

## BOTANY—FLOWERS

**The Rose's Kiss: A Natural History of Flowers.** By Peter Bernhardt. 1999. Island Press (1718 Connecticut Ave. NW, Washington DC 20009). 272 pp. Hardback \$24.95.

 The study of floral biology is one of the central themes of botany. Thus, over the past decade, there is a fascinating body of research from biochemical, molecular and biophysical methods to ecological approaches in the investigations of the biology of flowers. While this book emphasizes the ecology and natural history of flowers, it also considers all major aspects of sexual systems in plants.

Peter Bernhardt, the author, has good academic credentials in that he is a faculty member at St. Louis University and is associated with the Missouri Botanical Garden, one of the oldest and most prestigious in the United States. Bernhardt, in addition to this work, has written two other books for general audiences. This latter fact is obvious in that he makes very good analogies and tells fascinating anecdotes to bring in the lay reader. He also draws on a vast experience and extensive travels throughout the world to tell these interesting stories.

While Bernhardt uses the rose to provide an example for the major concepts in his book, a large variety of flower types is discussed. The book begins with an account of adaptations in floral morphology and structure. The author does use many technical botanical terms but always gives an adequate explanation and provides a glossary at the end of the book. A series of line drawings provides a helpful aid to his readers. Following the chapters on floral structure, Bernhardt

talks about the physiological and ecological controls that regulate the time in which plants should produce flowers.

The author has a talent for presenting captivating and rich analogies to explain complex topics. For instance, in the discussion of the role of the numerous pigments involved in determining the final color of flowers, Bernhardt compares the use of individual pigment molecules to the approach of French Impressionist painter Georges Seurat who combined dots of different colors to achieve a larger-scale effect in his paintings. To quote: "We credit Seurat with the perfection of a painting technique known as pointillism, but flowers probably perfected this design more than 80 million years ago."

The most interesting sections were the chapters on pollination biology. The author considers the well known birds, bats, insects and bees as well as the less famous mammals (e.g. lemurs and honey possums) involved in pollination. In his discussion of pollination by the use of floral mimicry ("pollination by deceit"), Bernhardt says "... mimics produce lots of seed by cross-pollination only when there is a steady supply of naive visitors. They must bloom at a time of year when a sucker is born every minute."

From the perspective of a teacher, I found the examples, anecdotes and analogies throughout *The Rose's Kiss* to be potentially useful in courses in botany and general biology. I must admit, despite the author's best intentions, the beginning of the book may seem a bit dry for the lay reader because of the presentation of floral anatomy and complex structures. However, the book picks up steam by the middle and has a fabulous finish. I recommend it to general readers who

want to develop a better appreciation for botany, but also to high school and college faculty.

Professor John Z. Kiss, Ph.D.  
Department of Botany  
Miami University  
Oxford, OH 45056

## CHILDREN'S SCIENCE

**Seals & Sea Lions.** By David Miller. 1998. 70 pp. Paperback \$16.95.

**Pandas.** By Heather Angel. 1998. 72 pp. Paperback \$16.95.

**Alligators & Crocodiles.** By John & Deborah Behler. 1998. 72 pp. Hardback \$16.95.

Voyageur Press, Inc. (123 North Second St., PO Box 338, Stillwater, MN 55082).

 These three books are part of the **WorldLife Library** series from Voyageur Press, Inc. Acclaimed naturalists serve as the authors for this series and they do an excellent job of incorporating interesting and significant facts about the animals they study. These books are wonderfully illustrated with color photographs that are absolutely first-rate.

Each book is organized to include an introductory chapter as an overview of the author's interests in the animal. Other chapters examine worldwide distributions of different species, habitat, life cycles, and breeding cycles. The interaction and impact of man with each animal is also discussed. Fact sheets present information such as common and scientific names, geographical distributions, maximum sizes, reproductive patterns, and diets. Each book also includes interesting conservation information including acts associated with the conservation of a species. Term and picture indexes round out the contents.

Nature-loving children and adults alike will undoubtedly enjoy reading the text and marvel at the pictures in this series. Grade school children can use these books as excellent reference sources for preparing a paper or report on an animal of interest. My four-year-old and six-year-old daughters were thoroughly intrigued by each book and I am certain that they will enjoy them for years to come. Consider the **WorldLife** series worthwhile, informative and fun additions to the bookshelf of the young science reader.

Professor Michael A. Palladino, Ph.D.  
Monmouth University  
West Long Branch, NJ 07764

## INDEX TO ADVERTISERS

American Society of Clinical Pathologists ....	323	NABT Special Events Form .....	400
Bio-Rad Laboratories .....	Cover 3	NABT Publications Order Form .....	351
Carolina Biological Supply Co. ....	Cover 4	NABT Sustaining/Organizational Members ..	364
Connecticut Valley Biological .....	396	National Academy of Sciences .....	397
Cybered Inc. ....	325	National Anti-Vivisection Society .....	339
Ferris State University .....	377	Nature Walk Magazine .....	368
Health-Science, Inc. ....	385	Plexus Publishing, Inc. ....	329
Johns Hopkins University Press .....	331	Prior Scientific, Inc. ....	344
Leica Microsystems, Inc. ....	393	Skulls Unlimited .....	337
NABT Affiliates .....	360	Texas Instruments .....	Cover 2, 328
NABT Membership Form .....	345	Vernier Software .....	349
NABT Convention Registration Form .....	399		