



Leopard (*Panthera pardus*)



French: Léopard, Panthère

Spanish: Leopardo, Pantera

Kingdom Animalia

Phylum Chordata

Class Mammalia

Order Carnivora

Family Felidae

Genus *Panthera* (1)

Size Head-body length: 100 - 190 cm (2)

Tail length: 70 - 95 cm (2)

Shoulder height: 45 - 80 cm (2)

Male weight: 30 - 70 kg (2)

Female weight: 28 - 60 kg (3)

STATUS

The leopard is classified as Near Threatened (NT) on the IUCN Red List (1) and is listed on Appendix I of CITES (4).

Several leopard **subspecies** have been classified separately on the IUCN Red List. The Amur leopard (*Panthera pardus orientalis*), the Arabian leopard (*Panthera pardus nimr*) and the Javan leopard (*Panthera pardus melas*) are classified as Critically Endangered (CR), while the Sri Lankan leopard (*Panthera pardus kotiya*) and the Persian leopard (*Panthera pardus saxicolor*) are listed as Endangered (EN) (1).

DESCRIPTION

Distinguished by its exceptionally beautiful, black-spotted coat, the leopard (*Panthera pardus*) is also recognised for its supreme stealth and its remarkable versatility. Despite being the smallest of the 'big cats', the leopard is the most widespread of all wild cat species, and is well known for the variety of prey it takes, as well as its ability to occupy a range of habitats, from deserts and mountains to jungles and swamps (2) (5) (6).

The leopard can be individually identified by its spot pattern (7). Its distinctive black spots contrast with the pale background coat colour and the white underparts. Small, solid black spots mark the head, throat, chest and lower limbs, with larger black patches on the belly. The leopard's back, flanks and upper limbs are patterned with pale-centred rosettes, which vary greatly in shape and size (2) (3) (5) (7).

There is huge variation in coat colour, pattern and body size across the leopard's range (2) (3) (5) (7) (8), and the appearance of this species is often associated with its habitat (8). **Melanism** is one of the commonest and most striking variations to the leopard's appearance, and is most frequent among leopard populations living in forests or mountainous regions, as well as among populations occurring in Asia. **Melanistic** leopards are completely black, giving rise to the name 'black panther', and are sometimes mistakenly thought of as a separate **subspecies** (2) (3) (8).

Leopards inhabiting savanna regions tend to have a more reddish or yellow-brown body, while desert leopards are usually pale cream or yellow-brown. Leopards from cooler regions generally appear greyer, and rainforest and high-mountain leopards typically have dark golden coats (8). Leopards that live in more open country tend to be larger than individuals that live in forests (7).

A superb predator, the leopard has a long, well-muscled body, thick, short limbs, and broad, powerful paws (3). Its powerful jaws enable it to kill and dismember prey, while particularly long, sensitive whiskers allow the leopard to 'feel' its way as it hunts at night. Several long hairs in the eyebrows help protect the eyes from vegetation as it moves through the undergrowth (8). The leopard is also an extremely agile climber, with heavily-muscled shoulders and forelimbs which aid it in climbing, pinning down prey and hauling prey into trees (5) (8).

RANGE

The leopard has an exceptionally large range, occurring throughout Africa and Asia (6) (7). It occurs across most of sub-Saharan Africa, with smaller populations in North Africa. Its range extends east to the Arabian Peninsula and throughout southwest Asia to India, China and the Russian Far East, and it is also found on the islands of Java and Sri Lanka (1) (2) (7).

Nine **subspecies** of leopard have been recognised, with the **nominate subspecies**, *P. p. pardus*, occurring in sub-Saharan Africa and North Africa. The Arabian leopard (*P. p. nimr*) occurs throughout Arabia, with the Persian leopard (*P. p. saxicolor*) occurring in Central Asia, the Javan leopard (*P. p. melas*) only on Java and the Sri Lankan leopard (*P. p. kotiya*) in Sri Lanka (1).

The Indian leopard (*P. p. fusca*) is distributed throughout the Indian sub-continent, while the Indochinese leopard (*P. p. delacourii*) is found throughout southeast Asia into southern China. The North Chinese leopard (*P. p. japonensis*) occurs in northern China, and the Amur leopard (*P. p. orientalis*) is found in the Russian Far East, the Korean peninsula and north-eastern China (1).

Despite occurring over such a vast area, the leopard has vanished from almost 40 percent of its historic range in Africa, and from over 50 percent of its historic range in Asia (1) (6).

HABITAT

The leopard has adapted to make use of many different habitat types, ranging from deserts to rocky hills and mountains, lowland forests, woodlands, jungles, grasslands and swamps (1) (2) (3) (8).

Although the leopard does occur in deserts and arid habitats (1) (8), it is more common in areas with reasonable amounts of cover, such as rocks or vegetation (3) (7). This species occurs from sea level to elevations of 5,200 metres (7) (8).

BIOLOGY

Combining opportunism, stealth and speed, the leopard is a fearsome predator. The distinctive coat of this species provides excellent camouflage and enables the leopard to conceal itself in the undergrowth or among rocks. It has exceptionally acute vision and hearing, and it is able to move slowly and silently, frequently stalking to within metres of its prey without being detected (2) (3). The leopard is also capable of moving extremely quickly and, when in pursuit of prey or fleeing from danger, it may run at speeds of more than 60 kilometres an hour (3). Although the leopard does most of its hunting on the ground, it is an exceptionally agile climber, and will frequently store large kills in trees (3) (8). This habit is more common in areas where other large **carnivores** are also present (8).

When hunting, the leopard first locates its prey from a vantage point, such as a tree, rock or ridge, or at places where prey may go to feed or drink (7). It takes a wide variety of prey species, ranging from **arthropods**, reptiles, small birds and small- to medium-sized mammals, to large mammals such as antelope (1) (2) (3) (5) (8). There have even been several observations of a leopard killing a young giraffe, estimated to weigh up to three times the leopard's body weight (8).

A large prey item, such as an adult antelope, may be enough to provide the leopard with enough food for two weeks, although the leopard will usually make a kill about every three days. A female with cubs may hunt twice as often as other leopards (5).

The leopard breeds throughout most of the year in most of Africa and India, while in the northern parts of Asia, breeding takes place mostly between December and February. In South Africa, the leopard breeds in the dry season, between July and October (3).

Usually, the female leopard produces a litter of two or three cubs after a **gestation** period of 90 to 105 days (5) (8), although in some cases up to six young may be born (2) (3) (5). The female may use a cave, thicket, hollow tree, abandoned burrow or a rock pile as a den (3), and the young remain hidden there until they are able to follow the female at around six to eight weeks old (2). Sometimes, the cubs may be moved between dens as they grow older (3).

The leopard cubs are weaned after three months, although they stay with the female for up to two years (2) (3) (5). The young cubs learn to hunt by playing, stalking and pouncing on a variety of objects from leaves and sticks to siblings (2). The leopard reaches sexual maturity at around two years old, and while adult males are almost entirely solitary, the female may spend nearly half of its life caring for young cubs (2).

The leopard has a fairly large **home range**, and will travel widely to visit each part of its range at regular intervals. This species communicates mainly by scent, using urine, secretions and faeces to scent mark along commonly used routes and at conspicuous places along trails and **territory** boundaries (3).

THREATS

Although the leopard is an amazingly adaptable species that has an extensive range, the future of this big cat is far from certain, and several **subspecies** are on the verge of extinction (1).

The major threats to the leopard are habitat conversion for agriculture and development, and persecution by humans (1) (3). Across Asia, this species is also threatened by habitat destruction and fragmentation due to logging (1) (6).

The leopard is subjected to intense persecution in many parts of its range, largely in response to loss of livestock. Poisoning of carcasses by livestock owners to target large **carnivores** is a rapidly increasing threat to this species (1) (8). Elimination of the leopard's natural prey is creating more conflict with humans, putting this big cat at even greater risk (3).

The leopard is one of the 'Big Five', meaning that along with the lion (*Panthera leo*), the African elephant (*Loxodonata africana*), the African buffalo (*Syncerus caffer*) and the rhinoceros, it is one of the most highly prized targets of sport hunters (2). Trophy-hunting therefore poses a severe threat to some leopard populations (1).

Furthermore, trade in leopard skins and teeth for use in traditional rituals and ceremonial dress is common in some central and West African countries, and illegal trade in Europe and Asia also poses a major problem (1) (3) (6).

CONSERVATION

The leopard is included on Appendix I of the Convention for International Trade in Endangered Species (CITES), meaning that a quota system limits the legal exports of skins and hunting trophies (1) (4). The leopard is also protected under national legislation across much of its range (1). In Afghanistan, the leopard has been placed on the country's Protected Species List, which prohibits all hunting and trading of this species within Afghanistan (1).

The leopard occurs in numerous protected areas across Africa and Asia (1), and growing wildlife tourism throughout this species' range may make a significant contribution to its survival (2). However, despite this, many populations occur outside of protected areas, and therefore improved mitigation methods to resolve conflicts between leopards and landowners are desperately required (1).

In west Asia, the leopard is almost entirely restricted to protected areas. However, while these areas may receive protection, most of them are too small to support large enough populations of this species to ensure its survival in the region, and therefore need to be expanded and connected to other areas using buffer zones and wildlife 'corridors' (1).

Several conservation organisations are closely involved in the conservation of the leopard. Over the past few years, scientists at Panthera have led the Munyawana Leopard Project, which is the longest and most comprehensive leopard study to date. The findings from this project have resulted in an effective conservation plan for this beautiful and charismatic wild cat (6).

FIND OUT MORE

Find out more about work to conserve the leopard:

- Panthera - Leopard:
<http://www.panthera.org/species/leopard>
- Leopard Conservation Project:
<http://www.leopardcon.co.za/>
- BBC Wildlife Finder - Leopard:
<http://www.bbc.co.uk/nature/life/Leopard>

Find out about specific work being done to conserve the critically endangered Amur leopard:

- ALTA Amur leopard conservation:
<http://www.amur-leopard.org/>
- ZSL - Amur leopard:
<http://www.zsl.org/conservation/regions/asia/amur-leopard/>
- WWF - Amur leopard:
<http://www.worldwildlife.org/species/finder/amurleopard/amurleopard.html>

AUTHENTICATION

This information is awaiting authentication by a species expert, and will be updated as soon as possible. If you are able to help please contact:
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GLOSSARY

- **Arthropods:** a major grouping of animals that includes crustaceans, insects and arachnids. All arthropods have paired jointed limbs and a hard external skeleton (exoskeleton).
- **Carnivore:** an organism that feeds on flesh. The term can also be used to refer to a mammal in the order Carnivora.
- **Gestation:** the state of being pregnant; the period from conception to birth.
- **Home range:** the area occupied by an animal during routine activities, which is not actively defended.
- **Melanism:** in animals, the condition of having darkened skin, hair or feathers due to excessive production of the pigment melanin, usually resulting in the animal being entirely black.
- **Nominate subspecies:** when a species is divided into subspecies, the originally described population is classified as the nominate subspecies. Indicated by the repetition of the species name; for example, *Cyclura nubila nubila* is the nominate subspecies of the Cayman Islands ground iguana, *Cyclura nubila*.
- **Subspecies:** a population usually restricted to a geographical area that differs from other populations of the same species, but not to the extent of being classified as a separate species.
- **Territory:** an area occupied and defended by an animal, a pair of animals or a group.

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<http://www.panthera.org/species/leopard>
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8. Nowell, K. and Jackson, P. (1996) *Wild Cats: Status Survey and Conservation Action Plan*. IUCN/SSC Cat Specialist Group, IUCN, Cambridge, UK. Available at:
<http://carnivoractionplans1.free.fr/wildcats.pdf>