

**HOME RANGE AND ACTIVITY PATTERNS OF THE AFRICAN  
LEOPARD (*Panthera pardus*) DURING THE DRY SEASON AT PITI  
EAST OPEN AREA, TANZANIA, EAST AFRICA**

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The African Leopard (*Panthera pardus*) is one of the most important trophy game animals in East Africa and is one of the most widely distributed of the large cats. However, because of their shy, retiring and semi-nocturnal habits and the remote areas where this species live, there are a few studies about their home range and activity patterns, parameters that are very important to know the actual population dynamics of the species. During the dry season, burning of natural rangelands by local people is a common practice in East Africa, thereby affecting the vegetation that leopards use for cover during hunting. This alteration of vegetative cover may affect leopard home range size and movements.

From 2001-2003 a leopard study was conducted in Piti East Open Area in Tanzania, East Africa, where we captured 17 leopards using an iron box trap set on top of a wooden platform and baited with game animal carcasses. Leopards were sedated with a mixture of ketamine and xilacine drugs. A radio-collar with a GPS (Televilt Inc.) sensor was attached to the adult leopards. We tracked and recuperated the GPS collars using VHF equipment and collars were sent back to Televilt in Sweden for data download.

We obtained a mean home range value for males of 136.37 km<sup>2</sup> and 25.06 km<sup>2</sup> for females. Activity patterns indicated no intra-sexual differences however, male movements were 2 to 4 times greater than females. Leopard home range sizes in this study were much larger than those found in other African leopard studies. This indicated that leopard behavior was possibly being affected by grass burning or other human induced activities.

Future research should address leopard home range size and activity patterns for both the dry and wet seasons, so this information will assist us to have a better idea of how is the leopard population at Piti Game Reserve. Also, another accomplished objective of this project was to test field techniques (capture, sedation, and GPS radio-telemetry) for future leopard population dynamics studies in Tanzania.

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