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### COMMUNICATION

#### AN UPDATED CHECKLIST OF MAMMALS OF ODISHA, INDIA

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## An updated checklist of mammals of Odisha, India

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**Abstract:** Based on available literature and field surveys, an updated checklist of mammals of Odisha State is presented in this communication. Their updated scientific binomen, IUCN status, Wildlife (Protection) Act schedules, CITES appendices, and last reported sighting of each species in Odisha are also given. Odisha has around 102 species of mammals under 34 families and 12 orders, among which 27 species have been included under the different threatened categories of the IUCN Red List.

**Keywords:** CITES, eastern India, Indian Wildlife (Protection) Act, IUCN.

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**Author contribution:** Both authors contributed equally to the study.

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## INTRODUCTION

Mammals are one of the most charismatic group and represented by 6,399 extant species under 1,314 genera, 167 families and 27 orders worldwide (Burgin et al. 2018). India is one of the 17 megadiverse countries in the world, and has over 427 extant mammalian species representing 199 genera, 52 families and 14 orders (Thong et al. 2018; Srinivasulu 2019). India is classified into 10 different biogeographic zones (Rodger & Panwar 1988), and each of these zone has some uniqueness in their mammalian fauna (Menon 2014).

The state of Odisha (formerly Orissa) (17.816–22.566 °N and 81.483–87.483 °E; Figure 1) spread over an area of 155,707km<sup>2</sup>, is situated along the east coast of India within the Deccan peninsular biogeographic zone (No. 6). Because of its unique geographic location within the transitional zone of Chhotanagpur Plateau (No. 6B), Eastern Ghats Highlands (No. 6C), Lower Gangetic Plain (No. 7B), and the Eastern Coastal Plain's (No. 8B) biogeographic provinces (Ray 2005), Odisha's biodiversity represents a mixture of Indo-Malayan and Afro-Mediterranean elements (Das et al. 2015). About 37% of the total geographic area of Odisha is under forest cover (Forest Survey of India 2019), which is mainly composed of tropical moist deciduous, tropical dry deciduous, tropical semi-evergreen, scrub and mangrove forests (Champion & Seth 1968). The coastline of Odisha is about 480km long, characterized by sand dunes, tidal creeks, backwaters, brackish water lagoons, estuaries, mangroves, mudflats, and salt marshes. There are 22 protected areas (19 wildlife sanctuaries (WS)), one national park and two tiger reserves in Odisha which covers about 4.73% of the state's geographical area.

Documented information on mammalian fauna of Odisha dates back to the second half of 19<sup>th</sup> century. It can be found referred in the first book on Indian mammals "The Mammals of India" by Jerdon (1867). Subsequently, other important publications also dealt with mammals of Odisha (Ball 1877; Sterndale 1884; Blanford 1888–1891). Although the Bombay Natural History Society's systematic Mammal Survey of India, Burma and Ceylon was held during 1911–1930, it could not cover parts of then princely states of Odisha (Das et al. 1993). A few species of mammals, however, were collected near Chilika Lake and Koira area in Odisha and the results were reported in Annandale (1915), Thomas (1915), Wroughton (1915), and Hinton & Lindsay (1926a,b). Subsequently, mammals of Odisha were also referred in several volumes of "Fauna of British India" (Pocock 1939, 1941) and "Fauna of India" (Ellerman

1961a,b). Behura & Guru (1969) compiled a checklist of mammals of Odisha and reported 34 species. During 1970–1983, the Zoological Survey of India made a series of mammalian surveys throughout Odisha, the results of which comprising 76 species were then reported in the state fauna series (Das et al. 1993). Mishra et al. (1996) also made a comprehensive checklist of wildlife of Odisha and reported 85 species of mammals within the political boundary of the state.

During the last two decades, there have been increasing efforts to document mammals of Odisha. These studies were focused on several protected areas, important hill ranges and sacred groves. Tiwari et al. (2002) first compiled 37 species of mammals from Chandaka-Dampara WS. Ramakrishna et al. (2006) reported 55 species of mammals from Similipal Biosphere Reserve encompassing the Similipal WS and Similipal Tiger Reserve. Mohapatra et al. (2009, 2012, 2013) reported 36 species of mammals from different hill forests of southern Odisha, 43 species from Kotgarh WS, and 47 species from several sacred groves in Sundargarh District. Sahu et al. (2012, 2014) reported 36 species of mammals from Hadagarh WS, and 43 species of mammals from Kuldiha WS. Murmu et al. (2013a,b) also reported 23 species of mammals of Kuldiha WS, and 42 species of mammals from Hadagarh WS. Khan et al. (2015) reported 18 species of cetaceans from Odisha. Debata et al. (2016) reported 25 species of bats within the geographic limits of Odisha. Besides these, Venkatraman et al. (2016) reported 24 species of mammals from Bhitarkanika mangroves. Very recently, Debata & Swain (2020) surveyed the mammalian fauna of an urban-influenced zone of Chandaka-Dampara WS using camera traps and reported 14 species of mammals. Some of the recent additions to mammalian fauna of Odisha are Bryde's Whale *Balaenoptera edeni* Anderson, 1879 (John et al. 2012), Lesser False Vampire Bat *Megaderma spasma* Linnaeus, 1758 (Debata et al. 2013), Asian Small-clawed Otter *Aonyx cinereous* (Illiger, 1815) (Mohapatra et al. 2014), Cantor's Roundleaf Bat *Hipposideros galeritus* Cantor, 1846 (Debata et al. 2015), Dwarf Sperm Whale *Kogia sima* (Owen, 1866), Bottle-nosed Dolphin *Tursiops truncatus* Montagu, 1821, Indian Ocean Humpback Dolphin *Sousa plumbea* (Cuvier, 1829), and Pantropical Spotted Dolphin *Stenella attenuata* (Gray, 1846) (Khan et al. 2015). As there is no recent updated information on mammals of Odisha, preparation of a checklist with updates was, thus, considered necessary for further conservation management of mammals of the state.

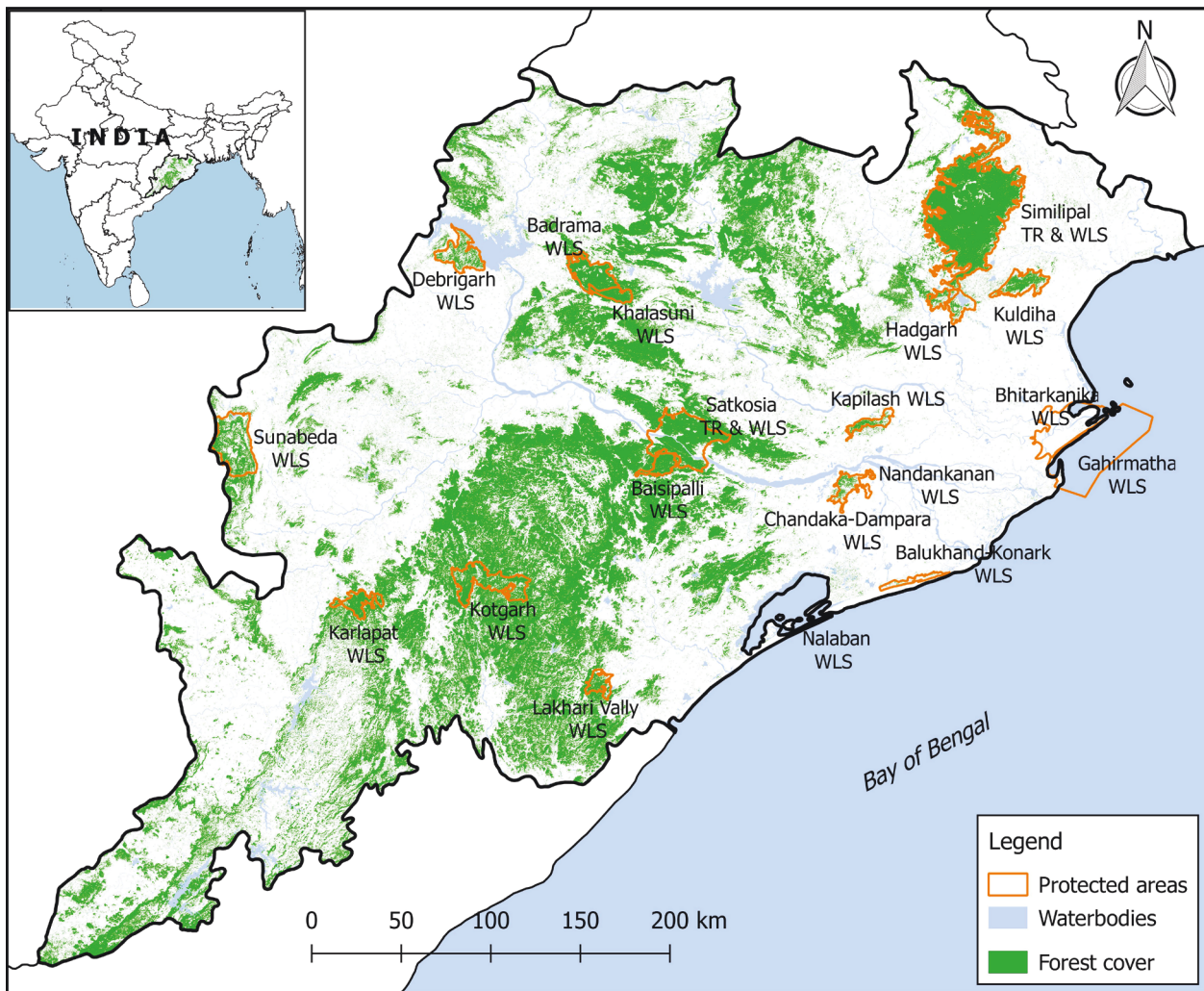


Figure 1. Map of Odisha showing the political boundary, forest cover and Protected Areas.

## METHODS

The checklist given in this communication is based on a thorough review of available literature, books, and technical reports on mammals of Odisha along with author's field surveys. While preparing the checklist, we followed IUCN (2020) for the scientific and common names of the species. The conservation status of the species provided in the checklist is based on the IUCN Red List, Indian Wildlife (Protection) Act, 1972 and Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

## RESULTS AND DISCUSSION

A total of 102 species of mammals under 34 families and 12 orders are listed in the current checklist of Odisha

(Table 1). Among all, the order Chiroptera is the largest group of mammals with 25 species (24.5%) followed by Carnivora (23 species; 22.6%), Cetacea (18 species; 17.6%), Rodentia (15 species; 14.7%), and Artiodactyla (12 species; 11.8%) (Figure 2). The rest of the groups represented less than 10% of the total mammalian diversity (Figure 2). As many as 22 species (21.6%) are threatened (nine Endangered and 13 Vulnerable), five (4.9%) are Near Threatened, 72 (70.6%) are Least Concern, and three (2.9%) are Data Deficient species (IUCN 2020).

### Mammals excluded from the Odisha list

We have excluded a few species from the checklist because they could be locally extirpated, inaccurately mentioned in the literature, or have not been formally recognized as a separate species. A detailed description on their distribution in Odisha is summarized below in

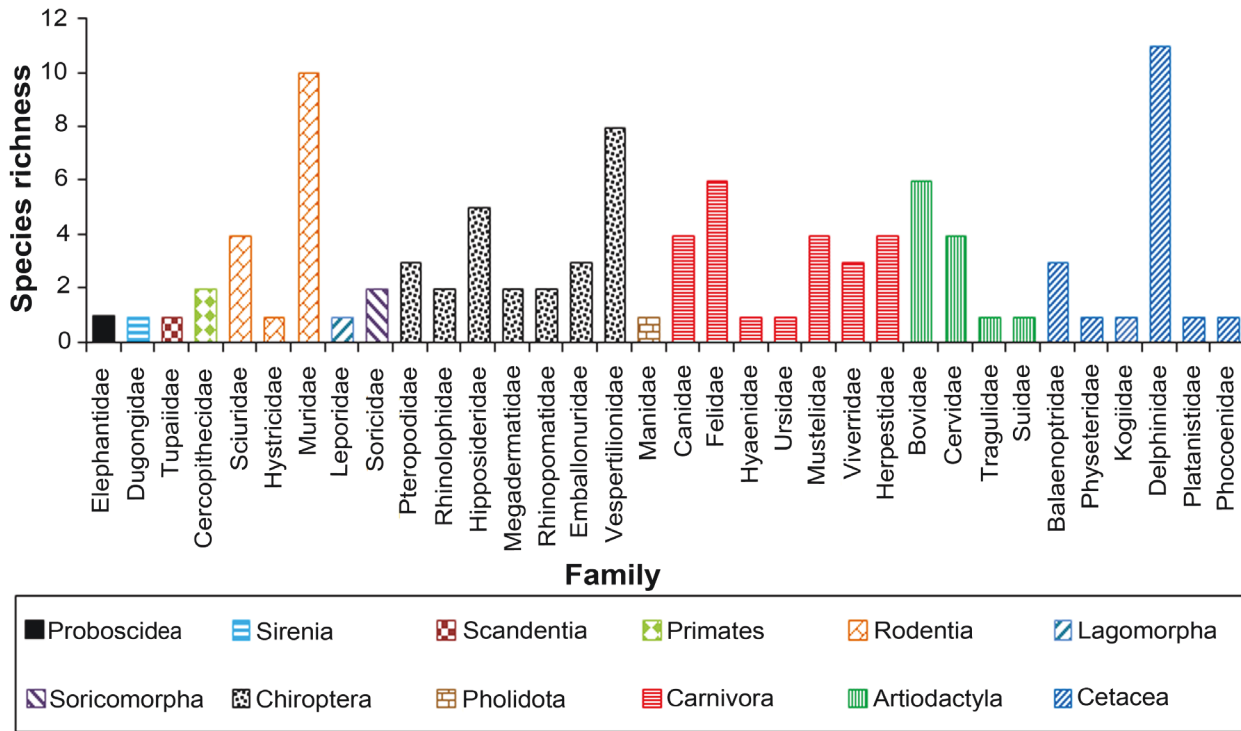


Figure 2. Mammalian species richness in different families in Odisha, India.

support of their exclusion from this list.

**Cheetah** *Acinonyx jubatus* (Griffith, 1821): Cheetah was stated to be present in Odisha based on various sighting records in Sambalpur District during 1880, Sundargarh District during 1910, Angul District during 1932 (Divyabhanusingh & Kazmi 2019), near Odisha-Andhra Pradesh border during 1952 (Mukherjee 1982) and in Dhenkanal District during 1960 (Behura & Guru 1969). Since then there is no report of sighting of Cheetah in Odisha and it is already considered extinct in India. We, therefore, excluded the species from the current checklist.

**Bonnet Macaque** *Macaca radiata* (E. Geoffroy, 1812): Bonnet Macaque was reported to occur only in Malkangiri District of southern Odisha (Mishra et al. 1996). Acharjyo (2001), however, raised doubt on its occurrence in Odisha. Moreover, Das et al. (1993) did not mention its occurrence in Odisha. Recently, Kumar et al. (2011) mapped the distribution of Bonnet Macaque in India, but did not report any troops from Odisha. We, therefore, excluded this species from Odisha checklist.

**Caracal** *Caracal caracal* (Schreber, 1776): Based on a newspaper report published in The Statesman, Calcutta on 10 March 1962, Behura & Guru (1969) reported the presence of Caracal in Mayurbhanj District, northern Odisha. Apart from this, there is no further valid

evidence of its occurrence in the state so far. The known eastern most range of this species in India extends up to Madhav National Park in Madhya Pradesh (Kushwaha & Kumar 1999). The species, therefore, might have been inaccurately mentioned or might have become locally extirpated in Odisha.

**Marbled Cat** *Pardofelis marmorata* (Martin, 1836): There is a mention that two young individuals (possibly kittens) of Marbled Cat captured in Phulbani District and displayed in the first wildlife exhibition held at Bhubaneswar in 1956 (Mishra et al. 1996). Besides that there is no further valid evidence on its occurrence in Odisha. As Leopard Cat *Prionailurus bengalensis* (Kerr, 1792) is a very common and widely distributed species in the forests of Odisha (Mishra et al. 1996), the captured kittens were probably misidentified Leopard Cats. The Marbled Cat is found in the mountain region of Himalaya, Himalayan foothills, and northeastern states in India (Ross et al. 2016). We, therefore, ruled out the presence of Marbled Cat in Odisha, and exclude it from the updated checklist.

**Clouded Leopard** *Neofelis nebulosa* (Griffith, 1821): There is a mention on occurrence of Clouded Leopard from Similipal WS by Ramakrishna et al. (2006). The authors mentioned its distribution in Chahala, Kabatghai, and Talbandh areas in Similipal with no valid evidence.

**Table 1. Checklist of mammals of Odisha, India. IUCN Status: EN—Endangered, VU—Vulnerable, NT—Near Threatened, LC—Least Concern, DD—Data Deficient.**

	Scientific name	Common name	IUCN status	WPA, 1972 schedule	CITES appendix	Latest source
	<b>A. ORDER PROBOSCIDEA</b>					
	<b>I. Family Elephantidae (Elephants)</b>					
1	<i>Elephas maximus</i> Linnaeus, 1758	Asian Elephant	EN	I	I	Debata & Swain (2020)
	<b>B. ORDER SIRENIA</b>					
	<b>II. Dugongidae (Dugongs)</b>					
2	<i>Dugong dugon</i> (Müller, 1776)	Dugong	VU	I	I	Mishra et al. (1996)
	<b>C. ORDER SCANDENTIA</b>					
	<b>III. Family Tupaiidae (Treeshrews)</b>					
3	<i>Anathana ellioti</i> (Waterhouse, 1850)	Madras Treeshrew	LC	Not listed	II	Sahu et al. (2014)
	<b>D. ORDER PRIMATES</b>					
	<b>IV. Family Cercopithecidae (Old world monkeys)</b>					
4	<i>Macaca mulatta</i> (Zimmermann, 1780)	Rhesus Macaque	LC	II	II	Debata & Swain (2020)
5	<i>Semnopithecus entellus</i> (Dufresne, 1797)	Northern Plains Gray Langur	LC	II	I	Debata & Swain (2020)
	<b>E. ORDER RODENTIA</b>					
	<b>V. Family Sciuridae (Squirrels)</b>					
6	<i>Funambulus palmarum</i> (Linnaeus, 1766)	Three-striped Palm Squirrel	LC	Not listed	Not listed	Sahu et al. (2014)
7	<i>Funambulus pennantii</i> Wroughton, 1905	Northern Palm Squirrel	LC	IV	Not listed	Murmu et al. (2013a, b)
8	<i>Petaurista philippensis</i> (Elliot, 1839)	Indian Giant Flying Squirrel	LC	II	Not listed	Murmu et al. (2013b)
9	<i>Ratufa indica</i> (Erxleben, 1777)	Indian Giant Squirrel	LC	II	II	Palei et al. (2017)
	<b>VI. Family Hystricidae (Porcupines)</b>					
10	<i>Hystrix indica</i> Kerr, 1792	Indian Crested Porcupine	LC	IV	Not listed	Debata & Swain (2020)
	<b>VII. Family Muridae (Rats and Mice)</b>					
11	<i>Bandicota bengalensis</i> (Gray, 1835)	Lesser Bandicoot Rat	LC	V	Not listed	Sahu et al. (2014)
12	<i>Bandicota indica</i> (Bechstein, 1800)	Greater Bandicoot Rat	LC	V	Not listed	Mohapatra et al. (2013)
13	<i>Golunda ellioti</i> Gray, 1837	Indian Bush-rat	LC	V	Not listed	Tiwari et al. (2002)
14	<i>Madromys blanfordi</i> (Thomas, 1881)	White-tailed Wood Rat	LC	V	Not listed	Mohapatra et al. (2013)
15	<i>Mus booduga</i> (Gray, 1837)	Common Indian Field Mouse	LC	V	Not listed	Sahu et al. (2014)
16	<i>Mus musculus</i> Linnaeus, 1758	House Mouse	LC	V	Not listed	Sahu et al. (2014)
17	<i>Rattus norvegicus</i> (Berkenhout, 1769)	Brown Rat	LC	V	Not listed	Mishra et al. (1996)
18	<i>Rattus rattus</i> (Linnaeus, 1758)	House Rat	LC	V	Not listed	Sahu et al. (2014)
19	<i>Tatera indica</i> (Hardwicke, 1807)	Indian Gerbil	LC	V	Not listed	Sahu et al. (2014)
20	<i>Vandeleuria oleracea</i> (Bennett, 1832)	Asiatic Long-tailed Climbing Mouse	LC	V	Not listed	Sahu et al. (2014)
	<b>F. ORDER LAGOMORPHA</b>					
	<b>VII. Family Leporidae (Hares)</b>					
21	<i>Lepus nigricollis</i> F. Cuvier, 1823	Black-naped Hare	LC	IV	Not listed	Debata & Swain (2020)
	<b>G. ORDER SORICOMORPHA</b>					
	<b>VIII. Family Soricidae (Shrews)</b>					
22	<i>Suncus etruscus</i> (Savi, 1822)	Savi's Pygmy Shrew	LC	Not listed	Not listed	Sahu et al. (2014)

	Scientific name	Common name	IUCN status	WPA, 1972 schedule	CITES appendix	Latest source
23	<i>Suncus murinus</i> Linnaeus, 1766	House Shrew	LC	V	Not listed	Sahu et al. (2014)
	<b>H. ORDER CHIROPTERA</b>					
	<b>IX. Family Pteropodidae (Fruit Bats)</b>					
24	<i>Cynopterus sphinx</i> (Vahl, 1797)	Greater Short-nosed Fruit Bat	LC	V	Not listed	Debata et al. (2016)
25	<i>Pteropus giganteus</i> (Brünnich, 1782)	Indian Flying Fox	LC	V	II	Debata et al. (2016)
26	<i>Rousettus leschenaultii</i> (Desmarest, 1820)	Leschenault's Rousette	LC	V	Not listed	Debata et al. (2016)
	<b>X. Family Rhinolophidae (Horseshoe Bats)</b>					
27	<i>Rhinolophus lepidus</i> Blyth, 1844	Blyth's Horseshoe Bat	LC	Not listed	Not listed	Debata et al. (2016)
28	<i>Rhinolophus rouxii</i> Temminck, 1835	Rufous Horseshoe Bat	LC	Not listed	Not listed	Debata et al. (2016)
	<b>XI. Family Hipposideridae (Roundleaf Bats)</b>					
29	<i>Hipposideros ater</i> Templeton, 1848	Dusky Roundleaf Bat	LC	Not listed	Not listed	Debata et al. (2016)
30	<i>Hipposideros fulvus</i> Gray, 1838	Fulvus Roundleaf Bat	LC	Not listed	Not listed	Debata et al. (2016)
31	<i>Hipposideros galeritus</i> Cantor, 1846	Cantor's Roundleaf Bat	LC	Not listed	Not listed	Debata et al. (2016)
32	<i>Hipposideros speoris</i> (Schneider, 1800)	Schneider's Roundleaf Bat	LC	Not listed	Not listed	Debata et al. (2016)
33	<i>Hipposideros lankadiva</i> Kelaart, 1850	Kelaart's Roundleaf Bat	LC	Not listed	Not listed	Debata et al. (2016)
	<b>XII. Family Megadermatidae (False Vampire Bats)</b>					
34	<i>Megaderma lyra</i> E. Geoffroy, 1810	Greater False Vampire Bat	LC	Not listed	Not listed	Debata et al. (2016)
35	<i>Megaderma spasma</i> (Linnaeus, 1758)	Lesser False Vampire Bat	LC	Not listed	Not listed	Debata et al. (2016)
	<b>XIII. Family Rhinopomatidae (Mouse-tailed Bats)</b>					
36	<i>Rhinopoma hardwickii</i> Gray, 1831	Lesser Mouse-tailed Bat	LC	Not listed	Not listed	Debata et al. (2016)
37	<i>Rhinopoma microphyllum</i> (Brünnich, 1792)	Greater Mouse-tailed Bat	LC	Not listed	Not listed	Debata et al. (2016)
	<b>XIV. Family Emballonuridae (Sheath-tailed Bats)</b>					
38	<i>Saccolaimus saccolaimus</i> (Temminck, 1838)	Pouch-bearing Tomb Bat	LC	Not listed	Not listed	Debata et al. (2016)
39	<i>Taphozous longimanus</i> Hardwicke, 1825	Long-winged Tomb Bat	LC	Not listed	Not listed	Debata et al. (2016)
40	<i>Taphozous melanopogon</i> Temminck, 1841	Black-bearded Tomb Bat	LC	Not listed	Not listed	Debata et al. (2016)
	<b>XV. Family Vespertilionidae (Evening Bats)</b>					
41	<i>Hesperoptenus tickelli</i> (Blyth, 1851)	Tickell's Bat	LC	Not listed	Not listed	Debata et al. (2016)
42	<i>Kerivoula picta</i> (Pallas, 1767)	Painted Woolly Bat	LC	Not listed	Not listed	Debata et al. (2016)
43	<i>Pipistrellus ceylonicus</i> (Kelaart, 1852)	Kelaart's Pipistrelle	LC	Not listed	Not listed	Debata et al. (2016)
44	<i>Pipistrellus coromandra</i> (Gray, 1838)	Indian Pipistrelle	LC	Not listed	Not listed	Debata et al. (2016)
45	<i>Pipistrellus tenuis</i> (Temminck, 1840)	Least Pipistrelle	LC	Not listed	Not listed	Debata et al. (2016)
46	<i>Scotophilus heathii</i> (Horsfield, 1831)	Greater Asiatic Yellow House Bat	LC	Not listed	Not listed	Debata et al. (2016)
47	<i>Scotophilus kuhlii</i> Leach, 1821	Lesser Asiatic Yellow House Bat	LC	Not listed	Not listed	Debata et al. (2016)
48	<i>Scotozous dormeri</i> Dobson, 1875	Dormer's Pipistrelle	LC	Not listed	Not listed	Debata et al. (2016)



	Scientific name	Common name	IUCN status	WPA, 1972 schedule	CITES appendix	Latest source
	<b>I. ORDER PHOLIDOTA</b>					
	<b>XVI. Family Manidae (Pangolins)</b>					
49	<i>Manis crassicaudata</i> E. Geoffroy, 1803	Indian Pangolin	EN	I	II	Anonymous (2019)
	<b>J. ORDER CARNIVORA</b>					
	<b>XVII. Family Canidae (Dogs)</b>					
50	<i>Canis aureus</i> Linnaeus, 1758	Golden Jackal	LC	II	III	Debata & Swain (2020)
51	<i>Canis lupus</i> Linnaeus, 1758	Grey Wolf	LC	I	I*	Palei et al. (2019)
52	<i>Cuon alpinus</i> (Pallas, 1811)	Dhole	EN	II	II	Debata & Swain (2018)
53	<i>Vulpes bengalensis</i> (Shaw, 1800)	Bengal Fox	LC	II	III	Anonymous (2018)
	<b>XVIII. Family Felidae (Cats)</b>					
54	<i>Felis chaus</i> Schreber, 1777	Jungle Cat	LC	II	II	Debata & Swain (2020)
55	<i>Prionailurus bengalensis</i> (Kerr, 1792)	Leopard Cat	LC	I	I	Palei et al. (2016)
56	<i>Prionailurus rubiginosus</i> (I. Geoffroy Saint-Hilaire, 1831)	Rusty-Spotted Cat	NT	I	I	Palei et al. (2019)
57	<i>Prionailurus viverrinus</i> (Bennett, 1833)	Fishing Cat	VU	I	II	Palei et al. (2018)
58	<i>Panthera pardus</i> (Linnaeus, 1758)	Leopard	VU	I	I	Anonymous (2019)
59	<i>Panthera tigris</i> (Linnaeus, 1758)	Tiger	EN	I	I	Anonymous (2019)
	<b>XIX. Family Hyaenidae (Hyaenas)</b>					
60	<i>Hyaena hyaena</i> (Linnaeus, 1758)	Striped Hyaena	NT	III	III	Debata & Swain (2020)
	<b>XX. Family Ursidae (Bears)</b>					
61	<i>Melursus ursinus</i> (Shaw, 1791)	Sloth Bear	VU	I	I	Anonymous (2019)
	<b>XXI. Family Mustelidae (Otters and Honey Badger)</b>					
62	<i>Aonyx cinerea</i> (Illiger, 1815)	Asian Small-clawed Otter	VU	I	II	Mohapatra et al. (2014)
63	<i>Lutra lutra</i> (Linnaeus, 1758)	European Otter	NT	I	I	Adhya (2020)
64	<i>Lutrogale perspicillata</i> (I. Geoffroy Saint-Hilaire, 1826)	Smooth-coated Otter	VU	II	II	Anonymous (2019)
65	<i>Mellivora capensis</i> (Schreber, 1776)	Honey Badger	LC	I	III	Debata & Swain (2020)
	<b>XXII. Family Viverridae (Civets and Palm Civets)</b>					
66	<i>Paradoxurus hermaphroditus</i> (Pallas, 1777)	Common Palm Civet	LC	II	III	Debata & Swain (2020)
67	<i>Viverra zibetha</i> Linnaeus, 1758	Large Indian Civet	LC	II	III	Mohapatra & Palei (2014)
68	<i>Viverricula indica</i> (E. Geoffroy Saint-Hilaire, 1803)	Small Indian Civet	LC	II	III	Debata & Swain (2020)
	<b>XXIII. Family Herpestidae (Mongooses)</b>					
69	<i>Herpestes auropunctatus</i> (Hodgson, 1836)	Small Indian Mongoose	LC	II	III	Debata & Swain (2018)
70	<i>Herpestes edwardsii</i> (E. Geoffroy Saint-Hilaire, 1818)	Indian Grey Mongoose	LC	II	III	Debata & Swain (2020)
71	<i>Herpestes smithii</i> Gray, 1837	Ruddy Mongoose	LC	II	III	Sahu et al. (2012)
72	<i>Herpestes vitticollis</i> Bennett, 1835	Striped-necked Mongoose	LC	II	III	Nayak et al. (2014)
	<b>K. ORDER ARTIODACTYLA</b>					
	<b>XXIV. Family Bovidae (Cattle)</b>					
73	<i>Antelope cervicapra</i> (Linnaeus, 1758)	Blackbuck	LC	I	III	Anonymous (2019)
74	<i>Bos gaurus</i> C.H. Smith, 1827	Gaur	VU	I	I	Anonymous (2019)
75	<i>Boselaphus tragocamelus</i> (Pallas, 1766)	Nilgai	LC	III	III	Anonymous (2019)

	Scientific name	Common name	IUCN status	WPA, 1972 schedule	CITES appendix	Latest source
76	<i>Bubalus arnee</i> (Kerr, 1792)	Wild Water Buffalo	EN	I	III	Mishra et al. (1996)
77	<i>Gazella bennettii</i> (Sykes, 1831)	Indian Gazelle	LC	I	III	Kotwal (1997)
78	<i>Tetracerus quadricornis</i> (de Blainville, 1816)	Four-horned Antelope	VU	I	III	Anonymous (2019)
	<b>XXV. Family Cervidae (Deers)</b>					
79	<i>Axis axis</i> (Erxleben, 1777)	Spotted Deer	LC	III	Not listed	Debata & Swain (2020)
80	<i>Muntiacus vaginalis</i> (Boddaert, 1785)	Northern Red Muntjac	LC	III	Not listed	Anonymous (2019)
81	<i>Rucervus duvaucelii</i> (G. Cuvier, 1823)	Swamp Deer	VU	I	I	Mishra et al. (1996)
82	<i>Rusa unicolor</i> (Kerr, 1792)	Sambar	VU	III	Not listed	Palei et al. (2019)
	<b>XXVI. Family Tragulidae (Mouse Deer)</b>					
83	<i>Moschiola indica</i> (Gray, 1852)	Indian Spotted Chevrotain	LC	I	Not listed	Anonymous (2019)
	<b>XXVII. Family Suidae (Wild Pigs)</b>					
84	<i>Sus scrofa</i> Linnaeus, 1758	Wild Boar	LC	III	Not listed	Debata & Swain (2020)
	<b>L. ORDER CETACEA</b>					
	<b>XXVIII. Family Balaenopteridae (Rorquals)</b>					
85	<i>Balaenoptera edeni</i> Anderson, 1879	Bryde's Whale	LC	I	I	Khan et al. (2015)
86	<i>Balaenoptera acutorostrata</i> Lacépède, 1804	Common Minke Whale	LC	I	I	Khan et al. (2015)
87	<i>Balaenoptera borealis</i> Lesson, 1828	Sei Whale	EN	I	I	Khan et al. (2015)
	<b>XXIX. Family Physeteridae (Sperm Whales)</b>					
88	<i>Physeter macrocephalus</i> Linnaeus, 1758	Sperm Whale	VU	I	I	Khan et al. (2015)
	<b>XXX. Family Kogiidae (Pygmy Sperm Whales)</b>					
89	<i>Kogia sima</i> (Owen, 1866)	Dwarf Sperm Whale	DD	I	II	Khan et al. (2015)
	<b>XXXI. Family Delphinidae (Marine Dolphins)</b>					
90	<i>Delphinus capensis</i> Gray, 1828	Long-beaked Common Dolphin	DD	II	II	Khan et al. (2015)
91	<i>Grampus griseus</i> (G.Cuvier, 1812)	Risso's Dolphin	LC	I	II	Khan et al. (2015)
92	<i>Orcaella brevirostris</i> (Owen in Gray, 1866)	Irrawady Dolphin	EN	I	I	Anonymous (2018)
93	<i>Pseudorca crassidens</i> (Owen, 1846)	False Killer Whale	NT	II	II	Khan et al. (2015)
94	<i>Sousa chinensis</i> (Osbeck, 1765)	Indopacific Humpback Dolphin	VU	II	II	Anonymous (2018)
95	<i>Sousa plumbea</i> (Cuvier, 1828)	Indian Ocean Humpback Dolphin	EN	II	I	Anonymous (2018)
96	<i>Stenella attenuata</i> (Gray, 1846)	Pantropical Spotted Dolphin	LC	II	II	Anonymous (2018)
97	<i>Stenella coeruleoalba</i> (Meyen, 1833)	Striped Dolphin	LC	II	II	Khan et al. (2015)
98	<i>Stenella longirostris</i> (Gray, 1828).	Spinner Dolphin	DD	II	II	Khan et al. (2015)
99	<i>Tursiops aduncus</i> (Ehrenberg, 1833)	Indopacific Bottle-nosed Dolphin	NT	Not listed	II	Khan et al. (2015)
100	<i>Tursiops truncatus</i> Montagu, 1821	Bottle-nosed Dolphin	LC	II	II	Khan et al. (2015)
	<b>XXXII. Family Platanistidae (River Dolphins)</b>					
101	<i>Platanista gangetica</i> (Roxburgh, 1801)	Ganges Dolphin	EN	I	I	Anonymous (2018)
	<b>XXXIII. Family Phocoenidae (Porpoises)</b>					
102	<i>Neophocaena phocaenoides</i> (G. Cuvier, 1829)	Finless Porpoise	VU	I	II	Anonymous (2018)

\* Only the populations of India, Bhutan, Nepal and Pakistan.

In India, this species is confined to the northeastern region (Menon 2014) and their occurrence in Odisha is, therefore, questionable. In fact, intensive camera trap monitoring in Similipal failed to report this species (Palei et al. 2016). Hence, we excluded it from the updated checklist.

**Greater Hog Badger** *Arctonyx collaris* F.G. Cuvier, 1825: Ramakrishna et al. (2006) reported this species from Jamuani area in Similipal Biosphere Reserve, Odisha. In India, Hog Badger is reported from West Bengal, Sikkim, and northeastern region of India (Menon 2014). A recent camera trap monitoring in Similipal Tiger Reserve did not report this species (Palei et al. 2016). Distribution of Hog Badger in Odisha is, therefore, ruled out.

**White-banded Palm Civet** *Paradoxurus jorandensis*: Ali et al. (1988) described a new species of palm civet as White-banded Palm Civet from Similipal Tiger Reserve, Odisha referring to a broad white band encircling the abdomen of an animal. This was later reported to be based on an individual specimen of Common Palm Civet which was partially albinistic (Das et al. 1993). Pocock (1933) also earlier mentioned the polymorphism in both colour and pattern in some species of Viveridae. In fact, there is photographic evidence on both normal and partially albinistic pups in a litter of Common Palm Civet (Image 1) from Baripada, Mayurbhanj District near Similipal Tiger Reserve.

Although 102 species of mammals have been included in the checklist, current status of certain species within the political boundary of Odisha needs to be further verified. Some of the most important among them are the Dugong *Dugong dugon* (Müller, 1776), Wild Water Buffalo *Bubalus arnee* (Kerr, 1792), Swamp Deer *Rucervus duvaucelii* (G. Cuvier, 1823), and Indian Gazelle *Gazella bennettii* (Sykes, 1831). Dugong was reported to occur in Odisha based on a single sighting record during 1902 from Chilika Lake (Mishra et al. 1996; Dash 2010). Since then there has been no record of its occurrence in Odisha. There are reports that during 1969 two herds of Wild Buffalo existed in some pockets of Kalahandi and Koraput districts (Behura & Guru 1969). Mishra et al. (1996) also mentioned about their occurrence in Sunabeda WS in Odisha and the adjoining Udanti WS in Chhattisgarh. Recently, on June 2011 an adult bull strayed into human habitation in Kundura area of Koraput District (Image 2). So, there are possibilities that a small population may still survive in some remote areas in western Odisha. Currently, Swamp Deer are reported to be confined in five isolated pockets in central, northern and northeastern India (Menon



Image 1. The clutch of a Common Palm Civet from Mayurbhanj District near Similipal Tiger Reserve showing the pups with normal and polymorphic coat color. © Abhishek Acharya.



Image 2. The Wild Buffalo that strayed into human habitation in Kundura area of Koraput District. The animal was sighted in close proximity with domestic buffaloes. © Kamal Lochan Purohit.



Image 3. Antler of a Swamp Deer kept as trophy in Khariar Palace, Odisha. The animal was shot in Sunabeda WS during the 1<sup>st</sup> half of 20<sup>th</sup> century. © Subrat Debata.

2014). Earlier, small populations of Swamp Deer were also known to occur in Sunabeda WS in the undivided Kalahandi District and Padmapur forests of Sambalpur District; the Sunabeda population was also believed to migrate between the Sunabeda plateau and forests of the then undivided state of Madhya Pradesh (Mishra et al. 1996). In fact, there is ample evidence that Swamp Deer were present in Sunabeda WS (Image 3). The Indian Gazelle is distributed in the arid and semi-arid regions of western and central India bordering the western Odisha region (Menon 2014). Sterndale (1884) earlier reported its occurrence along the Mahanadi Valley in Odisha. Although not very recently, Kotwal (1997) also reported sighting of 35 Indian Gazelles in Sunabeda WS. Based on a recent informal discussion with local residents of Sunabeda WS by the first author during December 2018, it is revealed that the Wild Buffalo, Swamp Deer, and Indian Gazelle were very common in Sunabeda during the mid-20<sup>th</sup> century, however, habitat encroachment and hunting have resulted in sharp decline in these animals. As per the views of the locals, although all these animals have become extremely rare in Sunabeda, they are sighted occasionally. Due to frequent Maoist activities, however, regular wildlife monitoring activities in Sunabeda WS have ceased. The proposed Sunabeda Tiger Reserve with an area of 956.17km<sup>2</sup> encompassing the Sunabeda WS (591.75km<sup>2</sup>) and adjoining Patdhara forest block (364.42km<sup>2</sup>), is one of the important wildlife habitat adjoining the central Indian landscape. Therefore, targeted and species-specific long term surveys along the western Odisha region in general and proposed Sunabeda Tiger Reserve in particular should be the utmost priority to ascertain the current status of the aforementioned species in Odisha.

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