



The Tanzania Carnivore Atlas Project

Tanzania's importance for carnivore biodiversity is internationally recognised, yet at present the country has limited capacity for monitoring carnivore distribution and trends. However, within Tanzania there is an, as yet, untapped source of information: There are a growing number of naturalists living in the country who are interested in carnivore conservation and who can help contribute information on carnivore sightings. The Tanzania Carnivore Atlas Project aims to draw on the interest and expertise of these people by generating a protocol whereby people can contribute information on the carnivores they see during the course of a year. This Project is modelled on the successful Tanzania Bird Atlas Project, although it has a more modest aim: to monitor the distribution of Tanzania's 35 carnivore species on an annual basis rather than the country's nearly 1000 bird species on a monthly basis.

The ultimate objective of the Carnivore Atlas Project is to generate more information on the status of Tanzania's carnivores and to contribute to an action plan for carnivore conservation in Tanzania. This plan will prioritise actions to conserve threatened carnivore species and its implementation will help to safeguard carnivore biodiversity across the country. Hence by contributing data to the project you will be lending your active support to the long-term conservation of Tanzania's carnivores.

All potential contributors to the Carnivore Atlas Project will receive a Carnivore Atlas Pack, which includes copies of two different types of check-sheet for carnivore sightings, a map of Tanzania and copies of our Cheetah Watch and Wild Dog Watch leaflets, should you also wish to contribute to these schemes.

THE CARNIVORE CHECK-SHEETS

We have included two types of data collection sheets in your pack: a carnivore Species Check-list and a carnivore Sightings Sheet. Each sheet asks for different kinds of information. We ask you to please fill in the *Species Check-list* as your first priority, then, if you have time, we would be delighted if you could also fill in the Sightings Sheet. ***Please only record carnivore species if you are absolutely certain of having correctly identified the species sighted.***

The Species Check-list

The Species Check-list includes all the wild carnivore species of Tanzania and is designed to provide basic presence/absence information. This kind of information will allow us to map the distribution of carnivores across Tanzania and to monitor species for range contractions or expansions.

As with the Tanzanian Bird Atlas Project, we are asking for sightings within grid squares that are a quarter square degree of latitude/longitude, an area of roughly 60 km². Instructions on identifying grid square numbers are found below.

We ask you to follow the guidelines carefully to ensure accurate data collection:

1. Please use a new sheet for each year and for each different grid square.
2. The top of each sheet asks for your name, the specific grid square number, and the year for which you are providing information on that particular sheet. It also asks for a rough assessment of how much time you spent in that particular grid square that year. ***It is very important that you include these four pieces of information at the top of every sheet.***
3. Place a tick against each carnivore species seen within a particular grid square during the course of a year.
4. We realise that it may be difficult for you to identify all 35 carnivore species and so we ask you to please restrict yourselves to recording details of only those species that you are confident of having identified reliably. We recommend Jonathan Kingdon's 'The Kingdon Field Guide of African Mammals' (1997 Academic Press) as a useful identification tool, especially for the lesser-known carnivores.

Numbering your grid square

	29°E <i>(longitude)</i>	30°E
4°S <i>(latitude)</i>	A <i>(2904A)</i>	B <i>(2904B)</i>
5°S	C <i>(2904C)</i>	D <i>(2904D)</i>

Grid squares are identified and numbered using lines of latitude and longitude. For the purposes of the Carnivore Atlas Project, every one degree square has been divided into four as shown and marked A, B, C or D. The longitude and latitude of the one-degree square shown here are 29°E and 4°S, respectively. When identifying your grid square number, please **first reference longitude (East) then latitude (South)**; in this example the four grid squares shown are numbered 2904A, 2904B, 2904C and 2904D. **It is very important that you always mark your grid square number at the top of your Species Check-list.**¹

The Sightings Sheet

The Sightings Sheet asks you for more detailed information on individual carnivore sightings. It would be wonderful if these sheets could be filled in every time you see a carnivore, but we realise that this may be asking a lot of you! Instead, we ask that you fill in these sheets whenever you have unusual sightings of carnivores; for example, whenever you see a species

¹ We have enclosed a map of Tanzania with grid squares for your reference. We are happy to provide more detailed maps of your area should you require.

that you see rarely in a particular area. Thus, the Sightings Sheet allows us to gather relatively detailed information about carnivores that are seldom seen in a given area.

Please fill in as many of the labelled columns as possible; these include the species seen, the total number of individuals in the sighting, the number of young, whether the carnivore was dead or alive in the sighting, the date, time, location*, and habitat type. A list of habitat categories is provided on the Sightings Sheet.

* We prefer a GPS location reference whenever possible. If you use a GPS, we would be most grateful if you could record the coordinates, if at all possible, in degrees decimals (i.e. 4.59843). If you don't have a GPS, then please provide a grid square reference, name of nearest town, or a description of the sighting location.

At the bottom of the Sightings Sheet, we ask you to list the species that you consider to be rare in the area for which you are reporting.

Please only include information of which you are completely certain in your Sightings Sheet.

We would very much appreciate it if you could fill in both check-sheets, but we also understand that the Sightings Sheet will require more time and effort to fill in. We therefore recommend that you prioritise the Species Check-list, and only complete the Sightings Sheet if you have sufficient time.

Please fill in the check-sheets even if you are just passing through a grid square, particularly if you are driving at night when nocturnal species are more likely to be seen. Road kills also constitute valid information, and sadly, many carnivores are killed on the roads.

Please return your forms at the end of the year to:

Carnivore Atlas Project
The Tanzania Carnivore Conservation Program
Tanzania Wildlife Research Institute
Box 661
Arusha, Tanzania
Tel: 027 250-8240

If you have any queries please contact us by email on carnivores@habari.co.tz or cheetah@habari.co.tz

Thank you for your assistance!



Tanzania Carnivore Atlas Project: Species Check-List

Observer(s) _____ Year _____

Grid square reference _____ (eg. 2904B; longitude(E) latitude(S) and quadrant A, B, C or D)

Observer visits to grid square over the year (please underline the most appropriate):

Pass through once / Single trip of 1-7 days / several trips or one long trip of 7-30 days /
Partially resident / Mostly resident

Latin name	Common name	Seen? tick if yes	How often seen? Once / 2-10 times / 10+
Family: CANIDAE	Dogs and allies		
Canis adustus	Side-striped jackal		
Canis aureus	Golden jackal		
Canis mesomelas	Black-backed jackal		
Lycaon pictus	Wild Dog		
Otocyon megalotis	Bat eared fox		
Family : FELIDAE	Cats		
Acinonyx jubatus	Cheetah		
Felis caracal	Caracal		
Felis silvestris	Wild cat		
Felis serval	Serval		
Panthera leo	Lion		
Panthera pardus	Leopard		
Family : HERPESTIDAE	Mongoose		
Atilax paludinosus	Marsh mongoose		
Bdeogale crassicauda	Bushy tailed mongoose		
Galerella sanguinea	Slender mongoose		
Helogale hirtula	Desert Dwarf mongoose		
Helogale parvula	Dwarf mongoose		
Herpestes ichneumon	Egyptian mongoose		
Herpestes naso	Long snouted mongoose		
Ichneumia albicauda	White-tailed mongoose		
Mungos mungo	Banded mongoose		
Rhynchogale melleri	Meller's mongoose		
Family : HYAENIDAE	Hyaenas		
Crocuta crocuta	Spotted hyaena		
Hyaena hyaena	Striped hyaena		
Proteles cristatus	Aardwolf		
Family : MUSTELIDAE	Weasels and allies		
Aonyx capensis	African clawless otter		
Lutra maculicollis	Spotted-necked otter		
Mellivora capensis	Honey Badger		
Ictonyx striatus	Zorilla		
Poecilogale albinucha	Striped (White-naped) Weasel		
Family : VIVERRIDAE	Genets and Civets		
Civettictis civetta	African Civet		
Genetta angolensis	Miombo genet		
Genetta genetta	Common genet		
Genetta maculata	Large Spotted genet		
Genetta servalina	Small Spotted (Servaline) genet		
Nandinia binotata	Two Spotted Palm Civet		
Introduced species			
Viverricula indica	Small Indian Civet		
Herpestes javacunis	Small Indian Mongoose		
Other? Please specify			



Tanzania Carnivore Atlas Project: Sightings Sheet

Observer(s) _____ Year _____

Species	Total number individuals	Number of young	Dead/ Alive	Date (D/M/Y)	Time	GPS location (or grid square or nearest town)	Habitat type (see categories)

Habitat type categories:

- Forest** – continuous stand of trees at least 10m tall; canopy interlocking
- Woodland** – open stand of trees at least 8m tall; canopy cover > 40%
- Bushland** – open stand of bushes between 3-7m tall; canopy cover > 40%
- Thicket** – closed stand of bushes between 3-7m tall
- Grassland** – mainly grasses and other herbs; woody plants < 10%
- Wooded grassland** – mainly grasses and herbs; woody plants 10-40%
- Afro-alpine** – mixed vegetation on high mountains; frosts are likely year-round
- Mangrove** – open or closed trees/bushes on shores between high & low watermark
- Freshwater swamp**
- Saline swamp**
- Anthropic landscape** – vegetation has been profoundly altered by humans (eg. villages, farms, plantations, etc.)

Please list the carnivore species that you consider to be rare in this area: