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Abstract: In Ethiopia, the cheetah has been recorded in the National Parks of Awash, Mago and Omo or their immediate vicinity. It has been also probably recorded in Yangudi Rassa National Park.

En Ethiopie, le guépard a été observé dans les Parcs Nationaux d'Awash, de Mago et d'Omo ou dans leurs environs immédiats. Il a été probablement observé dans le Parc National de Yangudi Rassa.

## Catalogue of the mammals of Ethiopia and Eritrea. 7. Revised checklist, zoogeography and conservation

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This review of the Ethiopian and Eritrean mammal fauna recognises provisional totals of 277 terrestrial and 11 marine species. The terrestrial fauna is dominated by savanna forms (47.2% of the total), most of which are widespread but with significant numbers being derived from either the East African savannas or the sub-Saharan savanna belt. Deserticolous species (16.2%) include many which are clearly associated with the Somali-arid zone. The 29 endemics are almost exclusively confined to the central plateaux at altitudes in excess of 1800 m and most are denizens of grassland or moorland habitats; few are forest species. Sylvicolous mammals are equally poorly represented amongst non-endemic forms (6.5%) and it is concluded that Ethiopian forests have an impoverished fauna compared with those of Uganda and Zaire.

Conservation of wildlife, perennially starved of resources, has suffered greatly from neglect, poaching and destruction of property during the political crises of recent years. This situation is not irredeemable, given the return of peace and some measure of prosperity. If the region's actual and proposed national parks were to be fully established and effectively administered, they have the potential to provide sanctuary for 210 (76%) of the terrestrial mammals, including all but five of the endemic species (one shrew and four rodents). Amongst larger mammals which are unprotected, the apparently precarious situation of the Dibatag (*Ammodorcas clarkei*) gives particular cause for concern.

KEY WORDS: Mammalia, Ethiopia, taxonomy, ecology, zoogeography, conservation.

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## INTRODUCTION

LARGEN et al. (1974) and YALDEN et al. (1976, 1977, 1980, 1984, 1986) have provided a taxonomic account of the mammal fauna of Ethiopia, including that of Eritrea, its former northern province which became an independent nation in 1993. However, it is over 20 years since this task was begun and our catalogue, especially the earlier parts, is now in need of some amendment. Previous omissions, subsequent discoveries and the results of recent taxonomic reviews are here incorporated into a single revised checklist, but we have been highly selective about the inclusion of additional collection localities. These are mentioned only if they significantly extend previously determined geographical distributions or altitudinal ranges. The consolidated checklist which, for higher taxonomic groups, follows the sequence adopted by CORBET & HILL (1991), has been used as a basis for discussing the relationships, zoogeographic affinities and conservation requirements of this mammal fauna.

Altitudinal ranges have been assessed for each species on the evidence of records from Ethiopia, Eritrea and immediately adjacent areas of Somalia, northern Kenya and eastern Sudan. It follows that, in the case of more widespread taxa, they are not necessarily representative of the full range of elevations occupied elsewhere. Altitudes in parentheses appear to be either exceptional, are perhaps based upon suspect data or may, in some cases, relate to localities where the animal occurred in the past but from which it has since been eliminated.

Certain well defined patterns of distribution are evident amongst the species that contribute to the mammal fauna of Ethiopia and Eritrea, such that most can be assigned to one of 12 zoogeographic categories, which reflect both their ranges and ecological characteristics. Those which cannot be included in this classification are either too poorly known to be so defined (e.g. *Crocidura nigrofusca*, *Genetta abyssinica*), are species of which the taxonomic content is still uncertain (e.g. *Cercopithecus aethiops*), have unusually limited ranges (e.g. *Kobus megaceros*), are exceptionally widespread in Africa because of their broad habitat preferences (e.g. *Felis silvestris*, *Syncerus caffer*), or extend far beyond the limits of the African continent (e.g. *Miniopterus schreibersii*, which reaches Australasia). The fact that such species are exceptions, while the great majority (87%) fit more or less neatly into one of the zoogeographic categories which we recognise, gives confidence that the latter are indeed meaningful entities and have significance as indicators of the past history of the fauna that now occupies NE Africa.

The following acronyms are used for zoogeographic categories: CAF = Central African forest, E = endemic, EAF = East African forest, EAM = East African montane, EAS = East African savanna, I = introduced by man, NAD = North African desert, P = Palearctic, PAS = Pan-African savanna, SA = Somali-arid, SS = Saharo-Sindian, WAS = West African savanna. U = unclassified.



Those for museum collections are: BM = Natural History Museum, London; BMNP = Bale Mountains National Park Museum, Dinshu; CMNH = Carnegie Museum of Natural History, Pittsburgh; FMNH = Field Museum of Natural History, Chicago; HZM = Harrison Zoological Museum, Sevenoaks, Kent; LACM = County Museum of Natural History, Los Angeles; LIV = Liverpool Museum; NHMAA = Natural History Museum, Addis Ababa; NMKN = National Museums of Kenya, Nairobi; NMW = Naturhistorisches Museum, Vienna; SMF = Senckenberg Museum, Frankfurt; USNM = United States National Museum, Washington, D.C.; ZMB = Zoologisches Museum der Humboldt-Universität, Berlin.

#### ANNOTATED CHECKLIST OF ETHIOPIAN AND ERITREAN MAMMALS

##### Order Insectivora

##### Family Erinaceidae

1. *Atelerix albiventris* (Wagner 1841)

PAS: 0-1500 m.

The known distribution of this species in Ethiopia was significantly extended by the record of ROCHE (1979), from 30 km N of Kalam.

2. *Hemiechinus aethiopicus* (Ehrenberg 1832)

NAD: 0-1000 m.

Allocation of this species to the genus *Hemiechinus* follows FROST et al. (1991).

##### Family Soricidae

The taxonomy of shrews, both within Ethiopia (DIPPENAAR 1980, HUTTERER 1981, HUTTERER & YALDEN 1990) and more widely in Africa (especially HUTTERER 1983, HUTTERER & HAPPOLD 1983, HUTTERER & KOCK 1983, DIPPENAAR & MEESTER 1989), has been so greatly revised as to render our previous account (YALDEN et al. 1976) totally obsolete. The more complex situation now recognised, with 26 or more species where we listed 14, also means that early literature records are even more difficult to allocate with certainty. In particular, the collections reported by OSGOOD (1936) need to be re-evaluated in the context of current taxonomic opinion.

3. *Crocidura thalia* Dippenaar 1980

Type locality: Gedeb Mountains, near Dodola, Ethiopia.

E: (515?) 2400-3300 m.

The high altitude shrews with inflated braincases were grouped by YALDEN et al. (1976) into two species: bicoloured *C. baileyi* and greyer *C. fumosa* (in which both

145. *Mungos mungo* (Gmelin 1788)

PAS: 0-1600 m.

The known range of this species in Ethiopia is extended by a sighting at Ucuna Dumbag, S of Gambela (LAVRENCHEKNO et al. 1989).

## Family Hyaenidae

146. *Proteles cristatus* (Sparrman 1783)

EAS: 0-2000 m.

Two roadkills found near Alem Tena in 1987 and 1990 provide the first records of this species in the central Rift Valley of Ethiopia.

147. *Hyaena hyaena* (Linnaeus 1758)

SS: 0-2300 m.

Recorded from the Omo National Park by BABA et al. (1982).

148. *Crocuta crocuta* (Erxleben 1777)

PAS: 0-3650 m.

A recent observation of Spotted hyaena at Jimma is remarkable only because this near ubiquitous animal had not previously been reported from the town or its immediate vicinity.

## Family Felidae

149. *Acinonyx jubatus* (Schreber 1775)

U: 200-1500 m.

150. *Felis silvestris* Schreber 1777

U: 0-3300 m.

Some authorities (e.g. MEESTER et al. 1986, HAPPOLD 1987, ANSELL & DOWSETT 1988) continue to treat the African wild cat, *Felis libyca* Forster 1780 as distinct from the Palearctic species, *F. silvestris*. Recent records include those of LAVRENCHEKNO et al. (1989) from Gambela; the Nicani River; and 16 km W of Abobo.

151. *Felis serval* Schreber 1776

PAS: 300-3300 m.

Called *Leptailurus serval* by WOZENCRAFT (1993), this species was recorded in the Harenna Forest, at both Katcha and near the Shawe River, during August 1986.



152. *Felis caracal* Schreber 1776

U: 0-3300 m.

This species is placed by HARRISON & BATES (1991) and WOZENCRAFT (1993) in the genus *Caracal*. Previously unknown from the central Rift Valley of Ethiopia, this situation is rectified by recent observations at Mekki (DEMETER & TOPÁL 1982); S of Adamatuli; and Wondo Genet, the latter based upon an animal seen in atypical habitat on the edge of moist forest.

153. *Panthera pardus* (Linnaeus 1758)

U: 0-4000 m.

YALDEN et al. (1980) failed to note the interesting report by PATRIZI (1933), of Leopard at Gaharre (= Gaare) in the Danakil Desert. During August 1986, this species was recorded in the Hareenna Forest, at both Katcha and near the Shawe River.

154. *Panthera leo* (Linnaeus 1758)

U: 0-4200 m.

Recorded near the Shawe River in August 1986.

## Order Cetacea

There are very few records of cetaceans from the coast of Eritrea, but many which could conceivably enter Eritrean waters or be stranded on this country's shores. YALDEN et al. (1986) identified 16 species that might be expected to enter the Red Sea but which, to the best of our knowledge, have not yet been observed there, although seven of these have definitely been recorded from the Gulf of Aden. We list here only the taxa which are known to occur in the Red Sea, those marked with an asterisk having been reported also from the coast of Eritrea.

## Family Delphinidae

155. *Grampus griseus* (G. Cuvier 1812)156. \**Globicephala macrorhynchus* Gray 1846157. *Stenella longirostris* (Gray 1828)158. \**Delphinus delphis* Linnaeus 1758159. *Sousa plumbea* (G. Cuvier 1829)160. *Tursiops aduncus* (Ehrenberg 1833)

Table 3.  
The recorded distribution of mammal species in the National Parks of Ethiopia.

Species	Abiata-Shalla	Awash	Bale	Gambela	Mago	Nachisar	Omo	Simien	Yangudi-Rassa	Total
<i>Atelerix albiventris</i>				*	+		*			3
<i>Hemiechinus aethiopicus</i>		+								1
<i>Crocidura thalia</i> ≠			+	?						2
<i>Crocidura glassi</i> ≠			+							1
<i>Crocidura baileyi</i> ≠								+		1
<i>Crocidura lucina</i> ≠			+							1
<i>Crocidura olivieri</i>	+	+	+	+						4
<i>Crocidura zaphiri</i> ≠						+				1
<i>Crocidura viaria</i>		+								1
<i>Crocidura fuscomurina</i>		+				?				2
<i>Crocidura bottegoides</i> ≠			+							1
<i>Crocidura hildegardeae</i>						+				1
<i>Crocidura harenna</i> ≠			+							1
<i>Crocidura phaeura</i> ≠						?				1
<i>Crocidura somalica</i>		+								1
<i>Crocidura fulvastra</i>		+								1
<i>Crocidura pasha</i>		+								1
<i>Crocidura lusitania</i>		+								1
<i>Epomophorus minimus</i>	+								+	2
<i>Epomophorus labiatus</i>						+		+	+	3
<i>Epomophorus gambianus</i>				+						1
<i>Micropteropus pusillus</i>				+						1
<i>Eidolon helwum</i>				+						1
<i>Rousettus aegyptiacus</i>	+			+		+				3
<i>Rousettus angolensis</i>			+							1
<i>Rhinopoma hardwickii</i>		+								1
<i>Taphozous perforatus</i>	+	+		+			+			4
<i>Taphozous nudiventris</i>							+			1
<i>Taphozous mauritanus</i>				+						1
<i>Coleura afra</i>						+	+			2
<i>Nycteris thebaica</i>	+	+		+		+				4

(continued)

Table 3 (continued)

Species	Abiata-Shalla	Awash	Bale	Gambela	Mago	Nachisar	Omo	Simien	Yangudi-Rassa	Total
<i>Miniopterus inflatus</i>		+	+							2
<i>Miniopterus schreibersii</i>						+				1
<i>Platymops setiger</i>							+			1
<i>Tadarida pumila</i>	+	+		+		+	+			5
<i>Tadarida nigeriae</i>		+								1
<i>Tadarida ansorgei</i>	+			+			+			3
<i>Tadarida condylura</i>	+			+						2
<i>Tadarida nanula</i>				+						1
<i>Galago senegalensis</i>			?							1
<i>Galago</i> sp.	+				+	+				3
<i>Papio anubis</i>	+		+	+	+	+	+	+		8
<i>Papio hamadryas</i>		+						+	+	3
<i>Theropithecus gelada</i> ≠								+		1
<i>Erythrocebus patas</i>				+	+		+			3
<i>Cercopithecus mitis</i>				*	+		+			3
<i>Cercopithecus djamdjamensis</i>			+							1
<i>Cercopithecus neglectus</i>					+		*			2
<i>Cercopithecus aethiops</i>	+	+		+				+	+	5
<i>Cercopithecus pygerythrus</i>			?		+	?	?			4
<i>Colobus guereza</i>	+	+	+	+	+	+	+	+		8
<i>Lycaon pictus</i>		+	+	*	*	+	+			6
<i>Otocyon megalotis</i>	+	+			+	+	+		*	6
<i>Canis simensis</i> ≠			+					+		2
<i>Canis adustus</i>	+			+		+	+			4
<i>Canis aureus</i>	+	+	+	+	+		+	+	*	8
<i>Canis mesomelas</i>	?	+			+	+	+		*	6
<i>Ictonyx striatus</i>	+	+	+	+	*		*			6
<i>Mellivora capensis</i>	+	+	+	*	*	+	*	+		8
<i>Aonyx capensis</i>	+									1
<i>Lutra maculicollis</i>		+		+						2
<i>Viverra civetta</i>	+	+	+	+	*	+	*		*	8

(continued)



Table 3 (continued)

Species	Abiata-Shalla	Awash	Bale	Gambela	Mago	Nachisar	Omo	Simien	Yangudi-Rassa	Total
<i>Genetta abyssinica</i>		+						?		2
<i>Genetta felina</i>	+			+	+	+	*		*	6
<i>Genetta maculata</i>	+	+	+	+		+	+	+		7
<i>Atilax paludinosus</i>	+		+	+						3
<i>Helogale parvula</i>	?	+			?	?	?*			5
<i>Herpestes sanguineus</i>	+	+		+	+	+	*	+	+	8
<i>Herpestes ichneumon</i>	+	+	+	+	+	+	*			7
<i>Ichneumia albicauda</i>	+	+	+	+	*	+	+		*	8
<i>Mungos mungo</i>				+						1
<i>Proteles cristatus</i>		+							*	2
<i>Hyaena hyaena</i>		+			+		+		*	4
<i>Crocuta crocuta</i>	+	+	+	+	+	+	+	+	*	9
<i>Acinonyx jubatus</i>		+			+		+		*	4
<i>Felis silvestris</i>	+	+	+	+	+	+	+	+	*	9
<i>Felis serval</i>	*	+	+	+	+	+	*	+	*	9
<i>Felis caracal</i>	+	+	+	*	+	*	*	+	*	9
<i>Panthera pardus</i>	*	+	+	+	+	+	+	+	*	9
<i>Panthera leo</i>		+	+	+	+	+	+	+	*	8
<i>Loxodonta africana</i>				+	+		+			3
<i>Equus africanus</i>									+	1
<i>Equus grevyi</i>					+				+	2
<i>Equus burchellii</i>					+	+	+			3
<i>Procavia capensis</i>	+	+	+					+		4
<i>Heterohyrax brucei</i>			+	+		+				3
<i>Orycteropus afer</i>	*	+	+	*	+	+	+		+	8
<i>Hylochoerus meinertzhageni</i>			+	+						2
<i>Potamochoerus larvatus</i>		+	+	+	*	+	+	+		7
<i>Phacochoerus africanus</i>	+	+	+	+	+	+	+		*	8
<i>Hippopotamus amphibius</i>		+		+	+	+	+		*	6
<i>Giraffa camelopardalis</i>				+	+		+			3

(continued)

Table 3 (continued)

Species	Abiata-Shalla	Awash	Bale	Gambela	Mago	Nachisar	Omo	Simien	Yangudi-Rassa	Total
<i>Acomys cahirinus</i>		+			+	+				3
<i>Arvicanthis abyssinicus</i> ≠								+		1
<i>Arvicanthis dembeensis</i>	+	+	+	+	+	+	+		+	8
<i>Arvicanthis blicki</i> ≠			+							1
<i>Arvicanthis somalicus</i>		+			+					2
<i>Lemniscomys striatus</i>				+						1
<i>Lemniscomys barbarus</i>						+				1
<i>Lemniscomys macculus</i>				+		+				2
<i>Lophuromys flavopunctatus</i>			+			+		+		3
<i>Lophuromys melanonyx</i> ≠			+							1
<i>Uranomys ruddi</i>				+						1
<i>Graphiurus murinus</i>						+				1
<i>Graphiurus parvus</i>					+					1
<i>Graphiurus</i> sp.	+		+	+						3
<i>Hystrix cristata</i>	+	+	+	+	+	+	*	+	+	9
<i>Thryonomys gregorianus</i>				+						1
<i>Heterocephalus glaber</i>		+								1
<i>Lepus habessinicus</i>		+			+				*	3
<i>Lepus jagani</i>	+			+						2
<i>Lepus starcki</i> ≠			+							1
<i>Lepus</i> sp.						+	+	+		3
<i>Elephantulus rufescens</i>						+				1
Total species	58	86	67	93	73	83	69	38	46	

+ = positive record of the species in the park or its immediate vicinity, \* = unattributed record from EWCO files which seems to be acceptable, ? = identity of species provisional and requiring confirmation, ≠ = endemic species.