Southeastern Working Group

SOUTHEAST PARTNERS IN FLIGHT ANNUAL MEETING

February 16-18, 2005
McAllen, Texas

(Revised Program)

SOUTHEAST PARTNERS IN FLIGHT ANNUAL MEETING

FEBRUARY 16-18, 2005
McALLEN, TEXAS

(Revised program after meeting)

PLANNING COMMITTEE

Cliff Shackelford (Texas Parks and Wildlife Department)
Catherine Rideout (Arkansas Game & Fish Commission)
Bob Cooper (University of Georgia)
Mark Woodrey (Mississippi State University)
Joni Ellis (Optics for the Tropics, FL)
Laurel Moore-Barnhill (U.S. Forest Service, SC)
David Pashley (American Bird Conservancy, VA)
Cecilia Riley (Gulf Coast Bird Observatory, TX)
EJ Williams (U.S. Fish and Wildlife Service, GA)

THANK YOU

Arkansas Game & Fish Commission
Country Inn & Suites, McAllen
McAllen Convention and Visitors Bureau
Texas Parks and Wildlife Department
World Birding Center at Bentsen-Rio Grande Valley State Park

GENERAL SCHEDULE

Wednesday, February 16

8:00 a.m. – 5:00 p.m.	Southeast Partners in Flight Steering Committee Meeting *Blue Jay Conference Room*
8:00 a.m. – 5:00 p.m.	Southeast Quail Study Group Steering Committee Meeting *Green Jay Conference Room*
5:00 p.m. – 7:00 p.m.	Registration in lobby of Country Inn & Suites

Thursday, February 17

6:00 a.m. – 9:45 a.m.	Registration in lobby at Country Inn & Suites
6:30 a.m. – 9:00 a.m.	World Birding Center visit and birding
10:00 a.m. – 1:00 p.m.	Plenary Session: "Bird Conservation in South Texas and Northeast Mexico" *Monarch Ballroom*
1:00 p.m. – 2:00 p.m.	Catered lunch, lobby of Millennium Building
2:00 p.m. – 3:15 p.m.	Concurrent Session 1A: Bird Biology/Conservation in Texas *Monarch Ballroom A*
2:00 p.m. – 3:15 p.m.	Concurrent Session 1B: Bird Conservation Methods & Programs *Monarch Ballroom B*
3:15 p.m. – 3:45 p.m.	Break, lobby of Millennium Building
3:45 p.m. – 5:15 p.m.	Concurrent Session 2A: Bird Habitat and Conservation *Monarch Ballroom A*
3:45 p.m. – 5:15 p.m.	Concurrent Session 2B: Shorebird & Waterbird Biology/Conservation *Monarch Ballroom B*
6:00 p.m. –10:00 p.m.	Poster Session, Social, and Silent Auction *Monarch Ballroom*

Friday, February 18

6:00 a.m. – 6:30 a.m.	Final registration in lobby of Country Inn & Suites
6:30 a.m. – 9:00 a.m.	World Birding Center visit and birding
10:00 a.m. – 1:00 p.m.	Plenary Session: "Bird Monitoring in the Southeast" *Monarch Ballroom*
1:00 p.m. – 2:00 p.m.	Catered lunch, lobby of Millennium Building
2:00 p.m. – 3:30 p.m.	Concurrent Session 3A: Monitoring Q&A *Monarch Ballroom A*
2:00 p.m. – 3:30 p.m.	Concurrent Session 3B: Opportunities for Bird Conservation on Private Lands. *Monarch Ballroom B*
2:00 p.m. – 3:30 p.m.	Concurrent Session 3C: Setting Population Objectives *Blue Jay Conference Room*
3:30 p.m. – 4:00 p.m.	Break, lobby of Millennium Building
4:00 p.m. – 5:30 p.m.	Session 4: Nature Tourism *Monarch Ballroom*
6:00 p.m.	Optional dinner and shopping in Nuevo Progreso, Mexico

Saturday, February 19

6:00 a.m. – past sunset	Guided day-trips (three options), departing from lobby of Country Inn & Suites
7:30 a.m.	Departure from Country Inn & Suites for the 3-day trip to Mexico

WEDNESDAY, FEBRUARY 16

CONCURRENT STEERING COMMITTEE MEETINGS: SEPIF and SEQSG

5:30 a.m. – 11:00 a.m.	**Breakfast** served near lobby for guests of the Country Inn & Suites
8:00 a.m. – 5:00 p.m.	**Southeast Partners In Flight** Steering Committee Meeting *Blue Jay Conference Room*
8:00 a.m. – 5:00 p.m.	**Southeast Quail Study Group** Steering Committee Meeting *Green Jay Conference Room*
5:00 p.m. – 7:00 p.m.	**Registration** in lobby of Country Inn & Suites
7:00 p.m.	**Dinner** on your own

THURSDAY, FEBRUARY 17

6:00 a.m. – 9:45 a.m.	**Registration** in lobby of Country Inn & Suites NOTE: Breakfast will be served from 5:30 a.m. – 11:00 a.m. for guests of the Country Inn & Suites
6:30 a.m. – 9:00 a.m.	Optional and **informal visit and birding** at the World Birding Center's headquarters at Bentsen-Rio Grande Valley State Park in Mission, TX. No shuttle service; please carpool (for directions, see *Maps* towards the back of this program)

PLENARY SESSION (10:00 a.m. – 1:00 p.m.) *Monarch Ballroom, Millennium Building*

"Bird Conservation in South Texas and Northeast Mexico"
Moderator: Cecilia Riley

10:00 a.m. – 10:10 a.m.	**Welcome and Introduction**
10:10 a.m. – 10:40 a.m.	John Arvin: **The Avifauna of South Texas: Changing Dynamics in the Ranges of Neotropical Birds**
10:40 a.m. – 11:10 a.m.	Eduardo Ingio-Elias: **An Update on the Avian Species Conservation Assessment in Mexico: National and Continental Priorities**
11:10 a.m. – 11:30 a.m.	Magdalena Rovalo: **Pronatura Noreste Projects of Binational Interest**
11:30 a.m. – 12:00 p.m.	Dave Krueper: **Wind Power Along the Texas Coast: Promise, Paradigm or Panacea?**
12:00 p.m. – 12:30 p.m.	Eduardo Ingio-Elias: **The Live Trade of Painted Bunting and Other Migratory Birds in the Neotropics: Trade and Population Monitoring**
12:30 a.m. – 1:00 p.m.	Arvind Panjabi: **Community-based bird conservation in the El Cielo Biosphere Reserve, Tamaulipas, Mexico**
1:00 p.m. – 2:00 p.m.	**Catered lunch** served in the lobby of the Millennium Building; can be eaten in the Monarch Ballroom, the hotel's poolside or grounds

(continued)

EARLY AFTERNOON PAPER SESSIONS (2:00 p.m. – 3:15 p.m.)

Two concurrent sessions held in Monarch Ballroom A & B

Concurrent Session 1A: Bird Biology/Conservation in Texas *Monarch Ballroom A*
Moderator: Dean Demarest

2:00 p.m. – 2:15 p.m. **Development and implementation of Texas Parks and Wildlife's Borderlands Program.** ISMAEL "SMILEY" NAVA. Texas Parks and Wildlife Dept., Natural Resources Center, Suite 2501, 6300 Ocean Dr., Unit 5846, Corpus Christi, TX 78412-5846

2:15 p.m. – 2:30 p.m. **Burrowing owl use of artificial burrows in southern Texas.** JENNIFER L. ORTEGA[1], MARC C. WOODIN[2]*, and MARY K. SKORUPPA[2]. [1]Department of Physical & Life Sciences, Texas A&M University-Corpus Christi, Corpus Christi, TX 78412, [2]United States Geological Survey, Texas Gulf Coast Field Research Station, Corpus Christi, TX 78412

2:30 p.m. – 2:45 p.m. **Birders and bird hunters: A Texas initiative for stabilizing and increasing grassland bird populations.** LEONARD A. BRENNAN[1]*, WILLIAM P. KUVLESKY, JR[1], ROBERT M. PEREZ[2], and STEPHEN J. DEMASO[2]. [1]Caesar Kleberg Wildlife Research Institute, Texas A&M University-Kingsville, Kingsville, TX 78363, [2]Texas Parks and Wildlife Dept., Austin, TX 78744

2:45 p.m. – 3:00 p.m. **Wintering birds of coastal prairies at Laguna Atascosa NWR, Texas.** MARC C. WOODIN[1]*, MARY K. SKORUPPA[1], GRAHAM C. HICKMAN[2], GENE W. BLACKLOCK[3], and ROBERT BENSON[2]. [1]United States Geological Survey, Texas Gulf Coast Field Research Station, Corpus Christi, TX 78412, [2]Department of Physical & Life Sciences, Texas A&M University-Corpus Christi, Corpus Christi, TX 78412, [3]Coastal Bend Bays & Estuaries Program, Inc., Corpus Christi, TX 78401

3:00 p.m. – 3:15 p.m. **Red-billed Pigeon (*Patagioenas flavivostris*) nesting characteristics in southeast Tamaulipas and south Texas.** JACK C. EITNIEAR. Center for the Study of Tropical Birds, Inc., San Antonio, TX 78209

Concurrent Session 1B: Bird Conservation Methods & Programs *Monarch Ballroom B*
Moderator: Laurel Moore-Barnhill

2:00 p.m. – 2:15 p.m. **Population declines of Nearctic-Neotropical migratory birds are driven primarily by processes that affect overwintering site persistence on the wintering grounds and survival of first-year and adult birds.** DAVID F. DESANTE*, DANIELLE R. KASCHUBE, and JAMES F. SARACCO. The Institute for Bird Populations, P.O. Box 1346, Point Reyes Station, CA 94956-1346

2:15 p.m. – 2:30 p.m. **GAP Analysis in the Southeast: New data products and partnerships.** STEVE WILLIAMS. Biological and Spatial Information Center, North Carolina State University, 1575 Varsity Drive, Zoology Annex, Rm. 1216, Raleigh, NC 27695-7617

2:30 p.m. – 2:45 p.m. **Analysis of the Kentucky Avian Point-Count Monitoring Database: 1993-2003**. SHAWCHYI VORISEK[1]*, DAVID A. BUEHLER[2], and ERIC P. LINDER[3]. [1]Kentucky Department of Fish and Wildlife Resources, Frankfort, KY 40601, [2]Department of Forestry, Wildlife and Fisheries, The University of Tennessee, Knoxville, TN 37901, [3]Department of Biological Sciences, Mississippi State University, Mississippi State, MS 39762

2:45 p.m. – 3:00 p.m. **Avian conservation, research, and policy initiatives at Defenders of Wildlife: an overview.** CAROLINE KENNEDY[1], AIMEE DELACH[2], CARROLL MUFFETT[3], JEFF LERNER[2], and J. CHRISTOPHER HANEY[2]*. [1]Field Conservation, [2]Conservation Policy, and [3]International Conservation Programs, Defenders of Wildlife, 1130 17th Street, NW, Washington, DC 20036

3:00 p.m. – 3:15 p.m. **Flying WILD: Bringing Bird Education to Schools**. MARC LEFEBRE, Council for Environmental Education, Houston, TX 77005

3:15 p.m. – 3:45 p.m. **BREAK** (coffee, sodas, and cookies served in the Millennium Building's lobby)

(continued)

LATE AFTERNOON PAPER SESSIONS (3:45 p.m. – 5:15 p.m.)

Two concurrent sessions held in Monarch Ballroom A & B

Concurrent Session 2A: Bird Habitat and Conservation *Monarch Ballroom A*
Moderator: Bob Cooper

3:45 p.m. – 4:00 p.m. **Spatially-explicit predictive models for grassland birds in the West Gulf Coastal Plain.** R. RANDY WILSON[1]*, AMY KEISTER[1], AND DAN TWEDT[2]. [1]U.S. Fish and Wildlife Service, Lower Mississippi Valley Joint Venture, 2524 South Frontage Road, Vicksburg, MS 39180; [2]USGS Patuxent Wildlife Research Center, 2524 South Frontage Road, Vicksburg, MS 39180

4:00 p.m. – 4:15 p.m. **Do flood-associated habitat changes affect habitat occupancy by Swainson's Warblers?** THOMAS J. BENSON*, JAMES C. BEDNARZ, and JEREMY D. BROWN. Department of Biological Sciences, Arkansas State University, State University, AR 72467

4:15 p.m. – 4:30 p.m. **Spatial ecology of swallow-tailed kites (*Elanoides forficatus*) in Southeast Georgia, USA: Integrating cost explicit models into species management.** RUA M. STOB[1]*, ROBERT J. COOPER[1], and KEN MEYER[2]. [1]Warnell School of Forest Resources, University of Georgia, Athens, GA 30602, [2]Avian Research and Conservation Institute, 411 N.E. 7 Street, Gainesville, FL 32601

4:30 p.m. – 4:45 p.m. **The importance of multi-scale habitat characteristics to brood parasitism of the Prothonotary Warbler (*Protonotaria citrea*) within a bottomland hardwood forest.** JILL J. GANNON* and ROBERT J. COOPER. Warnell School of Forest Resources, University of Georgia, Athens, GA 30602

4:45 p.m. – 5:00 p.m. **Do urban greenways provide high quality bird habitat?** CHRISTOPHER E. MOORMAN[1]*, GEORGE R. HESS[1], JAMIE H. MASON[2], KRISTEN E. SINCLAIR[3], and SALINA K. KOHUT[1]. [1]Department of Forestry, North Carolina State University, Raleigh, NC 27695, [2]Barr Engineering, 4700 West 77th Street, Minneapolis, MN 55435-4803, [3]North Carolina Natural Heritage Program, 1601 Mail Service Center, Raleigh, NC 27699-1601

5:00 p.m. – 5:15 p.m. **Kentucky Warbler habitat in Arkansas and Virginia compared.** M. VICTORIA MCDONALD[1]* and MICHELLE C. HUNT[2]. [1]Department of Biology, University of Central Arkansas, Conway, AR 72035, [2]Mississippi Museum of Natural Science, 2148 Riverside Dr, Jackson, MS 39202

Concurrent Session 2B: Shorebird & Waterbird Biology/Conservation. *Monarch Ballroom B*
Moderator: EJ Williams

3:45 p.m. – 4:00 p.m. **Regional assessment and management of inland stopover habitats for shorebirds in the Tennessee Valley**. ROGER D. TANKERSLEY, JR* and TRAVIS H. HENRY. Tennessee Valley Authority, Knoxville, TN 37902

4:00 p.m. – 4:15 p.m. **Using LIDAR and GIS to model habitat availability for migrating shorebirds in the Tennessee River Valley.** MATTHEW D. SMITH[1]*, ROGER D. TANKERSLEY, JR[1], TRAVIS H. HENRY[1], and KEN ORVIS[2]. [1]Tennessee Valley Authority, Knoxville, TN 37902, [2]University of Tennessee, Knoxville, TN 37996

4:15 p.m. – 4:30 p.m. **Shorebird abundance and habitat use in a urban coastal mosaic, Indian Point and Sunset Lake parks, Texas**. SHANNON R. ROWELL-GARVON* and KIM WITHERS. Center for Coastal Studies, Texas A&M University-Corpus Christi, Corpus Christi, TX 78363

4:30 p.m. – 4:45 p.m. **Nesting success and ecology of the snowy plover (*Charadrius alexandrinus*) at Barney M. Davis Power Plant, Nueces County, Texas, and Sunset Lake, San Patricio County, Texas.** MICHELLE R. KOLAR. Center for Coastal Studies, Texas A&M University-Corpus Christi, Corpus Christi, TX 78412

4:45 p.m. – 5:00 p.m. **Effects of hydrology and prey density on shorebird distribution in the Blind Oso, Oso Bay, Corpus Christi, Texas.** MAREN N. HARDING* and DR. KIM WITHERS. Center for Coastal Studies, Texas A&M University-Corpus Christi, Corpus Christi, TX 78412

5:00 p.m. – 5:15 p.m. **Island construction and colonization by nesting waterbirds in Nueces Bay, Texas**. GENE W. BLACKLOCK* and DAVID J. NEWSTEAD. Coastal Bend Bays & Estuaries Program, Inc., 1305 N. Shoreline Blvd., Suite 205, Corpus Christi, TX 78412

(continued)

6:00 p.m. –10:00 p.m. **POSTER SESSION, SOCIAL, AND SILENT AUCTION** (all combined in and around the Monarch Ballroom, Millennium Building). *Border Buttermilk* (tequila) refreshments graciously served by the McAllen Convention & Visitors Bureau. A variety of hors d'oeuvre will be served. No cash bar; BYOB if you do not like tequila. Silent Auction organized by Joni Ellis with proceeds to support *Optics for the Tropics*.

FRIDAY, FEBRUARY 18

6:00 a.m. – 6:30 a.m. **Final registration** in lobby of Country Inn & Suites.
NOTE: Breakfast will be served from 5:30 a.m. – 11:00 a.m. for guests of the Country Inn & Suites

6:30 a.m. – 9:00 a.m. Optional and **informal visit and birding** at the World Birding Center's headquarters at Bentsen-Rio Grande Valley State Park in Mission, TX. No shuttle service; please carpool (for directions, see *Maps* towards the back of this program).

PLENARY SESSION (10:00 a.m. – 1:00 p.m.) *Monarch Ballroom*

"Bird Monitoring in the Southeast" (also see "Background Information" located in the back of this program)

10:00 a.m. – 1:00 p.m. David Pashley (Moderator)

Panelists – Charles Baxter, David Buehler, Bob Cooper, David DeSante, Chuck Hunter, Terry Rich and Randy Wilson.

In light of recent discussions regarding the relative merits of management based monitoring and surveillance monitoring, it seems useful to return to some very basic questions regarding monitoring. It has been suggested that management based monitoring and surveillance monitoring are two ends of a continuum, or alternatively, that there is a distinct dichotomy between them. The reality may be that the situation is significantly more complicated than either depiction, that monitoring is multi-dimensional depending on the nature of questions being asked. What seems clear is that many monitoring programs are undertaken on the basis of poorly phrased (or nonexistent) questions, unrealistic expectations, and improper design. Because all agree on two issues – that monitoring is a key component of bird conservation and that resources for monitoring, and everything else we do, are extremely limited – it is timely to air out all of these issues. This panel discussion is suggested as a means, at least, of summarizing relevant topics, and hopefully suggesting some solutions to problems. It will be organized on the basis of the nature of questions that are often posed when designing monitoring programs. There will be a discussion among panelists about each topic, but each will be introduced by one of the panelists, whose names are suggested below.

- Status of Populations – David DeSante: Inventory and distribution, Population size, Population trends
- Bird-Habitat Relationships – Bob Cooper: Bird occurrence and abundance relative to vegetative characteristics
- Bird Response to Management Actions or Habitat Conditions – Charles Baxter: Changes in population size in response to local management practices, Adaptive resource management, Changes in population size in response to widespread land use conditions
- Factors Limiting Population Size – David Buehler: Consider the entire life cycle, Designing management based upon conclusions
- Setting Monitoring Priorities – Terry Rich: (from a continental perspective)
- How Can Monitoring in the Southeast be Improved? – Chuck Hunter
- General Overview and Some Impressions – Randy Wilson

1:00 p.m. – 2:00 p.m. **Catered lunch** served in the lobby of the Millennium Building; can be eaten in the Monarch Ballroom, the hotel's poolside or grounds

(continued)

EARLY AFTERNOON SESSIONS (2:00 p.m. – 3:30 p.m.)

Three concurrent sessions held in Monarch Ballroom A & B and the Blue Jay Conference Room

Concurrent Session 3A: **Monitoring Q&A: continued from the morning plenary** *Monarch Ballroom A*

Concurrent Session 3B: **Opportunities for Bird Conservation on Private Lands** *Monarch Ballroom B*
Moderator: Catherine Rideout

2:00 p.m. – 2:30 p.m.	Drue DeBerry, Forests for Watersheds and Wildlife, American Forest Foundation. **Bird Conservation on Family Forestlands in the Southeast: Opportunities in a changing environment.**
2:30 p.m. – 3:00 p.m.	Don McKenzie, NBCI Coordinator, Wildlife Management Institute. Don will present information on a **joint initiative** being pursued by the Southeast Quail Study Group and Southeast Partners in Flight to address opportunities for managing family forestlands for non-game birds and Bobwhite Quail through new Farm Bill programs.
3:00 p.m. – 3:30 p.m.	**Private Lands Discussion**

Concurrent Session 3C: Setting population objectives *Blue Jay Conference Room (near the hotel's front desk)*
Moderator: Terry Rich

3:30 p.m.– 4:00 p.m.	**BREAK** (coffee, sodas, and cookies served in the Millennium Building's lobby)

LATE AFTERNOON SESSION (4:00 p.m. – 5:30 p.m.)

Session 4: **Nature Tourism** *Monarch Ballroom*
Moderator: Shelly Plante

4:00 p.m. – 4:30 p.m.	Nature Tourism Overview: A Tool for Habitat Conservation and Avian Research. Shelly Plante
4:30 p.m. – 5:00 p.m.	Community Development through Nature Tourism. Martha Noell
5:00 p.m. – 5:30 p.m.	Nature Tourism: Ranch Opportunities for Today. Texas Cooperative Extension video. This 20-minute video gives a behind-the-scenes look at what it takes to create a nature tourism enterprise on your property. Through the eyes of six different ranchers in South Texas, you will learn the step-by-step process they followed to develop their new business. They give you the honest answers to questions about cost, nature tourism guests, marketing, insurance, competition and some good old fashioned advice.
6:00 p.m.	**Optional dinner and shopping** Friday night in Nuevo Progreso, Mexico. For details and directions, please see *Maps* towards the back of this program.

SATURDAY, FEBRUARY 19

GUIDED DAY-TRIPS:

For those signed up on a guided day-trip, please meet in the hotel lobby and be ready to leave at 6:00 a.m. Breakfast in the hotel starts at 5:30 a.m. for any guest of the Country Inn & Suites. If you are not staying in the hotel Saturday night, please be sure that you've checked-out by 6 a.m. Please inquire at the front desk about safe storage of your luggage inside the hotel as there won't be space in the rental vans for luggage other than your day-pack with field trip essentials (i.e., binoculars, bottled water, field guide, camera, snack). Bring plenty of cash for any entry fees into preserves, snacks, souvenirs, etc. Your field trip fee covers your box lunch, rental van, and gasoline.

Three guided day-trips offered:

- The Upper Valley (Starr and Zapata counties) – more xeric than the rest of the Valley and hosts species like Brown Jays, White-collared Seedeaters, Muscovy Ducks, three species of kingfishers, and more. Leaders: John Arvin and Jesus Franco.
- Central Valley – many of the Valley Specialties will be observed at wonderful sites like Santa Ana NWR, Anzalduas County Park, Estero Llano Grande (waterbirds), etc. Leaders: Cliff Shackelford and Steve Benn.
- Texas Tip – many of the Valley Specialties will be observed at wonderful places like Sabal Palm Grove Sanctuary, Laguna Atascosa NWR, South Padre Island, etc. This trip includes a peek at the Gulf of Mexico and beautiful Lower Laguna Madre. Leaders: Cecilia Riley and Tim Brush.

3-DAY FIELD TRIP TO NORTHEAST MEXICO:

For details, please see the leaders Catherine Rideout and David Pashley

ABSTRACTS

(each presenter is marked with an asterisk)

The Avifauna of South Texas: Changing dynamics in the ranges of neotropical birds (PLENARY – ORAL)
JOHN ARVIN
Gulf Coast Bird Observatory, 103 West Highway 332, Lake Jackson, TX 77566, jarvin@gcbo.org

The Lower Rio Grande Valley lies in the extreme southern tip of Texas and is a part of the Tamaulipan Biotic Province, an exceptionally well delineated biome in southern Texas southward through central Tamaulipas, Mexico. Its subtropical avifauna has been studied since the mid nineteenth century and includes about 50 species which are normally found north of the Mexican border either exclusively or mainly in the region. Well known examples include such species as Plain Chachalaca, Great Kiskadee, Green Jay and Altamira Oriole. There is abundant evidence of long term range extensions exceeding 500 kilometers among most, if not all, breeding species in the Biotic Province. Salient examples include White-tipped Dove, Buff-bellied Hummingbird, Ringed Kingfisher and Green Jay. That this process may have been on-going for a century or longer may be seen in the huge range extensions that have been shown by species like Great-tailed Grackle and Inca and White-winged Doves compared to their ranges known from the early part of the 20th century. Many species of birds whose ranges are basically Neotropical have occurred as "vagrants" in the Lower Rio Grande Valley. A number of these have since become regular breeding members of the local avifauna. Several other species, presently still considered "vagrants," may be in the process of making the transition from vagrant to regularly occurring resident. The driving force behind this northward extension is unknown, but is widely assumed to be due to long term climate change.

Do flood-associated habitat changes affect habitat occupancy by Swainson's Warblers? (ORAL)
THOMAS J. BENSON*, JAMES C. BEDNARZ, and JEREMY D. BROWN
Department of Biological Sciences, Arkansas State University, State University, AR 72467, thomas.benson@astate.edu

The Swainson's Warbler (*Limnothlypis swainsonii*), an uncommon inhabitant of bottomland hardwood forests, is a species of critical conservation concern in the southeastern U.S. Although past studies have examined habitat use of Swainson's Warblers over relatively short time scales, a multi-year assessment of factors that influence changes in occupancy of habitats is needed. To this end, we undertook this study to determine factors influencing change in warbler habitat occupancy between 2000 and 2001, when we completed initial surveys in Arkansas, and 2004. In 2004, we re-surveyed and re-sampled vegetation structure and composition at sites in 4 study areas in Arkansas that were occupied by Swainson's Warblers in 2000/2001. Of 44 sites occupied in 2000/2001, 29 (66%) were unoccupied in 2004. Unoccupied sites had significantly less litter ($\overline{X}$ = 63.4%), more bare ground ($\overline{X}$ = 36.2%), less shrub cover ($\overline{X}$ = 8.2%), and less litter depth ($\overline{X}$ = 11.5 mm) in 2004 than 2000/2001 ($\overline{X}$ = 93.7%, 6.3%, 13.4%, and 32.1 mm, respectively). Changes in habitat over the 3 to 4 years since initial surveys were consistent with the effects of flooding. As a ground forager that nests in the shrub layer, Swainson's Warblers appear to be especially vulnerable to flood-associated changes in litter and understory vegetation. We suggest that multiple years of monitoring are vital for identifying important habitat features and assessing population stability. Furthermore, our findings suggest that hydrological changes resulting in increased severity of flooding may adversely impact Swainson's Warbler populations.

Island construction and colonization by nesting waterbirds in Nueces Bay, Texas (ORAL)
GENE W. BLACKLOCK* and DAVID J. NEWSTEAD
Coastal Bend Bays & Estuaries Program, Inc., 1305 N. Shoreline Blvd., Suite 205, Corpus Christi, TX 78412, geneb@cbbep.org

Coastal waterbird nesting colonies in Texas are dependent on islands located between extensive barrier islands and the mainland. Several natural islands exist and have historically supported a large proportion of the breeding biomass. Most of the islands currently used by waterbirds were created by deposition of dredge material. Inadequate protection of these islands has resulted in a major loss in available nesting habitat due to erosion/subsidence, invasive vegetation, predation, and human disturbance. Waterbirds are consequently relegated to less

favorable habitat which can result in decreased overall reproductive success. Nueces Bay, in the central coast, has lost over 2/3 of its islands in the last thirty years, and the islands that remain are drastically reduced in size. In 2001, an island was created with the intention of providing nesting habitat for several waterbird species of conservation concern, especially black skimmer (*Rynchops niger*). The protected four-acre island was constructed at a cost of ~$1.5 million. Bare-ground nesters colonized the site in the first available breeding season, and in 2004 thirteen species including wading birds and whistling-ducks nested on the island. In 2003, we conducted weekly counts during the breeding season. Based on perceived low fledging success of black skimmers in 2003, a more intensive effort was made to observe nesting dynamics in addition to weekly counts in 2004. Piracy of black skimmers by gull-billed terns (*Sterna nilotica*) severely limited the ability of skimmers to successfully feed and fledge young.

Birders and bird hunters: A Texas initiative for stabilizing and increasing grassland bird populations (ORAL)

LEONARD A. BRENNAN[1]*, WILLIAM P. KUVLESKY, JR[1] , ROBERT M. PEREZ[2], and STEPHEN J. DEMASO[2]
[1]Caesar Kleberg Wildlife Research Institute, Texas A&M University-Kingsville, Kingsville, TX 78363, leonard.brennan@tamuk.edu; [2]Texas Parks and Wildlife Department, Austin, TX 78744

Coordinating grassland bird conservation efforts with initiatives to stabilize and increase upland game birds that have strong affinities for grassland habitats – such as quail and prairie grouse – present significant opportunities to leverage funding and resources that will positively impact many species of North American grassland birds**.** The widespread and ongoing declines of North American bird populations that have affinities for grassland and grass-shrub habitats (hereafter referred to as grassland birds) are on track to become a prominent wildlife conservation crisis of the 21st century. We present an overview of the Texas Quail Conservation Initiative (TQCI), a program designed to stabilize and increase northern bobwhite (*Colinus virginianus*) and scaled quail (*Callipepla squamata*) populations in 6 Bird Conservation Regions over the next 2-3 decades. The TQCI is a stepped-down, statewide plan designed to be coordinated with the National Bobwhite Conservation Initiative. It is based on a 3-step process to (1) promote quail management on public wildlife areas, (2) provide landowners financial incentives and technical assistance and (3) develop and promote Joint Venture initiatives modeled on the North American Waterfowl Plan and the North American Bird Conservation Initiative. We hypothesize that stabilizing and increasing populations of wild quail will have positive effects on numerous other species of grassland birds. As such, both birders and bird hunters have important roles as stakeholders in this initiative.

Vegetation characteristics of sites occupied and unoccupied by Swainson's Warblers at White River National Wildlife Refuge, Arkansas (POSTER)

JEREMY BROWN*, THOMAS J. BENSON, and JAMES C. BEDNARZ
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The Swainson's Warbler (*Limnothlypis swainsonii*) is a species of critical conservation concern in the southeastern United States. Because these warblers are ground-foraging litter-specialists, they likely are adversely affected by flooding. Consequently, previous studies involving low-elevation sites may not have accurately represented the habitat affinities of this warbler. Here, we examine relationships between Swainson's Warbler occupancy and vegetation structure at relatively high elevations in a bottomland area. We surveyed high-elevation sites systematically at White River National Wildlife Refuge (WRNWR) using song playbacks, and collected vegetation data at 45 occupied sites and 45 unoccupied sites. We found that canopy cover (mean = 82.0%), number of cane (*Arundinaria gigantea*) stems (3.84/m^2), total number of stems (9.22/m^2), average shrub height (1.15 m), cover of cane (20.53%), and number of snags (202/ha) were significantly greater in occupied than unoccupied sites (means = 78.12%, 0.21/m^2, 7.77/m^2, 0.86 m, 0.46%, and 147/ha, respectively). Additionally, we found that non-cane woody stems (mean = 5.36/m^2), cover of green vegetation (38.57%), forbs (18.53%), number of saplings (442/ha), poles (516/ha), and small trees (327/ha) were significantly lower in occupied sites than in unoccupied sites. Single-variable logistic regression analyses showed that percent cover of cane and number of cane stems were the best predictors of occupied sites ($p \leq 0.001$; concordance $\geq 75\%$). These preliminary results suggest that cane may be a crucial component related to the use of habitat by Swainson's Warblers at WRNWR. These results are of concern given the decline of canebrakes throughout the Southeast.

Green Parakeet update: South Texas and Northeastern Mexico (POSTER)
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Green Parakeets (*Aratinga holochlora*) established themselves in the Lower Rio Grande Valley of Texas in the late 1980s and 1990s. These birds nest, forage and roost mainly in urban/suburban habitats. The establishment of diverse, year-round food resources, many of native or near-native tree species, may be crucial in supporting Green Parakeets in the Valley. Urban Green Parakeets also occur in Monterrey, Nuevo Leon, and Laredo, Texas. Green Parakeets have not been seen in recent decades on the lower Rio Corona, a traditional breeding site, but they still occur in the upper Rio Corona and in other canyons near Ciudad Victoria, Mexico. Green Parakeets still occur in the Rio Sabinas valley of southwestern Tamaulipas. Numbers may have declined somewhat since the early 1990s, but trends are unclear and perhaps confused by short-term responses to changing food abundance. Preliminary data suggest that cave nesting sites may be particularly important to remaining Green Parakeets in northeastern Mexico.

Mapping stopover areas of migrating birds along the northern coast of the Gulf of Mexico using weather radar (POSTER)
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Urgency in conservation of coastal habitats that support populations of migratory birds is escalating due to the extensive and rapid development of coastal regions that provide critical stopover habitat for millions of birds migrating across the Gulf of Mexico twice annually. Identifying important stopover areas that support high densities of migratory birds *en route* will help to build a stronger scientific foundation and to narrow the decision making process for creating effective conservation strategies, mitigating important stopover habitats, and developing coastal areas in an ecologically sensitive manner. We compiled weather radar observations of birds at the onset of migratory flight throughout spring and autumn in order to quantify and map the distribution of migratory birds during stopover from three radar sites along the Gulf of Mexico. We used high resolution data and new data adjustment techniques to obtain more accurate and precise maps of bird densities than previous radar-mapping efforts. The highest relative bird densities occurred within large tracts of forested bottomlands bordering large rivers (e.g., Pearl, Pascagoula, and Apalachicola), and areas adjacent (i.e., generally up to 15 km away) to coastal waters. Seasonal differences in bird densities were evident. Bottomland hardwood forests were generally used more extensively and in relatively higher densities by birds during autumn whereas coastal areas had relatively higher and more-variable bird-densities in spring. We plan to quantitatively compare radar data and land cover data to identify habitats and landscape features favored by migrants during stopover.

Avian use of different early successional habitats during the post-breeding season in the Cumberland Mountains of eastern Tennessee (POSTER)
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Early successional habitats are important for breeding songbirds as well as forest interior songbirds that use them during the post-breeding season. Several types of early successional habitats are present in the Cumberland Mountains such as clearcuts, utility rights-of-ways (ROW) and reclaimed surface mines that differ in their vegetation structure and composition. These differences may affect their use by post-breeding birds. We conducted avian surveys using passive mist netting and walking transects from mid-June through late July in two clearcuts, two surface mines and two ROWs. We then assessed the species composition, richness, and abundance across the three habitat types. We captured a total of 35 species and 837 birds. Surface mines had the highest abundance of birds while the highest richness was in ROWs. Forest interior species comprised 34% of captures and 42% of species. Hatch year birds comprised 48% of the captures and 60% of these were woodland breeding species. Furthermore, hatch year woodland breeding species comprised a larger proportion of surface mine captures than did shrubland hatch year birds, a trend not seen in ROW and clearcuts. In general, surface mines reclaimed more than 10 years ago provide early successional woodland habitat with numerous saplings and thick herbaceous cover whereas clearcuts and ROW have less herbaceous cover and more dense woody vegetation. All three types of early successional habitat appear to provide habitat for post-breeding birds. However, the avian communities that occupy these habitats in the post-breeding season demonstrate that they are quite different.

Natural Resource Summaries – what do we really know about birds on National Parks (POSTER)
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The National Park Gulf Coast Network consists of eight National Parks located along the Gulf Coast of the United States from the tip of Texas to the western panhandle of Florida. These parks vary greatly in size and diversity of natural resources and include two seashores, two national preserves, three battlefields, and a national parkway. In order to better manage these parks it is essential to determine the state of knowledge for a particular park. We compiled baseline natural resource data and management issues important to each park into summary reports. In general, birds have been well inventoried compared with other taxa on most parks although more research and monitoring have been conducted at larger and more ecologically important parks. In particular, Padre Island National Seashore has had an exceptional amount of avian research conducted on the park, including long-term surveys of waterbirds and songbirds as well as extensive research on various aspects of the migration of Peregrine Falcons (*Falco peregrinus*). Some type of annual avian monitoring is conducted on five of the parks. Of the 38 management issues identified for the parks, seven are of high or medium concern for all parks. These issues all relate to the effect of anthropogenic disturbances on park resources. One such issue is the status of migratory birds on the park. Most parks identified concerns with the effect of habitat changes/loss through park management or outside park development on bird populations. Smaller parks also contend with data gap issues where a lack of baseline knowledge prevents park managers from assessing effects on populations. A couple of these parks have used local bird organizations to help alleviate this deficiency.

Evaluation of distance sampling as a method to determine the abundance of the Black-capped Vireo on Fort Hood, Texas (POSTER)
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The management objective for Fort Hood's population of the endangered black-capped vireo is a minimum of 1000 singing males. The current monitoring scheme on the installation does not allow evaluation of progress toward this goal because it permits calculation of an index of abundance rather than an estimate of actual abundance. We evaluated distance sampling as a technique for estimating black-capped vireo abundance. Three field biologists conducted 250 6-min point transect surveys from 12 April to 2 June within 350 ha of shrubland habitat. In the same area, 8 biologists determined the number of males present by color-banding and mapping territories. We compared abundance estimates derived from these 2 techniques. After fitting a hazard rate model to point transect data, we determined that the 95% confidence interval for the number of males present was 292–476. Based on color-banding and territory mapping, we identified 202 males. When we limited data to detections from the first 3 minutes of surveys, we determined that the 95% confidence interval was 169–291. We conclude that distance sampling provided accurate estimates of the number of male black-capped vireos when surveys were limited to 3 minutes. We also tested the assumption that distances measurements were accurate. Meeting this assumption is especially important at shorter distances, but may prove difficult in dense, shrubby vegetation inhabited by the vireo. We classified the accuracy of our distance measurements into 3 accuracy categories and found that only 9% of distances, <20 m received the lowest rating.

Population declines of Nearctic-Neotropical migratory birds are driven primarily by processes that affect overwintering site persistence on the wintering grounds and survival of first-year and adult birds (ORAL)
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Many species of Nearctic-Neotropical migratory landbirds (NTMBs) have declined over the past three decades. In response to these declines, major conservation efforts such as the Neotropical Migratory Bird Conservation Initiative (Partners In Flight, PIF), the North American Bird Conservation Initiative, and the Neotropical Migratory Bird Conservation Act have been established and funded. Despite these efforts, conservation of these species has largely been ineffective, at least at a range-wide scale. Indeed, for 31 species of landbirds with significant (P<0.10) range-wide population declines during the 22-year period, 1980-2002, trends during the eleven years subsequent to the establishment of PIF (1991-2002; mean -2.04% per year) were not significantly different (pairwise t-test: t=0.23, df=30, P=0.820) from those during the eleven years prior to the establishment of PIF (1980-1991; mean -1.94% per year), with 16 of the 31 species showing more negative trends during the later period. We regressed long-term

(1966-2002) BBS population trends on estimates of monthly overwintering apparent survival (site persistence) from 63 stations across Mexico, Central America, and the Caribbean operated during the first winter (2003-2004) of the Monitoreo de Sobrevivencia Invernal (MoSI) Program for the 12 species of forest-inhabiting NTMBs for which we could obtain estimates, and found a very strong positive linear relationship (R^2=0.86; P<0.0001). This suggests that processes operating on the wintering grounds of these species are driving their population trends, presumably through reduced first-year and adult survival. To confirm this hypothesis, we regressed 1992-2001 BBS range-wide population trends on 1992-2001 time-constant range-wide estimates of annual adult survival from MAPS for 31 species of Neotropical-wintering wood warblers, and again found a strong positive linear relationship (R^2=0.27; P=0.004). We suggest that intensified efforts to identify factors affecting NTMB winter site persistence, and thus winter habitat quality, will be essential for the conservation of these species.

Red-billed Pigeon (*Patagioenas flavivostris*) nesting characteristics in southeast Tamaulipas and south Texas (ORAL)

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Nest characteristics were collected from 48 nests at Rancho Los Colorados, near Aldama, in southern Tamaulipas and compared to 15 nests along the Rio Grande, principally in Starr County, Texas. Nests in Texas were located in Texas sugarberry, black willow, Mexican ash and retama. Trees utilized in Tamaulipas included coma, chaca, ebano and strangler fig. Nests in Tamaulipas were situated, on average, 3.1 meters higher than nests in Texas. An analysis of 119 clutches supported a clutch size of 1 with 8% having 2 egg clutches. Lack of understory vegetation at the Tamaulipan site appears to have resulted in higher nest placement. This suggests that construction of Falcon Reservoir resulted in diminished food resources creating more of a limiting factor than nesting habitat.

The importance of multi-scale habitat characteristics to brood parasitism of the Prothonotary Warbler (*Protonotaria citrea*) within a bottomland hardwood forest (ORAL)

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Population declines of forest-interior songbirds may be exacerbated by increased levels of brood parasitism present within reduced and degraded breeding habitat; bottomland hardwood forests of the southeastern U.S. are an example of one such habitat that has undergone severe reductions in the quantity and quality of breeding habitat and where parasitism by brood-parasitic cowbirds is high. We developed a multi-scale logistic regression model to investigate the relative importance of habitat characteristics to brood parasitism of Prothonotary Warblers (*Protonotaria citrea*) breeding within bottomland hardwood forests of the White River NWR, Arkansas. We demonstrated that the likelihood of brood parasitism was linked to local- and landscape-scale characteristics of the nest site and the surrounding habitat. Landscape-level characteristics describing proximity to external cowbird-feeding sites and exposure to internal canopy openings influenced the probability of parasitism; nests located closer to feeding sites and exposed to more open canopy experienced increased rates of parasitism. Finer-scale characteristics of the nesting habitat and the nest-site, as well as temporal characteristics of the breeding season, were also influential. Local characteristics may be immaterial in areas saturated with cowbirds, but emerge as influential within areas more removed from cowbird seeding points. We conclude that although the factors influencing parasitism levels are complex, appropriate habitat management may reduce parasitism levels. Landscape-level management efforts to minimize cowbird-feeding areas and decrease forest-interior disturbance that create open canopy may be most effective in decreasing levels of brood parasitism; however conservation efforts should consider all spatial scales when designing management plans to reduce parasitism.

Conservation potential for grassland bird habitat management on eastern United States Department of Defense military installations (POSTER)

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Department of Defense (DOD) lands occupy over 10-million hectares in the United States, and provide unique management opportunities to manage for breeding and wintering habitat for grassland birds. Some military installations maintain significant acreage in native grasses to facilitate military training. Native grasslands provide ideal

conditions for many training exercises because the grasslands are durable, provide great visibility, and can be managed cheaply and effectively using fire. Thus, the habitat conditions that provide suitable conditions for training activities also coincidentally provide ideal conditions for breeding and wintering grassland birds. To understand how DOD lands could contribute to the conservation of grassland birds, we used a course-filter approach to assess the potential for DOD lands in states east of the Mississippi River to provide minimum recommended habitats for grassland birds. We prioritized military installations by the amount of area currently in large grassland patches (>40 ha), the proportion of open habitats within the landscape, and the diversity of grassland bird species potentially present in the installation during breeding and wintering seasons. Forty-five of 186 installations contained at least one large (>40 ha) grassland patch, including 24 Army, 3 Air Force, 3 Marine, 11 Navy, and 4 National Guard installations. These installations provide >60,000 ha of grassland in patches greater than 40 ha. Most selected installations were concentrated in the Southeast (19), although several selected installations clustered in southern Indiana, Kentucky, and northern Tennessee (6). We provide a prioritized list of installations as a starting point for conservation of grassland birds on eastern military installations.

Measurement of foliage profiles for canopy dwelling birds (POSTER)

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A simple technique to utilize a surveying laser to measure accurately the vertical distribution of vegetation in forest canopies is described. Survey lasers are capable of making accurate measurements of foliage heights directly. The technique holds promise for measuring explicitly the distribution of foliage in forest canopies of any height. A small data set of measurements from tall forests in which cerulean warblers nest is used to illustrate application of the technique. Data summarization applies the methods of MacArthur and Horn (1969, Ecology 50:802-804.) to a set of quantitative measurements of distance from the ground to the lowest leaf to create a foliage profile. Statistical modeling of the foliage profile using mixed model logistic regression provides a powerful tool to assess differences in distribution of foliage among locations.

Comparison of winter bird population study and project prairie bird surveys of winter birds in grasslands (POSTER)

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We compared two techniques for assessing winter bird communities of temperate grasslands. A Winter Bird Population Study (WBPS) is an area-search survey method of long-standing utility intended for use in a variety of habitats. Project Prairie Birds (PPB) is a recently designed transect survey method intended for use in grasslands. We used both methods to survey birds on 23 herbaceous-grassland sites during winter and compared estimates of species richness, total density, and density of selected species. We found WBPS consistently produced higher estimates of species richness, whereas PPB generally produced higher estimates of avian density.

Effects of hydrology and prey density on shorebird distribution in the Blind Oso, Oso Bay, Corpus Christi, Texas (ORAL)

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Despite habitat changes due to alterations in hydrologic dynamics over the past decade, the Blind Oso, a tidal flat in Oso Bay, Texas, is a valuable site for migrating and resident shorebirds. The purpose of this study was to determine shorebird abundance and habitat use, benthic invertebrate abundance and biomass and to explore linkages between shorebirds, prey and changing water levels. Shorebirds were censused weekly from August 2002 to August 2003. Shorebird locations, vegetation, and water levels were stored in a GIS. Analysis of variance was used to determine differences in shorebird species and guild densities among habitats. T-tests were used to determine differences in shorebird categories between feeding and non-feeding transects. Pearson's correlations were

used to determine relationships between water cover and shorebird densities. Bonferroni's inequality was utilized to determine shorebird habitat preference/avoidance. Twenty-one species of shorebirds were observed. Peak shorebird densities were observed during fall and spring migrations. Intermediate-distance migrants and small-sized shorebirds were the most abundant guilds overall. Most shorebirds preferred the non-vegetated submerged habitat and avoided the vegetated habitats regardless of wetness. When compared to past studies, shorebird use of the Blind Oso has increased in fall due to changes in hydrology. Shorebirds appear to be selecting areas of Blind Oso where invertebrate densities are greatest. Hydrologic changes in this area have made the benthic composition more diverse by providing more flooding and introducing more species to the prey base for shorebirds. Overall, Blind Oso continues to provide reliable resources for migrating and wintering shorebirds.

The Live Trade of Painted Bunting and Other Migratory Birds in the Neotropics: Trade and Population Monitoring (PLENARY – ORAL)

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This research analyzed the international and domestic trade of live Neotropical migratory passerines, particularly the painted Bunting (*Passerina ciris*) in Latin America, with two specific case assessments for Mexico and Cuba. This research project explores dynamics of the trade including number of species and volumes harvested for both domestic and international markets in Mexico and Cuba. For a number of species the impact of legal and illegal trapping for the international caged bird trade represents a potentially serious threat to global populations. For example the Painted Bunting (*Passerina ciris*), which has declined by 60% in the U.S. since 1966 is on the Partners in Flight (PIF) WatchList and bird trappers alone have legally taken an estimated 315,000 birds for the domestic trade in a 22 years period. Just in the 2000-2001 harvesting season, 6,000 Painted Buntings, mainly males, where taken for exportation to Europe. Illegal capture of Painted Bunting and other migratory passerines is also taking place in several parts of Mexico and Cuba, however the assessment of this activity is very coarse. Mexico and Cuba represent the primary wintering and migration grounds for more than 50 species currently on the PIF WatchList. Other 170 Neotropical migrant species share breeding habitats across the U.S. Mexico and Cuba, including 41 species with more than 50% of their North American breeding range within Mexico. Fostering the development of a comprehensive population and habitat assessment and monitoring strategy for Neotropical migratory birds in Latin America and the Caribbean, as well as for its diverse resident and endemic avifauna, represents one of the most critical bird conservation needs in North America continent.

An Update on the Avian Species Conservation Assessment in Mexico: National and Continental Priorities (PLENARY – ORAL)

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We present here a progress report on the species conservation assessment for an all-bird species approach in Mexico. The Mexican Committee for the North American Bird Conservation Initiative (NABCI-Mexico) has established since 2002 a National Bird Species Conservation Assessment Working Group though the country that has implemented the first series of national workshop to assess and assign conservation scores for all bird species in the country. Trough this exercise NABCI Mexico has implemented a series of regional workshops allowing the participation of local ornithologists and bird experts from across Mexico. This all bird species assessment was conducted across the country using the Partners in Flight species assessment method. We present here preliminary data for the review of the conservation global scores in Mexico and the scores of four regional workshops. We also compare the results of this continental bird conservation assessment in Mexico (Partners in Flight – PIF) with the Mexican government's 2001 national species assessment (Species Extinction Risk Assessment Method – MER) and the IUCN-Bird Life International Threatened Birds of the World. The results show that the all-bird species conservation assessment model of Mexico can provide complementary tools for decision makers, not only in Mexico but continentally for bird conservation across North America.

Our Shared Forests (OSF): Ecuador and Georgia's Bird Conservation Partnership (POSTER)

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OSF is a bi-national, migratory bird conservation partnership between the Ecuadorian NGO Fundación Maquipucuna, the University of Georgia, the State Botanical Garden of Georgia, and coffee and cocoal farmer associations in the Chocó Andean Corridor in Northwest Ecuador. OSF builds on work funded by a grant from the World Bank/GEF. OSF uses a multidisciplinary approach that blends scientific research, conservation priority setting, fostering shade grown coffee and cocoa, and environmental education. The Chocó Andean Corridor is recognized as one of the earth's top five biodiversity hotspots, and a hotspot of bird endemism. We will study bird distributions in different habitats and produce a risk/conservation priorities map for the corridor. In partnership with local communities, we will increase the area under protection by 34,500 acres, and update the management plan for two IBAs in the mid-elevations of the corridor, the Protective Forests Guayllabamba and Maquipucuna. In the lowlands, we will define the guidelines for a 50,000-acre prospective protective forest, "The Río Santiago-Cayapas". Throughout the corridor, conservation will be enhanced by facilitating the Smithsonian's bird-friendly certification to over 2,000 acres of shade-grown coffee and cacao. OSF will connect Ecuador and Georgia through environmental education and action, involving children from both countries, North American birdwatchers, and Ecuadorian farmers. Environmental education will target 10 bird species that migrate between Georgia and Northwest Ecuador. We will make strategic use of the Internet and a website to show the connections between bird stewardship in Georgia and Ecuador, and to publish educational materials and bird monitoring results.

Science based planning to define landscapes capable of sustaining populations of priority species (POSTER)

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We believe the development of biologically sound habitat objectives are derived from: (1) a characterization of the ability of the landscape to support populations at prescribed levels; (2) an assessment of historic and projected habitat change and its implications to long-term sustainability; and (3) an assessment of restoration, protection, and management potential and priorities. As such, we present a scientific-based planning process for accomplishing these tasks through the use of conceptual models that relate population viability to habitat parameters.

Avian conservation, research, and policy initiatives at Defenders of Wildlife: an overview (ORAL)

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Although Defenders of Wildlife is recognized primarily for work with imperiled species, other bird conservation activities also receive attention, including: 1) projects for priority species and habitats, 2) issue-related policy initiatives, and 3) through its large membership base (more than one-half million members and supporters), leveraged protection of endangered and threatened species through inter-organizational partnerships. Species projects may involve bird restoration, research, or monitoring, e.g., California Condor (*Gymnogyps californianus*), Burrowing Owl (*Athene cunicularia*), and Mountain Plover (*Charadrius montanus*). Litigation has been used to protect species like Caspian Tern (*Sterna caspia*), Double-crested Cormorant (*Phalacrocorax auritus*), and Queen Charlotte Goshawk (*Accipiter gentilis laingi*) from unlawful, misguided, or unnecessary takings. Habitat projects include mitigation of wind-energy development along bird migration corridors, and strengthening the mission and resources for the national wildlife refuge system. Policy initiatives include appropriations for grassland bird habitat measures in the Farm Bill, advancing state comprehensive wildlife plans, mitigation of pesticide impacts on migratory birds, enacting limits on horseshoe crab harvest to protect shorebird feeding grounds, reducing seabird mortality from long-lining and other by-catch, and testing new proactive economic incentives for conserving birds and habitat. Defenders helped enact the Wild Bird Conservation Act, thereby protecting exotic wild birds that are threatened by global commercial trade, and will soon launch a study of the Mexican pet trade and its impacts on parrots and other Neotropical species. Much of Defenders' work is carried out with conservation partners like the American Bird Conservancy and the Boreal Songbird Initiative of Canada.

Nesting success and ecology of the snowy plover (*Charadrius alexandrinus*) at Barney M. Davis Power Plant, Nueces County, Texas, and Sunset Lake, San Patricio County, Texas (ORAL)

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The snowy plover (*Charadrius alexandrinus*) is one of few shorebird species that breeds and nests on the Gulf Coast of Texas. A study consisting of two breeding seasons, 2003 and 2004, was conducted at two man-made nesting sites, Barney M. Davis CPL-AEP cooling lake, Nueces County, Texas and Sunset Lake, San Patricio County, Texas. Both years, nesting began in March and continued through August. Peak nesting occurred April through June. Actual egg hatching success ranged from 6.52% at Sunset Lake in 2004, to 37.97% at CPL in 2003. Hatching success was significantly higher in 2003 than 2004. Actual nesting success ranged from 9.43% at CPL in 2004 to 42.86% at CPL in 2003. Mayfield Method of nesting success was 31.9% at Sunset Lake, and 46.5% at CPL in 2003 and 2004. Predation and weather were the two most common causes of nest failure. Debris was common at nesting microhabitats with some preference for microhabitat containing shell debris. Adult behaviors included running, walking, and pecking, while most young behavior consisted of standing and running. Additional long-term research is needed to better protect the species through management and educate the public on the importance of protecting snowy plovers and their habitat.

Wind power along the Texas coast: Promise, paradigm or panacea? (PLENARY – ORAL)

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Wind energy continues to gain attention as a potentially "green" source of seemingly limitless, clean energy. Each of the new generation turbines may reach heights of nearly 350' above the ground with rotor diameters of >200', and can produce enough electrical energy to supply between 200 to 600 households per year. There are more than 15,000 wind turbines in the United States, with the number expected to increase to greater than 30,000 by the year 2015. Mortalities at these sites are currently estimated at 40,000 birds per year. Wind energy potentially is able to generate clean energy without producing associated environmentally hazardous by-products and pollutants that other energy sources produce, thus benefiting wildlife populations. However, direct and indirect impacts have been documented with wind energy production. When these impacts are weighed within a local and regional context, and cumulative impacts are added to the scene, resultant impacts on some species of birds may become considerable. While bird kills have been documented at many wind facilities, and mortality varies greatly, the potentially greater concern are bat mortality totals which are just now being studied.

Building nesting and roosting towers for Chimney Swifts (POSTER)

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Several designs of towers were constructed for use by Chimney Swifts from 1989 to 2004. 72% of all towers were used by Chimney Swifts the first year the structures were in place and continued to be used for as long as fifteen years. Smaller towers were used only as nest sites, while larger towers were also used as communal roosts. The primary purpose of constructing the towers was to practice Chimney Swift conservation by providing additional habitat. However, several peripheral benefits were also achieved. Specially designed observation towers made it possible to witness already well-documented behavior as well as some previously undocumented activities – both diurnal and nocturnal. Towers that were placed in high traffic public areas such as city parks provided education about Chimney Swifts nesting not only in the towers, but also in the chimneys of residential and commercial buildings. The acceptance of the towers by Chimney Swifts (as well as by the public) is a clear indication that effective Chimney Swift conservation is not only possible, but also much less difficult and cost prohibitive than the conservation of many other declining avian species.

Wind power effects on flying animals: bats are affected more than birds (POSTER)

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Renewable energy is taking on a more prominent role and wind power becoming more important. The environmental effects of thousands of huge machines rotating in the wind are not easy to predict. This paper reviews the type and number of wind energy installations we can expect in the USA and their potential impact on populations of flying animals. The magnitude of the issue is best appreciated by looking at energy growth: If U.S. wind power would be used to satisfy the increase in demand for electricity (not reduce present use of fuel), a new large (122 m high) wind turbine will need to be installed about every 30 minutes, continuously. Many new installations will be on windy ridges in the eastern and southeastern USA. Many will be in other American countries through which migrants pass. In the last 1.5 years several small research projects have found that some nocturnally migrating birds are killed at inland wind power installations. With huge blades rotating at considerable speed, this is not unexpected. Numbers/tower/year are not large but the aggregate number of birds killed can be expected to be large as wind power comes into prominence. What are unexpected and alarming are the numbers of migrating bats of several species that are killed at wind turbines. Unlike mortality at other tall structures, absolute numbers of bat carcasses often equal or even greatly exceed those of birds. Action on this alarming problem is limited partly by our lack of basic science knowledge and natural history on the process of bat migration – questions such as when, where, how many, and how high.

Flying WILD: Bringing bird education to schools (ORAL)

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Flying WILD is a new program by the Council for Environmental Education, the national office for Project WILD. Flying WILD involves middle school students in learning and stewardship projects involving migratory birds, including the implementation of school bird festivals. Flying WILD Bird Festivals serve as a vehicle for partnerships between schools, conservation professionals, bird experts, businesses and community organizations.

Louisiana Waterthrush ecology and riparian conservation in the Georgia Piedmont (POSTER)

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The Louisiana Waterthrush is a stream bank-nesting songbird that consumes benthic macroinvertebrates along forested streams. Waterthrushes are of particular interest because they are an infrequently studied riparian obligate species, and riparian habitats are threatened ecosystems in the fast-developing Southern Piedmont. We studied waterthrush populations in 13 forested headwater drainages of the Georgia Piedmont in the springs of 2002-2004. During site selection, we surveyed over 60 streams and found that waterthrushes were absent from streams with forest canopies narrower than 20 m on each side in residential areas. We monitored 175 active waterthrush nests, of which 111 fledged between 1 and 5 young. During a drought in 2002, steep drainages with gravel-dominated riffles had higher juvenile waterthrush densities than drainages with sand-dominated riffles. In 2003, rainfall was at all-time record highs, and rainfall was at moderate levels in 2004. During these wetter years, some pairs raised two broods successfully. Despite the increase in rainfall, the drivers of reproduction were unclear in 2003 and 2004. Through simulation modeling, we discovered that the number of waterthrush juveniles that survive to independence for each female is sensitive to measured variation in survival of nests and of fledged young. Next, we will quantify the impacts of upland land use, instream habitat, and food availability on these two vital rates. From our results, we will provide management recommendations for land managers in the Georgia Piedmont to protect riparian bird populations and the associated assemblage of stream-side biota.

Microhabitat and nest site characteristics of breeding Texas Botteri's Sparrows (*Aimophila botterii texana*) (POSTER)

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Texas Botteri's Sparrow is a tall-grass specialist ground nester that breeds in a narrow strip of the southern Texas Gulf Coast. Breeding sparrows are found mainly in three habitats: coastal prairie, drier native grasslands, and disturbed grasslands or fallow fields. Botteri's Sparrow is important as an ecological indicator of healthy grasslands and is listed as "threatened" by Texas Parks and Wildlife Department. The purpose of this study was to record nest patch characteristics (vegetation height, density, and species) and nest placement variables (nest height, nest depth, nest width, vegetation nested in, and nest concealment) to identify nesting sparrow habitat. Preliminary nest searching took place 2-3 days weekly June 13 2004 through August 5 2004 on the King Ranch Laureles and Norias divisions. Eight nests were found through behavioral observation and both systematic and random searching. Shortened duration of the preliminary field season prevented collection of vegetation height, vegetation density, and nest concealment. Nest height was negligible (<10 mm) and was not measured. Four nests were found in coastal bermuda (*Cynodon dactylon*), knotroot bristlegrass (*Setaria geniculata*), or a mixture of both. Remaining nests were located in various grass and herbaceous species (identification in progress). Of the eight nests, four were in disturbed grassland areas, three in grasses interspersed in typical coastal prairie, and one nest was found in drier grassland. No significant difference between nest depth and nest width among the three habitats compared was found. Data analyses will be complete following summer 2005 field research.

Kentucky Warbler habitat in Arkansas and Virginia compared (ORAL)

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Kentucky Warbler (*Oporornis formosus*) habitat use in Arkansas and Virginia were investigated in sites that share certain biotic and abiotic factors and differ in others. In Arkansas, two sites occupied by Kentucky Warblers (Holla Bend National Wildlife Refuge and the Buffalo National River) and one site not occupied by Kentucky Warblers (Gene Rush Wildlife Management Area) were investigated. In Virginia, a large conservation area near Front Royal, Virginia (Smithsonian Conservation and Research Center) was studied. We wanted to know what factors differed or were shared between the sites, including environmental characteristics (slope, dominant ground cover, and vegetation volume) as well as shrub and tree species composition and density. Data were collected using 0.04 ha sample plots at each site. Principal component analysis and detrended correspondence analysis were employed to analyze environmental data and shrub-tree species data, respectively. The principal component analysis separated out the sites based on slope and the vegetation volume (Foliage Layer 1, 0.0-1.0 m; Foliage Layer 2, 1.0-2.0 m; Foliage Layer 3, 2.0-6.0 m, and Canopy Density). In Arkansas, slope was the most important variable followed by Foliage Layer 1. For both states, sites with Kentucky Warblers had a denser ground cover (>50%) than did the site without Kentucky Warblers. Also for both states, analyses performed on shrub and tree species data separated the sites based on tree and shrub species composition. In Arkansas, sites with Kentucky Warblers had high numbers of Box Elder (*Acer negundo*) shrubs, small trees, and large trees as well as high numbers of either Sugarberry (*Celtis laevigata*) or Hackberry (*C. occidentalis*) small trees, whereas the sites without Kentucky Warblers lacked these apparently key species. In both Arkansas and Virginia, sites with Kentucky Warblers appeared to share key features that may have been attractive to this species. This knowledge could help aid in conservation of habitat that is essential to breeding Kentucky Warblers in the southeastern states where this species occurs.

Effects of the restoration of native warm season grasses on wintering grassland birds in Georgia USA (POSTER)

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Grassland birds have experienced precipitous declines in the United States. The declines may be due to habitat loss on breeding or wintering grounds. Conversion of early successional habitat to pine plantations, intensive agriculture, and exotic-grass pasture is destroying wintering habitat in the southeastern United States. Current management on public lands in Georgia maintains early successional habitat with prescribed burning and annual

mowing. To determine whether restored grasslands provide better habitat, we planted a mixture of big bluestem, little bluestem, Indian grass, and switch grass in 6 treatment fields in spring 2002. In order to assess the role of landscape context on bird use, we planted three fields in an open, agricultural landscape and three fields within a forested landscape. Three control plots maintained under current management were established within each landscape. Winter bird use was monitored with mist netting. Captured birds were measured, banded, and released. Capture rate was used as an index of avian use. Each field was sampled three times between January-March (2003-2004). In 2003, species richness and capture rates were significantly higher in the treated plots within the forest landscape. There was no difference within the agricultural landscape. Sparrow capture rates in 2003 were significantly higher in the treated plots within both landscapes. In 2004, species richness, capture rates, and sparrow capture rates were not significantly different between treatments within either landscape. Avian use is highly variable between years, but native grassland restoration may be considered as a management tool for wintering grassland birds within forested landscapes.

Nesting success of Botteri's Sparrows (*Aimophila botteri texana*) in South Texas (POSTER)

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Botteri's Sparrow (*Aimophila botterii texana*) seems to favor two grassland types in south Texas for breeding. *A. b. texana* appears in sacahuista (*Spartina spartinae*) and in dry pastureland with bufflegrass (*Cenhrus ciliaris*) and kleingrass (*Panicum coloratum*). Nesting success was determined using Mayfield's method (Mayfield 1975) and compared to orientation, concealment and size of the nest, and to clutch size. Eight Botteri's Sparrow nests were located; 5 nests were not successful. Daily success rates were calculated and compared with the factors mentioned above. The number of nests located was insufficient to determine a relationship between nest success and these factors. Further studies will include a larger sample size, predation studies with artificial nests, and surveys in several habitats.

Do urban greenways provide high quality bird habitat? (ORAL)

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Conversion of "natural areas" to urban land uses poses a threat to long-term conservation of birds in the southeastern United States. Recently, greenways have become popular worldwide as a means of conserving habitat in urbanizing areas. We investigated how the width of the forested corridor containing the greenway, the type of land use adjacent to the greenway, and greenway composition and vegetation structure affect breeding bird (2002-2003), migrating bird (2004), and avian nest predator communities (2002) in urban greenways in Raleigh and Cary, North Carolina, USA. Total breeding bird abundance increased with increasing canopy cover in the adjacent landscape and increasing shrub cover within the greenway. Fewer development-sensitive species (Neotropical migrant, insectivore, and forest-interior birds) were recorded in greenways containing more managed area, such as trail and other mowed or maintained surfaces. During the breeding season, several development-sensitive species occurred only in greenway corridors wider than 50m, while urban-adaptors were most common in greenway corridors ≤50m wide. Preliminary analyses indicate that Neotropical migrant species richness and abundance were higher in wide greenways than in narrow greenways during both spring and fall migration. Relative abundance of mammalian nest predators increased as forest corridor width decreased, as the number of buildings in the adjacent landscapes decreased, and as trail width increased. The abundance of individual predator species varied with the amount of canopy, lawn, and pavement in the adjacent landscape, and no habitat structure variables were significant for all species. To provide high quality avian habitat, forested greenways should be designed with wider forest corridors and narrower trails.

Development and Implementation of Texas Parks and Wildlife's Borderlands Program (ORAL)
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The Texas Parks & Wildlife received a State Wildlife Grant (SWG) from the U.S. Fish and Wildlife Service to develop a binational program to address conservation of shared natural resources with Mexico, and develop projects along the 1,250 mile Texas border with 4 Mexican states. The five year SWG was initiated September 2003. Goals include developing partnerships and projects on both sides of the border with other state, federal and non-governmental organizations (NGO's).

This presentation highlights the task of developing a strategy to develop a unique program with limited staff, set priorities to deal with regional differences and changing habitats from El Paso/Cd. Juarez to the mouth of the Rio Grande/Rio Bravo, identify and develop partners, and implement strategies and conservation efforts of shared resources along this lengthy border criss-crossing up to four ecosystems. The presentation also highlights work conducted and proposed plans which benefit wildlife including birds and their habitats. Efforts to develop partnerships and projects conducted with partners are presented which highlight the diversity of the program. The first annual report (FY 2004) is also presented in addition to a summary Christmas bird counts on the Carreras Ranch (Dec. 2003 and Dec. 2004) located on a peninsula of the Laguna Madre de Tamaulipas, south of Carboneras, Tamp., Mexico.

Priority birds in restored pine-bluestem habitats, Ouachita National Forest, Arkansas (POSTER)
JOSEPH C. NEAL
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The Ouachita National Forest encompasses approximately 0.7 million ha in western Arkansas and eastern Oklahoma. Habitats include shortleaf pine (*Pinus echinata*) and mixed hardwood species. Restoration of the historic open structure of shortleaf pine-bluestem grass (*Andropogon* spp.) ecosystem, and recovery of Red-cockaded Woodpeckers (*Picoides borealis*), is underway. This once common habitat was lost due to nearly a century of fire suppression. In 1996, the Forest Plan was amended to establish Management Area 22, an initial >62,000 ha project area of potentially suitable habitat for a recovered population of Red-cockaded Woodpeckers in western Arkansas. Subsequent additions include >20,000 ha of National Forest lands in McCurtain County, Oklahoma, adjacent another population of Red-cockaded Woodpeckers in the McCurtain County Wilderness Area. Dense stands of pines are thinned with commercial timber sales. Sale revenues offset costs of additional treatments, including midstory reduction and prescribed burning. These revenues support key elements in the woodpecker recovery effort, including monitoring, translocations, and cavity maintenance. Research has provided insight into how fire and other treatments affect this habitat, and how this management scheme affects other species, including birds. Information is presented for five priority birds: Northern Bobwhite (*Colinus virginianus*), Red-headed Woodpecker (*Melanerpes erythrocephalus*), Red-cockaded Woodpecker, Prairie Warbler (*Dendroica discolor*), and Bachman's Sparrow (*Aimophila aestivalis*).

Community Development through Nature Tourism (ORAL)
MARTHA NOELL
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I will speak on the value of nature tourism to a community, both financially and in quality of life, emphasizing specific methods communities can use to effect changes in the perception of the value of habitat preservation and enhancement. The presentation will also cover how to get community *buy-in* of the importance of environmental responsibility.

Burrowing owl use of artificial burrows in southern Texas (ORAL)

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The western burrowing owl (*Athene cunicularia hypugaea*) is native to grasslands and deserts of western North America. It is endangered in Canada, threatened in Mexico, and in the United States is considered to be a Bird of Conservation Concern by the U.S. Fish and Wildlife Service. Western burrowing owls rely on abandoned mammal burrows for nesting and roost sites. In southern Texas, however, where natural burrows are uncommon, wintering burrowing owls often roost at roadside culverts. Previous research has shown that breeding burrowing owls readily use artificial burrows for nesting, but no research has been performed on the use of artificial burrows in the wintering range. Seventy-two artificial burrows (six types differing in both diameter and number of openings: 15 cm, 20 cm, and 25 cm diameters, each diameter with two and three openings) were constructed and placed in four locations in southern Texas. The burrows were monitored regularly for signs of burrowing owl use during two winters (October–March, 2001-2003). Two of the four locations showed evidence of use by burrowing owls. While all three diameters of burrows were used by owls at least once, 79% of all burrowing owls were detected at small (15 cm) diameter burrows. Of the six burrow types, the most frequently used were 15 cm diameter with two openings (29 of 58 visits) (50%) and 15 cm diameter with three openings (17 of 58 visits) (29%). Installation of artificial burrows with small diameters will provide additional winter roost sites for burrowing owls.

North American Breeding Bird Atlas viewer (POSTER)

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The North American Breeding Bird Atlas Viewer (BBA Viewer) allows searching and display of nearly 2 million records of breeding evidence for 545 species. Currently the BBA Viewer houses results from 16 completed atlases and 5 in-progress atlases at the state or provincial level. The BBA Viewer is part of a group of tools integrating maintenance and display of BBA results, from data entry to coordinator review to display of final maps. Besides helping individual atlases manage their projects and compare data between 1st and 2nd round atlases, the BBA Viewer has the potential to contribute to regional bird conservation. For example, combining states can provide distributional information grouped into Bird Conservation Regions or PIF physiographic regions. We welcome results from additional atlas projects, particularly those in the Southeast, which will fill in eastern continental distribution maps such as that of the Kentucky Warbler shown here.

Community-based bird conservation in the El Cielo Biosphere Reserve, Tamaulipas, Mexico (PLENARY–ORAL)

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El Cielo biosphere in southern Tamaulipas, Mexico, is a diverse ecosystem comprising tropical, temperate, and arid zones. This 144,530-hectare area supports a wide variety of plants and animals, including at least 385 bird species. Also within the reserve is the America's northernmost cloud forest, one of the most endangered ecosystems in Mexico and the world. In order to further the conservation of birds and biodiversity in this region, we are proposing a community-based conservation effort aimed at identifying threatened species, critical habitats, and wildlife corridors within El Cielo to ensure that the designated Reserve will adequately protect the biological integrity of this area. These steps were inadequately addressed during the establishment of the Reserve, and the current boundaries may not incorporate all areas that are important to the birds of El Cielo. This study will examine the seasonal habitat use and movements of resident and migratory birds during all four seasons, through mist-netting and point count stations in each of the five major habitat types in and around the Reserve. By initiating locally driven surveys with technical and financial assistance from Mexican and United States biologists, a long-term sustainable reserve management plan will be designed in cooperation with NGOs, and state and federal governments that provides for the welfare of both people and wildlife. The proposed project builds on recent and ongoing community conservation projects in this region. Current partners include Pronatura Noreste, Oklahoma City Zoo, Rocky Mountain Bird Observatory, Pro Biosfera, La Fe Women's Cooperative, Asociacion de Promotores de Campesinos de La Reserva de la Biosfera El Cielo, and WildShare International.

Nature Tourism Overview: A Tool for Habitat Conservation and Avian Research (ORAL)
SHELLY PLANTE
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I will give an overview of the business of nature tourism, what kind of experiences nature tourists seek, and options for developing and marketing nature tourism on private lands, in the community and with public lands. The presentation will also give examples of how diversification through nature tourism can lead to habitat conservation and open new avenues for avian research.

Development of the Comprehensive Conservation Wildlife Strategy in Arkansas (POSTER)
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In 2000, the U.S. Fish and Wildlife Service (USFWS) began receiving appropriations for the "State Wildlife Grants" (SWG) program. The SWG program provides states funding intended for research and habitat restoration aimed at species of greatest conservation concern including non-game species that have not traditionally received funds from other USFWS federal aid programs. To continue receiving annual appropriations, Congress requires that each state develop and submit a Comprehensive Wildlife Conservation Strategy (CWCS) by September 30, 2005. A plan assessing priority species and habitats and evaluating current threats is the basis for developing effective strategies to prevent species of concern from becoming threatened or endangered. An interdisciplinary, multi-agency team is leading the plan development in Arkansas. Some important elements required in the plan include information on the distribution and abundance of species of conservation concern, locations and relative conditions of key habitats and communities required by these species, conservation threats and potential conservation actions, and proposed monitoring of species and habitats. The Arkansas Game and Fish Commission has developed a relational database to serve as a repository for these elements. Much of the analysis and reporting required for the CWCS will be generated by the database. The Arkansas CWCS requires coordination among federal, state and local agencies that are involved in the management of lands, water, and wildlife in Arkansas and will serve as a basis for future planning and appropriate and effective use of SWG funding.

Pronatura Noreste Projects of Binational Interest (PLENARY – ORAL)
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Pronatura Noreste and its partners are presenting some of the present and future initiatives directed towards bird conservation in the Priority Areas for Bird Conservations (AICA's) at the border area between the U.S. and México. The results presented come from a continuous and solid effort that for the last eight years was based on a process of ecoregional planning and site evaluation. This effort involves fragile bird species as a group of special relevance, where threats, mitigation strategies and opportunities, and needs of collaboration are identified. Among the most important are: prairie dog colonies, Ferruginous Hawk, Mountain Plover, Burrowing Owl, and Worthen's Sparrow, specially in the Nuevo León grasslands (El Tokio). Second, the Thick billed Parrot, Eared Trogon, Northern Goshawk, and Spotted Owl, most of which depend on nesting cavities found in the scarce ancient forests of Tutuaca, Mesa de Guacamayas and Madera at the Occidental Sierra Madre. Also, not less important, the Black-capped Vireo and Golden-cheeked Warbler, whose habitat relies at the Maderas del Carmen mountains in the Chihuahuan Desert and the Biosphere Reserve of El Cielo at the Sierra Madre Oriental. Finally, the Piping Plover and Redhead are present in Laguna Madre of Tamaulipas, México.

Shorebird abundance and habitat use in a urban coastal mosaic, Indian Point and Sunset Lake parks, Texas (ORAL)
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The coastline along the Gulf of Mexico contains some of the most important staging and wintering shorebird habitats in North America. The estuarine habitats along the Texas Gulf Coast are of particular importance because they contain large expanses of unvegetated foraging habitats juxtaposed with beach and marsh habitats providing

areas for foraging and resting. The purpose of this study was to quantify temporal and seasonal abundance and habitat use by shorebirds within a dynamic landscape. The study area, Indian Point and Sunset Lake parks, Corpus Christi, Texas, is an urban coastal mosaic containing tidally influenced and depressional ponds, uplands, an excavated salt water "lake", undeveloped bay beach, and a saltmarsh. Censuses were conducted at least twice a month from 15 August 2002 thru 27 July 2003 using instantaneous scan sampling. Twenty-one shorebird species were documented using the five habitats during the year. The most frequently observed species throughout the censuses were dowitchers, Willets, peeps, American Avocets, and Black-bellied Plovers. The majority of shorebirds were observed foraging and they were most abundant in the tidal ponds, isolated ponds, and lakeshore habitats. Highest species diversity was exhibited in the fall and spring, which coincides with peak migration periods.

Identification of upland Neotropical migratory birds dependent upon habitats within the Rio Grande/Rio Bravo Delta (POSTER)

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The Laguna Madre Ecosystem extends over 277 miles in south Texas and northeast Tamaulipas, Mexico. Both the geographic location of Laguna Madre in the Western Hemisphere and its varied habitats (grasslands, wetlands, oak mottes, and thorn scrub chaparral) make this an unusually important place for both migratory and resident Neotropical species as stopover sites. The Rio Grande/Rio Bravo Delta, that separates the two hypersaline lagoonal systems, has been significantly altered due to water impoundment and diversion practices in the watershed. In this paper, we overview stopover habitats importance in the Rio Grande/Rio Bravo Delta for upland species that migrate through this area using distribution range maps for Western Hemisphere species and landuse/landcover maps from the project area. A total of one hundred fifty-two upland migratory species were summarized from area checklists. Forty-nine upland, migratory Neotropical species are included in one or more species of concern lists. A list was generated for each of the following habitats that a species used in either breeding or wintering season: upland closed and open canopy woodlands, scrub, grassland, and agricultural fields. Species distribution maps were generated for each group, highlighting variability of migration distance among species. In most cases, these species are specifically dependent upon coastal woodland, scrub, and grassland habitat in the Rio Grande/Rio Bravo Delta as stopover sites. These tabular and graphic summaries will be useful in increasing public awareness of the diversity of upland Neotropical migrant birds that are dependent upon remaining natural habitat in the Rio Grande/Rio Bravo Delta.

Using LIDAR and GIS to model habitat availability for migrating shorebirds in the Tennessee River Valley (ORAL)

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Stopover habitats for migrating shorebirds in the North American interior are often provided by managed reservoirs or wetlands. In the Tennessee Valley, the area and configuration of available mudflat habitats is a function of the timing and degree of drawdown on reservoirs managed by the Tennessee Valley Authority (TVA). Water level and the shape and elevation of substrate determine the spatial extent of mudflats, while the timing of reservoir drawdown dictates whether mudflats are available when birds are migrating. To quantify the amount of habitat exposed at various stages of drawdown, we used an airborne laser scanning method (LIDAR) to construct a fine-resolution digital elevation model (DEM) of mudflat habitats at Rankin Bottoms Wildlife Management Area. Linking this DEM to a real-time measure of reservoir drawdown, we can use a Geographic Information System (GIS) to model the amount of mudflat area exposed at any given reservoir elevation. We can then combine this assessment with a chronology of shorebird migration in the TVA region to determine habitat availability for shorebirds during the fall migration period. Different amounts of habitat may be available at every stage of drawdown based on the complexity of uncovered mudflats, and the greatest amount of habitat may not be available at the proper time for migrating shorebirds. By creating this spatio-temporal model, we can begin to explore how active management of the river system can serve to provide the largest habitats at a time when the most birds are migrating through.

Spatial ecology of swallow-tailed kites (*Elanoides forficatus*) in Southeast Georgia, USA: Integrating cost explicit models into species management (ORAL)

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Developing effective species management plans requires understanding the ecology of a species and potential economic costs of management actions. Often economic costs are not explicitly incorporated into non-game management models potentially leading to inefficient allocation of conservation resources. The swallow-tailed kite (*Elanoides forficatus*, STKI) is a Partners in Flight watch list species that is absent from 95% of its former range. We examined the influence of 5 covariates (percent clearcut, clearcut size, forest/non-forest edge, percent bottomland hardwood, and spring rainfall) on STKI nest survival in 90 Georgia nests with known fates from 1999-2004. We used the 1998 Georgia GAP land cover model to measure habitat covariates within 2km of nests and NOAA rain gauges in central and southern Georgia to measure spring rainfall. To compute cost-optimal management recommendations we wrote Kite manager, a program coded in Python to predict nest survival for a given set of covariates and compute cost sorted recommendations for changes in that set to achieve a desired level of nest survival. 8 models with various combinations of all covariates had substantial empirical support ($\Delta AIC_c > 2$) with spring rainfall as the most important covariate ($w_i = 0.49$). Simulations beginning with covariates constrained to the mean produced an exponential increase in cost-optimal recommendation from mean nest survival of 0.43 to 0.68. The high relative importance of spring rainfall suggests that seasonal flooding may explain much of the yearly variability in STKI nest survival. Kite manager is a flexible tool for making management decisions under uncertainty and is easily modified to address other species management issues.

Regional assessment and management of inland stopover habitats for shorebirds in the Tennessee Valley (ORAL)

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Shorebird migration through the North American interior relies on ample stopover habitat distributed along migratory routes. Inland migration often relies on ephemeral stopovers such as seasonally flooded lowlands rather than the established perennial stopovers that characterize coastal migration. Late summer drawdown of reservoirs managed by the Tennessee Valley Authority (TVA) has provided reliable stopovers for southbound migrant shorebirds over the past fifty years. Recent changes in management of the river system will delay summer drawdown, altering the temporal pattern of habitat availability and possibly disrupting fall migration. We present a research plan to evaluate broad-scale management of shorebird habitats in the Tennessee Valley focusing on 1) Coordination of shorebird counts to assess habitat use throughout the Tennessee Valley during fall migration; and 2) Multi-scale assessment of habitat availability examining the spatial distribution of stopovers, their total area, food species availability, and how available habitats may change under a new drawdown regime. Shorebird counts will be coordinated with U.S. Fish and Wildlife, Tennessee Wildlife Resources Agency, and other agencies able to assist in covering widely distributed stopovers. Habitat assessment will use Geographic Information System and remote sensing technologies to map all locations in the valley where stopovers may exist, and to evaluate how shoreline configuration and mudflat availability change through time during drawdown. Combining shorebird counts with habitat modeling will enable us to present a series of management scenarios to TVA in an effort to find an ideal balance in managing flood control, recreational opportunities, power production, and the availability of stopover habitat.

Juvenile Wood Thrush post-fledging movements, habitat use, and survival estimates in relation to experimental selection cutting (POSTER)

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Tennessee National Wildlife Refuge managed its oak (*Quercus* spp.)- hickory (*Carya* spp.) forests in 2001 with experimental selection cutting in an attempt to improve breeding habitat quality for mature forest songbirds. This timber harvest altered forest vegetative structure and composition, but the effects on juvenile Wood Thrushes (*Hylocichla mustelina*) were unknown. We monitored post-fledging juvenile Wood Thrushes within 20-ha treatment and control stands (n = 4) to determine the short-term (3 years post-treatment) effects of this management

on their movements, habitat use, and survival. Timber removal consisted of single-tree and small group selection cutting which reduced canopy cover to 70% within the forest matrix and to 40% within a series of 0.4-ha patches. During July and August 2004 we radio-marked and monitored 14 individuals from 6 nests in the control stands and 3 individuals from 2 nests in the treated stands. Based on >400 telemetry locations, radio-marked juvenile Wood Thrushes remained in the natal territory for 2-3 weeks post-fledging and then dispersed <2km by the end of August. During dispersal, radio-marked individuals moved around the study site using a variety of habitats but did not appear to select for treated areas. At least 24% (4 of 17) of the radiomarked juvenile Wood Thrushes died during the monitoring period, including 1 documented depredation by a Northern Copperhead (*Agkistrodon contortrix mokasen*). We will radio-mark additional juvenile Wood Thrushes in 2005 to further document habitat use and survival.

Territory size of the Loggerhead Shrike (*Lanius ludivicianus*) in an urban environment (POSTER)

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The purpose of this study is to determine the breeding territory size of the Loggerhead Shrike in an urban/school campus environment compared to its natural environment. This is an on going study that is being continued during the summer of 2005. The territory size of these urban Loggerhead Shrikes were very small, less than 1 ha. Literature values for territory size are significantly higher and range from 3 ha (Missouri) when nestlings are in the nest and up to 34 ha for the endangered San Clemente Island Loggerhead Shrike. A possible reason for a small territory size might be the lack of avian competitors for the same food resources.

Productivity of forest birds in southeastern Indiana: The effects of nest predator satiation. (POSTER)

DUSTIN W. VARBLE[1]*, DAVID A. BUEHLER[1], JOSEPH R. ROBB[2], and TERESA M. VANDOSOL[2]
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Periodic cicadas emergences influence forest bird nest survivorship. This could occur because of increased food availability for initiating nests and fledging host young and/or by satiating nest predators. We monitored nests to determine daily nest survival on five 40-ha plots from May to early July, 2004 on Big Oaks National Wildlife Refuge in southeastern Indiana. Common species monitored included cerulean warblers, wood thrush, acadian flycatchers, ovenbirds, and red-eyed vireos. Emergence traps on each plot indicated that the peak rate of cicada emergence occurred around May 23rd. We observed large, active cicada choruses on our study site from mid-May until mid-June. Wing traps on each plot indicated that avian predation of cicadas peaked shortly after the peak emergence in late May. While cicadas appeared to be a major prey item in most forest bird diets, overall nest success of many species did not significantly increase relative to estimates from previous years. This could result from other factors that influence survivorship, such as weather, which can be highly variable from year to year. Survivorship did increase during the peak cicada period (May 23rd – June 15th) compared to the non-peak period for cerulean warblers, wood thrush, acadian flycatchers, and above ground nests. Only ground nests were not more likely to survive during the peak cicada period. This may be due to the different community of nest predators that prey on ground nests where cicadas are only present for a short period before breeding in higher vegetation strata.

Analysis of the Kentucky Avian Point-Count Monitoring Database: 1993-2003 (ORAL)

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In 1995, the Kentucky Department of Fish and Wildlife Resources (KDFWR) established an avian monitoring program for Kentucky to monitor avian population trends on public and a few select private lands, to document the species supported on management areas, and to document avian-habitat relationships. The monitoring program consists of running 10-minute counts with a 50-m fixed radius. Counts are conducted once during the breeding

season by trained KDFWR staff and other agency staff and volunteers. In 2002 and subsequent years, all data were inputted into the national database housed at the Patuxent Wildlife Research Center. Additional data dating back to 1993 from the Daniel Boone National Forest was also added. Since initiation of the program, 3823 individual counts at 857 point-count locations have been conducted, consisting of over 40,000 individual observations. Population trend analysis for select species (Wood Thrush, Prairie Warbler, Worm-eating Warbler, Cerulean Warbler, Louisiana Waterthrush, Acadian Flycatcher, and Kentucky Warbler) show that populations on the monitored sites may not be tracking the same trends shown on the Breeding Bird Surveys in Kentucky. The monitoring approach has proven to be adequate for monitoring these species at the Bird Conservation Region scale but not at finer scales. Monitoring has also documented that species of management concern are being supported on all the monitoring sites; however, additional targeted monitoring is needed to document population trends for a few high priority species (Henslow's Sparrow, Bachman's Sparrow, Bewick's Wren, Golden-winged Warbler, Swainson's Warbler, Short-eared Owl). Suggestions for improvement will be discussed.

GAP Analysis in the Southeast: New data products and partnerships (ORAL)

STEVE WILLIAMS
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The GAP Analysis Program has initiated an effort in the Southeast to consolidate and refine existing individual state GAP datasets. Prior to this effort, conservation initiatives having a regional scope have been unable to utilize GAP data due to differing land cover categories, spatial models of vertebrate distribution, as well as database structure and syntax. The resultant regional dataset will better enable conservation efforts by providing a seamless, region-wide dataset that can be used to identify and rank conservation priorities. In contrast to traditional GAP models which are boolean in nature (presence/absence), more advanced models that tie productivity values to specific habitat are needed by the bird conservation community to set conservation goals and priorities. In a cooperative effort with the Migratory Bird Office of the USFWS, habitat productivity models are being developed for priority species that are indicative of selected habitat types and species assemblages.

Characteristics of roost sites used by western burrowing owls (*Athene cunicularia hypugaea*) wintering in southern Texas (POSTER)

DAMON WILLIFORD
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The western burrowing owl (*Athene cunicularia hypugaea*) is endangered in Canada, threatened in Mexico, and declining in most of the western United States. Most previous research has focused on the breeding biology of the burrowing owl, and little is known of its winter ecology. I determined characteristics of roost sites used by burrowing owls in winter in southern Texas. Data on 42 winter roost sites were collected from 15 November 2001 to 15 February 2002. The majority (87%) of roost sites was located on agricultural land, bare ground was 69% of the groundcover composition within a 10 m radius of the roost sites, and road culverts were the most commonly used roost site type. Most (65%) roost sites were culverts, with a mean diameter of 22.3 $\pm$ 1.63 cm *SD*. Landowners and public land managers should be encouraged to use smaller-diameter culverts when building roads or replacing old or damaged culverts and to graze livestock or mow around these culverts during winter.

A revised bird point count protocol for the Southeast Management Working Group, Partners in Flight (POSTER)

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Concern over the importance of accounting for variations in detectability among birds noted during point counts, and increased interest by managers in the use of point count data to evaluate management actions present an opportunity to revise the SE Management Working Group's point counting manual (Hamel et al. 1996, Land

Manager's Guide to Point Counts of Birds in the Southeast, Gen. Tech. Rep. SO-120. New Orleans, LA: U.S. Department of Agriculture, Forest Service, Southern Research Station. 39 p.). We present some thoughts on a revision to the existing protocol, and solicit ideas from partners who have used the earlier guide. Proposed revision of the document will address 1) Discussion of detectability issues, 2) Discussion of objectives, 3) Recommendations on analysis of data, 4) Discussion of survey design, 5) Vegetation sampling, and 6) Selection and Training of Personnel. Most obvious among suggested changes to the field design involves the addition of a fourth distance band, 50-100m, to the field recording protocol.

Spatially-explicit predictive models for grassland birds in the West Gulf Coastal Plain (ORAL)

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We used USGS National Land Cover Data (NLCD) and Breeding Bird Survey (BBS) data to develop spatially-explicit predictive models for Northern Bobwhite Quail, Grasshopper Sparrow, Loggerhead Shrike, Field Sparrow, Lark Sparrow, Eastern Meadowlark, and Dickcissel for the entirety of the West Gulf Coastal Plain Bird Conservation Region. BBS routes were divided into five, 10-stop segments and buffered 3,000m. NLCD within each of the 3,000m buffered BBS segments was then analyzed using FragStats software to generate landscape metrics. From the generated list of landscape metrics, we used Information Theory to select a set of 10 candidate models that we thought best predicted species abundance. Candidate models were ranked based on AIC criteria. The best candidate model for each species was then back-applied to NLCD using a roving window approach, resulting in a spatially-explicit predictive map of each species' relative abundance. It is anticipated that these models will facilitate the development of habitat objectives and focus areas for targeted delivery of conservation programs.

Wintering birds of coastal prairies at Laguna Atascosa NWR, Texas (ORAL)

MARC C. WOODIN[1]*, MARY K. SKORUPPA[1], GRAHAM C. HICKMAN[2], GENE W. BLACKLOCK[3], and ROBERT BENSON[2]
[1]United States Geological Survey, Texas Gulf Coast Field Research Station, Corpus Christi, TX 78412, marc_woodin@usgs.gov; [2]Department of Physical & Life Sciences, Texas A&M University-Corpus Christi, Corpus Christi, TX 78412, [3]Coastal Bend Bays & Estuaries Program, Inc., Corpus Christi, TX 78401

Grassland birds have undergone more pronounced and widespread declines than any other species group in North America. While recent years have seen an increase in research and conservation activities for breeding grassland birds, these species have been studied far less in winter. Coastal prairies, which once extended from southwestern Louisiana to extreme northeastern Tamaulipas, Mexico, support large numbers of wintering grassland birds in Texas. Many remaining coastal prairies have been converted to exotic grasslands to increase production of forage, but the effects of exotic grasses on grassland birds are unknown. We investigated the effects of exotic grasses, disturbance (discing and planting), area, and vegetation characteristics on wintering grassland bird species richness and abundance. We conducted 63 bird surveys at 21 grassland tracts (11 native and 10 exotic) at Laguna Atascosa National Wildlife Refuge in southern Texas during the winter of 1999 to 2000. The most frequently detected species were savannah sparrows (*Passerculus sandwichensis*) (61% of all detections), sedge wrens (*Cistothorus platensis*) (10%), and olive sparrows (*Arremonops rufivirgatus*) (7%). Species richness and total bird abundance were higher in native grasslands than in exotic grasslands. Disturbance and plant diversity were positively related to bird species richness and total bird abundance. Remaining tracts of native coastal prairie should be preserved to benefit bird diversity and abundance in winter. Discing and planting, often considered beneficial to wildlife in most parts of the country, must be considered very cautiously in southern Texas.

MAPS

NOTE FOR SELF-GUIDED BIRDERS:
The birding *hotspot* maps and GPS data on the following pages are intended to supplement the copy of the birding trail map that you received in your registration packet.

In addition to birding, most of these sites are wonderful places to view native flora and other fauna like butterflies, dragonflies, and so much more. There are as many species of butterflies recorded in the three southernmost counties of Texas as in all of eastern North America combined. Plan to visit the North American Butterfly Association's International Butterfly Park less than one mile east of the headquarters of the World Birding Center.

For the most up-to-date **rare bird** info, please call the Lower Rio Grande Valley's bird hotline at (956) 584-2731

Or sift through the most recent postings to **Texbirds** on that listserve's archives at <http://listserv.uh.edu/archives/texbirds.html>

COUNTRY INN & SUITES

1921 South 10th St., McAllen
(956) 618-2424

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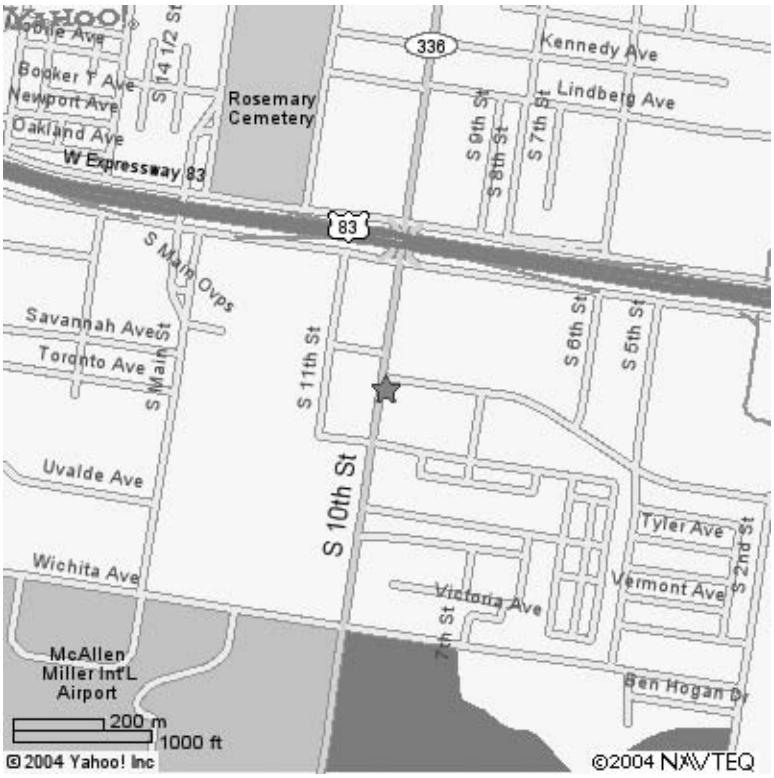

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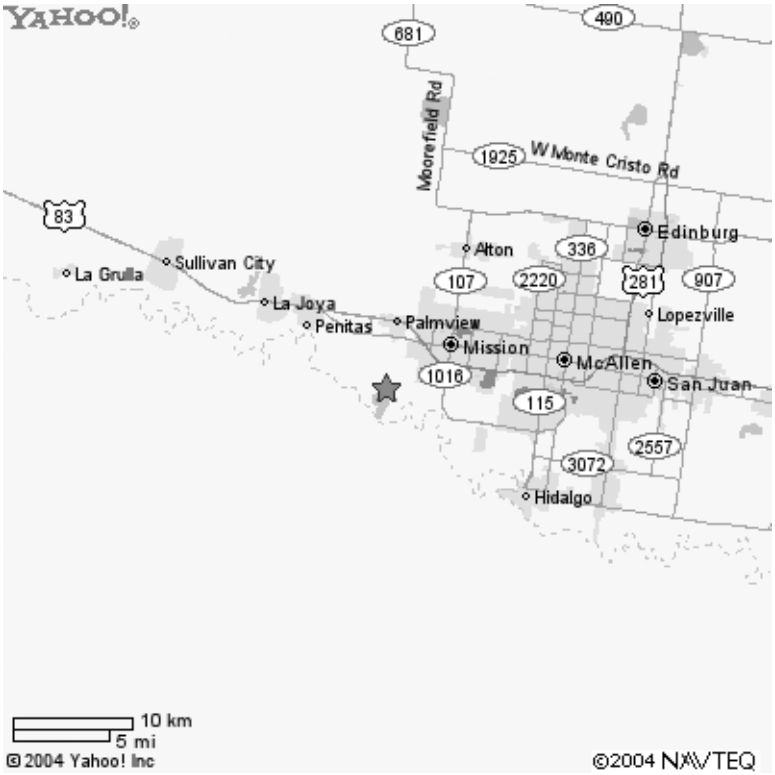
WORLD BIRDING CENTER

Headquarters at Bentsen-Rio Grande Valley State Park
2800 S. Bentsen Dr., Mission, TX
(956) 584-9156

Go west on Expressway 83 for several miles to Mission, TX, and exit Bentsen Palm Dr. Proceed south on this road until it *dead ends* into the park. This site is approximately 20-25 minutes from our host hotel.



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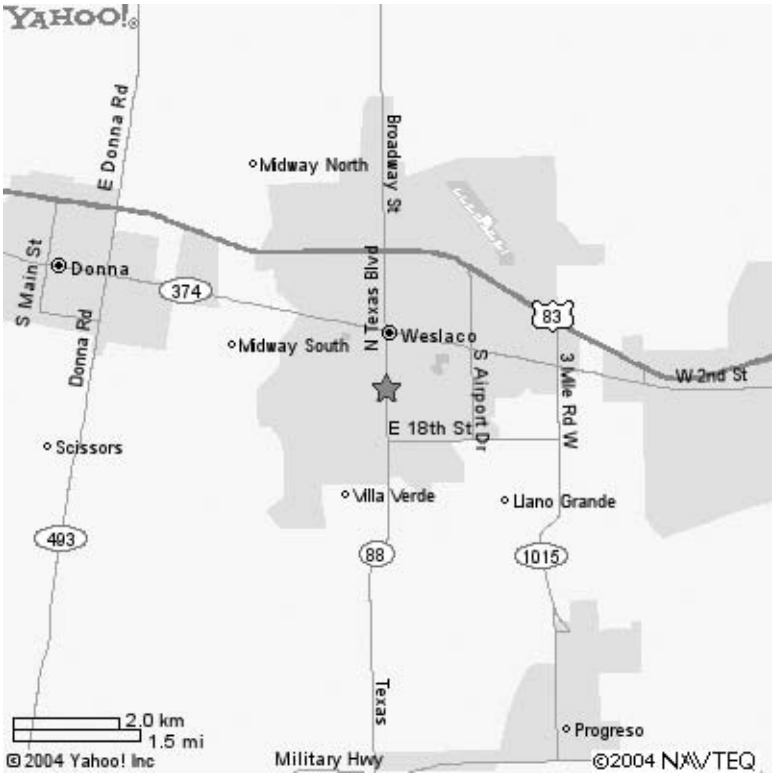
PARROT ROOST (mostly Red-crowneds) AND FRONTERA AUDUBON'S *THICKET*

From the host hotel in McAllen, proceed east on Expressway 83 to the city of Weslaco. Exit Texas Blvd (FM 88), go south until 10th Street, turn left on 10th and parallel park somewhere near the intersection of 10th and Kansas St. Arrive just before sunset, listen, and follow these raucous birds as they go to roost somewhere nearby. This is a residential area so please respect private property. One can birdwatch from the public streets and curbsides. This site is approximately 25-30 minutes from our host hotel. Also, **Frontera Audubon's** preserve is located about a block away. Look for it on the east side of Texas Blvd near 12th St.



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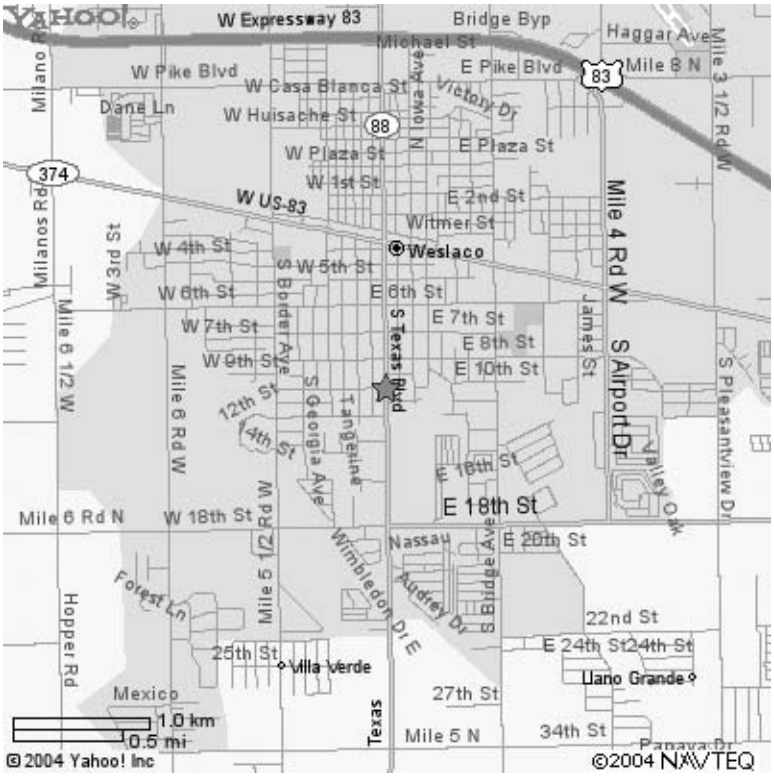

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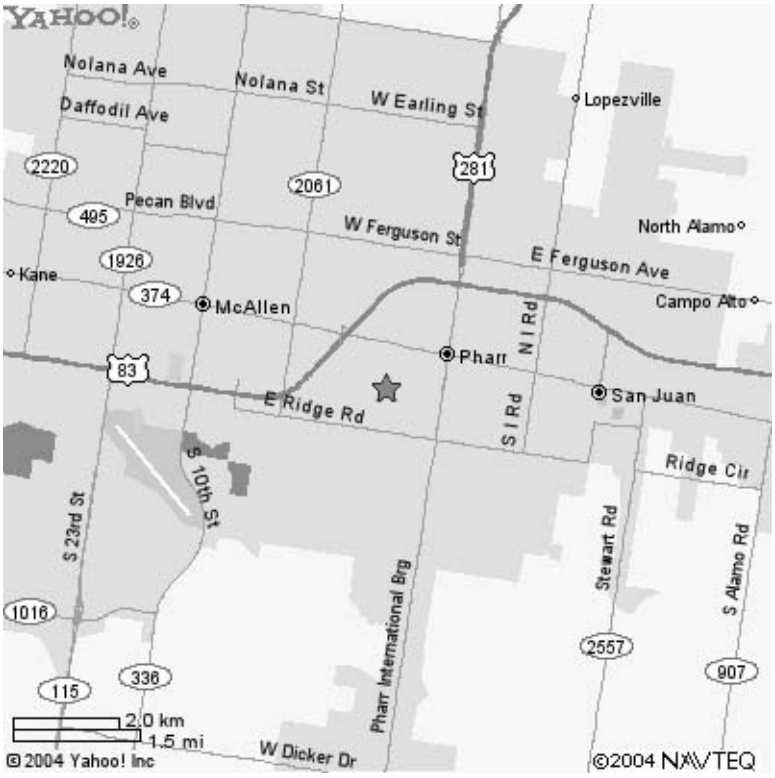
ALLEN WILLIAMS' BACKYARD WILDSCAPE

This private site has hosted several U.S. rarities since 2002

Take Expressway 83 east of McAllen to the Jackson Avenue exit (NOT Jackson Road). Proceed east on Jackson Ave. which will become Sam Houston Ave. The Williams' residence is in Pharr, TX, between the Senior Friends Center and the Skinner-Silva Funeral Home at 750 Sam Houston Ave. Park in the area just outside the property along the front fence – no need to call first. Enter the property at the driveway, pay the entry fee, and walk to the backyard. This site is approximately 15-20 minutes from our host hotel.



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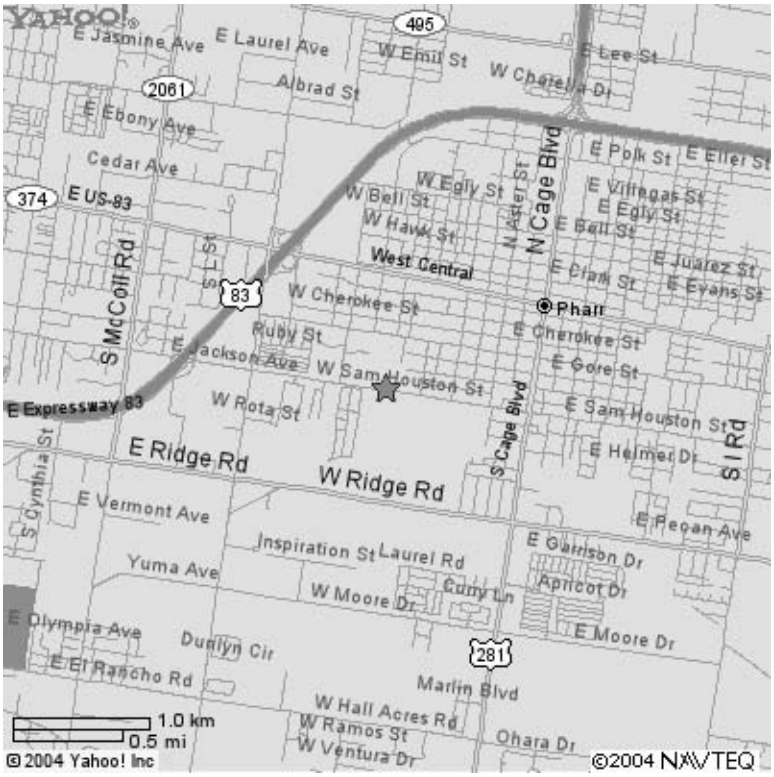

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GREEN-BREASTED MANGO

(hummingbird)

Irregularly attends a feeder at this private residence

One or two Green-breasted Mangos have been seen on occasion at 500 Rose Ellen St. in McAllen. From Expressway 83, go north on McColl Rd. (also FM 2061). Take a left on Fresno Ave. and then a right on Rose Ellen St. Park in front of the house and walk the driveway to the backyard. Pay entry fee. This site is approximately 10-15 minutes from our host hotel.

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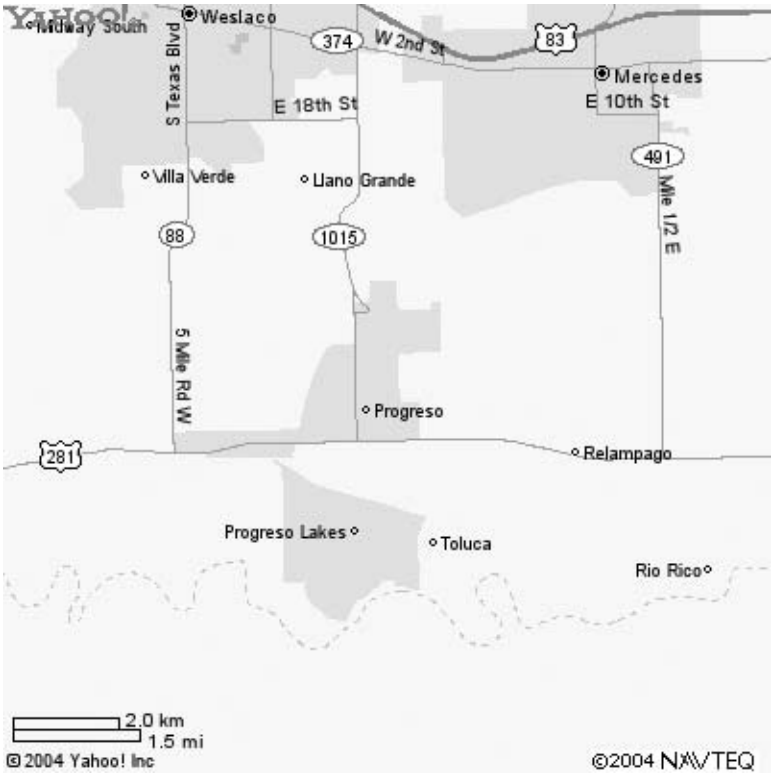
NUEVO PROGRESO, MEXICO

Optional dinner and shopping Friday night
No shuttle service; please carpool

Take Expressway 83 east to Weslaco and on the far east side of town exit FM 1015. Proceed south on FM 1015 for several miles and watch the highway signs that will lead you to the parking lot on the U.S. side of the border. Walk across the Rio Grande bridge, pay the small border fee, and enjoy Old Mexico. Only a valid driver's license with photo is required as ID. A passport is *overkill* for any brief border town visit. You will need 3 or 4 quarters to pay roundtrip crossing fees. U.S. currency is always accepted in shops and restaurants in this quaint border town. Enjoy!



Lat. & Long. Location Data for the Lower Texas Coast portion of the Great Texas Coastal Birding Trail

Data gathered by Joe and Sarah Dorn of Belton, TX. This spreadsheet is intended to aid those with handheld GPS units or cars equipped with guidance systems.

Loop Name	Name	Site #	Latitude	Longitude
Los Ranchos de Tejas Loop	See: http://www.tpwd.state.tx.us/birdingtrails/coastal_trail/maps/lower/losranchos/text.htm			
	Olmos Creek	LTC 001	N27 16 30.4	W97 48 12.7
	Sarita / The Kenedy Ranch	LTC 002	N27 13 21.4	W97 47 21.9
	TxDot Sarita Rest Area	LTC 003	N27 08 20.9	W97 47 36.0
	TxDot Brooks County Rest Area	LTC 004	N27 05 40.2	W98 08 46.7
	USFWS La Sal del Rey Tract	LTC 005	N26 31 22.6	W98 04 38.7
	Brushline Road / Tres Corales Ranch	LTC 006	N26 30 00.8	W98 02 55.1
	USFWS La Sal Vieja - Teniente Tract	LTC 007	N26 29 26.9	W97 59 19.7
	Delta Lake County Park	LTC 008	N26 24 53.3	W97 57 32.4
	USFWS La Sal Vieja - East Lake Tract	LTC 009	N26 30 14.5	W97 54 42.2
	The Inn at El Canelo	LTC 010	N26 38 07.6	W97 46 03.7
	King Ranch Norias Unit	LTC 011	N26 47 16.9	W97 46 30.8
Sacahuistale Loop	See: http://www.tpwd.state.tx.us/birdingtrails/coastal_trail/maps/lower/sacah/text.htm			
	Santa Monica Wetlands	LTC 012	N26 21 46.3	W97 35 10.9
	Sacahuistale Flats	LTC 013	N26 29 41.4	W97 33 27.1
	Fred Stone County Park	LTC 014	N26 34 05.0	W97 25 46.0
	Port Mansfield Nature Trail	LTC 015	N26 33 25.1	W97 25 47.8
Longoria Loop	See: http://www.tpwd.state.tx.us/birdingtrails/coastal_trail/maps/lower/longoria/text.htm			
	Las Palomas WMA-Longoria Unit	LTC 016	N26 19 17.3	W97 49 25.2
	Tiocano Lake	LTC 017	N26 12 59.4	W97 48 54.4
Arroyo Colorado Loop	See: http://www.tpwd.state.tx.us/birdingtrails/coastal_trail/maps/lower/arroyo/text.htm			
Plotted	Port of Harlingen	LTC 018		
	Rio Hondo	LTC 019	N26 14 08.0	W97 35 01.6
	Mont Meta Cemetery	LTC 020	N26 10 54.5	W97 35 13.2
Plotted	Las Palomas WMA –Arroyo Colorado	LTC 021		
	Adolph Thomae Jr. County Park	LTC 022	N26 20 41.2	W97 24 53.7
	Rio Grande Valley Shooting Center	LTC 023	N26 12 42.1	W97 25 51.8
	Laguna Atascosa NWR	LTC 024	N26 13 42.2	W97 20 48.4
Los Loros Loop	See: http://www.tpwd.state.tx.us/birdingtrails/coastal_trail/maps/lower/losloros/text.htm			
	Harlingen City Lake Park	LTC 025	N26 11 47.4	W97 41 24.6
	Hugh Ramsey Nature Park	LTC 026	N26 11 10.5	W97 39 52.4
	Arroyo Park / C.B. Wood Park	LTC 027	N26 10 17.7	W97 41 02.2
	Harlingen Thicket	LTC 028	N26 10 28.5	W97 41 17.2
	Arroyo Park / C.B. Wood Park	LTC 02X	N26 10 29.9	W97 41 46.6
	Lon C. Hill (Fair) Park	LTC 029	N26 11 58.4	W97 42 30.6

Loop Name	Name	Site #	Latitude	Longitude
Laguna Madre Loop	See: http://www.tpwd.state.tx.us/birdingtrails/coastal_trail/maps/lower/laguna/text.htm			
	Los Fresnos	LTC 030	N26 04 19.3	W97 28 52.8
	Palo Alto Battlefield National Park	LTC 031	N26 01 12.0	W97 28 51.2
	Laguna Vista	LTC 032	N26 06 06.0	W97 17 27.2
	Port Isabel	LTC 033	N26 04 36.6	W97 12 27.4
South Padre Island Loop	See: http://www.tpwd.state.tx.us/birdingtrails/coastal_trail/maps/lower/spadre/text.htm			
	South Padre Island	LTC 034	N26 14 47.7	W97 11 10.8
	Convention Center/Laguna Madre Nature Trail	LTC 035	N26 08 24.7	W97 10 29.8
	Valley Land Fund Migratory Bird Sanctuary	LTC 036	N26 05 55.9	W97 10 04.4
	SPI Gateway Project	LTC 037	N26 05 07.5	W97 10 08.6
	Isla Blanca County Park	LTC 038	N26 04 33.6	W97 09 49.0
Boca Chica Loop	See: http://www.tpwd.state.tx.us/birdingtrails/coastal_trail/maps/lower/bocachica/text.htm			
	TX 48 Scenic Drive	LTC 039	N26 01 15.5	W97 15 56.6
	NOAA Brownsville Weather Forecast Office	LTC 040	N25 55 00.7	W97 25 11.5
	Brownsville Sanitary Landfill	LTC 041	N25 56 18.3	W97 24 25.4
	Sabal Palm Audubon Center and Sanctuary	LTC 042	N25 51 58.5	W97 25 03.1
		LTC A42	N25 51 03.9	W97 25 01.6
	Boca Chica Beach /the USFWS Boca Chica	LTC 043	N25 58 32.9	W97 11 50.6
		LTC A43	N25 59 47.4	W97 09 00.6
Resaca Loop	See: http://www.tpwd.state.tx.us/birdingtrails/coastal_trail/maps/lower/resaca/text.htm			
	TPWD Coastal Fisheries Field Station	LTC 044	N25 59 24.0	W97 31 13.1
	Camp Lula Sams	LTC 045	N25 59 01.9	W97 31 13.9
	Gladys Porter Zoo / Dean Porter Park	LTC 046	N25 54 49.2	W97 29 42.9
	Resaca Boulevard	LTC 047	N25 55 31.7	W97 30 26.5
Las Palomas Loop	See: http://www.tpwd.state.tx.us/birdingtrails/coastal_trail/maps/lower/laspalomas/text.htm			
	Las Palomas WMA - Resaca de la Palma	LTC 048	N25 57 31.4	W97 34 16.7
	Las Palomas WMA - Ebony Unit	LTC 049	N26 05 24.6	W97 44 54.9
	Cannon Road	LTC 050	N26 03 45.1	W97 47 06.4
	Las Palomas WMA - Anacua Unit	LTC 051	N26 03 55.8	W97 50 37.6
		LTC A51	N26 04 36.6	W97 50 31.9
	El Zacatal	LTC 052	N26 05 04.4	W97 52 17.2
	TxDOT Relampago Rest Stop	LTC 053	N26 05 05.6	W97 55 09.5
Estero Llano Grande Loop	See: http://www.tpwd.state.tx.us/birdingtrails/coastal_trail/maps/lower/estero/text.htm			
	Estero Llano Grande	LTC 054	N26 07 16.8	W97 57 41.4
	Mercedes Civic Center	LTC 055	N26 09 02.2	W97 54 17.9
	The Weslaco Wetlands	LTC 056	N26 10 15.8	W97 58 27.3
		LTC A56	N26 10 26.7	W97 58 29.4
	The Valley Nature Center	LTC 057	N26 09 32.4	W97 59 55.3
	Frontera Audubon Thicket	LTC 058	N26 08 52.5	W97 59 26.0

Loop Name	Name	Site #	Latitude	Longitude
Santa Ana Loop	See: http://www.tpwd.state.tx.us/birdingtrails/coastal_trail/maps/lower/santana/text.htm			
	Santa Ana NWR	LTC 059	N26 05 06.8	W98 08 04.3
	Boys and Girls Club of Alamo	LTC 060	N26 11 22.0	W98 07 35.3
	Edinburg Scenic Wetland Trails	LTC 061	N26 17 46.6	W98 07 44.1
	USFWS La Sal Vieja - Monte Cristo Tract	LTC 062	N26 21 06.6	W98 15 25.1
	Quinta Mazatlan	LTC 063	N26 10 38.3	W98 14 02.9
	McAllen Convention Center	LTC 064	N26 11 29.4	W98 13 56.2
	McAllen Nature Center	LTC 065	N26 12 30.5	W98 15 56.7
	McAllen Sewage Ponds	LTC 066	N26 10 04.6	W98 16 26.9
	The Hidalgo Pumphouse Discovery Center	LTC 067	N26 05 51.1	W98 15 41.2
Los Ebanos Loop	See: http://www.tpwd.state.tx.us/birdingtrails/coastal_trail/maps/lower/losebanos/text.htm			
	Anzalduas Dam and County Park	LTC 068	N26 08 40.6	W98 19 23.4
	Bentsen-Rio Grande Valley State Park	LTC 069	N26 11 01.5	W98 22 47.2
	Chihuahua Woods Preserve	LTC 070	N26 13 28.6	W98 24 32.9
	Las Palomas WMA - Penitas Unit	LTC 071	N26 13 54.8	W98 27 22.8
	USFWS Yturria Tract	LTC 072	N26 15 17.6	W98 31 23.9
		LTC A72	N26 14 56.5	W98 29 09.9
	Los Ebanos Ferry Landing	LTC 073	N26 16 20.9	W98 33 04.1
Rio Bravo Loop	See: http://www.tpwd.state.tx.us/birdingtrails/coastal_trail/maps/lower/riobravo/text.htm			
	USFWS La Puerta Tract	LTC 074	N26 20 37.7	W98 43 55.3
	Fort Ringgold / the Chachalaca Nature Trail	LTC 075	N26 22 38.9	W98 48 43.1
		LTCA75	N26 22 43.0	W98 48 21.4
Plotted	Rancho Lomitas	LTC 076		
	Roma Bluffs / the Roma Historic District	LTC 077	N26 24 20.2	W99 01 09.3
		LTC A77	N26 24 22.9	W99 01 03.6
	Fronton	LTC 078	N26 25 23.4	W99 01 21.2
Falcon Loop	See: http://www.tpwd.state.tx.us/birdingtrails/coastal_trail/maps/lower/falcon/text.htm			
	Santa Margarita Ranch and Bluffs	LTC 079	N26 29 36.6	W99 03 53.1
	Salineño / the USFWS Kepler Tract	LTC 080	N26 31 39.5	W99 05 19.2
	Chapeño	LTC 081	N26 33 30.6	W99 07 22.5
	Falcon County Park	LTC 082	N26 33 51.5	W99 07 34.8
	Falcon Dam / the Falcon Woodlands	LTC 083	N26 33 20.6	W99 08 13.3
	Falcon State Park	LTC 084	N26 34 40.5	W99 07 42.2
Zapata Loop	See: http://www.tpwd.state.tx.us/birdingtrails/coastal_trail/maps/lower/zapata/text.htm			
	Zapata City Park	LTC 085	N26 54 12.9	W99 16 06.4
Plotted	Hebbronville Scenic Drive	LTC 086		
	San Ygnacio	LTC 087	N27 02 37.2	W99 26 13.5
	TxDOT Zapata County Rest Stop	LTC 088	N27 05 27.2	W99 25 33.9

BIRD MONITORING IN THE SOUTHEAST: BACKGROUND INFORMATION

BACKGROUND INFORMATION DOCUMENT #1

Monitoring Panel – SE Partners in Flight
18 February 2005
McAllen, Texas

Panelists: Charles Baxter, David Buehler, Bob Cooper, David DeSante, Chuck Hunter, David Pashley, Terry Rich, Randy Wilson

DP – "Surveillance monitoring" is a term that has come into use since the release of a report to the IAFWA at its fall, 2004, meeting. It refers to generally broad efforts to monitor the status of populations of birds (size, trends, distribution, etc.), as differentiated from management driven, hypothesis based monitoring of bird population response to particular conditions. This dichotomy was established in the afore-mentioned IAFWA report, and has been a source of some controversy in recent months. (Report and responses to it can be found at www.iafwa.org).

One of the reasons for criticism of surveillance monitoring is that so much of it is carried out in a haphazard manner, with insufficient consideration of the questions posed, the answers sought, the power of the test, design or protocol. Much of the monitoring that has been done over the past decade or so has by and large been a waste of time and money. Mark Wimer, who is managing the beginnings of a national point count database, commented that study design is critically important and is often poorly done in monitoring programs.

CB – The apparent dichotomy between surveillance and management-based monitoring is perhaps inaccurate. They may represent end points on a continuum. Even range-wide monitoring of the trend of a species should be properly designed and actually does measure response to the management issue of the changes are happening across landscapes, most of which we are not designing.

DD – One has to ask what one is monitoring, and the answer is trends or something like them. Why is one monitoring? This is apparently based on an assumption that bird populations are responding to something. This is turn is based on an intention to correct situations if bird response is not what we would want. Just knowing trend is nice, but it doesn't really provide much direction for conservation efforts. In order to know what to do for birds, one has to also understand vital rates – reproductive success and survivorship. Low rates of either can cause population decline, but conservation responses should be very different, depending on which is driving the situation. Demographic monitoring may be expensive and difficult, but it is essential. We must understand the bottleneck that limits population size in order to undertake effective conservation measures.

DP to DD – For how many North American birds do we understand the nature of that bottleneck?

DD – I haven't a clue, but surely it's not very many.

BC – We know a good deal about bird-habitat relationships and the distribution of birds. Further work on those objectives may not be needed. However, there remains a huge issue of monitoring bird response to management actions, in that the assumption that our conservation actions are actually going to achieve the intended consequences is rarely tested. This is particularly important in large landscapes, such as BCRs, with work in the Mississippi Alluvial Valley a prime example. There has been a great deal of bird-driven reforestation there and we must track how birds are actually responding.

DB – The conservation goal is to stabilize or increase populations, and progress toward that goal can only be measured by monitoring. Determining why or why not we are achieving our objective depends upon monitoring of demographic parameters. We used to think that poor nest success in itself was an indication of reproductive

failure, but have since learned that renesting attempts or multiple clutches in a season swamp out early failures. A cost-benefit analysis is needed to determine which demographic parameters we can and should target.

CB – Most monitoring to date occurs outside of the context of science-based management, and suffers from poor design and unrealistic expectations. The implications of having national and international bird conservation plans with explicit population targets have still not been widely recognized in the bird conservation community and the agencies and organizations that populate it. It is glib and somewhat true what virtually every organization claims – that it is science-based. Very few explicitly try to do things based on information that is known to be incorrect. However, to really be science-based today, an organization must operate on the basis of scientific principles. That means doing work based on hypotheses, testing those hypotheses and rejecting them when warranted, and changing the course of direction on this basis.

BC – Bird research should be management oriented. It should address the most critical assumptions behind bird conservation and serve in support of adaptive resource management.

TR – The PIF Science Committee has analyzed the quality of monitoring data for all North American (north of Mexico) landbirds (Summary is attached to these minutes). Of these, ___ are currently not monitored in such a manner that we can confidently estimate trends. Of these birds that are insufficiently known, ___ would be put on the Watch List if it were to be determined that they are declining. Furthermore, there are ___ currently on the Watch List that would be taken off if we were to learn that their populations are stable or increasing. If is clear that our highest monitoring priority is to design programs to understand the status of those birds that may or may not be high conservation priorities, depending on their population trend.

DP – Does the panel agree with Terry's assertion that this is our highest continental monitoring priority?

DD – It may be more important and efficient to devote resources to understanding the causes of decline of 30 or 40 species that we know are declining, but for which the reasons are unknown. That may give us greater conservation benefits for less of an investment.

CH – The greatest monitoring improvements needed in the Southeast are to become better at setting objectives at multiple scales, coordinate implementation of efforts, and analyze data. Our objectives should be to collect baseline data, evaluate management actions, evaluate assumptions, investigate demographics, and to better determine trends.

RW – The Southeast needs a coordinated monitoring program. One component of this is to target the parameters of interest, such as abundance and vital rates. Study design and data management will be critical. Manpower issues must be realistically addressed, and some sort of coordinating body or agency must take the lead in making this happen.

A discussion session consisting of a small number of people met after the panel adjourned. It was determined that Southeast states badly need monitoring guidelines, including how to set objectives, design and sampling, protocols, and data management. Studies should be designed at landscape levels, with BCRs being critical organizing principles. The group that should come up with these guidelines is the SE PIF Monitoring WG (chaired by Randy Wilson). Next year's PIF meeting (to be held in Florida) will focus on State Comprehensive Wildlife Conservation Strategies, all of which will be completed by then, the relationship between these Strategies and Joint Ventures, and the role that PIF can play in that relationship. A key component of that intersection is monitoring, and that meeting should be an opportunity to explore these issues. The LMVJV will develop a monitoring protocol by June, and the SE PIF Mon. WG should take that as a starting point from where to expand into these guidelines, and have them ready by the time of the 2006 SE meeting.

BACKGROUND INFORMATION DOCUMENT #2

Landbirds in need of better status and/or trend information within the Southeast U.S., Puerto Rico, and U.S. Virgin Islands

Southeast U.S.:
Swallow-tailed Kite (southeastern U.S. subspecies)
Snail Kite (Everglade population segment)
Short-tailed Hawk (Florida population segment)
White-tailed Hawk
American Kestrel (southeastern U.S. subspecies)
Aplomado Falcon (northern subspecies)
White-crowned Pigeon
Mangrove Cuckoo
Ferruginous Pygmy-Owl (Texas population segment)
Burrowing Owl (FL subspecies)
Spotted Owl (Mexican subspecies)
Northern Saw-whet Owl (Appalachian population segments)
Lucifer Hummingbird
Yellow-bellied Sapsucker (Southern Appalachian subspecies)
Olive-sided Flycatcher
Willow Flycatcher (southwestern U.S. subspecies)
Gray Vireo
Black-whiskered Vireo
Horned Lark (Coastal Prairies [Texas] subspecies)
Bewick's Wren (eastern and Appalachian subspecies)
Sprague's Pipit (non-breeding)
Golden-winged Warbler
Colima Warbler
Black-throated Green Warbler (South Atlantic Coastal Plain subspecies)
Blackburnian Warbler
Prairie Warbler (Florida subspecies)
Cerulean Warbler
Swainson's Warbler
Common Yellowthroat (Brownsville subspecies)
Bachman's Sparrow
Botteri's Sparrow (Texas subspecies)
Baird's Sparrow (non-breeding)
Henslow's Sparrow (breeding and non-breeding, separately)
Saltmarsh Sharp-tailed Sparrow (non-breeding)
Harris's Sparrow (non-breeding)
McCown's Longspur (non-breeding)
Smith's Longspur (non-breeding)
Painted Bunting (eastern subspecies)
Rusty Blackbird (non-breeding)
Audubon's Oriole
Red Crossbill (Appalachian population segments)

Puerto Rican and U.S. Virgin Islands:
Plain Pigeon (Puerto Rican subspecies)
Bridled Quail-Dove
Puerto Rican Screech-Owl (Culebra-Virgin Islands subspecies)
Puerto Rican Nightjar
Black Swift
Antillean Mango
Puerto Rican Flycatcher (Virgin Islands population segment)
Loggerhead Kingbird (Puerto Rican subspecies)
Puerto Rican Vireo
Bicknell's Thrush (non-breeding)
Elfin-woods Warbler
Greater Antillean Oriole (Puerto Rican subspecies)

BACKGROUND INFORMATION DOCUMENT #3

Highest Priority Survey Needs for Landbirds in the Southeast U.S. Partners in Flight Region

CC = Continental Concern, RC = Regional Concern, CS = Continental Stewardship, RS = Regional Stewardship, IM = Immediate Management, MA = Management Attention. A "No" under a survey need category indicates additional efforts are not necessary at this time; does not mean that surveys are not needed.

Species	Concern (Cont., Reg.)	Stewardship (Cont., Reg.)	Action Level	Status Need	Trend Need	Habitat Assoc. Need	Reproduction Output Need	Survival Need	Response to Mgmt. Need
Greater Prairie-Chicken	CC, RC	RS	IM	No	No	No	Yes	Yes	Yes
Lesser Prairie-Chicken	CC, RC	CS, RS	IM	No	No	No	Yes	Yes	Yes
Swallow-tailed Kite (southeast US)	CC, RC	RS	MA	Yes	Yes	No	Yes	Yes	Yes
Snail Kite (Everglade)	RC		IM	Yes	Yes	No	Yes	Yes	Yes
Short-tailed Hawk (Florida)	RC		MA	Yes	Yes	No	Yes	Yes	Yes
White-tailed Hawk	RC		MA	Yes	Yes	Yes	Yes	Yes	Yes
Crested Caracara (Florida)	RC		IM	No	No	No	No	Yes	Yes
American Kestrel (southeastern)	RC		MA	Yes	Yes	No	Yes	Yes	Yes
Aplomado Falcon (northern)	RC		IM	Yes	Yes	No	Yes	Yes	Yes
Peregrine Falcon (Appalachs.)	RC		IM	No	No	Yes	Yes	Yes	Yes
White-crowned Pigeon	CC, RC		MA	Yes	Yes	No	Yes	Yes	Yes
Mangrove Cuckoo	CC, RC		MA	Yes	Yes	No	Yes	Yes	Yes
Ferruginous Pygmy Owl (Texas)	RC		MA	Yes	Yes	No	Yes	Yes	Yes
Burrowing Owl (Florida)	RC		MA	No	Yes	No	Yes	Yes	Yes
Spotted Owl (Mexican)	CC, RC		MA	Yes	Yes	No	Yes	Yes	No
Northern Saw-whet Owl (Appalachs.)	RC		IM	Yes	Yes	Yes	Yes	Yes	Yes
Lucifer Hummingbird	RC	CS, RS	MA	Yes	Yes	No	Yes	Yes	No
Yellow-bellied Sapsucker (southern Appalachs.)	RC		IM	Yes	Yes	Yes	Yes	Yes	Yes
Red-cockaded Woodpecker	CC, RC	CS, RS	IM	No	No	No	Yes	Yes	Yes
Olive-sided Flycatcher	CC, RC		IM	Yes	Yes	No	Yes	Yes	Yes
Willow Flycatcher (southwest)	CC, RC		IM	Yes	No	Yes	Yes	Yes	Yes
Black-capped Vireo	CC, RC	CS, RS	IM	No	No	No	Yes	Yes	Yes
Gray Vireo	CC, RC		MA	Yes	Yes	No	Yes	Yes	No
Black-whiskered Vireo	RC		MA	Yes	Yes	No	Yes	Yes	Yes
Florida Scrub-Jay	CC, RC	CS, RS	IM	No	No	No	Yes	Yes	Yes

continued

Species	Concern (Cont., Reg.)	Stewardship (Cont., Reg.)	Action Level	Status Need	Trend Need	Habitat Assoc. Need	Reproduction Output Need	Survival Need	Response to Mgmt. Need
Horned Lark (coastal Texas)	RC		IM	Yes	Yes	Yes	Yes	Yes	Yes
Bewick's Wren (eastern and Appalachs.)	RC		IM	Yes	Yes	Yes	Yes	Yes	Yes
Sprague's Pipit	CC, RC	CC, RS	MA	Yes (non-breeding only)	Yes	Yes	No	Yes	Yes
Golden-winged Warbler	CC, RC		IM	Yes	Yes	Yes	Yes	Yes	Yes
Colima Warbler	CC, RC	CS	MA	Yes	Yes	No	Yes	Yes	No
Golden-cheeked Warblers	CC, RC	CS, RS	IM	No	No	No	Yes	Yes	Ye
Black-throated Green Warbler (South Atl. Coastal Plain)	RC		IM	Yes	Yes	No	Yes	Yes	Yes
Blackburnian Warbler	RC	CS	MA	Yes	Yes	No	Yes	Yes	Yes
Prairie Warbler (Florida)	CC, RC	CS, RS	IM	Yes	Yes	No	Yes	Yes	Yes
Cerulean Warbler	CC, RC	CS, RS	IM	Yes	Yes	No	Yes	Yes	Yes
Swainson's Warbler	CC, RC	CS, RS	MA	No	Yes	No	Yes	Yes	Yes
Common Yellowthroat (Brownsville)	RC		IM	Yes	Yes	Yes	Yes	Yes	Yes
Bachman's Sparrow	CC, RC	CS, RS	IM	Yes	Yes	No	Yes	Yes	Yes
Botteri's Sparrow (Texas)	RC		MA	Yes	Yes	No	Yes	Yes	Yes
Grasshopper Sparrow (Florida)	RC		IM	No	No	No	Yes	Yes	Yes
Baird's Sparrow	CC, RC	CS, RS	IM	Yes (non-breeding only)	Yes	Yes	No	Yes	Yes
Henslow's Sparrow	CC, RC	CS, RS	IM	Yes	Yes	No	Yes	Yes	Yes
Saltmarsh Sharp-tailed Sparrow	CC, RC	CS, RS	IM	Yes (non-breeding only)	Yes	Yes	No	Yes	Yes
Harris' Sparrow	CC, RC	CS, RS	MA	Yes (non-breeding only)	Yes	No	No	Yes	Yes
McCown's Longspur	CC, RC	CS, RS	MA	Yes (non-breeding only)	Yes	No	No	Yes	Yes
Smith's Longspur	CC, RC	CS, RS	MA	Yes (non-breeding only)	Yes	Yes	No	Yes	Yes
Painted Bunting (eastern)	CC, RC		IM	Yes	Yes	No	Yes	Yes	Yes
Rusty Blackbird	CC, RC	RS	MA	Yes (non-breeding only)	Yes	No	No	Yes	No
Audubon's Oriole	CC, RC	RS	IM	Yes	Yes	No	Yes	Yes	Yes
Red Crossbill (Appalachs.)	RC		IM	Yes	Yes	Yes	Yes	Yes	Yes
49 taxa									

Highest Priority Survey Needs for Landbirds in Puerto Rico and U.S. Virgin Islands.

CC = Continental Concern, RC = Regional Concern, CS = Continental Stewardship, RS = Regional Stewardship, IM = Immediate Management, MA = Management Attention. A "No" under a survey need category indicates additional efforts are not necessary at this time; does not mean that surveys are not needed.

Species	Concern (Cont., Reg.)	Stewardship (Cont., Reg.)	Action Level	Status Need	Trend Need	Habitat Assoc. Need	Reproduction Output Need	Survival Need	Response to Mgmt. Need
Sharp-shinned Hawk (Puerto Rico)	RC		IM	No	No	No	Yes	Yes	Yes
Broad-winged Hawk (Puerto Rico)	RC		IM	No	No	No	Yes	Yes	Yes
White-crowned Pigeon	CC, RC		MA	No	No	No	Yes	Yes	Yes
Plain Pigeon (Puerto Rican)	CC, RC	RS	IM	Yes	Yes	No	Yes	Yes	Yes
Bridled Quail-Dove	RC		IM	Yes	Yes	No	Yes	Yes	Yes
Puerto Rican Parrot	CC, RC	CS, RS	IM	No	No	No	Yes	Yes	Yes
Puerto Rican Screech-Owl (Culebra, Virgin Islands)	RC		IM	Yes	Yes	Yes	Yes	Yes	Yes
Puerto Rican Nightjar	CC, RC	CS, RS	IM	Yes	Yes	No	Yes	Yes	Yes
Black Swift	CC, RC		MA	Yes	Yes	No	Yes	Yes	No
Antillean Mango	RC		IM	Yes	Yes	No	Yes	Yes	Yes
Puerto Rican Flycatcher (Virgin Islands)	RC		IM	Yes	Yes	Yes	Yes	Yes	Yes
Loggerhead Kingbird (Puerto Rican)	RC		MA	Yes	Yes	No	Yes	Yes	Yes
Puerto Rican Vireo	CC, RC	CS, RS	MA	No	Yes	No	Yes	Yes	Yes
Caribbean Martin (Virgin Islands)	RC		MA	No	No	No	Yes	Yes	Yes
Bicknell's Thrush	CC, RC		MA	Yes (non-breeding only)	Yes	Yes	No	Yes	Yes
Elfin-woods Warbler	CC, RC	CS, RS	IM	Yes	Yes	Yes	Yes	Yes	Yes
Yellow-shouldered Blackbird	CC, RC	CS, RS	IM	No	No	No	Yes	Yes	Yes
Greater Antillean Oriole (Puerto Rican)	CC, RC	RS	MA	No	Yes	No	Yes	Yes	Yes
19 taxa									

BACKGROUND INFORMATION DOCUMENT #4

Southeast PIF Panel Discussion
Terry Rich (terry_rich@fws.gov)
18 February 2005

An explicit objective for monitoring is required (per IAFWA Report)

"What is the resource management or policy decision that will be informed by the monitoring program?"

Proposal: The first explicit policy decision to be informed is....

Should we, or should we not, be concerned species X at the continental scale?

Question for Discussion

Where does our need to understand the long-term, continental population trend of a species rank among the large suite of monitoring needs?

Monitoring Needs Definitions from PIF Continental Plan

Mo1 – Little or no information on population status.
Mo2 – Trend information available precision very low or unknown.
Mo3 – 1/3 or more of the Canadian/U.S. breeding range is not covered by a breeding-season survey – much of range is north of the BBS area.
Mo4 – [This category was added after publication of the PIF Continental Plan.] 2/3 or more of Western Hemisphere breeding range is not covered by a breeding-season survey – most of the range is south of U.S. border.

Monitoring Needs Analysis from the PIF Continental Plan

Among 448 Species of Landbirds

Mo1	85 species	(19%)
Mo2	106 species	(24%)
Mo3	96 species	(21%)
1 or more	243 species	(54%)

Among 100 Watch List Species

24 species
34 species
8 species
61 species

13 Species added due to being Mo4 only

Black Vulture
Turkey Vulture
White-tailed Kite
Harris's Hawk
White-winged Dove
Burrowing Owl
Lesser Nighthawk
Gila Woodpecker
Black Phoebe
Canyon Towhee
Pyrrhuloxia
Great-tailed Grackle
Bronzed Cowbird

Contingency Analysis I

If all species with inadequate monitoring had a PT score of 1 *higher*, the following 31 additional species would be on the Watch List.

Mo1
Whiskered Screech-Owl
Buff-collared Nightjar
Berylline Hummingbird
Blue-throated Hummingbird
Lucifer Hummingbird
Greater Pewee
Buff-breasted Flycatcher
Black-whiskered Vireo
Mexican Jay
Tamaulipas Crow
Mexican Chickadee
Olive Warbler
Painted Redstart
Flame-colored Tanager
Botteri's Sparrow
Altamira Oriole
Aplomado Falcon

Mo2
Mississippi Kite
Williamson's Sapsucker
Gilded Flicker
Gray Kingbird
Bridled Titmouse
Long-billed Thrasher
Crissal Thrasher
Long-eared Owl
Chihuahuan Raven
Curve-billed Thrasher

Mo3
Red-breasted Sapsucker
Connecticut Warbler
Le Conte's Sparrow
Wilson's Warbler

Mo4
None

Contingency Analysis II

If all species with inadequate monitoring had a PT score of 1 *lower*, the following 20 species would be off the Watch List.

Olive-sided Flycatcher
Canada Warbler
Bay-breasted Warbler
Harris's Sparrow
Blue Grouse
Band-tailed Pigeon
White-throated Swift
Costa's Hummingbird
Calliope Hummingbird
Allen's Hummingbird
White-headed Woodpecker
Worm-eating Warbler
Nelson's Sharp-tailed Sparrow
Montezuma Quail
Mangrove Cuckoo
Antillean Nighthawk
Elegant Trogon
Thick-billed Kingbird
California Gnatcatcher
Varied Bunting

E-mail Terry for a copy of: ***High Priority Needs for Rangewide Monitoring of North American Landbirds*** (January 2005 draft) by PIF Science Committee

NOTES