Can dogs eliminate Florida’s pythons?

I have reported in this newsletter several times in the past regarding the problems being experienced with alien Burmese pythons in the Florida Everglades. The situation has escalated hugely since 1979 when the first one was caught in the wild there. Now their numbers are estimated in the tens of thousands.

The pythons were probably first released when owners realised that their “pet snakes” had outgrown their cages and their welcome. Being kindly people, they released the snakes into the Florida Everglades instead of euthanasing them. This made up the original founder population which slowly grew until 1992 when hurricane Andrew destroyed a warehouse where hundreds of the pythons were being housed. The escaped snakes added impetus to an already bad situation.

By their very design and secretive nature, snakes are hard to find and teams of snake hunters are struggling to catch enough of them to make an impression on the population. Now, the School of Forestry and Wildlife Sciences at Auburn Florida are training sniffer dogs to try and speed up the process. The idea was first brought up by the Army Corps of Engineers who suggested the idea in 2010. So far two black Labrador retrievers Jake and Ivy have been trained to find the Burmese pythons specifically and are providing excellent service, having located 19 pythons so far - one of them a pregnant female.

In some circumstances, the dogs are faster than humans, are more accurate and can cover more ground, but like all dogs they have their environmental limitations. In my observations during the bush war in SWA no dog was able to match an Owambo tracker in finding the enemy. All the dogs I saw used in this role were unable to track when conditions were too dry, or too humid, or too hot or too ....

The dogs used included German shepherds, wolf x shepherd hybrids and Australian cattle dogs, but none were up to the task. The same has been found to be true of the “python trackers”, which battle to work in the heat and humidity of the area. Used within their limitations though, they do provide a useful service, but they will always be one step behind the snakes which have evolved over the millennia to feed on animals like dogs!
"If civilisation has risen from the Stone Age, it can rise again from the Wastepaper Age.

Jacques Barzun, "The House of Intellect" 1959

“Misguided” - Honeyguides and honey badgers

I can safely assume that at least some of you have been lucky enough to have received the attentions of a greater honeyguide trying to lead you to a beehive. If you paid it any attention, and tried to follow it you were probably disappointed not to have found the hive. I have followed them several times but have never found a hive - either running out of time, space or talent before I could get close. Maybe you were luckier or more talented than me!

There are many stories and legends surrounding these fascinating birds, many of which are true, but there are a few which need to be debunked. So which are true and which are not?

- Honeyguides eat honey. **False**. Honeyguides eat mostly bee and wasp larvae and wax from the hives.
- Honeyguides can digest beeswax. **True**.
- Honeyguides are brood parasites (of mostly hole nesting birds) and their chicks kill their nest mates with bites from their wickedly hooked beaks. **True**.
- Honeyguides will lead you to a snake or other dangerous animal the next time if you don’t leave it any honey after raiding a beehive. **False**.
- Honeyguides have been recorded giving their attraction calls to baboons. **True**. In these rare cases, the baboons never responded to the calls. This may be a case of mistaken identity on the part of the birds!
- Honeyguides lead honey badgers to beehives in the same way as they do humans. **False**.

The latter piece of “common bush knowledge” is untrue although it has been mentioned in many authoritative works including David Attenborough’s The Life of Birds. Honey badgers are mainly nocturnal and are poor tree climbers with poor vision and hearing. Despite these limitations, they are quite able to find their own honey without having to rely on a bird. They are a bad choice for a honeyguide.

Ever since the late 1700’s when Swedish naturalist Anders Sparrman heard of this relationship from local people, the rumour has been around, but never in over 200 years has any amateur naturalist or professional biologist ever witnessed a honey badger being led to a hive by a honeyguide. There was apparently a video posted on You Tube which purported to show this very interaction, but it turned out to be a hoax, with a stuffed honeyguide “posing” near a tame honey badger!

Several papers have been written on this subject, most notably those by Dean, Siegfried and MacDonald in Conservation Biology 1990 and a recent one by well known ornithologist Claire Spottiswoode (I have not seen it personally) in which she says “**There is no persuasive evidence that honeyguides ever guide honey badgers**”.

It is a pity to think that the very special relationship that has evolved between humans and these birds is threatened due to urbanisation and the slow but steady loss of traditional knowledge and skills.

Oldest elephant tracks discovered in UAE

Imagine a herd of elephants walking through a muddy area and carrying on with their lives as normal. Imagine the mud drying and those tracks filling with wind blown debris and eventually being buried beneath more mud and debris. Imagine then finding those same tracks 7 million years later looking as if they were made yesterday! That is what has recently been discovered in the Arabian desert.
The tracks show that they were made by many different individual elephants, but at the same time. This confirms that social organisation was present in fossil elephant species at least that long ago. The size of individual tracks and stride length were analysed, showing that the herd comprised a mix of adult animals right down to calves.

Although the site has actually been known for several years, it was only when scientists flew over it that the significance of the trackways became clear. In the words of Faysal Bibi, one of the site researchers “this is fossilised behaviour”. Very true when you think of it - the footprints tell us so much more than just what species was involved. We get a glimpse into the way those animals behaved that long ago.

“I think I’ve discovered the secret of life - you just hang around until you get used to it.”

Charles M. Schulz

In the news

Tarantula silk correction / update

In July last year I wrote about a new discovery which claimed that tarantulas (and baboon spiders) are able to produce silk from special hairs on the undersides of their feet. Well, I regret to say that we again may have to revise what we “know” or say about that. It seems as if this could be a case of not-so-good science in which something was assumed to be something it was not.

Dr Claire Rind of the University of Newcastle published a paper in the Journal of Experimental Biology (Rind et al., 2011, J. Exp. Biol. 214, 1874-1879) about tarantula spiders secreting silk from their feet to prevent them from slipping when climbing vertical surfaces. New investigation seems to have established that the hairs are not silk spigots but are actually chemoreceptors. The hole in the end is not the silk outlet, but the pheromone inlet. The silk released is in fact lymph which is secreted in a string of droplets and not as a line of silk as the previous researchers thought. More will still be said about this counter-claim and I will try keep an eye on it to see which is the real story.

Termit Massif and Tin Toumma Desert declared by Niger as a National Nature and Cultural Reserve

The Government of Niger this month declared the entire area of Termit Massif and Tin Toumma desert as a national nature and culture reserve. The region has now become the largest protected area in Africa, spanning an area of some 100000 square kilometers. By comparison, our Greater Kruger National Park is a “mere” 20000 square kilometers. The region is vast, relentlessly dry and is home to the critically endangered addax and many other unique and endemic species.
Maybe the yanks are waking up?

The recent ban on keeping certain giant snakes in the USA seems to signify a slight “coming to the senses” of the authorities in that country. The latest positive conservation move has been to pass new laws regarding the keeping of big cats in captivity there.

I saw some time back on a documentary (I can’t remember which) that it was estimated then there were approximately 700 big cats in captivity in private hands in the USA. Having dealt first hand with angry serval and caracal kittens myself I know how hard these things are to control. I have the scars to prove it and so does my daughter Hannah! I can only imagine the difficulty in restraining an angry adult Bengal tiger! Yet until now that was a perfectly legal animal to “own” in 42 states in the USA.

Big cats are impossible to domesticate and many people who try it are killed by their pets. To this I have no objection whatsoever - if a person is fool enough to mess around with big cats then they must be prepared to die by tooth and nail - I have no sympathy for them. What I do object to is the animals being subjected to abysmal living conditions, escaping their cages and being shot down because the authorities (quite understandably) have no experience in dealing with this type of situation. The recent incident in Ohio is a case in point.

Another negative aspect of big cats in captivity is the mixing of bloodlines, subspecies and sometimes entire species. Any cat bred in this way is dead to conservation and cannot be used in any program to repatriate animals or to add to a particular gene pool.

A new act called the Big Cats and Public Safety Protection Act March 2012 has now been introduced to enforce a set of restrictions on big cat ownership. This will ensure that only facilities that have the ability to house the animals humanely and safely will be able to keep them. In essence this means that only zoos and other professional and accredited institutions will be able to meet the criteria. All current big cat owners are also required to register their animals and subject their facilities to an inspection to see if they make muster. Finally, no big cats may be bred in captivity or made available for sale. The penalties tied in to this act allow for confiscation of animals, vehicles and other equipment and fines of up to $20,000 and 5 years in jail.
Crossword

Across
2. Known as volant mammals. (4)
6. The process of altering a wild animal's behaviour to become more tolerant of the presence of human beings (11)
7. Condition in which the earth’s surface is worn away by the action of water and wind (7)
10. A grass plant’s “trunk” or main vertical stem (4)
11. South Africa’s national fish (7)

Down
1. The area of the lower chest between the front legs of bovine animals. (7)
3. A structure on a spider’s spinnerets responsible for releasing silk. (6)
4. A group of large New World mygalomorph spiders. (10)
5. An igneous rock having visibly crystalline texture and generally composed of feldspar, mica and quartz (7)
7. Either of two times of the year when the sun crosses the plane of the earth’s equator and day and night are of equal length (7)
8. Afrikaans name for a pangolin (9)
9. A group of birds receiving their name from the English word used to describe a man who’s wife committed adultery (7)

What is it
I recently came across this beautifully patterned outline between layers of slate in the Thomas Baines Nature Reserve outside Grahamstown. What do think it is?
"Look well to this one day, for it, and it alone, is life. In the brief course of this one day lie all the verities, all the realities of your existence - the joy of living, the splendour of beauty, the glory of action."

Part of a Sanskrit Proverb by Kalidasa

Hiding the location of newly discovered species

A few years back I stumbled on an internet article about the Ethiopian mountain adder (*Bitis parviocular*) that had been re-discovered in the Ethiopian highlands. Until then it was known from only 3 specimens. Accompanying that article was a picture of a very beautiful snake - certainly one of the most attractive adders I have ever seen. My first thought was to wonder how long it would be before they were being stolen out of the wild and appearing on the websites of reptile breeders (or smuggler / poachers as most of them turn out to be.) A quick search revealed that they were already for sale - less than a year after 5 new locations for their existence was published. They were offered as "captive bred" animals - a ludicrous suggestion, but one so often used by smugglers, and one which is so difficult to disprove!

This brings one to the thought that is it not perhaps better if newly described species remain hidden from the public? These days, most species discovered are from very remote areas and represent very small remaining populations - or they would already have been discovered. This makes them especially vulnerable to collection. The scarcity value sets a high price on their heads and very quickly, smuggling networks are set up and local villagers are recruited to catch as many of the animals as they can. Before long, something that was already rare and vulnerable becomes endangered with extinction.

An example of this was seen with a newt species discovered in Laos in 2002. The animal has been so heavily collected for the pet trade that in 2008, research conducted by a biologist from the National University of Laos found it to be very close to extinction.

This is happening daily in our country. As you read this, unscrupulous and greedy South Africans are stripping huge numbers of birds, reptiles and amphibians from our bush.

What is it - Answer

The pattern shown looks like a fossilised plant such as a fern, but it is in fact a pseudofossil called a dendrite. These are caused when mineral filled water percolates through narrow fractures and fissures in rock. As the rock dries out the crystals begin to form, growing into a natural fractal pattern such as the one shown. This closely mimics an organic life form, but is really caused by the same factors that result in frost dendrites on windowpanes and snowflakes. Apparently manganese oxide is the most common mineral causing these interesting formations.

You can easily create this fractal pattern by squeezing a bob of toothpaste onto a piece of glass. Press another piece of glass against the first and rub them around a little. Then slowly pry the two pieces of glass apart and you will see the fractal pattern emerging until you have your own unique dendrite. (Thanks Will and Claire!)