



## **Teacher's Guide**

### **Sexual Selection in Male Animals** **NATURE Science Education Series**

**Grade Levels:**

7-12

**Subject Areas:**

Life Sciences

Biology

Scientific Methods/Measurement

**Synopsis:**

This episode focuses on the latest scientific studies of male animals' methods of attracting a mate. Topics include the lyrebird's song and courtship display, cicada calls, capuchin monkeys' and cockatoos' drumming, the seismic signals of jumping spiders, male competition in side-blotched lizards, cryptic choice in garter snakes, manikin love calls, and the magnificent riflebird's flamboyant displays. Live-action film footage of scientists gathering and analyzing data highlights the importance of new technologies in affirming scientific theories regarding sexual selection in male animals.

**Learning Objectives:** Students will:

- Describe how biologists collect and analyze data to test theories of sexual selection in male animals.
- Provide several examples of courtship rituals.
- Understand that these rituals are key factors in male animals passing on their genes to succeeding generations.
- Understand that biologists are only beginning to understand the behavioral and anatomical adaptations that aid sexual selection in male animals.

**Vocabulary:**

plumage, lyre, vocalization, arachnids, seismic signals, cryptic choice, ornithologist, flamboyant displays, agent of sexual selection

**Pre-Viewing Discussion:**

What are some of the ways that male animals attract a mate?

Why are some of these methods very showy and colorful? How are they linked to natural selection and species survival?

How do single male animals compete with one another to show that they are the best choice for a mate?

If you were a wildlife biologist, how would you set up an experiment or test a hypothesis about the purpose of courtship rituals? Think in terms of a certain animal or bird you wanted to observe.

**Post-Viewing Discussion:**

Which example of a male courtship ritual did you find the most interesting or unusual?

What did the courtship rituals of the capuchin monkey and the palm cockatoo have in common?

Why was Kim so amazed by her findings about the male manikin and his vocalizations? What technologies helped her reach valid conclusions from her observations? How did the equipment she used compare with the equipment Damien used in his study of jumping spiders and their courtship dance?

What is cryptic choice? How was it a factor in the observations of mating garter snakes? What other indications were there that female choice is a factor in the success of courtship rituals?

**Further Activities:**

Find other examples of male competition that often involves a “fight to the death” to win female approval.

Further investigate male animals’ use of flamboyant displays to attract a mate.

Compare and contrast the courtship rituals of animals that mate for life and those who have harems or many partners.

Find several examples of the role of female choice in the success of courtship rituals.

**Related New Dimension Media Titles:**

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