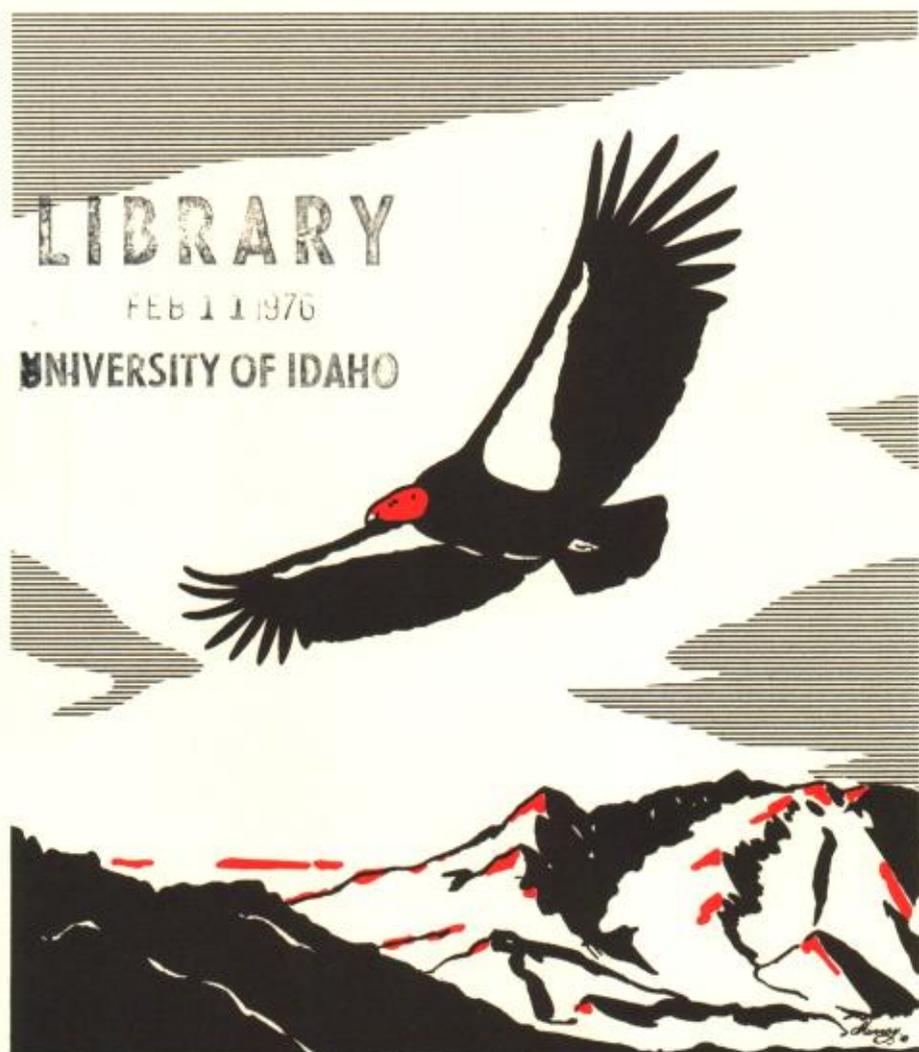


THE CONDOR

Volume 77

Winter 1975

Number 4



JOURNAL OF THE COOPER ORNITHOLOGICAL SOCIETY

COOPER ORNITHOLOGICAL SOCIETY

OFFICERS

President: HAROLD F. MAYFIELD, 9235 River Road, Waterville, Ohio 43566.

Vice-president: KENNETH STAGER, L. A. County Museum, Exposition Park, Los Angeles, California 90007.

Secretary: RUSSELL P. BALDA, Department of Biological Sciences, Northern Arizona University, Flagstaff, Arizona 86001.

Assistant Secretary: PAUL H. BALDWIN, Dept. of Zoology, Colorado State Univ., Fort Collins, Colo. 80521.

Treasurer: JANE R. DURHAM, P.O. Box 520, Tempe, Arizona 85281.

Assistant Treasurer: JAMES G. MILLER, Department of Zoology, University of California, Los Angeles, California 90024.

Editor, The Condor: PETER STETTENHEIM, Meriden Road, Lebanon, New Hampshire 03766.

Editor, Pacific Coast Avifauna: RALPH J. RAITT, Department of Biology, New Mexico State University, Las Cruces, New Mexico 88001.

BOARD OF DIRECTORS

RUSSELL P. BALDA

WILLIAM R. DAWSON

THOMAS R. HOWELL

JOSEPH R. JEHL

J. DAVID LIGON

OLIVER P. PEARSON

DENNIS M. POWER

PETER STETTENHEIM

EDGAR STONE

COUNCIL

NICHOLAS E. COLLIAS, *President*

MIKLOS D. F. UDVARDY, *Vice-president*

JENNIFER M. WHITE, *Secretary*

DAVID G. AINLEY

M. DALE ARVEY

RUSSELL P. BALDA

LUIS F. BAPTISTA

WILLIAM H. BEHLE

DONALD L. BLEITZ

CARL E. BOCK

THOMAS J. CADE

GENE M. CHRISTMAN

HOWARD L. COGSWELL

NICHOLAS E. COLLIAS

CHARLES T. COLLINS

JOHN DAVIS

WILLIAM R. DAWSON

JANE DURHAM

MERCEDES S. FOSTER

WILSON C. HANNA

JOHN WILLIAM HARDY

ED N. HARRISON

THOMAS R. HOWELL

NED K. JOHNSON

DAVID W. JOHNSTON

LLOYD F. KIFF

JAMES R. KING

J. DAVID LIGON

BRUCE L. MANION

BARBARA W. MASSEY

HAROLD F. MAYFIELD

L. RICHARD MEWALDT

JAMES R. NORTHERN

GORDON H. ORIAN

ROBERT T. ORR

KENNETH C. PARKES

ROBERT B. PAYNE

OLIVER P. PEARSON

SIDNEY B. PEYTON

FRANK A. PITELKA

DENNIS M. POWER

RALPH J. RAITT

STEPHEN M. RUSSELL

GARY D. SCHNELL

KENNETH E. STAGER

PETER STETTENHEIM

EDGAR N. STONE

LASZLO J. SZIJJ

HARRIET P. THOMAS

LISE THOMSEN

MIKLOS D. F. UDVARDY

JACK C. VON BLOEKER, JR.

STUART L. WARTER

JENNIFER MEUX WHITE

FRANCIS S. L. WILLIAMSON

MEMBERSHIP

Any person interested in the study and advancement of ornithology may become a member if endorsed by a regular member. Dues are as follows: regular members, \$15.00 per year, of which \$9.00 are for a year's subscription to THE CONDOR; student members, \$8.00 per year; sustaining members, \$25.00 per year; contributing members, \$25.00 per year. Members of all classes receive THE CONDOR.

The Board of Directors of the Cooper Ornithological Society voted that effective immediately, life memberships to the Society will no longer be available.

Send payment for dues, notices of change of address, and requests for information concerning memberships to *Jane R. Durham, Treasurer, P.O. Box 520, Tempe, Arizona 85281.*

Known office of publication: Department of Zoology, University of California, Los Angeles, California 90024. Second class postage paid at Los Angeles, California, and additional mailing offices.

DIVISIONS

Two divisions of the Society in California hold regular meetings open to members and guests.

Northern Division. *President:* Jennifer Meux White, Lawrence Hall of Science, University of California, Berkeley, California 94720.

Southern Division. *President:* James R. Northern, Dept. of Ornithology and Mammalogy, Los Angeles Co. Museum, Exposition Park, Los Angeles, Calif. 90007.

PUBLICATIONS

THE CONDOR is a journal published quarterly. Subscription price to institutions and non-members, \$20.00 per volume, payable in advance. Single copies, \$5.50 each. Subscription orders should be sent to the *Treasurer* (address above). Send orders for single copies to the *Assistant Treasurer* (see above).

PACIFIC COAST AVIFAUNA is a series of longer contributions, published at irregular intervals. Inquiries concerning manuscripts should be addressed to the *Editor, Ralph J. Raitt, Department of Biology, New Mexico State University, Las Cruces, New Mexico 88001.* Issues may be purchased from the *Assistant Treasurer* of the Society (see back cover of this journal).

THE CONDOR

JOURNAL OF THE COOPER ORNITHOLOGICAL SOCIETY

Volume 77, Number 4

Issued 29 January 1976

Editor: PETER STETTENHEIM

Associate Editors:

MERCEDES S. FOSTER
Museum of Vertebrate Zoology
University of California
Berkeley, California 94720

GARY D. SCHNELL
Department of Zoology
University of Oklahoma
730 Van Vleet Oval, Room 222
Norman, Oklahoma 73069

Editorial Assistants:

ELIZABETH PRYOR MACEACHRAN
Meriden Road
Lebanon, New Hampshire 03766

MARGARET CHAMBERS
22314 Clarksburg Road
Boyd, Maryland 20720

CONTENTS

- 375 Intra- and Interspecific Aggression in House Finches and House Sparrows
RONALD KALINOSKI
- 385 How Birds Develop Song Dialects
ROBERT E. LEMON
- 407 Song Dialects and Colonization in the House Finch, *Carpodacus mexicanus*, on the
East Coast
PAUL MUNDINGER
- 423 Nesting Parameters of Blue Grouse and Their Relevance to Populations
FRED C. ZWICKEL
- 431 Growth, Body Components and Energy Content of Nestling Double-crested
Cormorants
ERICA H. DUNN
- 439 Model Estimation of Energy Flow in Oregon Coastal Seabird Populations
JOHN A. WIENS and J. MICHAEL SCOTT
- 453 The Relation of Foliage Complexity to Ecological Diversity of Three Amazonian Bird
Communities
DAVID L. PEARSON
- 467 Flow of Digesta in the Intestine and Cecum of the Rock Ptarmigan
WILLIAM C. GASAWAY, DAN F. HOLLEMAN and ROBERT G. WHITE

SHORT COMMUNICATIONS

- 475 Heat Loss from Ducks' Feet Immersed in Cold Water
DELBERT L. KILGORE, JR. and KNUT SCHMIDT-NIELSEN
- 478 Inverted Flight in Canada Geese
FRANK H. HEPPNER and CHRISTOPHER WILLARD
- 480 Three Adult Red-tailed Hawks Tending a Nest
JAMES W. WILEY
- 482 Extra Adults at Harris' Hawk Nests
WILLIAM J. MADER
- 485 Hunting Tactics of a Peregrine Falcon on Black Turnstones
R. WAYNE CAMPBELL

(Continued on next page)

- 486 Plumage Variation in the Masked Bobwhite
RICHARD C. BANKS
- 487 Observations on Roof-nesting Killdeers
SALOME ROSS DEMAREE
- 488 Role of the Chick's Begging Behavior in the Regulation of Parental Feeding Behavior of *Larus glaucescens*
BRYAN A. HENDERSON
- 492 Effects of Human Activity on Egg and Chick Mortality in a Glaucous-winged Gull Colony
WILLIAM HUMPHREY GILLETT, JAMES L. HAYWARD, JR. and JOHN F. STOUT
- 495 Effects of Human Disturbance on the Breeding Success of Gulls
HENRY C. ROBERT and C. JOHN RALPH
- 500 Egg Size of Murrelets
SPENCER G. SEALY
- 501 Shadows and Detection of Movement by a Burrowing Owl (*Speotyto cunicularia*)
DONALD H. OWINGS and EARL HANDA
- 502 Daily Temperature Cycles in Barred, Great-horned and Snowy Owls
W. R. SIEGFRIED, R. L. ABRAHAM AND V. B. KUECHLE
- 506 Incubation Patch Fluctuations in Red-winged Blackbirds
LARRY C. HOLCOMB
- 509 Indigo Buntings in Utah with Special Reference to Interspecific Competition with Lazuli Buntings
ROBERT C. WHITMORE
- 511 Evidence of an Incomplete Prealternate Molt in Some South American *Myiarchus* Flycatchers
WESLEY E. LANYON
- 512 First Observation of the Orange-breasted Falcon in the Yucatan Peninsula of México
JOHN WILLIAM HARDY, RALPH J. RAITT, JORGE OREJUELA, THOMAS WEBBER and BRUCE EDINGER
- 512 Observations at a Nest of the Black-and-white Hawk-eagle
JOSEPH G. STRAUCH, JR.
- 513 Notes on a Nest and Behavior of the Chestnut-crowned Gnatcatcher
STEVEN L. HILTY
- 514 The Evolutionary Reappearance of Ancestral Muscles as Developmental Anomalies in Two Species of Birds
ROBERT J. RAIKOW
- 517 Common Raven and Starling Reliance on Sentinel Common Crows
RICHARD N. CONNER, IRVINE D. PRATHER and CURTIS S. ADKISSON
- 518 News and Notes
- 522 The Bulletin Board
- 523 Index to Volume 77

Printed Quarterly at Lawrence, Kansas, U.S.A., by Allen Press, Inc.

Second-class postage paid at Lawrence, Kansas, U.S.A. 66044.

© The Cooper Ornithological Society 1976.