

THEMATIC **#11**
**CURRENT
AFFAIRS**
for **IAS PRELIMS 2024**

**SPECIES
IN NEWS**

THEME # 2

- Mammals
- Plant Species
- Invasive Species
- Reptiles/ Amphibians
- Marine Species
- Bird Species
- Insect
- Turtle
- Miscellaneous





TARGET PT 2024

COMPLETE REVISION *of* PRELIMS
through 6000+ MCQs & 90+ CLASSES



CLASS & TEST

- 60 Concept cum Revision Classes with Daily Tests
- 10+ CSAT Classes & Tests
- 20+ Current Affairs Classes & Tests covering 800+ Topics

PRELIMS TEST SERIES

- 6 Revision Tests
- 6 Sectional Tests
- 20 Mock Tests (GS +CSAT)



STUDY MATERIAL

- Quick Revision Notes
- Prelims Current Affairs Compilation
- Prelims Fact File

SPECIAL CLASSES

- Special Sessions on Economic Survey & Budget and India Year Book
- Regular Doubt-clearing Sessions & Mentorship



BATCH
STARTS

26 OCTOBER

TEST TIMINGS: 09:00 AM to 10:00 AM
CLASS TIMINGS: 10:00 AM to 01:00 PM



COURSE FEE ₹ 14,000 (+GST)



8448496262 www.iasscore.in

Content

1. MAMMALS01-12

- ◆ Clouded leopard01
- ◆ Snow Leopard02
- ◆ Tasmanian Tiger02
- ◆ Asiatic wild dog-tiger coexistence03
- ◆ Iberian Wolf (Canis lupus signatus)04
- ◆ Sloth Bear04
- ◆ Eastern Swamp Deer05
- ◆ Golden Langurs06
- ◆ Koala06
- ◆ Grey Slender Loris07
- ◆ Indian Gaur07
- ◆ White-Cheeked Macaque (Macaca leucogenys)08
- ◆ India's striped hyenas09
- ◆ Caracal10
- ◆ Spotted Deer10
- ◆ Kashmir stag (Cervus Hanglu Hanglu)11
- ◆ Chinkara or Indian gazelle (Gazella Bennettii)11
- ◆ Fishing Cat12
- ◆ Wild Boar12
- ◆ Sela Macaque12

2. PLANT SPECIES 13-20

- ◆ Salsola oppositifolia Desfontania13
- ◆ Neelakurinji13
- ◆ Ganoderma lucidum14
- ◆ Dactylorhiza hatagirea15
- ◆ Allmania multiflora15
- ◆ Chenkuringi16
- ◆ New genus of a parasitic Flowering plant16

- ◆ Fimbristylis sunilii - (Plant Species)17
- ◆ Glycosmis albicarpa18
- ◆ Seagrass18
- ◆ Silver cockscomb19
- ◆ Moringa20

3. INVASIVE SPECIES21-24

- ◆ Invasive species threaten world's diversity21
- ◆ 'Pink Blooms' in Kole wetlands of Kerala22
- ◆ Ludwigia peruviana23
- ◆ Vilayati Kikar24

4. REPTILES/ AMPHIBIANS ...25-30

- ◆ Mizoram Parachute Gecko25
- ◆ Yellow-Bellied Snake26
- ◆ Eublepharis Pictus26
- ◆ Eoscansor cobrensis27
- ◆ Tomistoma27
- ◆ Cyrtodactylus exercitus27
- ◆ Madtsoiidae28
- ◆ Trimeresurus mayaae28
- ◆ Tachymenoides harrisonfordi29
- ◆ Chytridiomycosis or Chytrid29
- ◆ Harlequin Frog30

5. MARINE SPECIES31-40

- ◆ Atlantic menhaden31
- ◆ Scomberoides pelagicus31
- ◆ Icefish32
- ◆ Ganga-Ghagra basin canals pose a threat to dolphins: study32
- ◆ Ancient Peruvian Whale33
- ◆ Denison Barb34

- ◆ Dugong conservation reserve in the Gulf of Mannar34
- ◆ Sawfish35
- ◆ Sea Cucumber36
- ◆ Rough-toothed Dolphin.....36
- ◆ Megalodon37
- ◆ Four new corals were recorded from Indian waters38
- ◆ Actinimenes koyas39
- ◆ Vaquita porpoise39
- ◆ Azooxanthellate Corals40

6. BIRD SPECIES.....41-54

- ◆ Bannerman's turaco41
- ◆ Western Tragopan (Tragopan-melanocephalus).....42
- ◆ Himalayan Griffon Vulture.....42
- ◆ Tokhu Emong Bird Count (TEBC) .43
- ◆ Ospreys43
- ◆ Amur falcon44
- ◆ Kakapo population (Strigops habroptilus).....45
- ◆ Red-headed vulture finally seen .45
- ◆ Bald Eagle (Haliaeetus leucocephalus)46
- ◆ White-rumped vulture (Gyps bengalensis)46
- ◆ Hornbill.....47
- ◆ Indian Grey Hornbill48
- ◆ Oriental Darter48
- ◆ Indian eagle-owl.....49
- ◆ Great Indian Bustard (GIB)50
- ◆ Spot-billed Pelicans.....50
- ◆ Indian Skimmer51
- ◆ Siberian rubythroat51
- ◆ Greybellied Wren Babbler52
- ◆ Saras Crane (Grus antigone antigone).....52

7. INSECT.....55-62

- ◆ Crimson Rose Butterfly55
- ◆ A Rare Dragonfly spotted in Kerala56
- ◆ Palmking57
- ◆ Ghatiana Dwivarna57
- ◆ Red Weaver Ants58
- ◆ Varroa Mite58
- ◆ Blue Duke58
- ◆ Monarch Butterfly.....58
- ◆ Monoceromyia flavoscutata59
- ◆ New genus of wasp identified.....59
- ◆ Drosophila Melanogaster.....60
- ◆ Neuroterus Valhalla.....61
- ◆ Money Spider61
- ◆ Ant-mimicking Spiders.....62

8. TURTLE.....63-66

- ◆ Olive Ridley - Operation SaveKurma63
- ◆ Indian Tent Turtle64
- ◆ Chelonoidis Phantasticus.....64
- ◆ Red-Eared Slider Turtle.....65
- ◆ Asian Giant Tortoise.....65

9. MISCELLANEOUS67-70

- ◆ Ariosoma indicum67
- ◆ Emperor Penguin68
- ◆ Maip Macrothorax.....68
- ◆ Cornechiniscus mystacinus68
- ◆ Haploptychius Sahyadriensis68
- ◆ Syllipsimopodi bideni.....69
- ◆ Maxillaria anacatalinaportillae70
- ◆ Spinosaurus70

THEMATIC CURRENT AFFAIRS

UPSC CSE Prelims exam requires a candidate to link and interlink Current Affairs with the syllabus and the static concepts.

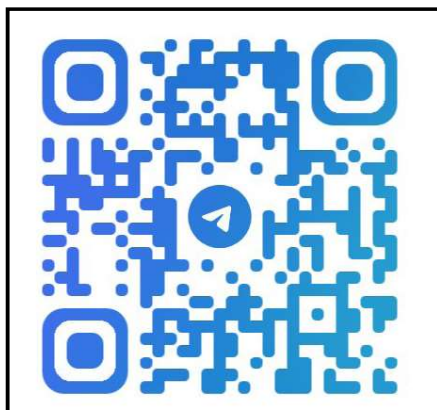
It's important to note that simply compiling current affairs won't suffice; it's crucial to learn how to utilize and link them effectively.

To aid in this process, we have categorized the entire UPSC prelims syllabus into actionable and easy-to-understand themes, and current affairs have been blended into these themes.

Thematic Current Affairs will help you in:

- Division of entire syllabus- theme wise
- Revision of concepts and current affairs together
- Developing the skill to interlink theory and contemporary developments
- Concise and precise information for quick coverage

Join our Telegram Channel *for* Peer to Peer Discussion



Prelims Sampoorna 2024



UPSC CSE Current Affairs

GS SCORE

An Institute for Civil Services

CONCEPT MAPPING WORKBOOK

PRELIMS PRACTICE MCQs

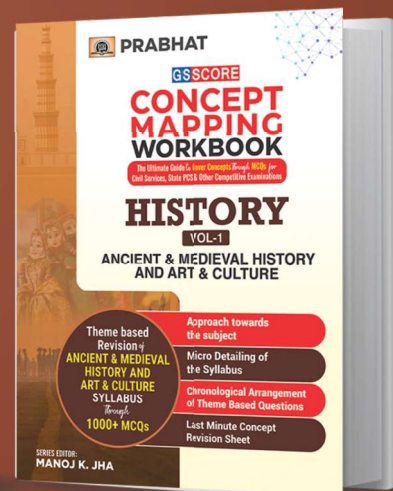
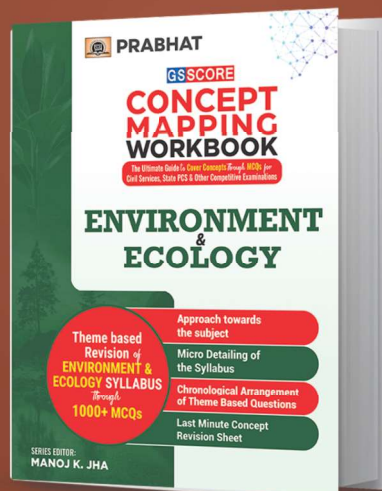
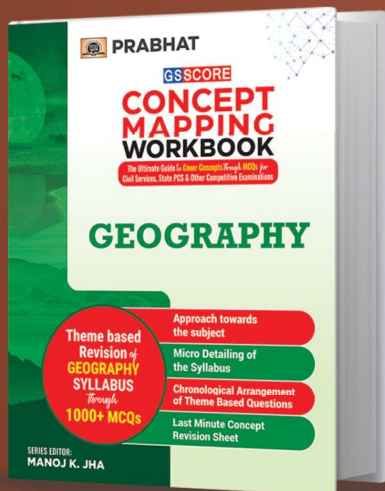
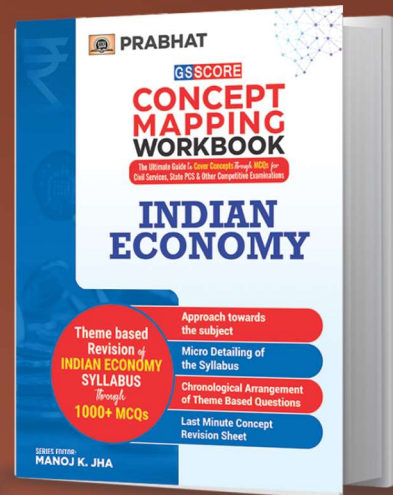
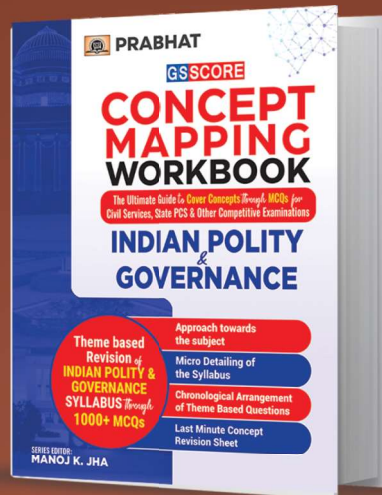
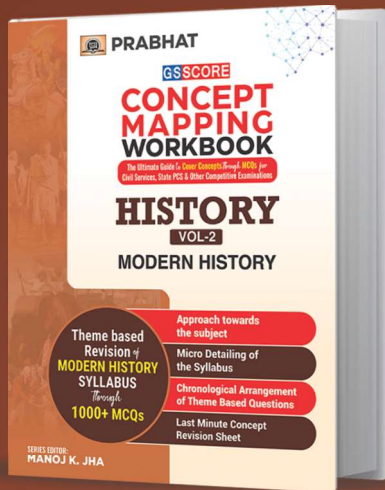
for **UPSC CSE &
STATE PCS EXAM.**

Coverage of Essential Concepts
through MCQs

Micro Detailing of the
Syllabus

Chronological Arrangement
of Theme Based Questions

Last Minute Concept Revision
Sheet



SCAN QR CODE
ORDER NOW



Mammals

1. CLOUDED LEOPARD

CONTEXT

A recent research paper published on clouded leopards by over 20 researchers from across the globe has helped understanding the habitats, migration corridors and laid out the conservation strategies.

About:

- ⦿ Clouded leopards are a member of the **Felidae family** and come under **nebulosa species**.
- ⦿ They are included in the endangered species around the world because they face the threat of extinction.
- ⦿ Clouded Leopard is a shy and elusive wildcat and can be spotted in the Tropical dense rainforest.
- ⦿ **Sub Species:** Classically considered a single species, the Clouded Leopard has recently been split into two species.
 - **Neofelis Nebulosi:** It is restricted to mainland Southeast Asia.
 - **Neofelis Diardi:** It is found on the islands of Sumatra and Borneo.
- ⦿ **Conservation status:** Both the species are listed as Vulnerable in IUCN red list.
- ⦿ **Range:** Historically, their range covered most of Southeast Asia from Nepal and southern China through Thailand, Indonesia, and Borneo. It is regionally extinct in Singapore and Taiwan.
 - In India, it occurs in north-east and West Bengal. It is the state animal of Meghalaya.
 - **Dampa tiger reserve** in Mizoram has one of the highest population densities.
- ⦿ In 2018, India added clouded leopards to its Recovery Programme for Critically Endangered Species to aid more research and strengthen conservation efforts.



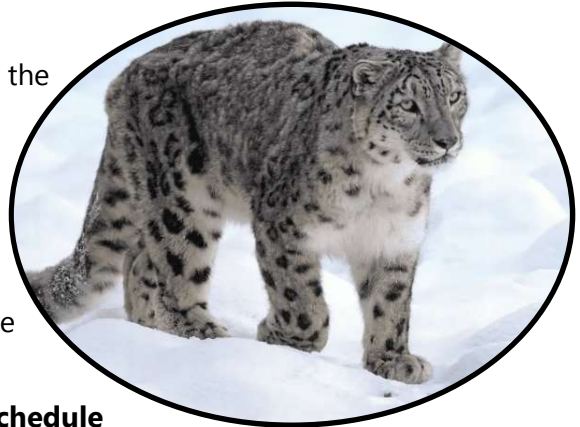
2. SNOW LEOPARD

CONTEXT

In encouraging news for wildlife conservationists and enthusiasts, snow leopards have been recently captured in camera in Jammu's Kishtwar district.

About

- It is a **large member of the cat family** native to the mountain ranges of Central and South Asia.
- It acts as an indicator of the health of the mountain ecosystem in which they live.
- It is the **State animal of Himachal Pradesh**.
- **Hemis National Park in Ladakh**, is famous as the Capital of Snow Leopard in India.
- It is listed as **Vulnerable in the IUCN Red List and Schedule I on Indian Wildlife (Protection) Act 1972**.



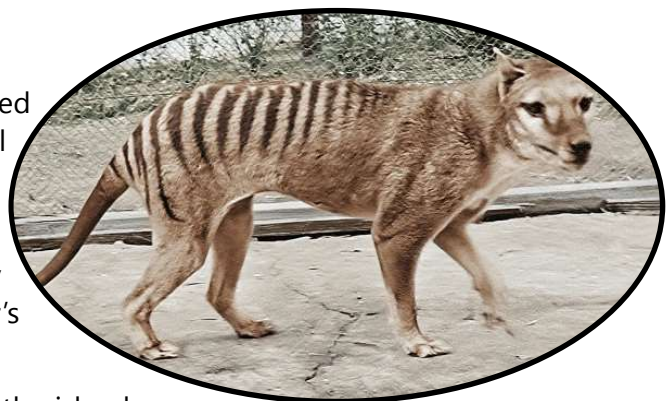
3. TASMANIAN TIGER

CONTEXT

Recently, the Texas-based biotechnology company Colossal announced their plans to use genetic engineering to recreate the Tasmanian Tiger and return it to the Arctic tundra, its original natural habitat.

About Tasmanian Tiger:

- Also known as the thylacine (a dog headed pouched dog), it was a carnivorous marsupial group thought to be extinct.
- Marsupials are mammals whose members are born incompletely developed and are usually carried and suckled in a pouch on the mother's abdomen.
- It was native to the Australian mainland and the islands of Tasmania and New Guinea.
- The last known thylacine died in captivity 80 years ago, in 1936 at the Hobart Zoo in Tasmania.
- It disappeared mainly due to over-hunting by humans, diseases and competition from the dingo, a wild dog native to Australia.



4. ASIATIC WILD DOG-TIGER COEXISTENCE

CONTEXT

A recent study in western **Assam's Manas National Park** revealed that overlapping prey availability or habitat suitability could dictate a **positive association** between dholes and tigers, facilitating co-existence or even cooperative behaviours between the two species of carnivores.

About Dhole:

Dhole (*Cuon alpinus*) are also called **red dog**, wild Asian carnivore of the dog family (Canidae).

- They are wild dogs native to East and Southeast Asia that are about the size of a German shepherd.
- The dhole is a **highly social animal**, living in large clans without rigid dominance hierarchies and containing multiple breeding females. Such clans usually consist of 12 individuals, but groups of over 40 are known.
- **Geographic Range:** From the Altai Mountains in Manchuria in Central and Eastern Asia, its range spreads southwards through the forest tracts of **India, Burma, and the Malayan Archipelago**.
 - In India, it is found in three clusters across India namely the **Western and Eastern Ghats, central Indian landscape** and **North East India**.
- **Habitat:** Dholes like open spaces and can often be found on jungle roads, river beds, jungle clearings, and paths, where they rest during the day.



There are about **10 to 11 subspecies** of dholes which are found all across the globe. Two are listed as endangered and two are on the verge of extinction. However, the **Asiatic wild dog** is the most **common subspecies found in India**.

Conservation:

- **IUCN:** Endangered
- **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES):** Appendix II
- **Wildlife Protection Act, 1972:** Schedule 2

Conservation Projects:

- **Breeding Centre:** In 2014, the Indian government sanctioned its **first dhole conservation breeding centre** at the Indira Gandhi Zoological Park (IGZP) in Visakhapatnam.
- **Protection under Project Tiger:** The creation of reserves under **Project Tiger** provided some protection for dhole populations sympatric with tigers.

5. IBERIAN WOLF (*CANIS LUPUS SIGNATUS*)

CONTEXT

According to latest information, the **Iberian wolf (*Canis lupus signatus*)**, native to the Iberian Peninsula comprising **Spain and Portugal**, has been extinct in the historic region of **Andalusia** in the extreme south of Iberia since 2020.

About Iberian Wolf (*Canis lupus signatus*):

- It is a subspecies of **Grey wolf** that has been isolated from mixing with other wolf populations for over a century.
- The Iberian wolf forms the **largest wolf population** in Western Europe.
- Grey wolves are **nocturnal predators** and are mainly **carnivores**.
- Due to population controls and damage to livestock, Iberian wolves were, as of September 2021, the only **Western European** subspecies of wolf whose hunting remained legal, yet only in Spain.
- Nonetheless, very few hunting permits were given every year, strictly north of the **Douro River**.
- Along with the difficulty of their hunt by virtue of their vigilant nature and the rarity of their sightings, they were strongly desired by many European hunters as a big-game trophy.

6. SLOTH BEAR

CONTEXT

The first World Sloth Bear Day was observed on **October 12**. It aims to spread awareness about protection and conservation of sloth bears.

Sloth bears (*Melursus ursinus*):

- Sloth bears are **endemic** to the Indian sub-continent with small populations in **Nepal and Sri Lanka** and **90% of the species population is found in India**.
- **IUCN Red List:** Vulnerable
- They are identified by their very distinct long, shaggy dark brown or black fur, distinct white V-shaped chest patch and four-inch long ivory-coloured curved claws used for digging out termites and ants from rock-hard mounds.
- Listed under **Schedule I of the (Wildlife Protection) Act of India, 1972** the species has the same level of protection as tigers, rhinos and elephants.
- They are found in all parts of the country **except** Jammu and Kashmir and north-eastern States.



7. EASTERN SWAMP DEER

CONTEXT

Recently, the population of the vulnerable eastern swamp deer has dipped in the **Kaziranga National Park and Tiger Reserve (Assam)**. The eastern swamp deer is extinct elsewhere in South Asia.

- ⦿ The eastern swamp deer has now been distributed to areas beyond the **Kaziranga National Park**, such as **Orang National Park** and **Laokhowa-Burachapori wildlife sanctuaries (Assam)**.

About Swamp Deer:

- ⦿ The barasingha, also called swamp deer, is a deer species distributed in the Indian subcontinent. Barasingha is the state animal of the Indian states of Madhya Pradesh and Uttar Pradesh.
- ⦿ There are three subspecies of swamp deer found in the Indian Subcontinent.
 - **Western swamp deer** (*Rucervus duvaucelii*) found in Nepal.
 - **Southern swamp deer/Hard Ground Barasingha** (*Rucervus duvaucelii branderi*) found in central and north India.
 - **Eastern swamp deer** (*Rucervus duvaucelii ranjitsinhi*) found in the Kaziranga (Assam) and Dudhwa National Parks (Uttar Pradesh).



Kaziranga National Park

- ⦿ Kaziranga National Park is a protected area in the northeast Indian state of Assam.
- ⦿ It is located in the edge of the Eastern Himalayan biodiversity hotspots – Golaghat and Nagaon district.
- ⦿ It is home to more than 2200 Indian one-horned rhinoceros, approximately 2/3rd of their total world population.
- ⦿ In 1985, it was declared as a World Heritage Site by UNESCO. It was declared as Tiger Reserve in 2006.
- ⦿ It is recognized as an Important Bird Area by BirdLife International for the conservation of avifaunal species.

Protection Status of Swamp Deer:

- ⦿ **IUCN Red List:** Vulnerable
- ⦿ **CITES:** Appendix I
- ⦿ **Wildlife Protection Act, 1972:** Schedule I

Laokhowa-Burachapori wildlife sanctuaries

- ⦿ It is a protected area located in the state of Assam, on the south bank of the Brahmaputra River.
- ⦿ This reserved forest became a sanctuary in 1995.
- ⦿ It forms an integral part of the Laokhowa-Burachapori eco-system and is a notified buffer of the Kaziranga Tiger reserve.

8. GOLDEN LANGURS

CONTEXT

Neighbours of a golden langur habitat in western Assam's Bongaigaon district have opposed a move by the State government to upgrade it to a wildlife sanctuary.

About Golden langur

- Gee's golden langur (*Trachypithecus geei*), also known as simply the golden langur, is an **Old World monkey**.
- **Habitat:** It is endemic to western Assam, India, and southern Bhutan.
- Their habitat is restricted to the region surrounded by four geographical landmarks: the foothills of Bhutan (North), Manas river (East), Sankosh river (West), and Brahmaputra river (South).
- Adult males have a cream to golden coat with darker flanks while the females and juveniles are lighter.
- It has a black face and a long tail up to 50 cm (19.69 in) in length.
- It lives in high trees and has a herbivorous diet of ripe and unripe fruits, mature and young leaves, seeds, buds and flowers.
- The average group size is eight individuals, with a ratio of several females to each adult male.



Protection Status:

- **IUCN List of Threatened Species:** Endangered
- **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES):** Appendix I
- **Wildlife Protection Act, 1972 :** Schedule I

9. KOALA

CONTEXT

The Australian government declared the **Koala (*Phascolarctos cinereus*)** as '**Endangered**' in the states of Queensland and New South Wales as well as the **Australian Capital Territory**.

About Koala

- The Koala is an **arboreal marsupial** with fur ranging from grey to brown above, and white below. It has large furry ears, a prominent black nose and no tail.
- Inhabit **eucalypt** woodlands and forests.
- The Koala has a fragmented distribution throughout **eastern Australia from north-east Queensland to the Eyre Peninsula in South Australia.**
 - In **New South Wales**, koala populations are found on the **central and north coasts, southern highlands, southern and northern tablelands, Blue Mountains, southern coastal forests, with some smaller populations on the plains west of the Great Dividing Range.**

10. GREY SLENDER LORIS

CONTEXT

India's first ever sanctuary for the endangered Slender Loris is to be set up in Karur & Dindigul districts of Tamil Nadu.

- The state government notified 'Kadavur slender loris sanctuary' under **Section 26 (A)(1)(b) of Wildlife (Protection) Act, 1972.**

Slender Loris:

- Slender Loris is a **small nocturnal mammal** that spends most of its life on trees.
- They are native to **India and Sri Lanka** and are also amongst the world's top 25 endangered primates.
- **IUCN Status:** Endangered
- They are also protected under **Schedule 1** of the **Indian legislation of the Wildlife (Protection) Act (WPA), 1972.**
- They act as **biological predators of pests that harm agricultural crops and help farmers.**
- As per reports, there are 14,000 Slender Loris in the Dindigul and Karur forests in Tamil Nadu.



11. INDIAN GAUR

CONTEXT

The images of an Indian Bison, or Gaur, in Pune's urban landscape, the frenzy among people, the capture of the injured animal that ran around in panic, and the sad news of its death has put the spotlight on human-Gaur conflict in the country.

About Indian Bison, or Gaur

- ◎ **Common Name:** Indian Gaur; Gaur.
- ◎ **Scientific Name:** *Bos Gaurus*.
- ◎ **Physical Characteristics:** It is one of the largest extant bovines. It is one of the largest species among the wild cattle, reaching a shoulder height of up to 220 cm.
- ◎ **Habitat:** Gaurs are found on the forested hills and grassy areas of south to south-east Asia.
- ◎ **Conservation Status:** The Gaur has been categorised as **vulnerable on the IUCN Red List** since 1986.



Distribution:

- ◎ They are found in **India, China, Thailand, Malaysia, Bangladesh, Bhutan, and Nepal.**
- ◎ The Western Ghats in southern India constitute one of the most extensive extant strongholds of gaur, in particular in the Wayanad – Nagarhole – Mudumalai – Bandipur complex.
- ◎ The gaur is the State Animal of Goa and Bihar.

12. WHITE-CHEEKED MACAQUE (MACACA LEUCOGENYS)

CONTEXT

Recently, the Scientists from the **Zoological Survey of India (ZSI)** have found a new mammal species in the country — the **White Cheeked Macaque (*Macaca leucogenys*)**.

Background

- ◎ While the species was first discovered in China in 2015, its existence was not known in India before this.
- ◎ It is only now that Indian scientists have discovered its presence in the remote Anjaw district in central Arunachal Pradesh.
- ◎ The latest discovery takes India's mammal count from 437 to 438.



About White Cheeked Macaque

- ◎ The **White Cheeked Macaque** has distinct **white cheeks, long and thick hair on the neck and a longer tail than other Macaque species.**

- It is the **last mammal** to have been discovered in **Southeast Asia**.
- Both the Arunachal macaque as well as the White Cheeked Macaque exist in the same biodiversity hotspot in the eastern Himalayas.
 - Along with White-Cheeked Macaques and Arunachal Macaque (*Macaca munzala*) the other species of Macaques are Assamese Macaque (*Macaca assamensis*) and Rhesus Macaque (*Macaca mulatta*) reported from the same landscape.
- This species is **not covered by the Wildlife Protection Act of India**, because till now it is not known that the species existed in India.

Zoological Survey of India (ZSI)

- **Founded in:** 1916
- **Parent organisation:** Ministry of Environment, Forest and Climate Change
- The Zoological Survey of India is the premier Indian organisation in zoological research and studies to promote the survey, exploration and research of the fauna in the country

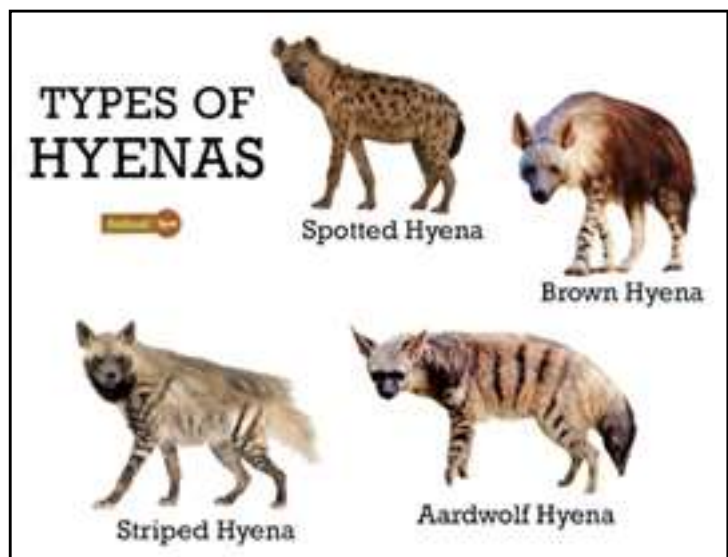
13. INDIA'S STRIPED HYENAS

CONTEXT

A nocturnal animal, Indian Striped Hyena is capable of hunting even during the no moon days.

About

- Striped hyenas can be seen over an extensive range in the north and northeast Africa, from the Middle East to southern Siberia as well as the Indian subcontinent.
- Hyenas are carnivorous beasts found chiefly in Africa and are known for being scavengers.
- With only four living members of their genus existing in the present times, they are among the smallest family of mammals alive, the fifth smallest to be exact.
- **Scientific Classification:**
 - **Kingdom:** Animalia
 - **Phylum:** Chordata
 - **Class:** Mammalia
 - **Order:** Carnivora



14. CARACAL

CONTEXT

With an estimated 50 individuals across the country, concentrated in the western parts of India, the caracal (*Caracal caracal schmitzi*), is critically endangered and perhaps on the brink of extinction in India.

About

- ⦿ It is a medium-sized and locally threatened cat species.
- ⦿ It has been widely reported to be on the brink of extinction in India.
- ⦿ It is also known by its persian name Siyahgosh or 'black ears'.
- ⦿ In India it is found mostly in Rajasthan, Gujarat and Madhya Pradesh.
- ⦿ Besides India, it is found in several dozen countries across Africa, the Middle East, Central and South Asia.
- ⦿ It is listed as Least Concern in **IUCN Red List and under Schedule I in Wildlife Protection Act, 1972.**



15. SPOTTED DEER

CONTEXT

Gir, the only sanctuary of the majestic Asiatic lions in the world, has witnessed the stable population of Spotted Deer.

About

- ⦿ It is also known as chital or axis deer.
- ⦿ It is sexually dimorphic, males are larger than females, and antlers are present only on males.
- ⦿ The upper parts are golden to rufous, completely covered in white spots.
- ⦿ It is listed as **least concern in the IUCN Red List and under Schedule III of the Indian Wildlife Protection Act (1972).**



16. KASHMIR STAG (*Cervus Hanglu Hanglu*)

CONTEXT

After two years, the unique Kashmir stag, vernacularly known as Hangul, has again shown a marginal increase in its population.

About

- ⦿ The Kashmir stag (*Cervus hanglu hanglu*), also called hangul, is a subspecies of Central Asian red deer endemic to Kashmir and surrounding areas.
- ⦿ It is the state animal of Jammu and Kashmir.
- ⦿ It is found in dense riverine forests in the high valleys and mountains of **Jammu and Kashmir and northern Himachal Pradesh**.
- ⦿ Hangul *Cervus hanglu* is the **only red deer species** in India.
- ⦿ Hangul is a **critically-endangered species** as per the **International Union for Conservation of Nature and Natural Resources (IUCN) Red List**.
- ⦿ It is listed as a **Schedule I Species** in **Indian Wildlife Protection Act 1972**.
- ⦿ The species is under threat based on the vulnerability of population with regard to viability and structure, dwindling population, and habitat vulnerability.



17. CHINKARA OR INDIAN GAZELLE (*Gazella Bennettii*)

CONTEXT

Rajasthan court awards informer half of fine in Chinkara killing case.

About Chinkara or Indian gazelle (*Gazella bennettii*):

- ⦿ Chinkara or Indian gazelle is the State animal of Rajasthan.
- ⦿ **Geographic Range:** Indian gazelles, *Gazella bennettii*, are primarily found in the northwestern region of India in the state of Rajasthan.
- ⦿ **Habitat:** Dry deciduous forests, open woodlands, and dry areas such as sand dunes, semi-arid deserts, and arid valleys.
- ⦿ **Conservation Status:**
 - *Gazella bennettii* is considered a species of least concern by the **International Union for Conservation of Nature (IUCN)**.
 - They are included in the **CITES Appendix III**.

18. FISHING CAT

CONTEXT

Recently the world's first population estimation of the fishing cat has been conducted outside the protected area network.

About

- The fishing cat is **nocturnal (active at night)** and apart from fish also preys on frogs, crustaceans, snakes, birds, and scavenges on carcasses of larger animals.
- The species breed all year round. In India, fishing cats are mainly found in the mangrove forests of the **Sundarbans, Chilika lagoon**, on the foothills of the Himalayas along the Ganga and Brahmaputra river valleys and in the Western Ghats.
- **IUCN Status:** Endangered



19. WILD BOAR

- It is the largest of the wild pigs.
- It is native to forests ranging from western and northern Europe and North Africa to India and China.
- It is listed as Least Concern in the IUCN Red list and under Schedule III in the Indian Wildlife Protection Act 1972.



20. SELA MACAQUE

A new species of old-world monkey recorded from Arunachal Pradesh has been named after Sela Pass, as Sela Macaque.

About

- They are genetically closer to the Arunachal macaque and both species have many similar physical characteristics such as heavy built and long dorsal body hair.
- This species is a major cause of crop damage in West Kameng district



Plant Species

1. SALSOLA OPPOSITIFOLIA DESFONTANIA

CONTEXT

A team of researchers from Gandhinagar-based **Gujarat Ecological Education and Research (GEER)** Foundation has discovered a new species of saltwort called **Salsola oppositifolia Desfontania**.

About

- Salsola oppositifolia Desfontania is a **perennial shrub** that grows in saline, arid to semi-arid environments of the Kutch district.
- The species belongs to the family of **Amaranthaceae**.
- It is **rarely prostrate** and unlike other species of Salsola, does not have any hairs. As the name **oppositifolia** suggests, the leaves of this plant grow opposite each other in the stem.
- It is a **halophyte** — a plant adapted to growing in saline conditions.
- This species, earlier known from **Italy, Northern Africa, Palestine, Spain and Western Sahara**, has been reported for the first time from India.



2. NEELAKURINJI

CONTEXT

Recently, the Ministry of Environment, Forest and Climate Change (MoEF) has listed Neelakurinji under Schedule III of the Wildlife (Protection) Act, 1972, including it on the list of protected plants.

About Neelakurunji

- Neelakuruj is scientifically known as *Strobilanthus Kunsthau*s,
- It is a shrub that grows in the shola forests of the Western Ghats in South India.
- The plant is named after the famous Kunthi River which flows through Kerala's Silent Valley National Park, where the plant occurs abundantly.
- It is found at an altitude of 1,300-2,400 metres.
- This flower blooms once in 12 years as the pollination of flowers needs a longer period.
- It is mainly found in the states of Kerala, Tamil Nadu, and Karnataka.



3. GANODERMA LUCIDUM

CONTEXT

Attempts are being made to popularise *Ganoderma lucidum* mushroom for business and livelihood, by cultivating it on wood logs and sawdust.

About: *Ganoderma lucidum* mushroom

- The mushroom is shiny red-brown and naturally grows on wood.
- It has been cultivated in various wood logs as well as sawdust substrates, with wheat bran, tea leaves, cotton husk and others being the additional substrates.
- It prefers broad-leaved tree species like acacia, poplar, oak, maple, *Melia*, eucalyptus, hevea, *Tectona* and *Grewia*.
- The mother culture of *Ganoderma lucidum* is commonly prepared from its fruiting body by tissue culture method; it is further used to prepare its spawn.



Geographical conditions:

- It thrives well in warm and humid climates and grows preferably in mixed forests of subtropical to temperate regions.
- Unlike normal mushrooms, the peculiar character of this one is that it grows on wood or wood-based substrate only.

4. DACTYLORHIZA HATAGIREA

CONTEXT

Dactylorhiza hatagirea have made it to IUCN Red List of Threatened Species as 'endangered'.

About

- ⦿ ***Dactylorhiza hatagirea* (Salampanja)** is a species of orchid generally found growing in the Himalayas.
 - It is locally called '**salam panja**' or '**hatta haddi**'.
 - It is called '**panchaule**' in Nepali and Himalayan regions.
- ⦿ It is threatened by habitat loss, livestock grazing, deforestation, and climate change.
- ⦿ It is extensively used in **Ayurveda, Siddha, Unani** and other alternative systems of medicine to cure dysentery, gastritis, chronic fever, cough and stomach aches.



5. ALLMANIA MULTIFLORA

CONTEXT

A new species of the genus *Allmania* has been recently identified on the granite hillocks of Palakkad, Kerala. The discovery has come 188 years after the genus and the first species were described by botanists.

About *Allmania multiflora*

- ⦿ It is named *Allmania multiflora*.
- ⦿ The species is quite special from both the botanical and conservation points of view.
- ⦿ *Allmania multiflora* is only the second species of this genus identified so far anywhere.
- ⦿ It is an annual herb that grows to a height of about 60 cm, erect, with branches arising from the base.
- ⦿ The stem is red to violet at the base and green above.
- ⦿ Found at heights ranging between 1,000 to 1,250 metres.
- ⦿ Shorter tepals and wider gynoecium (parts of the flower),



shorter bracts and in the diameter of the seeds are among the characteristics that distinguishes it from *Allmania nodiflora*.

- ⦿ Flowering and fruiting occurs from May to September.
- ⦿ *Allmania multiflora* has been so named for having a higher number of florets within an inflorescence.
- ⦿ It has assessed as **Critically Endangered IUCN Red List**.

6. CHENKURINJI

CONTEXT

'Chenkurinji', belonging to the Anacardiaceae family, was once abundant but its presence has been fast receding over the years.

About

- ⦿ It is a species of a tree, endemic to the Agasthyamala Biosphere Reserve.
- ⦿ It was once abundant in the hills on the southern parts of the Aryankavu Pass in Kerala's Kollam district.
- ⦿ It is very susceptible to climate change and the present condition of the species is quite bad with low regeneration performance.
- ⦿ It has medicinal properties and is used to lower blood pressure and treat arthritis.

7. NEW GENUS OF A PARASITIC FLOWERING PLANT

CONTEXT

A new genus of a parasitic flowering plant (*Septemeranthus*) has recently been discovered from the Nicobar group of islands.

What is Parasitic plant?

- ⦿ Parasitic plants produce root-like structures called haustoria which penetrate the host, connect to its vasculature and facilitate the exchange of materials such as water, nutrients, and pathogens between the host and the parasite, and between any plants simultaneously parasitized, even unrelated plant species.

- ⦿ In addition to *Septemeranthus*, four other genera have also been discovered earlier from Nicobar group of islands, highlighting the ecological significance of the region on non-parasitic plants-
 - *Nicobariodendron* (Hippocrateaceae)
 - *Pseudodiplospora* (Rubiaceae)
 - *Pubistylis* (Rubiaceae)
 - *Sphyranthera* (Euphorbiaceae)

Key-highlights of the discovery

- ⦿ The genus *Septemeranthus* grows on the plant species *Horsfieldiaglabra* (Blume) Warb.
- ⦿ The parasitic flowering plants have a modified root structure spread on the stem of the tree and are anchored inside the bark of the host tree.
- ⦿ The plant was found on the periphery of the tropical forest in one of the biodiversity hotspots referred to as the Nicobar group of islands separated from the Andaman group of Islands by a wide gap of 160 km with heavy tidal flows.
- ⦿ *Septemeranthus* partially depends on its host but also has leaves capable of photosynthesis.

8. FIMBRISTYLIS SUNILII - (PLANT SPECIES)

CONTEXT

Researchers identified two new plant species from the biodiversity-rich Western Ghats regions in Thiruvananthapuram and Wayanad districts of Kerala. They have been christened

- ⦿ *Fimbristylis sunilii*
- ⦿ *Neanotis prabhuii*

Fimbristylis sunilii:

- ⦿ Collected from the grasslands of Ponmudi hills, Thiruvananthapuram, *Fimbristylis sunilii* has been named after plant taxonomist C.N. Sunil, retired professor and research guide of Botany, SNM College.
- ⦿ A perennial plant of the Cyperaceae family, it stands 20-59 cm tall and was collected from an elevation of 1,100 metres.
- ⦿ *Fimbristylis sunilii* has been provisionally assessed as data deficient (DD) under the IUCN Red List categories.



Neanotis prabhuii

- ⦿ *Neanotis prabhuii* is a **prostrate perennial herb** named after K.M. Prabhukumar, Senior Scientist at CSIR-NBRI, Lucknow, in recognition of his research on flowering plants of the Western Ghats.
- ⦿ Discovered in the Chembra Peak grasslands of Wayanad, it hails from the family Rubiaceae and grows on high-altitude grasslands.
- ⦿ *Neanotis prabhuii* grows up to 70 cm in length and is many-flowered with the petals pale pink in colour.

9. GLYCOSMIS ALBICARPA

CONTEXT

A team of scientists from the **Botanical Survey of India (BSI)** has discovered a new gin berry species named *Glycosmis albicarpa* from the Kanyakumari Wildlife Sanctuary in Tamil Nadu.

About *Glycosmis Albicarpa*

- ⦿ The species is endemic to the southern Western Ghats.
- ⦿ The species belongs to the Orange family, Rutaceae.
- ⦿ Many of the related plants of these taxonomic groups are being utilised for their medicinal values and food.
- ⦿ Most commonly related species of these plants are collected from the wild, mainly for local use as food and medicine.
- ⦿ Berries of *Glycosmis* species have the unique characteristic of 'gin aroma' and have gained in popularity as an edible fruit.
- ⦿ The species is also a larval host plant for butterflies like other species of *Glycosmis*.



Botanical Survey of India (BSI)

- ⦿ BSI was established in 1890 with the objectives of exploring the plant resources of the country and identifying plant species with economic virtue.
- ⦿ **Located in:** Kolkata, West Bengal, India.

10. SEAGRASS

CONTEXT

A project attempting to restore climate change fighting marine plants in Cornwall has proved a success in its first year.

What is Seagrass?

- ⦿ Seagrass is a **flowering marine plant** that has the potential to capture carbon from the environment up to 35 times faster than tropical rainforests.
- ⦿ Seagrass live in near-shore waters of most of the worlds' continents.

◎ **Environmental significance:**

- They are the **main diet of dugongs** and **green turtles**.
- They provide a habitat for many, smaller marine animals, some of which, like prawns and fish, are commercially important.
- They also absorb nutrients from coastal run-off and stabilise sediment, helping to keep the water clear.
- Seagrasses store more than twice as much carbon from planet-warming **carbon dioxide (CO₂)** per square mile than forests do on land, according to a 2012 study.
- The plants also help support fisheries and protect coasts from erosion.

11. SILVER COCKSCOMB

CONTEXT

In **Karnataka's Chamarajanagara district**, where **silver cockscomb (anne soppu)**, farmers of the **Soliga tribe** say controlling the weed can cost up to Rs 2,000 per acre (0.4 hectare) per year.

About:

- ◎ Silver cockscomb is a short-lived 50-60 cm-tall plant that bears simple, spirally arranged leaves around the stem with pinkish or silky white flowers.
- ◎ It is **native to India and Africa or North and South America**.
- ◎ **Medicinal use:** The flowers and seed are **astringent, haemostatic, ophthalmic, parasiticide and poultice**. They are used in the treatment of bloody stool, haemorrhoid bleeding, uterine bleeding, leucorrhoea, dysentery and diarrhoea.
- ◎ Since it grows widely on farmlands across the country, most farmers use the plant as fodder.
- ◎ But like the Soliga tribe, some communities also consume it as a leafy vegetable.

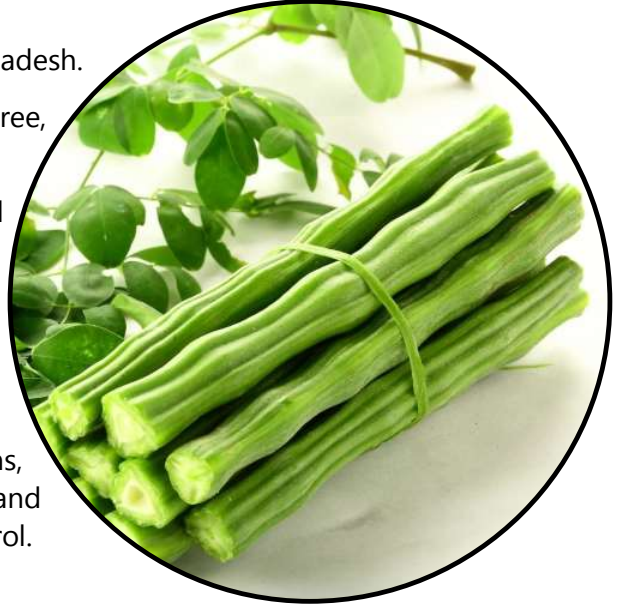


Soliga Tribe:

- ◎ The Soliga people of the **Biligiri Rangana Hills**, a tribal community in Southern India, could be among the country's first settlers.
- ◎ This forest-bound, **Dravidian speaking group**, lives isolated, practicing subsistence-level agriculture under primitive conditions.
- ◎ The Soligas are known for their intimate knowledge of the forests and judicious use of **medicinal plants and non-timber forest produce** like **honey, gooseberry, lichen, tubers, etc.**

12. MORINGA

- ⦿ It is a fast-growing, drought-resistant, deciduous trees that are native to India and Bangladesh.
- ⦿ It is often called the drumstick tree, the miracle tree, the ben oil tree, or the horseradish tree.
- ⦿ It has been used for centuries due to its medicinal properties and health benefits.
- ⦿ It also has antifungal, antiviral, antidepressant, and anti-inflammatory properties.
- ⦿ It is also used for water purification.
- ⦿ It has various healthy compounds such as vitamins, important elements such as Iron, Magnesium etc. and is extremely low on fats and contains no cholesterol.



Invasive Species

1. INVASIVE SPECIES THREATEN WORLD'S DIVERSITY

CONTEXT

Invasive species are costing the world at least \$423bn every year and have become a leading threat to the diversity of life on Earth, according to a UN assessment.

What is invasive species?

- ⦿ An invasive species is an organism that is **not indigenous, or native**, to a particular area.
- ⦿ **Pathways:** An invasive species can be introduced to a new area via the ballast water of oceangoing ships, intentional and accidental releases of aquaculture species, aquarium specimens or bait, and other means.
- ⦿ Not all non-native species are invasive.
 - **For example**, most of the food crops grown in the United States, including popular varieties of wheat, tomatoes, and rice, are not native to the region.
- ⦿ **Features:** To be invasive, a species must
 - It must adapt to the new area easily.
 - It must reproduce quickly.
 - It must harm property, the economy, or the native plants and animals of the region.

List of invasive flora and fauna in India

Name	State / Region	Native to
African apple snail	Andaman and Nicobar	
Papaya Mealy Bug	Assam	Mexico and Central America,

Cotton Mealy Bug	Deccan	North America
Amazon sailfin catfish	West Bengal	
Black Wattle	Western Ghats	South East Australia
Water Hyacinth	It is found throughout India	Tropical America
Black Mimosa	Himalaya, Western Ghats	Tropical North America
Parthenium/ Congress grass, Parthenium	It is found throughout India	Tropical North America
Cannibal Snail / Rosy wolf snail	–	Native to the southeastern United States.
Indian Bullfrog	Andaman and Nicobar	Afghanistan, Bangladesh, India, Myanmar, Nepal, Pakistan
Lantana camara	In the Bandipur National Park, Karnataka	South America

Additional examples:

- ⦿ **Cogon grass** is an Asian plant that arrived in the United States as seeds in packing material.
- ⦿ **Feral pigs** will eat almost anything, including native birds. They compete with native wildlife for food sources such as acorns.
 - Feral pigs spread diseases, such as brucellosis, to people and livestock. E. coli from their feces was implicated in the E. coli contamination of baby spinach in 2006.
- ⦿ **European green crabs** found their way into the San Francisco Bay area in 1989. They out-compete native species for food and habitat and eat huge quantities of native shellfish, threatening commercial fisheries.
- ⦿ **Dutch elm disease** (caused by the fungus *Ophiostoma ulmi*) is transmitted to trees by elm bark beetles. Since 1930, the disease has spread from Ohio through most of the country, killing over half of the elm trees in the northern United States.
- ⦿ **Emerald ash borer beetles**: Emerald ash borer beetles are invasive insects first discovered in Michigan in 2002 and most likely brought over on packing material from East Asia.

2. 'PINK BLOOMS' IN KOLE WETLANDS OF KERALA

CONTEXT

Kole wetlands, an internationally important **Ramsar site** of high value biodiversity, have been facing the threat of alien invasive species called '**Pink Blooms**'.

About Pink Bloom:

- ⦿ *Cabomba furcata*, popularly called as **Pink Bloom** due its massive flowering, is an invasive species in Kole wetland waters.
- ⦿ Cabomba furcata was brought to Kerala as an **aquarium plant** and has escaped to the wild.
- ⦿ The species is native of **central and South America**.
- ⦿ **Threats:**
 - Cabomba, which requires a **large quantity of oxygen** for its growth will choke water bodies and drainage canals.
 - It could also spread out to the **paddy fields** as seeds quickly spread into them.

Other invasive species emerging in the wetland are **water hyacinth and Salvinia molesta**.

Kole Wetland

- ⦿ Kole Wetland is located in Kerala.
- ⦿ It is one of the **Ramsar Sites**.
- ⦿ It is the **largest brackish**, humid tropical wetland ecosystem located in the **state of Kerala**.
- ⦿ Extending from the **northern bank of Chalakudy River** in the south to the southern bank of **Bharathapuzha River** in the north.
- ⦿ It is situated in the **Central Asian Flyway of migratory birds**.

3. LUDWIGIA PERUVIANA

CONTEXT

“*Ludwigia peruviana*”, an aquatic weed native to countries like **Central and South America**, is threatening **elephant habitats** in **Valparai, Tamil Nadu** which is further reviving the risk of **human-elephant conflicts** in the region.

About the species:

- ⦿ Ludwigia peruviana is an aquatic, sometimes deciduous species of flowering plant in the evening primrose family.
- ⦿ Ludwigia is among the **22 priority invasive plants** in Tamil Nadu.
- ⦿ It is used as an ornamental plant for its **tiny yellow**. It grows fast along water bodies.
- ⦿ Ludwigia peruviana, which grows fast along water bodies, has infested the majority of the hill station's swamps, locally known as **vayals**, where elephants used to find lush grass even in the summer.



Elephant Habitat in India:

- Currently, they are found in four fragmented populations in the **south, north, central and northeast India**. Habitat generalists' habitat ranges from wet tropical evergreen forests to semi-arid thorn and scrub forests.
- However, the highest densities of the elephant population are found in tropical deciduous forests.
- According to the report, **Karnataka has the highest number of elephants (6,049)**, followed by Assam (5,719) and Kerala (3,054).

Indian Elephant:

- Indian elephants are greyish-black animals that are subspecies of the Asian elephant. They are about **6.6 to 11.5 feet** in height and weigh about **6000 to 11,000 pounds**.
- These elephants go by the scientific name *Elephas maximus indicus* and have long trunks that are completely boneless.
- They feed mainly on grasses, but large amounts of tree bark, roots, leaves and small stems are also eaten.
- Cultivated crops such as **bananas, rice and sugarcane** are favored foods as well.
- Since they need to drink **at least once a day**, these elephants are always close to a source of fresh water.
- **Significance:** Elephants are not only a cultural icon in India and throughout Asia; they also help to maintain the integrity of their forest and grassland habitats.

4. VILAYATI KIKAR

- It is an invasive tree species introduced under the British Empire as part of development of Delhi.
- It is native to Mexico, South America and the Caribbean.
- The tree does not let any other tree or shrubs survive around it.
- These trees can dry up underground aquifers through its deep-root system, going as far as 20 metres or more in search of water.



Reptiles/ Amphibians

1. MIZORAM PARACHUTE GECKO

CONTEXT

Scientists recently discovered a new species of **gliding geckos** in Mizoram, named '**Mizoram parachute gecko**'.

About the species:

- ⦿ It is a newly discovered species of gliding geckos.
- ⦿ The Mizoram parachute gecko, or *Gekko mizoramensis*, is one of the 14 geckos known to take to the air.
- ⦿ It is thought that the species evolved as a result of being separated from its closest relative, *G. popaensis*, by the **Arakan Mountains**.
- ⦿ **Features:**
 - Unlike other gliding reptiles, which use the bone to form their flying surfaces, these geckos have flaps of skin.
 - When the lizards leap off a tall structure, air resistance pushes the flaps out to their full extent, much like a parachute, slowing the speed at which they fall.
 - The skin flaps also help to break up their shape, acting as a camouflage against predators.
- ⦿ Their specialised camouflage and body shape are shared by multiple species, making it hard to tell them apart from one another.



What are Geckos?

- ⦿ They are **reptiles** and are found on all continents **except Antarctica**.

- ⦿ They are believed to be among the earliest evolving squamates, the group that contains all **lizards, snakes and their close relatives**.
- ⦿ There are more than **1,200 species of gecko** today, making up around a fifth of all known lizards.

2. YELLOW-BELLIED SNAKE

CONTEXT

A rare yellow belly snake was seen on the coast of **Digha Bay of Bengal** amid huge tides recently.

About the species:

- ⦿ **Scientific name:** *Pelamis platurus*
- ⦿ The rare yellow belly snake is mainly found in the **Arabian Sea**.
- ⦿ The side of the tail is like the paddle of a boat and the lower abdomen is yellow making it different from other reptile species.
- ⦿ It is very poisonous and even **antivenom** does not work for snake bites.
- ⦿ The intensity of the poison is so high that the person can die due to the snake bite.
 - In West Bengal, four species of venomous snakes are found i.e., Kalach, Keute, Gokhro and Chandrabora.
- ⦿ Experts believe that once a **yellow-belly snake bites**, the human body becomes completely paralyzed.
- ⦿ **IUCN Red List: Least Concern**

Sea Snakes in India

- ⦿ There are 24 types of **sea snakes in India** and the yellow belly found in Digha is the most poisonous.

3. EUBLEPHARIS PICTUS

- ⦿ It is also known as the Painted Leopard Gecko.
- ⦿ It is strictly nocturnal, actively foraging along trails in the forest after dusk.
- ⦿ This new species appears to be common in forests of Andhra Pradesh & Odisha.
- ⦿ Based on IUCN conservation prioritization criteria, the researchers suggested it to list as Near Threatened.



4. EOSCANSOR COBRENSIS

- ⦿ A team of researchers published paper on its fossil discovery.
- ⦿ It is a reptile, belonging to Pennsylvanian subperiod of Carboniferous period, around 305 million years ago.
- ⦿ It used to live in area around present-day New Mexico.
- ⦿ The species belong to Varanopidae, which is an extinct family of reptiles.
- ⦿ They were similar to monitor lizards.
- ⦿ The ancient reptile was 24.5 cm in length and 58.3 g in weight.



5. TOMISTOMA

- ⦿ It is a freshwater large, slender-snouted crocodylian species native to south-east Asia.
- ⦿ It is distributed across part of Borneo, peninsular Malaysia and Sumatra.
- ⦿ It is frequently associated with peat swamp forest.
- ⦿ It shares its habitat with two other types of crocodylians.
- ⦿ The saltwater crocodile and the Siamese crocodile.
- ⦿ It is listed as **Endangered in IUCN Red List**.



6. CYRTODACTYLUS EXERCITUS

CONTEXT

A team of herpetologists have recorded a new species of **bent-toed gecko** from a wooded part of the Umroi Military Station in Meghalaya.

About: *Cryptodactylus exercitus*

- ⦿ Its scientific name is *Cryptodactylus exercitus* and English name is Indian Army's bent-toed gecko.
- ⦿ *Exercitus* in Latin means army.
- ⦿ The name was given to honour the Army for its services to the country. The military station where the bent-toed gecko was discovered was also a factor behind its name.



Other species

- The finding of the study was published in the latest issue of the European Journal of Taxonomy.
- The paper recorded another new bent-toed gecko, the *Cyrtodactylus siahaensis* named after Mizoram's Siaha district where it was found.
- These lizard specialists had in a separate study recorded the *Cyrtodactylus lungleiensis*, a new species of bent-toed gecko named after Mizoram's Lunglei town.
- India is now home to 40 species of the bent-toed gecko with the northeast accounting for 16 of them.

7. MADTSOIIDAE

CONTEXT

Scientists have reported spotting of the fossil of a Madtsoiidae snake from the Ladakh Himalaya for the first time.

About

- It is an extinct group of medium-sized to gigantic snakes, firstly appeared during the late Cretaceous.
- It is mostly distributed in the Gondwanan landmasses.
- The whole group disappeared in the mid-Paleogene across most Gondwanan continents except for Australia where it survived with its last known taxon *Wonambi* till late Pleistocene.

8. TRIMERESURUS MAYAAE

CONTEXT

A new species of snake has been discovered at Umroi Military Station in the Meghalaya.

About

- Locally it is known as **U Thlen**.
- It looked very similar to Pope's Pit Viper but the colour of the eyes was different.
- This new species was relatively common in Meghalaya, Mizoram and even in Guwahati.



9. TACHYMENOIDES HARRISONFORDI

CONTEXT

Researchers from **Germany**, the **United States** and **Peru** have named a recently discovered **species of snake** '*Tachymenoides harrisonfordi*' after actor *Harrison Ford*.

- Known for his portrayal of Indiana Jones, who famously fears snakes, Ford's real-life commitment to conservation earned him this distinction.

About the species:

- The snake was found in **Peru's Otishi National Park** by researchers from Peru and the United States.
- Measuring about **16 inches** when fully grown, the non-harmful *Tachymenoides harrisonfordi* serves as a reminder of the importance of studying and preserving Earth's diverse biosphere.
- The discovery sheds light on the plight of reptiles, as over a fifth of all reptile species are currently threatened with extinction.



10. CHYTRIDIOMYCOSIS OR CHYTRID

CONTEXT

For the past 40 years, a devastating fungal disease, called chytridiomycosis or chytrid, has been ravaging frog populations around the world, wiping out 90 species. This is a "panzootic" – a pandemic in the animal world.

- Transboundary and Emerging Diseases, a multinational study has developed a method to detect all known strains of this disease, caused by the amphibian chytrid fungus.

About

- Chytrid infects frogs by reproducing in their skin, affecting their ability to balance water and salt levels, and eventually leading to death if infection levels are high enough.
- The high mortality rate and the high number of species affected make chytrid unequivocally the deadliest animal disease known to date.
- Origin:**
 - Chytrid originated in Asia and was unwittingly spread to other continents through global travel and trade in amphibians.



◎ **Infection:**

- Chytrid has been devastating frog populations for the past 40 years, wiping out 90 species, including seven in Australia, and causing severe declines in over 500 frog species.
- Many species' immune systems were simply not equipped to defend against the disease, and mass mortalities ensued.
- In the 1980s, amphibian biologists began to notice sharp population declines, and in 1998, the chytrid fungal pathogen was finally recognized as the culprit.

11. HARLEQUIN FROG

CONTEXT

Researchers confirmed that many harlequin frogs once believed to be extinct are persisting. The harlequin frog genus was hit exceptionally hard by the fungus and over the past four decades, experts believed that upwards of 80 per cent of its species were driven to extinction.

About Harlequin frogs

- ◎ They are typically **small to medium-bodied** and many of them have bright and contrasting warning colours **advertising potent skin toxins**.
- ◎ They are typically diurnal and many of them occur in the vicinity of streams all year long, while others are found inside the forest
- ◎ They occur in a diverse array of habitats, from tropical wet forests along the Pacific coast and the **Amazon basin** to the montane regions and **paramos of the Andes**
- ◎ They are particularly sensitive to habitat modification, environmental changes, and infectious diseases, potentially making them important sentinel species in the terrestrial and freshwater ecosystems where they occur.
- ◎ Their presence is an indicator of water quality and healthy ecosystems, and their demise might be an early warning to humans of critical environmental conditions.



Marine Species

1. ATLANTIC MENHADEN

CONTEXT

The recent decline in **Ospreys** has happened due to shortage of fish species named '**Atlantic menhaden**' and food for them.

About

- These fishes are found in **coastal and estuarine waters** from Nova Scotia to northern Florida, Atlantic menhaden play many important roles.
- They are filter feeders, primarily consuming **phytoplankton and zooplankton** in the water column. Menhaden support an important commercial fishery.
- They constitute the largest landings, **by volume, along the Atlantic Coast of the United States**.
- Menhaden are harvested for use as **fertilizers, animal feed, and bait for fisheries including blue crab and lobster**.
- They are a major source of **omega-3 fatty acids**, so they are also used to develop human and animal supplements.
- In estuaries like the **Chesapeake Bay**, they are food for striped bass and other fish, as well as for predatory birds, including **osprey and eagles**.

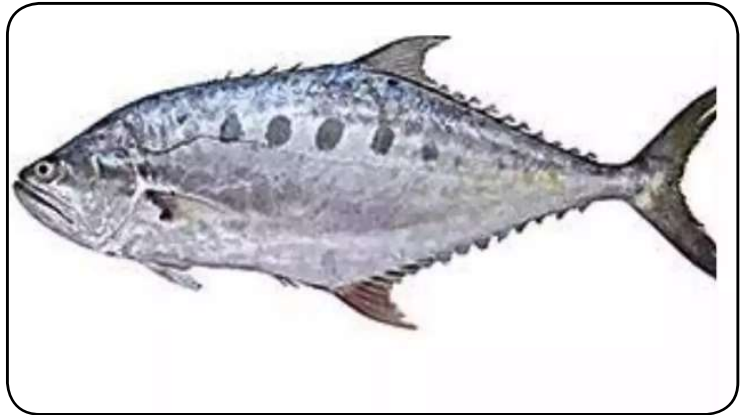
2. SCOMBEROIDES PELAGICUS

CONTEXT

The Central Marine Fisheries Research Institute (CMFRI) has identified a new carangid (Vatta) species from the Indian coast.

About Pola Vatta

- It belongs to the 'queen fish' group.
- It is named *scomberoides pelagicus*.
- The fish is locally known as "pola vatta".
- **Distinctive features:** Deep ovate body, concave dorsal head profile and stout and less numerous gill rakers on the first gill arch compared to the closely related species.
- It is the fifth queen fish discovered from the Indian waters.



3. ICEFISH

CONTEXT

An icefish colony recently discovered in Antarctica's ice-covered Weddell Sea, is world's largest fish breeding ground.

About the Ice Fish (*Channichthyidae*)

- The crocodile icefish or white-blooded fish comprise a family of notothenioid fish found in the Southern Ocean around Antarctica.
- They are the only known vertebrates to lack hemoglobin in their blood as adults.
- The blood of the ice fish is transparent in colour. They do not have red blood cells. They do not have haemoglobin to transport oxygen.
- They absorb oxygen through their skin. They have huge hearts.



Unique Warm waters

- The ice fish nests were found in a warm patch of water. This was unique and strange to the scientists. The temperature of the water here was 35 degrees Fahrenheit.

4. GANGA-GHAGRA BASIN CANALS POSE A THREAT TO DOLPHINS: STUDY

CONTEXT

A recent publication by scientists and researchers has revealed that **19 Gangetic river dolphins** had been rescued from the irrigation canals of the **Ganga-Ghagra basin** in Uttar Pradesh between 2013 and 2020.

Ganges river dolphins (*Platanista gangetica*)

- ⦿ The Ganges river dolphin can **only live in freshwater** and is essentially blind.
- ⦿ They hunt by emitting **ultrasonic sounds** or by echolocation.
- ⦿ They are frequently found alone or in small groups, and generally a mother and calf travel together.
- ⦿ Females are larger than males and give birth once **every two to three years** to only one calf.
- ⦿ Gangetic dolphins are the **National aquatic animal of India**.
- ⦿ National Board for Wildlife (NBWL) has accorded the 5th October as National Dolphin Day in 2022.
- ⦿ **Conservation Status:**
 - The Ganges river dolphin is in:
 - **Schedule 1 of the Indian Wildlife (Protection) Act 1972,**
 - Appendix 1 of the **Convention on International Trade in Endangered Species (CITES)**
 - Appendix 1 of the **Convention on Migratory Species (CMS)**
 - It is as “**endangered**” on the IUCN Red List.

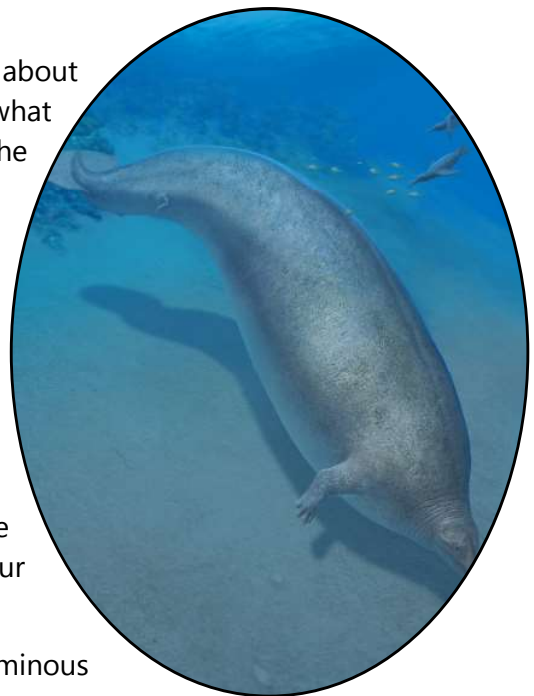
5. ANCIENT PERUVIAN WHALE

CONTEXT

Researchers have identified a gigantic species named, **Perucetus colossus** bigger than the extinct whale from bones excavated more than a decade ago.

About:

- ⦿ *Perucetus colossus*, an early whale from **Peru** that lived about 38-40 million years ago, a marine mammal built somewhat like a manatee that may have exceeded the mass of the blue whale.
- ⦿ *Perucetus* is believed to have been around 20 meters (66 feet) long and to have weighed up to 340 metric tons.
- ⦿ In comparison, the heaviest blue whale ever recorded weighed 180 metric tons, according to **Guinness World Records**.
- ⦿ The main feature of this animal is certainly the extreme weight, which suggests that evolution can generate organisms that have characteristics that go beyond our imagination.
- ⦿ Because of its heavy skeleton and, most likely, it's very voluminous body, this animal was certainly a slow swimmer.



6. DENISON BARB

CONTEXT

Denison barb, a native **freshwater fish species** commonly found in parts of **Karnataka and Kerala**, has been included in **Schedule I of the Wild Life (Protection) Amendment Bill, 2021**.

About Denison barb:

- It is an **endangered species of freshwater fish endemic** to the fast-flowing hill streams and rivers of the **Western Ghats in India**.
- Threats:** Aquarium trade; pet collection.
- Conservation status:** Endangered under IUCN Red list.



Schedules of the Wild Life (Protection) Act:

- The Wild Life (Protection) Act, 1972 is an Act of the Parliament of India enacted for **protection of plants and animal species**.
- It has six schedules which give varying degrees of protection.
 - Schedule I and part II of Schedule II** provides absolute protection - offences under these are prescribed the highest penalties.
 - Schedule III and Schedule IV:** Penalties for Species listed in Schedule III and Schedule IV are much lower than above category.
 - Schedule V:** Animals under Schedule V, e.g. common crows, fruit bats, rats and mice, are legally considered vermin and may be hunted freely.
 - Schedule VI:** The specified endemic plants in Schedule VI are prohibited from cultivation and planting.

7. DUGONG CONSERVATION RESERVE IN THE GULF OF MANNAR

CONTEXT

The Tamil Nadu government has decided to go ahead with the establishment of a conservation reserve for the elusive dugong (*Dugong dugon*).

About

- Dugong (*Dugong dugon*) is a **sirenian species** native to parts of the **Indian littoral**.

- ⦿ Dugongs are **cousins of manatees** and share a **similar plump appearance**, but have a **dolphin fluke-like tail**.
- ⦿ And unlike manatees, which use freshwater areas, **the dugong is strictly a marine mammal**.
- ⦿ Commonly known as "sea cows," dugongs graze peacefully on sea grasses in shallow coastal waters of the Indian and western Pacific Oceans.
- ⦿ Dugongs as a **Schedule I Animal under the Wildlife (Protection) Act, 1972**.
- ⦿ **Declining population:** The dugongs are on the verge of extinction.
- ⦿ In the **Andaman and Nicobar Islands**, their population is less than 100.
- ⦿ There are very few left in the **Gulf of Mannar**.
- ⦿ In the **Gulf of Kutch**, there are very few sporadic records.
- ⦿ They were present in **Lakshadweep** but now are locally extinct.
- ⦿ The plan included to set up a dugong conservation reserve in the **Gulf of Mannar, Palk Bay between India and Sri Lanka**, for the conservation of the animals.



8. SAWFISH

CONTEXT

According to the **International Union for Conservation of Nature (IUCN)**, all seven species of **sawfish are listed as Critically Endangered**.

About Sawfish

- ⦿ Sawfish also known as carpenter sharks are a family of rays.
- ⦿ They are characterized by long, narrow, flattened rostrum or nose extension, lined with sharp transverse teeth resembling saw.
- ⦿ Sawfish are closely related to sharks and have shark-shaped bodies, hence, they are also called flat sharks.
- ⦿ **IUCN Status:** Different Families of Sawfish are categorised in "Endangered" and "Critically Endangered"
- ⦿ It is also listed in **Schedule I** of the **Indian Wildlife (Protection) Act 1972**.



9. SEA CUCUMBER

CONTEXT

There has been an alarming increase in illegal activities involving sea cucumbers along the chain of limestone islands situated between India and Sri Lanka.

About

- Sea cucumbers, classified as **marine echinoderms** under the **class Holothuroidea**, are intriguing marine creatures.
- It is a marine invertebrate that live on the seafloor found generally in tropical regions.
- They are crucial to maintain the balance of ocean habitats.
- Major threats to this species are illegal Trading and smuggling for food and traditional medicine.
- It has no limbs or eyes, or blood.
- Lakshadweep has created the world's first conservation area for sea cucumbers.
- It is listed under **Schedule I** in the **Wildlife Protection Act, 1972**.



10. ROUGH-TOOTHED DOLPHIN

CONTEXT

Rough-toothed dolphins are dolphin species that are generally founded in the tropical and deep warm waters around the globe. In 1823, Georges Cuvier first described this species.

About the species:

- The scientific name of this species is *Steno bredanensis*.
- This species is the only member of the genus *Steno*.
- Steno* in Greek means narrow, which describes the beak of this animal.
- This animal has no sub-species.



11. MEGALODON

CONTEXT

A recent study provided the first empirical evidence of **warm-bloodedness** in the extinct shark based on geochemical analyses applied to fossilized teeth.

About

- It is an extinct species of **mackerel shark** which used to exist millions of years ago.
- It roamed the oceans an estimated 23 million to 2.6 million years ago.
- It was the largest shark to ever swim through Earth's oceans.



- It would have weighed around 70 tonnes and have length around 50 feet from nose to tail.

Who are Endothermic animals?

- Endothermic animals, often referred to as **warm-blooded animals**, have the ability to maintain a relatively stable internal body temperature, regardless of external environmental conditions.
- Endothermy is commonly observed in **mammals and birds**, which possess specialized physiological and anatomical adaptations to support this ability.
- Most shark species are not endothermic**, meaning they do not possess the ability to actively regulate their body temperature.
- Instead, sharks are considered 'ectothermic' or 'poikilothermic,' commonly known to us as **cold-blooded animals**.

Cold-Blooded Animals (Ectotherms)	Warm-Blooded Animals (Endotherms)
<ul style="list-style-type: none">Their body temperature could vary dramatically depending on the environment.Examples: Humans, reptiles, amphibians, insects, arachnids and fish	<ul style="list-style-type: none">They can maintain their body temperature regardless of the surroundings.Important features: Fat, sweat glands, fur and feathers to retain heat or release it to the environment.Examples: Mammals and birds

12. FOUR NEW CORALS WERE RECORDED FROM INDIAN WATERS

CONTEXT

Scientists have recorded four species of **azooxanthellate corals** for the first time from Indian waters.

About

- The non-reef building, solitary corals were found in the waters of **Andaman and Nicobar Islands**.
- These groups of corals are deep-sea representatives, with the majority of species reporting from between **200 m to 1000 m**.
- The new records have been published in **Thalassas- An International Journal of Marine Sciences**.
- About 570 species of hard corals are found in India and about **90%** of them are found in the waters around Andaman and Nicobar Islands.
- Andaman and Nicobar are one of the ancient and oldest ecosystems of corals that share less than 1% of the Earth's surface but they provide a home for about 25% of marine life.

The four species found are:

- Truncatoflabellum crassum
- T. incrustatum
- T. Irregular
- T. Krasum

What are azooxanthellate corals?

- **Azooxanthellate** corals are a group of corals that do not contain zooxanthellae and derive nutrition not from the sun but by capturing various forms of plankton.

Corals in India

- India is recorded to have around 7,517 km of coastline but only 6,100 km represents the mainland coastline. The three major types of coral reefs found in India are **fringing, barrier and atolls**.
- Coral reefs in India are found in a lot of areas including the **Gulf of Kutch, Gulf of Mannar, Palk Bay, Andaman & Nicobar and Lakshadweep Islands**. The Gulf of Kutch in the northwest has some of the most northerly reefs in the world.
- Patches of coral reefs are also found in **Ratnagiri, Malvan and Redi, south Bombay** and at the Gaveshani Bank located in the west of Mangalore.

Types of coral reefs in India

India has three major prevailing types of coral reefs:

- **Fringing reefs:** Fringing reefs evolve and develop near the continent and remain close to the coastline. These reefs are separated from the coastline by small, shallow lagoons. They are the most commonly found reefs in the world.
- **Barrier reefs:** Barrier reefs are found offshore on the continental shelf. They usually run parallel to the coastline at some distance. A deep and wide lagoon is located between the coastline and the barrier reef.
- **Atolls:** Atolls are formed on mid-oceanic ridges. They are shaped circularly or elliptically and are surrounded by seas on all four sides and have shallow waters in the center called a lagoon.

13. ACTINIMENES KOYAS

CONTEXT

Scientists from the **ICAR-National Bureau of Fish Genetic Resources (NBFGR)**, focused on documentation of aquatic genetic resources with special attention on fish and shell fish resources, have discovered a new species of shrimp.

About *Actinimenes koyas*

- ⦿ The species was collected at a depth of 1.0–2.0 m from the coral atoll of **Agatti Island**, which is part of the Lakshadweep group of islands.
- ⦿ This new species has been named 'Koyas' to honour the local community on the Lakshadweep islands.
- ⦿ Koyas form an important ethnic community on the islands, who have made a significant contribution to the development and preservation of the heritage of the society.

14. VAQUITA PORPOISE

CONTEXT

According to the United States Commission for Environmental Cooperation (CEC), **Vaquita porpoise (*Phocoena sinus*)** is nearing extinction and immediate measures are needed to save the remaining population.

About: Porpoises

- ⦿ Porpoises are among the smallest members of the cetacean family (whales, porpoises and dolphins).

About: Vaquita Porpoise

- ⦿ The vaquita (*Phocoena sinus*) is the world's smallest cetacean. Its name means "little cow" in Spanish.
- ⦿ It has a dark ring around the eyes is its most striking feature, along with a proportionally large dorsal fin.
- ⦿ It is unique among the porpoises as it is the only species of that family found in warm waters, and the size of the dorsal fin is believed to be an adaptation to that, allowing for extra body heat to dissipate.
- ⦿ Like many other species of porpoise, vaquita tend to be shy and elusive, avoiding boats when approached.
- ⦿ **Habitats:** Found only in the northern Gulf of California (Sea of Cortez) in Mexico. Most commonly seen in shallow waters up to 50 metres deep.

Protection Status:

- ⦿ **IUCN Red List:** Critically Endangered
- ⦿ **CITES:** Appendix I

- ⦿ **Threats:** The vaquita population has been in sharp decline for decades, recently accelerated by illegal fishing with gill-nets for the vulnerable totoaba, a large fish sought after for its swim bladder.
- ⦿ The small animal frequently gets caught in fixed fishing nets (gill-nets), as by-catch.

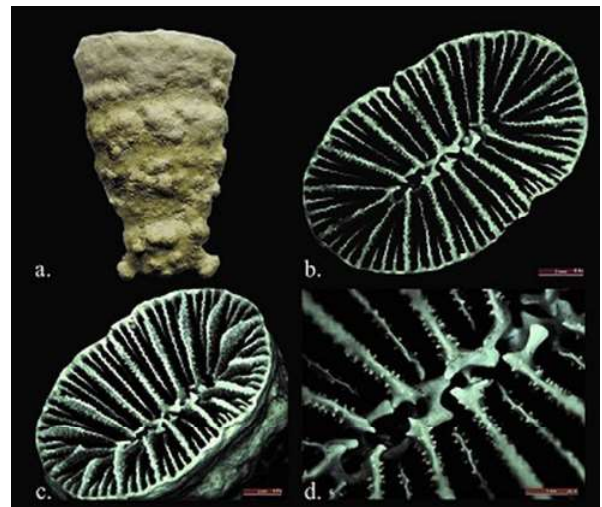
15. AZOOXANTHELLATE CORALS

CONTEXT

Scientists have recorded four species of corals for the first time from Indian waters. These new species of azooxanthellate corals were found from the waters off the Andaman and Nicobar Islands.

Azooxanthellate Corals

- ⦿ The azooxanthellate corals are a group of corals that do not contain zooxanthellae and derive nourishment not from the sun but from capturing different forms of planktons.
- ⦿ They are deep-sea representatives with the majority of species being reported from depths between 200 metres and 1,000 metres. They are also reported from shallow waters unlike zooxanthellate corals that are restricted to shallow waters.
- ⦿ Azooxanthellate corals are a group of hard corals. Hard corals are the prime and intrinsic part of the coral reef ecosystem.



Bird Species

1. BANNERMAN'S TURACO

CONTEXT

Bannerman's Turaco bird has come under serious threat at Kilum-Ijim Mountain Forest of Cameroon's northwest region. The Kilum-Ijim Mountain Forest, spanning some 20,000 square kilometers, is one of the last remaining homes of the endemic Bannerman's Turaco bird.

About Bannerman's Turaco

- Bannerman's turaco is a species of bird in the family Musophagidae.
- It is endemic to Cameroon. Its scientific and common names honor the ornithologist David Armitage Bannerman.



- This bird has a deep cultural value for the people in the Cameroon grassfields.
- Its natural habitat is subtropical or tropical moist montane forests.
- It is threatened by habitat destruction and the International Union for Conservation of Nature has listed it as an "endangered species".
- **Threats:** Habitat destruction due to clearing of forests for agricultural land.

2. WESTERN TRAGOPAN (*Tragopan-melanocephalus*)

CONTEXT

Himachal Pradesh's State bird – **Western Tragopan (*Tragopan-melanocephalus*)** has been facing threat due to habitat loss in parts of the country.

About the Species:

- The **Western Tragopan (*Tragopan-melanocephalus*)** is amongst the rarest of all living pheasants.
- **State Bird:** Himachal Pradesh (status accorded in 2007)
- **IUCN Status:** Vulnerable (Population decreasing)
- **Habitat:** It is endemic to the northwest Himalaya, within a narrow range from north Pakistan through Jammu and Kashmir and Himachal Pradesh, to the western part of **Garhwal**.
- **Diet:** Its diet consists primarily of plant matter, but it also includes insects and other small animals.
- It nests on the ground or in trees, as do other pheasants, but it roosts in trees alone or in couples.
- **Immatures males** look like females but are bigger and have longer legs. During mating season, adult males display their distinctively bare throats, or lappets, by making loud sounds to attract females.
- **The male**, who tips the scales at **1.8 to 2.2 kg**, sports a tall, black crest with a bright red tip and a bright red face and neck. Its back is a tan colour with large white patches of **varying sizes and shapes**.
- **Females** do not have crest feathers. The female has predominantly black feathers with white centre stripes. It has a pinkish face and legs with a speckled pale brownish grey upper body. The female has predominantly black feathers with white centre stripes. It weighs **between 1.3 kg and 1.4 kg**.



Pheasant is any bird of the family **Phasianidae (order Galliformes)** that is larger than a quail or partridge.

3. HIMALAYAN GRIFFON VULTURE

CONTEXT

Recently, Himalayan griffon vultures were sighted in Telangana. This is one of rare instance, where the huge bird from the north is being sighted in the southern parts. This makes for a new distribution of the Old World vulture.

About: Himalayan griffon vultures

- ⦿ **Common name:** Himalayan vulture.
- ⦿ **Scientific name:** *Gyps himalayensis*.
- ⦿ It is an **Old World vulture in the family Accipitridae**. It is one of the two largest Old World vultures and true raptors.
- ⦿ **Distribution:** This species is found along the Himalayas and the adjoining Tibetan Plateau.
- ⦿ **International Union for Conservation of Nature (IUCN) status:** Near Threatened species.



4. TOKHU EMONG BIRD COUNT (TEBC)

CONTEXT

Nagaland hosted the first edition of the Tokhü Emong Bird Count (TEBC) between November 4 to 7, a four-day documentation event to list birds in the state.

About Tokhu Emong Bird Count (TEBC)

- ⦿ It is the first avian documentation exercise taken by Nagaland to go beyond Amur falcons.
- ⦿ The event is being held during the Tokhü Emong post-harvest festival of the Lotha Nagas to spread awareness about Nagaland's bird diversity.
- ⦿ This event is being organised in collaboration with the Wokha Forest Division and the Divisional Management Unit, Nagaland Forest Management Project (NFMP), Wokha, and Bird Count India.
- ⦿ The TEBC falls within the Salim Ali Bird Count, a nationwide event conducted by the Bombay Natural History Society.



5. OSPREYS

CONTEXT

According to recent findings, there has been lowest reproductive number in more than 50 years of monitoring the **local population of the Ospreys 'a raptor'**.

About Ospreys:

- Ospreys are very large, distinctively shaped hawks. Despite their size, their bodies are slender, with long, narrow wings and long legs.
- Ospreys are brown above and white below, and overall they are whiter than most raptors.
- From below, the wings are mostly white with a prominent dark patch at the wrists.
- The head is white with a broad brown stripe through the eye.
- Juveniles have white spots on the back and buffy shading on the breast.
- Ospreys reside around nearly any body of water: **saltmarshes, rivers, ponds, reservoirs, estuaries, and even coral reefs.**
- Their conspicuous stick nests are placed in the open on **poles, channel markers, and dead trees, often over water.**



6. AMUR FALCON

CONTEXT

Amur falcons, the world's longest travelling raptors, began to arrive in Manipur's Tamenglong district as part of its annual routine migration.

Migration Journey:

- Locally known as Akhuipuina, the bird arrives mainly in Manipur and Nagaland on its southbound migration from breeding grounds in North China, Eastern Mongolia and far-east Russia en-route to its wintering grounds in South Africa.
- The one-way journey via India is about 20,000 km long and the birds do this twice a year.

Conservation efforts:

- Amur falcon is **protected under the Wildlife Protection Act 1972** and included under **Schedule IV.**
- Hunting of the birds or possessing its meat is punishable with imprisonment up to three years or a fine up to Rs 5,000.
- In 2018, the forest department started a conservation programme by radio-tagging the birds to study their migratory route.
- These species of birds come under the category of **Least Concern under the International Union for Conservation of Nature (IUCN) Red List.**



7. KAKAPO POPULATION (*Strigops habroptilus*)

CONTEXT

The genetic mapping of almost the entire kakapo **population** has discovered some **specific traits** that will help conservation biologists in their efforts to save these **parrot** species.

About the Species:

- Kakapo, also called **owl parrot**, is a giant flightless **nocturnal parrot** of **New Zealand**.
- With a face like an owl, a posture like a **penguin**, and a walk **like a duck**, the extraordinarily tame and gentle kakapo is **one of strangest and rarest birds** on Earth.
- They only breed every few years, triggered by the availability of **certain forest foods** such as the fruits of the **native rimu tree**.
- They also have very little wings. So, Kakapo is **flightless**.
- These birds evolved to be flightless by filling a **specific ecological niche** on an island with no predators.
- **IUNC Conservation status: Critically Endangered.**

The Rimu fruit (*Dacrydium cupressinum*):

- The mature Rimu tree towers over the canopy with its weeping leaves and shedding bark.
- Rimu plays an integral role in the **mating cycle of the kakapo**.
- The periodic mast-seeding of Rimu every couple of years helps synchronise kakapo mating efforts.
- Unripe Rimu fruit acts as '**kakapo viagra**' stimulating birds of both sexes into breeding, whereas the ripe fruit contains the perfect combination of nutrients and energy for growing chicks.

8. RED-HEADED VULTURE FINALLY SEEN

CONTEXT

For the first time since 2017, birders spotted a red-headed vulture (***Sarcogyps calvus***) in the Bhatti mines area of Delhi.

About the Species

- The red-headed vulture species feed on carcasses of medium sized and large mammals.
- **Family:** The red-headed vulture belongs to the family Accipitridae.
- **Scientific Name:** *Sarcogyps calvus*
- **Habitat:** These red-headed vulture species are distributed in Southeast Asia and the Indian Subcontinent.

- ⦿ **Size:** The red-headed vulture is a large bird, measuring 75 to 85 cm in length and weighing 3,500 to 5,500 grams.
- ⦿ **IUCN Status:** The IUCN (International Union for Conservation of Nature) has categorized and evaluated these bird species and has listed them as "Critically Endangered".

9. BALD EAGLE (*Haliaeetus leucocephalus*)

CONTEXT

The population of **American bald eagle**, removed from the United States' list of endangered species in 2007, has quadrupled since 2009.

About:

- ⦿ The bald eagle is a **sea eagle (*Haliaeetus species*)**.
- ⦿ It is the national bird of USA and a **classic icon**, standing for strength, courage, and freedom.
- ⦿ Bald eagles are **large, predatory raptors** that are recognizable for their brown body and wings, white head and tail, and hooked yellow beak. Their feet, which are also yellow, are equipped with sharp black talons.
- ⦿ Bald eagles grow to about 2.5 to 3 feet (0.7 to 0.9 meters) in height, and they have an impressive wingspan of 6.5 feet (two meters).
- ⦿ **Female bald eagles** are larger than the males, but share the same coloration.
- ⦿ **IUCN Status:** Least Concern



Dichloro-diphenyl-trichloroethane (DDT) had a catastrophic impact on the bald eagle population in 1940s.

Eagle

- ⦿ Eagle is the large birds of prey that belong to the *Accipitridae* family.
- ⦿ There are 24 species of Eagle found in India.

10. WHITE-RUMPED VULTURE (*Gyps bengalensis*)

CONTEXT

Even with protective measures in place, the future of the **critically endangered white-rumped vulture (*Gyps bengalensis*)** in the **Sigur plateau** of the **Nilgiris** remains highly precarious.

About

- ⦿ The **white-rumped vulture** (*Gyps bengalensis*) is an **Old World vulture** native to South and Southeast Asia.
- ⦿ It is the **smallest of the Gyps vultures**, but is still a very large bird.
- ⦿ A medium-sized vulture with a silvery bill, a dark body, a grayish shine on the wings, a white back, and a distinctive white collar on the neck.
- ⦿ It has been listed as Critically Endangered on the IUCN Red List since 2000.
- ⦿ It is closely related to the **European griffon vulture** (*Gyps fulvus*).



11. HORNBILL

CONTEXT

Recently, Great Indian Hornbill tortured to death in Nagaland.

About Hornbills

- ⦿ Hornbills (Bucerotidae) are a family of bird found in tropical and subtropical Africa, Asia and Melanesia. They get their name from the horn-like structure on the top of their beak—the casque.
- ⦿ Globally, Hornbill distribution is limited to Sub-Saharan Africa, Indian-Subcontinent, Philippines, Indonesia and the Solomon Islands.
- ⦿ In India, they are found in the Western Ghats and the northeastern states.
- ⦿ **Habitat**– Great hornbills inhabit the canopy of tall evergreen forests.
- ⦿ **Diet**: Hornbills are one of the biggest frugivores (fruit-eating birds) in the Asian rainforest. Around 40-70% of their diet consists of large ficus fruits, figs, drupes and berries, usually red or black in colour.
- ⦿ **Conservation status**: India is home to 9 species of Hornbill. All species except the Oriental pied hornbill are listed under Schedule I of the Wildlife Protection Act (1972).



These species are:

- ⦿ **Indian Grey Hornbill** (Least Concern)
- ⦿ **Malabar Grey Hornbill** (Vulnerable)

- **Malabar Pied Hornbill** (Near Threatened)
- **Great Hornbill** (Vulnerable); Also in Schedule I of the Wildlife Protection Act, 1972.
- **Narcondam Hornbill** (Vulnerable) is found only in the Narcondam Island of Andaman Sea.
- **Rufous-necked Hornbill** (Vulnerable)
- **Wreathed-Hornbill** (Vulnerable)
- **White-throated Hornbill** (Near Threatened)
- **Oriental Pied Hornbill** (Least Concern)

12. INDIAN GREY HORNBILL

CONTEXT

Gujarat Forest Department is reintroducing the **Indian Grey Hornbill (IGH)** in **Gir Forest** after almost ninety years when they vanished from this largest contiguous forest tract in western India.

About Indian Grey Hornbill

- **Indian Grey Hornbill (*Ocyceros birostris*)** is a fairly common hornbill species found only in the Indian subcontinent. It is a medium-sized hornbill with a brownish-grey body.
- **IUCN Status:** Least Concern.
- **Diet:** They feed on fruits and berries from fig trees, insects, reptiles (snakes, lizards), small birds (mostly fledglings) but on occasion can go after slightly bigger adult birds as well.
- These birds are known to be **arboreal**, i.e. spend most of their time on tall trees but may descend for food and to collect mud pellets for nesting.



13. ORIENTAL DARTER

CONTEXT

In order to monitor seasonal fluctuations in birds' movements, the ringing of oriental darters has been taken up in **Bharatpur bird sanctuary (Keoladeo National Park)**.

About Oriental Darter

- The Oriental darter or Indian darter (*Anhinga melanogaster*) is a water bird of tropical South Asia and Southeast Asia.

- ⦿ It is characterized by a long and slender neck with a straight pointed bill, and it hunts for fish with its body submerged in water.
- ⦿ They are classified as “**near-threatened**” by the **International Union for Conservation of Nature (IUCN)**.

Keoladeo National Park

- ⦿ Keoladeo National Park is a **UNESCO World Heritage** and a **Ramsar Site** located in Bharatpur district of Rajasthan.
- ⦿ The National park is famous for its **Siberian crane** and is a habitat for nearly 365 species of birds, raptors and waterfowls.

India’s first dedicated wildlife park

- ⦿ **Clouded leopards National park of Tripura** is India’s first dedicated wildlife park to spot Clouded leopards located inside **Sipahijola wildlife sanctuary**.
- ⦿ Apart from these places, Clouded Leopards can be seen in
 - Balphakram National Park, Meghalaya
 - Kanchanjunga National Park, Sikkim
- ⦿ Manas National Park, Assam
- ⦿ Phawngpui National Park, Mizoram
- ⦿ Dibrusaikhowa National Park, Arunachal Pradesh
- ⦿ Buxa National Park, West Bengal

14. INDIAN EAGLE-OWL

CONTEXT

The Indian eagle-owl was classified as a species only in recent years, thus distinguishing it from the **Eurasian eagle-owl**. The Indian species is an imposing bird.

About the Species:

- ⦿ The Bengal eagle-owl (*Bubo bengalensis*), also widely known as the Indian eagle-owl or rock eagle-owl, is a large horned owl species native to hilly and rocky scrub forests in the Indian Subcontinent.
- ⦿ It is a nocturnal species, bigger in size and does not have a dependency on forests.
- ⦿ They eat rats, bandicoots, and doves living in open scrubland and agricultural tracts.
- ⦿ Nearby rocky perches and crags provide ideal settings for its nests.
- ⦿ **Conservation status:**

➤ **IUCN Red list:** Least Concern

- ⦿ **CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora):** Appendix II

15. GREAT INDIAN BUSTARD (GIB)

- ⦿ It is one of the heaviest flying birds in the world.
- ⦿ It is usually found in dry grasslands and scrublands on the Indian subcontinent.
- ⦿ Its largest populations are found in the Indian state of Rajasthan.
- ⦿ It is the state bird of Rajasthan.
- ⦿ It is listed as Critically Endangered on the IUCN Red List and Schedule I of the Indian Wildlife (Protection) Act, 1972.

16. SPOT-BILLED PELICANS

CONTEXT

A nematode infestation has led to mass mortality of **Spot-Billed Pelicans (*Pelecanus philippensis*)** at **Telineelapuram Important Bird Area (IBA)** in **Naupada swamp** of Srikakulam district in Andhra Pradesh.

About Spot-billed pelicans

- ⦿ The spot-billed pelican (*Pelecanus philippensis*) or gray pelican is a member of the pelican family.
- ⦿ It breeds in southern Asia from southern Iran across India east to Indonesia. It is a bird of large inland and coastal waters, especially large lakes.
- ⦿ **Conservation status:** Near Threatened
- ⦿ Over 150 spot-billed pelicans have succumbed to the infestation since December. Only adult birds have succumbed to the infestation till date.



Telineelapuram Bird Sanctuary

- ⦿ Telineelapuram Bird Sanctuary is an internationally recognised exotic bird sanctuary for the conservation of rare exotic birds.
- ⦿ It is a designated **Important Bird Area (IBA)**.
- ⦿ Until now, in South India, the Telineelapuram IBA is the prime winter sojourn for the spot-billed pelican for breeding.
- ⦿ The same IBA is also a breeding habitat for the painted stork (*Mycteria leucocephala*).

17. INDIAN SKIMMER

CONTEXT

Indian skimmer is seen in huge flocks during winter in Coringa wildlife sanctuary (Kakinada).

About Indian Skimmer

- ⦿ A thick, orange-yellow bill with a slightly longer lower mandible (jaw) is one of the most striking features of the Indian skimmer (*Rynchops albicollis*).
- ⦿ The Indian skimmer grows to a length of 40-43 cm.

Distribution:

- ⦿ More widespread in winter, the Indian skimmer is found in the coastal estuaries of western and eastern India.
- ⦿ It occurs primarily on larger, sandy, lowland rivers, around lakes and adjacent marshes and, in the non-breeding season, in estuaries and coasts.
- ⦿ About 20% of the total population of fewer than 2,500 birds nest along river Chambal.



Conservation:

- ⦿ IUCN: Endangered
- ⦿ In 2020, Bombay Natural History Society (BNHS) have initiated a 'Guardians of the Skimmer' programme, which is a community-based conservation initiative.
- ⦿ BNHS in collaboration with Bird Count India have also initiated 'Indian Skimmer Count'-a citizen science initiative.

18. SIBERIAN RUBYTHROAT

CONTEXT

A rare winter migrant, Siberian rubythroat has been recorded in the Nilgiris.

About Siberian rubythroat

- ⦿ Siberian rubythroat (*Calliope calliope*) is a ground-loving songbird.
- ⦿ The male has a red throat edged with a narrow black border and a broad white border.
- ⦿ Females lack brightly coloured throat and borders.

Conservation

- ⦿ IUCN - Least Concern
- ⦿ CMS - Appendix II

- ◉ **Distribution** - During the breeding season the species is found in lowland taiga and subalpine shrubbery.
- ◉ The bird breeds in the coniferous forests of Siberia.
- ◉ The species is migratory, wintering in south-east Asia (Thailand, India, Indonesia and Bangladesh)
- ◉ Food - Insectivorous. Eats flies and their larvae, ants, wasps and beetles.



19. GREYBELLIED WREN BABBLER

CONTEXT

According to the recent findings of birdwatchers published by Indian BIRDS, a peer-reviewed journal of South Asian ornithology, they recorded a rare and elusive greybellied wren babbler.

About: Greybellied Wren Babbler

- ◉ Grey bellied wren babbler is a specie of songbird named after the Lisu, the local community.
- ◉ This is mostly found in Myanmar with some birds occurring in adjoining China and Thailand.
- ◉ **IUCN Status:** Least Concern
- ◉ **Habitat:** Subtropical moist montane forest.



Features:

- ◉ Dark edges to its back and crown feathers give it a scaly-looking quality.
- ◉ Forages on ground and in undergrowth, almost always under heavy cover and rarely emerging into the open.

20. SARAS CRANE (*Grus antigone antigone*)

CONTEXT

Once a common site in the paddy fields of **Uttar Pradesh, Bihar, Rajasthan, West Bengal, Gujarat, Madhya Pradesh and Assam**; the population of the Indian Sarus crane is now on the decline.

About

- ⦿ It is a **large non-migratory crane** found in parts of the Indian subcontinent, Southeast Asia, and Australia.
- ⦿ It is the **tallest flying bird in world** standing 152-156 cm tall with a wingspan of 240cm.
- ⦿ It is easily distinguished from other cranes in the region by its overall grey colour and the contrasting red head and upper neck.
- ⦿ The Indian Sarus Crane occurs in northern and **central India, Terai Nepal and Pakistan.**
- ⦿ **Conservation Status:**
 - **IUCN Red List:** Vulnerable
 - **Wildlife (Protection) Act 1972:** Schedule IV





- 01 **100+ Mentorship Sessions** (Pre & Post Test) based on **52 Tests** to cover entire Syllabus of GS Mains.
- 02 **80+ Prelims Tests** integrated with the **Mentorship Schedule of Mains Answer Writing Tests**.
- 03 **Detailed Discussion of the Tests.**
- 04 **Daily Preparation Target** with Strict Schedule (No Flexi Format).
- 05 **16 Weekly Revision Tests & 12 Subject Revision Tests** for Both Prelims & Mains
- 06 **Prelims Mock Test Series** (20 Tests) for **All India Ranking & Performance Analysis.**
- 07 **One on One Mentorship Session** for Marks Improvement.



BATCH STARTS } **05**
NOVEMBER

PROGRAMME FEE
₹ 17,000 +GST

8448496262
 iascore.in

Insect

1. CRIMSON ROSE BUTTERFLY

CONTEXT

The Crimson Rose butterflies have been flying from **Dhanushkodi** across the Indian Ocean. It is known for crossing the sea to migrate to Sri Lanka.

About Crimson Rose Butterflies

- ◎ Crimson Rose belongs to the **Swallowtails (Papilionidae) family**.
- ◎ It is known to migrate along the coast, inland and crosses the sea often.



Description:

- ◎ It is a large butterfly with a mix of black, white and crimson colours on its wings and body, and is known for crossing the sea to migrate to Sri Lanka.
- ◎ The most interesting and visually stunning aspect of the migration was that the butterflies made small pit stops on flowering plants on the beach to fuel their journey.

Characteristics:

- ◎ Crimson Roses were spotted on Ipomea flowers and half leaf flowers on the beach.
- ◎ The grandest gathering was on a Calotropis gigantea plant, which was the sole plant in the vicinity.
- ◎ Each butterfly spent about 30 seconds on nectaring and then continued its journey towards Sri Lanka.

Distribution:

- ◎ The species occurs mostly in dry, deciduous forests, dense scrub, jungles, and open country, but

can also be found in disturbed semi-evergreen, evergreen forests.

- ⦿ This species occurs across mainland Sri Lanka and Peninsular India to West Bengal, as well as possible distributions along with the Andaman Islands, Nicobar Islands, in Western Myanmar, and Bangladesh.

IUCN Status: The IUCN Red List of Threatened Species in 2019 listed it as **Least Concern**.

2. A RARE DRAGONFLY SPOTTED IN KERALA

CONTEXT

A species of **Spiny Horntail- Dragonfly** is seen in **Kottiyoor forests** of Kannur district of Kerala.

About

- ⦿ This species is endemic to Western Ghats, earlier found in Maharashtra this year.
- ⦿ In India, they are found in three types of species in genus *Burmagomphus*.
- ⦿ **cauvericus** – restricted to certain areas of Western Ghats
- ⦿ **pyramidalis**- Western Ghats as well as in Peninsular India.
- ⦿ **laidlawi**- Found in whole of Western Ghats
- ⦿ Other than these species all species of the genus are found in the **Western and Eastern Himalayas**.
- ⦿ The new species is separated from its congeners by the markings on the lateral thorax and peculiar shape of anal appendages.



Dragonfly

- ⦿ Dragonflies are predatory insects from the order Odonata (an order of flying insects that includes the dragonflies and damselflies) and characterized by;
 - large eyes
 - transparent wings
 - Most colourful patches in body

Other major species in India

- ⦿ Ditch jewel dragonfly
- ⦿ *Diplacodes trivialis* (ground skimmer): Most abundant species.
- ⦿ Red Groundling
- ⦿ *Potamarcha congener*- Common chaser

3. PALMKING

CONTEXT

The **rare butterfly Palmking** has been spotted for the first time in Tamil Nadu.

About Butterfly Palmking:

- ⦿ The unique woody species was earlier seen only in Kerala.
- ⦿ It is the first recorded instance of the rare species in Tamil Nadu.
- ⦿ Palmking was first recorded in South India by British scientist S.Ferguson in 1891.
- ⦿ More than a Century later, it was rediscovered in 2007 in Thenmala by C. Susanth.

Distribution:

- ⦿ This butterfly is widely distributed across parts of **India, Myanmar, Indo China, Peninsular Malaysia and Thailand.**
- ⦿ It occurs in the Indonesian archipelago and the Philippines.
- ⦿ In India, Palmking sightings were recorded in the forests of **Arippa, Shendurney, Periyar Tiger Reserve in the south of Western Ghats.**
- ⦿ The butterfly is characterised by its brown colour and dark bands and is described as reclusive, mostly resting in the shade.
- ⦿ It is not easy to spot a Palmking because its wood colour makes for easy camouflage and it rarely spreads its wings.
- ⦿ Palmking belongs to the **Nymphalidae subfamily** and feeds on palm, coconut and calamus varieties of plants.

4. GHATIANA DWIVARNA

CONTEXT

A new Crab Species has been discovered from Karnataka.

About

- ⦿ It is the 75th crab species to be found in India.
- ⦿ The name of this new species of crab is derived from a Sanskrit word 'dwivarna' which means two-colored.
- ⦿ It is a venomous and non-edible species of crab.

5. RED WEAVER ANTS

- In Odisha, red weaver ants are consumed in the form of a Chutney known as 'Kai Chutney' and scientists have sought a GI tag for the dish.
- It helps in getting rid of flu, common cold, whooping cough, to increase appetite, enhance vision and eyesight naturally.
- The tribal healers also prepare medicinal oil, which is used as baby oil and externally used to cure rheumatism, gout, ringworm and other skin diseases.
- These ants live in colonies consisting of multiple nests on trees. These ants are indigenous to Mayurbhanj, Odisha.



6. VARROA MITE

- It is an external parasitic mite that attacks and feeds on the honey bees.
- The disease caused by the mites is called varroosis.
- It can reproduce only in a honey bee colony.
- It attaches to the body of the bee and weakens the bee by sucking fat bodies.

7. BLUE DUKE

CONTEXT

The Chief Minister of Sikkim declared Blue Duke as "State Butterfly of Sikkim".

About

- It is a native butterfly species of Sikkim. It is also called *Bassarona durga*.
- It was first discovered in Sikkim in 1858.
- It is listed in Schedule 2 of Wildlife Protection Act, 1972.



8. MONARCH BUTTERFLY

- It has been recently classified endangered in the **International Union for Conservation of Nature (IUCN) Red List**.
- Most of these butterflies are found in winter in the California coast and forests in central Mexico.
- A smaller population of the species is also found in countries like Australia, Hawaii and India.
- They breed in only one particular plant The Milkweeds.

9. MONOCEROMYIA FLAVOSCUTATA

CONTEXT

Researchers have discovered two new species of very **rare wasp-like flower flies** from north-eastern India and the Western Ghats.

About

- ⦿ The newly described species, **Monoceromyia flavoscutata** and **Monoceromyia nigra**, belong to the **Syrphidae family**.
- ⦿ They are wasp like flower flies or syrphid flies.
- ⦿ They were named so because of their black colored thorax and yellowing in their body.

About Monoceromyia

- ⦿ The Monoceromyia genus is generally referred to as syrphid fly.
- ⦿ They are generally found in Australasian, Afrotropical, Neotropical and Oriental regions.
- ⦿ Afrotropical includes Africa, Arabian Peninsula, south of Sahara Desert, southern Iran, Madagascar, islands of western Indian Ocean and extreme south west Pakistan.
- ⦿ The oriental region refers to East, South and Central Asia. Neotropical region includes South America, Caribbean and Central America.



10. NEW GENUS OF WASP IDENTIFIED

CONTEXT

The scientific community has named a new genus of wasp after the **Soliga** community of Karnataka.

About

- ⦿ Wasp is a **social winged insect** which has a narrow waist and a sting and is typically **yellow with black stripes**.
- ⦿ It constructs a **paper nest from wood pulp** and raises the larvae on a diet of insects.
- ⦿ In recognition of the conservation of **forests and biodiversity** of the indigenous people.
- ⦿ **Genus named: Soliga ecarinata** is an acknowledgement of the Soliga lifestyle which is rooted in the philosophy of sustainability since ancient days.

The species is named '**ecarinata**' denoting the absence of ridges in certain body regions and this new insect is strikingly colourful and distinct from all its relatives.

- ⦿ This is the second genus of this subfamily **reported from India** and the first from South India.
- ⦿ **Key features of the Species:**
 - The new wasp belongs to the **subfamily Metopiinae** of Darwin wasps' family *Ichneumonidae*.
 - The subfamily Metopiinae has **862 species in 27 genera** including two fossil genera.
 - Most of these species are seen only in the **Palaeartic region, Neotropical and Nearctic regions**.

The Soliga community:

- ⦿ The Soliga people are a tribal community found in the Biligiri Rangana (BR) Hills in the district of Chamarajanagar, in the southern state of Karnataka, India.
- ⦿ They belong to the **Australoid ethnic group**: dark complexion, curly hair, short stature, a dolichocephalic head, a sunken nasal root and a depressed nasal bridge.
- ⦿ They speak the **Soliganudia** dialect that has 65% lexical similarity with **Kannada, a Dravidian language spoken in Karnataka, Andhra Pradesh, Tamil Nadu and Maharashtra**.
- ⦿ The Soliga used to practice **shifting cultivation**.
- ⦿ They grow **Ragi (Finger millet, *Eleusine coracana*)** for subsistence.
- ⦿ Their main source of income is harvesting and sale of Non-timber Forest Produce (NTFP) **like honey, nellikai (gooseberry, *Emblica officinalis*), bamboo, Paasi(Lichen), algae, wild turmeric, Indian blackberry, soapnut and nennari (wild root)**.
- ⦿ They also make baskets using bamboo.
- ⦿ **Religion followed**: Soliga people follow **naturism and animism** along with following Hindu practices and their main deities are Madeshwara.

11. DROSOPHILA MELANOGASTER

CONTEXT

Pune hosted the fifth edition of the **Asia Pacific Drosophila Research Conference (APDRC5)**, which was organised in the country for the first time by the **Indian Institute of Science Education and Research (IISER)**.

About Drosophila Melanogaster

- ⦿ Drosophila is a **genus of flies, belonging to the family Drosophilidae**, whose members are often called "**small fruit flies**" or **pomace flies, vinegar flies, or wine flies**.
- ⦿ One species of Drosophila in particular, *D. melanogaster*, has been heavily used in research in genetics and is a common model organism in developmental biology.



- Its genome is entirely sequenced and there is enormous information available about its biochemistry, physiology and behaviour.

12. NEUROTERUS VALHALLA

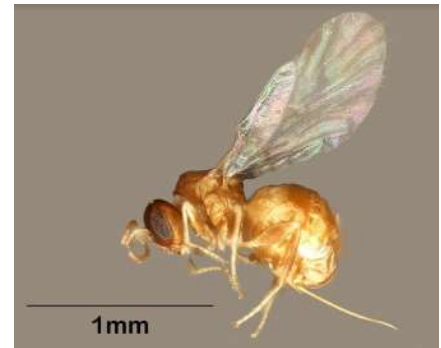
CONTEXT

The Rice University researchers recently discovered a new wasp species called **Neuroterus Valhalla**. It is a weird species that spends 11 months of a year locked in a crypt. It is just a millimetre long.

A wasp is an insect with wings and yellow and black stripes across its body. **Wasps have a painful sting like a bee but do not produce honey.**

About N.valhalla

- It was discovered outside a student pub Valhalla. And thus named after it. The species was collected from an oak tree in 2018. The scientists are yet to find the male member of the species.
- The females lay eggs in trees. It is a **cynipid gall wasp**. It uses chemicals to produce crypts or galls around its eggs.
- Around 1,300 gall wasps are known to human. They are distributed in Europe and North America. The reproduction of gall wasps is partly **parthenogenesis**.



Parthenogenesis is asexual reproduction where growth and reproduction occur without the fertilization of sperm.

13. MONEY SPIDER

CONTEXT

It has been reported for the 1st time in the India from the Muthanga range of the Wayanad Wildlife Sanctuary.

About

- It is commonly found in European meadows.
- It belongs to the family of dwarf spiders under the genus Prosoponoides.
- Both sexes are dark brown and have irregular silver patches and black spots on the elliptical abdomen.



14. ANT-MIMICKING SPIDERS

About

- ⦿ The ant-mimicking spider has been named *Toxeus alboclavus*.
- ⦿ The male and the female spiders of this species grow up to 4 mm and 6 mm long respectively.
- ⦿ The forward-projecting fangs have a characteristic shape of an antler.





Turtle

1. OLIVE RIDLEY - OPERATION SAVEKURMA

CONTEXT

Recently, Hundreds of Olive Ridley turtles were found dead in their breeding grounds between Kakinada and Antarvedi in the Godavari region of India's east coast.

About Olive Ridley turtle

- The Olive Ridley turtles are the smallest and most abundant of all sea turtles found in the world.
- They are best known for their unique mass nesting called **Arribada**, where thousands of females come together on the same beach to lay eggs.
- They are **carnivores** and get their name from their olive-colored carapace, which is heart-shaped and rounded.
- **Habitat:**
 - They are mainly found in the warm waters of the **Pacific, Atlantic and Indian oceans**.
 - Odisha's **Gahirmatha Marine Sanctuary** is known as the world's largest rookery (a colony of breeding animals) of sea turtles.



Conservation status

- **IUCN Red List: Vulnerable**
- Wildlife Protection Act, 1972: Schedule 1
- CITES Appendix I

Initiative taken for protection

- **Operation Olivia:** Every year, the Indian Coast Guard's "Operation Olivia", initiated in the early 1980s, helps protect Olive Ridley turtles as they congregate along the Odisha coast for breeding and nesting from November to December.

2. INDIAN TENT TURTLE

CONTEXT

Ministry of Environment informed Rajya Sabha about the Indian Tent Turtles.

About Indian tent turtle (*Pangshura tentoria*)

- ⦿ The **Indian tent turtle (*Pangshura tentoria*)** is a species of turtle in the family **Geoemydidae**. The species is endemic to India and Bangladesh.
- ⦿ The preferred habitats of *P. tentoria* are freshwater rivers and swamps.
- ⦿ Indian tent turtle is listed in **Schedule –I of the Wild Life (Protection) Act, 1972** and is thereby provided the highest degree of protection.
- ⦿ There are no reports to indicate that the Indian tent turtle is on the verge of extinction due to illegal mining in Narmada River.
- ⦿ **IUCN Status:** Least Concern.
- ⦿ **CITES Status:** Appendix II.



3. CHELONOIDIS PHANTASTICUS

CONTEXT

A giant tortoise, found alive in 2019, has been confirmed to belong a Galápagos species long believed extinct.

About

- ⦿ Named **Fernanda** after her **Fernandina Island home**, the tortoise is the first of her species, **Chelonoidis phantasticus**, to be identified in more than a century.
- ⦿ *Chelonoidis phantasticus* means “fantastic giant tortoise”.
- ⦿ Commonly called the **Fernandina Island Galápagos giant tortoise**, the species was so far known only from a single individual, collected in 1906.
- ⦿ Although Fernanda was found on Fernandina Island itself, and although tortoises can’t swim from one island to another, they can be carried from one Galápagos island to another during major storms.



4. RED-EARED SLIDER TURTLE

- It is a very popular aquatic turtle, native to South-Eastern USA and Mexico.
- It is classified as controlled pest animal under the Victorian Catchment and Land Protection Act 1994.
- It emerges from the water for basking on rocks and logs.
- When basking, red-eared sliders commonly pile on top of each other.
- They can tolerate a wide range of habitats and are sometimes found in estuaries and coastal wetlands with brackish water.
- It is listed as **Least Concern in the IUCN Red List**.



5. ASIAN GIANT TORTOISE

CONTEXT

Ten captive-bred Asian Giant Tortoise (*Manouria emys*) juveniles were released into a protected area of Nagaland's Intanki National Park.

About Asian Giant Tortoise

- The soft release of Asian Giant Tortoise is an attempt to boost conservation and repopulating the species. The soft release is a process of gradually releasing captive-raised species into the wild.
- **Distribution:** They are found in Bangladesh, India, Indonesia, and Malaysia and other places.
- **Diet:** Bamboo shoots, tubers and other juicy vegetation and some invertebrates and frogs.
- **Threats:** Hunting for consumption, habitat loss, anthropogenic activities like construction and slash and burn.



Conservation Status

- **IUCN:** Critically Endangered
- **CITES:** Appendix II
- **Indian Wildlife (Protection) Act of 1972:** Schedule IV

Intanki National Park:

- It is also known as the Ntangki National Park, which was established by British administrators in the year 1923.
- **Flora:** it has thick rain forests which creates natural habitat for many animals.
- **Fauna:** Wild buffaloes, Hoolok gibbo, Tigers, Sloth bear, Wild dogs and flying squirrels.

**IAS
2024**

PRELIMS TEST SERIES 2024

**4600+
QUESTIONS**

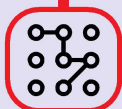
**PRELIMS
PRACTICE
PROGRAMME
(PPP)**



29

**BATCH
STARTS | OCTOBER**

**₹ PROGRAMME FEE
₹ 8,500 (+GST)**



**Tests as per Changing
Pattern of the UPSC
Prelims**



**Concept & Essential Skills
Building through Tests
and their Discussion**



**Level-wise Questions for
gradual improvement &
exam readiness**



**One-on-one mentorship
for Personalised Guidance**



**Emphasis on both Static &
Current Events as per the
evolving format**

TOTAL 68 TESTS

33

**SUB SECTIONAL
TESTS
50 QUESTIONS**

12

**SECTIONAL TESTS
(GS & CSAT)
100 & 50 QUESTIONS**

07

**CURRENT AFFAIRS
TESTS
100 QUESTIONS**

16

**MOCK TESTS TESTS
(GS & CSAT)
100 & 80 QUESTIONS**



8448496262



iascore.in

Miscellaneous

1. ARIOSOMA INDICUM

CONTEXT

Recently, Scientists discovered new eel species named *Ariosoma indicum* from Kerala and West Bengal respectively.

About *Ariosoma indicum*

- ⦿ Scientists confirmed *Ariosoma indicum* as a new species after two years of through research, taxonomic studies and molecular analysis.
- ⦿ The newly discovered eel belongs to the Congrid eels group and has been named *Ariosoma indicum*.
- ⦿ The *Ariosoma* genus has seven species, including the newly identified eel that have been documented in Indian waters.
- ⦿ Globally, there are 223 species in the genus.
- ⦿ The term **Indicum** means that it was found in India.
- ⦿ The total length of the new species is 362 millimetres.
- ⦿ **Distribution:** It is possibly distributed along the Indian coast, including the coastal waters of Kerala and West Bengal.
- ⦿ **Features:**
 - A greenish-brown body, with faint dark bands on the dorsal portion of the head
 - Minute dark pigmentation patches on the extremities of the lower jaw
 - Bicoloured pectoral fin
 - A short wedge-shaped pointed vomerine teeth patch, with three or four rows in the anterior portion



Protection status:

The new eel species is not listed as 'Threatened' or 'Endangered' by the International Union for Conservation of Nature's Red List or the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

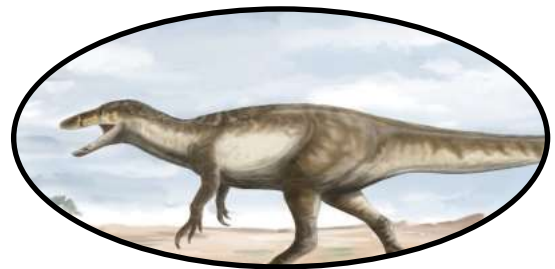
2. EMPEROR PENGUIN

- It is the tallest and heaviest of all living penguin species and is endemic to Antarctica.
- They are the world's deepest-diving birds.
- They are capable of diving to depths of approximately 550 metres (1,800 feet).
- Their population is decreasing due to the climatic changes associated with global warming.
- It is listed as Near Threatened in the IUCN Red List.



3. MAIP MACROTHORAX

- The remains of the largest dinosaur named Maip macrothorax ever recorded have been found in Patagonia. It was around 9-10 meters long.
- It had an agile skeleton, a long tail, a long neck and an elongated skull with over 60 small teeth.



4. CORNECHINISCUS MYSTACINUS

- In the recent study, it was found that, one tardigrade (diverse group of microscopic invertebrates) represented a previously undiscovered species, called Cornechiniscus Mystacinus.
- The species are commonly found in mountains of Tashkomur in Jalalabat region of northern Kyrgyzstan.
- It is found in yellow to dark orange colour.
- Tardigrades can survive for up to 30 years, without food or water & even in extreme conditions.



5. HAPLOPTYCHIUS SAHYADRIENSIS

- A new species of snail has been found in northern Western Ghats of Maharashtra.
- The species is endemic to Vishalgad Conservation Reserve in Kolhapur.

- It has been named after the type locality of the species in the northern part of the Western Ghats, which is Sahyadri in Sanskrit.
- India has nearly 1,450 snails and slugs with the highest diversity in north-eastern India followed by the Western Ghats.



6. SYLLIPSIMOPODI BIDENI

CONTEXT

Recently, a fossil unearthed in central Montana (US) of a species named *Syllipsimopodi bideni* represents the oldest-known relative of today's octopuses and boasts 10 arms, with two twice as long as the other eight.

About: *Syllipsimopodi bideni*

- It has been named after the **US president, Joe Biden**.
- *Syllipsimopodi*, about 12 cm long, had a **torpedo-shaped body and squid-like appearance** though it was not closely related to squids.
- It also is the **oldest-known creature with suckers**, which enable the arms to better grasp prey and other objects.
- It represents the only member of the octopus lineage with 10 arms, meaning two were lost in later evolution.
- There are numerous similar examples in the history of life on Earth – such as the reduction in the number of digits seen in meat-eating dinosaurs or horses.
- *Syllipsimopodi* prowled the warm waters of a tropical bay – Montana at the time was situated close to the equator. It may have been a mid-level predator, eating smaller invertebrates.
- It drifted across oceans nearly 328m years ago.
- *Syllipsimopodi* pushes back by 82 million years the origins of a group called **vampyropods** that includes today's octopuses.

Vampyropods

- Vampyropods are soft-bodied cephalopods typically characterized by eight arms and an internalized chitinous shell or fin supports.
- Cephalopods are a group of marine invertebrates that include octopuses, squids and cuttlefish.
- Vampyropoda, the clade combining octopods, vampyromorphs, and their relatives, is one of three main groups of coleoid (internally-shelled) cephalopods, the other two being Decabrachia (squids, cuttlefishes, bobtail squids, and Spirula) and the extinct Belemnnoidea.

7. MAXILLARIA ANACATALINAPORTILLAE

CONTEXT

Scientists have described a new species of the Neotropical orchid genus *Maxillaria* from northern Ecuador.

About *Maxillaria anacatalinaportillae*

- ◎ ***Maxillaria anacatalinaportillae*** grows as an epiphyte in cloud rainforests at altitude of 1,700 m above sea level.
- ◎ **IUCN Red List criteria:** Critically Endangered

8. SPINOSAURUS

CONTEXT

Recently, Rare Spinosaurus dinosaur fossils found on Isle of Wight.

About *Spinosaurus Aegyptiacus*

- ◎ ***Spinosaurus Aegyptiacus***: 1st Known Aquatic Dinosaur
- ◎ A team of scientists from various Universities of the United States have discovered a carnivorous (meat eating) swimming dinosaur named "*Spinosaurus aegyptiacus*" at the Kem Kem region of the Moroccan Sahara in North Africa.
- ◎ Unlike other theropod dinosaurs, the 50-foot (15 meters) long Spinosaurus used its tail for swimming to actively hunt for prey in rivers.
- ◎ Lived about 95 million years ago (Cretaceous period), spinosaurus was even longer than an adult Tyrannosaurus rex (T-rex).