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# ENCEPHALARTOS

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# CYCAD SOCIETY OF SOUTH AFRICA BROODBOOM VERENIGING VAN SUID-AFRIKA

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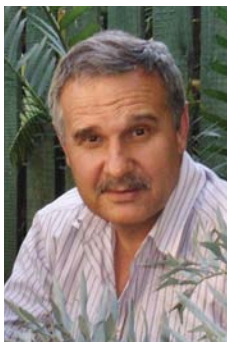
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# ENCEPHALARTOS

Tydskrif van die Broodboom Vereniging van Suid-Afrika

## ON THE COVER:

Front cover: *Encephalartos horridus* in habitat near Uitenhage with a new flush of leaves. Note the broad pinnae with only a single lobe. This particular habitat had plants with nine different pinna shapes which varied from the hotter part of the habitat to the cooler part. The plants more exposed to the sun had narrow, revolute pinnae with two or three lobes while plants lower down the slope had up to 5 lobes and much wider pinnae. One specimen even had prickles on both margins of the pinnae. This plant grows on a southern slope and is sheltered from the hot sun most of the year. Photograph: Wynand van Eeden

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## FROM THE COUNCIL / VAN DIE RAAD

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### VAN DIE REDAKTEUR / FROM THE EDITOR

As alles volgens plan verloop het, ontvang lede twee uitgawes gelyk. Omrede artikels maar min was en om kostes te spaar is die Junie en September uitgawes saam geos aan lede. Hopelik raak beide nie weg in die pos nie!

Dit is ook weer tyd om lede te herinner om hulle ledegeld te betaal vir 2020. Kyk elders in hierdie uitgawe vir meer inligting en ook 'n lidmaatskap vorm.

Die nuwe jaar is nie ver in die toekoms nie en dit beteken dat lede 'n nuwe bestuur moet verkies, beide vir hulle takke, asook vir die raad van die vereniging. Let wel daarop dat ALLE lede die voorreg het volgens die konstitusie om ampsdraers te benoem. Soos in die nuwe konstitusie uiteengesit en omdat die streeksvoorsitters lede verteenwoordig, sal die streeksvertegenwoordigers stem om nuwe ampsdraers te kies. Dit is dus belangrik dat lede hulle streeksvoorsitters 'n mandaat gee vir wie om te stem. Die jaareinde funksies van die streke is dus 'n goeie geleentheid om hierdie saak te bespreek.

Dit is belangrik om mense te kies wat vaardig, betrokke en bereid is om te help. Die vereniging is finansiële gesond maar fondse moet steeds oordeelkundig bestee word.

Ek vertrou hierdie uitgawe, al is dit dun om die lyf, lees lekker en dat lede steeds sal bly bydra om ENCEPHALARTOS 'n sukses te maak.

Beste groete  
Wynand van Eeden

If all went according to plan, you should have received two issues. Due to a shortage of articles and to save postage, the June and September issues were sent together. I sincerely hope they did not get lost in the mail!

It is also time to renew your membership for 2020. Please see notices elsewhere in this issue as well as a membership form you can complete and post to the secretary.

The new year is not far in the future and that means new candidates must be nominated for the council as well as for the regional committees. Please note that the constitution allows ALL members to nominate candidates for the various positions. The new constitution calls for the regional representatives to then vote and fill the positions on the board. This means members should give their representatives a valid mandate for whom to vote. The yearend functions are thus the ideal opportunity to address this issue and to get the necessary nominations we need.

It is important to nominate involved, capable and willing people to run our society. The society is on a sound financial footing but funds must still be managed with care.

I trust this issue, as thin as it is, is still good to read and members will continue to contribute to make ENCEPHALARTOS a success.

Kind regards  
Wynand van Eeden

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**PLEASE RENEW YOUR MEMBERSHIP FOR 2020.  
HERNU ASSEBLIEF U LIDMAATSKAP VIR 2020.**

#### Banking details / Bank besonderhede

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**Account number:** 011 943 300. (cheque)

# AN ENORMOUS *ENCEPHALARTOS LONGIFOLIUS* CONE

Robert Kopfstein

Nine years ago a one meter by one meter size box with a specimen of *Encephalartos longifolius* (along with several other boxed *Encephalartos* species) was donated to the San Diego Botanic Garden. The donation was to honor Bill Teague, a long time horticulturist and landscape designer. On September 29, 2010 Bill Teague died of ALS, but not before he got to plan the layout of where these large cycads would be placed in the botanic garden.

This generous donation was a gift of Ken Hennell, who grew most of his cycad collection from seed. In the case of the *E. longifolius* he sowed the seed in the late 1980's.

In 2018 the *E. longifolius*, a female pushed a huge cone and was wet pollinated with fresh pollen from a private garden.

By August of 2019 the female cone began to fall apart, and after two weeks it finally shed its last seed. There were 900 in all.

Since August the seed has been cleaned and is resting until it is mature enough to germinate.

The San Diego Botanic Garden now has more than 1000 cycads in its data base, and now that the new conservatory is up and functioning, the Garden is able to display to the public its more tropical species, like *Zamia pseudoparasitica* (coning size, both male and female) and *Microcycas calocoma*.

It will be interesting to see what percentage of the 900 *E. longifolius* seeds are viable.



Figure 1. The cone begins to fall apart. Photo: Jeremy Bugarchich (curator of plant collections).



Figure 2. Jeremy's hat atop the cone. Photo: Jeremy Bugarchich (curator of plant collections).



Figure 3. Single megasporophyll with two seeds. Photo: Jeremy Bugarchich (curator of plant collections).

# CYCAD BIOLOGY AND CONSERVATION:

## THE 9<sup>TH</sup> INTERNATIONAL CONFERENCE ON CYCAD BIOLOGY

Wynand van Eeden

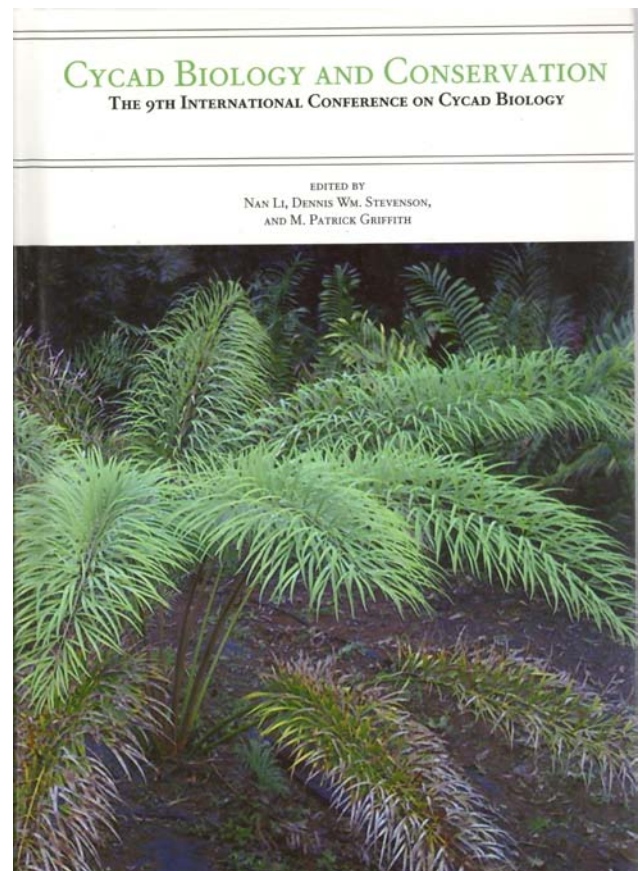
**Edited by:** Nan Li, Dennis Wm. Stevenson and Patrick Griffith  
**Format:** hard cover  
**Size:** 180 x 260 mm  
**Pages:** 608  
**Price:** US\$150 (or US\$5.00 per article)  
**Available from:** [www.nybgshop.org](http://www.nybgshop.org)  
(or see [www.cycadgroup.org](http://www.cycadgroup.org) for more)

I was very excited to receive a message from the publisher, the New York Botanical Garden, stating that the proceedings of the 9<sup>th</sup> International Conference on Cycad Biology, held in Shenzhen, China in December 2011, are now available. It took a while but was well worth the wait if you are a student of cycads.

It starts off with an obituary for Oliver Sacks, who passed away in 2015. For those of you not familiar with his work, it is well worth finding a copy of *Island of the Colourblind* to read. In this book he describes how the Parkinsonism and Alzheimer's prevalent on the island of Guam is traced back to the poisons in cycads.

The proceedings contain 34 articles, contributed by 100 people from 14 countries and topics covered are anatomy, conservation, ecology, genetics, horticulture, pollination biology and systematics. The contributions are of a high standard and add much to our understanding of cycad biology and their role in the flora of the regions they occur. It is also good to see more contributions on conservation and horticulture at these conferences. These fields should be studied in more detail as it is getting more and more important to understand ecological relationships and how we can protect cycads from extinction. We are losing species at an alarming rate and much need to be done to curb this trend.

Many of the contributors are well known and established cycad researchers but it is good to also see younger scientists rise from the ranks to join them and



**Figure 1.** Cover of the proceedings of CYCAD 2011, showing *Cycas debaoensis*.

continue working on cycads. There is much we still do not understand and much we still have to learn.

I have all the printed proceeding of the cycad conferences in my personal library and it is a remarkable resource. In the current age where it is so easy to get unreliable information off the internet, it is good to have a resource which many knowledgeable people spent time and effort to create. I am eagerly awaiting the proceedings of the Colombia conference and will definitely add it to my library.

# THE STORY OF ENCEPHALARTOS EUGENE-MARAISII

Andre Cilliers

## EUGENE MARAIS, THE PERSON

Eugène Nielen Marais (9 January 1871–29 March 1936) was a South African lawyer, naturalist, poet and writer. He has been recognised as an intellectual genius and an Afrikaner hero. Marais was born in Pretoria and attended various schools throughout the country. A great deal of his education was in English, as were many of his early poems. He matriculated at the age of sixteen.

After leaving school, he worked in Pretoria as a legal clerk and then as a journalist before becoming owner (at the age of twenty) of a newspaper called *Land en Volk*. He also involved himself deeply in local politics at that time.

He began taking opiates at an early age and moved to morphine (then considered to be non-habit forming and safe) very soon thereafter. He became addicted, and his addiction ruled his behaviour to a greater or lesser extent throughout his life. When asked why he took drugs, he blamed his ill health, insomnia and the death of his young wife at the time of the birth of their only child. Much later, he blamed his addiction on malaria which he contracted in Mozambique.

His time in the Waterberg was probably the most creative part of his life. He spent months there observing animals and insects, and their behaviour. Among these

were baboons, the black mamba, puff adder, spitting cobra and the termite. His observations in the Waterberg led to the writing of the world renowned book *Soul of the White Ant*. In this book (a very worthwhile read) he speculated that the termite colony should be considered a single organism!! The philosophy behind the book is truly remarkable, and a witness to the intellectual capacity of Marais. The book was plagiarised by Nobel laureate Maurice Maeterlinck. This was probably the biggest cause of Marais' depression which later led to him taking his own life. He also wrote other books following his time and observations in the Waterberg, among which are *My Friends the Baboons* and *The Soul of the Ape*. He is acknowledged as the father of the scientific study of the behaviour of animals, known as Ethology. The most renowned book remained *Soul of the White Ant*, which has been translated into many languages.

## DISCOVERY OF ENCEPHALARTOS EUGENE-MARAISII

During his time in the Waterberg, Marais reported having seen cycads up in the mountains. He even sent a specimen to the botanist, Dr Rudolf Marloth in Cape Town. He noted that the kernels (which we call the sarcotesta) had poisoned several children. Marloth could not be sure that this had indeed come from the Waterberg, for up till then all cycads had been found in the eastern parts of



Figure 1. Eugene Marais (source: Wikipedia).



Figure 2. Dr Inez Verdoorn (source: Wikipedia).

the country and Marais's dependence on drugs also did not add to the credibility of the find. Eugene Marais took his own life at age 65 on a farm near Pelindaba north of Pretoria, taking with him the details of his cycad. It was Dr Inez Verdoorn, his niece and a noted South African botanist, who continued the hunt for this special plant. It was a moment of great human and botanical triumph when through her efforts the cycads were at last found and Eugene Marais was proved right. Various forms have since been observed among such as Kransberg, Palala and Melkrivier.

Eugene Marais made an enormous contribution to South African literature, botany and zoology. He also enriched the lives of so many cycad enthusiasts by discovering one of the most beautiful of the indigenous cycads, and adding to it the wonderful story that led to the formal description of the species.



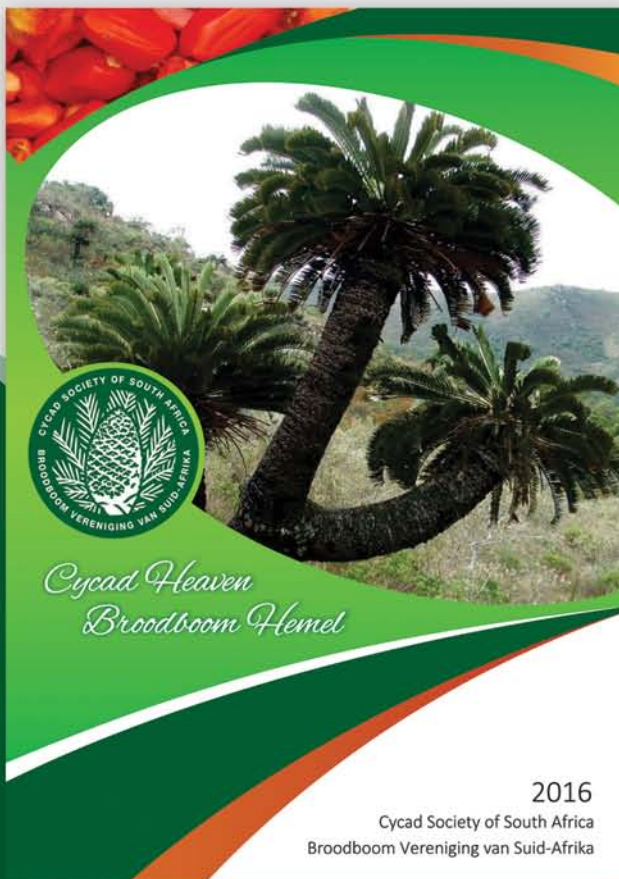
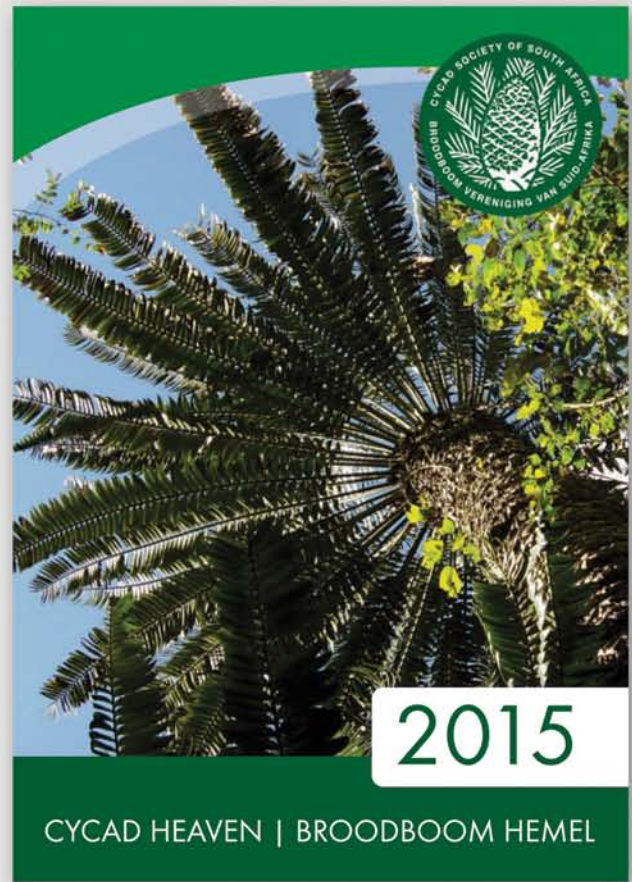
**Figure 3.** *Encephalartos eugene-maraisii*

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The annual membership fees for TCS are listed below. For your convenience, you may join or renew your membership online using PayPal (see [www.cycad.org/members/membership-info.htm](http://www.cycad.org/members/membership-info.htm)), and you may pay your dues up to three years in advance, except for student memberships, which can only be paid one year at a time.

Two of the most important benefits of TCS membership are the Cycad Newsletter and the Cycad Society Seedbank.

- Student Memberships: \$25.00 per year
- Non-US Student Memberships: \$35.00 per year
- US Memberships: \$35.00 per year
- Non-US Memberships: \$45.00 per year

## BOOKS WANTED

Copies wanted of the following books:

- Speculations on the *Encephalartos* species of Mozambique, Capela, P. (2nd edition), 2010
- *Encephalartos nubimontanus* – a distinction between 11 variants, De Klerk, D., 2004
- Bothalia, Part VIII, Vol 4. - The Cycads of Southern Africa, Dyer, R.A., 1965
- Cycad Cultivation and Landscaping, Tang, W., 1995

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- Scan at 300 dpi.
- Save as jpeg, using maximum file size (i.e. minimum compression).
- Send by e-mail to [wynand@ananzi.co.za](mailto:wynand@ananzi.co.za) and mark 'For Encephalartos'.

The tables and figures/photographs of a manuscript should be numbered and all tables should have a heading. All figures and photographs should have a legend. All figures/photographs should bear written on the reverse the name of the author, figure number and the top of the figure or photograph.

Formal descriptions of new cycad taxa and new name combinations may be published in ENCEPHALARTOS. Authors are however, advised to rather publish such articles in the journal *Novon* which has been established especially for such articles. Articles on potential new cycad taxa, without formally describing them as new taxa, may also be published in ENCEPHALARTOS. To avoid any possible confusion of names of such taxa in future, they should be designated for example by terms such as Species A or Species 99. Do not ascribe provisional names to potential new cycad taxa.

### Contributions should reach the editor not later than:

March issue	: First week of January
June issue	: First week of April
September issue	: First week of July
December issue	: Last week of September

One copy of the ENCEPHALARTOS issue in which a contribution appears, will be supplied gratis to all non-member authors.

**Note:** If applicable, all figures and photographs will be reduced or enlarged to fit over either one, two or three columns when printed.

### Tariffs for advertising in ENCEPHALARTOS:

Page size	Black and white	Colour
Quarter page	R175	R250
Half page	R350	R500
Full page	R700	R1000

Members: up to quarter page free of charge—black and white only.

To advertise in ENCEPHALARTOS, contact the Secretary Treasurer and/or Editor.

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Bydraes kan in Afrikaans of Engels geskryf word. Manuskripte moet getik wees. Kort mededelings en briewe aan die redakteur mag getik of in duidelik leesbare handskrif wees. Nommer alle bladsye van 'n manuskrip opeenvolgend. Foto's moet van goeie gehalte wees, voldoende kontras besit en besonderhede duidelik toon. Skrywers is welkom om illustrasies in elektroniese formaat te stuur, met die volgende vereistes:

- Skandeer teen 300 dpi.
- Stoor as jpeg, maksimum lêergrootte (d.w.s. minimum kompressie).
- Stuur per e-pos na [wynand@ananzi.co.za](mailto:wynand@ananzi.co.za) en merk 'Vir Encephalartos'.

Die tabelle en figure/foto's van 'n manuskrip moet genommer wees en elke tabel moet 'n opskrif hê. Alle figure en foto's moet 'n onderskrif hê. Agter op elke figuur/foto moet die naam van die outeur en die nommer van die figuur/foto geskryf word en die bopunt van die figuur of foto moet aangedui word.

Alhoewel die formele beskrywing van nuwe broodboom taksons en nuwe naamkombinasies in ENCEPHALARTOS opgeneem kan word, word daar aanbeveel dat sodanige artikels eerder in die tydskrif *Novon*, wat spesiaal vir sodanige artikels in die lewe geroep is, gepubliseer word. Artikels oor potensiële nuwe broodboomtaksons kan ook opgeneem word in ENCEPHALARTOS sonder dat die artikels die nuwe takson formeel beskryf. Om latere moontlike naamsverwarring van sodanige taksons tot die minimum te beperk, moet die potensiële nuwe takson in die artikel deur terme soos byvoorbeeld Spesie A of Spesie 99 aangedui word.

### Bydraes moet die redakteur voor of op die volgende datums bereik:

Maart-uitgawe	: Eerste week van Januarie
Junie-uitgawe	: Eerste week van April
September-uitgawe	: Eerste week van Julie
Desember-uitgawe	: Eerste week van September

Een eksemplaar van die ENCEPHALARTOS uitgawe waarin 'n bydrae verskyn, sal gratis aan alle nie-lid outeurs voorsien word.

**Nota:** Waar van toepassing, sal alle finaal gedrukte figure en foto's verklein of vergroot word om oor óf een, twee óf drie kolomme te pas.

### Tariewe om in ENCEPHALARTOS te adverteer:

Bladsy grootte	Swart en wit	Kleur
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