

Anolis Lizards of the Greater Antilles Questions

Part I. Introduction

1. Where are the Greater Antilles? Which Islands make up the Greater Antilles?
2. What is the goal of this research?

Part II. Looking for patterns

3. What type of information does the data table show?
4. Describe the six different types of body shapes that the lizards have.
5. What patterns do you see between the type of body shape a lizard has and the habitat it lives in?
6. Does this pattern exist on all islands? Explain.
7. Which lizards do you think are more closely related; those that live on the same island but in different habitats, or those that live on different islands but have the same body features and live in the same type of habitat? Explain.
8. Write two alternative hypotheses about how these lizards might have speciated/evolved on and between these islands.
9. How could you test your hypotheses?

Part III. Testing your hypotheses

10. Explain the different patterns that you see in the phylogenetic tree. Look at their body shape, habitat, and the island on which they are found. Write down as many observations as you can.

11. Based on the phylogenetic tree, which lizards do you think are more closely related: those that live on the same island but in different habitats, or those that live on different islands but have the same body shape and live in the same type of habitat? Explain using specific examples.

12. Look back at your original hypotheses (question 8). Explain how these new data support or do not support your hypotheses about how these lizards might have speciated/evolved.

13. How could you further test your hypotheses? What type of information would you want to have?

14. How could fossil evidence help you test your hypotheses?

15. How do you think the lizards could have gotten from one island to another?