

Red Panda

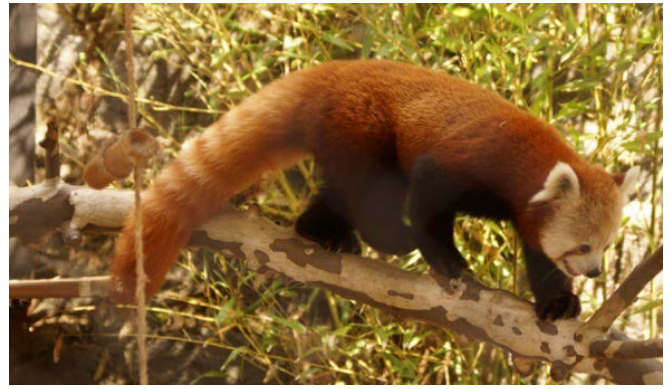
Ailurus fulgens fulgens

Class: Mammalia **Order:** Carnivora **Suborder:** Caniformia ('dog-like' carnivores) **Family:** Ailuridae

Other names: Fire Fox; Lesser Panda; Red Cat-bear, Fox bear, Himalayan raccoon

Other subspecies: Some taxonomists recognize 2 distinct species, *A. fulgens* and *A. styani*; others classify them as two subspecies *A. fulgens fulgens* & *A. fulgens styani*. The IUCN lumps both together into one species, *A. fulgens*.

Other Relatives: Red pandas are the only remaining member of the Ailuridae. Fossil evidence is scarce but suggests a close tie to the Procyonidae (raccoons). Molecular studies support a relationship to Mustelidae (weasels) and Mephitidae (skunks) [1].



Zoo Red Pandas 0.2

Gansu 0.1 – female, DOB: 06/27/13, AQ: 5/21/2014

Meriadoc ("Merry") 0.1 – female, DOB: 06/27/13, AQ: 5/21/2014

About Gansu & Merry

Gansu and Merry are fraternal twin sisters who were born at the Detroit Zoo.

Gansu has a narrower face with darker throat markings. Gansu weighs 10 lbs. 10 oz.

Merry has a rounder face with lighter, white markings. Merry weighs 8 lbs. 3 oz.

Status

Vulnerable – less than 10,000 individuals [2]

CITES Appendix I



Geographic Range

Red pandas are found in Sichuan, Yunnan, and Xizang provinces in China, in the foothills of the Himalayas in Nepal and Bhutan, and in northern Myanmar.

- *A. fulgens* or *A. fulgens fulgens*: Himalayas and perhaps Zhangmu (southwestern Tibet)
- *A. styani* or *A. fulgens styani*: Yunnan (China), Sichuan (China), Burma and perhaps eastern Tibet

Habitat

Red pandas prefer cool temperate, subtropical, and montane bamboo forests from 1500 - 4800 m.

Characteristics

Size: *Weight:* 7 – 13 lbs. (3.7-6.2kg)

Length: 22-24.5" (56-62cm)

Tail: 11-19" (28-49cm) [1]

Longevity: **Wild** 8-10 years [3]

Captivity 13-18 years

Physical Description

- They are covered in soft, dense fur over their whole body, including the bottoms of their feet. Their furry feet help protect against the cold snow. They use their tail to cover themselves during the cold winter months and to balance themselves in trees.
- Their red and white markings provide camouflage in the trees; resembling the red mosses and white lichens.
- Red pandas have a bony projection, known as a false thumb, on their wrist which helps to grasp bamboo. Red pandas' claws are sharp and semi-retractable.
- Differences between the 2 species are minor: *A. styani* is larger overall and has a slightly bigger skull, more robust teeth, a longer winter coat, its fur has more black and the tail stripes more distinct [1].
- Unlike other carnivores, the molars have elaborate crown pattern – modified for chewing bamboo [1].
- Unique digestive system for an herbivore: They have the simple digestive tract of a carnivore, thereby lacking the microbes that facilitate digestion of plant material in typical herbivores. The digestive tract is relatively short (much like other carnivores), and they possess a single-chambered stomach; most herbivores have multi-chambered stomachs. Therefore, food passes through the gut quickly (2-4 hrs), with only about 24% of the material eaten being digested/absorbed. They must eat large quantities to compensate, so red pandas must consume 30% of their bodyweight daily [1].
- The underside of the tip of the tongue has enlarged **papillae**, which is used to inspect scents [1].

Dimorphism

Monomorphic: No sexual dimorphism in size or color

Males:

Females:

Diet: Omnivore

Diet in the Wild: The diet of a red panda is made up of mostly bamboo leaves and shoots (their only food source in winter), but they also will eat berries, other small plant leaves, acorns, blossoms, bird eggs, insects and grubs.

Diet in the Zoo: leaf-eater biscuits, apple, grape, pear, chooey biscuits, bamboo plants

Behavior

- Can be *diurnal*, *crepuscular*, and/or *nocturnal* [1]
- Largely *arboreal*
- They “wash” themselves like a cat, using their fore and hindpaws while sitting upright [1].
- Red pandas can **thermoregulate** their bodies and metabolism: they can reduce their metabolism without reducing core body temperature.
- They descend trees headfirst and display their flexibility as they move from branch to branch. The tail is used for balance when in trees, while on the ground it is carried straight and horizontally [3].

Home Life

- Red pandas behave much like larger carnivores – their home ranges overlap, but there is little to no interaction [4].
- The home ranges of female red pandas often measure about one square mile, while males can live in areas twice that size. Male home ranges frequently overlap with at least one female home range and sometimes expand during the breeding season [4].
- Territories defined by scent markings – urine and anal gland secretions rubbed onto tree stumps and rocks. Trails are automatically marked by secretion from glands on soles of feet [1].
- Their habitat may include up to 40 species of bamboo, but only 1 or 2 species are eaten (90% of diet is leaves of *Bashania faberi*) [1]

Social Structure & Communication

- Adult red pandas are solitary animals aside from short mating relationships.
- Red pandas will communicate with body language and a series of noises. 7 distinct calls have been recorded: Whistle, quack-snort, twitter, squeal, bleat, exhale, and snort [1].
- Aggression is rare – may occur during mating season - Arching of back and tail, slow raising and lowering of head while emitting low intensity puffing, jaw-clapping, shaking head from side to side, opponents eventually stand on hind legs and bat each other with fore paws [1].
- Eye tracts and forehead patterns are thought to be unique and that animals can recognize one another by these patterns [1].

Feeding Behavior

- Red pandas will spend 10 - 12 hours/day feeding/foraging on ground [1]
- Red pandas' diets are very low in nutrients. As a result of this diet, they must conserve energy by moving slowly throughout their home ranges. They typically only cover about 25% of their home range per month when moving to forage [4].

Reproduction

- Red pandas are *polygynous*.
- Breeding occurs once per year [3]. Males have a small or nonexistent role in raising and caring for the young [3].
- Gestation will last approximately 130-134 days and litters can range from one to four young (called cubs) are born in secluded nests. Cubs are weaned about 13-22 weeks [1]. A nest may be a hollow tree or a rock crevice [3].
- Females become noticeably heavy and lethargic around six weeks before **parturition** [3].
- During first few weeks after birth, mother may move cubs several times to new nests [1]. Mothers will remain with them newborn cubs for 60 to 90 % of the time for the first few days [3].
- Young will stay in the nest for around 90 days and remain with the mother until the next mating season. Independence is around 8 months of age. [1]
- Red pandas reach adult size at about 1 year of age.

Conservation

In North America, captive red pandas are part of a management program called the Species Survival Program (SSP).

- **Use & Trade:** Red panda fur is considered good luck by some tribal people – Red panda fur hats are still worn in many regions, especially by bridegrooms [1]
- **Threats:** habitat loss and fragmentation, poaching, and inbreeding depression [2]
 - Populations of the red panda are currently decreasing in size and nearly all of their threats are caused by humans. The human population that overlaps with the red panda's range almost doubled from 1971 to 1991.
 - Deforestation (commercial logging, demand for firewood, clearing for habitation and farming, jhum (slash-and-burn shifting cultivation) by hill tribes, grazing of domestic stock, monoculture forest plantation) has led to reduced food supply for the red pandas. [2]
 - Due to human encroachment in suitable forest habitat and the unusual biology of bamboos, the red panda may be near extinction in the western part of its range, especially in Nepal [2]

- Other threats include habitat fragmentation (as a result of logging and clearing for agriculture or roads), poaching (for fur), hunting, inbreeding depression, and droughts (as a result of climate change).
- **Predators:** Leopards, Dholes, Asian golden cats, Golden eagles and snow leopards [1] [3]. Yellow-throated marten known to kill newborns [1].

Did You Know?/Fun Facts

- The word panda is derived from a Nepalese term 'ponya' for "eater of bamboo". Alternatively it may derive from a local name, "nigalya ponya," which may have meant something like "bamboo footed". The name *Ailurus fulgens* means "shining" or "fire-colored" cat [1]
- Red pandas were named and described about 50 years before the giant panda.
- A Chinese name for the red panda is "HUNHO," which in English means firefox.
- Red pandas are closely related to raccoons.
- Males leave a scent track from chemicals secreted from pads of their feet.

Glossary: List of definitions of the most important recurrent technical terms used in the text.

Papillae - a small, round or cone-shaped protuberances on the tongue that contain taste buds.

Parturition - the action of giving birth to young

Thermoregulate - the ability of an organism to keep its body temperature within certain boundaries, even when the surrounding temperature is very different.

References

[1] San Diego Global, "Red Panda, *Ailurus fulgens*," February 2011. [Online]. Available: http://library.sandiegozoo.org/factsheets/red_panda/red_panda.htm. [Accessed March 2015].

[2] X. C. A. Y. P. W. C. & T. Z. Wang, "*Ailurus fulgens*," 2008. [Online]. Available: <http://www.iucnredlist.org/details/714/0>. [Accessed March 2015].

[3] T. a. J. P. Heath, "*Ailurus fulgens*," 2008. [Online]. Available: http://animaldiversity.org/accounts/Ailurus_fulgens/. [Accessed March 2015].

[4] Red Panda Network, "About the Red Panda," 2015. [Online]. Available: http://redpandanetwork.org/red_panda/about-the-red-panda/. [Accessed March 2015].