Loktak Protocluster

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Why in News?

An Indian researcher based in Japan has named a newly discovered large structure of galaxies after Manipur's Loktak Lake, seeking to "immortalise" the northeastern state's identity in the cosmos.

- **Loktak Protocluster** – It is a *primitive galaxy cluster*, described by scientists as a "city of galaxies" that is still being built by the forces of gravity.
- **Discovery** – Led by Dr Ronaldo Laishram, an astrophysicist from Manipur who is currently a researcher at the National Astronomical Observatory of Japan (NAOJ).
- **Age** – The Loktak Protocluster is seen as it existed *12.6 billion years ago*.
- **Cosmic Timeline** – At that point, the universe was only about 1.2 billion years old, meaning these galaxies are some of the earliest to form.
- **Telescopes Used** – The structure was studied using the Subaru Telescope in Hawaii and the James Webb Space Telescope.
- **Naming** – The name reflects a parallel between Loktak's connected phumdis and the galaxy clusters, showing how nature and the cosmos share similar patterns of unity.

Quick Fact

Loktak Lake
• **Loktak Lake** – It is the largest freshwater lake in Northeast India. • **Location** – Manipur's Bishnupur district, about 45 km from Imphal. • **Floating Ecosystem** – The lake's surface features thick mats of vegetation called *phumdis* (heterogeneous masses of vegetation, soil, and organic matter). • **Keibul Lamjao National Park** – The world's only floating national park, situated in the southeastern part of the lake, this park is the *last natural habitat of the endangered Sangai* (the Manipuri brow-antlered deer, or "dancing deer").

References

1. The Hindu | Indian researcher names newly discovered galaxy structure after Manipur's Loktak Lake
2. NDTV | Indian scientist discovers galaxy names it after Manipur's Loktak Lake



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