



Photo by Diane Wilson

Kirk's dik-dik, *Madoqua kirkii*

Legal Status: Kirk's dik-dik are not protected or otherwise regulated by the U.S. Endangered Species Act or CITES. The IUCN Red List considers them to be Lower risk/least concern and the total population for this species is estimated to be 971,000 individuals.

Description: Dik-diks are delicate, hare-sized antelopes inhabiting the arid bush country of eastern and southwestern Africa. Females are slightly larger and heavier than males; body weight averages 5.5 kg and shoulder height is about 400 mm. Both sexes possess a crest of hair on their forehead, which is raised during courtship or when the animal is alarmed. Their large eyes are ringed with white hair. Males have short horns that are straight or curved slightly backward from the profile of the face. The most conspicuous feature of *M. kirkii* is an elongated, proboscis-like nose. This specialized adaptation allows them to regulate body temperature by cooling blood that flows through the bellows-like structure in the nose; thus making them better able to survive in hot dry climates.

Range: There are 2 distinct populations of *M. kirkii* found in East Africa. The East African population is found from the southern tip of Somalia and southern half of Kenya through central Tanzania. The southwestern population includes northern Namibia and adjoining Angola. Dik-dik populations in these two regions were once linked, but changes in climate, vegetation, and habitat have resulted in their separation by more than 2,000 km (Kingdon, 1982). In Kenya,

there is a narrow belt of overlap between *M. kirkii* and *M. guentheri* in the vicinity of the Tana River. Specimens of intermediate or mixed characteristics are found in this area (Kingdon, 1982).

Habitat: *M. kirkii* inhabit a variety of habitats ranging from dry scrub lands to moister thickets and grasslands. Their habitats are characterized by an abundance of low thicket vegetation in which to hide.

Diet: The diet of the dik-dik consists of tree and shrub leaves, buds, flowers, pods, grass, and herbs. Acacia is a favored browse. Dik-diks in the wild have little need for water, obtaining needed moisture from the plants they consume. Mineral salts are also important to their well-being.

Social Organization: Dik-diks are highly territorial and exhibit remarkable site fidelity. Territory sizes range from 0.3 to 10 ha (Tinley, 1969; Tilson and Tilson, 1986). Large preorbital glands produce a tarry substance used to mark vegetation within their territories. A communal dung pile is also an important aspect of establishing and maintaining territorial boundaries. Dik-diks are monogamous and mate for life. They are most often found in pairs or family units of three. Youngsters are usually driven out of the family territory at 6-9 months of age. Females are polyestrous and give birth twice yearly to a single calf after a gestation period of 170-180 days.

Threats to Survival: Although the current population is stable, hunting and habitat loss may be a future concern.

Zoo Programs: The AZA North American Regional Studbook for Kirk's dik-dik has been maintained since by the Saint Louis Zoo. This studbook serves as a resource for the AZA Population Management Program (PMP) which manages the North American zoo population. As of 31 December 2006, there were 46 individuals (19.27.0) housed in 14 North American locations. This species is managed under the AZA Antelope and Giraffe Taxon Advisory Group (TAG) and is considered to be a Conservation Link and Education population. The target population set by the AZA Antelope and Giraffe TAG in the Regional Collection Plan for this population is 75 animals. This population is in need of maximizing its breeding potential and new locations are welcome to participate in this conservation program.

Four distinct karyotypes (cytotypes) have been documented in *M. kirkii*. These karyotypes have been designated as cytotypes A, B, C and D (Benirschke and Kumamoto, 1987; Ryder et al., 1989; Kumamoto et al., 1994; Kumamoto and Kingswood, 1995). Cytotypes A, B and C were identified from captive dik-diks whose founders originated in East Africa. Cytotype D has been documented from a natural population in Etosha National Park, Namibia. Only cytotype A is confirmed in the current living North American population. Several individuals of unknown

cytotype are present in the living population. The confirmation of their cytotypes is encouraged and can be accomplished through genetic testing.

Conservation: Although the wild population of *M. kirkii* is considered stable, this species has less than three large populations (i.e., at least 5,000 animals) in well-protected and managed areas; thus, it could be at risk in the future (East, 1992). *M. kirkii* has been adversely affected by ecological changes brought about by human actions, but it remains widespread and locally common within its range.

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Resources:

IUCN/SSC Antelope Specialist Group—Small Antelope Subgroup
www.iucn.org/themes/ssc/sgs/neaasg.

Shurter, S. and Fischer, M., editors. 2006. AZA Antelope and Giraffe Advisory Group Regional Collection Plan, 4th edition. www.aza.org.

Wilson, D. 2006. AZA North American Regional Kirk's Dik-dik Studbook. www.aza.org.