



WATERBERG NATURE CONSERVANCY

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Newsletter Number 19, July 2012



NEXT GENERAL MEETING

Date: Thursday 26 July

Venue: Vaalwater Rivier Oord

(two km past the Spar on the old Ellisras Road, turn left)

Time: 2:00 pm

Note winter starting time, 2:00 pm (not 2:30 pm)

Guest Speaker: Lyn Wadley

Medicinal plants used as insecticides 77,000 years ago in South Africa

At our last meeting we heard about modern uses of plant medicines from Ben-Erik van Wyk. Now the theme is taken into the deep past with a case study from Sibudu Cave (KwaZulu-Natal) where people used medicinal plants as early as 77,000 years ago. Lyn Wadley will show how the archaeological evidence was assembled and interpreted. People who lived in the cave 77,000 years ago constructed plant bedding from sedges topped with aromatic leaves. The *Cryptocarya woodii* (River Wild Quince) leaves contain insecticidal chemicals that would have repelled mosquitoes and other insects. This is the earliest evidence anywhere in the world for the use of medicinal plants.

Lyn has more credentials than simply living in the Waterberg and being a member of the Conservancy. She obtained her Masters degree in Archaeology from the University of Cape Town and her PhD in Archaeology from the University of the Witwatersrand. She lectured at Wits University from 1982 to 2004 and is now an Honorary Professor in the Archaeology Department, and the Institute for Human Evolution at the University. She is the author of more than 100 scientific papers and is a National Research Foundation (NRF) A-rated scientist.

And More:

Gerrit Ferreira: Modimolle Fire Protection Association

Jessica Babich: African Pangolin Working Group and Lapalala News

Food and Drink
RSVP to Heidi Carlton by Tuesday 24 July 2012

JOIN THE CONSERVANCY

For those of you in the Waterberg who are receiving this Newsletter but are not Conservancy members, please join us.

The 67 members of the Waterberg Nature Conservancy reflect a variety of bush activities – private reserves and private homes, tourism operations, game ranching, hunting, commercial agriculture, conservation research, environmental education, small business.

NEW WEBSITE

We've created a brand new website that you will find very easy to use and quite full of Conservancy news and activities. If you have any suggestions or corrections for it, please let us know. Take a look:

www.waterbergnatureconservancy.org.za

PANGOLINS IN THE WATERBERG

by Jessica Babich

If anybody wished you "Happy Pangolin Day" on 18 February 2012, your initial reaction would most probably have been, "What on earth is a pangolin?".

Or perhaps not...

Maybe you are some of the lucky few, who have had the privilege of seeing this remarkable little mammal in the wild.



Photograph by Lapalala Wilderness/Wild Revolution

Seldom seen, this elusive scaly mammal patrols the African landscapes under the cover of night - many people do not even know it exists.

But not for long.

There are plans afoot to change awareness surrounding this special animal on a global scale, as well as conduct research on this mammal across the African continent.



Photograph by Lapalala Wilderness/Wild Revolution

In June 2011, Lapalala Wilderness was the venue for the first ever African Pangolin Working Group (APWG) meeting, a newly founded initiative based on the gap of knowledge currently surrounding these rare and endangered animals. The APWG is now also affiliated with the IUCN.

The APWG is team that consists of academics, researchers, filmmakers, conservationists and wildlife rehabilitators, each of whom bring a particular set of expertise to the initiative.

The APWG seeks to research, rehabilitate and collect genetic data of pangolins across

Southern Africa and other African countries – while educating communities about its conservation and learning more about the cultural significance of the animal.

APWG chairman, Prof Ray Jansen (Head of the Department of the Environment, Water and Earth Sciences at Tshwane University of Technology), explains further, “The idea was born a few months ago, where interested parties got together looking at a particular species where we know very little about.”

A common concern for this intriguing animal brought the group together to map a way forward in conserving this vulnerable species.

Past studies in the Lowveld area and current studies by Darren Pietersen in the Kalahari have given great insight into the baseline ecology for the species.

Ray explains further, “But we don’t know what’s going on in the central population – for example, the Waterberg. The different feeding ecology, the different prey, termites and ants available – it’s all very new to us.”

“And important in terms of finding genetic differences between sub-populations where they are isolated in islands of habitat.”

The pangolin is seriously threatened by illegal poaching and trade, electric fencing on game farms, poisons and gin traps.

Through the African Pangolin Working Group’s joint expertise, there will now be an opportunity to better understand this enigmatic little animal as a species -- and to help minimize the threats that it currently faces.

“We know little about their ecology, their distribution, population status in Southern Africa and in Africa in general, and we developed this Working Group to determine if there is a problem and a plight for the species.”

In the months to come, it is hoped that through new research, more will be revealed about the status of these incredible little mammals and how they can be helped.

Anyone can participate and contribute information about these amazing animals.

If you have seen a pangolin, no matter how recent or long ago, please log onto the African Pangolin Working Group website at www.pangolin.org to share the sighting information.

The site will give more details about this group, their activities and how your contribution can help pangolins in Africa.



WATERBERG CONSERVATIONIST OF THE YEAR AWARD

We have initiated a Waterberg Conservationist of the Year award and ask that you nominate candidates (whether WNC members or not) for what we hope will become a prestigious and sought-after accolade. The successful candidate will be an influential advocate for conservation and an important example for others to follow.

Nominees should demonstrate unusual concern for the environment through their operations, policies and actions. Other criteria include the following:

- The candidate is a permanent resident of the Waterberg;

- The candidate has incorporated effective conservation principles into his / her normal land management;
- The candidate is supportive of formal conservation programmes, even though he or she might not be a high-profile active participant;
- The candidate displays a high level of responsibility for both the natural and social environment in which we live.



AFRICAN WILD DOGS IN THE WATERBERG AND SOUTH AFRICA

by Conway Volek

While there is a lot of publicity in the press, other media and public or private communications about the plight of a certain few animals, very little is ever mentioned about *Lycaon pictus* or the African Wild Dog.

Wild dogs are a highly social carnivore with packs averaging 13 adults with a trend towards male bias in sex ratio. The pack is normally led by a dominant breeding pair, sub-ordinate non-breeding adults and subordinate offspring of the alpha pair. The wild dog coat patterns are individually unique and highly variable combining black, white and varying shades of brown.

Wild dogs were once distributed throughout much of the sub-Saharan Africa but reviews in 1997 suggest they have been extirpated from 25 of their former 39 range states. Viable populations exist in countries in southern and eastern Africa with the largest occurring in northern Botswana, western Zimbabwe, eastern Namibia and north-eastern South Africa.

Currently the only population considered viable in South Africa is in Kruger National Park. The remaining populations in South Africa, which primarily occur within fenced reserves, are spatially isolated from each other as a result of land use changes and the consequent habitat fragmentation in their former range. These populations are collectively managed as a metapopulation within which intermittent emigration or immigration is simulated through actively translocating individuals, single-sex groups or packs, to conserve genetic diversity (Lindsey & Mills 2004).

Current reserves in the metapopulation network are Madikwe, Pilanesberg and Khamab in the North West province, Tswalu in the Northern Cape Province, and Hluhluwe-iMfolozi, Mkhuze, Thanda, Hlambanyathi and Tembe in KwaZulu-Natal province. Populations of wild dogs do also occur outside of formally protected areas in South Africa although these appear to be limited to the Limpopo and Mpumalanga provinces.

The wild dog population is estimated at less than **450** in South Africa and is declining due the pressures brought on by its declining habitat.

The Kruger National Park and the Waterberg Region in Limpopo are the only areas within South Africa where there are unmanaged wild dog populations. The Waterberg Region has the largest remaining free roaming pack. With this comes major consequences when the dogs move onto various privately own farms they traverse.

The wild dog is classified as Endangered by the IUCN and is governed by the Management Diversity Act and Threatened or Protected Species (TOPS) Regulations who also classify them as endangered.

They are opportunistic carnivores using a cooperative hunting strategy to chase down prey. The fact that they don't stay in a particular area very long, due to their huge ranges, means that they would only kill one or two animals to feed on before moving off. The notion that the dogs would come into an area and decimate the animals there is simply not true; in fact, the dogs move away naturally. That said, when they den, they are in an area for a longer period, causing bigger damage to whatever food source is in that area, and in turn endure the wrath of that land owner.

The conservation challenge with wild dogs lies with its declining populations across the continent as a result of increasingly fragmented habitat, expanding human population and the persecution of it both within and outside of protected areas.

Increased habitat fragmentation can increase a population's susceptibility to stochastic, catastrophic events and can lead to an increasing number of encounters with domestic dogs infected with diseases such as rabies, or may result in a reduction of genetic diversity through inbreeding (Fuller et al. 1992b; Kat et al. 1995; Woodroffe et al. 1997).

Wild dogs occur at lower densities than competing carnivores such as lions and spotted hyaenas, and are susceptible to edge effects such as vehicle collisions, snaring and diseases because of their wide ranging behavior (Lindsey et al. 2004b; Woodroffe & Ginsberg 1999a). The highest priority for wild dog conservation is considered to be the maintenance of contiguous, suitable landscapes and the mitigation of lethal edge effects (Fuller et al. 1992b; Kat et al. 1995; Woodroffe et al. 1997; Mills et al. 1998; Woodroffe & Ginsberg 1999a; Rasmussen 1999; Creel & Creel 2002; Davies & Du Toit 2004; Woodroffe et al. 2004).

There is an ongoing effort to gain more information on the wild dogs in the Waterberg and also to seek ways in which to help stem the decline in our population. A few ideas about how to help with information gathering and protection of the dogs are being discussed.

Deon Cilliers of EWT (Endangered Wildlife Trust) is the main emergency contact for local land owners if dogs are sighted. Both Marakele National Park and Lapalala Wilderness have committed to accepting dogs that are captured for relocation.

Population size and distribution outside of protected areas are difficult to estimate accurately because the dogs have huge home ranges (up to 1110 km² in Kruger). The EWT has launched a photographic project in the Waterberg to collect the data necessary for improved estimates. They will compile a database of photos entered in the competition. See: www.ewt.org.za/photocontest.aspx.

Without a concerted effort from all of us we could see the end of another one of our beautiful, and less talked about, mammals.

More information is available from the following sources:

Wild Dog Advisory Group South Africa, www.wagsa.org.za

Endangered Wildlife Trust, www.ewt.org.za

Michelle Thorn (EWT Waterberg Predator Research), michellet@ewt.org.za

Emergency Contact: Deon Cilliers, deonc@ewt.org.za; 082 853 1068



AIR QUALITY: THE WATERBERG IS A NATIONAL PRIORITY

AREA

Compiled by the Government Communication and Information System

Water and Environmental Affairs Minister Edna Molewa has, under the National Environmental Management: Air Quality Act, declared the Waterberg area as a national priority area.

According to the department, a priority area in terms of the Air Quality Act is an area in which ambient air quality standards are being exceeded, or may be exceeded or any other situation which causes, or may cause a significant negative impact on air quality in the area.

This may be the result of emissions from specific sources that may expose individuals to elevated risks of adverse health effects and contribute to the cumulative health risks of emissions from other sources in the area

"The area therefore requires specific air quality management actions to rectify or avoid the deterioration of the air quality, thus ensuring that the Constitutional right to an environment that is not harmful to health and wellbeing is upheld," the department said.

The areas covered include the Bojanala District in North West and the Waterberg District in Limpopo that is part to several local municipalities such as Thabazimbi, Modimolle, Mogalakwena, Bela-Bela, Mookgophong and Lephalale in Limpopo, and Moses Kotane, Rustenburg and Madibeng in the North West province.

The department said in addition to covering rapidly developing areas in two provinces, the Waterberg priority area was also a proactive approach to potential trans-boundary air quality impact that may arise between South Africa and Botswana.

"This proactive approach is therefore in support of future sustainable development in the area, provides regulatory certainty, and ensures that air quality levels remain within the national ambient air quality standards," it said. - [BuaNews](#)



WHERE ON EARTH IS MAGNETIC NORTH?

by Richard Wadley

In this age of car-borne GPS systems, with their invariable pseudo-Japanese-American female direction advisors – the ultimate dumbing down of map reading – it's increasingly difficult to find anyone who can actually read a real map.

This sad fact was brought home to us late the other afternoon as we reached the T-junction of the Bakkers Pass road with the old tar road to Lephalale via Bulgerivier. We were flagged down by an occupant of a very small car, while his companion, the driver, sat panic-stricken and hunched over the dashboard, desperately punching instructions into the GPS mounted on the windscreen.

"Which is the quickest way to Bela-Bela?" the man asked, looking hopefully at the strip of dusty corrugated track we had just negotiated in our *bakkie*.

“Well”, I replied, casting an eye at the bright blue midget parked in the shadow of one of my wheels, “this road *could* eventually take you to Bela Bela, but it certainly isn’t the quickest way – and it won’t be simple either, especially in ..er... that”.

This news was communicated to the perspiring GPS operator-cum-driver, who, judging from his wild gesticulations (he was French) and stabbing motions towards the instrument on the windscreen, evidently still believed otherwise.

“And”, I added, as a final deterrent, “the road hasn’t been maintained for years, it’s full of *dongas* and is frequented by crazy young game rangers who drive their employers’ 4x4s at reckless speeds along it, forcing other users into the bush”. (The bit about the *dongas* isn’t true).

That image sank in, and even though the car was a hired model (it had the little give-away red sticker on the top left corner of the windscreen), I could see they were having second thoughts.

“What should we do then?” cried the passenger – and it was evident that this was not the first time on this trip they’d been led astray by that digital siren. “We must be there this evening!”

“I’m afraid you really would do best to go back through Vaalwater and on to Modimolle, even through the awful roadworks”, I replied sympathetically. “Turn right at the first robots in Modimolle and you’re almost there”.

The fellow clearly agreed – and had obviously already suggested this option to his techno-captive friend, because he repeated my advice with just a hint of – you know – ‘I told you so’ smugness.

The driver shrugged resignedly, said something rather unpleasant to the GPS lady (French is such an expressive language) and fired up his Korean steed. The passenger leapt in and, spitting grit onto my bumper, they screamed off.

In the direction of Bulgerivier.

Truly.

I wonder where in Botswana they eventually ran out of gas...

Back in the real world, anyone who has had to try and find a position using a topographic map and a compass will know that this is not quite as straightforward as it might at first appear. The reason is that our maps are (nearly always) orientated so that the top of the map points towards the North Pole, also known as True North (TN); whereas the compass needle, on the other hand, points towards the Magnetic North Pole (MNP), which, it turns out, is somewhere else entirely. (The MNP is that imaginary point where the axis of the Earth’s magnetic field points vertically into the Earth’s surface.) Worse, the MNP does not remain in one position, but is migrating around, depending on whimsical changes in the Earth’s magnetic field.

The result is that if one wants to convert a magnetic compass bearing relative to MNP to a direction on a map, it is necessary to know how to adjust that magnetic bearing to one that refers to TN. The difference between the two is called the *magnetic declination*; and, this number varies both through time and according to where you happen to be on the Earth’s surface.

According to Wikipedia, studies have shown that the MNP has been wandering in a generally

north-westerly direction for most of the last century, during which time it has moved over 1100 km; and currently, it's moving at a faster pace, over 40 km per year. This means that anyone needing to convert a magnetic compass bearing to an accurate bearing on a map needs to know the current magnetic declination at the location concerned.

Well, help is at hand: that marvellous institution funded by the American taxpayer, the National Oceanographic and Atmospheric Administration, or NOAA (a neat acronym don't you think?) has a very user-friendly website on which you can punch in your own latitude and longitude and get – instantly – the current magnetic declination for your site. Just like that. For free. No sultry voice trying to lure you down a lonely track. Just the faint refrain of "Star Spangled Banner".

In late June 2012, for example, the magnetic declination for Vaalwater (latitude $24^{\circ} 17' 30''$ South; longitude $28^{\circ} 07' 00''$ East) was: $-15^{\circ} 28' 02''$, increasing at about 1' per annum.

The minus sign means that the MNP is to the west of TN; so you would need to add $15^{\circ} 27' 55''$ to your compass bearing in order to get the direction on a map. You could use the same figure for anywhere in the Waterberg and not be more than a couple of minutes out - for now.

In case you're interested, the website is www.ngdc.noaa.gov . Click on "Geomagnetic Calculators" and you'll be taken to a screen inviting you to enter your latitude and longitude co-ordinates. Where to get those? From your GPS of course!



BIKING THE BLUES AWAY

by Richard Wadley

Mountain biking (MTB) has to be one of the most enjoyable ways of getting close to the magnificent environment in which we are privileged to live. A chilly morning in early June saw over two hundred enthusiasts gathering near the beautiful homestead of Peggy and Sam van Coller, some 45km north of Vaalwater, for the inaugural Waterberg Academy / Lindani MTB race.



Photographs provided by Simone Baber

Two course options, of 20km and 52km, designed by Alan van Coller and laid out with meticulous care across Lindani's pristine plains and rolling hills, had already attracted accolades from the professional cycling fraternity for their thoughtful combination of speed sections with those requiring technical competence (and an element of good luck!). The courses, on farm roads and single-track, were well-cleared and marked, but in such a way as to minimise their intrusion on the wilderness that the van Coller family has worked hard to achieve on the property over the last fifteen years.



In addition to the two main events, there was a 4km walk as well as a 2km cycle race for youngsters.

Participants came from as far away as Gauteng and neighbouring lodges were filled for the weekend. On race day, the organisation was superb; the marshalling and signage was good (although inevitably, a few riders – including the writer – missed some turns); and the finish area was

remarkably well equipped with refreshments, medical tent, public address system, adult and childrens' entertainment, hot showers and toilets. The atmosphere was festive and many

were the compliments paid to the race organisers, with the hope expressed that this would become an annual event.

Race results were posted on-line within a day. First home in the 52km event was Timothy Hammond in 2h.22.20, with Genevieve van Coller (2h.51.46) the first female finisher. In the 20km race, the winner was Jonathan Jacobs in 1h.16.48, with Janine Meares (1h.32.56) the first female.

Proceeds from the race went to the [Waterberg Academy](#); and members of the PTA, together with Lindani staff, were out in force to fulfil the numerous roles required to make this such a successful event. Several Vaalwater and Lephalale businesses and local lodges, apart from Lindani itself, sponsored the event.

As an enthusiastic, if ill-prepared participant on the day, I'd like to thank everyone involved, especially Simone Baber and her team, for providing us all with so much enjoyment; and for the opportunity to share the beautiful Lindani landscape on a crisp, clear Waterberg day.

Diarise June 2013 now!

Editor's Note: Our modest correspondent neglected to mention that he came in first in his group of Veterans in the 20km race.



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