

## MESSAGE FROM THE PRESIDENT

Later this year, three things will happen that flow from the Raptor Research Foundation's past and portend its future. These will transpire in the Scottish town of Pitlochry, during the week of September 29<sup>th</sup>. For the first time in its 42-year history, RRF will hold its annual conference outside North America. While there have been several significant European RRF meetings, this is the first time we will convene the event that binds us an organization--the centerpiece of our year--off the North American continent.

Coincident with this historic conference, RRF will install a new President. For the first time in our organization's history, our President will hail from outside North America. This is another reflection of RRF's transition from a regional to a global organization, a trend that I fully support and believe is vital to accomplishment of RRF's mission to promote awareness and conservation of raptors. As the By Laws crafted by RRF's founders over 40 years ago state, "The purposes [of RRF] shall be to stimulate the dissemination of information concerning raptorial birds among interested persons *worldwide* [emphasis added] ..."

While the world of science is gender neutral, I cannot help but note that for the first time in RRF's history, our President will be a woman. While many outstanding women scientists have been leaders and members of RRF over the past 40<sup>+</sup> years, for the first time "the man" will be a woman. I am old enough to appreciate this significance.

Most importantly, irrespective of gender, our incoming President, Ruth Tingay is an extraordinary individual who will provide outstanding leadership for RRF in her new role. I have witnessed and admired Ruth's energy, engagement, and thoughtfulness in all matters RRF over the past 4 years. I am delighted that it is Ruth to whom I will be passing the torch.

In these senses, our 2009 annual conference will be one of the more significant gatherings in RRF's history. Those fortunate enough to participate will be witnessing historic transitions, in addition to enjoying an excellent scientific program and related activities. The rest of us can take satisfaction in tangible demonstrations of the growth of our organization, in directions that will sustain RRF and further accomplishment of its mission worldwide during the 21<sup>st</sup> century.



Best regards -- Lenny



**RAPTOR RESEARCH FOUNDATION, INC**OFFICERS

President: Leonard Young      Secretary: Joan Morrison  
 Vice-president: Ted Swem      Treasurer: Angela Matz

DIRECTORS

Eurasian: Fabrizio Sergio	At Large #1: Jim Bednarz
Southern Hemisphere: Miguel Saggese	At Large #2: Clint Boal
At Large Outside North America: Ruth Tingay	At Large #3: Michael W. Collopy
North America #1: Petra Wood	At Large #4: Carol McIntyre
North America #2: Gary Santolo	At Large #5: John A. Smallwood
North America #3: Laurie Goodrich	At Large #6: Daniel E. Varland

For more information about the Raptor Research Foundation, Inc. (founded in 1966), please visit the RRF website at: <http://www.raptorresearchfoundation.org/>.

Persons interested in birds of prey are invited to join the Raptor Research Foundation (RRF). *Wingspan* is emailed twice each year to all members of RRF and is available on the RRF website. 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](mailto:business@osnabirds.org) (email); <http://www.osnabirds.org> (web).

**Election Results 2009****Changes in directors (effective 1 Jan 2009)**

Eurasian director: Fabrizio Sergio, re-elected  
 North America Director #3: Laurie Goodrich, re-elected  
 Director-at-Large #3: Mike Collopy, re-elected  
 Director-at-Large #6: Mike Kochert replaces Dan Varland

Many thanks to out-going Director Varland for your service to RRF!!!

**Changes in officers**

President elect: Ruth Tingay  
 Vice President: Ted Swem, re-elected

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**Remember to vote in the next RRF election this summer!!**  
**Make your voice heard!**

**Editor's Note** – Thanks to the following contributors for this issue of the *Wingspan*: Shelley Bayard de Volo, Keith Bildstein, David Bird, Rob Bierregaard, Clint Boal, Marcel Gabhauer, Gene Jacobs, Karla Kinstler, Bill Mattox, Carol McIntyre, Libby Mojica, Joan Morrison, Wayne Nelson, Chris Niemela, Miguel, Saggese, Janus Sielicky, Ruth Tingay, Dan Varland, Susan Whaley, Lenny Young.

*Wingspan* welcomes contributions from RRF members and others interested in raptor biology and management. Contributions may be submitted by mail (Petra Bohall Wood, *Wingspan*, PO Box 6125, West Virginia University, Morgantown, WV 26506 USA) or email ([rrfwingspan@mail.wvu.edu](mailto:rrfwingspan@mail.wvu.edu)). Email is preferred and for long contributions, please send as an MS Word attachment.

Deadline for the next issue is **15 August 2009**.

**RAPTOR RESEARCH FOUNDATION  
2009 ANNUAL CONFERENCE  
PITLOCHRY, SCOTLAND  
29 Sept – 4 Oct 2009**



Scotland is preparing for *THE* raptor event of the year as the RRF 2009 annual conference swings into town. Hosted by the Scottish Raptor Study Groups (SRSG), this six-day international extravaganza is the place to be from 29 September – 4 October 2009. The venue is the Atholl Palace, a Scottish castle hotel set in magnificent grounds overlooking the town and surrounding hills of Pitlochry, central Scotland.



The scientific programme will run from Wednesday 30 Sept to Saturday 3 October and is already full, with over 120 oral and poster presentations. Professor Ian Newton will open the conference, followed with a plenary lecture by Professor Steve Redpath of Aberdeen University, who will highlight the rich history of raptor research and conservation in Scotland. In addition to general raptor biology and ecology subjects, there are six special symposia that will run concurrently with the general scientific programme, including Migration and Over-wintering, Conservation Management, Persecution, *Haliaeetus*, Scottish Raptors and Reintroductions.

Evening social events include an ice-breaker reception at the Atholl Palace Hotel on the first evening (Tues 29), where delegates can unwind in the bar and lounge area, recovering from their travels in the company of old and new friends. Wednesday night is poster night, with 50+ posters to view and discuss with presenters in the Atholl Suite. On Thursday evening we will be hosting a traditional Scottish party at the nearby Blair Castle (ticket only event), where delegates can try out a selection of Scottish whiskies under the expert tutelage of local whisky connoisseur Charles MacLean, a world authority on Scottish whisky and author of several whisky books. Charles will help delegates to increase their understanding and enjoyment of several whiskies generously provided by two leading Scottish distilleries, Adelphi and Bowmore. Suitably anesthetised, delegates will then have an opportunity to learn some traditional Scottish ceilidh dancing in the castle's Great Ballroom, under the expert guidance of the Bella McNab Dance Band. Flares on the castle walls will light our journey home before midnight.



On Friday evening, local raptor expert and RRF member Roy Dennis will give a one hour's illustrated presentation on Scottish landscapes and wildlife. Roy is well known for his long-term work on Scottish ospreys, as well as many other species, and this evening's presentation will offer delegates a rare insight to the varied habitats and animals of Scotland, maybe even the Loch Ness Monster! Roy will also be available to sign copies his new book, 'A Life of Ospreys'.

Our final evening is the traditional RRF Awards Banquet, which will be held at the Atholl Palace Hotel (ticket only event). The annual RRF research and student awards will be announced, followed by the return of David Bird's amusing slideshow depicting raptor researchers in compromising positions. This year, David will be accompanied by Scottish RRF member George Smith to ensure that the European delegates are equally as humiliated. The evening will draw to a close with a special appearance by the Highland tribal drumming band, Clanadonia. With their thunderous percussion and tribal rhythms, the 2009 conference will end with a bang!



Eleven fieldtrip options are on offer throughout the week, including half and full-day excursions, all led by experts from the Scottish Raptor Study Groups. These trips will visit some of Scotland's premier wildlife hotspots, including the Isle of Mull, Speyside and the Cairngorm Mountains, as well as opportunities to get an 'inside' view of several raptor projects, including red kites in central Scotland and white-tailed sea eagles in east Scotland. In addition, there are local wildlife & habitat tours, including a visit to a working grouse moor, a visit to the historical battlefields of Highland Perthshire, and several trips to

local whisky distilleries. Many fieldtrips are already fully booked, but there are still places available on a few - please visit the conference website to check availability.

Vendors will include book-sellers, artists, photographers, distilleries and conservation organisations and charities. A full list will be posted on the conference website in due course.

For logistical reasons, the conference is limited to 300 delegates. To date, delegates from 32 countries have registered, including Austria, Australia, Belgium, Canada, Cyprus, England, Estonia, France, Germany, Greece, Holland, Hong Kong, India, Israel, Italy, Japan, Kenya, Mongolia, Nepal, Northern Ireland, Norway, Philippines, Portugal, Republic of Ireland, Russia, Scotland, South Africa, Spain, Sweden, USA, Wales and Zimbabwe. **At the time of writing, we have ~25 tickets remaining.** If you would like to register, please follow the on-line instructions on the conference website. The remaining tickets will be allocated on a first come – first served basis, with priority given to RRF and Scottish Raptor Study Group members.

A new on-line mailing list/information board has been set up for registered delegates. The conference organisers will post news and updates on this site, and delegates can use the list to find room-mates, travel-mates etc. Please note, only delegates who have paid their registration fees are eligible to join. If you are a registered delegate, please visit the group's homepage to subscribe to the list: <http://groups.yahoo.com/group/RRFScotland2009>

Conference funding is looking healthy, with over £45,000 raised to date from our generous sponsors. Delegate tickets are priced at £125 (approx £20 per day) and include a conference registration pack (name badge, programme, book of abstracts, souvenirs) access to all conference

areas, tea/coffee breaks and a free buffet lunch on each day of the scientific programme (Weds to Sat inclusive). Unfortunately we are not able to offer discounted or day-only tickets.

For further information, please visit the conference website:  
<http://www.rrfconferencescotland2009.org>

We look forward to welcoming you to Scotland 2009.



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## UPCOMING MEETINGS

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**2010** -- September 22-26

Raptor Research Foundation 2010 Annual Conference – Fort Collins, Colorado  
The Rocky Mountain Raptor Program will host the annual meeting in Ft. Collins, Colorado at the Marriott hotel in downtown Ft Collins. Field trips include local raptor migration viewing at Pawnee Buttes, Rocky Mountain National Park, Soapstone Prairie Natural Area, and many more!  
Organizers: Judy Scherpelz and Susan Harness (Rocky Mountain Raptor Program <http://www.rmrp.org/>) and Richard Harness (EDM, International). Contact: Libby Mojica [ekmojica@wm.edu](mailto:ekmojica@wm.edu)

**2011** -- October 26-30

Raptor Research Foundation 2011 Annual Conference – Duluth, Minnesota  
The Natural Resources Research Institute and Department of Biology at the University of Minnesota-Duluth will host the 2011 RRF conference at the Radisson Hotel Duluth-Harborview in downtown Duluth. Co-hosts include Hawk Ridge Bird Observatory and Duluth Audubon.  
Organizers: Dr. Gerald J. Niemi, (University of Minnesota-Duluth) and Dr. Matthew Etterson (US EPA Mid-Continent Ecology Division). Contact: Libby Mojica [ekmojica@wm.edu](mailto:ekmojica@wm.edu)

*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.*

**[http://raptorresearchfoundation.org/board\\_minutes.htm](http://raptorresearchfoundation.org/board_minutes.htm)**

**Also check the RRF website for the Spanish language version of Wingspan that will be available in the coming weeks. Thanks to Miguel Saggese for the translation!!**

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## HIGHLIGHTS FROM THE 2008 ANNUAL MEETING

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Submitted by Dan Varland, RRF Conference Committee Chair

**2008 Annual Meeting** was held 24-28 September at the Holiday Inn Downtown at the Park in Missoula, Montana. The meeting was hosted by Raptors of the Rockies and co-hosted by The University of Montana Division of Biological Sciences and the Continuing Education, Technical Assistance and Training Center. Kate Davis was Local Committee Chairperson and Jim Bednarz was Scientific Program Committee Chairperson. There were 177 in attendance. Photos by Dan Varland (DV) and Wayne Nelson (WN) unless otherwise noted.



Special Speaker Ken Dial opened the conference with a presentation on the evolution of flight in birds. (DV photo)



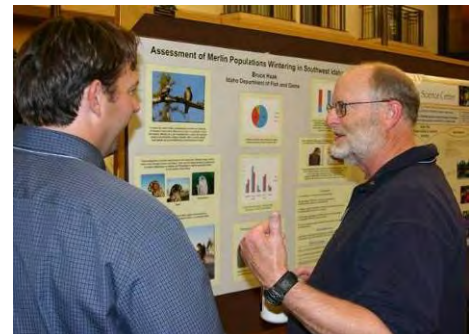
Local Host Kate Davis makes a point at the MTC Center for Performing Arts before the showing of the Craighead film, "Life With an Indian Prince". (DV photo)



Conference Planner Bernadette Bannister and Monte Dolack, Birds in Art Show host. (DV Photo).

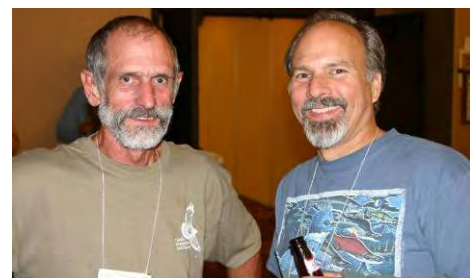


John Craighead receives a standing ovation at the Saturday night banquet. (DV photo)



Bruce Haak (right) makes a point to Jeremy Guinn about his merlin research during the poster session. (DV photo)

Right: Jay Sumner presented a moving tribute to the Craigheads entitled The Craighead Legacy. (WN photo)



Mike Kochert and Brian Woodbridge (right). (DV photo)



Presenters (chapter authors) at the symposium on the book *Raptor Research and Management Techniques*. (Jim Harper Photo)



Steve Hoffman and Laurie Goodrich. (DV photo)



Audience at the *Techniques* symposium. (DV photo)



Discussing the September issue of *The Journal of Raptor Research* are (from left): Ruth Taylor, Gretchen Albrecht and Suzanne Tomlinson.(DV photo)

Right: David Bird autographs copy of *Raptor Research & Management Techniques* for Ruth Tingay (DV photo)



Display items for the *Techniques* symposium (WN photo).



Bryan Bedrosian (left) and Bill Clark talk raptors in the raptor processing tent at the Raptor View banding station. (DV photo)



Banquet group. From left: Alora Nelson, Geoff Holroyd, Helen Trefry, Lisa Priestly and Enrique Hector Valdez. (WN photo)



Serving line at the banquet. Pat McClelland is in the foreground. (WN photo)



Carol McIntyre, Gary Santolo and Chris Briggs recruit a new RRF member in a down-town Missoula bar. (Ruth Tingay photo)



Kate Davis and Sibley during a field trip to Raptors of The Rockies facilities after the conference. (WN photo)

Dan Varland finds himself a new field assistant at the silent auction, after a hard bidding war with Ted Swem! (Ruth Tingay photo)



Left: Rob Domenech, Executive Director of Raptor View Institute, with a Golden Eagle captured during a post-conference field trip to Raptor View research station on the Continental Divide near Lincoln, Montana. (DV photo)



Golden Eagle at release. (WN photo)

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## News from the RRF Awards and Grants Committee

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Submitted by Clint Boal, Chair

### **William C. Anderson Memorial Award Student Presentation Award**

1st Place tie to:

Isabel Caballero, University of Illinois at Chicago, Chicago, IL, USA

Genetic Analysis Reveals Possible Extra-pair Paternity and Sex-biased Dispersal in an Urban Avian Predator (*Falco peregrines*)

James Dwyer, Virginia Polytechnic Institute and State University, Blacksburg, VA, USA

Interpecific and Intraspecific Social Interactions of Crested Caracaras (*Caracara cheriway*) in Florida.

3rd Place to Kathlyn McVey, Boise State University, Boise, ID, USA

How Does Introduction of Agriculture Alter Food Web Dynamics?: Stable Isotopes Analysis of Trophic Relationships and Food Webs of Burrowing Owls (*Athene cunicularia*).

### **William C. Anderson Memorial Award Student Poster Award**

Travis Booms, University of Alaska, Fairbanks, AK, USA

Molted Raptor Feather Persistence and aging in a Sub-Arctic Environment: Implications for Non-invasive Genetic Sampling

### **James R. Koplín Student Travel Award**

Sofi Hindmarch, Simon Fraser University, Burnaby, BC, Canada.

Habitat Transformed: How is Barn Owl (*Tyto alba*) Distribution and Breeding success Influenced by Land Use in the Fraser Valley, British Columbia?

## **2008 Thomas Cade Award**

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. **Dr. David Bird** is the 2008 recipient of the Tom Cade Award. Dr. Bird has been a member of the Raptor Research Foundation for a period spanning 4 decades. He has been a leading figure in the RRF, serving in many capacities including the office of President and as a Board Member. He has also served as Vice-president of the World Working Group on Birds of Prey and is an Elected Fellow of the American Ornithologist's Union.



After receiving his Ph.D. in 1978, he became the Director of the MacDonald Raptor Research Center and, in 1992, Director of the Avian Science and Conservation Center, at McGill University. He has authored or co-authored

over 150 peer-reviewed publications, including co-editing the books [Raptors in Human Landscapes: Adaptations to Built and Cultivated Environments](#), and the recently published [Raptor Research and Management Techniques](#).

Dr. Bird is a leading figure in captive propagation of birds of prey, using a captive colony of kestrels to conduct research into physiology and toxicology that could never be conducted with wild birds. He was the first to breed falcons using artificial insemination, first to produce young raptors from frozen semen, and the first to breed rough-legged hawks and loggerhead shrikes in captivity. He played an active role in reintroduction of peregrine falcons and shrikes in Canada. Beyond research, Dr. Bird is a genuinely enthusiastic supporter of raptor research, especially as a mentor of students. It is with pleasure that the Raptor Research Foundation presents the 2008 Thomas Cade Award to Dr. David Bird.

### 2008 Award Selection Committee Members

Brent Bibles, Clint Boal, Richard Clark, Joelle Gehring, Carole Griffiths, James Harper, David Johnson, Alan Kemp, Jeff Lincer Bill Mannan, Libby Mojica, Joan Morrison, Guy Rondeau, Bob Rosenfeld, and Miguel Saggese. Service on an award selection committee is an excellent way to contribute to the Raptor Research Foundation. If you would like to help us by serving on an awards committee, please contact Clint Boal, Awards Committee Chair, 218 Agriculture Sciences, Texas Tech University, Lubbock, TX 79409-2120; email: [clint.boal@ttu.edu](mailto:clint.boal@ttu.edu)

*Application instructions and deadlines for RRF grants and awards are available on the RRF website.*

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## News from the RRF EURASIAN COMMITTEE

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Submitted by Ruth Tingay, Chair

In autumn 2006, the RRF Eurasian Committee proposed the launch of a new initiative called TERMS (The European Raptor Monitoring Scheme). The goal of this project was to oversee and harmonise the collection, regular updating and publication of international population estimates for raptors in Eurasia, using similar protocols to those already well-established in North America. The first TERMS workshop was due to be held at the RRF October 2007 Eurasian Conference in Batumi, Georgia. However, due to the late cancellation of the Batumi conference, the TERMS initiative became temporarily stalled.

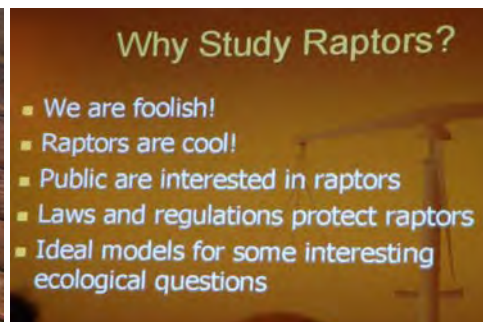
In October 2007, the RRF Eurasian Committee was invited to merge the TERMS initiative with a pre-established consortium that was attempting to create a similar initiative, called EURAPMON (European Raptor Monitoring Network), whose main aim was to monitor contaminant levels in raptors as an indicator for ecosystem and human health in Europe. Combining the international

expertise of RRF population ecologists with the national expertise of eco-toxicologists from across Europe, EURAPMON has the potential to deliver a broad and effective international monitoring strategy for raptor populations in a region where current monitoring protocols are largely restricted to a national level.

In November 2007, EURAPMON submitted an ambitious funding proposal to the European Science Foundation to support the role of a EURAPMON coordinator, a steering committee and several sub-regional workshops. The abstract of this proposal is as follows:

*The wider aim of the programme is to strengthen the contribution of research and monitoring for and with raptors in Europe for the delivery of biodiversity, environmental and human health benefits, including maintenance and recovery of raptor populations and their habitats, and reduced chemicals threats to ecosystem and human health. The immediate objectives are (1) to establish a sustainable and resource-efficient Europe-wide network for monitoring for and with raptors, linked to international networks; (2) to establish consensus on Europe-wide priorities for monitoring for and with raptors, based on a comprehensive inventory of existing monitoring, and of needs of key users (policy makers, risk assessors, environmental managers); (3) to spread best practices and build capacities in Europe for harmonized monitoring for and with raptors; (4) to build a web-based database, populated with interoperable data on European raptor population trends and (contaminant and other) pressures on raptors in Europe, and to produce European- and EU- scale analytical outputs which meet priority needs of users. Activities, workplan and budget are carefully tailored to achieve outputs which meet these objectives. The proposal builds on our existing network, which has already achieved notable output and is eminently qualified for the job. It includes participants from 21 ESF member countries and from key international bodies (UNEP/CMS, BirdLife, MEROS, Raptor Research Foundation) with relevant expertise, databases and members covering all ESF member countries; we have access to a significant proportion of leading and emerging expertise and facilities for such work in Europe. Our multi-disciplinarity (conservation biologists, ecologists, raptor eco-toxicologists) will enable development of new leading-edge methods for early detection of environmental change, determination of drivers of change (with levels of certainty) and prediction of emerging problems (e.g. based on combined ecological, chemical, metabonomic and/or genomic techniques). This should effectively position raptors as sentinels of the health of European ecosystems.*

In June 2008, we were advised that the funding bid had failed, although the reviewers encouraged us to re-submit with some minor alterations. A revised proposal was submitted in October 2008. At the time of writing, this funding proposal is still under review and we expect a decision by summer 2009. We owe a large debt of gratitude to RRF Eurasian Committee members Dr Phil Whitfield (Scotland) and Dr Fabrizio Sergio (Spain), who both spent a considerable amount of time and effort providing expert scientific input into the raptor population monitoring aspects of the funding proposal.



Photos by R. Wayne Nelson

**Get Involved with RRF!!**

If you are interested in becoming more involved with the Raptor Research Foundation, please contact an Officer, Board of Directors member, or Committee chair. There are many opportunities with varying levels of time commitments. Elections for Directors and Officers occur every year; throw your name in the hat. Participate on a committee; the RRF committees are always looking for additional members! See the RRF website or the table below for committee chairs.

**RRF Archivist or Historian Needed**

If you are interested in this important position, please contact RRF President, Lenny Young.

**Chair needed for Andersen Student Presentation Award subcommittee**

If you regularly attend RRF annual meetings, consider becoming chair of this committee. Duties are to identify judges and to coordinate the judging and selection of the student presentation awards at the annual meeting. If interested, contact Clint Boal.

**Chair needed for the RRF resolutions committee**

RRF seeks a replacement who, through the resolution process, will help express the will of the RRF and its membership. Interested individuals should contact RRF President Lenny Young or Secretary Joan Morrison.

<b>RRF Standing Committees</b>	<b>Current Chair</b>	<b>Term Begin</b>	<b>Term End</b>	<b>Thanks to Recent Past Chairs</b>
Conferences	Libby Mojica	Jan-09	Dec-11	Dan Varland
Conservation	Jim Bednarz	Jan-09	Dec-11	Steve Sheffield
Educaton	Kate Davis Carol	Jan-07	Dec-09	
Nominations	McIntyre	Jan-08	Dec-10	Judy Henckel
Awards	Clint Boal	Jan-08	Dec-10	Petra Wood
Resolutions	open	x	x	
Scientific Program	Jim Bednarz	Jan-07	Dec-09	
Membership	Ted Swem	Jan-04	Dec-06	
Development	open	x	x	
Eurasian	Ruth Tingay	Jan-06	Dec-08	

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## Raptor News

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Hawk Mountain Sanctuary recently awarded **Dr. Tom Cade**, founder of The Peregrine Fund, its **2008 Sarkis Acopian Award for Distinguished Achievement in Raptor Conservation**. The award was made in recognition of Dr. Cade's work in helping to restore functional populations of Peregrine Falcons and other species of raptors through the use of captive breeding and release. Last year's awardee was Dr. Ian Newton, formerly of the Monks Wood Research Station in Cambridgeshire, England. The Acopian Award, the most prestigious in raptor conservation, consists of a medallion bearing the image of conservationist and philanthropist Mr. Sarkis Acopian, the Sanctuary's largest benefactor, and includes a \$10,000 cash prize.




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## Wing-tagged Turkey Vultures in North America

Submitted by R. Wayne Nelson

North, Central, and South American ornithologists and birders may have opportunities to see Turkey Vultures bearing patagial wing-tags of five color combinations. **Please report all sightings of wing-tagged Turkey Vultures.** Include *date, location, color of the tag and its code (letters, numbers), the wing (right or left) to which the tag is attached, and the circumstances of the sighting (bird was alone, in a flock, flying or perched, feeding or roosting, etc.).*

**East-central Alberta -- Yellow tag with black letters** [photo by Michael Bloom]

**Contact:** Rick Morse, 8 Gaylord Place, St. Albert, AB T8N 0S8 Canada

[ricmorse@shaw.ca](mailto:ricmorse@shaw.ca) 1-(780)-405-7389.

Beginning in 2008, nestling vultures were tagged at their nests in abandoned farm buildings in a large block, east of Edmonton to the Alberta-Saskatchewan border. This vulture study was begun in 2003 to investigate the productivity and distribution of these birds, by Wayne Nelson, Floyd Kunnas, and Dave Moore of the Alberta Fish and Wildlife Division. Nelson, now retired from AFD, and Rick Morse, a Master Banding Permit holder, began a long-term wing-tagging project in August 2008, tagged 20 nestlings, and two were seen in northern Venezuela in January 2009 (but their ID letters have not yet been read).



**Saskatchewan – Green tag with white letter and numbers** [photo by R. Wayne Nelson]

**Contact:** C. Stuart Houston, 863 University Drive, Saskatoon, SK S7N 0J8 Canada

[stuart.houston@usask.ca](mailto:stuart.houston@usask.ca) 1-(306)-244-0742 before 9 p.m. CST.

From 2003 to the present, over 300 vultures in central and southern Saskatchewan at nests in abandoned farm building have received green wing-tags, in a long-term project conducted by Stuart Houston and his team of Brent Terry, Marten Stoffel, and Michael Blom. Their wing-tagged vultures have been seen in Venezuela and Saskatchewan and places in-between, and recorded on a hunter's trail cam and found as a road-kill in central Alberta. Soon some of these birds will become breeders and will contribute to the study's other goals. (Some red-green color-blind people may see these tags as a *dark blue*, definitely *not* a light blue.)



### **Pennsylvania – Red tag with black letters**

**Contact:** Keith Bildstein, Hawk Mountain Sanctuary Acopian Center for Conservation Learning, 410 Summer Valley Road, Orwigsburg, PA 17961 U.S.A.  
[Bildstein@hawkmtn.org](mailto:Bildstein@hawkmtn.org) 1-(570)-943-3411 ext. 108.

A long-term, ongoing study. Some of these birds may venture into eastern Canada.

### **California – White tag with black letters**

**Contact:** Peter H. Bloom, Western Foundation of Vertebrate Zoology, 439 Calle San Pablo, Camarillo, CA 93012 U.S.A.  
[phbloom@aol.com](mailto:phbloom@aol.com) 1-(714)-544-6147

Long-standing, on-going project.

### **NW Venezuela ‘wintering’ North American vultures – red tag with white numbers,**

**ALSO pale blue tag with black numbers** [photo courtesy of Hawk Mountain Sanctuary]

**Contact:** Keith Bildstein.

To try to look at the migration of North American vultures from the southern end, in our winters of 2006-7 and 2008-9, over 300 vultures were tagged in Venezuela, with red tags at the Maracaibo zoo, and with pale blue tags at Barquisemeto, in a cooperative project between Venezuela researchers and Hawk Mountain Sanctuary researchers.




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## **Research at the Avian Science and Conservation Centre of McGill University**

submitted by David M. Bird

### **Captive-bred Kestrels: Equivalent to Their Wild Counterparts?**

The ASCC has been breeding kestrels in captivity for over 35 years! In the spring and summer of 2008 **Lina Bardo** completed her third field season of her project examining the possible effects of such long-term captive breeding on the American Kestrel, focusing on their behaviour, physiology and morphology. As part of her Ph.D. study, Lina has employed the technique of cross-fostering of clutches between wild and captive breeding pairs. After one more field season in 2009, she will be travelling to the University of California (Davis) to team up with

Dr. John Wingfield to analyze corticosterone in blood samples taken from captive and wild kestrels in an effort to document stress responses in the birds.



Lina Bardo holds a wild adult male American Kestrel in preparation for blood sampling (right). Sandrine Keller, an intern with the ASCC, climbs to the top of an electrical pole to access a nest box containing a family of wild kestrels.



### Can Green-Energy Turbines Share the Wind with Birds of Prey?

For his M.Sc. project, **Michael Ross** travelled to the Gaspé region to study whether the Baie-des-Sables wind farm affects the behaviour and abundance of migrating birds of prey. For two months during the spring migration of 2007 and 2008, daily scans were conducted to verify if altitude, direction and flight type varies between a control (an area without wind turbines) and the main wind farm area. The results of this study are very important to the province of Quebec since the Baie-des-Sables wind farm is the first of many large-scale wind farms planned for the province in the next ten years. It also has worldwide importance since wind energy is an increasingly attractive source of clean renewable energy.



Michael Ross observes the behaviour of migrating raptors as they fly over the Baie-des-Sables wind farm.

### Are Flame-Retardant Chemicals Used in Household Items Bad News for Our Birds?

As part of a five-year study by Dr. Bird and two former Ph.D. students, Drs. **Kim Fernie** and **Laird Shutt**, now toxicologists with Environment Canada, ASCC graduate students **Sarah Marteinson** and **Katrina Sullivan** are using the American Kestrel colony to examine the impact of brominated flame retardants (BFRs) on the health and reproduction of birds of prey. BFRs are added to many commercial products for the purpose of fire prevention, including high impact polystyrenes used in textiles, foams, upholstery, electronics, insulation and building materials. BFRs are similar in nature to PCBs, a more well-known class of pollutants, but are currently less well understood. The chemical properties of BFRs allow them to disperse through air and water as well as accumulate in wildlife. They are also capable of biomagnification and so are particularly dangerous for wildlife species at the top of the food chain such as raptorial birds. For her Ph.D. project, Sarah is studying the effects of exposure of captive male kestrels to two kinds of flame-retardant chemicals, primarily how BFRs affect reproduction, including effects on courtship and brood rearing behaviour as well as testes activity, sperm integrity and hormone levels. Meanwhile, for her M.Sc. project, Katrina used tiny data loggers known as iButtons, which take periodic nest temperature readings, to investigate whether these two kinds of chemicals can change the birds' incubation behaviours. She is also analyzing blood levels of the hormone, prolactin, which is responsible for the onset and maintenance of incubation. **Demetrios Kobiliris**, an M.Sc. student, is investigating possible effects of these chemicals on the stress response of kestrels as well as on their foraging behaviour. In 2007 and 2008, he completed several hours of behavioural observations and also took blood samples to assess their corticosterone response to stress. If flame retardant chemicals in the food chain do affect this corticosterone response, it

could mean a slower reaction to potential dangers in the wild and/or a reduced capacity to obtain food, both of which could compromise the survival of birds of prey.

### **Can UAVs Revolutionize Wildlife Aerial Surveys?**

Now in the final year of his M.Sc., **Dominique Chabot** is looking to change the way wildlife aerial surveys are conducted. Ever more sophisticated and affordable drone planes, known as UAVs (Unmanned Aerial Vehicles) promise to soon rival costly and obtrusive full-size airplanes and helicopters when it comes to counting animal herds and colonies, censusing remote wildlife, mapping out natural habitats and countless other related tasks. Dominique has been conducting trials using the CropCam, a Canadian-built UAV originally designed for agricultural assessment, weighing only 2.5kg and powered by a small electric motor. The small and silent aircraft is capable of carrying out custom flights autonomously using built-in GPS and capturing bird's-eye view imagery with an onboard digital camera. To date the CropCam has been tested for peering into Bald Eagle nests, locating beaver food caches, counting colonies of Canada Geese and Snow Geese, and mapping out threatened Least Bittern habitat. In 2009, thanks in part to a grant from the Kenneth Molson Foundation, the ASCC is teaming up with Quanser to investigate the potential application of a rotary-type UAV to peer into the nests of several raptor species. As part of Dominique's Ph.D. thesis research, he will attempt to determine the birds' reactions to the UAV and whether it can be used to record the contents of raptor nests in relatively inaccessible locations.



### **Sex and the City: How are Bald Eagles Making Use of Urban Habitat?**

In the past few decades, despite their previously known avoidance of humans, Bald Eagles have begun moving into urbanized habitats in large numbers. In April of 2008 M.Sc. student **Raphael Goulet** travelled to the Greater Vancouver area to examine nesting success, nest-site preferences and feeding habits of urban and suburban Bald Eagles. From Vancouver Island to Stanley Park and from northern Washington State to the upper Fraser Valley, Raphael counted the number of fledged young in each active nest, collected food remains below nest trees, and recorded data on selected nest site features from hundreds of nests! He and Dr. Bird are working in collaboration with David Hancock, a renowned west-coast Bald Eagle biologist, founder of the Hancock Wildlife Foundation, and originator of the live-streaming eagle webcam. He is making one more trip out west in the spring of 2009 to analyze food remains taken from urban and rural eagle nests.

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### **World Owl Hall of Fame 2009 Recipients**

Submitted by Karla Kinstler

The owl whose face adorned the United Kingdom's first commemorative stamp of the third millennium is flying into the World Owl Hall of Fame, albeit posthumously. He will receive the prestigious Lady Gray's Award on March 7, 2009 in Houston, Minnesota at the seventh annual International Festival of Owls. Georgie the barn owl was the undeniable star of the World Owl Trust's "Meet the Birds" programs on the grounds of Muncaster Castle in Cumbria, England. He captured the hearts and minds of well over a million people between 1990 and his passing in 2003 at age 13.

For all of you who have ever picked apart an owl pellet, the man we have to thank for discovering the details of their formation will be receiving the Hall of Fame's Special Achievement Award—like Georgie, on a posthumous basis. Dr. Gary Duke's work on owl digestion still stands as the classic and most comprehensive work in the field. Duke is perhaps better known by the general public for co-founding The Raptor Center at the University of Minnesota in 1974. The Center has gone on to become an internationally renowned facility specializing in the medical care, rehabilitation, and conservation of raptors. "Owls were his passion, his favorite bird," says his widow, Maryann Duke. "He especially admired the great horned owl because he thought they were so brave and tough." Dr. Duke passed away in 2006 at age 68. He resided in Shoreview, Minnesota.

The Hall of Fame's Champion of Owls Award is given to someone who has made a broad geographical impact on owls in multiple fields, usually over a lifetime. Yet this year's winner is the first person without a head of white hair to claim the award. Despite being 20 years younger than any other recipient, Dr. James Duncan, from Winnipeg, Manitoba, is highly deserving of the honor. Duncan was involved in the planning of three international owl conferences, has published papers on 11 species of owls, and has studied great gray owls for 25 years. In his position with Manitoba Conservation, Duncan has created management and recovery programs for several owl species. He also has supervised several graduate students studying owls.

The World Owl Hall of Fame was established in 2006 as part of the International Festival of Owls to bring public recognition to the owls and humans who have done great things to make this world a better place for owls. It is judged by a panel of owl experts from four countries in the fields of research, education, rehabilitation, and conservation. The World Owl Hall of Fame is sponsored by the World Owl Trust, Center for Biological Diversity, Global Owl Project, Raptor Education Group, Gray Owl Fund, and Owlstuff.com. For more information about the Hall of Fame go to [www.festivalofowls.com/worldowllhalloffame.htm](http://www.festivalofowls.com/worldowllhalloffame.htm).

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### **News from the Peregrine Fund**

submitted by Susan Whaley

See <http://www.peregrinefund.org/pdfs/NLAR/NL39.pdf> for a link to their recent newsletter.

Articles include:

- Page 3: "Early Warning Systems" reviews our work with toxins harmful to wildlife, humans and the environment.
- Page 6: "A Hunter's New Perspective on Lead" by our condor expert (and avid hunter) Chris Parish describes how his research caused him to switch to copper bullets.

Two wild-hatched condor chicks fledged this month at the Grand Canyon. This is the first year since the recovery program began that there are more condors in the wild in the world than in captivity. Also, their most recent condor study shows the benefits of extending a lead-free ammunition program to parts of southern Utah where condors search for food. To read the full article, "Effectiveness of Action to Reduce Exposure of Free-Ranging California Condors in Arizona and Utah to Lead from Spent Ammunition," go to:

<http://dx.plos.org/10.1371/journal.pone.0004022>

Proceedings of a conference about the effects of ingesting lead from ammunition on wildlife and humans is available online. This is an excellent compilation of scientific and academic research on an important environmental and health issue. Individual papers may be downloaded at: [http://www.peregrinefund.org/Lead\\_conference/2008PbConf\\_Proceedings.htm](http://www.peregrinefund.org/Lead_conference/2008PbConf_Proceedings.htm)

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**Raptor News from Argentina**  
Submitted by Miguel D. Saggese

**Course “Raptor Biology and Medicine School”**

During October 28<sup>th</sup>-31<sup>st</sup> 2008, Dr. Saggese gave a four-day international course on raptor biology and medicine school at Temaiken Foundation and Thematic Park, Argentina <http://www.temaiken.com.ar/>. The goal of this four-day course was to educate veterinarians, raptor biologists and students in raptor biomedicine, biomedical sampling, rehabilitation and conservation. More than 120 veterinarians, biologists and students from Argentina, Chile, Peru, Bolivia, Venezuela, Spain and Uruguay assisted to this course that included 20 hours of lectures and 4 hours of wet lab. The following topics were discussed:

*Anatomy, physiology, taxonomy, ecology, conservation problems, breeding biology, conservation medicine, rehabilitation, handling, capture, physical examination, trauma, housing, bio security, nutrition, toxicology, therapeutics, metabolic, infectious and parasitic diseases, anaesthesia, general and orthopaedic surgery, ophthalmology, radiology and captive breeding of birds of prey.*



During the wet-lab, practical and live demonstrations about *handling, physical examination, bleeding techniques, oral & cloacal swabbing and other procedures* were made using Temaiken’s raptor collection.



**IMPORTANT ANNOUNCEMENT** -- This 3-4 days course is offered free and aimed to educate Latin-American biologists, health professionals and students in raptor biology, medicine and conservation. If you are interested in hosting the “Raptor Biology and Medical School” in your country please contact Dr. Miguel D. Saggese at [msaggese@westernu.edu](mailto:msaggese@westernu.edu)

### **Trip to Petrified Wood National Park, Southern Patagonia, Argentina**

In the early summer of 2008, Dr. Miguel D. Saggese (Western University of Health Sciences, California, USA), Dr. Ana Trejo (Universidad Nacional del Comahue, Rio Negro, Argentina) and Agustin Quaglia (Universidad de Buenos Aires, Buenos Aires, Argentina), conducted raptor research at the Petrified Woods National Park (PWNP), Santa Cruz province, Southern Patagonia, Argentina. The PWNP is located in the Patagonian steppe region, between the Atlantic coast and the Andes Mountains. The presence of alternated valleys and mesas, with winds usually up to 60 miles per hour, characterize the area. Grasslands with scattered and very low shrubs and small trees predominate in the steppes. Many sheep ranches surround this area, where unfortunately strychnine and organophosphates are still widely used to kill foxes, pumas and any other predators, including raptors.

Twenty one years ago, in 1987-1988, Dr. Saggese and Dr. E. De Lucca conducted pioneering raptor research in this area. They investigate the breeding and feeding ecology of black-chested eagle (*Geranoaetus melanoleucus*), cinereous harriers (*Circus cinereus*) and American kestrels (*Falco sparverius*) inhabiting this area. Last year, the main goals of the trip were to investigate fidelity of black-chested eagles and other raptors to their nesting territories and evaluate the potential of this area as a raptor biomedical research station, as part of a long term project aimed to better understand the ecology and health of Patagonian raptors, its prey and other wildlife. Little is known about site fidelity in Patagonian birds of prey so evaluating site fidelity 21 years later and confirming the presence of black-chested eagles and other species of raptors in the area was of great interest. Some other interesting results of this trip included the finding of three active nests of varied hawk (*Buteo polyosoma*), the first nesting record of a Patagonian Pygmy Owl (*Glaucidium nanum*) in Argentina, new bird records for the area, and the collection of pellets and prey remains from different species of raptors (that will help us to increase our knowledge on raptors feeding ecology and better characterize the composition of the mammals inhabiting the area).



Patagonian trip team members Ana Trejo and Agustin Quaglia (left) and Miguel D. Saggese (right)



## RAPTOR RESEARCH MENTORS WANTED!

### Junior Raptor Research Mentoring Program needs your participation!

The RRF Director for the Southern Hemisphere is currently preparing a Junior Raptor Researcher Mentoring Program, as part of a larger initiative to further develop raptor research and conservation initiatives in Central and South America. The main goal of this program is to create a one on one relationship between a mentor and undergraduate or graduate students interested in either conducting raptor research or advancing raptor conservation.

Experienced Raptor Researchers willing to donate their time towards this effort and teach, guide, and train students from all Central and South America, for the discipline/s in which they are experts, are being sought to make this program a great success. Expertise ranging from trapping, banding, and measuring raptors to conducting sophisticated diet analyses and habitat modeling is greatly needed. Students and junior raptor researchers will undoubtedly benefit from the research experience and expertise you can provide in countries where a limited number of mentors exist.

Mentoring provides an enriching and unique opportunity not only for students but for the mentors as well. A program such as this will therefore help to 1) create personal and professional relationships between the students and their mentors, 2) identify common research interests, and 3) promote much needed collaborative research targeting Neotropical raptors. More importantly, mentors will have a significant role in the scientific and professional success of others.

Eventually, mentoring will create more mentors and you can be part of this.

The need for this mentoring program is real. Excellent and experienced avian researchers are numerous in Central and South American Universities as well in other avian research institutions. However, when compared with the volume of work and research that has been gained during the last 35 years in other parts of the world or in other groups of birds, knowledge of Neotropical raptors still is very limited. In fact, for many of these Latin-American countries, raptor research still is in its infancy.

If you are interested in learning more about this program or in becoming a mentor, please contact Dr. Miguel D. Saggese by sending an email to [msaggese@westernu.edu](mailto:msaggese@westernu.edu) or a letter at the following address: 309 E. Second Street, CVM, Western University of Health Sciences, Pomona, California, USA. Thank you very much in advance for your help with this program.

Sincerely, Miguel D Saggese DVM, MS, PhD.

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## ANNOUNCEMENTS and BRIEF NEWS ITEMS

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### Announcements

Reminder that the *Journal of Raptor Research* is now available online through BioOne.2 ([www.Bioone.org](http://www.Bioone.org)). The current and recent issues of the Journal are accessible on this searchable website for anyone with institutional access to BioOne. All RRF members now have free, full-text access to the *Journal of Raptor Research* (2006--current issue) online, even if institutional subscription to BioOne is unavailable. To access JRR online: Go to the BioOne Web site ([www.bioone.org](http://www.bioone.org)), select Browse from the menu at the top, Current Issues in the drop-down, and navigate to Journal of Raptor Research. You may also use the following direct link to access the full archive: <http://www.bioone.org/perlserv/?request=get-archive&issn=0892-1016>. When you request access to full text or to download an article, you will be prompted for your UserID and password. Your UserID is RAPT (all caps), 00 (zero zero) followed by your 6-digit membership number, which is located on your address label for *Journal of Raptor Research* or Ornithological Newsletter. Your password is your last name in standard capitalization (example: Bird). A link is provided on the Raptor Research Foundation website for your convenience.

In addition, the entire *Journal of Raptor Research* archive, 1967 – 2005, is available free of charge on the SORA website (Searchable Ornithological Research Archive, <http://elibrary.unm.edu/sora/>). SORA is an open access electronic journal archive for all the major North American ornithological journals.

### Assistance Requested

**Observations of Raptor Winter Philopatry** -- Request information of any unpublished observations of winter philopatry in raptors, for possible inclusion in a compilation of similar observations. Define “winter philopatry” as a situation in which “a migrant raptor, positively identified, winters in the same location for two or more successive winter seasons”. Positive identification should be documented by color banding or other individual identification technique, such as radio tags, PTTs, GPSs, etc. Please include usual details of researcher’s name, species of raptor, dates, location, identification technique, etc. The examples should qualify as demonstrating winter philopatry according to the above criteria. Therefore, under this definition, raptors that are year-round residents do not qualify. Please send particulars, preferably by e-mail, to: Bill Mattox, 8300 Gantz Avenue, Boise, ID 83709, [wgmattox2@earthlink.net](mailto:wgmattox2@earthlink.net) (208) 362-3435

### Workshops

#### **Raptor Workshop: Accredited through University of Wisconsin - Stevens Point**

A 5-day workshop entitled "Introduction to Raptor Field Techniques" will be held in Stevens Point, WI by Eugene Jacobs of the Linwood Springs Research Station and Loren Ayers of the Wis. Dept. of Natural Resources. It's scheduled to begin on Monday afternoon June 8 and

continue through Friday June 12, 2009. Receive first hand experience working with live raptors while you develop skills with: capturing, handling, banding techniques, tree climbing and rappelling, blood extractions, habitat sampling and more. Cost is \$425 and space is limited, so register early. For more information and a registration form visit <http://www.RaptorResearch.com>

## **For Sale**

**RRF Publications, Pins, and Decals** –Hard copies of The Journal of Raptor Research (Vol. 1-30), most Raptor Research Reports, and RRF pins and decals may be purchased directly from RRF (Angela Matz, 101 12th Ave., Room 110, Fairbanks, AK 99701, USA; email: [angela\\_matz@fws.gov](mailto:angela_matz@fws.gov)). See [http://raptorresearchfoundation.org/back\\_issues\\_jrr.htm](http://raptorresearchfoundation.org/back_issues_jrr.htm) for details and prices. Orders for 4 or more issues receive a 30% discount. Hard copies of The Journal of Raptor Research (Vol. 31+) 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](mailto:business@osnabirds.org); web: <http://www.osnabirds.org>). Some older issues are not available in hardcopy; but all issues from Vol. 1-39 are available on SORA (<http://elibrary.unm.edu/sora/jrr/>) for free download.

## **Raptor Books and Publications**

**A new book on Peregrine Falcon now available in pre-booking with discount PEREGRINE FALCON POPULATIONS. STATUS AND PERSPECTIVES IN THE 21ST CENTURY is the most up-to date compendium on the status and conservation of Peregrine Falcons in Europe and worldwide.** This book is the biggest collection of papers related to Peregrine studies. For the moment there are papers on European Peregrine populations in Poland, Czech Republic, Slovakia, Hungary, Bulgaria, Romania, Croatia, Russia (European and Asiatic part), Ukraine, Belarus, Armenia, Finland, Norway, Denmark, Germany, France, Spain, Italy, Austria, United Kingdom and more to come. In addition to European presentations it also includes papers from countries in other continents - United States, Australia, South Africa, Israel. Furthermore, this book also includes papers on **Saker Falcons**, comparing the species with the Peregrine and studies from their central European stronghold - Hungary, Czech Republic and Slovakia. Almost 60 papers, ca. 600 pages, almost 300 colour figures and pictures. The book is based on papers presented at the 2nd International Peregrine Conference Poland 2007, held from 19-23 September 2007 in Piotrowo near Poznań, Poland with addition of new articles about countries not present at the Conference.

**The prepublication price is with 25% discount.** More information about the book and Peregrine Conference, including list of papers and authors available at:

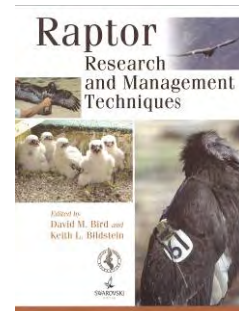
[www.falco.strefa.pl](http://www.falco.strefa.pl)

<http://www.falcoperegrinus.net/index.php?p=page&id=109>

[www.falconline.eu](http://www.falconline.eu)

Janusz Sielicki, European Peregrine Working Group

**Raptor Research and Management Techniques** -- Copies still available from many natural history booksellers or order from Hancock House online at [www.hancockhouse.com](http://www.hancockhouse.com).



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## RECENT THESES ON RAPTORS

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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.

**Bayard de Volo, S. 2008. Genetic studies of Northern Goshawks (*Accipiter gentilis*): genetic tagging and individual identification from feathers, and determining phylogeography, gene flow and population history for Goshawks in North America. Ph.D. Dissertation, Colorado State University, Fort Collins, Colorado. USA. 133pp.**

Northern Goshawks (*Accipiter gentilis*) are large, widespread forest raptors that require large tracts of forest for foraging and nesting. There has been much interest in the population and taxonomic status of goshawks, especially for populations occurring west of the 100<sup>th</sup> meridian. Because most goshawk populations require large forest tracts for foraging and nesting, their needs are often in conflict with forest management. These conflicts prompted concerns that changes in forest structure that alter landscapes (e.g., timber harvest, catastrophic fire, fire suppression) negatively impact goshawk populations. Also of concern is whether goshawk populations in Western North America are genetically distinct from those in the East and the North, and whether some populations or subspecies should be candidates for listing and protection under the Endangered Species Act (ESA). To study the effects of forest management on goshawk populations, long-term population studies, using capture-mark-recapture techniques, are required. Capturing and marking goshawks with leg bands is difficult and costly, both of which have limited demographic studies across much of the species' range. Likewise, the same difficulties influence the collection of genetic tissue for studies of phylogeography and population genetic structure. My studies focused on using non-invasive sampling of feathers to: (1) determine whether genetic capture-recapture methods were feasible; and (2) evaluate genetic relationships among North American goshawk populations. To address the first objective I conducted two studies that established methods for non-invasive genetic capture-recapture studies. First, I examined the question of whether individual goshawks could be genetically "marked." I identified five microsatellite genetic markers that when used together provided the necessary resolution to uniquely genotype 113 goshawks from the Kaibab Plateau, Arizona. Second, I determined that feathers molted at nest sites were a useful non-invasive source of DNA for genetic studies. I established an improved method for isolating DNA from feathers, and showed that tail feathers provided significantly more DNA than other feather types, but all feathers were useful for generating unique genetic profiles. For the second objective, I examined the genetic relationships among 21 populations of goshawks from across a large portion of their North American range. I used mitochondrial control region sequences from 315 goshawks to address: (1) potential population isolation during the Pleistocene; (2) degree of post-glacial gene flow; (3) presence of currently unique population segments; and (4) agreement of geographic distribution of genetic lineages (haplotypes) with previously determined geographic variation in morphology. Results

indicated that goshawks were historically isolated into three Pleistocene (glacial period) populations (Pacific-Coastal, Southwestern, Eastern), and have since experienced limited post-glacial gene flow, resulting in two unique zones of admixture among Intermountain West populations. Goshawk populations are currently genetically differentiated among five major geographic regions: California, Colorado Plateau, Arizona Sky Islands, New Mexico, and a large group including the Rocky Mountains, Great Lakes, and Central Appalachian Mountains. Likewise, the geographic distribution of major haplogroups agreed with variation in size morphology previously determined from museum specimens. Interestingly, goshawks in the Arizona Sky Islands (putative *A. g. apache* subspecies) were significantly differentiated from all other populations, including those geographically nearby. This suggests that goshawks in the Sky Islands and perhaps farther south into Mexico have a unique genetic history and limited genetic contact with populations to the north.

**Leslie Corinn Cauble. 2008. The diets of rural and suburban Barred owls (*Strix varia*) in Mecklenburg County, North Carolina. M.Sc. Thesis. Biology Department, University of North Carolina at Charlotte, Charlotte, NC.**

The diet of Barred Owls found in unfragmented mature forests was compared to the diet of Barred Owls occupying suburban residential areas in Mecklenburg County, North Carolina. This study found a significant difference between the diets of rural and suburban Barred Owls, with the suburban diet comprised predominantly of avian prey (54.6%) and the rural diet consisting mostly of reptiles and amphibians (28.3%) and insects (26.5%). One rural and one suburban nest were matched based on age of owlets, date of recordings, and date of branching and were compared to control for the effect of seasonality. A significant difference was found between the age-date matched rural and suburban Barred Owl diets suggesting that seasonality is not greatly influencing the observed diet differences. A comparison was also made between the diets of Mecklenburg County Barred Owls and Barred Owls found in other areas of North America. A significant difference was determined between Mecklenburg County Barred Owl diets and diets reported for other North American Barred Owls. Results of this study suggest that Barred Owls living in suburban habitats are taking advantage of unique foraging opportunities found in residential areas. Suburban areas may have increased avian densities due to bird attractors which, when combined with an open understory, may account for the large numbers of avian prey items observed.

**Marcel A. Gahbauer. 2009. Breeding, dispersal, and migration of urban Peregrine Falcons in eastern North America. Thesis, McGill University.**

The recovery of the Peregrine Falcon (*Falco peregrinus*) in eastern North America is a great conservation success, but the resulting largely new urban population has received remarkably little study. Satellite telemetry, detailed monitoring of active nests, and a review of archived nesting data since the resumption of breeding in the east were used to characterize aspects of the ecology of this rebuilding population. The accuracy of small satellite transmitters was confirmed to be appropriate for tracking long-distance movements, and they were used to compare the dispersal and migration of 34 Peregrine Falcons. Adults from a comparative sample in Alberta migrated farther than juveniles from eastern North America. Among juveniles, those raised at natural nest sites or in rural habitat departed earlier, while males were more likely to migrate long distances than females. Siblings varied considerably in their migratory strategies, and the one juvenile

tracked over multiple years adapted his behaviour annually, suggesting that there are many factors involved in determining migratory movements in Peregrine Falcons, and that their relative importance may change with time. In Ontario, the Peregrine Falcon population has grown to a record size, initially due to an intense captive-breeding and release effort, and more recently to considerable immigration from adjacent states. This influx resulted in a substantial dilution of the original *F.p. anatum* gene pool, in part because *anatum* juveniles appear to have been recruited to the breeding population at a lower rate. The shift was also facilitated by a small number of immigrant adults producing a disproportionate percentage of the offspring in southern Ontario. In southern Ontario, nearly all nests have been on buildings in cities, reflecting the dramatic expansion of Peregrine Falcons into urban habitat throughout eastern North America. Pooling data from southern Ontario, Quebec, Massachusetts, Pennsylvania, and New Jersey revealed that productivity varied considerably by region, but overall was similar at urban and rural sites. Within urban habitat, productivity was greater on buildings than on bridges and highest in nest boxes on covered ledges. Adults showed a bias toward nest sites facing between south and east, but this did not translate directly into higher productivity, reflecting the complex variety of factors that influence nesting success. While building and vehicle collisions account for significant mortality among urban juveniles, human assistance through provision of nest boxes and rescues of grounded fledglings may offset these risks. Ongoing management of this nature may be required for peregrine success in cities to remain high, but efforts should also be made to apply similar strategies to other species at risk that have adapted to urban environments.

**Niemela, C.N. 2007. Landscape characteristics surrounding white-tailed kite nest sites in southwestern California. M.S. Thesis, Humboldt State University, Arcata, CA, USA. 53pp.**

I quantified landscape variables surrounding 31 white-tailed kite (*Elanus leucurus*) nest sites and compared them with 31 unused sites in an undeveloped landscape in southwestern California. Using a geographic information system, I combined landcover data from Orange County with aerial photography to produce a landcover map surrounding white-tailed kite nest sites. Habitat types were quantified and landscape pattern indices were computed within circular plots of 300, 500, 700 and 1000 m radii centered on nests. At all circular scales, kite nests had significantly more agriculture, grassland, riparian, and woodland habitat, and significantly less chaparral habitat than unused sites ( $P \leq 0.01$ ). The landscape surrounding nest sites also had significantly greater patch density than unused sites, suggesting a preference for patchier landscapes. All nests were within 307 m of a riparian corridor, and were located at elevations below 314 m, and on slopes less than 25 degrees. I used logistic regression analysis to develop a predictive model of landscape variables that best discriminated between white-tailed kite nest sites and unused sites within my study area. Largest patch index and perimeter density were used to further interpret the landscape surrounding white-tailed kite nests. The final model incorporated distance to nearest stream, percent grassland, and percent woodland, and correctly classified 97% of kite nest sites within the study area. While landscape variables were significantly different between nest sites and unused sites, some variables varied widely among individual kite nest sites. These results suggest that the quality of similar habitat types varied widely across the landscape, and that the quantity of habitat necessary to support a pair of nesting kites may vary as well. For white-tailed kites in California, habitat quality is largely dependent on abundance and availability of California voles (*Microtus californicus*).

**Raptor Research Foundation, Inc.  
2009 CALL FOR NOMINATIONS**

Nominations are open for the 2009 Raptor Research Foundation (RRF) elections!

**The following RRF Directors will be elected in 2009:**

North American Director #2 (must reside in North America)  
At Large Outside North America (must reside outside North America)  
Director At Large #2 (no geographic restrictions)  
Director At Large #5 (no geographic restrictions)  
Directors serve a three-year term beginning on January 1, 2010.

**Qualifications/duties for each Director position include:**

- ✓ Current regular, honorary or life member
- ✓ Resident of the representative geographical district (if applicable)
- ✓ Communicate and vote on official business by email
- ✓ Attend the annual board meeting during the annual conferences as often as possible during the term (Directors)

Details on the terms and duties of Directors are described in the RRF bylaws at the RRF website:  
<http://raptorresearchfoundation.org/rrfbylaw.htm>

**Nomination deadline and contact information:**

Please send all nominations to Carol McIntyre (nominations chair), by **Friday, April 17, 2009** by email (preferred) [Carol\\_McIntyre@Nps.gov](mailto:Carol_McIntyre@Nps.gov) (email preferred) OR snail mail, Carol McIntyre, NPS, 4175 Geist Road, Fairbanks, AK 99709.

**Please note:** If you are nominating someone other than yourself, please receive the candidate's approval before you submit their name.

All candidates running for a Director's position need to submit a short (250 words or less) summary describing their background, RRF affiliation and primary reasons that they want to serve as a RRF director to the nominations chair by **Friday May 15, 2009**. The summary will be included on the RRF election ballot.



**WINGSPAN**

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