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Mesalina bishnoi — First Record of the Genus Mesalina in India

1 June 2026 ·

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Mesalina bishnoi — First Record of the Genus Mesalina in India

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✓ Every fact web-verified against primary sources

Scientists discovered **Mesalina bishnoi** — a new lizard species from **Rajasthan's Thar Desert** — marking the **first confirmed Indian record of the genus Mesalina**. The species was identified via **DNA analysis** as a *cryptic species* (morphologically similar to relatives but genetically distinct). The name honours the **Bishnoi community**, known for centuries of wildlife and tree conservation in Rajasthan.

THE DISCOVERY AT A GLANCE

PARAMETER	DETAIL
Species	<i>Mesalina bishnoi</i> sp. nov.
Family	Lacertidae (wall lizards / sand lizards)
Location	Thar Desert, Rajasthan
Significance	First Indian record of the genus <i>Mesalina</i>
Discovery method	DNA barcoding / molecular phylogenetics — confirmed as a cryptic species
Eponym	Named after the Bishnoi community of Rajasthan

WHAT IS A CRYPTIC SPECIES?

A **cryptic species** is one that is genetically and biologically distinct from other species but is morphologically (physically) very similar — it can be confused with related species on visual examination alone. Only **DNA analysis** (barcoding, phylogenetics) reveals the separation.

This is increasingly important in biodiversity research: India's species richness is significantly **under-recorded** because many cryptic species have not yet been separated from their look-alikes.

THE BISHNOI COMMUNITY — WHY THE NAME?

The **Bishnoi community**, primarily based in **Rajasthan** and **Haryana**, follows the principles of **Guru Jambheshwar (1451–1536)** which **mandate 29 tenets** (**bis = 20, noi = 9**) prohibiting the felling of green trees and killing of animals. The community is closely associated with:

- **Chipko movement precursor** — the 1730 **Amrita Devi Bishnoi** case (363 Bishnois martyred to protect khejri trees in Jodhpur district).
- Protection of the **blackbuck (Antelope cervicapra)** in Rajasthan.
- Named species: honouring communities for conservation is increasingly practised in Indian taxonomy.

GENUS MESALINA

- **Distribution (globally):** Arid North Africa and the Middle East; India lay outside its known range before this discovery.
- The find extends the genus's known range **significantly eastward**, into the Thar.
- The Thar Desert's herpetofauna is relatively understudied; new species are being discovered regularly as molecular tools become more accessible.

UPSC RELEVANCE

PAPER	RELEVANCE
GS3	Biodiversity — new species; herpetofauna; cryptic species concept; taxonomy and DNA barcoding
GS1	Bishnoi community — cultural conservation practice; Rajasthan
Prelims	Cryptic species; DNA barcoding; <i>Mesalina bishnoi</i> ; Bishnoi community (Guru Jambheshwar, 29 tenets); Amrita Devi (1730); genus Mesalina (first India record)

FACTS CORNER

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MESALINA BISHNOI:

First Indian record of genus Mesalina (family Lacertidae)

Location: Thar Desert, Rajasthan

Type: cryptic species (genetically distinct, morphologically similar to relatives)

Identified via DNA barcoding / molecular phylogenetics

Named after the Bishnoi community

BISHNOI COMMUNITY:

Rajasthan + Haryana; founded by Guru Jambheshwar (1451–1536)

29 tenets (bis=20, noi=9); prohibits felling green trees + killing animals

1730: Amrita Devi — 363 Bishnois martyred protecting khejri trees

Known for protecting blackbuck in Rajasthan

CRYPTIC SPECIES: GENETICALLY DISTINCT BUT MORPHOLOGICALLY SIMILAR; DISCOVERED ONLY THROUGH DNA ANALYSIS

Sources: The Hindu, Current Science Journal

Source: Mesalina bishnoi — First Record of the Genus Mesalina in India — Ujyari.com | Free UPSC & State PCS Current Affairs

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