

Serval

Leptailurus serval

Class: Mammalia **Order:** Carnivora **Family:** Felidae (cats) **Subfamily:** Felinae (all small and medium-sized non-pantherine cats)

Other names: bush cat; giraffe cat [1]

Other subspecies: Nineteen subspecies were recognized in *Mammal Species of the World*

Other Relatives: *serval* is the only species in the genus *Leptailurus*

Molecular DNA studies closely link servals with African golden cats (*Caracal aurata*) and caracals (*Caracal caracal*) [2]

Zoo Serval 0.1

'Savannah' 0.1– female,

DOB: between 2001-2003, AQ: 11/21/2003

About Savannah

Savannah was a relinquished pet. She weighs about 25 lbs.

Status

Least Concern [3] in sub-Saharan Africa. Endangered in Northern Africa.

CITES Appendix II [3]

A 2007 Mediterranean Mammal Assessment workshop classified servals north of the Sahara as regionally Critically Endangered; there are fewer than 250 mature individuals, each subpopulation is smaller than 50 and completely isolated in Morocco and Tunisia [3]

Geographic Region

Mainly sub-Saharan Africa but not tropical rainforests and Saharan desert. Small populations reported recently north of Sahara in Morocco, northern Algeria, and some have been reintroduced in Tunisia [2]

Habitat

Well-watered savanna, grassland up to 3,800 m [2] [3]

In North Africa, they are found from semi-desert to cork oak forest on the Mediterranean coast [3]

Characteristics

Size: *Length:* 23-36" ((59-92cm) head to base of tail) *Tail:* 8-15" (20-38cm) *Shoulder height:* 21-26" (0.6 m) *Weight:* 20-26 lbs. (females), 20-40 lbs. (males) [2]

Longevity: Wild 10 years

Captivity 20 years

Physical Description

- Servals have the largest ears and longest legs, relative to their body size, in the cat family. The mobility of the long legs are well-suited to pulling rodents out of crevices. [2]
- Their remarkably long legs can constitute much of their height and are used to see over savanna grasses, aiding in prey detection. Front legs have 5 digits, rear have four. [2]
- The ears are rounded with white stripes on the back and they rest on a small, elongate head.
- The fur is pale yellow, with solid black spots on sides and bars/bands on the neck and shoulders. The underside is lighter than the upper. Underfur is dense, wavy with and shorter than outer guard hair. [2]
- The tail has black bands with a black tip.
- **Melanistic** (black) servals are found in Kenya and Ethiopia [2]
- The pupil of the serval's eye closes to elliptical/spindle shaped (domestic cats, caracals and ocelots also have elliptical-shaped pupils) [2]

Dimorphism

Males: somewhat larger than females

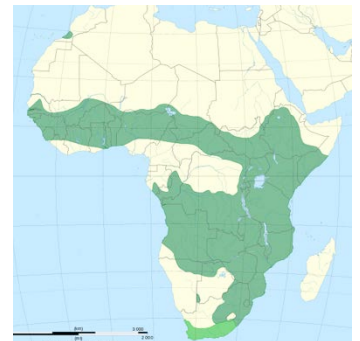
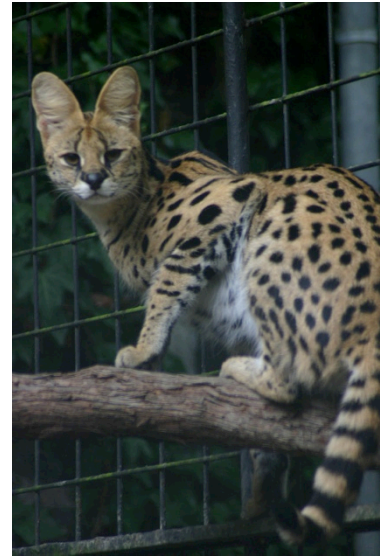
Females:

Diet: Carnivore

Servals eat small prey for their bodysize: Over 90% of diet is prey weighing less than 200 grams [2]. Servals hunt using a 'wait, listen and pounce' method, rather than chasing down their prey [1].

Diet in the Wild: Their diet consists primarily of moles, rodents, small birds, lizards & snakes, insects, and grasses. Have been known to hunt in water and hook fish, fogs, crabs and water birds. Occasionally will hunt duikers, flamingos, hares and young antelope [2].

Diet in the Zoo: exotic feline diet, whole or partial chicken, mice, pinky rats, knuckle bone



Behavior

- *Nocturnal*, night-active or *crepuscular*, active at dawn & dusk
 - Their nocturnal habit may be due to human presence in daytime; May also be less nocturnal in wild areas or where larger predators are nocturnal [2]
- Can leap or pounce a span of 4 m (13 ft), over 1.5 m (5 ft) high [2]. Standing on its hind legs, a serval can jump more than 9 feet (2.7 meters) vertically [1]

Social Structure & Communication

- Servals are solitary animals that primarily communicate through urine spraying and rubbing saliva on objects.
- Males scent mark more often than females [2]. They will also leave feces in prominent places and scrape with front and hind feet. [2]
- They also communicate using vocalizations such as shrill cries, hissing, growls, and newborns make a 'curious chirping noise.' [2]
- Male home ranges generally do not overlap. When defending a territory, they will flatten their ears, arch their back, bare their teeth, and nod their heads. In a serious confrontation, they will strike with their forelegs, growl, and bark.
- Servals will take cover when surprised. When threatened directly they will raise their tail and flee using sudden direction changes and leaping.

Feeding Behavior

- "Angling play" has been described for servals: Captured mice are allowed to escape into a crevice so that the serval can then retrieve them. If a good crevice isn't nearby, serval carries prey carefully to new area. If mouse doesn't run into crevice, serval pushes it in with forepaws. A play object such as a piece of bark may be substituted for the live mouse. They will often toss rats, mice, or birds into air, then recapture; snakes are stalked, caught, stalked again.
- Use stiff-legged bouncing jumps to secure prey, all four feet off the ground at once. They catch birds by jumping vertically (as high as 1.5m) and clapping their paws together [2] [4]. If prey is heard beneath the soil, they will rummage, dig, and sniff to either reach or flush the critter out. [4]
- They avoid hunting on windy days; probably because they can't locate prey with sound [2]
- They have a hunting success rate of 48%, higher than other members of the family Felidae. This success rate was observed in successfully reintroduced and wild servals. [4]

Reproduction

- Sexual maturity 12-24 months.
- Servals are **polyestrus**; in excellent habitats could give birth twice a year. Males and females stay together for duration of female's **estrus**. Females in estrus utters short, sharp meows; these are repeated frequently, they may purr, rub sides of chin and cheek against the male [2]
- Gestation lasts from 65 to 75 days. One to three **altricial** young are born per litter. Weaning occurs around four to five months and can hunt for themselves at six to seven months.
- There is no set breeding interval, however most mating occurs more often in the spring [4]. Most births in wild occur about a month before prey densities are highest [2]
- Dens are made in dense vegetation or unused aardvark or porcupine burrows [2].
- Servals can hybridize with African wild cats (*Felis lybica*) which share their preference for riverine habitats [2]

Conservation

- **Use & Trade:** "Savannah cats" result from crosses of domestic cats with servals-Hybrids often sterile [2]
- **Threats:** The serval's biggest threat is habitat loss/fragmentation, often caused by agricultural expansion and urban development. This habitat degradation affects the servals directly as well as affecting their prey animals.
 - Poaching is another threat – there is high domestic trade of serval pelts for tourism or ceremonial/medicinal purposes: Serval skins may be sold as young leopard *Panthera pardus* or cheetah *Acinonyx jubatus*. In Nigeria, pelts were second most common mammal species traded [2]
 - Although serval very rarely prey upon livestock (and indeed may even be beneficial to crop farmers due to their predilection for rodents), in rural areas throughout Africa, they are sometimes persecuted for taking poultry and indiscriminate predator control methods practiced by pastoralists frequently kill them [3]
 - Servals are also trapped for sale in the pet trade.
- **Predators:** Hyenas, leopards, African wild dogs, Nile crocodiles and lions [2]

Did You Know?/Fun Facts

- Name for servals from the Portuguese for lynx (*lobo-cerval*) via the French (*loup cervier*, the "wolf that hunts the stag"), via Latin *lupus cervarius* [2].
- The serval's hearing is so good that it can detect animals in a burrow underground.
- The long legs are an adaptation for hunting in the tall grass, not running quickly. Their long neck is also helpful for seeing in the tall grass.
- Their extra-long neck and legs give them the nickname "giraffe cat." [1]

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

Altricial - hatched or born in an undeveloped state and requiring care and feeding by the parents.

Estrus -a recurring period of sexual receptivity and fertility in many female mammals; heat

Melanistic - a development of the dark-colored pigment melanin in the skin, fur, feathers or appendages and is the opposite of albinism.

Polyestrus – where an animal can go into heat several times a year.

References

[1] San Diego Zoo, "Mammal: Serval," 2015. [Online]. Available: <http://animals.sandiegozoo.org/animals/serval>. [Accessed March 2015].

[2] San Diego Global, "Serval, *Leptailurus serval*," December 2010. [Online]. Available: <http://library.sandiegozoo.org/factsheets/serval/serval.html>. [Accessed March 2015].

[3] C. H. P. & S. E. Breitenmoser-Wursten, "Leptailurus serval," 2008. [Online]. Available: <http://www.iucnredlist.org/details/11638/0>. [Accessed March 2015].

[4] T. Canniff, "Leptailurus serval," 2011. [Online]. Available: http://animaldiversity.org/accounts/Leptailurus_serval/. [Accessed March 2015].