

Lab 9: Animal Behavior

Cricket Behavior Experiments and Questions pages C63-C68

LAB QUIZ #2 NEXT WEEK!

Do not disturb the crickets

Do not put your face directly next to the Petri dish or aquarium

Try to remain calm and quiet while observing

Do not let the crickets escape, catch them or kill them!

GOALS:

- Distinguish the physical differences between male and female crickets.
- Use appropriate vocabulary to explain how crickets create and sense sound.
- Label two diagrams that show 1) file & scraper 2) tympanic membrane
- Describe the differences between the three types of cricket songs.
- Compare and contrast the behavior of your male cricket during isolation, introduction of a female, and introduction of another male.
- Use your observations to identify cricket behaviors that show submission, aggression, and courtship.
- Describe the simple experiment you conducted to determine the cricket's response to light; explain how you would adjust this experiment to make a more valid conclusion about cricket behavior.
- Describe the experiment you designed and summarize your results.
- Describe the aggressive behavior of a Betta fish.

KEY TERMS:

cerci	ovipositor	stridulation	file
tympanic membrane	mandibles	spermatophore	palps
calling song	aggressive song	courtship song	grooming
submissive behaviors	isolated male behaviors	aggressive behaviors	pecking order
hypothesis	scraper	experimental control	fleeing
antennation			

I. Introduction:

p. C-63: Read introduction.

II. Normal Behavior:

pp. C63-64, 66, 68: Read procedure, and then conduct observations and record results on p. C68. Answer the questions in section I. on the top of p. C66.

III. Courtship Behavior:

pp. C64, 66, 68: Read procedure, and then conduct observations and record results on p. C68. Answer the questions in section II. on p. C66.

IV. Aggressive Behavior:

pp. C64, 66-68: Read procedure, and then conduct observations & record results on p. C60. Answer the questions in section III. on pp. C66-67.

V. Phototaxis:

pp. C64: Read procedure, and then conduct observations. You can record your observations in a column that you make on page C68.

- Write a hypothesis about the behavior you observed. Use an "If.....then ..." statement.
- What might be changed or added to this experiment to make it more scientifically valid?
- Answer the questions in section IV. on pp. C67.

VI. Design Your Own Experiment:

Design and conduct an experiment that will teach you something about cricket behavior. Check with me before conducting your experiment. Fill out the following before you begin:

What is your question? _____

What is your hypothesis? _____

What is your control? _____

Come up with a plan on how you will carry out your experiment and go for it! **RECORD YOUR RESULTS** in the optional columns on p. C68.

Was your hypothesis supported? _____ Why or why not?

VI. STATIONS:

- View cricket wing under the dissecting microscope. Make a sketch labeling the file and scraper.
- View the tympanic membrane of a cricket under the dissecting microscope. Make a sketch.

- Answer the questions in section V. on p. C67.
- Observe a Betta fish aggression. Lift the paper that is located between the two fish bowls.
- Record what you observe below.