

adaptations to ensure survival in changing environments is a predominant feature of the presentation. Of particular interest was the development of the hoof of the animal so that it could keep a foothold on the steep rocky cliffs in the high mountains of Asia and America.

Special emphasis is placed on the economical aspects of the domestication of these animals. That they are in most cases relatively easy to raise and require little food other than what nature provides makes them an attractive animal to raise for profit. The chapter entitled "Gifts of Goats," elaborates on the numerous products that can be obtained and marketed from this unusual group of animals.

The chapters that deal with the origin, propagation, and preservation of the sheep and goats in the United States present the reader with an interesting account of these animals in our country.

The text of this book is one of the most interesting accounts of animals that I have had the pleasure to read. I feel that any person who has an interest in animals would benefit from reading this book.

James E. Seiple  
Huron High School  
Huron, Ohio

#### BIOLOGY OF EARTHWORMS

by C. A. Edwards and J. R. Lofty. 2nd ed., 1977. Halsted Press, Division of John Wiley and Sons (605 Third Avenue, New York 10016). 333 p. Price not given.

The authors claim this book to be a comprehensive text on the biology of the earthworms; it is. It discusses in great depth the morphology, taxonomy, biology, physiology, and ecology of the earthworms. It also includes other chapters on the role of the earthworm in organic matter cycles, earthworms and microorganisms, the effects of agriculture on earthworm populations, and earthworms as pests and benefactors. Because of the breadth of the material covered in this text, it can be used in all levels of biological education. However, it would be especially valuable to graduate students doing earthworm research, particularly in the areas of biologic sludge digestion, and earthworms as a protein source. Further many commercial worm growers encouraged by the market potential of the redworm (*Eisenia foetida*) to convert sewage sludge to useful humus material will find this text valuable in developing a greater knowledge about the earthworms that they intend to raise.

Beginning with the first chapter on morphology, the reader is immediately brought into the world of the earthworms. The discussions on the structure of the worm are richly supplemented with exceptionally fine photographs and diagrams of the external and internal structure of the earthworm. This chapter alone would be instrumental in assuring the success of those students of biology who so early in their career must dissect the earthworm as part of their introduction to this science. The chapter on taxonomy is equally thorough; that on the "Biology of the Earthworm" gives a complete review of the reproductive behavior and life cycles of these organisms. Unfortunately in this chapter, the life history of so many species of earthworms are discussed that the text becomes confusing and difficult to follow. The last chapter in the book, "Simple Experimentation and Field Study with Earthworms," should be valuable to those students in general biology who must perform simple biological experiments as part of their coursework. Earthworms as an experimental organism, are plentiful, inexpensive, relatively easy to cultivate, and require no complex holding structures or licenses. The book also includes a very useful simplified key to common genera of terrestrial earthworms, a discussion of nomenclature, a short glossary and an excellent reference section.

This book may not be for everyone but it will certainly serve as a fine text or reference for those people interested or involved in the study of earthworms.

Richard B. Glazer  
Ulster County Community College  
Stone Ridge, New York

#### THE HYDRA

by Stanley Shostak. 1977. Coward McCann and Geoghegan, Inc. (200 Madison Avenue, New York 10016). 47 p. \$5.96.

The life history, morphology, physiology and behavior of the hydra are thoroughly explained in this text. The book also includes many excellent illustrations, photographs and photomicrographs of hydras. (The photomicrographs are credited to Jane A. Westfall.) It is well indexed and contains a glossary.

After describing the importance of hydra research on regeneration, aging and cancer, the author gives instructions on how to set up a home or classroom laboratory to study hydra.

The book would be useful in elementary and junior high science classrooms.

George H. Ratzlaff  
Central Junior High  
Hutchinson, Kansas

### DOCTOR OF ARTS IN BIOLOGY

Fellowships are available for persons interested in the D.A. degree in Biology. The program stresses preparation for undergraduate teaching at colleges and universities. Applicants should hold a Master's degree in some area of biology. Deadline for receipt of applications is March 1, 1979. For more information contact:

Dr. Donald P. Streubel,  
Chairman, D.A. Committee  
Department of Biology  
Idaho State University  
Pocatello, Idaho 83209

An equal opportunity employer

Jim DeNinno wants your name for his mailing list and is offering Three Super Specials to Get It!

**3.95 BUYS ALL OF THIS  
Old & Rare Coins**

1 - Old Indian Head Cent	1 - 5 Cent - 25 years
1 - V Liberty Nickel	1 - 1968 - 5 Penny unc.
1 - Buffalo Nickel	1 - 1960 - D Small Date
1 - Large Cent eng	
1 - 1943 WWII Cent	
1 Cent 1920 or Older	
1 Wooden Nickel	
1 D Mint Cent - 25 years	

**OR 3.95 BUYS THESE TWO  
RARE UNCIRCULATED COINS**

The mint made a mistake but we didn't. Now is your chance to take advantage of their mistake.

<b>55</b> 1955 5 Cents Poorman's Double Die	<b>PLUS</b> 1 1960 D Small Date
---	---------------------------------------

**OR 6.95 BUYS EVERYTHING  
IN BOTH OF THE ABOVE SPECIALS**

With Every Offer you Receive

- 1 Free Two 5 Bill
- More Free Coins
- Or Free Brochures

Add \$.25 for Postage

**JIM De NINNO & CO.**  
Suite 5, Pike Bldg. Viewmont Village  
Scranton, Pa. 18508