



Despite their bulk, Sumatran rhinos are expert at melting into the forest – it is almost unheard of to see a wild one at close range. Virtually all photos (apart from camera-trap images) are of captive individuals.



THE SECRET RHINO

One of the world's rarest and most enigmatic mammals is a gifted vocalist whose performances can reduce listeners to tears. **MARK CARWARDINE** reveals why the Sumatran rhino deserves as much attention as its African relatives.

Photos by **STEPHEN BELCHER**



A footprint in a muddy trail is a useful clue for staff and volunteers working in the Sumatran Rhino Sanctuary.



Rhino-protection units keep track of the rhinos' movements and deter poachers.

A CAPTIVE AUDIENCE

All of the photographs illustrating this article were taken in the Sumatran Rhino Sanctuary, a 100ha forest enclosure in the heart of Way Kambas National Park in Sumatra.

Created by the International Rhino Foundation and the Indonesian Government as part of a captive breeding programme, the compound contains five rhinos – two males and three females. Four of them were captured in the wild; Rosa – the star of most of these pictures – was found wandering along a road in Bukit

Badisan Selatan National Park in 2003.

The fifth, a male, was brought over from Cincinnati Zoo. Protected by an electric fence, the animals are able to live in natural rainforest habitat, while receiving state-of-the-art veterinary care and nutrition.

Captive breeding isn't a substitute for protecting Sumatran rhinos in the wild, but the animals in the enclosure act as an insurance policy and provide a unique opportunity to study their ecology – information that could prove vital in the fight to save the species.



THE EXPERT

MARK CARWARDINE is a rhino addict. He has spent a lot of time with them in Africa and Asia, and is making a *Last Chance to See* TV special about their plight for BBC2.

PEOPLE LIVING IN the jungles of Sumatra, in western Indonesia, could be forgiven for thinking that they share their forest home with a creature straight out of a horror film like *The Blair Witch Project*. They are sometimes startled by tremendous crashing sounds, or stumble upon large, round tunnels made by something moving fast through the dense vegetation. And, once in a while, they hear strange whistling, whining and snorting. But they rarely, if ever, see the animal responsible.

I don't know of any mythical or paranormal beasts in that corner of Indonesia; instead, the source of these weird and wonderful noises and tunnels is the Sumatran rhino, which is as surprising and intriguing as anything a film-maker could dream up.

A ZOOLOGICAL ENIGMA

The Sumatran rhino is one of the rarest and most elusive mammals on the planet. The smallest of the five species of rhino – though still immense – it is also the most peculiar.

It is adorned with two horns (the rear one seldom being more than an irregular knob), reddish-brown hair, tufted ears and thick folds of skin that give the animal an armoured appearance. According to Marco Polo, who described the species in the 13th century, it even has a head like that of a wild boar.

Some scientists say that the Sumatran rhino has been on Earth longer than any other mammal. It certainly looks prehistoric. Indeed, the species is believed to be a direct descendant of the shaggy-coated woolly rhino that once roamed Europe and Asia – perhaps clinging on until 10,000 years ago.

Swift and nimble in its dense, seemingly impenetrable forest, the Sumatran rhino can easily burst through tangled undergrowth, charge up steep slopes and swim across raging rivers. Many forest trails are made by this living bulldozer during its haphazard wanderings, while others have been used by generations of rhinos travelling between favourite salt licks and feeding areas.

Like its better-known relatives of the African savannah, this giant forest herbivore is a voracious eater – it will readily gobble up more than 50kg of plant material in a single day. Preferring to feed early in the morning and just before nightfall, it uses its

mobile, prehensile upper lip to browse young saplings, leaves, twigs, shoots and fruit.

But the best thing about the Sumatran rhino is its voice. It is constantly talking and singing – even with its mouth full.

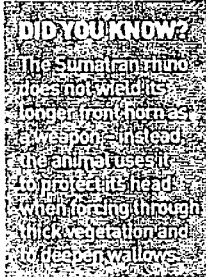
WHISTLES AND EEPS

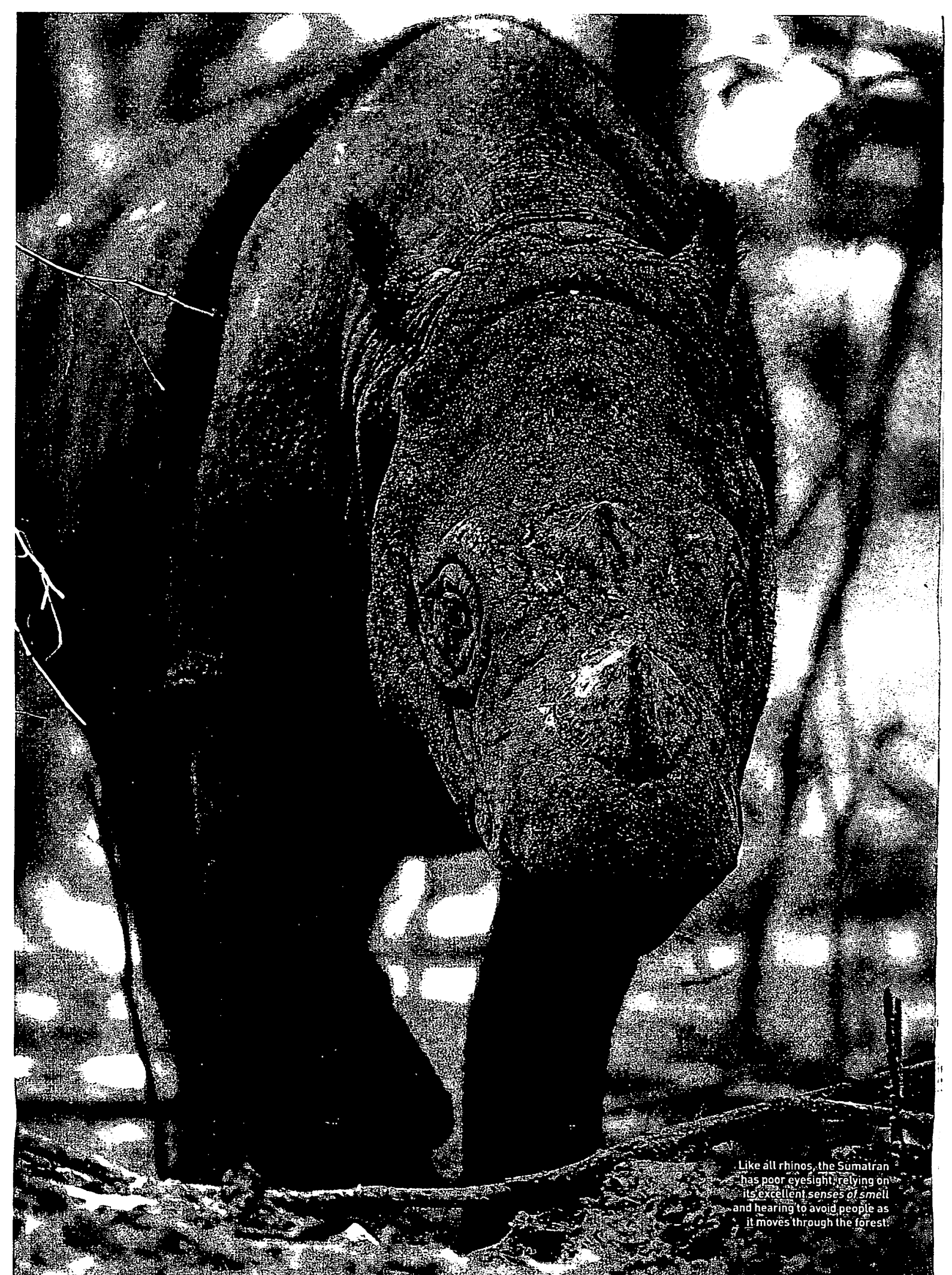
The rhino's most common sound is a yelp, known as an 'eep', which lasts about a second. It also produces a loud and distinctive whistle, immediately followed by what can only be described as a cough or sneeze. This is called a 'whistle blow' and, since much of it is infrasonic, the sound can travel for many kilometres through thick forest. In fact, the whistle blow is so loud

that it makes the iron bars of zoo enclosures resonate.

Finally, there is a third type of vocalisation that lasts for four to seven seconds and sounds remarkably like a clip from the song of a humpback whale. Nobody knows if the rhino is singing a real song (which, strictly speaking, is something repeated over time and linked to breeding

behaviour), but it is certainly possible. Researchers studying this astonishing vocalisation have commented that, just like whale song, it has a powerful impact on people, often reducing them to tears.





Like all rhinos, the Sumatran has poor eyesight, relying on its excellent senses of smell and hearing to avoid people as it moves through the forest.

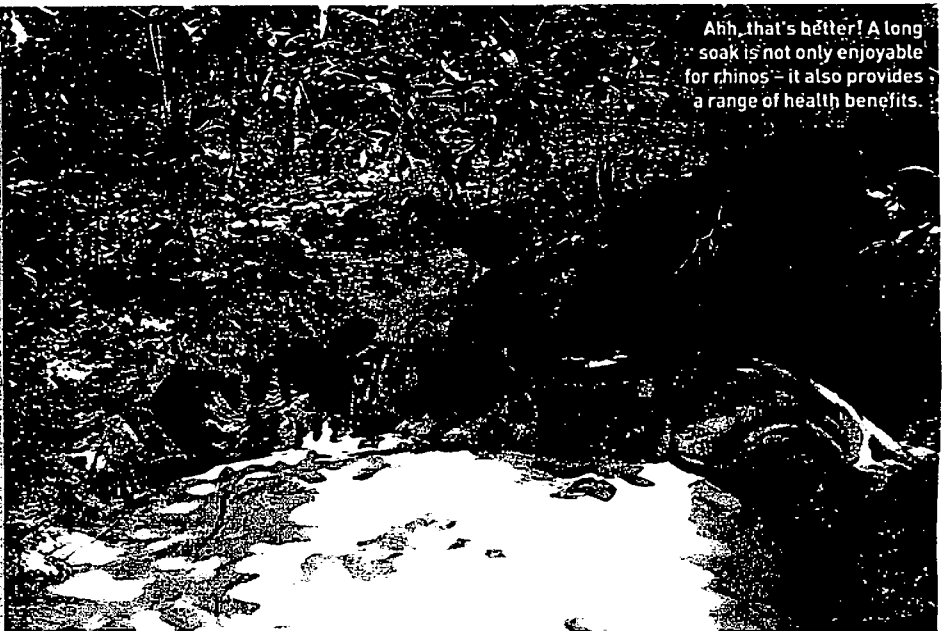


Sumatran rhinos use their mobile upper lips to grasp forest plants and, like cows, spend much of their time ruminating.

MUD, GLORIOUS MUD

Sumatran rhinos like nothing more than a long soak in a pool of rainwater or, better still, a muddy bath. If they can't find a suitable wallow, they'll go to a lot of trouble to dig or deepen one with their feet and horns. It's not unusual for the animals to spend two or three hours lounging and the sores in their skin to ventilate into the fresh air.

Wallowing is believed to help the rhinos to stay cool during the sweltering afternoons. It also helps to protect their skin and to keep it moist. Rhinos also use mud to cover their bodies in a protective layer. This helps to keep them cool and to protect their skin from the sun. Rhinos also use mud to cover their eyes and to keep them moist.



Ahh...that's better! A long soak is not only enjoyable for rhinos - it also provides a range of health benefits.

One study of a captive female recorded no fewer than 421 eeps, 60 whistle blows and 180 whale songs in 20 minutes, which shows just how vocal this species can be. As yet, we can't be sure what the rhinos are talking and singing about, though they could be conveying messages about anything from sexual readiness to potential dangers or their position in the forest.

ON THE WAY OUT

There are three species of rhino in Asia: the Indian one-horned, with a population of about 2,600 in India and Nepal; the Javan, with a frighteningly low population of 50 or so in Java and Vietnam; and the Sumatran, of which some 200 survive in isolated groups in Malaysia and Indonesia.

At one time, the Sumatran rhino had a vast range stretching from India and Bhutan, through southern China and into South-East Asia as far as Indonesia. Incredible though it may seem, the species was so common that, as recently as the 19th century, it was considered a pest. But centuries of hunting and habitat destruction have taken their toll – today, this operatic giant of the mammal world is one of the most endangered of all animals. It doesn't receive as much attention as its African cousins, yet its wild population has halved in the past 15 years.

Today, the Sumatran rhino is extinct almost everywhere and survives in only a handful of fragmented locations. There are believed to be 15–25 individuals in Sabah (Malaysian Borneo), while the rest are in three national parks in Sumatra: 50 in Bukit Barisan Selatan; 25–30 in Way Kambas; and about 60 in Gunung Leuser. There may be some survivors in Peninsular Malaysia, but few experts hold out much hope. In addition to

this pitifully small total left in the wild, there are currently 10 individuals in captivity.

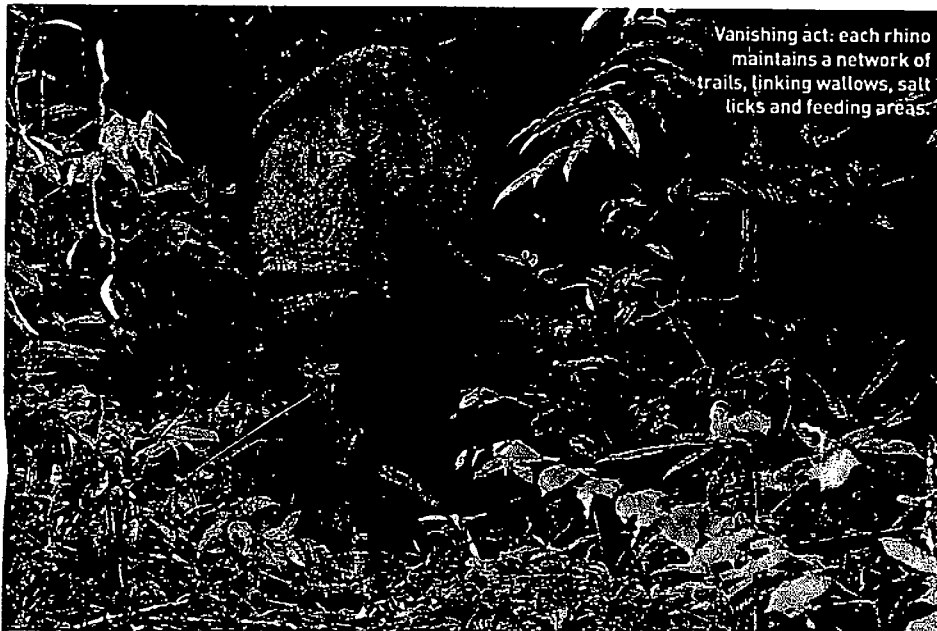
The threat from poaching is ever-present. The Sumatran rhino's small horns are considered exceptionally potent in traditional Chinese medicine, and thus command higher prices. Indeed, they are so valuable that dealers are busily stocking up in the hope that the species will become extinct, pushing their value even higher.

Fortunately, anti-poaching patrols, which seek out snares and confront armed gangs, as well as village workshops and intelligence-gathering to prevent poaching attempts before they take place, have reduced hunting to a bare minimum. Now the challenge is to grow the population to a more sustainable level.

ROLLERCOASTER RIDE

While this article was being prepared, there has been heartening – and tragic – news from the Sumatran Rhino Sanctuary (see box, p66). Early this year, one of the females, Ratu, successfully mated with a male, Andalas. Their baby was due to be born in May 2011, and the pregnancy was celebrated around the world as a major achievement. Hardly any calves are being born in the wild, and just three have been produced in captivity in the past century. It's 10 minutes to midnight for the Sumatran rhino: every individual counts.

Sadly, in April, Ratu was found to have miscarried. But there's hope: she and Andalas will probably try again. It will be the grand finale after years of research and collaboration between governments, NGOs and zoos, then months spent gradually introducing the pair of rhinos by scent, sound, sight and – finally – physical contact. All that's needed now is a little bit of rhino chemistry.



Vanishing act: each rhino maintains a network of trails, linking wallows, salt licks and feeding areas.

DATA

FACTSHEET

SUMATRAN RHINO

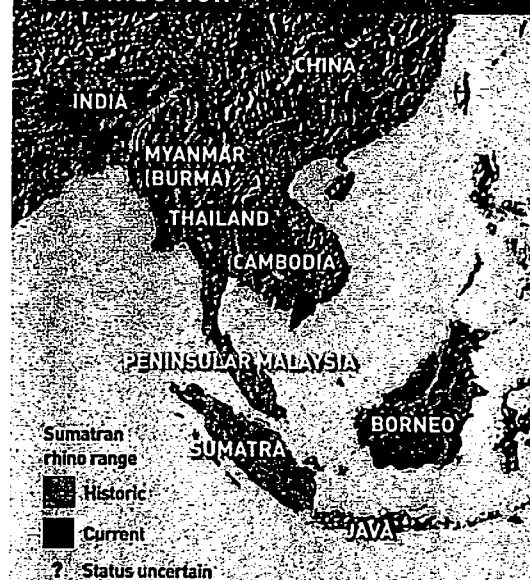
Dicerorhinus sumatrensis

THE BASICS

- || **ORIGIN** SOUTHWESTERN ASIA
- || **Asian two-horned rhino; hairy rhino.**
- || **LENGTH** 2.3–3.2m.
- || **HEIGHT** 1.5–1.8m.
- || **WEIGHT** 600–950kg.
- || **HORN** Front: 25–79cm; rear: up to 10cm.
- || **COLOUR** Reddish-brown.
- || **DIET** Leaves, shoots, fruit and twigs from several hundred plant species, including wild mangoes, figs and bamboo; food is browsed or picked up from the forest floor.
- || **REPRODUCTION** Age at maturity: 6–7 years (female); 10 years (male). Females give birth to a single calf every 3–5 years on average, after a gestation of 15–17 months.
- || **HABITAT** Primarily dense lowland rainforest; also in forested areas from sea-level swamp to uplands.
- || **LIFESPAN** Up to 40 years.
- || **STATUS** Listed as Critically Endangered by IUCN. Total population estimated to be about 200 in the wild, scattered across Sumatra and Sabah (Malaysian Borneo); probably extinct in mainland Malaysia.



DISTRIBUTION



FIND OUT MORE

Illustration by Priscilla Barrett/Brown Reference Group

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INSETS Jon Hall/BBC

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