

PRELIMS EDGE 202515-07-2025**SPECIES IN NEWS****Locust Swarms**

- Locusts are a **type of grasshopper belonging to the family Acrididae**.
- The Desert Locust (*Schistocerca gregaria*) is considered **the most destructive migratory pest**.
- Locusts are solitary insects until they undergo a transformation called **gregarisation**, where they become more social and congregate in large swarms.
- A small swarm (1 km²) can contain 80 million locusts, consuming as much food as 35,000 people in one day, while a large swarm can eat up to 1.8 million metric tons of vegetation.
- Locusts are migratory pests capable of flying hundreds of kilometers in swarms.

- They are a trans-border pest that travels between Africa, the Middle East, and South Asia.
- India's Scheduled Desert Area, encompassing the states of Rajasthan, Gujarat, and Haryana, covering over 2 lakh square kilometers, is particularly vulnerable to locust invasions, which often originate from regions such as Africa and the Gulf.
- Desert Locust (*Schistocerca gregaria*), Migratory Locust (*Locusta migratoria*), Bombay Locust (*Nomadacris succincta*), and Tree Locust (*Anacridium sp.*) are reported in India.
- India's Locust Warning Organization, along with 10 Locust Circle Offices in Rajasthan and Gujarat, monitors, surveys, and controls desert locusts in coordination with state governments in the Scheduled Desert Area.

Gharial

- It is a freshwater crocodile belonging to the Crocodylia Order and Crocodylidae Family.
- The name 'gharial' comes from the Hindi word ghara, meaning pot or vessel, referring to the bulbous snout tip of adult males, which resembles an inverted pot.
- **Distribution:** Its range spanned the rivers of Bangladesh, Bhutan, India, Myanmar, Nepal, and Pakistan.
- Their major population occurs in three tributaries of the Ganga River: the Chambal and Girwa Rivers in India and the Rapti-Naryani River in Nepal.
- The Gharial reserves of India are located in three States: Uttar Pradesh, Madhya Pradesh, and Rajasthan.

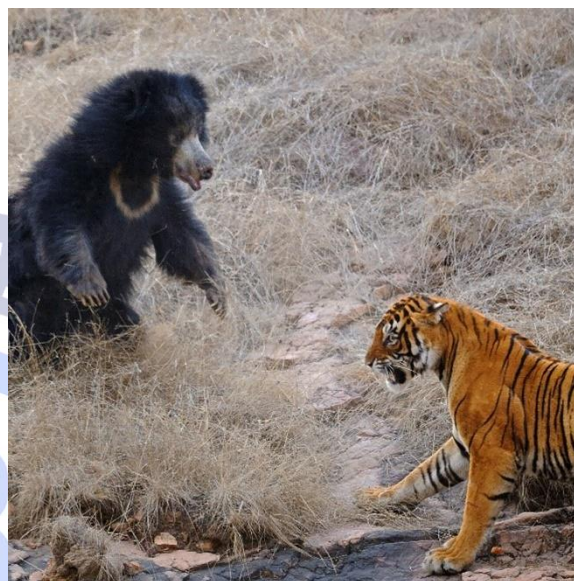
Features of Gharials

- It is one of the largest crocodilian species, with males reaching 16 to 20 feet (5 to 6 meters) in length. Females typically grow to lengths of 11.5 to 15 feet (3.5 to 4.5 meters).
- They have thick skin covered with smooth epidermal scales that do not overlap.
- The snout of the gharial is uniquely the thinnest and most elongated among all the crocodilians.
- In addition, the adult males sport a large bulb at the tip of their snout, called the 'ghara'.
- It is also the most aquatic of all crocodilians, for it never moves far from the water.
- **Reproduction:** They mate during November–January and lays eggs March–May.
- **Threats:** Overhunting for skins, trophies, eggs, and traditional medicine

Conservations Status of Gharials

- IUCN: Critically endangered
- CITES: Appendix I
- Wildlife (Protection) Act, 1972: Schedule I

Sloth Bear



- Sloth bears are **one of the eight bear species found across the world.**
- They are **myrmecophagous**, meaning, **they find bugs and termites to be their most sought-after meal.**
- **Habitat:** They live in a variety of dry and moist forests and in some tall grasslands, where boulders, scattered shrubs and trees provide shelter.
- **Distribution:** They mainly inhabit the region of India, Nepal, Sri Lanka and presumably Bhutan.
- **Appearance:** They have long, shaggy dark brown or black fur and curved claws, which are the longest out of any of the bear species.

- These bears are mostly nocturnal, foraging for food at night and resting in secluded locations
- Sloth Bear Sanctuaries in India: Daroji Sloth Bear Sanctuary (Karnataka) Jessoré Sloth Bear Sanctuary (Gujarat).

Conservation Status

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

TERMS IN NEWS

Pheromone



- Pheromones are **chemical substances which are secreted on the outside by an individual, and received by another individual of the same species.**
- These are present in all bodily secretions, and especially in the axillary sweat — can be detected by the olfactory system.
- Pheromones are ecto-hormones, meaning they are secreted outside the body.

Types of Pheromones

- **Releaser pheromones:** They work right away and elicit a specific response from the other person.

- **Signaler pheromones:** They give information about the person who releases them. For example, they help a mother tell her own baby apart from other babies.
- **Modulator pheromones:** They affect mood and emotions.
- Primer pheromones affect hormones, for example during pregnancy or menstrual cycles.
- Animals, with their heightened senses and vomeronasal organ are known to secrete pheromones to trigger many kinds of behaviors like raising an alarm, signaling a food trail, warning another animal to back off, and bonding with an offspring.
- Pheromones are also used by some fungi, slime molds, and algae as attractants in reproduction; organisms of complementary reproductive cell types grow or move toward each other.

Exercise Talisman Sabre

- It is the **largest bilateral military exercise between Australia and the United States, with multinational participation.**
- It has been conducted between Australia and the United States biennially since 2005.
- It is conducted across a number of locations across Australia and offshore, using both Defence and non-Defence training areas.



- It is designed to advance a free and open Indo-Pacific by strengthening partnerships and interoperability among key allies.
- Now in its 11th iteration, Talisman Sabre 2025 is the largest and most sophisticated warfighting exercise ever conducted in Australia.
- More than 35,000 military personnel are participating.
- In addition to the United States, forces from Canada, Fiji, France, Germany, India, Indonesia, Japan, the Netherlands, New Zealand, Norway, Papua New Guinea, the Philippines, the Republic of Korea, Singapore, Thailand, Tonga, and the United Kingdom are participating.
- Malaysia and Vietnam will also attend as observers.
- This year's exercise will consist of live-fire exercises and field training activities, incorporating force preparation activities, amphibious landings, ground force maneuvers, and air combat and maritime operations.

SCHEMES IN NEWS

ADEETIE Scheme



- ADEETIE (Assistance in Deploying Energy Efficient Technologies in Industries & Establishments) Scheme is a flagship initiative of the Bureau of Energy Efficiency (BEE) under the Ministry of Power, Government of India.
- It aims to catalyze the adoption of energy-efficient technologies among Micro, Small, and Medium Enterprises (MSMEs), enhancing their competitiveness and contributing to India's climate goals.
- This Scheme offers comprehensive financial and technical support to Udyam-registered MSMEs, enabling them to implement energy-efficient technologies with a proven potential to save at least 10% of energy.
- The scheme is structured to provide targeted assistance in the form of interest subvention on loans, Investment Grade Energy Audits (IGEA), Detailed Project Reports (DPRs), and post-implementation Monitoring and Verification (M&V).
- The scheme is envisaged to provide interest subvention of 5% for Micro and Small Enterprises and 3% for Medium Enterprises on loans, ensuring accessibility

and affordability for MSMEs seeking financial aid for energy efficiency projects.

- The scheme also includes provisions for **capacity building**, with BEE providing assistance through its ADEETIE online platform, designed to facilitate financing for energy-efficient projects in the MSME sector.

PRACTICE QUESTIONS

Q1 : Consider the following statements regarding Locust Swarms

1. Locusts are solitary insects until they undergo a transformation called gregarisation, where they become more social and congregate in large swarms.
2. They are a trans-border pest that travels between Africa, the Middle East, and South Asia.

How many of the above statements are correct?

- A. Only Statement 1
- B. Only Statement 2
- C. Both the Statements
- D. None of the Above

Q2: Consider the following statements regarding Pheromone

1. Pheromones are chemical substances which are secreted on the outside by an individual, and received by another individual of the same species.
2. These are present in all bodily secretions, and especially in the axillary sweat — can be detected by the olfactory system.

How many of the above statements are correct?

- A. Only Statement 1
- B. Only Statement 2
- C. Both the Statements
- D. None of the Above

Q3: Consider the following statements regarding Sloth Bear

1. They are myrmecophagous, meaning, they find bugs and termites to be their most sought-after meal.
2. These bears are mostly arboreal, foraging for food and resting in tree tops

How many of the above statements are correct?

- A. Only Statement 1
- B. Only Statement 2
- C. Both the Statements
- D. None of the Above

Q4: Consider the following statements regarding ADEETIE (Assistance in Deploying Energy Efficient Technologies in Industries & Establishments) Scheme

1. It aims to catalyze the adoption of energy-efficient technologies among Micro, Small, and Medium Enterprises (MSMEs), enhancing their competitiveness and contributing to India's climate goals.
2. It is a flagship initiative of the Bureau of Energy Efficiency (BEE) under the Ministry of Power, Government of India.

How many of the above statements are correct?

- A. Only Statement 1
- B. Only Statement 2
- C. Both the Statements
- D. None of the Above

Q5 : Consider the following statements regarding Gharials

1. It is a saltwater crocodile belonging to the Crocodylia Order and Crocodylidae Family.
2. Their major population occurs in three tributaries of the Ganga River: the Chambal and Girwa Rivers in India and the Rapti-Naryani River in Nepal
3. They are considered as critically endangered by IUCN.

How many of the above statements are incorrect?

- A. Only One
- B. Only Two
- C. All of the Above
- D. None of the Above

Answers

1. C
2. C
3. A
4. CS

