



Statement of Ownership, Management, and Circulation
(Required by 39 USC 3685)

2. Publication Number 0 8 9 2 - 1 0 1 6		3. Filing Date	
4. Issue Frequency Quarterly		5. Number of Issues Published Annually 4	
6. Annual Subscription Price \$33.00		7. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and Zip+4) Raptor Research 810 E. 10th Street P.O. Box 368 Lawrence, KS 66044-0368	
8. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer) Raptor Research 810 E. 10th Street P.O. Box 368 Lawrence, KS 66044-0368		Contact Person Karen Ridgway Telephone (785) 843-1234 ext. 138	
9. Full names and complete mailing addresses of Publisher, Editor, and Managing Editor (Do not leave blank)			
Publisher (Name and complete mailing address) Jim Fitzpatrick Treasurer Carpenter Nature Center 12805 Saint Croix Trail Hastings, MN 55033			
Editor (Name and complete mailing address) James C. Bednarz, Department of Biological Sciences, P.O. Box 599, Arkansas State University State University, AR 72467			
Managing Editor (Name and complete mailing address)			
10. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a nonprofit organization, give its name and address.)			
Full Name Raptor Research	Complete Mailing Address 810 E. 10th Street P.O. Box 368 Lawrence, KS 66044		
11. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box <input checked="" type="checkbox"/> None			
Full Name	Complete Mailing Address		
12. Tax Status (For completion by nonprofit organizations authorized to mail at special rates) (Check one) The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes: <input checked="" type="checkbox"/> Has Not Changed During Preceding 12 Months <input type="checkbox"/> Has Changed During Preceding 12 Months (Publisher must submit explanation of change with this statement)			

PS Form 3526, September 1998

(See Instructions on Reverse)

Computerized Facsimile

13. Publication Title Raptor Research		14. Issue Date for Circulation Data Below July 04	
15. Extent and Nature of Circulation		Average No. Copies Each Issue During Preceding 12 Months	Actual No. Copies of Single Issue Published Nearest to Filing Date
a. Total Number of Copies (Net press run)		1238	0
b. Paid and/or Requested Circulation			
(1)	Paid/Requested Outside-County Mail Subscriptions (include advertiser's proof and exchange copies)	601	0
(2)	Paid In-County Subscriptions (include advertiser's proof and exchange copies)	0	0
(3)	Sales Through Dealers and Carriers, Street Vendors, Counter Sales, and Other Non-USPS Paid Distribution	0	0
(4)	Other Classes Mailed Through the USPS	332	0
c. Total Paid and/or Requested Circulation (Sum of 15b(1), (2), (3), and (4))		1133	0
d. Free Distribution by Mail			
(1)	Outside-County as Stated on Form 3541	0	0
(2)	In-County as Stated on Form 3541	0	0
(3)	Other Classes Mailed Through the USPS	1	0
e. Free Distribution Outside the Mail (Carriers or other means)		1	0
f. Total Free Distribution (Sum of 15d and 15e)		2	0
g. Total Distribution (Sum of 15c and 15f)		1135	0
h. Copies not Distributed		103	0
i. Total (Sum of 15g and h.)		1238	0
Percent Paid and/or Requested Circulation (15c divided by 15g times 100)		99.8	0.0
16. Publication of Statement of Ownership <input checked="" type="checkbox"/> Publication required. Will be printed in the 38/3 issue of this publication. <input type="checkbox"/> Publication not required.			
17. Signature and Title of Editor, Publisher, Business Manager, or Owner <i>M. James Bednarz</i>			Date 9/4/04

I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including civil penalties).

Instructions to Publishers

- Complete and file one copy of this form with your postmaster annually on or before October 1. Keep a copy of the completed form for your records.
- In cases where the stockholder or security holder is a trustee, include in items 10 and 11 the name of the person or corporation for whom the trustee is acting. Also include the names and addresses of individuals who are stockholders who own or hold 1 percent or more of the total amount of bonds, mortgages, or other securities of the publishing corporation. In item 11, if none, check the box. Use blank sheets if more space is required.
- Be sure to furnish all circulation information called for in item 15. Free circulation must be shown in items 15d, e, and f.
- Item 15b. Copies not Distributed, must include (1) newspaper copies originally stated on Form 3541, and returned to the publisher, (2) estimated returns from news agents, and (3) copies for office use, leftovers, spoiled, and all other copies not distributed.
- If the publication had Periodicals authorization as a general or requester publication, this Statement of Ownership, Management, and Circulation must be published; it must be printed in any issue in October or, if the publication is not published during October, the first issue printed after October.
- In item 16, indicate the date of the issue in which this Statement of Ownership will be published.
- Item 17 must be signed.

Failure to file or publish a statement of ownership may lead to suspension of second-class authorization.

PS Form 3526, September 1998 (Reverse) Computerized Facsimile



Buteo Books

Specializing in Ornithology

Toll Free: 800-722-2460

phone: 434-263-8671

fax: 434-263-4842

Buteo Books is the largest retailer of Ornithology books in North America, with over 2,000 in-print titles, and hundreds of out-of-print titles available.

A FEW BOOKS ON BIRDS OF PREY AND FALCONRY

Raptors of Eastern North America. Brian Wheeler.

Raptors of Western North America. Brian Wheeler.

Suggested Practices for Raptor Protection on Power Lines: State of the Art in 1996.

Return of the Peregrine: A North American Saga of Tenacity and Teamwork.

Tom Cade and William Burnham. The Peregrine Fund.

Birds of Prey: Health and Disease. Third Edition. John E. Cooper.

North American Falconry and Hunting Hawks, Eighth edition. Beebe & Webster.

Handbook of the Birds of the World. The first eight volumes of this projected sixteen-volume work are available for \$195 each. Volume 2 includes diurnal raptors, Volume 3 includes owls. Volume 9 will be available August 2004.

RARE AND OUT-OF-PRINT ORNITHOLOGY

Buteo Books has a wide selection of used and out-of-print titles available, including rare falconry collections. Our stock changes daily, so call to check availability of that scarce title you're seeking.

BIRDS OF NORTH AMERICA SERIES

This series consists of individual species accounts for each of the more than 700 species which breed in the United States and Canada, including diurnal and nocturnal raptors. These illustrated reviews provide comprehensive summaries of the current knowledge of each species, with range maps and extensive list of references.

Buteo Books is pleased to offer these accounts for \$7.50 each. All 716 profiles are listed in taxonomic order on our website. Singles may be ordered by contacting Buteo Books. Shipping and handling is \$4 for the first profile and \$1 for each additional profile to a maximum of \$10 per order.

Buteo Books; 3130 Laurel Road; Shipman, VA 22971; USA

Visit our website for more information:

www.buteobooks.com

A Telemetry Receiver Designed with The Researcher in Mind

What you've been waiting for!

Finally, a highly sensitive 999 channel synthesized telemetry receiver that weighs less than 13 ounces, is completely user programmable and offers variable scan rates over all frequencies. For each animal being tracked, the large LCD display provides not only the frequency (to 100Hz) and channel number, but also a 7 character alphanumeric comment field and a digital signal strength meter. Stop carrying receivers that are the size of a lunch box or cost over \$1500. The features and performance of the new R-1000 pocket sized telemetry receiver will impress you, and the price will convince you.

Other Features Include:

- Factory tuned to any 4MHz wide segment in the 148-174MHz Band
 - Very high sensitivity of -148dBm to -150dBm
 - Illuminated display and keypad for use in low light or darkness
 - User selectable scan rates from 1-30 seconds in 1 second steps
 - Rechargeable batteries operate the receiver for 12 hours and can be replaced with standard AA Alkaline batteries in the field.
- Both 12vdc and 110vac chargers are included.

- 6.1" (15.5cm) high,
2.6" (6.6cm) wide,
1.5" (3.8cm) deep.
- 3 year warranty
- 1 day delivery

\$695.00

Please specify desired 4MHz
wide segment in the
148-174MHz band

Visit our
website for
complete
specifications,
operating
manual and
information
on the R-1000
or call our
toll-free number
to order your
receiver now.

**Try the
New R-1000
and You'll Be
Impressed!**



COMMUNICATIONS SPECIALISTS, INC.

426 West Taft Avenue • Orange, CA 92865-4296 • 1-714-998-3021 • Fax 1-714-974-3420
Entire U.S.A. (800) 854-0547 • Fax (800) 850-0547 • <http://www.com-spec.com>



2004 ANNUAL MEETING

The Raptor Research Foundation, Inc. 2004 annual meeting will be held on 9–13 November 2004 in Bakersfield, California. For information about the meeting see the following website: http://www.calhawkingclub.org/field_meet/34th_annual/ or contact Rick Holderman (parabuteo1@cox.net).

Persons interested in predatory birds are invited to join The Raptor Research Foundation, Inc. (see: <http://biology.boisestate.edu/raptor/>). Send requests for information concerning membership, subscriptions, special publications, or change of address to OSNA, P.O. Box 1897, Lawrence, KS 66044-8897, U.S.A.

The Journal of Raptor Research (ISSN 0892-1016) is published quarterly and available to individuals for \$33.00 per year and to libraries and institutions for \$50.00 per year from The Raptor Research Foundation, Inc., 14377 117th Street South, Hastings, Minnesota 55033, U.S.A. (Add \$3 for destinations outside of the continental United States.) Periodicals postage paid at Hastings, Minnesota, and additional mailing offices. POSTMASTER: Send address changes to *The Journal of Raptor Research*, OSNA, P.O. Box 1897, Lawrence, KS 66044-8897, U.S.A.

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

Copyright 2004 by The Raptor Research Foundation, Inc. Printed in U.S.A.

Ⓢ This paper meets the requirements of ANSI/NISO Z39.48-1992 (Permanence of Paper).

RAPTOR RESEARCH FOUNDATION, INC.

Grants and Awards

For details and additional information visit: <http://biology.boisestate.edu/raptor/rrfi.htm>

Awards for Recognition of Significant Contributions.

The **Tom Cade Award** is a non-monetary award that recognizes an individual who has made significant advances in the area of captive propagation and reintroduction of raptors. The **Fran and Frederick Hamerstrom Award** is a non-monetary award that recognizes an individual who has contributed significantly to the understanding of raptor ecology and natural history. Submit nominations for either award to: Dr. Clint Boal, Texas Cooperative Fish and Wildlife Research Unit, BRD/USGS, Texas Tech University, 15th Street & Boston, Ag Science Bldg., Room 218, Lubbock TX 79409-2120 U.S.A.; phone: 806-742-2851; e-mail: cboal@ttu.edu

Awards for Student Recognition and Travel Assistance.

The **James R. Koplín Travel Award** is given to a student who is the senior author and presenter of a paper or poster to be presented at the RRF meeting for which travel funds are requested. Application deadline: due date for meeting abstract. Contact: Dr. Patricia A. Hall, 5937 E. Abbey Rd., Flagstaff, AZ 86004; phone: 520-526-6222 U.S.A.; e-mail: pah@spruce.for.nau.edu

The **William C. Anderson Memorial Award** is given to both the best student oral and poster presentation at the annual RRF meeting. The paper cannot be part of an organized symposium to be considered. Application deadline: due date for meeting abstract, no special application is needed. Contact: Rick Gerhardt, Sage Science, 319 SE Woodside Ct., Madras, OR 97741 U.S.A.; phone: 541-475-4330; email: rgerhardt@madras.net

Grants.

Application deadline for all grants is February 15 of each year; selections will be made by April 15.

The **Dean Amadon Grant** for up to \$1000 is designed to assist persons working in the area of systematics (taxonomy) and distribution of raptors. The **Stephen R. Tully Memorial Grant** for up to \$500 is given to support research and conservation of raptors, especially to students and amateurs with limited access to alternative funding. Agency proposals are not accepted. Contact for both grants: Dr. Carole Griffiths, 251 Martling Ave., Tarrytown, NY 10591 U.S.A.; phone: 914-631-2911; e-mail: cgriff@liu.edu

The **Leslie Brown Memorial Grant** for up to \$1400 is given to support research and/or the dissemination of information on African raptors. Contact: Dr. Jeffrey L. Lincer, 9251 Golondrina Drive, La Mesa, CA 91941, U.S.A.; e-mail: JeffLincer@tns.net

CONTENTS

MODELING RAPTOR MIGRATION PATHWAYS USING A FLUID-FLOW ANALOGY. David Brandes and Daniel W. Ombalski	195
ENVIRONMENTAL CORRELATES OF AFRICAN WOOD-OWL CALLING ACTIVITY IN KIBALE NATIONAL PARK, UGANDA. Nathaniel E. Seavy	208
DIETS AND FORAGING BEHAVIOR OF NORTHERN SPOTTED OWLS IN OREGON. Eric D. Forsman, Robert G. Anthony, E. Charles Meslow, and Cynthia J. Zabel	214
A COMPARISON OF BARRED AND SPOTTED OWL NEST-SITE CHARACTERISTICS IN THE EASTERN CASCADE MOUNTAINS, WASHINGTON. Joseph B. Buchanan, Tracy L. Fleming, and Larry L. Irwin	231
PRODUCTIVITY AND NEST-SITE CHARACTERISTICS OF GRAY HAWKS IN SOUTHERN ARIZONA. Brent D. Bibles and R. William Mannan	238
JUVENILE GROUSE IN THE DIET OF SOME RAPTORS. Vitali Reif, Risto Tornberg, and Kauko Huhtala	243
VARIATION IN MITOCHONDRIAL DNA OF FOUR SPECIES OF MIGRATORY RAPTORS. Elise V. Pearlstine	250
NESTING BIOLOGY AND DIET OF THE MADAGASCAR HARRIER (<i>CIRCUS MACROSCeles</i>) IN AMBOHITANTELY SPECIAL RESERVE, MADAGASCAR. Lily-Arison Rene de Roland, Jeanneney Rabearivony, Ignace Randriamanga, and Russell Thorstrom	256
BREEDING BIOLOGY OF THE GREY-FACED BUZZARD (<i>BUTASTUR INDICUS</i>) IN NORTHEASTERN CHINA. Wen-Hong Deng, Wei Gao, and Jiang Zhao	263
SHORT COMMUNICATIONS	
VARIABLE RETENTION TIMES FOR RECTRICES AT DIFFERENT LOCI IN A GOLDEN EAGLE. David H. Ellis and Marc Kéry	270
A LOCAL CONCENTRATION OF SNOWY OWLS ON THE YUKON-KUSKOKWIM DELTA IN SUMMER 2000. Christopher M. Harwood, Brian J. McCaffery, Fred J. Broerman, and Paul A. Liedberg	275
PREMIGRATORY COMMUNAL ROOSTS OF THE LESSER KESTREL IN THE BOREAL SUMMER. Pedro P. Olea, Rubén Vera, Ángel de Frutos, and Hugo Robles	278
ANALYSIS OF THE AUTUMN MIGRATION OF JUVENILE HONEY-BUZZARDS (<i>PERNIS APIVORUS</i>) ACROSS THE CENTRAL MEDITERRANEAN. Nicolantonio Agostini, Charles Coleiro, and Michele Panuccio	283
LETTERS	
DO EURASIAN HOBBIES (<i>FALCO SUBBUTEO</i>) HAVE "FALSE EYES" ON THE NAPE? Juan José Negro, Juan Manuel Grande, and José Hernán Sarasola	287
VULTURE WINTER ROOST ABANDONMENT AND REESTABLISHMENT. Keely T. Roen and Richard H. Yahner	288
COMMENSAL FORAGING BY A RED-SHOULDERED HAWK (<i>BUTEO LINEATUS</i>) WITH WILD TURKEYS (<i>MELEAGRIS GALLOPAVO</i>). Gary R. Graves	290
NOTES ON A RANGE EXPANSION AND SUMMER DIET OF THE MOUNTAIN CARACARA IN THE ANDES OF SOUTH-CENTRAL CHILE. Ricardo Figueroa Rojas, Sergio Alvarado Orellana, and E. Soraya Corales Stappung	290
AN EXAMPLE OF COOPERATIVE HUNTING BY SAKER FALCONS IN HUNGARY. Wade L. Eakle, Carl Millier, Pierre Mineau, and János Világosi	292
BOOK REVIEW. Edited by Jeffrey S. Marks	294