) ..... 24:2, 25:2	Gekweekte broodbome ..... 6:12
FTG anniversary [50th anniversary of Fairchild Tropical Garden, Miami] 14:20	Geldenhuys, Sally: In memoriam ..... 21:28
Further reports of cycad sex changes [ <i>Cycas revoluta</i> , <i>Zamia vasquezii</i> ] (OSBORNE, Roy) ..... 40:20--21	Genera: Cladistic diagram showing possible relationship between families and genera of Cycadales ..... 10:7
Further research on coralloid roots ..... 17:22	General comments ..... Newsletter 1:8, Newsletter 2:2
Fused leaflets [Letter from Helmut SCHLEGEL] ..... 36:39	Gerber, Harry ..... 21:21, 23:24, 32:24
Fused/deformed leaflets in <i>Encephalartos inopinus</i> (SCHWELLNUS, Martin) ..... 33:33	GERBER, Harry: letter [collecting of seed in habitat] ..... 9:32
	Germination of seed [Letter by Piet VORSTER] ..... 22:26
	Germination: Caesarians for cycad seeds [assistance for emerging radicles] (GIDDY, Cynthia) ..... 14:18--19
	Germination: Notes on germinating seeds in European conditions (STAINER, Ottorino) ..... 25:14--15
	Germination: Unconventional placement of seed kernels for germination (GROBBELAAR, Nat) ..... 23:29
Gall midge damage ..... 16:13	Geslagsverhouding: Manlik/vroulik: getalle verskille ..... 6:11
Garden & Home [magazine] feature ..... 25:24	Getting sponsor to donate scarce cycad [Letter from M. NASSER] ..... 47:28
Garden, botanical: Bogor Botanic Garden ..... 44:20--21	Ghana: <i>Encephalartos barteri</i> [Focus on] (OSBORNE, Roy) ..... 14:8, 9--15
Garden, botanical: Botanical garden of Florence, Italy, the [Giardino dei Semplici di Firenze] (STAINER, Ottorino) ..... 44:29--31	Giant <i>Cycas thouarsii</i> (VORSTER, Piet) ..... 37:30
Garden, botanical: Botanic gardens of Java, the (MARTA, Fadjar) ..... 44:20--22	Giant <i>Encephalartos cycadifolius</i> , a (DONALDSON, John; and NÄNNI, Ingrid) ..... 39:18
Garden, botanical: Cibodas Botanic Garden, the ..... 44:21--22	Giardino dei Semplici di Firenze: see Botanical garden of Florence ..... 44:29--31
Garden, botanical: Cycad collection at the Botanical Garden of Amsterdam, the (HINTERDING, Maurice M.) ..... 42:18--23	Giddy, Cynthia 5:26, 13:6, 18:32, 23:14, 23:16, 25:22, 26:25, 31:10, 31:34, 31:35, 31:34, 31:35, 35:28
Garden, botanical: Cycad collection of the Durban Botanic Gardens, the (OSBORNE, Roy) ..... 34:16--20	GIDDY, Cynthia: Australian cycads - a worthy challenge ..... 31:12--17
Garden, botanical: Cycads at the Bogor Botanic Gardens, Indonesia (FORSTER, Paul I.) ..... 41:19--20	GIDDY, Cynthia: brief ..... 19:5
Garden, botanical: Cycads at the Karoo Botanic Garden (OSBORNE, Roy) ..... 38:15--17	GIDDY, Cynthia: Caesarians for cycad seeds [assistance for emerging radicles] ..... 14:18--19
Garden, botanical: Cycads in Dublin: the collection in the National Botanic Gardens, Glasnevin (NELSON, E. Charles) ..... 33:12--16	GIDDY, Cynthia: Changes to the Natal Conservation Ordinance ..... 38:37--40
Garden, botanical: Durban Botanic Gardens - Cycad project nears completion (OSBORNE, Roy) ..... 33:30--31	Giddy, Cynthia: comments on the Van Zyl Commission of Enquiry-press release ..... 26:17
Garden, botanical: Durban Botanic Gardens - new initiatives in cycad collection ..... 28:22	Giddy, Cynthia: "Conserva Award" (OSBORNE, Roy) ..... 41:34
Garden, botanical: Durban Botanic Gardens ..... 35:32	GIDDY, Cynthia: CYCAD '96 [congress] ..... 41:31
Garden, botanical: Foster Botanic Gardens in Hawaii (MIYANO, Leland) ..... 26:30--32	GIDDY, Cynthia: Focus on <i>Encephalartos cerinus</i> ..... 32:4--7
Garden, botanical: Hurricane Andrew and Fairchild Tropical Garden (NORSTOG, Knut J.; and FAWCETT, Priscilla K.S.) ..... 33:26--28	GIDDY, Cynthia: Focus on <i>Encephalartos ngoyanus</i> ..... 23:3--9
Garden, botanical: Kirstenbosch Botanical Garden ..... 35:33	Giddy, Cynthia: Giddy in Garden and Home ..... 10:29
Garden, botanical: Living plants section of the Museum National d'Histoire Naturelle, Paris, France, the (DU PUY, B.; & DELANGE, Y.) 30: 10--12	GIDDY, Cynthia: Impressions at a cycad auction ..... 15:21
Garden, botanical: Lowveld National Botanic Garden [Nelspruit] ..... 35:31, 36:10	GIDDY, Cynthia: Letter - Cycad in Rio Gardens ..... 2:28
Garden, botanical: Memories about the botanic garden of the Department of Botany, University of Pretoria (ROBBERTSE, Hannes) ..... 37:10--14	GIDDY, Cynthia: Letter: Comments on "From the president" [availability and price of seed and pollen] ..... 43:37--38
Garden, botanical: National Botanical Gardens, Pretoria ..... 35:29	GIDDY, Cynthia: Letter: <i>Macrozamia johnsonii</i> ..... 33:35
Garden, botanical: Nong Nooch Botanic Garden ..... 48:23	GIDDY, Cynthia: Letter: Plants inspected ..... 39:28
Garden, Botanical: Portici Botanical Garden, the (OSBORNE, Roy) ..... 40:8--9	GIDDY, Cynthia: Letter: South African Department of Environment and CITES regulations ..... 43:37
Garden, botanical: Purwodadi Botanic Garden, the ..... 44:21	Giddy, Cynthia: Natal Parks Board conservation award ..... 31:10--11
Garden, botanical: Saving a <i>Cycas</i> [repairing transport damage] (OSBORNE, Roy; and MORETTI, Aldo) ..... 39:22--23	GIDDY, Cynthia: Pollen exchange ..... 21:10
Garden, botanical: Schönbrunn ..... 29:11--13	GIDDY, Cynthia: Pollen exchange report 1990 ..... 27:14
Garden, botanical: Shenzhen Fairy Lake Botanical Garden, the (YANG, Si-Lin; WANG, Ding-Yue; and OSBORNE, Roy) ..... 41:15--17, 41:16	Giddy, Cynthia: Presentation of Conservation Award to Cynthia Giddy (MERESMAN, Avis) ..... 41:31--32
Garden, botanical: The cycad collection at the Naples Botanical Garden (OSBORNE, Roy) ..... 31:18--20	GIDDY, Cynthia: Recent advances in the cultivation of cycads ..... 24:10--15
Garden, botanical: The evolution of a botanical garden collection: the cycads at Fairchild Tropical Garden (WALTERS, Terrence) ..... 30:8--9	GIDDY, Cynthia: Report on the CITES plants committee meeting ..... 36:30--31
Garden, botanical: The Rome Botanical Garden (OSBORNE, Roy) ..... 39:12--14	GIDDY, Cynthia: Report on the CITES Plants Committee meeting, Zomba, Malawi, April 15--17th, 1991 ..... 27:10--12
Garden, botanical: Xishuangbanna Botanical Garden ..... 48:19	GIDDY, Cynthia: The international trade in cycads ..... 28:20
Garden: Atagawa Tropical & Alligator Garden, Japan (SHIMIZU, Hideo; and OSBORNE, Roy) ..... 41:21--23	GIDDY, Cynthia: The relocation of two rare cycad plants [ <i>Encephalartos</i> cf. <i>E. laevifolius</i> ] ..... 27:17--19
Garden: Cycads for Africa (OSBORNE, Roy) ..... 41:33--34	GIDDY, Cynthia: Trade in cycad seeds: CITES regulations ..... 31:32--33
Garden: New cycad garden under way (Department of Botany, University of Natal) ..... 12:6	Giddy, Cynthia: World honour for Cynthia Giddy (OSBORNE, Roy) 35:24 (see also 35:40)
Garden: Old Fort Garden, Durban ..... 35:31	Giddy: Cynthia Giddy on S.A.B.C. .... 6:13
Gardens: Cycads in Pretoria gardens (OSBORNE, Roy) ..... 15:24--25	Giddy in Garden and Home ..... 10:29
Garland, Ian ..... 33:31	Giese Cycad Nursery ..... 11:16, 19:53
Gaudio, Luciano ..... 40:20	GIESE, Don: letter ..... 15:29, 7:22
Gauteng: New regulations concerning cycads in the province of Gauteng (GROBBELAAR, Nat) ..... 46:27	Gilliland, H.B. .... 38:4
Gazania Nursery ..... 11:16	Giordano, Eduardo ..... 39:23
GEDDES, Robert: Palms for highveld conditions ..... Newsletter 2:6	Give and take 2:23, 3:23, 4:25--26, 5:12--13, 6:23, 7:26, 8:37, 9:30, 10:34, 11:23, 12:32, 13:46, 14:7, 15:18
	GLEN, Hugh: see HURTER, Johan; GLEN, Hugh; and CLAASSEN, Isabella ..... 44:4--9
	Golden cycad of Fiji, the, and the correct name for the native Fijian cycad (HILL, Ken D.) ..... 36:11--13
	GOLDSCHMIDT, R.P.; and SACKS, A.J.: Radiographic evaluation of cycad seed

.....	41:26--28	GROBBELAAR, Nat: New scientific reports	46:34--36, 47:31--33, 48:35--36, 49:35--36, 50:32--33
Gonzales, Héctor	42:12	GROBBELAAR, Nat: News from council	36:36
Goode, Douglas	21:21, 21:31, 23:11, 23:22--23	GROBBELAAR, Nat: News from our council	33:28--29
GOODE, Douglas: Cycad posters	12:5, 34:32, 49:30	GROBBELAAR, Nat: Nominations for Council [call for]	34:33
Goode, Douglas: Cycads of Africa	21:20, 21:21, 21:31, 23:22	GROBBELAAR, Nat: Obituary - Dr Amy Frances May Gordon Jacot-Guillarmod	32:25--26
Goode, Douglas: launching of Douglas Goode's cycad posters	13:39	GROBBELAAR, Nat: Photo competition	34:33
Goode, Douglas: New Goode poster (OSBORNE, Roy)	34:32	GROBBELAAR, Nat: Promotion for Osborne [to Associate Professor]	37:26
GORDON, Dave: letter	3:26	GROBBELAAR, Nat: Siamese twins amongst cycad cones	19:53
Goulding, Ken	23:26	GROBBELAAR, Nat: Some observations on <i>Encephalartos inopinus</i>	35:25--26
Green cones in <i>Encephalartos lehmannii</i> (VORSTER, Piet)	36:33	GROBBELAAR, Nat: Spininess of cycad pinnae	23:28
Gregory, Tim	23:13	GROBBELAAR, Nat: The China experience and CYCAD '96	47:12--13
GREGORY, Tim: see CHEMNICK, Jeff; and GREGORY, Tim		GROBBELAAR, Nat: The cycad coning cycle	45:20
Greguss [Pal], in memoriam	26:16	GROBBELAAR, Nat: The elephant's foot cycad [ <i>Cycas siamensis</i> ]	35:23
Grobbelaar, Hanneke	23:14	GROBBELAAR, Nat: The yellow leaf phenomenon	39:19--20
GROBBELAAR, Hanneke: Nuus oor die Transvaalse Streektak van die Vereniging	42:23--24, 43:31--32, 44:43--45, 45:18--19, 46:24--26, 47:18--20, 48:32, 49:23, 50:17--19, 20, 21	GROBBELAAR, Nat: To the rescue	27:16
GROBBELAAR, Hanneke: Transvaalse Streektak: program vir 1997	49:24--25	GROBBELAAR, Nat: Unconventional placement of seed kernels for germination	23:29
GROBBELAAR, Hanneke: Transvaalse Streektak: The Marble-Hall - Groblersdal excursion [Summary of "Die Marble-Hall - Groblersdal uitstappie"]	50:20--21	GROBBELAAR, Nat: Van die president	21:2, 22:2, 23:3, 26:2, 27:2, 28:2, 29:2, 30:2, 31:2, 32:3, 33:3, 34:3, 35:3, 36:3--4
GROBBELAAR, Hanneke: Transvaalse Streektak: Toekomstige aktiwiteite	50:17--18	GROBBELAAR, Nat: Weglating van sikadeë uit skoolleerplanne	18:42
GROBBELAAR, Hanneke: Transvaalse Streektak: Verslae oor onlangse aktiwiteite: Die Marble-Hall - Groblersdal uitstappie	50:20--21	GROBBELAAR, Nat: Welcome to our new editor [Isabella Claassen]	32:25
GROBBELAAR, Hanneke: Transvaalse Streektak: Verslae oor onlangse aktiwiteite: Dr Rolf Oberprieler se praatjie oor snuitkewers	50:18--20	GROBBELAAR, Nat: Yellow leaves in cycad seedlings (comment by Piet VORSTER)	36:33--34, 37:15--16
GROBBELAAR, N.; and VAN DER WESTHUIJZEN, I.: Stomatal densities on the leaves of some African cycads	41:17--19	GROBBELAAR, Nat; OSBORNE, Roy; & VORSTER, Piet: Letter [CITES regulations on trade in cycad seeds]	29:26
Grobbelaar, Nat	10:29, 23:14, 23:16, 23:24, 26:25, 30:22, 30:22, 35:28, 41:32, 47:9	Grobbelaar, Nathanaël	20:24
GROBBELAAR, Nat: Academic award for Osborne [Distinguished Teachers Award]	41:34	GROBBELAAR, Nathanaël: brief - Stomata (huidmondjies) van ons inheemse broodbome	2:28
GROBBELAAR, Nat: Activities in the American Cycad Society	39:17--18	GROBBELAAR, Nathanaël: Koraalvormige wortels	4:4--9
GROBBELAAR, Nat: Addisionele kommentaar oor "Broodbome floreer ook in kouer dele" (tydskrifuitknipsel)	50:27--28	Grobbelaar, Nat (junior)	34:31
GROBBELAAR, Nat: A more realistic conservation strategy for the South African cycads	32:15--18	GROBLER, M.: brief	1:21
GROBBELAAR, Nat: Bees and cycads	19:43--44	Groeipatrone van <i>Encephalartos manikensis</i> -blare (ROUWENHORST, Erik)	50:11--12
GROBBELAAR, Nat: "Blue" cycads	35:24	Grondwet	3:22
GROBBELAAR, Nat: Book review: <i>Cycads; their cultivation and propagation</i> by Guy Wrinkle	46:33	Grondwet: wysiging van	35:35, 36:4, 50:34
GROBBELAAR, Nat: Book review: <i>Proceedings of the Third International Conference on Cycad Biology</i> by P. Vorster	46:32--33	Grove, Andrew	32:9
GROBBELAAR, Nat: Comments on the magazine clipping "Cycads also flourish in cool areas" (summary)	50:28--29	GROVE, Andrew: see OSBORNE, Roy; and GROVE, Andrew	32:8--11
GROBBELAAR, Nat: CYCAD '96 [congress]	36:36	Grow man, grow ... (OSBORNE, R.)	5:28--29
GROBBELAAR, Nat: Cycads at Aswan, Egypt	34:30--31	Growing <i>Encephalartos</i> in a Miami-type climate (VORSTER, Piet)	16:18--25
GROBBELAAR, Nat: <i>Cycas taiungensis</i> - a new name for the widely known cycad species endemic to Taiwan	39:20	Growing palms in South Africa	Newsletter 2:7
GROBBELAAR, Nat: <i>Encephalartos middelburgensis</i> specimen declared a national monument	39:21	Growth patterns of <i>Encephalartos manikensis</i> leaves [Summary of "Groeipatrone van <i>Encephalartos manikensis</i> -blare" deur Erik Rouwenhorst]	50:12
GROBBELAAR, Nat: <i>Encephalartos middelburgensis</i> : unveiling of National Monument Council's plaque	41:32--33	Growth rate: <i>Encephalartos natalensis</i>	11:22
GROBBELAAR, Nat: Farewell to Neil Munro	31:3	Growth rate: <i>Encephalartos transvenosus</i>	10:25
GROBBELAAR, Nat: From the president	21:2, 22:2, 23:2, 26:2, 27:2, 28:3, 29:2, 31:2, 32:3, 33:3, 34:3, 35:3, 36:3--4, 30:2	Growth rate: <i>Encephalartos transvenosus</i> over period of 14 years	10:9
GROBBELAAR, Nat: Keep a record of your cycads	45:14--35	Growth rate: Study of the growth rate and coning cycle of cultivated cycad plants in Japan, a (SHIMIZU, Hideo)	41:23--26
GROBBELAAR, Nat: Kommentaar oor konsep beleid: <i>Encephalartos spesies</i> in Suid-Afrika	47:22--23	GRUNDLING, E.F.: brief	3:25
GROBBELAAR, Nat: Letter: Comments on Dr. Schlegel's letter [on parthenocarpy]	38:40	GUBB, Andrew; & VICE, Ashton: The East London Museum cycad collection	27:20--21
GROBBELAAR, Nat: Letter: Cycads: their corruptules, omnules and omnels	41:36--37	Gums: More on cycad cone gums	13:22-24, 22:12
GROBBELAAR, Nat: Letter: <i>Encephalartos aplanatus</i>	46:28	GUNN, Mary: In memoriam	22:14
GROBBELAAR, Nat: Letter: Trade in cycad seeds: CITES regulations	33:36--37	Gunn, Mary; & Codd, L.E.: <i>Botanical exploration of South Africa</i> (reviewed by Roy OSBORNE)	5:19
GROBBELAAR, Nat: Masting by cycads	24:21-22	Guy Wrinkle/Exotic Plants [nursery]	19:53
GROBBELAAR, Nat: Membership statistics	37:29	Hammer, Nancy: Wedding bells for Nancy	12:5
GROBBELAAR, Nat: Natal Nature Conservation Ordinance	39:21--22	<i>Handbook of cycad cultivation and landscaping</i> by William Tang [reviewed by Roy OSBORNE]	43:38
GROBBELAAR, Nat: Natalse Parkeraad reageer op president se versoek aangaande toestemming vir die uitvoer van broodboomsaad	36:35	Hand-pollination of <i>Encephalartos heenanii</i> in the Songimvelo Game Reserve, Mphumalanga Province (STALMANS, Marc)	44:23--24
GROBBELAAR, Nat: New council for the period Jan. 1994 - Dec. 1995	36:29--30	Harold Johnson Natuurreservaat, broodbome by (ROUWENHORST, Erik)	49:19--21
GROBBELAAR, Nat: New regulations concerning cycads in the province of Gauteng	46:27	Harold Johnson Nature Reserve [Letter from Piet VORSTER]	50:30
		Harris, Ruan	37:28
		HARRIS, Ruan: In memoriam: Mnr Thys de Bruyn	44:45
		HARRIS, Ruan: Transvaal regional news	37:28
		Hawaii: Foster Botanic Gardens in Hawaii (MIYANO, Leland)	26:30--32
		Hawaii: Note from the Director of the Honolulu Botanic Gardens, a (KRISTIANSEN, Michael S.)	27:33
		Heat production in cycad cones	7:14, 12:6, 14:23
		<i>Hedyscepe canterburyana</i>	Newsletter 2: front cover

Heenan collections: where are they now? .....	21:20
Heenan expeditions revisited, the (OSBORNE, Roy) .....	43:16-23
Heenan, David .....	43:18
HEENAN, Denis: letter .....	1:21, 18:40
Hendricks, John George .....	23:36
Hendricks, John: In memoriam .....	21:28
HENDRICKS, John: letter .....	5:33
HENDRICKS, John: see OSBORNE, Roy; & HENDRICKS, John .....	3:13-17
HENDRICKS, John: The Gondwanan <i>Cycas</i> .....	10:24-25
HENNING, N.G.C. en Lise: brief [Huldeblyk aan wyle Willie Pretorius van Tzaneen] .....	16:34
Herdruk van beskrywings van nuwe broodboomsoort in "ENCEPHALARTOS" [brief van H.C. KENNEDY] .....	33:37
Hibridisering: Nuwe idee mag help met bewaring [verhoed hibridisering] (ROUWENHORST, Erik) .....	49:17
Hill, Ken .....	48:22
HILL, Ken D.: The golden cycad of Fiji, and the correct name for the native Fijian cycad .....	36:11-13
HILL, Ken: Letter: Comments on <i>Cycas siamensis</i> and <i>Cycas segmentifida</i> .....	45:22
HINTERDING, Maurice M.: The cycad collection at the Botanical Garden of Amsterdam .....	42:18-23
Hints for beginners on growing cycads from seeds (NEL, Danie) .....	34:22
Holland: Cycad collection at the Botanical Garden of Amsterdam, the (HINTERDING, Maurice M.) .....	42:18-23
Hollow stems in <i>Encephalartos</i> (TANG, William) .....	44:42-43
HOLZMAN, Greg: Letter: New approach to cycad conservation .....	34:35
Honolulu Botanic Gardens: Note from the Director of the Honolulu Botanic Gardens, a (KRISTIANSEN, Michael S.) .....	27:33
Honorary life members [Knut Norstog and D.D. Pant] .....	16:33
Honorary membership [Roy Osborne] .....	23:20
Hoofbestuur [nominasies] .....	11:3
Hoofbestuur .....	12:3
Hoofbestuur, nuwe [uitnodiging vir nominasies] .....	18:11
HOOFT, Jan: <i>Zamia</i> from seed .....	22:16-17
Hopes fade for wild <i>Encephalartos woodii</i> (OSBORNE, Roy) .....	40:22-23
Hopes raised - then dashed - by <i>Encephalartos woodii</i> (unusual cone) ..	7:15
How old is that eyead? (COX, Graham) .....	21:16-17
HUBBUCH, Charles E.: Letter .....	31:30
Hughes, George .....	31:10
Huldeblyk aan wyle Willie Pretorius van Tzaneen .....	16:34
<i>Humilis</i> on the move [replanting <i>Encephalartos humilis</i> in nature] (ZUNCKEL, Kevin) .....	12:24
HUNTER, Kobus: Letter: <i>Cycas revoluta</i> in Walt Disney World .....	41:35-36
HUNTER, Kobus: see VORSTER, Piet; HUNTER, Kobus; and CONRADIE, Kobus .....	45:19-20
Huntington: Cycads at the Huntington (MUSIAL, Kathy) .....	18:22-23
Huntley, Brian: New Director for National Botanical Institute .....	21:20
Huntley, Mick: In memoriam .....	17:22
Hurricane Andrew (WALTERS, Terrence) .....	32:25
Hurricane Andrew and Fairchild Tropical Garden (NORSTOG, Knut J.; and FAWCETT, Priscilla K.S.) .....	33:26-28
Hurricane Andrew: Cycads recovering well at Fairchild Tropical Garden (NORSTOG, Knut; and FAWCETT, Priscilla) .....	35:27
HURTER, Johan: Focus on <i>Encephalartos heenanii</i> .....	40:4-7
HURTER, Johan: Focus on <i>Encephalartos kisambo</i> .....	39:4-8
HURTER, Johan: see SLABBERT, Riekie; and HURTER, Johan .....	36:5-10
HURTER, Johan: see SLABBERT, Riekie; and HURTER, Johan .....	37:4-8
HURTER, Johan; and CLAASSEN, Isabella: Focus on <i>Encephalartos nubimontanus</i> .....	45:4-11
HURTER, JOHAN; and CLAASSEN, Isabella: Focus on <i>Encephalartos whitelockii</i> .....	48:4-9
HURTER, Johan; GLEN, Hugh; and CLAASSEN, Isabella: Focus on <i>Encephalartos equatorialis</i> .....	44:4-9
HUYDECOPER, Joan .....	42:19
Hybrid <i>Encephalartos longifolius</i> or natural genetic diversity (SCHWELLNUS, Martin R.) .....	34:25-27
Hybrid: <i>Encephalartos horridus</i> x <i>E. longifolius</i> .....	38:31
Hybrid: <i>Encephalartos longifolius</i> x <i>E. horridus</i> .....	37:21
Hybrid: Hybrid <i>Encephalartos longifolius</i> or natural genetic diversity (SCHWELLNUS, Martin R.) .....	34:25-27
Hybridization in <i>Encephalartos</i> (VORSTER, Piet) .....	10:10-15
Hybridization: Cross pollination successful [hybrid between <i>Cycas siamensis</i> and <i>C. rumphii</i> ] [Letter from Shri DHAR] .....	48:34
Hybridization: Interesting experiment in cross pollination between cycads, an [ <i>Cycas siamensis</i> x <i>C. rumphii</i> ] (DHAR, Shri) .....	46:22-23
Hybridization: <i>Transvenosus-woodii</i> twins [hybrid between <i>Encephalartos transvenosus</i> and <i>E. woodii</i> ] .....	25:23
Hybridization: Variation in <i>Encephalartos longifolius</i> (VORSTER, Piet) .....	38:31-32
Hybrids: Artificial hybrids involving <i>Cycas revoluta</i> [Letter from Anon.] .....	46:28
Hybrids: Cycad hybrids [Letter from Piet VORSTER] .....	42:27
Hybrids: Letter [in defense of hybrids] by Piet VORSTER .....	13:45
Hybrids: Letter [in defense of hybrids] by Knut J. NORSTOG .....	13:44-45
Hydroponic growing: [Letter by Helmut SCHLEGEL] .....	14:34
I am a cycad [poem] (WILLIAMS, Charles A.) .....	3:25
Identification: Computer identification of cycads .....	28:21
Impressions at a cycad auction (GIDDY, Cynthia) .....	15:21
Income and expenditure statement for year ending 1991-12-31 (VORSTER, L.M.D.) .....	30:26-27
Increase in membership fees (ROBBERTSE, Hannes) .....	43:34
Index to the "Focus on ..." series .....	31:38, 38:33
Index to volumes 1-20 .....	20:4-9
Index to volumes 21-27 .....	28:27-29
India: map of cycad distribution .....	26:11
India: On <i>Cycas pectinata</i> Hamilton from north-east India (PANT, Divya Darshan; SINGH, Rita; and CHAUHAN, Deventra Kumar) .....	38:17-30
Indonesia: Cycads at the Bogor Botanic Gardens, Indonesia (FORSTER, Paul I.) .....	41:19-20
Initial observations of the reproductive behaviour and an insect pollination agent of <i>Bowenia serrulata</i> (W. Bull) Chamberlain (WILSON, Gary W.) .....	36:13-18, 37:15
(comment by Piet VORSTER)	
Injury: Stem injury in cycads: an experiment (TANG, William) .....	44:26-29
In memoriam: Craig Bowles .....	27:9
In memoriam: Bruce Bursey .....	31:24
In memoriam: Mnr Thys de Bruym (HARRIS, Ruan) .....	44:45
In memoriam: Sally Geldenhuys .....	21:28
In memoriam [Pal Greguss] .....	26:16
In Memoriam: Mary Gunn .....	22:14
In memoriam: John Hendricks .....	21:28
In memoriam: Mick Huntley .....	17:22
In memoriam: Gifford Phipson .....	25:17
In memoriam: Embden Pienaar .....	26:16
In memoriam: Sergio Sabato (NORSTOG, Knut) .....	27:35
In memoriam: Robert Tucker .....	32:26
In memoriam [Maurice Wood] .....	19:27
Inopinus enquiry [anamalous seed development in <i>Encephalartos inopinus</i> ] .....	13:41, 14:22
In search of an honorary accountant .....	31:29
In search of <i>Encephalartos delucanus</i> (TURNER, Ian) .....	44:9-12
In search of <i>Zamia wallisi</i> (TURNER, Ian) .....	11:20-21
Insect pollination .....	11:14
Insect pollination implications (COMPTON, Stephen) .....	12:9
Insect pollination of cycads (NORSTOG, Knut J.; and FAWCETT, Priscilla K.S.) .....	19:38-42
Insect pollination research (OSBORNE, Roy) .....	10:33
Insect pollination: Initial observations of the reproductive behaviour and an insect pollination agent of <i>Bowenia serrulata</i> (W. Bull) Chamberlain (WILSON, Gary W.) .....	36:13-18, 37:15
(comment by Piet VORSTER)	
Insect pollination: More insect-cycad work .....	23:21
Insect pollination: The role of wind in the pollination of <i>Bowenia</i> (VORSTER, Piet) .....	37:15
Insects [ <i>Atala</i> butterflies on <i>Zamia integrifolia</i> ] .....	37:32
Insects: Caution against the control of Leopard Moths in natural populations of cycads, a [Letter from John DONALDSON] .....	33:36
Insects: Cycad-associated geometrid moths in southern Africa (STAUDE, Hermann S.) .....	40:16-19
Insects: Cycad-insect interactions .....	24:29
Insects: Cycad-insect relationships (KENNEDY, Paul) .....	27:22-25
Insects: Cycad-insect relationships. Destruction (KENNEDY, Paul) .....	29:20-22
Insects: Cycad weevils: comments on articles by P.I. Forster and E. Rouwenhorst (OBERPRIELER, Rolf) .....	49:25-26
Insects: <i>Encephalartos aplanatus</i> Vorster: the weevil perspective (OBERPRIELER, Rolf G.) .....	48:10-12
Insects: Required: insects occurring on cycads (OBERPRIELER, Rolf G.) .....	27:26
Insects: The weevils associated with cycads - an overview [talk at meeting of the Transvaal Regional Branch] (OBERPRIELER, Rolf) .....	50:18-20
Insekte: <i>Antliarhinus</i> spp. en bestuwing (ROUWENHORST, Erik) .....	48:24-25
Interesting experiment in cross pollination between cycads, an [ <i>Cycas siamensis</i> x	

<i>C. rumphii</i> ] (DHAR, Shri) . . . . .	46:22-23
International Plant Conservation Congress (DONALDSON, John) . . . . .	17:16-17
International trade in cycads, the (GIDDY, Cynthia) . . . . .	28:20
<i>Introduction to the genus Cycas in Australia</i> , an (by L. Butt) [booklet] . . . . .	28:21
Italy: Botanical garden of Florence, Italy, the [Giardino dei Semplici di Firenze] (STAINER, Ottorino) . . . . .	44:29-31
Italy: Cone sculptures in southern Italy (OSBORNE, Roy) . . . . .	39:24 [Letter from Ottorino STAINER] . . . . .
Italy: News from Italy . . . . .	16:12
Italy: Portici Botanical Garden, the (OSBORNE, Roy) . . . . .	40:8, 9, 10
Italy: Saving a <i>Cycas</i> [repairing transport damage] (OSBORNE, Roy; and MORETTI, Aldo) . . . . .	39:22-23
Italy: The Rome Botanical Garden (OSBORNE, Roy) . . . . .	39:12-14
Italy: Twenty five years of field studies on cycads at the Botanical Garden of Naples, Italy (DE LUCA, Paolo; MORETTI, Aldo; and BALDUZZI, Alberto) . . . . .	42:11-18
Jacot-Guillarmod, Amy Frances May Gordon: obituary (GROBBELAAR, Nat) . . . . .	32:25-26
Jäger, A. . . . .	37:23
James Wylie Information Centre in the Durban Botanic Gardens . . . . .	18:35
<i>Janbechynea</i> [beetle] . . . . .	29:23
Japan: Atagawa Tropical & Alligator Garden, Japan (SHIMIZU, Hideo; and OSBORNE, Roy) . . . . .	41:21-23
Japan: map showing geographical distribution of <i>Cycas revoluta</i> . . . . .	41:6
Java: Botanic gardens of Java, the (MARTA, Fadjar) . . . . .	44:20-22
Java: The Bogor Botanic Garden . . . . .	44:20-21
Java: The Cibodas Botanic Garden . . . . .	44:21-22
Java: The Purwodadi Botanic Garden . . . . .	44:21
Jeyes fluid and gardening . . . . .	10:28
John Donaldson, Ph.D . . . . .	31:28
Joint [palm & cycad] society, Pro's and con's on the formation of [MANTHE, Cyril] . . . . .	Newsletter 1:7
Jones, David L.: <i>Cycads of the world</i> [review by Roy OSBORNE] . . . . .	35:36
JONES, David L.: see FORSTER, Paul I.; and JONES, David L. . . . .	43:23-25
JONES, David L.: see FORSTER, Paul I.; JONES, David L.; and MACHIN, Peter J. . . . .	44:12-15
FONES, Scott; and WYNANTS, Jeff: <i>Encephalartos macrostrobilus</i> (Zamiaceae), a new cycad species from northern Uganda . . . . .	50:13, 14, 15, 16, 17
<i>Jubaea spectabilis</i> . . . . .	Newsletter 2:4
<i>Jubaeopsis caffra</i> . . . . .	Newsletter 1:13-16, 13, 15, front cover
Kaapse broodbome bedreig . . . . .	2:29
Kaapsehoop project complete [Kevan Zunckel's research on <i>Encephalartos laevifolius</i> ] . . . . .	26:30
KACHELHOFFER, N.J.: Financial statement/Finansiële staat [1994] . . . . .	44:46-47
KACHELHOFFER, N.J.: Financial Statement/Finansiële staat [1995] . . . . .	47:14-15
Karoo Botanic Garden, cycads at the (OSBORNE, Roy) . . . . .	38:15-17
Kawau Island, a field trip to (TOWERS, Brian) . . . . .	Newsletter 2:4-5
Keëlrekord? [ <i>Encephalartos villosus</i> with 15 female cones] . . . . .	14:19
Keep a record of your cycads (GROBBELAAR, Nat) . . . . .	45:14-35
Kemp, Maans . . . . .	5:26, 13:4, 32:14
KEMP, Maans: A passing glance at central African cycads . . . . .	32:13-14
KEMP, Maans: Broodbome en die wet . . . . .	14:4-7, 15:19
KEMP, Maans: Cycads of the eastern Cape Province . . . . .	Newsletter 3:5
KEMP, Maans: Focus on <i>Encephalartos altensteinii</i> . . . . .	13:8-17
KEMP, Maans: Focus on <i>Encephalartos arenarius</i> . . . . .	11:4-7
KEMP, Maans: Focus on <i>Encephalartos caffer</i> . . . . .	3:6-11
KEMP, Maans: Focus on <i>Encephalartos cycadifolius</i> . . . . .	26:3-7
KEMP, Maans: Focus on <i>Encephalartos friderici-guilielmi</i> . . . . .	18:4-9
KEMP, Maans: Focus on <i>Encephalartos horridus</i> . . . . .	7:8-13
KEMP, Maans: Focus on <i>Encephalartos latifrons</i> . . . . .	8:8-15
KEMP, Maans: Focus on <i>Encephalartos lehmannii</i> . . . . .	4:12-17
KEMP, Maans: Focus on <i>Encephalartos longifolius</i> . . . . .	1:6-13
KEMP, Maans: Focus on <i>Encephalartos princeps</i> . . . . .	24:3-7
KEMP, Maans: Focus on <i>Encephalartos trispinosus</i> . . . . .	33:4-12
KEMP, Maans: Sex change in <i>Cycas revoluta</i> . . . . .	2:24-25
KEMP, Maans: The safest cycad in the country? [in Port Elizabeth's snake park] . . . . .	32:23
KEMP, Maans: Variation in <i>Encephalartos caffer</i> . . . . .	32:18-19
KEMP, Maans: Vreemde broodboomsiekte . . . . .	48:27-29
KENNEDY, H.C.: Brief: Herdruk van beskrywings van nuwe broodboomsoortein "ENCEPHALARTOS" . . . . .	33:37
KENNEDY, Paul: Cycad-insect relationships . . . . .	27:22-25
KENNEDY, Paul: Cycad-insect relationships. Destruction . . . . .	29:20-22
KENNEDY, Paul: Letter: Len Butt - credibility gap . . . . .	46:29-32
KENNEDY, Paul: <i>Macrozamia fawcettii</i> . . . . .	33:16, 18, 17
KENNEDY, Paul: <i>Macrozamia spiralis</i> . . . . .	29:18-19
KENNEDY, Paul: Visiting N.S.W. Macrozamas with Loran Whitelock . . . . .	6:18-22
Kenya: <i>Encephalartos hildebrandtii</i> [Focus on] (OSBORNE, Roy) . . . . .	2:6, 7, 8, 9-12
Kenya: <i>Encephalartos kisambo</i> [Focus on] (HURTER, Johan) . . . . .	39:4-7, 8
Kenya: <i>Encephalartos</i> species growing in Kenya and Tanzania (TURNER, Ian S.) . . . . .	38:12-15
Kevan Zunckel's research on <i>Encephalartos laevifolius</i> . . . . .	26:30
Kew cycad stamp . . . . .	23:25
Kew Gardens: Temperate House Kew Gardens London, the (MUNRO, Craig) . . . . .	24:8-9
Kew, a view on (PHILLIPS, Maxine) . . . . .	2:19
Kew: The Palm House and the cycad collection at the Royal Botanic Gardens, Kew (ANDREWS, Susyn) . . . . .	19:30-31.
Khayota, Beatrice . . . . .	27:12
KILLICK, D.J.B.; and OSBORNE, Roy: The National Herbarium . . . . .	16:26-27
King, Tony . . . . .	36:37
King's Park - Perth's pride (PATTERSON, Norm) . . . . .	16:10-11
Kipling, Jenny . . . . .	22:front cover, 22:1
KIPLING, Mike: Letter [root contraction] . . . . .	29:24
Kirstenbosch Botanical Garden . . . . .	35:33
Kistner, Hermann . . . . .	3:27, 21:23
KISTNER, Hermann: letter . . . . .	5:32
Kloppers, John en/and Maryna . . . . .	50:21
Kluge, Johan . . . . .	35:31
Knysna: Cycads for Africa (OSBORNE, Roy) . . . . .	41:33-34
Koerantuitknipsels . . . . .	32:32, 36:41, 37:32, 39:28, 40:28, 42:30, 43:43, 45:44, 47:33-34, 35, 48:38, 49:38-40, 50:38
Koerant- en tydskrifuitknipsels . . . . .	50:35-36-38
Komitee 1985 . . . . .	Newsletter 3:3
Komitee [1986] . . . . .	5:13
Kommentaar oor artikel "Broodbome floreer ook in kouer dele" (Tydskrifuitknipsel) [Brief van Erik ROUWENHORST] . . . . .	50:27
Kommentaar oor konsep beleid: <i>Encephalartos spesies</i> in Suid-Afrika (GROBBELAAR, Nat) . . . . .	47:22-23
Koraalvormige wortels (GROBBELAAR, Nathanaël) . . . . .	4:4-9
Korea: Cycads in Korea (BOWRING, Douglas) . . . . .	11:17
Korrespondensie . . . . .	19:52
Kort mededelings . . . . .	32:18-24
Kotzé, Nico . . . . .	33:32
Kouegehardheid: Plante nie altyd gehard nie [Brief van Erik ROUWENHORST] . . . . .	47:25-26
Kransberg dalk vanjaar al oopgestel vir stappers (VAN STADEN, Piet) . . . . .	28:26
Krantzkloof excursion . . . . .	21:23
Krantzkloof: <i>E[ncephalartos] villosus</i> survey at (done by Kevin Weerts) . . . . .	27:27
Krempin, Jack: <i>Palms &amp; cycads around the world</i> : review of book . . . . .	28:18, 28:19
KRISTIANSEN, Michael S.: A note from the Director of the Honolulu Botanic Gardens . . . . .	27:33
KROMHOUT, C.: brief . . . . .	15:29
KUUN, P.J.C.: Brief: Ruilhoekie . . . . .	48:34
Kwazulu cycad project . . . . .	6:12
Kweek van broodbome (OOSTHUYZEN, Koos) . . . . .	Newsletter 2:10-12
Kweek: Broodbome in potte [Brief van Izak J. VAN DEN BERG] . . . . .	48:34
Kwekerslys . . . . .	6:11
LAIRD, Murray: Letter . . . . .	31:30
LAKE, Julie: Cycad toxin research . . . . .	29:16
LAKE, Julie: The cycad conundrum [toxins] . . . . .	31:26-27
LAMBERT, Ann: Book review: Krempin's "Palms & cycads around the world" . . . . .	28:19
Landscaping: Cycad landscaping (MIYANO, Leland) . . . . .	19:16-17
LANDY, D.H.: Letter . . . . .	6:38-39
LANE, Alan: <i>Encephalartos</i> in Perth . . . . .	14:3
LAUGHLAND, Bryan: Australian cycads in habitat . . . . .	25:10-13
LAUGHLAND, Bryan: Letter . . . . .	25:24
Leaf production in <i>Dioon spinulosum</i> (TANG, William) . . . . .	50:21-23, 50:22-23
Leaf waxes . . . . .	17:14, 21:20, 29:9
Leaflets, branched, in <i>Cycas</i> (TANG, William) . . . . .	40:13-16
Leaves on cone [Letter from Colin PINKER] . . . . .	43:35
Leaves on cones . . . . .	11:16 ( <i>Zamia furfuracea</i> ), 12:4 ( <i>Encephalartos longifolius</i> and <i>E. transvenosus</i> ), 13:18-19, 20:20-21
Leaves on cones: Abnormal cones on <i>Zamia furfuracea</i> (TANG, William) . . . . .	41:29

Leaves on cones: Cone leaves	14:20, 20:20--21, 22:23, 26:36, 29:7, 29:25, 32:14, 32:22, 38:11
Leaves on cycad cones (ROBBERTSE, Hannes)	43:27--30
Leaves, yellow: Yellow leaves in cycad seedlings (GROBBELAAR, Nat)	36:33--34, 37:15--16 (comment by Piet VORSTER)
Leaves: Yellow leaves in cycad seedlings [Letter from R. SCHUTTE]	35:38, 36:33--34
Leaves: Unusual "lebombo" leaves	22:23
<i>Lebomboensis</i> thefts	14:23
Ledelys, Januarie 1996	45:27--43
Legislation Cycads and the law (OSBORNE, Roy)	4:18
Legislation: Changes to the Natal Conservation Ordinance (GIDDY, Cynthia)	38:37--40
Legislation: CITES regulations on trade in cycad seeds [Letter from Nat GROBBELAAR, Roy OSBORNE, & Piet VORSTER]	29:26
Legislation: Dominican Republic <i>Zamia</i> and CITES (TANG, William)	46:18--21
Legislation: Draft policy: <i>Encephalartos</i> species in South Africa	47:20--21, 47:22--23 (kommentaar deur Nat GROBBELAAR)
Legislation: <i>Encephalartos</i> seeds [Letter from Mike MICHAELSEN]	42:27--28
Legislation: A more realistic conservation strategy for the South African cycads (GROBBELAAR, Nat)	32:15--18
Legislation: Natal Nature Conservation Ordinance (GROBBELAAR, Nat)	39:21--22
Legislation: New conservation act	21:28
Legislation: New regulations concerning cycads in the province of Gauteng (GROBBELAAR, Nat)	46:27
Legislation: Regulations controlling trade in cycad seeds [Letter from Roy OSBORNE]	43:36--37
Legislation: Report on the CITES plants committee meeting (GIDDY, Cynthia)	36:30--31
Legislation: Seeds: export/import: Big Brother's infinite wisdom???? [Letter from Mike MICHAELSEN]	45:23
Legislation: South African Department of Environment and CITES regulations [Letter from Cynthia GIDDY]	43:37
Legislation: Total ban on distribution/export/sale of seed of endangered plants encourages illegal trade in those seeds [Letter from Keith THOMPSON]	41:37--38
Legislation: Trade in cycad seeds: CITES regulations (GIDDY, Cynthia)	31:32--33
Legislation: Trade in cycad seeds: CITES regulations [Letter from Nat GROBBELAAR]	33:36--36
Legislation: What is CITES and how does it work? (McGOUGH, Noel)	30:13
Len Butt - credibility gap [Letter from Paul KENNEDY]	46:29--32
Leopard moth	9:25, 22:22, 25:25
Leopard Moth damage	15:3
Leopard Moth: Antibodies to the rescue [ants collecting eggs of Leopard Moth] (OSBORNE, Roy)	34:31
Leopard Moth: New product [ <i>Cypermethrin EC</i> ] knocks Leopard Moth larvae (OSBORNE, Roy)	42:24
Leopard Moths: Caution against the control of Leopard Moths in natural populations of cycads, a [Letter from John DONALDSON]	33:36
Leopards [ <i>Leopard Moths</i> ] on the prowl	22:22
<i>Lepidozamia hopei</i>	18:20--21, 24:25, 41:20, 41:30, 48:14
<i>Lepidozamia hopei</i> (Zamiaceae), the world's tallest cycad (FORSTER, Paul I.)	48:12--15
<i>Lepidozamia peroffskyana</i>	16:11, 18:17, 18:19--20, 23:12, 31:15, 46:10
<i>Lepidozamia peroffskyana</i> : Cycad-insect relationships (KENNEDY, Paul)	27:22--25
<i>Leptocycas gracilis</i> (fossil)	16:32
Letter to the Editor	44:48
Letters	1:20--21, 2:28, 3:26--28, 4:11, 5:32--34, 6:37--39, 7:22--23, 8:34--35, 9:31, 10:32, 11:13, 12:28--29, 13:43--45, 14:34, 15:29, 16:34, 18:40--41, 21:29, 22:24--26, 25:24, 26:32--37, 29:24--26
Letters to the Editor	31:30--31, 33:34--37, 34:33--35, 35:37--39, 38:40--41, 39:25--26, 28; 40:24--25, 42:27--28, 43:34--38, 45:22--23, 46:28--32, 48:34, 49:28--31, 50:27--30
Letters to/from the Editor	32:27--29, 36:38--39, 41:35--39
Lewe en dood: reaction of <i>Encephalartos altensteinii</i> to natural disasters	12:8
Lewington, Bert [artist]	18:39
Life members (Dyer and Verdoorn)	1:14
Lillie Natuurreservaat: besoek aan	24:16--20
Lindblad, Peter	14:24
List of members, January 1996	45:27--43
List of members, April 1997	50:39--55
Literature, botanical [advertisement]	17:13
Living fossils in cultivation (WYMAN, Ken)	5:18--19, 6:35--36
<i>Livistona</i>	Newsletter 2:4
LONG, Michael: Letter: Disappointing seedbanks	49:29
Longivity of cycad pollen, the (OSBORNE, R.; ROBBERTSE, P.J., & CLAASSEN, M.I.)	28:10--13
Longwood Gardens: Cycads of Longwood Gardens, the (WINN, Thomas)	15:27--29
Lotusland	18:12--18
Low temperature: Cycad pollen survives ultra-low temperature	17:25
Lowveld National Botanic Garden [Nelspruit]	13:35, 15:3, 17:24, 35:31, 36:10
Mabena, Simon	41:32
MACHIN, Peter J.: see FORSTER, Paul I.; JONES, David L.; and MACHIN, Peter J.: The conservation status of <i>Macrozamia plurinervis</i> (Zamiaceae)	44:12--14, 15
<i>Macrozamia riedlei</i>	15:32
<i>Macrozamia communis</i>	8:36, 25:21, 35:10--14, 49:front cover
<i>Macrozamia cranei</i>	46:12
<i>Macrozamia diplomera</i>	12:25, 18:17, 25:11
<i>Macrozamia douglasii</i>	41:28
<i>Macrozamia fawcettii</i>	6:19, 6:21, 14:17, 31:17
<i>Macrozamia fawcettii</i> (KENNEDY, Paul)	33:16--18, 33:17
<i>Macrozamia flexuosa</i> (as <i>M. pauli-guilielmii</i> subsp. <i>flexuosa</i> )	31:17
<i>Macrozamia heteromera</i>	6:21, 12:25, 25:11, 31:17
<i>Macrozamia johnsonii</i> [Letter from Cynthia GIDDY]	33:35
<i>Macrozamia johnsonii</i> and <i>Cycas</i> in New South Wales [Letter from Piet VORSTER]	34:34
<i>Macrozamia lucida</i>	11:19, 43:23--25, 43:24, 46:12
<i>Macrozamia lucida</i> (Zamiaceae) and its southern limit in New South Wales, Australia (FORSTER, Paul I.; and JONES, David L.)	43:23--25
<i>Macrozamia lucida</i> : map of Australia showing geographical distribution	43:24
<i>Macrozamia macdonnellii</i>	16:15, 31:15, 44:31
<i>Macrozamia miquelii</i>	10:30--31
<i>Macrozamia moorei</i>	6:18, 6:21, 7:18, 16:10, 30:23, 46:12, 46:12, 49:4--9
<i>Macrozamia pauli-guilielmii</i> subsp. <i>plurinervis</i> : Visiting <i>Macrozamia pauli-guilielmii</i> subspecies <i>plurinervis</i> (PERNER, Joe)	19:28--29
<i>Macrozamia pauli-guilielmii</i>	1:20, 9:32--33, 14:17
<i>Macrozamia pauli-guilielmii</i> subsp. <i>flexuosa</i> : see <i>M. flexuosa</i>	31:17
<i>Macrozamia platyrachis</i>	14:17, 14:26--27, 25:12, 31:16
<i>Macrozamia plurinervis</i>	29:14, 44:12--15
<i>Macrozamia riedlei</i>	16:11, 25:22
<i>Macrozamia secunda</i>	13:25, 31:16
<i>Macrozamia spiralis</i>	13:25
<i>Macrozamia spiralis</i> (KENNEDY, Paul)	29:18--19
<i>Macrozamia stenomera</i>	6:20, 13:25, 25:12, 31:16
<i>Macrozamia viridis</i>	46:13
<i>Macrozamia</i> : Visiting N.S.W. <i>Macrozamia</i> s with Loran Whitelock (KENNEDY, Paul)	6:18--22
<i>Macrozamia</i> root [anatomical] studies [by David Webb]	13:36
<i>Macrozamia</i> s of Queensland	29:14
Magic of the Cycad Forest [Modjadje] (MILNER, Frances)	19:21--22
Magical use: The magical and medicinal usage of <i>Stangeria eriopus</i> in Natal (OSBORNE, Roy; and GROVE, Andrew)	32:8--11
Major advances in <i>Cycas</i> taxonomy: review of a recent paper by Ken Hill (OSBORNE, Roy)	33:29--30
Major BBC TV series on cycads	23:28
Malawi: <i>Encephalartos gratus</i> [Focus on] (OSBORNE, Roy)	25:4, 5, 6, 7, 8, 9
Male cone metabolism: more hot news	14:23
Male cycad cones. Structure and function (TANG, Willie)	20:25--28
Manganese deficiency in <i>Cycas revoluta</i> [Letter from Willie TANG]	43:35
Manlik/vroulik: getalleverskille	6:11
Mann, Brian	18:25
[MANTHE, Cyril]: Collections [Beatriz Freitas' collection]	Newsletter 1:3--4
[MANTHE, Cyril]: Cycad feature. Propagation	Newsletter 1:9--12
MANTHE, Cyril: Editorial	Newsletter 1:1--2
MANTHE, Cyril: Editorial	Newsletter 2:2
[MANTHE, Cyril]: General comments	Newsletter 1:8
[MANTHE, Cyril]: Palm feature. <i>Jubaeopsis caffra</i>	Newsletter 1:13--16
[MANTHE, Cyril]: Pro's and con's on the formation of a joint [palm & cycad] society	Newsletter 1:7
[MANTHE, Cyril]: The collector	Newsletter 1:5--6
[MANTHE, Cyril]: The purpose behind a newsletter	Newsletter 1:3
Map of Australia showing geographical distribution of <i>Macrozamia lucida</i>	43:24
Map of China showing Piet Vorster's travels	48:16

Map of Cuba showing distribution of <i>Microcycas calocoma</i> . . . . .	42:5	Microscopic space invaders (OSBORNE, Roy) . . . . .	42:26
Map of Japan showing geographical distribution of <i>Cycas revoluta</i> . . . . .	41:6	Microscopy . . . . .	26:18-19
Map of Mexico and northern Central America showing the distribution of <i>Dioon</i> in Mexico . . . . .	50:4	Middelburg Broodboomwandelpad-uitstap (SCHOEMAN, Stef) . . . . .	18:33
Map of south-east Asia showing distribution of <i>Cycas siamensis</i> . . . . .	43:4	Mikroskyfies stel plantdiewe aan die kaak [Koerantuitknipsel] . . . . .	50:38
Map showing geographical distribution of <i>Encephalartos brevifoliolatus</i> . . . . .	47:7	MILNER, Frances: The magic of the Cycad Forest [Modjadje] . . . . .	19:21-22
Map showing the approximate localities for <i>Encephalartos septentrionalis</i> and allied taxa in Uganda and Sudan . . . . .	50:17	MINNIE, Ollie: Pollenbank Natal members . . . . .	29:25
Marais, Eugene . . . . .	17:3	Miracle <i>E.[ncephalartos] natalensis</i> (WENTZEL, Bunny) . . . . .	19:54
Margate experiment: Margate's Trees of Heaven [ <i>Cocos nucifera</i> ] (WICHT, Hein) . . . . .	Newsletter 2:5	Miriam Rothschild's butterfly studies (COMPTON, Stephen) . . . . .	9:25
Marta, Fadjar . . . . .	44:22	Misdaad: see <i>crime</i> . . . . .	
MARTA, Fadjar: The botanic gardens of Java . . . . .	44:20-22	MIYANO, Leland: Cycad landscaping . . . . .	19:16-17
Marta, Yuen . . . . .	44:22	MIYANO, Leland: Foster Botanic Gardens in Hawaii . . . . .	26:30-32
Marthinson, William . . . . .	41:32	MIYANO, Leland: Letter . . . . .	1:21, 5:33
Marx, Frank . . . . .	5:25, 13:5	MIYANO, Leland: Some <i>Cycas</i> species with undulate leaflets . . . . .	36:22-27
<i>Mascarena verschaffeltii</i> . . . . .	Newsletter 2:7	Moçambique: <i>Encephalartos gratus</i> [Focus on] (OSBORNE, Roy) 4, 5, 6, 7, 8, 9	
Massive publicity drive for Cycad Society . . . . .	Newsletter 3:4	Moçambique: <i>Encephalartos manikensis</i> [Focus on] (OSBORNE, Roy) . . . . .	38:4-11
Masson's cycad ( <i>Encephalartos altensteinii</i> at Kew Gardens) . . . . .	24:9	Moçambique: <i>Encephalartos munchii</i> [Focus on] (OSBORNE, Roy) . . . . .	35:4-8, 9
Masting by cycads (GROBBELAAR, Nat) . . . . .	24:21-22	Modjadje . . . . .	6:16, 7:17
Mate choice in cycads (TANG, Willie) . . . . .	36:27-29	Modjadje outing . . . . .	5:29
Maths figures in your cycad collection (OSBORNE, Roy) . . . . .	Newsletter 3:7	Modjadje: Broodboomkoningin . . . . .	2:5-6
Maturation of cycad seeds [Letter from Shri DHAR] . . . . .	49:28-29	Modjadje: Magic of the Cycad Forest [Modjadje] (MILNER, Frances) . . . . .	19:21-22
Maturity in cycads (TANG, Willie) . . . . .	24:24-27	Mogote - the story of <i>Zamia cremonophila</i> (WRINKLE, Guy) . . . . .	39:9-10
Mauritius, Cycads on [ <i>Cycas thouarsii</i> ] . . . . .	14:22	Monteseel Cycad Reserve: Natal University Mountain Club to the rescue at Monteseel . . . . .	24:28
Mayor's dream comes true . . . . .	1:5	Montgomery <i>Microcycas calocoma</i> seeds (OSBORNE, Roy) . . . . .	43:31
McGough, Noel . . . . .	27:12	Monument, national: <i>Encephalartos middelburgensis</i> specimen declared a national monument (GROBBELAAR, Nat) . . . . .	39:21
McGOUGH, Noel: What is CITES and how does it work? . . . . .	30:13	Monument, national: <i>Encephalartos middelburgensis</i> : unveiling of National Monument Council's plaque (GROBBELAAR, Nat) . . . . .	41:32-33
McMASTER, Cameron: Letter: <i>Encephalartos caffer</i> : new locality . . . . .	47:27	Monuments, botanical historical (OSBORNE, Roy) . . . . .	3:20-22
Medicinal use: The magical and medicinal usage of <i>Stangeria eriopus</i> in Natal (OSBORNE, Roy; and GROVE, Andrew) . . . . .	32:8-11	Mora de Retana, Dora . . . . .	27:12
Mediterranean cone sculptures [Letter from Ottorino STAINER] . . . . .	43:34-35	More information on fertilizers (BROOME, Tom) . . . . .	47:17-18
Meerow, Alan . . . . .	47:8	More insect-cycad work . . . . .	23:21
Meet your new committee . . . . .	5:23-26	More on cycad cone gums . . . . .	22:12
Meet your new [1988/1989] committee . . . . .	13:3-7	More realistic conservation strategy for the South African cycads, a (GROBBELAAR, Nat) . . . . .	32:15-18
MEHRA, P.N.: Letter [on sex chromosomes] . . . . .	8:34-35	More thefts . . . . .	2:29
Members, list of, January 1996 . . . . .	45:27-43	Moretti, Aldo . . . . .	10:4, 5, 16:12, 23:10, 40:20
Membership: Increase in membership fees (ROBBERTSE, Hannes) . . . . .	43:34	Moretti, Aldo: Professor Moretti: promotion [to full professor] (OSBORNE, Roy) . . . . .	38:33
Membership statistics (GROBBELAAR, Nat) . . . . .	37:29	MORETTI, Aldo: see DE LUCA, Paolo; MORETTI, Aldo; and BALDUZZI, Alberto . . . . .	42:11-18
Memories about the botanic garden of the Department of Botany, University of Pretoria (ROBBERTSE, Hannes) . . . . .	37:10-14	MORETTI, Aldo: see OSBORNE, Roy; and MORETTI, Aldo . . . . .	39:22-23
MERESMAN, Avis: Letter: Wildlife Expo [Exhibition] . . . . .	41:38-39	Morphology: Variation in floristic characteristics of <i>Bowenia serrulata</i> (WILSON, Gary W.) . . . . .	45:12-13
MERESMAN, Avis: Natal Parks Board nursery, Queen Elizabeth Park, Pietermaritzburg . . . . .	44:41-42	Motel: <i>Zamia</i> Motel . . . . .	30:23
MERESMAN, Avis: News from Natal . . . . .	36:36	Moth: New moth menace? [Emperor Moth, <i>Bunaea alcinoë</i> ] . . . . .	23:26
MERESMAN, Avis: News from the Natal Regional Branch . . . . .	39:15-16, 43:33, 45:17-18, 47:18	Moths: Cycad-associated geometrid moths in southern Africa (STAUDE, Hermann S.) . . . . .	40:16-19
MERESMAN, Avis: Presentation of Conservation Award to Cynthia Giddy . . . . .	41:31-32	Moving experience, a . . . . .	6:34
MERESMAN, Avis: Presentation of the Conservation Award to Roy Osborne . . . . .	39:15-16	Mozambique: map of cycad localities . . . . .	38:5
MERESMAN, Avis: The cycad tragedy [ <i>Encephalartos senticosus</i> involved in road accident] . . . . .	37:23	Multiple cones in <i>Ceratozamia</i> [Letter from Tom BROOME] . . . . .	46:28
MERESMAN, Avis: Twin seeds and seedlings . . . . .	40:21	Multiple cones in <i>Cycas revoluta</i> . . . . .	30:11
MERESMAN, Avis: Wildlife Expo '92: Natal Section exhibition . . . . .	34:21	Multiple male cones in <i>Cycas</i> (TANG, Willie) . . . . .	36:34-35
MERESMAN, Avis; and NEL, Danie: Letter: Cycad Centre . . . . .	49:29-30	MÜNCH, Hazel: Raymond Charles Münch . . . . .	35:9-10
MERESMAN, Avis; and NEL, Danie: Letter: News flash from the Cycad Centre . . . . .	47:28	Münch, Raymond Charles (MÜNCH, Hazel) . . . . .	35:9-10
Mexican cycads - 1991 (NORSTOG, Knut; and FAWCETT, Priscilla) . . . . .	30:14-19	MUNRO, Craig: The cycad . . . . .	17:32
Mexico: Problems of endangered species conservation in Mexico: cycads an example (VOVIDES, Andrew P.) . . . . .	20:29-35	MUNRO, Craig: The Temperate House Kew Gardens London . . . . .	24:8-9
MICHAELSEN, Mike: Letter: Seeds: export/import: Big Brother's infinite wisdom????? . . . . .	45:23	Munro, Neil . . . . .	15:26, 17:1, 17:23, 19:47, 31:3
MICHAELSEN, Mike: Letter: <i>Encephalartos</i> seeds . . . . .	42:27-28	MUNRO, Neil: Eastern Cape cycads . . . . .	19:45-47
MICHAELSEN, Mike: Wild harvested seeds and their distribution . . . . .	50:24-26	MUNRO, Neil: Evidence of cycad poaching at Kaapschoop . . . . .	21:24-25
Microchipping . . . . .	33:32-33	MUNRO, Neil: Never discard a seemingly sick cycad . . . . .	21:22-23
Microchips show up plant thieves [Abstract of newspaper clipping "Mikroskyfies stel plantdiewe aan die kaak"] . . . . .	50:38	MUNRO, Neil: Similarity between <i>Welwitschia mirabilis</i> and <i>Encephalartos</i> . . . . .	19:51
<i>Microcycas calocoma</i> . . . . .	33:26, 42:4, 5-9, 10, 11	MUNRO, Neil: Skukuza Nursery . . . . .	26:20-21
<i>Microcycas calocoma</i> for sale . . . . .	8:24	MUSIAL, Kathy: Cycads at the Huntington . . . . .	18:22-23
<i>Microcycas calocoma</i> : Montgomery <i>Microcycas calocoma</i> seeds (OSBORNE, Roy) . . . . .	43:31	Mutants: Cycad mutants (OSBORNE, Roy) . . . . .	17:26-30
<i>Microcycas calocoma</i> : seed imported . . . . .	3:3	Myburgh, Susan . . . . .	37:28
<i>Microcycas</i> tragedy . . . . .	28:21	Nair, Jerald "J.J." . . . . .	18:34
		Nair, J.J.: Cycad toxicity M.Sc. . . . .	27:27
		Name change: <i>Cycas taitungensis</i> - a new name for the widely known cycad species endemic to Taiwan (GROBBELAAR, Nat) . . . . .	39:20
		NÄNNI, Ingrid: see DONALDSON, John; and NÄNNI, Ingrid . . . . .	39:18
		Naples Botanical Garden: Saving a <i>Cycas</i> [repairing transport damage] . . . . .	

(OSBORNE, Roy; and MORETTI, Aldo)	39:22-23	New committee [1986]	5:13
Naples: Portici Botanical Garden, the (OSBORNE, Roy)	40:8-9	New committee member [Stef Schoeman]	16:27
Naples: Twenty five years of field studies on cycads at the Botanical Garden of Naples, Italy (DE LUCA, Paolo; MORETTI, Aldo; and BALDUZZI, Alberto)	42:11-18	New conservation act	21:28
Nasionale komitee	1:3	New council for the period Jan. 1994 - Dec. 1995 (GROBBELAAR, Nat)	36:29-30
NASSER, M.: Letter: Getting sponsor to donate scarce cycad	47:28	New cycad (a) section of Society of the Indian Plant Taxonomists (SINGH, Rita)	19:32-33
Natal: Conservation of cycads in Natal (SCOTT-SHAW, Rob)	34:28-30	New cycad book (Goode, Douglas: <i>Cycads of Africa and Madagascar</i> )	5:17
Natal, news from (MERESMAN, Avis)	36:36	New cycad garden under way (Department of Botany, University of Natal)	12:6
Natal Nature Conservation Ordinance (GROBBELAAR, Nat)	39:21-22	New Director [Brian Huntley] for National Botanical Institute	21:20
Natal Nature Conservation Ordinance: Changes to the Natal Conservation Ordinance (GIDDY, Cynthia)	38:37-40	New <i>Encephalartos</i> species [ <i>E. turneri</i> ]	15:4
Natal Parks Board conservation award [to Cynthia Giddy]	31:10-11	New Goode poster (OSBORNE, Roy)	34:32
Natal Parks Board nursery, Queen Elizabeth Park, Pietermaritzburg (MERESMAN, Avis)	44:41-42	New interim regulations on certain proceedings regarding specially protected plants within the Gauteng Province [Summary of letter from J.K. BAKER]	50:29
Natal Regional Branch, news from the (MERESMAN, Avis)	39:15-16, 43:33, 45:17-18, 47:18	New Mexican <i>Ceratozamia</i> [ <i>C. euophyllidia</i> ]	6:12
Natal Regional Branch, news from the (OSBORNE, Roy)	37:29	New moth menace? [Emperor Moth, <i>Bunaea alcinoë</i> ]	23:26
Natal Section Krantzklouf excursion	21:23	New nature reserve [ <i>Starvation Creek Nature Reserve for Encephalartos laevifolius</i> ]	4:20
Natal Section news	23:24-25, 29:27, 31:24, 32:24, 34:33	New nerve poison from <i>Cycas circinalis</i>	12:8
Natal Section news: Cycad chemistry lecture	28:22	New palm and cycad book [ <i>Palms and cycads beyond the tropics</i> , by Keith Boyer]	23:17
Natal Section news - cycad "microchipping"	33:32-33	New pest threatens <i>Cycas</i> [scale insect <i>Aulacaspis yasumatsui</i> ] (TANG William)	49:14-17
Natal section news - ESKOM visit	23:25	New president [Nathanaël Grobbelaar]	20:24
Natal Section news - Giddy & Osborne on CYCAD '90	25:22	New product [ <i>Cypermethrin EC</i> ] knocks Leopard Moth larvae (OSBORNE, Roy)	42:24
Natal Section news: John Pate's visit	25:22	New regulations concerning cycads in the province of Gauteng (GROBBELAAR, Nat)	46:27
Natal Section news - Northern Natal extravaganza	28:22	New scientific reports	27:9, 28:19, 29:15, 30:19, 31:25, 32:29-30, 34:35, 35:39, 36:39-40, 37:30, 39:26-27, 40:25-26, 41:39-40, 45:26
Natal Section news - The Natal Wildlife Expo	24:29	New scientific reports (GROBBELAAR, Nat)	46:34-36, 47:31-33, 48:35-36, 49:35-36, 50:32-33
Natal Section news - Umgeni Valley excursion	26:38	New scientific reports (OSBORNE, Roy)	43:39-40, 44:48
Natal Section news [visits to gardens of Esther Simes and Danie Steyn]	25:23	New sex research initiative (OSBORNE, Roy)	37:27
Natal Section news [visits to gardens of Esther Simes and Danie Steyn]	25:23	New species of <i>Encephalartos</i> ( <i>E. macrostrobilus</i> ) (JONES, Scott; and WYNANTS, Jeff)	50:13-17, 50:13-14
Natal Section news - Wildlife Expo 1991	28:22	New species of <i>Encephalartos</i> ( <i>E. voiensis</i> , <i>E. sclavoi</i> )	8:24
Natal Section news: 1991 year end function	29:27	New species of <i>Zamia</i> from Amazonian Peru, a (WRINKLE, Guy) [suggested name <i>Zamia gentryi</i> , but probably not the same as <i>Zamia gentryi</i> described in 1997 (?) from Ecuador]	36:20-22
Natal Section: new committee	21:27	New tissue culture initiative (OSBORNE, Roy)	37:23
Natal University Mountain Club to the rescue at Monteseel	24:28	New <i>Zamia</i> species, a [ <i>Zamia standleyi</i> ]	23:21
Natalse Parkeraad reageer op president se versoek aangaande toestemming vir die uitvoer van broodboomsaad (GROBBELAAR, Nat)	36:35	News flash from the Cycad Centre [Letter from Avis MERESMAN and Danie NEL]	47:28
National Botanical Gardens, Pretoria	35:29	News from council (GROBBELAAR, Nat)	33:28-29, 36:36
National Botanical Institute: New Director [Brian Huntley] for	21:20	News from Italy	16:12
National committee	1:3	News from Natal (MERESMAN, Avis)	36:36
National Herbarium, the (KILLICK, D.J.B.; and OSBORNE, Roy)	16:26-27	News from S.A.A.B.	27:12
National monument: <i>Encephalartos middelburgensis</i> specimen declared a national monument (GROBBELAAR, Nat)	39:21	News from the Natal Regional Branch (MERESMAN, Avis)	39:15-16, 43:33, 45:17-18, 47:18
National monument: <i>Encephalartos middelburgensis</i> : unveiling of National Monument Council's plaque (GROBBELAAR, Nat)	41:32-33	News from the Natal Regional Branch (OSBORNE, Roy)	37:29
Natuurreservaat: Broodbome by Harold Johnson Natuurreservaat (ROUWENHORST, Erik)	49:19-21	Newsitem: T.W. Walters [appointed Executive Director of Montgomery Foundation]	41:30-31
Naudé, Kobus	37:28	Newspaper clippings	5:30-31, 6:41-42, 7: 24-25, 8:38, 9:28-29, 10:27, 11:24-26, 12:30-31, 13:24, 13:31, 14:25, 15:30-31, 16:25, 17:31, 18:43-46, 19:11-12, 19:42, 20:41-42, 21:30-34, 22:27-30, 23:29, 23:32-35, 24:30, 25:25-31, 26:25, 26:39-42, 27:41-46, 28:24-26, 29:28-30, 30:28-30, 31:34-37, 32:31-32, 33:38, 34:39-40, 35:40, 36:42, 37:31-32, 39:27-28, 40:26-27, 41:44-48, 42:29-32, 43:40-42, 45:44, 47:33-35, 48:37-38, 49:38-40
NAUDÉ, T.W.: see BOTHA, C.H.; NAUDÉ, T.W.; SWANN, G.E.; ASHTON, M.M.; and VAN DER WATEREN, J.F.	30:20-21	Newspaper clippings: see also <i>ex press</i> and <i>press clippings</i>	
NBI's cycad conservation plan (OSBORNE, Roy)	34:20-21	Newspaper/magazine clippings	36:42, 38:42-44, 50:35, 36, 37, 38
Ndam, Nouhou	27:12	Newton, Ken	49:5
Nel, Danie	5:25, 13:6, 23:24, 32:24, 33:38	Ngcobo, Josiah	32:9
NEL, Danie: Hints for beginners on growing cycads from seeds	34:22	Nice cycad congress	9:27
NEL, Danie: Saadbank 7:6, 8:21, 9:28, 10:32, 11:2, 12:36, 13:33, 15:19, 17:30, 18:47, 20:40		Nigeria: <i>Encephalartos barteri</i> [Focus on] (OSBORNE, Roy)	14:8, 9-15
NEL, Danie: see MERESMAN, Avis; and NEL, Danie	47:28, 49:29-30	Nitrogen: Feeding nitrogen to cycads (VORSTER, Piet; HUNTER, Kobus; and CONRADIE, Kobus)	45:19-20
NEL, Danie: Seedbank 7:6, 8:21, 9:28, 10:32, 11:2, 12:36, 13:33, 17:30, 18:47, 20:40, 23:31, 28:30		Nitrogen: Producing more seeds with a better fertilizer regime (BROOME, Tom)	44:25-26 (see also VORSTER, Piet; HUNTER, Kobus; and CONRADIE, Kobus in 45:19-20)
NEL, Danie: The four-coned female <i>Encephalartos ferox</i>	35:25	Nominations for Council [Call for] (GROBBELAAR, Nat.)	34:33
Nel, Danie: Trophy for Danie Nel [Conservation Award]	32:24	Nominations for Council [Call for] (ROBBERTSE, Hannes)	43:33-34
NEL, W.D.: Finansiële verslag [1985]	5:20-21	Nong Nooch Botanical Garden	48:23
NEL, W.D.: Financial report [1985]	5:20-21		
NELSON, E. Charles: Cycads in Dublin: the collection in the National Botanic Gardens, Glasnevin	33:12-16		
Nelspruit: Lowveld National Botanic Garden [Nelspruit]	13:35, 15:3, 17:24, 35:31, 36:10		
Neopolitan botanical conference	27:38		
Nerve poison from <i>Cycas circinalis</i>	12:8		
NESTOR: letter	1:20		
Netherlands, the: Cycad collection at the Botanical Garden of Amsterdam, the (HINTERDING, Maurice M.)	42:18-23		
Never discard a seemingly sick cycad (MUNRO, Neil)	21:22-23		
New African cycads [ <i>Encephalartos sclavoi</i> , <i>E. cerinus</i> ]	19:10		
New approach to cycad conservation [Letter from Greg HOLZMAN]	34:35		

Norstog videotape: cycad reproduction	26:31	Observations on root contraction of <i>Encephalartos cycadifolius</i> in long and short planting bags (SCHWELLNUS, Martin)	27:28-29
Norstog, Knut	16:33	Obtaining spermatozooids from cultivated cycads (SCHUCHMANN, Helga)	22:13-15
NORSTOG, Knut J.: C.J. Chamberlain and the ladies	43:25-26	Occasional parthenocarpy as a general rule in cycads [Letter from Helmut SCHLEGEL]	39:26
Norstog, Knut: Cycad book and video [video cassette accompanying his book <i>The biology of cycads</i> ]	26:31	Occasional parthenocarpy as a general rule in cycads? [Letter from Helmut SCHLEGEL] 38:40, 38:40 (comment by Nat GROBBELAAR), 38:41 (comments by Piet VORSTER)	31:25
NORSTOG, Knut J.: Cycad phenology	32:11-13	Odd coning in <i>Zamia</i>	31:24
NORSTOG, Knut: In memoriam: Sergio Sabato	27:35	Odd cycad growths	31:24
NORSTOG, Knut: Letter [conservation]	32:27	Odour of male <i>Encephalartos concinnus</i> cones [Letter from Roy OSBORNE]	43:35
NORSTOG, Knut J.: Letter [in defense of hybrids]	13:44-45	Office-bearers (1989)	17:34
NORSTOG, Knut J.: Recent work in cycad tissue culture	34:28	Old Fort Garden, Durban	35:31
NORSTOG, Knut J.; and FAWCETT, Priscilla K.S.: Hurricane Andrew and Fairchild Tropical Garden	33:26-28	Omnels: Cycads: their corruptules, omnules and omnels (Letter from Nat GROBBELAAR)	41:36-37
NORSTOG, Knut J.; and FAWCETT, Priscilla K.S.: Insect pollination of cycads	19:38-42	Omnules: Cycads: their corruptules, omnules and omnels (Letter from Nat GROBBELAAR)	41:36-37
NORSTOG, Knut; and FAWCETT, Priscilla: Cycads recovering well at Fairchild Tropical Garden	35:27	On <i>Cycas pectinata</i> Hamilton from north-east India (PANT, Divya Darshan; SINGH, Rita; and CHAUHAN, Deventra Kumar)	38:17-30
NORSTOG, Knut; and FAWCETT, Priscilla: Mexican cycads - 1991	30:14-19	On the evolution of cycads (OSBORNE, Roy)	16:28-33
<i>Nostoc</i> sp.	4:9	On the hot track [temperature increases in male cones]	25:24
Note from the Director of the Honolulu Botanic Gardens, a (KRISTIANSEN, Michael S.)	27:33	One man's poison (OSBORNE, Roy)	1:16-18
Note on the cycads in Yunnan, south-western China, a (YANG, Si-Lin; and YANG, Si-Yuan)	40:10-13	Ontkieming: CLAASSEN, M.I.: Brief [ontkieming van saad]	26:32
Notes on cold-hardiness [Letter from Ed BROWN]	50:29-30	Ontkiemingsprobleem	23:31
Notes on leaf variation in <i>Encephalartos longifolius</i> (CLAASSEN, Isabella)	37:19-21 (comment by Piet VORSTER)	Oorsese saadbestelling	8:25
Novel seed cleaning machine, a	23:27	Oosthuizen, Koos (see Oosthuyzen, Koos)	
Ntamvuna Reserve extension	1:18	Oosthuyzen, Koos	17:21, 24:17, 37:28
Nucellus, the: its position and function in the ovule of <i>Encephalartos</i> (STEYN, Elsie M.A.; and STRYDOM, Dawie J.F.: The)	35:14-18	Oosthuyzen, Koos: Patryshoek Nursery	35:29
Number of cones: <i>Encephalartos villosus</i> : aantal vroulike keëls [brief van T.J.R. BOTHA]	35:38	OOSTHUYZEN, Koos: Kweek van broodbome	Newsletter 2:10-12
Number of cones: Multiple male cones in <i>Cycas</i> (TANG, Willie)	36:34-35	Open day display	6:11
Nursery 8:23 [Sportweni Cycad Nursery], 10:31 [Wulveskop Estate Nursery], 12:9 [Kangwane Parks and Environmental Affairs Board Nursery], 13:35 [Lowlands Nursery], 14:27 [Sumatra Nursery], 15:22 [Transvaal Provincial Administration's nursery at Hartbeeshoek], 16:17 [Cycad Nursery - Henkie & Ita van der Walt], 19:53 [Guy Wrinkle/Exotic Plants, Giese Cycad Nursery], 20:40 [Henkie and Ita van der Walt's open ground farm], 24:14, 26:20-21 [Skukuza Nursery], 35:29 [Patryshoek Nursery]		Organogenesis: Root formation from callus (SCHLEGEL, Helmut)	15:22
Nursery list	6:11	Osborne, Roy 5:23, 10:8, 10:29, 13:3, 17:23, 21:21, 21:23, 23:16, 23:20, 26:25, 35:28, 35:32, 37:23, 39:16, 49:5	
Nursery: Natal Parks Board nursery, Queen Elizabeth Park, Pietermaritzburg (MERESMAN, Avis)	44:41-42	Osborne, Roy: Academic award for Osborne [Distinguished Teachers Award] (GROBBELAAR, Nat)	41:34
Nursery news	8:23, 11:16, 12:9, 18:47	Osborne (MERESMAN, Avis)	39:15-16
Nutrition: Feeding nitrogen to cycads (VORSTER, Piet; HUNTER, Kobus; and CONRADIE, Kobus)	45:19-20	Osborne, Roy: Promotion for Osborne [to Associate Professor] (GROBBELAAR, Nat)	37:26
Nutrition: Manganese deficiency in <i>Cycas revoluta</i> [Letter from Willie TANG]	43:35	OSBORNE, Roy: Antibodies to the rescue [ants collecting eggs of Leopard Moth]	34:31
Nutrition: More information on fertilizers (BROOME, Tom)	47:17-18	OSBORNE, Roy: A pipedream? [ <i>Encephalartos altensteinii</i> grown in pipes]	41:34
Nutrition: Producing more seeds with a better fertilizer regime (BROOME, Tom) 44:25-26 (see also VORSTER, Piet; HUNTER, Kobus; and CONRADIE, Kobus in 45:19-20)		OSBORNE, Roy: Artificial propagation project: results of a recent survey	32:23-24
Nutrition: Yellow leaf phenomenon, the (GROBBELAAR, Nat)	39:19-20	Osborne, Roy: attending Sixth International Congress of Plant Tissue and Cell Culture	7:14
Nuus oor die Transvaalse Streektak (GROBBELAAR, Hanneke) 45:18-19, 42:23-24, 43:31-32, 44:43-45, 46:24-26, 47:18-20, 48:32, 49:23, 50:17-19, 20, 21		OSBORNE, Roy: Book review: <i>Cycads of the world</i> by David L. Jones	35:36
Nuwe idee mag help met bewaring [verhoed hibridisering] (ROUWENHORST, Erik)	49:17	OSBORNE, Roy: Book review: <i>Handbook of cycad cultivation and landscaping</i> by William Tang	43:38
Nuwe interim reëling vir sekere handelinge in spesiaal beskermde plante binne die Gauteng Provinsie [Brief van J.K. BAKER]	50:29	OSBORNE, Roy: Book review: Jack Krempin's "Palms & cycads around the world"	28:18
Nuwe komitee [1986]	5:13	OSBORNE, Roy: Book review: <i>Palms and cycads beyond the tropics</i> by Keith Boyer	33:37-38
Nuwe komiteelid [Stef Schoeman]	16:27	OSBORNE, Roy: Botanical historical monuments	3:20-22
Nuwe wildernisgebied [Oos Kaap]	8:24	OSBORNE, Roy: Chairman's letter	Newsletter 3:2
		OSBORNE, Roy: Cone sculptures in southern Italy	39:24
Oberprieler, Rolf G.	21:27	OSBORNE, Roy: Conference: Botanical diversity	36:36
OBERPRIELER, Rolf: Cycad weevils: comments on articles by P.I. Forster and E. Rouwenhorst	49:25-26	OSBORNE, Roy: "Conserva Award" [to Cynthia Giddy]	41:34
OBERPRIELER, Rolf: The weevils associated with cycads - an overview [talk at meeting of the Transvaal Regional Branch]	50:18-20	OSBORNE, Roy: Crested <i>Stangeria</i> cones	39:17
OBERPRIELER, Rolf G.: <i>Encephalartos aplanatus</i> Vorster: the weevil perspective	48:10-12	OSBORNE, Roy: CYCAD '90 - the Second International Conference on Cycad Biology. A report on the meeting held in Queensland, Australia, July 1990	23:10-17
OBERPRIELER, Rolf G.: Required: insects occurring on cycads	27:26	OSBORNE, Roy: CYCAD '90 [congress]: Proceedings	33:30
Obituary - Dr Amy Frances May Gordon Jacot-Guillarmod (GROBBELAAR, Nat)	32:25-26	OSBORNE, Roy: CYCAD '93 [congress]	33:29
Obituary. Dr. I.C. Verdoorn (VORSTER, P.)	18:24-25	OSBORNE, Roy: CYCAD '93 Proceedings	44:45
		OSBORNE, Roy: Cycad hit parade	7:7
		OSBORNE, Roy: Cycad mutants	17:26-30
		OSBORNE, Roy: Cycad research in the 80's	6:26-34
		OSBORNE, Roy: Cycad seed exchange	Newsletter 2:8
		OSBORNE, Roy: Cycad seed kernel morphology	13:26-30
		OSBORNE, Roy: Cycads and the law	4:18
		OSBORNE, Roy: Cycads at the Karoo Botanic Garden	38:15-17

- OSBORNE, Roy: Cycads for Africa . . . . . 41:33-34
- OSBORNE, Roy: Cycads in Pretoria gardens . . . . . 15:24-25
- OSBORNE, Roy: Cycads omitted in school biology syllabi . . . . . 17:22
- OSBORNE, Roy: Cycad Society of Southern Africa, the . . . . . Newsletter 2: 8-9
- OSBORNE, Roy: DBG [Durban Botanic Gardens] sales day success [auction of plants] . . . . . 35:22
- OSBORNE, Roy: Distribution of *Encephalartos* in central Africa . . . . . 20:22-23
- Osborne, Roy: doctorate for . . . . . 17:14
- OSBORNE, Roy: Durban Botanic Gardens - Cycad project nears completion . . . . . 33:30-31
- OSBORNE, Roy: *Encephalartos natalensis* population under threat . . . . . 28:17
- OSBORNE, Roy: Evidence of a sex change in *Encephalartos middelburgensis* . . . . . 27:33
- OSBORNE, Roy: Focus on *Encephalartos barberi* . . . . . 14:8-16
- OSBORNE, Roy: Focus on *Encephalartos concinnus* . . . . . 34:4-11
- OSBORNE, Roy: Focus on *Encephalartos eugene-maraisii* . . . . . 17:9-13
- OSBORNE, Roy: Focus on *Encephalartos ferox* . . . . . 9:14-21
- OSBORNE, Roy: Focus on *Encephalartos ghellinckii* . . . . . 12:16-23
- OSBORNE, Roy: Focus on *Encephalartos gratus* . . . . . 25:4-9
- OSBORNE, Roy: Focus on *Encephalartos hildebrandtii* . . . . . 22:6-12
- OSBORNE, Roy: Focus on *Encephalartos inopinus* . . . . . 31:4-8
- OSBORNE, Roy: Focus on *Encephalartos laevifolius* . . . . . 19:2-8
- OSBORNE, Roy: Focus on *Encephalartos lanatus* . . . . . 16:3-9
- OSBORNE, Roy: Focus on *Encephalartos lebomboensis* . . . . . 15:6-15
- OSBORNE, Roy: Focus on *Encephalartos manikensis* . . . . . 38:4-11
- OSBORNE, Roy: Focus on *Encephalartos munchii* . . . . . 35:4-9
- OSBORNE, Roy: Focus on *Encephalartos paucidentatus* . . . . . 27:3-9
- OSBORNE, Roy: Focus on *Encephalartos transvenosus* . . . . . 20:10-18
- OSBORNE, Roy: Focus on *Encephalartos umbeluziensis* . . . . . 21:3-9
- OSBORNE, Roy: Focus on *Encephalartos villosus* . . . . . 10:16-23
- OSBORNE, Roy: Focus on *Encephalartos woodii* . . . . . 5:4-10
- OSBORNE, Roy: Focus on *Macrozamia moorei* . . . . . 49:4-9
- OSBORNE, R.: From the bookshelf (Review: C.J. Chamberlain, *The living cycads*) . . . . . 2:30
- OSBORNE, Roy: From the bookshelf [various publications of Bijan Dehgan's reviewed] . . . . . 14:29
- OSBORNE, Roy: From the chairman . . . . . 2:4
- OSBORNE, Roy: From the president . . . . . 5:22-23, 7:20-21, 8:20-21, 9:12-13, 10:26-27, 11:18-19, 12:10-11, 13:34-35, 14:28-29, 15:20-21, 16:16-17, 17:2, 18:10, 19:9, 20:2
- OSBORNE, Roy: Further reports of cycad sex changes [*Cycas revoluta*, *Zamia vasquezii*] . . . . . 40:20-21
- OSBORNE, R.: Grow man, grow . . . . . 5:28-29
- OSBORNE, Roy: Hopes fade for wild *Encephalartos woodii* . . . . . 40:22-23
- OSBORNE, Roy: Index to the "Focus on ..." series . . . . . 38:33
- OSBORNE, Roy: Insect pollination research . . . . . 10:33
- OSBORNE, Roy: Letter . . . . . 31:31
- OSBORNE, Roy: Letter: Odour of male *Encephalartos concinnus* cones . . . . . 43:35
- OSBORNE, Roy: Letter: Regulations controlling trade in cycad seeds . . . . . 43:36-37
- OSBORNE, Roy: Letter: Relocating to Australia . . . . . 44:48
- OSBORNE, Roy: Major advances in *Cycas* taxonomy: review of a recent paper by Ken Hill . . . . . 33:29-30
- OSBORNE, Roy: Maths figures in your cycad collection . . . . . Newsletter 3:7
- OSBORNE, Roy: Microscopic space invaders . . . . . 42:26
- OSBORNE, Roy: Montgomery *Microcycas calocoma* seeds . . . . . 43:31
- OSBORNE, Roy: NBI's cycad conservation plan . . . . . 34:20-21
- OSBORNE, Roy: New Goode poster . . . . . 34:32
- OSBORNE, Roy: New product [*Cypermethrin EC*] knocks Leopard Moth larvae . . . . . 42:24
- OSBORNE, Roy: New scientific reports . . . . . 41:39-40, 42:28-29, 43:39-40, 44:48
- OSBORNE, Roy: New sex research initiative . . . . . 37:27
- OSBORNE, Roy: New tissue culture initiative . . . . . 37:23
- OSBORNE, Roy: News from the Natal Regional Branch . . . . . 37:29
- OSBORNE, Roy: On the evolution of cycads . . . . . 16:28-33
- OSBORNE, Roy: One man's poison . . . . . 1:16-18
- OSBORNE, Roy: PACSOA annual show and plant sale . . . . . 46:26-27
- OSBORNE, Roy: PACSOA poster . . . . . 39:16
- OSBORNE, Roy: Philatelic cycads . . . . . 4:3
- OSBORNE, Roy: Pollination and 'cone' development in *Cycas revoluta* . . . . . 31:23
- OSBORNE, Roy: Pollination and cone development in *Zamia pumila* . . . . . 32:20
- OSBORNE, Roy: Professor Moretti: promotion [to full professor] . . . . . 38:33
- Osborne, Roy: Promotion for Osborne [to Associate Professor] (GROBBELAAR, Nat) . . . . . 37:26
- OSBORNE, Roy: Report on the Third International Conference on Cycad Biology, a, Pretoria, July 1993 . . . . . 35:28-34, 36:37
- OSBORNE, Roy: Revision of Pant's "Cycas and Cycadales" . . . . . 35:25
- OSBORNE, Roy: S.A.A.B. Conference [1993] . . . . . 33:30
- OSBORNE, Roy: Seed morphology: *Cycas wadei* . . . . . 32:19
- OSBORNE, Roy: Sex change in cycads - hope for [*Encephalartos woodii*?] . . . . . 2:20-22
- OSBORNE, Roy: Sex life of cycads [ (with line drawings illustrating reproduction)] . . . . . 8:26-29
- OSBORNE, Roy: South African cycads - a bibliography . . . . . 11:8-13
- OSBORNE, Roy: The cycad collection at the Naples Botanical Garden . . . . . 31:18-20
- OSBORNE, Roy: The cycad collection of the Durban Botanic Gardens . . . . . 34:16-20
- Osborne, Roy: *The cycad collection of the Durban Botanic Gardens* [booklet reviewed by Piet VORSTER] . . . . . 35:37 (see also 36:42)
- OSBORNE, Roy: The Heenan expeditions revisited . . . . . 43:16-23
- OSBORNE, Roy: The Portici Botanical Garden . . . . . 40:8-9
- OSBORNE, Roy: The R50 story . . . . . 2:26
- OSBORNE, Roy: The Rome Botanical Garden . . . . . 39:12-14
- OSBORNE, Roy: The Taiwan *Cycas* Nature Reserve . . . . . 20:36-38
- OSBORNE, Roy: Times of coning for the African cycads . . . . . 35:18-20
- OSBORNE, Roy: Two new reports on cycad sex changes . . . . . 23:18-20
- OSBORNE, Roy: U.S.A. visitors [Michael Perry, Byron & Libby Besse] . . . . . 33:32
- OSBORNE, Roy: USA research roundup . . . . . 8:4-5
- OSBORNE, Roy: Van die president . . . . . 5:22-23, 7:20-21, 8:20-21, 9:12-13, 10:26-27, 11:18-19, 12:10-11, 13:34-35, 14:28-29, 15:20-21, 16:16-17, 17:2, 18:10, 19:9, 20:2
- OSBORNE, Roy: Visitors to South Africa . . . . . 40:19-20
- OSBORNE, Roy: 1991 World cycad census - your co-operation requested . . . . . 27:39-40
- OSBORNE, Roy: world honour for Cynthia Giddy . . . . . 35:24 (see also 35:40)
- OSBORNE, Roy: see GROBBELAAR, Nat; OSBORNE, Roy; & VORSTER, Piet . . . . . 29:26
- OSBORNE, Roy: see KILLICK, D.J.B.; and OSBORNE, Roy . . . . . 16:26-27
- OSBORNE, Roy: see PHELON, Janet; VAN HENSBERGEN, Hubertus; and OSBORNE, Roy . . . . . 34:11-14
- OSBORNE, Roy: see SHIMIZU, Hideo; and OSBORNE, Roy . . . . . 41:21-23
- OSBORNE, Roy: see STEVENSON, Dennis Wm.; and OSBORNE, Roy . . . . . 33:19-25
- OSBORNE, Roy: see WALKLEY, Stan; and OSBORNE, Roy . . . . . 47:24
- OSBORNE, Roy: see YANG, Si-Lin; WANG, Ding-Yue; and OSBORNE, Roy . . . . . 41:15-17, 41:16
- OSBORNE, Roy; & DALZELL, Christopher: Potential propagation of *Encephalartos woodii* from excised leaves . . . . . 45:16-17
- OSBORNE, Roy; & HENDRICKS, John: A world list of cycads . . . . . 3:13-17
- OSBORNE, Roy; and GROVE, Andrew: The magical and medicinal usage of *Stangeria eriopus* in Natal . . . . . 32:8-11
- OSBORNE, Roy; and HENDRICKS, John: A world list of cycads - supplement . . . . . 5:27
- OSBORNE, Roy; and MORETTI, Aldo: Saving a *Cycas* [repairing transport damage] . . . . . 39:22-23
- OSBORNE, R.; ROBBERTSE, P.J., & CLAASSEN, M.I.: The longevity of cycad pollen . . . . . 28:10-13
- OSBORNE, Roy; and SANTANA, Rafael Milanés: Focus on *Microcycas calocoma* . . . . . 42:4-11
- OSBORNE, Roy; and TOMIYAMA, Hajime: Focus on *Cycas revoluta* . . . . . 41:5-15
- OSBORNE, Roy; and WALKLEY, Stan: Upside down *Bowenia* from Down Under . . . . . 47:16-17
- OSBORNE, Roy; SALATINO, Maria Luiza, & SALATINO, Antonio: Cycad leaf waxes . . . . . 12:26-27
- Overseas seed order . . . . . 4:19, 5:16
- Overseas visitor to South Africa: Andrew Shaw . . . . . 28:23
- PACSOA annual show and plant sale (OSBORNE, Roy) . . . . . 46:26-27
- PACSOA poster (OSBORNE, Roy) . . . . . 39:16
- Palm & Cycad Symposium - Townsville, Australia, 11-13 October 1996 (WALKLEY, Stan) . . . . . 49:18-19
- Palm collections [Piet Vorster's collection] . . . . . Newsletter 2:7
- Palm feature. *Jubaeopsis caffra* [MANTHE, Cyril] . . . . . Newsletter 1:13-16
- Palm House (the) and the cycad collection at the Royal Botanic Gardens, Kew (ANDREWS, Susyn) . . . . . 19:30-31.
- 'Palm' may affect brain . . . . . 29:28
- Palms & cycads around the world*: review of Jack Krempin's book by Roy OSBORNE . . . . . 28:18
- Palms & cycads around the world*: review of Jack Krempin's book by Ann LAMBERT . . . . . 28:18

<i>Palms and cycads beyond the tropics</i> , by Keith Boyer [New palm and cycad book]	23:17
<i>Palms and cycads beyond the tropics</i> by Keith Boyer (Review of book by Roy OSBORNE)	33:37-38
Palms for highveld conditions (GEDDES, Robert)	Newsletter 2:6
Pamphlets: Wild Life Society issues cycad pamphlets	29:17
Pant, Divya Darshan	10:6, 16:33
PANT, Divya Darshan: Cycads of Asia	26:8-15
Pant, D.D.: <i>Cycas and Cycadales</i> [revision of] (OSBORNE, Roy)	35:25
PANT, Divya Darshan: John George Hendricks	23:36
PANT, Divya Darshan: Letter	13:43
PANT, Divya Darshan; SINGH, Rita; and CHAUHAN, Deventra Kumar: On <i>Cycas pectinata</i> Hamilton from north-east India	38:17-30
Pant's fossil paper	17:17-14
Panzhihua: <i>Cycas</i> Reserve	48:16
Parthenocarpy in cycads [Letter from Helmut SCHLEGEL]	39:26
Parthenocarpy: Occasional parthenocarpy as a general rule in cycads? [Letter from Helmut SCHLEGEL]	38:40, 38:40 (comment by Nat GROBBELAAR), 38:41 (comments by Piet VORSTER)
Passing glance at central African cycads, a (KEMP, Maans)	32:13-14
Pate, John	23:14
Pate, John: visit to Natal	25:22
Pathogens: Cycad seed pathogens (BRUNNER, Julius)	22:18-20
PATRONE, Rosaria	40:20
Patryshoek Nursery	18:47, 35:29
PATTERSON, Norm: King's Park - Perth's pride	16:10-11
PELZER, A.N.: Brief: Afnemende ledetalle	39:25-26
PERNER, Joe: Visiting <i>Macrozamia paili-guilielmii</i> subspecies <i>plurinervis</i>	19:28-29
PERNER, Joe: Visiting <i>Macrozamia platyrachis</i>	14:26-27
Perry, Michael	33:32
Peru: New species of <i>Zamia</i> from Amazonian Peru, a (WRINKLE, Guy) [suggested name <i>Zamia gentryi</i> , but probably not the same as <i>Zamia gentryi</i> described in 1997 (?) from Ecuador]	36:20-22
Pest: <i>Bunaea alcinoë</i> : New moth menace? [Emperor Moth]	23:26
Pest control: New product [ <i>Cypermethrin EC</i> ] knocks Leopard Moth larvae (OSBORNE, Roy)	42:24
Pest: Chrysomelid larvae feeding on new leaf of <i>Cycas siamensis</i>	43:8
Pest: Gall midge damage	16:13
Pest: New pest threatens <i>Cycas</i> [scale insect <i>Aulacaspis yasumatsui</i> ] (TANG William)	49:14-17
PETERS, H.A.: <i>Zamia</i>	5:14-15
PHELON, Janet; VAN HENSBERGEN, Hubertus; and OSBORNE, Roy: The apparent seed viability of <i>Encephalartos ferox</i> growing in sun and shade conditions in the wild	34:11-14
Phenology: Cycad phenology (NORSTOG, Knut J.)	32:11-13
Phenology: Study of the growth rate and coning cycle of cultivated cycad plants in Japan, a (SHIMIZU, Hideo)	41:23-26
Phenology: Times of coning for the African cycads (OSBORNE, Roy)	35:18-20
Philatelic cycads (OSBORNE, Roy)	4:3
PHILLIPS, Maxine: A view on Kew	2:19
Phipson, Gifford: In memoriam	25:17
Phipson, Yvette: In memoriam: Gifford Phipson	25:17
Photo competition (GROBBELAAR, Nat)	34:33
Pickering, Tim	23:13
Pienaar, Embden, in memoriam	26:16
Pienaar, Emden: cycads in garden	15:25
Piet VORSTER, comments by [on Albert C. Smith's article on <i>Cycas rumphii</i> forma <i>seemannii</i> ]	19:50
Pigments: <i>Ceratozamia</i> leaves	12:6
Pinker, Colin	19:2
PINKER, Colin: Letter: Leaves on cone	43:35
PINKER, Colin & Charmaine: Letter [cone leaves in <i>Encephalartos villosus</i> ]	29:25
Pipedream?, a [ <i>Encephalartos altensteinii</i> grown in pipes] (OSBORNE, Roy)	41:34
Plant names, why change (VORSTER, Piet)	1:15
Plante nie altyd gehard nie [Brief van Erik ROUWENHORST]	47:25-26
Plants inspected [Letter from Cynthia GIDDY]	39:28
Plastic nursery bags	12:6
<i>Platymerus</i> weevil, the	21:27
Poison, one man's (OSBORNE, Roy)	1:16-18
Poisoning: Suspected cycad ( <i>Cycas revoluta</i> ) intoxication in dogs BOTHA, C.H.; NAUDÉ, T.W.; SWANN, G.E.; ASHTON, M.M.; and VAN DER WATEREN, J.F.)	30:20-21
Pollen bank	2:7, 3:12, 4:20, 5:16, 6:40, 25:23, 27:15
Pollen exchange	13:32-33
Pollen exchange (GIDDY, Cynthia)	21:10
Pollen exchange report 1990 (GIDDY, Cynthia)	27:14
Pollen: Collecting and storing pollen (TANG, Willie)	7:4-6
Pollen: Cycad pollen morphology	27:9
Pollen: Cycad pollen progress [review of B. & N. Dehgan's paper, Comparative pollen morphology and taxonomic affinities in Cycadales]	18:18
Pollen: Cycad pollen studies (WHITELOCK, Loran)	8:22-23
Pollen: Cycad pollen studies	13:38
Pollen: Cycad pollen survives ultra-low temperature	17:25
Pollen: Longevity of cycad pollen, the (OSBORNE, R.; ROBBERTSE, P.J., & CLAASSEN, M.I.)	28:10-13
Pollenbank Natal members (MINNIE, Ollie)	29:25
Pollinating cycads (TANG, Willie)	8:16-17
Pollination and 'cone' development in <i>Cycas revoluta</i> (OSBORNE, Roy)	31:23
Pollination and cone development in <i>Zamia pumila</i> (OSBORNE, Roy)	32:20
Pollination success [ <i>Cycas thouarsii</i> ]	13:40
Pollination: Beetles and pollination in <i>Encephalartos altensteinii</i> (STOBART, Mike)	17:32-33
Pollination: Cycad-insect relationships (KENNEDY, Paul)	27:22-25
Pollination: Cycad weevils: comments on articles by P.I. Forster and E. Rouwenhorst (OBERPRIELER, Rolf)	49:25-26
Pollination: <i>Cycas</i> pollination (WALKLEY, Stan)	31:22
Pollination: Feral cycads (TANG, Willie)	39:10-12
Pollination: Hand-pollination of <i>Encephalartos heenanii</i> in the Songimvelo Game Reserve, Mphumalanga Province (STALMANS, Marc)	44:23-24
Pollination: Initial observations of the reproductive behaviour and an insect pollination agent of <i>Bowenia serrulata</i> (W. Bull) Chamberlain (WILSON, Gary W.)	36:13-18, 37:15 (comment by Piet VORSTER)
Pollination: Insect pollination	11:14
Pollination: Insect pollination of cycads (NORSTOG, Knut J.; and FAWCETT, Priscilla K.S.)	19:38-42
Pollination: Insect pollination implications (COMPTON, Stephen)	12:9
Pollination: Insect pollination research (OSBORNE, Roy)	10:33
Pollination: More insect-cycad work	23:21
Pollination: The role of wind in the pollination of <i>Bowenia</i> (VORSTER, Piet)	37:15
Pollination: Some observations on <i>Encephalartos inopinus</i> (GROBBELAAR, Nat)	35:25-26
Pollination: wet or dry?	31:38
POPENOE, John: Letter	12:28
Porcupine damage	23:30
Portici Botanical Garden, the (OSBORNE, Roy)	40:8-9
Postcard: Botshabelo cycad postcard	16:14
Poster: New Goode poster (OSBORNE, Roy)	34:32
Poster: [New Goode poster] (OSBORNE, Roy)	34:32
Poster: PACSOA poster [Letter from MERESMAN, Avis; and NEL, Danie]	49:30
Posters: Cycad posters (Douglas Goode)	12:5
Posters [Priscilla Fawcett]	13:37
Potential propagation of <i>Encephalartos woodii</i> from excised leaves (OSBORNE, Roy; & DALZELL, Christopher)	45:16-17
Pots: Cycads in containers (VORSTER, Piet)	49:31-35
Pots: Cycad in containers in Calcutta (DHAR, Shri)	50:31-32
Preliminary assessment of cycad conservation and diversity in Queensland, Australia, a (FORSTER, Paul I.)	46:8-18
Preliminary study of the <i>Cycas micholitzii</i> complex, a (WANG, Ding-yue)	44:31-38
Presentation of Conservation Award to Cynthia Giddy (MERESMAN, Avis)	41:31-32
Presentation of the Conservation Award to Roy Osborne (MERESMAN, Avis)	39:15-16
President, new [Nathanaël Grobbelaar]	20:24
Press clippings	5:30-31, 6:41-42, 7:24-25, 8:38, 9:28-29, 10:27, 11:24-26, 12:30-31, 13:24, 13:24, 13:31, 14:25, 15:30-31, 16:25, 17:31, 18:43-46, 19:11-12, 19:42, 20:41-42, 21:30-34, 22:27-30, 23:29, 23:32-35, 24:30, 25:25-31, 26:39-42, 27:41-46, 28:24-26, 29:28-30, 30:28-30, 31:34-37
Press clipping: Rhodians attend cycad conference Down Under	26:25
Press clippings: see also <i>ex press</i> and <i>newspaper clippings</i>	
Pretoria: Memories about the botanic garden of the Department of Botany, University of Pretoria (ROBBERTSE, Hannes)	37:10-14
Pretoria: National Botanical Gardens, Pretoria	35:29

Pretorius, Willie: Huldeblyk aan wyle Willie Pretorius van Tzaneen . . .	16:34	Rare coning [male <i>Encephalartos chimanimaniensis</i> ] . . . . .	13:39
PRETORIUS, Willie: Keëlblare in [ <i>Encephalartos transvenosus</i> ] . . .	13:18-19	Ratanawarsha, Chanuan . . . . .	27:12
Price, David . . . . .	14:23	RAUTENBACH, M.: Brief: <i>Encephalartos ferox</i> frats? [sade sonder sarcotesta]	41:37
Prinsloo, Anton . . . . .	41:32	Recent advances in the cultivation of cycads (GIDDY, Cynthia) . . . . .	24:10-15
PRINSLOO, Gerrit: Brief [ontklemingsprobleem] . . . . .	23:31	Recent scientific publications . . . . .	31:28
Problems of endangered species conservation in Mexico: cycads an example (VOVIDES, Andrew P.) . . . . .	20:29-35	Recent work in cycad tissue culture (NORSTOG, Knut J.) . . . . .	34:28
<i>Proceedings of the Third International Conference on Cycad Biology</i> by P. Vorster [book reviewed by Nat GROBBELAAR] . . . . .	46:32-33	Record keeping: Keep a record of your cycads (GROBBELAAR, Nat) . . . . .	45:14-35
Producing more seeds with a better fertilizer regime (BROOME, Tom) . . . . .	44:25-26	Re-establishment: Kwazulu cycad project . . . . .	6:12
(see also VORSTER, Piet; HUNTER, Kobus; and CONRADIE, Kobus in 45:19-20)		Regional News 1:23, 2:27, 3:18-19, 4:20-21, 5:3, 6:24-25, 7:3, 8:32-33, 9:13, 10:8, 11:21, 12:15, 13:19-20, 14:16, 15:26, 17:20-22, 18:32, 19:34	
Professor Moretti: promotion [to full professor] (OSBORNE, Roy) . . . . .	38:33	Regulations controlling trade in cycad seeds [Letter from Roy OSBORNE]	43:36-37
Profile. Roy Osborne: national chairman . . . . .	1:3	Regulations: New regulations concerning cycads in the province of Gauteng (GROBBELAAR, Nat) . . . . .	46:27
Promotion for Osborne [to Associate Professor] (GROBBELAAR, Nat) . . . . .	37:26	Regulations, South African . . . . . Newsletter 2:3	
Propagation . . . . .	38:43-44	Relationships: Cladistic diagram showing possible relationship between families and genera of Cycadales . . . . .	10:7
Propagation (cycad feature) [MANTHE, Cyril] . . . . . Newsletter 1:9-12		Relocating to Australia [Letter from Roy OSBORNE] . . . . .	44:48
Propagation: Artificial propagation project: results of a recent survey (OSBORNE, Roy) . . . . .	32:23-24	Relocation of two rare cycad plants, the [ <i>Encephalartos</i> cf. <i>E. laevifolius</i> ] (GIDDY, Cynthia) . . . . .	27:17-19
Propagation: Cycad propagation [ <i>Encephalartos friderici-guillielmi</i> ] (FORRESTER, Len) . . . . .	41:35	Remarkable roof garden [cycads at library of University of Natal] . . . . .	15:5
Propagation: Cycad sucker success (BURSEY, Bruce) . . . . .	13:21	Removal and rooting of basal suckers of <i>E[ncephalartos] woodii</i> . . . . .	27:34
Propagation: Cycads from leaves [ <i>Encephalartos woodii</i> ] . . . . .	40:22-23	Report on "Fishtail" <i>Encephalartos transvenosus</i> (CLAASSEN, Isabella) . . . . .	37:22, 38:32 (comment by Piet VORSTER)
Propagation: Cycads grown from leaves? . . . . .	6:12	Report on the CITES plants committee meeting (GIDDY, Cynthia) . . . . .	36:30-31
Propagation: Domestic growing of cycads from seed to houseplant size (SCHLEGEL, Helmut) . . . . .	26:22-25	Report on the CITES Plants Committee meeting, Zomba, Malawi, April 15-17th, 1991 (GIDDY, Cynthia) . . . . .	27:10-12
Propagation: Hints for beginners on growing cycads from seeds (NEL, Danie) . . . . .	34:22	Report on the Third International Conference on Cycad Biology Pretoria, July 1993, a (OSBORNE, Roy) . . . . .	35:28-34, 36:37
Propagation: Maturation of cycad seeds [Letter from Shri DHAR] . . . . .	49:28-29	Reprint service . . . . .	20:9
Propagation: Never discard a seemingly sick cycad (MUNRO, Neil) . . . . .	21:22-23	Reproduction: Cycad propagation [ <i>Encephalartos friderici-guillielmi</i> ] (FORRESTER, Len) . . . . .	41:35
Propagation: Notes on germinating seeds in European conditions (STAINER, Ottorino) . . . . .	25:14-15	Reproduction in a population of <i>Zamia pumila</i> - more work from Willie Tang . . . . .	26:30
Propagation: Potential propagation of <i>Encephalartos woodii</i> from excised leaves (OSBORNE, Roy; & DALZELL, Christopher) . . . . .	45:16-17	Reproduction: Initial observations of the reproductive behaviour and an insect pollination agent of <i>Bowenia serrulata</i> (W. Bull) Chamberlain (WILSON, Gary W.) . . . . .	36:13-18, 37:15 (comment by Piet VORSTER)
Propagation: Radiographic evaluation of cycad seed (GOLDSCHMIDT, R.P.; and SACKS, A.J.) . . . . .	41:26-28	Reproduction: Mate choice in cycads (TANG, Willie) . . . . .	36:27-29
Propagation: Recent work in cycad tissue culture (NORSTOG, Knut J.) . . . . .	34:28	Reproduction: Maturity in cycads (TANG, Willie) . . . . .	24:24-27
Propagation: Removal and rooting of basal suckers of <i>E[ncephalartos] woodii</i> . . . . .	27:34	Reproduction: Norstog videotape . . . . .	26:31
Propagation: Rescue of a <i>E[ncephalartos] natalensis</i> trunk . . . . .	31:9	Reproduction: Occasional parthenocarpy as a general rule in cycads? [Letter from Helmut SCHLEGEL] 38:40, 38:40 (comment by Nat GROBBELAAR), 38:41 (comments by Piet VORSTER)	
Propagation: Some observations on <i>Encephalartos inopinus</i> (GROBBELAAR, Nat) . . . . .	35:25-26	Reproduction: Occasional parthenocarpy as a general rule in cycads [Letter from Helmut SCHLEGEL] . . . . .	39:26
Propagation: Sowing cycad seed in a way that guarantees germination (BRUNNER, Julius) . . . . .	21:18-19	Reproduction: Parthenocarpy in cycads [Letter from Helmut SCHLEGEL] . . . . .	39:26
Propagation: Unconventional placement of seed kernels for germination (GROBBELAAR, Nat) . . . . .	23:29	Reproduction: Spermatozooids of <i>Encephalartos villosus</i> (STEYN, Elsie M.A.) . . . . .	36:18, 19, 20
Propagation: <i>Zamia</i> from seed (HOOFT, Jan) . . . . .	22:16-17	Requests, special . . . . . Newsletter 3:3	
Pro's and con's on the formation of a joint [palm & cycad] society [MANTHE, Cyril] . . . . . Newsletter 1:7		Rescue of a <i>E[ncephalartos] natalensis</i> trunk . . . . .	31:9
Pseudo-development in cycad seeds [Letter from Ottorino STAINER] . . . . .	43:36	Research: Cycad research funding available (ROBBERTSE, Hannes) . . . . .	37:14
Publications of the Botanical Research Institute, Pretoria . . . . .	5:17	Research: Cycad research in the 80's (OSBORNE, Roy) . . . . .	6:26-34
Publicity drive . . . . . Newsletter 3:4		Research: New sex research initiative (OSBORNE, Roy) . . . . .	37:27
Publicity: Cycad exhibits . . . . . 15:5, 17:20		Research on <i>E[ncephalartos] laevifolius</i> [done by Kevin Zunckel] . . . . .	3:12
Publicity: Durban Museum centenary [launching of Douglas Goode's cycad posters] . . . . .	13:39	Research: S.A. cycad research report . . . . .	18:18
Publicity: <i>Exotica 91</i> [Exhibition] . . . . .	27:13	Research update . . . . .	10:24
Publicity: Natal Section news - The Natal Wildlife Expo . . . . .	24:29	Research: USA research roundup (OSBORNE, Roy) . . . . .	8:4-5
Publicity: News from the Natal Regional Branch (MERESMAN, Avis) . . . . .	43:33	Reserve: Ntamvuna extension . . . . .	1:18
Publicity: PACSOA annual show and plant sale (OSBORNE, Roy) . . . . .	46:26-27	Ressler, Paul . . . . .	23:12
Publicity: Wildlife Expo [Exhibition] [Letter from Avis MERESMAN] . . . . .	41:38-39	Revision of Pant's "Cycas and Cycadales" (OSBORNE, Roy) . . . . .	35:25
Publicity: Wildlife Expo 1991 . . . . .	28:22	Rhodians attend cycad conference Down Under [press clipping] . . . . .	26:25
Publicity: Wildlife Expo '92: Natal Section exhibition (MERESMAN, Avis) . . . . .	34:21	Richter, Mark . . . . .	41:33, 43:43
Purpose behind a newsletter, the [MANTHE, Cyril] . . . . . Newsletter 1:3		Ripcord [insecticide] . . . . .	29:9
Purwodadi Botanic Garden, the . . . . .	44:21	Riti, Angelo . . . . .	39:13
Queen Elizabeth Park: visit to . . . . .	9:13	ROACH, John: see ROACH, Julie; and ROACH, John . . . . .	25:16-21
Queensland: Preliminary assessment of cycad conservation and diversity in Queensland, Australia, a (FORSTER, Paul I.) . . . . .	46:8-18	ROACH, Julie; and ROACH, John: Cycads in the Adelaide Botanic Garden . . . . .	25:16-21
R.A. Dyer, <i>The cycads of South Africa</i> ; S. Gilbert, <i>Cycads: status, trade, exploitation and protection, 1977-1982</i> . . . . .	1:24	Robbertse, Hannes . . . . .	36:30
Radiographic evaluation of cycad seed (GOLDSCHMIDT, R.P.; and SACKS, A.J.) . . . . .	41:26-28	ROBBERTSE, Hannes: [Call for] Nominations for Council . . . . .	43:33-34
		ROBBERTSE, Hannes: Cycad research funding available . . . . .	37:14
		ROBBERTSE, Hannes: From the president 37:3, 38:3, 39:3, 40:3, 41:3-4, 42:3, 43:3, 44:3, 45:3, 46:3, 47:3, 48:3, 49:3	
		ROBBERTSE, Hannes: Increase in membership fees . . . . .	43:34

ROBBERTSE, Hannes: Leaves on cycad cones	43:27-30	Aldo)	39:22-23
ROBBERTSE, Hannes: Memories about the botanic garden of the Department of Botany, University of Pretoria	37:10-14	Scale insect: New pest threatens <i>Cycas</i> [scale insect <i>Aulacaspis yasumatsui</i> (TANG William)	49:14-17
ROBBERTSE, Hannes: Van die president	37:3, 38:3, 39:3, 40:3, 41:3-4, 42:3, 43:3, 44:3, 45:3, 46:3, 47:3, 48:3, 49:3	Scarr, Errol	18:35, 33:31, 35:33
ROBBERTSE, P.J.: see OSBORNE, R.; ROBBERTSE, P.J., & CLAASSEN, M.I.	28:10-13	Schippman, Uwe	27:12
Rome Botanical Garden, the (OSBORNE, Roy)	39:12-14	SCHLEGEL, Helmut: Coralloid roots and white tubercles on secondary roots	39:14-15
Roof garden: Remarkable roof garden [cycads at library of University of Natal]	15:5	SCHLEGEL, Helmut: Domestic growing of cycads from seed to houseplant size	26:22-25
Root [anatomical] studies, <i>Macrozamia</i> [by David Webb]	13:36	SCHLEGEL, Helmut: "Flatfoot" <i>Cycas</i> ( <i>C. siamensis</i> ?)	37:27
Root contraction [Letter by Mike KIPLING]	29:24	SCHLEGEL, Helmut: Letter	18:40
Root contraction: Observations on root contraction of <i>Encephalartos cycadifolius</i> in long and short planting bags (SCHWELLNUS, Martin)	27:28-29	SCHLEGEL, Helmut: Letter: <i>Cycas silvestris</i> ?	40:24-25
Root formation from callus (SCHLEGEL, Helmut)	15:22	SCHLEGEL, Helmut: Letter: Fused leaflets	36:39
Root: Taproot growing in wrong direction in <i>Encephalartos hildebrandtii</i> (TANG, William)	49:22	SCHLEGEL, Helmut: Letter [hydroponic growing]	14:34
Roots on <i>Zamia</i> cones (TANG, Willie)	28:14-15	SCHLEGEL, Helmut: Letter: Occasional parthenocarpy as a general rule in cycads? 38:40, 38:40 (comment by Nat GROBBELAAR), 38:41 (comments by Piet VORSTER)	39:26
Rothschild, Miriam: Miriam Rothschild's butterfly studies (COMPTON, Stephen)	9:25	SCHLEGEL, Helmut: Letter: Occasional parthenocarpy as a general rule in cycads?	39:26
ROUWENHORST, Erik: <i>Antliarhinus</i> spp. en bestuiving	48:24-25	SCHLEGEL, Helmut: Letter: Parthenocarpy in cycads	39:26
ROUWENHORST, Erik: Brief: Kommentaar oor artikel "Broodbome floreer ook in kouer dele" [Tydskrifuitknipsel]	50:27	SCHLEGEL, Helmut: Root formation from callus	15:22
ROUWENHORST, Erik: Brief: Plante nie altyd gehard nie	47:25-26	Schoeman, Stef	15:26, 16:27
ROUWENHORST, Erik: Brief: Sensitiewe ekostelsel	47:26	SCHOEMAN, Stef: <i>E. [ncephalartos] eugene-maraisii</i> uit veld gesteel	18:41
ROUWENHORST, Erik: Brief: Verskillende vorme van <i>Encephalartos natalensis</i>	47:27	SCHOEMAN, Stef: Middelburg Broodboomwandelpad-uitstappie	18:33
ROUWENHORST, Erik: Broodbome by Harold Johnson Natuurreservaat	49:19-21	Schönbrunn: The Bundesgärten Schönbrunn (BRUNNER, Julius)	19:18-20
ROUWENHORST, Erik: <i>Encephalartos lebomboensis</i>	48:25-27, 49:24	SCHUCHMANN, Helga: Obtaining spermatozoids from cultivated cycads	22:13-15
ROUWENHORST, Erik: Groecipatrone van <i>Encephalartos manikensis</i> -blare	50:11-12	Schucht, Rein (youngest member)	2:6
ROUWENHORST, Erik: Nuwe idee mag help met bewaring [verhoed hibridisering]	49:17	SCHUTTE, R.: Letter: Yellow leaves in cycad seedlings	35:38, 36:33-34
Roy Osborne: national chairman (profile)	1:3	Schutzman, Bart	23:10
Royal cycads [fossil cycads] (ZEITNER, June Culp)	19:23-27	SCHWELLNUS, M.R.: Letter: Unusual male cones in <i>E[ncephalartos] altensteinii</i> (hybrid)	26:32-33
Ruilhoekie	Newsletter 3:2, 1:22, 2:19	SCHWELLNUS, M.R.: Letter: Unusual male cone in <i>E[ncephalartos] trispinosus</i>	26:35
Ruilhoekie [Brief van P.J.C. KUUN]	48:34	SCHWELLNUSS, M.R.: Letter: Unusual scales/leaves in <i>E[ncephalartos] arenarius</i>	26:34
Ruocco, Michele	39:13	SCHWELLNUS, Martin: Fused/deformed leaflets in <i>Encephalartos inopinus</i>	33:33
S.A. cycad research report	18:18	SCHWELLNUS, Martin R.: Hybrid <i>Encephalartos longifolius</i> or natural genetic diversity	34:25-27
S.A.A.B. 1991 Conference	26:31	SCHWELLNUS, Martin: Observations on root contraction of <i>E[ncephalartos] cycadifolius</i> in long and short planting bags	27:28-29
S.A.A.B. Conference [1993] (OSBORNE, Roy)	33:30	SCHWELLNUS, Martin: Something special - something sad	33:33-34
S.A.A.B. Congress (1987)	8:24, 9:27	Scientific publications, recent	31:28
S.A.A.B. Congress [1988]	13:37	Scientific reports, new	27:9, 28:19, 29:15, 30:19, 31:25, 32:29-30, 34:35, 35:39, 36:39-40, 37:30, 39:26-27, 40:25-26, 41:39-40, 45:26
S.A.A.B. Congress 1989	17:24	Scientific reports, new (GROBBELAAR, Nat)	46:34-36, 47:31-33, 48:35-36, 49:35-36, 50:32-33
S.A.A.B. Outing	15:4	Scientific reports, new (OSBORNE, Roy)	42:28-29, 43:39-40, 44:48
S.A.A.B., news from	27:12	Sclavo, Jean-Pierre	10:5
S.A.A.B.: 1992 S.A.A.B. Conference	30:22	Scott-Shaw, Rob	32:24
S.A.G.P.: Broodboombewaring in S.A.	15:16-18	SCOTT-SHAW, Rob: Conservation of cycads in Natal	34:28-30
Saad: <i>Encephalartos ferox</i> frats? [sade sonder sarcotesta] (Brief van M. RAUTENBACH)	41:37	SCRIBA, John: Letter	21:29
Saad: ontkiemingsprobleem	23:31	[SEAMAN, Greg]: A novel seed cleaning machine	23:27
Saadbank	12:36, 13:33, 19:42	Seawright, Alan	29:28
Saadbank (NEL, Danie)	8:21, 9:28, 10:32, 11:2, 15:19, 17:30, 18:47, 20:40	Seed, Australian	27:38
Saadbank skiet wortel	5:11	Seed Bank	12:36, 13:33, 19:42
Saadbank: Transvaalse Streektak: Stuifmeel- en Saadbank	37:25	Seed Bank (NEL, Danie)	8:21, 9:28, 10:32, 11:2, 15:19, 17:30, 18:47
Saadbank-nuus	6:13	Seed cleaning: A novel seed cleaning machine	23:27
Saadbestelling, oorseese	8:25	Seed collection: Consequences of collecting cycad seed from wild populations, the [Letter from John DONALDSON]	34:33-35
Saadversameling: Natalse Parkeraad reageer op president se versoek aangaande toestemming vir die uitvoer van broodboomsaad (GROBBELAAR, Nat)	36:35	Seed: Cycad seed pathogens (BRUNNER, Julius)	22:18-20
Sabato, Sergio	10:5, 42:12	Seed: Cycad seeds and seedlings (TANG, Willie)	9:8-11
Sabato, Sergio: In memoriam (NORSTOG, Knut)	27:35	Seed displays in cycads (TANG, Willie)	14:30-33
SACKS, A.J.: see GOLDSCHMIDT; and SACKS, A.J.	41:26-28	Seed: floating <i>Cycas</i>	17:24
SALATINO, Maria Luiza & Antonio: see OSBORNE, Roy; SALATINO, Maria Luiza, & SALATINO, Antonio	12:26-27	Seed: Hints for beginners on growing cycads from seeds (NEL, Danie)	34:22
Sale: PACSOA annual show and plant sale (OSBORNE, Roy)	46:26-27	Seed: Maturation of cycad seeds [Letter from Shri DHAR]	49:28-29
SANDERS, Owen	5:34	Seed morphology	13:26-30 (27-28)
SANTANA, Rafael Milanés: see OSBORNE, Roy; and SANTANA, Rafael Milanés	42:4-11	Seed: Notes on germinating seeds in European conditions (STAINER, Ottorino)	25:14-15
Santiago-Blay, Jorge A.	29:23	Seed: Nucellus, the: its position and function in the ovule of <i>Encephalartos</i> (STEYN, Elsie M.A.; and STRYDOM, Dawie J.F.)	35:14-18
Save the cycads	21:26	Seed: Occasional parthenocarpy as a general rule in cycads? [Letter from Helmut SCHLEGEL]	38:40, 38:40 (comment by Nat GROBBELAAR), 38:41
Save the cycads! Part 2	22:21		
Saving a <i>Cycas</i> [repairing transport damage] (OSBORNE, Roy; and MORETTI,			

(comments by Piet VORSTER)	
Seed: Overseas seed order	4:19, 5:16
Seed production on transplanted <i>Cycas revoluta</i> (WALKLEY, Stan)	29:8
Seed production: Producing more seeds with a better fertilizer regime (BROOME, Tom)	44:25-26 (see also VORSTER, Piet; HUNTER, Kobus; and CONRADIE, Kobus in 45:19-20)
Seed: Pseudo-development in cycad seeds [Letter from Ottorino STAINER]	43:36
Seed viability: Apparent seed viability of <i>Encephalartos ferox</i> growing in sun and shade conditions in the wild, the (PHELON, Janet; VAN HENSBERGEN, Hubertus; and OSBORNE, Roy)	34:11-14
Seed: Wild harvested seeds and their distribution (MICHAELSEN, Mike)	50:24-26
Seedbank (NEL, Danie)	20:40, 23:31, 28:30
Seedbank news	6:13
Seedbank takes root	5:11
Seedbank: <i>Encephalartos</i> seeds [Letter from Mike MICHAELSEN]	42:27-28
Seedbeds	23:29, 24:13
Seedlings: Cycad seeds and seedlings (TANG, Willie)	9:8-11
Seeds: export/import: Big Brother's infinite wisdom???? [Letter from Mike MICHAELSEN]	45:23
Sensitiewe ekostelsel [Brief van Erik ROUWENHORST]	47:26
Sex change in cycads - hope for [ <i>Encephalartos woodii</i> ?] (OSBORNE, Roy)	2:20-22
Sex change in <i>Cycas revoluta</i> (KEMP, Maans)	2:24-25
Sex change: Another sex change [ <i>Encephalartos senticosus</i> , as <i>E. lebomboensis</i> ] (STEENKAMP, Kobus)	42:25
Sex change [ <i>Encephalartos latifrons</i> ]	13:42
Sex change: Evidence of a sex change in <i>Encephalartos middelburgensis</i> (OSBORNE, Roy)	27:33
Sex change: Further reports of cycad sex changes [ <i>Cycas revoluta</i> , <i>Zamia vasquezii</i> ] (OSBORNE, Roy)	40:20-21
Sex change [ <i>Stangeria</i> ]	19:27
Sex changes: Two new reports on cycad sex changes (OSBORNE, Roy)	23:18-20
Sex chromosomes [Letter by P.N. MEHRA]	8:34-35
Sex life of cycads [with line drawings illustrating reproduction] (OSBORNE, Roy)	8:26-29
Sex ratio: Coning and sex ratio of <i>Encephalartos transvenosus</i>	18:37
Sex: "Double sex" in <i>Cycas revoluta</i> [bisexual plant] (TOMIYAMA, Hajime)	44:40-41
Sex: New sex research initiative (OSBORNE, Roy)	37:27
Shaw, Andrew	28:23, 36:37
SHAW, Andrew: Letter	29:25
Shenzhen Fairy Lake Botanical Garden, the (YANG, Si-Lin; WANG, Ding-Yue; and OSBORNE, Roy)	41:15-17, 41:16
SHIMIZU, Hideo: A study of the growth rate and coning cycle of cultivated cycad plants in Japan	41:23-26
SHIMIZU, Hideo; and OSBORNE, Roy: Atagawa Tropical & Alligator Garden, Japan	41:21-23
Shimizu, Mami	34:32
"Shimmering" <i>Cycas</i>	5:33
Shooter, Roy	13:7, 23:11, 23:24
Short communications	32:18-24
Siamese twins amongst cycad cones (CLAASSEN, Isabella)	32:23
Siamese twins: Another case of Siamese twins amongst cycad cones [ <i>Encephalartos caffer</i> ] (CLAASSEN, Isabella)	37:26
Siamese twins: Crested <i>Stangeria</i> cones (OSBORNE, Roy)	39:17
Siekte: Vreemde broodboomsiekte (KEMP, Maans)	48:27-29
Sikadeë: Weglating van sikadeë uit skoolleerplanne (GROBBELAAR, Nat)	18:42
Simes, Esther [private garden]	25:23
Similarity between <i>Welwitschia mirabilis</i> and <i>Encephalartos</i> (MUNRO, Neil)	19:51
SINGH, Rita: A new cycad section of Society of the Indian Plant Taxonomists	19:32-33
SINGH, Rita: see PANT, Divya Darshan; SINGH, Rita; and CHAUHAN, Deventra Kumar	38:17-30
Siniscalco Gigliano, Gesualdo	10:5
Size: <i>Lepidozamia hopei</i> (Zamiaceae), the world's tallest cycad (FORSTER, Paul I.)	48:12-15
Size: What is the tallest species and individual of cycad? [ <i>Lepidozamia hopei</i> ?] (FORSTER, Paul I.)	41:30
Skade aan blare: Vreemde broodboomsiekte (KEMP, Maans)	48:27-29
Skoolleerplanne: Weglating van sikadeë uit skoolleerplanne (GROBBELAAR, Nat)	18:42
Skukuza Nursery (MUNRO, Neil)	26:20-21
SLABBERT, Riekie; and HURTER, Johan: Focus on <i>Encephalartos cupidus</i>	36:5-10
SLABBERT, Riekie; and HURTER, Johan: Focus on <i>Encephalartos sclavoi</i>	37:4-8
Slide show and lecture on some south American cycads [Letter from Bernard FISCHER]	41:36
SMITH, Albert C.: Fiji's cycad: <i>Cycas rumphii</i> forma <i>seemannii</i>	19:48-49
SMUTS, Day: Brief	18:41
SMUTS, Nico: Besoek aan Lillie Natuur Reserwaat	24:16-20
Society: Activities in the American Cycad Society (GROBBELAAR, Nat)	39:17-18
Some <i>Cycas</i> species with undulate leaflets (MIYANO, Leland)	36:22-27
Some observations on <i>Encephalartos inopinus</i> (GROBBELAAR, Nat)	35:25-26
Something special - something sad (SCHWELLNUS, Martin)	33:33-34
South African cycads - a bibliography (OSBORNE, Roy)	11:8-13
South African Department of Environment and CITES regulations [Letter from Cynthia GIDDY]	43:37
South African regulations	Newsletter 2:3
Sowing cycad seed in a way that guarantees germination (BRUNNER, Julius)	21:18-19
Special requests	Newsletter 3:3
Specialist cycad nurseries	Newsletter 3:8
Spermatozoids of <i>Encephalartos villosus</i> (STEYN, Elsie M.A.)	36:18-30
Spermatozoids: Obtaining spermatozoids from cultivated cycads (SCHUCHMANN, Helga)	22:13-15
Spininess of cycad pinnae (GROBBELAAR, Nat)	23:28
Sporophylls, female, in different genera	16:29
Sportweni Cycad Nursery	8:23
Spray [Ripcord] causes "mutation"	29:9
Stainbank, Dering	31:10
STAINER, Ottorino: Letter	31:31
STAINER, Ottorino: Letter: Mediterranean cone sculptures	43:34-35
STAINER, Ottorino: Letter: Pseudo-development in cycad seeds	43:36
STAINER, Ottorino: Notes on germinating seeds in European conditions	25:14-15
STAINER, Ottorino: The botanical garden of Florence, Italy [Giardino dei Semplici di Firenze]	44:29-31
Stallard, Don	43:18, 43:19, 43:20
STALMANS, Marc: Hand-pollination of <i>Encephalartos heenanii</i> in the Songimvelo Game Reserve, Mphumalanga Province	44:23-24
Stamp: Kew cycad stamp	23:25
Stamps	47:front cover, 47:11, 48:31
Stamps: Fossil cycad	21:19
<i>Stangeria eriopus</i>	2:front cover, 2:8, 9-13, 15, 16, 17; 16:10, 16:24, 16:25, 26:19, 32:10, 34:19, 49:21
<i>Stangeria</i> - a botanical watchdog [superstition]	17:13
<i>Stangeria</i> : Crested <i>Stangeria</i> cones (OSBORNE, Roy)	39:17
<i>Stangeria</i> sex change	19:27
STAUDE, Hermann S.: Cycad-associated geometrid moths in southern Africa	40:16-19
STEENKAMP, Kobus: Another sex change [ <i>Encephalartos senticosus</i> , as <i>E. lebomboensis</i> ]	42:25
Stem bulb on cone stalk in <i>Zamia furfuracea</i> (TANG, Willie)	29:7
Stem injury in cycads: an experiment (TANG, William)	44:26-29
Stems: Hollow stems in <i>Encephalartos</i> (TANG, William)	44:42-43
Stephen, Alistair M.: see Stephens, Daphne C.; and Stephen, Alistair M.	
Stephens, Daphne C.; and Stephen, Alistair M.: Exudates from <i>Encephalartos</i> cones (reviewed by Roy OSBORNE)	13:22-24
Sternberg, Leonel	14:23
Stevenson on the U.S.A. <i>Zamias</i>	28:21
Stevenson, Dennis	10:4, 5; 16:12, 23:14, 48:22
STEVENSON, Dennis: Comments on Dick Endt's article [on <i>Zamia</i> in Ecuador]	19:15
STEVENSON, Dennis: A formal classification of the cycads	30:24
STEVENSON, Dennis Wm.: The genus <i>Zamia</i>	9:3-7
STEVENSON, Dennis Wm.; and OSBORNE, Roy: The world list of cycads	33:19-25
Steyn, Danie	25:23
Steyn, Elsie	46:24
STEYN, Elsie M.A.: Spermatozoids of <i>Encephalartos villosus</i>	36:18, 19, 20
STEYN, Elsie M.A.; and STRYDOM, Dawie J.F.: The nucellus: its position and function in the ovule of <i>Encephalartos</i>	35:14-18
STOBART, Mike: Beetles and pollination in <i>Encephalartos altensteinii</i>	17:32-33
Stomatal densities on the leaves of some African cycads (GROBBELAAR, N.)	41:17-19

<i>Strecknuus</i> 1:23, 2:27, 3:18-19, 4:20-21, 5:3, 6:24-25, 7:3, 8:32-33, 9:13, 10:8, 11:21, 12:15, 13:19-20, 14:16, 15:26, 17:20-22, 18:32, 19:34	
Stroebel, Pieter	13:7
STROEBEL, Pieter: Letter	4:11, 21:29
STRYDOM, Dawie: <i>Encephalartos longifolius</i> - yet more variation	37:17-18, 38:31-32 (comment by Piet VORSTER)
STRYDOM, Dawie J.F.: see STEYN, Elsie M.A.; and STRYDOM, Dawie J.F.	35:14-18
Study of the growth rate and coning cycle of cultivated cycad plants in Japan, a (SHIMIZU, Hideo)	41:23-26
Stuifmeelbank, Transvaalse	3:12
Stuifmeelbank: Transvaalse Strektak: Stuifmeel- en Saadbank	37:25
Stuifmeelruil	2:7, 3:12, 5:16, 6:40, 13:32-33
Stukkies en brokkies 1:13, 2:25, 3:12, 4: 19-20, 5:16-17, 6:11-13, 7:14-16, 8:24-25, 9:26-27, 10:28-29, 11:14-15, 12:4-8, 13:36-42, 14:20-24, 15:3-5, 16:12-15, 17:23-25, 18:34-39, 21:26-28, 22:21-23, 23:26-30	
Sudwala Caves	21:27
Sumatra Nursery	14:27
Superstition: <i>Stangeria</i> - a botanical watchdog	17:13
Supplementary description of the Guizhou Cycad from China, a (WANG, Ding-yue; & DENG, Cao-yi)	43:14-16
Swanepoel, Robbie	Newsletter 3:3
SWANN, G.E.: see BOTHA, C.H.; NAUDÉ, T.W.; SWANN, G.E.; ASHTON, M.M.; and VAN DER WATEREN, J.F.	30:20-21
Swop Shop	Newsletter 3:2, 1:22, 2:19
Symposium: Palm & Cycad Symposium - Townsville, Australia, 11-13 October 1996 (WALKLEY, Stan)	49:18-19
Taiwan: The Taiwan <i>Cycas</i> Nature Reserve (OSBORNE, Roy)	20: 36-38
Tallest cycad: <i>Lepidozamia hopei</i> (Zamiaceae), the world's tallest cycad (FORSTER, Paul I.)	48:12-15
Tang and meso-American cycads	23:21
TANG, William: Abnormal cones on <i>Zamia furfuracea</i>	41:29
TANG, Willie: Cycad trade and conservation	4: 22
TANG, William: Dominican Republic <i>Zamia</i> and CITES	46:18-21
Tang, William: <i>Handbook of cycad cultivation and landscaping</i> [reviewed by Roy OSBORNE]	43:38
TANG, William: Hollow stems in <i>Encephalartos</i>	44:42-43
TANG William: New pest threatens <i>Cycas</i> [scale insect <i>Aulacaspis yasumatsui</i> ]	49:14-17
TANG, William: Stem injury in cycads: an experiment	44:26-29
TANG, William: Taproot growing in wrong direction in <i>Encephalartos hildebrandtii</i>	49:22
TANG, William; and YANG, Si-Lin: Focus on <i>Cycas siamensis</i>	43:4-11
Tang, Willie	14:23, 35:30, 48:22
TANG, Willie: Another cycad monster [ <i>Encephalartos trispinosus</i> cone crowned by leaves]	20:20-21
TANG, Willie: Collecting and storing pollen	7:4-6
TANG, Willie: Cycad seeds and seedlings	9:8-11
TANG, Willie: Evolutionary patterns in cycads cone shape and size	18:26-31
TANG, Willie: Feral cycads	39:10-12
TANG, Willie: letter	3:27
TANG, Willie: Letter [uprooting of <i>Zamia integrifolia</i> plants in nature]	29:24
TANG, Willie: Letter: Manganese deficiency in <i>Cycas revoluta</i>	43:35
TANG, Willie: Male cycad cones. Structure and function	20:25-28
TANG, Willie: Mate choice in cycads	36:27-29
TANG, Willie: Maturity in cycads	24:24-27
TANG, Willie: Multiple male cones in <i>Cycas</i>	36:34-35
TANG, Willie: Pollinating cycads	8:16-17
Tang, Willie: Reproduction in a population of <i>Zamia pumila</i> - more work from Willie Tang	26:30
TANG, Willie: Roots on <i>Zamia</i> cones	28:14-15
TANG, Willie: Seed displays in cycads	14:30-33
TANG, Willie: Stem bulb on cone stalk in <i>Zamia furfuracea</i>	29:7
TANG, Willie: Variation in female cones of <i>Zamia pumila</i>	19:35-37
Tanzania: <i>Encephalartos hildebrandtii</i> [Focus on] (OSBORNE, Roy)	22:6, 7, 8, 9-12
Tanzania: <i>Encephalartos sclavoi</i> [Focus on] (SLABBERT, Riekie; and HURTER, Johan)	37:4-8
Tanzania: <i>Encephalartos</i> species growing in Kenya and Tanzania (TURNER, Ian S.)	38:12-15
Taproot growing in wrong direction in <i>Encephalartos hildebrandtii</i> (TANG, William)	49:22
TATE, Dave: Letter	12:30
Tate, Joyce	18:35
Taxonomic ranking and <i>Encephalartos aplanatus</i> [Letter from Piet VORSTER]	47:25
Television: Major BBC TV series on cycads	23:28
Television: TV 50/50 programme	29:15
Temperate House Kew Gardens London, the (MUNRO, Craig)	24:8-9
Temperature increase in male cones 7:14 ( <i>Encephalartos woodii</i> ), 12:6, 14:23, 25:24	
Terminology: Cycads: their corruptules, omnules and omnels (Letter from Nat GROBBELAAR)	41:36-37
Thailand: Nong Nooch Botanical Garden	48:23
The Bundesgärten Schönbrunn (BRUNNER, Julius)	19:18-20
The candidates [for Executive Committee]	4:23-24
The Cubans have landed [seed of <i>Microcycas calocoma</i> imported]	3:3
The cycad (MUNRO, Craig)	17:32
The cycad tragedy [ <i>Encephalartos senticosus</i> involved in road accident] (MERESMAN, Avis)	37:23
The cycads of South Africa (R.A. Dyer)	1:24, 8:25
The evolution of a botanical garden collection: the cycads at Fairchild Tropical Garden (WALTERS, Terrence)	30:8-9
The genus <i>Zamia</i> (STEVENSON, Dennis Wm.)	9:3-7
The Gondwanan <i>Cycas</i> (HENDRICKS, John)	10:24-25
The living cycads (C.J. Chamberlain): review by Roy OSBORNE	2:30
The R50 story (OSBORNE, Roy)	2:26
The role of wind in the pollination of <i>Bowenia</i> (VORSTER, Piet)	37:15
The safest cycad in the country? [in Port Elizabeth's snake park] (KEMP, Maans)	32:23
The Society and conservation [Letter from Piet VORSTER]	33:34
The Taiwan <i>Cycas</i> Nature Reserve (OSBORNE, Roy)	20: 36-38
The Van Zyl Commission of Enquiry - press release	26:17
The world list of cycads (STEVENSON, Dennis Wm.; and OSBORNE, Roy)	33:19-25
THOMPSON, Keith: Letter	31:31
THOMPSON, Keith: Letter: Total ban on distribution/export/sale of seed of endangered plants encourages illegal trade in those seeds	41:37-38
Thompson, Nurelle	47:13
Times of coning for the African cycads (OSBORNE, Roy)	35:18-20
Tissue culture	5:21, 6:15, 19:29
Tissue culture news	9:27
Tissue culture: New tissue culture initiative (OSBORNE, Roy)	37:23
Tissue culture: Recent work in cycad tissue culture (NORSTOG, Knut J.)	34:28
Tissue culture report	13:41
Tissue culture: Root formation from callus (SCHLEGEL, Helmut)	15:22
Tissue culture: Roy Osborne [Bits and pieces]	7:14
TITCHEN, Tony: Letter	10:32
To Zaire after cycads (TURNER, Ian)	9:22-24
TOMIYAMA, Hajime: "Double sex" in <i>Cycas revoluta</i> [bisexual plant]	44:40-41
TOMIYAMA, Hajime: Variegated forms of <i>Cycas revoluta</i>	48:32-33
TOMIYAMA, Hajime: see OSBORNE, Roy; and TOMIYAMA, Hajime	41:5-15
Total ban on distribution/export/sale of seed of endangered plants encourages illegal trade in those seeds (Letter from Keith THOMPSON)	41:37-38
Tour of Queensland	3:3
TOWERS, Brian: A field trip to Kawau Island	Newsletter 2:4-5
Townsend, James	38:15
Toxin: BMAA "no problem"	18:18
Toxin: Cycad toxin research (LAKE, Julie)	29:16
Toxin: Suspected cycad ( <i>Cycas revoluta</i> ) intoxication in dogs BOTHA, C.H.; NAUDÉ, T.W.; SWANN, G.E.; ASHTON, M.M.; and VAN DER WATEREN, J.F.)	30:20-21
Toxins: Cycad conundrum, the (LAKE, Julie)	31:26-27
Toxins: Cycad toxicity [M.Sc. degree for J.J. Nair]	27:27
Trade	4: 22
Trade in cycad seeds: CITES regulations (GIDDY, Cynthia)	31:32-33
Trade in cycad seeds: CITES regulations [Letter from J.L. ANDERSON]	33:35
Trade in cycad seeds: CITES regulations [Letter from Nat GROBBELAAR]	33:36-37
Trade: Comments on "From the president" [availability and price of seed and pollen] [Letter from Cynthia Giddy]	43:37-38
Trade: Dominican Republic <i>Zamia</i> and CITES (TANG, William)	46:18-21
Trade: International trade in cycads, the (GIDDY, Cynthia)	28:20
Trade: Seeds: export/import: Big Brother's infinite wisdom????? [Letter from Mike MICHAELSEN]	45:23
Trade: Total ban on distribution/export/sale of seed of endangered plants encourages illegal trade in those seeds (Letter from Keith THOMPSON)	

.....	41:37--38	Unusual cone number: <i>Cycas revoluta</i> .....	40:front cover
<i>Tranes internatus</i> [weevil] .....	29:20--22	Unusual cone number: <i>Encephalartos</i> plants in cultivation: Unusual cone number:	
<i>Tranes lyteroides</i> [weevil]: .....	27:25	Four-coned female <i>Encephalartos ferox</i> , the (NEL, Danie) .....	35:25
<i>Tranes lyteroides</i> [weevil]: Cycad-insect relationships (KENNEDY, Paul)		Unusual cone numbers [Letter from Stan WALKLEY and Roy OSBORNE]	47:24
.....	27:22--25	Unusual cycads .....	21:26
<i>Tranes subopaca</i> [weevil]: Initial observations of the reproductive behaviour and		Unusual <i>Cycas thouarsii</i> coning .....	22:23
an insect pollination agent of <i>Bowenia serrulata</i> (W. Bull) Chamberlain		Unusual growth form [ <i>Encephalartos longifolius</i> ] .....	14:24
(WILSON, Gary W.) .....	36:13--18, 37:15 (comment by Piet VORSTER)	Unusual male cones in <i>E[ncephalartos] altensteinii</i> (hybrid) [Letter by M.R.	
Transplanting: <i>Encephalartos altensteinii</i> : removal from the wild becomes a death		SCHWELLNUS] .....	26:32--33
sentence (VICE, Ashton) .....	44:39--40	Unusual male cone in <i>E[ncephalartos] trispinosus</i> [Letter by M.R.	
Transplanting: Something special - something sad (SCHWELLNUS, Martin)		SCHWELLNUS] .....	26:35
.....	33:33--34	Unusual scales/leaves in <i>E[ncephalartos] arenarius</i> [Letter by M.R.	
Transvaal Provincial Administration's nursery at Hartbeeshoek .....	15:22	SCHWELLNUS] .....	26:34
Transvaal Regional Branch, welcome to the .....	31:29	[uprooting of <i>Zamia integrifolia</i> plants in nature] [Letter by Willie TANG]	29:24
Transvaal Regional Branch: programme for 1994 .....	37:coloured page 5	Upside down <i>Bowenia</i> from Down Under (OSBORNE, Roy; and WALKLEY,	
Transvaal regional news (HARRIS, Ruan) .....	37:28	Stan) .....	47:16--17
Transvaalse Streektak van die Vereniging, nuus oor die (GROBBELAAR,		USA research roundup (OSBORNE, Roy) .....	8:4--5
Hanneke) 42:23--24, 43:31--32, 44:43--45, 45:18--19, 46:24--26, 47:18--20,			
48:32, 49:23, 50:17--21, 50:20--21			
Transvaalse Streektak: program vir 1994 .....	37:gekleurde bladsy 5	VAN DEN BERG, Izak J.: Brief: Broodbome in potte .....	48:34
Transvaalse Streektak: program vir 1997 (GROBBELAAR, Hanneke) 49:24--25		VAN DER MERWE, Jack: Letter .....	12:28
Transvaalse Streektak: Stuifmeel- en Saadbank .....	37:25	Van der Walt, Henkie and Ita: cycads in garden .....	15:25
<i>Transvenosus-woodii</i> twins [hybrid between <i>Encephalartos transvenosus</i> and <i>E.</i>		Van der Walt, Henkie and Ita: open ground farm .....	20:40
<i>woodii</i> ] .....	25:23	Van der Walt, Ita .....	35:28
<i>Tree atlas of southern Africa</i> by F. & J. von Breitenbach [book reviewed by		VAN DER WATEREN, J.F.: see BOTHA, C.H.; NAUDÉ, T.W.; SWANN,	
Piet VORSTER] .....	40:23--24	G.E.; ASHTON, M.M.; and VAN DER WATEREN, J.F. ....	30:20--21
Tribute to Dr Dyer, a (press clipping) .....	13:24	VAN DER WESTHUIJZEN, I.: see GROBBELAAR, N.; and VAN DER	
Trophy for Danie Nel [Conservation Award] .....	32:24	WESTHUIJZEN, I. ....	41:17--19
Try this for size [female cone of <i>Encephalartos longifolius</i> ] .....	11:15	Van die president (GROBBELAAR, Nat) 21:2, 22:2, 23:3, 27:2, 28:2, 29:2,	
Tucker, Robert .....	23:16	30:2, 31:2, 32:3, 33:3, 34:3, 35:3, 36:3--4	
Tucker, Robert: in memoriam .....	32:26	Van die president (OSBORNE, Roy) 5:22--23, 6:14--15, 7:20--21, 8:20--21,	
Turner, Ian .....	23:16, 48:21	9:12--13, 10:26--27, 11:18--19, 12:10--11, 13:34--35, 14:28--29, 15:20--21,	
TURNER, Ian: Cycads in China .....	21:11--14	16:16--17, 17:2, 18:10, 19:9, 20:2	
TURNER, Ian S.: <i>Encephalartos</i> species growing in Kenya and Tanzania		Van die president (ROBBERTSE, Hannes) 37:3, 38:3, 39:3, 40:3, 41:3--4, 42:3,	
.....	38:12--15	43:3, 44:3, 45:3, 46:3, 47:3, 48:3, 49:3, 50:3	
TURNER, Ian: In search of <i>Encephalartos delucanus</i> .....	44:9--12	Van die president (VORSTER, Piet) .....	24:2, 25:3
TURNER, Ian: In search of <i>Zamia wallisi</i> .....	11:20--21	Van die voorsitter (OSBORNE, Roy) .....	3:4--5, 4:10--11
TURNER, Ian: To Zaire after cycads .....	9:22--24	VAN HENSBERGEN, Hubertus: see PHELON, Janet; VAN HENSBERGEN,	
TUVEL, David: Food for thought .....	2:4	Hubertus; and OSBORNE, Roy .....	34:11--14
TV 50/50 programme .....	29:15	Van Jaarsveld, Ernst .....	40:22
Tweeslagtige keël .....	12:29	VAN ROOY, Leon: Brief: Waarde van broodbome .....	49:28
Twenty five years of field studies on cycads at the Botanical Garden of Naples,		Van Staden, J. ....	37:23
Italy (DE LUCA, Paolo; MORETTI, Aldo; and BALDUZZI, Alberto)		VAN STADEN, Piet: Kransberg dalk vanjaar al oopgestel vir stappers .	28:26
.....	42:11--18	Van Vliet, Ger .....	27:12
Twin seeds .....	13:42	Van Zyl Commission, the - Cynthia Giddy comments .....	26:17
Twin seeds and seedlings (MERESMAN, Avis) .....	40:21	Van Zyl Commission: The Van Zyl Commission of Enquiry - press release	26:17
Twins .....	16:14	Variation in <i>Encephalartos caffer</i> (KEMP, Maans) .....	32:18--19
Twin seed of <i>Ceratozamia [norstogii]</i> [Letter from Tom TURNER] .....	41:38	Variation in <i>Encephalartos longifolius</i> (VORSTER, Piet) .....	38:31--32
Two new African cycads [ <i>Encephalartos sclavoi</i> , <i>E. cerinus</i> ] .....	19:10	Variation in floristic characteristics of <i>Bowenia serrulata</i> (WILSON, Gary W.)	
Two new reports on cycad sex changes (OSBORNE, Roy) .....	23:18--20	.....	45:12--13
Two new <i>Zamias</i> [ <i>Z. soconuscensis</i> , <i>Z. cremnophila</i> ] .....	18:21	Variegated forms of <i>Cycas revoluta</i> (TOMIYAMA, Hajime) .....	48:32--33
Tzaneen: cycads along street .....	18:36	Variegated leaves in <i>Cycas revoluta</i> .....	41:11
		Vázquez-Torres, Mario .....	10:5, 42:12, 16:12
		Venance, Nirina .....	27:12
		<i>Venillodes pantheraria</i> [cycad-associated moth] .....	40:16
		VENTER, N.J.L.: letter .....	8:34
		Verdoorn, Inez .....	1:14, 6:11
		Verdoorn, I.C.: Obituary (VORSTER, P.) .....	18:24--25
		Verdoorn: Dr Verdoorn turns ninety .....	6:11
		Verkieping van Uitvoerende Komitee: Uitslag .....	5:16
		Verskillende vorme van <i>Encephalartos natalensis</i> [Brief van Erik	
		ROUWENHORST] .....	47:27
		Verskoning .....	20:3
		Vice, Ashton .....	44:17
		VICE, Ashton: <i>Encephalartos altensteinii</i> : a massive rape but possible recovery	
		.....	44:15--19
		VICE, Ashton: <i>Encephalartos altensteinii</i> : removal from the wild becomes a death	
		sentence .....	44:39--40
		VICE, Ashton: see GUBB, Andrew; & VICE, Ashton .....	27:20--21
		Vidio cassette: Cycad book and vidio [Knut Norstog's vidio cassette accompanying	
		his book <i>The biology of cycads</i> ] .....	15:3
		View on Kew, a (PHILLIPS, Maxine) .....	2:19
		Visit to cycad nursery [Eddie du Preez, Kloof] .....	9:13
		Visit to Kaapchoop district Nelspruit (FREEMAN, Ian) .....	28:16
		Visiting <i>Macrozamia pauli-guilielmii</i> subspecies <i>plurinervia</i> (PERNER, Joe)	

.....	19:28--29
Visiting <i>Macrozamia platyrachis</i> (PERNER, Joe)	14:26--27
Visiting N.S.W. <i>Macrozamia</i> s with Loran Whitelock (KENNEDY, Paul)	6:18--22
Visitors to South Africa [OSBORNE, Roy]	40:19--20
Von Breitenbach, J. & F.: <i>Tree atlas of southern Africa</i> [book reviewed by Piet VORSTER]	40:23--24
Voorstter sê sy sê, die	1:4
Vorige uitgawes van ENCEPHALARTOS	5:17
Vorster, Elsa	23:14, 37:30
VORSTER, Johan: Brief	12:30
VORSTER, L.M.D.: Balance sheet 1990	26:43--46
VORSTER, L.M.D.: Financial state, 1989	22:4--5
VORSTER, L.M.D.: Financial statement [for 1992]	34:36--38
VORSTER, L.M.D.: Financial statement [for 1993]	38:35--36
VORSTER, L.M.D.: Finansiële staat [vir 1992]	34:36--38
VORSTER, L.M.D.: Finansiële staat [vir 1993]	38:35--36
VORSTER, L.M.D.: Income and expenditure statement for year ending 1991-12-31	30:26--27
VORSTER, P.: Obituary. Dr. I.C. Verdoorn	18:24--25
Vorster, P.: <i>Proceedings of the Third International Conference on Cycad Biology</i> [book reviewed by Nat GROBBELAAR]	46:32--33
Vorster, Piet	5:24, 10:29, 13:4, 23:14, 23:16, 47:9
VORSTER, Piet: <i>Amorphocerus</i> broadens its horizons	50:24
VORSTER, Piet: Book review: <i>Cycads in China</i> by Faxian Wang, Huibo Liang, Tanqing Chen, & Dingyue Wang	47:29--32
VORSTER, Piet: Book review: <i>Cycads of China</i> by Guan Zhongtian & Zhou Lin	47:28--29
VORSTER, Piet: Book review: <i>The cycad collection of the Durban Botanic Gardens</i> by Roy Osborne	35:37 (see also 36:42)
VORSTER, Piet: Book review: <i>Tree atlas of southern Africa</i> by F. & J. von Breitenbach	40:23--24
VORSTER, Piet: Burning of <i>Encephalartos lanatus</i> to induce leaf formation	38:32
VORSTER, Piet: Comments on articles which appeared in "ENCEPHALARTOS" 36	38:31--33
VORSTER, Piet: Comments on <i>Cycas revoluta</i>	42:25--26
VORSTER, Piet: Comments on issues raised in "ENCEPHALARTOS" no. 36	37:14
VORSTER, Piet: Comments on some issues raised in "ENCEPHALARTOS" no. 35 ["Fishtail" <i>Encephalartos transvenosus</i> , "Blue" cycads, Observations on <i>Encephalartos inopinus</i> , Green cones in <i>Encephalartos lehmannii</i> , Yellow leaves]	36:32--33
VORSTER, Piet: CYCAD '96 [report on congress]	47:8--11
VORSTER, Piet: Cycads in containers	49:31--35
VORSTER, Piet: Distribution of "ENCEPHALARTOS"	38:30
VORSTER, Piet: Encounters with Chinese cycads	48:15--24
VORSTER, Piet: "Fishtail" <i>Encephalartos transvenosus</i>	38:32
VORSTER, Piet: Focus on <i>Encephalartos aemulans</i>	28:4--8
VORSTER, Piet: Focus on <i>Encephalartos aplanatus</i>	46:4--8
VORSTER, Piet: Focus on <i>Encephalartos brevifoliolatus</i>	47:4--7
VORSTER, Piet: Focus on <i>Encephalartos dolomiticus</i>	30:3--7
VORSTER, Piet: Focus on <i>Encephalartos dyerianus</i>	29:3--7
VORSTER, Piet: From the president	24:2, 25:2
VORSTER, Piet: Giant <i>Cycas thouarsii</i>	37:30
VORSTER, Piet: Growing <i>Encephalartos</i> in a Miami-type climate	16:18--25
VORSTER, Piet: Hybridization in <i>Encephalartos</i>	10:10--15
VORSTER, Piet: Letter	20:39
VORSTER, Piet: Letter [Age of cycad plants]	22:24
VORSTER, Piet: Letter [Australian cycads]	32:28
VORSTER, Piet: Letter: Comments on Dr. Schlegel's letter [on parthenocarpy]	38:41
VORSTER, Piet: Letter: Cycad hybrids	42:27
VORSTER, Piet: Letter: Cycadologists: Rhodes University versus Pretoria University	42:27
VORSTER, Piet: Letter [CYCAD '93 congress theme]	32:28
VORSTER, Piet: Letter [ <i>Cycas micholitzii</i> var. <i>micholitzii</i> ]	22:26
VORSTER, Piet: Letter: <i>Cycas revoluta</i> : how cold hardy?	48:34
VORSTER, Piet: Letter [ <i>Encephalartos laevifolius</i> on Mariepskop]	22:24--25
VORSTER, Piet: Letter: <i>Encephalartos trispinosus</i>	35:37--38
VORSTER, Piet: Letter [Germination of seed]	22:26
VORSTER, Piet: Letter: Harold Johnson Nature Reserve	50:30
VORSTER, Piet: Letter [in defense of hybrids]	13:45
VORSTER, Piet: Letter: <i>Macrozamia johnsonii</i> and <i>Cycas</i> in New South Wales	34:34
VORSTER, Piet: Letter: Taxonomic ranking and <i>Encephalartos aplanatus</i>	47:25
VORSTER, Piet: Letter: The Society and conservation	33:34
VORSTER, Piet: R.A. Dyer	12:12--15
VORSTER, Piet: The role of wind in the pollination of <i>Bowenia</i>	37:15
VORSTER, Piet: Van die president	24:2, 25:3
VORSTER, Piet: Variation in <i>Encephalartos longifolius</i>	38:31--32
VORSTER, Piet: Why does one collect cycads?	48:29--31
VORSTER, Piet: Why plant names change	1:15
VORSTER, Piet: Yellow leaves on cycads	37:15--16
VORSTER, Piet: see GROBBELAAR, Nat; OSBORNE, Roy; & VORSTER, Piet	29:26
VORSTER, Piet; HUNTER, Kobus; and CONRADIE, Kobus: Feeding nitrogen to cycads	19--20
VORSTER, Piet and Elsa: Focus on <i>Stangeria eriopus</i>	2:8--17
VORSTER, Piet; and VORSTER, Elsa: Focus on <i>Cycas thouarsii</i>	6:3--10
Vorster: Piet Vorster's palm collection	Newsletter 1:7
Vovides, Andrew	23:14
VOVIDES, Andrew P.: Problems of endangered species conservation in Mexico: cycads an example	20:29--35
Vovides, Andrew: Andrew Vovides moves to FTG	20:31
Vreemde broodboomsiekte (KEMP, Maans)	48:27--29
Waarde van broodbome [Brief van Leon VAN ROOY]	49:28
WALKLEY, Stan: <i>Cycas</i> pollination	31:22
WALKLEY, Stan: Palm & Cycad Symposium - Townsville, Australia, 11--13 October 1996	49:18--19
WALKLEY, Stan: Seed production on transplanted <i>Cycas revoluta</i>	29:8
WALKLEY, Stan; and OSBORNE, Roy: Letter: unusual cone numbers	47:24
WALKLEY, Stan: see OSBORNE, Roy; and WALKLEY, Stan	47:16--17
Walska, Ganna	18:12--18
Walters, Roy	21:23
Walters, Terrence W.: Newsitem: T.W. Walters [appointed Executive Director of Montgomery Foundation]	41:30--31
WALTERS, Terrence W.: Elucidating evolutionary relationships among cycads: the application of electrophoresis	28:9
WALTERS, Terrence: Hurricane Andrew	32:25
WALTERS, Terrence: The evolution of a botanical garden collection: the cycads at Fairchild Tropical Garden	30:8--9
Wang, Ding-yue	44:34, 36
WANG, Ding-yue: A preliminary study of the <i>Cycas micholitzii</i> complex	44:31--38
WANG, Dingyue: CYCAD '94, the First National Cycad Symposium of China	39:24--25
WANG, Ding-Yue: see YANG, Si-Lin; WANG, Ding-Yue; and OSBORNE, Roy	41:15--17, 41:16
WANG, Ding-yue; & DENG, Cao-yi: A supplementary description of the Guizhou Cycad from China	43:14--16
WANG, Ding-yue; & DENG, Cao-yi: <i>Cycas segmentifida</i> , a new species from China	43:11--14
Wang, Faxian; Liang, Huibo; Chen, Tanqing; & Wang, Dingyue: <i>Cycads in China</i> [book reviewed by Piet VORSTER]	47:29--32
Waxes, cycad leaf	17:14, 21:20, 29:9
Wedding bells for Nancy [Hammer]	12:5
Wedstryd	15:23
Weerts, Kevin: [ <i>Encephalartos villosus</i> survey at Krantzklouf]	27:27
Weevils: Cycad weevils: comments on articles by P.I. Forster and E. Rouwenhorst (OBERPRIELER, Rolf)	49:25--26
Weevils: <i>Encephalartos aplanatus</i> Vorster: the weevil perspective (OBERPRIELER, Rolf G.)	48:10--12
Weevils: The weevils associated with cycads - an overview [talk at meeting of the Transvaal Regional Branch] (OBERPRIELER, Rolf)	50:18--20
Weglating van sikadeë uit skoolleerplanne (GROBBELAAR, Nat)	18:42
Welcome to our new editor [Isabella Claassen] (GROBBELAAR, Nat)	32:25
Welcome to the Transvaal Regional Branch	31:29
Welsh, Rob	40:22
Welwitschia book (by Chris H. Bormmann)	8:24
<i>Welwitschia mirabilis</i>	19:51
Wentzel, Bunny	15:26, 17:1, 17:21, 17:23
WENTZEL, Bunny: Miracle <i>E. [ncephalartos] natalensis</i>	19:54
Wetgewing: Broodbome en die wet (KEMP, Maans)	10:29, 14:4--7, 15:19
Wetgewing: Kommentaar oor konsep beleid: <i>Encephalartos</i> spesies in Suid-Afrika (GROBBELAAR, Nat)	47:22--23
Wetgewing: Natalse Parkeraad reageer op president se versoek aangaande toestemming vir die uitvoer van broodboomsaad (GROBBELAAR, Nat)	36:35

Wetgewing t.o.v. broodbome	6:13	<i>Zamia cremnophila</i>	18:21, 39:9-10
What is CITES and how does it work? (McGOUGH, Noel)	30:13	<i>Zamia fischeri</i>	28:15
What is the tallest species and individual of cycad? [ <i>Lepidozamia hopei</i> ?] (FORSTER, Paul I.)	41:30	<i>Zamia floridana</i>	5:14, 5:15
WHITELOCK, Loran: Cycad pollen studies	8:22-23	<i>Zamia floridana</i> : see <i>Zamia integrifolia</i>	22:16-17
WHITELOCK, Loran: letter	5:32	<i>Zamia furfuracea</i>	9:11, 11:16 (abnormal female cone), 14:21, 17:20, 22:15, 30:16, 30:17, 41:29, 44:27-28
Why does one collect cycads? (VORSTER, Piet)	48:29-31	<i>Zamia furfuracea</i> : variegated form	50:31
Why plant names change (VORSTER, Piet)	1:15	<i>Zamia</i> [gentryi]:	19:14-15
WICHT, Hein: Margate experiment: Margate's Trees of Heaven [ <i>Cocos nucifera</i> ] Newsletter 2:5		<i>Zamia gentryi</i> [sic]: New species of <i>Zamia</i> from Amazonian Peru, a (WRINKLE, Guy) [suggested name <i>Zamia gentryi</i> , but probably not the same as <i>Zamia gentryi</i> described in 1997 (?) from Ecuador]	36:20-22
Wijnands, Onno	27:12	<i>Zamia integrifolia</i>	22:16-17
Wild Life Society issues cycad pamphlets	29:17	<i>Zamia integrifolia</i> (as <i>Z. pumila</i> ): Reproduction in a population of <i>Zamia pumila</i> - more work from Willie Tang	26:30
Wildlife Expo [Exhibition] [Letter from Avis MERESMAN]	41:38-39	<i>Zamia integrifolia</i> : [ <i>Atala</i> butterflies on <i>Zamia integrifolia</i> ]	37:32
Wildlife Expo '92: Natal Section exhibition (MERESMAN, Avis)	34:21	<i>Zamia integrifolia</i> : uprooting of plants in nature [Letter by Willie TANG]	29:24
WILLIAMS, Charles A.: I am a cycad	3:25	<i>Zamia lindenii</i> :	19:14
<i>Williamsonia gigas</i> (fossil)	16:32	<i>Zamia lindenii</i> : A cycad experience in Ecuador (ENDT, Dick)	19:13-15
<i>Williamsonia sewardiana</i> (fossil)	16:32	<i>Zamia loddigesii</i>	30:15
WILSON, Gary W.: Initial observations of the reproductive behaviour and an insect pollination agent of <i>Bowenia serrulata</i> (W. Bull) Chamberlain	36:13-18, 37:15 (comment by Piet VORSTER)	<i>Zamia paucijuga</i>	42:12
WILSON, Gary W.: Variation in floristic characteristics of <i>Bowenia serrulata</i>	45:12-13	<i>Zamia poeppigiana</i>	19:15
WINN, Thomas: The cycads of Longwood Gardens	15:27-29	<i>Zamia pumila</i>	22:15, 42:19, 46:18-21; 46:19, 21
Wohlberg, Edgar	39:16, 47:13	<i>Zamia pumila</i> : Dominican Republic <i>Zamia</i> and CITES (TANG, William)	46:18-21
Wollemi Pine	41:48, 42:32	<i>Zamia pumila</i> : Pollination and cone development in (OSBORNE, Roy)	32:20
Wood, John Medley	34:17, 36:37	<i>Zamia pumila</i> : Variation in female cones of <i>Zamia pumila</i> (TANG, Willie)	19:35-37
WOOD, Maurice G.: letter	4:11	<i>Zamia pumila</i> : see <i>Z. integrifolia</i>	26:30
Wood, Maurice: in memoriam	19:27	<i>Zamia soconuscensis</i>	18:21
Woodpeckers	18:31, 37	<i>Zamia standleyi</i>	23:21
Works, Roy	36:37, 40:19	<i>Zamia vasquezii</i>	40:21, 42:15
World award for Cynthia Giddy (OSBORNE, Roy)	35:24 (see also 35:40)	<i>Zamia wallisii</i> : In search of <i>Zamia wallisii</i> (TURNER, Ian)	11:20-21
World cycad census	29:15, 31:11	<i>Zamia</i> from seed (HOOFT, Jan)	22:16-17
World cycad census, 1991 - your co-operation requested (OSBORNE, Roy)	27:39-40	<i>Zamia</i> in Ecuador (ENDT, Dick)	20:24
World cycad census: 1991-1992 world cycad census: news and progress	30:25	<i>Zamia</i> Motel	30:23
World list of cycads, a (OSBORNE, Roy; & HENDRICKS, John)	3:13-17	<i>Zamia</i> : Odd coning in	31:25
World list of cycads - supplement, a (OSBORNE, Roy; and HENDRICKS, John)	5:27	<i>Zamia</i> : Stevenson on the U.S.A. <i>Zamias</i>	28:21
World: map of cycad distributions	26:9	<i>Zamia</i> surprise [abnormal female cone] (DeBRUYNE, Marion)	11:16
WRINKLE, Guy: A new species of <i>Zamia</i> from Amazonian Peru [suggested name <i>Zamia gentryi</i> , but probably not the same as <i>Zamia gentryi</i> described in 1997 (?) from Ecuador]	36:20-22	<i>Zamia</i> : The genus <i>Zamia</i> (STEVENSON, Dennis Wm.)	9:3-7
Wrinkle, Guy: <i>Cycads: their cultivation and propagation</i> [booklet reviewed by Nat GROBBELAAR]	46:33	<i>Zamia</i> : Two new <i>Zamias</i> [ <i>Z. soconuscensis</i> , <i>Z. cremnophila</i> ]	18:21
WRINKLE, Guy: Mogote - the story of <i>Zamia cremnophila</i>	39:9-10	<i>Zamites fenconis</i> [fossil]	16:30
Wulveskop Estate Nursery	10:31	ZEITNER, June Culp: Royal cycads [fossil cycads]	19:23-27
Wylie Info. Centre [James Wylie Information Centre in the Durban Botanic Gardens]	18:35	<i>Zerenopsis leopardina</i> [cycad-associated moth]	9:25, 22:22, 25:25, 40:16
Wylie, James	18:35	<i>Zerenopsis leopardina</i> : New product [ <i>Cypermethrin EC</i> ] knocks Leopard Moth larvae (OSBORNE, Roy)	42:24
WYMAN, Ken: Living fossils in cultivation	5:18-19, 6:35-36	Zhongtian, Guan; & Lin, Zhou: <i>Cycads of China</i> [book reviewed by Piet VORSTER]	47:28-29
WYNANTS, Jeff: see JONES, Scott; and WYNANTS, Jeff 50:13, 14, 15, 16, 17		Zimbabwe: <i>Encephalartos concinnus</i> [Focus on] (OSBORNE, Roy)	34:4-8, 9, 10, 11
Xishuangbanna Botanical Garden	48:19	Zimbabwe: <i>Encephalartos manikensis</i> [Focus on] (OSBORNE, Roy)	38:4-11
X-rays: Radiographic evaluation of cycad seed (GOLDSCHMIDT, R.P.; and SACKS, A.J.)	41:26-28	Zimbabwe: map of cycad localities	38:5
Yamaji, Yoko	34:32	Zunckel, Kevin	3:12
YANG, Si-Lin; and YANG, Si-Yuan: A note on the cycads in Yunnan, south-western China	40:10-13	Zunckel, Kevan	36:37
YANG, Si-Lin; WANG, Ding-Yue; and OSBORNE, Roy: The Shenzhen Fairy Lake Botanical Garden	41:15-17, 41:16	ZUNCKEL, Kevin: [ <i>Encephalartos</i> ] <i>Humilis</i> on the move (replanting in nature)	12:24
YANG, Si-Lin: see TANG, William; and YANG, Si-Lin	43:4-11	Zunckel, Kevan: research on <i>Encephalartos laevifolius</i> completed	26:30
YANG, Si-Yuan: see YANG, Si-Lin; and YANG, Si-Yuan	40:10-13		
Yellow leaf phenomenon, the (GROBBELAAR, Nat)	39:19-20		
Yellow leaves in cycad seedlings (GROBBELAAR, Nat)	36:33-34, 37:15-16 (comment by Piet VORSTER)		
Yellow leaves in cycad seedlings [Letter from R. SCHUTTE]	35:38, 36:33-34		
Yellow leaves on cycads (VORSTER, Piet)	37:15-16		
Youngest member [Rein Schucht]	2:6		
Youngest member [Robbie Swanepoel]	Newsletter 3:3		
Zaire: To Zaire after cycads (TURNER, Ian)	9:22-24		
<i>Zamia</i> (PETERS, H.A.)	5:15-15		
<i>Zamia</i> Cafe	30:23		

A SNAKE IN PARADISE?

NZ HERALD 21.12.96

THIEVES' TRACKS: Andrew Maloy with the abandoned cypads. HERALD PICTURE / BRETT PHIBBS



# Robbery case for special branch

By FIONA BARBER

A \$15,000 night raid on an Auckland greenhouse is the latest in a big-business crop of plant crimes.

Thirty-four cypads were grabbed from Unitec after thieves hacked through wire and shade-cloth at the Mt Albert polytechnic.

Workers arrived yesterday to find all but a few of the palm-like plants in their prized collection had gone.

The expensive cypads — the biggest pair are worth about \$6000 each — are the latest casualties of a crime which those in the horticultural industry say is both organised and flourishing.

The managing editor of *Commercial Horticulture* magazine, Mr Bob Edwards, said plant thefts were an increasing problem countrywide.

"Stealing throughout horticulture is much more organised — thieves are taking cuttings to order."

Expensive plants had been stolen from garden centres and people had been spotted digging trees out of the ground.

Last year, the Wholesale Tree company in Takanini resorted to putting microchips in the trunks of potted cypads.

Unitec staff are inserting reward notices in letters notifying students of their exam results.

The polytechnic is offering \$500 for information leading to recovery of the plants.

Some of the cypads, natives of Australia and South Africa, had spent about 15 years at the Unitec, said a horticultural lecturer, Mr Andrew Maloy.

"They knew the cypads were here. They obviously were people who had a ready market or were going to use them in a landscape job."

Mr Maloy said a very old cypad tree from the polytechnic grounds had to be removed and potted after repeated attempts to dig it up or hack off cuttings.

Aloes

New Zealand Herald, 21.12.1996

Cycad theft is now a real problem here. It is all about supply and demand. I shall enclose a recent newspaper clipping which was just one of several from last year. Ten years ago the word cycad was unknown here and now with the press connecting the word value and dollars every few months, everyone wants a cycad for investment. The only cycad we grow for sale (but do not promote or advertise) is *Lepidozamia peroffskyana* because it grows easily and well here. We can offer it cheaply and it seems to satisfy the public demand for a nice plant which is a cycad.

Sent in by KEITH BOYER



# Botanic garden for locals and tourists

Joe and Karen Perner want to establish a botanic gardens for both Katherine locals and tourists to enjoy.

The botanic gardens will specialise in cycads. "The collection of plants will ideally consist of 20 to 30 plants of each species which will be planted in the ground," Mr Perner said.

Cycads are palm like plants which are native to Africa, the Americas, and the Asia Pacific region. They live in temperate to equatorial climates.

Mr Perner said cycads have been in existence for over 250 million years, and that fossil evidence from around 200 million years ago have shown that the plants have hardly changed.

### Habitat

"They are real survivors and are possibly more threatened now than they have ever been through unscrupulous collectors, farming and land clearing, annual fires and destruction of habitat.

"It is important that these relics of our past are preserved in recognised botanic gardens and collections, and hopefully plants produced from these will be planted back into habitat where these species are already extinct," Mr Perner said.

### Cycads

Mr Perner started collecting cycads in 1981 and has since become recognised world wide as a reputable collector and an authority on the plants.

Cycads need well drained soils and the rocky two point six hectares area on Morris Road where the

By ALICE MELITA

botanic gardens are to be is ideal Mr Perner said.

"The site was chosen for geological rock formations, sandstone and limestone, the diversity of soil types and for its good drainage."

All the plants in the gardens are watered by irrigation. Mr Perner said he has put in kilometres of irrigation line.

### Funding

Mr and Mrs Perner will be applying for funding to establish the botanic gardens and tourism infrastructure.

"I have always had a dream of creating a botanic gardens to house my collection," he said.

If the funding becomes available Mr Perner said he will start construction of a one kilometre walking track and drill a bore to water the gardens.

### Viewing

The walking tracks will have different degrees of difficulty Mr Perner said.

Mr Perner also has plans for a viewing platform with "a 250 degree view of the horizon taking in south, west and easterly views". This view will incorporate Twin Hills, Arnhem Land escarpment, 17 Mile Valley and Nitmiluk Gorge.

There are also plans for a kiosk and interpretation centre in the future. "This will also incorporate fossil displays of animals and plants," Mr Perner said.



Mr Perner hopes to offer tourists and locals self-guided and guided tours. "Sunset tours and night tours are also envisaged," he said.

Life size replicas of dinosaurs that once roamed the Katherine area are also on the drawing board for the gardens Mr Perner said.

### Botanic

The Perners are hopefully that the Cycads Gardens and Nursery will officially open this time next year.

"Depending on the funding I envisage opening early next tourist season," Mr Perner said.

The rare plants produced from the the Perners collection and botanic gardens will be distributed to other gardens and collectors.

ABOVE: Joe Perner with one of his many cycad palms.

RIGHT: Joe and Karen Perner with daughter Jade Jefferis.



This collection will also be a research collection for botanists and specialists," Mr Perner said.

"Interest has been shown from institutions and botanic gardens from all over the world," he said.

Mr Perner is a self taught field botanist who has travelled the world gathering seeds for his collection.

Mr Perner said he is recognised around the world for his expertise in cycads.

**KATHERINE ORCHID NURSERY**

- ☘ Fresh cut orchid flowers
- ☘ Orchid plants & growing requirements
- ☘ Local delivery
- ☘ Nursery tours

phone orders 8972 1905  
Monday to Saturday 9am to 5pm  
Special for April - Mini Dendrobiums \$6.00

