

# Current Status of the Mammals of Balochistan

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**Abstract.-** Ninety species of mammals of Balochistan have been recorded so far belonging to 9 orders and 27 families; of these, 21 species are threatened, 4 species are endemic to Balochistan, 14 species are of special conservation interest, 8 sites are important for mammals. Special efforts are being made to conserve the important mammals particularly in the protected areas specially in Chiltan Hazarganji National Park and the Hingol National Park.

**Key words:** Biodiversity, threatened species, Balochistan, protected areas.

## INTRODUCTION

**B**alochistan is the largest province of Pakistan extending over an area of 350,000 sq.km and the smallest number of inhabitants about 0.7 million only. The province lies between 24°32'N and 60°70'E. The coast line is about 770 km long. The east-central and northern part of the province has high mountains of which considerable parts reach an elevation of above 2,300 m (7000 feet) and the valleys are situated around 1,500 m above sea level. The high mountains include: The Sulaiman range, The Toba-Kakar-Kakar Khurasan range, and Central Brahui range. The ranges are generally below 2300m (7000 feet) and their valleys may be as low as 76m above sea level. The low mountains include the Khirthar range, Pab range, Chagai and Raskoh hills, Sihan range, Central Makran Coastal range, and Makran coast range.

Sizeable sandy plains are found in Chagai and Kharan districts and smaller ones along the coast and elsewhere. River plains are narrow and limited. Tidal plains are found along the coast particularly at Ras Malaan, Ormara, Pasni, Gwadar and Jiwani. The Forest areas are located at Ziarat, Harboi, Qila, Saifullah and Zhob.

The province is very important with respect to mammalian species-found specially in the mountains and desert areas of the province. The work done on the occurrence and distribution and status of the mammals of Balochistan in the recent past includes: Ahmed and Ghalib (1975), Gils and Baig (1992), Roberts (1998), Khan (2000), Shafiq *et*

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*al.* (2002), Shafiq and Barkati (2002), Khan *et al.* (2004), Javed and Azam (2005), Khan and Siddiqui (2005), Roberts (2005) and Roberts (2005a).

As many as 2 National Parks, 14 Wildlife Sanctuaries and 8 Game Reserves have been established in the Province (Table I). At present, detailed baseline studies on the biodiversity of Hingol National Park are being undertaken under the GEF funded project on the Management of Hingol National Park w.e.f. December 2003. The project aims to conserve globally important habitats and biodiversity through active participation of the custodial communities of the area.

## MATERIAL AND METHODS

Faunistic surveys have been carried out by the Zoological Survey Department in the different ecological zones of the country since 1960. The checklist of the mammals of Balochistan is mostly based on the data collected in collaboration with the Balochistan Forest and Wildlife Department during 1999-2006.

## RESULTS AND DISCUSSION

On the basis of the studies undertaken so far in different ecological zones of the Province particularly in the Protected Areas, ninety species of mammals have been recorded (Table II). The National Red List Status for 194 species of mammals of Pakistan has been given by Sheikh and Molur (2004). Of these, the following 7 species in

Balochistan are critically endangered: Leopard, Caracal, Striped hyana and Goitred gazelle while Sand cat, Balochistan black bear, Honey badger,

**Table I.- Wildlife protected areas of Balochistan.**

Name	District	Location / Area (Ha)	Established in year	Established to protect
<b>National Parks</b>				
Hazarganji-Chiltan	Quetta and Mastung	29°59'N 66°24'E 27,421 ha	1980	Chiltan markhor
Hingol	Lasbela, Gwadar and Awaran	25°30'N 65°30'E 619,043 ha	1988 and 1997	Marine, estuarine and terrestrial fauna, such as marsh crocodile, green turtle, masher fish, houbara bustard, dalmatian pillcan, spot-billed pelican, plumbeous dolphin, Sindh ibex, urial, chinkara, pangolin and leopard
<b>Wildlife Sanctuaries</b>				
Khurkhera	Lasbela	26°03'N 66°44'E 18,345 ha	1972	Chinkara
Buzi Makola	Gwadar	25°53'N 64°12'E 145,101 ha	1972	Ibex, urial and chinkara
Chorani	Khuzdar	27°42'N 66°45'E 19,433 ha	1972	Black bear, Ibex and urial
Kachau	Khuzdar	21,660 ha	1972	Urial
Shaahan	Khuzdar	27°50'N 66°35'E 29,555 ha	1972	Ibex and Urial
Raghai Rakshan	Kharan	27°20'N 65°20'E 125,425 ha	1972	Urial
Kolwah Kap	Kech	26°02'N 64°39'E 33,198 ha	1972	Chinkara
Maslakh	Pishin	29°55'N 66°30'E 46,559 ha	1968	Chinkara and urial
Ziarat	Ziarat	30°24'N 67°44'E 37,247 ha	1971	Markhor and urial
Sasnamana	Ziarat	6,607 ha	1971	Juniper forest
Gut	Chagai	165,992 ha	1983	Ibex, urial and chinkara
Koh-e-Gishk	Kalat	24,356 ha	1969	Ibex and urial
Ras Koh	Kharan	28°50'N 65°06'E 99,498 ha	1962	Ibex and urial
Chhapar Kohan	Khuzdar	194,616 ha	1988	Chinkara, Ibex, urial and Black bear
<b>Game Research</b>				
Bureji	Lasbela	178,259 ha	Declared a wildlife sanctuary in 1972; game reserve since 1998.	Sindh ibex, urial, chinkara and marsh crocodile.
Sand Khushdil Khan	Pishin	30°36'N 66°45'E 1,296 ha	1983	Staging and breeding area for waterfowl
Zangi Nawar	Chagai	29°27'N 65°47'E 1,069 ha	1982	Breeding and wintering area for waterfowl, including whooper swan and marbled teal
Gogi	Ziarat	10,364 ha	1962	Game birds
Wam	Ziarat	30°27'N 67°43'E 3,887 ha	1962	Game birds
Zawakhan	Chagai	1,060 ha	1963	Markhor and urial
Kambran	Chagai	211,433 ha	1983	Ibex, urial and chakor
Duzdara and Koh-e-Surko	Quetta	2,351 ha	1999	Wild animals
<b>Private Game Reserves</b>				
Hapursi	Kalat		Traditional use	Ibex and urial
Tobati	Kalat		Traditional use	Ibex and urial
Dher	Bolan		Traditional use	Ibex and urial
Gaj Kolachi (Kinjoo)	Khuzdar		Traditional use	Black bear, Ibex and Urial
Lohindo	Khuzdar		Traditional use	Black bear
<b>Community Conservation Areas</b>				

Torghar Qila Saifullah 1800 km<sup>2</sup> (score area 300 Km<sup>2</sup>) 1985 Straight-horned markhor

Source: Balochistan Conservation Strategy 2000.

**Table II.- Checklist of the mammals of Balochistan.**

Order	Family	Common name	Scientific name	Status
Insectivora	Erinaceidae	Aghan Hedgehog	<i>Hemiechinus auritus megalotis</i> Blyth, 1845	Lc
		Pale or Indian Hedgehog	<i>Paraechinus micropus</i> Blyth, 1845	Lc
		Brandt's Hedgehog	<i>Paraechinus hypomelas hypomelas</i> Brandt, 1836	Lc
	Soricidae	Mediterranean Pygmy Shrew	<i>Suncus etruscus</i> Savi, 1822	Lc
		Balochistan Short-tailed Shrew	<i>Crocidura gmelini</i> Pallas, 1811	Lc
		Zarudny's Shrew	<i>Corocidura zarudnyi</i> Ognev, 1928	Lc
Chiroptera	Pteropidae	Egyptian Fruit Bat	<i>Rousettus egypticus arabicus</i> E. Geoffroy, 1810	Vu
	Rhinopomatidae	Indian Flying Fox	<i>Pteropus giganteus</i> Briinnich, 1782	Lc
		Lesser Mouse-tailed Bat	<i>Rhinopoma hardwickii</i> Grey, 1831	Lc
		Large Mouse-tailed Bat	<i>Rhinopoma microphyllum</i> Briinnich, 1782	Lc
	Rhinolophidae	Large Mouse-tailed Bat	<i>Rhinopoma mascatellum</i> Thomas, 1903	Nt
		Greater Horse Shoe Bat	<i>Rhinolophus ferrumequinum</i> Schreber, 1774	Vu
	Hipposideridae	Big Eared Harseshoe Bat	<i>Rhinolophus macrotis</i> Blyth, 1844	Nt
		Fulvous Leaf-nosed Bat	<i>Hipposideros fulvus</i> Gray, 1838	Lc
	Vespertilionidae	Persian Trident Bat	<i>Tiaenops persicus persicus</i> Dobson, 1871	Vu
		Trident Leaf-nosed Bat	<i>Asellia tridens</i> Geoffrey, 1813	NE
		Geoffroy's Bat	<i>Myotis emarginatus</i> Geoffroy, 1806	NE
		Sind Bat or Persian serotin	<i>Eptesicus nasutus</i> Dobson, 1877	DD
			Kuhl's Pipistrelle	<i>Pipistrellus kuhli</i> Kuhl, 1819
Carnivora	Felidae	Leopard or Panther	<i>Panthera pardus saxicolor</i> , Pocock, 1927	CR
		Cheetah	<i>Acinonyx jubatus</i> Schreher, 1776	Locally extinct
		Caracal or Red Lynx	<i>Felis caracal</i> Schreber, 1776	CR
		Jungle Cat	<i>Felis chaus prateri</i> Pocock, 1939	Lc
		Pallas's Cat	<i>Felis manul</i> , Pallas, 1776	Nt
		Sand Cat or Dune Cat	<i>Felis margarita</i> , Loche, 1858	CR
		Indian Desert Wild Cat	<i>Felis sylvestris ornata</i> Grey, 1832	DD
	Herpestidae	Indian Mongoose or Indian Grey Mongoose	<i>Herpestes edwardsi ferrugineus</i> Blandford, 1874	Lc
		Small Indian Mongoose	<i>Herpestes javanicus</i> Geoffroy, E. 1818	Lc
	Canidae	Indian Wolf or Grey Wolf	<i>Canis lupus pallipes</i> Sykes, 1831	E
		Asiatic Jackal	<i>Canis aureus</i> Linnaeus, 1758	Nt
		Indian or Bengal Fox	<i>Vulpes bengalensis</i> Shaw, 1800	Nt
		Blanford's / Hoary / King Fox	<i>Vulpes cana</i> Blandford, 1877	Nt
		Rueppell's Fox or Sand Fox	<i>Vulpes rueppelli</i> Schinz, 1825	Vu
		Desert Fox	<i>Vulpes vulpes griffithi</i> Blyth, 1854	Nt
		Common Red Fox	<i>Vulpes vulpes pusillus</i> Blyth, 1854	Nt
		Striped Hyaena	<i>Hyaena hyaena</i> Linnaeus, 1758	CR
	Ursidae	Balochistan Black Bear	<i>Ursus thibetanus gedrosianus</i> Blandford, 1877	CR
	Mustelidae	Beech or Stone Marten	<i>Martes foina</i> Erxleben, 1777	DD
		Marbled Polecat	<i>Vormela peregusna alpherakii</i> Birula, 1910	Lc
Ratel or Honey Badger		<i>Mellivora capensis</i> Schreber, 1776	CR	
Pholidota	Manidae	Indian Pangolin / Scaly Anteater	<i>Manis crassicaudata</i> Grey, 1827	Vu

Order	Family	Common name	Scientific name	Status
Artiodactyla	Bovidae	Gad or Urial Sind Wild Goat or Sind Ibex	<i>Ovis vignei blanfordi</i> Hume, 1877 <i>Capra aegagrus blythi</i> Hume, 1875	Vu Nt
		Chiltan Wild Goat or Chiltan Markhor	<i>Capra aegagrus chialtanensis</i> Lydekker, 1913	Vu
		Suleman Markhor or Straight horned Markhor	<i>Capra falconeri megaceros</i> Hume, 1875	Vu
		Chinkara or Indian Gazelle	<i>Gazella bennettii</i> Sykes, 1831	Vu
		Goitred Gazelle or Sand or Persian Gazelle	<i>Gazella subgutturosa</i> Gueldenstaedt, 1780	CR
		Indian Wild Boar	<i>Sus scrofa davidi</i> Groves, 1981	Lc
Perissodactyla	Equidae	Indian Wild Ass	<i>Equus hemionus khur</i> Lesson, 1827	Extinct
Lagomorpha	Leporidae	Cape Hare	<i>Lepus capensis craspedotis</i> Blandford, 1875	Vu
		Indian Hare or Desert Hare	<i>Lepus nigricollis dayanus</i> Blandford, 1874	Lc
	Ochotonidae	Afghan or Collared Pika	<i>Ochotona rufescens</i> Gray, 1842	Lc
Rodentia	Sciuridae	Northern Palm Squirrel or Five-Striped Palm Squirrel	<i>Funambulus pennanti</i> Wranghton, 1905	Lc
	Hystriidae	Indian Crested Porcupine	<i>Hystrix indica blanfordi</i> Miller, 1911	Nt
	Dipodidae	Small Five-toed Jerboa	<i>Allactaga elater</i> Lichtenstein, 1825	Lc
	(Sub-family: Cardiocranitoae)	Hotson's Five-toed Jerboa	<i>Allactaga hotsoni</i> Thomas, 1920	Lc
		Greater Three-toed Jerboa or Blandford's Jerboa	<i>Jaculus blanfordi</i> Murray, 1884	Lc
		Balochistan Pygmy Jerboa or Dwarf Three-toed Jerboa	<i>Salpingotus michaelis</i> Fitz Gibbon, 1966	Lc
	Gliridae	Forest Dormouse	<i>Dryomys nitedula</i> Pallas, 1779	Vu
	Muridae	Himalayan Wood Mouse or Field Mouse	<i>Apodemus rusiges</i> Miller, 1913	Vu
	(Sub-family: Murinae)	Soft furred Field Rat or Matad	<i>Millardia meltada pallidior</i> Ryley, 1914	Lc
		Sand-coloured Rat	<i>Millardia gleadowi</i> Murray, 1885	Lc
		Roof Rat or House Rat or Black Rat	<i>Rattus rattus</i> Linnaeus, 1758	Lc
		Brown Rat or Sewer Rat or Norway Rat	<i>Rattus norvegicus</i> Berkenhout, 1769	Lc
		Grey Spiny Mouse	<i>Mus saxicola</i> Elliot, 1837	DD
		Little Indian Field Mouse	<i>Mus musculus</i> Linnaeus, 1758	Lc
		Cairo Spiny Mouse	<i>Acomys cahirinus</i> Dermarest, 1819	Nt
		Indian Bush Rat or Golunda	<i>Golunda ellioti</i> Gray, 1837	Lc
		Short-tailed Mole Rat	<i>Nesokia indica</i> Gray and Hardwicke, 1832	Lc
	(Sub-family: Cricetinae)	Mouse-like Hamster	<i>Calomyscus bailwardi</i> Thomas, 1905	Lc
		Little Grey Hamster or Migratory Hamster	<i>Cricetulus migratorius</i> Pallas, 1773	Lc
	(Sub-family: Cerbillinae)	Balochistan Gerbil or Pygmy Gerbil	<i>Gerbillus nanus</i> Blandford, 1875	Nt
		Cheesman's Gerbil	<i>Gerbillus cheesmani</i> Thomas, 1919	Vu
		Indian Gerbil or Antelope-rat	<i>Tatera indica</i> Hardwicke, 1807	Lc
		Swinhoe's Jird or Syndevall's Jird	<i>Meriones crassus</i> Sundevall, 1842	Nt
		Indian Desert Jird	<i>Meriones hurrianae</i> Jerdon, 1867	Lc
		Libyan Jird	<i>Meriones libycus</i> Lichtenstein, 1823	Lc
		Persian Jird	<i>Meriones persicus</i> Blandford, 1875	Lc
		Great Gerbil or Gaint Day	<i>Rhombomys opimus</i> Lichtenstein, 1823	Nt

Jird

Order	Family	Common name	Scientific name	Status	
		Afghan Mole-Vole or Quetta Mole Vole	<i>Ellobius fuscocapillus</i> Blyth, 1843	Nt	
Cetacea	Balaenopteridae	Blue Whale	<i>Balaenoptera musculus</i> Linnaeus, 1758	E	
		Fin Whale or Common Rorqual	<i>Balaenoptera physalus</i> Linnaeus, 1758	E	
		Bryde's whale	<i>Balaenoptera edeni</i> Anderson, 1879	DD	
		Physeteridae	Humpback Whale	<i>Megaptera novaeangliae</i> Borowski, 1781	Vu
	Dwarf Sperm Whale		<i>Kogia simus</i> Owen, 1866	DD	
		Phocaenidae	Little Indian Porpoise or Finless Porpoise	<i>Neophocaena phocaenoides</i> G. Cuvier, 1829	DD
			Delphinidae	Long-beaked or Dussumier's Dolphin	<i>Delphinus tropicalis</i> Van Bree, 1971
		Indian Humpbacked Dolphin or Plumbeous Dolphin		<i>Sousa plumbea</i> Cuvier, 1892	DD
		Melon headed Whale Or Electra Dolphin		<i>Peponocephala electra</i> Nishiwaki and Narris, 1966	DD
		Bottle nosed Dolphin		<i>Tursiops truncatus</i> Montagu, 1821	DD
		Cuvier's Beaked Whale or Goose Beaked Whale		<i>Ziphius cavirostris</i> Cuvier, G. 1823	DD

CR, critically endangered; E, endangered; Vu, vulnerable; Nt, near-threatened; Lc, least concern; DD, data deficient; NE, not evaluated.

**Table III.- Species of special concern.**

S.No.	Common name	Scientific name	Status
1.	Leopard	<i>Panthera pardus saxicolor</i>	Critically endangered
2.	Caracal	<i>Felis caracal</i>	Critically endangered
3.	Pallas's Cat	<i>Felis manul</i>	Near-threatened
4.	Sand Cat	<i>Felis margarita</i>	Critically endangered
5.	Wolf	<i>Canis lupus</i>	Endangered
6.	Ruppell's Fox	<i>Vulpes rueppelli</i>	Vulnerable
7.	Striped Hyaena	<i>Hyaena hyaena</i>	Critically endangered
8.	Balochistan Black Bear	<i>Ursus thibetanus gedrosianus</i>	Critically endangered
9.	Honey Badger	<i>Mellivora capensis</i>	Critically endangered
10.	Balochistan Urial	<i>Ovis vignei blanfordi</i>	Vulnerable
11.	Straight – horned Markhor	<i>Capra falconeri jerdoni</i>	Vulnerable
12.	Chiltan Wild Goat	<i>Capra aegagrus chiltanensis</i>	Endemic
13.	Chinkara	<i>Gazella bennettii</i>	Vulnerable
14.	Goitred Gazelle	<i>Gazella subgutturosa</i>	Critically endangered
15.	Balochistan Pygmy Jerboa	<i>Salpingotus michaelis</i>	Endemic

Indian wolf is endangered. Furthermore, the following 4 species of mammals are endemic to Balochistan: Chiltan wild goat, Hoston's five-toed jerboa, Greater three-toed jerboa and Balochistan pygmy jerboa.

Fifteen species of mammals of Balochistan are in need of special attention (Table III) on account of being either endangered or being rare or

localized.

Thirteen species of mammals of Balochistan are protected under the Balochistan Wildlife Protection Act 1974 (Table IV).

The important areas for wild mammals are: Chiltan/Hazarganji National Park, Hingol National Park, Qila Saifullah, Zhob, Noshki, Chagai, Kharan and Khuzdar.

The Chagai desert ecosystem including the Reko diq Copper Extraction Project area is very important due to presence of threatened species of mammals as well as for the houbara bustard. The Asiatic cheetah is reported to visit the Taftan and Kirtika area. Four goitred gazelles were sight recorded during August 2004 by one of the authors (ARK) around Kirtika Check Post area. Similarly, Sand Cat was recorded around Humai Kili Village and Red fox, Ruppell's or sand fox, Blandford's fox, caracal, cape hare, porcupine, pangolin, Balochistan gerbil and longhaired hedgehog have been recorded in Reko Diq Project Area. Chinkara has been extirpated from this area but it is still present in other parts of Balochistan e.g., Hingol National Park. Pygmy jerboa and Hoston's jerboa are endemic to the Chagai desert.

**Table IV.- Protected species of mammals in Balochistan, animals which shall not be hunted, killed or captured. Schedule III Balochistan Wildlife (Protection Preservation, Conservation and Management) Act 1974.**

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-	Sind Wild Goat
-	Markhor (Including Chiltan Markhor and Straight Horned Markhor)
-	Urial or Gad
-	Himalayan Rhesus Monkey*
-	Blandford Fox
-	Balochistan Black Bear
-	Common Otter*
-	Smooth coated Indian Otter
-	Caracal
-	Pallas's Cat
-	Lynx*
-	Sand Cat
-	Snow Leopard*
-	Leopard
-	Cheetah**
-	Wild Ass**
-	Spotted Deer*
-	Hog Deer*
-	Indian Gazelle
-	Goitred or Persian Gazelle-

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\*, Does not occur in Balochistan; \*\*, Now extinct in Balochistan.

Most of the important wildlife of the Province is restricted to the Protected Areas, which have been under threat due to habitat degradation and lack of

management. Poaching and hunting is a widespread problem throughout the province due to weak enforcement of the wildlife laws and regulations in a tribal society.

There is a need for the restructuring and capacity building of the wildlife Department, development of ecotourism in the province and for creating public awareness regarding environmental conservation.

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