

The Origin and Evolution of Birds

Alan Feduccia

A comprehensive and profusely illustrated exploration of the origin of birds and of avian flight. Feduccia draws on fossil evidence and studies of the structure and biochemistry of living birds to present current knowledge and fresh data on avian evolution and to propose a major new model of this evolutionary process.

534 illus. \$55.00



Munias and Mannikins

Robin Restall

Restall, the world's leading authority on the 41 species of these seed-eating songbirds, provides a comprehensive natural history of each species, color illustrations of every known plumage, and numerous line drawings.

“The definitive work on munias and mannikins.”—Noble Proctor

Copublished with Pica Press/Helm Information Ltd.
182 b/w + 82 color illus. \$60.00



Yale University Press P.O. Box 209040, New Haven, CT 06520 1-800-YUP-READ

"PROVIDES A TREMENDOUS SERVICE..."

...to both new students and more experienced researchers....Thank you, Plenum Press, for continuing to publish these reviews."

—*The Wilson Bulletin*, from the review of an earlier volume

Announcing new editors!

CURRENT ORNITHOLOGY Volume 13

edited by Val Nolan, Jr.,
and Ellen Ketterson,
Indiana University, Bloomington

Contributions address • the social cognition of birds compared with that of primates • predicting cognitive capacity in four corvid species • the assessment of body condition in birds • avian chemical defense • the evaluation of birds as predators of insect pests in temperate agriculture, and • offspring desertion in birds.

0-306-45473-4/324 pp. + Index
ill./1996/\$89.50
(\$107.40 outside US & Canada)

CURRENT ORNITHOLOGY Volume 12

edited by Dennis M. Power

"I enjoyed reading each
of these chapters.

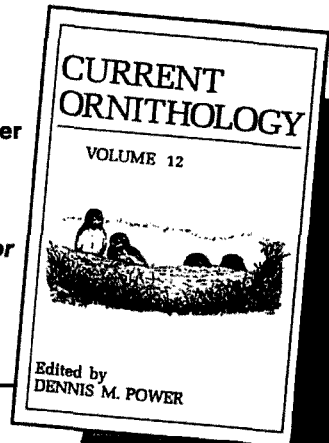
...exceptionally strong."

—*Animal Behavior*

0-306-44978-1/294 pp.
ill./1995/\$79.50
(\$95.40 outside US & Canada)



PLENUM PUBLISHING CORPORATION
233 Spring Street, New York, NY 10013-1578
e-mail: info@plenum.com • <http://www.plenum.com>
(212) 620-8000/(800) 221-9369

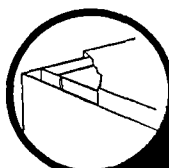


NEW!

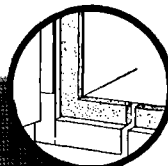
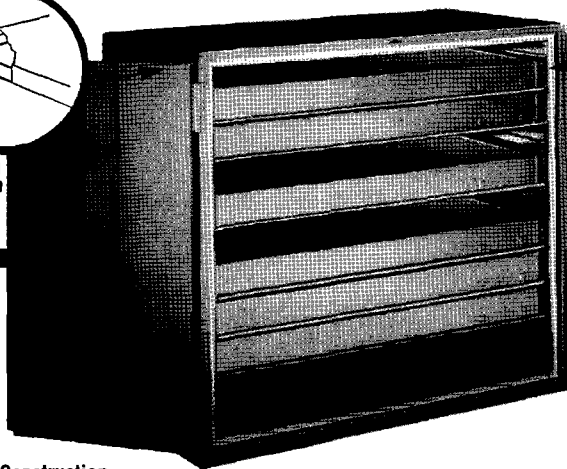
Lane Science Cabinets now feature Durable Neoprene Door Seals and Powder Paint Finishes.

PERMANENT SPECIMEN PRESERVATION

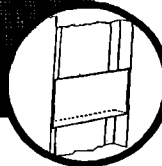
with *Lane* **ZOOLOGY AND ORNITHOLOGY SPECIMEN CABINETS**



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. Also available, Steel Trays.

FOR ILLUSTRATED BROCHURE, WRITE

Lane

SCIENCE EQUIPMENT CORP.

225 W. 34th St., New York, N.Y. 10122
Tel. (212) 563-0663 Fax (212) 465-9440

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

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

Lane Science Equipment Corp. Dept. P
225 W. 34th St., New York, N.Y. 10122

Please send complete details on Lane Zoology and Ornithology Specimen Cabinets to:

Name _____ Title _____

Institution _____

Address _____

City _____ Zone _____ State _____

ORNITHOLOGICAL MONOGRAPHS

- No. 3. *The Birds of Kentucky*. R. M. Mengel. 1965. \$10.00.
- No. 6. *Adaptations for Locomotion and Feeding in the Anhinga and the Double-crested Cormorant*. O. T. Owre. 1967. \$3.00.
- No. 7. *A Distributional Survey of the Birds of Honduras*. B. L. Monroe, Jr. 1968. \$7.00.
- No. 10. *The Behavior of Spotted Antbirds*. E. O. Willis. 1972. \$4.00.
- No. 11. *Behavior, Mimetic Songs and Song Dialects, and Relationships of the Parasitic Indigobirds (Vidua) of Africa*. R. B. Payne. 1973. \$6.00.
- No. 12. *Intra-island Variation in the Mascarene White-eye Zosterops borbonica*. F. B. Gill. 1973. \$2.50.
- No. 13. *Evolutionary Trends in the Neotropical Ovenbirds and Woodhewers*. A. Feduccia. 1973. \$2.50.
- No. 14. *A Symposium on the House Sparrow (Passer domesticus) and European Tree Sparrow (P. montanus) in North America*. S. C. Kendeigh, Ed. 1973. \$3.00.
- No. 15. *Functional Anatomy and Adaptive Evolution of the Feeding Apparatus in the Hawaiian Honeycreeper Genus Loxops (Drepanididae)*. L. P. Richards and W. J. Bock. 1973. \$5.00.
- No. 16. *The Red-tailed Tropicbird on Kure Atoll*. R. R. Fleet. 1974. \$3.00.
- No. 17. *Comparative Behavior of the American Avocet and the Black-necked Stilt (Recurvirostridae)*. R. B. Hamilton. 1975. \$4.00.
- No. 18. *Breeding Biology and Behavior of the Oldsquaw (Clangula hyemalis L.)*. R. M. Alison. 1975. \$2.50.
- No. 19. *Bird Populations of Aspen Forests in Western North America*. J. A. D. Flack. 1976. \$4.00.
- No. 21. *Social Organization and Behavior of the Acorn Woodpecker in Central Coastal California*. M. H. MacRoberts and B. R. MacRoberts. 1976. \$4.00.
- No. 22. *Maintenance Behavior and Communication in the Brown Pelican*. R. W. Schreiber. 1977. \$3.50.
- No. 23. *Species Relationships in the Avian Genus Aimophila*. L. L. Wolf. 1977. \$7.00.
- No. 24. *Land Bird Communities of Grand Bahama Island: The Structure and Dynamics of an Avifauna*. J. T. Emlen. 1977. \$5.00.
- No. 25. *Systematics of Smaller Asian Night Birds Based on Voice*. J. T. Marshall. 1978. \$4.00.
- No. 26. *Ecology and Behavior of the Prairie Warbler Dendroica discolor*. V. Nolan, Jr. 1978. \$15.00.
- No. 27. *Ecology and Evolution of Lek Mating Behavior in the Long-tailed Hermit Hummingbird*. F. G. Stiles and L. L. Wolf. 1979. \$4.50.
- No. 28. *The Foraging Behavior of Mountain Bluebirds with Emphasis on Sexual Foraging Differences*. H. W. Power. 1980. \$4.50.
- No. 29. *The Molt of Scrub Jays and Blue Jays in Florida*. G. T. Bancroft and G. E. Woolfenden. 1982. \$4.00.
- No. 30. *Avian Incubation: Egg Temperature, Nest Humidity, and Behavioral Thermoregulation in a Hot Environment*. G. S. Grant. 1982. \$5.00.
- No. 31. *The Native Forest Birds of Guam*. J. M. Jenkins. 1983. \$6.00.
- No. 32. *The Marine Ecology of Birds in the Ross Sea, Antarctica*. D. G. Ainley, E. F. O'Connor, and R. J. Boekelheide. x + 97 pp. 1984. \$9.00 (\$8.00).
- No. 33. *Sexual Selection, Lek and Arena Behavior, and Sexual Size Dimorphism in Birds*. R. B. Payne. viii + 52 pp. 1984. \$8.00 (\$6.50).
- No. 34. *Pattern, Mechanism, and Adaptive Significance of Territoriality in Herring Gulls (Larus argentatus)*. J. Burger. xii + 92 pp. 1984. \$9.00 (\$7.00).
- No. 35. *Ecogeographical Variation in Size and Proportions of Song Sparrows (Melospiza melodia)*. J. W. Aldrich. x + 134 pp. 1984. \$10.50 (\$8.50).
- No. 36. *Neotropical Ornithology*. P. A. Buckley et al., Eds. xi + 1,041 pp., 8 color plates. 1985. \$50.00.
- No. 37. *Avian Monogamy*. P. A. Gowaty and D. W. Mock, Eds. vi + 121 pp. 1985. \$11.00 (\$9.00).
- No. 38. *An Analysis of Physical, Physiological, and Optical Aspects of Avian Coloration with Emphasis on Wood-Warblers*. E. H. Burt, Jr. x + 122 pp. 1986. \$15.00 (\$12.50).
- No. 39. *The Lingual Apparatus of the African Grey Parrot, Psittacus erithacus Linné (Aves: Psittacidae): Description and Theoretical Mechanical Analysis*. D. G. Homberger. xii + 236 pp. 1986. \$25.00 (\$20.00).
- No. 40. *Patterns and Evolutionary Significance of Geographic Variation in the schistacea Group of the Fox Sparrow (Passerella iliaca)*. R. M. Zink. viii + 119 pp. 1986. \$15.00 (\$12.50).
- No. 41. *Hindlimb Myology and Evolution of the Old World Suboscine Passerine Birds (Acanthisittidae, Pittidae, Philepittidae, Eurylaimidae)*. R. J. Raikow. viii + 81 pp. 1987. \$12.50 (\$9.50).
- No. 42. *Speciation and Geographic Variation in Black-tailed Gnatcatchers*. J. L. Atwood. viii + 74 pp. 1988. \$10.00 (\$8.00).
- No. 43. *A Distributional Survey of the Birds of the Mexican State of Oaxaca*. L. C. Binford. viii + 418 pp. 1989. \$40.00 (\$36.00).
- No. 44. *Recent Advances in the Study of Neogene Fossil Birds. I. The Birds of the Late Miocene-Early Pliocene Big Sandy Formation, Mohave County, Arizona (K. J. Bickart); II. Fossil Birds of the San Diego Formation, Late Pliocene, Blancan, San Diego County, California (R. M. Chandler)*. vi + 161 pp. 1990. \$19.75 (\$17.75).
- No. 45 & 46. *Descriptions of Thirty-two New Species of Birds from the Hawaiian Islands. Part I. Non-Passeriformes (S. L. Olson and H. F. James); Part II. Passeriformes (H. F. James and S. L. Olson)*. Bound as one volume. 176 pp. 1991. \$25.00 (\$22.50).
- No. 47. *Parent-Offspring Conflict and its Resolution in the European Starling*. Elizabeth Litovich and Harry W. Power. 71 pp. 1992. \$11.70 (\$10.50).

Order from: Max C. Thompson, Assistant to the Treasurer A.O.U., Department of Biology, Southwestern College, 100 College Street, Winfield, KS 67156. Orders must be prepaid, in U.S. dollars; add 5 percent (minimum \$2.00 U.S., \$4.00 all other countries) handling and shipping charge in U.S., and 20 percent (minimum \$3.00) for all other countries. Make checks payable to American Ornithologists' Union. Prices in parentheses are for A.O.U. members.

Here's what people are saying about

THE BIRDS OF NORTH AMERICA *Life Histories for the 21st Century*

"There's nothing quite like having a wonderful resource right at one's fingertips. [The Birds of North America species profiles] are just a marvelous resource for addressing all kinds of questions about the biology of birds."

DON KROODSMA, PH.D., PROFESSOR OF BIOLOGY, UNIVERSITY OF MASSACHUSETTS, AMHERST

"The Birds of North America is highly regarded in our library."

JEANETTE SMITH, HEAD LIBRARIAN, HALLET MEMORIAL PUBLIC LIBRARY, CROSBY, MINNESOTA

"This series is certainly something I regularly refer patrons to when they are looking for life histories. It's really the only place to go since nothing like it has been done since Bent. It's a wonderful addition to the reference collection here."

MARTY SCHLABACH, MANN LIBRARY, CORNELL UNIVERSITY

"The articles . . . provide an excellent introduction to journal literature and experimental work for further research. I'm happy to have The Birds of North America in our reference collection."

ALISON RICKER, SCIENCE LIBRARIAN, OBERLIN COLLEGE

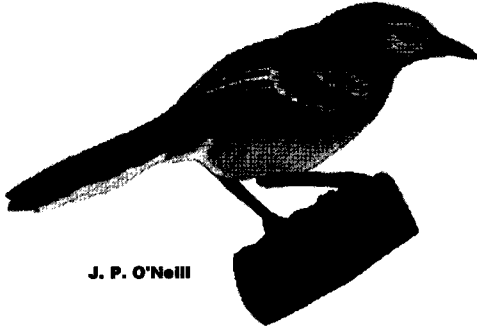
"I know of no other scientific serial work ever published that, in addition to meeting all the criteria commonly associated with today's rigorous scholarly standards, is capable of bringing even a hundredth part of the sheer joy and wonder to bird fanciers as can The Birds of North America."

JOHN BACK, EDMONTON, ALBERTA, CHARTER SUBSCRIBER TO THE BIRDS OF NORTH AMERICA

Does your library have a copy?



Call today for more information
THE BIRDS OF NORTH AMERICA
P.O. Box 1897, Lawrence, KS 66044
1-800-627-0629
<http://www.acnatsci.org/bna>
Internet: rwalker@allenpress.com



J. P. O'Neill

**STUDIES IN NEOTROPICAL
ORNITHOLOGY HONORING
TED PARKER**

**Ornithological
Monographs #48**

Ash-throated Antwren (*Herpsilochmus parkeri*)

J. V. Remsen, Jr., Editor

This commemorative volume acknowledges the central contributions of the late Theodore A. Parker III to Neotropical ornithology. The volume contains 51 papers devoted to Neotropical birds. Twelve papers are co-authored by Parker, and two papers address Parker's life and influence on ornithology in the New World tropics. A full bibliography of his publications is included. Seven new species are described, including three new *Scytalopus* tapaculos, two tyrannids, and two antbirds. An additional 20 forms are raised to species status in revisions of species limits for several important groups. Many papers focus on distribution and biogeography, foraging ecology, and conservation, and are written by leading workers in Neotropical field ornithology. The volume is a must for anyone interested in the stunning avian diversity that characterizes the New World tropics. Several color illustrations are included in the volume.

Each copy is \$49.95; the pre-publication price is \$39.95 (expected date of publication: 1 July 1997). Please include \$4.00 per copy for shipping and handling. Make checks in U.S. funds payable to "American Ornithologists' Union" and send to:

**Max C. Thompson
Assistant to the Treasurer, AOU
Department of Biology
Southwestern College
100 College Street
Winfield, Kansas 67156
USA**

Website with detailed contents: <http://www.manomet.org/parker>



The American Ornithologists' Union

The Council for 1996–1997

Officers and Editors

- President:** NED K. JOHNSON, *Museum of Vertebrate Zoology, University of California, Berkeley, California 94720*
- President-Elect:** FRANK B. GILL, *National Audubon Society, 700 Broadway, New York, New York 10003*
- Vice President:** ROBERT M. ZINK, *Bell Museum of Natural History, 100 Ecology Building, University of Minnesota, St. Paul, Minnesota 55108*
- Secretary:** MARY VICTORIA McDONALD, *Department of Biology, University of Central Arkansas, Conway, Arkansas 72035*
- Treasurer:** FREDERICK H. SHELDON, *Museum of Natural Science, Foster Hall 119, Louisiana State University, Baton Rouge, Louisiana 70803*
- Editor of *The Auk*:** THOMAS E. MARTIN, *Montana Cooperative Wildlife Research Unit, University of Montana, Missoula, Montana 59812*
- Editor of *Ornithological Monographs*:** JOHN M. HAGAN III, *Manomet Bird Observatory, Manomet, Massachusetts 02345*

Elective Councilors and Living Past Presidents

1997: James A. Kushlan, Martin L. Morton, Glenn E. Walsberg. 1998: Steven R. Beissinger, Robert S. Kennedy, Lloyd F. Kiff. 1999: Susan M. Haig, Jeffrey R. Walters, Wesley W. Weathers.

Past Presidents: Ernst Mayr (1957–59), Dean Amadon (1964–66), Harold F. Mayfield (1966–68), Robert W. Storer (1970–72), John T. Emlen (1975–76), Wesley E. Lanyon (1976–78), Harrison B. Tordoff (1978–80), Thomas R. Howell (1982–84), Frances C. James (1984–86), Charles G. Sibley (1986–88), Glen E. Woolfenden (1988–90), Brina Kessel (1992–94), Richard C. Banks (1994–96).



Instructions to Contributors

The Auk publishes original reports on the biology of birds. Appropriate topics include documentation, analysis, and interpretation of laboratory and field studies, theoretical or methodological developments, and reviews of information or ideas. Authors are encouraged to write papers from the perspective of general concepts and theories, and to consider the relevance of their findings to taxa in addition to birds. *The Auk* strives to publish a color frontispiece with each lead article; authors are encouraged to submit suitable color illustrations. Contributions are welcome from throughout the world but must be written in English. Submit five copies of each manuscript complete with tables, figure legends, and figures (retain original figures until notified) to the Editor. Include a copy of the manuscript on a 3.5-inch diskette (WordPerfect preferred, but identify the software). Double-space all written material (including tables and figure legends) on standard-sized stationery. Number pages through the figure legends. Submit tables separately from the text; type figure legends consecutively on a separate sheet. Manuscripts should conform to general usage in the most recent issue of the journal. The title page should contain: (1) full title; (2) authors' names and addresses; (3) left and right running heads (<36 characters each); and (4) name, mailing address, and e-mail address of author to whom correspondence should be sent. **Detailed instructions to contributors are available in *Auk* 113(3):731–733; copies may be obtained from the Editor. Paying close attention to these instructions will hasten the processing of your manuscript and gratify the editorial staff.**

Contents (continued)



Problems with removal experiments designed to test the relationship between paternity and parental effort in a socially polyandrous bird. <i>Ian G. Jamieson and James S. Quinn</i>	291
Crows do not use automobiles as nutcrackers: Putting an anecdote to the test. <i>Daniel A. Cristol, Paul V. Switzer, Kara L. Johnson, and Leah S. Walke</i>	296
Black-capped Chickadees and Red-breasted Nuthatches "weigh" sunflower seeds. <i>Bernd Heinrich, Chris C. Joerg, Sean S. Madden, and Emory W. Sanders, Jr.</i>	298
<i>Mononykus</i> and birds: Methods and evidence. <i>Luis Chiappe, Mark Norell, and James Clark</i>	300
On the origin of some birds collected by George Such, and the type localities of several forms. <i>José Fernando Pacheco and Bret M. Whitney</i>	303
REVIEWS. <i>Edited by Carl D. Marti</i>	306