

# Herpetology Exam

Holt Science Olympiads Invitational  
February 24, 2018

Team number: \_\_\_\_\_

School: \_\_\_\_\_

Team Member Names:

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There are 19 stations in total.

Your team will have two minutes per station.

Please write all answers clearly. Illegible answers will not be graded. For all taxonomic names that appear on the official Herpetology species list, spelling counts.

**\*Please double-check that you are recording answers for the correct station. The question number will match the number of the station.\***

At the end of the exam period, you will have approximately ten minutes to revisit stations and/or check over your answers.

**1. SKULL** – *Note*: this came from a subadult or adult female.

- a. To which family does this species belong?

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- b. Where does this species occur in the US? For an extra point, give the reason for its distribution.

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- c. The common name of this animal includes the adjective “spectacled.” Why is this animal considered “spectacled?”

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**2. PRESERVED SPECIMEN**

- a. What is the genus of this specimen?

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- b. What is the life stage of this specimen?

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- c. What is the origin of (or reason for) the common name of this genus?

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- d. Why do adult males of this genus have long claws? In other words, for what do they use the claws?

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**3. PRESERVED SPECIMEN**

a. To which family does this specimen belong?

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b. Where do members of family lay their eggs?

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c. In areas near cities or suburban areas, very few babies of this species survive. Why?

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**4. SHELL/SKELETON**

a. Identify the genus of this specimen.

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b. How are members of this genus distinguished from other genera within this family? Provide at least two characteristics. You will receive an extra point for each valid characteristic above two (up to three extra, five in total).

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c. How many species are in this genus?

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**5. PRESERVED SPECIMEN**

- a. Identify the genus of this specimen.

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- b. What type of reproductive mode is observed in members of this genus?

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- c. What is the geographic range of this genus in the United States?

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- d. Name one way that humans threaten members of this genus. Name up to two additional negative human impacts on this genus for extra points.

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**6. PRESERVED SPECIMEN**

- a. What is the genus of this specimen?

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- b. Where would you expect to find this species during the daytime?

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- c. What is the main defensive behavior observed in this species?

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- d. This species is weakly venomous, but can generally be safely handled by humans. Why is it unlikely that this species will bite a human?

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**7. PRESERVED SPECIMEN**

- a. Identify the genus of this specimen.

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- b. How are members of this suborder distinguished from the other suborder within the order Squamata? Provide two characteristics.

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- c. What is the meaning of the common name of this species? For one extra point, explain what the Latin genus means.

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**8. PRESERVED SPECIMEN**

- a. Identify the genus of this specimen.

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- b. What is the life stage of this individual?

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- c. What is the main defense behavior of many species within this genus?

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- d. In what type of climatic region would you expect to find members of this genus?

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**9. PRESERVED SPECIMEN**

a. Identify the genus of this specimen.

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b. Which ecology describes this species? (circle one):

- i. Fossorial
- ii. Arboreal
- iii. Semi-aquatic
- iv. Fully aquatic

c. Why are the dewlaps of species in this genus different colors?

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d. How are males of this species distinguished from females? Provide two distinct morphological and/or behavioral characteristics. You will receive an extra point for each valid characteristic beyond two (up to three extra, five in total).

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**10. PRESERVED SPECIMEN**

a. Identify the family of this specimen.

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b. TRUE or FALSE (circle one)? Members of this family occur in Michigan. For an extra point, state how many species of this family occur in Michigan:

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c. How many species have been described from this family worldwide? (circle one)

- i. 1500
- ii. 500
- iii. 100
- iv. 50

**11. PRESERVED SPECIMEN**

- a. Identify the genus of this specimen.

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- b. What characteristic is used to distinguish between species within this genus?

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- c. What term is used to describe the limbs of members of this genus, which are not actually used to walk on?

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- d. How do members of this genus survive in seasonally dry wetlands? For one extra point, state where exactly they spend these periods.

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**12. PRESERVED SPECIMEN**

- a. Identify the family of this specimen.

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- b. What is the name of the toxin present in the skin of this species? For an extra point, name the animal for which the toxin was named.

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- c. Why is this species considered to exhibit a “triphasic” lifecycle?

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**13. PRESERVED SPECIMEN**

- a. Identify the genus of this specimen.

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- b. What is one identifying feature of this genus? Give one more feature for an extra point.

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- c. TRUE or FALSE (circle one)? The young of this species exhibit direct development.

**14. PRESERVED SPECIMEN**

- a. Identify the genus of this specimen.

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- b. Describe the life cycle of this genus.

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- c. The average lifespan of members of this genus **raised and maintained in captivity** is (circle one):

- i. 1 year
- ii. 5 years
- iii. 25 years
- iv. 40 years



**15. PRESERVED SPECIMEN**

a. Identify the family of this specimen.

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b. What is the name of the type of reproduction used in this species complex (circle one)?

- i. sexual reproduction
- ii. arrhenotoky
- iii. kleptogenesis
- iv. protandry

c. What is the geographic range of this species complex?

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**16. PRESERVED SPECIMEN**

a. Identify the family of this specimen.

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b. Where do members of this family spend the majority of their lives?

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c. Members of this family exhibit developmental plasticity. Describe this phenomenon.

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**17. PRESERVED SPECIMEN**

a. Identify the family of this specimen.

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b. What is the enlarged throat of this specimen called? For an extra point, describe what it is used for.

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c. About how many species have been described within this family worldwide?

- i. 1500
- ii. 500
- iii. 100
- iv. 50

**18. *Pseudacris crucifer***

a. What is the genus of this specimen?

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b. What is the origin of (or reason for) the common name of this species?

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c. How is this genus differentiated from the other North American genera within this family? Provide one characteristic. Provide a second characteristic for an extra point.

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**19. CLEARED AND STAINED SPECIMENS.**

a. What is the Order of specimen 19A?

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b. What is the Order of specimen 19B?

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c. What is the name of the process by which the tails of these specimens became fragmented (broken)?

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