Bush Telegraph
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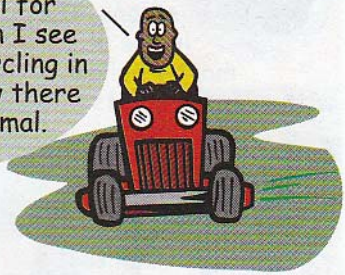
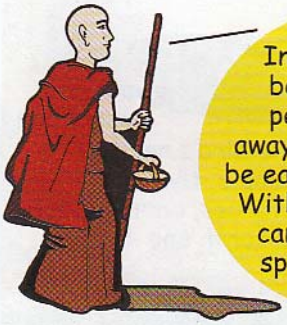
Vulture Conservation

What does a vulture make you feel when you see one or someone talks about one? Are you amazed? Are you concerned? Are you scared? Are you relieved?



As a farmer I am thankful for vultures. When I see lots of them circling in the sky, I know there is a dead animal.



In my religious belief, when a person passes away he/she should be eaten by vultures. Without vultures I cannot fulfil my spiritual needs.

Perhaps you have not thought about it much. As for all living things on Earth, vultures play an important role in our environment.

Vultures are speedy, effective scavengers. They "clean up" after other animals. Without them, disease and flies could multiply to uncontrollable amounts. Vultures have been helping us for thousands of years, now they need our help. Some of our activities can kill or injure vultures and other birds. Read on to learn about how vultures live, what they do for us and how we can help them.

Become involved in protecting vultures and be a vulture conservationist!

Did you know?

Birds most likely evolved from reptiles about 150 million years ago.

A martial eagle ringed 18 years ago was recently recaptured. It had travelled all the way from Sesfontein to Eluna in Ohangwena region!

The foot of a Lappet-faced Vulture is as large as a man's outstretched hand.

A vulture can reach a dead animal faster than a hyaena! (It can glide at 75 km/h while a hyaena runs only at 40 km/h.)

STARTING WITH BIRD BASICS

Stop reading. Go outside. Look around for birds. What do they look like? What colour are they? What shapes and sizes are they? Are they all the same? You have probably observed that there are many kinds of birds. They have different shapes, sizes, colours and behaviours. There are approximately 8600 different species (types) of birds in the world. **But what makes a bird a bird?**

BIRD BODIES

The basic body design of all birds is the same.

Skeleton - Bones are as light and small as possible, but are still strong. The inside is mostly hollow with support struts.

Beak - The shape shows what kind of food the bird eats. For example, seeds, fruits, insects, snakes etc.

Mouth - Unlike humans, the tongue has a bone. Birds however do not have teeth.

Eyes - Eyesight is excellent and is important for finding food.

Wings - Shape and size depends on the bird's needs. For example, flying long distances, darting back and forth and soaring.

Warm-blooded - Keep a constant body temperature just like us.

Feet - Flat feet are for standing. Curved feet are for holding onto branches.

FLIGHT

For almost all birds, flight is a way of life

What do you need to fly? Force! One to get you up and one to move you forward.

For birds the key to flying is their feathers. No other animal has feathers. Feathers grow out of the skin, just like human hair does. The structure of the feathers makes them waterproof. Birds need three different types of feathers to fly: primary, secondary and tail feathers.

Three major types of flight: Read the descriptions below. Try to draw the different types of flight. One has been done for you.

Flapping - Moving the wings up and down as quickly as possible. Needed to take off.

Soaring - Staying in about the same place in moving air. Air is moving up faster, than the bird is being pulled down.

Gliding - Moving forward but slowly losing height.

LET'S TALK ABOUT VULTURES

Now that we have explored birds in general, let us apply our knowledge to vultures.

WORLDWIDE VULTURE FACTS

- 22 species worldwide
- 10 resident species in Africa
- 5 resident species in Namibia
- There are no vultures in Australia or Antarctica

The five resident species (types) of vultures in Namibia are:

Cape Griffon Vulture — Hooded Vulture
Lappet-faced Vulture — White-backed Vulture
White-headed Vulture

Other vulture species have been seen in Namibia, but very rarely. These vulture species are vagrants because they do not always live here.

The three main resident Namibian vulture species:

Lappet-faced vulture

White-backed vulture

Cape Griffon Vulture

Some Vulture Basics

Physical

Bald head and neck for keeping clean during 'messy' eating.

Massive Wings for soaring and gliding at 300-500 metres.

Powerful, large curved beak for tearing meat and skin easily.

Flat foot for a running take off and for standing on the ground for long periods.

"Crop" in the oesophagus (food pipe in throat) to store meat.

Behavioural

Scavengers - Eat dead and rotten meat. Stomach acid can digest bones.

A foraging net - Large groups looking for food together because many pairs of eyes are better than one.

Diurnal - active during the

"Sunning behaviour" in the morning and after rain.

Breeding Facts

Breeding Age: 5-6 years
Nests: In trees or on cliffs
Eggs: 1 (rarely 2 eggs) per year
Group: Breed in pairs

Lappet-faced Vulture egg

Incubation: About 2 months
Nestling: About 3 months
Both parents sit on the egg (incubate) and take care of the young vulture chick (nestling).

VALUABLE VULTURES

Vultures are an important part of the Namibian environment. Historically, vultures lived in all parts of the country where they could find food, water and shelter. Today, the Cape Griffon Vulture is nearly extinct and other vulture species have limited space to live. Read below to find out why vultures are helpful to nature and to us. Think about the dangers vultures face and what you can do to help vultures survive!

BENEFITS

Vultures are needed in the ecosystem, helpful to farmers and good for tourism.

Vultures:

- Clean up! They are part of the food chain.
- Clear the bush of dead animal carcasses.
- Alert a farmer to dead stock.
- Prevent diseases (for example, anthrax) that may spread to livestock.
- Control jackal populations by competing for the same food source.

- Large, easy to see birds that birdwatchers enjoy viewing.

DANGERS

Vultures are dependent on the dead meat they can find in the environment. Our human activities affect the vulture's ability to survive. Some activities are an accident and others are on purpose.

Human activities:

- **NUMBER ONE KILLER:** The use of poison to control "problem animals" kills vultures. Vultures either directly eat the poison or may become sick from eating an animal that was poisoned.
- The cutting down of trees destroys the place where some vultures nest and sit.
- Bush encroachment makes it more difficult for vultures to find and get to dead animals. Vultures need a clearing to land and take off.
- Round water reservoirs may cause a vulture to drown if it falls in. Vultures are very clean birds and wash themselves often.
- The shooting of vultures because of the belief that they kill small stock.
- The disturbance of cliff nesting sites by accident or through development.

How do you think that these dangers to vultures can be prevented? On the next page are a few suggestions.

TAKING ACTION ⇨ FOR VULTURES

Everyone can get involved and take action to protect vultures. Below are four ways that will benefit vulture conservation today and in the future. Can you think of other ways to help vultures and wildlife?

1) **Don't use poison.** Protect your livestock **and** protect all wildlife. Can you think of ways to protect livestock in an environmentally-friendly way?

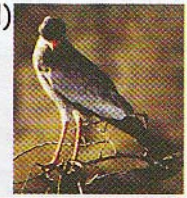
2) **Start a "Vulture Restaurant".** Provide food and water for a healthy vulture population. Contact the organisations below to find out how to start a safe, nutritious feeding place for vultures. Can you think of some benefits of having a vulture restaurant in your area?

3) **Know your birds.** Learn and understand the environment around you. The study of birds is called ornithology. Test your bird identification skills and enter the contest. **Directions:** 1) Look at the pictures of the birds below and determine their common English name 2) Go to page 12 to find out how to enter the contest.

a) 

b) 

c) 

d) 

4) **Spread the word.** Educate others

ORGANISATIONS TAKING ACTION

The VULTURE STUDY GROUP (VSG)

The VSG is a working group of the Endangered Wildlife Trust (EWT). It is a group of interested and concerned citizens working together and sharing information about vultures throughout Southern Africa.

VSG aim: To ensure the existence of free-living vulture populations worldwide.

VSG activities:

Research and monitoring **Conservation action**
Education through extension work

To contact the local VSG office, write to VSG c/o NaDEET

NAMIBIAN CONTACTS

Local MET Office
For information on birds and environmental policies.

NARREC
To report poisonings and for help with sick, injured, orphaned or dead birds
Tel: (061) 264 409

REST
For information on vultures, vulture restaurants and satellite tracking
Tel: (067) 306226.

AfriCat
For help with large carnivore problems
Tel: (067) 304566

RESEARCH: Collecting data through BIRD RINGING

Research is a careful study or investigation to get new information about a specific topic. People who conduct research are called researchers or scientists. Their work is very important because it can help us to solve problems and hopefully live better. For example, research can find medications for diseases or it helps us understand the living world around us.

BIRD RINGING

What: Putting plastic or metal rings around the leg of a bird.
Why: To be able to identify the bird in the future, to learn more about birds. For example, age, reproduction and movements to other areas (migration).
Who: Qualified, licensed bird ringers
How: Depending on the kind of bird (big, small, water, land) the method will change. Let us explore how vultures are ringed below:

Vulture Ringing Basics

Usually chicks before they fledge (start flying) are ringed
Information is gathered as to where vultures are breeding
Care is taken that the chick, adult vultures and nest are not injured or damaged

Ringing equipment

- Binoculars
- Pliers
- Measuring Tape
- Scale
- Cloth bag
- Rings
- Record Book

1) A vulture nest with chick is found.

2) The vulture chick is carefully removed from the nest and placed in the cloth bag.

3) The chick is weighed and measured.

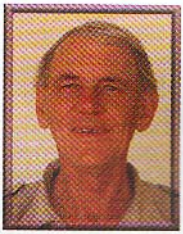
4) The colour coded rings are put on the legs.

5) The information is written in a record book and given to various organisations including the VSG, MET and SAFRING (South African Bird Ringing Unit).

6) The vulture chick is returned safely to the nest.

ADVANCED RESEARCH: Radio-tracking mammals (for example, cheetahs) is a research tool that is commonly used to find out more about movements and lifestyle of these mammals. This year the **first** vulture was fitted with a **SATELLITE TRACKING** device. For updates, look for articles in a newspaper or contact REST!

People and Personalities in Conservation



Name: Peter Bridgeford
Organisation: Vulture Study Group (VSG)
Job Title: Namibian Representative
No of years on the job: 6 years

What is your role as a representative?
I collect information about vulture activities. This includes breeding, distribution and deaths (both natural and unnatural). This information is put into a database. I also promote vulture conservation through extension work with farmers unions and conservancies. We have not had time to go to schools.

How does one become a representative?
One has to be actively involved with and be interested in vultures. You need time and experience to want to promote vulture conservation as it is a volunteer position.

Why did you become involved with vulture conservation?
I have been birding as a hobby for about 30 years. When I worked for the Ministry of Environment and Tourism (MET) in the Skeleton Coast Park, I saw vultures breeding for the first time. I began to observe these large birds as it was interesting. Several years later, I was introduced to ringing vultures for the first time. As I had been ringing small birds for many years, I had some experience.

What can Namibians do to get involved in vulture conservation?
It is helpful to get any information on vultures. If someone sees or knows of a vulture breeding place then they should report it. It is very important not to disturb the vultures or nest though. Vultures may abandon their egg if they are bothered. People should also report any vulture deaths. They should look for rings on the dead vulture and report where and when it was found. Most importantly Namibians can take care not to use poisons indiscriminately as this is probably the biggest cause of vulture deaths. Farmers can also make a vulture restaurant.

What is the biggest challenge to protecting vultures in the long-run?
The biggest threat in Namibia is poisoning that occurs when vultures eat poisoned carcasses left out for 'problem animals'. Another threat however may be habitat loss. If too many trees are cut down, then there will not be a place for vultures to build their nests. Not all trees are suitable for vultures to breed in. Lastly, power lines may cause electrocutions. Although some incidents have been reported, we do not have enough information yet.

Peter's Message to Namibia's youth:
You do not have to be a vulture expert to make a difference. If you are a child, teacher and/ or farmer you can help by getting involved.

For the ADVANCED READER - *Vultures in the World*

Vultures Threatened by Veterinary Drug

In the past decade southern Asian vulture populations have collapsed. The number of breeding pairs of Oriental White-backed Vultures in Keoladeo National Park in India declined by 96%. This once common vulture, probably numbering well in excess of 100,000 birds in the late-1980s, fulfilled a valuable role in the Indian subcontinent.

In a region where Hindus do not eat cattle and where Muslims regard livestock that die of natural causes to be unfit for human consumption, vultures clean up the cattle carcasses and thus prevent the spread of diseases. Some communities use vultures for disposing of human corpses. With the declining number of vultures, these corpses have not been consumed, such as has been observed at the Towers of Silence at Malabar Hill in Mumbai. Today crows and kites fulfil this function, albeit less efficiently. The locals are urgently seeking solutions to this dilemma, with one proposal being to build a giant aviary over this important burial site.

The disappearance of the vultures has unfortunately resulted in a proliferation of other scavengers, with recent observations of more than 1000 feral dogs at carcass dumping sites! This may have severe negative consequences, such as the spread of rabies.

During the past few years scientists from around the world have urgently been studying the reason for the disappearance of the vultures. Post-mortem examinations showed that most of the birds had visceral gout, caused by kidney dysfunction. Kidney failure results in an accumulation of uric acid crystals in the blood, which then precipitate on the heart, liver and other organs. The million-dollar question was "what was causing this kidney failure in these Asian vultures?" Some researchers believed that the cause was an infectious disease. Various other mortality factors were proposed, including a food shortage, human persecution, indiscriminate poisoning and pesticides.

Vulture conservationists in Africa expressed concern about the vulture declines because, if an infectious disease was responsible for the deaths, this may eventually spread to Africa. Several workshops have been held with the aim being to initiate monitoring programmes, create awareness about the problem and even prepare Africa for the possible arrival of an infectious disease. The Vulture Study Group has been actively involved.

Much to the relief of Africa's vulture conservationists, new research results have showed that vultures are extremely susceptible to residues of the non-steroidal anti-inflammatory drug (NSAID) diclofenac. Tissues of 23 vultures that had died of kidney failure contained diclofenac. In both Pakistan and India diclofenac is used by veterinarians to treat cattle and buffalo. A survey conducted found this drug to be cheap and widely available.

DICLOFENAC info box:

- Similar to Voltaren, which is used by humans to relieve pain, tenderness and inflammation caused by rhematoid arthritis and gout.
- Not registered for veterinary purposes in South Africa and Namibia
- Other NSAIDs are available for use in animals. It is possible that these drugs could also cause kidney failure after chronic exposure.

It is currently recommended that, to prevent the exposure of these drugs to vultures and other scavengers, carcasses of animals previously treated with NSAIDs should be disposed of that they cannot be accessed by vultures. Much work needs to be done, including further research on diclofenacs toxicity to other scavenging raptors, providing alternative veterinary products, and importantly the establishment of a captive breeding population for later reintroduction purposes.

This article is adapted from: ANDERSON, M.D. & BENSON, P. 2003. Veterinary drug implicated in vulture crash. Africa Birds & Birding 8(4): 12.

VULTURE ACTIVITY PAGE

Quick vulture flying experiment: GLIDING VS SOARING
Take a piece of paper. This represents a vulture. Try the following two experiments and observe how the paper "vulture" flies.

a) Hold the paper out in front of you and let it go.
b) Now hold the piece of paper in front of your mouth and blow air underneath it to lift it up.

What happened? Which paper "vulture" is gliding? soaring? Which one do you think takes more energy?

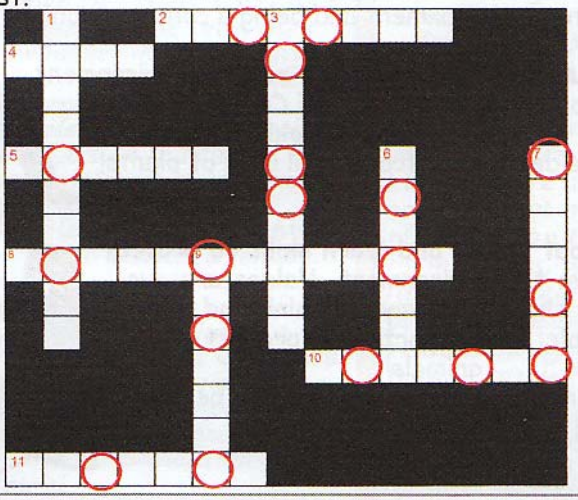
TEST YOUR UNDERSTANDING: Asian Vulture Drama

1) Read the article, "Vulture Threatened By Veterinary Drug".
2) Use a dictionary or ask for help with words you do not know or understand.
3) Write down the most important events in the story.
4) Together with friends or classmates, create a drama (small play) that tells the story of the Asian Vulture crisis. (You can also adapt the story to Namibia.)
5) After practicing, show your drama to your class, family, and friends.

ENVIRONMENTAL CLUBS: Host an "Asian Vulture Drama" evening at school or in the community as a way to raise funds for your club activities.

CONSERVATION CROSSWORD AND CONTEST

Directions: 1) Solve the puzzle below using the clues provided and information from the previous pages. 2) Write down the letters that are in the red circles on a piece of paper. 3) Unscramble the letters by filling them in the missing spaces below to discover the hidden message. 4) Turn to page 12 to enter the contest.



Across
2. An investigation to gather and learn new information
4. Government makes these to protect us
5. Our beliefs that shape the way we think and act
8. The variety of all living things
10. Having died out, no longer existing on Earth
11. A group of animal/ plant of one kind

Down
1. To do something (2 words)
3. May die out soon. Only a few left
6. To keep from harm
7. The living environment of animals and plants
9. A scavenging bird

HIDDEN MESSAGE about why we should conserve:

__ __ __ __ __ __ f__ for __ __ e __e__ __ __e __ e __ __ __ i o __!

The BIGGER Picture

What is a conservationist really?

A conservationist is a person who protects our natural environment!

What does it actually mean to be a conservationist? Can anyone become one? Yes. Some people's job is to be a conservationist, but they need everyone's help. Protecting the environment is a big task that cannot be done alone. Everyone needs to be involved to make it successful!

SOME JOBS IN CONSERVATION

	TYPE: Park Ranger **MAIN TASK:** To monitor and protect the park and its animals and plants. To enforce laws that protect the environment.	**TYPE:** Veterinarian **MAIN TASK:** To take care of sick and injured wild animals to make them healthy again.
TYPE: Conservancy Council Member **MAIN TASK:** To advise and make decisions about a community's natural resources that benefits the environment and the people.	**TYPE:** Researcher **MAIN TASK:** To investigate and study to get new information. For example, a researcher may study the way vultures get food to help protect them.	**TYPE:** Environmental Educator **MAIN TASK:** To help people gain knowledge, skills and values that protect the environment through learning.

WANT TO GET INVOLVED?

You can start right now. Below are some important steps to being a part of protecting the natural environment and being a conservationist.

1) Gain knowledge and understanding for the natural environment.

For example: Visit an EE Centre!
Read a science book!
Ask your elders about traditional uses of plants!

2) Adopt values and learn skills to protect and improve the environment. Values are our beliefs that shape the way we think and act.

For example: It is important to protect all animals!
Litter on the ground is ugly and can be harmful to animals!

3) Take action for the environment.

For example: Use water wisely! Recycle!
Start a clean-up campaign! Plant a tree!

Chinga's & Nzovu's Corner

Thank you to all for sending your questions to us. It is wonderful to see our readers asking so many questions about the world around them. If you have any questions for Chinga and Nzovu, please write to:

Chinga & Nzovu, NaDEET, P.O. Box 31017, Pioneers Park, Windhoek

Dear Chinga and Nzovu,
What makes a chameleon change colour?
From Topsy in Ondangwa

Dear Topsy,
Chameleons are a type of lizard. Other lizards worldwide can also change their colour. Chameleons can change their colour because they have special skin cells. These cells are red, yellow, blue and white. When the chameleon's brain sends a message to these cells, they grow bigger or smaller giving the chameleon an overall different colour. The chameleon changes its colour as a reaction to changes in light, temperature and mood. For example, a male chameleon will change his colours to attract a female. There are lots of beliefs about chameleons. For example, some people say that if a chameleon looks at you, it will copy everything you do. Chameleons are important for the environment because they keep insect populations under control.

Chinga and Nzovu

Dear Chinga and Nzovu,
Can we include human beings in the word "animal"? If so why is it that if you call a person an "animal" that person gets angry?
From Julia in Döbra

Dear Julia,
People often think that animals are only things like elephants or lions. But actually chameleons, birds, fish and many others are also animals. Scientists have grouped all living things into five categories or kingdoms:

- *Monera (for example, bacteria)*
- *Protista (for example, slime molds)*
- *Fungi (for example, yeast)*
- *Plantae (for example, Mopane tree)*
- *Animalia (for example, you!)*

Most members of the animal kingdom are able to move around, eat food (not make their own like plants do) and have cells that can form tissues, which form organs (like your heart). So, yes human beings are animals. Some of the reasons though that we are different from a turtle for example is that we have hair, give live birth to our young and most importantly breastfeed.
So next time someone calls you an animal say "Thank you"!

Chinga and Nzovu

CONTESTS *** CONTESTS *** CONTESTS

In this issue there are two contests you can enter to win prizes. Read the directions below and see if you can win!

FROM PAGE 5:
Win a bird book by correctly identifying the birds in "Taking Action for Vultures". On a piece of paper, write down the name of each bird in English next to the pictures' letter. Send your answers together with your name and address to us!

FROM PAGE 9:
Win a "Large Birds of Prey" Poster and Booklet by solving the Conservation Crossword. On a piece of paper, write down the answer to the HIDDEN MESSAGE with your name and address!

For both contests, send your answers to:
Bush Telegraph contest, NaDEET, P.O. Box 31017, Pioneers Park, Windhoek **by 1.July 2004**. The winners will be chosen at random from all correct answers received. Winners and answers will be announced in the next issue.

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yes, ☐ please send me ..... additional copies.

Please send all subscriptions to: **Namib Desert Environmental Education Trust (NaDEET), P.O. Box 31017, Pioneers Park, Windhoek**

Thank you to the Namibia Nature Foundation, SIDA Local Environment Fund, the VSG and AfriCat for sponsoring this issue of the Bush Telegraph!

Photos courtesy of P. Bridgeford and M. Dürr ~ Vulture drawings courtesy of D. Houghton
The **Bush Telegraph** is written by Viktoria Keding.