



General Studies Manual for UPSC and State Public Services Examinations 2014

Environment, Biodiversity and Climate Change
Module-2: Faunal Diversity of India

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Chapter 1. Fauna of India

The below compendium is based upon the Schedule 1 of the Wild Life Protection Act 1972. All images have been sourced from wikipedia commons under creative commons sharealike license and ARKLive.com

Andaman Wild pig

- The Andaman Wild pig (*Sus scrofa andamanensis*) is one of the three sub-species of wild pig found in India.
- They are: *Sus salvantus*, in the foot-hill regions of the Himalayas; *Sus scrofa andamanensis*, confined to the Andaman Islands; and *Sus scrofa cristata*, common throughout peninsular India.
- Compared to other sub species of wild pig, which are abundant and widely distributed, the Andaman wild pig is an endangered species and confined to Andaman and Nicobar islands.



Black Buck (Antelope cervicapra)

- The blackbuck (Antilope cervicapra) is an antelope species native to the Indian Subcontinent. Its population is confined to central - western India (Madhya Pradesh, Rajasthan, Gujarat, Punjab, Haryana, Maharashtra, Odisha) and Southern India (Karnataka, Andhra Pradesh, Tamil Nadu).
- It has been classified as near threatened by IUCN since 2003.
- The blackbuck is the **only living species of the genus Antilope**.
- The horns of the blackbuck are ringed with one to four spiral turns and the female is usually hornless.
- Bollywood actor Salman Khan was sentenced to five years imprisonment for killing two blackbucks and several endangered chinkaras. The arrest was prompted by intense protests from the Bishnoi ethnic group, which holds animals and trees sacred, and on whose land the hunting had taken place.
- It has been declared as the state animal of Andhra Pradesh.



Brow-antlered Deer or Thamin or Sangai

- Thamin or brow-antlered deer is an endangered species of deer indigenous to Southeast Asia.

- The three subspecies of Thamin are:
 - The Manipuri brow-antlered deer, found in Manipur. It is called sangai in Manipuri.
 - The Burmese brow-antlered deer, found in Myanmar, and westernmost Thailand.
 - The Thai brow-antlered deer, found in Indo-China.
- The Manipuri brow-antlered deer (Sangai) is found in its natural habitat only at **Keibul Lamjao National Park, Loktak Lake, Manipur**. A census conducted in 2000 in the park showed that there were just 162 deer in the park.
- It is also the state animal of Manipur.
- It is listed as Endangered species in IUCN red list.



Himalayan Brown bear

- The Himalayan Brown Bear is also known as the Himalayan Red Bear or Isabelline Bear. It is a subspecies of the Brown Bear.
- The bears are found in Nepal, India, Pakistan and Tibet. They are already speculated to have become extinct in Bhutan.
- It is classified as endangered species in IUCN red list.
- The bear is believed by some to be the source of the legend of the Yeti or Abominable Snowman, because of its ability to walk upright.
- It is best seen in the Great Himalayan National Park (Himachal Pradesh) and the Deosai National Park, Pakistan.



Capped Langur (*Presbytis pileatus*)

- Capped Langur is a species of primate in the Cercopithecidae family.
- It is found in Bangladesh, Nepal, Bhutan, China, India, and Myanmar. Its natural habitat is subtropical or tropical dry forests.



Caracal (*Felis caracal*)

- Also known as the **desert lynx**, it is a wild cat that is widely distributed across Africa, central Asia and southwest Asia into India.
- Adult caracals are solitary, but have also been observed in pairs.
- Caracals can survive without drinking for a long period—the water demand is satisfied with the body fluids of prey.
- They have been used in India for the purpose of hunting and blood sports.

Cheetah (*Acinonyx jubatus*)

- Cheetahs are included on the International Union for Conservation of Nature (IUCN) list of vulnerable species
- The fastest land mammal in the world, the cheetah has many adaptations that allow it to sprint across the plains
- The cheetah likely evolved in Africa during the Miocene epoch (26 million to 7.5 million years ago), before migrating to Asia
- The cheetah is a carnivore, eating mostly mammals under 40 kg (88 lb), including the Thomson's gazelle, the Grant's gazelle.
- *In India, Cheetah is now not found in wild situations because it got extinct as back as 1940s.*

Chinese Pangolin (*Mainis pentadactyla*)

- Classified as Endangered (EN) on the IUCN Red List (1) and listed on Appendix II of CITES
- The peculiar-looking Chinese pangolin is one of just eight species belonging to the order Pholidia, meaning 'scaled animals'.
- The pangolin is also known as a scaly anteater because, despite not being closely related to anteaters, it is highly specialised in feeding solely on ants and termites.
- The Chinese pangolin is found in a wide variety of habitats including tropical, coniferous, evergreen and bamboo forests, grasslands and agricultural fields. It is protected by schedule 1 of India's wildlife protection act.

Chinkara or India Gazelle (*Gazella gazella bennetti*)

- **This is the smallest asiatic antelope.** It grows to a height of 65 cms and weighs up to a mere 25 kgs
- They can go without water for long periods and can even get sufficient fluids from plants and dew drops
- It shares its habitat with several other herbivores, such as nilgai, chital deer, wild goats, and wild boar.
- It is preyed upon by leopards and dholes, and was a common prey item of the Asiatic cheetah

**Clouded Leopard (*Neofelis nebulosa*)**

- The clouded leopard is classified as Vulnerable (VU) on the IUCN Red List
- *The clouded leopard is an almost monkey like climber and has been observed hanging from branches from its rear feet upside down*
- This shy and elusive species is usually associated with tropical



forests, but also makes use of other habitats. The clouded leopard has been seen in primary and secondary forest, as well as grassland, scrub and mangrove swamps

- Deforestation resulting from commercial logging and the growth of human settlements is thought to be the foremost threat to this species

Crab-eating Macaque (*Macaca irus umbrosa*)

- Crab-eating Macaque also known as the long-tailed macaque, is a cercopithecine primate native to Southeast Asia. It is referred to as the cynomolgus monkey in laboratories.
- The crab-eating macaque differs from other macaque species in the fact that the crab-eating macaque has a long tail which is about the same length as its body.*
- The crab-eating macaque is an arboreal primate meaning that it spends most of its life in the safety of the trees. The crab-eating macaque has a long tail which helps it to balance and sharp nails and its fingers to toes which help with grip.
- Despite its name, the crab-eating macaque does not only eat crabs and in fact at least 50% of the crab-eating macaque's diet is made up from fruits, nuts and seeds.*
- Although the crab-eating macaque is not considered to be a animal under threat at this time, habitat loss in the form of pollution but primarily deforestation is causing sever declines in the crab-eating macaque population numbers.



Desert Cat (*Felis libyca*)

- Indian Desert Cat is also known as the Asian Steppe Wildcat or Asiatic Wildcat.
- The Indian Desert Cat can be found in semi-desert and grasslands of Iran, Afghanistan, Pakistan and India.
- Similar in size and appearance to a domestic cat, their coat is sandy yellow in colour with dark spots and the tip of their tail is black. They also have small tufts at the tips of their ears.
- The Indian desert cat hunts and catches mainly rodents, birds and insects. They are often active during the day and rest in dens and burrows
- Once widely hunted for its fur, its chief threat today is hybridisation with domestic cats. They are not however considered to be under any particular threat and are classified as Least Concern.



Dugong (Dugong dugon)

- Dugong or Sea Cow is a sea-grass eating mammal which is found in waters of as many as 37 countries. It is now on verge of extinction, because it has been hunted for meat and oil. In India also, its meat is considered to be aphrodisiac.
- Maximum Population of Dugong is found in Red Sea, followed by the Persian Gulf.
- Largest Dugong was as long as 13.5 ft and was found in Gulf of Katch in India. In India, they are found in Gulf of Kutch, the only population remaining in western India and Gulf of Mannar. The Gulf of Mannar Biosphere (GoMB) has the largest population of dugongs in India. They are also found near the Andaman and Nicobar Islands.
- With fewer than 200 dugongs (commonly known as sea cow) in its waters, India is strongly encouraging its neighbours in South Asia to sign the Dugong United Nations Environment Programme/Convention of Migratory Species (UNEP/CMS) MoU as early as possible.
- Currently classified as vulnerable to extinction under the IUCN Red List of Threatened Species, the dugongs are vulnerable to human-related influences due to their life history and dependence on sea grasses that are restricted to coastal habitats under increased pressure from human activities.
- Reasons for the decline in population are: sea grass habitat loss and degradation, gill netting, chemical pollutants, indigenous use and hunting.

Fishing Cat (*Felis viverrina*)

- The fishing cat is classified as Endangered (EN) on the IUCN Red List
- As its name implies, the fishing cat predominantly preys on fish.
- The fishing cat is discontinuously distributed throughout southern and southeast Asia, found in northeastern India, the foot of the Himalayas in Nepal and India.
- Fishing cats typically inhabit areas of wetland, including swamps and marshy areas, oxbow lakes, reed beds, tidal creeks and mangrove areas, up to an altitude of 1,500 metres.
- The primary threat the fishing cat faces is wetland destruction, with over 50 percent of Asian wetlands under threat and disappearing as a result of human settlement, drainage for agriculture, pollution, excessive hunting, and wood-cutting.



Gangetic dolphin (*Platanista gangetica*)

- The government has now notified the Ganges River Dolphin (*Platanista gangetica gangetica*) as India's National Aquatic Animal.
- The Total population of Ganges River Dolphin is estimated to be around 2000 (as per estimates of India chapter of WWF nature) and they inhabit the Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems of Nepal, India and Bangladesh.
- Major threat to these animals is river water pollution and accidental entanglement of fishing nets. They have been poached over for their oil. The habitat degradation due to declining flow, heavy siltation and construction of barrages causing physical barrier for this migratory species is also one of the reasons behind decline of their numbers.
- These dolphins are found in Assam, Uttar Pradesh, Madhya Pradesh, Rajasthan, Bihar, Jharkhand and West Bengal (7 states) and ideal habitats are in the Ganga, Chambal, Ghaghra, Gandak, Sone, Kosi, the Brahmaputra and Kulsu rivers.
- The decision to declare the Ganges river dolphin India's national aquatic animal was taken Oct 5 2009 during the first meeting of the newly-constituted National Ganga River Basin Authority.
- It is also known as Susu because of the sound it produces when breathing.*
- The Ganges River dolphin lives in one of the world's most densely populated areas, and is threatened by removal of river water and siltation arising from deforestation, pollution and entanglement in fisheries nets



There is another variety of River dolphins found in South Asia called Indus River Dolphin (*Platanista minor minor*). It is found in Indus river in Pakistan and its Beas and Sutlej tributaries. Both Ganges River Dolphin and Indus river Dolphin are now taxonomically considered one species since 1998

Indian bison or Gaur (*Bos gaurus*)

- The gaur is one of the larger of the wild cattle, and individuals can reach over two metres at the shoulder
- Gaurs graze preferentially on green grasses although they will also consume fruit and leaves. These cattle have been domesticated and used for both food and work in India.
- Gaurs are found throughout southern Asia. The largest populations are in India, but the species also spreads eastwards from India and Nepal to Vietnam and peninsular



Malaysia.

- Restricted to forested hilly areas in evergreen, deciduous and savannah forest often associated with glades and relatively open terrain. Hunting, particularly for the horns, remains a serious threat to their survival.

Golden Cat (*Pardofelis temmincki*)

- Asian golden cats are territorial and solitary
- Asiatic golden cat is primarily found in forest habitats, ranging from tropical and subtropical evergreen to mixed and dry deciduous forest.
- The Asiatic golden cat is threatened primarily by habitat loss to deforestation, but it is threatened by indiscriminate snaring.
- Asian golden cats live throughout Southeast Asia, ranging from Tibet, Nepal, Bhutan, India and Bangladesh to Myanmar, Thailand, Cambodia, Laos, Vietnam, Southern China to Malaysia and Sumatra.

**Giant squirrel (*Ratufa macroura*)**

- The grizzled giant squirrel is found in Sri Lanka and Western Ghats of southern India
- It is highly territorial and is very vocal upon encountering an intruder. It is usually found alone or occasionally in pairs.

**Himalayan Ibex (*Capra ibex*)**

- This species inhabits the mountain ranges of central and northeastern Afghanistan, China and north India.
- The Ibex primarily occupies mountainous regions from 500-6,700 m in rocky terrain and open alpine meadows and crags, seeking out lower elevations during the winter.
- Its diet consists of alpine grasses and herbs, and it feeds in early morning and evenings.
- Poaching also occurs in some areas by military personnel, road maintenance workers, and others, especially in areas accessible by vehicle.
- In India, Asiatic ibex is found in several protected areas in the western Himalayan region including: Jammu and Kashmir - Kishtwar and Hemis National Parks.

**Himalayan Tahr (*Hemitragus jemlahicus*)**

- The Himalayan tahr is a relative of the wild goat and is specially adapted to life on the rugged mountain slopes of the Himalayas, extending from the montane to alpine zones.
- Tahr are predominantly grazers, feeding on grasses and herbs, but they do browse the leaves of shrubs particularly when pastures are snow-covered.



- In its native range the Himalayan tahr is threatened by habitat loss as people exploit resources (e.g. medicinal plants) in more marginal areas and military conflicts in northern India, which has also contributed to the tahr's decline.
- There are plans to extend the Great Himalayan National Park's range and establish the Srikhand National Park as a reserve for tahr.

Indian Elephant (*Elephas maximus*)

- Asian elephants (*Elephas maximus*) are smaller than their African savannah relatives and have many other physical features that distinguish them.
- One of the characteristic features of an elephant are the modified incisor teeth which are known as tusks, only some male Asian elephants have tusks, whilst females (cows) have 'tushes' instead, that are seldom visible.
- Elephants are highly intelligent and long-lived animals.
- This species once roamed through much of the Asian Continent south of the Himalayas, extending into China and south to the islands of Sumatra and Borneo.
- Asian elephants inhabit a wide range of grasslands and forest types, including scrub forest, rainforest and semi-cultivated forests, preferring areas that combine grass with low woody plants and tree.

**Indian Lion (*Panthera leo persica*)**

- The last surviving population of the Asiatic lions occupies a compact tract of dry deciduous forest and open grassy scrublands in southwestern part of saurashtra region of state of Gujarat and are found in forests and thorny thickets.
- They have belly fold and distinctive tuft of hair on elbow which are absent in their African counterparts.
- *Lions are the only cats that live in groups, called prides. Prides are family units that may include up to three males, a dozen or so females, and their young.*
- Lions are the only cats that live in groups, called prides. Prides are family units that may include up to three males, a dozen or so females, and their young.

**Indian Wild Ass (*Equus hemionus khur*)**

- The Indian wild ass's range once extended from western India, southern Pakistan, Afghanistan, and south-eastern Iran. In India, they are found in Rann of

Katch. **Indian Wild Ass Sanctuary located in the Little Rann of Kutch is the largest wildlife sanctuary in India**

- Wild asses graze between dawn and dusk. The animal feeds on grass, leaves and fruits of plant, crop, Prosopis pods, and saline vegetation.
- They live either solitarily, or in small groups of twos and threes while family herds remain large.
- The Gujarat Ecological Education and Research Foundation (GEER) report has recommended that the Thar desert in Rajasthan should be developed as an alternative site for reestablishing the Indian wild ass by reintroduction a few of them



Indian Wolf (Canis lupus pallipes)

- This species resembles a large domestic dog, but has longer legs, larger feet, a narrower chest and a straight tail.
- It is an efficient predator, capable of working together with other individuals to bring down large prey, ten times the size of an individual wolf.
- It can be found in a wide variety of northern habitats where suitable food occurs, including forests, tundra, taiga, deserts, plains and mountains.



Kashmir Stag (Cervus elaphus hanglu)

- Classified as Endangered (EN) on the IUCN Red List
- This deer lives in groups of two to 18 individuals in dense riverine forests, high valleys, and mountains of the Kashmir valley and northern Chamba in Himachal Pradesh. In Kashmir, it's found in Dachigam National Park at elevations of 3,035 meters.
- They were threatened, due to habitat destruction, over-grazing by domestic livestock, and poaching.
- Hangul is the only surviving race of the Red Deer family of Europe in the sub-continent.



Leopard or Panther (Panthera pardus)

- The leopard can be individually identified by its spot pattern.
- Leopards inhabiting savanna regions tend to have a more reddish or yellow-brown body, while desert leopards are usually pale cream or yellow-brown.



- Leopards that live in more open country tend to be larger than individuals that live in forests.
- The leopard has an exceptionally large range, occurring throughout Africa and Asia.
- The leopard has adapted to make use of many different habitat types, ranging from deserts to rocky hills and mountains, lowland forests, woodlands, jungles, grasslands and swamps.
- Across Asia, this species is also threatened by habitat destruction and fragmentation due to logging.

Leopard Cat (*Prionailurus bengalensis*)

- Leopard cat is a small wild cat of South and East Asia.
- Leopard cats are the most widely distributed Asian small cats. They are found in agriculturally used areas but prefer forested habitats. They live in tropical evergreen rainforests and plantations at sea level, in subtropical deciduous and coniferous forests in the foothills of the Himalayas.
- They are agile climbers and quite arboreal in their habits. They rest in trees, but also hide in dense thorny undergrowth on the ground
- Leopard cats are carnivorous, feeding on a variety of small prey including mammals, lizards, amphibians, birds and insects
- They are hunted mainly for their fur, or food, and as pets. They are also widely viewed as poultry pests and killed in retribution

**Red Panda (*Ailurus fulgens*)**

- The red panda is classified as Vulnerable (VU) on the IUCN Red List
- These species have similarities with both the bear and raccoon family.
- The coat provides effective camouflage amongst the trees where branches are often swathed in reddish-brown moss.
- They have semi-retractable claws, which allow them to be efficient climbers and when not foraging, pandas are usually found in the trees.
- *Red pandas are one of the few animals whose diet is composed almost entirely on bamboo.*
- *Red pandas are found in the Himalayas and mountainous regions of northern Myanmar, and western Sichuan and Yunnan Provinces in China.*
- The red panda is found in temperate montane forests at elevations between 2,200 and 4,800 metres above sea level where there is a thick bamboo.



Lion-tailed Macaque (*Macaca silenus*)

- Classified as Endangered on the IUCN Red List
- The striking lion-tailed macaque is one of the smallest and most endangered of the macaque species of monkey.
- These macaques spend the majority of their time in the trees, huddling together to sleep at night high up in the forest canopy
- The mainstay of the lion-tailed macaque diet is fruit, although they will also forage for seeds, young leaves, flowers, buds and even fungi
- Found in the Western Ghats Mountains of southwest India and Inhabits evergreen broadleaf monsoon forest.
- Lion-tailed macaques are increasingly rare, mainly as a result of the destruction of their forest home. Only 1% of the original habitat remains today due to widespread deforestation for timber, agriculture and development.

**Loris (*Loris tardigradus*)**

- This species is among the most social of the nocturnal primates. During daylight hours the animals sleep in groups in branch tangles, or curled up on a branch with their heads between their legs
- The slender loris has extremely thin arms and legs. Its face is dominated by huge round eyes which give it excellent night vision and enable it to hunt for insects during the night.
- They consume every part of their prey, including the scales and bones.
- Populations of this small primate are declining because their forest habitats are being destroyed for logging, agriculture and development.
- Endemic to Sri Lanka. The red slender loris is distributed in the south and southwestern parts of the country

**Malabar Civet (*Viverra megaspila*)**

- It is endemic to the Western Ghats of India. It is listed as Critically Endangered by IUCN
- Malabar Large-Spotted Civets live in plantations and wooded areas in south Malabar, India. They are solitary and active at night.
- Malabar Large-Spotted Civets mainly feed on small mammals, birds, snakes, frogs, fruit and eggs.



- Humans are predators of Malabar Large-Spotted Civets. They tend to be treated as raiders of poultry, and are captured and killed when encountered

Salim Ali's fruit bat (*Latidens salimalii*)

- Classified as Critically Endangered in the IUCN list
- Salim Ali's fruit bat is one of the world's rarest bats and is the only species in the genus *Latidens*. It is a medium-sized fruit bat, which lacks an external tail.
- It play an extremely important role as pollinators and seed dispersal agents within their rainforest habitat.
- It was first described from a single specimen collected at an altitude of 750 meters in the Western Ghats rainforest of the High Wavy Mountains, South India.
- Under the Indian Wildlife Protection Act all species of fruit bat are classified as pests and it is therefore legal to persecute them outside of protected reserve.

**Markhor (*Capra falconeri*)**

- Classified as Endangered (EN) on the IUCN Red List
- The markhor is a skilled, nimble climber, and will often be seen perched on precipitous rock faces, away from the threat of predators, such as snow leopards, wolves and lynxes.
- The markhor is found in the mountains of central Asia, with populations scattered through north eastern Afghanistan, northern India and Pakistan.
- They may be found in a range of environments including steep gorges, rocky areas, scrub forest and grassy meadows.
- The main cause of the precipitous decline has been excessive hunting, both for meat and for its impressive horns, that are also used for traditional medicine in the East Asian market.

**Mouse Deer (*Tragulus meminna*)**

- They are found in India, Sri Lanka and perhaps Nepal, and have pale-spotted or -striped upper parts unlike the other Asian members of the family.
- All species in the family lack horns, but both genders have elongated canine teeth.
- It is basically a forest species, being found commonly in all forest types within the dry zone, and also in coconut plantations and home garden.



Musk Deer (*Moschus moschiferus*)

- Classified as Vulnerable (VU) on the IUCN Red List
- Musk deer are responsible for the production of musk, a strong-smelling substance that is one of the most expensive animal products in the world.
- The male musk deer does not possess antlers, but instead has two prominent, tusk-like canine teeth.
- Lichen forms an important part of the Siberian musk deer's diet.
- The musk deer is found in the Russian Federation, Kazakhstan, northern and western China, the Democratic People's Republic of Korea, the Republic of Korea, and Mongolia
- The main threat to the musk deer comes from being hunted for the musk trade, because it has been a highly valued ingredient in the production of medicines and perfumes.

**Nilgiri Langur**

- The Nilgiri langur is classified as Vulnerable on the IUCN Red List
- The Nilgiri langur has a glossy, dark brown coat and long, thick golden to brown fur on the head.
- Found in the Western Ghats of India.
- Inhabits tropical wet evergreen, semi-evergreen and riparian forests as well as teak plantations, at altitudes of between 300 – 2,000 m above sea level.
- This langur species form groups with one male and up to 23 females and young, who move through the forest eating the leaves of 102 plant species as well as some of their fruit, flowers and seeds.

**Chapter 2. Other Protected Fauna: Compendium - 2****Gharial (*Gavialis gangeticus*)**

- Traditionally, the Gharial (*Gavialis gangeticus*) has been identified with water, the source of all existence and fertility. To some, it is *the vahana or vehicle of Goddess Ganga*, and others revere it as the Vahana of Varuna, the god of water. One of the foremost challenges of gharial conservation today is to rekindle the respect and reverence of the people for this ancient animal as our '**river guardian**'.
- Gharial is evolutionarily the most unique crocodilian in the world being a specialized river dwelling fish-eater, but harmless to humans.



- ✓ It lives in deep fast-flowing rivers. The bulbous 'ghara' on the tip of the snout of mature males just above the nostrils, helps in creating a snorting hiss to advertise the animal's presence, and dominance. Gharials nest between March and May. Female gharials excavate egg chambers in sand banks, depositing up to an average of 60 eggs, which hatch in 90 days. Gharials guard their eggs and young ones as long as they are not unusually disturbed by humans.
- ✓ Gharials are endemic to the Indian sub-continent. Once found abundantly in all the major river systems of South Asia, the Gharial is now extinct in Pakistan, Bangladesh, Burma and Bhutan. Nepal has only a remnant breeding population.
- ✓ In India too, the major breeding populations are confined to **two rivers only, Girwa and the Chambal.** The two rivers run along the borders of Uttar Pradesh, Madhya Pradesh and Rajasthan. A few non-breeding populations exist in small pockets in other rivers in India.
- ✓ Gharial is listed as 'Critically Endangered' in the IUCN Red List of Endangered Species. Between 2007-2008, over 100 Gharials in the Chambal perished in a mystery die-off attributed to a nephro-toxin possibly originating from contaminated fish in the Yamuna.

Tibetan Antelope or Chiru

- ✓ Classified as Endangered (EN – A2d) on the IUCN Red List
- ✓ The Tibetan antelope, or 'chiru', is well known for possessing the finest and warmest wool in the animal kingdom. This adaptation provides warmth in the harsh climate of the Tibetan plateau but has contributed greatly to this species' decline
- ✓ Endemic to the Tibetan Plateau, this antelope is found mainly in Chinese regions although some individuals migrate to Ladakh in India
- ✓ The principal cause of this decline is to supply the '**shahtoosh**' trade; the production of shawls made from the fine, warm wool of this species. Shahtoosh stands for 'king of wools' in Persian and became a sought-after fabric in the fashion capitals of the world towards the end of the 20th Century. Up to five antelope are needed to produce a single shawl and these can fetch up to US\$ 15,000 on world markets.
- ✓ Until 2002, shahtoosh shawls were legally produced in the states of Jammu and Kashmir in India but a vital ban on manufacture has now been introduced.



Nilgiri Tahr (Hemitragus hylocrius)

- ✓ Classified as Endangered (EN) on the IUCN Red List
- ✓ The Nilgiri tahr is a goat antelope found high up in the mountains of southern India, it is known locally as the 'Nilgiri ibex'.



- ✓ Found only in the Western Ghats Mountain Range of southwestern India, the largest population is found within the Eravikulam National Park.
- ✓ Outside breeding seasons, males are found lower down in the best grazing fields, whilst female herds are found on the exposed cliff ledges.

Nyan, Argali or Great Tibetan Sheep (*Ovis ammon hodgsoni*)

- ✓ The argali is the largest of the wild sheep, and the males have impressive horns that are highly prized by hunters.
- ✓ These are often violent and the clashing of horns can be heard reverberating around the mountains.
- ✓ The argali graze on grasses, herbs and sedges; herds may migrate to higher elevations during the summer months in search of fresh pasture.
- ✓ Argalis are found in mountainous areas between 1,300 and 6,100 metres above sea level (2), where there are dry alpine habitats.
- ✓ Habitat loss caused by the introduction of domestic sheep is perhaps the most pertinent threat to their survival.



Pangolin (*Manis crassicaudata*)

- ✓ The thick-tailed pangolin possesses some of the most effective armour in the mammalian world.
- ✓ The pangolin can roll up into a tight ball when threatened, thus ensuring only its scales are exposed.
- ✓ The diet of the thick-tailed pangolin consists of ants and termites, and it has some very effective tools to allow it to hunt these tough little insects.
- ✓ The thick-tailed pangolin is only active at night, spending the day in a burrow, which is often situated under large rocks.
- ✓ The thick-tailed pangolin occurs in Bangladesh, India (south of the Himalayas), Sri Lanka, and small areas of Pakistan.



Pygmy Hog (*Sus salvania*)

- ✓ Classified as Critically Endangered (CR) on the IUCN Red List
- ✓ *The pygmy hog is the smallest of all the pig family; it is also the most endangered. These small hogs have relatively short limbs.*
- ✓ Female pygmy hogs are found in small groups, known as 'sounders', composed of one or two adults and their young.
- ✓ Pygmy hogs forage for a wide variety of foods, eating roots, grasses, fruits, insects and earthworms amongst others.



- ✓ Pygmy hogs occupy typical floodplain habitats, such as secondary successional forests, dense tall grasslands and mixed scrub association.

Rusty spotted Cat (*Felis rubiginosa*)

- ✓ The rusty-spotted cat is classified as Vulnerable (VU) on the IUCN Red List
- ✓ One of the smallest cat species in the world, the rusty-spotted cat has been called the hummingbird of the cat family, due to its small size, agility and activeness.
- ✓ It is apparently mainly nocturnal and spends its days in a hollow log, tree or forest thicket.
- ✓ It feeds on small mammals and birds, which can sometimes include domestic poultry and ducks and It give birth in spring in India.
- ✓ It has also occasionally been found in modified habitats such as tea plantations, sugarcane fields and the attics of houses surrounded by paddy fields and coconut plantations.



Clawless Otter (*Aonyx cinerea*)

- ✓ Classified as Vulnerable (VU) on the IUCN Red List
- ✓ This Otter equally at home in the water and on land, is the smallest of the world's otters.
- ✓ The Asian short-clawed otter is a sociable animal, living in loose family groups of up to 12 individuals.
- ✓ The diet of the Asian short-clawed otter consists primarily of crabs, other crustaceans, molluscs and fish (2), although frogs, small mammals, snakes and insects are also eaten.
- ✓ The Asian short-clawed otter has a large distribution, ranging from north-western and south-western India, through southern China to Philippines.
- ✓ In Malaysia at night, their chirps are often heard as they move through rice fields and are found in, and around, rivers, creeks, estuaries, hill streams, marshes, coastal wetlands, mangroves and rice fields, often close to human activity.



Sloth Bear (*Melursus ursinus*)

- ✓ Classified as Vulnerable (VU) on the IUCN Red List 2007
- ✓ The small sloth bear is unique amongst the bears, as insects are its main food source.
- ✓ It has a long, shaggy, coat with particularly long hair over the shoulders, and is typically black.

- ✓ Found on the Indian subcontinent in Nepal, Bhutan, Bangladesh, India and Sri Lanka. Two separate subspecies are recognised; the Sri Lankan sloth bear *Melursus ursinus inornatus* and the Indian sloth bear *M. u. ursinus*.
- ✓ Sloth bears are found in a wide variety of habitats on the subcontinent, from grasslands and thorn scrub to evergreen forest.

**Greater Slow Loris (*Nycticebus couceang*)**

- ✓ The greater slow loris is classified as Vulnerable (VU) on the IUCN Red List
- ✓ It is a nocturnal and strictly arboreal primate. It hides high up in trees to sleep during the day, often on branches or palm fronds.
- ✓ Unlike many other primates, all species of lorises only have a vestigial tail and instead use incredibly mobile wrist and ankle joints to manoeuvre along branches.
- ✓ The greater slow loris is found in Southeast Asia. Its range extends from the northern tip of Thailand, throughout the Malaysian peninsula to Indonesia and Singapore and some of the neighbouring islands.
- ✓ This arboreal primate occurs mainly in primary and secondary tropical lowland forests, up to elevations of 1,300 metres. The greater slow loris prefers forest edges, as insect prey and support branches are more abundant.
- ✓ It is easily targeted by poachers, as this species clings tightly to the branches rather than escaping, is stunned by bright daylight, and is very slow moving.

**Small Travencore Flying Squirrel (*Petinomys fuscocapillus*)**

- ✓ Listed as Near Threatened because its extent of occurrence is probably approximately 30,000 km², and the extent and quality of its habitat are probably declining, and it occurs as severely fragmented populations.
- ✓ This species is restricted to the Western Ghats of southern India and to the island of Sri Lanka.
- ✓ It is an arboreal and nocturnal species. It occurs in evergreen, deciduous and montane forests.
- ✓ Travancore flying squirrels were thought to be extinct but rediscovered in 1989 after a gap of 100 years.

**Swamp Deer (All sub-species of *Cervus duvaucelii*)**

- ✓ Classified as Vulnerable (VU C1) on the IUCN Red List 2002

- ✓ The barasingha (*Rucervus duvaucelii*), also called swamp deer is a deer species currently found in isolated localities in northern and central India, and southwestern Nepal. It is extinct in Pakistan and Bangladesh.
- ✓ The most striking feature of a barasingha is its antlers, with 10 to 14 tines on a mature stag, though some have been known to have up to 20.
- ✓ Barasinghas used to inhabit the basins of the Indus, Ganges and Brahmaputra Rivers, as well as central India as far as the Godavari River. Today, barasinghas have disappeared entirely from the western part of their range. In 1964, the total population in India was estimated at 3000 to 4000 individuals. In northeastern India, the surviving animals are found in Assam.



Tibetan Gazelle (*Procapra picticaudata*)

- ✓ The Tibetan gazelle is classified as Near Threatened (NT) on the IUCN Red List
- ✓ The Tibetan gazelle (*Procapra picticaudata*) is a small and slender gazelle with a compact body and long, thin limbs. Male Tibetan gazelles have slender, ridged horns that are relatively straight with just a slight arch.
- ✓ The Tibetan gazelle is native to China and India. Although over 99 percent of its range lies in the Qinghai-Tibet Plateau of China, populations do also occur in small areas of India neighbouring the plateau
- ✓ The population of the Tibetan gazelle in the region of Ladakh in India is particularly at risk. Severely reduced by hunting in the past, it is continuing to decline due to intensive livestock grazing, and may also face threats from feral dogs and from diseases transmitted by livestock.
- ✓ The Tibetan gazelle population in Ladakh may now number only around 50 individuals in an area of just 100 square kilometres, while populations in some other parts of India have recently become extinct.



Tibetan Wild Ass (*Equus hemionus kiang*)

- ✓ It is a species of 'Least Concern' on the IUCN redlist of threatened animals.
- ✓ **The Tibetan wild ass or Kiang is the largest wild ass.**
- ✓ The Tibetan wild ass is distributed in China, India, Nepal and Pakistan. Outside China, most of the kiang populations are found in Ladakh and Sikkim, India.



- ✓ The major threat to kiang comes from habitat destruction and competition with domestic livestock. Kiang is despised by the pastoralists, as they allegedly degrade pastures.
- ✓ The animal was also harvested for meat in India in the past, but presently no one consumes the animal. Many pastoralists claim that the population of kiang exploded as a result of reduced hunting in the last few decades.

Wild Yak (*Bos grunniens*)

- ✓ While there are over 12 million yaks in the world, most of these are domestic. The wild yak was domesticated about 2,000 years ago. Unfortunately, the number of wild yak is decreasing very quickly, due to uncontrolled hunting, and by their pastures being taken over by domestic yak.
- ✓ There are probably only a few hundred wild yak, and they have been categorized by the IUCN as endangered. Wild yak are now officially protected in China.
- ✓ The wild yak has adapted to living in harsh and barren areas of the Himalayan alpine region. They are one of the few animals that live at these high altitudes.
- ✓ The yak is one of the most important domesticated beasts in Tibet, where it provides transportation, meat, milk, even its dried dung is used as fuel.

**Tibetan Wolf (*Canis lupus chanco*)**

- ✓ The Tibetan wolf, also known as the woolly wolf, is a gray wolf subspecies native to Asia from Turkestan throughout Tibet to Mongolia, northern China and the Indian subcontinent. In Tibet and Ladakh it is known as chánkú or shanko.
- ✓ It is relatively widespread with a stable population trend and has therefore been assessed as Least Concern by IUCN.
- ✓ The Tibetan wolf is thought by some scientists to be the most likely ancestor of the domestic dog, on account of its small size and mandible morphology.
- ✓ Continued threats to wolves include poisoning and deliberate persecution due to depredation on livestock; fragmentation of habitat.

**Gee's golden langur (*Trachypithecus geei*)**

- ✓ Gee's golden langur, or simply the golden langur, is an Old World monkey found in a small region of western Assam, India and in the neighboring foothills of the Black Mountains of Bhutan.

- ✓ It is one of the most endangered primate species of India. Long considered sacred by many Himalayan people, the golden langur was first brought to the attention of science by the naturalist E. P. Gee in the 1950s.
- ✓ In 1988, two captive groups of golden langurs were released into two protected areas of the western region of the state of Tripura, India. As of 2000, one of these groups, consisting of six (and possibly eight) individuals in the Sepahijala Wildlife Sanctuary, had survived.
- ✓ Golden langurs are currently considered to be an endangered species in India. Presently, their population is around 10,000 only.



Four-horned antelope (*Tetraceros quadricornis*)

- ✓ The species is listed as Vulnerable by the IUCN due to habitat loss.
- ✓ The four-horned antelope or chousingha, is a species of small antelope found in open forest in India and Nepal. It is the only species currently classified in the genus *Tetracerus*.
- ✓ Their range extends south of the Gangetic plains down to the state of Tamil Nadu, and east as far as Odisha. They also occur in the Gir Forest National Park of western India.
- ✓ Living in a densely populated part of the world, the four-horned antelope is threatened by loss of its natural habitat to agricultural land. In addition, the unusual four-horned skull has been a popular target for trophy hunters. Only around 10,000 four-horned antelope are estimated to remain alive in the wild.



Lynx (*Felix lynx isabellinus*)

- ✓ Its conservation status has been classified as "Least Concern" by IUCN.
- ✓ One of the subspecies of the Eurasian lynx, a medium-sized cat native to European and Siberian forests, South Asia and East Asia.
- ✓ Distribution - Tibet; Kashmir ; Kuen Lun Mts.; Turkestan, Thian Shan, and Altai Mts
- ✓ Distinguished from the typical Scandinavian race by its paler, more "isabelline" underhair on the average, by the exposure of the pads in the winter coat, and apparently by its rather smaller skull.



Hoolock (*Hyloba tes hoolock*)

- ✓ It is classified as endangered by IUCN
- ✓ The hoolock gibbons (Hoolock), also known as langoor, are two primate species from the family of the gibbons (Hylobatidae).

- ✓ Hoolocks are the second-largest of the gibbons, after the siamang.
- ✓ The range of the hoolocks extends from northeast India to Myanmar. Small populations (in each case few hundred animals) live also in eastern Bangladesh and in southwest China. In northeast India, the hoolock is found south of Brahmaputra and east of the Dibang Rivers in all the seven states.
- ✓ *One species, western hoolock gibbon (Hoolock hoolock) is found in Assam, Bangladesh and in Myanmar west of the Chindwin River.*
- ✓ *White browed gibbon is the only anthropoid ape to be found in India, which is native of Assam.*



Chapter 3. Critically Endangered Fauna - Birds

Jerdon's Courser

The Jerdon's Courser (*Rhinoptilus bitorquatus*) is a nocturnal bird found only in the northern part Andhra Pradesh. It is a flagship species for the extremely threatened scrub jungle. The species was considered to be extinct until it was rediscovered in 1986 and the area of rediscovery was subsequently declared as the **Sri Lankamaleswara Wildlife Sanctuary**. **Jerdon's Courser is endemic to Andhra Pradesh**.



However, 19th century records do attribute its presence in the neighbouring areas of the state of Maharashtra.

Forest Owlet

The Forest Owlet (*Heteroglaux blewitti*) had been lost for more than a century. When not sighted for decades, posters were printed and Salim Ali, the premier ornithologist of India made a public appeal to look for the bird. After 113 long years, the owlet was rediscovered in 1997 and reappeared on the list of Indian birds.



Habitat: Dry deciduous forest. It is thinly distributed in South Madhya Pradesh, in north-west Maharashtra and north-central Maharashtra.

White-bellied Heron

The White-bellied Heron (*Ardea insignis*) is an extremely rare bird found in five or six sites in Assam and Arunachal Pradesh, one or two sites in Bhutan, and a few in Myanmar. It is inherently rare, and populations have never been known to be very high.



Himalayan Quail

The Himalayan Quail (*Ophrysia superciliosa*) is presumed to be extinct since no reliable records of sightings of this species exist after 1876. Intensive surveys are required as this species is hard to detect due to its reluctance to fly and its preference for dense grass habitats. Possible sighting of this species was reported in Nainital in 2003.

Sociable Lapwing

Sociable Lapwing (*Vanellus gregarius*) is a winter migrant to India. This species has suffered a sudden and rapid population decline due to which it has been listed as critically endangered. It is found in fallow fields and scrub desert and is native to Central Asia, South Asia some countries in Middle East. In India, distribution is restricted to the north and north-west of the country.

**Spoon Billed Sandpiper**

Spoon Billed Sandpiper (*Eurynorhynchus pygmeus*) requires highly specialized breeding habitat, a constraint that has always kept its population scarce. India is home to some of the last existing wintering grounds of this species (estimated at only 150-320 breeding pairs worldwide).

Siberian Crane

Siberian Crane (*Grus leucogeranus*) is a large, strikingly majestic migratory bird that breeds and winters in wetlands. They are known to winter at Keoladeo National Park, Rajasthan. However the last documented sighting of the bird was in 2002.