345-million-year-old fossil

Prelims: *Current events of National and International Importance| Science and Technology*

Why in News?

*The 345-million-year-old fossil nicknamed "**Lizzie**" belongs to Westlothiana lizziae, a Carboniferous-period creature discovered in Scotland in 1984 that scientists long misidentified as an early land-dwelling reptile (amniote).*

Why Scientists Were Deceived?

- **Reptile-like exterior –** Described in 1990, the fossil had five-toed feet and claw-like tips that made it look like an early amniote adapted for life on land.
- **X-ray revelations–** Advanced synchrotron X-ray scans uncovered a primitive skull, internal gills, and a fish-like mouth filled with thousands of tiny teeth, pointing to an aquatic or amphibious lifestyle rather than a true reptile.

What It Means for Evolution?

- **Gradual transition–** Land-associated traits like claws evolved earlier on the tetrapod family tree—while creatures were still living in or around water—rather than appearing only after animals fully moved onto land.
- **Trackway rethinking–** Ancient claw-like fossil trackways older than 359 million years can no longer be assumed to belong strictly to amniotes.



Reference

Science Daily| 345-million-year-old fossil

