

The Nutrition and Natural History of the Serval (*Felis serval*) and Caracal (*Caracal caracal*)

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KEYWORDS

- Nutrition • Behavior • Serval • Caracal • Natural history
- Diet • Hand rearing • Feeding

There exists a paucity of information with regards to the specific nutrient and dietary needs of many species of exotic cats, including those kept sporadically as house pets, such as the serval and the caracal. The diets of exotic cats kept in captivity are usually based on the nutrient requirements of the domestic cat, although there is some evidence that different cat species may not metabolize certain nutrients in the same manner as domestic species.¹⁻⁴ This article provides information on the natural diet and behavior of the serval and caracal and offers insight into some health issues that may arise in a domestic environment. Where there is a lack of more detailed information, the domestic cat should be used as the model for the serval and caracal.

SERVAL (*FELIS SERVAL*)

The serval is a medium-sized African cat. Taxonomically it is classified as both *Felis serval* and *Leptailurus serval*, depending on the source.^{5,6} Adults stand approximately 60 cm at the shoulder.^{5,6,7} Males are typically larger than the females and weigh on average approximately 14 kg, whereas females average 10 kg.^{5,6} The average life expectancy in the wild is thought to be approximately 10 years,⁶ although it can be significantly longer in captivity. They have typically been found in Sub-Saharan Africa, although they are likely no longer present in appreciable numbers in South Africa.^{6,7} Their preferred habitat is open grassland areas near stable bodies of water, although occasionally they have been reported in various other habitat types.

Servals have the longest legs and ears in relation to body size of any of the cats.⁶ The serval is a specialized hunter of rodents; they use their height and hearing to hunt for rodents in the grass.⁵⁻⁷ They use a characteristic hunting technique wherein

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Vet Clin Exot Anim 12 (2009) 327-334

doi:10.1016/j.cvex.2009.01.017

vetexotic.theclinics.com

1094-9194/09/\$ – see front matter © 2009 Elsevier Inc. All rights reserved.

they may remain motionless for up to 15 minutes, using their hearing to pinpoint the location of prey. They then jump with all four feet in the air distances of 1 to 4 m and strike the prey with one or both front feet. They are able to jump straight up over 1 m in the air to catch prey such as birds and insects by clawing in midair or slapping the prey between their paws.⁸ On occasion, they have been observed bounding three to four times in row to flush prey and then using their front paws to strike the prey down.^{5-7,9} In addition to rodents, they are also known to hunt birds, reptiles, insects, and amphibians.^{5,7} They have been recorded as having one of the better hunting success rates of the cats—up to 48%.^{6,7} They tend to hunt smaller prey animals, such as mice and rats, but have been observed to hunt and catch prey as large as lesser flamingos (*Phoenicopterus minor*).⁹ They have often been observed consuming vegetation as well.^{5,7}

Servals are a solitary animals.^{6,7} They are generally considered to be nocturnal, but are often observed hunting during the morning and late afternoon hours, especially in areas away from human activity.^{6,7,9} Home range size depends on the habitat and prey density, but on average it is estimated to range from approximately 4 km² for females to 8 km² for males in the Ngorogora Crater in Tanzania.⁷ Home range also has been calculated at double that size in less ideal habitats.^{6,7}

THE CARACAL (CARACAL CARACAL)

The caracal is a sturdy, medium-sized cat found throughout many parts of Africa and the Middle East and through Asia into India and Pakistan.⁶ As with the serval, there seems to be some disparity in nomenclature. Caracals are found in the literature referred to as both *Caracal caracal* and *Felis caracal*. In Africa, the caracal ranges in size from approximately 8 kg for females to close to 20 kg for males.⁶ In India, caracals tend to be somewhat smaller, estimated at 6 kg.¹⁰ Caracals in captivity have lived as long as 16 years.⁶ The African population is listed on CITES II (not a species of concern); however, the Asian population is listed as CITES I (endangered).¹⁰ The caracal can be found in most habitats other than deserts and the dense equatorial forests of Africa. It is rare in some parts of its range and so numerous in others that it is hunted as vermin.⁸

The main prey animals of caracals in the wild are reported to be mammalian,¹¹ most of which are rodents. Birds, reptiles, and invertebrates are also consumed.¹² Whereas the serval is a specialized hunter of rodents, the caracal is more diverse in its hunting preferences. Although rodents still make up a large portion of the diet, caracals are known to regularly hunt prey 2 to 2.5 times their own size.^{6,12-14} The larger prey may include gazelles, duiker, springhares,⁶ other small carnivores (eg, black-backed jackals, bat-eared fox, and African wild cat),¹¹ and various small livestock, such as sheep and goats.^{6,11,12,14} There is some indication that caracals also consume vegetation.¹¹ Like the serval, caracals are noted for having impressive jumping abilities, reportedly more than 3 m.⁶ In addition to their jumping abilities, caracals are reported to be excellent sprinters.⁶ When killing prey, caracals seem to use a variety of methods, depending largely on the size of the prey. Small prey are killed with a bite to the nape. Mid-size prey are killed with a bite to the back of the neck; larger prey are killed with a bite to the throat.⁶

As with the serval, the caracal is mainly solitary.^{6,13} Although it is normally thought of as nocturnal, caracals have been observed hunting during daylight hours in areas with little human activity.^{6,11,12} They tend to have larger home ranges than the serval. A study in Africa recorded males with home ranges close to 27 km² and females with home ranges close to 7 km².¹⁴ A study of home ranges in Israel showed territories

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