

Translated excerpt

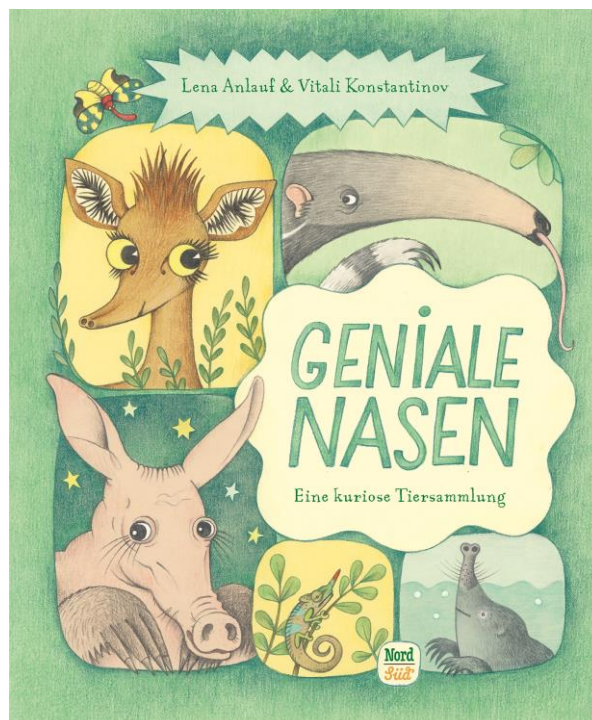
Lena Anlauf / Vitali Konstantinov
Geniale Nasen
Eine kuriose Tiersammlung

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Amazing snouts
A curious collection of animals

Translated by Marshall Yarbrough



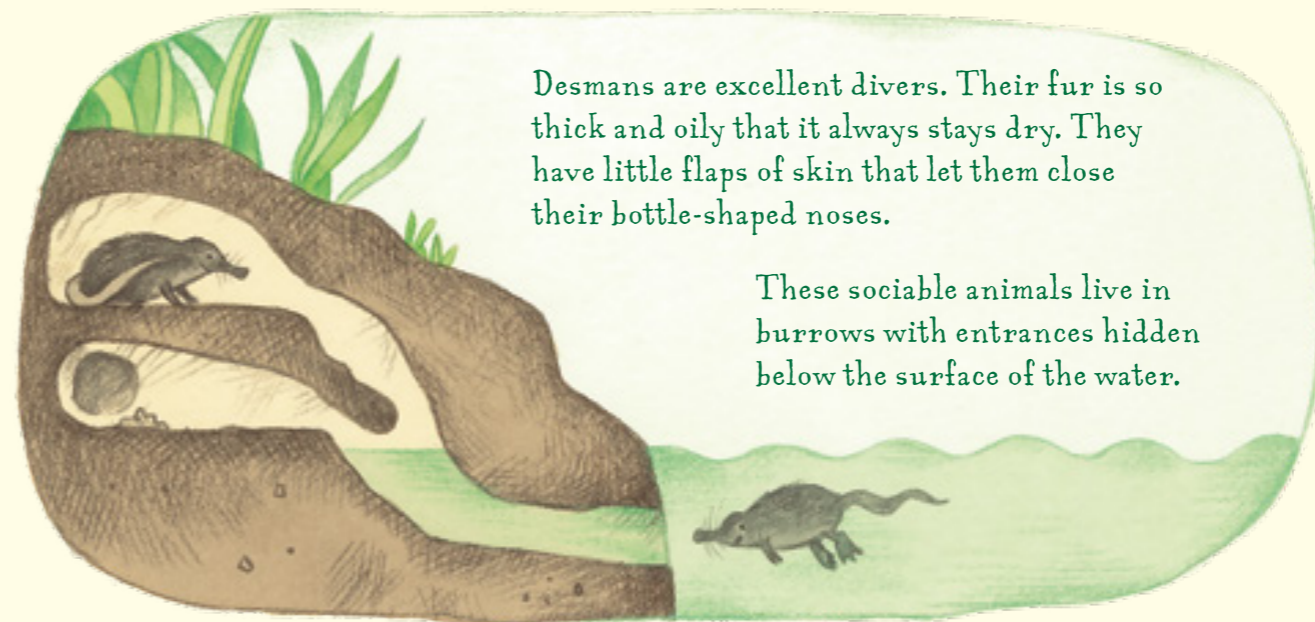


Before the desman surfaces, it sometimes sticks its nose out of the water like a snorkel to sniff out potential danger.

Also known as the wychochol.

DESMAN

Desmana moschata / Galemys pyrenaicus



Desmans are excellent divers. Their fur is so thick and oily that it always stays dry. They have little flaps of skin that let them close their bottle-shaped noses.

These sociable animals live in burrows with entrances hidden below the surface of the water.

The Russian desman is a semiaquatic mole. It lives beside slow-moving rivers, lakes, and ponds in Russia, Ukraine, and Kazakhstan. The somewhat smaller Pyrenean desman is found in the mountain streams of Spain, Portugal, and France. Both species are nearly blind and find their way around by feeling and sniffing with their noses. When the desman locates its prey, it snatches it up with its snout and devours it on the spot.



The desman also likes to stick its nose in the mud onshore, where it can use its whiskers to sense the movements of insects or worms.



Every day it gobbles up at least half its body weight in tiny critters!

Desman is another word for *musk*, a particular kind of animal odor that desmans secrete from a gland. Because of this, they used to be hunted to make perfume. Today hunting them is prohibited, but now they are at risk from increasing levels of pollution in the water.



It's also called the rabbit-eared bandicoot.

BILBY

Macrotis lagotis / Macrotis leucura

Greater bilbies live in Australia. They have silky soft fur and get around mostly by hopping. The female has a pouch that faces backward.

During the day bilbies sleep in their burrows, which are two meters (six feet) underground. The burrows also offer protection to other vulnerable animals from heat and wildfires, which occur often in summer.



The bilby's sense of smell is very good. It pokes its nose out of its burrow to sniff the air for nearby predators. By doing so it avoids run-ins with dingoes, the wild dogs of Australia.

When humans brought cats and foxes to the continent, though, bilbies didn't recognize the scent of the unfamiliar predators. The smaller of the two bilby species, the lesser bilby, has since gone extinct.

Rabbits were also introduced into the bilby's habitat. As a result, bilbies were driven out. Their population is getting smaller and smaller. In response to this, there have been efforts in recent years to call more attention to these animals and better protect them. For example, the bilby has been suggested as an Easter Bunny alternative.



To date, the sale of chocolate bilbies has paid for a fence twenty kilometers (twelve miles) long to keep out predators. Thanks to this fence, a group of bilbies inside one of Australia's national parks is now protected.



It's also called a star mole.

STAR-NOSED MOLE

Condylura cristata

Star-nosed moles live in North America. They dig tunnels underground, but also like to spend time aboveground or in ponds and creeks. Almost totally blind and deaf, they find their way around mainly by using their fantastically good sense of touch: scientists have discovered that by constantly feeling around with their nose they form star-shaped images of their surroundings in their minds.



The star-nosed mole is among the few mammals that can smell underwater. To do so it uses a special trick: it dives, breathes out, holds onto the air bubbles with the tendrils on its nose, and then sucks the air back in, along with nearby odor molecules.



This mole's unique olfactory organ is about the size of a finger and has twenty-two tendrils arranged in a star shape around its two nostrils. It contains more than a hundred thousand nerve receptors on tiny bumps. That's almost five times as many as are found in a whole human hand!

With the help of its highly sensitive tendrils, the star-nosed mole can detect up to thirteen bugs per second, while at the same time checking to see if they are edible. It devours its prey in less than a quarter of a second. That makes it the fastest eater among all mammals.



LOWLAND STREAKED TENREC



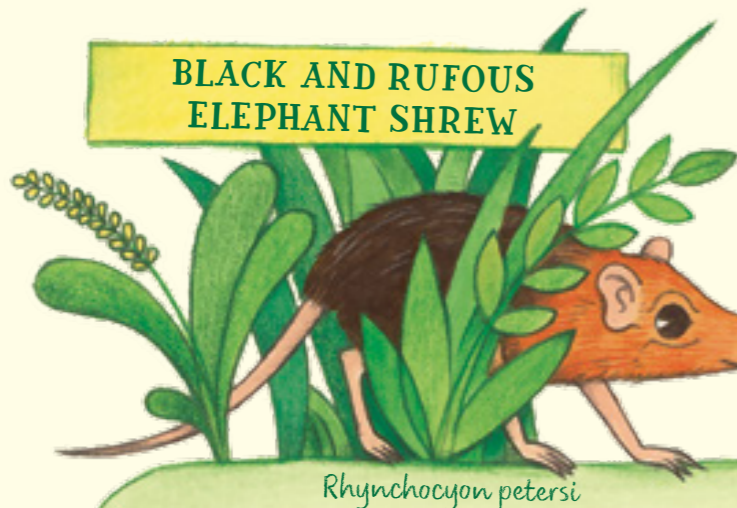
The lowland streaked tenrec lives in Madagascar. Its snout is covered in sensitive whiskers and wart-like bumps that help it track down prey. When a new tenrec couple meets for the first time, the first thing they do to get to know each other is to sniff each other's noses. And if the young try to leave the nest too early, their parents carefully push them back in with the quill-free tips of their noses.

HOG-NOSED SHREW RAT

The hog-nosed shrew rat lives on the island of Sulawesi in Indonesia. Its binomial name *Hyorhinomys stuempkei* honors the zoologist Gerolf Steiner, who wrote a book under the pseudonym Harald Stümpke about a fictitious order of mammals called "rhinogrades," or "snouters."



BLACK AND RUFOUS ELEPHANT SHREW



BUSHVELD ELEPHANT SHREW



These two animals belong to the order of elephant or jumping shrews that are native to Africa. They find tasty insects by sticking their flexible noses under leaf litter and following their highly developed sense of smell.

SOLENODON

Solenodons are found only on the islands of Cuba and Hispaniola. The Hispaniolan solenodon has a very special nose bone: it has a ball-and-socket joint that lets it twist the tip of its nose all the way around. Like their pointy-nosed relatives the water shrews, solenodons number among the few poisonous mammals.



GAMBIAN POUCHED RAT

A trained Gambian pouched rat can help diagnose diseases with its superpowered nose. It can also sniff out smugglers and detect land mines in former war zones.

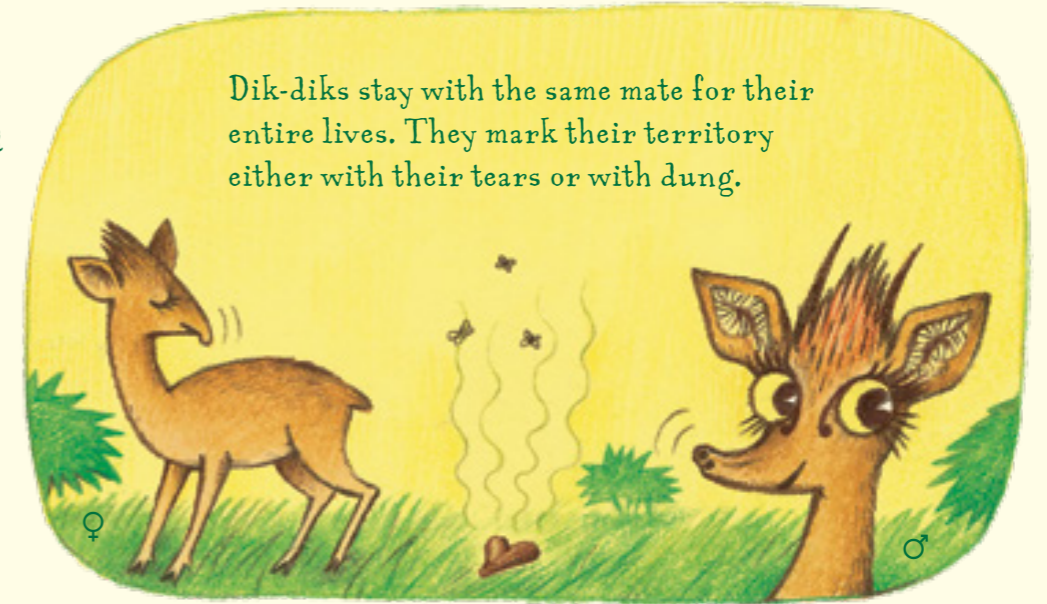


Magawa the rat was awarded a gold medal for her sniffing work in Cambodia. By the time she retired in 2021, she had found seventy-one land mines and thirty-eight explosive devices, and in doing so had made about 225,000 square meters (800,000 square feet) of land safe to walk on again.



Madoqua saltiana  **DIK-DIK**  *Madoqua piacentinii*
 *Madoqua guentheri* / *Madoqua kirkii* 

Dik-diks are small antelopes that live in African steppe and semidesert habitats. They take in so much water from the plants they eat that they hardly ever need to drink. It is a matter of debate whether there are just four species or many more than that. Günther's dik-diks have the longest snouts.



Dik-diks stay with the same mate for their entire lives. They mark their territory either with their tears or with dung.

The dik-dik can twist and extend its nose in every direction.



Its long nostrils function like air conditioners. When the dik-dik breathes quickly in and out, the air that passes over the moist mucous membrane inside the nostrils cools the blood in the snout. As the blood travels throughout the rest of the body, the total body temperature decreases.



When in danger, this small antelope raises the fuzzy shock of hair on top of its head and makes a whistling noise through its nose that sounds like *dsik-dsik*. This cry, which also warns other animals about nearby predators and hunters, is how it got its name. When fleeing, the dik-dik dashes off, leaping up to three meters (ten feet) in a single bound and moving in a zig-zag pattern from one sheltering bush to the next.

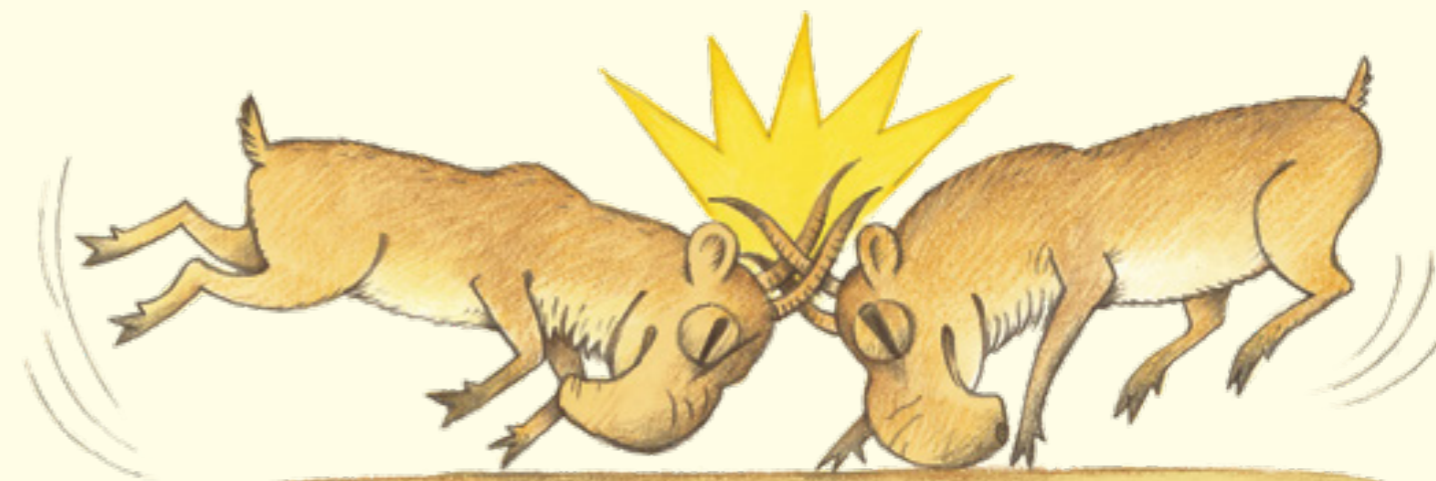


In the cold months, the saiga grows a fluffy winter coat.

SAIGA ANTELOPE

Saiga tatarica / Saiga mongolica

The saiga antelope lives in the semidesert and steppe regions of southern Russia, Kazakhstan, and Mongolia. Nose-focused cave paintings and engravings dating back to the ice age show that even thousands of years ago people found its appearance fascinating.



The saiga antelope's trunk-like nose gives it more than just a good sense of smell. It also helps it to survive on the steppe, which gets very hot in the summer and icy cold in the winter. Like the dik-dik's snout, the saiga's snout is a helpful temperature regulator. In the summer it helps keep the saiga from overheating: the saiga breathes quickly and cools down the blood in the trunk, which then flows to the rest of the body. Similarly, in cold weather it can warm up the air the saiga breathes.



The nostrils function as air filters and as humidifiers: they are densely packed with hair and mucus glands, which can filter out dust that gets kicked up by the herd in summer. The male saiga's trunk-like nose also helps him in his search for a mate. It can swell up in size and act as a resonating body, impressively amplifying his mating calls.

Saigas are important for the ecosystem, spreading fertilizer and seeds across wide distances with their dung. In a single day they can travel up to 120 kilometers (seventy-five miles).





Tapirs belong to an ancient genus of mammals. A few species have gone extinct. Today, all that remain are the Malayan tapir of Southeast Asia and its Central and South American relatives. The Kabomani tapir was acknowledged only a few years ago, in 2009—though there is still not perfect agreement as to whether it is a species in its own right or just a subspecies of the South American tapir.

The nose and upper lip of the tapir are fused together to form a trunk. Muscles set in a screw-like pattern allow it to move its trunk in all directions and utilize it as a versatile tool. Not only can tapirs sniff out food, but their noses are also prehensile: they can use them to break off leaves and branches and pop them into their mouths.

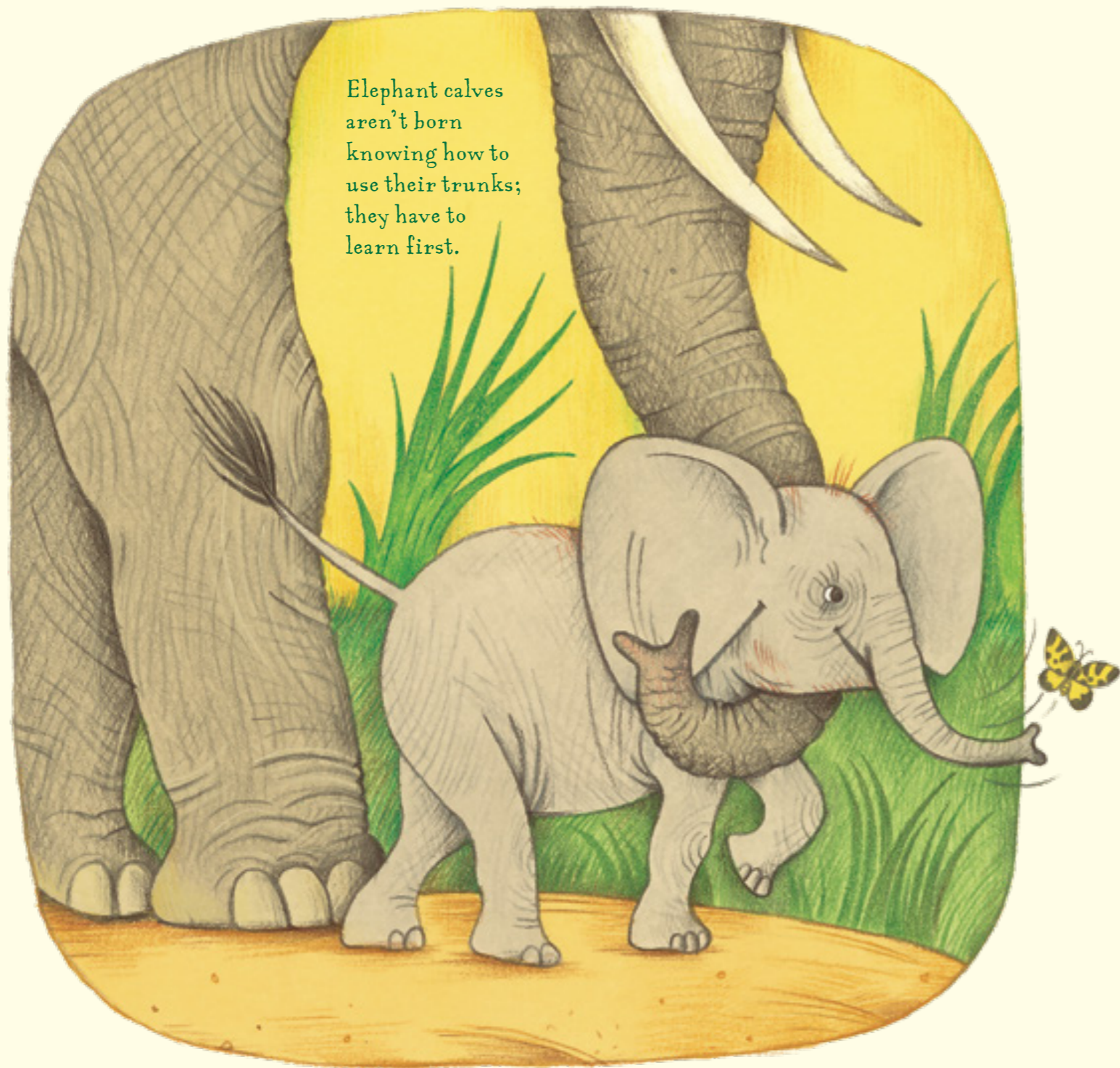


To communicate with one another, tapirs belch, gurgle, squeak, and yowl. For some of their calls, their trunk functions like an amplifier.



South American tapirs live in dense jungles near water. They like to eat underwater plants and are fantastic swimmers. They use their trunks as snorkels.

Young tapirs have dark fur with white spots and stripes. These act as camouflage. When fully grown tapirs are very strong and astonishingly fast. Because their habitat is being destroyed by humans, however, tapir populations are nevertheless in danger.

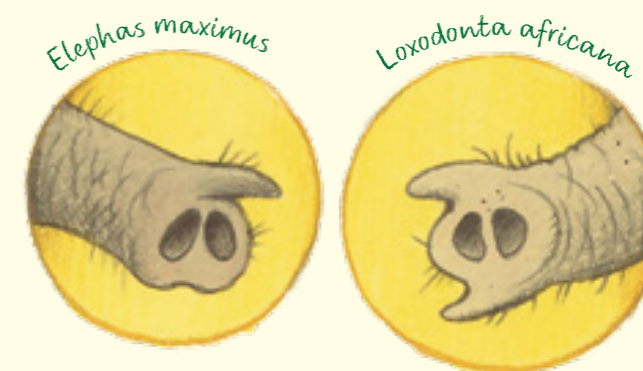


Elephant calves aren't born knowing how to use their trunks; they have to learn first.


ELEPHANT

Loxodonta cyclotis *Elephas maximus*
Loxodonta africana

Elephants belong to the order of Proboscidea. There are three different species: the African bush elephant, which lives on open savanna; the African forest elephant, which is found in tropical rainforests; and the Asian elephant, which makes its home in different parts of South Asia.

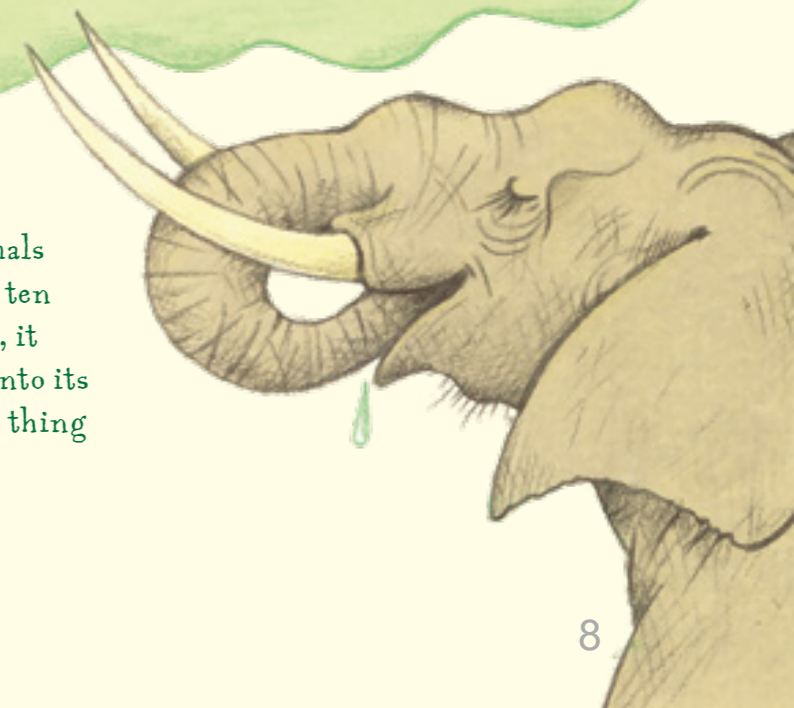


Elephant trunks are boneless and are made up of more than forty thousand muscles. At the very tip of the trunk, the African elephant has two fingers, the Asian elephant just one. These fingers turn their noses into brilliant grabbing tools: they can pick up peanuts and even peel off their shells. Meanwhile they can also use their trunks to lift objects weighing up to three hundred kilograms (660 pounds).

Elephant noses are also used for many kinds of communication: via smells, noises, gestures, and touch. A raised trunk, for example, conveys excitement. And when an elephant is sad, the others pat it soothingly with their trunks, or carefully place their trunks in its mouth. Sometimes they get their trunks lovingly tangled up.

Elephants can exchange messages with other herds using infrasound; especially low-pitched sounds that can travel up to ten kilometers (six miles) over land. To send the messages off, the elephant places its trunk on the ground, since elephants don't just hear infrasound with their ears—they also pick it up with their highly sensitive feet.

The elephant is one of the most highly macrosomatic animals in the world: it can detect water from a distance of up to ten kilometers (six miles) using its sense of smell. To drink, it draws as much as eight liters (two gallons) of water up into its trunk and then sprays it into its mouth. It does the same thing to take a bath—sometimes using dirt instead of water.





Myrmecophaga tridactyla

ANTEATER

60 cm (24 in)

Anteaters live in Central and South America. There are giant anteaters, smaller anteaters known as tamanduas, and pygmy or silky anteaters. Giant anteaters weigh up to fifty kilograms (110 pounds), while silky anteaters weigh only about 250 grams (nine ounces). All three varieties are macrosmatic; they have poor eyesight and hearing, but an excellent sense of smell.



The giant anteater gobbles up about thirty thousand ants and termites per day. This sounds like a lot, but it only adds up to about two hundred grams (seven ounces). That probably explains why the anteater has only enough energy to concentrate on doing exactly one thing. While the animal is eating, a researcher can creep up and observe it from way up close without it noticing.



Giant anteaters are loners, but they leave messages for their fellows on trees, using scratch marks and scent markings they make by pressing the scent glands on their chests up against the bark. Scientists are still not sure what exactly the animals are telling each other. They think that this is the anteater's way of marking its territory or finding a mate.



Unlike their tree-dwelling relatives, giant anteaters are usually found in grassy terrain. But if it gets too hot for them there, they're happy to head back into tropical rain forests or swampland. With their sharp claws they can defend themselves against jaguars and pumas. But their population is steadily decreasing as a result of the destruction of their habitat by humans.



KOALA
Phascolarctos cinereus

Koalas are marsupials that live in eucalyptus groves in Australia and sleep up to twenty hours a day. Even though they can neither distinguish between a lot of smells nor smell things from very far away: their noses are perfectly adapted to their needs.

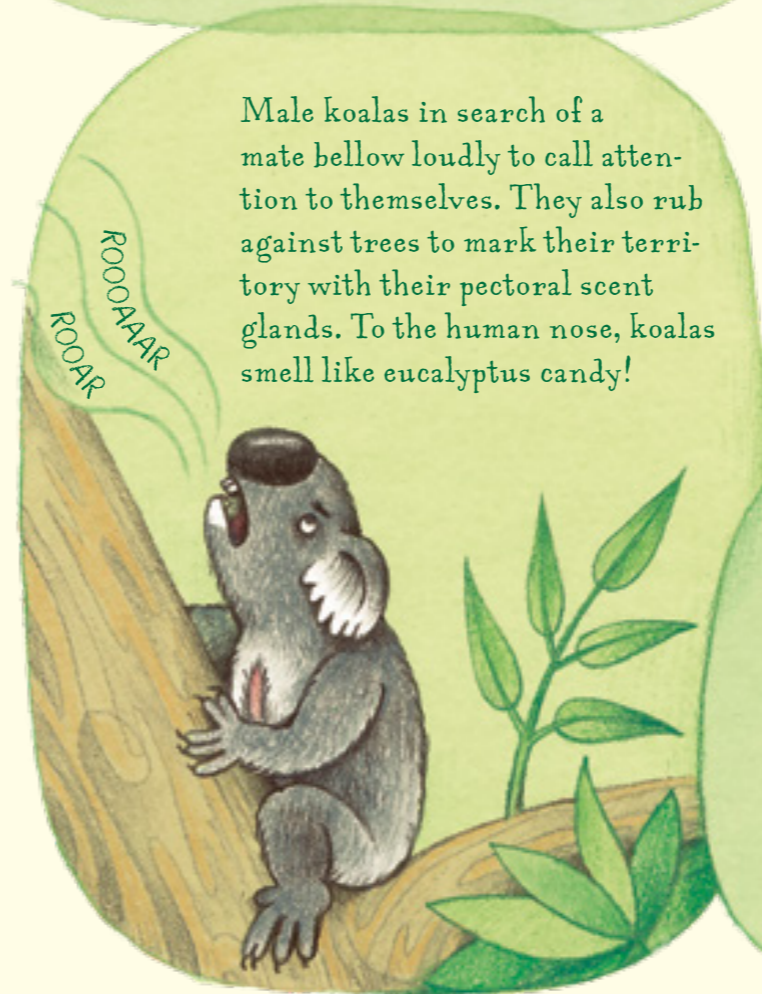


Because of their limited smelling range, koalas have to get very close to each other in order to recognize their fellows by their personal scent. When they do, they look like they're rubbing noses.

Koalas are very picky when it comes to their food: they subsist almost exclusively on eucalyptus, but among all the different eucalyptus species they only like a specific few. By sniffing a eucalyptus leaf, they find out whether it contains too much poisonous oil or has wilted — or if it's a fresh, tasty morsel.



You can tell koalas apart by the very specific markings around their nostrils. Every koala nose is as unique as a fingerprint.



Male koalas in search of a mate bellow loudly to call attention to themselves. They also rub against trees to mark their territory with their pectoral scent glands. To the human nose, koalas smell like eucalyptus candy!

Even baby koalas rely on their noses. After just thirty-five days in their mother's belly, blind, deaf, and naked, they have to feel and sniff their way to her pouch all by themselves.

