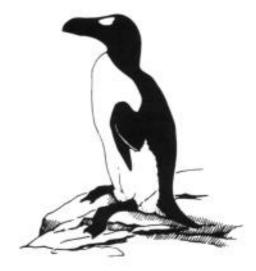
# The Auk

A Quarterly Journal of Ornithology



## Vol. 109 No. 4 October 1992

### CONTENTS

USE OF A NEW REPRODUCTIVE INDEX TO EVALUATE RELATIONSHIP BETWEEN HABITAT QUALITY AND BREEDING SUCCESS. Peter D. Vickery, Malcolm L. Hunter, Jr., and Jeffrey V. Wells
IS DENSITY AN INDICATOR OF BREEDING SUCCESS? Peter D. Vickery, Malcolm L. Hunter, Jr., and Jeffrey V. Wells
EXTRAPAIR FERTILIZATION IN MONOGAMOUS BULL-HEADED SHRIKES REVEALED BY DNA FINGER- PRINTING. Satoshi Yamagishi, Isao Nishiumi, and Chikashi Shimoda
How do frugivores process fruit? Gastrointestinal transit and glucose absorption in Cedar Waxwings (Bombycilla cedrorum). Douglas J. Levey and Gary E. Duke
CHANGES IN SURVIVAL RATES OF LESSER SNOW GEESE WITH AGE AND BREEDING STATUS. Charles M. Francis, Miriam H. Richards, Fred Cooke, and Robert F. Rockwell
EFFECT OF GROWTH AND HATCHING ASYNCHRONY ON THE FLEDGING AGE OF BLACK AND REL KITES. Javier Viñuela and Javier Bustamante
CHITIN DIGESTION AND ASSIMILATION BY SEABIRDS. Sue Jackson, Allen R. Place, and Lindsay J Seiderer
PLUMAGE VARIABILITY IN REDPOLLS FROM CHURCHILL, MANITOBA. Gilles Seutin, Peter T. Boag and Laurene M. Ratcliffe
REPRODUCTIVE PATTERNS AND SOCIAL ORGANIZATION OF THE COMMUNAL GUIRA CUCKOO (GUIRA GUIRA) IN CENTRAL BRAZIL. Regina H. Macedo
PHYLOGEOGRAPHY OF MITOCHONDRIAL DNA IN TWO SPECIES OF WHITE-EYES IN AUSTRALIA Sandie M. Degnan and Craig Moritz
CHARACTERISTICS AND CONSEQUENCES OF NEST-SITE FIDELITY IN WOOD DUCKS. Gary R. Hepp and Robert A. Kennamer
DIVING BEHAVIOR IN SURF SCOTERS AND BARROW'S GOLDENEYES. Guy Beauchamp
PHYLOGENETIC ANALYSIS OF AVIAN PARENTAL CARE. Mary C. McKitrick
FREQUENCY VARIATION IN SONGS OF BLACK-CAPPED CHICKADEES (PARUS ATRICAPILLUS). A. G. Horn, M. L. Leonard, L. Ratcliffe, S. A. Shackleton, and R. G. Weisman
DAILY MASS GAINS AMONG WOODLAND MIGRANTS AT AN INLAND STOPOVER SITE. Kevin Winker Dwain W. Warner, and A. R. Weisbrod

(Continued on outside back cover)

PUBLISHED BY

THE AMERICAN ORNITHOLOGISTS' UNION

Washington, D.C.

The American Ornithologists' Union



#### THE COUNCIL FOR 1992–93

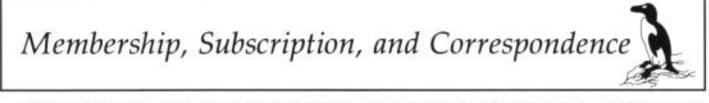
#### Officers and Editors

- President: BRINA KESSEL, University of Alaska Museum, P.O. Box 80211, College, Fairbanks, Alaska 99708.
- President-Elect: RICHARD C. BANKS, U.S. Fish & Wildlife Service, National Museum of Natural History, Washington, D.C. 20560.
- Vice President: ERICA H. DUNN, Cornell Laboratory of Ornithology, 30 Davidson Road, Aurora, Ontario L4G 2B1.
- Secretary: MARY VICTORIA MCDONALD, Department of Biology, University of Central Arkansas, Conway, Arkansas 72035.
- Treasurer: MARION A. JENKINSON, Museum of Natural History, University of Kansas, Lawrence, Kansas 66045.
- The Auk: GARY D. SCHNELL, Department of Zoology, Sutton Hall, 625 Elm Avenue, University of Oklahoma, Norman, Oklahoma 73019.
- Ornithological Monographs: NED K. JOHNSON, Museum of Vertebrate Zoology, Life Sciences Building, University of California, Berkeley, California 94720.

#### Elective Councilors and Past Presidents

1993: FRANCESCA J. CUTHBERT, J. DAVID LIGON, FRANK A. PITELKA. 1994: KEITH L. BILDSTEIN, JOHN W. FITZPATRICK, MERCEDES S. FOSTER. 1995: SIDNEY A. GAUTHREAUX, JR., JARED VERNER, ROBERT M. ZINK.

Past Presidents: ERNST MAYR (1957–59), DEAN AMADON (1964–66), HAROLD F. MAYFIELD (1966–68), JOHN W. ALDRICH (1968–70), ROBERT W. STORER (1970–72), JOSEPH J. HICKEY (1972–73), JOHN T. EMLEN (1975–76), WESLEY F. 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), BURT L. MONROE, JR. (1990–92).



Persons interested in birds are invited to join the American Ornithologists' Union. Dues are \$35 per year; student memberships are \$18. Membership is \$18 for persons in all countries *except* the United States, Canada, Israel, Japan, Australia, New Zealand, and the following Western European countries: Iceland, Norway, Sweden, Finland, Denmark, Germany, The Netherlands, Belgium, Luxembourg, France, the United Kingdom, Ireland, Switzerland, Austria, Italy, Spain, and Portugal. All members receive the *Auk* and North American members receive a bimonthly *Ornithological Newsletter*. Subscription price to institutions is \$60. A Life Membership is \$1,050, paid in one sum or four annual installments of \$262.50. Gifts of any amount for the Endowment Fund are welcome and should be sent to the Treasurer. The following major donation categories are recognized: Sponsor (\$1,000), Patron (\$3,000), Benefactor (\$10,000), and Guarantor (\$25,000). The names of Sponsors, Patrons, Benefactors, and Guarantors are inscribed in perpetuity in the AOU records. Gifts to the AOU are tax deductible to the extent permitted by law.

Send requests for information concerning membership, advertising, and back issues to the Treasurer. Information about, or orders for, Ornithological Monographs and other special publications should be sent to: Max C. Thompson, Assistant to the AOU Treasurer, Department of Biology, Southwestern College, 100 College St., Winfield, Kansas 67156. Communications also may be routed through the AOU's permanent address: Division of Ornithology, National Museum of Natural History, Washington, D.C. 20560.

Send change of address, payment of dues, subscription requests, or requests for undelivered issues of the Auk to Ornithological Societies of North America (OSNA), P.O. Box 1897, Lawrence, Kansas 66044-8897. The Auk (ISSN 0004-8038) is published quarterly (January, April, July, and October) for \$60 per year (to institutions) by the American Ornithologists' Union, 810 East 10th St., Lawrence, Kansas 66044-8897. Second-class postage paid at Lawrence, Kansas. POSTMASTER: Send address changes to *The Auk*, P.O. Box 1897, Lawrence, Kansas 66044-8897. Copyright 1992 by the American Ornithologists' Union. All material in this journal may be copied for the noncommercial purpose of educational or scientific advancement without the need to seek specific permission.

#### THIS PUBLICATION IS PRINTED ON ACID-FREE PAPER.