WINGSPAN

VOLUME 6 NO. 2 SEPTEMBER 1997

## MESSAGE FROM THE PRESIDENT

Dear Members and Friends:

Two students were applying for a summer job at a well-known raptor center, but only one position was available. The director of the establishment perused their resumes, which were for the center's purposes much the same. In other words, the candidates were equally qualified for the position. Which one to choose? Then the director noticed that while both students were members of the Raptor Research Foundation (RRF), one had actually got involved with the organization. He had served on the local organizing committee for an RRF conference held in his region a couple of years ago. He got the job.

Here is my point. To me, it is not enough just to be a member of an organization, i.e., pay your annual dues, receive the journals and newsletters, and maybe attend the annual conference occasionally. To really belong to an organization, one must get involved!

Now I know what some of you are thinking. "I don't have a Ph.D." or "I'm not a big-shot professor or scientist!" or "I don't have any profile--what do I have to offer?!" The fact is that you have plenty to offer: time and energy.

Based on my experience, it is true that if one wants to get elected to the board or become an officer or, God forbid, the president of RRF, one must have some profile. To put it in other words, you have to earn your stripes. After all, you are trying to convince fellow members to vote for you, to have faith in you. I look for two things when I am reading over the bio-sketches of RRF candidates looking for my vote. First, to what extent have they been involved in the organization and second, what do they hope to accomplish during their tenure? Having said that, there seems to be a general shortage of people running for board and officer positions in any given election. Put your hat in the ring, and do not give up!

I do recognize that RRF is no longer big on committees; we used to have dozens, but most were ineffective and non-productive. The Conferences Committee has been mainly run by Mike Kochert and myself, if only because we have been attending RRF conferences for over two decades. We will, however, be looking to bring in some new blood in this capacity. For its purposes, the Resolutions Committee is not a terribly busy one and is essentially a one-person show in the form of Dave Garcelon. The various Awards Committees have generally been manned by members who are well-established in their careers, who have shown good judgement in other matters, and who are perhaps colleagues of the person the award is named after. On the other hand, both the Koplin and Andersen Award Committees are always looking for help. The Publications Committee consists of the various current editors of our literature, i.e., Marc Bechard, Lenny Young, and Daniel Varland. Pat Hall and Massimo Pandolfi comprise our Nomination Committee, and any other members joining them should be well-connected in the raptor world. Presently, Jim Bednarz chairs our Conservation Committee composed of several experienced veterans in both

raptor conservation, as well as serving in other ways in RRF. This is an extremely busy committee, and members should be willing to serve in more than name only. A blend of sage raptor biologists well-versed in science and some neophytes who have plenty of time and energy on their hands should make this a highly productive and effective committee. Conservation should and must become a priority for RRF, and I refer you to an article on this subject by David Andersen and Jim Bednarz elsewhere in this issue.

Not meaning to belittle their accomplishments to date, there are three RRF committees that could possibly use some additional energy and input: the Membership Committee headed by Dick Clark, the Education and Rehabilitation Committee headed by Nancy Read and Betsy Hancock, and the Public Relations Committee consisting of Walter Crawford and myself. RRF definitely needs an active Development Committee to get an endowment fund off the ground. If you are interested, communicate with me or president-elect Mike Kochert.

So, want to do something for RRF besides join a committee, but don't have any ideas? Here are some. First, do attend our annual conferences and network by introducing yourself to officers and directors of the organization. Indicate your willingness to help in some way. If there is an RRF conference in your region, offer your assistance, whether it is stuffing envelopes, being a gofer, or sitting at a registration desk. Help us stimulate more people to join RRF by distributing our brochures in your neck of the woods or at other conferences. We especially need members in eastern Europe, Africa, and Latin America. Organize a fund-raiser, e.g., bake sale, raffle, etc., for RRF or request some of our pins, decals, and/or literature from our treasurer and sell them to raise funds for RRF. Our raffle being organized by Ed Henckel is still badly in need of donated items, e.g., raptor books, prints, clothing, etc. If you are a financial wizard or have connections with the wealthy, maybe you can give us some advice as to how to expand our coffers to build

*(continued on page 16)*



*Wingspan* is distributed twice a year to all RRF members. It is also available to non-members for a subscription rate of $10 per year. *The Journal of Raptor Research* (ISSN 0892-1016) is published quarterly and available to individuals for $30 per year and to libraries and institutions for $50 per year from: The Raptor Research Foundation, Inc., 12805 St. Croix Trail, Hastings, MN 55033 USA. Add $3 for destinations outside of the continental United States.

Persons interested in predatory birds are invited to join The Raptor Research Foundation, Inc. Send requests for information concerning membership, subscriptions, special publications, or change of address to: Jim Fitzpatrick, Treasurer, 12805 St. Croix Trail, Hastings, MN 55033 USA.

## 1997 RRF MEETING FLIES SOUTH THIS FALL!

by Wendy Denton & Mary Margaret Spradlin

The Raptor Research Foundation's 1997 annual meeting will be held from October 30 to November 1 in Savannah, Georgia. The meeting will take place at the beautiful Savannah Mariott Riverfront, with easy access to Savannah's picturesque historic district, restaurants, and beaches. The conference will consist of general paper sessions on various aspects of raptor ecology and biology, a special symposium on "The Status and Biology of Kites" convened by Ken Meyer and Brian Millsap, and a poster session. Field trips, exhibits, films, and videos will round out a stimulating conference. A call for papers has been mailed ro RRF members. More are available upon request.

Field trips and social events will offer participants a memorable experience. Field trips are available on Friday, October 31 for full- and half-day outings. Full-day trip options include tours of the Okeefenokee National Wildlife Refuge and the Savannah River Ecology Lab, a birding tour of nearby coastal areas, and a trip to Sapelo Island. Half-day excursions include birdwatching on the coast; squirrel hunting with a local falconer; a trip to the new Center for Wildlife Education and the Lamar Q. Ball, Jr. Raptor Center at Georgia Southern University; a tour of Savannah's historic and Victorian districts; and a tour of historic Fort Pulaski. Social events include a cocktail-poster reception, a Halloween dinner social in Georgia's oldest fort, and an informal awards banquet at the Mariott. The banquet will also feature a raffle for books and fine pieces of art. Conference attendees will enjoy the amenities of a fabulous conference facility and rooms in a first class hotel. Room rates begin at $85 for single or double rooms. Inexpensive lodging is available to students near the conference location.

Registration for members is $110 before September 30, and $130 after that time; non-members are welcome at $120/$140 and students at $65/$85. ***ATTENTION STUDENTS! YOUR RATE HAS BEEN REDUCED FROM THAT PRINTED IN THE CALL FOR PAPERS! THIS IS THE NEW REGISTRATION FEE! IF YOU HAVE ALREADY MAILED YOUR REGISTRATION, YOU WILL BE REFUNDED THIS $30 REDUCTION.*** All attendees will receive a commemorative conference print of a Swallow-tailed Kite, as part of their registration packet. Field trips and social events are additional.

Allow us to assure you that Southern hospitality WILL be in abundance! For more information about the meeting, please contact Michelle Pittman or Fran Aultman, Georgia Southern University, P.O. Box 8124, Statesboro, GA 30460-8124, phone: 912-681-5555, fax: 912-681-0360, e-mail: meeden@gsvms2.cc.gasou.edu or franic@gsaix2.cc.gasou.edu.

## EASTERN REGION NEWS

by Brian A. Millsap, Eastern Director

RRF work in at least my part of the Eastern Region has focused on preparations for the 1997 annual meeting in Savannah, Georgia. The local committee and Georgia Southern University have been working hard to ensure that this meeting will be a memorable one! I've toured the facilities and know much of what is in store for us, and I can assure you that you don't want to miss it. As for the rest of the Eastern Region, I just want to remind you that I am your voice on the board, and I want to serve your interests. Please feel free to contact me anytime that I can be of service. I can be reached via e-mail at millsab@mail.state.fl.us, or by phone during the day at (850-488-3831). I look forward to seeing you in Savannah!

# FALCONRY POSITION STATEMENT
OF
THE RAPTOR RESEARCH FOUNDATION, INC.

## INTRODUCTION

Birds of prey have received considerable conservation attention in recent years due to marked declines in some populations, notably of those species vulnerable to environmental pollutants. As a result of these declines, and because reliable data on population status were often unavailable, protection of raptor species became a conservation priority, including strict regulation of the sport of falconry. In 1977, the Conservation Committee of the Wilson Ornithological Society (WOS) reported on falconry in North America (Braun et al. 1977), concluding that falconry is a legitimate art but that monitoring of raptor populations was needed. Recommendations were made that falconry regulations be adopted by all states, that a practical marking system be developed for permanent identification of individual raptors, that properly marked falconry birds be allowed to be transported freely between states, and that captive bred raptors of any species be allowed for falconry. At the time of the WOS committee report, newly promulgated federal regulations controlling the practice of falconry were being implemented in the United States which have served as the basis, with minor changes, for regulating the sport in 42 states. Similar rules have been promulgated by several provinces in Canada.

Since 1977, substantial data have become available on the status of most raptor species suitable for falconry, and depressed raptor populations have generally recovered in North America and Europe. Most of the recommendations of the WOS Conservation Committee have been achieved in the United States and Canada, and the contributions of falconers to raptor management and conservation education have been widely recognized. Yet regulation of falconry still causes controversy in some countries.

The purpose of the Falconry Position Statement by the Raptor Research Foundation, Inc., is to provide current and additional expert opinion based on available biological data on issues relating to the regulation and practice of falconry. This statement neither affirms nor disaffirms the philosophical question of the legitimacy of the sport of falconry..

## DEFINITION OF ISSUES

*Harvest from Wild Populations.*--The removal of young birds from wild populations reduces productivity (directly, and perhaps indirectly through disturbance during the nesting season). However, raptors are a renewable resource, and thus the game management principle of "sustainable yield" may be appropriately applied to harvest of individuals from healthy populations.

*Captive Propagation.*--Captive propagation of raptors has increased dramatically in recent years, and the release of captive-bred progeny has been valuable for reestablishing some endangered species. Captive breeding provides birds for falconry, but may also be used to conceal illegally acquired birds unless parentage can be proven.

*Hybridization and Introductions.*--The production of hybrids, especially among large falcons, has raised questions concerning the release of such birds to the wild. Genetic theory predicts that, at normal population levels, hybrids between sympatric or parapatric species would be eliminated by natural selection. Similarly, non-native species from within the same super-continent (Americas, Eurasia) are unlikely to establish themselves in the wild as introduced aliens. However, traits from hybrids between allopatric species might establish in native stocks, and species from other super-continents might become accidentally introduced if used in large numbers for falconry.

*Identification of Individual Birds and Parentage.*--To effectively enforce falconry regulations, individual birds must be reliably identified. Leg bands which cannot be refastened after removal would be a convenient method, but bands currently used are not entirely reliable. Alternatives include biochemical parentage tests, which should soon be available for raptors, and foot scute patterns which are expected to provide unique "fingerprints" for individual identification.
*Regulation and Enforcement of Falconry.*--Controls are desirable; however, the intensity of regulations and their enforcement should be consonant with the risk to raptor populations.

## POSITION

The position of the Raptor Research Foundation, Inc., with regard to the above stated issues relating to falconry is:

1. North American raptors used in falconry have stable or increasing populations throughout most or all of their range. This is also generally true of European countries where falconry is practiced.
2. Evidence indicates that large and stable or increasing raptor populations can sustain an annual harvest of at least 10% of nestlings.
3. Any harvest of raptors from small and unstable or declining populations should be evaluated, in each instance, on a biological (e.g., population and productivity data) basis.
4. The annual harvest of wild raptors by falconers in the United States is well below 5% for any species and below 1% for most species. Percentages are not adjusted for return to wild stocks of released and escaped birds.
5. Final development of biochemical parentage tests and the use of foot scute patterns for individual identification should be encouraged as tools for regulation and enforcement.
6. Escape of sympatric and parapatric species or their hybrids is unlikely to pose any significant threat to wild populations. However, we recommend that hybrids between allopatric species should not be bred for falconry, and that other hybrids or species at risk of accidental introduction between super-continents should be imprinted on humans before being used in falconry.
7. Licensing individual falconers on merit is effective for regulating falconry, especially when combined with individual markers for raptors of special management concern (e.g., endangered species). There is little conservation justification for the administrative costs of marking common raptors individually, and future consideration should be given to modification of this practice.
8. Many resources now being directed toward the control of falconry in the United States and elsewhere could be redirected to raptor population monitoring, habitat conservation, education and preventing the killing of wild raptors.
9. Government agencies should be more responsive to the changing status of species, both by imposing protection when necessary and by removing restrictions on use when biological data indicate such is warranted.
10. International standards for the practice and regulation of falconry are encouraged.

## ACKNOWLEDGMENTS

The Raptor Research Foundation is grateful to Jim Mosher, Jim Brett, Robert Kenward, and Ian Newton, who formed the ad-hoc committee which drafted and revised this position statement on behalf of RRF. The Raptor Research Foundation also thanks Dean Amadon, Clait Braun, Allen Brohm, Tom Cade, S. Kent Carnie, Christian de Coune, Gary E. Duke, Mark Fuller, Frederick and Frances Hamerstrom, Jeffrey Lincer, Jimmie R. Parrish, James Ruos, and James Weaver for their comments and suggestions on earlier drafts of the statement.

(*Editor's note:* Expanded abstracts, including literature citations, relevant to RRF's Falconry Position Statement will be published in *The Journal of Raptor Research*, Volume 31, Issue No. 3.)

# RRF AND RAPTOR CONSERVATION

by David E. Andersen, Vice-President &
James C. Bednarz, Chair, Conservation Committee

Without question, members of the Raptor Research Foundation, Inc. (RRF), have had a significant and positive influence on the conservation of raptors. From furthering scientific understanding of raptors, to conscientiously using raptors in the ancient art of falconry, members of RRF have had wide ranging and important impacts on raptors and the attitudes of others about raptors. Many RRF members have devoted their professional careers to the conservation of raptors, and we suspect that most RRF members devote a significant portion of their energy and passion to raptors. Individual members of RRF exhibit tireless efforts toward furthering raptor conservation in both their profession and avocation, and are recognized for their efforts both within and outside the organization.

Recently, however, we have begun to wonder whether the same can be said about RRF as an organization. A number of very significant conservation issues involving raptors have been prominent in the recent past. The controversies regarding Northern Spotted Owls, Mexican Spotted Owls, Apache Northern Goshawks, Queen Charlotte Northern Goshawks, and Swainson's Hawks have all proceeded with little visible presence of RRF, although individual RRF members have been and are significantly involved in each. While these issues are discussed at some length at annual RRF meetings, it seems to us that RRF is largely absent in contributing to discussions at the level of the general public and public policy. Case in point: the American Ornithologists' Union (AOU) and The Wildlife Society (TWS) recently completed a technical review of published management guidelines for southwestern forests and Northern Goshawks in the desert southwest. RRF members participated in that review, but as representatives of AOU or TWS. RRF as an organization was absent from that review. Why? The answer is that RRF was not invited to participate in the review. Why wasn't RRF invited to participate in such a review? And, had RRF been invited to participate, would RRF been positioned to provide a professional technical review in a timely manner?

So, we pose two additional questions. One, has RRF been absent as an organization from important and visible raptor conservation issues? To us, the answer to that question is YES. Second, given this absence, should RRF as an organization do something to correct that deficiency? That is a matter of policy for RRF to address as an organization. In recent years, many members of the RRF Board have advocated that the organization should become increasingly involved in conservation policy decisions. Also, RRF currently has a Conservation Committee. Thus, it would seem that the membership does want to (and in our opinion should) play a significant role in raptor conservation issues. As an organization, it may be appropriate to coordinate RRF's participation with other scientific societies (likely through the Ornithological Council) in technical review of raptor conservation issues in the future. However, that means that we must be willing and prepared to participate in such projects in a timely and professional manner, which necessitates significant contributions of time and expertise by RRF members. To date, those kinds of contributions have been hard to come by when it comes to addressing raptor conservation issues.

That is not to imply that the Conservation Committee has been doing nothing. Activities in the past year include:

- An active committee reviewing the proposal to delist *Falco peregrinus anatum* (Brian Millsap chairs that committee).
- Submission of a letter to the U.S. Fish and Wildlife Service concerning the elimination of "Category 2" species as candidates for listing as endangered or threatened (RRF opposed it, see the letter below).
- Submission of suggestions and substantial revisions to the soon to be published "Guidelines for the Use of Wild Birds in Research" produced by the Ornithological Council (RRF's input emphasized

the humane treatment of both raptors and the lure animals used in trapping raptors, and that traditional trapping methods for raptors could be accomplished in a humane manner). We suggest that all raptor field workers follow these guidelines when conducting research.

- Formation of an ad hoc committee to review management prescriptions for Ferruginous Hawks on Bureau of Land Management lands in Utah (report is due soon).
- Formation of an ad hoc committee to make recommendations concerning the development of Habitat Conservation Plans (HCP) for raptors. This is a major undertaking, and this committee may need some assistance.

Unfortunately, the RRF Conservation Committee was unable to act on a number of other issues and crises that arose during the past year because of the lack of time and able volunteers available to do the necessary research that would permit RRF to provide formal written input based on solid science.

In summary, we find RRF's current participation in raptor conservation issues inadequate. Thus, we challenge RRF to be neither satisfied with past contributions nor willing to be satisfied with the contributions that most individual members are currently making. Rather, we believe that RRF should be the preeminent organization regarding raptor conservation issues in the world. That will not happen unless RRF members collectively decide to make that happen by their actions. Simply proclaiming that RRF should become involved in conservation issues and going about business as usual will not change the status quo. Maybe inclusion of additional people into RRF's Conservation Committee (people with the expertise and willingness to commit time and energy) will move a conservation agenda forward. We are convinced that innovative progress in conservation can only be implemented by painstaking effort and significant contributions of time. We hope that a group as eminently qualified and devoted as RRF could muster the commitment necessary to increase our effectiveness as an organization committed to the conservation of raptors.

## RRF COMMENTS ON "CATEGORY 2 & 3" DESIGNATIONS

16 October 1996

Mr. E. LaVerne Smith
Chief
Division of Endangered Species
U.S. Fish and Wildlife Service
1849 C Street N.W.
Mailstop 452 ARLSQ
Washington, D.C. 20240

Dear Mr. Smith:

This letter is in response to the changes in the process by which the Fish and Wildlife Service identifies candidates for addition to the lists of endangered and threatened wildlife and plant taxa as proposed in the Federal Register Vol. 61(40):7596-7599 and Vol. 61 (181):48875-48876. The Service proposes to discontinue the designation of Category 2 and Category 3 taxa in notices of review. Although the Service remains concerned about Category 2 species, further biological research and field study are needed to resolve the conservation status of these taxa. Additionally, the Service proposes that the designation of Category 2 taxa as candidates has resulted in confusion about the conservation status of these taxa.

The Raptor Research Foundation consists of more than 1200 professional biologists, conservationists, researchers, and managers. Our organization has been an interested participant in listed species conservation

since the inception of the Endangered Species Act (ESA). The Service's decision to eliminate Category 2 and 3 taxa is of concern to The Raptor Research Foundation because it affects several species of interest to our membership. These include the Ferruginous Hawk, Swainson's Hawk, and Northern Goshawk. Data from some local areas suggest that populations of all of these species are in decline, but the regional or continental extent of these declines are not known.

We urge that the Service reconsider the decision to discontinue the listing of designated Category 2 and Category 3 taxa in notices of review. Category 2 species, by definition, have some probability to be eligible for listing although sufficient information to justify issuance of a proposed rule is lacking. It is this uncertainty regarding status that is of concern and must be addressed. The key to dealing with the current uncertainty regarding the status of these taxa is further research and field study on the distribution, abundance, habitat relationships, and population dynamics of these taxa. As noted by the Service in the Federal Register, some of these taxa may and others may not warrant listing. Continuing to include these taxa in future notices of review will provide a single, centralized, national list of taxa that require priority research and field study. If no list of species of uncertain status is maintained, then monitoring may not be done and some species may decline to extinction without receiving the protection of the ESA. This possible, and indeed likely, result would be in direct violation of the intent of the ESA.

At this time, it is unclear how these taxa will be identified and their status evaluated if they are not listed in future notices of review. If the Service does not acknowledge and address the uncertainty of the conservation status of these taxa, we believe this will result in more confusion about which species are of special concern and which require monitoring priority. The potential trade-offs of eliminating Category 2 and 3 species need to be addressed. The intent of the ESA is to minimize the probability of extinction and to promote the recovery of species in jeopardy. The first step in this process is to identify and acknowledge uncertainty regarding the status of potentially declining taxa. The Category 2 designation clearly and unambiguously recognizes this uncertainty. Continuing to include these taxa in future notices of review is a basic and necessary step in focusing priority attention in terms of monitoring and information gathering on these taxa.

Based on this reasoning, The Raptor Research Foundation recommends that the United States Fish and Wildlife Service continue to include Category 2 species in future notices of review. Alternatively, we suggest publishing a list of taxa with a different label (i.e., not "Category 2") that would clearly indicate the status of these species (e.g., "Species of Concern" or "Species of Uncertain Status").

Most Sincerely,

David Bird
President
The Raptor Research Foundation

James C. Bednarz
Chair of Conservation Committee
The Raptor Research Foundation

(*Conservation Committee Chair's Note:* The U.S. Fish and Wildlife Service (USFWS) published its final decision on the identification of candidates for listing as endangered or threatened in the Federal Register on December 5, 1996 (Vol. 61(235):64481-64485). The final decision was to discontinue the maintenance of a list of Category 2 species. USFWS did not respond directly to RRF nor to the specific issues raised in our letter (see above). However, USFWS did group comments received and discussed nine issues related to its decision. The essence of USFWS's response was that lists of sensitive species maintained by The Nature Conservancy's Heritage system, in conjunction with other state and federal agency lists, may provide a workable substitute for the former list of Category 2 species. Interested members should review the final decision published in the Federal Register.)

## PEREGRINE DE-LISTING COMMITTEE UPDATE

by Brian A. Millsap, Eastern Director

At the request of the Ornithological Council, RRF appointed a committee to evaluate the scientific evidence regarding a proposal by the U.S. Fish and Wildlife Service to de-list the American Peregrine Falcon (*Falco peregrinus anatum*) in January, 1996. This committee consists of RRF members Mitchell Byrd, Gordon Court, Jim Enderson, Pat Kennedy, Brian Millsap, and Bob Rosenfield. Committee members have been accumulating, reviewing, and discussing the available information since that time. The committee expects to have a draft report on its deliberations prepared in time for delivery to the RRF Officers and Board of Directors at the 1997 business meeting in Savannah.

## THE PEREGRINE FUND RECEIVES 1997 COMPUTERWORLD SMITHSONIAN AWARD

The Peregrine Fund recently received the 1997 Computerworld Smithsonian Award in the Environment, Energy, and Agriculture category for visionary use of information technology in its Harpy Eagle Conservation Program. The award recognizes The Peregrine Fund's successful integration of satellite telemetry, global positioning system, and geographic information system technologies to further conservation of the Harpy Eagle and its rain-forest habitat. Nominated by Digital Equipment Corporation, The Peregrine Fund was selected by a panel of judges who sought projects that were based on innovative uses of information technology that bring about improvements to society. The Peregrine Fund's nomination will become part of the Smithsonian Institution's Permanent Research Collection of Information Technology Innovation at the National Museum of American History. The Peregrine Fund's nomination, which contains detailed information about the Harpy Eagle Conservation Program, may be viewed on the World Wide Web at: http://innovate.si.edu/x/view.pl?nomid=97400.

## 1997 HAWK MOUNTAIN-ZEISS RAPTOR RESEARCH AWARDS

For the past nine years, Carl Zeiss Optical has sponsored a research grant with Hawk Mountain. The Hawk Mountain-Zeiss Raptor Research Award is presented to candidates throughout the world who are involved in raptor research projects. The 1997 research award will be split evenly between two recipients: Michael Goldstein, a graduate student at Clemson University, and Todd Katzner, a graduate student at Arizona State University. Mr. Goldstein will use his grant to study the impact of organophosphate pesticides on Swainson's Hawks during wintering in Pampas, Argentina. In 1996, field reconnaissance disclosed four incidents of organophosphate poisoning that killed at least 4,100 Swainson's Hawks. Goldstein will develop a risk assessment for Swainson's Hawks and devise a management plan for the species in Argentina. His work is part of a larger effort involving U.S., Canadian, and Argentinian wildlife biologists. The other recipient, Mr. Katzner, will use his grant to study the raptor community at the Naurzum Zapovednik Nature Reserve in north central Kazakhstan. Katzner will study predator-prey relationships of the four species of eagles: the Pallas' Sea Eagle, the Imperial Eagle, the Steppe Eagle, and the Golden Eagle. He will focus on eagle habitat use, the impact of patch dynamics on eagle feeding ecology, and reproductive success. Because the status of raptors in the region is largely unknown, the work is of considerable conservation interest. For more information on the Hawk Mountain-Zeiss Raptor Research Award, write to Keith L. Bildstein, Director of Research, Hawk Mountain Sanctuary, RR2, Box 191, Kempton, PA 19529.

# ANNOUNCEMENTS

## UPCOMING MEETINGS

**1997**

**October 30 - November 1**
**RAPTOR RESEARCH FOUNDATION**
**Savannah, Georgia**
*Contact:* Michelle Pittman or Fran Aultman, Georgia Southern University, P.O. Box 8124, Statesboro, GA 30460-8124, phone: 912-681-5555, fax: 912-681-0360, e-mail: meeden@gsvms2.cc.gasou.edu or franic@gsaix2.cc.gasou.edu.

**1998**

**April 6-12**
**NORTH AMERICAN ORNITHOLOGICAL CONFERENCE**
**St. Louis, Missouri**
*Contact:* Bette Loiselle, Department of Biology, University of Missouri--St. Louis, 8001 Natural Bridge Road, St. Louis, MO 63121-4499, phone: 314-516-6224; fax: 314-516-6233, e-mail: bird_stl@umsl.edu.

**August 4-11**
**FIFTH WORLD CONFERENCE ON BIRDS OF PREY AND OWLS**
**Midrand (Johannesburg), South Africa**
*Contact:* Gerhard Verdoorn; EWT Raptor Conservation Fund; Vulture Study Group, Raptor Conservation Group, Poison Working Group; P.O. Box 72155; Parkview 2122; South Africa; phone: 27-11-646-4629, 27-11-646-8617, or 27-82-446-8946 (mobile); fax: 27-11-646-4631; e-mail: nesher@global.co.za; or Robin Chancellor, e-mail: WWGBP@aol.com.

**September 30 - October 4**
**RAPTOR RESEARCH FOUNDATION**
**Ogden, Utah**
*Contact:* Carl Marti, Department of Zoology, Weber State University, Ogden, UT 84408-2505, phone: 801-626-6172, fax: 801-626-7445, e-mail: cmarti@weber.edu, www: http://www.weber.edu/rrf/.

**1999**

**November 9-13**
**RAPTOR RESEARCH FOUNDATION**
**La Paz, Baja California Sur, Mexico**
*Contact:* Ricardo Rodriguez Estrella, Centro de Investigaciones Biologicas del Noroeste, Division de Biologia Terrestre, km 1 Carretera San Juan de la Costa, La Paz 23000 B.C.S. MEXICO, phone: 112-536-33, fax: 112-553-43, e-mail: estrella@cibnor.mx.

## POSITIONS AVAILABLE

**FALCON INTERNS** We have vacancies for interns from May to September 1998, working with our seven permanent staff, breeding, hacking, and training falcons. We manage about 200 falcons, also horses and sheep. We provide board, lodging, and training. Applicants should be 18 or over, non-smokers, with at least two years experience of training raptors. Applicants should send a resume, a photograph, and two references to: **Dr Nick Fox, Director of Falcon Management and Research, Environmental Research and Wildlife Development Agency (Abu Dhabi), Penllynin Farm, College Road, Carmarthen, Carmarthenshire SA33 5EH, Wales, UK, phone/fax: 44-1267-233864, email: narc@celtic.co.uk.**

**RESEARCH ASSISTANTS FOR FALCON SURVEYS** We require research assistants for falcon survey work from approximately March to July 1998 in Russia, Kazakhstan, Kyrgyzstan, Uzbekistan, Mongolia, and China. Applicants should be 20 or over with a background in biological science, and able to manage under difficult conditions in a non-English speaking environment. The work is unpaid apart from expenses, and entails assisting local biologists

surveying nesting Saker and Peregrine falcons. We provide training in field techniques in the UK before you leave. We can provide academic supervision to include your field work as part of a degree course. Applicants should send a resume, a photograph, and two references to: **Dr Nick Fox, Director of Falcon Management and Research, Environmental Research and Wildlife Development Agency (Abu Dhabi), Penllynin Farm, College Road, Carmarthen, Carmarthenshire SA33 5EH, Wales, UK, phone/fax: 44-1267-233864, email: narc@celtic.co.uk.**

## PUBLICATIONS AVAILABLE

**"RAPTOR RESEARCH REPORT NO. 9"** "The Burrowing Owl, Its Biology and Management: Including the Proceedings of the First International Burrowing Owl Symposium," edited by J. L. Lincer and K. Steenhof, is now available. Printed in May 1997, the publication is No. 9 in RRF's "Raptor Research Report" series. Included are papers presented at the Burrowing Owl symposium held in conjunction with the RRF meeting in Bellevue, Washington in 1992. An "Invited Papers" section has a paper on the species' status in North America, a literature overview, and a review of Burrowing Owl taxonomy and distribution. Other major sections include, "Population Biology and Status," "Genetics and Breeding Biology," "Life History and Breeding Behavior," and "Management and Related Subjects." The two appendices include a Burrowing Owl bibliography and an account on survey protocol and guidelines for mitigation. For a copy, contact: **Jim Fitzpatrick, Treasurer, The Raptor Research Foundation, Inc., 12805 St. Croix Trail, Hastings, MN 55033.** Cost is $20 for RRF members and $25 for non-members, plus an additional $5 for shipping and handling.

**"THE PRAIRIE FALCON"** This new, 171-page book by Stanley H. Anderson and John R. Squires covers all aspects of the Prairie Falcon's life history from mating and rearing young to hunting behaviors and the yearly migration cycle. It may be purchased directly from the publisher: **University of Texas Press, P.O. Box 7819, Austin, TX 78713-7819, phone: 800-252-3206, fax: 800-687-6046.**

## NEWS OF MEMBERS

**Isabel Bellocq** will have a new address effective October 1, 1997: Departamento de Ciencias Biologicas; FCEN, Universidad de Buenos Aires; Ciudad Universitaria, Pab. 2; 1428 - Buenos Aires; Argentina; phone: 54-1-781-5021 ext. 214, e-mail: bellocq@biolo.bg.fcen.uba.ar.

## REQUESTS FOR ASSISTANCE

**FINAL REQUEST FOR RAFFLE DONATIONS** The silent auction planned for RRF's 1997 annual meeting has been converted into a raffle. Donations have been very slow in arriving, and many more items are still needed. Please consider making a donation, as this is a fund raising event to provide the monies needed to operate RRF and promote raptor research. Donations should be mailed to: **Center for Wildlife Education, RRF RAFFLE, Georgia Southern University, P.O. Box 8058, Statesboro, GA 30460-1779.** Please also notify Ed Henckel, the raffle coordinator, at: **ednjudy@epix.net.**

**PLEASE UPDATE YOUR LISTING IN "THE FLOCK"!** Many membership records recently transferred to OSNA from RRF had no historical data to indicate what year the member joined RRF. With no information to base this on, OSNA used the year RRF joined OSNA to fill this field in the directory. OSNA would like RRF members to make OSNA aware of their actual "joined society" dates, so that OSNA's historical information can be more complete and accurate. Corrections should be transmitted to: **Richard Walker, OSNA Business Manager, P.O. Box 1897, Lawrence, KS 66044-8897, phone: 785-843-1221, fax: 785-843-1274, e-mail: rwalker@allenpress.com.**

## RAPTOR DISPERSAL SYMPOSIUM

by Petra Bohall Wood, Director at Large

The Raptor Research Foundation will be hosting a symposium on "Raptor Dispersal Patterns and Mechanisms" during the April 1998 OSNA meetings in St. Louis, Missouri. Each of six presentations will focus on a particular species of raptor (or closely related species) and will attempt to summarize existing information. The species represented will present a mix of dispersal strategies by including migratory and sedentary species as well as species with delayed breeding.

## RECENT THESES ON RAPTORS

**Alvarez-Cordero, E. 1996. BIOLOGY AND CONSERVATION OF THE HARPY EAGLE IN VENEZUELA AND PANAMA. Ph.D. Diss., Univ. Florida. 212pp.**

From 1989 to 1996, I studied the Harpy Eagle (*Harpia harpyja*) in two regions at similar latitude in Central and South America to learn more about the biology and habitat of this species and evaluate its conservation needs. I collected approximately 248 records covering the whole geographic range of the Harpy Eagle; 103 entries were collated for Venezuela, and 52 for Panama. Assisted by local people I located 10 nesting sites of these eagles in the Darien Region of Middle America, all in the emergent tree species (>40 m to the first branch) called "Cuipo" (*Cavanillesia plantanifolia* Bombacaceae); one additional site was found in the Atlantic Region. In the Venezuelan Guayana I mainly worked in logging concessions, and located 29 nest sites; the eagles built their nests 25-40 m high in emergent trees, some reaching 50-52 m. They used seven different tree species in four botanical families, mainly in the Bombacaceae and Lecythidaceae.

In 1995, I used Global Positioning System (GPS) to survey roads and trails (>2,500 km) over a 300 x 300 km study area in SE Venezuela, and map locations of nests (n=29) and other features related to forest management. These data were integrated in a Geographic Information System (GIS) with existing information for vegetation, drainage network, and centers of human activity. Most nests sites had some sort of tree felling activity within 1 km, and 7 nest trees have been destroyed. While most nests in Venezuela were close to human settlements (<20 km, n=18), measurements of nearest pair spacing (range 3-7 km) for nests in Venezuela, Panama, and Guyana suggest that density of this raptor greatly surpasses previous estimates. Pair dispersion ranged from 45 to 79 $km^2$ per pair in Venezuela and was 10-63 $km^2$ per pair in Panama.

Sloths (*Bradypus* spp. and *Choloepus* spp.) predominated in the diet of the eagles studied in Venezuela, as well as various primates and other arboreal mammals (such as kinkajou, large and small porcupines, and opossums). The eagles also captured a few species of birds and reptiles like the Green iguana and the Tegu lizard.

Harpy Eagles persist for years in selectively logged areas near landscapes dominated by human activity. During this investigation I have equipped 16 eagles (only 2 were adults) with both satellite and radio transmitters. Usually only one egg hatched after 56-58 days of incubation (average 56 d), nestlings were ready for flight at age 160-180 days; young eagles had an extended period of post-fledgling dependency (>2 years after fledgling, n=4) before dispersal from the nest site. Shooting of eagles (including 2 of the young birds I telemetered), and live poaching of nestlings were major threats to the local population of eagles that I studied.

**Bisson, I. 1996. NEST SITE SELECTION AND PRODUCTIVITY OF THE SPANISH IMPERIAL EAGLE *AQUILA ADALBERTI* POPULATION OF DOÑANA NATIONAL PARK, SPAIN. M.S. Thesis, McGill Univ., Montreal, Quebec. 85pp.**

I examined the nest site selection of the Spanish Imperial Eagle *Aquila adalberti* population of the Doñana National Park (SW Spain) from 1984 to 1994, in relation to the microhabitat and macrohabitat representing vegetative composition, degree of human influence and land use. The study included 75 active nest sites and 75 random sites. Univariate analyses and Generalized Linear Models were used. Nest sites significantly differed from the random sites for 87% of habitat variables measured. The model correctly classified 85.3% of the nest sites and 86.7% of the random sites. The probability of occupation of a site by a Spanish Imperial Eagle increased with tree height, angle of aperture of the wood stand, distance to paved roads, distance to urban centre and distance to water body.

Four productivity parameters (laying date, number of eggs, number of nestlings and number of chicks fledged) were measured over the same 10-year period for 16 territories in the Doñana Park. Spearman correlation coefficient analyses ($r_s$) was used to test for relationships between territory habitat characteristics, representing microhabitat, vegetative composition, degree of human influence and land use, and productivity. Egg-laying was later in territories situated closer to urban centres ($n = 16$, $r_s = -0.529$, $P < 0.05$) and those with more kilometres of power lines ($n = 16$, $r_s = 0.518$, $P < 0.05$). No other productivity parameter was found to be significantly influenced by any of the territory features measured.

**Garner, H. D. 1997. DYNAMICS AND STABILITY OF A POPULATION OF WINTERING RED-TAILED HAWKS IN THE DELTA REGION OF ARKANSAS. M.S. Thesis, Arkansas State University, State University. 73pp.**

The impacts of human activities on wildlife and ultimately on the human environment are not completely understood. I conducted a study on a winter population of Red-tailed Hawks (*Buteo jamaicensis*), top predators, which may be relatively sensitive indicators of ecosystem degradation and modification in the Delta region of Arkansas. Specifically, the degree of stability or dynamics of individuals making up the population was explored to determine if winter populations may be monitored effectively. During the winters of 1994-95 and 1995-96, 10 adults and 24 immature birds were captured using bal-chatri cage traps. Hawks were marked with binumeric leg bands from early November through mid February during both winter seasons. A sub-sample of 15 hawks was also instrumented with radio transmitters. Biweekly surveys revealed that red-tail numbers fluctuated throughout the winter season possibly in response to changing weather conditions. The weather factors in combination that seemed to influence hawk numbers were wind direction, wind speed, and temperature ($R^2$=0.40, $F$=3.29, $P$=0.049). Red-tailed Hawk numbers increased slightly during periods of southerly winds and warmer temperatures, and decreased during periods of northerly winds and colder temperatures. The majority of the Red-tailed Hawk population wintering in the study area was found to be stable with 15 of 34 birds (44%) exhibiting a relatively long-term winter residency strategy (staying in a defined area for at least 37 days) and 13 of 34 (38%) displaying a short-term residency strategy (staying in a defined area for more than 5 days and less than 37 days). Most red-tails captured during November and early December remained in the study area through early January, but were replaced or augmented by another group of hawks that moved into the study area during late December and January. The second group of birds remained in the study area until the spring migration period began in March. The available cover types along the survey route were found to be used out of proportion to availability. Observed Red-tailed Hawk numbers were higher than expected in rice fields and forests and less than expected in bean and wheat fields. Juveniles and adults were not observed to use the various cover types differently ($X^2$=2.221, $P$=0.528). Red-tail numbers tallied on raptor surveys were significantly correlated to rodent numbers ($r$=0.618). Relative rodent abundance was found to be higher in the cover types with higher observed hawk numbers. My data indicate that individual Red-tailed Hawks pursue one of three alternative strategies during the winter season: 1) winter residency, 2) short-term residency, and 3) migratory. All factors influencing an individual red-tail to pursue a specific strategy are not clear, but changing weather and rodent availability may motivate Red-tailed Hawks to adopt a more mobile strategy.

**Plumpton, D. L. 1996. ANTHROPOGENIC EFFECTS ON WINTER HABITAT USE BY FERRUGINOUS HAWKS IN COLORADO. Ph.D. Diss., University of Minnesota, St. Paul. 85pp.**

Habitat loss, fragmentation, and insularization constitute the single biggest threat to global biodiversity. Despite the magnitude of this problem, few studies have examined the response of wildlife to ongoing habitat destruction. I studied the behavior of Ferruginous Hawks (*Buteo regalis*) wintering in 2 adjacent sites in Colorado that featured low and high anthropogenic influence and habitat fragmentation; the Rocky Mountain Arsenal National Wildlife Refuge (RMANWR), and several Denver suburbs, respectively. Daily home ranges were not different ($P = 0.28$) in size for RMANWR ($N = 25$, $\bar{x} = 4.71$ km$^2$, SE = 1.33) and suburban hawks ($N = 13$, $\bar{x} = 2.30$ km$^2$, SE = 0.50). Although hawk activity levels between the sites were not different ($P = 0.146$), RMANWR hawks used more pole and ground perches, of longer sum duration, and comprising a greater proportion of the daily time budget ($P < 0.05$). Conversely, suburban hawks used more tree perches, of longer sum duration, and a greater portion of the daily time budget ($P \leq 0.001$). RMANWR hawks spent less time roosting after daylight began ($\bar{x} = 61$ min) than did suburban hawks ($\bar{x} = 138$ min, $P = 0.004$). The principal prey [black-tailed prairie dogs (*Cynomys ludovicianus*)] was procured by killing directly, kleptoparasitizing, and scavenging. Prey acquisition and competitive interactions were not different ($P > 0.05$) between the sites. Relative abundance of Ferruginous Hawks differed by site and year ($P < 0.0001$), and reflected availability of prairie dogs. Ferruginous Hawks modified perch use, time budgets, and roosting habits to exploit fragmented, human-altered habitats, provided some foraging habitats with adequate populations of suitable prey species remained.

**Villarroel, M. 1996. COPULATORY BEHAVIOUR AND PATERNITY IN SOLITARY- AND COLONY-NESTING KESTRELS. Ph.D. Diss., McGill Univ., Montreal, Quebec. 134pp.**

In this thesis, I analysed the mating behaviour of the solitary-nesting American Kestrel (*Falco sparverius*) in southern Quebec (Canada) and the colony-nesting Lesser Kestrel (*F. naumanni*) in Aragon (Spain). DNA fingerprinting of 26 families of Lesser Kestrels revealed that 3.4% of nestlings were extra-pair, which may have arisen through either extra-pair copulation or mate replacement. Two nestlings in two different nests were also the result of intraspecific brood parasitism. DNA fingerprinting of 21 American Kestrel families showed that all the nestlings in two nests were extra-pair (10% extra-pair young overall), most probably due to mate replacement.

I analysed the mating behaviour of both species in two studies with a similar aim, i.e. to test why mated pairs copulate so frequently. Sixteen pairs of wild American Kestrels and 12 pairs of "solitary" Lesser Kestrels (1-4 nests per 0.3 km$^2$) were analysed in terms of four hypotheses that explain high frequency of within-pair copulations both outside and during the fertile period. First the Paternity Assurance Hypothesis, i.e. males control timing and frequency of copulations to best assure fertilization, was rejected because extra-pair copulation attempts were low in both species (<1% of all copulations observed), within-pair copulation frequencies did not increase with nest density in the Lesser Kestrel, and copulation and mate attendance did not increase as the fertile period approached. Second, the Immediate Mutual Benefits Hypothesis, i.e. females trade copulations for food, was refuted because copulation most often occurred without food transfers. Third, the Female Mate-Guarding of Males Hypothesis, i.e. females distract their mates from other mating opportunities by copulating frequently, was rejected because male loss was low, males and females solicited similar amounts of copulations, and females did not differ in the timing or frequency of solicitations. Finally, the Mate Assessment Hypothesis, i.e. assessment of mate quality is mediated by copulation, most closely predicted the behaviour observed since within-pair copulation was high outside the fertile period and during pair formation in both species.

**Warnke, D. K. 1996. A COMPARISON OF NESTING BEHAVIOR OF BALD EAGLES BREEDING ALONG WESTERN LAKE SUPERIOR AND ADJACENT INLAND WISCONSIN. M.S. Thesis, Univ. Minnesota, St. Paul. 58pp.**

Using a remote video recording system and direct observations we constructed quantitative time budgets of adult and nestling Bald Eagles (*Haliaeetus leucocephalus*) breeding in northern Wisconsin from 7 days

post hatch until fledging in 1992 and 1993. Bald Eagles breeding in north-central Wisconsin exhibit high productivity (>1.0 young per occupied territory), and low egg and nestling blood contaminant levels. We quantified prey delivery rates, and nestling and adult time activity budgets at the nest on a weekly basis until fledging. Season-long prey delivery rates to Wisconsin Bald Eagle nests averaged 5.12 items day$^{-1}$, and appeared related to number of nestlings in the nest, but not nestling age. Attendance by one or both adults declined rapidly from >90% in weeks 2-4 (8-28 d post hatch) to <20% by week 8 (50-56 d). Nestlings were inactive in weeks 2-4, lying in the nest >90% of the day. Beginning with week 5 (29-35 d), brooding dropped below 3% of the adult time budget and nestlings sought sun and shade in the nest. Nestlings stood or sat in the nest ~30% of the time starting in week 6 (36-42 d), began to feed themselves as the amount of time adults spent feeding nestlings declined, and their mobility in the nest increased. During weeks 9-12 (56-83 d post hatch), nestlings stood or sat most of the day (>50%), and the proportion of their time budgets spent at active behaviors (21%) peaked in week 9. Adult attendance at the nest was <10% of the day in weeks 9-12. In addition to quantifying time budgets, we found that the nesting period can be divided into 3 nestling stages for time budget comparison in different regions of the breeding range based on changes in adult and nestling behaviors.

In 1992 and 1993 we conducted behavioral observations at Bald Eagle (*Haliaeetus leucocephalus*) nests on the Wisconsin Lake Superior shoreline (LSS) where productivity has historically been lower than inland Wisconsin sites. The Lake Superior shoreline breeding Bald Eagle population was extirpated, most likely due to anthropomorphic contaminant exposure, and has become re-established beginning in the 1980's. We quantified prey delivery rates and time budgets of adults and nestlings at these nests and compared them to the prey delivery rates and time budgets quantified at inland northern Wisconsin nests (Chapter 1). The behavioral differences recorded were most pronounced between inland and LSS nests with 2 nestlings (LSS2). Adults at inland nests delivered an average of 4.79 prey items day$^{-1}$, significantly more than the 2.04 items day$^{-1}$ delivered to LSS nests. Daily prey delivery rates to nestlings at LSS nests with 1 nestling (LSS1) (2.43 deliveries nestling$^{-1}$ day$^{-1}$) were similar to those recorded at inland nests (3.13 deliveries nestling$^{-1}$ day$^{-1}$), and both were significantly greater than prey delivery rates to LSS2 nests (0.92 deliveries nestling$^{-1}$ day$^{-1}$). Adults at inland nest sites spent significantly more time at the nest (91.7%) than did adults at LSS2 nests (63.7%), and adult attendance at LSS1 nests (85.7%) was significantly higher than at LSS2 nests, but not different from inland nests during weeks 2-4 post hatch. Adult attendance was higher and nestlings at inland nests spent more time active, feeding, and upright in the nest, and less time lying in the nest compared to nestlings at LSS2 nests in weeks 5-8. During weeks 9-12, LSS2 nestlings spent significantly less time feeding than did nestlings at inland nests. Reduced prey deliveries and behavioral variation are consistent with the hypothesis that Bald Eagle productivity on the Wisconsin Lake Superior shoreline is primarily influenced by prey availability.

## *WINGSPAN* CONTRIBUTIONS

The Raptor Research Foundation wishes to thank the following people who contributed material to this issue of *Wingspan*: **Eduardo Alvarez-Cordero, David Andersen, Marc Bechard, James Bednarz, Isabel Bellocq, David Bird, Wendy Denton, Ricardo Rodriguez Estrella, Nick Fox, Robert Kenward, Karen Lutto, Carl Marti, Helen McDonald, Brian Millsap, Simone Ross, Mary Margaret Spradlin, Karen Steenhof, Daniel Varland,** and **Petra Bohall Wood.**

*Wingspan* welcomes contributions from RRF members and others interested in raptor biology and management. Articles and announcements should be sent, faxed, or e-mailed to the editor: Leonard Young, 5010 Sunset Drive NW, Olympia, WA 98502-1576 USA (phone/fax: 360-866-8039; e-mail: wingspan@msn.com). The deadline for the next issue is February 6, 1998.

*(continued from page 2)*

an endowment fund. If you speak other languages, offer to be a translator for our printed materials or at one of our international conferences. If you're a writer, submit material to our newsletter or journal.

Got a project for RRF? Say, an educational poster or brochure, a workshop, etc.? Put together a proposal, and we'll do our best to help you make it a reality. Bear in mind that we are not looking for more work to do; if you have an idea, be prepared to help carry it to fruition.

In short, get involved! Everything you do for RRF, no matter how modest, is something achieved for raptor conservation. Clearly that's what it is all about!

This is my last *Wingspan* address as your president. My term comes to a close at the end of this year, as it is time to pass the reins over to another highly deserving soul. I have thoroughly enjoyed my tenure, and I like to think that I have made some inroads toward the goals I defined in my election platform, e.g. bringing RRF even closer to other parts of the world, supporting the journal and newsletter, etc. As I've said before, not a day goes by without some RRF business to take care of via e-mail. And in retrospect, two years was perhaps too short a term for the president of RRF. It takes about a year just to get a feel for things. I wonder how our next president would feel if his term was for three years and not just two. Hmm ... something to think about. In any case, I remain fully dedicated to the organization, and I plan to merely change hats. RRF has come a long way since its inception, but there is certainly plenty of room for improvement.

David M. Bird

## INFORMATION ON 1998 RRF MEETING AVAILABLE ON WWW

Information on the 1998 RRF annual meeting, to be held in Ogden, Utah from September 30 to October 4, will be available on the World Wide Web at: http://www.weber.edu/rrf/. This site will eventually contain information on the local environment of Ogden; the meeting schedule; a call for papers; and information on registration, lodging, transportation, field trips, and special events.

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