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Armageddon reedtail

Damselfly species found in Western Ghats named after climate impact on insects.

Damselflies

- They are a group of predatory, aerial insects that are in the order Odonata.
- Damselflies are found mainly near shallow, freshwater habitats and are graceful fliers with slender bodies and long, filmy, net-veined wings.
- Damselflies are generally smaller, more delicate, and fly weakly in comparison with dragonflies.
- Damselflies can usually be distinguished from dragonflies by their thinner, needlelike abdomens and by the way they hold their wings when at rest.

Armageddon reedtail

- It is the new damselfly species that has been discovered in Kerala's southern Western Ghats.
- It has a captivating dark brown to black body with vibrant greenish-blue eyes, and half of its eight abdominal segments are marked with delicate pale blue markings.
- Its only habitat is primary montane streams, where it thrives beneath dense canopy cover.
- The species given this name in order to draw attention to the global decline of insect populations due to rampant habitat loss and climate change.
- The term ***Ecological Armageddon*** is used to describe the devastating decline of insect populations around the world.
- This phenomenon, also called insect apocalypse, affects entire ecosystems because insects pollinate, cycle nutrients and provide food for other animals.

References

1. Down To Earth – Damselfly species found in Western Ghats
2. The Indian Express – Damselfly species in Western Ghats of Kerala

Matangini Hazra

A staunch Gandhian from Tamluk, Bengal, Matangini Hazra fell to British bullets on September 29, 1942, while leading a Quit India Movement march.

- **About –** She was a revolutionary leader who played a significant role in India's struggle for independence.
- She was born in Hogla, West Bengal in 1869.
- Following her husband's death, she began devoting herself to social causes.
- **Role in freedom struggle -** She was influenced by Gandhiji's beliefs, that she earned the name Gandhi Buri (the old Gandhian woman).
- In 1905, she became actively involved in the Indian independence struggle and was arrested for taking part in the Civil Disobedience Movement in 1930.
- She participated in the Non-Cooperation movement in 1932 and was arrested for her role in the Salt Satyagraha movement.
- She was arrested again and imprisoned in Baharampur for six months for his persistence with the demand of Salt Tax be repealed.
- In 1933, she was hurt in a police baton charge after attending a sub divisional Congress convention in Serampore.
- Matangini Hazra led a march during the Quit India movement of 1942, to take over the Tamluk police station from British authorities and fell to the British bullets at the age of 73.
- She was the first woman revolutionary to have her statue erected in the Kolkata Maidan in 1977.

References

1. The Indian Express – Remembering Matangini Hazra
2. The Economic Times – From Aruna Asaf Ali to Matangini Hazra

Investor-State-Dispute Settlement (ISDS)

The recently concluded G-20 Declaration, among its many commitments, reiterated the need to pursue reform of the World Trade Organization (WTO) to improve all its functions and conduct proactive discussions.

WTO Dispute Settlement system

- WTO's dispute settlement system (DSS) is called its crown jewel.
- The dispute settlement system (DSS) is a two-tiered system where the appellate body is the second tier.
- The appellate body hears appeals from WTO panels.
- The appellate body, from 1995-2019, has upheld the international rule of law by holding powerful countries accountable for international law breaches.

- The future of the WTO's appellate process is uncertain.
- Other areas of international law witnessing the formative stages for an appellate process is:
    1. International investment law through investor-state-dispute settlement (ISDS).
    2. A ubiquitous component of Bilateral Investment Treaties (BITs).

Investor-State-Dispute Settlement (ISDS)

- The ISDS mechanism permits companies to drag governments to international arbitration without exhausting the local remedies.
- It also allows them to claim huge amounts as compensation citing losses they suffered due to reasons, including policy changes.
- The contentious ISDS mechanism already has been incorporated by investment pact by the EU and Canada.
- The ISDS today is the principal means to settle international investment law disputes.
- India has had a chequered history with ISDS, with five adverse awards: four in favour, and several pending claims.
- **BITs -** A bilateral investment treaty (BIT) is an agreement between two countries regarding promotion and protection of investments made by investors from respective countries in each other's territory.

References

1. The Hindu – Global dispute settlement, India and appellate review
2. Live Mint – India to junk 2016 model for bilateral investment treaties

Ancient Kosi Super flood

A study led by an IIT Kanpur scientists has found that an 'extreme monsoon event' occurred around 11,000 years ago and predict it could happen again today.

Gravel-sand transition

- As rivers flow from their origins in the mountains to the plains, they carry rocks, gravel, and sand.
- The heavier particles, rocks and gravel, settle down earlier in the river's trajectory whereas the lighter particles settle later.
- The part of the river's path where there is a gradual transition from heavier to lighter particles on the riverbed is called the gravel-sand transition.
- **Anticline -** An anticline is a fold in a sedimentary rock that bulges outwards.
- Older layers of sediments are found towards the centre and the younger ones are located towards the exterior.

Hyper concentrated flows

- An extreme monsoon event leading to a flood that occurs every 200-1000 years.
- This extreme event is expected to have occurred along with a complementary cause called hyper concentrated flows.
- Hyper concentrated flows occur when some event a trigger, like a landslide or a

glacial lake outburst causes the river to carry more sediments than usual.

- Hyper concentrated flows can change the way rivers flow, so they often have devastating consequences.
- A major landslide combined with a heavy monsoon can generate hyper concentrated flows, which can actually move very large particles further downstream.
- **Avulsion –** Hyper concentrated flows can also change the course of the river in a process called avulsion, forcing thousands of people to move.

Kosi River

- Kosi River is a transboundary river in Nepal and northern India.
- With its tributaries, the Kosi drains the eastern third of Nepal and part of Tibet, including the country around Mount Everest.
- Some of its headstreams rise beyond the Nepalese border in Tibet.
- About 48 km north of the Indian-Nepalese frontier, the Kosi is joined by several major tributaries and breaks southward through the Siwālik Hills at the narrow Chatra Gorge.
- The river then emerges on the great plain of northern India in Bihār state on its way to the Ganges River, which it enters south of Purnia.
- Because of its great outflushing of debris, the Kosi has no permanent channel in its course through the great plain of northern India.
- It has long been notorious for its devastating floods, which long made vast tracts of northern Bihār unsafe for habitation or cultivation.
- Now a dam across the Chatra Gorge at Barakakshetra controls floods, permits irrigation of the floodplain, provides hydropower, and supports fish hatcheries.
- Maize is extensively cultivated on the sandy soils of the Kosi's basin.

Reference

The Hindu – Ancient Kosi super flood could happen again

Sycamore Tree

A 300-year-old tree in England that was famous for its beauty and unique location was cut down by a teenage boy.

- The sycamore tree was located in a dip between two hills, at a gap in the Hadrian Wall an old stone structure that is close to the border between England and Scotland in Northumberland, northern England.
- The gaps are essentially channels, which were naturally chipped away by vast amounts of meltwater flowing beneath the ice sheets that once covered the area, thousands of years ago.

Sycamore

- Sycamore trees can become extremely tall as they mature reaching a height of up to 35 metres.
- They are commonly found in the UK and have leaves similar to that of a maple tree.
- A sycamore can live for as long as 400 years, according to the UK's Woodland Trust website.
- Native to central, eastern and southern Europe, it is believed to have been introduced to the UK by the Romans or in the Tudor era around the 1500s.
- Widespread planting led to the species becoming extremely common in the UK by the mid-1800s.
- The seed is extremely fertile, so sycamore has spread quickly across the UK and colonized many woodlands to the detriment of native species.
- As its wood is considered strong and hard, amenable to carving, it is also used to make decoratively carved wooden spoons in Wales.
- The 'love spoons' are named so as they are given as a romantic gesture.
- The Sycamore tree landmark is beside the Hadrian's Wall.

The Hadrian Wall

- The Hadrian Wall is part of a larger UNESCO World Heritage Site called the 'Frontiers of the Roman Empire' and is found in the UK and Germany.
- The Roman Empire, in its territorial extent, was one of the greatest empires history

has known.

- It was protected by a network of frontiers stretching from the Atlantic Coast in the west to the Black Sea in the east, from central Scotland in the north to the northern fringes of the Sahara Desert in the south
- The Empire reached its greatest extent around the second AD.
- This stone frontier would then be of protective use and often had forts close to it.
- The larger frontier includes various sections, including the Hadrian Wall, which runs along 118 km.
- It was built on the orders of Emperor Hadrian (circa AD 122) at the northernmost limits of the Roman province of Britannia.

References

1. The Indian Express – UK's beloved Sycamore Gap cut down
2. BBC – Sycamore Gap