

# New titles in Ornithology from Academic Press...

## AVIAN BIOLOGY

Edited by DONALD S. FARNER, JAMES R. KING,  
and KENNETH C. PARKES

The emphasis is on the significance of avian biological research to such areas of biology as ethology, ecology, population biology, evolutionary biology, and physiological ecology.

### Volume 7

1983, 576 pp., \$69.50/ISBN: 0-12-249407-5

Subscription Price: \$59.50\*

### Volume 6

1982, 512 pp., \$65.00/ISBN: 0-12-249406-7

Subscription Price: \$55.50\*

\*Subscription prices are valid only on purchase of all volumes before publication of the last volume. Subscription prices are not valid on orders from Australia or New Zealand.

Avian Biology volumes 1-5 are available at a subscription price.

## ACOUSTIC COMMUNICATION IN BIRDS

### Volumes 1 and 2

Edited by DONALD E. KROODSMA  
and EDWARD H. MILLER

Taxonomic Editor: HENRI OUELLET

Volumes in the COMMUNICATION  
AND BEHAVIOR Series

**FROM THE REVIEWS:** "The editors have . . . done their job well . . . they tackle problems and issues relevant to acoustics, ecology, and evolution as well as ethology, so many biologists will benefit from dipping into them . . . they identify problems and provide signposts to future development that will be a positive stimulus to it in the years ahead."  
—P. J. B. Slater in SCIENCE

### Volume 1: Production, Perception, and Design Features of Sounds

1983, 360 pp., \$39.00/ISBN: 0-12-426801-3

### Volume 2: Song Learning and Its Consequences

1983, 392 pp., \$42.00/ISBN: 0-12-426802-1

## THE BIRDS OF AFRICA

### Volume 1

LESLIE H. BROWN, EMIL K. URBAN,  
and KENNETH NEWMAN

Illustrated by MARTIN WOODCOCK  
and PETER HAYMAN

Foreword by HRH The Duke of Edinburgh, KG, KT

This five-volume set covers all species of birds found in Africa, including migrants from the Palearctic and vagrants. Resident birds are described in full detail, with sections on their range and status, description, field characters, voice, general behavior, food and breeding biology.

1982, 552 pp., approx. 310 mm. x 240 mm.,  
28 color plates, 4 black & white plates, \$99.00  
ISBN: 0-12-137301-0

For faster service call TOLL-FREE 1-800-321-5068.  
To place an order from Florida, Hawaii or Alaska,  
call 1-305-345-4100.

In the U.K. call (01) 300-0155. Credit cards only.

## PHYSIOLOGY AND BEHAVIOUR OF THE PIGEON

Edited by MICHAEL ABS

This book synthesizes the most important information on the biology of the pigeon, which until now has been dispersed throughout the specialist literature. An international group of experts has contributed chapters dealing with ontogeny and juvenile development; the digestive system and nutrition; excretion; endocrinology of reproduction; respiration; circulation; the fore-limb musculature and flight; thermoregulation; the chemical senses; the somatosensory system; hearing; the functional morphology of the visual system; vision; orientation; behaviour; vocalizations; and learning.

1983, 384 pp., \$63.00/ISBN: 0-12-042950-0

## HIBERNATION AND TORPOR IN MAMMALS AND BIRDS

CHARLES P. LYMAN, ANDRÉ MALAN,  
JOHN S. WILLIS, and LAWRENCE C. H. WANG

A Volume in the *PHYSIOLOGICAL ECOLOGY Series*

**CONTENTS** (Chapter Titles): Why Bother to Hibernation? Who is Who among the Hibernators? Entering Hibernation. The Hibernating State. Sensitivity to Arousal. The Mystery of the Periodic Arousal. Mechanisms of Arousal. Intermediary Metabolism in Hibernation. Is There Cold Adaptation of Metabolism in Hibernators? Hibernation: Some Intrinsic Factors. Hibernation Responses to External Challenges. Hibernation and the Endocrines. Respiration and Acid-base State in Hibernation. Recent Theories of Hibernation. Index.

1982, 328 pp., \$39.50/ISBN: 0-12-460420-X

## PHYSIOLOGY AND BIOCHEMISTRY OF THE DOMESTIC FOWL

Edited by B. M. FREEMAN

FROM REVIEWS OF PREVIOUS VOLUMES:

"... these three volumes comprise an invaluable work of reference . . . and it is likely that this will be only the first of many editions."

—F. T. W. Jordan *et al* in

THE VETERINARY RECORD

### Volume 5

1984, 452 pp., \$79.95/ISBN: 0-12-267105-8

### Volume 4

1983, 448 pp., \$55.00/ISBN: 0-12-267104-X

Send payment with order and save postage  
and handling.

Prices are in U.S. dollars and are subject to change  
without notice.



## ACADEMIC PRESS, INC.

(Harcourt Brace Jovanovich, Publishers)

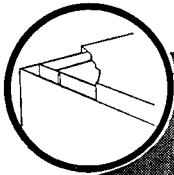
Orlando • San Diego • San Francisco • New York •  
London • Toronto • Montreal • Sydney • Tokyo

ORLANDO, FLORIDA 32887

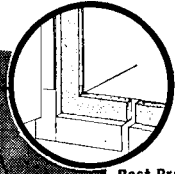
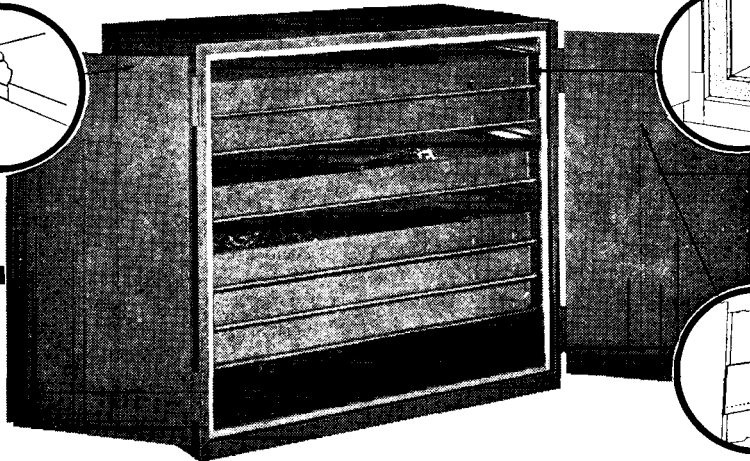
13074

How many years would it take to replace your collection?  
 Safe-guard your valuable specimens  
**PERMANENT SPECIMEN PRESERVATION**

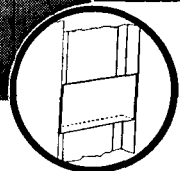
with *Lane* **ZOOLOGY AND ORNITHOLOGY  
 SPECIMEN CABINETS**



Double Wall Construction



Pest-Proof and Air Tight Seal



Fumigant Compartment

- Double Wall Construction
- Pest-Proof and Air Tight Seal
- Double Panel Door
  - Lift-Off Safe Type Hinge
  - Fumigant Compartment
  - 3-Point Locking Mechanism
  - Front and Back Air Tight Seals
    - Specimen Trays of Aluminum and Masonite. Lightweight, sturdy and easy to handle.

Skin Case #201 (illustrated)  
 Holds large trays for larger specimens.

Skin Case # 202 (not illustrated)  
 Divided for half-size trays for smaller specimens.

FOR ILLUSTRATED BROCHURE, WRITE

*Lane*

**SCIENCE EQUIPMENT CO.**  
 225 WEST 34<sup>th</sup> Street New York, NY 10122

Lane Science Equipment Co. Dept. D  
 225 WEST 34<sup>th</sup> Street, New York, NY 10122  
 Please send complete details on Lane Zoology and Ornithology Specimen Cabinets to:

Name \_\_\_\_\_ Title \_\_\_\_\_  
 Institution \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_



Incorporated December 6, 1934

## COOPER ORNITHOLOGICAL SOCIETY

### Objectives

- The observation and cooperative study of birds.
- The spread of interest in bird study.
- The conservation of birds and wildlife in general.
- The publication of ornithological knowledge.

### Membership (Includes THE CONDOR)

\$18.00 (\$12.00 students) Advance Payment in U.S. Dollars Required  
Subscriptions are entered for the calendar year.

Subscription Address: Charles T. Collins, Treasurer—EA  
Department of Biology  
California State University  
Long Beach, CA 90840 USA

### Publications

#### THE CONDOR

A Quarterly Journal of Ornithology Established in 1899.

#### STUDIES IN AVIAN BIOLOGY

Devoted to Papers of Unusual Length. Supercedes Pacific Coast Avifauna, Established in 1900:

- STATUS AND DISTRIBUTION OF ALASKA BIRDS. By BRINA KESSEL and DANIEL D. GIBSON. 100 pp. SAB No. 1, November 1978 ..... \$9.00
- SHOREBIRDS IN MARINE ENVIRONMENTS. Edited By FRANK A. PITELKA. 261 pp. SAB No. 2, June 1979 ..... OUT OF PRINT
- BIRD COMMUNITY DYNAMICS IN A PONDEROSA PINE FOREST. By ROBERT C. SZARO and RUSSELL P. BALDA. 66 pp. SAB No. 3, October 1979 ..... \$6.50
- THE AVIFAUNA OF THE SOUTH FARALLON ISLANDS, CALIFORNIA. By DAVID F. DESANTE and DAVID G. AINLEY. 104 pp. SAB No. 4, April 1980 ..... \$10.00
- ANNUAL VARIATION OF DAILY ENERGY EXPENDITURE BY THE BLACK-BILLED MAGPIE: A STUDY OF THERMAL AND BEHAVIORAL ENERGETICS. By JOHN N. MUGAAS and JAMES R. KING. 78 pp. SAB No. 5, May 1981 .. \$8.00
- ESTIMATING NUMBERS OF TERRESTRIAL BIRDS. Edited By C. JOHN RALPH and J. MICHAEL SCOTT. 630 pp. SAB No. 6, October 1981 ..... OUT OF PRINT

#### NEW TITLES

- POPULATION ECOLOGY OF THE DIPPER (*Cinclus mexicanus*) IN THE FRONT RANGE OF COLORADO. By FRANK E. PRICE and CARL E. BOCK. 84 pp. SAB No. 7, November 1983 ..... \$9.00
- TROPICAL SEABIRD BIOLOGY. Proceedings of an International Symposium of the Pacific Seabird Group. Edited by RALPH W. SCHREIBER. 114 pp. SAB No. 8, December 1983 ..... \$12.00

Prices above include postage and handling. PREPAYMENT IN U.S. DOLLARS ONLY IS REQUIRED  
Make checks payable to *Cooper Ornithological Society*

*Cooper Ornithological Society—EA*  
P.O. Box 368  
Lawrence, KS 66044 U.S.A.

**1984 MEETING OF THE AMERICAN SOCIETY OF ZOOLOGISTS  
and  
AMERICAN MICROSCOPICAL SOCIETY, ANIMAL BEHAVIOR SOCIETY,  
BIOLOGICAL SOCIETY OF WASHINGTON, CRUSTACEAN SOCIETY,  
INTERNATIONAL ASSOCIATION OF ASTACOLOGY,  
SOCIETY OF SYSTEMATIC ZOOLOGY,  
AND WESTERN SOCIETY OF NATURALISTS**

**MARRIOTT CITY CENTER HOTEL  
HOLIDAY INN DENVER DOWNTOWN HOTEL  
DENVER, COLORADO**

**DECEMBER 27 - 30**

Call for Papers: April 1984  
Abstract Deadline: August 14, 1984  
For Oral and Poster Presentations

**Housing Rates:**

\$40 Single, \$48 Double or Twin at the Marriott City Center  
\$30 Single and \$36 Double or Twin at the Holiday Inn Downtown

**TENTATIVE SYMPOSIA AND REFRESHER COURSES:**

PATTERNS OF DISPERSAL AMONG MAMMALS AND THEIR EFFECTS ON THE GENETIC STRUCTURE  
OF POPULATIONS  
EVOLUTION AND DISTRIBUTION OF SOME BRAIN AND PITUITARY HORMONES  
PHYLOGENETIC ORIGINS OF HUMORAL IMMUNE MEDIATORS  
CARDIOVASCULAR ADAPTATION IN REPTILES  
CELL-CELL INTERACTIONS AND THE CELL SURFACE IN NEURAL RETINA DEVELOPMENT  
TERRITORIALITY: RECENT THEORETICAL ADVANCES, TESTS OF MODELS, AND CASE STUDIES  
CHARACTER WEIGHTING, CLADISTICS, AND CLASSIFICATION  
THE BIOLOGY AND EVOLUTION OF LUNGFISHES  
NATURALISTS AND NATURAL HISTORY INSTITUTIONS OF THE AMERICAN WEST  
PHOTOPERIODISM IN THE MARINE ENVIRONMENT  
SCIENCE AS A WAY OF KNOWING - HUMAN ECOLOGY  
REFRESHER COURSE ON LESSER-KNOWN CRUSTACEA  
REFRESHER COURSE ON BIOLOGY OF THE LESSER-KNOWN INVERTEBRATES

Hosted by University of Denver - James Platt & Dennis Barrett, Co-Chairpersons of Local Committee

Ski Aspen after the Meeting. Special rates at the Holiday Inn of Aspen will be confirmed in July (discounts up to 20%). Reservations must be made by November 15. Information available from ASZ (see address below).



**SOCIALS, SPECIAL PROGRAMS,  
COMMERCIAL EXHIBITS,  
JOB PLACEMENT SERVICE . . .**

For more information, contact:

Mary Wiley, Executive Officer,  
American Society of Zoologists,  
Box 2739 California Lutheran College,  
Thousand Oaks, California 91360,  
Telephone: 805-492-3585

# THE AUK

A Quarterly Journal of Ornithology

PUBLISHED BY THE AMERICAN ORNITHOLOGISTS' UNION

*Editor:* JOHN A. WIENS, Department of Biology, University of New Mexico, Albuquerque, New Mexico 87131

*Editor-Elect:* ALAN H. BRUSH, Biological Sciences Group, University of Connecticut, Storrs, Connecticut 06268.

*Copy Editor:* JEAN FERNER

*Associate Editors:* HERBERT W. KALE, II (Periodical Literature), WILLIAM E. SOUTHERN (Book Reviews)

THE AUK welcomes original reports dealing with the biology of birds, emphasizing the documentation, analysis, and interpretation of laboratory and field studies, theoretical or methodological developments, or reviews of existing information or ideas. Contributions are welcomed from throughout the world, but must be written in English.

**SUGGESTIONS TO CONTRIBUTORS.** Submit the typewritten original and two copies of the text, tables, and all other material to the Editor-Elect. Three copies of illustrations should be submitted. *All typewritten material must be double-spaced on one side of numbered 8½ × 11 inch (21½ × 28 cm) good quality bond paper, with at least 1 inch (2½ cm) margins.* Originals typed on erasable, light weight, or mimeo bond will not be considered, but copies may be clear reproductions. Number pages through the Literature Cited. Avoid footnotes. The style of manuscripts should conform to general usage in recent issues. A cover page should contain the full title, a shortened version of the title (not to exceed 35 characters in length) for use as a running head, and your address at the time the research was conducted. Your present address, if different, should be given at the bottom of the first text page. The cover page should include the name and full address of the individual to whom proof is to be sent.

Each article should be preceded by an Abstract not exceeding 5% of the length of the paper. The Abstract should recapitulate the findings of the paper, not describe the work done. Acknowledgments should follow the text and precede the Literature Cited. Scientific and English names of birds always should be given where first mentioned in the text, and should follow the A.O.U. Check-list of North American Birds and supplements or the appropriate equivalent unless departures are explained and defended. SI metric units should be used in all measurements. In general, abbreviations of statistical terms and mensural units should conform with the Council of Biology Editors (CBE) Style Manual, 4th ed. Use the 24-hour clock (0800 and 2030) and "continental" dating (1 July 1971).

*Tables*, which must not duplicate material in either the text or illustrations, are typewritten (**double-spaced throughout!**) separately from the text. Each table should contain a short but complete heading, and must not contain vertical rulings. *Illustrations* (including labels of coordinates) should be on 8½ × 11 inch (21½ × 28 cm) sheets, and must be mailed flat. The name of the author and the figure number should be penciled on the *back* of each figure. Legends should be typed consecutively (double-spaced) on a separate page. Drawings should be drafted with undiluted india ink, and be large enough to permit ½ to ½ reduction to the size that they will appear in print. Graphs may be drafted on coordinate paper ruled with light *blue* lines; do *not* use coordinate paper ruled with *green* lines. Use mechanical lettering, pressure transfer letters, or calligraphy; typewritten lettering is not acceptable. Lettering should be large enough to be easily readable after 50% reduction of the figure, but not overly large. Lettering style should be uniform among all figures for a manuscript, as should the size of lettering following reduction. Photographs should be glossy prints of good contrast and sharpness, and should be approximately the same size as they will appear in print. Letters and arrows on photographs are best applied by pressure-sensitive materials. The Auk is published in a double-column format; give careful attention to designing your tables and illustrations accordingly.

Literature citations for all manuscripts are listed (double-spaced!) in a Literature Cited section following the text and Acknowledgments. Text citations should include author and year (e.g. Darwin 1858), or, if more than two authors are involved, the first author and year (Jones et al. 1947). If critical matter is cited or quoted directly from longer works, indicate the pertinent pages (e.g. MacArthur 1972: 204). Citations of two or more works on the same topic should be cited in chronological order (e.g. Meanley 1971, Dyer 1975). For abbreviations and forms of titles of serial publications, follow the BIOSIS List of Serials. Consult recent issues of The Auk and the CBE Style Manual for additional details.

A more detailed set of instructions for contributors appeared in the Auk, Vol. 99, No. 1 (January 1982), copies of which are available from the Editor.

## ORNITHOLOGICAL MONOGRAPHS

Order from Frank R. Moore, Assistant to the Treasurer A.O.U., Department of Biology, University of Southern Mississippi, Hattiesburg, Mississippi 39406. All orders must be prepaid and include a \$1.00 handling charge. Prices to AOU members are given in parentheses.

- No. 2. *A Comparative Study of Some Social Communication Patterns in the Pelecaniformes*, by Gerard Frederick van Tets. 1965. \$3.50 (\$2.50).
- No. 3. *The Birds of Kentucky*, by Robert M. Mengel. 1965. \$15.00 (\$12.50).
- No. 6. *Adaptations for Locomotion and Feeding in the Anhinga and the Double-crested Cormorant*, by Oscar T. Owre. 1967. \$6.00 (\$4.50).
- No. 7. *A Distributional Survey of the Birds of Honduras*, by Burt L. Monroe, Jr. 1968. \$14.00 (\$11.00).
- No. 10. *The Behavior of Spotted Antbirds*, by Edwin O. Willis. 1972. \$9.00 (\$7.50).
- No. 11. *Behavior, Mimetic Songs and Song Dialects, and Relationships of the Parasitic Indigobirds (Vidua) of Africa*, by Robert B. Payne. 1973. \$12.50 (\$10.00).
- No. 12. *Intra-island Variation in the Mascarene White-eye Zosterops borbonica*, by Frank B. Gill. 1973. \$3.50 (\$2.50).
- No. 13. *Evolutionary Trends in the Neotropical Ovenbirds and Woodhewers*, by Alan Feduccia. 1973. \$3.50 (\$2.50).
- No. 14. *A Symposium on the House Sparrow (Passer domesticus) and European Tree Sparrow (P. montanus) in North America*, edited by S. Charles Kendeigh. 1973. \$6.00 (\$4.50).
- No. 15. *Functional Anatomy and Adaptive Evolution of the Feeding Apparatus in the Hawaiian Honeycreeper Genus Loxops (Drepanididae)*, by Lawrence P. Richards and Walter J. Bock. 1973. \$9.00 (\$7.50).
- No. 16. *The Red-tailed Tropicbird on Kure Atoll*, by Robert R. Fleet. 1974. \$5.50 (\$4.50).
- No. 17. *Comparative Behavior of the American Avocet and the Black-necked Stilt (Recurvirostridae)*, by Robert Bruce Hamilton. 1975. \$7.50 (\$6.00).
- No. 18. *Breeding Biology and Behavior of the Oldsquaw (Clangula hyemalis L.)*, by Robert M. Alison. 1975. \$3.50 (\$2.50).
- No. 19. *Bird Populations of Aspen Forests in Western North America*, by J. A. Douglas Flack. 1976. \$7.50 (\$6.00).
- No. 20. *Sexual Size Dimorphism in Hawks and Owls of North America*, by Noel F. R. Snyder and James W. Wiley. 1976. \$7.00 (\$6.00).
- No. 21. *Social Organization and Behavior of the Acorn Woodpecker in Central Coastal California*, by Michael H. MacRoberts and Barbara R. MacRoberts. 1976. \$7.50 (\$6.00).
- No. 22. *Maintenance Behavior and Communication in the Brown Pelican*, by Ralph W. Schreiber. viii + 78 pp., 38 text figures. 1977. Price \$6.50 (\$5.00).
- No. 23. *Species Relationships in the Avian Genus Aimophila*, by Larry L. Wolf. viii + 220 pp., 17 text figures + 10 plates, long-play phono disc album. 1977. Price \$12.00 (\$10.50).
- No. 24. *Land Bird Communities of Grand Bahama Island: The Structure and Dynamics of an Avifauna*, by John T. Emlen. xi + 129 pp., 38 text figures, appendix. 1977. Price \$9.00 (\$8.00).
- No. 25. *Systematics of Smaller Asian Night Birds Based on Voice*, by Joe T. Marshall. viii + 58 pp., frontispiece, 15 plates, phono disc supplement, appendices I-III. 1978. Price \$7.00 (\$6.00).
- No. 26. *Ecology and Behavior of the Prairie Warbler Dendroica discolor*, by Val Nolan, Jr. xx + 595 pp., color frontispiece, 42 text figures, 8 appendices. 1978. Price \$29.50.
- No. 27. *Ecology and Evolution of Lek Mating Behavior in the Long-tailed Hermit Hummingbird*, by F. Gary Stiles and Larry L. Wolf. viii + 78 pp., 26 text figures. 1979. Price \$8.50 (\$7.50).
- No. 28. *The Foraging Behavior of Mountain Bluebirds with Emphasis on Sexual Foraging Differences*, by Harry W. Power. x + 72 pp., color frontispiece, 12 text figures. 1980. Price \$8.50 (\$7.50).
- No. 29. *The Molt of Scrub Jays and Blue Jays in Florida*, by G. Thomas Bancroft and Glen E. Woolfenden. viii + 51 pp., 15 text figures. 1982. Price \$8.00 (\$6.50).
- No. 30. *Avian Incubation: Egg Temperature, Nest Humidity, and Behavioral Thermoregulation in a Hot Environment*, by Gilbert S. Grant. viii + 75 pp., 35 text figures. 1982. Price \$9.00 (\$7.00).
- No. 31. *The Native Forest Birds of Guam*, by J. Mark Jenkins. x + 61 pp., color frontispiece, 6 color plates, 24 text figures. 1983. Price \$9.00 (\$7.00).
- No. 32. *The Marine Ecology of Birds in the Ross Sea, Antarctica*, by David G. Ainley, Edmund F. O'Connor, and Robert J. Boekelheide. x + 97 pp., 42 text figures. 1984. Price \$9.00 (\$8.00).
- No. 33. *Sexual Selection, Lek and Arena Behavior, and Sexual Size Dimorphism in Birds*, by Robert B. Payne. viii + 52 pp., 12 text figures. 1984. Price \$8.00 (\$6.50).