

So elusive that, until recently, barely any westerner had seen one in the wild, red pandas are probably the most beautiful animal still pending on most mammal-watchers' checklists.

But their situation has never been more precarious, writes Dirk Kloss, CEO of the Red Panda Network

FIELD GUIDE TO RED PANDAS

Opposite: a small relation of the giant panda. Here: the red panda is about the size of a domestic cat



Impossibly cute, but largely unknown and rapidly disappearing, the red panda, or ‘firefox’, is often referred to as the ‘lesser panda’ in deference to the better-known giant panda. Others prefer to call them the ‘first panda’ as Western scientists described the red panda 50 years earlier than their larger namesakes in 1825. One Nepali word for the panda, *nigálya pónya*, means bamboo eater. Few people outside its native habitat have even heard of the red panda, let alone seen one. They are scarce, very shy and more active at night. Habitat loss and poaching threatens them with extinction across their habitat in the Eastern Himalayan highlands.

Red pandas represent the Eastern Himalayan Broadleaf forest as a landscape species. If you protect them you protect their habitat, which is home to many other rare species, as well as millions of mostly poor people in the mountains and downstream that depend on the red panda’s native forests for their livelihoods. Without the forests the pandas disappear, the climate changes, the water becomes scarce in dry seasons and more disastrous during monsoon floods.

RED PANDA SUB-SPECIES

Red pandas – like their giant cousins – eat mostly bamboo, both have a ‘false thumb’ extending from a wristbone to grab it better and they even share part of their habitat. However,

contrary to popular belief they are not closely related. Giant pandas are in the bear family, while red pandas are in a family of their own. It took scientists a while to work this out: the red panda has been previously classified in the families *procyonidae* (raccoons) and *ursidae* (bears), but recent research has placed it in its own family *ailuridae*, in the superfamily *musteloidea*, along with *mustelidae* and *procyonidae*.

Two subspecies of red panda are recognised. *Ailurus fulgens fulgens* roam in Nepal, north eastern India (West Bengal, Sikkim, Arunachal Pradesh), Bhutan, and part of China. *Ailurus fulgens styani* are slightly larger with a less smooth hair, only found in China (in the Hengduan Mountains in Sichuan and the East Nujiang River of Yunnan Province) and northern Myanmar.

DISTRIBUTION

Less than 10,000 individuals, some say as few as a couple of thousand, remain in the wild. Due to the fact they are spread thinly across a vast habitat, several groups are already disconnected from the genetic pool and might not be able to maintain a healthy population much longer. While Nepal is only thought to have a couple of hundred red pandas left and there is just a handful holding out in northern Myanmar, a larger population is thought to roam the forests across Sikkim in northern

“ LESS THAN 10,000 INDIVIDUALS, SOME SAY AS FEW AS A COUPLE OF THOUSAND, REMAIN IN THE WILD ”

India and Bhutan. Perhaps the largest group is the *styani* subspecies in the south-western Chinese districts of Sichuan and Yunnan, where they share part of their habitat with their giant panda cousins.

Red pandas only live in temperate forests in the foothills of the Himalayas at elevations between 4,900 and 13,000ft. Here, the summers are mild and wet, while the winters bring snow, so red pandas move lower during cold months. The southern slopes of the mountains trap the water from seasonal monsoons, supporting forests of firs, deciduous hardwoods and rhododendrons. A bamboo understory grows in these forests and provides the bulk of the red panda’s diet. However, these swathes of bamboo are only found in narrow bands throughout the red panda’s range and so they are restricted to these small, fragile areas because of their dependence on the bamboo.

PHYSICAL CHARACTERISTICS

At some point during the millennia the red panda’s ancestors vanished from North America and Europe along with their bamboo food →

source, and the red pandas living in Asia are smaller than the fossils that have been found in Tennessee. Today's red pandas have an average head and body length of 56 to 63cm (22 to 25 in), while their tails are between 37 and 47cm (15 to 19 in) long. Their long, soft reddish-brown upper fur and blackish underside fur helps to hide them in the trees when viewed from below against the night sky. This is offset by a light face with tear markings and robust cranial-dental features. The white facial badges are similar to those of a raccoon, and individuals have distinctive markings. Their roundish head has medium-sized upright ears, a black nose, and black eyes. Their long bushy tail with six alternating transverse red and ochre rings provides balance and excellent camouflage against its habitat of moss- and lichen-covered trees. The red panda's legs are black and short, with thick fur on the soles of the paws for thermal insulation on snow-covered or ice surfaces.

The curved and sharp semi-retractile claws stand inward for the grasping of narrow tree branches, leaves and fruit. When descending a tree headfirst, the red panda rotates its ankle to control its descent – one of the few climbing species to do so.

DIET

The red panda's bamboo diet is very unusual for a genetically carnivorous mammal. When the weather is warm enough, they also eat insects and fruit. While the giant panda eats almost every part of the bamboo plant (except the roots), the red panda only eats the youngest, most tender shoots and leaves. The red panda chews the bamboo thoroughly, whereas the giant panda hardly chews at all. The red panda's preference for just a handful of the thousands of different bamboo species is apparently an ancient adaptation, as indicated by fossils of similar animals that have been found in Eastern Europe and North America. These specimens date back to the Miocene (25 to five million years ago) and Pliocene (five to two million years ago) periods, leading scientists to believe that bamboo and red panda-like animals were once found in many areas of the planet. It is likely that the range of the bamboo has increased and decreased with changes in global temperature and moisture, but fortunately for the red panda, their favourite bamboo species still thrives in parts of the Himalayas.

Bamboo is very high in indigestible fibre, making it extraordinarily difficult to extract the nutrients. While herbivorous mammals like cows normally have very strong teeth and extra fermentation chambers in their guts, the originally carnivorous red panda guts are not specialised to handle plant matter. As a result,



Above: a precarious existence. Opposite top left and right: pairing up; finding the best shoots; home territory, China

red pandas only extract about one quarter of the nutrients from bamboo, and food passes through their digestive tract quite quickly. Many red pandas lose as much as 15 per cent of their body weight during the winter, when their other preferred foods (such as insects) are not readily available.

When food is scarce they can spend 13 hours a day looking for and eating bamboo, and slow their already low metabolic rate further in colder temperatures. Their thick fur covers their entire body, including the soles of their feet, allowing them to conserve their body heat.

BEHAVIOUR

Red pandas are generally solitary, but develop extended associations with their mothers that last for over a year, and have short mating relationships during the spring breeding season. Their ranging patterns are similar to large carnivores. They tend to have overlapping home ranges in which the individuals rarely interact with each other. Red pandas search for the most tender bamboo shoots and leaves, and these prime specimens may be patchily distributed – not unlike the prey of larger animals, such as jungle cats. These red panda habits reduce overcrowding and overuse of shared resources.

The home ranges of females often measure about one square mile, while males need twice that size. They frequently overlap with at least one female home range and sometimes expand during the breeding season. Because red pandas constantly need to conserve energy, they only cover 650 to 1,000ft of their home ranges per day and about 25 per cent of their

home ranges per month.

Red pandas mark their territories and home ranges with urine, secretions from anal glands, and scents from glands on the pads of their feet. They have also been known to use communal latrine sites to stake out territory and share information with others. In addition, red pandas often communicate using body language (such as head bobbing and tail arching) and a variety of noises (such as a threatening 'huff-quack' sound, as well as a warning whistle).

REPRODUCTION

Red pandas reproduce very slowly, which makes it harder for them to recover from population declines. After a three-to-four-month gestation period, which is very long for an animal that weighs only 11 pounds at maturity, they give birth in June/July to only one or two, or, very rarely, up to four initially-blind cubs. They are weaned after about nine months and despite the amount of food they eat, they grow quite slowly, reaching adult size after 12 months. Mothers move the cubs between several nests in hollow trees or crevices for safety, but during these first couple of years they are more likely to fall prey to natural enemies. The young become sexually mature at 18 months.

In the wild they rarely survive more than 10 years, although they can live up to 15 or even 18 years in captivity.

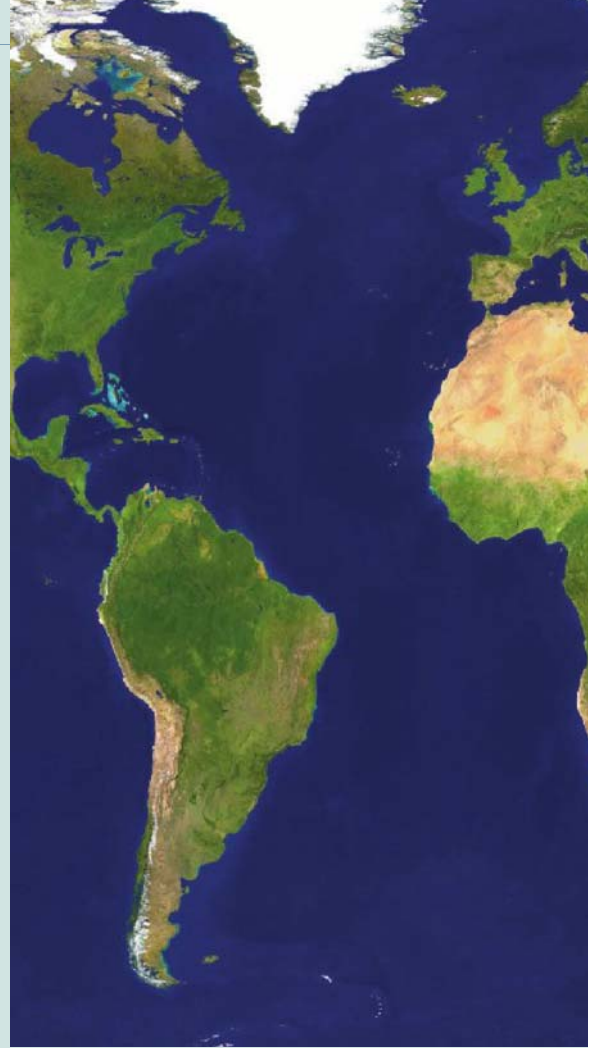
THREATS

The main cause for the rapid decline in red panda population is habitat loss and degradation driven by human development, including deforestation for livestock, agriculture, and firewood or bamboo extraction, followed by hunting and poaching. Other threats include encounters with stray dogs and people, often children, who disturb the habitat and might even try to catch an animal, resulting in deaths, particularly of young red pandas.

Official numbers suggest that the Chinese red panda population has been halved since the 1960s; the actual decline might be even faster. In some parts of Nepal and India the forests have disappeared entirely. Clear cutting for firewood or agriculture, whether shifting cultivation or permanent, removes old trees that provide maternal dens and decreases the ability of some species of bamboo to regenerate. Deforestation can inhibit the natural mobility of red pandas and exacerbate the natural population subdivision by topography and ecology, leading to severe fragmentation of the remaining wild population. Small groups of less than 40 individuals with little opportunity for exchange between them risk inbreeding,



WHERE TO WATCH RED PANDAS IN THE WILD



1 EASTERN NEPAL

Perhaps the world's only reliable areas is in three districts of Eastern Nepal where over the past decade a unique conservation group (Red Panda Network) has been able to establish a network of community-based monitoring and conservation ambassadors that regularly patrol unprotected, community-controlled forests. Over time they have been trained and became one of the best ways to see red pandas, and to do so in a sustainable way. A carefully laid-out, yet unmarked, trailsystem on traditional villager footpaths through the forests (on often steep slopes) has been created, where the red pandas have become used to the presence of the villagers and their occasional tourist visitors. Trained guides distribute walks between the various trail

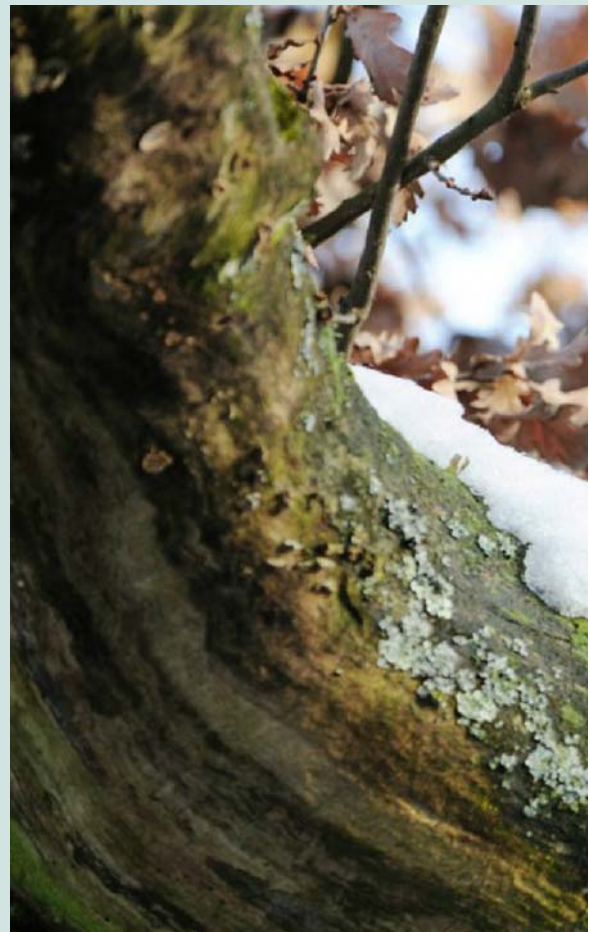
systems and avoid or minimise excessive visitation, particularly during mating and delivery months. These kinds of eco-tours are small-scale, non-destructive, minimally invasive, and provide a maximum of benefits to the local community. Villagers benefit from home-stay and small guest house accommodations, sales of local food and souvenirs, and from employment as forest guardians, monitoring staff, and tour guides/porters. These incentives result in more responsible forest use and viewing practices at the same time.

WHEN TO GO: Head to Nepal between October and early May to avoid the rainy season that prevents views and brings on blood-sucking leeches. January can get uncomfortably cold. April coincides with the breathtaking flowering of huge rhododendron forests, and November is green and clear.

2 SIKKIM, INDIA

Few protected areas, such as Nepal's Langtang and India's Singhalila National Parks have been able to stabilise their red panda population and monitor their exact whereabouts. Still, viewing is much less certain than in carefully monitored Eastern Nepal.

WHEN TO GO: October through early May, but avoid January and prepare for unpredictable dense fog even in the autumn.





3 CHENGDU, CHINA

Outside of such special circumstances the best and probably only way are responsibly managed zoos and reserves. The largest facility is probably the Giant Panda Research Base in Chengdu in China's Sichuan province with about 60 red pandas roaming in very large outdoor enclosures. The newest allows open walkthroughs by visitors without a fence separating them from the red pandas. Actual reserves with wild red pandas are only about half a day's travel away, but viewing chances are very low.

WHEN TO GO: All year, but while the summer season offers a preferable temperature for the visitor, the red pandas tend to feel a little too hot as they are used to a cooler mountain climate.

Outside of Asia, zoos around the world have taken up the call to preserve the species. More than 200 zoos currently have red pandas and almost all of them participate in a management program to ensure the survival of a viable zoo population. North America's Red Panda Species Survival Program (SSP) keeps a studbook of all red pandas on the continent, determines which animals should be mated and develops long-term research and management strategies for the species. The international studbook is managed by Rotterdam zoo, and management programs exist in Japan, Europe, Australia, and China.

Here: the red panda spends most of its life in the trees, in its high-altitude forest habitat



decreased genetic diversity, and even extinction. In addition, the natural bloom and death cycles of bamboo that removes their entire food source once every 10 years or so can wipe out a population group that previously could have moved to another area, if it has become isolated by habitat fragmentation.

International and national laws introduced over the past 30 years in all five countries the red pandas inhabit, now prohibit the hunting and trading of red pandas, though cases of poaching continue. Use in traditional ceremonies and weddings has declined, but they are still hunted for their skin and bushy tails for hat production. The number of captured red pandas sold to zoos has decreased substantially in recent years, but private collectors still pay exorbitant prices – and in some parts of Nepal and India red pandas are kept as pets.

Protecting the red panda goes hand in hand with protecting its habitat. Many local people depend on the red panda's habitat for their survival, protection from floods or droughts, and firewood and timber. These people are not opposed to change; they lack viable economic alternatives. In addition to the creation of protected areas, the communities in and around them need to be educated about and actually receive the benefit of red panda conservation. This includes better income from wildlife tourism, higher incomes from sustainably cultivated medicinal plants.

RESPONSIBLE VIEWING

The large distance between individuals and their extremely elusive shyness makes seeing a red panda in the wild extraordinarily difficult.

“RED PANDAS SEARCH FOR THE MOST TENDER BAMBOO SHOOTS AND LEAVES, WHICH MAY BE PATCHILY DISTRIBUTED”

Avoid rushing into trails without your guides' invitation, and don't talk about the exact location outside of your group, as poachers might follow your visit.


While in the presence of red pandas, keep your voice low, turn off your camera flash and follow the directions of your guides.

Refer to our 'Where to watch red pandas in the wild' box for details of the few places with trained guides and responsible practices. Ask the operator if they follow an approved Code of Conduct, and whether a trained naturalist and/or researcher will accompany the guide.

About the Red Panda Network

Established in 2005, the Red Panda Network (RPN) is the only global charity dedicated to the conservation and welfare of all red pandas. It defends these remarkable creatures against the many threats they face, through awareness campaigns, field research, advice to governments, carbon mitigation, and community-based conservation projects.

RPN helps to create a world where red pandas and the unique landscape they represent continues to exist for future generations.

RPN offers probably the only trip with an almost 100 per cent likelihood of success to view these elusive creatures in the wild. Find out more at www.redpandanetwork.org 

WIN A RED PANDA ADOPTION



RED PANDA NETWORK is offering one *Wild Travel* reader the chance to win a year's red panda adoption

Red pandas are endearing and – if found by your tracking guides – generous to the patient observer; but they face many dangers: from rapid deforestation and hunting, to stray dogs. Meanwhile, their natural enemies have an easier prey when the red pandas have to run across deforested openings in their more and more fragmented forest habitats.

Despite CITES and 15-year prison terms for poachers, every year dozens of newspaper articles list the arrests made of traders with red panda skins, and these are just the ones that got caught.

Red Panda Network's adoption programme helps to fund the charity's work protecting red pandas across their entire range in the Eastern Himalayas, raising awareness worldwide, and combining urgently needed research for how best to protect them with community development so that local villagers have more to gain from protecting red pandas and their habitat than from cutting down the last remaining mountain forests.

You can win a year's red panda adoption package by answering the question below. The winner will receive an adoption pack welcoming them to RPN. This includes a subscription to the exclusive *Red Panda Times*, a fact sheet about these remarkable creatures, a personalised certificate featuring the red panda you've adopted, a computer wallpaper with our favourite red panda image and an eCard you can send to friends with an image of your chosen red panda.

Question: What is the name of the red panda that starred in the *Kung Fu Panda* movie?

Email your answer to: membership@redpandanetwork.org with 'WildTravel red panda competition' in the subject line, by 23 April 2013. For more information on adopting a red panda see www.redpandanetwork.org

T&Cs: Closing date 23 April 2013. Only one entry allowed per person. Not open to employees and relatives of Archant or associated companies. The winner will be drawn at random from correct entries received. No cash alternative given.

Find out what's involved in tracking snow leopards in remote Russia on page 54



More wildlife, less waiting



Here at *Wild Travel* we're firm believers that you can never have too much of a good thing, which is why we've decided to increase our frequency from six to 12 issues a year, starting with our next issue (on sale 24 April).

That means that we'll be bringing you twice as much wildlife, twice as many destinations and twice the inspiration for your own adventures – and you'll only have to wait half as long to get the next instalment!

Don't worry though, each issue will continue to be packed with the same great content for the same great price (even if we do say so ourselves).

In the meantime, we've got plenty to keep you going right here, with an interview with none other than natural history icon Sir David Attenborough, trip reports from a snow leopard expedition to Russia's remote Altai Republic and a wildlife photography trip to Portugal's Algarve (yes, really), as well as a comprehensive guide to the wildlife of Costa Rica, a field guide to red pandas, and news of the revival of Africa's next big safari destination.

Matt Havercroft, Editor

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The CEO of the Red Panda Network offers his guide to the endangered 'firefox'



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Wildlife photographer and author Adrian gives his guide to the fauna of Costa Rica

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SIR DAVID ATTENBOROUGH

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PLUS

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