

## WHAT IS ENVIRONMENTAL PHYSIOLOGY ?

BIO 3610

02

### Study Sheet for "A Conversation with George Bartholomew"

1. According to George Bartholomew, what is "physiological ecology" (our "environmental physiology")?
  
2. Explain why the following "pairs" are hard to separate:
  - a. Morphology and Physiology
  
  - b. Organism and Environment
  
3. "...let the animal tell me what questions to ask." What does Dr. Bartholomew mean by this? How does he illustrate this approach in his studies of insects and pocket mice?
  
4. According to George Bartholomew, how important is environmental physiology to understanding any organism?
  
5. What factors have caused biology to become "fragmented?" Relate Dr. Bartholomew's career to this overall problem.
  
6. What advice does Dr. Bartholomew give to biology students? What motivates your decision about career?
  
7. How does George Bartholomew portray a biologist who is "having fun in science?"
  
8. What would it take to become a good student under Dr. B.? What do you think the experience would be like? What opportunities at Cedarville would prepare you for his laboratory?

### **Testimony of a Younger Biologist**

Lisa Crockett, Assistant Professor of Physiology,  
Ohio University, Athens, Ohio

Photocopied Article:

"Professor Studies How Animals Adapt to Environmental Changes."

*Ohio University Forum*, Fall, 1998. pp. 16-18.

Additional Background (optional):

See Her Website accessible from the BIO 3610 Home Page under "Useful Env. Phys. Websites"

1. How did Lisa Crockett, as an undergraduate student, begin to discover her "niche" in biology? How were her intellectual motivations an important factor?
2. What cellular sites are an important focus for physiological adjustment to environmental change?
3. What hypothesis is Dr. Crockett testing with regard to the gill epithelium of eels?
4. What impressions do you glean from Lisa Crockett's personal and professional experiences?