Vocalization in Frogs

The tungara frog is a small terrestrial vertebrate that is found in Central America. Tungara frogs breed in small pools, and breeding groups range from a single male to choruses of several hundred males. the advertisement call of a male tungara frog is a strange noise, a whine that starts at a frequency of 900 hertz and sweeps downward to 400 hertz in about 400 milliseconds. The whine may be produced by itself, or it may be followed by one or several chucks or clucking sounds. when a male tungara a frog is calling alone in a pond, it usually gives only the whine portion of the call, but as additional males join a chorus, more and more of the frogs produce calls that include chucks. Scientists noted that male tungara frogs calling in a breeding pond added chucks to their calls when they heard the recorded calls of other males played back. That observation suggested that it was the presence of other calling males that incited frogs to make their calls more complex by adding chucks to the end of the whine.

What advantage would a male frog in a chorus gain from using a whine-chuck call instead of a whine? Perhaps the complex call is more attractive to female frogs than the simple call. Michael Ryan and Stanley Rand tested that hypothesis by placing female tungara frogs in a test arena with a speaker at each side. One speaker broadcast a pre-recorded whine call, and the second speaker broadcast a whine-chuck. When female frogs were released individually in the center of the arena, fourteen of the fifteen frogs tested moved toward the speaker broadcasting the whine-chuck call.

1. The word “incited” in the passage is closest in meaning to

A. allowed

B. stimulated

C. forced

D. helped

2. According to paragraph 1, male tungara frogs add chucks to the whine they produce when

A. potential mates are unable to hear the frequency of their whine sounds

B. other males produce louder whine sounds than they do

C. the frogs breed in large pools rather than small ones

D. other males are present in their breeding pool

3. What is the relationship of paragraph 2 in the passage to paragraph 1?

A. Paragraph 2 provides additional support for a scientific hypothesis discussed in paragraph 1.

B. Paragraph 2 questions the accuracy of a scientific observation discussed in paragraph1.

C. Paragraph 2 provides a possible explanation for a scientific observation discussed in paragraph 1.

D. Paragraph 2 identifies some strengths and weaknesses of a scientific hypothesis discussed in paragraph 1.

ANS: BDC