

GECKODAILY CLASSROOM RESOURCES · EDUCATOR GUIDE

Lesson Plan: Lazarus Species & Conservation Status

GRADE BAND

Ecology/conservation unit, middle school through college
(adjust depth as needed)

DURATION

One 30-45 minute class period, or a
discussion-based extension to a longer unit

Learning objectives

- Define IUCN Red List conservation categories and explain how they differ.
- Explain what a 'Lazarus species' is, using the crested gecko as a primary case study.
- Discuss the limitations of declaring a species extinct based on absence of sightings.

Materials

- Crested Gecko Species Fact Sheet and Research Spotlight
- Comparative Reptile Biology Chart (for conservation status column across all five species)
- Reptile Biology Glossary (IUCN Red List definition)

Warm-up

Show students the five species' IUCN statuses from the Comparative Reptile Biology Chart without naming which is which. Ask: 'What do you think "Vulnerable" versus "Least Concern" actually means, in concrete terms, for a population of animals?'

Activity outline

- **Step 1.** Read the crested gecko Research Spotlight together as a class or in small groups.
- **Step 2.** Have students list, in order, the timeline of events: 1866 description, presumed extinction, 1994 rediscovery, and the resulting genetic bottleneck in captive populations.
- **Step 3.** Introduce two other well-known Lazarus species mentioned in the spotlight (the coelacanth and the Wollemi pine) and briefly discuss what they have in common with the crested gecko's story.
- **Step 4.** Compare the crested gecko's Vulnerable status to the Least Concern status of the other four species on the comparison chart, and discuss what factors might explain the difference (limited native range, past population crash, introduced predators).

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Discussion questions

- Why might a species be hard to detect even if it isn't actually extinct? Think about the crested gecko's small size, camouflage, and nocturnal habits.
- Should conservation status change immediately after a rediscovery like the crested gecko's in 1994, or should it take time? What information would you want before changing a species' status?
- Does a successful captive breeding program (like the one that followed the crested gecko's rediscovery) reduce concern about a species' wild population? Why or why not?

Extensions

- Have students look up the crested gecko's current IUCN Red List status online and report whether it has changed since this material was written.
- Assign a research project on one other real Lazarus species not mentioned here (for example, the takahe of New Zealand or the Chacoan peccary).