



Wildlife Campus

20
YEARS
ANNIVERSARY

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Magazine

Snake removal
by ASI

World vegan day
Giveaway winner!

What type of guide
will you be?
Part #7

Soil, source of all life
Slowly washing away?
by Amy Holt

Photography competition!

WildlifeCampus

What type of guide Will you be? Part #7



WildlifeCampus CEO
Todd Kaplan

In this feature, Garth Thompson explores types of guides.

Guiding attracts a wide, diverse, and interesting group of people, those that have been in the industry for some time can quickly place guides in a number of different categories. We continue this roll call with...

The people and wildlife enthusiast

These are the best guides in the profession. They have a true love, appreciation and understanding for all things wild, with equal attention paid to the two-legged animals who have saved up and paid for someone to show, share and interpret this gift to them.

These guides have all the qualities of the people-orientated guide but combined with those of the true bush lover and naturalist. At the top of the guiding pyramid, they are few in number and high in demand.

Possibly the best indicator of the success and abilities of these guides is the number of clients who return and seek out their services, often booking him or her as an exclusive guide for the duration of the entire safari. These safaris may cover a variety of parks and wild areas in a number of countries, where species and habitat differ considerably.

This type of guide often has the skills to guide on foot, by vehicle, canoe, boat, kayak, raft, hot-air balloon, helicopter, fixed-wing aircraft, mountain bike, on horseback, elephant-back or even underwater - among the diverse life of a coral reef.

They have an in-depth knowledge of mammals, rock art, birds, plants, African history and culture, conservation issues, geology, reptiles, fish, insects and astronomy, apart from human skills. They make lifelong friends with most of their clients through this common bond of nature's uncomplicated and diverse beauty, enhanced by genuine experiences.



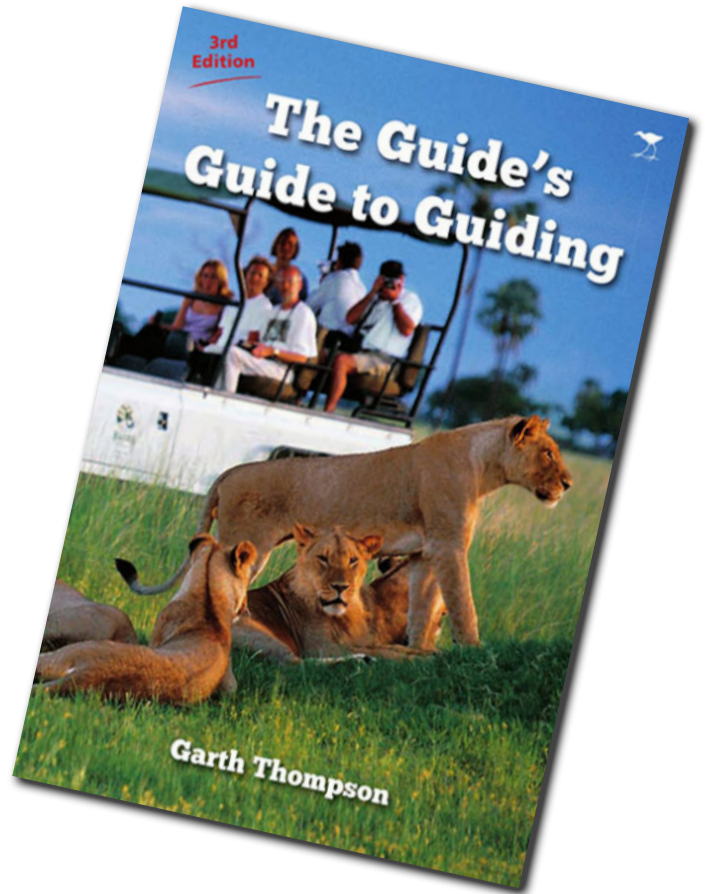
What type of guide Will you be? Part #7

They are proud of their profession and take it seriously. It is often a lifetime occupation. They raise, educate and house their families from their vocation. Their families share the friendships with people from all corners of the earth.

Are you aiming for the pinnacle of guiding? It's not something easily or quickly achieved but believe me, well worth the effort.

Garth Thompson is one of the world's foremost field guides and the author of the must-read The Guide's Guide to Guiding.

**Click the book to try the
FREE component of the WildlifeCampus
Guide's Guide to Guiding course!**



**WildlifeCampus would like to wish all of our
students a safe and wonderful festive season!
Thank you for all your support in 2021!
See you in**

2022

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Wildlife Campus

LEARN PROTECT SAVE

Photography competition “Win an elephant”



Join our **Facebook group**
and submit your entry
on the pinned post
before **15th of December!**

Stand a chance to “foster”
an orphaned baby elephant
at HERD for 1 year!



THE DOS AND DONT'S OF SNAKE REMOVAL



We teach snake handling to a number of corporate clients in various industries around Africa as well as thousands of private individuals who attend our public courses in South Africa. Quite obviously, the most important thing when it comes to snake removal is learning the safest handling methods, with tried and tested protocols, to ensure the safety of the snake remover as well as the snake.



Snake removal can be tricky as every removal scenario is unique and they don't always go to plan. It is quite easy to get flustered in the spur-of-the-moment, mistakes can be made quickly and often with disastrous effects. There are some very basic guidelines that are important for those doing snake removals.



Training is obviously vitally important – attending an accredited course that covers snake awareness, first aid for snakebite, identification, behaviour, myths and how to safely capture and release venomous snakes is a must.

There are several courses available and usually a number of levels of training, from introductory courses, all the way through to Advanced Snake Handling courses. These courses are open to people from all walks of life and should be attended by anyone living in a natural area where snakes are often encountered. As for accreditation, most trainers claim to have some form of accreditation. Do your homework and go with a reputable training provider.

Make sure you have the correct snake handling equipment. There is a huge range of equipment on the market and it is easily ordered online and delivered to your door. But there should be no compromise when it comes to the handler's safety.

If you live in a natural area where snakes are prevalent, rather invest in decent equipment and learn how to use it properly. Avoid picking up braai tongs or using bent coat hangers to do snake removals.



Get secure containers. Make sure you use good quality containers for snake captures. Round buckets and snake tubes are ideal. Avoid rectangular or square containers as snakes find the corners very quickly and climb up and out before a lid can be secured. Avoid snake bags unless you have ample experience in working with them – we see far too many snake handlers bitten through bags.

If you're doing removals in an area where spitting snakes occur, make sure to wear eye protection at all times. Getting venom in the eyes is an extremely unpleasant experience and should be avoided at all costs.

Having a decent head torch, or torch that mounts onto your tongs is a great addition for night-time removals and for doing removals in dark places like sheds etc.

Get permits. In order to legally remove snakes in all provinces of South Africa (except for KwaZulu Natal) snake removers need catch and release permits, which are issued by their local Nature Conservation authority.

If you're being phoned for a removal – ask the caller to keep an eye on the snake from a safe distance. If they stay 5 meters from any snake, they are safe – and knowing where the snake is can save the remover hours of time.



Make sure all pets are kept away from where the snake is. This cannot be emphasized enough – we see many removal videos where there are dogs in the way of the remover.

Crowd control is crucial. Whether the removal is at a private house, lodge or business premises, keeping people away from the snake is essential and helps to avoid unnecessary distractions. There is nothing worse than having people screaming over your shoulder or trying to take a video on their cell phone while you are trying to get control of the snake.

Take your time and stay calm – slow and fluid movements are always better than quick and jerky movements as the snakes react to this.

Don't take your eyes off the snake until it is safely contained. It's very easy to get distracted by someone asking questions when you are 90 percent of the way through a removal.

Avoid showing off.

Sadly, there is often a lot of ego around snake removals and when handlers become arrogant, they often make mistakes whilst showing off their skills.

It's always a nice idea to take some time to educate the people whose property you're removing the snake from. This is a great way to spread snake education and often saves many future snakes which are found on the property.

Release the snake, in a suitable environment (away from people and roads) as soon as possible after capture, and not more than 10km from where it was caught. It's often a good idea to take a video of the release and to keep these on file as evidence of the release – sadly, poaching is a real issue with reptiles and having proof of release is a smart idea.

In all possible instances, avoid necking snakes (grabbing a snake behind its neck)– it is rarely necessary.

Log your removal for permit purposes. You will need to submit a yearly log to your local nature conservation office, and it is important to log all the details of each removal and release. Uploading the records to a virtual museum database such as the Animal Demography Unit (ADU) Reptilemap or Inaturalist is a great way to contribute to distribution maps of species for future field guides and reptile atlases.

As you get more experience and confidence with removals, you will find it becomes easier. Don't compromise on safety, it is easy to become too comfortable and complacent around these unpredictable and often highly venomous animals. Have respect for the animals and try limit stress whilst you rescue it.



Holiday season Gift Idea



Gift voucher

(example)

The value of R 1 500,00

OR

1 Online course
FOH Lodge Operations

Give an extra special gift this festive season!

A WildlifeCampus gift voucher is the perfect gift for friends, family, colleagues and employees!

Whether you are serious, curious, career-orientated or a wildlife enthusiast, we have something for everyone at WildlifeCampus.

We offer more than 40 online wildlife and tourism-related courses and we have been doing so for the past 20 years to over 25 000 students in 154 countries.

Feel free to view our variety of courses on www.wildlifecampus.com

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Soil, source of all life

by Amy Holt
WLC Student

Slowly washing away?



Treasure lies beneath our feet, and it is certainly not shiny. Soil is life. It is vital for food security. Topsoil, the uppermost layer of soil, grows 95% of our food but it is rapidly disappearing. Half of the planet's topsoil has been lost in the last 150 years. However, it takes more than 500 years for one inch of topsoil to be formed. As the layer of fertile topsoil thins, it gets increasingly difficult to grow crops for food.

This is a worldwide problem, where soils are becoming severely degraded due to a combination of intensive farming practices and natural processes.

For centuries we have exploited soil for the benefit of growing food. To only now realising the importance of soil health and how it will impact our food supply. Microorganisms that live in the soil feed off organic matter and, in turn, supply essential nutrients to plants. They support farmers by maintaining soil moisture and fertility, suppressing plant disease, and preventing soil erosion. Soil filters and cleans much of the water we drink and the air we breathe by retaining dust and pathogens. Further, healthy topsoil provides a sponge-like effect that can absorb rainfall, reduce the risk of floods, retain water and increase the storage of groundwater. Soil is the second-largest carbon sink after the ocean. Indeed, soils are a key part of the global cycles that make all life possible.

How we farm today is destroying our ability to feed the planet in the future. In the last few decades, soil degradation has been sped up by intensive farming practices. Degradation refers to a decline in soil productivity and a reduction in protective vegetation cover, up to the devastation of entire landscapes through erosion. Modern tillage agriculture is a huge threat to soil life. This is because it deprives soil of the organic matter it needs for food, allows it to dry out, adds pesticides, and leaves it vulnerable to being washed away.



Ultimately, prolonged erosion causes irreversible soil loss over time, reducing the biomass production, filtering, infiltration and water holding capacity of soil.

As urbanisation increases across the globe, we are sealing off an entire below ground ecosystem. Soil sealing is the covering of the soil surface with materials such as concrete and stone, as a result of new buildings, roads, etc. Depending on its degree, soil sealing reduces or most likely completely prevents natural soil functions and ecosystem services on the area affected. This is an issue that is expected to get worse as the world's population continues to grow.

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According to the UN's Food and Agricultural Organisation (FAO), a third of the world's soil is now moderately to highly degraded. In Sub-Saharan Africa, it has been estimated that 65% of soils are degraded. Poor soils can exacerbate both drought and flooding. South Africa is a semi-arid country with an average annual rainfall of approximately 464 mm, compared to a global average of 786 mm. Temperatures are increasing in Southern Africa faster than the worldwide average. This, along with longer dry spells has led to increased evaporation, thus reducing the available water. The most valued crops in South Africa are maize and wheat. While, fresh fruit and wine brings in the most foreign earnings. All of these crops are under threat from increased temperatures and changing rainfall patterns.

Soil erosion is a severe land degradation problem in South Africa, with economic, social and environmental implications. High rates of soil erosion by water are causing rapid sedimentation of water bodies, ultimately increasing the water crisis in South Africa.

Gully erosion is one of the most devastating forms of soil erosion, which greatly contributes to soil degradation and loss in South Africa. It happens when runoff concentrates and flows strongly enough to detach and move soil particles, resulting in the formation of incised channels. The Northern Cape and Eastern Cape are the most severely affected by gully erosion. On top of this, the Eastern Cape is also the most severely affected province for sheet and rill erosion. Sheet erosion is the uniform removal of soil in thin layers, and it occurs when soil particles are carried evenly over the soil surface by rainwater that doesn't infiltrate into the ground. It completely strips an area of the topsoil, plant seeds and organic matter.



While, rill erosion results in small, yet well defined streams. It happens when runoff forms small channels as it concentrates down a slope.

In South Africa, only 12% of land is suitable for crop production. This is a worryingly small percentage which is likely to get smaller as the loss of topsoil continues to threaten agriculture throughout the country.

Healthy soil is the foundation of agriculture and is a vital part of the ecosystems that support the delivery of primary ecosystem services. Without underground life, land would be barren. But, how can we reduce the pressures on the soil while still feeding growing populations? A simple solution is crop rotation, which, allows different plants to grow in an area of soil every year. This allows the soil to replenish itself of nutrients that are lacking after the growth of one type of plant.

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As the world's growing population continues to put huge strains on global fresh water and food supplies, scientists believe hydroponic technology may be able to mitigate impending food shortages. Hydroponics is a form of soil-less farming where seeds are grown in water-based, nutrient-rich solution. So why grow without soil? Hydroponics allows growers to produce food anywhere in the world, at any time of the year, and to net higher yields with fewer resources. Further, plants have been shown to grow faster and larger because obtaining nutrients from their surroundings requires less energy. There is also no weeds, fewer pests, and minimal diseases.



Hydroponics is not new. It dates back to 600BC with the Hanging Gardens of Babylon and 1100 with the Aztecs' floating gardens. Although the general theory behind hydroponics remains the same, modern technology has enabled us to grow plants faster, stronger and healthier. Wake Island, a rocky atoll in the Pacific Ocean, was used as a refuelling stop for Pan American Airlines in the 1930s. Since there was no soil, they had to use hydroponics to grow vegetables for the passengers. Further, during the Second World War, British and American armies used hydroponics to grow food for service members stationed on rocky islands. In 2015, using hydroponic technology, astronauts ate the first space-grown leafy vegetables. The UN's FAO has been implementing hydroponic farming in areas of the world that are suffering food shortages from climate-related events such as flooding, irregular rains, droughts, and high temperatures. There are currently ongoing projects to establish large hydroponic farms in Latin American and African countries. The technology used in these hydroponic farms are largely based off hydroponics systems that were designed at NASA.

Aquaponics is a combination of aquaculture and hydroponics and is simply the cooperation between fish and plants. The fish eat and excrete ammonia which is converted into nutrients by bacteria, then the plants absorb the nutrients, which, in turn, cleans the water. As the water is recycled and reused through the system, aquaponics uses one-tenth of the water of soil-based farming. Aquaponics mimic nature, as you are essentially creating a self-contained ecosystem.

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The aquaponics system represents the relationship between water, aquatic life, bacteria, nutrient dynamics, and plants which grow together in waterways all over the world. Rice paddies in Asia were early aquaponics systems. Looking to the future, aquaponics may offer solutions to large-scale farming or even to restore degraded areas.

During the 1980s, John Allen and his team created Biosphere 2 (Biosphere 1 being the Earth's) at the foot of the Santa Catalina Mountains, Arizona, to shed light on how our planet sustains life. It was completely cut off from the rest of the world, and so, Earth's incredibly complex and fragile network of interconnected systems had to be taken into account to ensure it could support eight humans. The models of five world biomes were used; rainforest, coral reef, mangrove wetlands, desert and savannah. The two other biomes were to replicate man-made systems: agricultural landscapes and an urban area. Biomes are the building blocks of a biosphere.

In September 1991, Biosphere 2 was ready and the eight humans spent two years inside this self-contained biosphere, before emerging in September 1993. They became so connected to the system, that they knew they were part of the living system rather than apart from it. Biodiversity starts from the ground up. Without healthy soil, there is a limit to plant development and diversity. This in turn, limits the ability of animals to populate an area. Not without its problems, Biosphere 2 allowed what is often taken for granted, to be appreciated—clean air, water and food. Ultimately, Biosphere 2 provided a powerful and practical lesson as to how our biosphere is the only life-supporting system we have at our disposal. To truly bring ourselves into harmony with the natural world, we must return to seeing humanity as a part of it.

Today, Biosphere 2 is owned and managed by the University of Arizona. Here scientists are studying the conditions that are required to create new soil, in an experiment called the Landscape Evolution Observatory. Three independent landscapes, each created from 500 tonnes of crushed basalt rock that was extracted from a volcanic crater in northern Arizona, have been created in the Biosphere. This initial condition will allow scientists to observe each step in the landscapes' evolution; from purely mineral and abiotic substrate to living, breathing landscapes that will, in the end, support microbial and vascular plant communities. This research will advance our understanding of how climate change may impact water resources and ecosystems in arid environments. Indeed, the experiment at Biosphere 2 will be key to 'eco-engineering' degraded soils.



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Soil is a whole world in itself that is often overlooked. Yet, this lack of appreciation for our soils could have dire consequences for the future of civilisation. Archeologists have determined that sophisticated civilisations, such as the Maya civilisation, fell because they mismanaged their soils. We could suffer the same fate, if we fail to prevent the degradation of the soils. For our life-support system, soil, to continue to thrive and remain living, we must change our ways. Whether this is through crop rotation, hydroponics, aquaponics, or simply growing your own to reduce the pressure on the environment and improve food security.

There is no place in the world where nature is so densely packed than in the soil. In fact, there are more living organisms in a tablespoon of soil than there are people on Earth. Soil is a hotspot for biodiversity, home to 25% of Earth's biodiversity. Clearly, there is more to soil than meets the eye.

The hidden world beneath our feet is fundamental to sustaining life on land. Soil is life.



World vegan day

giveaway



Winner announcement

Name: Debbie Van Lill

Prize: Vegan Hospitality for Chefs training

Feedback:

"I did the Vegan hospitality for chefs training with Hayley Cooper over the weekend. It was an absolute eye opener. The content was engaging and she is so professional. I didn't realise how many details I never paid attention to. Hayley equipped me with so much knowledge. I can now use this knowledge to enhance the skill of every young chef that I train! This opens up so many opportunities for young people. Thank you so much Hayley! I can recommend this training for all practitioners in the hospitality industry!"

Interested in doing a vegan training?

Contact Hayley, Africa's only certified vegan hospitality consultant, on hayley@wilddreams.co.za OR www.wilddreams.co.za

A honey badger is the central focus of the image, partially obscured by tall, thin reeds and green grass. The badger's black and white fur is clearly visible, and it appears to be looking towards the camera. The background is a soft-focus natural setting.

Brand new course content Now loading...

During December the WildlifeCampus team will be updating the Field Guiding/Game Ranging course.

This update includes:

A full content review by our team and a FGASA assessor, extra content, latest industry trends, new imagery and updated test questions

Does the hippo deserve its fearsome reputation?

By David Batzofin



My favourite African myth is how the hippo came to live in water. For those who do not know it, this is one of the incarnations of that tale...

A very long time ago in Africa, when all the animals lived together in the bush with the Creator, most animals lived on the land, and only a very few lived in the water.

The hot sun baked the earth every day, and all the animals suffered one way or another. But the animals had strong skins to protect them against the sun, either fur, feathers or scales. Hippo's skin was not that strong and as he grew bigger, his skin began to stretch and became thinner. By the time he was an adult, his skin was so thin, that it was burned by the hot African sun. Hippo could endure it no more and he went to the Creator and asked: "Please, may I go live in the river?" The Creator looked with kindness at Hippo and said: "Yes, my friend you may but you must first ask permission from the river animals." But the river animals were selfish and said; "No, we cannot allow this. You are so big and will eat all the fish in the river." "You do not have to worry, as I do not eat fish. I will only eat the grass and river plants," said Hippo.



"And to prove this every day I will open my mouth wide so that you all can see there are no fish bones or scales in my mouth. And I will spread my dung with my tail so that you can see there are no bones" This convinced the river animals and they gave their permission for him to join them in the cool river water. And from that day to this, hippos still open their mouths wide and spread their dung with their tails to prove that they are keeping their promise.

Are more people killed in Africa by hippos than all of the Big 5 combined? That theory is now being questioned by experts who believe that unreported crocodile attacks may account for many of the deaths. However, this large aquatic mammal is still dangerous if encountered while out of its usual environment.



Does the hippo deserve its fearsome reputation?

By David Batzofin



Halfway through a quiet afternoon drive, having bumbled around the reserve without much luck when it came to dangerous game sightings, our guide decided to head off to two dams to see if the 'hippo were home'.

The hippos at the first dam were most accommodating and decided that we posed no threat to them, so they bobbed around for a while before moving out of our sight.

After some discussion between the tracker and guide, it was decided that the resident hippo in the second dam could be more accommodating, and we headed off in that direction.

And he most certainly was! We had no sooner arrived and parked than he began his territorial display.

Wide-mouthed and with his head flailing from side to side, we sat in quiet awe of how an animal of this size could lift himself out of the water, going from submerged and placid to large and menacing in an instant.

Bearing in mind that full-grown males can weigh in at 1500kg and even though they might have short stubby legs, on land they can attain speeds up to 30kph, his display was exciting and impressive. What was interesting was that the hippo seemed to have drawn an invisible line in the water and his entire performance was carried out at that distance without either advancing or retreating!

Our guide had located the vehicle in the perfect position to witness this behaviour but without any undue stress on either the guests or the hippo. And, if the need had arisen, we would have been able to leave without any complicated manoeuvring.

And finally, I think he realised that expending energy on our vehicle was a waste of time and he, like the hippo at the first dam, merely submerged and eventually reappeared at the far end of the dam.

It was a memorable ending to what had been a quiet drive...

