



BOTSOC NEWSLETTER

May 2009

Dear Botsoc Member

A warm 'hello' to you on these Winter Time days.

Our Annual General Meeting has come and gone and at the end of this Newsletter you will find the list of those who now make up CAPP (Core of Active Plant People). There were 16 members and 3 visitors present, which, we understand, is not a bad attendance for an AGM. We did have our quorum so were able to finalize the business of the evening. We were thrilled that most of the previous members were willing to continue on CAPP and warmly welcome Olga Jones as a new addition. Olga was thrown in at the deep end as at the last Garden Walk (4 April) we had so many visitors (40) that she had to step in and take a group. Thank you Olga and we look forward to your on going help with the guiding. The presentation after the meeting, by Jay Bolin, was fascinating as you will see from the item further down, so, all in all, we felt it was a good evening.

Dr Gillian Maggs-Kölling, erstwhile Head of the NBRI, has received a well-earned promotion and is now the Deputy Director of Forest Research. We applaud her for what she has achieved at the NBRI and wish her every success in her new post. Until she has settled in, Gillian can still be reached via her NBRI e-mail. We know that she is still going to be around and we will not lose touch.

In another mail, we will send out a list of members for 2009, that is, those who have paid their membership fees for this calendar year. If you have not yet paid, this will be the last Newsletter to come your way. Do bear in mind that we have kept our subscription rate as low as possible as we would like to reach as many folk as possible. Our membership drive is low key this year as there will not be an Open Day when our numbers have historically substantially increased. Stay with us, we'll have a good year!

Diana Thompson

REPORT ON PREVIOUS ACTIVITIES

BOTSOC / NEWS outing to NaDEET, Friday 1st May 2009 to Monday 4th May 2009



The Carbon Footprint of 30 people from NEWS (Namibian Environment & Wildlife Society), Botsoc (Botanical Society of Namibia) and the Centre was measured over 3 days at the Namib Desert Environmental Education Trust Centre in the NamibRand Nature Reserve. The Director of the Centre, Viktoria Keding, measured the hot and cold water used for showers, cooking & cleaning; our rubbish of glass, paper, plastic and compost waste as well as the energy used from solar heating, solar cooking, fuel efficient stoves and gas! We were not the worst group but neither were we the best! However, we learnt a lot, had great fun and it was a wonderful experience.

UPCOMING WALKS AND TALKS OF INTEREST

GARDEN WALK:

The next guided walk in the National Botanic Garden will take place on **Saturday 9 May 2009 at 08:00**

Meet at **08:00** at National Botanical Research Institute, 8 Orban Street, Windhoek

Entrance for non-members is N\$10. Muffins and tea/coffee will be on sale.

Further guided walks in the National Botanic Garden will take place every first Saturday of each month.

TALKS:

Thursday 14 May 2009 at 18h30 at the National Botanical Research Institute, 8 Orban Street

An illustrated talk about **"Plants of the Central Highlands"**

Coleen Mannheimer will present another slideshow in her very popular series on Namibia's wild flowers.

Following the summer rains, flowering plants produced an exceptional burst of colour in Windhoek and surrounds.

This floral splendour may have intrigued you to find out more about these plants. Here's your opportunity!!!

All are welcome. Refreshments will be served.

PLANTS

From fungus to foul flower: Unearthing the parasitic genus *Hydnora*

Jay Bolin

The parasitic genus *Hydnora* (Hydnoraceae) is a wonderful initiation into the wild world of parasitic plants, which compose approximately 3% of plant diversity. The most familiar parasitic plant to most Namibians is a common mistletoe, *Tapinanthus oleifolius*, which parasitizes a variety of native and introduced plants, and whose bright red flowers and fruits are common sights in tree crowns throughout Namibia. *Tapinanthus* is considered a “hemiparasite” because it has green photosynthetic leaves and uses its host primarily as a source of water (and a few minerals). Conversely, *Hydnora* represents an extreme form of parasitism, and is termed a “holoparasite” because it completely lacks chlorophyll and depends on its host for all of its water and nutritional requirements. Without a direct requirement for sunlight, the adult *Hydnora* plants lack many features typical of green plants and are without roots, scales, and leaves. Its appearance is so peculiar that the esteemed father of southern African botany, Carl Thunberg, mistook this strange parasitic plant first collected from the Karoo of the Western Cape of SA for a type of mushroom and initially described it as such!

The pollination biology of *Hydnora* is one of its most fascinating aspects. All members of the genus produce fetid odours, resembling carrion or old gym socks to attract their pollinators. The pollination system itself is a clever “catch and release” insect trapping mechanism, where insects (mainly carrion beetles) attracted by the odours, tumble into the floral chamber where they are detained by the smooth vertical chamber walls. When pollen is released, the insect’s escape is facilitated by changes in texture of the floral wall. The carrion beetles escape after pollen shed and some unwittingly fall for the same bit of floral odour trickery, affecting exchange of pollen.

The Afrikaans names for *Hydnora*, *jakkalskos* or *bobbejaankos*, reflects the large edible fruit of *Hydnora* species and some of the animals that covet it. Botanically the fruit is a berry and contains thousands of tiny seeds. The fruits can be eaten raw or cooked, and when ripe the taste and texture resembles a mealy apple. However, in my experience it is quite difficult to beat the local porcupines, jackals, and various rodents to the ripe fruits.

The taxonomy of the genus has been confused since its inception, due primarily to poor preservation of its fleshy flowers. The most widespread species in Namibia is *Hydnora abyssinica*, distinguished by white tepals and its preference for *Acacia* hosts. Other species of *Hydnora* in Namibia parasitize *Euphorbia* species. The most difficult species to locate, *Hydnora triceps*, flowers completely underground and is characterized by fused tepals at the flower apex, insects locate the flower through cracks in the soil surface, and exit and enter via three lateral floral vents formed by the tepals. The exclusive host of *H. triceps* is *Euphorbia dregeana* and is restricted to winter rainfall areas. The *Hydnora africana* species group can be demarcated from other species by having mostly free, pink to orange-red tepals and parasitizes mainly *Euphorbia damarana*, *E. gregaria*, and *E. mauritanica*, but other hosts have been observed. In collaboration with Dr. Erika Maass at UNAM and Lytton Musselman and at Old Dominion University, Norfolk Va, USA we are preparing a revision of the genus based on molecular and morphological characters. We will recognize at least five *Hydnora* taxa in Namibia, *H. abyssinica*, *H. triceps*, and within the *H. africana* species group, *Hydnora africana*, *Hydnora longicollis* (an apparently disused name and mainly forgotten species), and a new species yet to be formally described. Once the detailed descriptions are completed we plan to publish this work in the Flora of Namibia in collaboration with the NBRI. We need your help! Please contact either, myself (jbolin@odu.edu) or Dr. Erika Maass at UNAM (emaass@unam.na) if you have spotted this bizarre plant and would like to contribute to our understanding of its distribution.

Jay Bolin is a Ph.D. Candidate at Old Dominion University, Norfolk, Virginia USA and a Student Fulbright Scholar to the University of Namibia.



The edible fruit of *Hydnora africana*. Thousands of tiny seeds are embedded in the white pulpy flesh.



From left to right: *Hydnora abyssinica*, *H. africana*, and *H. triceps*. The fleshy chamber flower with a “catch and release” insect trapping mechanism is characteristic of the genus.

Honour and Respect

TO HONOUR AND RESPECT means to think of the land and the water and plants and animals who live here as having a right equal to our own to be here.

We are not the supreme and all-knowing beings, living on top of the pinnacle of evolution, but in fact we are members of the sacred hoop of life, along with the trees and rocks, the coyotes and the eagles and fish and toads, that each fulfils its purpose. They perform their given task in the sacred hoop and we have one, too.

Wolf Song from the Abenaki

REGULAR INFORMATION

Botanical Society of Namibia - THE CORE OF ACTIVE PLANT PEOPLE (CAPP)

CAPP members 2009:

Hildegard Becker	beckerkj@mweb.com.na	061 235433	Advertising PRO, Guide
Marilyn Böttger	mjb@mweb.com.na	061 225689	Committee Member
Percy Chimwamurombe (Dr)	pchimwa@unam.na	061 2063358	Committee Member
Ellen Gudde	stpc.ge@iway.na	061 228815	Secretary and Publicity
Luise Hoffmann	luisehof@iway.na	061 239415	Tree expert, Guide
Olga Jones	olga.jns@gmail.com	061 236186	Committee Member
Salomè Kruger	salomek@nbri.org.na	061 2022011	Committee Member
Ezekiel Kwembeya (Dr)	kwembeya@nbri.org.na	061 2022021	NBRI talks, walks
Gillian Maggs-Kölling (Dr)	gmk@nbri.org.na	061 2022020	NBRI representative
Coleen Manheimer	manfam@iafrica.com.na	061 2022016	NBRI rep. + WEBSITE
Silke Rugheimer	silker@nbri.org.na	061 2022014	NBRI Botanical Garden
Carol Steenkamp	carolsteenkamp@gmail.com	061 230390	Committee Member
Sue Harvey	whkanimalhosp@mweb.com.na		Committee Member
Diana Thompson	rafthom@mweb.com.na	061 226871	Chairperson, Finances, Members
Uschi Kirchner Walter	uschi@safarisuk.ch	061 234610	Newsletter co-ordinator

Kind regards

Diana Thompson and CAPP

National Botanical Research Institute)	Web: www.nbri.org.na
National Herbarium (8 Orban Street, Windhoek, Tel 202 2111
Botanic Garden)	open to visitors Monday – Friday 8h00 – 17h00, no charge