

SUPPLEMENT TO

**THE AUK**

Vol. 117, No. 3, July 1999: The Proceedings--1998 Meeting

PROCEEDINGS OF THE

**ONE HUNDRED AND SIXTEENTH STATED MEETING**

OF THE

AMERICAN ORNITHOLOGISTS' UNION

Held In Conjunction with The 1998 North American Ornithological Conference

6 - 12 April 1998

Regal Riverfront Hotel  
St. Louis, Missouri, USA

© AMERICAN ORNITHOLOGISTS' UNION. 1999. Proceedings of the  
One Hundred and Sixteenth Stated Meeting of the American Ornithologists' Union.  
Auk 116 (3, Suppl.):1DD-76DD.

## **MEMBERS OF THE 1997-1998 AOU COUNCIL**

### **Officers**

*President:* Ned K. Johnson  
*Vice President:* Scott M. Lanyon  
*President-Elect:* Frank B. Gill  
*Secretary:* M. Victoria McDonald  
*Treasurer:* Frederick H. Sheldon

### **Elective Councilors**

*Terms Expiring 1998:* Steven R. Beissinger, Robert S. Kennedy, Lloyd F. Kiff  
*Terms Expiring 1999:* Susan M. Haig, Jeffrey R. Walters, Wesley W. Weathers  
*Terms Expiring in 2000:* Irene M. Pepperberg, Carol M. Vleck, David W. Winkler

### **Editors**

*The Auk*  
Thomas E. Martin

*Ornithological Monographs*  
David A. Wiedenfeld

### **Past Presidents**

Ernst Mayr, 1957-1959  
Dean Amadon, 1964-1966  
Harold F. Mayfield, 1966-1968  
Robert W. Storer, 1970-1972  
John T. Emlen, 1975-1976  
Harrison B. Tordoff, 1978-1980  
Thomas R. Howell, 1982-1984  
Frances C. James, 1984-1986  
Charles G. Sibley, 1986-1988  
Glen E. Woolfenden, 1988-1990  
Brina Kessel, 1992-1994  
Richard C. Banks, 1994-1996

**PROCEEDINGS OF THE  
ONE HUNDRED AND SIXTEENTH STATED MEETING  
OF THE  
AMERICAN ORNITHOLOGISTS' UNION**

M. Victoria McDonald, *Secretary*

The One Hundred and Sixteenth Stated Meeting of the American Ornithologists' Union was held 6-12 April 1998 at the Regal Riverfront Hotel and Convention Center in downtown St. Louis, Missouri, USA, in conjunction with the 1998 North American Ornithological Conference. This was a joint meeting of the AOU, Association of Field Ornithologists, Colonial Waterbird Society, Cooper Ornithological Society, Wilson Ornithological Society, and the Raptor Research Foundation. Local Hosts were the University of Missouri-St. Louis in cooperation with the Missouri Botanical Garden, St. Louis Audubon Society, St. Louis University, St. Louis Zoo, Washington University, Webster Groves Nature Study Society, and World Bird Sanctuary. The Co-Chairs of the Committee on Local Arrangements were Bette A. Loiselle and John G. Blake. An Organizing Committee composed of representatives of the societies coordinated the Program, and the Chair of the Committee on the Scientific Program was Jeffrey D. Brawn. Business and scientific sessions, committee meetings, and other organizations' meetings were held in various meeting rooms in the Regal Riverfront Hotel. Most participants were accommodated in the Hotel.

**BUSINESS SESSIONS**

The Council met the evening of 6 April and the morning and afternoon of 7 April 1998 in the Hotel's Clark Room, and again briefly on 7 April outside of the LaClede Room. The Fellows met twice late in the afternoon of 7 April 1998 in the Hotel's LaClede Room. (Detailed minutes of these meetings were prepared by the Secretary and distributed to Council members and to Fellows in separate mailings.) On the morning of 8 April Conference participants met in the Hotel's Grand Ballroom for the Welcome and Opening of Sessions. Chancellor Blanche Touhill of the University of Missouri-St. Louis welcomed participants, and Peter Raven, Director of the Missouri Botanical Garden responded with Introductory Remarks. This was followed by the Margaret Morse Nice Plenary Award Lecture given by Ellen Ketterson and Val Nolan, Jr., and sponsored by the WOS. This was the first of four Plenary Lectures given throughout the conference. (See Scientific Program listing elsewhere in these Proceedings.) The AOU Business Meeting of the Members was held during the late afternoon of 8 April in the Illinois Ballroom (Minutes follow). Important actions concerning the AOU and taken at various meetings held during the Conference are summarized below. More comprehensive reports, e.g., winners of awards conferred by other participating societies have been published elsewhere. (See OSNA Newsletter June 1998 [Number 124], the web sites of the societies, and the Conference's web page [<http://www.umsl.edu/~biology/icte/bird98>]).

MINUTES OF THE 1998 BUSINESS MEETING OF MEMBERS  
116th STATED MEETING OF THE AMERICAN ORNITHOLOGISTS' UNION

The 116th Business Meeting of the Members was held on Wednesday, 8 April 1998 in the Illinois Ballroom of the Regal Riverfront Hotel and Conference Center in St. Louis, Missouri, USA.

President Ned K. Johnson brought the meeting to order at 16:30. Members attending numbered 141.

1. *Minutes.* Minutes from the 115th Stated Meeting at the University of Minnesota were approved.
2. *President's Report and Announcements.* The President discussed briefly issues of concern to the AOU. Announcements related to meeting logistics were made.
3. *Secretary's Report.* Secretary McDonald highlighted important actions of the Fellows' and Council meetings held earlier in the week. Membership numbers have increased slightly, and the AOU is in good shape financially. Recently deceased members, and newly elected Elective Members and Fellows were announced.
4. *Treasurer's Report.* Treasurer Frederick H. Sheldon reported briefly on the financial affairs of the AOU. A detailed financial account appears at the end of the published Proceedings.
5. *Editor's Report--Ornithological Monographs.* President Johnson reported for past-Editor John M. Hagan, III. Three monographs are being or have been published within this fiscal year. A new Editor will be appointed by Council shortly.
6. *Editor's Report--The Auk.* Editor Thomas E. Martin reported.
7. *Birds of North America project.* Frank B. Gill discussed this project.
8. *Ornithological Societies of North America.* Fred E. Lohrer reported on OSNA. A new OSNA Director, Anthony H. Bledsoe, and a new OSNA Newsletter Editor, Cheryl L. Trine, have been selected recently.
9. *Resolutions.* Committee chair David E. Blockstein presented six resolutions prepared jointly by the AOU and other ornithological societies participating in this conference, and approved previously by the AOU Council and the other societies' governing boards. All resolutions were passed by the AOU Members (and also by the other societies during the conference). An additional Resolution of Appreciation to the 1997 Local Committee was approved unanimously at the annual Banquet, 12 April 1998.
10. *Election of Officers and Council Members.* Printed statements from the nominees were available for members. President Johnson called for comments from the members, and nominees were excused during the comment period. In one round of ballots the following were elected or re-elected: President Elect John W. Fitzpatrick; Vice President James A. Kushlan; Secretary Mary Victoria McDonald; Treasurer Frederick H. Sheldon; and Elective Councilors (three-year terms) Walter D. Koenig, Scott M. Lanyon, and Stephen M. Russell.
11. *Future Meetings:* a) 1999 AOU Meeting. The 117th Stated Meeting will be held in mid-August 1999 at Cornell University. Kevin J. McGowan, David W. Winkler, and John W. Fitzpatrick are Local Committee Co-Chairs; b) 2000 AOU Meeting. The 118th Stated Meeting will be held jointly with the BOU in St. John's, Newfoundland, from 14 to 20 Aug 2000.

The meeting was adjourned by President Johnson at 17:30.

M. Victoria McDonald, *Secretary*

## OTHER BUSINESS

*Awards.*--FRANK B. GILL was selected by the Council as the recipient of the **William Brewster Award**, and JARED M. DIAMOND received the **Elliott Coues Award**. Citations appear in *The Auk*, Vol. 116, No. 1. RICHARD C. BANKS received the **Marion Jenkinson Service Award**.

The AOU Research Awards Committee, chaired by Paul J. DuBow, announced formally at the joint Banquet the award recipients determined earlier in the year. The 1998 AOU **Research Awards** winners were as follows: M. JOSEPHINE BABINE - Speciation in tanagers on the Isthmus of Panama; MARY K. CHASE - Natal dispersal and habitat selection in Song Sparrows in a heterogeneous environment; LESLEY J. EVANS OGDEN - The importance of agricultural land to over-wintering shorebirds in the Fraser River Delta, British Columbia, Canada; SHARON ANNE GILL - Mutual mate choice in a tropical duetting species, the Buff-breasted Wren; STEPHEN P. HUDMAN - Ecological interactions between Red-eyed and Blue-headed Vireos in the southern Appalachians; JENNIFER A. JACOBY - The genetics of reintroduced populations of an endangered bird, *Falco peregrinus*; JORDAN O. KARUBIAN - Evolutionary implications of variable breeding plumage in the Red-backed Fairy-wren; BILL MCMARTIN - A test of the importance of breeding season food resources in understanding songbird responses to forest fragmentation; GEOFFREY R. PARKS - Regional abundance and breeding success of the Puerto Rican Vireo; SUHEL QUADER - Mate choice and nest architecture in the Baya Weaverbird; SCOTT M. RAMSEY - Mating tactics of female Black-capped Chickadees; SAMUEL KEITH RIFFELL - Effects of coastline shape on wet meadow birds; LAURA STENZLER - Indirect versus direct measurement of dispersal distance; ANDREW M. STOEHR - Testosterone and reproductive trade-offs in male House Finches; SCOTT A. TAROF - Natural and sexual selection in Least Flycatchers: why do breeding birds cluster?; M. LISA VEIT - Genetic structure and gene flow in Cerulean Warblers: a test of the source-sink model in nature; BRETT L. WALKER - Tests of the 'molt constraints' and 'hatching date' hypotheses of delayed plumage maturation; HEATHER DAWN WILKINS - The winter foraging ecology of Yellow-bellied Sapsuckers in central Mississippi.

Winners of the 1998 AOU **Marcia Brady Tucker Travel Awards** were announced at the Banquet. These were determined by a joint Committee on Student Awards, chaired by John R. Faaborg. Carla Cicero represented the AOU on this Committee. The names and institutions of the recipients follow: DANIEL R. ARDIA, Cornell University, Energetic consequences of sex related differences in habitat use in wintering American Kestrels; ELIZABETH BORST, Villanova University, The effects of breeder experience, breeder age, and pairbond duration on clutch initiation date and clutch size in Florida Scrubjays; THOMAS BROOKS, University of Tennessee, Knoxville, Deforestation and bird extinctions in the Atlantic forest; DAWN BURKE, Trent Univ., Landscape and fragment size effects on reproductive success of forest breeding birds; CHRISTINA CARUSO, Sheldford Vivarium, Champaign, IL, Interactive effects of plant density and distribution on the pollination and reproductive success of a hummingbird pollinated plant, *Ipomopsis aggregata*; CLAUDIO CELADA, University of Alberta, Response of Yellow Warbler to territory quality and spatial structure; ALICE DOOLITTLE, Univ. Minn., St. Paul, The use of captive rearing in the recovery of the Great Lakes Piping Plover: a modeling approach; HECTOR D. DOUGLAS III, Wake Forest Univ., Ecological change at Isla Espanola, Galapagos Islands, Ecuador and its impact upon the ecology and population dynamics of the Waved Albatross (*Phoebastria irrorata*); COLLEEN S. DWYER, University Southern Mississippi, Agerelated differences in foraging efficiency of Gray Catbirds (*Dumetella carolinensis*) and preparation for fall migration; ARTHUR FLEISCHER, JR., University South Florida, Prebreeding time budgets and timing of laying of Florida Scrubjays in natural and suburban habitats; HOLLY FREIFELD, University of Oregon, Seasonality and trends in four years of avian census data from American Samoa; LENNY GANNES, Princeton University, Blackcaps have an initial period of low mass change while refueling during spring migration; CAMERON GHALAMBOR, University of Montana, Variation in incubation strategies among co-existing nuthatches (Sittidae): testing the relative importance of nest predation and microclimate; PETER J. HODUM, Univ. of California, Davis, Are seabirds indicators of the marine environment? Perspectives from an Antarctic seabird community; DAVID J. HORN, Iowa State Univ., The relationship between probability of occurrence of grassland birds and field size depends on landscape composition; MATTHEW D. JOHNSON, Tulane University, How does food availability affect the winter habitat use of canopy foraging warblers?; WENDY A.

KUNTZ, Univ. of Nevada, Reno, Individual and population level variation in the territorial call of the Mexican Spotted Owl; IRBY J. LOVETTE, Univ. of Pennsylvania, Intraspecific phylogeography and genetic diversity in Neotropical warblers; AMY M.L. MUSANTE-MILLER, Univ. California, Santa Barbara, Variation in Northern Mockingbird responses to cowbird eggs: a case of non-optimality; JOSEPH J. NOCERA, Acadia University, Behavioral toxicology of the Common Loon in the Canadian Maritimes; JOHN PUSHCOCK, New Mexico State Univ., Las Cruces, Stopover fat reserves of migrants: implications for migration counts and other migration studies; GREGORY J. ROBERTSON, Univ. New Brunswick, Molt speed predicts pairing success in male Harlequin Ducks; KIM M. SUEDKAMP, Univ. Arizona, What effect does human disturbance have on nest success of Acadian Flycatchers (*Empidonax vireescens*)?; PAMELA SVETE, Univ. of Alaska, Fairbanks, Using Microsatellites to Evaluate Extrapair Paternity in Subarctic Breeding Black Brant (*Brant Bernicla Nigricans*); WINFRED W. WONG, Baylor University, Avian use of oases during spring migration: a multiscale perspective; and JAMES M. ZINGO, University Massachusetts, Changes in community composition of migrant landbirds during stopover on Falkner Island, Stewart B. McKinney National Wildlife Refuge.

Also at the Banquet, the joint Committee on Student Awards announced awards for **Best Student Paper and Poster Presentations**. No rankings among these were made, and the specific (named) award given to a certain recipient was determined randomly. Three AOU awards were granted: The 1998 Nellie Johnson Baroody Award went to ADAM J. FRY of Brown University for his paper "Assuming neutrality of avian mitochondrial DNA: Should we be concerned?" One of the 1998 AOU Council Awards was presented to DANIEL R. ARDIA of Cornell University for his paper "Energetic consequences of sex-related differences in habitat use in wintering American Kestrels (*Falco sparverius*);" and the second 1998 AOU Council Award went to WENDY L. REED of Iowa State University for her paper "Intraspecific variation in egg size of the American Coot (*Fulica americana*): Consequences for offspring survival."

*Membership.*--The Director of the Ornithological Societies of North America (OSNA), Fred E. Lohrer, reported to the Council that as of 28 Feb 1998 AOU membership had decreased slightly from eight months ago, and now totaled 3835 individuals and families. According to the OSNA Director, this apparent loss of members, however, was likely due to the shorter than usual time between last years' and this years' meetings; thus, by August 1998, membership is expected to be up to about the same as it was in August 1997. (Note: At the conclusion of the 1998 Conference OSNA Director Lohrer was replaced by the newly appointed Director Anthony H. Bledsoe.)

The following **Deaths** of AOU members were reported at the AOU Business Meeting held 8 April 1998: CORRESPONDING FELLOW: Miguel Alvarez del Toro; FELLOWS: John T. Emlen, Jr. and Miklos D. F. Udvardy; ELECTIVE MEMBER: Philip L. Wright, and MEMBERS: James D. Reichel and Nathaniel R. Whitney.

At the Fellows Meeting on 7 April 1998, the Fellows elected one new **Honorary Fellow**: Janet Kear of The United Kingdom; The Fellows also elected three new **Corresponding Fellows**: Theunis Piersma of The Netherlands, Susumu Ishii of Japan, and Vladimir Payevsky of Russia. The Fellows elected six new **Fellows** in 1998: R. Michael Erwin, Robert S. Kennedy, Irene M. Pepperberg, John H. Rappole, Jeffrey R. Walters, and David W. Winkler.

New Elective Members were elected earlier in the year by mail ballots cast by Fellows and Elective Members. The names of the following 16 new **Elective Members** were announced for the first time at the members' Business Meeting on 8 April 1998: James R. Belthoff, Deborah Buitron, Peter O. Dunn, G. Michael Haramis, Andrew G. Horn, Peter W. Houde, Danny J. Ingold, James L. Ingold, Nedra K. Klein, J. Michael Meyers, Jonathan H. Plissner, Richard O. Prum, David A. Shealer, Lisa G. Sorenson, Michael D. Sorenson, Dan A. Tallman, and Linda A. Whittingham.

*Finances.*--Details and closing balances appear at the end of these Proceedings. Treasurer Frederick H. Sheldon was Chair of the Finance Committee. John W. Fitzpatrick, Howard P. Brokaw, and Edward E. Crawford served as 1997-1998 Investing Trustees and were re-elected by Council at its 13 Aug 1997 meeting.

*Publications.*--Editor of *The Auk*, Thomas E. Martin reported to Council and members that publication of *The Auk* continues on schedule. Council re-elected Martin Editor of *The Auk*. A new Editor of the *Ornithological Monographs*, David A. Wiedenfeld, was elected. Three manuscripts destined to be *Ornithological Monographs* No. 48, 49, and 50 were completed or near completion. The OSNA's *Ornithological Newsletter* is now being edited by Cheryl L. Trine. The Council re-elected the incumbent AOU Representatives to the Managing Board, *Birds of North America*: Erica H. Dunn, Frederick H. Sheldon, and Glen E. Woolfenden.

*Bylaws.*--The 1998 AOU Committee on Bylaws was chaired by Edward H. Burtt, Jr. The Fellows' 1998 deliberation on a set of proposed Bylaws changes concerned with a procedure for changing the name of the journal and monograph series, which were initially approved by Fellows and Council in 1997, was tabled. At their 1998 meetings, however, the Fellows and Council did give initial approval by unanimous votes to a proposal duly submitted prior to the meeting by Fellows Richard C. Banks and George E. Watson. In its endorsement of this proposed change, the Committee on Bylaws reported "This amendment removes the age-restricted limit on the number of Fellows...The amendment removes the problem of interpretation of the last clause of the last sentence, which has presented a problem in several recent elections as to whether we should elect Fellows who are over 60 years of age at the expense of elective more new Fellows who are younger or vice versa. The amendment removes age as a factor in the election of new Fellows and focuses attention on quality and continuity of contribution..."

As initially approved in 1998, the Bylaws would be amended by deletion of the third and last sentence of Article I. Section 4. If amended the Section would read (the third sentence, in underlined letters, would be absent):

Section 4. Fellows shall be chosen for exceptional and sustained contributions to ornithology and/or service to the Union. Fellows at the time of their election shall be Honorary Fellows, Corresponding Fellows, or Elective members in good standing who are residents or citizens of a political subdivision of the Western Hemisphere. The number of Fellows less than 60 years of age shall be limited to 125 and this without prejudice to number, status, or further election of older Fellows.

*Future meetings.*--The 1999 meeting will be held 10-14 August at Cornell University in Ithaca, New York. Co-chairs of the Local Committee are Kevin J. McGowan, John W. Fitzpatrick, and David W. Winkler.

## ATTENDANCE

About 1400 participated attended the joint Conference, representing all states of the U.S., as well as most of the countries in the Americas, and other countries.

## COMMITTEE MEETINGS, OTHER ORGANIZATIONS' MEETINGS, AND SPECIAL EVENTS

In addition to the AOU's business meetings, the AOU and other organizations' committees held meetings and social events throughout the Conference. The dates, times, and locations of these are embedded in the Scientific Program listing, which appears elsewhere in the Proceedings. A brief listing of these events follows: NABC Council Meeting, AOU Council Meeting, AFO Council Meeting, COS Board Meeting, WOS Council Meeting, WOS General Business Meeting, COS General Business Meeting, ABC Policy Council Meeting, OC Council Meeting, CWS Council Meeting, PIF Internatl. Working Group, COS Board Meeting, Student Awards Committee, No-Host Dinner, Icebreaker Reception, PIF Working Group, TNC Wings of the Americas, Flight Night Reception-Saint Louis Zoo, All OUt Ostrich 5km Run, AFO General Business Meeting, AOU Conservation Committee, WOS General Business Meeting, ROL Contributors Meeting, WORG Lunch, Association for Parrot Conservation, AOU Board of Editors Meeting, CWS Council Meeting, Current Ornithology Editorial Board, Student/Society Officer Mixer, Univ. Arkansas Reunion, Poster Session Reception, OSNA Committee, Tropical Night at Missouri Botanical Garden, Pre-banquet Social (Cash Bar), Banquet, and Dance & Cash Bar.

### FIELD TRIPS AND TOURS

Half-day trips were offered to the Riverlands Environmental Demonstration Area, Forest Park-Kennedy Forest, and Tower Grove Park. Full-day trips were offered to Shaw Arboretum and Tyson Research Center, St. Charles County-Busch Conservation Area to Riverlands, Riverlands and Mark Twain National wildlife Refuge, and the World Bird Sanctuary. Participants could also attend overnight birding trips to Mingo National Wildlife Refuge and Duck Creek Conservation Area in southeast Missouri, and Eagle Bluffs and Prairie Chicken viewing areas in central Missouri. Information on local city attractions was available to registrants.

### SCIENTIFIC SESSIONS

The complete scientific program appears on the following pages.

**SCIENTIFIC PROGRAM AND EVENTS LISTINGS FOR THE 1998 NORTH AMERICAN ORNITHOLOGICAL CONFERENCE (INCLUDING THE 116TH STATED MEETING OF THE AOU)**

BUSINESS SESSIONS & SPECIAL EVENTS

MONDAY, 6 APRIL 1998

|                       |   |               |  |
|-----------------------|---|---------------|--|
|                       |   |               | Vans depart from Memorial Street Entrance (Meeting Level) promptly at 09:00                                    |
| 08:00 - 17:00         | North American Banding Council Meeting<br>Stephen Russell, Organizer  | 13:00 - 17:00 | First Colonial Waterbird Society Council Meeting<br>Ian Nisbet, President<br>Jefferson C                       |
| 09:00                 | Mingo National Wildlife Refuge and Duck Creek Conservation Area Field Trip<br>Vans depart from Memorial Street Entrance (Meeting Level) promptly at 09:00. Return: Tuesday, 16:00 hrs | 14:00 - 21:30 | Conference Registration<br>West Assembly Area  |
| 13:00 - 18:00         | American Bird Conservancy Policy Council Meeting<br>Gerald Weingrad, Organizer<br>LaCledé   | 15:45 - 17:00 | First American Ornithologists' Union Fellows Meeting<br>Victoria McDonald, Secretary<br>Lewis                  |
| 14:00 - 17:00         | Ornithological Council Meeting<br>Ellen Paul, Organizer<br>Jefferson F  | 17:00 - 18:00 | Student Awards Committee Meeting<br>John Faaborg, Chair<br>Jefferson E   |
| 16:00 - 19:30         | Conference Registration<br>West Assembly Area   | 17:30 - 20:00 | No-Host Dinner for Council, Fellows, and Board Members of AOU, AFO, COS, CWS, and WOS<br>Top of the Riverfront |
| 19:00 - 21:30         | First American Ornithologists' Union Council Meeting<br>Victoria McDonald, Secretary<br>Clark   | 18:00 - 20:00 | Partners in Flight Research Working Group<br>Ben Wigley, Organizer<br>Lewis                                    |
| 19:00 - 21:30 Meeting | First Cooper Ornithological Society Board Meeting<br>Eileen Kirsch, Secretary<br>LaCledé  | 19:00 - 22:00 | Icebreaker Reception<br>Regal Riverfront Lobby   |

TUESDAY, 7 APRIL 1998

08:00 - 15:30 Second American Ornithologists' Union Council Meeting  
Victoria McDonald, Secretary  
Clark

19:45 - 22:00 The Nature Conservancy's Wings of the Americas  
Kimberly Smith, Organizer  
LaCledé

WEDNESDAY, 8 APRIL 1998

08:00 - 17:00 First Association of Field Ornithologists Council Meeting  
Charles Duncan, President  
Field

07:00 - 19:00 Conference Registration  
Spirit of St. Louis

10:00-11:00 Informal Meeting for Spouses  
Soulard

08:00 - 17:00 Second Cooper Ornithological Society Board Meeting  
Eileen Kirsch, Secretary  
LaCledé

10:00 - 14:00 Riverlands Environmental Demonstration Area Field Trip  
Vans depart from Memorial Street Entrance (Meeting Level) promptly at 10:00

09:00 - 17:00 First Wilson Ornithological Society Council Meeting  
Edward Burt, President  
Jefferson A

12:00 - 12:30 All WOS Members: Business Meeting  
Missouri Ballroom

09:00 - 16:00 Shaw Arboretum and Tyson Research Center Field Trip

12:30 - 1:30 All COS Members: Business Meeting  
Illinois Ballroom

15:00 - 18:00 Intl. Working Group of Partners in Flight

|                        |  |                                |  |
|------------------------|--|--------------------------------|--|
|                        | Borja Mila, Organizer<br>Soulard   | FRIDAY, 10 APRIL 1998          |  |
| 16:30 - 17:30          | All AOU Members: Business Meeting<br>Illinois Ballroom   | 07:30 - 18:30                  | Conference Registration<br>Spirit of St. Louis   |
| 17:30 - 22:00          | Flight Night Reception at the St Louis Zoo.<br>Sponsor: Saint Louis Zoo<br>Buses depart from Memorial Street<br>Entrance (Meeting Level) beginning at                              | 10:00 - 12:00<br>10:00 - 14:00 | Tower Grove Field Trip<br>Riverlands Environmental Demonstration<br>Area Field Trip<br>Vans depart from Memorial Street Entrance<br>(Meeting Level) promptly at 10:00  |
|                        |  | 12:00 - 13:00                  | All WOS Members: Business Meeting<br>Missouri Ballroom   |
| THURSDAY, 9 APRIL 1998 |  | 12:00 - 13:00                  | Meeting of Individuals Contributing to<br>Recent Ornithological Literature<br>Peter Stettenheim, Organizer<br>LaCledé  |
| 07:30 - 18:30          | Conference Registration<br>Spirit of St. Louis   | 12:00 - 13:30                  | Women in Ornithology Resource Group<br>Lunch<br>Wendy Hill, Organizer<br>Illinois  |
| 10:00 - 12:00          | Forest Park-Kennedy Forest Field Trip<br>Vans depart from Memorial Street Entrance<br>(Meeting Level) promptly at 10:00  | 12:00 - 13:30                  | Association for Parrot Conservation<br>Steven Beissinger, Organizer<br>Spirit of St. Louis West  |
| 12:00 - 13:00          | All AFO Members: Business Meeting<br>Missouri Ballroom   | 12:00 - 13:30                  | AOU Board of Editors<br>Tom Martin, Organizer<br>Soulard   |
| 12:00 - 12:30          | Third American Ornithologists' Union<br>Council Meeting (if necessary)<br>Victoria McDonald, Secretary<br>LaCledé  | 17:30 - 19:00                  | OSNA Committee Meeting<br>Fred Lohrer, Director<br>LaCledé   |
| 12:00 - 13:30          | AOU Conservation Committee<br>Steven Beissinger, Chair<br>Spirit of St. Louis West   | 18:00 - 22:00                  | Tropical Night Reception at the Missouri<br>Botanical Garden<br>Sponsor: Internat. Ctr for Tropical Ecol. at<br>UM-St. Louis & Missouri Botanical Garden<br>Buses depart from Memorial Street<br>Entrance (Meeting Level) begin at 17:30 |
| 12:30 - 13:00          | Second American Ornithologists' Union<br>Fellows Meeting (if necessary)<br>Victoria McDonald, Secretary<br>LaCledé   | 18:00 -                        | Eagle Bluffs and Prairie Chickens, Central<br>Missouri Trip<br>Vans depart from Memorial Street Entrance<br>(Meeting Level) 18:00. Return Sat 20:00  |
| 13:30 - 17:00          | First Colonial Waterbird Society Council<br>Meeting<br>Ian Nisbet, President<br>Spirit of St. Louis West   |                                |  |
| 17:15 - 19:00          | Current Ornithology Editorial Board<br>Val Nolan, Jr., Convenor<br>Soulard   |                                |  |
| 17:00 - 19:00          | University of Arkansas Reunion<br>Jeannette Bider, Organizer<br>Spirit of St. Louis West   | SATURDAY, 11 APRIL 1998        |  |
| 17:30 - 19:00          | Student/Society Officer Mixer for Students,<br>Post-docs, and Society Officers, Fellows,<br>and Council Members<br>Sponsor: AOU, AFO, COS, CWS, RRF,<br>and WOS<br>Lewis and Clark | 07:00 - 08:30<br>06:45         | All-Out Ostrich 5km Uproar<br>Participants leave from hotel lobby at<br>\$10 registration fee on site.<br>Benefit the Josselyne Van Tyne Fund<br>Gateway Arch  |
| 19:00 - 22:00          | Poster Session and Reception<br>South Exhibit Hall   | 07:30 - 12:00                  | Conference Registration<br>Spirit of St. Louis   |
|                        |  | 08:00 - 16:00                  | St. Charles County-Busch Conservation<br>Area/Riverlands Field Trip<br>Riverlands and Mark Twain National<br>Wildlife Refuge Field Trip  |

- Vans depart from Memorial Street Entrance  
(Meeting Level) promptly at 08:00
- 09:00 - 15:00 World Bird Sanctuary Field Trip  
Vans depart from Memorial Street Entrance  
(Meeting Level) promptly at 09:00
- 16:30 - 18:00 Student Awards Committee  
John Faaborg, Chair  
Soulard
- 18:30 - 19:30 No-Host Cash Bar  
West Assembly Area
- 19:30 - 21:30 NAOC Banquet  
Grand Ballroom
- 21:30 - 00:00 Dance and Cash Bar  
Grand Ballroom

SCIENTIFIC SESSIONS

WS1. Workshop: An Inventory/Evaluation of North American Monitoring Activities

Sponsor: Ornithological Council

Organizer: Michael Erwin

08:15-17:15

Missouri

WS2. Workshop: Conservation of Neotropical Birds

Sponsor: The Neotropical Bird Club

Organizer: John Sterling

08:30-17:30

Illinois

WS3. Workshop: Partners in Flight Bird Conservation Planning

Sponsor: Partners in Flight

Organizer: David Pashley

14:00-17:00

Meramec

WS4. Workshop: Ornithology and the Law

Sponsor: U.S. Fish and Wildlife Service and the Ornithological Council

Organizers: Daniel Petit, David Blockstein, and Carol Anderson

13:00-17:00

Jefferson B

WS5. Workshop: National Shorebird Plan Research and Monitoring Working Group

Sponsor: Manomet Center for Conservation Science

Organizer: Stephen Brown

18:00-20:00

Soulard

Morning Sessions:

- 08:00 - 08:30 Welcome by Chancellor Blanche Touhill, University of Missouri-St. Louis  
Introductory Remarks by Peter Raven, Director, Missouri Botanical Garden

P2. Margaret Morse Nice Plenary Award Lecture

Sponsor: Wilson Ornithological Society

08:30-09:30

## Grand Ballroom

08:30 Studying birds: One species at a time. ELLEN KETTERSON and VAL NOLAN, JR.

## BREAK

09:30 - 10:00

West Assembly Area

## S1. Symposium: Population Biology of Song Sparrows: a Model Species

Convenor: Nadav Nur

10:00-12:30

Mississippi

10:00 Population dynamics of the Song Sparrow in central California: A comparative perspective. NADAV NUR\* and GEOFFREY R. GEUPEL.

10:30 Senescence in Song Sparrows. P. ARCESE, L. F. KELLER, J. N. M. SMITH, and A. B. MARR.

11:00 The Song Sparrow and the Brown-headed Cowbird: Enemies and friends. JAMES N. M. SMITH\* and MARY J. TAITT.

11:30 Song Sparrows as a general model of landbird conservation. CHRISTOPHER M. ROGERS.

12:00 Nestling weight as a potential indicator of phenotypic quality in individual Song Sparrows. MARY K. CHASE\*, NADAV NUR, and GEOFFREY R. GEUPEL.

## GS1. Session: Physiology and Energetics I

Chair: Don Miles

10:00-11:45

LaClede

10:00 Ontogenetic variation in the cost of terrestrial locomotion of shorebirds. DONALD B. MILES\*, ROBERT E. RICKLEFS, J. B. WILLIAMS, and H. VISSER.

10:15 Daily energy expenditure of Great Cormorants wintering at Lake Chiemsee, Southern Germany. THOMAS M. KELLER\* and G. HENK VISSER.

10:30 Why are egg yolks yellow? DAVID J. DELEHANTY.

10:45 Fatty acid binding protein, a major protein in the flight muscle of migrating Western Sandpipers. CHRISTOPHER G. GUGLIELMO\*, NORBERT H. HAUNERLAND, and TONY D. WILLIAMS.

11:00 Blackcaps have an initial period of low mass change while refueling during spring migration. L.Z. GANNES.

11:15 Ecological and behavioral correlates of BMR in tropical forest birds. BRIAN K. McNAB\* and FRANK J. BONACCORSO.

11:30 Reproductive endocrinology of free-living Adlie Penguins in Antarctica. CAROL M. VLECK\* and THERESA L. BUCHER.

## GS2. Session: Habitat Management and Conservation I

Chair: Ray Chandler

10:00-12:00

Jefferson D&E

10:00 Winter bird communities of coastal pine savannas. C. RAY CHANDLER and MARK S. WOODREY.

10:15 Effects of fire and disturbance history on avian community composition in historic oak savannas. RALPH GRUNDEL, GARY S. DULIN, ANTHONY E. ZAMMIT, and NOEL B. PAVLOVIC.

- 10:30 Effects of selective logging on a bird community in southeastern Brazil. ALEXANDRE ALEIXO.
- 10:45 Comparison of avian use of post-fire and clearcut forests in the Rocky Mountains. NATASHA B. KOTLIAR, CYNTHIA P. MELCHER.
- 11:00 Short-term effects of uneven-aged forest management on birds in oak-hickory forests of the Arkansas Ozarks. PAUL G. RODEWALD and KIMBERLY G. SMITH.
- 11:15 Fire, savanna restoration, and the viability of midwestern bird populations. JEFFREY D. BRAWN.
- 11:30 Nesting success of Neotropical migratory and resident bird species in growing- versus dormant-season prescribed fire habitats in southwestern Georgia. MARK A. HOWELL\*, BRIAN R. CHAPMAN, and KARL V. MILLER.
- 11:45 Riparian ecosystems of southeastern Minnesota: Does trout habitat improvement affect Louisiana Waterthrushes? JENNIFER K. HATHAWAY.

GS3. Session: Local Movements and Short Distance Dispersal I

Chair: Curt Adkisson

10:00-11:45

Jefferson B&C

- 10:00 Non-breeding season movements and habitat use of Florida Grasshopper Sparrows. TYLAN F. DEAN\* and PETER D. VICKERY.
- 10:15 Alternative dispersal strategies in Australian Treecreepers. VERONICA A. J. DOERR\*, ERIK D. DOERR, and PETER B. STACEY.
- 10:30 Dispersal within and among populations of tropical wrens: Implications for individual fitness and population stability. KERRY N. RABENOLD\* and MARIA CAROLINA YABER.
- 10:45 Post-breeding movements of American Avocets in the Western Great Basin. JONATHAN H. PLISSNER\*, SUSAN M. HAIG, and LEWIS W. ORING.
- 11:00 Breeding dispersal in the Red-cockaded woodpecker: Associated factors and an estimate of its cost. SUSAN J. DANIELS and JEFFREY R. WALTERS.
- 11:15 Behavioral ecology of Blue Jays in citrus groves in South Florida. CURTIS S. ADKISSON.
- 11:30 Natal dispersal of Peregrine Falcons breeding in Greenland. MARCO RESTANI and WILLIAM G. MATTOX.

GS4. Session: Community Ecology I

Chair: Mike Murphy

10:00-12:00

Field

- 10:00 Winter bird communities on San Salvador, Bahamas. MICHAEL T. MURPHY\*, KERRI L. CORNELL and KARMEL L. MURPHY.
- 10:15 Effect of migratory guilds on forming forest bird community structure in elevational gradient. MARTIN KOROAN.
- 10:30 Changes in the bird communities of Xalapa and Las Vigas, Veracruz, Mexico, 1897-1997. ERNESTO RUELAS INZUNZA.
- 10:45 Seasonal patterns of hornbill density in relationship to fruit

abundance: Evaluating three alternative methods of estimating fruit abundance in a central African rainforest. BRITTA DENISE HARDESTY\*, V. T. PARKER and THOMAS B. SMITH.

11:00 Moist forest hilltops sustain avian diversity in southwestern Ecuador. C. DUSTIN BECKER.

11:15 Variation in the composition of understory bird species on a peninsula. MARIA INES BARRETO.

11:30 Diurnal raptors, landscape heterogeneity, and shifting cultivation in lowland tropical rain forest, northeastern Honduras. DAVID L. ANDERSON.

11:45 Trophic structure of bird community in recovering areas and remaining forests. MARIA CECILIA BARBOSA DE TOLEDO and MILTON CEZAR RIBEIRO.

#### GS5. Session: Morphology

Chair: James Sneider

10:00-11:30

Jefferson A

10:00 Comparative limb osteology in Woodcreepers (Dendrocolaptinae). MARKUS P. TELLKAMP.

10:15 Morphological adaptations for life on oceanic islands in Fruit-Doves (Columbidae: Ptilinopus). JEFF K. SAILER.

10:30 Hypertrophic fluctuations in digestive organs of Columbian Sharp-tailed Grouse. JAMES W. SCHNEIDER and KERRY P. REESE.

10:45 The antitrochanter and its relation to hindlimb function in birds. KENNETH E. CAMPBELL\* and FRITZ HERTEL.

11:00 Clap, whistle, rasp, rattle, or vibrate? Alternative mechanisms of mechanical sound production in *Machaeropterus deliciosus* (Pipridae). KIMBERLY S. BOSTWICK\* and RICHARD O. PRUM.

11:15 Ecomorphology and evolution of hummingbirds from the Juan Fernandez Islands of Chile. FRITZ HERTEL\*, JUAN CARLOS TORRES-MURA, and MICHAEL S. ROY.

#### GS6. Session: Endangered and Vulnerable Species I

Chair: Susan Haig

10:00-11:45

Missouri

10:00 Monitoring of Golden-cheeked Warblers (*Dendroica chrysoparia*) on Fort Hood, Texas: 1997 results. RANDALL A. CRAFT\*, TERRY L. COOK, and JOHN D. CORNELIUS.

10:15 Eskimo Curlew museum records provide a schedule to search for living birds. EVE IVERSEN.

10:30 Metapopulation structure and conservation status in Spotted Owls. SUSAN M. HAIG\* and THOMAS D. MULLINS.

10:45 Can we determine the nature of habitat use of the Marbled Murrelet in forests? C. JOHN RALPH, SHERRI L. MILLER, TERESA MATSUMOTO, and WILLIAM HOGOBOOM.

11:00 Non-breeding ecology of the endangered Cape Sable Seaside Sparrow in the Everglades National Park. TYLAN F. DEAN, ROBERT J. FLETCHER, JR.\*, and JOAN L. MORRISON.

11:15 Ecological change at Isla Espanola, Galapagos Islands, Ecuador and its impact upon the ecology and population dynamics of the Waved Albatross (*Phoebastria irrorata*). HECTOR D. DOUGLAS III.

11:30 Weather-caused population decline of Cerulean Warblers in Desha County, Arkansas. PAUL B. HAMEL, CHRISTOPHER A. WOODSON\*, and MIKE STATEN.

GS7. Session: Evolution and Biogeography

Chair: Diana Tomback

10:00-12:00

Lewis and Clark

10:00 Clark's Nutcracker on Cerro Potosi, Nuevo Leon: The ecology of a disjunct distribution. DIANA F. TOMBACK\*, LEO P. BRUEDERLE, and KATHLEEN K. KELLY.

10:15 The Eurasian Collared-Dove (*Streptopelia decaocto*): A nonindigenous species on the move. CHRISTINA M. ROMAGOSA.

10:30 Island birds: Nested patterns and quantitative approaches in biogeography. JEFFREY C. ROBERTS.

10:45 A relatively intact Pacific island avifauna? The birds of Isabel, Solomon Islands. ANDREW W. KRATTER \* and D. W. STEADMAN.

11:00 Phylogeny and biogeography in the evolution of migration: Shorebirds of the Charadrius complex. LEO JOSEPH\*, ENRIQUE LESSA, and LESLIE CHRISTIDIS.

11:15 Predicting geographic distributions of tropical birds from museum specimen locality data. LISA G. BALL\*, A. TOWNSEND PETERSON, and KEVIN COHOON.

11:30 Genetic analysis of Mottled Ducks from Florida and Texas. OLIN E. RHODES, JR. \*, ALAN M. FEDYNICH, DANNY B. PENCE, PAUL N. GREY, and JAMES F. BERGAN.

11:45 Hooded Crows accept Cuckoo parasitism: A new test of the Mafia Hypothesis. S. I. ROTHSTEIN\*, A. LOTEM, Y. SHPIRER, and A. ZAHAVI.

Afternoon Sessions:

S2. Symposium: Rangewide Variation in Cerulean Warbler Ecology

Convenor: Paul Hamel

13:30-16:00

Missouri

13:30 Abundance and habitat selection of Cerulean Warblers in Illinois. SCOTT K. ROBINSON, GLENDY C. VANDERAH, and JEANNETTE MORSS.

14:00 Breeding biology and distribution of Cerulean Warblers in the lower Mississippi alluvial valley. PAUL B. HAMEL\*, CHRISTOPHER A. WOODSON, WINSTON P. SMITH, and ROBERT J. COOPER.

14:30 Cerulean Warblers in eastern Ontario: Breeding biology of a potential source population. RALEIGH J. ROBERTSON\*, JASON JONES, M. LISA VEIT, CATHERINE J. OLIARNYK, PAUL R. MARTIN, CLIVE GOODINSON, and VICKI FRIESEN.

15:00 Population status of Cerulean Warblers in the Northeast U.S. KENNETH V. ROSENBERG and SARA E. BARKER.

15:30 Nesting ecology of the Cerulean Warbler in the Cumberland Mountains of

Tennessee. CHARLES P. NICHOLSON\* and DAVID A. BUEHLER.

S3. Symposium: Physiological Ecology of Arid Zone Birds

Convenor: Joseph B. Williams

13:30-15:30

Mississippi

13:30 Energetics of Dune Larks in the Namib Desert. JOSEPH B. WILLIAMS.

14:00 Life in the desert: Do the kidneys make the bird? DAVID L. GOLDSTEIN.

14:30 The role of hyperthermia in the water economy of desert birds. B. IRENE TIELEMAN and JOSEPH B. WILLIAMS.

15:00 Behavior and physiology of the Verdin during the summer in the Sonoran Desert. BLAIR O. WOLF.

GS8. Session: Evolutionary Biology I

Chairs: Jessica Eberhard and Shannon Hackett

13:30-16:30

Jefferson B&C

13:30 Ecological correlates between trophic level and reproductive characteristics of Anatidae. PATRICK W. BROWN.

13:45 The evolution of nest-building and coloniality in parrots and other cavity-nesting birds. J. R. EBERHARD.

14:00 Evolution and maintenance of sexual dimorphism in the House Finch: Effects of current selection and history. ALEXANDER V. BADYAEV.

14:15 Feather-degrading bacteria as a factor in the evolution of molt. EDWARD H. BURTT, JR.\*, PATRICIA H. WEE, CHARITY IRVINE, and JANN M. ICHIDA.

14:30 Chemical defense and toxin-level variation in Pitohui birds. JOHN P. DUMBACHER.

14:45 Assuming neutrality of avian mitochondrial DNA: Should we be concerned? ADAM J. FRY.

15:00 An inverse relationship between embryonic development and immunocompetence, a connection to longevity in birds. ERPUR S. HANSEN\*, JEANNE M. FAIR, SETH B. ISENBERG, BRODDI R. HANSEN, and ROBERT E. RICKLEFS.

15:15 Geographic variation in clutch size of North American prairie nesting ducks. ELIZABETH R. LOOS.

15:30 A phylogenetic perspective on the post-copulatory displays of dabbling ducks (Anatini). FRANK McKINNEY\* and KEVIN JOHNSON.

15:45 Is avian mtDNA evolving neutrally? SHANNON J. HACKETT.

16:00 Inter-island cultural and genetic variation in the Thick-billed Vireo. MARLENE R. WALKER.

16:15 Northern Mockingbird responses to cowbird eggs: A case of non-optimality. AMY M.L. MUSANTE-MILLER\* and STEPHEN I. ROTHSTEIN.

GS9. Session: Breeding Biology I

Chairs: Reed Bowman and Frank Rohwer

13:30-16:15

Laclede

- 13:30 The effect of habitat and density on reproductive success of the Wrentit. YVONNE L. CHAN\*, NADAV NUR, and GEOFFREY R. GEUPEL.
- 13:45 Allocation of food resources, increases in mass and fledging age of nestlings of three sympatric Amazona parrots in intensively monitored natural nests. ERNESTO C. ENKERLIN-HOEFLICH\* and JAIME GONZALEZ-ELIZONDO.
- 14:00 Pre-breeding time budgets and timing of laying of Florida Scrubjays in natural and suburban habitats. ARTHUR L. FLEISCHER, JR.
- 14:15 Annual variation in habitat conditions and nesting productivity of Wood Ducks. ROBERT J. GATES\*, ANDREW T. SELLE, and ROBERT KAWULA.
- 14:30 Habitat selection by breeding ducks: Do females have eyes for grass? STACEY FISCHER and FRANK C. ROHWER\*.
- 14:45 Comparative brood ecology of Gadwall and Mallard. MICHEL GENDRON\* and ROBERT G. CLARK.
- 15:00 Effects of wetland conditions on characteristics of breeding Wood Ducks. ROBERT A. KENNAMER\* and GARY R. HEPP.
- 15:15 Density dependent effects on growth and behavior in Pacific Black Brant (*Branta bernicla nigricans*) goslings. MARK P. HERZOG and JAMES S. SEDINGER.
- 15:30 Nesting ecology and behavior of the Gray Vireo in western Colorado. SCOTT W. HUTCHINGS\* and TONY R. LEUKERING.
- 15:45 Variation in the timing of breeding and clutch size in the Florida Scrub-Jay (*Aphelocoma coerulescens*). REED BOWMAN\*, GLEN E. WOOLFENDEN, and JOHN W. FITZPATRICK.
- 16:00 Clutch size and nestling loss in Black-billed Magpies. BRUCE A. VANDER LEE.

GS10. Session: Conservation

Chair: Steve Pruett-Jones

13:30-16:15

Lewis and Clark

- 13:30 Avian use of oases during spring migration: A multi-scale perspective. WINFRED W. WONG.
- 13:45 The Monk Parakeet in the United States: Biological concern versus public opinion. STEPHEN PRUETT-JONES.
- 14:00 Responses of migrating birds to two Mississippi alluvial valley stopover sites: Early-successional upland and bottomland forests. GLEN R. THOMAS\* and JAMES C. BEDNARZ.
- 14:15 Using molecular markers to match breeding and wintering populations of the Wilson's Warbler. MARI KIMURA\*, DEREK J. GIRMAN, PEG WADE, BORJA MILA, and THOMAS B. SMITH.
- 14:30 Ornithology in the Republic of Armenia. MARTIN S. ADAMIAN and DANIEL KLEM, JR.\*
- 14:45 Glass: A deadly conservation issue for birds. DANIEL KLEM, JR.

15:00 Spatial extent of human-intrusion effects on bird distributions.  
HEIDI A. MARCUM\*, KEVIN J. GUTZWILLER, and STANLEY H. ANDERSON.

15:15 Distribution and abundance of Neotropical passage migrants along a moisture gradient in Central Panama's lowland forests. SABRINA E. RUSSO, W. DOUGLAS ROBINSON, JEFFREY D. BRAUN, and SCOTT K. ROBINSON.

15:30 Further evidence of bird mortality from collisions with windows.  
TIMOTHY J. O'CONNELL.

15:45 The American Bird Conservancy Policy Council: Bird conservation through the collaboration of ornithologists and policy advocates. GERALD W. WINEGRAD.

16:00 Distribution and characterization of microsatellites in the Emu genome (*Dromaius novaehollandiae*). ELLEN H. ROOTS\* and ROBERT J. BAKER.

#### GS11. Session: Parental Care

Chairs: Marcy Brown and Cameron Ghalambor

13:30-16:15

Field

13:30 Predation risk and parental investment in antipredator behavior by the Wattled Jacana (*Jacana jacana*). RACHEL A. POLSTER\* and GODFREY R. BOURNE.

13:45 Variation in incubation strategies among coexisting nuthatches (*Sittidae*): Testing the relative importance of nest predation and microclimate. CAMERON K. GHALAMBOR.

14:00 No tradeoff between EPCs and parental effort by male Hooded Warblers (*Wilsonia citrina*). TREVOR E. PITCHER\* and BRIDGET J.M. STUTCHBURY.

14:15 Gender differences in Peregrine Falcon nest attendance: Genetic difference or response to one's mate. ANGELA G. PALMER.

14:30 'Courtship' feeding in Common Terns: Nutritional importance and effects on egg size. DAVID J. MOORE\*, TONY D. WILLIAMS, and RALPH D. MORRIS.

14:45 Effect of mate removal on incubation behavior and reproductive success of female Wood Ducks. CHAD A. MANLOVE and GARY R. HEPP.

15:00 Western Gull chick-rearing behavior on Alcatraz Island in response to parental sex, chick rejection and human disturbance. MARGARET E. BROWN.

15:15 Female incubation behavior and predation risk in Song Sparrows. CHRISTINE A. HOWELL.

15:30 Sex ratio manipulation within broods of female House Wrens. DAN ALBRECHT.

15:45 Variation in the incubation periods of shorebirds: possible explanations. SZABOLCS LENGYEL.

16:00 Temporal patterns of host availability, Brown-headed Cowbird brood parasitism and parasite egg mass. BILL M. STRAUSBERGER.

#### GS12. Session: Fragmentation and Landscape Ecology I

Chairs: Deborah Finch and Chris Kellner

13:30-16:30

Jefferson D&C

- 13:30 Spatial autocorrelation in California land birds. WALT KOENIG.
- 13:45 Patterns of avian distribution and nest success in a variegated landscape. LARA M. COBURN\* and R. DOUGLAS SLACK.
- 14:00 Land use effects on breeding Golden-cheeked Warblers. CADE L. COLDREN\* and KEITH A. ARNOLD.
- 14:15 Patterns of forest use and endemism in resident bird communities of north-central Michoacan, Mexico. DEBORAH M. FINCH, SANTIAGO GARCIA, and GILBERTO CHAVEZ LEON.
- 14:30 At which level should we study the effect of habitat fragmentation on forest birds? RALPH S. HAMES\*, KENNETH V. ROSENBERG, JAMES D. LOWE, SARA E. BARKER, ROGER SLOTHOWER, and ANDRE A. DHONDT.
- 14:45 How general are the effects of forest coverage on nesting success? WESLEY M. HOCHACHKA and THOMAS E. MARTIN.
- 15:00 Patterns of distribution and relative abundance of landbirds in Western Mexico. JENNIFER HOLMES.
- 15:15 Avian reproductive success and nest parasitism by Brown-headed Cowbirds: Comparison of two landscapes. CHRISTOPHER J. KELLNER, JAMES R. KARR, and LISA ROWE.
- 15:30 Geographic conservation priorities for the birds of Western Mexican dry forests. DANIEL A. KLUZA\* and A. TOWNSEND PETERSON.
- 15:45 Landscape pattern and local structure: Testing habitat selection hypotheses at two spatial scales for three secondary cavity-nesting birds. JOSHUA J. LAWLER, and THOMAS C. EDWARDS JR.
- 16:00 Patterns of breeding bird diversity and abundance across land use gradients in the southern Appalachians. JEREMY W. LICHSTEIN\*, THEODORE R. SIMONS, and KATHLEEN E. FRANZREB.
- 16:15 The effects of farm field borders on overwintering bird densities. JEFFREY F. MARCUS\*, PETER T. BROMLEY, and WILLIAM E. PALMER.

GS13. Session: Mating Systems and Sexual Selection I

Chairs: Donald Jenni and Terrence Mace

13:30-16:15

Jefferson A

- 13:30 Into the mating system of the Buff-breasted Sandpiper. RICHARD B. LANCTOT\* and KIM T. SCRIBNER.
- 13:45 Polyandry in the Comb-crested Jacana. TERRENCE R. MACE.
- 14:00 Spider egg sacs in House Wren nests: A test of the mate-choice hypothesis. KEVIN P. ECKERLE\* and CHARLES F. THOMPSON.
- 14:15 Cooperative display and relatedness in a lekking hummingbird species, the Green Violet-ear (*Colibri thalassinus*). SANDRA L. L. GAUNT, LUIS F. BAPTISTA, THOMAS A. WAITE, PATRICIA G. PARKER, JULIO E. SANCHEZ.
- 14:30 Female mate choice in two species of New World Quail: An analysis of feather ornaments and behavior. JULIE C. HAGELIN.
- 14:45 The effects of testosterone on prevalence of coccidia in free-ranging Dark-eyed Juncos (*Junco hyemalis*). STEPHEN P. HUDMAN\*, ELLEN D. KETTERSON, and VAL NOLAN JR.

15:00 The signaling function of blue plumage in Blue Grosbeaks. AMBER J. KEYSER\* and GEOFFREY E. HILL.

15:15 Pre- and post copulatory behavior of the polyandrous Northern Jacana. DONALD A. JENNI.

15:30 Extra-pair copulations and extra-territorial intrusions in the Yellow-Breasted Chat (*Icteria virens*). HERMAN L. MAYS JR.

15:45 Extra-pair copulations and extra-pair paternity in a monogamous Arctic-breeding shorebird: The Semipalmated Plover. YURI ZHARIKOV and ERICA NOL\*.

16:00 Molt speed predicts pairing success in male Harlequin Ducks. GREGORY J. ROBERTSON.

#### Morning Sessions:

##### P2. Plenary Lecture

Sponsor: Association of Field Ornithologists

08:15-09:15

Grand Ballroom

08:15 A world of wounds: Ornithologists and the human predicament. PAUL EHRLICH.

#### BREAK

09:15-09:45

West Assembly Area

#### GS14. Session: Community Ecology II

Chair: Dale E. Gawlik

09:45-11:45

Lewis and Clark

09:45 Avian community characteristics of urban greenspaces in St. Louis, Missouri. JEFFREY M. AZERRAD\* and CHARLES H. NILON.

10:00 Bird communities in the Everglades: What do we know about non-Ciconiiformes? DALE E. GAWLIK\* and DEBORAH A. ROCQUE.

10:15 Comparison of avian communities in pine flatwoods and plantations in south-central Florida. DAVID R. BARBER and KENNETH D. MEYER.

10:30 Response of coexisting House Wrens (*Troglodytes aedon*) and Mountain Wrens (*T. solstitialis*) to heterospecific song playback in northwestern Argentina. ROBERT C. DOBBS, PAUL R. MARTIN and THOMAS E. MARTIN.

10:45 Possible effects of Pacific anadromous salmon on bird community structure in Southeast Alaska. SCOTT M. GENDE\* and MARY F. WILLSON.

11:00 Movement patterns and population fluctuations in southeast Arizona winter grassland sparrow assemblages. CALEB E. GORDON.

11:15 Ecological interactions and fitness costs to coexistence in two congeneric wood warblers (*Vermivora*). PAUL R. MARTIN.

11:30 Information mediates competitive interactions between three species of hummingbird. ELIZABETH A. SANDLIN.

GS15. Session: Important Bird Areas of the Americas and Related Issues

Chair: Fred Baumgarten

09:45-11:45

Mississippi

09:45 National Audubon Society Important Bird Areas (IBA) Program: A State-level perspective. FRED BAUMGARTEN.

10:00 The United States Important Bird Areas Program. JEFF T. PRICE.

10:15 A cornerstone of conservation?: Evaluating the success of the New York Important Bird Areas Program. JEFFREY V. WELLS and FRED BAUMGARTEN.

10:30 Important Bird Areas in the Americas. J. A. LYONS DE PEREZ\* and A. MADRONO NIETO\*.

10:45 The Panama Important Bird Areas Program. GEORGE R. ANGEHR.

11:00 The Canadian Important Bird Areas Program. STEVE A. WILCOX.

11:15 A comparison of North American avian conservation priority ranking systems. DAVID W. MEHLMAN\* and LAWRENCE L. MASTER.

11:30 Arizona Bird Conservation Plan- A Guide to Conserve Arizona's Birds. MARGIE J. LATTA\* and TROY E. CORMAN.

GS16. Session: Fragmentation and Landscape Ecology II

Chair: Jim Bednarz

09:45-12:00

Jefferson D&E

09:45 Do local landscape patterns influence the nest success of migratory birds in western forests? DIANE M. EVANS\*, JAMES C. BEDNARZ, and JOSEPH P. HOVIS.

10:00 Ongoing changes in a Swainson's Thrush population related to landscape fragmentation and forest management. JAMES C. BEDNARZ\*, JOSEPH C. HOVIS, and DIANE M. EVANS.

10:15 Landscape and fragment size effects on reproductive success of forest breeding birds. D. BURKE.

10:30 Edge effects in coast redwood forest fragments. L. ARRIANA BRAND\* and T. LUKE GEORGE.

10:45 Predicting species richness of area-sensitive birds in forests of Prince George's County, Maryland. DEANNA K. DAWSON\*, GREGORY A. GOUGH, CHANDLER S. ROBBINS, and LONNIE J. DARR.

11:00 An assessment of the relationship between forest cover and forest birds in southern Ontario, Canada. MICHAEL D. CADMAN\* and DOUGLAS P. TATE.

11:15 Habitat relationships between breeding birds and remotely-sensed landscape composition and pattern in Illinois. WILLIAM E. STONE\* and J. L. ROSEBERRY.

11:30 Breeding densities and habitat of riparian birds along the Lower Rio Grande, Texas. C. E. RUPERT and T. BRUSH.

11:45 Are wind sheltered topographies and fragmented habitats in Kenting National Park, Taiwan benefitting local Crested Goshawk populations? HUIHENG CHEN.

## GS17. Session: Foraging and Nutritional Ecology I

Chair: Daniel Cristol

09:45-12:00

Jefferson B&amp;C

- 09:45 Woodpecker foraging in southern pine beetle, *Dendroctonus frontalis* Zimmermann (Coleoptera: Scolytidae), infestations. DAWN E. W. DRUMTRA\*, MARITA P. LIH, and FREDERICK M. STEPHEN.
- 10:00 No mean feet: Hindlimb handling of food by passerines. MICHAEL S. PUTNAM\*, THOMAS S. SCHULENBERG, and JENNIFER L. GRAETZ.
- 10:15 Foraging ecology and reproductive success of the Red-cockaded Woodpecker (*Picoides borealis*) in central Mississippi. DOUGLAS R. WOOD\*, FRANCISCO J. VILLELA, and L. WESLEY BURGER, JR.
- 10:30 Foraging ecology of the Tit-like *Dacnis* (*Xenodacnis parina*): Impacts of local and regional processes on foraging patterns. GRACE P. SERVAT.
- 10:45 Spatial variation in foraging of American Redstarts and Black-throated Green Warblers along the northern Lake Huron shoreline. ROBERT J. SMITH\*, MATTHEW J. DALLMAN, MICHAEL J. HAMAS, and DAVID N. EWERT.
- 11:00 Effects of food supplementation on Black-capped Chickadees in central Maine. W. HERBERT WILSON, JR.
- 11:15 Food use of wintering Whooping Cranes: Past and current research. CRAIG M. WESTWOOD\*, FELIPE CHAVEZ-RAMIREZ, and R. DOUGLAS SLACK.
- 11:30 Dropping and theft of clams by young and adult Herring Gulls. DANIEL A. CRISTOL.
- 11:45 Winter foraging behavior of California and Blue-gray Gnatcatchers: Alone and in mixed-species flocks. ROBERT C. WHITMORE.

## GS18. Session: Local Movements and Short Distance Dispersal II

Chair: R.J. Gutierrez

09:45-12:00

Missouri

- 9:45 Extra-territorial movements by male Western Tanagers during the breeding period. CORY R. DAVIS\* and JAMES C. BEDNARZ.
- 10:00 An investigation of between-year breeding-site fidelity and local dispersal in a migratory songbird. JEFFREY P. HOOVER.
- 10:15 Juvenile northern spotted owl dispersal: Process and pattern. R. J. GUTIERREZ\*, JAMES P. WARD, ALAN B. FRANKLIN, PETER TURCHIN, and WILLIAM S. LAHAYE.
- 10:30 Seasonal and daily patterns of Marbled Murrelet distribution at sea. CECILIA LOUGHEED.
- 10:45 Brood movements of resident Canada geese at Old Hickory Reservoir. AMY L. MERCER \* and DANIEL L. COMBS.
- 11:00 Mate and site fidelity of Great Lakes Piping Plovers. LAUREN C. WEMMER.
- 11:15 Generation of asymmetric natal dispersal distances in a population of Black Kites: Effects of individual and habitat quality. MANUELA G. FORERO, JOSE A. DONAZAR, and FERNANDO HIRALDO.

11:30 Causes and consequences of territory change and breeding dispersal distance in the Black Kite. MANUELA G. FORERO, JOSE A. DONAZAR, JULIO BLAS and FERNANDO HIRALDO.

11:45 Seed dispersal and evidence of long distance movements of *Ceratogymna* hornbills in Cameroon. KIMBERLY M. HOLBROOK\* and THOMAS B. SMITH.

GS19. Session: Census Methods

Chair: William Eddleman

09:45-11:45

Field

09:45 Playback versus silent protocol for censusing nocturnal avian species. DOUGLAS R. WOOD\*, FRANCISCO J. VILELLA, L. WESLEY BURGER, JR., and JAMES W. ARMACOST, JR.

10:00 The effectiveness of tape playback in estimating density of Black Rails. MICHAEL L. LEGARE, and WILLIAM R. EDDLEMAN\*.

10:15 Species richness, abundance, and wetland use by Shorebirds in the western Great Basin: A comparison of census methods. NILS WARNOCK and SUSAN M. HAIG.

10:30 Effectiveness of broadcast surveys in determining habitat use of Ferruginous Pygmy-Owls in southern Texas. GLENN A. PROUDFOOT\*, JODY L. MAYS, SAM L. BEASON, and RALPH BINGHAM.

10:45 Calculating detection probabilities for territorial land birds. OLIVER KOMAR\*, JUAN PABLO DOMINGUEZ, and A. TOWNSEND PETERSON.

11:00 Influence of point-count length on bird-habitat model performance. RANDY DETTMERS\* and DAVID A. BUEHLER.

11:15 Can point counts be used to estimate absolute density? GEORGE A. GALE, ROBERT J. COOPER\*, and MATT R. MARSHALL.

11:30 Evaluation of mist net sampling as an index to productivity. JONATHAN BART\*, CAMERON B. KEPLER, PAUL W. SYKES, JR., and CAROL I. BOCETTI.

GS20. Session: Biology and Conservation of the Genus *Pipile* (Cracidae)

Convenor: Daniel Brooks

09:45-11:45

Soulard

09:45 *Pipile* as a protein source to rural hunters and Amerindians. DANIEL M. BROOKS.

10:00 Implications of a community-based wildlife management program in the conservation of the Cracidae. ALFREDO J. BEGAZO.

10:15 An overview of guans in captivity, with emphasis on *Pipile*. MICHAEL S. MACEK.

10:30 Use of the Common Piping Guan (*Pipile cumanensis cumanensis*) as a model for short- and long-term preservation of cracid semen. KAREN E. DeMATTEO\*, CHERYL S. ASA, MICHAEL S. MACEK, and TIMOTHY L. SNYDER.

10:45 Ecology and conservation of *Pipile jacutinga* in Sao Paulo State, Brazil. MAURO GALETTI.

11:00 The status of *Pipile pipile* in Trinidad. STANLEY TEMPLE.

11:15 How and why of a captive breeding program for the critically endangered Trinidad Piping-Guan. GILLES SEUTIN\* and VERONIQUE CONNOLLY.

Afternoon Sessions:

GS20. Working Session: Status and Conservation of Endangered Pipile (Cracidae).

Convenor: Daniel Brooks

13:00-17:00

Soulard

13:00-17:00 Working Session

S4. Symposium: Raptor Dispersal Patterns and Mechanisms

Convenor: Petra Bohall Wood

13:00-17:30

Mississippi

13:00 Dispersal patterns and possible mechanisms for juvenile Bald Eagles. PETRA BOHALL WOOD\*, BRIAN A. MILLSAP, and GRAINGER W. HUNT.

13:30 Why do raptors disperse? Some insights based on physiology and hormones. JAMES R. BELTHOFF\* and ALFRED M. DUFTY, JR.

14:00 Natal and adult dispersal in Barn Owls. CARL D. MARTI.

14:30 Dispersal and annual recruitment in the Mexican Spotted Owl. PETER B. STACEY.

15:00 BREAK

15:30 Pre-breeding dispersal of Crested Caracaras: Habitat selection, survival, and conspecific attractions. JOAN L. MORRISON.

16:00 Natal dispersal of Red-shouldered and Red-tailed Hawks in southwestern California. PETER H. BLOOM\*, JEFF W. KIDD, EDMUND H. HENCKEL, JUDITH L. HENCKEL, MICHAEL D. McCRARY, DAVID M. CHOATE, SCOTT THOMAS, DONNA KRUCKI, and SUSAN GALLAUGER.

16:30 Dispersal patterns and mechanisms in juvenile Northern Goshawks (Accipiter gentilis). MICHAEL F. INGRALDI.

17:00 Natal and breeding dispersal of American Kestrels in southern Idaho. KAREN STEENHOF and MARC J. BECHARD\*.

S5. Symposium: Tropical Breeding Seasonality: Proximate and Ultimate Mechanisms

Convenors: W. Douglas Robinson, Martin Wikelski, and Michella Hau

13:00-16:30

Missouri

13:00 The annual cycle of Columbina doves from seasonal environments in Venezuela. CARLOS BOSQUE\*, M. ANDREINA PACHECO, and MARIA ALEXANDRA GARCIA.

13:30 Seasonal breeding in Darwin's finches. B. ROSEMARY GRANT.

14:00 Changes in latitudes, changes in attitudes: An Australian perspective. WILLIAM A. BUTTEMER\* and LEE B. ASTHEIMER.

14:30 Integration of seasonal information for reproduction in a Neotropical bird. MICHAELA HAU\*, MARTIN WIKELSKI, and JOHN C. WINGFIELD.

15:00 BREAK

15:30 Seasonal timing of reproduction in the Seychelles Warbler: A field experiment using translocation. JAN KOMDEUR.

16:00 Timing of breeding in some neotropical birds: Is nest predation important? W. DOUGLAS ROBINSON\*, MARTIN WIKELSKI, and MICHAELA HAU.

GS21. Session: Systematics I

Chairs: Amy Driskell and Kevin Omland

13:00-17:15

Lewis and Clark

13:00 Molecular systematics of hummingbirds occurring in northern Mexico, the United States, and Canada. WILLIAM H. BALTOSSER\*, JOHN M. BUSH, MAURICE G. KLEVE, and S. MICHAEL POST.

13:15 mtDNA data cannot be used to infer the Manacus species tree. ROBB T. BRUMFIELD\*, MICHAEL J. BRAUN, and SHANNON J. HACKETT.

13:30 A total-evidence estimate of relationships within the family Troglodytidae using mitochondrial and nuclear sequence data. F. KEITH BARKER.

13:45 Phylogeny of goldfinches, canaries and siskins established by cytochrome b gene sequence comparison. A. ARNAIZ-VILLENA, M. ALVAREZ, V. RUIZ-DEL-VALLE, C. GARCIA-TORRE, P. VARELA, M.J. RECIO, S. FERRE, and J. MARTINEZ-LASO.

14:00 Molecular phylogenetics of the genus Myioborus (Aves, Parulinae): Preliminary results and biogeographic implications. JORGE L. PEREZ-EMAN.

14:15 Reconstructing the history of plumage evolution in orioles (*Icterus*) using a phylogeny based on two mitochondrial genes. KEVIN E. OMLAND\* and SCOTT M. LANYON.

14:30 The Fire-capped Tit (*Cephalopyrus*) is not even remotely related to tits. STORRS L. OLSON.

14:45 Phylogenetic reconstruction of the Stiff-tail Ducks. KEVIN G. McCracken\*, JOHN HARSHMAN, and ALAN D. AFTON.

15:00 BREAK

15:30 Genetic structure, morphological variation, and phylogenetic relationship among Caribbean Island populations of Stripe-headed Tanager and Bananaquit. NEDRA K. KLEIN.

15:45 Intraspecific phylogeography and genetic diversity in Neotropical warblers. IRBY J. LOVETTE.

16:00 Phylogenetic relationships within the Bridled White-eye inferred from mitochondrial sequence data. ISAAC JONES\*, BETH SLIKAS, SCOTT DERRICKSON, and ROBERT FLEISCHER.

16:15 Molecular systematics, morphological and behavioral evolution in the Honeyeaters (Passeriformes, Meliphagidae). AMY C. DRISKELL.

16:30 New hypotheses of phylogenetic relationships of synallaxine ovenbirds (*Furnariidae*) based on nest architecture. KRISTOF ZYSKOWSKI.

16:45 Molecular analysis of phylogenetic relationships among "nine-primaried oscines". TAMAKI YURI\* and DAVID P. MINDELL.

17:00 Plumage evolution in the genus *Grallaria*. NATHAN H. RICE.

GS22. Session: Endangered and Vulnerable Species II

Chairs: Rob Bierregaard and Juan E. Martinez-Gomez

13:00-16:45

Field

13:00 Effects of Brown-headed Cowbird parasitism on a population of Southwestern Willow Flycatchers. MARY J. WHITFIELD\* and JULIE C. UYEHARA.

13:15 Population rise and decreasing reproductive success of an island population of Ospreys (*Pandion haliaetus*) in southern New England. RICHARD O. BIERREGAARD, JR. and AUGUSTUS D. BEN DAVID.

13:30 The effects of tourist disturbance on Wood Stork breeding behavior and nesting success in the Brazilian Pantanal. SHANNON N. BOUTON\* and PETER C. FREDERICK.

13:45 Habitat indicators for the endangered Cape Sable Seaside-Sparrow (*Ammodramus maritimus*). AUDREY L. MAYER\* and STUART L. PIMM.

14:00 Distribution, abundance, and habitat characteristics of the Buff-breasted Flycatcher. JOHN A. MARTIN\* and MICHAEL L. MORRISON.

14:15 Monitoring of the nesting colonies of the endangered Maroon-fronted Parrot in Mexico. CLAUDIA MACIAS-CABALLERO.

14:30 Refinement of the Whooping Crane studbook utilizing microsatellite DNA and leg banding data. KENNETH JONES\*, FELIPE CHAVEZ-RAMIREZ, TRAVIS GLENN, and CLAIRE MIRANDE.

14:45 Population dynamics of the endangered Golden-cheeked Warbler (*Dendroica chrysoparia*) on Fort Hood, Texas. LESLIE A. JETTE\*, TIMOTHY J. HAYDEN, and JOHN D. CORNELIUS.

15:00 BREAK

15:30 Population structure and survival rates of the Socorro Mockingbird. JUAN E. MARTINEZ-GOMEZ\* and ROBERT L. CURRY.

15:45 Using stable isotopes to determine foraging strategies and natal origins of Wood Storks. CHRIS S. ROMANEK, KAREN F. GAINES\*, A. LAWRENCE BRYAN, JR., and I. LEHR BRISBIN, JR.

16:00 Determination of movements and migration of endangered Wood Storks using satellite-telemetry: Blending research, education and public outreach. I. LEHR BRISBIN, JR., KAREN F. GAINES, A. LAWRENCE BRYAN, JR. \*, FRED W. KOONTZ, and ELIZABETH F. STEVENS.

16:15 Spatial variability, nomadism, and conservation of American Flamingos in coastal wetlands of the Yucatan Peninsula, Mexico. FELICITY ARENGO\* and GUY A. BALDASSARRE.

16:30 Landscape-level habitat use by American Flamingos in Yucatan, Mexico. GUY A. BALDASSARRE\*, EDUARDO GALICIA, and FELICITY ARENGO.

GS23. Session: Ecology and Conservation of Grassland Birds

Chair: James Herkert

13:00-17:00

Jefferson B&C

13:00 Determinants of Sedge Wren abundance in a tallgrass prairie remnant.  
JAMES R. HERKERT\* and WILLIAM D. GLASS.

13:15 Reclaimed surface mine grasslands and avian conservation. T. L.  
DeVAULT\*, R. A. BAJEMA, P. E. SCOTT, and S. L. LIMA.

13:30 Henslow's Sparrows and reclaimed mine grasslands. R. A. BAJEMA\*, T.  
L. DeVAULT, P. E. SCOTT, and S. L. LIMA.

13:45 The relationship between probability of occurrence of grassland birds  
and field size depends on landscape composition. DAVID JOSEPH HORN\* and  
ROLF R. KOFORD.

14:00 Brown-headed Cowbirds in grasslands established by the Conservation  
Reserve Program in the northern Great Plains. LAWRENCE D. IGL\* and  
DOUGLAS H. JOHNSON.

14:15 Habitat use and reproductive success of grassland nesting birds on a  
reclaimed strip-mine. DANNY J. INGOLD\* and AMANDA L. MURRAY.

14:30 Evaluation of edge effects on grassland birds in the Kansas tallgrass  
prairie. WILLIAM E. JENSEN\* and ELMER J. FINCK.

14:45 The effect of predator distribution on grassland bird nest success.  
ERIC L. KERSHNER and JEFFERY W. WALK.

15:00 BREAK

15:30 Predicting grassland bird abundance: effects of spatial scale.  
TIMOTHY D. McCOY\*, MARK R. RYAN, ERIC W. KURZEJESKI, and LOREN W. BURGER,  
JR.

15:45 Status, habitat selection, and nesting ecology of Henslow's Sparrow in  
Oklahoma. DAN L. REINKING\*, DONALD H. WOLFE, and DAVID A. WIEDENFELD.

16:00 Results of a regional survey for breeding grassland birds in the  
Northeast, U.S.A. W. GREGORY SHRIVER\* and PETER D. VICKERY.

16:15 Influence of management and patch size on the distribution of  
grassland birds. JEFFERY W. WALK\* and RICHARD E. WARNER.

16:30 Edge effects in southwestern Missouri prairie fragments: Evidence from  
mammalian activity, artificial nests, and real nests. MAIKEN WINTER.

16:45 Microhabitat nest-site selection by Grasshopper Sparrows in tallgrass  
prairie. DAVID A. WIEDENFELD\*, DAN L. REINKING, and DONALD H. WOLFE.

GS24. Session: Habitat Management and Conservation II

Chairs: John B. Dunning, Jr. and Stephen C. Brown

13:00-17:15

Illinois

13:00 Effectiveness of bird habitat replacement at created wetlands in  
Massachusetts. STEPHEN C. BROWN.

13:15 Non-breeding dabbling duck use of flooded rice and moist-soil  
impoundments. JONATHAN D. MAUL\* and CHARLES M. COOPER.

- 13:30 Adverse effects of ecosystem restoration efforts on bird populations at Mono Lake, California. JOSEPH R. JEHL, JR.\* and ROBERT JELLISON.
- 13:45 Mist netting as a tool in revegetation monitoring. CHRISTOPHER D. OTAHAL.
- 14:00 Avian communities in deciduous forests differentially impacted by White-tailed Deer browsing in Indiana. BRIAN J. MacGOWAN and HARMON P. WEEKS, JR.
- 14:15 Fluctuating asymmetry as an indicator of logging effects on avian habitat quality. GARY D. ZENITSKY and ROBERT J. COOPER.
- 14:30 Least Bittern habitat selection and nesting productivity in southern Illinois mined land wetlands. SLADE B. MOORE\* and JACK R. NAWROT.
- 14:45 Habitat use by army ants and ant-following birds in premontane forest and traditional coffee plantation in western Panama. DINA L. ROBERTS, ROBERT J. COOPER and LISA J. PETIT.
- 15:00 BREAK
- 15:30 Response of American Woodcock to an aspen clearcut. WILLIAM L. ROBINSON.
- 15:45 Shorebird use of a large, restored wetland in central Indiana. JOHN B. DUNNING, JR. and THOMAS M. BRAILE.
- 16:00 What role does human disturbance have on nest success of Acadian Flycatchers (*Empidonax virescens*) in southeastern Missouri? KIMBERLY M. SUEDEKAMP and BRADY J. MATTSSON.
- 16:15 Reproductive success and territory dynamics of breeding Prothonotary Warblers in a bottomland hardwood forest. LARRY A. WOOD\* and ROBERT J. COOPER.
- 16:30 Corticosterone secretion as an indicator of indirect effects of *Bacillus thuringiensis* on Red-eyed Vireos. W. RUSS MCCLAIN\*, REBECCA L. HOLBERTON, and ROBERT J. COOPER.
- 16:45 Effects of structural marsh management and winter burning on bird abundance in Louisiana coastal marshes during winter. STEVEN W. GABREY\* and ALAN D. AFTON.
- 17:00 Recent changes in aquatic bird populations and habitat characteristics at Laguna Cartagena National Wildlife Refuge, Puerto Rico: Implications for restoration. FRED C. SCHAFFNER.
- GS25. Session: Migration and Orientation I  
Chairs: Russell P. Balda and Bruce Thompson  
13:00-17:30  
Jefferson D&E
- 13:00 Climatic correlates of bird migration patterns within South America. LEO JOSEPH\* and DAVID STOCKWELL.
- 13:15 Landbird migration through arid New Mexico: comparison of stopovers in three ecological settings. JOHN PUSCHOCK, BRUCE C. THOMPSON\*, MARK C. ANDERSEN, DEBORAH M. FINCH, JEFF KELLY, and MIKE MEANS.
- 13:30 The role of the sun compass in cache recovery by seed caching corvids. W. WILTSCHKO, R. WILTSCHKO, and R. P. BALDA\*.

- 13:45 Spring stopover ecology of migrant Western Sandpipers. MARY ANNE BISHOP and NILS WARNOCK.
- 14:00 Encounters of banded raptors associated with migration monitoring sites in Nevada and New Mexico, 1980-1997. STEPHEN W. HOFFMAN\*, JEFF P. SMITH, TIMOTHY D. MEEHAN, and PAUL GRINDROD.
- 14:15 Influence of weather on fall migration of Interlake Giant Canada Geese. BEAULIN L. LIDDELL\* and JAMES A. COOPER.
- 14:30 A banding study of migration patterns in two subspecies of the White-crowned Sparrow. ALVARO P. JARAMILLO.
- 14:45 Activity budgets of Summer Tanagers during stopover. DAVID A. ABORN\* and FRANK R. MOORE.
- 15:00 BREAK
- 15:30 Physiology constrains rapid refueling by Blackcaps (*Sylvia atricapilla*) during migratory stopover. WILLIAM H. KARASOV\*, BERRY PINSHOW, and DANIEL AFIK.
- 15:45 Wing beat frequency of thrushes during nocturnal migration. ROBERT H. DIEHL\* and RONALD P. LARKIN.
- 16:00 Age-related differences in migration behavior of Broad-winged Hawks. BRYAN P. MARANSKY\* and KEITH L. BILDSTEIN.
- 16:15 Stopover fat reserves of migrants: Implications for migration counts and other migration studies. JOHN PUSCHOCK.
- 16:30 What can simple models tell us about differential migration? MITCHELL B. BAKER and DANIEL A. CRISTOL.
- 16:45 Magnetic orientation of the Semipalmated Sandpiper during spring migration. DAVID S. MIZRAHI.
- 17:00 The trans-equatorial migration of the Swallow-tailed Kite (*Elanoides forficatus forficatus*): Route, habitat affinities, and implications for conservation. K. D. MEYER\*, A. W. WASHBURN, and J. E. ARNETT.
- 17:15 Temporal and spatial variation in abundance of migratory birds at an inland stopover site on Kennesaw Mountain, Georgia. ANDREW A. KINSEY\*, and C. RAY CHANDLER.

WS6. Workshop: Visual Ornithology: The use of multimedia in the classroom.  
Organizers: Gary. L. Nuechterlein and Deborah P. Buitron  
13:00-15:00  
Jefferson A

RT1. Roundtable: Choices: Career Alternatives in Ornithology (all welcome)  
Sponsor: Women in Ornithology Resource Group  
Organizers: Susan Elbin and Elissa Landre  
13:15-15:15  
LaClede

Evening Sessions:

WS8. Workshop: National Shorebird Plan Habitat Management Working Group  
Sponsor: Manomet Center for Conservation Science  
Organizer: Stephen Brown  
18:00 - 20:00

LaCledé

POSTERS\*

19:00 - 22:00

South Exhibit Hall

\*Posters will be available for viewing from Wednesday, April 8 at 3 PM until Saturday, April 11 at 3 PM. Authors are required to be at their poster during the Thursday evening session.

DATA MANAGEMENT AND ORGANIZATION

1. The North American Banding Council: Its role in enhancing the use of banding in research. STEPHEN M. RUSSELL.
2. The redesign of electronic data management in the North American Bird Banding Program. JOHN TAUTIN, MARY GUSTAFSON, LUCIE METRAS, and ERUM WELLING.
3. Introducing the U.S. National Committee for the International Union of Biological Sciences (IUBS). STEVEN R. BEISSINGER.
4. DUCKDATA: A bibliographic database for North American waterfowl and their wetlands habitats. DEAN W. DEMAREST and KENNETH J. REINECKE.

BEHAVIOR

5. Agricultural habitat use and perch preferences of Red-tailed Hawks (*Buteo jamaicensis*) and American Kestrels (*Falco sparverius*) in the Sacramento Valley, California. MAURA EAGAN.
6. Effects of endocrine disrupting pollutants, op' DDT and pp' DDT, on reproductive behaviors of the Zebra Finch, *Taeniopygia guttata*. JEANINE A. FERRENCE, PAUL L. LEBERG, and CLINTON W. JESKE.
7. Stable individual differences in Yellow-crowned Parakeets (*Cyanoramphus auriceps*) on developmental behaviors. MILDRED SEARS FUNK.
8. Environmental contaminants, food availability, and reproduction in a Bald Eagle (*Haliaeetus leucocephalus*) population on Vancouver Island, British Columbia, Canada. CHRIS E. GILL\*, JOHN ELLIOTT, and LEAH BENDELL-YOUNG.
9. Egg acceptance and rejection by Florida Scrub Jays. TINA L. GIONFRIDDO\* and GLEN E. WOOLFENDEN.
10. Between-group interactions in the cooperatively breeding Brown Jay. AMANDA M. HALE\*, DEAN A. WILLIAMS, and KERRY N. RABENOLD.
11. A review of factors that influence male parental care during incubation. BRITT J. HEIDINGER\* and THOMAS E. MARTIN.
12. The effects of experimentally-moving nests in an Eared Grebe colony. WENDY L. HILL\* and MELISSA CARNAHAN.
13. Factors affecting frequency of nest defense behavior in Worm-eating Warblers. KATHLEEN LYNCH.
14. Frequency, timing, and success of parasitic egg-laying in Wood Ducks. COURTENAY N. WILLIS\* and DAVID W. WALTER.
15. DNA evidence for extra-pair paternity in the Eastern Tufted Titmouse.

ELENA V. PRAVOSUDOVA.

16. Effects of multiple color bands on the behavior of white-breasted nuthatches. VALERIE A. WEISS.

ECOLOGY

17. Predation of artificial bird nests along road, river and lake ecotones in a boreal balsam fir forest. MARYLENE BOULET\* and MARCEL DARVEAU.
18. Foraging behavior and nest-site selection of Yellow-throated Warblers and Northern Parulas at Caddo Lake, Texas. GYPSY GOODING.
19. Ecological causes of spatial variation in the rate of nest predation. KATHERINE N. LARKINS\* and DAVID G. HASKELL.
20. House Sparrow decline accelerated by House Finches in the Great Plains. H. T. HENDRICKSON.
21. Dispersal of Tree Swallows and Eastern Bluebirds on a statewide scale: Preliminary results from the Cornell Nest Box Network in New York State. PAUL E. ALLEN, TRACEY L. KAST\*, PIXIE SENESAC, DAVID W. WINKLER, and ANDR C9 A. DHONDT.
22. Seasonal occurrences of diurnal raptors and Loggerhead Shrikes along a roadside transect in southern Texas: The role of perch height and below perch habitat on species distribution and interactions. DANIEL H. KIM\*, FELIPE CHAVEZ-RAMIREZ, and ALFREDO GAYTAM.
23. Foraging guild structure of primeval beech-fir forest bird community in MalE1 Fatra Mountains, Central Europe, during the breeding season. MARTIN KOROAN and PETER ADAMIK.
24. Partitioning of rich and marginal floral resources by Broad-tailed and Magnificent Hummingbirds. RONALD S. LANGE\*, SUMMER A. SCOBELL, and PETER E. SCOTT.
25. Human activities and the abundance of Common Ravens at Yucca Mountain, Nevada. PATRICK E. LEDERLE.
26. Influence of ice cover on Bald Eagle distribution within the Upper Mississippi River Region. KELLY J. MCKAY\* and GREGORY M. QUARTUCCI.
27. The relationship of nest site characteristics to the fledging success of Mourning Doves (*Zenaida macroura*). JILL L. DEPPE\*, ANTHONY J. NASTASE\*, DAWN A. SHERRY\*, and STEVEN M. AQUILANI.
28. The proximate effects of rainfall on avian clutch size. MICHAEL A. PATTEN\* and JOHN T. ROTENBERRY.
29. Territoriality and site persistence in the Louisiana Waterthrush overwintering in Puerto Rico, West Indies. LEONARD REITSMA\*, BENJAMIN STEELE, PETER HUNT, and SHERMAN BURSON.
30. Cattle Egrets shift foraging areas throughout nesting season in upper Delaware Bay. STEPHANIE R. SCHMIDT\* and KATHARINE C. PARSONS.
31. Diet and prey selectivity of two ground-foraging neotropical migrant warblers wintering in Jamaica. ALLAN M. STRONG.
32. A new explanation for the distribution of commonness and rarity in avian communities: The spatial variation in abundance hypothesis. ROBERT V. TAYLOR\* and JAMES H. BROWN.

33. Nest-site selection in wild turkeys from Arkansas: Effects of patch characters on reproductive success. WAYNE E. THOGMARTIN.
34. Effects of edge type on avian abundance and diversity in an urban arboretum. SARAH E. WARD.
35. Predators of songbird nests in western forest landscapes: Identification using artificial nests and cameras. KEVIN S. WARNER and REX SALLABANKS.
36. Overlap in nesting habitat of Bewick's Wren and House Wren in a Kansas prairie. DOUGLAS W. WHITE and E. DALE KENNEDY.
37. The influence of landscape on the reproductive success of Plumbeous Vireos breeding in Colorado. JAMESON F. CHACE, ALEXANDER CRUZ, DANIEL M. EVANS, SCOTT E. SEVERS, and JOHN WALSH.
38. Past and present distribution of the Brown-headed Cowbird in the Rocky Mountain Region. JAMESON F. CHACE and ALEXANDER CRUZ.
39. Kinematics, speed, and ecological implications of the stride cycle in the Japanese Quail (*Coturnix japonica*). CLAY E. CORBIN\* and STEPHEN M. REILLY.
40. Adaptive resource management in the Piedmont National Wildlife Refuge. LAURA L. FRASCH, CLINT T. MOORE, MICHAEL J. CONROY, and KATHERINE BARKER.
41. Characteristics of nest trees used by Woodpeckers in upland oak-hickory forests of southeastern Minnesota. COLLETTE L. ADKINS GIESE.
42. The vegetation structure of Bachman's Sparrow breeding habitat in southeastern U.S. THOMAS M. HAGGERTY.
43. Mockingbird territoriality and site fidelity at a Florida wintering area. SYLVIA L. HALKIN.
44. Relative abundance and habitat associations of Grasshopper Sparrows (*Ammodramus savannarum*) in six shrub-steppe habitat types of Oregon's Columbia Plateau. AARON HOLMES, GEOFFREY R. GEUPELL, NAVAD NUR, RUSS MORGAN, and KENT LIVEZEY.
45. The influence of benthic invertebrates and water depth on foraging site selection of ten nonbreeding waterbird species in California's northern San Joaquin Valley. REBECCA JO SAFRAN\*, CRAIG R. ISOLA, MARK A. COLWELL, and ORIANE E. WILLIAMS.
46. Great-tailed Grackle invasion of California, 1964 to present: Patterns of colonization. WALTER WEHTJE and DANIEL S. COOPER.
47. Habitat selection and pairing success of Red-eyed Vireos in different sized woodlots. WENDY R.E. DUNFORD\* and DAWN BURKE.
48. The importance of mountain Longleaf Pine and hardwood forests for breeding birds in the Talladega Mountains, Alabama. SCOTT F. LOVELL.
49. The influence of water retention structures and associated riparian zones on avian communities within agricultural and forested sites. JONATHAN D. MAUL\* and CHARLES M. COOPER.
50. Climate change and avian range expansions in the forest-tundra transition of the Northwest Territories: Difficulties in evaluating alternative hypotheses. CHRISTOPHER J. NORMENT, ALEX HALL, and PAUL HENDRICKS.
51. Influence of adjacent habitat disturbance on forest bird communities.

AMANDA DUMIN RODEWALD and RICHARD H. YAHNER.

52. Nesting ecology of Least Terns using natural and man-made habitats of coastal Georgia. SARA H. SCHWEITZER and MICHAEL G. KROGH.

53. Bird use of conventional, minimum tillage, and organic farms. DAVE SHUTLER, ADELE MULLIE, and ROBERT G. CLARK

54. Lotteries and despotism in avian territoriality. DAVE SHUTLER.

#### CONSERVATION

55. Bird surveys and training at the Iwokrama International Centre for Rain Forest Conservation and Development, Guyana: Preliminary results. DAVID AGRO\*, ROBERT S. RIDGELY, and LEO JOSEPH.

56. The use of a GIS to monitor competition for nest trees between Double-crested Cormorants and Black-crowned Night-Herons at colonies near Toronto, Ontario. SCOTT W. JARVIE, TAMARA CHIPPERFIELD, and HANS BLOKPOEL.

57. Mercury exposure of Common Loons in Minnesota. CORY J. COUNARD, PETER REAMAN, DAVE EVERS, JOE KAPLAN, FRANCESCA CUTHBERT, EMMETT BRASELTON, BENNETT DAVIS, and JEFF HINES.

58. The effects of hunting on the avifauna of the Nakai-Nam Theun National Biodiversity Conservation Area, Lao P.D.R. MATTHEW A. ETTERSON.

59. Testing effects of habitat manipulation on an isolated sink population of the federally endangered Black-capped Vireo (*Vireo atricapillus*). DAVID W. WOLFE, C. CRAIG FARQUHAR\*, PHI A. NGUYEN, and JOHN P. MARESH.

60. Domestic cat predation on birds in different spatial arrangements of housing development. AMY M. KNUPP\* and DAVID G. HASKELL.

61. Chocolate production, protected area corridors, and forest bird conservation in the Talamanca region of Costa Rica. JEFFREY D. PARRISH and ROBERT W. REITSMA.

62. California Gnatcatcher territory size and breeding behavior: Implications for habitat conservation planning and species management. KRISTINE L. PRESTON\* and PATRICK J. MOCK.

63. Evidence of population declines among Common Eiders breeding in the Belcher Islands, Northwest Territories. GREGORY J. ROBERTSON, and H. GRANT GILCHRIST.

64. Partial-cut forest harvesting: Does it provide habitat for forest-dependent songbirds? REBECCA TITTLER\*, MICHAEL R. NORTON, and SUSAN J. HANNON.

65. Success of shrub-nesting birds relative to surrounding land use. JEFFERY W. WALK and ERIC L. KERSHNER.

66. Status and behavior of a newly-established Parrot population of Maui, Hawaii. GEORGE H. WARING.

67. Do hedgerows have conservation value for birds? JULIE L. WHIPKEY.

68. Domestic cat predation of birds. LINDA WINTER.

69. Status assessment of Cerulean Warbler. PAUL B. HAMEL

70. Heavy metal and selenium levels in grebe eggs and feathers from Agassiz

NWR. JOANNA BURGER, and BRUCE EICHHORST.

#### BREEDING BIOLOGY

71. Measuring nest attentiveness and nest temperature patterns in grebes. TRACY A. AICHER\* and BRUCE A. EICHHORST.
72. Analysis of indigenous microbiota and breeding population trends for Western Gulls on Alcatraz Island. MARY CATHERINE BARGER, MICHAEL SULLIVAN, KATHLEEN R. SCHUPE, and MARGARET E. BROWN.
73. Adaptive significance of reneesting following nest abandonment in the Blue-gray Gnatcatcher. ERIC K. BOLLINGER, and MELISSA N. HELTON.
74. A comparison of predation rates on artificial and natural nests of grassland birds. WILLIAM B. DAVISON.
75. Survivorship and lifetime reproductive success of Field Sparrows (*Spizella pusilla*) in northeastern Pennsylvania. MICHAEL CAREY.
76. Egg size, hatching date and growth of Lesser Scaup ducklings. RUSSELL D. DAWSON and ROBERT G. CLARK.
77. Reproductive success of winter wrens (*Troglodytes troglodytes*) in North-temperate coniferous forests. TONI L. DE SANTO\*, MARY F. WILLSON, KRISTEN BARTECCHI, and JOSH WEINSTEIN.
78. Life history characteristics and the landscape ecology of breeding birds in Michigan forests. THOMAS V. DIETSCH.
79. Biological implications of Common Tern egg contaminant levels. DELIA M. GARCIA, MARK SHIELDCASTLE, and GILDO TORI.
80. Breeding biology of Peruvian Guano-birds and their relation to Peruvian Anchovy availability. JAIME JAHNCKE\* and LUIS PAZ-SOLDAN.
81. Geographic variation in the breeding biology of North American cavity-nesting birds: Preliminary results from the Cornell Nest Box Network. TRACEY L. KAST\*, PAUL E. ALLEN, PIXIE SENESAC, ANDRÉ A. DHONDT, and DAVID W. WINKLER.
82. Scale dependent selectivity for cover at Marbled Murrelet nest sites. IRENE A. MANLEY.
83. Reproductive biology and offspring growth of Salton Sea Gull-billed Terns. KATHY C. MOLINA.
84. Relative abundance and distribution of breeding birds in a central Appalachian forest of eastern Pennsylvania. MARK S. MONROE and LAURIE J. GOODRICH.
85. Mate retention and nesting site fidelity in Red-necked Grebes. GARY L. NUECHTERLEIN, DEBORAH P. BUITRON, and BONNIE E. STOUT.
86. Time of day of egg laying in a riparian bird community. SPENCER G. SEALY, DIANE L. NEUDORF\*, and D. GLEN MCMMASTER.
87. Reproductive failure of breeding Caspian Terns in Elkhorn Slough, California. JENNIFER L. PARKIN.
88. The effect of male age and testosterone treatment on reproductive success in the Dark-eyed Junco. SAMIRAH A. RAOUF\*, PATRICIA G. PARKER, ELLEN D. KETTERSON, and VAL NOLAN, JR.

89. Egg physiognomy and conspecific brood parasitism recognition in the Eastern Kingbird. DIANE L. ROWE\*, MICHAEL T. MURPHY, and JAMES J. ROPER.
90. Embryonic development of the American Kestrel (*Falco sparverius*). GARY SANTOLO, JACKIE PISENTI, JULIE YAMAMOTO, and ALIDA MORZENTI.
91. Yellow-billed Cuckoo nest-site selection in a Mississippi alluvial valley bottomland hardwood forest. JENNIFER K. WILSON, WINSTON P. SMITH, BRIAN R. CHAPMAN, and ROBERT J. COOPER.
92. Egg ejection by "accepter" cowbird hosts and possible preferential egg stealing by cowbirds. DIRK E. BURHANS, MAIKEN WINTER, and STEPHEN I. ROTHSTEIN.
93. Peruvian Diving-petrel breeding biology on La Vieja Island, central coast of Peru. JAIME JAHNCKE\* and ELISA GOYA.
94. Components of variation in growth of cross-fostered nestlings in the Tree Swallow. DONALD L. BEAVER\*, RICHARD W. HILL, and PATRICK E. LEDERLE.
95. Multivariate analysis of Rock Wren nest sites. JENNIFER J. MATIASEK.

#### EVOLUTION AND SYSTEMATICS

96. Geographic variation in the Canyon Wren. STEPHANIE L. JONES and J. SCOTT DIENI.
97. Genetic polymorphisms in two species of whistling ducks from Texas. AMANDA S. ALLEN, OLIN E. RHODES, JR., ERIN P. REAT, ALAN M. FEDYNICH, D.B. PENCE, and JAMES F. BERGAN.
98. The monophyly and outgroup relationships of the Hawaiian finch radiation: An osteological cladistic analysis. HELEN F. JAMES.
99. The phylogenetic placement of the Hawaiian Thrush based on molecular data. CARL E. MCINTOSH, and ROBERT C. FLEISCHER.
100. Genetic variation and gene flow in the subspecies of White-winged Dove in Texas. CHRISTIN L. PRUETT\*, SCOTT E. HENKE, KELLY M. HOGAN, MICHAEL F. SMALL, and JAY ROBERSON.
101. Intense natural selection on body size and fluctuating asymmetry in swallows during severe weather. CHARLES R. BROWN and MARY BOMBERGER BROWN.
102. Population genetics and phylogeny of the Cave Swallow species complex. JEREMY J. KIRCHMAN.
103. Phylogeny and biogeography of the *Amazona ochrocephala* (Psittacidae) species complex. J. R. EBERHARD\* and E. BERMINGHAM.
104. Molecular markers for studying hybridization between Blue-winged and Golden-winged Warblers (*Vermivora pinus* and *V. chrysoptera*). LEO H. SHAPIRO, RONALD A. CANTERBURY, and ROBERT C. FLEISCHER.
105. Estimation of genetic variation in the Eastern Wild Turkey (*Meleagris gallopavo silvestris*) by DNA fingerprinting. BAOSHAN SHEN and OLIN E. RHODES, JR.

#### METHODOLOGY

106. Evaluating non-breeding bird abundance in prairie environments: A comparison of two survey methods. JENNIFER A. DHUNDALE\*, ROBERT J.

FLETCHER, JR., and TYLAN F. DEAN.

107. A comparison of avifaunal monitoring using point count and random area search methods. KELLY J. MCKAY\*, JAMES P. QUINLIVAN, and MICHAEL S. BORNSTEIN.

108. An exact method for measuring vertical foliage distribution. PAUL B. HAMEL.

109. Does the method of preparation alter measurements of organochlorine pesticide levels in avian carcasses? J. A. FRICK, J. A. KLEMENS\*, R. G. HARPER, and A. P. CAPPARELLA.

110. A fungal inoculation technique to promote the establishment of nesting woodpeckers in managed forests. MARTIN J. HUSS, DAVID M. JULIANO, JAMES C. BEDNARZ, and DANIEL E. VARLAND.

111. Use of a video recording system to monitor Willow Flycatcher nests along the San Pedro River, Arizona. TRACY D. MCCARTHEY\*, JAY W. ROURKE, CHARLES E. PARADZICK, and MICHAEL W. SUMNER.

112. A new artificial egg design for use in studies of nest predation. GEOFFREY B. WEST\*, and DAVID G. HASKELL.

#### MIGRATION

113. Stopover to Neotropical and temperate landbird migrants on the south shore of Lake Ontario during spring migration. GREGORY A. JONES and CHRISTOPHER J. NORMENT.

114. Absence of breeding readiness in Neotropical and long-distance migrant landbirds during spring stopover. GREGORY A. JONES and CHRISTOPHER J. NORMENT.

115. Idaho Bird Observatory. GREGORY S. KALTENECKER\* and MARC J. BECHARD.

116. Flight without horizon references in European Starlings (*Sturnus vulgaris*). ROBERT G. MOYLE\* and FRANK H. HEPPNER.

117. Assessment of avian population change using migration casualty data. JENNIFER A. NEHRING\* and SANDRA D. BIVENS.

118. Indication of molt migration in temporarily flightless Yellow Rails along the St. Lawrence River, Quebec. MICHEL ROBERT\* and PIERRE LAPORTE.

119. Use of isolated farmstead woodlots in the northern Great Plains as stopover habitat by Neotropical woodland migrants. HEATHER A. CARLISLE\*, ERIC T. LIKNES and DAVID L. SWANSON.

120. Shorebird diet during migration through Delaware Bay. NELLIE TSIPOURA and JOANNA BURGER.

121. Changes in community composition of migrant landbirds during stopover on Falkner Island, Stewart B. McKinney National Wildlife Refuge, Connecticut, from 1978-96. JAMES M. ZINGO.

122. The dynamics of the 1997-1998 winter finch "superflight" in eastern North America. STEVE KELLING, KENNETH V. ROSENBERG, ANDRE A. DHONDT, ROGER SLOTHOWER, and JOHN W. FITZPATRICK.

123. Monitoring the fall migration of Northern Saw-whet Owls in southern Rhode Island. PETER W.C. PATON.

MORPHOLOGY AND PHYSIOLOGY

124. Sexing White-winged Doves (*Zenaida asiatica asiatica*) by discriminant analysis of morphological measurements. NATHAN A. BURKEPILE\*, CHRISTIN L. PRUETT, and JONATHAN E. THOMPSON.
125. Comparative morphometric data in the genus Tragopan (Phasianinae): What lessons can we learn? KAMAL ISLAM\* and JOHN A CRAWFORD.
126. Using the mass of flight feathers in fluctuating asymmetry studies: Pitfalls and prospects. SIRI IBARGDCEN and THOMAS A. WAITE.
127. Relative value of TOBEC, morphometrics and fat-scoring in estimating % fat in small passerines. BRADLEY J. BERGSTROM and THOMAS W. SHERRY.
128. Thermoregulatory responses of day-old Mallards to air temperature and wind: A standard operative temperature scale. GEORGE S. BAKKEN, PENNY S. REYNOLDS, KEVIN KENOW, CARL E. KORSCHGEN, and ANDREW F. BOYSEN.
129. Energy and nutrient requirements for growth in the Green-rumped Parrotlet (*Forpus passerinus*). M. ANDREINA PACHECO, CARLOS BOSQUE, and STEVEN R. BEISSINGER.
130. Metabolic adaptation and climatic constraints on winter bird distribution. GRANT E. CANTERBURY.
131. Flight performance of Hummingbirds: Effects of shorter wings, weight gain, and molt. PENG CHAI\*, and ROBERT DUDLEY.
132. Plasma lipid metabolites as measures of physiological state in the Western Sandpiper. CHRISTOPHER G. GUGLELMO\*, TONY D. WILLIAMS, OLIVER EGELER, and CHRISTOPHER J. MARTYNIUK.
133. Effect of photoperiod on fecal estradiol levels in migratory and non-migratory buntings. TSUKASA NAKAMURA and MASANORI ITOH.
134. Risk factors associated with mycoplasmal conjunctivitis in House Finches: Results from a citizen based study. BARRY K. HARTUP\*, HUSSNI O. MOHAMMED, GEORGE V. KOLLIAS, and ANDRE A. DHONDT.

POPULATION BIOLOGY AND DEMOGRAPHY

135. Age structure and longevity in the Semipalmated Plover population breeding at Churchill, Manitoba. DEBBIE GIESBRECHT\*, ERICA NOL, and YURI ZHARIKOV.
136. Fifty year study in Michigan of avian populations in a maturing aspen forest. DOUGLAS A. JAMES and AMANDA E. LATHAM.
137. Population trends of the Caspian Tern (*Sterna caspia*) in North America. LINDA R. WIRES\* and FRANCESCA J. CUTHBERT.
138. Decline in a western population of American Redstarts: Habitat preference and demographic consequences. JOSHUA J. TEWKSBURY and TODD M. MUSCI.
139. Demography of a wintering warbler in Jamaican agricultural and natural habitats. MATTHEW D. JOHNSON\* and THOMAS W. SHERRY.

TROPICAL ECOLOGY

140. Modification of point counts to enhance avian species detectability during the non-breeding season in Belize, Central America. VICTORIA D.

PIASKOWSKI and OMAR A. FIGUEROA.

141. Distribution, endemism and habitat use across taxa: A comparison among butterflies and birds of Costa Rica. DOUGLAS F. STOTZ and SARAH A. DUNDAS.

142. The diet of Guanay Cormorants and Peruvian Boobies as indicators of Peruvian Anchovy abundance and distribution. JAIME JAHNCKE\* and ELISA GOYA.

143. Diet and ranging patterns of a group of Black Curassows. IVAN JIMENEZ\*, MARISOL ESCANO, XIMENA BERNAL, and CARLOS A. MEJIA.

144. Altitudinal distribution, habitat selection, and abundance of *Grallaria antpittas* in the Central Andes of Colombia. G. H. KATTAN\* and J. W. BELTRAN.

#### VOCALIZATION

145. Song dialects in the Bronzed Cowbird. PAIGE S. WARREN.

146. Songs of Aleutian Island Song Sparrows: Acoustic structure in a windy environment. EDWARD W. WEST.

147. Song variation in California Rufous-crowned Sparrows. MARK C. WIMER.

148. Interspecific signal discrimination between Nuttall's and White-headed Woodpeckers. D. J. DODENHOFF and R. D. STARK.

149. Passerine call notes: An underappreciated character in the study of geographic variation of North American birds? KIMBALL L. GARRETT and JON L. DUNN.

#### Morning Sessions:

##### P3. Plenary Lecture

Sponsor: International Center for Tropical Ecology at Univ. Missouri-St. Louis

08:15-09:15

Grand Ballroom

08:15 Fifty years of thought about life histories of birds. ROBERT E. RICKLEFS.

##### BREAK

09:15-09:45

West Assembly Area

##### GS26. Session: Systematics II

Chair: Pam Rasmussen

09:45-12:00

Lewis and Clark

09:45 A reassessment of the distribution, conservation, and taxonomic status of the Plain-pouched Hornbill *Aceros subruficollis*. PAMELA C. RASMUSSEN.

10:00 A comparison of cytochrome-b and DNA-hybridization phylogenetic data for herons, parids, swallows, and sylvioids: The good, bad, and ugly. FREDERICK SHELDON\*, CLARE JONES, KEVIN McCracken, FRANK GILL, BETH SLIKAS, LINDA WHITTINGHAM, and DAVID WINKLER.

10:15 Relationships of extinct Hawaiian rails, based on mitochondrial DNA sequences. BETH SLIKAS\* and ROBERT FLEISCHER.

10:30 The systematic relationships of the Hawk-Headed Parrot, *Deropterus accipitrinus*. MATTHEW I. WILLIAMS.

10:45 A comparison of molecular and morphological estimates of gruiform phylogeny. P. HOUDE.

11:00 Evolutionary relationships of *Buteo* and related taxa. ROBERT FLEISCHER, PEDRO CORDERO, CARL MCINTOSH, ISAAC JONES, and ANDREAS HELBIG.

11:15 The phylogeny of cranes from DNA sequences: Is the evidence from cytochrome b and ND6 congruent with that from intron 7 of the beta-fibrinogen gene? MATTHEW G. FAIN\* and CAREY KRAJEWSKI.

11:30 Enigmatic phylogeny of Skuas: An alternative hypothesis. MICHAEL J. BRAUN\* and ROBB T. BRUMFIELD.

11:45 Among-site rate variation in the cytochrome b and ND6 genes of cranes. CAREY KRAJEWSKI.

GS27. Session: Fragmentation and Landscape Ecology III

Chair: Susan Hannon

09:45-11:45

Missouri

09:45 Source/sink dynamics in American Redstarts and related stand and landscape features: Conservation in a stochastic environment. SUSAN J. HANNON.

10:00 Patterns of habitat use by Neotropical migratory and resident birds in a fragmented landscape in Mexico. CATHERINE H. GRAHAM.

10:15 Changes in the avifauna of an Andean region following eight decades and a half of forest fragmentation. LUIS MIGUEL RENJIFO.

10:30 A source sink model of Lazuli Buntings in Montana. ERICK GREENE, JENNIFER JOLIVETTE\*, and ROLAND REDMOND.

10:45 The influence of island area and elevation on anthropogenic extinction rates of Polynesian birds. DAVID W. STEADMAN.

11:00 A preliminary study of the historic distribution of birds on Palawan, Philippines. KELLEY R. REIS.

11:15 The health of riparian bird populations in central coastal California National Parks. GEOFFREY R. GEUPEL \*, STACY SMALL, NADAV NUR, TOM GARDALI, and GRANT BALLARD.

11:30 Evaluating Great Smoky Mountains National Park as a population source for Wood Thrush. GEORGE L. FARNSWORTH\* and THEODORE R. SIMONS.

GS28. Session: Ecotoxicology

Chair: Jeanne Fair

09:45-11:15

Jefferson B&C

09:45 Life history traits and the ecological costs of contaminants on cavity-nesting birds. JEANNE M. FAIR and ORRIN B. MYERS.

10:00 Behavioral toxicology of the Common Loon in the Canadian Maritimes.

JOSEPH J. NOCERA.

10:15 Organochlorine pesticide contamination in Neotropical resident passerines. A.P. CAPPARELLA\*, R. G. HARPER, J. A. FRICK, J. A. KLEMENS, T. A. SAGER, and D. BIESINGER.

10:30 Extensive feather growth during the nestling stage provides Great Egrets protection against sublethal effects of dietary methylmercury poisoning. PETER C. FREDERICK, MARILYN G. SPALDING, SHANNON BOUTON, and HEATHER LYNCH.

10:45 Plasma cholinesterase activity in Illinois breeding passerines. ELIZABETH C. LOEBACH and JEFFREY D. BRAWN.

11:00 Wintering range and habitat patterns of organochlorine pesticide contamination in Neotropical migrant passerines. J. A. KLEMENS\*, R. G. HARPER, J. A. FRICK, and A. P. CAPPARELLA.

GS29. Session: Field and Analytic Methods

Chair: Jean-Pierre Savard

09:45-11:45

Jefferson A

09:45 Evaluation and comparison of three home range analyses using wintering shorebird GPS locations. CHRISTINE M. GUNNELS, DAVID T. COBB, and GARY SPRANDEL.

10:00 Sex identification of Boreal Owl and capture techniques for woodpeckers and owls. JACQUES IBARZABAL\* and JEAN-PIERRE L. SAVARD.

10:15 An evaluation of a new rapid assessment method for estimating avian diversity in tropical forests. SEBASTIAN K. HERZOG\* and MICHAEL KESSLER.

10:30 Effect of neckbands on activity of Giant Canada Geese at Rochester, Minnesota. BEAULIN L. LIDDELL\* and JAMES A. COOPER.

10:45 A new technique to deter rat snakes from climbing Red-cockaded Woodpecker cavity trees and a description of how rat snakes climb limbless pine boles. DANIEL SAENZ\*, CHRISTOPHER S. COLLINS, and RICHARD N. CONNER.

11:00 Subcutaneous and intra-abdominal radiotransmitters with external whip antennas in Mourning Doves. JOHN H. SCHULZ\*, ALEX J. BERMUDEZ, JAMES L. TOMLINSON, JEFFREY D. FIRMAN, and ZHUOQIONG HE.

11:15 Historical resources for ornithologists. MELISSA G. WIEDENFELD.

11:30 Molecular sex determination of Hermit Thrush wintering in southeast Louisiana. GENA M. DWYER\*, MARY E. WHITE and PHILIP C. STOUFFER.

GS30. Session: Habitat Selection I

Chair: Wendy Gram

09:45-12:00

Field

09:45 Territory densities and habitat correlates of forest interior birds in the Missouri Ozark Forest Ecosystem Project (MOFEP). WENDY K. GRAM, JOHN FAABORG, KASSIA REYNARD, RICHARD L. CLAWSON, ELENA SEON, and CRAIG SCROGGINS.

10:00 American Redstart habitat relationships on Upper Mississippi River floodplain forests. EILEEN M. KIRSCH.

10:15 Clustering of nest locations in the San Clemente Loggerhead Shrike. THOMAS SCOTT\*, WILLIAM EVERETT, MICHAEL MORRISON, FRANS JUOLA, CATHY

KOEHLER, PEY-YI LEE, and WALTER WEHTJE.

10:30 Modeling Wood Thrush habitat associations in the southern Appalachians. SUSAN A. SHRINER, THEODORE R. SIMONS\*, and GEORGE L. FARNSWORTH.

10:45 Winter use of salt ponds by shorebirds in San Diego Bay. JILL M. TERP.

11:00 Bullock's Orioles and Yellow-billed Magpies: Evidence for an active nesting association. DAVID RICHARDSON and GINGER M. BOLEN.

11:15 Habitat use by foraging vultures in east central Florida. ERIC D. STOLEN and VICKIE L. LARSON.

11:30 Comparative habitat selection in Wilson's Warblers and Yellow Warblers along an elevational gradient. JANET M. RUTH.

11:45 Changes in nesting distribution and density in three species of terns. JOHN G.T. ANDERSON.

GS31. Session: Breeding Biology III

Chair: Laura Lee

09:45-12:00

Mississippi

09:45 The effects of food supplementation on Eastern Bluebird (*Sialia sialis*) reproduction in east central Kansas. DOUGLAS A. ROBINSON, JR\* and ELMER J. FINCK.

10:00 Nest defense behavior of Eastern Bluebirds under different conditions of food availability. LAURA R. LEE.

10:15 Cumulative effects of cowbird parasitism on host reproductive success. LISA J. PETTIT.

10:30 Parental care in estrildid finches: Cross-species fostering experiments support a colonization model of *Vidua* brood parasites. ROBERT B. PAYNE.

10:45 An experimental test of the influence of egg size on fitness-related traits in nestling House Wrens. JOHN D. STYRSKY\* and CHARLES F. THOMPSON.

11:00 Hatching asynchrony reduces the duration, not the magnitude, of peak load in breeding Green-rumped Parrotlets. RODNEY B. SIEGEL.

11:15 Costs of reproduction in Tree Swallows? DAVE SHUTLER and ROBERT G. CLARK.

11:30 Nesting biology of the Band-tailed Pigeon in western Oregon. JEROME P. LEONARD\* and ROBERT L. JARVIS.

11:45 Bird nesting ecology in a forest defoliated by gypsy moths. JENNIFER L. BELL\* and ROBERT C. WHITMORE.

GS32. Session: Mating Systems and Sexual Selection II

Chair: David Westneat

09:45-11:45

Jefferson D&E

09:45 Using microsatellites to evaluate extra-pair paternity in sub-arctic

breeding Black Brant (*Branta bernicla nigricans*). PAMELA SVETE\*, JIM SEDINGER, GERRY SHIELDS, and KIM SCRIBNER.

10:00 Exposure to bacteria in semen is a consequence of extra-pair copulations to female Red-winged Blackbirds. T. BIRCH RAMBO and DAVID F. WESTNEAT.

10:15 Delayed plumage maturation in Lazuli Buntings: Tests of the female mimicry and status signalling hypotheses. VINCENT MUEHTER\*, ERICK GREENE, and LAURENE RATCLIFFE.

10:30 The effect of a blood parasite on Blue Jay (*Cyanocitta cristata*) reproductive success. MARY C. GARVIN\* and KEITH A. TARVIN.

10:45 Consequences of plumage variation among yearling Lazuli Buntings: Dull males do best when competition among males is high. ERICK GREENE, BRUCE E. LYON, and VINCENT MUEHTER.

11:00 Mate fidelity, divorce and reproductive success in Magellanic Penguins. GENE S. FOWLER\* and P. DEE BOERSMA.

11:15 Alternative hypotheses linking the immune system and mate choice in birds. DAVID F. WESTNEAT and TIM R. BIRKHEAD.

11:30 Breeding synchrony and extra-pair fertilizations in two populations of Red-winged Blackbirds. DAVID F. WESTNEAT and ELIZABETH M. GRAY.

#### GS33. Session: Predation Ecology

Chair: John Blake

09:45-12:00

LaClede

09:45 Sensory cues and their use by foraging avian nest predators. LEONARD SANTISTEBAN.

10:00 Avian predation on threatened salmonids in the Columbia River estuary. DANIEL D. ROBY\*, KEN COLLIS, STEPHANIE ADAMANY, and DAVID P. CRAIG.

10:15 Nest-site selection by six upland-nesting ducks: Do predators matter? ALISON E.H. PERKINS\* and I. J. BALL.

10:30 Nest-site selection and nest predation of Bicknell's Thrush in montane spruce-fir forests of the northeastern United States. KENT P. McFARLAND\* and CHRISTOPHER C. RIMMER.

10:45 Improved fledging success of Least Bitterns following removal of a mink den. JOYCE C. MAZOUREK\* and NICOLE L. FREDRICKSON.

11:00 Predation rates on artificial nests in pristine tropical forest. MARTHA J. GROOM and M. URSULA VALDEZ\*.

11:15 Predation pressure along an urban gradient: Predatory risk or release in urban environments? JONATHAN C. GERING\* and ROBERT B. BLAIR.

11:30 A comparison of predation on natural and artificial passerine nests in a southern pine forest. JEFFREY J. BULER.

11:45 Forest community responses to Blue Jays (*Cyanocitta cristata*), a known nest predator. PAUL A. CALLO.

Afternoon Sessions:

S6. Symposium: Avian Life Histories

Convenor: Robert E. Ricklefs

13:00-17:00

Mississippi

13:00 Environmental constraints and mechanistic pathways underlying the evolution of life histories. THOMAS E. MARTIN.

13:30 Avian parent-offspring interactions under life history selection. ANNE B. CLARK.

14:00 Life-history aspects of family strife. DOUGLAS W. MOCK.

14:30 Endocrine control of life-cycle stages: A constraint on response to the environment? JOHN C. WINGFIELD.

15:00 BREAK

15:30 Immunity as a life history trait. VICTOR APANIUS.

16:00 The role of optimization models in understanding life histories, with particular reference to the Alcidae. RONALD. C. YDENBERG.

16:30 The comparative approach to avian life histories: A useful complement to within-population studies. DAVID W. WINKLER.

S7. Symposium: Stopover Ecology and its Relevance to Bird Conservation

Convenors: Kenneth Rosenberg and Peter Vickery

13:00-17:00

Missouri

13:00 Stopover biology of shorebirds and passerines: What can we learn by comparing systems? SUSAN K. SKAGEN.

13:30 Bird observatories, banders and bird watchers: Pooling data from stopover sites to benefit conservation of migratory birds. ERICA H. DUNN.

14:00 A comparison of timing, content, and monitoring methods of landbird migration in the Pacific states. C. JOHN RALPH.

14:30 Behavior and ecology of intercontinental migrant landbirds: Importance of scale. FRANK R. MOORE\* and THEODORE R. SIMONS.

15:00 BREAK

15:30 The use of weather surveillance radar to map important migration stopover areas. SIDNEY A. GAUTHREAUX, JR. and CARROLL G. BELSER.

16:00 Bridging the gap between migration science and conservation action: Lessons from Block Island and beyond. JEFFREY D. PARRISH.

16:30 Long-term protection of coastal shorebird, raptor and passerine stopover on the Cape May Peninsula. LAWRENCE J. NILES and ERIC STILES.

GS34. Session: Cooperative Breeding/Social Behavior

Chair: Craig Benkman

13:00-16:30

Jefferson D&E

13:00 Territory size, habitat use, and population size of the Island Scrub-Jay (*Aphelocoma insularis*). RODD KELSEY.

- 13:15 The adaptive use of public information by foraging Red Crossbills (*Loxia curvirostra*). JULIE W. SMITH\* and CRAIG W. BENKMAN.
- 13:30 Public information use favors assortative flocking or why birds of a feather should flock together. CRAIG W. BENKMAN\*, JULIE W. SMITH, and KIMBERLY COFFEY.
- 13:45 Primogeniture and social organization in Magpie roosts. C. H. TROST.
- 14:00 Stepparents, parents, and the fates of natal prebreeding Florida Scrub-Jays (*Aphelocoma coerulescens*). GLEN E. WOOLFENDEN\*, JILL M. GOLDSTEIN, and JACK P. HAILMAN.
- 14:15 Behavioral and genetic parentage in the cooperatively breeding Brown Jay. DEAN A. WILLIAMS\* and AMANDA M. HALE.
- 14:30 Cooperative breeding by Brown-headed Nuthatches in southern Florida. GARY L. SLATER.
- 14:45 Demographic consequences of limited breeding opportunities in a south central Florida Red-cockaded Woodpecker population. D.L. LEONARD, JR.\* and REED BOWMAN.
- 15:00 BREAK
- 15:30 The function and significance of Common Loon social gatherings. JAMES PARUK.
- 15:45 Nestling sex ratios in fairy-wrens. STEPHEN PRUETT-JONES, MICHAEL WEBSTER, and ELAINA TUTTLE.
- 16:00 No evidence for reciprocation as a direct benefit of helping behavior in the Red-cockaded Woodpecker. MEMUNA Z. KHAN\* and JEFFREY R. WALTERS.
- 16:15 Upon closer inspection, helpers don't help in Western American Crows. CAROLEE CAFFREY.
- GS35. Session: Physiology and Energetics II  
Chair: Tom Dailey  
13:00-16:15  
Field
- 13:00 Trans-dermal delivery of exogenous steroid hormone: A non-invasive method for hormone studies. W.B. CASH\*, C.G. SIMS, L. ARCAND-HOY, F. TILTON, and R.L. HOLBERTON.
- 13:15 Effect of temperature and wind on Northern Bobwhite metabolism. LOREN W. BURGER, JR., MARK R. RYAN, THOMAS V. DAILEY\*, and ERIC W. KURZEJESKI.
- 13:30 Effects of vegetation structure on Bobwhite Quail (*Colinus virginianus*): Thermodynamic energy demands. ELIODORA J. CHAMBERLAIN\*, RONALD D. DROBNEY, THOMAS V. DAILEY.
- 13:45 The effects of temperature and artificial rainfall on the metabolism of American Kestrels. SHELDON J. COOPER\*, GLENN R. WILSON and JAMES A. GESSAMAN,
- 14:00 Age-related differences in the corticosterone stress response in the Northern Mockingbird. CRISTOPHER G. SIMS\* and REBECCA L. HOLBERTON.
- 14:15 Reproductive flexibility and brain GnRH plasticity in songbirds. T. P. HAHN\*, P. J. DEVICHE, R. CRAIN, R. N. CHO, S. A. MACDOUGALL-SHACKLETON, and G. F. BALL.

- 14:30 Migration-induced variation in thermogenic capacity in migratory passerines. DAVID L. SWANSON\* and KURT L. DEAN.
- 14:45 Effects of diet quality on growth and development of nestling seabirds: Captive feeding trials. MARC D. ROMANO, DANIEL D. ROBY, and JOHN F. PIATT.
- 15:00 BREAK
- 15:30 The role of pre-roost hyperphagia by hummingbirds in determining torpor use: Frequency and duration. DONALD R. POWERS\* and TENNILLE K. CAMARILLO.
- 15:45 Adrenocortical stress response in North American accipiters during autumn migration. H. M. ROGERS\*, M.J. BECHARD and A.M. DUFTY, JR.
- 16:00 Mathematical modeling of reproductive photocues in captive bird populations. GREGORY A. BABBITT.

GS36. Session: Endangered and Vulnerable Species III

Chair: Francisco Vilella

13:00-16:30

LaClede

- 13:00 An evaluation of management techniques to increase the reproductive success of roof-nesting Black Skimmers in northwest Florida. HEATHER A. BOLTE\*, DAVID T. COBB, and DANIEL L. COMBS.
- 13:15 Using environmental and landscape features to model interior Least Tern *Sterna antillarum* athalassos populations in the Lower Mississippi River. FRANCISCO J. VILLELLA.
- 13:30 The use of captive rearing in the recovery of the Great Lakes Piping Plover: A modeling approach. ALICE W. DOOLITTLE.
- 13:45 Comparison of food availability in potential Whooping Crane (*Grus americanus*) wintering areas. DAWN A. SHERRY\* and FELIPE CHAVEZ-RAMIREZ.
- 14:00 Comparative use of ocean-side and bay-side beaches by breeding Piping Plovers in Massachusetts. L. KYLE JONES\*, SCOTT M. MELVIN, and P.A. BUCKLEY.
- 14:15 Reproductive success of Florida Grasshopper Sparrows. DUSTIN W. PERKINS\*, PETER D. VICKERY, MARK D. SCHEUERELL, and BILL PRANTY.
- 14:30 Distribution and abundance of Snowy Plovers at Great Salt Lake, Utah. PETER W.C. PATON.
- 14:45 Effects of jet aircraft overflights on behavior and productivity of nesting Peregrine Falcons in interior Alaska. DANA L. NORDMEYER.
- 15:00 BREAK
- 15:30 Does Red-cockaded Woodpecker excavation at resin wells affect the risk of bark beetle infestation of cavity trees? RICHARD N. CONNER, DANIEL SAENZ, D. CRAIG RUDOLPH, WILLIAM G. ROSS, and DAVID L. KULHAVY.
- 15:45 Anthropogenic impacts on nest success of Western Snowy Plovers in north-central Oklahoma. JOANNA B. WHITTIER\*, DAVID M. LESLIE, JR, BRYAN R. WINTON, MARCUS T. KOENEN, and RUSSELL B. UTYCH.
- 16:00 Current status and recent nesting of Northern Beardless-Tyrannulet and Tropical Parula in the Lower Rio Grande Valley, Texas. TIM BRUSH.

16:15 Nest sites and nesting success of Southwestern Willow Flycatchers in the Gila Valley, New Mexico. SCOTT H. STOLESON and DEBORAH M. FINCH\*.

GS37. Session: Fragmentation and Landscape Ecology IV

Chair: Kathryn Sieving

13:00-16:30

Jefferson B&C

13:00 Landscape effects on the distribution of the Ochre-flanked Tapaculo. HEATHER McPHERSON.

13:15 Defining corridors for endemic birds in fragmented south-temperate rainforest. KATHRYN E. SIEVING\*, MARY F. WILLSON, and TONI L. DE SANTO.

13:30 Fragmentation effects on forest birds: Woodland cover or configuration? MARC-ANDRÉ VILLARD\*, M. KURTIS TRZCINSKI, and GRAY MERRIAM.

13:45 Seasonal distribution and community composition of avifauna in isolated-deciduous forest patches. GREGORY S. KELLER\*, RICHARD H. YAHNER, and GERALD L. STORM.

14:00 Bird community integrity in the Mid-Atlantic Highlands: Distribution and determination. TIMOTHY J. O'CONNELL\*, ROBERT P. BROOKS, and LAURA E. JACKSON.

14:15 Islands within an island: Bird communities of two forest remnants in Singapore. NAVJOT S. SODHI, WEN ZSA LOH, R. SUBARAJ, and A. U. KARA.

14:30 Priority shrubsteppe vertebrates and landscape management in the interior Columbia Basin. TERRELL D. RICH.

14:45 Ghosts of habitats past: Relative contribution of landscape change to current habitat associations of shrubsteppe birds. STEVEN T. KNICK and JOHN T. ROTENBERRY\*.

15:00 BREAK

15:30 Landforms, land-use, and habitats: Bird abundance and nesting success in Iowa watersheds. TIMOTHY M. BERGIN\*, LOUIS B. BEST, and KATHRYN FREEMARK.

15:45 Riparian forest strips as long term refuges for breeding birds in a boreal balsam fir forest. MARCEL DARVEAU, LOUIS BELANGER, and JEAN HUOT.

16:00 Effects of local fragmentation on nesting success in the Wood Thrush. CHERYL L. TRINE and SCOTT K. ROBINSON.

16:15 The role of forest fragments in banana-producing areas of Costa Rica in preserving avian diversity. BRUCE E. YOUNG.

GS38. Session: Vocalizations

Chairs: Erick Greene and Arch McCallum

13:00-17:30

Lewis and Clark

13:00 Individual and population level variation in the territorial call of the Mexican Spotted Owl. W. A. KUNTZ.

13:15 Alarm calls of birds and pine squirrels: Intertaxon response to alarm vocalizations. ERICK GREENE.

13:30 European Starlings use risk-based rather than referential alarm calls. ERICK GREENE.

13:45 A re-evaluation of the function of the Eastern Towhee's song introduction. HITESH KHANNA.

14:00 Song learning influences physiological response to song playback in female Mountain White-crowned Sparrows. SCOTT A. MACDOUGALL-SHACKLETON and THOMAS P. HAHN.

14:15 Regional variability in the song of the Willow Flycatcher. JAMES A. SEDGWICK.

14:30 Long term breeding site and song use in Big Bend (TX) Black-capped Vireos. JON C. BARLOW, MARK K. PECK and NIK TATARNIC.

14:45 Male Bronzed Cowbirds show stronger responses to foreign songs in parapatry than in allopatry. PAIGE S. WARREN.

15:00 BREAK

15:30 Structure of dawn serenades in Carolina and Mountain Chickadees. JASON DAVIS\* and ARCH McCALLUM.

15:45 Evolution of note-type repertoires in the Paridae, based on two-voice spectral contours. ARCH McCALLUM\* and CHERYL SINE.

16:00 Geographic variation in the sedentary Hutton's Vireo. COLETTE T. BARIL.

16:15 Sound design for vocalizations: Quality in the woods, consistency in the fields. TIMOTHY J. BROWN\* and PAUL HANDFORD.

16:30 Individual variation in the song of both sexes in Dusky Antbirds. K.C. DERRICKSON\* and E.S. MORTON.

16:45 Why Eastern Willets sing to the sound of a different drummer. HECTOR D. DOUGLAS III.

17:00 Patterns of song structure and variation in insular populations of montane Lincoln's Sparrows (*Melospiza lincolni* *alticola*). CARLA CICERO\* and Z. MORGAN BENOWITZ-FREDERICKS.

17:15 Cultural evolution in a population of Chestnut-sided Warblers. BRUCE E. BYERS.

GS39. Session: Habitat Selection and Nest Site Characteristics

Chairs: Donald Stauffer and William Bowerman

13:00-16:30

Jefferson A

13:00 Breeding success of the Heermann's Gull in relation to nesting density and substrate type on Isla Rasa, Baja California, Mexico. LOURDES M. RUGGE.

13:15 Characteristics of nest site selection in three species of *Ceratogymna* hornbills in the Dja Reserve, Cameroon. DONALD J. STAUFFER\* and THOMAS B. SMITH.

13:30 Nest site selection in Hooded Warblers: Implications for predation and parasitism. LAURA R. NAGY.

13:45 Characteristics of Hairy Woodpecker nest sites in western Washington. DAVID M. JULIANO\*, JAMES C. BEDNARZ, and DANIEL E. VARLAND.

14:00 Comparative breeding biology and nest-site selection of two Vireo species in Mid-Appalachia. JENNIFER A. DECECCO\*, GEORGE A. GALE, MATTHEW R. MARSHALL, and ROBERT J. COOPER.

14:15 Characterization of trees and cavities used for nesting and spatial distribution of nests of the Thick-Billed Parrot (*Rhynchopsitta pachyrhyncha*) in the Sierra Madre Oriental, Mexico. MIGUEL ANGEL CRUZ-NIETO.

14:30 Nest-site selection of Goshawk, Red-shouldered and Red-tailed Hawks of the Upper Peninsula, MI. STACY R. CHRISTIANSEN\*, WILLIAM L. ROBINSON, and WILLIAM BOWERMAN.

14:45 Nesting habits of Loggerhead Shrikes in an urban area of south Texas. FELIPE CHAVEZ-RAMIREZ.

15:00 BREAK

15:30 Termite mounds as an avian nesting substrate: Escape from competition or predation? DONALD BRIGHTSMITH.

15:45 Do Northern Goshawks nest in old growth in the Upper Midwest? WILLIAM W. BOWERMAN.

16:00 Nest site selection by natural cavity nesting Wood Ducks in southern Illinois. R. GRAY ANDERSON\*, EDWARD H. ZWICKER, and ROBERT J. GATES.

16:15 Sharp-shinned Hawks nesting in the West Gulf Coastal Plain of Texas and Louisiana. CLIFFORD E. SHACKELFORD\*, DANIEL SAENZ, and RICHARD R. SCHAEFER.

WS8. Workshop: Management of Ornithological Collections at Teaching Institutions and Nature Centers  
Sponsor: Wilson Ornithological Society  
Organizer: Edward H. Burt  
13:30-15:30  
Soulard

Morning Sessions:

P4. Plenary Lecture  
Sponsor: American Ornithologists' Union  
08:15 - 09:15  
Grand Ballroom

08:15 Acquisition and functions of song in the White-crowned Sparrow: Field and laboratory studies. LUIS BAPTISTA.

BREAK  
09:15-09:45  
West Assembly Area

S8. Symposium: The Biology of Wrens  
Convenor: Stephanie Jones  
09:45-14:00  
Mississippi

09:45 A celebration of Cistothorus. DONALD E. KROODSMA.

10:15 Winter Wrens in fragmented and continuous old-growth cedar/hemlock

landscapes. SALLIE J. HEJL.

10:45 The function and control of sex differences in song in tropical vs. temperate wrens. RACHEL N. LEVIN.

11:15 The young and the restless: Family dynamics and delayed dispersal in Song Wrens of central Panama. TARA R. ROBINSON.

LUNCH BREAK

12:00 - 13:00

13:00 An experimental and comparative study of the influence of helpers versus territory quality on reproductive success of Bicolored Wrens. JOSEPH HAYDOCK.

13:30 The decline of Bewick's Wren: Interactions with House Wrens and changing land-use history. E. DALE KENNEDY.

GS40. Session: Monitoring and Population Trends

Chair: John Sauer

09:45-12:00

Jefferson D&E

09:45 Monitoring forest bird populations in Vermont, 1989-1996. STEVEN D. FACCIO\*, KENT P. McFARLAND, and CHRISTOPHER C. RIMMER.

10:00 An alternative analysis of population change in Cerulean Warblers. JOHN R. SAUER AND WILLIAM A. LINK.

10:15 Controlling for varying effort in the analysis of Christmas Bird Count Data. WILLIAM A. LINK\* and JOHN R. SAUER.

10:30 Raptor population trends discerned from 21 years of migration monitoring in the Great Basin and New Mexico. JEFF P. SMITH\* and STEPHEN W. HOFFMAN.

10:45 Midwestern raptor population trends as determined by forty years of Christmas Bird Count Data. KELLY J. MCKAY and PETER C. PETERSEN.

11:00 Population trends of songbird species and landuse changes in Knox County, Tennessee: 1960-1992. MICHAEL E. BALTZ.

11:15 Seasonality and trends in four years of avian census data from American Samoa. HOLLY B. FREIFELD.

11:30 Climate change and birds: Models and the search for fingerprints. JEFF T. PRICE.

11:45 Population trends of herons and egrets in southern San Francisco Bay. THOMAS P. RYAN.

GS41. Session: Breeding Biology III

Chair: Mark Reynolds

09:45-11:30

LaClede

09:45 Factors affecting brood patch size in Ross' and Lesser Snow Geese. ALAN D. AFTON\*, DOMINIQUE G. HOMBERGER, RAY T. ALISAUSKAS, CYNTHIA K. BLUHM, and MOHAMED EL HALAWANI.

10:00 The effect of nest box dispersion on occupancy and reproductive

success of Mountain Chickadees. MARK D. REYNOLDS.

10:15 Interaction of egg viability, brood reduction and nest failure on the onset of incubation in birds. STEVEN R. BEISSINGER.

10:30 Video documentation of predators at active bird nests. FRANK R. THOMPSON III, WILLIAM D. DIJAK, and DIRK E. BURHANS.

10:45 Predation at old field bird nests: What factors are important? DIRK E. BURHANS\*, DON DEARBORN, FRANK R. THOMPSON III, and JOHN FAABORG.

11:00 Home range and habitat preferences: Analysis for female Brown-headed Cowbirds (*Molothrus ater*) in Central Texas. J. A. KOLOSZAR\*, T. L. COOK, M. D. GOERING, R. A. CRAFT and L. L. SANCHEZ.

11:15 Breeding biology of the Chestnut-backed Chickadee. KIMSEY M. FOWLER, JR.

#### GS42. Session: Foraging and Nutritional Ecology II

Chair: Nathaniel Wheelwright

09:45-12:15

Jefferson B&C

09:45 Foraging ecology of cavity-nesting birds in young forests of the northern Coast Range of Oregon. JENNIFER M. WEIKEL\* and JOHN P. HAYES.

10:00 When do fledgling Savannah Sparrows learn to forage independently? NATHANIEL T. WHEELWRIGHT\* and JENNIFER J. TEMPLETON.

10:15 Seed dispersal of a high-quality fruit by specialized frugivores: High-quality dispersal? DAN WENNY.

10:30 Training and retention of a simple foraging task by the Florida Scrub-Jay. PETER E. MIDFORD.

10:45 The interactive effects of plant density and distribution on the pollination and reproductive success of a hummingbird-pollinated plant, *Ipomopsis aggregata*. CHRISTINA M. CARUSO.

11:00 Using predictions from optimal breathing models to elucidate ecological mechanisms underlying diving behavior in Marbled Murrelets. PATRICK G.R. JODICE\*, and MICHAEL W. COLLOPY.

11:15 Predictions and observations of swan foraging behavior in northern Utah. K. A. M. ENGELHARDT\*, and J. A. KADLEC.

11:30 Diet choice and breeding success across generations in Western Gulls. RAYMOND PIEROTTI\*, and CYNTHIA A. ANNETT.

11:45 Harlequin Ducks adjust feeding behavior with changes in winter conditions. JULIAN B. FISCHER.

12:00 A corvid cognitive boundary: Peanut object-constancy in the Florida Scrub-Jay. JACK P. HAILMAN\*, ELIZABETH D. HAILMAN, and GLEN E. WOOLFENDEN.

#### GS43. Session: Fragmentation and Landscape Ecology V

Chair: Bethany Woodworth

09:45-12:00

Field

09:45 Parasitism by Brown-headed Cowbirds in shrubsteppe communities of

eastern Washington. BRETT L. WALKER\* and MATTHEW VANDER HAEGEN.

10:00 Causes of a gradient in forest bird densities in a Hawaiian rainforest. STEVEN G. FANCY, BETHANY L. WOODWORTH\*, MICHAEL P. MOORE, JAY T. NELSON, and ERIK J. TWEED.

10:15 The importance of temporal scale on the effects of habitat fragmentation: An overview. DAVID M. WATSON.

10:30 Continuing long-term changes in the avifauna of a tropical forest isolate: Barro Colorado Island, Panama. W. DOUGLAS ROBINSON.

10:45 The role of vegetation structure in the local distribution of several Neotropical terrestrial insectivores in a fragmented landscape. JEFFREY A. STRATFORD.

11:00 Effects of corridor width on the abundance and nesting success of Acadian Flycatchers in Southern Illinois, USA. LEONARDO CHAPA.

11:15 Nesting density and success of the Chimango Caracara (*Milvago chimango*) in southern Chile. J.L. MORRISON, J.E. AMETT, M. BRUSCIA, S.M. McGEHEE, and L.M. PHILLIPS.

11:30 How do riparian buffer zones affect avian nesting success? KEITH P. LEWIS\* and WILLIAM A. MONTEVECCHI.

11:45 Distribution of Cotingids and Piprids in the Atlantic Forest of Brazil: Application of GIS using historic records and broad-scale environmental data. BETTE A. LOISELLE\* and JAQUELINE M. GOERCK.

GS44. Session: Habitat Selection II

Chair: Peter Hunt

09:45-12:00

Jefferson A

09:45 Disjunct wetland use of Horned and Pied-billed Grebes: Habitat selection or interspecific territory defense. ERIK OSNAS.

10:00 Habitat distribution of wintering Northern Waterthrushes in Puerto Rico. PETER HUNT\*, SHERMAN BURSON, LEONARD REITSMA, BENJAMIN STEELE.

10:15 Socioecology of wintering Northern Waterthrushes in a Puerto Rican mangrove forest. BENJAMIN STEELE\*, LEONARD REITSMA, SHERMAN BURSON, and PETER HUNT.

10:30 Does differential habitat occupancy in the winter affect breeding season events in migratory passerines? Making the link with stable isotopes. PETER P. MARRA\*, KEITH A. HOBSON, and RICHARD T. HOLMES.

10:45 How does food availability affect the winter habitat use of canopy-foraging warblers? MATTHEW D. JOHNSON.

11:00 Habitat preference of White-tailed Ptarmigan in Glacier National Park, MT. DAVID P. BENSON.

11:15 Energetic consequences of sex-related differences in habitat use in wintering American kestrels (*Falco sparverius*). DANIEL R. ARDIA.

11:30 Validating species-habitat models for breeding birds in a Longleaf Pine system. JENNIFER C. ALLEN\*, JEFFREY R. WALTERS, SHARLENE M. KRIEGER, and JAIME A. COLLAZO.

11:45 Habitat selection and reproductive success of Prothonotary Warblers:  
Potential links between individual behavior and population dynamics.  
JAMES E. LYONS.

WS9. Workshop: Communicating with Legislators on Ornithological Issues  
Sponsor: The Ornithological Council  
Organizers: Elizabeth A. Schreiber and Irene Pepperberg  
10:30-11:30  
Lewis and Clark

WS10. Workshop: Action Plan for Pipile (follow-up of Thursday Session)  
Sponsor: Cracid Specialist Group (CSG) and Cracid Taxon Advisory Group (TAG)  
Organizer: Dan Brooks  
09:30 - 12:00  
Soulard

Afternoon Sessions:

S9. Symposium: Saving the Rarest of the Rare  
Convenor: Eve Iversen  
13:00-16:30  
Missouri

13:00 Saving Hawaii's endangered avifauna: Conservation or extinction - At what cost? SHARON E. REILLY.

13:30 Predicting geographic distributions of rare and endangered bird species-new tools for conservation. A.T. PETERSON.

14:00 A compilation of published records of the Ivory-billed Woodpecker in Texas: Voucher specimens versus sight records. CLIFFORD E. SHACKELFORD.

14:30 Demise of the Ivory-billed Woodpecker: What happened? JEROME A. JACKSON.

15:00 BREAK

15:30 Efforts to preserve an endangered species: The California Condor.  
MICHAEL WALLACE.

16:00 The influence of cowbird removal on an isolated Black-capped Vireo population in Oklahoma. JOSEPH A. GRZYBOWSKI.

GS45. Session: Habitat Management and Conservation III  
Chair: T. Luke George  
13:00-16:30  
Jefferson A

13:00 Landbird abundance in managed and unmanaged coast redwood forests in northwestern California. GJON C. HAZARD.

13:15 Immediate effects of timber harvesting on songbird abundances in central West Virginia. C. A. WEAKLAND and P. B. WOOD.

13:30 Sources of variation in reproductive success of American Robins breeding in degraded desert-riparian habitat. IAN G. WARKENTIN, J. MICHAEL REED, and SUSIE M. DUNHAM.

13:45 Ovenbirds in riparian buffer strips: Short-term response to upland timber harvest in Alberta's boreal mixed-wood forest. J. DANIEL LAMBERT.

14:00 Avian nest success in relation to forest type and silvicultural treatment in the Mississippi alluvial valley. DANIEL J. TWEDT, R. RANDY WILSON, ROBERT HAMILTON, and JACKIE HENNE-KERR.

14:15 Influence of regeneration on songbird movements in an industrial forest landscape. ISABELLE ROBICHAUD\*, MARC-ANDRÉ VILLARD, and CRAIG S. MACHTANS.

14:30 Reproductive survival of White-eyed Vireos and Painted Buntings in unmanaged shrub-scrub, managed pine-oak forest, and old growth maritime forest habitats of Sapelo Island, GA. J. MICHAEL MEYERS\*, LISA K. DUNCAN, and ELIZABETH G. SPRINGBORN.

14:45 The effects of livestock removal on songbirds in pinyon-juniper woodlands in New Mexico. CHRISTOPHER B. GOGUEN\* and NANCY E. MATHEWS.

15:00 BREAK

15:30 Effects of forest openings in the contiguous forest of eastern Pennsylvania on the reproductive success of forest songbirds. JAMES J. GIOCOMO.

15:45 Home range and movements of Painted Buntings in managed pine-oak forest and shrub-scrub habitat on Sapelo Island, GA. ELIZABETH G. SPRINGBORN\*, J. MICHAEL MEYERS, and LISA K. DUNCAN.

16:00 The short-term impact of timber harvesting on the jarrah forest avifauna of south-western Australia. MICHAEL D. CRAIG.

16:15 Using nest and foraging site characteristics to predict the response of forest birds to silvicultural treatments in Ponderosa Pine forests. T. LUKE GEORGE, STEVE ZACK, and WILLIAM F. LAUDENSLAYER.

GS46. Session: Demography and Life Histories

Chair: Keith Tarvin

13:00-17:15

Jefferson D&E

13:00 A population simulation model for a migrant songbird, the Black-throated Blue Warbler. T. SCOTT SILLETT and RICHARD T. HOLMES.

13:15 Patterns of recruitment in a tropical seabird, the Brown Noddy. JOHN W. CHARDINE and RALPH D. MORRIS.

13:30 Survival rates of a tropical parrot in a seasonal environment: Karma meets dogma revisited. BRETT K. SANDERCOCK\* and STEVEN R. BEISSINGER.

13:45 Abundance, productivity, and survival in a resident Bewick's Wren population. WILL RICHARDSON, NADAV NUR and GOEFFREY R. GEUPEL.

14:00 Sex-specific survival and age-specific movements: Guiding development of a spatially-based population model of a neotropical migrant songbird. LARKIN A. POWELL, MICHAEL J. CONROY, DAVID G. KREMENTZ, and JASON D. LANG.

14:15 Age-dependent reproductive success: Evidence for the selection hypothesis. ROBERT A. MAUCK\* and CHARLES E. HUNTINGTON.

14:30 Problems in demographic modeling of Neotropical-Nearctic migratory birds: Are they dead or just dispersed? MATTHEW R. MARSHALL\*, ROBERT J. COOPER, and R. RANDY WILSON.

14:45 Differences in prehatching reproductive output between one-year old and older female Tree Swallows. PATRICK E. LEDERLE.

15:00 BREAK

15:30 Source-sink population dynamics of Blue Jays. KEITH A. TARVIN.

15:45 Epidemic mycoplasmal conjunctivitis in House Finches from eastern North America, 1994-1997. ANDRC9 A. DHONDT, DIANE L. TESSAGLIA, ROGER SLOTHOWER, and BARRY HARTUP\*.

16:00 Synchrony and density-dependence among five populations of tropical wrens. MARIA CAROLINA YABER\* and KERRY N. RABENOLD.

16:15 The effects of breeder experience, breeder age, and pair-bond duration on clutch initiation date and clutch size in Florida Scrub-Jays. ELIZABETH M. BORST\*, GLEN E. WOOLFENDEN, JOHN W. FITZPATRICK, and ROBERT L. CURRY.

16:30 Clutch size of Prothonotary Warblers: Eleven years of data. CHARLES R. BLEM\* and LEANN B. BLEM.

16:45 David Lack's continuing influence in behavioral and evolutionary ecology: An analysis of 1992-1995 SCI citations. TED R. ANDERSON.

17:00 Nestling growth rates in a tropical bird, the Stonechat: The influence of predator presence and supplemental feeding. ALEXANDER SCHEUERLEIN\* and EBERHARD GWINNER.

#### GS47. Session: Foraging Nutritional Ecology III

Chair: Peter Scott

13:00-16:15

Field

13:00 Age-related differences in foraging efficiency of Gray Catbirds (*Dumetella carolinensis*) and preparation for fall migration. COLLEEN S. DWYER.

13:15 Birds and bats pollinate *Marcgravia* on Dominica. RICHARD L. ZUSI\* and MICHAEL J. HAMAS.

13:30 Nectar resources of hummingbirds in an Arizona mountain range: Diversity, rewards, and degree of mutualism. PETER E. SCOTT, RONALD S. LANGE, and SUMMER A. SCOBELL.

13:45 Variation in lipid content of forage fishes and its influence on seabird reproduction in the Exxon Valdez oil spill area. DANIEL D. ROBY\*, JILL A. ANTHONY and KATHY R. TURCO.

14:00 Protein and calcium in diets of wild pheasants. CHRISTINE SHEPPARD \*, ELLEN DIERENFELD, and MARTIN BURNETT.

14:15 Regulation of winter territory size in Townsend's Solitaires. RHYS V. BOWEN.

14:30 Comparative diet of nestlings of three sympatric Amazona parrots during three successive nesting seasons in a disturbed habitat mosaic of southern Tamaulipas, Mexico. ERNESTO C. ENKERLIN-HOEFELICH\*, JAIME GONZALEZ-ELIZONDO, and ROMUALDO MARTINEZ.

14:45 Influence of nutrient reserve levels on over-winter survival of Canada Geese staging in interior Alaska. \*MICHAEL W. EICHHOLZ and JAMES S. SEDINGER.

15:00 BREAK

15:30 Nutritional ecology of breeding Ross' Geese. RAY L. BON and RAY T.

ALISAUSKAS\*.

15:45 Can Newfoundland Black-legged Kittiwakes do without capelin? JOHN W. CHARDINE.

16:00 Water depth and flock pattern as factors affecting the selection of foraging sites by wading birds. LISA BORGIA.

GS48. Session: Migration and Orientation II

Chairs: Kelly McCay and Jeff Kelly

13:00-15:15

Lewis and Clark

13:00 Avian monitoring and spring migration response to the 1993 flood on Mark Twain National Wildlife Refuge. KELLY J. MCKAY\*, PETER C. PETERSEN, JAMES P. QUINLIVAN, and MICHAEL S. BORNSTEIN.

13:15 Response of passerines to migrant hawks during migratory stopover. DAVID A. CIMPRICH\*, and MARK S. WOODREY.

13:30 Tracking migrating Ospreys across major ecological barriers by satellite. BERND-U. MEYBURG\* and CHRISTINE MEYBURG.

13:45 Migrant stopover at a montane forest site in Vermont. CHRISTOPHER C. RIMMER\* and KENT P. MCFARLAND.

14:00 Spring migrants in forested wetlands of the Mississippi alluvial valley. R. RANDY WILSON, A. BLAINE ELLIOTT, and DANIEL J. TWEDT.

14:15 Does sex affect the migration and stopover biology of migrating passerines on Appledore Island, Maine? SARA R. MORRIS.

14:30 Stopover patterns of Blackpoll Warblers during autumnal migration in Puerto Rico. MICHAEL E. BALTZ\* and FRED C. SCHAFFNER.

14:45 Relative abundance of thrushes migrating through a fragmented midwestern landscape. PETER T. FAUTH, KERRY N. RABENOLD, DEAN A. WILLIAMS, and M. CAROLINA YABER.

15:00 The influence of biogeographic and local factors on wood warbler migration in the Middle Rio Grande of New Mexico. JEFFREY F. KELLY\*, DEBORAH M. FINCH, and WANG YONG.

GS49. Session: Evolutionary Biology II

Chair: John Smallwood

13:00-16:30

Jefferson B&C

13:00 Fitness asymmetries in a narrow, moving hybrid zone between Hermit and Townsend's Warblers. SCOTT F. PEARSON.

13:15 Patterns of variation in the juvenal plumage of American Kestrels: North American clines and subspecies. JOHN A. SMALLWOOD, CHRIS NATALE, KAREN STEENHOF, CARL D. MARTI, and GARY R. BORTOLOTTI.

13:30 Intraspecific variation in egg size of the American coot (*Fulica americana*): Consequences for offspring survival. WENDY L. REED.

13:45 High levels of genetic differentiation in two species of *Drymophila* antbirds. JAQUELINE GOERCK\*, JOHN M. BATES, and SHANNON J. HACKETT.

14:00 The evolutionary origin of coloniality: A test of hypotheses with the Red-necked Grebe. JOEL L. SACHS\*, COLIN R. HUGHES, GARY L. NUECHTERLEIN,

and DEBORAH P. BUITRON.

14:15 Life history evolution on islands: Insular effects on reproductive ecology. DAVID A. WIGGINS\* and ANDERS PAPE MOLLER.

14:30 Why are Western Wood-Pewees rarely parasitized? JOHN J. WALSH, JAMESON F. CHACE, DAN M. EVANS, ALEXANDER CRUZ.

14:45 Phylogeographic structure of eastern and western populations of Harlequin Ducks and comparisons to other sea duck species. KIM SCRIBNER\*, RICHARD LANCTOT, SANDRA TALBOT, BARBARA PIERSON, JOHN PEARCE, DAN ESLER, KATHY DICKSON, BUDDY GOACHER, and DENNY ZWIEFELHOFER.

15:00 BREAK

15:30 Patterns of population differentiation in the breeding range of MacGillivray's warbler: Preliminary results from mitochondrial DNA and morphological data. BORJA MILA\*, DEREK J. GIRMAN, MARI KIMURA, and THOMAS B. SMITH.

15:45 The effect of predation on begging call evolution in nestling wood warblers. DAVID G. HASKELL.

16:00 Genetic differentiation among Sky Island populations of Mexican Jays. BONNIE S. BOWEN\*, ROLF R. KOFORD, and JERRAM L. BROWN.

16:15 Longterm breeding performance in relation to individual diet choice in the Western Gull. CYNTHIA A. ANNETT\* and RAYMOND PIEROTTI.

## RESOLUTIONS

Seven resolutions were approved by the memberships of all societies participating in the 1998 North American Ornithological Conference. The Chair of the joint Committee on Resolutions was David E. Blockstein.

### SNOW GOOSE POPULATION MANAGEMENT

Background: It appears that great danger to an Arctic ecosystem exists as a result of increases in a single population of Snow Goose, that this danger threatens the existence of numerous other species of birds and other wildlife, and that this situation can be linked directly to the effects of large-scale human modification of the landscape on the goose's migratory and wintering grounds. The National Audubon Society's Board of Directors adopted a similar resolution.

WHEREAS, an exponentially growing population of Lesser Snow Geese (*Chen caerulescens*) breeding along the border of Hudson Bay and migrating through mid-continental North America is overgrazing and over-grubbing its breeding habitat, causing changes in vegetation and soil salinity and threatening large portions of the Arctic ecosystem with potentially irreversible ecological degradation; and

WHEREAS, plant species grubbed and eaten by the rapidly growing Snow Goose population in the Arctic are being destroyed to an unprecedented extent, and are being replaced over vast areas by unpalatable, salt-tolerant species; and

WHEREAS, extensive scientific research on the effects of Snow Geese, including long-term enclosure experiments, suggests that their alteration of the biotic environment, especially plant community composition and structure, and abiotic environment, especially soil chemistry, may be irreversible; and

WHEREAS, long term studies show that populations of many bird species that depend on tundra habitat are declining precipitously as a result of the growing Snow Goose population. These declining populations include species such as Hudsonian Godwit, Smith's Longspur, Yellow Rail, American Golden Plover, and Stilt Sandpiper, and a host of more widespread species with substantial numbers potentially at risk; and

WHEREAS, the rapid increase in mid-continent Snow Goose populations is primarily a result of human modifications of habitat on wintering grounds, along the migratory routes, and in the staging areas; and

WHEREAS, the habitat modifications promoting population growth of Snow Geese include modern and large-scale agricultural practices throughout the non-breeding range, and these conditions are likely to persist for many decades; and

WHEREAS, scientific evidence indicates that a continued growth of the mid-continent Snow Goose populations threatens the integrity of important wildlife habitat, including managed refuges, waterfowl wintering grounds, and key migratory resting and staging areas in the United States; and

WHEREAS, density dependent population control mechanisms will not self-regulate exponential population explosion of Snow Geese because of the species' demonstrated ability and willingness to extend both nesting and foraging ranges continually into new areas as the existing breeding grounds become degraded; and

WHEREAS, the mortality of adult geese is viewed as the driving demographic variable by which humans can hope most effectively to reduce the total population, its rate of growth, and its effects on the environment; and

WHEREAS the 1997 report entitled, *Arctic Ecosystems in Peril: Report of the Arctic Goose Habitat Working Group* has been published by the Arctic Goose Joint Venture (AGJV) Management Board and Working Group (under the auspices of the North American Waterfowl Management Plan), has received adequate peer review, and concludes with a series of specific recommendations to reduce Snow Goose numbers.

THEREFORE BE IT RESOLVED that the American Ornithologists' Union (AOU) endorses the science-based recommendations of the Arctic Goose Habitat Working Group as necessary steps for reducing mid-continent Snow Goose numbers "to a level of about 50% of current numbers by the year 2005" (1997, *Arctic Ecosystems in Peril: Report of the Arctic Goose Habitat Working Group*, p.118).

## NATIONAL FOREST MANAGEMENT, FOREST HEALTH AND ROADLESS AREAS

WHEREAS, America's national forests are comprised of 156 separate forests, encompassing 25 percent of all federal public lands (200 million acres), providing essential habitat for many bird species and other biota, including a greater number of threatened and endangered species than any other system of federally owned land; and

WHEREAS, the remaining large unfragmented roadless areas provide particularly important and irreplaceable habitat for many species, and such areas are found almost exclusively on national forests and other public lands; and

WHEREAS, many of America's national forests are overcut and fragmented due to excessive logging; and

WHEREAS, few roadless areas are protected (e.g., in the Blue Mountains of eastern Oregon and Washington, less than 8% of 722,000 acres of forested roadless areas are administratively protected); and

WHEREAS, the Clinton Administration is attempting to reverse traditional forest management policy in order to favor conservation based on the capacity of the land; and

WHEREAS, elements of this policy include a proposed 18-month moratorium on logging in large roadless areas (greater than 5,000 acres) in most national forests; and

WHEREAS, the proposed moratorium is consistent with the recommendations of the Eastside Forest Scientific Society Panel (Interim protection for late-successional forests, fisheries and watersheds; The Wildlife Society Technical Review 94-2, 1994), in which the AOU was a participant; and

WHEREAS, there is considerable effort in Congress to oppose Administration policy and allow more logging under the guise of a so-called "forest health crisis;" and

WHEREAS, the American Ornithologists' Union (AOU) and the Cooper Ornithological Society have each passed resolutions challenging the scientific basis of the "forest health crisis;"

THEREFORE BE IT RESOLVED, that the American Ornithologists' Union supports the efforts of Forest Service Chief Michael Dombeck and the Clinton administration towards increasing conservation and protection of roadless areas in national forests. Be it further resolve that the American Ornithologists' Union urges the Clinton administration to extend these roadless area protections to all national forests and to roadless areas of 1,000 acres or more; and

THEREFORE BE IT FURTHER RESOLVED that the American Ornithologists' Union opposes Congressional attempts to increase logging of national forests under the guise of a "forest health crisis" and urges Congress to take steps to prevent loss and fragmentation of roadless areas.

## FUNDING FOR NATURAL RESOURCE SCIENCE

WHEREAS scientific knowledge is a necessary basis for effective management of natural resources; and

WHEREAS, present knowledge of the natural resources of the United States is insufficient for many management objectives to be achieved; and

WHEREAS, current federal funding for biodiversity and ecosystems research and monitoring (estimated by \$460 million by the National Science and Technology Council) is inadequate to meet the needs of resource managers and decisionmakers; and

WHEREAS, the proposed fiscal 1999 budget of \$158 million for the Biological Resources Division (BRD) of the U.S. Geological Survey, is less than its budget for fiscal 1994 (\$164 million) before the 104th Congress imposed a 15% cut when BRD was an agency known as the National Biological Service; and

WHEREAS, budget restrictions on BRD allow it to accomplish relatively few priorities identified by other agencies in the Department of the Interior (DI), leaving the U.S. Fish and Wildlife Service with a list of some 300 unaddressed research needs, and have caused a 40% decrease in BRD maintenance activities and no new construction since fiscal 1994; and

WHEREAS; the research budget of the U.S. For. Ser. has remained essentially flat since a 5% recession in fiscal 1995 and research is now at about 7% of agency budget rather than 11% that has been traditional; and

WHEREAS, neither President Clinton's 21st Century fund for research nor Senator Gramm's National Research Investment Act of 1998 (S. 1305) include science in the natural resource agencies and departments among their significant proposed increases in science funding; and

WHEREAS, a 1998 report of the President's Council of Advisors on Science and Technology (Teaming with life: investing in science to understand and use America's living capital) recommends increases of up to \$200 million annually (phased in over three years) for research, education, management and information infrastructure necessary to make sustainable use of biodiversity and ecosystems;

THEREFORE BE IT RESOLVED that the AOU encourages the President and the Congress to significantly increase funding for natural resource science and related activities in agencies including the U.S. Geological Survey (particularly the Biological Resources Division), the U.S. Forest Service, and the proposed National Institute for the Environment (NIE) under the National Science Foundation.

#### PUBLIC LANDS FUNDING INITIATIVE

Background: The Public Lands Funding Initiative is an effort of a broad coalition of environmental, recreational, scientific and other organizations dedicated to working for additional funding for government programs benefiting wildlife and wildlands. The entire Defining Statement document is located on GREEN's web site: <http://www.defenders.org/inter2.html>. One can also find a listing of the groups who have already signed on to the initiative.

WHEREAS, America's public lands, wildlife, fish, and plants are irreplaceable natural assets that belong to, and benefit, our entire nation; and

WHEREAS, the ideals underlying the creation and protection of our parks, refuges, forests, and other national lands have been admired and emulated around the world; and

WHEREAS, these public lands represent an investment in America through the conservation of our natural and cultural heritage; and

WHEREAS, more and more Americans are turning to our public lands for education, recreation, and the economic well being of their families and communities; and

WHEREAS, ironically, at the same time that these assets are increasing in value, their vitality is threatened by inadequate funding and shortsighted investment in the agencies that care for them; and

WHEREAS, the account in the federal budget that pays for the care and upkeep of our public lands (Function 300 -- Natural Resources and Environment) is slated to decrease over the next five years under the Balanced Budget Agreement; and

WHEREAS, the financial condition of our public land and natural resource management agencies is in crisis and without significant increases to base funding over the next five years, these agencies and programs will be unable to protect and manage the resources intrusted to their care; and

THEREFORE BE IT RESOLVED that the American Ornithologists' Union supports the Public Lands Funding Initiative, including the following proposed funding increases that are based on data requested from the agencies, and reflect real need: The Fish and Wildlife Service, \$710 million to operate the National Wildlife Refuge System, to implement the Endangered Species Act, and for migratory bird management; The National Park Service, \$630 million for natural and cultural resource protection, park operations, and maintenance of physical infrastructure; The Bureau of Land Management, \$125 million for wildlife, fisheries, and threatened and endangered species, to provide recreational opportunities, and for paleontology research. (Note: the request for BLM is well below needs for adequate stewardship of its 260 million acres. This request is based on amounts that could be used effectively with limited or no increases in staff); The Forest Service, \$618 million for Fish, Wildlife, and Rare Plants; Recreation; Wilderness; Road Obliteration and Maintenance; Invasive Species; Rangeland Management; and Research on Wildlife, Fish, Water and Air; The U.S. Geological Survey's Biological Resources Division, \$185 million for biological research, resource monitoring, information transfer, and maintenance and operations of research laboratories, cooperative research units, and their equipment; The Land and Water Conservation Fund, at least \$700 million

(assuming the base does not include the additional \$699 million in FY98) to achieve full funding for land acquisition needs in the four agencies and to revitalize the grants to states and local communities for recreation and open space needs.

#### NORTHEAST NATIONAL PETROLEUM RESERVE

- WHEREAS, the Northeast National Petroleum Reserve ("the Reserve") is a low-lying coastal region comprising nearly 4.6 million acres of nearly undisturbed foothill tundra and wet tundra; and
- WHEREAS, the Reserve encompasses the largest stretch of low-lying, coastal plain tundra and foothill tundra in Alaska, and perhaps in North America; and
- WHEREAS, the ecosystems and habitat represented in the Reserve are not found in Alaska protected areas; and
- WHEREAS, numerous bird species are found in the Reserve, including the Yellow-billed Loon (*Gavia adamsii*) and Gyrfalcon (*Falco rusticolis*), which nest only in this region in the United States, the endangered Spectacled Eider (*Somateria fischeri*) and Steller's Eider (*Polysticta stelleri*), molting waterfowl, and large populations of many shorebirds and waterbirds; and
- WHEREAS, the Colville River Special Area of the Reserve has been recognized as one of the most significant regional habitats for raptors in North America, including nearly 90 nesting pairs of Peregrine Falcons (*Falco peregrinus*), which have only recently returned to this area following the DDT-caused decline in the 1970s; and
- WHEREAS, The Bureau of Land Management is considering an Integrated Activity Plan for The Reserve, with five alternative courses of action, each making a certain amount of the Reserve available for gas and oil extraction activities; and
- WHEREAS, the Draft Environmental Impact Statement analyzing each of these alternatives is inadequate in that it fails to evaluate adequately the unique ecological and biological features of the reserve, and fails to address available literature on the response of bird populations to various types and levels of development; and
- WHEREAS, there has not been adequate surveying of presence and abundance of the bird species in the region,
- THEREFORE BE IT RESOLVED that the American Ornithologists' Union recommends that the Bureau of Land Management defer the selection of a management plan for the Reserve until basic surveys and research have been completed, or, if deferment is not possible, that the Bureau of Land Management select Alternative A, the "no action" alternative which will continue the current management and allow no oil or gas leases; and
- THEREFORE BE IT FURTHER RESOLVED that whatever management plan is selected by the Bureau of Land Management, that it be implemented in such a manner as to include very specific safeguards, based upon scientific information, to protect the environment and the wildlife found within the Reserve.

#### IZEMBEK NATIONAL WILDLIFE REFUGE

- WHEREAS, The Izembek National Wildlife Refuge (INWR) and the Izembek lagoon (Izembek State Game Refuge) it encompasses, located on the Alaska Peninsula, is so important as wetland habitat for wildlife diversity that it was recognized as the first wetland site[s] in the United States placed on the list of wetlands of international importance under the "Ramsar" Convention; and
- WHEREAS, the refuge and the lagoon are being considered for additional international recognition as a reserve of international importance by the Western Hemispheric Shorebird Reserve Network; and
- WHEREAS, the refuge provides habitat for numerous bird species, including a resident, non-migratory Tundra Swan (*Cygnus columbianus*) population, approximately half the world population of the [endangered] threatened Steller's Eider (*Somateria fischeri*), the entire Pacific Brant (*Branta bernicla*) population, and the entire population of emperor geese (*Chen canigica*); and
- WHEREAS, the Refuge's Kinzarof Lagoon has the only significant eelgrass (*Zostera marina*) beds on the Pacific side of the Alaska peninsula, which is a primary food source for numerous bird and fish species; and

WHEREAS, two identical bills, S. 1092 and H.R. 2259, are presently before Congress, each of which has passed committees in their respective houses, that would direct construction of a road that would traverse seven miles of the Izembek Wilderness and four more miles of the Refuge, and bisect an isthmus between the Izembek and Kinzarof Lagoons; and

WHEREAS, the bills suspend the application to the road project of all environmental laws, including the endangered species act, migratory bird treaty act, and all federal provisions to protect wetlands and to require environmental impact assessments; and

WHEREAS, the proposed road through this fragile tundra is likely to: degrade wilderness values; increase silt loads to the Lagoon and/or decrease fresh-water flow to the Lagoon, which could affect eelgrass growth and production; disturb wildlife including the many birds in the area and result in increased pressure from future human disturbance; expose the izembek Lagoon to waterborne contaminants from shipping accidents or potential offshore oil development; and

WHEREAS, Congress designated 95% of the INWR as wilderness in 1980, and the Wilderness Act prohibits the building of permanent roads within any wilderness areas,

THEREFORE BE IT RESOLVED that the AOU urges Congress to reject S.1092 AND H.R.2259 and to oppose any other effort to build a road through the Izembek National Wildlife Refuge.

#### EXXON VALDEZ RESTORATION RESERVE FUND

WHEREAS, in the court settlement following the Exxon Valdez oil spill, a trust fund was established to provide for restoration and enhancement of resources injured as a result of the spill and a Trustee Council was created to oversee the allocation of that money with a mission to return the environment to a "healthy, productive, world-renowned ecosystem"; and

WHEREAS, the impact of the spill was primarily on the marine ecosystem and its inhabitants, including Common Murres (*Uria aalge*), Thick-billed Murres (*Uria lomvia*), Pigeon Guillemots (*Cepphus columba*), Marbled Murrelets (*Brachyramphus marmoratus*), cormorants (*Phalacrocorax* spp.), and other seabirds; and

WHEREAS, more than half of the money available for restoration has been spent on land purchases to protect valuable fish and wildlife habitats, not all of which will directly improve the marine resources damaged by the spill; and

WHEREAS, the Trustee Council previously established a restoration reserve account to provide funds for restoration activities after the last Exxon payment in 2001; and

WHEREAS, in adopting the restoration plan, the Trustee Council specifically recognized that monitoring recovery, understanding the spill's effects on the ecosystem and undertaking needed restoration activities "on an ecosystem basis" will extend well into the future; and

WHEREAS, by 2001, the reserve fund is expected to total about \$140 million, including interest; and

WHEREAS, the Trustee Council will make a decision in 1998 on the allocation of that fund; and

WHEREAS, scientific research is necessary for understanding the northern Gulf of Alaska ecosystem, which has not been well studied. E.g., there is a need for increased understanding of the interrelationships among seabird colonies and their dependence on poorly-studied forage fishes in the region; and

WHEREAS, use of the information based on research is essential for protecting the marine resources of Prince William Sound and the northern Gulf of Alaska; and

WHEREAS, only through continued research and monitoring will it be possible to determine the long-term effects of the spill and of the measures used to mitigate those effects; and

WHEREAS, the chief scientist of the trustee council has proposed using the reserve fund to establish a permanent, adaptive, interdisciplinary research and monitoring program, which "would track, and eventually predict, ecosystem changes and provide a basis and mechanism for long-term restoration, enhancement, and wise management of marine resources in the northern Gulf of Alaska,"

THEREFORE BE IT RESOLVED that the American Ornithologists' Union (AOU) encourage the Exxon Valdez Trustee Council to a) establish a permanent fund for competitive, peer-reviewed research and monitoring of the northern Gulf of Alaska ecosystem and b) allocate all or nearly all of the restoration reserve fund for this purpose; and

THEREFORE BE IT FURTHER RESOLVED that an ongoing marine conservation biology research and monitoring program should be based on the following core principles: 1. Research and monitoring should focus on conserving and recovering the living marine resources and biological diversity of the Gulf of Alaska, and should be coordinated with other federal and state marine research programs in Alaska, such as those in the Bering Sea, to leverage efforts and enhance the benefits of each. 2. Decisions on research and monitoring proposals should be based on a competitive scientific peer review process involving not only Alaskan scientists, but a mix of scientists throughout the United States with appropriate expertise in the various research topics to be considered. The best science results from involving the most appropriate scientists in all aspects of the process, and from basing funding decisions on emerging scientific and management questions. The resulting science should be of sufficient quality for publication in the best scientific journals. 3. The overall design of the long-term monitoring and research program should be reviewed by the national research council, the National Science Foundation, or other appropriate scientific bodies. 4. Research and monitoring should be ecosystem-oriented, designed and implemented to understand the processes and relationships governing marine ecosystem functioning, to enhance recovery of living marine resources that were harmed by the Exxon Valdez oil spill or are otherwise in decline, and to address emerging environmental problems and biodiversity loss in the Gulf of Alaska. 5. Research and monitoring should not be narrowly focused on maximizing certain resources for short-term economic gain, but should be broad-based and seek to understand how marine ecosystems function as a basis for management and conservation in the long run. 6. Use of indicator species is appropriate in some cases, however, in addition to studies on specific species, integrative research should be conducted to tie together information through modeling and other techniques to develop an understanding of processes affecting species on large geographic and temporal scales. 7. Research and monitoring projects should include long-term studies, allowing observation of environmental variation over decades to increase scientific understanding of ecosystem processes that vary over long time periods, and enhance our understanding of natural vs. human-caused environmental changes.

#### COMMUNICATION TOWERS AND AVIAN MORTALITY

WHEREAS an estimated two million to four million birds are killed in collisions with communication towers, particularly those higher than 200 feet, in eastern North America alone each year; and

WHEREAS towers 200 ft and taller are required to be lit for aircraft safety, generally with blinking lights; and

WHEREAS birds migrating at night are attracted by light, circle the tower, and strike supporting guy wires; and

WHEREAS there are presently at least 75,000 towers above 200 feet tall in the U.S. (according to the Federal Aviation Administration [FAA]) and another 100,000 are expected to be constructed in the next decade (according to the communications industry) due to expansion in various communications markets, and to accommodate digital TV; and

WHEREAS the accrued impact of thousands of towers on migrant songbird populations may be significant for declining species such as Cerulean Warblers and endangered species such as Kirtland's Warbler,

THEREFORE BE IT RESOLVED that the AOU urges the FAA to endorse studies involving experiments toward finding lighting systems for towers that reduce avian mortality; and

THEREFORE BE IT FURTHER RESOLVED that the AOU encourages the communications industry to voluntarily reduce the number of new towers by co-locating new transmitters on existing towers and to work with the U.S. Fish & Wildlife Service (USFWS) to minimize collisions of birds with towers; and

THEREFORE BE IT FURTHER RESOLVED that the AOU strongly encourages the U.S. Fish & Wildlife Service to work with the FAA and the Federal Communications Commission to study the magnitude of the problem, including through preparation of an Environmental Impact Statement, and to develop a national plan to minimize collisions of birds with towers (Citations: Cochran, William W. 1959. Attraction of nocturnal migrants by lights on a television tower. *Wilson Bulletin* 70:378-380. Kemper, Charles. 1996. A Study of Bird Mortality at as West Central Wisconsin TV Tower from 1957-1995. *Passenger Pigeon*, 58: 219-235. Larkin, Ronald P. 1988. Circular paths of birds flying near a broadcast tower in cloud. *Journal of Comparative Psychology*, 102:90-93. Ogden, Lesley P. 1996. Collision course: the hazards of lighted structures and

windows to migrating birds. World Wildlife Fund Canada and the Fatal Lights Awareness Program, 46 pp. Design or Modification of Buildings and other Structures to Reduce Collisions by Birds); and

WHEREAS birds are often unable to recognize sheet glass as a barrier, and at least 100 million to a billion birds are killed each year in the United States alone by striking glass of various sizes, in all types of human-built structures, during every season; and

WHEREAS the lights in tall lighted structures such as those in multistory buildings are known to disorient and result in bird fatalities from colliding with windows and opaque walls; and

WHEREAS glass can be modified to transform it into barriers that birds can recognize and avoid; and

WHEREAS the enactment of a building policy of minimum night lighting, especially during migration, can markedly alleviate bird attraction and confusion around tall buildings and towers; and

WHEREAS, the problem of collisions between birds and windows is ubiquitous, incremental, cumulative, insufficiently documented and not well recognized as to its magnitude or its parameters; and

WHEREAS, there has been insufficient research on building design and placement, alternative materials, landscaping and other measures to minimize collisions,

THEREFORE BE IT RESOLVED that the AOU encourages the U.S. Fish and Wildlife Service, as custodians of the nation's migratory bird resource, to make research related to bird-window collisions and their avoidance high on its priority list and to encourage the Biological Research Division of the U.S. Geological Survey to carry out the needed research; and

THEREFORE BE FURTHER RESOLVED that the AOU encourages the American Bird Conservancy to undertake a campaign, similar to its "Cats Indoors" campaign to raise awareness of the issue and to work with glass manufacturers, architects, builders, developers, landscape planners, building managers and home owners to find ways to reduce the problem of unintentional killing of wild birds in collisions.

#### RESOLUTION IN SUPPORT OF THE SALTON SEA AS SIGNIFICANT WILDLIFE HABITAT

WHEREAS the Salton Sea, the third largest interior saline lake in North America, formed by accidental water diversions from the Colorado River into southeastern California in 1905-6 and presently maintained by inflows of water imported for agricultural purposes, agricultural runoff, and freshwater river flows, has long been recognized as providing significant wetland habitat for a highly diverse array of migratory and breeding waterbird populations; and

WHEREAS recent surveys have revealed populations of up to 1.5 million Eared Grebes in midwinter (Jehl 1988), up to half of California's wintering White-faced Ibis (Shuford et al. 1996), and regional significance as an integral component of the Pacific Flyway for tens of thousands of migratory shorebirds (Page et al. 1992), waterfowl, and American White Pelicans, as well as significant breeding colonies of Double-crested Cormorants and Caspian Terns (K. Molina unpubl. data), nearly 40% of the nesting Black Skimmers (Collins and Garrett 1996), and by far the larger of only two breeding populations of Gull-billed Terns in western North America (Parnell et al. 1995); and

WHEREAS the Salton Sea has been documented to be of significant value as avian habitat from the time of its formation (see, for example, early studies reported by Grinnell 1908, Dawson 1923, Pemberton 1927, Miller & van Rossem 1929), and has retained this significance in the subsequent nine decades, with the Sea and its surrounding agricultural lands remaining a renowned birdwatching locality of national significance with over 350 species recorded and immense numbers of breeding, migrant, and wintering birds, in addition to unique post-breeding use by a variety of subtropical waterbirds; and

WHEREAS the Salton Sea represents a complex mosaic of habitats and land-use types, from saline lake waters to brackish and freshwater deltas resulting from both natural and imported (agricultural) water sources, and of state and federal wildlife refuges, agricultural areas, and geothermal developments, all with equally complex interactions and often competing interests; and

WHEREAS the State of California and surrounding regions have experienced significant losses of wetlands (Johnson and Jehl 1994), including coastal wetlands, interior wetlands (most notably the Colorado River delta and Tulare Lake basin), and interior saline lakes such as Owens Lake (Jehl 1994), making the Salton Sea, despite its "artificial" genesis, especially unique and important as de facto mitigation on a regional if not continental scale; and

WHEREAS significant colonies of ground-nesting colonial waterbirds and herons, as well as of the recently established Brown Pelican, have thrived during the 1990s, likely due in large measure to decreased levels of human recreational uses of key portions of the Salton Sea (Molina 1996); and

WHEREAS the Salton Sea has experienced high levels of eutrophication, salinization, and contamination, resulting in diminished water quality (Setmire et al. 1990); and

WHEREAS freshwater sources for the Salton Sea are currently under threat from planned diversions to coastal urban regions of California; and

WHEREAS, there have recently been large-scale mortalities of birds (150,000 eared grebes in 1992, 1,400 brown pelicans in 1996, many nesting double-crested cormorants in 1997) and millions of fish, all symptomatic of severe problems in the ecosystem; and

WHEREAS, current attempts by agencies, NGOs, private concerns, and lawmakers to "save" the Salton Sea are gaining momentum, including engineering studies, Congressional legislation, and an environmental impact statement together with a scientific review committee conducted by the DI; and

WHEREAS, there is no consensus on what is meant to restore, or "save" the Salton Sea; and

THEREFORE BE IT RESOLVED that the American Ornithologists' Union recognizes the significance of the Salton Sea to wildlife and supports rehabilitation and conservation efforts for the Salton Sea that are responsive to the needs of wildlife and based on sound and thorough biological data; that recognize the importance of freshwater, delta, brackish, saline, and agricultural habitats at the Salton Sea; that improve water quality and guarantee continued adequate sources of freshwater; that stress the critical need for protection and isolation of waterbird colonies from human and other disturbance; and that seek to minimize threats to wildlife potentially resulting from urban and recreational development; and

THEREFORE BE IT FURTHER RESOLVED that the American Ornithologists' Union supports an approach that allows sufficient time to study the situation, including all feasible options, that any additional research funds are added to agency core budgets, that no money be spent on "emergency action" before a full environmental impact statement is completed, including studies of the impacts of brine or salt disposal from all pumped water, and that the implementation of whatever action be recommended must meet all environmental laws, including the National Environmental Policy Act and the Clean Water Act, and that judicial review of proposed actions be allowed without restraint.

Citations: Collins, C. T. and Garrett, K. L. 1996. The Black Skimmer in California: an overview. *West. Birds* 27: 127-135. Dawson, W. L. 1923. *The Birds of California*. South Moulton Co., San Diego Grinnell, J. 1908. *Birds of a voyage on Salton Sea*. *Condor* 10: 185-191. Jehl, J., Jr. 1988. *Biology of the Eared Grebe and Wilson's Phalarope in the nonbreeding season: a study of adaptations to saline lakes*. *Studies in Avian Biol.* 12. \_\_\_\_\_. 1994. Changes in saline and alkaline lake avifaunas in western North America in the past 150 years. *Studies in Avian Biology* 15: 258-272. Johnson, N., and Jehl, J. Jr. 1994. A century of avifaunal change in western North America: overview. *Studies in Avian Biol.* 15: 1-3. Miller, L. M. and van Rossem, A. J. 1929. Nesting of the Laughing Gull in southern California. *Condor* 31: 141-142. Molina, K. 1996. Population status and breeding biology of Black Skimmers at the Salton Sea, California. *West. Birds* 27: 143-158. Page, G. W., Shuford, W. D., Kjelson, J. E. and Stenzel, L. E. 1992. Shorebird numbers in wetlands of the Pacific Flyway: a summary of counts from April 1988 to January 1992. Point Reyes Bird Observatory, 4990 Shoreline Hwy, Stinson Beach, CA 94970. Parnell, J. P., Erwin, R. M., and Molina, K. C. 1995. Gull-billed Tern (*Sterna nilotica*). In *The Birds of North America*, No. 140. (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia and The American Ornithologists' Union, Washington, D.C. Pemberton, J. R. 1927. The American Gull-billed Tern breeding in California. *Condor* 29: 253-258. Setmire, J.G., R. Schroeder, Densmore, S. Goodbred, D. Audet and W. Radke. 1990. Detailed study of water quality, bottom sediment, and biota associated with irrigation drainage in the Salton Sea are, California, 1988-90. U. S. Geological Survey, Water Res. Invest. Rept. 93-4014. Shuford, W. D., Hickey, C. M., Safran, R. J., and Page, G. W. 1996. A review of the status of the White-faced Ibis in winter in California. *West. Birds* 27: 169-196.

#### RESOLUTION OF COMMENDATION

WHEREAS the American Ornithologists' Union has held its One Hundred and Sixteenth Stated Meeting jointly with other societies as part of the 1998 North American Ornithological Conference, and

RECOGNIZING that the Local Committee on Arrangements, under the outstanding direction of Bette Loiselle and John Blake provided us with an exceptionally diverse assemblage of exhibits, special events, field trips, and evening social events, and

RECOGNIZING that the Committee on the Scientific Program under the equally capable direction of Jeff Brawn arranged outstanding scientific lecture sessions, workshops, and poster sessions, and

WHEREAS all those who have attended this meeting have been enriched by it,

THEREFORE BE IT RESOLVED that the American Ornithologists' Union commends the Committee on Local Arrangements and the Committee on the Scientific Program for their efforts; and

THEREFORE BE IT FURTHER RESOLVED that the American Ornithologists' Union also thanks the individual, institutional, and corporate sponsors of this meeting.

**AOU COMMITTEES AND APPOINTMENTS  
1997-1998**

Committee Structure: See *The Auk* 106, (2 Supp): 4AA-10AA

ADVERTISING AND SALES: Anthony H. Bledsoe, Assistant Treasurer for Advertising.

BIRD COLLECTIONS: Richard C. Banks, Chair; Michael J. Braun; Carla Cicero; B. P. Escalante; Sandra L. L. Gaunt; Kimball L. Garrett; Robert Kennedy; Dennis Paulson; Pamela Rasmussen; Sievert A. Rohwer; Gary Schnell.

BREWSTER AND COUES AWARDS: Donald E. Kroodsmma (1998), Chair; Eugene S. Morton (1999); Wesley W. Weathers (2000); David M. Bird; Kathy M. Martin.

BYLAWS: Edward H. Burt, Jr., Chair; Alan Peterson; Steve Russell.

CLASSIFICATION AND NOMENCLATURE (NORTH AMERICA): Richard C. Banks, Chair; John W. Fitzpatrick; Thomas R. Howell; Ned K. Johnson; Henri Ouellet; J. V. Remsen; Robert W. Storer.

CLASSIFICATION AND NOMENCLATURE (SOUTH AMERICA): J. V. Remsen, Acting Chair; Manuel A. Nores; Richard O. Prum; Robert S. Ridgely; Mark B. Robbins; Thomas S. Schulenberg; J. M. Cardoso da Silva; F. Gary Stiles; Douglas F. Stotz; Bret M. Whitney.

CONSERVATION: Steven R. Beissinger, Chair; Jeffrey R. Walters, Carola A. Haas, Jeff T. Price, Robert Blair, Stanley A. Temple, Daniel R. Petit, Jeff Kelly, Susan M. Haig, Robert A. Askins, John B. Dunning, Jr., Scott R. Derrickson.

ENDOWMENT: Ruth Ogden Russell, Chair; Jane P. Church; Val Nolan Jr.; Eleanor H. Stickney; John W. Fitzpatrick; Frederick Sheldon (ex officio).

FINANCE: Frederick H. Sheldon, Chair; Howard P. Brokaw; Theresa L. Bucher; John W. Fitzpatrick; Fred E. Lohrer, Glen E. Woolfenden.

HISTORICAL RECORDS: Judith McIntyre, Chair; Carla Dove; Lowell Overton.

INVESTING TRUSTEES: John W. Fitzpatrick, Chair; Howard P. Brokaw; Edward E. Crawford.

LOCAL ARRANGEMENTS, 1998: Bette Loiselle; John G. Blake.

LOCAL ARRANGEMENTS, 1999: Kevin McGowan; David Winkler.

MEMBERSHIP: Charles Van Riper, Chair; Robert W. Butler; David J. Horn (student); Danny J. Ingold; Miguel Mora; Mark K. Sogge.

MEMORIALS: C. Stuart Houston, Chair; Jerome A. Jackson; Robert W. Storer.

NOMINATIONS: Frank B. Gill, Chair; Steven R. Beissinger; Robert S. Kennedy; Lloyd F. Kiff; Patricia A. Gowaty; Ken Yasukawa.

NOMINATION OF CORRESPONDING AND HONORARY FELLOWS: John C. Wingfield, Chair; I. Lehr Brisbin; Cynthia Carey; James A. Kushlan.

NOMINATION OF FELLOWS AND ELECTIVE MEMBERS: Joanna Burger, Chair (1998); Ross Lein (1999); Robert M. Zink (2000).

OSNA OVERSIGHT: Frank B. Gill, Chair (President-Elect); Frederick H. Sheldon (Treasurer).

PUBLICATIONS: Frank B. Gill, Chair; Helen James (1998); Joseph Jehl (1999); Max C. Thompson (2000); John M. Hagan (Editor, *Ornith. Monogr.*); Thomas R. Martin (Editor, *The Auk*).

PUBLIC RESPONSIBILITY: David Blockstein, Chair; Steven Beissinger; Greg Butcher; Irene Pepperberg; Alan Poole.

RESEARCH AWARDS: Paul J. Dubowy, Chair; Anthony H. Bledsoe; Alan Brush; Perri K. Eason; Carola A. Haas; Gary Ritchison; Charles R. Smith.

RESOLUTIONS: David Blockstein, Chair; Alan Brush; Jeff Brawn; Bob Curry; Bridget Stutchbury.

SCIENTIFIC PROGRAM: Jeffrey D. Brawn.

SPECIAL AFFAIRS, ELECTRONIC ROL: James L. Gullede, Chair; Pamela C. Rasmussen; Peter Stettenheim.

SPECIAL AFFAIRS, LONG-RANGE PLANNING: John Fitzpatrick, Chair; John Bates; Erica Dunn; Susan Haig; Frances C. James; Brina Kessel; Jeffrey Walters. Ex officio: Frank B. Gill, Scott M. Lanyon, M. Victoria McDonald, Frederick Sheldon.

SPECIAL AFFAIRS, NSF/AOU GRANTS TO 1998 IOC: Robert M. Zink, Chair; Ellen D. Ketterson, Richard T. Holmes, Marilyn Ramenofsky, Fred Cooke, Donna Holmes.

STUDENT AWARDS: Carla Cicero, Chair; Shannon Hackett; Christopher Rogers; Margaret Rubega; Mark Stanback; Doris Watt.

ASSISTANTS TO THE SECRETARY: Jeffrey D. Brawn (Program Coordinator); James P. Dean (Liaison, Permanent Mailing Address).

ASSISTANTS TO THE TREASURER: Anthony H. Bledsoe (Auk Advertisements); Max C. Thompson (Publications).

AOU WEB PAGE WEBMASTER: Alison E. H. Perkins.

RECENT ORNITHOLOGICAL LITERATURE: Peter Stettenheim, Coordinating Editor; Jay H. Sheppard, North American Editor.

REPRESENTATIVE TO THE AAAS: Edward I. Saiff.

REPRESENTATIVE TO THE AIBS: Helen James.

REPRESENTATIVE TO THE ASSOCIATION OF SYSTEMATICS COLLECTIONS: Betty Anne Schreiber.

REPRESENTATIVES TO THE MANAGEMENT COMMITTEE, BIRDS OF NORTH AMERICA PROJECT: Erica H. Dunn; Frederick H. Sheldon; Glen E. Woolfenden.

REPRESENTATIVES TO THE POLICY ADVISORY COUNCIL, AMERICAN BIRD CONSERVANCY: David Blockstein; Alan Poole.

REPRESENTATIVES TO THE BOARD OF THE ORNITHOLOGICAL COUNCIL: David Blockstein; Lowell Adams; Ellen Paul (Director of the OC).

REPRESENTATIVE TO THE COALITION FOR EDUCATION IN THE LIFE SCIENCES (CELS): L. Henry Kermott (inactive).

REPRESENTATIVES TO THE NORTH AMERICAN BANDING COUNCIL: Jared Verner; Glen Woolfenden.