

Q&A...

Send us your wildlife questions – our experts have all the answers.

OUR EXPERTS

KATE EVANS

Kate is an elephant scientist. She spent three years in the Okavango Delta, Botswana, studying the behaviour and ecology of male elephants.



MARTHA ROBBINS

A research associate at the Max Planck Institute for Evolutionary Anthropology in Germany, Martha has studied gorillas since 1990.



MIKE TOMS

Mike has edited *Bird Table* magazine for the British Trust for Ornithology for three years. He also organises the BTO's Garden BirdWatch Scheme.



RICHARD JONES

Richard has been fascinated by insects since childhood. A former president of the British Entomological Society, he now works as a surveyor and writer.



PAT MORRIS

Former senior lecturer at the University of London and a past chairman of the Mammal Society, Pat has studied small mammals for 35 years.



SEND YOUR QUESTIONS TO:
Q&A, BBC Wildlife,
14th Floor, Tower House,
Fairfax St, Bristol BS1 3BN

OR EMAIL
wildlifemagazine
@bbcmagazinesbristol.com

Due to the volume of letters received, we are not able to answer questions personally.

Making trunk calls

Working as a guide in Zimbabwe, I found this 20cm bone (one of a pair) in a fresh elephant carcass. What part of the animal is it from, and what does it do? Is it part of the hyoid?

Craig Black East Sussex

You're right – this is one of five bones that make up the hyoid apparatus (used in vocalisation) of an elephant. Most other animals have nine. Being so small, hyoid bones are usually quickly consumed by scavengers and are thus rarely found in elephant carcasses.

An elephant hyoid sits at the base of the tongue and is attached to the skull by muscles, tendons and ligaments (rather than by bones, as in most other mammals)

A hyoid bone, part of an elephant's sound system.



to provide structural support to the tongue and larynx. This looser arrangement gives the larynx more flexibility, which is thought to help with the production of the low-frequency sounds that enable elephants to communicate over vast distances.

Two other adaptations (other than their size) enable elephants to communicate effectively. The first is the trunk, which can extend the resonating chamber by as much as three metres. The second is a unique structure inside the hyoid known as the pharyngeal pouch, which houses an emergency water supply that the elephants access by putting their trunks in their mouths. Because in elephants the hyoid structure has adapted to house the pharyngeal pouch, the larynx sits low down, which also contributes to the size of the resonating chamber.

Kate Evans Elephant scientist

Poker face

I recently saw a great spotted woodpecker feeding on the pollen of what I think was a red hot poker. Is this a common food source?

Simon Sefton Hartlepool

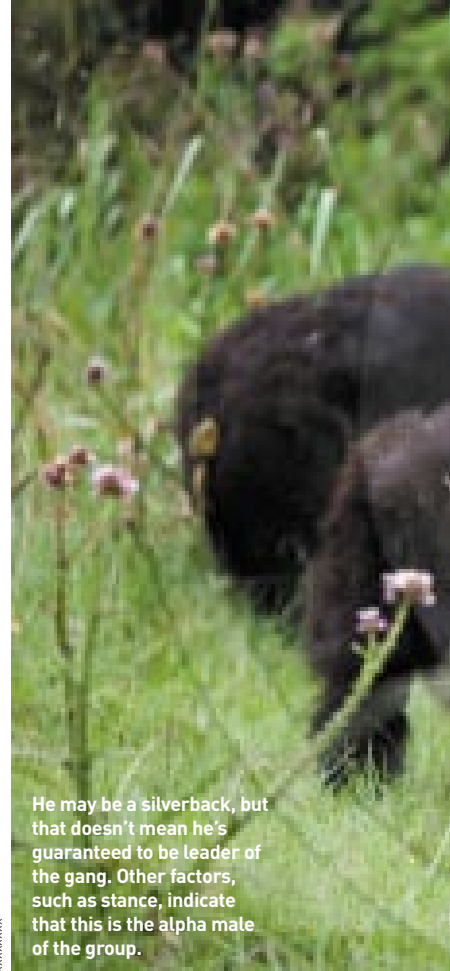
Red hot poker *Kniphofia uvaria*, a native of upland areas across southern and tropical Africa, is a popular garden plant in Britain. In its native range, the species is visited by sunbirds and sugarbirds, which love its sweet nectar. It is this, not pollen, that your woodpecker was probably feeding on.

Michael Gore

Great spotted woodpeckers are versatile feeders and I have received several records of them visiting red hot pokers. Using their long, manoeuvrable tongues, they can easily access the plant's nectar for the short season that it is available. These birds are renowned for their ability to memorise the locations of food, so an individual may return to the same garden every summer to enjoy the plant's offerings.

Globally, there are a number of bird species that specialise in nectar-feeding, including hummingbirds and, occasionally, warblers on migration.

Mike Toms BTO



He may be a silverback, but that doesn't mean he's guaranteed to be leader of the gang. Other factors, such as stance, indicate that this is the alpha male of the group.

Silver ages

During a visit to see mountain gorillas in Uganda, I was told that no group has more than one silverback, though it may contain several males. Does this mean that an adult male doesn't develop a silver coat until he becomes dominant? Is it hormones that start the growth?

Jeremy Spencer Via email



The nectar in red hot poker flowers attracts birds the world over – even here in the UK.



All male gorillas develop silvering on their backs and a peaked sagittal crest when they reach maturity at 11 or 12 years old. They are also much larger than adult females. The silvering process is probably driven by an increase in testosterone, as you thought, and takes one to two years to complete. Males retain their silver backs for the rest of their lives.

The word 'silverback' is now practically synonymous with the

word 'leader', particularly one that is strong and experienced, so it may come as a surprise to learn that 40 per cent of mountain gorilla groups include several silverbacks (though groups of western lowland gorillas usually

DID YOU KNOW?

While some silverbacks hold alpha male status for more than 15 years and sire more than 12 offspring, others live a solitary life and never become fathers.

just have one). However, there are dominance hierarchies among the silverbacks in multi-male groups, so there's always a single alpha male.

Becoming the dominant male is very difficult, and those that make it don't do so until they are at least 16 years old. Retaining this top spot is also challenging, as younger silverbacks are waiting in line, but some males remain dominant until well into their 30s.

Martha Robbins Primatologist

QUICKFIRE

Do frogs and newts feed in the same way?

Emma Shaldon, Via email
Not really. Newts feed both in water and on land. In water, they suck in prey by opening their mouths and distending their throats. On land, they seize prey in their jaws or use their sticky tongues. Large prey items are often subdued with violent shaking before being eaten. Frogs, in contrast, feed only on land, taking a wide range of invertebrates with their sticky tongues. They can take quite big prey – I once saw one eat a young harvest mouse. Steve Harris Biologist



Chris Lloyd

I saw a pintailed whydah at Lee Valley Park, East London, last October – how did it get there?

Simon Kittle, London
This species breeds across much of sub-Saharan Africa, favouring grassland and scrub. It is not a noted migrant in the UK and this one will have escaped from a local collection. A few bird enthusiasts keep and breed whydahs – not an easy task as they are nest parasites of various waxbill species and difficult to breed in captivity. Mike Toms BTO

What disease causes the leaf stems of my Lombardy poplar to twist into swollen spirals?

Spencer Frith, Malvern
This isn't a disease, but a gall (an abnormal growth caused by the presence of insects) that has formed around a colony of up to 100 tiny, fluffy grey-white aphids *Pemphigus spyrothecae* feeding together on the leaf's sap. When the leaf matures, dries and falls in autumn, the tight spiral unravels and the winged females escape. Richard Jones Entomologist

WHAT ON EARTH?

IF YOU KNOW what this species is, send your answer (with your name and address) on a postcard marked 'What On Earth? July' to the address on p54 by 6 July. The sender of the first correct answer picked out wins a year's subscription to *BBC Wildlife*. The results will be published in the Summer 2007 issue.



WHAT WAS IT?

May's picture showed the male flowers of the butterflybur *Petasites hybridus*, recognisable by the dense clustering of pinkish, short-stalked inflorescences radiating from a central stem. The plant is found on damp ground throughout Britain and blooms from March to May. G Bougourd from Petersfield wins a subscription.

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Herb lover

What are the beetles eating my rosemary bush? They are domed and a dark, glossy metallic bronze with red-purple stripes.

Peter Williams London

This is the rosemary leaf beetle *Chrysolina americana*, an introduction from southern Europe (not America, as its Latin name implies). Several live specimens were first found here in a kitchen in Disley, Cheshire, in 1963, thought to have hitched a ride from Portugal via pine cones picked up on a family holiday.

The beetle was not seen again until 1995, when it was found at RHS Wisley, Surrey, and shortly after in flowerbeds at Waterloo Station. It has now spread across much of England, feeding on rosemary, lavender, sage and other related plants, but is not at pest levels – yet.

Richard Jones
Entomologist

The distinctive
rosemary leaf
beetle.



Richard Jones

A rare shot of a grey squirrel mother taking the risk of moving her young from one nest to another.



Rebecca Nason

Relocation, relocation

I recently saw this grey squirrel carrying its babies to a tree hole. One by one, she moved a total of five young to the new nest. I assume she was relocating them, but why?

Rebecca Nason Via email

It is quite common for squirrels to carry their babies from nest to nest, but rare to catch this behaviour on camera. A mother squirrel will relocate her young if her drey is damaged (by high winds or

heavy rain, for example), carrying them to safety one at a time, as you witnessed. Hedgehogs do the same, despite their spines. Though the youngsters you saw were being transferred to a tree hole, a mother squirrel will often build a new drey or reoccupy one of her existing spare ones.

This baby is being held in the gap behind its mother's incisors, so its skin won't be damaged by her bite. But a large youngster like this is not easy to carry, and

both mother and young are more vulnerable to predation during a relocation exercise.

Newborn (pink) young may be abandoned or even eaten, but older offspring represent a longer period of parental investment and are therefore worth saving. Five is quite a large litter for squirrels – normally it's about three.

Pat Morris Mammal expert

DID YOU KNOW?

Grey squirrels often have a second litter later in the season, one reason why their populations have expanded so rapidly.

The vampire bat's ability to run on the ground – and make a vertical take-off from a standing start – helps it overwhelm prey.



STRANGE BUT TRUE... Leaps and bounds

BATS MAY BE masters of the air, but the majority are rather awkward walkers. There are a handful of exceptions, though, one of which is the vampire bat *Desmodus rotundus*. This stealthy bloodsucker approaches its prey unnoticed on the ground – a tactic that means it has to be able to make a fast getaway if it's spotted. Luckily, the bat's forelimbs – its wings – are remarkably powerful and allow it to leap straight into the air, achieving a vertical velocity of 2.4m per second in an instant.

As if this wasn't enough, the vampire bat has another locomotory trick up its sleeve: it's a fast runner, too. Using high-speed video, scientists have recently unraveled how the bat achieves this unlikely feat. At low speeds, the bat walks much like any other quadruped, though its long forelimbs and short

hindlimbs give it a strange appearance. The real surprise comes when the bat breaks into a bounding gait: it uses its powerful forelimbs to leap into the air, bringing its back legs down to land as they move forward. The overall effect is like a running push-up and allows the bat to reach a top speed of 1.1m per second.

Nick Atkinson

DO THE LOCOMOTION

» The algae octopus *Octopus aculeatus*, the algae octopus, often uses just two of its eight tentacles to 'walk' across the ocean floor. Waving the remaining arms around provides the disguise that gives the cephalopod its common name.

» The flying snake *Chrysopelea ornata* can travel up to 100m in the air. The snake flattens its body and 'steers' using an undulating swimming motion.

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