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## **Beach-nesting Bird Breeding Census and Report for Coastal Alabama – 2008**

This is a final report on the work done for the contract entitled: 2008: Protecting Beach-nesting Birds on the Alabama Coast. The contract was performed by the National Audubon Society for the Dauphin Island Sea Lab on behalf of the Mobile Bay National Estuary Program as part of a grant from the U.S. Environmental Protection Agency. Included in this report is a table entitled GPS Locations for Beach-nesting Birds in Alabama 2008, two maps (on one page) that include beach-nesting bird locations and recommended locations for management actions at Bon Secour National Wildlife Refuge, a budget that shows how the contract and matching moneys were spent, and a certification of the match. The field work was directed by Margo Zdravkovic, who is currently Director of the Coastal Bird Conservation Program.

### **Survey Methods and Study Area**

Full breeding censuses of beach-nesting birds were performed by Margo Zdravkovic and Jennifer Hewitt as described in *Locating Breeding Snowy and Wilson's Plovers on the U.S. Gulf Coast- Census Guidelines 2005* (Zdravkovic and Hecker 2005). These methods were consistently applied to all sites surveyed. The U.S. Shorebird Conservation Plan states that the highest confidence is placed in population estimates obtained from a dedicated census effort (Brown *et al.* 2001); therefore, exact pair counts were done for breeding beach-nesting birds. Breeding pairs of Snowy and Wilson's Plovers, American Oystercatchers, and Black Skimmers are defined as: 1) birds exhibiting courtship behavior or joint or group defensive behavior, 2) a single bird or pair at a nest, 3) a single bird or pair with young, or 4) birds located together as a pair. Global Positioning System (GPS) coordinates were collected for each breeding pair, and maps were produced indicating the locations of each pair by species. Based on existing available data (Boyd 1972, Bergstrom 1988a, Chase and Gore 1989, Chase 1991) and CBCP plover breeding data collected on the Gulf coast (Zdravkovic 2005), we assumed for the purpose of our census that both Snowy and Wilson's Plovers nesting on the Gulf coast are seasonally monogamous.

The 2008 census and study area included Bon Secour National Wildlife Refuge, Dauphin Island, West Dauphin Island, and Pelican Island in Baldwin and Mobile Counties, Alabama. Surveying and monitoring were conducted during the nesting season in 2008. Data were collected on abundance, distribution, and habitat use of Snowy Plovers, Wilson's Plovers, American Oystercatchers, and Black Skimmers. Our 2008 Alabama census and monitoring spanned the peak-nesting periods for all beach-nesting species surveyed. Repeat surveys were conducted at all sites throughout the breeding season to

account for variation in species nesting peaks. All surveys were conducted on foot, and all breeding pair coordinates were recorded by GPS. Larger habitats were surveyed by teams of at least two individuals. The main focus of our survey was to count breeding pairs and identify breeding habitat. For all plover and oystercatcher nests located, data were collected on macro and microhabitats used by each species including data on vegetation and substrate type. Additional data were collected on microhabitat, including the distance of each nest to the nearest vegetation, dune edge, wrack line, salt marsh edge, water and road or ORV trail. All beach-nesting bird habitats and nests were digitally photographed.

## **Results**

### **Alabama 2008 Beach-nesting Bird Census Results**

CBCP staff and partners located breeding pairs of Snowy Plovers (seven locations), Wilson's Plovers (seven locations), American Oystercatchers (four locations), and Black Skimmers (two locations). All nest locations are reported in the accompanying table, including bird species and latitude and longitude coordinates as calculated on-site using GPS. The 2008 results are a follow-up to the study results for 2007 (Zdravkovic 2007).

### **Recommendations for shorebird management at Bon Secour NWR: 1) Perdue Unit** (see attached annotated map, upper)

- Create a permanent corridor for public to access front beach by posting and roping Pine Beach Trail from front beach through primary dune line and low back dunes into the heavily vegetated dunes of the trail.
- A clearly delineated trail will direct public onto front beach, minimize damage to back/inter-dune habitat and protect Snowy Plover nesting areas.
- All signage should be durable. Use heavy posts, wood/metal or carsonite and USFWS NWR "blue goose" Entry Prohibited signs.
- Recommend signage placed at 3 meters (10 ft) apart. Create 30ft wide permanent corridor with two parallel lines of signage placed approximately 10 meters (30ft) apart. Use posts 8-10 feet long and bury at least two feet deep into sand.
- Use ¼ inch yellow polypro rope strung between signs during beach-nesting bird breeding season (March 1 to September 1). Remove roping after breeding season ends.
- Clearly mark trail on front beach with a large sign visible from the refuge boundaries to deter public cutting through primary dune line.
- Recommend new permanent signage to protect primary dune line on or in front of primary dune with signs placed at 20 meters (60ft) apart running the length of Perdue Unit front beach (current signs are buried by growing dune).
- Recommend increased permanent refuge signage at lagoon inlet (eastern boundary) placed 20 meters (60ft) apart to reduce disturbance to feeding breeding/migrating/wintering shorebirds.
- Recommend seasonal post and roping (50 meter buffer around nests) on front beach in areas of potential Snowy Plover and Least Tern nesting habitat (March 1 to September 1) to encourage increased numbers of beach-nesting birds.
- Recommend multiple "No pets/ No Dogs" signage posted at all trail entrances and refuge boundaries.

- Strongly recommend turtle patrolling vehicles and all others drive low and slow on the beach at waterline, to avoid beach-nesting bird nesting and chick foraging areas. This practice is being used in Florida. USFWS recommends a 5mph speed limit in beach-nesting bird areas.

### **Recommendations for shorebird management at Bon Secour NWR:**

#### **2) Fort Morgan Unit**

(see attached annotated map, lower)

- Recommend new permanent signage to protect primary dune line on or in front of primary dune with signs placed at 30 meters apart mainly in area in front of back dune Snowy Plover nesting habitat adjacent to private residence (see GPS coordinates on map).
- All signage should be durable. Use heavy posts, wood/metal or carsonite and USFWS NWR “blue goose” Entry Prohibited signs.
- Recommend permanent refuge signage and multiple “No Dogs” signage at eastern boundary behind primary dune line, near private residence placed 3 meters (10ft) apart to deter nearby residents from entering Snowy Plover nesting areas.
- Recommend seasonal posting and roping on front beach in areas of potential Snowy Plover and Least Tern nesting habitat with a 50 meter buffer around nests (March 1 to September 1) to encourage increased numbers of beach-nesting birds.
- Recommend multiple “No pets/ No Dogs” signage posted at all refuge boundaries.
- Strongly recommend turtle patrolling vehicles and all others drive low and slow on the beach at waterline, to avoid beach-nesting bird nesting and chick foraging areas. This practice is being used in Florida. USFWS recommends a 5mph speed limit in beach-nesting bird areas.

#### **Conservation Status of Focal Species**

**Snowy Plover** (*Charadrius alexandrinus*) – The U.S. population is estimated to be 18,000 individuals, the majority of which comprises the U.S. interior population (*C. a. nivosus*) of approximately 13,200 individuals (Brown *et al.* 2001). The federally threatened Pacific Coast population is estimated at 2,000 individuals, and the Gulf of Mexico and Caribbean population (*C. a. tenuirostris*) is estimated at 2,200–2,800 individuals (Wetlands International 2003). The U.S. Shorebird Conservation Plan lists the Snowy Plover as Category 5 (highly imperiled), and the Audubon WatchList designation is in the Red Category (Globally Threatened or Near-Threatened). The Snowy Plover population of the southeastern U.S. is currently under consideration for federal listing as Endangered. The species is state-listed as Endangered in Alabama and Washington; Threatened in Florida, Mississippi, Kansas, Oregon, and Puerto Rico; and a Species of Special Concern in California.

**Wilson’s Plover** (*Charadrius wilsonia*) – The U.S. population is estimated to be 6,000 individuals (Brown *et al.* 2001). The Wilson’s Plover is listed in the U.S. Shorebird Conservation Plan as Category 4 (species of high concern) based on the increased level of threats to this species on its breeding and non-breeding grounds, as well as its relatively limited breeding distribution. The Audubon WatchList designation for the Wilson’s Plover is in the Yellow Category (Moderately High Priority). Although the Wilson’s

Plover has no federal protection under the U.S. Endangered Species Act, it is state-listed as Endangered in Virginia and Maryland; Threatened in South Carolina; Rare in Georgia; and State-Protected in Alabama.

**American Oystercatcher** (*Haematopus palliatus*) – The U.S. population is estimated to be 11,000 individuals (Brown *et al.* 2001). This species is listed in the U.S. Shorebird Conservation Plan as Category 4 (species of high concern) based upon the increased level of threats on its breeding and non-breeding grounds, as well as its limited distribution. The American Oystercatcher is state-listed as a Species of Special Concern in Florida.

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