

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>





Buteo Books

3130 Laurel Road
Shipman, VA 22971

800-722-2460
434-263-8671

allen@buteobooks.com
www.buteobooks.com

BUTEO BOOKS is the largest retailer of Ornithology titles in North America, with over 2000 in-print titles in stock.

In-Print Falconry and Birds of Prey

Handbook of the Birds of the World. The first seven volumes of this projected sixteen-volume work have been published, including Volume 2, covering the diurnal raptors, and Volume 3, covering owls. They are priced at \$185 each.

The Raptor Almanac: A Comprehensive Guide to Eagles, Hawks, Falcons, and Vultures. Scott Weidensaul. Lyons Press, 2000. 382 pp. Color photos. Cloth. \$40.00

The Harris Hawk: Management, Training and Hunting. Lee W. Harris. Swan Hill Press, 2001. 144 pp. Color and b&w photos and illustrations. Cloth. \$32.95

Rare and Out-of-print Falconry

Usually available from Buteo Books, the classic reference on diurnal raptors: Brown & Amadon: *Eagles, Hawks and Falcons of the World*. First English edition, 1968. \$300.

Birds of North America series

individual species accounts for over 500 species, including:

Swallow-tailed Kite

White-tailed Kite

Snail Kite

Mississippi Kite

Bald Eagle

Northern Harrier

Sharp-shinned Hawk

Cooper's Hawk

Northern Goshawk

Common Black-Hawk

Harris' Hawk

Red-shouldered Hawk

Broad-winged Hawk

Swainson's Hawk

White-tailed Hawk

Zone-tailed Hawk

Hawaiian Hawk

Red-tailed Hawk

Ferruginous Hawk

Crested Caracara

American Kestrel

Merlin

Gyr Falcon

Prairie Falcon

Barn Owl

Flammulated Owl

Eastern Screech-Owl

Whiskered Screech-Owl

Great Horned Owl

Snowy Owl

Northern Hawk Owl

Northern Pygmy-Owl.

Ferruginous Pygmy-Owl

Elf Owl

Burrowing Owl

Spotted Owl

Barred Owl

Great Gray Owl

Long-eared Owl

Short-eared Owl (R)

Boreal Owl

Northern Saw-whet Owl

Available soon:

American Kestrel

California Condor

2002 ANNUAL MEETING

The Raptor Research Foundation, Inc. 2002 annual meeting will be held in conjunction with the Third North American Ornithological Conference on 24–28 September in New Orleans, Louisiana. For information about the meeting see the following website: <http://www.tulane.edu/~naoc-02/> or contact Dr. Tom Sherry (tsherry@tulane.edu).

Persons interested in predatory birds are invited to join The Raptor Research Foundation, Inc. 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 2002 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., AWARDS

Lifetime Achievement Awards

The **Tom Cade Award** recognizes an individual who has made significant advances in the area of captive propagation and reintroduction of raptors. Nomination packets can be submitted at any time. Contact: **Brian Walton**, Predatory Bird Research Group, Long Marine Laboratory, University of California, Santa Cruz, CA 95064 U.S.A.; tel. 408-459-2466; e-mail: walton@cats.ucsc.edu.

The **Fran and Frederick Hamerstrom Award** recognizes an individual who has contributed significantly to the understanding of raptor ecology and natural history. Nomination packets can be submitted at any time. Contact: **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.; tel. (806) 742-2851; e-mail: cboal@ttacs.ttu.edu.

Student Recognition and Travel Assistance Awards

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 annual meeting for which travel funds are requested. Contact: **Dr. Patricia A. Hall**, 5937 E. Abbey Rd. Flagstaff, AZ 86004 U.S.A.; tel. 520-526-6222; e-mail: pah@spruce.for.nau.edu. Application Deadline: due date for meeting abstract.

The **William C. Andersen Memorial Award** is given to the students who are senior authors and presenters of the best student oral and poster presentation at the annual RRF meeting. Contact: **Laurie Goodrich**, Hawk Mountain Sanctuary, 1700 Hawk Mountain Road, Kempton, PA 19529 U.S.A.; tel. 610-756-6961; email: goodrich@hawkmountain.org. Application Deadline: due date for meeting abstract; no special application is needed.

Grants

For each of the following grants, complete applications must be submitted to the contact person indicated by **15 February**. Recipients will be notified by 15 April.

The **Dean Amadon Grant** for \$200–400 is designed to assist persons working in the area of distribution and systematics (taxonomy) of raptors. Contact: **Dr. Carole Griffiths**, 251 Martling Ave., Tarrytown, NY 10591 U.S.A.; tel. 914-631-2911; e-mail: cgriff@liu.edu.

The **Stephen R. Tully Memorial Grant** for \$500 is given to support research, management, and conservation of raptors, especially to students and amateurs with limited access to alternative funding. Contact: **Dr. Kim Titus**, Alaska Department of Fish and Game, Division of Wildlife Conservation, P.O. Box 240020, Douglas, AK 99824 U.S.A.; e-mail: kimt@fishgame.state.ak.us.

The **Leslie Brown Memorial Grant** for up to \$1,000 to support research and/or dissemination of information on birds of prey, especially to proposals concerning African raptors. Contact: **Dr. Jeffrey L. Lincer**, 9251 Golondrina Dr., La Mesa, CA 91941 U.S.A.; e-mail: jefflincer@tns.net.

CONTENTS

AN URBAN OSPREY POPULATION ESTABLISHED BY TRANSLOCATION. Mark S. Martell, Judy Voigt Englund, and Harrison B. Tordoff	91
BREEDING GROUNDS, WINTER RANGES, AND MIGRATORY ROUTES OF RAPTORS IN THE MOUNTAIN WEST. Stephen W. Hoffman, Jeff P. Smith, and Timothy D. Meehan	97
CIRCUITOUS AUTUMN MIGRATION IN THE SHORT-TOED EAGLE (<i>CIRCAETUS GALLICUS</i>). Nicolantonio Agostini, Luca Baghino, Charles Coleiro, Ferdinando Corbi, and Guido Premuda	111
SPRING MIGRATION OF ADULT AND IMMATURE BUZZARDS (<i>BUTEO BUTEO</i>) THROUGH ELAT, ISRAEL: TIMING AND BODY SIZE. Reuven Yosef, Piotr Tryjanowski, and Keith L. Bildstein	115
PROVISIONING RATES AND TIME BUDGETS OF ADULT AND NESTLING BALD EAGLES AT INLAND WISCONSIN NESTS. D. Keith Warnke, David E. Andersen, Cheryl R. Dykstra, Michael W. Meyer, and William H. Karasov	121
A LINE TRANSECT SURVEY OF WINTERING RAPTORS IN THE WESTERN PO PLAIN OF NORTHERN ITALY. Giovanni Boano and Roberto Toffoli	128
SHORT COMMUNICATIONS	
BALD EAGLE REPRODUCTIVE PERFORMANCE FOLLOWING VIDEO CAMERA PLACEMENT. Cheryl R. Dykstra, Michael W. Meyer, and D. Keith Warnke	136
ABSENCE OF BLOOD PARASITES IN NESTLINGS OF THE ELEONORA'S FALCON (<i>FALCO ELEONORAE</i>). Alejandro Martínez-Abraín and Gerardo Urios	139
POSSIBLE CHOKING MORTALITIES OF ADULT NORTHERN GOSHAWKS. Thomas D. Bloxton, Andi Rogers, Michael F. Ingraldi, Steve Rosenstock, John M. Marzluff, and Sean P. Finn	141
EXHUMATION OF FOOD BY TURKEY VULTURE. Harvey R. Smith, Richard M. DeGraaf, and Richard S. Miller	144
BATS AS PREY OF BARN OWLS (<i>TYTO ALBA</i>) IN A TROPICAL SAVANNA IN BOLIVIA. Julieta Vargas, Carlos Landaeta A., and Javier A. Simonetti	146
FOOD OF THE LESSER KESTREL (<i>FALCO NAUMANNI</i>) IN ITS WINTER QUARTERS IN SOUTH AFRICA. Grzegorz Kopij	148
RED-SHOULDERED HAWK FEEDS ON CARRION. Bill Pranty	152
LETTERS	
FIRST REPLACEMENT CLUTCH BY A POLYANDROUS TRIO OF BEARDED VULTURES (<i>GYPÆTUS BARBATUS</i>) IN THE SPANISH PYRENEES. Antoni Margalida and Joan Bertran	154
MISSISSIPPI KITES USE SWALLOW-TAILED KITE NESTS. Jennifer O. Coulson	155
ERRATUM	157