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.
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 155,707 km², is situated along the east coast of India within the Deccan peninsular biogeographic zone (No. 6). Because of its unique geographical 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 480 km 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 19th 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-Dampaara 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 Kotagarh 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 Kuldihwa WS. Murmu et al. (2013a,b) also reported 23 species of mammals of Kuldihwa 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-Dampaara 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 cinereus (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.
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 1. Map of Odisha showing the political boundary, forest cover and Protected Areas.
Checklist of mammals of Odisha

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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 easternmost 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 of 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 |
|-----------------|-------------|--------------|-------------------|----------------|---------------|
| **A. ORDER PROBOSCIDEA** | | | | | |
| I. Family Elephantidae (Elephants) | | | | | |
| 1 | Elephas maximus Linnaeus, 1758 | Asian Elephant | EN | I | I | Debata & Swain (2020) |
| **B. ORDER SIRENIA** | | | | | |
| II. Dugongidae (Dugongs) | | | | | |
| 2 | Dugong dugon (Müller, 1776) | Dugong | VU | I | I | Mishra et al. (1996) |
| **C. ORDER SCANDENTIA** | | | | | |
| III. Family Tupaiidae (Treeshrews) | | | | | |
| 3 | Anathana elliottii (Waterhouse, 1850) | Madras Treeshrew | LC | Not listed | II | Sahu et al. (2014) |
| **D. ORDER PRIMATES** | | | | | |
| IV. Family Cercopithecidae (Old world monkeys) | | | | | |
| 4 | Macaca mulatta (Zimmermann, 1768) | Rhesus Macaque | LC | II | II | Debata & Swain (2020) |
| 5 | Semnopithecus entellus (Dufresne, 1797) | Northern Plains Gray Langur | LC | II | I | Debata & Swain (2020) |
| **E. ORDER RODENTIA** | | | | | |
| V. Family Sciuridae (Squirrels) | | | | | |
| 6 | Funambulus palmarum (Linnaeus, 1766) | Three-striped Palm Squirrel | LC | Not listed | Not listed | Sahu et al. (2014) |
| 7 | Funambulus pennantii Wroughton, 1905 | Northern Palm Squirrel | LC | IV | Not listed | Murmu et al. (2013a, b) |
| 8 | Petaurista philippensis (Elliot, 1839) | Indian Giant Flying Squirrel | LC | II | Not listed | Murmu et al. (2013b) |
| 9 | Ratufa indica (Erxleben, 1777) | Indian Giant Squirrel | LC | II | II | Palei et al. (2017) |
| **F. ORDER LAGOMORPHA** | | | | | |
| VII. Family Leporidae (Hares) | | | | | |
| 10 | Hystricidae Kerr, 1792 | Indian Crested Porcupine | LC | IV | Not listed | Debata & Swain (2020) |
| **G. ORDER SORICOMORPHA** | | | | | |
| VIII. Family Soricidae (Shrews) | | | | | |
| 11 | Bandicota bengalensis (Gray, 1835) | Lesser Bandicoot Rat | LC | V | Not listed | Sahu et al. (2014) |
| 12 | Bandicota indica (Bechstein, 1800) | Greater Bandicoot Rat | LC | V | Not listed | Mohapatra et al. (2013) |
| 13 | Gulo elliottii Gray, 1837 | Indian Bush-rat | LC | V | Not listed | Tiwari et al. (2002) |
| 14 | Madromys bilanfordi (Thomas, 1891) | White-tailed Wood Rat | LC | V | Not listed | Mohapatra et al. (2013) |
| 15 | Mus booduga (Gray, 1837) | Common Indian Field Mouse | LC | V | Not listed | Sahu et al. (2014) |
| 16 | Mus musculus Linnaeus, 1758 | House Mouse | LC | V | Not listed | Sahu et al. (2014) |
| 17 | Rattus norvegicus (Berkenhout, 1769) | Brown Rat | LC | V | Not listed | Mishra et al. (1996) |
| 18 | Rattus rattus (Linnaeus, 1758) | House Rat | LC | V | Not listed | Sahu et al. (2014) |
| 19 | Tatera indica (Hardwicke, 1807) | Indian Gerbil | LC | V | Not listed | Sahu et al. (2014) |
| 20 | Vandenela uraearoa (Bennett, 1832) | Asiatic Long-tailed Climbing Mouse | LC | V | Not listed | Sahu et al. (2014) |
| **F. ORDER LAGOMORPHA** | | | | | |
| VII. Family Leporidae (Hares) | | | | | |
| 21 | Lepus nigricollis F. Cuvier, 1823 | Black-naped Hare | LC | IV | Not listed | Debata & Swain (2020) |
| **G. ORDER SORICOMORPHA** | | | | | |
| VIII. Family Soricidae (Shrews) | | | | | |
| 22 | Suncus etruscus (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 Soncus murinus Linnaeus, 1766 | House Shrew                 | LC          | V                  | Not listed     | Sahu et al. (2014)     |
| H. ORDER CHIROPTERA           |                            |             |                    |                |                        |
| IX. Family Pteropodidae (Fruit Bats) |                        |             |                    |                |                        |
| 24 Cynopterus sphinx (Vahl, 1797) | Greater Short-nosed Fruit Bat | LC          | V                  | Not listed     | Debata et al. (2016)   |
| 25 Pteropus giganteus (Brünnich, 1782) | Indian Flying Fox        | LC          | V                  | II             | Debata et al. (2016)   |
| 26 Rousettus leschenaultii (Desmarest, 1820) | Leschenault’s Rousette   | LC          | V                  | Not listed     | Debata et al. (2016)   |
| X. Family Rhinolophidae (Horseshoe Bats) |                        |             |                    |                |                        |
| 27 Rhinolophus lepidus Blyth, 1844 | Blyth’s Horseshoe Bat       | LC          | Not listed         | Not listed     | Debata et al. (2016)   |
| 28 Rhinolophus rouxi Temminck, 1835 | Rufous Horseshoe Bat        | LC          | Not listed         | Not listed     | Debata et al. (2016)   |
| XI. Family Hipposideridae (Roundleaf Bats) |                        |             |                    |                |                        |
| 29 Hipposideros ater Templeton, 1848 | Dusky Roundleaf Bat         | LC          | Not listed         | Not listed     | Debata et al. (2016)   |
| 30 Hipposideros fulvus Gray, 1838 | Fulvus Roundleaf Bat        | LC          | Not listed         | Not listed     | Debata et al. (2016)   |
| 31 Hipposideros galiennis Cantor, 1846 | Cantor’s Roundleaf Bat      | LC          | Not listed         | Not listed     | Debata et al. (2016)   |
| 32 Hipposideros speronis (Schneider, 1800) | Schneider’s Roundleaf Bat   | LC          | Not listed         | Not listed     | Debata et al. (2016)   |
| 33 Hipposideros Iankadavo Kelaart, 1850 | Kelaart’s Roundleaf Bat     | LC          | Not listed         | Not listed     | Debata et al. (2016)   |
| XII. Family Megadermatidae (False Vampire Bats) |                        |             |                    |                |                        |
| 34 Megaderma lyra E. Geoffroy, 1810 | Greater False Vampire Bat   | LC          | Not listed         | Not listed     | Debata et al. (2016)   |
| 35 Megaderma spasma Linnaeus, 1758 | Lesser False Vampire Bat    | LC          | Not listed         | Not listed     | Debata et al. (2016)   |
| XIII. Family Rhinopomatidae (Mouse-tailed Bats) |                        |             |                    |                |                        |
| 36 Rhinopoma hardwickii Gray, 1831 | Lesser Mouse-tailed Bat     | LC          | Not listed         | Not listed     | Debata et al. (2016)   |
| 37 Rhinopoma microphyllum (Brünnich, 1792) | Greater Mouse-tailed Bat    | LC          | Not listed         | Not listed     | Debata et al. (2016)   |
| XIV. Family Emballonuridae (Sheath-tailed Bats) |                        |             |                    |                |                        |
| 38 Saccolaimus saccolaimus (Temminck, 1838) | Pouch-bearing Tomb Bat      | LC          | Not listed         | Not listed     | Debata et al. (2016)   |
| 39 Taphozous longimanus Hardwicke, 1825 | Long-winged Tomb Bat        | LC          | Not listed         | Not listed     | Debata et al. (2016)   |
| 40 Taphozous melanopogon Temminck, 1841 | Black-bearded Tomb Bat      | LC          | Not listed         | Not listed     | Debata et al. (2016)   |
| XV. Family Vespertilionidae (Evening Bats) |                        |             |                    |                |                        |
| 41 Hesperoptenus tickellii (Blyth, 1851) | Tickell’s Bat               | LC          | Not listed         | Not listed     | Debata et al. (2016)   |
| 42 Kerivoula picta (Pallas, 1767) | Painted Woolly Bat          | LC          | Not listed         | Not listed     | Debata et al. (2016)   |
| 43 Pipistrellus ceylonicus (Kelaart, 1852) | Kelaart’s Pipistrelle       | LC          | Not listed         | Not listed     | Debata et al. (2016)   |
| 44 Pipistrellus coromandar (Gray, 1838) | Indian Pipistrelle         | LC          | Not listed         | Not listed     | Debata et al. (2016)   |
| 45 Pipistrellus tenuis (Temminck, 1840) | Least Pipistrelle          | LC          | Not listed         | Not listed     | Debata et al. (2016)   |
| 46 Scotophilus hethini (Horsfield, 1831) | Greater Asiatic Yellow House Bat | LC          | Not listed         | Not listed     | Debata et al. (2016)   |
| 47 Scotophilus kuhlii Leach, 1821 | Lesser Asiatic Yellow House Bat | LC          | Not listed         | Not listed     | Debata et al. (2016)   |
| 48 Scototus dorseni 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                  |
|-----------------------------------------------------|---------------------------|-------------|--------------------|---------------|-------------------------------|
| **I. ORDER PHOLIDOTA**                              |                           |             |                    |               |                               |
| XVI. Family Manidae (Pangolins)                     |                           |             |                    |               |                               |
| 49 Manis crassicaudata E. Geoffroy, 1803             | Indian Pangolin           | EN          | I                  | II            | Anonymous (2019)              |
| **J. ORDER CARNIVORA**                              |                           |             |                    |               |                               |
| XVI. Family Canidae (Dogs)                          |                           |             |                    |               |                               |
| 50 Canis aureus Linnaeus, 1758                       | Golden Jackal             | LC          | II                 | III           | Debata & Swain (2020)         |
| 51 Canis lupus Linnaeus, 1758                        | Grey Wolf                 | LC          | I                  | I*            | Palei et al. (2019)           |
| 52 Cuon alpinus (Pallas, 1811)                       | Dhole                     | EN          | II                 | II            | Debata & Swain (2018)         |
| 53 Vulpes bengalensis (Shaw, 1800)                  | Bengal Fox                | LC          | II                 | III           | Anonymous (2018)              |
| **XVIII. Family Felidae (Cats)**                    |                           |             |                    |               |                               |
| 54 Felis chaus Schreber, 1777                        | Jungle Cat                | LC          | II                 | II            | Debata & Swain (2020)         |
| 55 Prionailurus bengalensis (Kerr, 1792)             | Leopard Cat               | LC          | I                  | I             | Palei et al. (2016)           |
| 56 Prionailurus rubiginosus (L. Geoffroy Saint-Hilaire, 1831) | Rusty-Spotted Cat       | NT          | I                  | I             | Palei et al. (2019)           |
| 57 Prionailurus viverrinus (Bennett, 1833)          | Fishing Cat               | VU          | I                  | II            | Palei et al. (2018)           |
| 58 Panthera pardus (Linnaeus, 1758)                 | Leopard                   | VU          | I                  | I             | Anonymous (2019)              |
| 59 Panthera tigris (Linnaeus, 1758)                 | Tiger                     | EN          | I                  | I             | Anonymous (2019)              |
| **XIX. Family Hyaenidae (Hyaenas)**                 |                           |             |                    |               |                               |
| 60 Hyaena hyaena (Linnaeus, 1758)                   | Striped Hyaena            | NT          | III                | III           | Debata & Swain (2020)         |
| **XX. Family Ursidae (Bears)**                      |                           |             |                    |               |                               |
| 61 Melursus ursinus (Shaw, 1791)                    | Sloth Bear                | VU          | I                  | I             | Anonymous (2019)              |
| **XXI. Family Mustelidae (Otters and Honey Badger)**|                           |             |                    |               |                               |
| 62 Aonyx cinerea (Illiger, 1815)                    | Asian Small-clawed Otter  | VU          | I                  | II            | Mohapatra et al. (2014)       |
| 63 Lutra lutra (Linnaeus, 1758)                     | European Otter            | NT          | I                  | I             | Adhya (2020)                  |
| 64 Lutrogale perspicillata (L. Geoffroy Saint-Hilaire, 1826) | Smooth-coated Otter     | VU          | II                 | III           | Anonymous (2019)              |
| 65 Mellivora capensis (Schreber, 1776)              | Honey Badger              | LC          | I                  | III           | Debata & Swain (2020)         |
| **XXII. Family Viverridae ( Civets and Palm Civets)**|                           |             |                    |               |                               |
| 66 Paradoxurus hermaphroditus (Pallas, 1777)        | Common Palm Civet         | LC          | II                 | III           | Debata & Swain (2020)         |
| 67 Viverra zibetha Linnaeus, 1758                   | Large Indian Civet        | LC          | II                 | III           | Mohapatra & Palei (2014)      |
| 68 Viverricula indica (E. Geoffroy Saint-Hilaire, 1803) | Small Indian Civet      | LC          | II                 | III           | Debata & Swain (2020)         |
| **XXIII. Family Herpestidae (Mongoose)**           |                           |             |                    |               |                               |
| 69 Herpestes auropunctatus (Hodgson, 1836)          | Small Indian Mongoose     | LC          | II                 | III           | Debata & Swain (2018)         |
| 70 Herpestes edwardsii (E. Geoffroy Saint-Hilaire, 1818) | Indian Grey Mongoose     | LC          | II                 | III           | Debata & Swain (2020)         |
| 71 Herpestes smithii Gray, 1837                    | Ruddy Mongoose            | LC          | II                 | III           | Sahu et al. (2012)            |
| 72 Herpestes viticollis Bennett, 1835              | Striped-necked Mongoose   | LC          | II                 | III           | Nayak et al. (2014)           |
| **K. ORDER ARTIODACTYLA**                           |                           |             |                    |               |                               |
| 73 Antilope cervicapra (Linnaeus, 1758)             | Blackbuck                 | LC          | I                  | III           | Anonymous (2019)              |
| 74 Bos gaurus C.H. Smith, 1827                     | Gaur                      | VU          | I                  | I             | Anonymous (2019)              |
| 75 Boselaphus tragocamelus (Pallas, 1766)           | Nilgai                    | LC          | I                  | III           | Anonymous (2019)              |
| Scientific name | Common name | IUCN status | WPA, 1972 schedule | CITES appendix | Latest source |
|-----------------|-------------|-------------|--------------------|---------------|---------------|
| 76 Bubalus arnee (Kerr, 1792) | Wild Water Buffalo | EN | I | III | Mishra et al. (1996) |
| 77 Gazella bennettii (Sykes, 1831) | Indian Gazelle | LC | I | III | Kotwal (1997) |
| 78 Tetracerus quadricornis (de Blainville, 1816) | Four-horned Antelope | VU | I | III | Anonymous (2019) |
| **XXV. Family Cervidae (Deers)** | | | | | |
| 79 Axis axis (Exelber, 1777) | Spotted Deer | LC | III | Not listed | Debata & Swain (2020) |
| 80 Muntiacus vaginalis (Boddart, 1785) | Northern Red Muntjac | LC | III | Not listed | Anonymous (2019) |
| 81 Rucervus duvauceli (G. Cuvier, 1823) | Swamp Deer | VU | I | I | Mishra et al. (1996) |
| 82 Rusa unicolor (Kerr, 1792) | Sambar | VU | III | Not listed | Palei et al. (2019) |
| **XXVI. Family Tragulidae (Mouse Deer)** | | | | | |
| 83 Moschiola indica (Gray, 1852) | Indian Spotted Chevrotain | LC | I | Not listed | Anonymous (2019) |
| **XXVII. Family Suidae (Wild Pigs)** | | | | | |
| 84 Sus scrofa Linnaeus, 1758 | Wild Boar | LC | III | Not listed | Debata & Swain (2020) |
| **L. ORDER CETACEA** | | | | | |
| **XXVIII. Family Balaenopteridae (Rorquals)** | | | | | |
| 85 Balaenoptera edeni Anderson, 1879 | Bryde's Whale | LC | I | I | Khan et al. (2015) |
| 86 Balaenoptera acutorostrata Lacèpède, 1804 | Common Minke Whale | LC | I | I | Khan et al. (2015) |
| 87 Balaenoptera borealis Lesson, 1828 | Sei Whale | EN | I | I | Khan et al. (2015) |
| **XXIX. Family Physeteridae (Sperm Whales)** | | | | | |
| 88 Physeter macrocephalus Linnaeus, 1758 | Sperm Whale | VU | I | I | Khan et al. (2015) |
| **XXX. Family Kogiidae (Pygmy Sperm Whales)** | | | | | |
| 89 Kogia sima (Owen, 1866) | Dwarf Sperm Whale | DD | I | II | Khan et al. (2015) |
| **XXXI. Family Delphinidae (Marine Dolphins)** | | | | | |
| 90 Delphinus capensis (Owen, 1866) | Long-beaked Common Dolphin | DD | II | II | Khan et al. (2015) |
| 91 Grampus griseus (G. Cuvier, 1812) | Risso’s Dolphin | LC | I | II | Khan et al. (2015) |
| 92 Orcasella brevirostris (Owen in Gray, 1866) | Irrawady Dolphin | EN | I | I | Anonymous (2018) |
| 93 Pseudorca crassidens (Owen, 1846) | False Killer Whale | NT | II | II | Khan et al. (2015) |
| 94 Sousa chinensis (Osbeck, 1765) | Indopacific Humpback Dolphin | VU | II | II | Anonymous (2018) |
| 95 Sousa plumbea (Cuvier, 1828) | Indian Ocean Humpback Dolphin | EN | II | I | Anonymous (2018) |
| 96 Stenella attenuata (Gray, 1846) | Pantropical Spotted Dolphin | LC | II | II | Anonymous (2018) |
| 97 Stenella coeruleoalba (Meyen, 1833) | Striped Dolphin | LC | II | II | Khan et al. (2015) |
| 98 Stenella longirostris (Gray, 1828) | Spinner Dolphin | DD | II | II | Khan et al. (2015) |
| 99 Tursiops aduncus ( Ehrenberg, 1833) | Indopacific Bottle-nosed Dolphin | NT | | Not listed | Khan et al. (2015) |
| 100 Tursiops truncatus Montagu, 1821 | Bottle-nosed Dolphin | LC | II | II | Khan et al. (2015) |
| **XXXII. Family Platanistidae (River Dolphins)** | | | | | |
| 101 Platanista gangetica (Roxburgh, 1801) | Ganges Dolphin | EN | I | I | Anonymous (2018) |
| **XXXIII. Family Phocoenidae (Porpoises)** | | | | | |
| 102 Neophocaena phocaenoides (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...
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 on a recent informal discussion with local residents of the mid-20th 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 956.17km² encompassing the Sunabeda WS (591.75km²) and adjoining Patdhara forest block (364.42km²), 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 assertion the current status of the aforementioned species in Odisha.

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