

# NOTES ON THE CURRENT STATUS AND DISTRIBUTION OF SOME LARGE MAMMALS IN ETHIOPIA

(EXCLUDING ERITREA)

by

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Après avoir décrit les différentes grandes zones climatiques d'Ethiopie et donné quelques précisions sur la végétation caractéristique de chacune, l'auteur analyse les facteurs qui peuvent influencer la répartition des grands mammifères de ces régions. Des notes brèves, portant sur près de 50 espèces de grands mammifères, sont réunies pour tenter d'établir quelle est, actuellement, en Ethiopie, leur répartition et leur statut.

## INTRODUCTION

In recent years there has been an encouraging number of investigations into the fauna of selected parts of Ethiopia. Yet there are still vast tracts of country from which no recent published records are available of even the most conspicuous large mammals which are present. Thus in Dorst and Dandelot (1970) the distribution of lion in Ethiopia is represented by a question mark.

Poor communications, rugged terrain and the enormous range of habitats represented serve to make Ethiopia a difficult, if fascinating country with which to become acquainted. Furthermore the wildlife situation, especially with regard to big game is very different from that which prevailed a few decades ago. On the whole, large mammals throughout the Empire have undergone a serious decline in numbers. The outlook is rendered less bleak with the recent introduction of new wildlife legislation and a start has been made on implementing ambitious plans for conservation. The problems in the way of progress, however, remain considerable.

These notes are based largely on the author's own field work over the past five years. They are far from comprehensive and there is no attempt to deal with taxonomic problems, since except in a very few instances there has been no opportunity to collect

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specimens. In general, only animals which could be positively identified in the field, at least to species level, have been considered for inclusion and a number of other species have been omitted where it was felt that recent records gave too little indication of present status and distribution. Nevertheless, it is hoped that they will help to clear up some areas of uncertainty.

To avoid repetition, place names mentioned in the text have been listed in a gazeteer which follows the notes. The province of Eritrea has had to be excluded as there has been no opportunity for travel in that province during the last few years.

## ETHIOPIA :

### PHYSICAL FEATURES AND THE MAJOR BIOTIC REGIONS

Ethiopia is a land of some 1,200,000sq km (460,000sq ml) lying between latitudes 4°00'N and 18°00'N. The country is roughly triangular in shape with the apex to the north. The centre of the triangle is occupied by a huge highland mass bisected SW-NE by the Main Ethiopian Rift which funnels out into the Afar Depression and extends, like the arms of a Y, as the valleys of the Red Sea and the Gulf of Aden.

East of the rift the highlands form the Eastern or Somali Plateau which dips gently south-eastwards to the Somali border and the coastal plains of the Indian Ocean. On the other side of the rift valley, the highlands of the Western Plateau generally fall steeply to the peripheral lowlands and reach their greatest development in the basalt mass of the Simien Mountains which presents a precipitous north face with sheer drops of over 2,000ft (600 m). The land thus ranges in elevation from about 380ft (116 m) below sea level in the Danakil Depression of Afar, to nearly 15,000ft (4,543 m) above sea level in the Simiens.

The pattern of rainfall (mainly orographic) is complex and the natural vegetation shows corresponding diversity. Very broadly, major biotic regions may be distinguished as follows : Northern and Eastern Lowlands, Southern Lowlands and Rift Valley, Western Lowlands, Highland Forest Zones, Afroalpine Meadows and Moorlands.

### NORTHERN AND EASTERN LOWLANDS

These are the driest regions of Ethiopia. In the extreme north, over most of Afar and east of about 44°00'E, rainfall is irregular

and usually less than 30 cm (12 in) per year falling, in places to 10 cm or less.

Dense thorn thicket clothes the lower parts of the escarpments. But away from the foothills the flat, lava strewn plains and lava ridges of Afar generally present a more open cover of *Acacia* scrub. The vegetation however is by no means uniform and while some areas could truly be described as desert, others support a reasonable grass cover (very often dominated by *Chrysopogon aucheri*) or a fairly dense thornbush composed of a few species commonly including *Acacia nubica*, *A. mellifera*, *A. senegal*, *Commiphora* spp and small bushes and trees such as *Balanites*, *Grewia* and *Cadaba*. *Sanseveria* is a common component of the ground vegetation.

Soils of Afar are mainly brown earths with a high clay fraction.

On the low plains of the Eastern Plateau, a vast area loosely known as the Ogaden, *Acacia-Commiphora* thornbush persists but with a richer variety of species being well-represented. East of about 45°00'E the desert earths are replaced by loose, red sand.

#### SOUTHERN LOWLANDS AND THE RIFT VALLEY

This is a complex region and receives a higher rainfall than the eastern lowlands. Very generally, dense *Acacia-Commiphora* bush extends westwards through the southern part of Bale province and the Borana district of Sidamo province to the valley of the Omo River. Thornbush also persists in the Main Ethiopian Rift as far north as the Lake Abaya region and continues to clothe dryer parts of the escarpments further north. Within this broad zone there are several areas of open grassland or *Acacia* tree savanna with similar short grass pasture : notable examples occur in the Omo Valley, western Sidamo and east of Lakes Chamo and Abaya. Common trees include *Acacia tortilis*, *A. seyal* and *Balanites* spp. The grass cover is usually of very mixed composition.

The floor of the rift north of Lake Abaya is higher and *Acacia* savanna-woodland tends to predominate as far as the throat of Afar. *Acacia tortilis*, *A. seyal* and others form an open canopy above short grass pasture and thickets of smaller trees and bushes. This part of the rift however is extensively cultivated.

#### WESTERN LOWLANDS

With their higher rainfall the lowlands of the west are for the most part, clothed with deciduous, broadleaved savanna-woodland

on black clay (black cotton soil) with rocky outcrops. *Combretum* and *Terminalia* species predominate together with other similar-sized trees such as *Lonchocarpus laxiflorus*, *Stereospermum kunthianum*, *Gardenia lutea*, *Piliostigma thonningii* and, especially in the drier north, incense trees (*Boswellia papyrifera*). The long grass cover is commonly dominated by *Hyparrhenia* species and there are extensive brakes of lowland bamboo (*Oxytenanthera*). This type of association persists well into the foothills of the Western Plateau and in western Gojjam, for example, broadleafed woodland and *Oxytenanthera* thicket covers the hills well above the 4,900ft (1,500 m) contour level. Seasonal floodplains and permanent swamps occur within the Gambella Salient.

### HIGHLAND FORESTS

Thousands of years of exploitive agriculture have destroyed the natural vegetation over much of the Western Plateau. The scene is now one of farmland and pasture with groves of the alien *Eucalyptus* which supply fuel and timber. Remnants indicate that these rolling highlands were once under closed forest. In parts of Tigre province, especially the eastern escarpments, belts of remnant forest are dominated by *Juniperus procera* and *Olea africana*.

The wetter, south-western parts of the plateau (receiving over 150 cm (59") of rain per year) are still densely forested and at about 8°00'N the forest extends as a tongue into the western lowlands before giving way to open woodland and savanna. A large variety of broadleafed trees including *Celtis*, *Cordia*, *Schefflera*, *Aningeria* and *Teclea* form a more or less closed canopy above lower storey trees and a dense undergrowth on the rich moist loams.

Fairly similar forest occurs on parts of the Eastern Plateau but here the rainfall, though high, is more seasonal. Certain broadleafed species tend to drop out and a conifer, *Podocarpus gracilior* is favoured. At the higher levels throughout the highlands, the *Podocarpus* forest tends to merge into *Juniperus procera* forest, and although some trees of the lower forest persist (eg *Pygeum africanum*, *Teclea nobilis*), typically highland species such as *Hagenia abyssinica*, *Erica arborea* (giant heath), *Hypericum* spp (St John's wort) and brakes of the mountain bamboo (*Arundinaria alpina*) are more characteristic of the juniper zone. Above about 10,000ft (3,000 m) juniper becomes much less frequent among the *Hagenia*, *Hypericum* and *Erica*. In this zone there are commonly large glades with lush pasture and an abundance of attractively-flowering

herbs. The highest levels which may be termed 'forested' (around 12,000ft (3,600 m)) are clothed with almost pure stands of giant heath. The distribution of these upper forest zones however is greatly influenced by local topography and rainfall as well as by deliberate burning of the heath by pastoralists.

#### AFROALPINE MEADOWS AND MOORLANDS

Above about 12,000ft the heath cover naturally thins out and gives way to Afroalpine associations in which grasses, sedges and *Alchemilla* species form a more or less continuous ground cover with cushions of *Helichrysum*, scattered giant lobelias (*L. rhyncho-petalum*) and stunted bushes of giant heath.

These major biotic regions have necessarily been described in very broad terms and within each region numerous distinct plant associations can be recognised. Some, such as riverine associations are of widespread importance in influencing large mammal distribution. The presence of tsetse fly, particularly in the south-western lowlands and the Omo River Valley is another important factor in this connection, even though it does not entirely preclude cattle-raising.

Indeed no part of Ethiopia is entirely free from the impact of man, for the 28 million people (and almost as many head of cattle) are very widely distributed. In general, the northern, eastern and southern lowlands are occupied by nomadic pastoralists while the western lowlands and the rift valley are inhabited by both pastoral nomads and settled cultivators. The highlands, in the main, are intensively settled by peasant farmers who cultivate and raise stock for subsistence.

#### Notes on some larger Mammals

Observations for which no reference or authority is given are from the author's own records.

#### Order PRIMATES

#### Family CERCOPITHECIDAE

*Cercopithecus aethiops* (L.). — Vervet and Grivet Monkeys.

The distribution and systematics of these monkeys in Ethiopia have been investigated in some detail by Dandelot and Prévost

only one record is available from the Gambella salient where Duckworth (1973) heard it calling south of Gambella town in about 7°55'N.

*Hyaena hyaena* (L.). — Striped Hyaena.

Generally thought to be well-distributed in the south and east but rarely seen and probably nowhere common. In Harrar one was seen in the Marmar Mountains close to the Somali border and another at Durdur near the French border.

#### Family FELIDAE

*Panthera leo* (L.). — Lion.

Everywhere under pressure from illegal hunters, the lion is far more often heard than seen and tends to lie up in thick bush and riverine vegetation during the day. It is nonetheless well distributed and occurs in a wide range of habitat.

In the north it is present in western Tigre between the Tacazze and Gash Rivers. In the west it has been recorded near the Dinder River and tributaries; immediately north of the Baro River (Blower 1967a) and within the Gambella salient at several points between the Baro and Akobo Rivers (Duckworth 1973). Further south, it is much in evidence west of the Omo River south of Maji and has been recorded on the east bank at Murle and within the Mago Valley. Eastwards lion occurs in the Stefanie Rift, the Cuchia district and around Lake Chamo and Abaya. No recent, positive records from Borana. It has been seen in eastern Bale (40 km east of Rayitu) and recorded from the Fafan River about 80 km south of Degabur and close to the Harrar-Jigjiga road. There are small numbers in the Awash Valley, at least between Marahara and Lake Hertale.

On the plateaux lion has been recorded west of Welkite on the Gibbe River (upper Omo), within the Blue Nile Gorge (Corbet & Yalden 1972) and in the Bale and Arussi mountains. In Arussi Brown (1966) found tracks of a lion at 12,500ft (3,650 m) but concluded that there were no lion resident at that altitude.

*Panthera pardus* (L.). — Leopard.

While under extreme pressure everywhere this remarkably adaptable animal still manages to survive in every province and has been recorded from montane moorland to sub-desert scrub. There are no recent records available however from Ogaden or

from Danakil north of the Awash River. Its main stronghold is generally thought to be the forested regions of the south-west but it is not known to be common anywhere.

*Acinonyx jubatus* (Schreber). — Cheetah.

A scarce animal but still apparently fairly well-distributed. Within the last six years it has been recorded in the following localities :

Kaffa — Mwi River : Urban & Brown (1968).

Gemu Goffa — Cuchia : group of 4 seen. Mago Valley : tracks only.

Sidamo — Hudat : group of 3 seen 10 km south-west of Hudat.

Harrar — Aysha : two seen close to Somali border east of Aysha. Lake Hertale : two seen about 35 km south-east of the lake (Duckworth 1973).

Hunters and others report seeing cheetah occasionally throughout the Awash Valley and adjacent parts of Afar and also south of the road between Harrar and Jigjiga.

## Order PROBOSCIDAE

### Family ELEPHANTIDAE

*Loxodonta africana* (Blumenbach.) — African Elephant.

In western Ethiopia elephant undertake extensive seasonal movements, apparently across the Sudan border. There are unconfirmed reports that they wander in this way up and down the Tacazze Valley.

During the wet season elephant are certainly present in the western borderland between the Dinder and Balas Rivers and throughout the Gambella salient. Herds are seen from time to time on the west bank of the lower Omo (Urban & Brown 1968) but the pattern of movement is still not known.

In April 1971 about 60 head were seen in the Mago Valley and there they may be resident.

Elephant were present north of Moyale in November (rains) 1969 and dung was noted on the road near Hudat in Nov. 1971. Locals report seeing them in Borana every year.

In Harrar elephant (43 counted on one occasion) move seasonally up and down the Fafan and Errer River Valleys east of Harrar town. They are rumoured to travel southwards down the Webe Shebelle as far as Imi.

*Oreotragus oreotragus* (Zimmerman). — Klipspringer.

This species occupies suitable habitat throughout the eastern and western highland masses and within the Main Ethiopian Rift. No positive records are available from isolated mountainous parts of Afar and Ogaden. It may well occur there however for it occupies a very wide range of habitat. It is commonly seen in the mountains of Bale above 12,500ft (3,800 m) and has been recorded near the floor of the Stefanie Rift on the eastern wall at about 2,300ft (700 m).

*Dorcotragus megalotis* (Menges). — Beira Antelope.

In 1899 Beira was collected from the Marmar Mountains just within Ethiopia (Powell-Cotton 1902). In 1971 a group of five was discovered in the same locality (Bolton 1972). In 1972 this only known group comprised one adult male, four adult females and one juvenile.

*Ourebia ourebi* (Zimmerman). — Oribi.

Apparently occurs only in the west and south. It is continuously distributed in the western lowlands from north of the Taccaze south to the Akobo and probably south-eastwards to the Omo where it has been recorded in the Mwi River area (Urban & Brown 1968). It also occurs in the Mago Valley, the Cuchia district, west of Welkite, and has been recorded within the Main Ethiopian Rift from Lake Zwai southwards to Lake Awassa. In most of its range it is only seen occasionally and in small numbers but at Cuchia nearly 70 were seen in a day.

#### GAZETTEER

Abaro Mt., Arussi : 7°07'N 39°37'E. — Abaya Lake, Gemu Gofa : 7°15'N 37°50'E. — Abbe Lake, Wollo : 11°10'N 41°45'E. — Abiata Lake, Shoa : 7°37'N 38°35'E. — Agre Mariam, Sidamo : 5°38'N 38°15'E. — Agula, Tigre : 13°42'N 39°35'E. — Akobo River (mouth) : 7°47'N 33°03'E. — Alledeghi Plains, Harrar : 9°20'N 40°20'E. — Amaro Mountains, Sidamo : 5°40'N 37°54'E. — Angar River (mouth) : 9°38'N 36°05'E. — Arbore, Gemu Gofa : 5°00'N 36°52'E. — Arero, Sidamo : 4°45'N 40°51'E. — Asbe Taferi, Harrar : 9°05'N 40°51'E. — Assaita Lake, Wollo : 11°35'N 41°28'E. — Awash River (mouth) : 11°12'N 41°38'E. — Awash, Shoa : 9°00'N 40°09'E. — Awassa Lake, Sidamo : 7°03'N 38°26'E. — Aysha, Harrar : 10°45'N 42°34'E. — Balas River (mouth) : 10°54'N 35°17'E. — Baro River (At Ethiopian border) : 8°22'N 33°47'E. — Cacca Mt., Arussi : 7°23'N 39°11'E. — Chamo Lake, Gemu Gofa : 5°50'N 37°40'E. — Cuchia, Gemu Gofa : 6°40'N 37°20'E. — Dabus River (mouth) : 10°32'N 35°12'E. — Dakata River (mouth) : 7°17'N 42°14'E. — Dallol, Tigre : 14°15'N 40°18'E. — Danan, Harrar : 6°30'N 43°32'E. —



Debre Berhan, Shoa : 9°40'N 39°32'E. — Debre Libanos, Shoa : 9°42'N 38°49'E. — Debre Sina, Shoa : 9°51'N 39°47'E. — Degahabur, Harrar : 8°13'N 40°33'E. — Didessa River (mouth) : 10°06'N 35°39'E. — Dinchu, Bale : 7°06'N 39°47'E. — Dinder River (At Ethiopian border) : 13°20'N 34°07'E. — Dire Dawa, Harrar : 9°35'N 41°52'E. — Dipa Lake, Gemu Gofa : 5°11'N 36°12'E. — Durdur, Harrar : 10°52'N 42°20'E.

El Kerre, Bale : 5°50'N 42°05'E. — Errer River (mouth) : 7°33'N 42°03'E.

Fafan River (mouth approx.) : 6°00'N 44°15'E. — Fantalle Mt., Shoa : 8°58'N 39°54'E.

Galadi, Harrar : 6°58'N 46°24'E. — Gambella town, Illubabor : 8°16'N 34°38'E. — Ganale River (At Ethiopian border) : 4°10'N 42°05'E. — Gash River (At Ethiopian border) : 15°13'N 36°30'E. — Gilo River (mouth) : 8°09'N 33°12'E. — Ginnir, Bale : 7°10'N 40°43'E. — Goba, Bale : 7°00'N 39°59'E. — Goc, Illubabor : 7°33'N 34°22'E. — Godare, Illubabor : 7°26'N 35°02'E. — Gode, Harrar : 5°52'N 43°42'E. — Gondar, Begemder : 12°37'N 37°28'E. — Garo, Bale : 7°00'N 40°31'E. — Gubba, Gojjam : 11°15'N 35°18'E.

Harrar, Harrar : 9°18'N 42°08'E. — Hashin Plain, Harrar : 9°00'N 43°46'E. — Hertale, Harrar : 9°55'N 40°25'E. — Hosanna, Shoa : 7°32'N 37°51'E. — Hudat, Sidamo : 4°44'N 49°22'E.

Imi, Bale : 6°27'N 42°06'E.

Jigjiga, Harrar : 9°22'N 42°47'E. — Jimma, Kaffa : 7°40'N 36°50'E. — Julietta Lake, Tigre : 13°15'N 40°55'E.

Kalam, Kaffa : 4°48'N 35°58'E. — Kebir island, Eritrea : 15°40'N 40°10'E. — Kebre Dahar, Harrar : 6°45'N 44°17'E. — Kebre Mengist, Sidamo : 5°53'N 39°00'E. — Kelafo, Harrar : 5°37'N 44°12'E. — Koka Dam, Shoa : 8°25'N 39°05'E.

Langano, Shoa : 7°37'N 38°45'E.

Mago River (mouth) : 5°28'N 36°13'E. — Maichew, Tigre : 12°47'N 39°34'E. — Maji, Kaffa : 6°11'N 35°36'E. — Makelle, Tigre : 13°30'N 39°28'E. — Marmar Mts, Harrar : 10°35'N 42°41'E. — Mega, Sidamo : 4°05'N 38°20'E. — Mersa Fatma, Eritrea : 14°54'N 40°18'E. — Metahara, Shoa : 8°53'N 39°55'E. — Metemma, Begemder : 12°57'N 36°10'E. — Mille River (mouth) : 11°25'N 40°57'E. — Moyale, Sidamo : 3°33'N 39°04'E. — Murle, Gemu Gofa : 5°07'N 36°10'E. — Mustayel, Harrar : 5°15'N 44°45'E. — Mwi River (mouth) : 5°48'N 35°55'E.

Nachisar Plains, Gemu Gofa : 5°55'N 37°46'E. — Negele, Sidamo : 5°20'N 39°35'E.

Omo River (mouth) : 4°32'N 35°58'E. — Orobo Mts, Bale : 6°35'N 39°40'E.

Pibor River (mouth) : 8°27'N 33°13'E.

Rasa Gubba, Shoa : 9°55'N 40°04'E. — Rayitu, Bale : 6°50'N 41°15'E. — Rudolf Lake (north-east tip), Gemu Gofa : 4°33'N 36°05'E.

Sagan River (mouth) : 4°50'N 36°55'E. — Sardo, Wollo : 11°58'N 41°18'E. — Shakissa, Bale : 6°00'N 41°43'E. — Shala Lake, Shoa : 7°28'N 38°30'E. — Sham, Illubabor : 7°32'N 33°57'E. — Shashamanne, Shoa : 7°12'N 38°36'E. — Shilavo, Harrar : 6°06'N 44°46'E. — Simien Mts., Begemder : 13°13'N 38°10'E. — Soddu, Sidamo : 6°52'N 37°45'E. — Stefanie Lake, Gemu Gofa : 4°45'N 36°55'E.

Taccaze (Setit) River (At Ethiopian border) : 14°15'N 36°33'E. — Tana Lake, Begemder : 12°00'N 37°20'E.

Wachille, Sidamo : 4°36'N 39°03'E. — Waito River (mouth) : 4°50'N 36°55'E. — Webe Shebelle River (At Ethiopian border) : 4°58'N 45°01'E. — Weldiya, Wollo : 11°49'N 39°35'E. — Welkite, Shoa : 8°15'N 37°48'E.

Yavello, Sidamo : 4°54'N 38°06'E.

Zwai Lake, Shoa : 8°00'N 38°50'E.

#### ACKNOWLEDGEMENTS

It will be apparent that, for certain regions of Ethiopia, I have made full use of the work of others, much of it in the form of unpublished records and reports. I am most grateful to those, all of them reliable observers, who have made such information available to me.

## SUMMARY

The major biotic regions of Ethiopia are briefly described under five broad headings with particular reference to natural vegetation. Some of the factors influencing the distribution of large mammals are mentioned. Brief notes have been compiled on some fifty species of large mammals in an attempt to outline their present distribution and, where possible, offer some indication of their status in Ethiopia.

The notes are based mainly on sight records and make no contribution to the study of systematics.

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