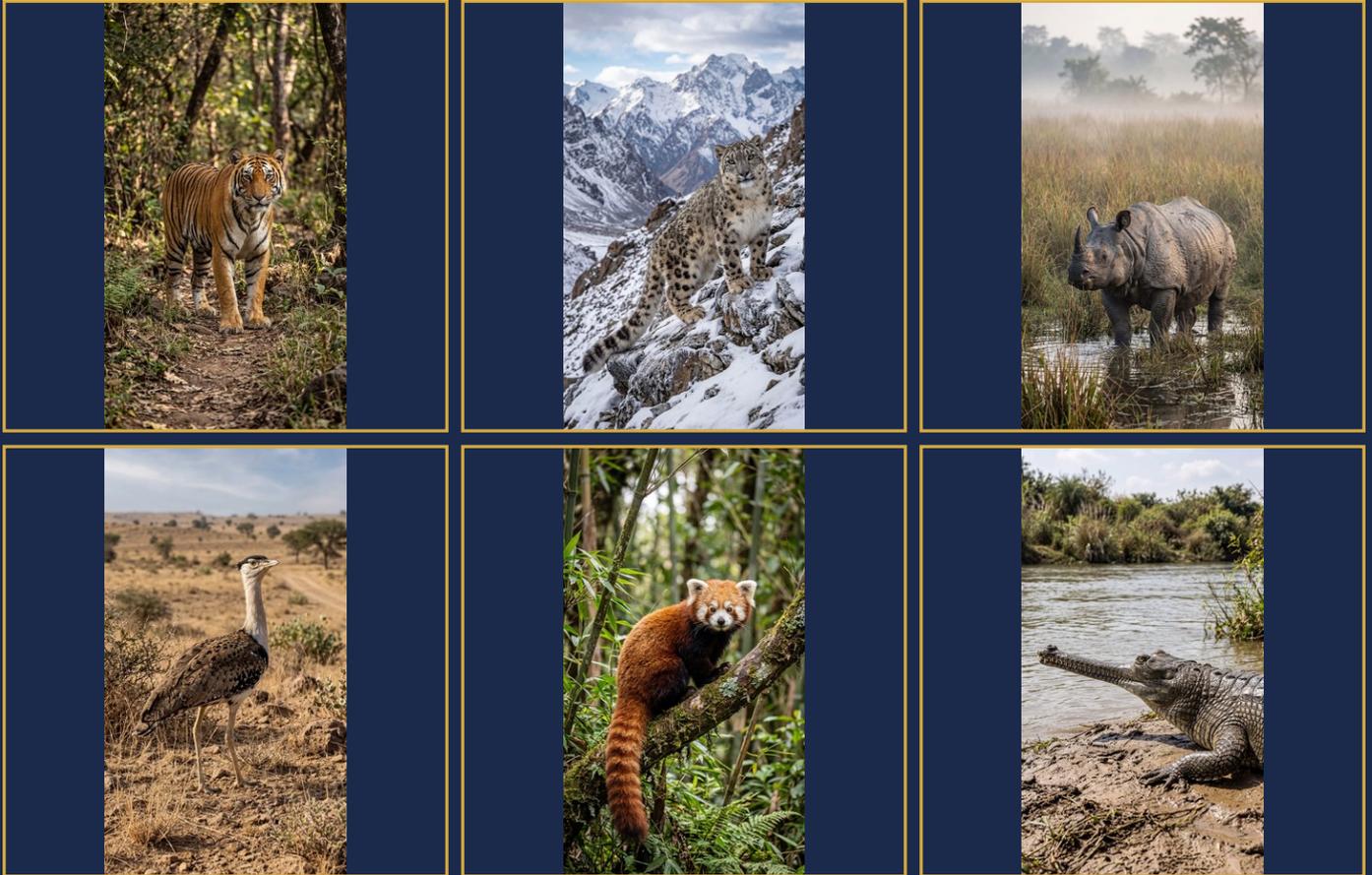




# Clarity UPSC

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## SPECIES IN NEWS 2026

A Comprehensive Visual Guide to Important Wildlife & Plant Species  
for UPSC Civil Services Examination 2026

16 Mammals	8 Birds	7 Reptiles	3 Marine	7 New Spp.	4 Invasive	3 Plants
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48 Species Covered

## How to Read This Guide

Each species entry includes its IUCN Red List conservation status, displayed as a color-coded badge. Here is what each color means:

<b>CR</b>	<b>Critically Endangered</b>	Facing extremely high risk of extinction in the wild
<b>EN</b>	<b>Endangered</b>	Facing very high risk of extinction in the wild
<b>VU</b>	<b>Vulnerable</b>	Facing high risk of extinction in the wild
<b>NT</b>	<b>Near Threatened</b>	Close to qualifying for a threatened category
<b>LC</b>	<b>Least Concern</b>	Lowest risk; does not qualify for a more at-risk category
<b>DD</b>	<b>Data Deficient</b>	Inadequate information to assess risk of extinction
<b>NE</b>	<b>Not Evaluated</b>	Has not yet been evaluated against IUCN criteria

Each species entry contains:

- Habitat — Preferred ecosystem and environment
- Distribution — Geographic range (with focus on India)
- Key Facts — Important facts for exam preparation
- Why in News — Recent developments making it exam-relevant
- Conservation — Protection measures, projects, and legal status

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# MAMMALS

16 species

## 1. Bengal Tiger

Endangered

*Panthera tigris tigris*

Schedule I (Wildlife Protection Act, 1972)



Bengal Tiger (*Panthera tigris tigris*) – Endangered

The Bengal Tiger is the most numerous tiger subspecies and India's national animal. It is an apex predator of tropical forests with distinctive orange coat and black stripes unique to each individual, much like human fingerprints.

**Habitat** Tropical and subtropical moist broadleaf forests, mangroves (Sundarbans), grasslands, and dry deciduous forests.

**Distribution** India (major populations in Madhya Pradesh, Karnataka, Uttarakhand, Maharashtra, Tamil Nadu, Assam), Bangladesh, Nepal, Bhutan, and Myanmar.

**Key Facts** India's national animal and the most numerous tiger subspecies. India holds about 75% of the world's wild tiger population. The 2022 tiger census recorded 3,682 tigers in India, up from 2,967 in 2018.

**In News:** Project Tiger completed 50 years in 2023. India's 5th cycle tiger census (2022) showed a record population. International Big Cat Alliance (IBCA) launched by India. Tiger corridors and human-tiger conflict remain key policy issues.

**Conservation:** Project Tiger (1973), National Tiger Conservation Authority (NTCA), 54 tiger reserves across India. CITES Appendix I.

## 2. Asiatic Lion

Endangered

*Panthera leo persica*

Schedule I



Asiatic Lion (*Panthera leo persica*) – Endangered

The Asiatic Lion is the only wild lion population outside Africa, distinguished from African lions by a smaller mane, a distinctive belly fold, and bifurcated infraorbital foramina in the skull – a key anatomical difference tested in exams.

**Habitat** Dry deciduous forests, scrublands, and savanna-type habitats.

**Distribution** Restricted to Gir National Park and surrounding areas in Gujarat, India. Historically ranged across Southwest Asia.

**Key Facts** The only wild population of Asiatic lions exists in India. The 2020 census recorded 674 lions, a 29% increase from 2015. Smaller and with a distinctive belly fold compared to African lions.

**In News:** Asiatic Lion Conservation Project launched. Translocation debate for establishing a second population in Kuno-Palpur, Madhya Pradesh. Disease outbreaks (Canine Distemper Virus) remain a concern for the single population.

**Conservation:** Asiatic Lion Conservation Project, Gir National Park (1965). Listed in CITES Appendix I.

### 3. African Cheetah

Vulnerable

*Acinonyx jubatus*

Schedule I



African Cheetah (*Acinonyx jubatus*) – Vulnerable

The African Cheetah is the fastest land animal (120 km/h) and cannot roar due to a fixed hyoid bone – it purrs instead. Not a true 'big cat' (genus *Panthera*), it belongs to genus *Acinonyx*. Unlike other cats, it has semi-retractable claws that act like sprinting spikes for traction.

**Habitat** Open grasslands, savannas, and semi-arid areas.

**Distribution** Reintroduced in Kuno National Park, Madhya Pradesh (India). Native to Africa and a small population in Iran (Asiatic Cheetah, Critically Endangered subspecies).

**Key Facts** The fastest land animal, reaching speeds of 112 km/h. Declared extinct in India in 1952. Project Cheetah reintroduced African cheetahs from Namibia (2022) and South Africa (2023) to Kuno National Park.

**In News:** Project Cheetah – India's ambitious intercontinental translocation project. Several cheetah deaths raised concerns about acclimatization. Cubs born in India marked a milestone. Gandhi Sagar Wildlife Sanctuary identified as a potential second site.

**Conservation:** Project Cheetah (2022), Kuno National Park. CITES Appendix I. Action Plan for Cheetah Reintroduction in India.

### 4. Indian Elephant

Endangered

*Elephas maximus indicus*

Schedule I



Indian Elephant (*Elephas maximus indicus*) – Endangered

The Indian Elephant is the largest land animal in Asia, smaller than its African cousin with smaller ears, a concave back, and a single finger-like lip on the trunk tip (African elephants have two). It is classified as a keystone and flagship species.

**Habitat** Tropical evergreen forests, semi-evergreen forests, moist deciduous forests, dry deciduous forests, and grasslands.

**Distribution** India (Karnataka, Kerala, Assam, Tamil Nadu, Uttarakhand, Odisha, West Bengal, Meghalaya, Arunachal Pradesh), Sri Lanka, mainland Southeast Asia.

**Key Facts** India's natural heritage animal. India hosts about 60% of all Asian elephants (~27,000-31,000). 32 Elephant Reserves identified across India. Human-elephant conflict is a major conservation challenge.

**In News:** Elephant (Amendment) Bill discussions. Rising human-elephant conflict incidents. Elephant corridors under threat from linear infrastructure projects. Supreme Court orders on elephant corridors.

**Conservation:** Project Elephant (1992), 32 Elephant Reserves, Elephant Task Force. CITES Appendix I.

## 5. Indian One-Horned Rhinoceros

Vulnerable

*Rhinoceros unicornis*

Schedule I



Indian One-Horned Rhinoceros (*Rhinoceros unicornis*) – Vulnerable

The Indian One-Horned Rhinoceros has a single horn made of keratin (not bone) and thick folded skin resembling armour plates. It is the largest of the three Asian rhino species and an excellent swimmer, often feeding on aquatic plants.

**Habitat** Alluvial floodplain grasslands, riverine forests, and swampy areas.

**Distribution** India (Assam – Kaziranga, Manas, Orang; West Bengal – Jaldapara, Gorumara; Uttar Pradesh – Dudhwa) and Nepal (Chitwan).

**Key Facts** The largest of the three Asian rhino species. Kaziranga National Park holds about 70% of the world population. Indian Rhino Vision 2020 aimed to increase population and distribution in Assam.

**In News:** Indian Rhino Vision 2020 outcomes reviewed. Poaching remains a threat despite declining trends. Translocation efforts to establish new populations. Kaziranga flood management and rhino conservation.

**Conservation:** Indian Rhino Vision 2020, Kaziranga NP (World Heritage Site). CITES Appendix I.

## 6. Snow Leopard

Vulnerable

*Panthera uncia*

Schedule I



Snow Leopard (*Panthera uncia*) – Vulnerable

The Snow Leopard, called the 'Ghost of the Mountains,' inhabits altitudes of 3,000–5,500 metres. Its tail, nearly as long as its body, provides balance on steep terrain and serves as a face warmer in extreme cold. It cannot roar, only chuff.

**Habitat** Alpine and subalpine zones, rocky mountain terrain, steep cliffs at altitudes of 3,000–5,500 metres.

**Distribution** India (Jammu & Kashmir, Ladakh, Himachal Pradesh, Uttarakhand, Sikkim, Arunachal Pradesh). Also in Central Asia – Mongolia, China, Nepal, Pakistan, Kyrgyzstan, and others.

**Key Facts** Known as the 'Ghost of the Mountains.' India's first national snow leopard population estimation (SPAI) in 2024 recorded 718 snow leopards. Hemis National Park in Ladakh has the highest density.

**In News:** First-ever Snow Leopard Population Assessment of India (SPAI) released in 2024. India hosts the 3rd largest snow leopard population globally. Climate change threatens high-altitude habitats.

**Conservation:** Project Snow Leopard (2009), SECURE Himalaya project, Global Snow Leopard and Ecosystem Protection Program (GSLEP). CITES Appendix I.

## 7. Red Panda

Endangered

*Ailurus fulgens*

Schedule I



Red Panda (*Ailurus fulgens*) – Endangered

The Red Panda is the sole living member of family Ailuridae, making it taxonomically unique – not a bear, not closely related to the Giant Panda. It has a modified wrist bone (a 'false thumb') for gripping bamboo, similar to but independently evolved from the Giant Panda.

**Habitat** Temperate broadleaf and mixed forests with dense bamboo understory at elevations of 2,200–4,800 metres.

**Distribution** India (Sikkim, Arunachal Pradesh, West Bengal – Darjeeling, Meghalaya), Nepal, Bhutan, Myanmar, and southwestern China.

**Key Facts** Not closely related to the Giant Panda despite the name. State animal of Sikkim. India has an estimated 5,000-6,000 red pandas. Two species now recognised: Himalayan Red Panda (*A. fulgens*) and Chinese Red Panda (*A. styani*).

**In News:** Habitat fragmentation due to infrastructure development in the eastern Himalayas. Red Panda conservation initiatives in Sikkim and Arunachal Pradesh. International Red Panda Day awareness.

**Conservation:** Padmaja Naidu Himalayan Zoological Park (captive breeding). Protected under CITES Appendix I.

## 8. Indian Pangolin

Endangered

*Manis crassicaudata*

Schedule I



Indian Pangolin (*Manis crassicaudata*) – Endangered

The Indian Pangolin is the world's only mammal fully covered in keratin scales, comprising about 20% of its body weight. It is toothless and uses a sticky tongue longer than its body to consume ants and termites – and is the most trafficked wild mammal globally.

**Habitat** Tropical and subtropical forests, grasslands, degraded habitats, and even agricultural areas. Prefers soft, sandy soils for burrowing.

**Distribution** Throughout the Indian subcontinent – India, Sri Lanka, Pakistan, Nepal, and Bangladesh.

**Key Facts** The world's most trafficked mammal. Covered in keratin scales. Nocturnal and solitary. India has two pangolin species: Indian Pangolin and Chinese Pangolin (found in northeast India).

**In News:** Pangolins remain the world's most trafficked mammals. Increased seizures of pangolin scales in India. IUCN uplisted from Vulnerable to Endangered. World Pangolin Day awareness campaigns.

**Conservation:** Zero poaching target under various state action plans. CITES Appendix I (complete ban on international trade since 2016).

## 9. Nilgiri Tahr

Endangered

*Nilgiritragus hylocrius*

Schedule I



Nilgiri Tahr (*Nilgiritragus hylocrius*) – Endangered

The Nilgiri Tahr is a stocky mountain ungulate endemic exclusively to the Western Ghats of South India – the only wild caprid south of the Himalayas. Adult males develop a distinctive silvery saddle on their backs, earning them the name 'Saddleback.'

**Habitat** Montane grasslands and rocky cliff faces in the Western Ghats at elevations above 1,200 metres.

**Distribution** Endemic to the Western Ghats – Tamil Nadu and Kerala (Eravikulam NP, Anamalai Hills, Nilgiri Hills, Palni Hills, Periyar, Silent Valley).

**Key Facts** State animal of Tamil Nadu. The only species in the genus *Nilgiritragus*. Estimated population of about 3,100 individuals. Eravikulam National Park holds the largest population.

**In News:** Nilgiri Tahr conservation project by the Tamil Nadu government. Habitat threats from invasive species (Scotch Broom, Wattle) in shola-grassland ecosystems. Climate change pushing habitat upward.

**Conservation:** Eravikulam NP, Project Nilgiri Tahr (Tamil Nadu). CITES Appendix I equivalent under WPA Schedule I.

## 10. Hangul (Kashmir Stag)

Critically Endangered

*Cervus hanglu hanglu*

Schedule I



Hangul (Kashmir Stag) (*Cervus hanglu hanglu*) – Critically Endangered

The Hangul or Kashmir Stag is India's only surviving species of red deer (*Cervus*), now restricted to Dachigam National Park in Jammu & Kashmir. With fewer than 250 individuals, it is among the most critically endangered cervids in the world.

**Habitat** Dense riverine forests and high valleys with mixed coniferous and deciduous vegetation in the Kashmir Himalayas.

**Distribution** Restricted to Dachigam National Park and surrounding areas in Jammu & Kashmir, India.

**Key Facts** State animal of Jammu & Kashmir. One of the most endangered deer species in the world. Population estimated at around 250-300 individuals, primarily in Dachigam NP.

**In News:** Conservation breeding programme initiated. Critically low population raises alarm. Habitat degradation due to encroachment and overgrazing in Dachigam NP buffer zones.

**Conservation:** Dachigam NP, Conservation Breeding Programme. Listed as Critically Endangered since 2017.

## 11. Pygmy Hog

Endangered

*Porcula salvania*

Schedule I



Pygmy Hog (*Porcula salvania*) – Endangered

The Pygmy Hog is the world's smallest and rarest wild pig, weighing just 6–9 kg and standing about 25 cm tall. Once thought extinct, it was rediscovered in 1971 in Assam's tall grasslands and is now the subject of a dedicated captive breeding programme.

**Habitat** Dense, tall grasslands (alluvial floodplains) – particularly Terai grasslands.

**Distribution** Extremely restricted. Wild populations in Manas National Park, Assam. Reintroduced populations in Sonai Rupai, Orang NP, and Barnadi WLS in Assam.

**Key Facts** World's smallest and rarest wild pig (about 25 cm tall). Indicator species for the health of tall grassland habitats. Pygmy Hog Conservation Programme (PHCP) has been reintroducing captive-bred hogs since 2008.

**In News:** Successful reintroduction programme in multiple sites in Assam. Grassland habitat conservation in the Terai-Duar savanna. Small population size makes it vulnerable to stochastic events.

**Conservation:** Pygmy Hog Conservation Programme (PHCP), Manas NP (World Heritage Site). CITES Appendix I.

## 12. Sloth Bear

Vulnerable

*Melursus ursinus*

Schedule I



Sloth Bear (*Melursus ursinus*) – Vulnerable

The Sloth Bear is the only bear species that carries young on its back and feeds primarily on insects using a specialised elongated lower lip and gap in the front teeth to create a vacuum for sucking up termites. It is endemic to the Indian subcontinent.

**Habitat** Dry and moist tropical forests, scrublands, and grasslands. Also found in rocky outcrops.

**Distribution** India (widespread – MP, Chhattisgarh, Maharashtra, Karnataka, Odisha, Jharkhand, Rajasthan, Gujarat, Andhra Pradesh), Sri Lanka, Nepal.

**Key Facts** Myrmecophagous (feeds mainly on termites and ants) with a specially adapted lower lip and palate. India has the largest population (~20,000). Known for aggressive behaviour and human-bear conflicts.

**In News:** Human-sloth bear conflict is a major concern in central India. Sloth bear rescue and rehabilitation centres. Linear infrastructure projects through bear habitats.

**Conservation:** Multiple wildlife sanctuaries and national parks. Agra Bear Rescue Facility (Wildlife SOS). CITES Appendix I.

### 13. Gangetic River Dolphin

Endangered

*Platanista gangetica*

Schedule I



Gangetic River Dolphin (*Platanista gangetica*) – Endangered

The Gangetic River Dolphin is India's national aquatic animal and one of only four freshwater dolphin species worldwide. It is functionally blind with vestigial eyes and navigates entirely by echolocation – swimming on its side while trailing a flipper along the riverbed.

**Habitat** Freshwater river systems – deep pools and eddies of large rivers, confluences of rivers.

**Distribution** Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems across India, Nepal, and Bangladesh. In India: Uttar Pradesh, Bihar, West Bengal, Assam, Jharkhand, Madhya Pradesh.

**Key Facts** India's National Aquatic Animal. Functionally blind – uses echolocation to navigate. Indicator species for river health. Population estimated at 3,500-4,000 in India.

**In News:** National Mission for Clean Ganga (Namami Gange) includes dolphin conservation. Dolphin population surveys in major rivers. Inland waterway development on the Ganga raises conservation concerns.

**Conservation:** Vikramshila Gangetic Dolphin Sanctuary (Bihar), Project Dolphin. CITES Appendix I.

### 14. Dugong

Vulnerable

*Dugong dugon*

Schedule I



Dugong (*Dugong dugon*) – Vulnerable

The Dugong is the only strictly herbivorous marine mammal, grazing on seagrass beds in shallow coastal waters. Often called the 'Sea Cow,' it belongs to the ancient order Sirenia and is believed to have inspired mermaid legends among early sailors.

**Habitat** Shallow coastal waters with seagrass meadows.

**Distribution** In India: Gulf of Mannar, Palk Bay, Gulf of Kutch, and Andaman & Nicobar Islands. Globally across the Indo-Pacific.

**Key Facts** The only strictly herbivorous marine mammal. Also called 'Sea Cow.' India's estimated dugong population is around 200-250 individuals, with the largest population in the Gulf of Mannar.

**In News:** Dugong Conservation Reserve declared in Palk Bay, Tamil Nadu – India's first dugong conservation reserve. Seagrass habitat degradation due to trawling. Marine protected area expansion.

**Conservation:** India's first Dugong Conservation Reserve (Palk Bay). Gulf of Mannar Marine NP. CITES Appendix I.

## 15. Indian Wolf

Least Concern

*Canis lupus pallipes*

Schedule I



Indian Wolf (*Canis lupus pallipes*) – Least Concern

The Indian Wolf is a distinct ecotype of the grey wolf, smaller and leaner than its Eurasian counterpart, adapted to India's arid scrublands and grasslands. Recent genetic studies suggest it may represent a separate species, making it one of the most evolutionarily distinct canids.

**Habitat** Open grasslands, scrublands, semi-arid regions, and agro-pastoral landscapes.

**Distribution** Peninsular India – Rajasthan, Gujarat, Madhya Pradesh, Maharashtra, Karnataka, Andhra Pradesh, Telangana, and parts of Uttar Pradesh.

**Key Facts** Genetically distinct from Himalayan and Tibetan wolves. Estimated population of 2,000-3,000 in India. Lives in open habitats unlike most wolf subspecies. Key predator in grassland ecosystems.

**In News:** Indian Wolf proposed as a separate species based on genetic studies. Grassland habitat conservation for wolf corridors. Human-wolf conflict (livestock predation) and retaliatory killings remain threats.

**Conservation:** Proposed 'Project Wolf' on the lines of Project Tiger. Velavadar Blackbuck NP (Gujarat) and other grassland protected areas.

## 16. Lion-tailed Macaque

Endangered

*Macaca silenus*

Schedule I



Lion-tailed Macaque (*Macaca silenus*) – Endangered

The Lion-tailed Macaque is one of the world's rarest primates, endemic to the Western Ghats rainforests. Named for its lion-like tail tuft and distinctive silver-white mane, it is an arboreal specialist that rarely descends to the ground and communicates through 17 distinct vocal calls.

**Habitat** Tropical wet evergreen forests (rainforests) of the Western Ghats.

**Distribution** Endemic to the Western Ghats of India – Karnataka, Kerala, and Tamil Nadu (Anamalai Hills, Nilgiri Hills, Sholayar, Silent Valley, Sirsi-Honnava).

**Key Facts** One of the most endangered primates globally. Distinguished by its silver-white mane. Estimated population of around 4,000. Highly arboreal, rarely descends to the ground.

**In News:** Fragmentation of rainforest habitats in the Western Ghats. Road-widening projects through lion-tailed macaque habitats. Western Ghats conservation and Kasturirangan Committee report implementation.

**Conservation:** Silent Valley NP, Anamalai Tiger Reserve. Western Ghats Biodiversity Hotspot conservation.

# BIRDS

8 species

## 17. Great Indian Bustard

Critically Endangered

*Ardeotis nigriceps*

Schedule I



Great Indian Bustard (*Ardeotis nigriceps*) – Critically Endangered

The Great Indian Bustard is one of the heaviest flying birds in the world, weighing up to 15 kg. Fewer than 150 individuals survive, making it critically endangered. Its long legs, large body, and reluctance to fly make it especially vulnerable to powerline collisions – the leading cause of mortality.

**Habitat** Arid and semi-arid grasslands, scrublands, and open dry plains.

**Distribution** Rajasthan (Desert NP – Jaisalmer, Barmer), Gujarat (Kutch), Maharashtra, Karnataka, and Andhra Pradesh. Historically widespread across India.

**Key Facts** One of the heaviest flying birds in the world. Population declined to around 150 individuals, with the majority in Rajasthan. Overhead power lines are the single biggest threat, causing collision deaths.

**In News:** Supreme Court ordered undergrounding of power lines in bustard habitats. Species Action Plan for Great Indian Bustard. Conservation breeding programme at Desert NP, Jaisalmer. GIB listed as species for CMS Energy Task Force.

**Conservation:** Species Recovery Programme, Conservation Breeding Centre (Jaisalmer). CMS Appendix I. Supreme Court direction to underground power lines.

## 18. Amur Falcon

Least Concern

*Falco amurensis*

Schedule II



Amur Falcon (*Falco amurensis*) – Least Concern

The Amur Falcon undertakes the longest over-water migration of any raptor – approximately 22,000 km annually from Siberia to Southern Africa, passing through Northeast India. Nagaland's Pangti village, once a mass-hunting site, has become a model conservation story.

**Habitat** Open woodlands, grasslands, and agricultural fields during migration. Breeds in Siberia and northern China.

**Distribution** Migratory – breeds in southeastern Siberia and northern China; winters in southern Africa. Passes through northeastern India (Nagaland, Manipur, Assam) during migration.

**Key Facts** Undertakes one of the longest overwater migrations of any raptor (~22,000 km round trip). Congregates in huge roosts in Nagaland's Doyang Reservoir during autumn migration – up to a million birds.

**In News:** Nagaland's conservation success story – from mass hunting to community-based protection. Amur Falcon Festival in Pangti village. Example of community conservation and ecotourism.

**Conservation:** Community-based conservation in Nagaland. CMS Appendix II.

## 19. Indian Vulture

Critically Endangered

*Gyps indicus*

Schedule I



Indian Vulture (*Gyps indicus*) – Critically Endangered

The Indian Vulture suffered a catastrophic 99% population decline since the 1990s due to diclofenac, a veterinary painkiller that causes renal failure in vultures feeding on treated cattle carcasses. This ecological crisis led to India banning veterinary diclofenac in 2006.

**Habitat** Open countryside, semi-arid zones, and near human habitations. Nests on cliffs and tall buildings.

**Distribution** Central and peninsular India. Previously widespread across the Indian subcontinent; populations have crashed by over 97% since the 1990s.

**Key Facts** Population crashed by over 99% due to Diclofenac poisoning (a veterinary NSAID toxic to vultures). From tens of millions to a few thousand. Vultures are nature's sanitation workers, preventing disease spread.

**In News:** Vulture Action Plan 2020-2025 implementation. Ban on veterinary diclofenac expanded to multi-dose vials. Vulture Safe Zones established. Jatayu Conservation Breeding Centres producing vultures for release.

**Conservation:** Vulture Action Plan, Jatayu Conservation Breeding Centres (Pinjore, Bhopal, Rani). Ban on veterinary diclofenac (2006). Vulture Safe Zones.

## 20. Black-necked Crane

Near Threatened

*Grus nigricollis*

Schedule I



Black-necked Crane (*Grus nigricollis*) – Near Threatened

The Black-necked Crane is the only alpine crane species, breeding above 3,000 metres on the Tibetan Plateau and wintering in India's high-altitude valleys. It holds deep cultural significance in Ladakh and Arunachal Pradesh, where local communities celebrate its annual arrival.

**Habitat** High-altitude wetlands, marshes, and lakeshores in Tibetan Plateau and adjacent areas. Winters in lower valleys.

**Distribution** Breeds in Tibetan Plateau (China), Ladakh (India). Winters in Arunachal Pradesh (Sangti and Zemithang valleys), Bhutan.

**Key Facts** The only alpine crane species – breeds above 3,000 metres. State bird of Jammu & Kashmir. Around 50-100 birds winter in Arunachal Pradesh. Sacred in Tibetan Buddhist culture.

**In News:** Habitat conservation in Ladakh's high-altitude wetlands (Hanle, Tso Kar). Wintering habitat protection in Arunachal Pradesh. Climate change impacts on high-altitude wetlands.

**Conservation:** Tso Kar Wetland Complex (Ramsar Site, Ladakh). Protected wintering grounds in Arunachal Pradesh. CMS Appendix I.

## 21. Nilgiri Wood Pigeon

Vulnerable

*Columba elphinstonii*

Schedule I



Nilgiri Wood Pigeon (*Columba elphinstonii*) – Vulnerable

The Nilgiri Wood Pigeon is a large, striking pigeon endemic to the Western Ghats shola forests, with a distinctive checkerboard pattern on its nape. It is an important seed disperser for native fruit trees and serves as an indicator species for the health of montane evergreen forests.

**Habitat** Moist tropical evergreen forests (shola forests) and adjacent dense woodland in the Western Ghats.

**Distribution** Endemic to the Western Ghats – from Maharashtra southward through Goa, Karnataka, Kerala, and Tamil Nadu.

**Key Facts** A large, handsome pigeon endemic to the Western Ghats Biodiversity Hotspot. Shy and elusive. Feeds on fruits, especially wild figs. Indicator species for the health of evergreen forests.

**In News:** Western Ghats Ecologically Sensitive Area (ESA) notification. Habitat loss from plantation expansion. Part of the Western Ghats endemic bird assemblage under threat.

**Conservation:** Protected in various Western Ghats sanctuaries and national parks. Kasturirangan Committee ESA recommendations.

## 22. Greater Flamingo

Least Concern

*Phoenicopterus roseus*

Schedule II



Greater Flamingo (*Phoenicopterus roseus*) – Least Concern

The Greater Flamingo is the largest flamingo species globally. Its pink coloration comes from carotenoid pigments in the algae and crustaceans it filter-feeds using a uniquely shaped inverted bill. The Rann of Kutch in Gujarat hosts one of the largest breeding colonies in the world.

**Habitat** Shallow alkaline or saline lakes, mudflats, tidal flats, coastal lagoons, and salt pans.

**Distribution** Widespread – Africa, southern Europe, Middle East, South Asia. In India: Gujarat (Kutch – Flamingo City, Nal Sarovar), Rajasthan (Sambhar Lake), Maharashtra (Thane Creek), Andhra Pradesh, Tamil Nadu.

**Key Facts** Largest flamingo species. Flamingo City in the Rann of Kutch is India's only known breeding site. Thousands of flamingos visit Mumbai's Thane Creek Flamingo Sanctuary during winter.

**In News:** Thane Creek Flamingo Sanctuary expansion and protection in Mumbai. Threats from infrastructure development near flamingo habitats. Sambhar Lake ecological deterioration affecting flamingo congregations.

**Conservation:** Thane Creek Flamingo Sanctuary (Maharashtra), Flamingo City (Gujarat). Nal Sarovar Bird Sanctuary.

## 23. Bengal Florican

Critically Endangered

*Houbaropsis bengalensis*

Schedule I



Bengal Florican (*Houbaropsis bengalensis*) – Critically Endangered

The Bengal Florican is a critically endangered grassland bustard with males performing spectacular aerial courtship displays – leaping vertically 1–2 metres and hovering briefly before descending. It requires vast undisturbed grasslands and is a key indicator of grassland ecosystem health.

**Habitat** Tall grasslands, particularly in floodplain grasslands and adjacent scrub.

**Distribution** India (Assam – Manas, Dibru-Saikhowa, Kaziranga; Uttar Pradesh – Dudhwa, Pilibhit) and Cambodia. Extinct from Nepal, Bangladesh.

**Key Facts** One of the world's rarest bustards. Indian population estimated at fewer than 350 individuals. Known for spectacular aerial courtship displays by males over grasslands. Grassland specialist.

**In News:** Critically low population, one of Asia's most endangered birds. Grassland habitat conversion to agriculture. Flood management altering grassland ecology in Assam.

**Conservation:** Manas NP (World Heritage Site), Kaziranga NP, Dibru-Saikhowa NP. Grassland conservation programmes.

## 24. Kaiser-i-Hind Butterfly

Near Threatened

*Teinopalpus imperialis*

Schedule II



Kaiser-i-Hind Butterfly (*Teinopalpus imperialis*) – Near Threatened

The Kaiser-i-Hind ('Emperor of India') is one of the world's most prized swallowtail butterflies, found in the Eastern Himalayas at 1,800–3,000 metres. It is protected under Schedule II of the Wildlife Protection Act and listed in CITES Appendix II due to illegal collection for trade.

**Habitat** Evergreen broadleaf forests at elevations of 1,800–3,000 metres.

**Distribution** Eastern Himalayas – Arunachal Pradesh, Meghalaya, Manipur, Nagaland, Sikkim, and West Bengal (Darjeeling). Also in Nepal, Bhutan, Myanmar, Laos, Vietnam, and southern China.

**Key Facts** Name means 'Emperor of India.' One of the most sought-after butterflies by collectors. Large and strikingly beautiful with iridescent green wings. State butterfly of Arunachal Pradesh.

**In News:** Illegal butterfly trade and collection remain concerns. Arunachal Pradesh declared it as the state butterfly. Biodiversity hotspot conservation in the Eastern Himalayas.

**Conservation:** CITES Appendix II. Protected under Wildlife Protection Act. Namdapha NP, Eaglenest WLS.

# REPTILES & AMPHIBIANS

7 species

## 25. Gharial

Critically Endangered

*Gavialis gangeticus*

Schedule I



Gharial (*Gavialis gangeticus*) – Critically Endangered

The Gharial is the most aquatic of all crocodilians, with a long, narrow snout evolved for catching fish. Males develop a distinctive bulbous nasal growth called a 'ghara' (after the Hindi word for pot), which amplifies calls and produces bubbles during courtship.

**Habitat** Deep, fast-flowing rivers with sandy banks for nesting. Prefers clean river systems.

**Distribution** India (Chambal River – primary population; also Son, Girwa/Rapti, Gandak, Mahanadi rivers). Small populations in Nepal.

**Key Facts** Distinctive long, narrow snout. Males develop a bulbous growth (ghara) on the snout. Population reduced to about 650-700 mature adults. National Chambal Sanctuary holds the largest breeding population.

**In News:** National Chambal Sanctuary conservation success. River pollution and sand mining threaten gharial habitats. Restocking programmes in the Ganges basin. Gavial indicator of river ecosystem health.

**Conservation:** National Chambal Sanctuary, Gharial breeding centres (Lucknow, Kukrail). CITES Appendix I.

## 26. Saltwater Crocodile

Least Concern

*Crocodylus porosus*

Schedule I



Saltwater Crocodile (*Crocodylus porosus*) – Least Concern

The Saltwater Crocodile is the world's largest living reptile, exceeding 6 metres, with the strongest bite force measured in any animal. It has specialised salt-excreting glands enabling ocean dispersal, and Bhitarkanika National Park in Odisha hosts one of the largest populations.

**Habitat** Coastal brackish water, estuaries, mangrove swamps, and river deltas. Also enters freshwater rivers.

**Distribution** In India: Sundarbans (West Bengal), Bhitarkanika (Odisha), Andaman & Nicobar Islands. Globally across Southeast Asia to Australia.

**Key Facts** Largest living reptile – males can exceed 6 metres and 1,000 kg. Bhitarkanika NP in Odisha has the highest density in India. A 23-foot crocodile in Bhitarkanika is recorded in the Guinness Book.

**In News:** Bhitarkanika crocodile census results. Human-crocodile conflict in Andaman & Nicobar Islands. Mangrove habitat conservation linked to saltwater crocodile protection.

**Conservation:** Bhitarkanika NP (Odisha), Sundarbans Biosphere Reserve. CITES Appendix I (India), Appendix II (Australia, Papua New Guinea).

## 27. Olive Ridley Sea Turtle

Vulnerable

*Lepidochelys olivacea*

Schedule I



Olive Ridley Sea Turtle (*Lepidochelys olivacea*) – Vulnerable

The Olive Ridley is the smallest sea turtle species and famous for 'arribada' – mass synchronised nesting where tens of thousands of females come ashore simultaneously. Gahirmatha beach in Odisha hosts the world's largest rookery, and arribada timing is linked to lunar cycles and wind patterns.

**Habitat** Tropical and subtropical oceans. Nests on sandy beaches.

**Distribution** Globally in warm oceans. In India: Odisha coast (Gahirmatha, Rushikulya, Devi River mouth) for mass nesting (arribada). Also along Tamil Nadu, Andhra Pradesh, and Maharashtra coasts.

**Key Facts** Famous for 'arribada' – synchronised mass nesting where hundreds of thousands of turtles nest on the same beach simultaneously. Gahirmatha (Odisha) is the world's largest rookery. India's east coast is critical for this species.

**In News:** Fishing trawler impact on turtle mortality – Turtle Excluder Devices (TEDs) mandatory. Record arribada events in Odisha. Coastal development and port expansion near nesting sites.

**Conservation:** Gahirmatha Marine Sanctuary, Operation Olivia (Indian Coast Guard). TEDs mandated for trawlers. CITES Appendix I.

## 28. King Cobra

Vulnerable

*Ophiophagus hannah*

Schedule II



King Cobra (*Ophiophagus hannah*) – Vulnerable

The King Cobra is the world's longest venomous snake, reaching over 5.5 metres. Uniquely among snakes, it builds a nest for its eggs and guards them until hatching. Its genus name *Ophiophagus* means 'snake-eater' – it feeds almost exclusively on other snakes.

**Habitat** Dense tropical and subtropical forests, bamboo thickets, adjacent agricultural areas, and mangroves.

**Distribution** India (Western Ghats, northeastern India, Andaman Islands), Southeast Asia, southern China.

**Key Facts** World's longest venomous snake – can reach 5.5 metres. The only snake that builds a nest for its eggs. Primarily feeds on other snakes (ophiophagous). Agumbe Rainforest Research Station in Karnataka is a key study centre.

**In News:** King cobra habitat fragmentation due to deforestation. Agumbe Rainforest Research Station conservation research. Human-snake conflict and rescue operations. Climate change impacts on distribution.

**Conservation:** Protected under WPA Schedule II. Agumbe Rainforest Research Station (Karnataka). Multiple protected areas across range.

## 29. Red-crowned Roofed Turtle

Critically Endangered

*Batagur kachuga*

Schedule I



Red-crowned Roofed Turtle (*Batagur kachuga*) – Critically Endangered

The Red-crowned Roofed Turtle is one of India's most endangered freshwater turtles, with males developing a vivid red crown and blue facial markings during breeding season – a dramatic sexual dichromatism rare among turtles. It is restricted to the Ganga river system.

**Habitat** Deep, flowing rivers with sandy or clay banks. Prefers clean, deep-water stretches.

**Distribution** Ganges River system – India (Uttar Pradesh, Bihar, West Bengal) and Bangladesh. National Chambal Sanctuary is a key site.

**Key Facts** Males develop a spectacular red crown during breeding season. One of the most endangered freshwater turtles in the world. Flagship species for river conservation in the Ganges basin.

**In News:** Chambal River conservation efforts. Turtle breeding and release programmes. River pollution and sand mining threatening nesting sites. Freshwater turtle conservation gaining attention.

**Conservation:** National Chambal Sanctuary, Turtle Survival Alliance India. CITES Appendix I.

## 30. Purple Frog

Endangered

*Nasikabatrachus sahyadrensis*

Schedule II



Purple Frog (*Nasikabatrachus sahyadrensis*) – Endangered

The Purple Frog, discovered in 2003, is a 'living fossil' whose lineage diverged about 100 million years ago when India was still part of Gondwana. It spends most of its life underground, surfacing only for two weeks during monsoons to breed – making it one of the most elusive amphibians.

**Habitat** Underground burrows in forests of the Western Ghats. Surfaces only during monsoon for breeding.

**Distribution** Endemic to the Western Ghats of Kerala and Tamil Nadu, India.

**Key Facts** A 'living fossil' – its closest relative is in the Seychelles, separated ~100 million years ago by continental drift. Discovered only in 2003. Spends most of its life underground. Bloated purple body and pig-like snout.

**In News:** Symbol of Western Ghats' ancient biodiversity. Habitat threats from rubber and cardamom plantations. Featured in awareness campaigns for Western Ghats conservation and ESA notification.

**Conservation:** Protected in various Western Ghats reserves. Highlighted in Kasturirangan Committee report for Western Ghats ESA.

## 31. Chel Snakehead

Least Concern

*Channa marulius*

Not Scheduled



Chel Snakehead (*Channa marulius*) – Least Concern

The Giant Snakehead is a large predatory freshwater fish with a specialised suprabranchial organ that allows it to breathe atmospheric air, enabling survival in oxygen-poor waters and even short overland migrations between water bodies.

**Habitat** Freshwater rivers, lakes, ponds, canals, and reservoirs. Prefers still or slow-moving waters with vegetation.

**Distribution** Widespread across the Indian subcontinent – India, Pakistan, Sri Lanka, Bangladesh, Nepal, Myanmar, and Thailand.

**Key Facts** Also known as the Great Snakehead or Bullseye Snakehead. One of the largest snakehead species, reaching up to 120 cm. Air-breathing fish that can survive in poorly oxygenated water. Important food fish.

**In News:** Invasive in the United States and other regions outside its native range. Genetic studies revealed multiple cryptic species within what was considered *C. marulius*. Freshwater fish conservation and biodiversity.

**Conservation:** Not specifically protected; managed as a food fishery. Of concern as an invasive species outside South Asia.

# MARINE

3 species

## 32. Whale Shark

Endangered

*Rhincodon typus*

Schedule I



Whale Shark (*Rhincodon typus*) – Endangered

The Whale Shark is the world's largest fish, reaching over 18 metres, yet feeds exclusively on plankton through filter-feeding. Each individual has a unique pattern of spots like a fingerprint. Despite its massive size, it is docile and poses no threat to humans.

**Habitat** Tropical and warm temperate oceans, coastal and open ocean waters. Filter feeder found near the surface.

**Distribution** Global – tropical and warm temperate oceans. In India: Gujarat coast (Saurashtra), Kerala, Lakshadweep, Andaman & Nicobar Islands.

**Key Facts** The largest living fish species – can reach 18 metres in length. A gentle filter feeder consuming plankton. Locally called 'Vhali' (dear one) in Gujarat. Whale shark migration along Gujarat coast is well documented.

**In News:** Gujarat's whale shark conservation programme – partnership with Wildlife Trust of India and fisherfolk. Tagged whale sharks tracked for migration patterns. Marine biodiversity conservation.

**Conservation:** Gujarat whale shark conservation programme, 'Whale Shark' campaign with fishing communities. CITES Appendix II. CMS Appendix I.

## 33. Ganges Shark

Critically Endangered

*Glyphis gangeticus*

Schedule I



Ganges Shark (*Glyphis gangeticus*) – Critically Endangered

The Ganges Shark is one of the world's rarest sharks, a true freshwater species (unlike the Bull Shark which merely tolerates freshwater). With tiny eyes adapted for murky river conditions and fewer than 100 known specimens, it remains one of the least understood elasmobranchs.

**Habitat** Freshwater and brackish waters of large river systems, estuaries.

**Distribution** Historically in the Ganges-Hooghly river system, India. Possibly also in the Brahmaputra and Mahanadi. Extremely rare with very few confirmed records.

**Key Facts** One of the rarest sharks in the world – known from fewer than 80 specimens. A true freshwater shark. Often confused with the Bull Shark. Virtually nothing is known about its ecology and population size.

**In News:** Ganges River pollution and overfishing threaten this critically endangered species. Largely overlooked in conservation compared to terrestrial species. River biodiversity surveys attempting to confirm its presence.

**Conservation:** Listed in CITES Appendix II. Virtually no targeted conservation programmes exist. Benefit from broader Ganges River conservation efforts.

## 34. Golden Mahseer

Endangered

*Tor putitora*

Schedule II



Golden Mahseer (*Tor putitora*) – Endangered

The Golden Mahseer, called the 'Tiger of Indian Rivers,' is a large freshwater fish prized by anglers and sacred in some Hindu traditions. It requires cold, fast-flowing, well-oxygenated rivers to survive, making it a sensitive indicator of riverine ecosystem health.

**Habitat** Fast-flowing, clear rivers and streams of the Himalayan foothills. Prefers deep pools with rocky substrates.

**Distribution** Himalayan rivers – India (Uttarakhand, Himachal Pradesh, J&K;), Nepal, Pakistan, Afghanistan, Bangladesh, Myanmar.

**Key Facts** Called the 'Tiger of Rivers' due to its strength and fighting spirit. Can grow up to 2.75 metres and weigh over 50 kg. State fish of multiple Himalayan states. A prized game fish and important cultural species.

**In News:** Dam construction fragmenting mahseer habitats. Conservation hatcheries for restocking rivers. Mahseer conservation linked to river ecosystem health. Pancheshwar Dam project controversy.

**Conservation:** Mahseer Conservation Project (Tata Group, Lonavala). Listed in Schedule II of WPA. Various state-level fishing regulations.

## NEW SPECIES

7 species

### 35. Siruvani Shieldtail Snake

Not Evaluated

*Rhinophis siruvaniensis*

Schedule II



Siruvani Shieldtail Snake (*Rhinophis siruvaniensis*) – Not Evaluated

*Rhinophis siruvaniensis* is a shieldtail snake (family Uropeltidae) described in 2025 from the Siruvani Hills. Non-venomous and fossorial (burrowing), it was first collected by a tourist guide on a coffee farm in Palakkad, Kerala, demonstrating how citizen science contributes to biodiversity discovery.

**Habitat** Wet evergreen forests at 800–1,100 m elevation, also found in spice plantations and villages.

**Distribution** Siruvani Hills, Palakkad district (Kerala) and adjoining Tamil Nadu, Western Ghats.

**Key Facts** Described in 2025 from specimens first collected by a tourist guide at Jellipara village. A burrowing, non-venomous shieldtail snake (family Uropeltidae). Brownish-black with bold dark blotches and creamy white underside. Identified through morphology and DNA analysis.

**In News:** Published in *Evolutionary Systematics* (October 2025) by researchers from IISc and others. Highlights citizen science contributions to taxonomy. Continuing discovery of new species in the Western Ghats Biodiversity Hotspot.

**Conservation:** Protected within Western Ghats forest reserves. Highlights need for Ecologically Sensitive Area notification enforcement.

### 36. Irwin's Wolf Snake

Not Evaluated

*Lycodon irwini*

Schedule II



Irwin's Wolf Snake (*Lycodon irwini*) – Not Evaluated

Irwin's Wolf Snake is a uniformly glossy black colubrid described in 2025 from Great Nicobar Island, named after Steve Irwin. Unlike its banded relatives, it lacks white markings. Previously misidentified for over a decade, its extremely restricted island range makes it a conservation priority.

**Habitat** Moist evergreen forests on a remote tropical island.

**Distribution** Great Nicobar Island, Nicobar Archipelago, India. Appears restricted to this single island.

**Key Facts** A uniformly glossy black wolf snake up to 1.2 m long – unlike banded relatives. Non-venomous, nocturnal predator of small vertebrates. Named after Steve Irwin, the Australian wildlife conservationist. Previously misidentified as part of the *Lycodon subcinctus* group.

**In News:** Described in 2025 after years of taxonomic uncertainty. Highlights the unique biodiversity of the Nicobar Islands. Very restricted range raises conservation concerns. Great Nicobar development projects debated.

**Conservation:** Authors recommend Endangered status under IUCN criteria due to extremely restricted range. Protected under WPA.

### 37. Indian Fishing Spider

Not Evaluated

*Dolomedes indicus*

Not Scheduled



Indian Fishing Spider (*Dolomedes indicus*) – Not Evaluated

*Dolomedes indicus*, described in 2025 from Wayanad, Kerala, is India's first recorded fishing spider (family Dolomedidae). This semi-aquatic predator rests its legs on the water surface to detect vibrations from prey, and thrives only in pristine, unpolluted streams – making it a potential bioindicator species.

**Habitat** Pristine, cool freshwater streams under forest canopy in tropical evergreen forests.

**Distribution** Wayanad district, Kerala, Western Ghats. First record of family Dolomedidae in India.

**Key Facts** India's first recorded raft/fishing spider (family Dolomedidae). Semi-aquatic predator that rests legs on water surface to detect vibrations from prey. Can catch small fish and aquatic insects. Potential indicator species for freshwater ecosystem health – found only in unpolluted waters.

**In News:** Published in Scientific Reports (2025). First record of the entire spider family Dolomedidae from India. Highlights India's vastly understudied invertebrate biodiversity.

**Conservation:** No specific conservation measures. Benefits from freshwater habitat and forest protection in the Western Ghats.

### 38. Bush Frogs

Various

*Raorchestes* spp. (multiple new species)

Schedule II



Bush Frogs (*Raorchestes* spp. (multiple new species)) – Various

Bush Frogs of genus *Raorchestes* are tiny, direct-developing frogs (skipping the tadpole stage) endemic to the Western Ghats. Multiple new species are described annually, demonstrating that India's amphibian diversity remains significantly underestimated.

**Habitat** Tropical montane forests, shola-grassland mosaics in the Western Ghats.

**Distribution** Endemic to the Western Ghats, India. Many species restricted to single mountain peaks or valleys.

**Key Facts** *Raorchestes* is a large genus of bush frogs endemic to the Western Ghats. Multiple new species described in recent years. Many have tiny ranges and are already threatened. Direct development – eggs hatch into froglets, skipping tadpole stage.

**In News:** Ongoing discovery of new bush frog species in the Western Ghats – at least 10+ new species described since 2020. Climate change and habitat fragmentation threatening mountaintop endemics.

**Conservation:** Western Ghats Biodiversity Hotspot conservation. Many species in protected areas but several occur outside reserves.

### 39. Shillong Cascade Frog

Not Evaluated

*Amolops shillong*

Schedule II



Shillong Cascade Frog (*Amolops shillong*) – Not Evaluated

*Amolops shillong*, the Shillong Cascade Frog, was described in 2025 by ZSI scientists from urban forest patches in Shillong city. It clings to wet rocks in fast-flowing cascades and is sister to *Amolops siju* from Siju Cave. Remarkably, it was hiding in plain sight within a bustling city – the ninth *Amolops* discovered in NE India in two decades.

**Habitat** Rocky cascading streams in urban and suburban forest patches at about 1,430 m elevation.

**Distribution** Mawlai area, Shillong, East Khasi Hills District, Meghalaya, India.

**Key Facts** Described in 2025 by ZSI scientists (published in Records of the Zoological Survey of India). Found in urban forest patches of Shillong. Belongs to the *Amolops indoburmanensis* species complex. Sister species to *Amolops siju*. Harvested locally for consumption at some localities.

**In News:** Ninth *Amolops* species discovered in Northeast India in two decades. Found right within Shillong city, highlighting hidden urban biodiversity. Confirms Northeast India as a global amphibian diversity hotspot.

**Conservation:** Benefits from forest protection in Meghalaya. No specific conservation programme yet.

### 40. Colossal Bracket Fungus

Not Evaluated

*Bridgeoporus kanadii*

Not Applicable



Colossal Bracket Fungus (*Bridgeoporus kanadii*) – Not Evaluated

*Bridgeoporus kanadii*, described in 2025 from West Kameng, Arunachal Pradesh, is a colossal bracket fungus growing on old-growth fir trees (*Abies*). Its fruiting bodies exceed 3 metres in radius and can bear a person's weight. It is only the second species in genus *Bridgeoporus*, the first (*B. nobilissimus*) being critically endangered in North America.

**Habitat** Old-growth and dead fir trees (*Abies* spp.) in temperate coniferous forests.

**Distribution** West Kameng district, Arunachal Pradesh, India.

**Key Facts** Second species known in genus *Bridgeoporus* (the first, *B. nobilissimus*, is critically endangered in North America). Fruiting bodies exceed 3 metres in radius and can bear a person's weight. At least 40 fruiting bodies found in clusters. Named after mycologist Kanad Das. Published in Current Science (2025) by Botanical Survey of India researchers.

**In News:** Highlights India's vastly underdocumented fungal biodiversity. Fungi are crucial for forest health – wood-rotting fungi play an indispensable role in carbon and nutrient cycling. Need for mycological surveys emphasised.

**Conservation:** No specific conservation measures. Protected indirectly through forest conservation in Arunachal Pradesh.

## 41. Brahmaputra Day

### Gecko

Not Evaluated

*Cnemaspis brahmaputra*

Schedule II



*Brahmaputra Day Gecko (Cnemaspis brahmaputra) – Not Evaluated*

*Cnemaspis brahmaputra*, described in July 2025, is a small diurnal gecko found near Dirgheswari Temple on the northern bank of the Brahmaputra in Assam. Only the second *Cnemaspis* species in Northeast India, it occurs on the opposite bank from its relative *C. assamensis*, with significant genetic divergence between them.

**Habitat** Rocky outcrops and tree trunks in subtropical forests along the Brahmaputra valley.

**Distribution** Northern bank of Brahmaputra River, near Dirgheswari Temple, Guwahati, Assam.

**Key Facts** Described in July 2025 in Taprobanica. Small diurnal gecko (SVL 30–36 mm) of the *Cnemaspis podihuna* clade. Only the second *Cnemaspis* species in Northeast India (after *C. assamensis*, 2000). The two species occur on opposite banks of the Brahmaputra with significant genetic divergence.

**In News:** Part of the ongoing taxonomic revolution in Indian reptile systematics. Multiple new gecko species described from India annually. Highlights the Brahmaputra valley as a zone of speciation.

**Conservation:** Protected under WPA Schedule II. Benefits from forest conservation in the Brahmaputra valley.

# INVASIVE

4 species

## 42. Lantana camara

Not Applicable

*Lantana camara*

Not Applicable



*Lantana camara (Lantana camara) – Not Applicable*

*Lantana camara* is a Central and South American shrub introduced as an ornamental that has become one of the world's worst invasive species. It produces allelopathic chemicals that suppress native plants, forms impenetrable thickets, and is toxic to livestock – yet its berries are spread by birds.

**Habitat** Invasive in tropical and subtropical regions – forests, grasslands, wastelands, roadsides, and degraded areas.

**Distribution** Native to Central and South America. Invasive across India – virtually all states. Major problem in protected areas like tiger reserves and national parks.

**Key Facts** One of the world's top 10 worst invasive species. Introduced to India as an ornamental plant by the British. Toxic to livestock. Rapidly colonises disturbed habitats and outcompetes native vegetation. Covers about 13 million hectares in India.

**In News:** Lantana eradication programmes in tiger reserves (Mudumalai, BRT, Bandipur). Studies on lantana removal improving grassland habitat for herbivores. Innovative uses – lantana furniture-making by tribal communities.

**Conservation:** Active removal programmes in multiple national parks and tiger reserves. Research on biological control agents.

## 43. Water Hyacinth

Not Applicable

*Pontederia crassipes*

Not Applicable



*Water Hyacinth (Pontederia crassipes) – Not Applicable*

Water Hyacinth, native to the Amazon basin, is considered the world's worst aquatic invasive weed. It doubles its biomass every two weeks, forming dense floating mats that block sunlight, deplete oxygen, clog waterways, and destroy fisheries – yet it was introduced to India as an ornamental for its purple flowers.

**Habitat** Freshwater lakes, rivers, ponds, canals, and wetlands. Thrives in nutrient-rich (eutrophic) water bodies.

**Distribution** Native to the Amazon Basin, South America. Invasive globally. In India: widespread in water bodies across most states, particularly problematic in Kerala, West Bengal, Assam, Bihar.

**Key Facts** Called 'Terror of Bengal' for choking waterways. One of the fastest-growing plants in the world – can double its population in 12 days. Causes oxygen depletion in water, killing fish. Blocks waterways and affects fisheries.

**In News:** Ongoing challenge in wetland conservation. Impacts on Ramsar wetland sites. Innovative uses being explored – biofuel, compost, handicrafts. Biocontrol using weevils (*Neochetina*) being studied.

**Conservation:** Mechanical removal, biological control (weevils), and utilisation programmes. Listed among 100 worst invasive species globally.

## 44. Prosopis juliflora

Not Applicable

*Prosopis juliflora*

Not Applicable



*Prosopis juliflora (Prosopis juliflora) – Not Applicable*

*Prosopis juliflora*, native to Central and South America, was introduced in India for afforestation of arid lands but has become highly invasive across Rajasthan, Gujarat, and other dry regions. Its deep taproot reaches the water table, outcompeting native vegetation, while its pods are consumed and dispersed by livestock.

**Habitat** Arid and semi-arid lands, wastelands, riverbanks, and grasslands. Extremely drought-tolerant.

**Distribution** Native to Central America and South America. Invasive across arid India – Rajasthan, Gujarat, Tamil Nadu, Andhra Pradesh, Karnataka, Maharashtra, Telangana.

**Key Facts** Locally called 'Vilayati Babool' or 'Juliflora.' Introduced for afforestation in arid zones in the 1870s. Depletes groundwater and displaces native vegetation. Thorny branches injure livestock and wildlife.

**In News:** Invasive in Great Indian Bustard habitats (Desert NP). Threatens native grassland ecosystems critical for endangered species. States debating removal vs. utilisation (charcoal, fuel). Impacts on pastoral communities.

**Conservation:** Removal programmes in wildlife habitats. Debate over large-scale eradication vs. managed utilisation.

## 45. African Catfish

Least Concern

*Clarias gariepinus*

Banned for culture in India



*African Catfish (Clarias gariepinus) – Least Concern*

The African Catfish was introduced to India for aquaculture due to its rapid growth but has escaped into natural water bodies across the country. This air-breathing predator can survive out of water for hours and migrate overland, devastating native freshwater fish populations.

**Habitat** Freshwater lakes, rivers, floodplains, and man-made water bodies. Extremely hardy – tolerates low oxygen, drought, and pollution.

**Distribution** Native to Africa. Invasive in India – particularly in West Bengal, Bihar, Odisha, Andhra Pradesh, and northeastern states. Banned for aquaculture but widely cultured illegally.

**Key Facts** Air-breathing catfish that can survive out of water for hours. Voracious predator that decimates native fish populations. Grows fast and large (up to 1.7 metres). Banned for culture by the National Green Tribunal.

**In News:** NGT ban enforcement challenges – continued illegal farming. Devastating impact on native freshwater biodiversity. National Biodiversity Authority concerns about invasive species in Indian waterways.

**Conservation:** Banned by NGT for aquaculture in India. Listed among invasive species of concern. Eradication from water bodies attempted in several states.

# PLANTS

3 species

## 46. Pitcher Plant

Endangered

*Nepenthes khasiana*

Schedule III (Plants, post-2022 WPA)



Pitcher Plant (*Nepenthes khasiana*) – Endangered

*Nepenthes khasiana* is India's only native pitcher plant species, endemic to the Khasi Hills of Meghalaya. It is a carnivorous plant that traps insects in modified pitcher-shaped leaves filled with digestive enzymes – an adaptation to nutrient-poor soils. It is the state plant of Meghalaya.

**Habitat** Subtropical and tropical moist forests, growing on nutrient-poor, acidic soils in misty hill slopes.

**Distribution** Endemic to Meghalaya, India (Khasi Hills, Jaintia Hills). The only *Nepenthes* species native to India.

**Key Facts** India's only pitcher plant species. Carnivorous – traps insects in pitcher-shaped modified leaves filled with digestive fluid. Grows in nutrient-poor soils of Meghalaya's sacred groves. State plant of Meghalaya.

**In News:** Habitat loss due to mining and jhum (slash-and-burn) cultivation in Meghalaya. Sacred groves conserving pitcher plant populations. Only Indian representative of the *Nepenthaceae* family. CITES regulation of trade.

**Conservation:** Protected under WPA Schedule III (post-2022 amendment; formerly Schedule VI) and CITES Appendix II. Sacred groves in Meghalaya serve as refugia. Pitcher Plant Lake (Meghalaya) is a known habitat.

## 47. Blue Vanda Orchid

Not Evaluated

*Vanda coerulea*

Schedule III (Plants, post-2022 WPA)



Blue Vanda Orchid (*Vanda coerulea*) – Not Evaluated

The Blue Vanda is one of the few orchids producing true blue flowers through a rare anthocyanin pigment. Found in Northeast India, Myanmar, Thailand, and China, it is highly prized in horticulture. Originally in CITES Appendix I, it was downlisted to Appendix II in 2005 after its range proved wider than initially thought.

**Habitat** Epiphytic on large trees in subtropical and tropical moist forests at elevations of 800–1,700 metres.

**Distribution** Northeastern India (Meghalaya, Manipur, Mizoram, Nagaland, Arunachal Pradesh), Myanmar, Thailand, southwestern China (Yunnan). Not endemic to India.

**Key Facts** One of the most prized orchids in the world for its rare blue colour produced by anthocyanin pigments. Heavily collected for horticulture, leading to population declines. An epiphyte that grows on other trees without parasitising them. Was in CITES Appendix I but downlisted to Appendix II in 2005.

**In News:** Over-collection for trade remains a threat. Conservation efforts in northeastern India. India's rich orchid diversity (about 1,300 species) and conservation challenges. International trade regulated under CITES.

**Conservation:** Protected under WPA Schedule III (post-2022 amendment; formerly Schedule VI) and CITES Appendix II. Conservation in sacred forests. Ex-situ conservation in botanical gardens.

## 48. Sandalwood

Vulnerable

*Santalum album*

State regulations (not WPA)



*Sandalwood (Santalum album) – Vulnerable*

Sandalwood is a hemi-parasitic tree that attaches its roots to host trees to extract water and nutrients – one of the few commercially valuable parasitic plants. Its heartwood produces the world's most expensive wood oil, used since antiquity. India is the largest producer, with Karnataka contributing over 75% of production.

**Habitat** Dry deciduous forests, scrub forests. Semi-parasitic tree that attaches to roots of host plants.

**Distribution** Southern India – Karnataka, Tamil Nadu, Kerala, Andhra Pradesh. Also in parts of Maharashtra and Madhya Pradesh. Karnataka is the traditional stronghold.

**Key Facts** One of the most expensive woods in the world due to its aromatic heartwood oil. Semi-parasitic – derives some nutrients from host tree roots. Takes 15-20 years to develop commercially viable heartwood. State tree of Karnataka.

**In News:** Smuggling and illegal felling remain major concerns (historically associated with Veerappan's sandalwood smuggling). Karnataka's sandalwood policy and regulated harvesting. Sandalwood plantation promotion for legal supply. Spike disease threatening wild populations.

**Conservation:** Regulated harvesting under state forest laws (Karnataka Sandalwood Preservation Act). Plantation programmes to reduce pressure on wild populations.



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