



Photo Credit: Nancy Ayotte, Oregon Wildlife Center

Nyala Antelope, *Tragelaphus angasi*

Legal Status: Not covered by the U.S. Endangered Species Act or regulated by CITES, nyala populations are considered stable by both organizations. In 1990, wild populations were estimated to be 40,000. IUCN considers Nyala to be 'Lower Risk - Conservation Dependent', meaning that due to either local population or habitat conservation efforts, their numbers are likely to remain stable.

Today strong local populations are found in South Africa and elsewhere because they are protected within numerous refuges and in this century, nyala have increased their range within several of these refuges. Overall, however, the species' range has been greatly reduced and today some populations are only found in isolated pockets of their former range. This fragmentation of their range is cause for some concern as genetic flow is restricted between sub-populations. Nyala are one of the least studied large mammals of southern Africa, principally due to their secretive nature and relatively small geographic range.

Hunters and bushman have long described the species as being one of the rarest antelopes in southern Africa; inhabiting limited areas, nyala are of extremely retiring habits and males can be decidedly dangerous.

Description: Generally, males are slate gray in color with a profuse mane of hair on the throat and under parts, including the long, bushy tail. Fourteen or more rather discontinuous white stripes radiate down the sides of the body. Horns, found only on males,



form more than one complete spiral turn and are impressive in size. When mature, nyala horns measure 19.5-23 inches (500-600 mm) in length. Dimorphic, females are hornless, light chestnut in color and have approximately eleven transverse stripes and a few white spots on the haunch. Male average 44 inches (112 cm) tall at the shoulders and weigh 220-280 lb. (100-127 kg). Females are smaller, measuring 36 inches (92 cm) at the shoulder and 127 lb. (58 kg) in weight. Nyala breed year around, the females reaching maturity when 20 months old, earlier in captivity. Gestation is 7-7.5 months. In captivity, nyala may live as long as 17 years and life expectancy for males is somewhat less than females. Nyala appear to possess a delicate physiology, a factor that may contribute to their frequently high losses during periods of drought.

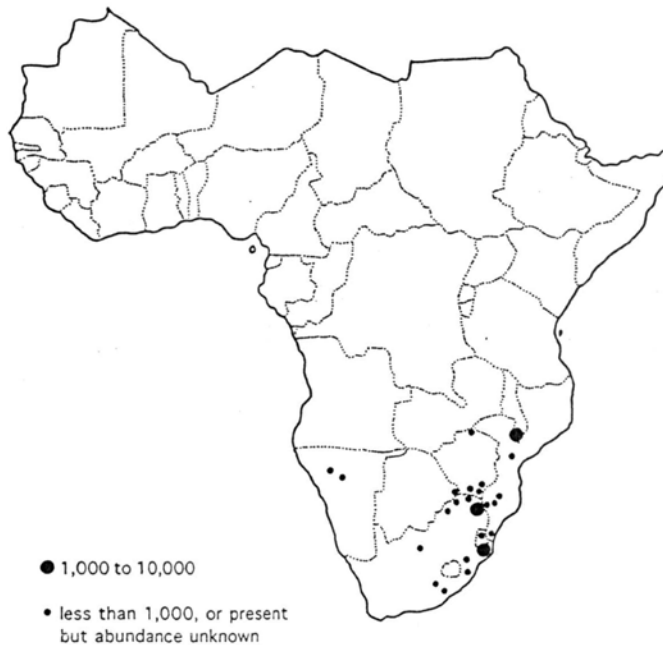
Tragelaphine antelopes, including bongo, bushbuck, mountain nyala, lesser and greater kudu, eland and sitatunga, are (other than eland) somewhat alike in appearance and behavior. Bushbuck, sitatunga and nyala are most similar in appearance. Hybridization occurs between many of the tragelaphine antelopes, including lesser kudu x sitatunga, bushbuck x sitatunga, bongo x sitatunga, and greater kudu x eland have been documented in captivity. Regardless of their common name, studies of cranial characteristics confirm that the nyala and mountain nyala are only distantly related to each other.

Range: Nyala are found in isolated populations throughout South Africa, Malawi, Mozambique, and Zimbabwe. Limited populations are also found in Botswana and Namibia. This species appears to be cool sensitive and combinations of temperature and humidity affect their thermoregulation to play a major role in limiting their distribution.

Habitat: Nyala are found in low country that is defined by dense bush and savanna veldt; they are never far from water.

The presence of adjacent thickets is a prerequisite and provides food, shade, refuge and concealment for the young. Coat patterns of both males and females render them almost invisible within this type of vegetation. In other habitats, only 18% of the population are found in grasslands, tree-savanna or woodlands lacking thickets.

Diet: Nyala are considered selective browsers, feeding almost exclusively on grasses in the young sprout stage that appears shortly after the onset of the rainy season. The



nyala's preferred browsing height is 3 feet (1 meter) above the ground. During times of drought, they can feed on foliage as high as 6 feet (2 meters).

Social Organization: Nyala groups consist of 1-30 individuals, although the majority contains only 1-3 animals. Males are usually found singly, only joining females when they are in oestrus. Herds generally space themselves uniformly over available habitat, living in densities of one per .6 sq. miles (one sq. km). Groups appear transitory in nature and individuals roam freely. When younger males congregate, this association rarely lasts more than a few hours. Juvenile males usually leave their dam comes into estrus again. Female dispersal is slower, young remaining in the vicinity of their mother after conception for some time.

A prominent feature of adult male dominance displays consists of piloerection of the dorsal hair crest, elevation of the tail, head lowered with horns facing vertically and standing still while displaying a broadside silhouette. This broadside display with arched-back posture is seen with many ungulates. Additional to this broadside display, males also walk with their front legs stiff and high. Visual communication most likely plays the key role in social behavior. Limited vocal communication is evident other than alarm barks, bleats and quiet clicking. Physical social contact, even between a mother and offspring, is rare. In the wild, nyala are seen in the wild associating with impala, waterbuck, greater kudu, and occasionally baboons. Red-billed oxpeckers are commonly observed picking ticks off nyala.

Males test females for estrus whenever they come into contact with them. This is accomplished by smelling briefly at the base of a female's tail. During courtship males display a 'flehmen' (curled-lip) response. The duration of actual courtship may last 24 hours during which time other males may displace the initiating male due to dominance. Births occur in seclusion and neonates have a 'lying up' (concealment) period of about two weeks. Mothers do not attempt to defend or even watch their offspring. Placentas are eaten by the mother as well as occasionally by unrelated females. Most breedings produce a single calf.

Home ranges of males do not change with the season and overlaps those of females considerably. This species does not display territorial behavior and there is no evidence of territorial marking or defense; males usually coexist harmoniously throughout the year.

Threats To Survival: Population crashes of nyala have been documented in the wild, regardless of the habitat's carrying capacity. A large die-off within the Ndumu Game Reserve, Natal, South Africa, an enclosed area of 25,000 acres (10,117 ha), was attributed to a gradual loss of fitness that coincided with a period when vegetation was lacking and weather further aggravated by high rainfall and a sudden drop in temperature. Disease was not a significant factor and other herbivores within the reserve did not suffer as high a mortality during the same period. Nyala are culled in many areas to prevent over-browsing of habitat, and sport hunting occurs on private ranches for their horns, meat and pelts. Natural predators of adult and/or

young nyala include lions, leopards, cheetahs, servals, spotted hyenas, wild dogs, baboons, large eagles, rock pythons, Nile crocodiles and humans.

Zoo Programs: The North American Regional Studbook includes institutions from the United States, Canada, Mexico and the Dominican Republic. Historically, nyala have been maintained by at least 88 facilities, a number that does not include many private owners. Over 2000 nyala have been reported by North American owners since their first importation in September 1927. Today captive populations trace their pedigrees back to 29 founding (wild caught) ancestors. Another 20 founders may be present in the living population but this cannot be proven due to poor record keeping.

The captive population is reflective of a limited gene pool. At least one United States institution increased its collection from one founder pair to 83 animals with no apparent inbreeding suppression. The chromosome morphology of the nyala is somewhat unusual and has been previously described. The most current studbook records information on 54 males and 110 females being held in 26 facilities as of January 2000. At least that many more are present on private ranches, principally in Texas. The Lisbon Zoo has published a European Studbook for nyala; the first edition was published in 1997 and records 120 living animals being held by 19 institutions.

The AZA Antelope Advisory Group's Regional Collection Plan (RCP) for Antelopes and Giraffes recommends that nyala be managed via a Population Management Plan (PMP) which uses the studbook data and relevant analytical software to make institution-by-institution management recommendations. The target population for nyala is 150 animals, their role being one of education and display.



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