WINGSPAN

VOLUME 15 NO. 1 FEBRUARY 2006

MESSAGE FROM THE PRESIDENT

It feels a bit strange to actually be writing this Wingspan's "Message from the President", after 10 years of arranging those of others. I greatly enjoyed editing our newsletter. Nevertheless, passing on responsibility for Wingspan was necessary for me to fulfill the commitments I made to you when I sought the RRF presidency, most notably development and implementation of an action plan to guide the foundation's activities. I am delighted that Petra Bohall Wood has taken on the editorship of Wingspan; I can think of no one to whom I would rather have handed the reins. I am certain that Petra will guide Wingspan to a higher level of excellence in communications.

In the all-important area of communications, your directors have recently taken two giant steps. At the board's 2005 annual meeting in Green Bay, the board voted unanimously to convert Wingspan to an exclusively electronically distributed newsletter, starting with the September 2006 issue. This is the last paper issue of Wingspan you will receive; henceforth, you will receive Wingspan by e-mail. Wingspan also will be posted on RRF's website. The board took this action to reduce costs (Wingspan costs are almost entirely printing and postage) and to speed delivery of the newsletter to our members outside North America.

Even more significantly, as part of RRF leadership's first 2006 e-mail agenda (see our website), our directors voted unanimously to request that Cheryl Dykstra, new editor of The Journal of Raptor Research, prepare a proposal to transition TJRR to an exclusively electronically distributed journal, starting in 2008. The board will discuss Cheryl's proposal at its 2006 annual meeting in Veracruz, and make a decision there on whether and how to proceed. Again, costs and timeliness are big drivers. The board's decision also reflects an ongoing and accelerating trend toward electronic publication of scientific journals.

These are extremely important decisions that directly bear upon the first part of RRF's mission -- to stimulate the dissemination of information concerning raptorial birds among interested persons worldwide -- and the board needs to hear how you feel. While the Wingspan transition is in motion, part of the reason for making the change in September, rather than with this issue, is to make sure that all RRF members are aware of the board's intent and have a chance to weigh in on this decision before it takes effect. So, please, let your directors and officers know what you think.

To close, I want you to know that you have an open invitation to contact me directly at any time. Whether it's a question, a suggestion, a request, or a complaint, I want to know what's important to you and how I can help. Within the bounds of time and life, my promise to you is to always be responsive. You can reach me at leonardyoung1@comcast.net, 1-360-561-8125, or 1640 Oriole Lane NW, Olympia, WA 98502-4342, USA.

Very best regards as we approach the northern spring.

Lenny

For more information about the Raptor Research Foundation, Inc. (founded in 1966), please visit the RRF website at: **http://biology.boisestate.edu/raptor.**

Persons interested in birds of prey are invited to join the Raptor Research Foundation (RRF). *Wingspan* is mailed twice each year to all members of RRF. It is available to non-members at a subscription rate of US$10 per year. Members also receive *The Journal of Raptor Research* (ISSN 0892-1016), which is published quarterly. For membership and subscription information, please contact: Ornithological Societies of North America, 5400 Bosque Boulevard, Suite 680, Waco, TX 76710, USA; 1-254-399-9636 (phone); 1-254-776-3767 (fax); business@osnabirds.org (email); **http://www.osnabirds.org** (web).

ELECTION RESULTS -- 2006 changes in officers, directors, and editors

President-elect Leonard Young began his two-year term as President on January 1, 2006 replacing Brian Millsap. Angela Matz became RRF Secretary replacing Judith Henckel.

Mike Collopy and Dan Varland were re-elected Directors At Large. Fabrizio Sergio replaced Steve Redpath as Eurasia Director and Laurie Goodrich replaced Ted Swem as North America Director #3.

Cheryl Dykstra replaced James Bednarz as Editor of the *Journal of Raptor Research*. Petra Bohall Wood became Editor of *Wingspan*; out-going Editor is Leonard Young.

Editor's Note

After 10 years as Editor of the *Wingspan*, Lenny Young has passed on the editor's duties to Petra Wood. Thanks Lenny for your excellent work! I'll do my best to continue producing a high quality newsletter.

Thanks also to the following individuals who contributed material for this issue of the *Wingspan:* José Carrillo, Bill Clark, Elaine Corvidae, David Drummond, Cameron Ellis, Fred Gehlbach, Kristin Hasselblad, Shawn Hawks, Judy Henckel, Derek Hengstenberg, Geoff Holroyd, Ernesto Ruelas Inzunza, Kent Jensen, Mike Neal, R. Wayne Nelson, Miguel Saggese, Darren Sleep, Luis Tapia del Rio, Ruth Tingay, Lenny Young, Dan Varland, and Al Vrezec.

Wingspan welcomes contributions from RRF members and others interested in raptor biology and management. Contributions may be mailed (Petra Bohall Wood, Wingspan, PO Box 6125, West Virginia University, Morgantown, WV 26506 USA), faxed (1-304-293-4826), or e-mailed (rrfwingspan@mail.wvu.edu); email is preferred. Deadline for the next issue is 7 **August 2006.**

RAPTOR RESEARCH FOUNDATION ANNUAL MEETING
at the
4th NORTH AMERICAN ORNITHOLOGICAL CONFERENCE
Veracruz, Mexico
3-7 October 2006

The 4th NORTH AMERICAN ORNITHOLOGICAL CONFERENCE (NAOC) will be held in Veracruz, Mexico, 3-7 October 2006, and is being jointly organized by the RAPTOR RESEARCH FOUNDATION (RRF), American Ornithologists Union, Association of Field Ornithologists, CIPAMEX, Cooper Ornithological Society, Society of Canadian Ornithologists, Waterbird Society, and Wilson Ornithological Society. The NAOC meeting will serve as the annual meeting for RRF in 2006.

The conference theme is "Wings Without Borders," and will feature a rich scientific program, symposia, plenary lectures, business meetings of societies, and social activities. Pre-and post-conference activities will include training workshops, birding, culture, and nature tours. Veracruz is home to a rich avifauna, with over 700 species reported for the state, of which >230 species are Neotropical migrants and >20 species are endemic to Mexico. The conference is scheduled to coincide with the peak of the raptor migration season in the world's largest raptor migration bottleneck. Visit the conference web site for more information (URL: **http://www.naoc2006.org**). Key dates for the conference are:

February	Circular mailed to members of participating societies
3 April	Deadline for Abstracts and Early Registration
May	Abstract Acceptance and Session
	Assignments
June	Program available on Web Site
3 September	Regular Registration Close
3 October	RRF Board Meeting
4-7 October	Scientific Program
6 October	RRF Business Meeting 17:15 – 18:30

Laughing Falcon: could be seen on either of the RRF-sponsored raptor conference tours in Veracruz in 2006.

Raptor tours sponsored by the Raptor Research Foundation and led by Bill Clark (RAPTOURS, P. O. Box 531467, Harlingen, TX 78553; 956-364-0415) will be offered before and after the conference. See the RRF website for detailed itineraries or contact Bill (raptors@earthlink.net).

PRE-CONFERENCE RAPTOR TOUR -- Sept 29 - Oct 3

More than four million migrating raptors have been counted recently per season at Veracruz. Most were Swainson's and Broad-winged Hawks and Turkey Vultures, but many other species were also tallied. We saw over a million in two days on our 1994 Raptours tour. We will sample this migration, as well as the

great variety of neotropical raptors found around Veracruz and Cardel. The tour will be conducted at a leisurely pace, with lots of time to observe each raptor (and other birds, too), yet leaving some time to relax at our hotels. We should see 28 raptor species and over 100 total bird species. Tour price is $750 US per person; single supplement is $100.

POST-CONFERENCE RAPTOR TOUR -- Oct 8-13

We will sample the great variety of neotropical raptors found in southern Mexico. We will observe migrating and resident raptors south of Veracruz, visit a remnant patch of rain forest at Estation Biologica de las Tuxtlas, and visit a mountain forest on this tour. The tour will be conducted at a leisurely pace, with lots of time to observe each raptor (and other birds) yet leaving some time to relax at our hotels in Catemaco and Tuxtepec. We should see 25 raptor species and >120 total bird species. Tour price is $900 per person; single supplement is $150.

Note: Each tour price is per person and includes all local transport from Veracruz, all hotels (double occupancy), tips, entry fees, and guide fees. It does not include any meals or beverages nor air transportation to or from Veracruz nor items of personal nature.

THIRD INTERNATIONAL BURROWING OWL SYMPOSIUM

Conservation and Ecology of Burrowing Owls
3 October 2006, Veracruz, Mexico

The emphasis of the symposium, to be held in conjunction with the NAOC conference, will be to present results of studies on the causes of the decline of the burrowing owl in North America and to review the burrowing owl status and ecology and conservation needs in Mexico. A discussion time will be allocated for audience participation of both topics: “Causes of the Decline of burrowing owls in North America” and the “Ecology and Conservation of burrowing owls in Mexico.” The specific buildings and room will be announced when we have determined how many people to expect and the size of room needed. The format of the symposium will follow that of the NAOC, i.e. 12 minute talks with 3 minutes for questions and set up for each speaker. We hope to accommodate 15-20 talks.

If you plan to attend the conference or wish to give a presentation, please send an email with your name, affiliation, and title to **geoffrey.holroyd@ec.gc.ca** with subject ‘IBOS.’ If your presentation pertains to Mexico, contact **helen.trefry@ec.gc.ca.**

CONTACTS: For English submissions - Geoff Holroyd, Canadian Wildlife Service, Environment Canada, Room 200, 4999-98 Ave., Edmonton, AB, T6B 2X3, CANADA; phone 403-951-8689; FAX 403-495-2615; For Spanish submissions - Helen Trefry, Canadian Wildlife Service, Environment Canada, Room 200, 4999-98 Ave., Edmonton, AB, T6B 2X3, CANADA; phone 403-951-8693; FAX 403-495-2615.

ORGANIZERS: Geoff Holroyd, Canadian Wildlife Service; Courtney Conway, University of Arizona; Helen Trefry, Canadian Wildlife Service; Enrique Valdez, University of Alberta.

2005 RRF Award Committee Report

by Petra Bohall Wood, Chair, RRF Awards Committees

****

The William C. Andersen Student Presentation Award

Committee: Rick Gerhardt (chair), John Smallwood, Jeff Lincer, Jeff Smith, Cheryl Dykstra, Irene Stewart, Ken Meyer, Jim Harper

1st place recipient:

Timothy C. Roth II, Indiana State University, Terre Haute, IN; oral presentation titled "Diet, activity patterns, and predictability of movement in wintering Accipiter hawks"

2nd place recipient:

Jessi L. Brown, University of Nevada, Reno; oral presentation titled "Exploring aplomado falcon nest success by modeling daily nest survival rates"

The James R. Koplin Student Travel Award

Committee: Patricia Hall (chair), Joan Morrison, Jim Harper

Recipient: **Jessi L. Brown**, University of Nevada, Reno

Amadon and Tully Grants

Committee: Carole Griffiths (chair), Joelle Gehring, Robert Rosenfield

Amadon grant recipient:

Isabel Caballero, University of Illinois at Chicago; proposal title: "DNA analysis of population structure and subspecies composition of reestablished Peregrine Falcon (Falco peregrinus) populations in the Midwest"

Tully grant recipient:

Ursula Valdez, University of Washington, Seattle, WA; proposal title: "Ecology and Habitat Use of Forest-falcons in the Amazonian Forest of Southeast Peru"

Brown Grant

Committee: Jeff Lincer (chair), Steve Hoffman, Alan Kemp, Dick Clark,

Recipients:

Darcy Ogada, Research Associate, Department of Ornithology, National Museums of Kenya. Proposal title: Land-use practices, rural culture and the conservation of Mackinder's eagle owls in Kenya

Bernard Ahon, Ph.D student in Ornithology at the University of Abidjan Cocody in Côte d'Ivoire (Ivory Coast). Proposal title: Rufous fishing owl: distribution and conservation status in Cote d'Ivoire

Hamerstrom and Cade Award

Nomination Committee: David Andersen (chair), Patricia Kennedy, Steve Redpath, and Eduardo Inigo-Elias

Selection Committee: Clint Boal (chair), Brent Bibles, Buzz Hull

Recipient: **Dr. Miguel Ferrer**, Donana Biological Research Station (see next page)

Application instructions and deadlines for each grant and award are available on the RRF website.

The 2005 Fran and Frederick Hamerstrom Award

by Clint Boal
Chair, Fran and Frederick Hamerstrom Award Selection Committee

****

Fran and Frederick Hamerstrom contributed significantly to the understanding of raptor ecology and natural history through their long term ecological studies, and by presenting that information through both technical and popular outlets. In honor and recognition of Fran and Frederick Hamerstrom, the Raptor Research Foundation, Inc., established an award based on scientific contributions and productivity. This award is to recognize individuals for significant contributions to the understanding of raptor ecology and natural history.

The recipient of the 2005 Raptor Research Foundation's Fran and Frederick Hamerstrom Award is Dr. Miguel Ferrer. Miguel is probably best known for his work on the highly endangered Spanish Imperial Eagle. He has developed a deep understanding of Spanish Imperial Eagles and is using that knowledge to build conservation plans and push for effective conservation strategies for the species. In addition to conducting research and publishing widely on a variety of other raptor species, especially Booted and Bonelli´s eagles, Miguel has also investigated a diverse array of issues facing raptor conservation. These range from the impact of wind power, power lines and electrocution on raptors to the development of plasma biochemistry to aid our understanding of raptor ecology.

Perhaps more importantly than his personal research is the impact Miguel has had on conservation and the training of future researchers. He arrived at the beginning of what has been a sustained flow of high quality raptor research in Spain. Miguel has had an important role in providing leadership and mentorship to what is now an active, scientifically excellent cadre of raptor biologists in Spain. He played a pivotal role in bringing raptor research conducted at the biological station at Donana, Spain, to a high level of excellence. More recently, Miguel has been at the forefront of European raptor conservation and ecological studies.

Miguel's contribution to raptor ecology and natural history, his excellence in quality research, and his energy in pursuing conservation is a credit to the Raptor Research Foundation. He has contributed profoundly to our knowledge of raptor ecology and it is with great pleasure we are able to recognize his accomplishments with the 2005 Fran and Frederick Hamerstrom Award.

RRF President's Award

At the banquet ending the 2005 annual meeting, out-going President Brian Millsap presented the RRF President's Award to out-going Secretary Judith Henckle for her distinguished service to RRF and for her untiring assistance to Brian with RRF business during his tenure as president. Congratulations Judy!!
[photo by R. Wayne Nelson]

The Raptor Population Index Program Receives Second-year Grant from the National Fish and Wildlife Foundation

by Ernesto Ruelas Inzunza, RPI Project Manager

****

The National Fish and Wildlife Foundation has awarded a challenge grant of $105,750 to Hawk Mountain Sanctuary Association and its partners for the second year of the Raptor Population Index (RPI) program, commencing on April 1, 2006. The grant must be matched 2:1 from private or other non-federal government sources.

The RPI program is a joint venture of Hawk Mountain Sanctuary (HMS), HawkWatch International (HWI) and the Hawk Migration Association of North America (HMANA). The goal of RPI is to contribute to raptor conservation by creating a permanent continent-wide monitoring program for migratory raptors based on counts of migrating raptors at numerous watch sites throughout North and Central America. RPI will produce statistically defensible estimates and assessments of trends in abundance for each species of migratory raptor and disseminate those results widely to the scientific and conservation communities and to the public.

A report on the first year of the project can be downloaded from **http://hmana.org/rpi.** The report indicates that as of August 31, 2005, the HawkCount database (**http://hawkcount.org**) contained nearly 30,000 hawk count data days, an increase of 27% over the past year, with 149 hawkwatches currently contributing data. Historical data from HMANA paper archives, HWI watch sites, and other sources are continually being added to the HawkCount electronic database to make those data readily accessible and available for research and monitoring.

RPI analyses conducted so far include calculation of trends from 6 sites in the northeast and Great Lakes regions and from 3 western sites – Hawk Mountain and Waggoner's Gap PA, Montclair and Cape May NJ, Lighthouse Point CT, Holiday Beach ON, Bridger Mountains MT, Goshute Mountains NV, and Manzano Mountains NM. Data from several other watch sites that are slated for analysis in the near future will contribute to a developing picture of continental status and trend. Species conservation assessments will be produced based on these and other data sets. Results will be made available in peer-viewed publications and via the web (**www.hmana.org**). Sample conservation assessments for the eastern populations of three species are shown at **www.hawkmountain.org**.

A total of 85 individuals and 4 organizations contributed over $28,000 in 2005 as "RPI Sponsors" and assisted the RPI partners in meeting the 2:1 match needed to take the first step towards an effective continent-wide program to monitor raptor populations. To become an "RPI Sponsor," contact Ernesto Ruelas Inzunza, HMANA, Cornell Lab of Ornithology, 159 Sapsucker Woods Road, Ithaca NY 14850 (**er99@cornell.edu**) or Laurie Goodrich (**Goodrich@hawkmtn.org**).

UPCOMING MEETINGS

2006

March 17-19
Owls on the Move: When, Where, Why?
A Symposium on Northern Owls - Duluth, Minnesota. More information is available at http://www.hawkridge.org

June 11-14
II Neotropical Raptor Conference: Raptors of the Southern Cone – Iguazú, Argentina
Contact: **www.neotropicalraptors.org** or **cellis@peregrinefund.org** (see pg 9)

June 13
Workshop on Handling, Management and Biomedical Sampling in Birds of Prey – Iguazú, Argentina (see pg 9)

October 3-7
Raptor Research Foundation 2006 Annual Conference and 4th North American Ornithological Conference – Veracruz, Mexico (see pg 3)

October 3
Third International Burrowing Owl Symposium – Veracruz, Mexico (see pg 4)

2007

September 12-16
Raptor Research Foundation 2007 Annual Conference – Fogelsville, Pennsylvania

Hosted by Hawk Mountain Sanctuary and Hawk Migration Association of North America at the Holiday Inn Conference Center, Fogelsville, near Allentown, Pennsylvania. The RRF board will meet on Wednesday, September 12. The joint RRF-HMANA meeting will begin with a mixer Wednesday evening. New Jersey Audubon's Pete Dunne will serve as Keynote Speaker Thursday morning. Pete has written numerous books on bird watching, including with David Sibley and Clay Sutton, "Hawks in Flight". Paper sessions will be held Thursday, Friday, and Saturday, with an optional afternoon field trip to Hawk Mountain on Friday. Saturday, September 15 will feature a special HMS-hosted symposium on the status of North America migratory birds of prey. All-day field trips will occur Sunday, September 16.
contact: http://biology.boisestate.edut/raptor or daniel.varland@rayonier.com

October
The Raptor Research Foundation's 2007 Eurasian Conference – Batumi, Georgia

Hosted by the Georgian Center for the Conservation of Wildlife (GCCW). The GCCW is a nonprofit organization aiming to encourage biodiversity conservation activities in Georgia. Current research includes vulture studies (in collaboration with Natural Research and Hawk Mt), raptor migration monitoring at the Black Sea coast (with Birdlife International) and the Important Bird Areas Program across Georgia (with Birdlife International). The meeting will take place in October 2007 (exact dates to be confirmed) to coincide with the peak of raptor migration at the Eastern Black Sea coast. Further details will be posted on the RRF website as they become available.

If you are interested in hosting a future RRF annual meeting, please contact the RRF Conference Chair, Dan Varland (daniel.varland@rayonier.com), and see the RRF website for guidelines on hosting a conference.

II Neotropical Raptor Conference
Raptors of the Southern Cone – 11-14 June 2006

Sheraton Internacional Iguazú Resort, Iguazú – Argentina

The Neotropical Raptor Network (NRN) invites you to participate in the Second Neotropical Raptor Conference. Join scientists, resource managers, falconers, zoos, government and non-government organizations and other persons and institutions with an interest in research and/or conservation of birds of prey in Latin America and the Caribbean. Share knowledge, interests, and concerns and help develop a network of practitioners in the fields of raptor conservation, research, captive breeding and falconry. There will be simultaneous translation of oral presentations in 3 languages. Workshops and symposia on the following topics are scheduled: The Andean Condor, Legal Framework for Falconry in the Southern Cone, Health and Management of Captive Birds, raptor vocalization, raptor census techniques, and other subjects. Registration fees fter 1 March 2006 are: Non-Latin American $300 US; Latin American Professional $180 US; Latin American Student $115 US. For more information on the conference, workshops, the location, and field trips, please visit http://www.neotropicalraptors.org/2006NRC.iguazu.i.htm or contact cellis@peregrinefund.org.

Workshop on Handling, Management and Biomedical Sampling in Birds of Prey
at the II Neotropical Raptor Conference - Iguazú, Argentina
13 June 2006

Speaker: Dr. Miguel D. Saggese, DVM MS, Texas A&M University
Sponsored by The Schubot Exotic Bird Health Center, Texas A&M University

The objectives of this workshop are to train veterinarians, biologists, rehabilitators, students, and all those working or interested in working with birds of prey, in the basic aspects of handling, management and biomedical sampling of Cathartiformes, Accipitriformes, Falconiformes, and Strigiformes. It will be useful for those actively working or planning to work with birds of prey in epidemiologic surveillance, health status of free and captive populations, avian medicine, rehabilitation, pathology, epidemiology, toxicology, ecology, and migration. The workshop includes 4hrs of lectures and 4hrs of hands-on work. The topics covered include: capture and handling, physical examination, measuring, sampling, processing and preservation of biomedical samples for hematology, clinical biochemistry, serology, genetics, parasitology, virology, bacteriology, mycology and toxicology. Topics will include review of most common infectious and parasitic diseases of raptors, necropsy techniques, and simple laboratory techniques (e.g. fecal parasites examination, Gram stain, Ziehl-Neelsen stain, crop wash and observation of Trichomonas sp., packed cell volume, blood smears, talon washing for pesticides exposure, etc.). Lectures will be given in the morning at the conference site (Hotel Iguazú, Iguazu National Park). The wet lab will take place at Guira Oga Rehabilitation Center, Puerto Iguazú, in the afternoon. Materials and literature will be provided by the organizers. All lectures and lab will be given in Spanish.

Those interested should send an email to Dr. Saggese [**msaggese@cvm.tamu.edu**; phone: 979- 458-0904; **www.cvm.tamu.edu/schubot**] describing: 1) current position and/or work of place (students mention career and degree plan), 2) experience working with raptors, and 3) how your current or future work will benefit from this workshop. This workshop is free but limited to 20 participants. Attendees will be selected by merit.

ANNOUNCEMENTS and BRIEF NEWS ITEMS

News Items

Mississippi Kites have expanded their breeding range into a broad area of central Texas in the last few years and some are nesting in suburbia, for example in Woodway (Waco), in front yards by busy streets, and in small forest preserves where they rarely dive on or vocalize about human activity such as grass mowing at nest trees. Woodway was colonized by the kites in 2002 (by Broad-winged Hawks in 1975). Bert Frenz has been studying the invasion and will have an extensive report on it in the Bulletin of the Texas Ornithological Society (BTOS) during 2006, some of the text derived from Fred Gehlbach's notes on periodicity, population, and breeding parameters in Woodway, where the kites nested 300 m from nesting broadwings in 2004 (kites later by 4 weeks). -- Fred Gehlbach

International Association for Falconry and Conservation of Birds of Prey -- The December 2005 edition of the IAF News Bulletin is now available and can be accessed on the IAF website at: http://www.i-a-f.org/nm/publish/news_19.html

Requests for Assistance

The **Merlin Falcon Foundation** 501(c) (3) is building a photo and artwork gallery of world merlins (nine recognized subspecies) on our website. We would greatly appreciate and acknowledge all photo and artwork contributions toward better understanding and appreciating this exciting falcon! Please contact or email attachments to: **merlinology@hotmail.com**. Visit our evolving website at: **www.merlinfalconfoundation.org**

SEEKING a source (other than AFO) for high quality new or used banding pliers, size 2/3 and 3A/3B. Must be fully functional. Contact Mike Neal at **mneal@hawkwatch.org** or (801) 484-6808 Ext. 110.

For Sale

RRF Publications, Pins, and Decals – Back issues of The Journal of Raptor Research (TJRR) Vol. 1-30, all Raptor Research Reports, and RRF pins and decals may be purchased directly from RRF (Jim Fitzpatrick, Carpenter St., Croix Valley Nature Center, 12805 St. Croix Trail S, Hastings, MN 55033, USA; email: **jim@carpenternaturecenter.org**). Some older issues are not available. See **http://biology.boisestate.edu/raptor/JRR.htm** for details and prices. Orders for 4 or more issues receive a 30% discount. Vol. 31+ of TJRR may be purchased from Ornithological Societies of North America (5400 Bosque Blvd, Suite 680, Waco, TX 76710, USA; phone: 1-254-399-9636; email: **business@osnabirds.org;** web: **http://www.osnabirds.org**).

To learn more about what RRF is doing for raptor conservation and for RRF members, check out the minutes from the RRF business meetings. Minutes from the annual business meeting held at the annual conference, as well as minutes from quarterly email agendas, are posted on the RRF website.

RECENT THESES ON RAPTORS

The U.S. Geological Survey's Richard R. Olendorff Memorial Library greatly appreciates receiving a copy of each thesis abstracted in *Wingspan*. This allows the Library to make theses available to scientists and managers worldwide through its Raptor Information System (RIS, see *Wingspan* 7(1):16). Please send theses to: Olendorff Memorial Library, U.S. Geological Survey, Forest and Rangeland Ecosystem Science Center, Snake River Field Station, 970 Lusk Street, Boise, ID 83706, USA.

Carrillo, J. 2005. Determining factors on breeding success of the Eurasian kestrel *Falco tinnunculus* in Tenerife Island. Ph.D. Diss., Univ. La Laguna, Spain. 249 pp.

On Tenerife, kestrels nests generally in rocky cavities in all the habitats from sea level to 2400 m. The breeding cycle was variable and dependent on altitude. We found no differences in clutch size between years or habitats nor in the number of fledglings. The only organochlorine compound (OC) found in eggs was p,p´-DDE. Probably agriculture was the main source of OC. The risk of predation was the factor clearly affecting nest defense behaviour. In semiarid areas laying dates are affected by rainfall of the previous autumn and clutch size by rainfall of the previous month. Probably the stability of the island habitats of Tenerife favours stability of reproductive parameters between years. In the western Palearctic mean laying date occurs about 8 days later for each northward shift of 10º of latitude and there is a trend of increasing mean clutch size from the south towards the north.

Corvidae, E.L. 2005. Comparison of wing muscles in three birds of prey: correlation of functional and behavioral differences. M.S. Thesis. University of North Carolina at Charlotte. 31 pp.

Flight is energetically costly but essential to survival in birds. Therefore locomotor structure, including skeletal and muscular characteristics, is adapted to reflect the flight style necessitated by different ecological niches. Red-tailed Hawks (*Buteo jamaicensis*) soar to locate their prey, Cooper's Hawks (*Accipiter cooperii*) actively chase down avian prey, and Ospreys (*Pandion haliaetus*) soar and hover to locate fish. In this study, wing ratios, proportions of skeletal elements, and relative sizes of flight muscles were compared between these species. Oxidative and glycolytic enzyme activities of several muscles were also analyzed via assays for citrate synthase (CS) and for lactate dehydrogenase (LDH). It was found that structural characteristics of these three raptors fit within prevailing aerodynamic theory. The similarity of enzymatic capacity among different muscles of the three species shows low physiological diversity and suggests that wing architecture may play a greater role in determining flight styles for these birds.

Hasselblad, K.W. 2004. Northern goshawk home ranges and habitat selection in south central Idaho. M.S. Thesis, Boise State University. Boise, Idaho.

To measure Northern Goshawk (*Accipiter gentilis*) home range sizes and habitat selection in naturally-fragmented forests of south central Idaho, I radio-tracked six adult males throughout their breeding seasons in 2001 and 2002. Males were tracked from the time young were 5-10 d old

until 20 d post-fledging. I collected 485 temporally-independent locations, with a mean of 54 ± 3.3 (±SE) such locations per bird. Average linear error associated with triangulated locations was 130 ± 15 m. Median minimum convex polygon home range size was 588 ha for males that successfully fledged young, and 542 ha for unsuccessful males. Median 85% cluster core area size was 98 ha for successful males, and 70 ha for unsuccessful males. Home ranges of neighboring males overlapped by an average of 19%. These home ranges were smaller than any previously reported for goshawks in North America and may have been due to a super abundance of hunting areas, such as edge areas where forest and shrubsteppe habitats interfaced and goshawks perched to hunt open-country prey, especially ground squirrels.

I assessed goshawk habitat selection at two scales [perching/hunting sites within the home range (Johnson's 3rd order), and home range placement within the larger study area (Johnson's 2nd order)]. Habitat variables measured included: distance from used (obtained through radio telemetry) and available (randomly selected within home ranges) locations to the nearest seedling (< 2.5 cm dbh) stand, sapling/pole (2.6-12.9 cm dbh) stand, "small tree" (13-34 cm dbh) stand, road/trail, and camp area. "Small tree" habitat constituted the largest trees in the study area. I used logistic regression to identify those features that may be important in predicting individual goshawk use of a perching site. Five out of six males selected perching sites closer to "small tree" habitat and camp areas than expected. Two males selected perching locations closer to roads/trails than expected, and two males selected higher or lower elevations than expected. I examined habitat selection at the scale of home range placement within the study area using home-range sized sampling ellipses placed around 23 known historical nests, and 23 randomly selected locations within the study area. At this scale, goshawks selected for less sapling/pole habitat, and greater habitat diversity as measured by Shannon's diversity index, similar to results from other studies.

Hawks, S.E. 2004. Origins of Northern Goshawks Moving Past Duluth, Minnesota, as Determined by Hydrogen Isotopes. M.S. thesis, North Dakota State University

The migration and dispersal movements of northern goshawks (*Accipiter gentilis*, hereafter "goshawks") in North America are poorly understood. Separating these movements may be important to monitor regional geographic population trends and to gain demographic insights. Long-term trends from migration stations indicate that goshawk numbers can fluctuate dramatically, especially in the western Great Lakes region. Hawk Ridge Nature Reserve in Duluth, Minnesota, is the leading site in North America to document major movements of goshawks during annual fall migration. Feathers were collected from goshawks during two seasons of fall migration, 2001 and 2002, to assess whether hydrogen isotopes could be used to determine the latitudinal breeding and natal origins of adult and hatch-year birds. Feather samples were also solicited from persons working with nesting and captive goshawks throughout northwestern North America to evaluate hydrogen isotopic variability from birds of known locations as well as to determine the relationship between those isotopic values and measurements from local precipitation. Feathers from hatch-year goshawks captured at Duluth showed a bimodal distribution, suggesting birds originated from locations around and south of Duluth in addition to others migrating from farther north. Hydrogen isotopic values from adults were imprecise and currently cannot be used to determine latitudinal origins, even though a relationship exists between isotopic values of adult feathers and local precipitation from the same area. Results also suggest that it is important to consider both dietary sources and physiology when sampling feathers and using hydrogen isotopes.

Hengstenberg, D.W. 2003. Reproductive biology, abundance, and movement patterns of the Puerto Rican broad-winged hawk in a limestone forest of Puerto Rico. M.S. Thesis, Mississippi State University, Starkville, Mississippi.

The Puerto Rican Broad-winged Hawk (*Buteo platypterus brunnescens*) is an endemic and endangered raptor subspecies inhabiting upland montane forests of Puerto Rico. The Broad-winged Hawk is non-migratory and exhibits a limited geographic range with known populations restricted to montane forests of Puerto Rico. Broadwings were once a common raptor species in the island's interior but due to island wide deforestation from the early 1900's to the 1940's, the species declined rapidly. The objectives of the study were to investigate reproductive ecology, movement patterns, behavior, and nesting habitat of broadwings in Río Abajo Forest (2,500 ha), Puerto Rico, from 2001−2002. We monitored 10 active nests during the 2001 and 2002 breeding seasons. Mayfield nest survival was 0.67 across breeding seasons (0.81 in 2001, N = 6; 0.51 in 2002, N = 4) and pairs averaged 1.1 young per nest (2001–2002). Broadwings nested in mixed species timber plantations and mature secondary forest. Nests were placed in the upper reaches of large trees emerging from the canopy. Six of 10 nests were found in *Calophyllum brasiliense* trees. Nest tree DBH, understory stem density, and distance to limestone cliff wall correctly classified (83.3%) nest sites. Annual home range size of radiomarked birds (N=6) averaged 107.0 ha, core area of 12.0 ha, and weekly movements averaged 2,906.8 m. Radiomarked birds remained within Rio Abajo Forest (96% locations) most of the time. Habitats used were evergreen forest, active coffee, montane forest, pasture, and regenerating forest. Abundance of broadwings was 52.5 individuals (range 35–77.5). We observed 158 courtship displays between broadwings. During raptor surveys, 25 territorial interactions were documented between resident broadwings and intruding Red-tailed Hawks (*Buteo jamaicensis jamaicensis*). Broadwings displaced intruding Red-tailed Hawks from occupied territories (P = 0.009). Captive-reared Puerto Rican Parrots (*Amazona vittata*) will be released in Río Abajo Forest in the future. Red-tailed Hawks are major parrot predators. Because of the negative relationship between sympatric *Buteo* species, resident broadwings may indirectly offer some protection to released parrots. Appropriate management and protection of forest stands and minimizing disturbance to nesting pairs will insure conservation of the breeding broadwing populations of Río Abajo Forest. Forest managers should attempt to promote sustainable land use practices in areas surrounding the forest. Land use practices around the forest boundary will both indirectly and directly affect the ability of the Río Abajo Forest to function as an effective conservation unit.

Murray, J.O. 2005. The influence of grazing treatments on density of nesting burrowing owls on the Cheyenne River Sioux Reservation. South Dakota State University, Brookings, SD.

Grazing enhances burrowing owl (*Athene cunicularia*) habitat in tall-grass prairies; however, limited research has been conducted in mixed-grass prairies regarding the relationship between burrowing owls and large herbivores. I examined the influence of grazing by bison (Bison bison) and cattle on burrowing owls on the Cheyenne River Sioux Reservation, South Dakota. Burrowing owl densities were sampled in each of three bison-grazed sites, three cattle-grazed sites, and three ungrazed sites. Nine black-tailed prairie dog (*Cynomys ludovicianus*) towns were chosen as study sites, which ranged in size from 9.3 ha to 160.1 ha. The average year-long stocking rate for each study site was 10.7 hectares/animal unit. I sampled burrowing owl densities, prairie dog activity (inactive and active burrow density) and town size for each study site in 2004 and 2005. There was a significant difference in owl densities among grazing treatments and study sites ($P < 0.001$ and $P = 0.001$). Owl densities were higher on bison-grazed sites than on cattle-grazed and ungrazed sites. Although inactive burrow density was not significantly different among treatments, it was positively correlated with owl densities. Factors not measured may have contributed to the differences observed in grazing treatments. Incorporation of grazing practices and preservation of active prairie

dog towns is encouraged to ensure that burrowing owls are effectively managed on the Cheyenne River Sioux Reservation.

[The complete thesis can be accessed as a PDF file at: http://wfs.sdstate.edu/]

Tapia, L. 2004. Study of the raptor community of the province of Ourense (Northwestern Spain). (In Spanish). Ph.D. Diss., University of Santiago de Compostela, Spain. 401pp.

Descriptive information of diversity, abundance, density, population estimation as well as data about habitat selection for the raptors community in the province of Ourense (Galicia-Northwestern Spain) is given. A special mention was made for the knowledge of the local distribution in their southwestern mountains (Baixa Limia). The population status of Red-legged partridge (Alectoris rufa), Iberian hare (Lepus granatensis) and European wild rabbit (Oryctolagus cuniculus) in these mountains were analyzed. Distribution models of habitat use were developed at macro-scale level. The possible ecological repercussions on raptors were discussed, as well as the existing conflicts in the conservation of both, establishing management plans for the populations of prey species in the Baixa-Limia. The raptor community phenologic status was characterized in a mountainous area in Ourense along an annual cycle, and the specific patterns of hunting habitat selection were analyzed during the spring-summer and autumn-winter periods. We discussed the influence of the environmental variables on the presence, abundance and raptor richness in both periods. Based on these models, conservation measures and habitat management actions were proposed.

We developed habitat selection and distribution models in two spatial scales: small scale models based in the area of the Baixa-Limia and large scale models based in the whole territory of the province of Ourense. We discussed the habitat selection models obtained, analyzing effect of the scale and evaluating the effectiveness of the two census techniques employed. The applicability of the final models was also discussed in the conservation of the diurnal raptors in Ourense. Furthermore, the status of the Golden eagle (Aquila chrysaetos) in the province of Ourense was analyzed, as well as their habitat use and distribution models. The potential breeding distribution areas were characterized by means of three different spatial-temporal datasets. Predictive models of habitat suitability obtained in the different periods, the available habitat in the whole province of Ourense was evaluated using a Geographic Information System. This allowed the identification of high-priority areas for the conservation of such species. The conservation problems associated with the limitations of the habitat such as food-supply, the availability of nesting sites, changes in land use, human disturbance and other aspects such as reproductive parameters or effective population size were also discussed.

Sleep, D.J.H. 2005. response of boreal forest owls to landscape patterns originating from fire and timber harvest. Ph.D. Thesis, University of Guelph, Guelph, Ontario, Canada. 113 pp.

This thesis investigated the effects of forest fire and industrial harvesting disturbance on forest dwelling owls. The underlying assumption of various forms of natural disturbance emulation is that harvest can be used to mimic wildfire as a disturbance agent, in spite of their differences. I tested the effects of disturbance type and history on local calling behavior and occurrence probability of four sympatric species of forest-dwelling owls in Ontario at the provincial scale. I found the amount and nature of disturbed area and disturbance history to be non-significant in predicting occurrences of Northern Saw-whet Owls (*Aegolius acadicus*), Boreal Owls (*Aegolius funereus*), and Barred Owls (*Strix varia*). However, amount of recent harvest was negatively associated with Great Gray Owls (*Strix nebulosa*), and age since fire disturbance was positively associated. These results suggest that, at a broad scale, harvest is a suitable mimic for the former three species, and less so for the latter. However, animals may respond differently to different habitat features at different scales. I tested for the effects of harvest versus fire disturbance on habitat use by Boreal

Owls at a landscape scale. Most parsimonious habitat use models differed between fire and harvest-origin landscapes, and failed to successfully predict owl locations on alternate landscapes when cross-validated. These results suggest Boreal Owls behave differently on landscapes originating from differing disturbance events. More research is needed to define and measure the demographic consequences of this behavior. Finally, I examined what structural features influence perch and nest-site selection by Northern Hawk Owls (*Surnia ulula*), a species that will likely benefit the most from the creation of large, harvest origin openings. I found that perch-sites were selected based on height, openness and amounts of surrounding small mammal habitat, and nest sites were selected based on prey availability. Thus, remnant snags and coarse woody debris are factors that promote Hawk Owl use, are under control of harvest management, and are therefore important considerations with respect to this species' establishment. Managers must decide whether promoting the establishment of these birds is conducive or detrimental to emulating nature using forest harvesting, and manage landscapes accordingly.

Vrezec, A. 2004. Interspecific interactions between forest owls (Strigidae). Ph.D. Thesis, Univ. Ljubljana, Slovenia. 87 pp.

Interspecific interactions are a fundamental force in structuring natural communities. The guild is represented by ecologically similar species that exploit the same class of environmental resources in a similar way. In the dissertation a predator guild is taken into consideration. The study guild was size-structured with the Ural Owl (*Strix uralensis*) as the biggest, the Tawny Owl (*Strix aluco*) as medium, and the Tengmalm's Owl (*Aegolius funereus*) as the smallest species. The study was conducted in a continuous montane mixed forest of Aremonio-Fagion type on Mts. Krim, Kum, Bohor, Boc, and Pohorje (Slovenia, Central Europe). Owl territories were surveyed with point count playback method. The statistical analysis of habitat selection was done using univariate and multivariate methods. The distributional patterns of owl territories in the area of sympatry were calculated according to the nearest neighbor distance method using standard normal deviate (z – test). The breeding density of the Ural Owl on Mt. Krim was estimated to be 2.2 territories / 10 km2; high relative to published data from Europe. The densities of Tawny Owls (4.0 territories / 10 km2) and Tengmalm's Owls (2.8 territories / 10 km2), on the other hand, were in a range or even lower compared to the other European data. The Tawny Owl is a characteristic lowland species in Slovenia distributed between 0 and 1500 m a.s.l., the Tengmalm's Owl was significantly confined to high altitude areas (500 – 1630 m a.s.l.), while the Ural Owl had no specific preference to the certain altitude (125 – 1600 m a.s.l.). The Ural and Tawny Owl were significantly segregated in space with the most important factor being the altitude. The segregation between the species was the consequence of competitive exclusion, where Tawny Owl was out-competed by the Ural Owl. The forests in lowlands were mainly more influenced by human impact, and therefore acted as refuge areas for Tawny Owls in sympatry with Ural Owls. The impact of the Ural and Tawny Owl on the Tengmalm's Owl population is quite different, so there is a differential reaction of Tengmalm's Owl on both superior predators. As a consequence, in sympatry the Tengmalm's Owl had selected areas free of Tawny Owl, but managed to survive within Ural Owl territories. It appeared that the severe competitive exclusion between the Ural and Tawny Owl was beneficial for the Tengmalm's Owl. This relationship could be interpreted as a specific type of commensalism among predators, which is dependent on the differential impact of the two predators on the third.

Raptor Research Foundation, Inc.
CALL FOR NOMINATIONS

Nominations are open for the 2006 RRF Election for the following offices:

President-elect to serve as President-elect for one year (2007), prior to assuming the duties as President for two years (2008-2009)

Vice President to serve a two year term (2007-2008)

Nominations are open for the election of the following directors, to serve a three year term (2007-2009) beginning on January 1, 2007:

North American Director #2 (U.S. & Canada)
Director At-Large #2 (no geographic restriction)
Director At-Large #5 (no geographic restriction)
Director, At Large outside North America

Qualifications for each position: 1) current regular, honorary or life member; 2) resident of the representative geographical district (if applicable); 3) able to communicate and vote on official business by email; 4) attendance at the annual board meeting during the annual conferences (President and Vice President), and as often as possible during the term (Directors). Terms and duties of Officers and Directors are described in the bylaws on the RRF website (**http://biology.boisestate.edu/raptors/**).

If you are not putting forth your own name, please have the candidate's approval before submission. To be included on the ballot, the candidate must submit a biographical sketch stating the position for which the nomination was made. Deadline for nominations and submission of biographical sketch is June 1, 2006 to Nomination Committee Chair, Judith Henckel by e-mail (**ednjudy@epix.net**) or mail (1752 Robin Hood Road, Mt. Bethel, PA 18343, USA) or to RRF Secretary, Angela Matz (**angela_matz@fws.gov**).

WINGSPAN
1640 Oriole Lane NW
Olympia, WA 98502-4342 USA

Non-profit Organ.
U.S.
POSTAGE
PAID
Olympia, WA
Permit No. 78