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03 October 2024

Assam's Swallowtail Butterflies

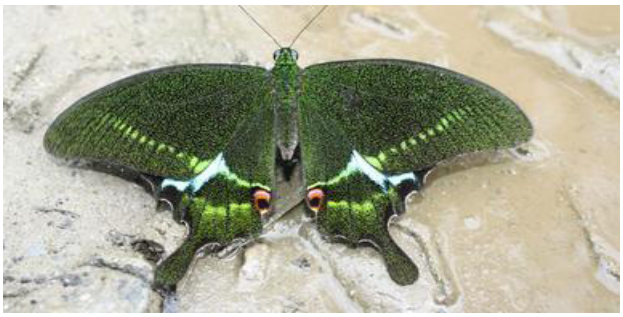
Context: A study has recently revealed the significant decline of swallowtail butterflies in Assam's Bodoland Territorial Region, primarily caused by the overexploitation of medicinal host plants.

- The International Union for Conservation of Nature has classified these butterflies as globally endangered, raising urgent concerns for conservation efforts to protect their habitats and ensure their survival.

Key Findings:

Threats to Swallowtail Butterflies:

- Overexploitation of 25 species of host plants valued for their medicinal properties.
- Illegal cattle farming within protected areas.
- Agriculture and tea cultivation near butterfly habitats.
- Illegal tree felling.
- Pesticide use affecting butterfly populations.



Butterfly Population Status:

- The decline in swallowtail butterflies, which was not a significant concern two decades ago, has led the International Union for Conservation of Nature (IUCN) to classify them as globally endangered.
- India's Status: The country is home to 77 of the 573 recorded swallowtail butterfly species worldwide; northeastern India is designated as a 'swallowtail-rich zone'.

Host Plant Exploitation:

- The extensive harvesting of three species of the plant belonging to the family Aristolochiaceae has negatively impacted swallowtail butterflies from the Atrophaneura, Pachliopta, and Triodes genera. These species rely exclusively on these plants for food.
- The exploitation of Ligustrum cordatum, a plant used in traditional medicine, also affects the Lamproptera genus.
- Similar concerns apply to butterflies in the Graphium genus, which depend on plants from the Lauraceae and Magnoliaceae families.

Long-term Survival Concerns:

- The reduction of host plant resources raises significant concerns regarding the long-term survival and ecological health of swallowtail butterflies, as these plants are essential for their lifecycle and reproduction.
- Environmental Indicators
- Swallowtail butterflies serve as valuable indicators of environmental health, influencing their presence, abundance, and diversity.

About Bodoland Territorial Region:

- The Bodoland Territorial Region covers 8,970 sq. km, with approximately 40% of the area forested, primarily near the Bhutan border.
- The study area, particularly the Manas Biosphere Reserve, is crucial for supporting 25 host plant species from 6 families that are vital for the butterflies.
- This region is significant for its citrus biodiversity, with 52 varieties of 17 citrus species and 6 potential hybrid species.
- Citrus plants are essential for the development of swallowtail larvae, particularly those in the Papilio genus.

GI Tags

Context: The Geographical Indications Registry in Chennai has conferred GI tags on eight traditional products from the state.

Products that received GI tag:

Distinctive Rice Beers:

Face to Face Centres
DELHI MUKHERJEE NAGAR: 9205274741, 42 | LAXMI NAGAR : 9205212500, 9205962002 | RAJENDRA NAGAR: 9205274743 | UTTAR PRADESH PRAYAGRAJ: 0532-2260189, 8853467068 | LUCKNOW (ALIGANJ): 0522-4025825, 9506256789 | LUCKNOW (GOMTI NAGAR): 7234000501, 7234000502 | GREATER NOIDA: 9205336037, 38 | KANPUR: 7887003962, 7897003962 | GORAKHPUR : 7080847474, 9161947474 | ODISHA BHUBANESWAR: 9818244644/7656949029
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- **'Bodo Jou Gwran',** notable for its alcohol content of 16.11%, exemplifies the region's brewing tradition.
- **'Maibra Jou Bidwi',** is a beloved welcome drink made from fermented half-cooked rice and yeast.
- **'Bodo Jou Gishi'** is mentioned in the cultural narratives of the Bodo community, highlighting the deep-rooted traditions associated with these beverages.

Culinary Traditions:

- **'Bodo Napham',** a dish made from fermented fish preserved through traditional methods like smoking and salting
- **'Bodo Ondla',** a flavorful rice powder curry
- **'Bodo Narzi',** a semi-fermented food noted for its high Omega-3 fatty acid content
- **Bodo Gwkha' (Gwka Gwkhi)** is a traditional Bodo dish prepared during the Bwisagu festival

Traditional Craftsmanship:

- **'Bodo Aronai',** a handwoven cloth, earning a GI tag

About Geographical Indication (GI) Tag:

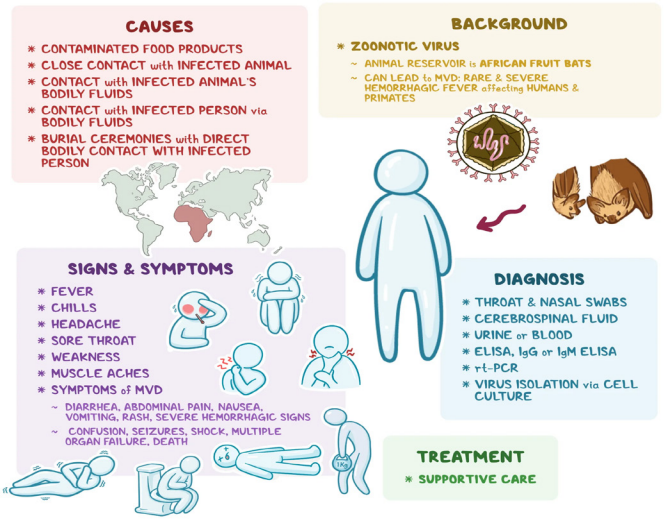
- A Geographical Indication (GI) is an indication that identifies goods with special characteristics originating from a specific geographical area. It signifies that the product has the qualities or a reputation that are intrinsically linked to its geographical origin.
- Legal Framework:
- The protection and registration of GIs in India are governed by the Geographical Indications of Goods (Registration and Protection) Act, 1999.
- **Scope:** GI tags primarily apply to agricultural products, natural products, and manufactured goods, including handicrafts and industrial items.
- **Validity:** A GI tag is valid for a period of 10 years and can be renewed thereafter.

Marburg Virus Disease (MVD)

Context: The Marburg Virus Disease (MVD) outbreak in Rwanda has resulted in six fatalities, mostly among healthcare workers.

What is Marburg Virus Disease?

- Marburg Virus Disease (MVD), previously known as Marburg Hemorrhagic Fever, is a highly fatal illness caused by the Marburg virus.
- Marburg virus belongs to the same family as the Ebola virus, the Filoviridae family, which causes severe hemorrhagic fevers in humans and non-human primates.



Origin:

- First identified in 1967 in Marburg, Germany, after lab workers were exposed to infected green monkeys from Uganda.
- **Natural Host:** The African fruit bat (Rousettus aegyptiacus) is the primary reservoir of the Marburg

virus, though it can spread to humans and primates.

Transmission:

- MVD can spread through zoonotic transmission from fruit bats to humans and then through human-to-human transmission via direct contact with:
  - » Blood,
  - » Secretions,
  - » Other bodily fluids of an infected person.
- Healthcare workers, caregivers, and family members of infected individuals are at high risk if protective measures are not in place.

Symptoms of Marburg Virus Disease:

- Early signs of the disease include high fever, severe headache, muscle pain, and a rash characterized by flat and raised bumps on the torso. Patients may also experience chest pain, a sore throat, as well as nausea, vomiting, and diarrhea.
- Advance symptoms become more severe, leading to liver failure, delirium, and shock. In advanced stages, internal and external bleeding (hemorrhaging) can occur, along with multi-organ dysfunction, which significantly increases the risk of fatality.
- **Fatality Rate:** Ranges from 24% to 88%, with an average of 50%, depending on the virus strain and medical care quality.

Treatment and Prevention:

- Currently, there is no specific treatment or vaccine for Marburg Virus Disease. Supportive care plays a critical role in managing the illness and increasing the chances of survival. Supportive care includes:
  - » Intravenous fluids,
  - » Electrolyte balance,
  - » Oxygen supplementation, and
  - » Blood product replacement.

Prevention measures are crucial in controlling the spread of the virus that include:

- Good hygiene practices, especially handwashing,
- Avoiding direct contact with bodily fluids of infected persons,
- Using protective gear (gloves, masks, gowns) for healthcare workers and caregivers,
- Ensuring safe handling of animals and thorough cooking of animal products.

NEWS IN BETWEEN THE LINES

‘Cruise India Mission’

- The Union Minister for Ports, Shipping and Waterways, Shri Sarbananda Sonowal launched the ‘Cruise India Mission’ from Mumbai Port on 1st October 2024. The main objectives of the Mission are to double the number of cruise passengers by 2029 and establish India as a global cruise tourism hub.
- Three main cruise sectors that will be covered under the Mission:
- **Ocean and Ports:** To improve infrastructure for ocean cruises
- **River and Inland Waterways:** To promote cruise tourism on river and waterways
- **Islands development:** To develop cruise tourism on islands and highlight their beauty to the world
- Cruise India Mission will be implemented in three phases:
- **Phase 1 (October 1, 2024 – September 30, 2025):** This phase will focus on conducting studies, master planning and building cruise alliances with neighbouring countries.
- **Phase 2 (October 1, 2025 – March 31, 2027):** This phase will focus on developing new cruise terminals, marinas

and destinations to activate high-potential cruise locations and circuits.

- **Phase 3 (April 1, 2027 – March 31, 2029):** This final phase will focus on integrating all cruise circuits in the Indian subcontinent.

Monetary Policy Committee (MPC)

- The central government has reconstituted the Monetary Policy Committee (MPC) of the Reserve Bank of India (RBI) and notified 3 new external members as announced on October 1, 2024.
- The committee comprises three RBI members and three appointed by the government, serving for four years or until further notice.
- The Monetary Policy Committee (MPC) was formed under Section 45ZB of the RBI Act of 1934 by the Central Government. It is responsible for determining interest rates and ensuring price stability.
- New External Members Appointed by Government:
- Ram Singh, Director, Delhi School of Economics, University of Delhi
- Saugata Bhattacharya, Economist
- Nagesh Kumar, Director and Chief Executive, Institute for Studies in Industrial Development, New Delhi

Surgeon Vice Admiral Aarti Sareen: First Woman Director General of AFMS

- Surgeon Vice Admiral Aarti Sareen became the first woman to serve as Director General of the Armed Forces Medical Services (AFMS), making her the 46th DG of AFMS.The Ministry of Defense announced her appointment, emphasizing her responsibility for all medical policy matters in the armed forces.
- Vice Admiral Sareen has had a notable career, serving as the Director General of Medical Services for the Navy and Air Force, as well as the Commandant of the Armed Forces Medical College (AFMC) in Pune.
- She joined the Armed Forces Medical Services in December 1985 and holds an MD in Radiodiagnosis from AFMC.
- Additionally, she is a Diplomate of the National Board in Radiation Oncology from Tata Memorial Hospital and has received training in Gamma Knife Surgery from the University of Pittsburgh.
- Vice Admiral Sareen has been honored with the Ati Vishisht Seva Medal in 2024, the Vishisht Seva Medal in 2021, and multiple commendations for her exceptional service.

Swachh Bharat Mission Completes 10 years

- On the occasion of Gandhi Jayanti, 2 October 2024, Prime Minister Narendra Modi participated in the 'Swachh

Bharat Diwas 2024' program, marking the completion of 10 years of the Swachh Bharat Mission.

Achievements of Swachh Bharat Mission:

- Under the Swachh Bharat Mission, more than 12 crore toilets were constructed, leading to India being declared Open Defecation Free (ODF). In 2014, the country's toilet coverage was just 40%, but by 2019, it had increased to 100%.
- According to the World Health Organization (WHO), between 2014 and 2019, cleanliness campaigns saved the lives of more than 3 lakh people, who could have lost their lives due to diseases like diarrhea.
- According to research by the International Food Policy Research Institute, University of Washington, California and Ohio State University, 60,000-70,000 children are being saved every year through the Swachh Bharat Mission.

Swachh Bharat Mission:

- The Swachh Bharat Mission was launched on 2 October 2014 on the occasion of Mahatma Gandhi's birth anniversary.
- The Swachh Bharat Mission aimed to make all villages and cities open defecation free (ODF) by 2 October 2019. The mission's urban component is implemented by the Ministry of Housing and Urban Affairs, while the rural component is overseen by the Ministry of Jal Shakti.