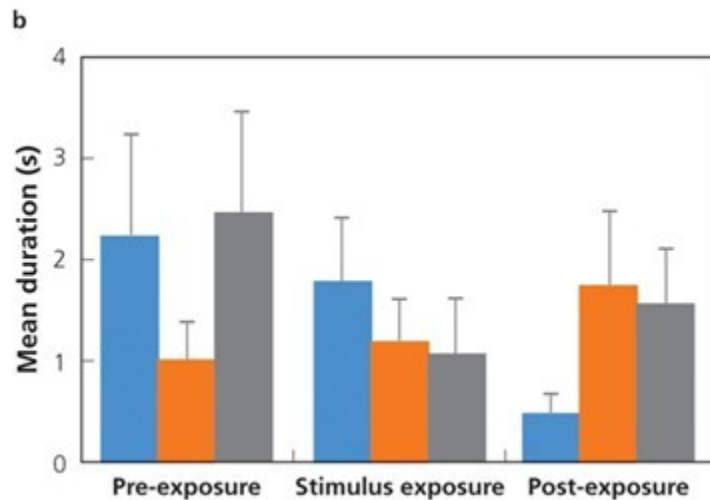


Chapter 2: Methods for Studying Animal Behavior

Type: multiple choice question

Title: Chapter 02 - Question 01

1. Which of the following best describes the results from this graph of mean duration of male spider chemoexplore from Uetz et al.'s research on spiders?
- There was no effect of visual cues on male behavior
 - There was no effect of seismic cues on male behavior
 - There was no effect of multimodal cues on male behavior
 - There was no effect of any experimental treatment on male behavior



Type: multiple choice question

Title: Chapter 02 - Question 02

2. Ethograms are most often associated with which of the following?
- The comparative method
 - The experimental method
 - *c. The observational method
 - Cladograms
 - Sister species

Type: multiple choice question

Title: Chapter 02 - Question 03

3. Phylogenies are most often associated with which of the following?
- The observational method
 - *b. The comparative method
 - The experimental method
 - Morgan's canon

e. Behaviorism

Type: multiple choice question

Title: Chapter 02 - Question 04

4. A researcher conducts an experiment in which she exposes individuals to one of three treatments that manipulate nutritional status of an individual. Individuals are fed diets that differ in calories (low-, medium-, and high-calorie diets), and the size of territories defended by individuals is recorded. Which of the following statements about this work is correct?

- a. Nutritional status is a derived trait
- b. Nutritional status is the dependent variable
- *c. Nutritional status is the independent variable
- d. Territory size is a derived trait
- e. Territory size is a proximate trait

Type: multiple choice question

Title: Chapter 02 - Question 05

5. The term “control group” is associated with:

- a. The observational method
- b. The comparative method
- *c. The experimental method
- d. Ancestral traits
- e. Phylogenies

Type: multiple choice question

Title: Chapter 02 - Question 06

6. In lieu of working directly with animals, a researcher uses a computer model to examine how variation in resource distribution might affect territoriality. Which of the following applies to this research with respect to the 3 Rs of ethical standards in research?

- a. It is an example of redundancy
- b. It is an example of refinement
- c. It is an example of reduction
- d. It is an example of regression
- *e. It is an example of replacement

Type: multiple choice question

Title: Chapter 02 - Question 07

7. A researcher has found variation in courtship dancing behavior among closely related species. She has determined that simple courtship dances are the ancestral form of the trait, while complex courtship dances are derived. This research approach is an example of which of the following?

- a. The experimental method
- *b. The comparative method
- c. The observational method
- d. The statistical method
- e. The proximate method

Type: multiple choice question

Title: Chapter 02 - Question 08

8. A research study quantifies the fitness of individuals that defend territories of different size and finds that individuals that defend a territory of 10 m² have the highest fitness. This is example of:

- a. The comparative method
- b. The experimental method
- *c. The observational method
- d. Heritable variation in a population
- e. A selection experiment

Type: multiple choice question

Title: Chapter 02 - Question 09

9. Which of the following is NOT true about sister species?

- a. They have identical X chromosomes
- b. They share a recent common ancestor
- c. They can be identified using a phylogeny
- d. They are more closely related to one another than to any other species
- *e. Ancestral traits are used to identify them

Type: multiple choice question

Title: Chapter 02 - Question 10

10. *Scientific World* is a publication that covers groundbreaking events in science and technology. Which of the following would NOT be useful in determining whether this is an example of primary or secondary literature?

- a. The articles all have Literature Cited sections
- b. Most of the authors have higher education degrees such as a Ph.D. or an M.D.
- c. The articles are written in the standard scientific format
- d. The information for authors indicates that all articles are reviewed by experts in this field before they are accepted for publication
- *e. It is associated with an organization

Type: multiple choice question

Title: Chapter 02 - Question 11

11. Mathematical models allow researchers to make different predictions by varying assumptions. Which of the following parameters was an assumption varied by Lima, Valone, & Caraco (1985) in their model of squirrel food carrying?

- *a. Fitness increases with energy intake rate
- b. Individuals vary in their mating behavior
- c. Movement speed varies with the type of predator
- d. Fitness increases as more time is spent away from trees
- e. Female and male behavior differ

Type: multiple choice question

Title: Chapter 02 - Question 12

12. In Roberts et al.'s (2006) experimental test of the hypothesis that male wolf spiders use the behavior of nearby males to find receptive females, what did they compare?

- *a. The behavior of a male before and after the presentation of a stimulus
- b. The behavior of a male after the presentation of a stimulus
- c. The presentation of visual cues only
- d. The presentation of seismic cues only
- e. There was no control in the experiment

Type: essay/short answer question

Title: Chapter 02 - Question 01

1. What two assumptions are made in Lima, Valone & Caraco's model about fitness of squirrels while they feed for food? What two predictions does the model make?

Feedback: Assumptions: 1) Fitness increases with energy intake rate and 2) fitness increases as less time is spent away from the safety of trees. Predictions: 1) At a given distance, carrying behavior will increase with food item size (handling time) and 2) For a given food item size, carrying behavior will decrease as distance to safety increases.

Type: essay/short answer question

Title: Chapter 02 - Question 02

2. Explain the rationale of using two different controls in the study of jumping behavior of tadpoles conducted by De Sousa and Rossa-Ferres.

Feedback: One control was no object; the other was a neutral object similar in size to a predator to control for the presence of the predator in that treatment.

Type: essay/short answer question

Title: Chapter 02 - Question 03

3. Explain how each of the three R's lessens the negative effects of research on animals.

Feedback: Replacement reduces the number of animals used by using another approach. Reduction reduces the number of subjects. Refinement involves reduction in pain and stress by modifying protocols.

Type: essay/short answer question

Title: Chapter 02 - Question 04

4. Describe two fundamental differences between the primary and secondary scientific literature.

Feedback: The primary literature is subject to peer while the secondary literature is not. The primary literature presents detailed methods of the research while the secondary literature does not.

Type: essay/short answer question

Title: Chapter 02 - Question 01

1) Clark, Roberts, and Uetz (2012) demonstrated that field-caught males are attracted to the displays of other males while lab-reared adults raised in isolation were not. What kinds of social interactions may be required for a male to be attracted to the display behavior of a rival male?

Feedback: Males may need to observe another male displaying to a female.