Living Fossils & Helmeted Water Toad

Why in News?

A frog species 'Helmeted Water Toad' considered as a living fossil is losing its ground in its native Chile as climate change and human intervention damage its habitat.

- **Living fossil** – It refers to an '*archaic' species* that has
  - Survived for a long time
  - *Anatomy harks back to an early stage* in the group's evolutionary tree
  - Remained unchanged for much of that period
- There are several species that are often referred to as living fossils, including coelacanths, horseshoe crabs, tuataras and nautiloids.

Living Fossils
• Purple Frog - It has similarities to the Sooglossidae family of frogs in Seychelles, *supporting the Gondwana landmass hypothesis* and is also believed to have co-existed with dinosaurs. • Alligator gar Fish – Its fossil records date back to nearly 100 million years ago, hence they are referred as "*living fossil fish*". • Frilled Shark – It has been swimming in the depths of the ocean since the time of the dinosaurs and in the 80 million years they've been known to live on earth, the fish have barely changed. • Sturgeons – One of the most *endangered fish species*, have existed since the time of dinosaurs, for about 200 million years. • Horse Shoe Crab – They are important ecosystem engineers and predators of small organisms and are called as *marine living fossils.* • Amami Rabbit – It is a *living remnant of ancient rabbits* that once lived on the Asian mainland. • **Coelacanth** – It is a fish species.

Helmeted Water Toad

- **Scientific name** – Calyptocephallela gayi.
- **Morphology** – It is one of the largest frogs in the world, growing up to over 30 cm (1 foot) in length and weighing up to 1 kg (2.2 lbs).



- **Living fossil** – The amphibian has *seen little genetic variation* for millions of years, but now its future is at risk.
- **Challenges** – The species that managed to coexist with dinosaurs, that managed to resist a mass extinction, is now threatened by human beings.
- **Living environment** – It spans from the northern region of Coquimbo to the southern island of Chiloe.
- **Threats** – Its population is suspected to have declined by at least 30% since 1990 due to factors like
    - Climate change
    - Habitat interruption
    - Environmental decline
    - Pollution
    - Poor water and waste management
- **Conservation Status**
    - **IUCN Red List** – *Vulnerable*

Reference

The Hindu| Declining of Helmeted Water Toad- A Living Fossil

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