

SOCIEDAD CARIBEÑA DE ORNITOLOGÍA

# EL PITIRRE

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# EL PITIRRE

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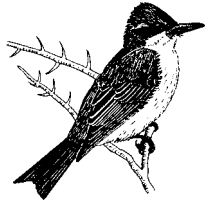
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## THE AVIFAUNA OF PÁLPITE, CIÉNAGA DE ZAPATA, CUBA, AND THE IMPORTANCE OF THE AREA FOR GLOBALLY THREATENED AND ENDEMIC BIRDS

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*Resumen.*—LA AVIFAUNA DE PÁLPITE, CIÉNAGA DE ZAPATA, CUBA, Y LA IMPORTANCIA DEL ÁREA PARA AVES GLOBALMENTE AMENAZADA Y ENDÉMICO. Presentamos aquí los resultados de trabajo de campo en el bosque semi-deciduo y bosque de ciénaga temporalmente inundados en la región de Pálpite, Ciénaga de Zapata, Cuba, durante los años de 1998 al 2002, y los meses de enero–mayo, julio, septiembre y octubre. En total, 99 especies de aves han sido registradas en la área, incluyendo seis globalmente amenazadas o casi-amenazadas, y 15 endémicos, una proporción bastante alta de especies. La abundancia relativa en todas estaciones se presenta para todas las especies, con notas sobre la nidificación, estructura de la vegetación, alimentación y hábitat. Adicionalmente, el Potú *Nyctibius jamaicensis* ha sido registrado en la área, el cual se registró recientemente para Cuba y conocido en pocas localidades. Notas sobre las poblaciones de especies amenazadas en la área son presentadas, con otros interesantes registros.

*Palabras clave:* avifauna, *Catharus fuscescens*, *Ciénaga de Zapata*, *Cuba*, endémico, *especies amenazada*, *Geotrygon caniceps*

*Abstract.*—We present the results of fieldwork in the semi-deciduous and seasonally inundated woodland around Pálpite, in the Ciénaga de Zapata, Cuba, from 1998 to 2002, in January–May, July, September, and October. In total, 99 bird species occur in the area, including six considered globally threatened or near threatened, and 15 that are Cuban endemics, a remarkably high proportion of the overall total. Relative and seasonal abundance is presented for all species, along with notes concerning habitat use, foraging strata and breeding. Additionally, Northern Potoo *Nyctibius jamaicensis* has been recorded in the area, a species only recently found in Cuba and still known from few localities in the island. Notes concerning the populations of threatened species in the area are also presented, along with other interesting records.

*Key words:* avifauna, *Catharus fuscescens*, *Ciénaga de Zapata*, *Cuba*, endemics, *Geotrygon caniceps*, *threatened species*

### INTRODUCTION

THE LAST TWO DECADES have witnessed the publication of basic avifaunal lists for diverse areas of Cuba (e.g., Hernández Suárez *et al.* 1999; Kirkconnell 1998; Kirkconnell *et al.* 1993; Navarro *et al.*

1997; Peña *et al.* 2000a,b) but, thus far, few such have been presented for any part of the ornithologically rich Zapata Peninsula (only González Alonso *et al.* 1992, 1993). A complete list of those species known from the Ciénaga de Zapata was presented at

a recent conference of the SCO (Bacallao Mesa *et al.* 1999), however, and an earlier and less complete list of birds and other terrestrial vertebrates was published by Garrido (1980). Such inventories provide important material for environmental planners and decision-makers, as they represent an invaluable first step in the prioritization and targeting of conservation resources. As part of a broader project to identify the key sites for birders visiting the Zapata region, we prepared avifaunal lists for 19 such areas (Kirkconnell *et al.* in prep.), one of which, the woodland immediately to the west of the village of Pálpite, was surveyed regularly in several months, and is the subject of this paper.

#### STUDY AREA

Pálpite lies approximately 5 km north of Playa Larga, which is at the head of the Bahía de Cochinos (Bay of Pigs). The principal area of semi-deciduous forest in the vicinity of the settlement, and that investigated by us, lies immediately to the west and south, and is included within the Ciénaga de Zapata Biosphere Reserve, but not in the Ciénaga de Zapata National Park. Typical tree species of this forest, which grows on thin soils with a limestone substrate, include *Cedrela odorata*, *Bursera simaruba*, *Cordia gerascanthus*, *Spondias mombin*, and *Oxandra lanceolata* (see Garrido and Kirkconnell 2000). Canopy height is typically 7–10 m. Ground cover is comparatively sparse. Mean dbh of canopy-height trees was calculated as 66.1 cm from 30 randomly selected trees within 2 m of the main trail. These woodlands become partially inundated seasonally, principally in June–October. Basic climatic data for the Zapata region were presented by Alfonso *et al.* (1985): mean daily temperatures range from 20°C in January to 27°C in July. The nature of the study area was fundamentally impacted by Hurricane Michelle in early November 2001, with many small areas being partially cleared as a result of tall trees being felled in its wake, and other, much larger, areas of up to several hectares or more now solely containing dead trees. In addition, the woodland is subject to small-scale human impacts, with subsistence hunting and tree harvesting, principally for house construction, occurring locally. Indeed, the destruction of much of Pálpite as a result of the same hurricane, placed additional, short-term pressure on these forests.

#### METHODS

We performed transects along the first 2.5 km of a human trail that runs south from Pálpite towards Playa Larga. These surveys were undertaken on a

total of 28 days from September to May (the majority in January to April) in the years 1998–2002, with more detailed fieldwork being undertaken from 17 to 26 July 2000 and 12 to 26 July 2002. Surveys were usually conducted in the first or last three hours of daylight, on days without rain or strong winds, to coincide with the peaks in bird activity, although were occasionally performed at other less ideal times of day, and were designed only to gain an impression of those bird species present and their general level of abundance, using broad indices suggested by Parker *et al.* (1996), not to establish specific estimates of density. At other times of day we censused adjacent areas, around the village, principally areas of second growth and gardens. In total, 52 days of fieldwork were undertaken. All contacts with a bird species were registered, both aural and visual (the two senior authors are thoroughly familiar with the vocal characteristics of virtually all species recorded in Cuba), and we occasionally made voucher tape recordings. For this purpose, Kirwan used a Marantz PMD-201 recorder and Sennheiser ME-66 microphone, and Kirkconnell a Sony TCM-5000 recorder and Sennheiser ME-66 microphone. Several recordings by Kirwan have been archived at the National Sound Archive, London (UK). In addition, we noted any direct evidence of breeding activity (e.g., observations of food-carrying, nest attendance, adults feeding dependent young).

#### RESULTS

Ninety-five species, of which 15 are Cuban endemics, have been recorded in the study area. With the exception of one, Northern Potoo *Nyctibius jamaicensis*, all were recorded during the course of our surveys. *Nyctibius jamaicensis* was only recently discovered in Cuba, and has thus far been recorded from five localities, including Pálpite (Martinez *et al.* 2000, Kirwan 2001). It is worth noting that we have specifically searched for this species at the study site, most recently in July 2000, using tape playback, but without success. In addition, we recorded six species of global conservation concern (BirdLife International)—Gundlach's Hawk *Accipiter gundlachi* (Endangered), Gray-headed Quail-Dove *Geotrygon caniceps* (Vulnerable), Blue-headed Quail-Dove *Staroenas cyanocephala* (Endangered), Cuban Parrot *Amazona leucocephala* (Near Threatened), Cuban Parakeet *Aratinga euops* (Vulnerable), and Bee Hummingbird *Mellisuga helenae* (Near Threatened). Given the recent proposal that nominate *G. caniceps* (in Cuba) and the form *leucometopus* (from Hispaniola) be treated specifically (Garrido *et al.* 2002), all five of these

Table 1. Seasonal abundance, habitat foraging height and threat status of all bird species recorded at Pálpite, Ciénaga de Zapata, Matanzas province, Cuba. Those species highlighted in bold text are Cuban endemics (see note in the main text concerning Grey-headed Quail-Dove *Geotrygon caniceps* and Cuban Martin *Progne cryptoleuca*). Codes defining seasonal abundance are taken from Parker *et al.* (1996): U = uncommon (1–4 pairs per km<sup>2</sup>), R = rare (less than one bird/km<sup>2</sup>), C = >15 birds/km<sup>2</sup>. In the Habitat column, 'Other' refers to areas immediately around the village, including gardens and scrub therein, and a small pool just to the east of the settlement. In the breeding evidence column, all species for which we have observations indicating nesting in the study area are denoted 'B'. Threat status is taken from BirdLife International (2000).

| Species                       | Scientific name                | Habitat     | Strata     | Dec–Feb | Mar–May | Jun–Jul | Aug–Nov | Breeding | Threat status                     |
|-------------------------------|--------------------------------|-------------|------------|---------|---------|---------|---------|----------|-----------------------------------|
| Great Blue Heron              | <i>Ardea herodias</i>          | Other       |            |         |         |         | R       |          |                                   |
| Cattle Egret                  | <i>Bubulcus ibis</i>           | Other       |            |         | R       | R       |         |          |                                   |
| Green Heron                   | <i>Butorides virescens</i>     | Forest      | Low        |         |         | R       |         |          |                                   |
| Black-crowned Night-Heron     | <i>Nycticorax nycticorax</i>   | Other       |            |         |         |         |         |          |                                   |
| Wood Stork                    | <i>Mycteria americana</i>      | Other       |            | R       |         |         | R       |          |                                   |
| Turkey Vulture                | <i>Cathartes aura</i>          | Edge/Other  |            | C       | C       | C       | C       |          |                                   |
| <b>Gundlach's Hawk</b>        | <i>Accipiter gundlachi</i>     | Forest      | Canopy     | R       | R       | R       |         |          | Endangered                        |
| Broad-winged Hawk             | <i>Buteo platypterus</i>       | Other       |            |         | R       |         |         |          |                                   |
| Red-tailed Hawk               | <i>Buteo jamaicensis</i>       | Other       |            |         | R       | R       |         |          |                                   |
| American Kestrel              | <i>Falco sparverius</i>        | Edge/Other  |            | U       | U       | U       | U       | B        |                                   |
| Spotted Rail                  | <i>Pardirallus maculatus</i>   | Other       |            |         |         |         | R       |          |                                   |
| Limpkin                       | <i>Aramus guarauna</i>         | Other       |            |         |         |         | R       |          |                                   |
| Killdeer                      | <i>Charadrius vociferus</i>    | Other       |            |         | U       |         |         | B        |                                   |
| Black-necked Stilt            | <i>Himantopus mexicanus</i>    | Other       |            |         | R       |         |         | B        |                                   |
| Lesser Yellowlegs             | <i>Tringa flavipes</i>         | Other       |            |         | R       |         |         |          |                                   |
| Solitary Sandpiper            | <i>Tringa solitaria</i>        | Other       |            |         | R       |         |         |          |                                   |
| White-crowned Pigeon          | <i>Columba leucocephala</i>    | Forest      | Canopy     | C       | C       | C       | C       |          |                                   |
| White-winged Dove             | <i>Zenaida asiatica</i>        | Edge        |            | U       | U       | U       | U       |          |                                   |
| Zenaida Dove                  | <i>Zenaida aurita</i>          | Forest      | All        | U       | U       | U       | U       |          |                                   |
| Mourning Dove                 | <i>Zenaida macroura</i>        | Edge        |            | U       | U       | U       | U       |          |                                   |
| Common Ground-Dove            | <i>Columbina passerina</i>     | Edge        |            | C       | C       | C       | C       |          |                                   |
| Key West Quail-Dove           | <i>Geotrygon chrysis</i>       | Forest      | Low        | U       | U       | U       | U       |          |                                   |
| <b>Gray-headed Quail-Dove</b> | <i>Geotrygon caniceps</i>      | Forest      | Low        | U       | U       | U       | U       |          | Vulnerable                        |
| Ruddy Quail-Dove              | <i>Geotrygon montana</i>       | Forest      | Low        | U       | U       | U       | U       |          |                                   |
| <b>Blue-headed Quail-Dove</b> | <i>Starnoenas cyanocephala</i> | Forest      | Low        | U       | U       | U       | U       |          | Endangered                        |
| <b>Cuban Parakeet</b>         | <i>Aratinga euops</i>          | Edge        |            |         |         | R       |         |          | Vulnerable                        |
| Rose-throated Parrot          | <i>Amazona leucocephala</i>    | Forest/Edge | Canopy     | U       | U       | U       | U       | B        | Near Threatened                   |
| Yellow-billed Cuckoo          | <i>Coccyzus americanus</i>     | Forest      | Mid        |         |         |         |         |          |                                   |
| Great Lizard-Cuckoo           | <i>Saurothera merlini</i>      | Forest      | Low/Mid    | C       | C       | C       | C       |          |                                   |
| Smooth-billed Ani             | <i>Crotophaga ani</i>          | Other       |            | C       | C       | C       | C       |          |                                   |
| <b>Cuban Pygmy-Owl</b>        | <i>Glaucidium siju</i>         | Forest      | Mid/Canopy | U       | U       | U       |         |          |                                   |
| Stygian Owl                   | <i>Asio stygius</i>            | Edge        |            |         |         | R       | R       |          |                                   |
| Short-eared Owl               | <i>Asio flammeus</i>           | Edge        |            |         |         |         | R       |          |                                   |
| Northern Potoo                | <i>Nyctibius jamaicensis</i>   | Forest      | Mid/Canopy |         |         |         |         |          | see Martínez <i>et al.</i> (2000) |

| Species                       | Scientific name                   | Habitat     | Strata     | Dec–Feb | Mar–May | Jun–Jul | Aug–Nov | Breeding | Threat status   |
|-------------------------------|-----------------------------------|-------------|------------|---------|---------|---------|---------|----------|-----------------|
| Common Nighthawk              | <i>Chordeiles minor</i>           | Edge        |            |         |         |         | R       |          |                 |
| Antillean Nighthawk           | <i>Chordeiles gundlachii</i>      | Edge        |            |         | C       | C       |         |          |                 |
| <b>Cuban Nightjar</b>         | <i>Caprimulgus cubanensis</i>     | Forest/Edge | Low        | U       | U       |         |         |          |                 |
| Cuban Emerald                 | <i>Chlorostilbon ricardii</i>     | Forest      | Low/Mid    | C       | C       | C       | C       |          |                 |
| <b>Bee Hummingbird</b>        | <i>Mellisuga helenae</i>          | Forest      | All        | C       | C       | C       | C       |          | Near Threatened |
| <b>Cuban Trogon</b>           | <i>Priotelus temnurus</i>         | Forest      | Mid/Canopy | C       | C       | C       | C       |          |                 |
| <b>Cuban Tody</b>             | <i>Todus multicolor</i>           | Forest      | Low/Mid    | C       | C       | C       | C       |          |                 |
| Antillean Palm-Swift          | <i>Tachornis pheonicea</i>        | Other       |            |         | R       | R       |         |          |                 |
| Belted Kingfisher             | <i>Ceryle alcyon</i>              | Other       |            |         |         | R       |         |          |                 |
| West Indian Woodpecker        | <i>Melanerpes superciliosus</i>   | Forest/Edge | Mid        | C       | C       | C       | C       | B        |                 |
| Yellow-bellied Sapsucker      | <i>Sphyrapicus varius</i>         | Forest      | Mid        | C       | U       |         |         |          |                 |
| <b>Cuban Green Woodpecker</b> | <i>Xiphidiopicus percussus</i>    | Forest      | Mid/Canopy | C       | C       | C       | C       | B        |                 |
| Northern Flicker              | <i>Colaptes auratus</i>           | Forest      | Mid/Canopy |         |         | U       |         |          |                 |
| Crescent-eyed Pewee           | <i>Contopus caribaeus</i>         | Forest      | Low/Mid    | C       | C       | C       | C       | B        |                 |
| La Sagra's Flycatcher         | <i>Myiarchus sagrae</i>           | Forest      | All        | C       | C       | C       | C       |          |                 |
| Eastern Kingbird              | <i>Tyrannus tyrannus</i>          | Forest/Edge | All        |         |         |         | R       |          |                 |
| Gray Kingbird                 | <i>Tyrannus dominicensis</i>      | Forest      | Canopy     |         | U       | U       |         | B        |                 |
| Loggerhead Kingbird           | <i>Tyrannus caudifasciatus</i>    | Forest      | Low/Mid    | C       | C       | C       |         | B        |                 |
| White-eyed Vireo              | <i>Vireo griseus</i>              | Forest      | Mid        |         |         |         | R       |          |                 |
| <b>Cuban Vireo</b>            | <i>Vireo gundlachii</i>           | Forest      | Low/Mid    | C       | C       | C       | C       | B        |                 |
| Yellow-throated Vireo         | <i>Vireo flavifrons</i>           | Forest      | Mid        |         |         |         | R       |          |                 |
| Red-eyed Vireo                | <i>Vireo olivaceus</i>            | Forest      | Mid        |         |         |         |         |          |                 |
| Black-whiskered Vireo         | <i>Vireo altiloquus</i>           | Forest      | Mid/Canopy |         | C       | C       |         | B        |                 |
| Cuban Crow                    | <i>Corvus nasicus</i>             | Other       |            | U       | U       | U       |         |          |                 |
| <b>Cuban Martin</b>           | <i>Progne cryptoleuca</i>         | Other       |            |         |         | R       |         |          |                 |
| Tree Swallow                  | <i>Tachycineta bicolor</i>        | Other       |            | R       |         |         |         |          |                 |
| Northern Rough-winged Swallow | <i>Stelgidopteryx serripennis</i> | Other       |            |         |         | R       |         |          |                 |
| Cave Swallow                  | <i>Petrochelidon fulva</i>        | Other       |            |         | R       |         |         |          |                 |
| Blue-gray Gnatcatcher         | <i>Polioptila caerulea</i>        | Forest      | Mid        | C       | C       |         | C       |          |                 |
| Veery                         | <i>Catharus fuscescens</i>        | Forest      | Low        | R       |         |         |         |          |                 |
| Red-legged Thrush             | <i>Turdus plumbeus</i>            | Forest      | Low/Mid    | C       | C       | C       | C       | B        |                 |
| Gray Catbird                  | <i>Dumetella carolinensis</i>     | Forest      | Low/Mid    | C       | C       |         |         |          |                 |
| Northern Mockingbird          | <i>Mimus polyglottos</i>          | Edge        |            | C       | C       | C       | C       |          |                 |
| Blue-winged Warbler           | <i>Vermivora pinus</i>            | Forest      | All        | R       |         |         |         |          |                 |
| Northern Parula               | <i>Parula americana</i>           | Forest      | All        | C       | U       |         | U       |          |                 |
| Magnolia Warbler              | <i>Dendroica magnolia</i>         | Forest      | All        | C       | U       |         | U       |          |                 |
| Black-throated Blue Warbler   | <i>Dendroica caerulescens</i>     | Forest      | Low/Mid    |         | C       |         | C       |          |                 |
| Black-throated Green Warbler  | <i>Dendroica virens</i>           | Forest      | All        | U       | U       |         | U       |          |                 |
| Yellow-throated Warbler       | <i>Dendroica dominica</i>         | Forest      | Mid/Canopy |         |         |         |         |          |                 |

| Species                      | Scientific name                | Habitat     | Strata     | Dec–Feb | Mar–May | Jun–Jul | Aug–Nov | Breeding | Threat status |
|------------------------------|--------------------------------|-------------|------------|---------|---------|---------|---------|----------|---------------|
| Prairie Warbler              | <i>Dendroica discolor</i>      | Forest      | Low/Mid    | U       | U       |         | U       |          |               |
| Palm Warbler                 | <i>Dendroica palmarum</i>      | Forest/Edge | Low/Mid    | U       | U       |         | U       |          |               |
| Black-and-white Warbler      | <i>Mniotilta varia</i>         | Forest      | Low/Mid    | C       | C       | R       | C       |          |               |
| American Redstart            | <i>Setophaga ruticilla</i>     | Forest      | All        | C       | C       |         | C       |          |               |
| Worm-eating Warbler          | <i>Helmitheros vermivorus</i>  | Forest      | Low/Mid    | U       |         |         | U       |          |               |
| Ovenbird                     | <i>Seiurus aurocapillus</i>    | Forest      | Low        | U       | U       |         | U       |          |               |
| Northern Waterthrush         | <i>Seiurus noveboracensis</i>  | Forest      | Low        | U       |         |         |         |          |               |
| Louisiana Waterthrush        | <i>Seiurus motacilla</i>       | Forest      | Low        |         |         | R       |         |          |               |
| Common Yellowthroat          | <i>Geothlypis trichas</i>      | Edge        |            | C       | C       |         |         |          |               |
| <b>Yellow-headed Warbler</b> | <i>Teretistris fernandinae</i> | Forest      | Low/Mid    | C       | C       | C       | C       | B        |               |
| Hooded Warbler               | <i>Wilsonia citrina</i>        | Forest      | Low/Mid    | R       |         |         | R       |          |               |
| Bananaquit                   | <i>Coereba flaveola</i>        | Edge        |            |         | R       |         |         |          |               |
| Red-legged Honeycreeper      | <i>Cyanerpes cyaneus</i>       | Forest      | Mid/Canopy | R       |         | R       |         |          |               |
| Western Spindalis            | <i>Spindalis zena</i>          | Forest      | Mid/Canopy |         | U       | U       |         | B        |               |
| Summer Tanager               | <i>Piranga rubra</i>           | Forest      | Mid        |         |         | R       |         |          |               |
| Scarlet Tanager              | <i>Piranga olivacea</i>        | Forest      | Mid        |         | R       |         |         |          |               |
| Cuban Bullfinch              | <i>Melopyrrha nigra</i>        | Forest      | Low/Mid    | C       | C       | C       | C       |          |               |
| Yellow-faced Grassquit       | <i>Tiaris olivacea</i>         | Forest      | All        | C       | C       | C       | C       | B        |               |
| Rose-breasted Grosbeak       | <i>Pheucticus ludovicianus</i> | Forest      | All        |         |         |         | R       |          |               |
| Tawny-shouldered Blackbird   | <i>Agelaius humeralis</i>      | Other       |            | C       | C       | C       | C       |          |               |
| <b>Cuban Blackbird</b>       | <i>Dives atrovioleacea</i>     | Other       |            | C       | C       | C       | C       |          |               |
| Greater Antillean Grackle    | <i>Quiscalus niger</i>         | Other       |            | C       | C       | C       | C       |          |               |
| Shiny Cowbird                | <i>Molothrus bonariensis</i>   | Other       |            | C       | C       | C       | C       |          |               |
| Greater Antillean Oriole     | <i>Icterus dominicensis</i>    | Forest      | Low/Mid    | C       | C       | C       | C       | B        |               |
| Baltimore Oriole             | <i>Icterus galbula</i>         | Forest      | Low/Mid    |         |         |         |         |          |               |
| House Sparrow                | <i>Passer domesticus</i>       | Other       |            | C       | C       | C       | C       | B        |               |

may be considered endemic. Among the 19 sites reviewed by Kirkconnell *et al.* (in prep.), just six support more endemic species than Pálpite and yet, in contrast, only seven areas hold a lower total number of species, demonstrating the relatively high proportion (16%) of endemics within the avifauna of the study area. (Note that for our present purposes, and our work in progress, we consider Cuban Nightjar *Caprimulgus cubanensis* as an endemic species (following Garrido and Reynard 1998) and Cuban Martin *Progne cryptoleuca* an endemic breeder, whose wintering grounds are subject entirely to speculation. Otherwise, our taxonomy and nomenclature follows American Ornithologists' Union 1998.)

In Table 1, we present the relative abundance of all species recorded in the area, according to the two main seasons. Those species for which specific evidence of breeding in the area is available are denoted, and notes on the habitats used around Pálpite and principal foraging strata for those species recorded in forest are also presented.

#### SPECIES ACCOUNTS

**Gundlach's Hawk *Accipiter gundlachi*.**—Only rarely recorded in the study area: one in typical low dashing flight on 15 February 1999, one on 26 July 2000, one in soaring flight on 24 April 2002, a pair alarm-calling on 17 July 2002, and a recent kill which was presumed to belong to this species (given that it clearly was that of an *Accipiter*) on 21 July 2002.

**Spotted Rail *Pardirallus maculatus*.**—One was found dead in the town on 9 September 2002; it had probably hit an overhead electric wire at night.

**Gray-headed Quail-Dove *Geotrygon caniceps*.**—Reasonably common, being recorded on most transects and in the wet season (May to October) appears to be the commonest quail-dove at the study site. We have no definite evidence of breeding at this locality but cannot conceive that it does not do so, and perhaps in some numbers. We have records from 10 localities in the Zapata region (one of which was largely destroyed by Hurricane Michelle), which is clearly one of the species' major strongholds, and acquires even greater importance if one considers *G. c. caniceps* at the specific level (Garrido *et al.* 2002; Kirkconnell *et al.*, in prep.). It is important, therefore, that areas such as the woodlands surrounding Pálpite, as part of the Biosphere Reserve, are adequately protected.

In addition, we take the opportunity here to com-

ment further on apparent differences between nominate *caniceps* and *leucometopus* of the Dominican Republic. In an earlier contribution to this issue, Garrido *et al.* (2002) remarked on the lack of specific vocalization data to compare the two forms in this respect. In particular, the lack of recordings from Hispaniola thwarts effective analysis of any differences, but it is worth noting the overlooked remarks of Wetmore and Swales (1932) that *leucometopus* changes from its fast song to the slow song. Neither Garrido or Kirwan have experience of this form's ability to change from one song-type to another (Kirwan having heard only the fast song), but both observers, and Kirkconnell, have vast experience with nominate *caniceps*, which we have only witnessed to change from the slow to the fast song. Whether this potential difference in the vocalizations of the two forms is real must be the subject of future research.

**Blue-headed Quail-Dove *Starnoenas cyanocephala*.**—At Pálpite, this species appears to be the rarest of the four quail-doves. Whereas all are treated as Uncommon in Table 1, according to the criteria for assessing general status employed here, the number of encounters with this species during our fieldwork suggests that *Starnoenas* is rarer than the three *Geotrygon* in the area.

**Cuban Parakeet *Aratinga euops*.**—Few records in the study area, and perhaps almost certainly largely absent in the dry season (November to April). Most regularly recorded in July 2002 when three were observed on 16th, four on 18th, one on 19th, and four on 21st. These records may suggest local movements in response to local changes in food supplies following Hurricane Michelle, localized habitat changes caused by the same climatic event, or more probably that the species exhibits seasonal foraging patterns (though the species was not recorded in July 2000, when equal-effort fieldwork was conducted in the study area), for which limited evidence is available from the mountains around Trinidad (Collar 1997; Kirkconnell, pers. obs.).

**Bee Hummingbird *Mellisuga helenae*.**—Recorded regularly throughout the study period, with up to six recorded per day. Singing males were most frequently encountered in April to July. According to our research, Pálpite appears to be one of the species' strongholds in the Zapata region, which, in turn, is perhaps the most important area on the island for this Near-Threatened species.

**Common Nighthawk *Chordeiles minor*.**—Garrido and Kirkconnell (2000) consider it to be an



uncommon transient through Cuba, making the observation of 40 on 9 September 2002 somewhat unusual.

**Eastern Kingbird *Tyrannus tyrannus*.**—Considered a rare transient in Cuba (Garrido and Kirkconnell 2000) making the observation of c. 100 on active migration on 9 September 2002 exceptional.

**Veery *Catharus fuscescens*.**—One on 26 February 2001 is the first February record in Cuba and the West Indies of a scarce transient through the region (Raffaele *et al.* 1998, Garrido and Kirkconnell 2000). Remsen (2001) re-evaluated the winter range of this species. For his purposes, he defined winter as being from 2 December to 20 February; all records from this period were from three small areas at the periphery or south of the Amazon basin, in South America. He located no records from the West Indies, Mexico, and Belize from November to March, or from elsewhere in Central America from December to February. Given Remsen's findings, it seems unlikely that the Pálpite record was anything other than an exceptionally early migrant (a hypothesis we favor). However, the possibility exists that tiny numbers could perhaps winter somewhere/occasionally in the Caribbean region, a supposition perhaps confirmed by the presence of one with a damaged leg, which was photographed, at Soroa, Pinar del Río province, on 1 January 2003 (P. Morris, *in litt.* 2003). That this latter individual had a damaged leg does mean that it may have been forced to winter in the West Indies. However, the date of the record does suggest that it was either able to do so, despite its injury, or that it had already 'elected' to winter in the Caribbean and only incurred the damaged leg subsequently.

**Black-and-white Warbler *Mniotilta varia*.**—A female present within a flock of Black-whiskered Vireos *Vireo altiloquus*, Yellow-headed Warblers *Teretistris fernandinae* and Cuban Bullfinches *Melopyrrha nigra*, on 20–22 July 2002 at least, is the earliest fall report for Cuba (Garrido and Kirkconnell 2000).

**Bananaquit *Coereba flaveola*.**—One in a garden in the village on 23 July 2000 is the first record from the well-watched Zapata region, and one of only four localities in mainland Cuba where the species, which is mysteriously scarce in the country, has been found (Wallace *et al.* 1999, Mazar Barnett and Kirwan 2001).

**Scarlet Tanager *Piranga olivacea*.**—A male on

4 May 2002 is the latest spring report in Cuba of this rare transient, which is more frequently noted in the fall (Garrido and Kirkconnell 2000), and probably one of the few West Indian records in this month (Raffaele *et al.* 1998).

Records of the following species are also of interest, they being uncommon in Cuba: Blue-winged Warbler *Vermivora pinus* (male on 15 February 1999), and Summer Tanager *Piranga rubra* (female/immature on 29 October 1999).

#### DISCUSSION

Cuba and its related cays was considered an Endemic Bird Area (Stattersfield *et al.* 1998), which harbors 25 endemic species (a total which did not include *Geotrygon caniceps* and several other taxa that will probably be considered as species in forthcoming taxonomic revisions). Ten species that are treated as range-restricted (i.e., their historical ranges are judged to occupy less than 50,000 km<sup>2</sup>) are known from Cuba (Stattersfield *et al.* 1998) but only one of these, Yellow-headed Warbler *Teretistris fernandinae*, has been recorded in our study area. However, of the 23 globally Threatened or Near-Threatened species known from Cuba (BirdLife International 2000), six have been recorded at Pálpite. Just five of the 19 sites in the Zapata region identified by Kirkconnell *et al.* (*in prep.*) hold more threatened or near-threatened birds (all harbor seven). Thus, given the occurrence of so many species of conservation concern and endemic to Cuba within this small area, the conservation of the seasonally dry deciduous forests around Pálpite should be considered a priority within the overall protection of biodiversity in the Zapata region. Despite the entire Zapata Peninsula having been designated a protected area (Scott and Carbonell 1986), considerable threats still face many bird species in the area; those threatening some of the hole-nesters were succinctly illustrated by Mitchell *et al.* (2000). An environmental education project is currently underway in the region (Lowen 2002), which should provide a much-needed boost to conservation efforts in Zapata. Visiting birdwatchers are urged to ensure that landowners, hotel owners, and local people are made aware of their interest in birds and natural history, and their reason for visiting the area. Only through such actions will the local population be made more clearly aware of the exceptional importance of the Zapata region to wildlife, and the need to protect the area.

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## SEARCHES FOR SEABIRD BREEDING COLONIES IN THE LESSER ANTILLES

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**Abstract.**—Information is presented which updates current seabird breeding colony locations in the Lesser Antilles. No evidence of breeding was found for Black-capped Petrels (*Pterodroma hasitata*) in Dominica. Audubon's Shearwater (*Puffinus lherminieri*) was found nesting on the St. Martin islet of Tintamarre. Incubating Red-billed Tropicbirds (*Phaethon aethereus*) were recorded in Anguilla and St. Martin. White-tailed Tropicbird (*Phaethon lepturus*) nesting was confirmed in St. Martin. An important and possibly recently established Caribbean Brown Pelican (*Pelecanus occidentalis occidentalis*) breeding colony in St. Martin is described. Our investigations have resulted in significant findings regarding Caribbean seabird conservation. More surveys, however, are necessary in the region to identify seabird breeding locations and evaluate the sustainability of known populations.

**Key words:** *Anguilla, Audubon's Shearwater, Black-capped Petrel, Brown Pelican, Dominica, Lesser Antilles, Pelecanus occidentalis occidentalis, Puffinus lherminieri, Phaethon aethereus, Phaethon lepturus, Pterodroma hasitata, Red-billed Tropicbird, status, St. Martin, White-tailed Tropicbird*

**Resumen.**—INFORME CORRIENTE SOBRE COLONIAS DE CRIANZA DE AVES MARINAS EN LAS ANTILLAS MENORES. Se presenta información que actualiza las ubicaciones de las colonias de crianza. No se encontro ninguna evidencia de crianza de *Pterodroma hasitata* en Dominica. Se encontro que *Puffinus lherminieri* tiene nidos en un cayo de St. Martin. La incubacion de *Phaethon aethereus* fue documentada en Anguilla y St. Martin. Se confirmo que *Phaethon lepturus* tiene nidos en St. Martin. Descripción de una colonia de tamaño significativo de *Pelecanus occidentalis*. Estas investigaciones dieron resultados significantes sobre la conservación de las aves marinas del Caribe. Sin embargo, mas estudios de la region son nesarios para identificar los sitios de los criaderos de las aves marinas y para evaluar el mantenimiento de las poblaciones conocidas.

**Key words:** *Anguilla, Antillas Menores, Dominica, estatus, Pampero de Audubon, Pampero de las Brujas, Pelicano, Pelecanus occidentalis occidentalis, Phaethon aethereus, Phaethon lepturus, Pterodroma hasitata, Puffinus lherminieri, Rabijunco, Rabijunco de Pico Rojo, St. Martin*

### INTRODUCTION

MANY ISLANDS OF THE LESSER ANTILLES have not been thoroughly surveyed for breeding seabirds. For successful conservation planning in the region, seabird population status, timing of breeding, and critical habitat must be determined. The goal of our research during the winters of 2001 and 2002 was to identify Lesser Antillean breeding areas for seabirds which were previously unknown or unconfirmed. Identification of breeding colonies is the first step in the process of protecting or restoring these populations and habitats. To meet that goal, we conducted searches for seabird breeding colonies in Anguilla, St. Martin, Saba, and Dominica (Fig. 1). In addition, we took note of potential threats that may limit breeding success.

### SPECIES ACCOUNTS

**Black-capped Petrel.**—The Black-capped Petrel (*Pterodroma hasitata*) breeds only in the Caribbean (Lee 2000) and is listed as Critically Endangered (Schreiber 2000). This species nests in burrows in steep mountainous terrain, returning to land at night, and only during the breeding season. The only known extant breeding colonies are in the mountains of Hispaniola. The Black-capped Petrel has historically nested in Dominica and, as recently as the 1980s, was observed flying over southern Dominica at Petit Coulibri near Morne Verte (Evans and James 1997). Surveys conducted this century for the petrel on Morne Diablotin and coastal mountains of southeastern Dominica, including our own during two days in January 2002, have resulted in no conclusive evidence of

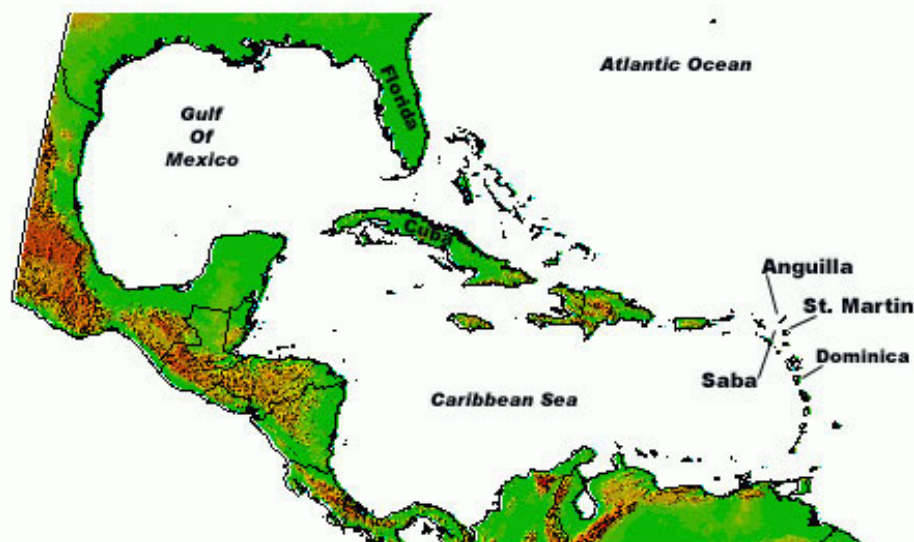


Fig. 1. Islands covered during seabird surveys, 2001-2002 (United Nations Environment Program).

breeding (Evans and James 1997; Brown and Collier 2001).

Southeastern Dominica's mountains are thickly vegetated with forest. We conducted searches for petrels at Morne Fou, part of the Petit Coulibri Estate. Morne Fou rises almost vertically from the ocean to approximately 1000 m. Three methods of detection were used in searches for petrels during our two-day search: The first method used was "call-playback" attraction in which a loop tape of Black-capped Petrel calls, obtained from George Reynard, was played at night in a suspected breeding area. This method has been used successfully to attract other nocturnal burrowing seabird species (Warham 1990). The tape was played at full volume on a portable stereo player from one hour after sunset until midnight. On the night of 29 January 2001 a loop tape of the call of the petrel was played from 19:30 to 00:00 h. The call was played for 90 min at each of the three sites on Morne Fous, allowing all directions to be covered by the sound. No petrels were seen.

The second method used was "call-playback" to determine burrow occupancy. A hand-held mini-cassette recorder was used to play petrel calls at the mouth of burrows. Petrel chicks or incubating adults will often respond to the call from within the burrow (James and Robertson 1985). On 30 January 2001 a daytime survey was made of the area below Morne Fous on the southeastern facing side called "des Sav" (15°12.57' N, 061°20.5' W). Because of the large number of animals, such as land crabs which

create burrows in the area, many holes were present. Using a hand-held tape player, the call was played at the mouth of 31 burrows. No petrels were found.

The third method used a burrow camera to determine occupancy. The camera was on the end of a 3-m flexible tube, used to guide the lens through burrows. Infrared lights illuminated the burrows and contents were viewed through a hand-held monitor (Dyer and Aldworth 1998). On 30 January at des Sav, seven burrows were checked visually using the camera. No petrels were found.

Time of year should not have been a factor because petrels are most often found breeding from November to May. However, breeding colonies have been found in Hispaniola year-round (Woods 1987). It is also possible that the stereo player did not amplify the sound enough to attract petrels, although an unidentified owl hovered overhead at one point.

We played the recording for the groundskeeper at Petit Coulibri Estate, approximately 100 m below Morne Fous, and he reported that he had not heard the call of the Black-capped Petrel in the area during the 40 years he had worked, lived, and hunted there. A fisherman in the area, however, reported that he had heard the call while fishing at night below Morne Fous. Two other individuals, upon seeing drawings of the bird, reported that the bird is seen in the mountains of the Grand Bay area.

These local sightings are encouraging and the Black-capped Petrel may yet be found in Dominica

Table 1. Surveys for Audubon's Shearwater on Saba, Lesser Antilles, 2001–2002.

| Location                               | Year | Date   | Time        | Results          |
|--|------|--------|-------------|------------------|
| The Landfill                           | 2001 | 5 Feb  | 17:30–21:30 | None observed    |
| Sulpher Mine                           | 2001 | 6 Feb  | 05:30–07:00 | One seen flying  |
| Sulpher Mine canyon                    | 2002 | 20 Feb | Diurnal     | One adult on egg |
| Sulpher Mine canyon                    | 2002 | 20 Feb | 21:00–22:30 | None observed    |
| Sulpher Mine                           | 2002 | 20 Feb | 22:45–23:30 | None observed    |
| Eastern & northern sides of Great Hill | 2002 | 21 Feb | Diurnal     | None observed    |
| Southern & eastern sides of Booby Hill | 2002 | 21 Feb | Diurnal     | None observed    |
| The Bottom                             | 2002 | 21 Feb | 20:00–21:00 | None observed    |
| The Landfill                           | 2002 | 22 Feb | 21:15–22:15 | None observed    |
| Hilltop above The Landfill             | 2002 | 22 Feb | Diurnal     | None observed    |

because many areas remain unsurveyed. This species is of critical concern and more studies are needed. Because of repeated acts and threats of violence from residents, however, our search was severely restricted and eventually forced to end.

**Audubon's Shearwater.**—There are an estimated 3000–5000 pairs of Audubon's Shearwaters (*Puffinus lherminieri*) nesting in the Caribbean (Lee 2000) and they are listed as Near Threatened (Schreiber 2000). However, their population and breeding status is difficult to determine because of a lack of research on the species. Chicks and eggs are susceptible to predation by introduced predators such as cats and rats, which may be causing a decline in the population (Wingate *in* Palmer 1962). Because Audubon's Shearwaters nest in burrows and usually are active at the colonies only at night, they are difficult to locate. Our surveys during the winters of 2001 and 2002 revealed only one individual on Isle Tintamarre and two on Saba.

Isle Tintamarre (18°7.5' N, 62°59.17' W) is an islet 3 km from St. Martin. It rises gradually from a beach and scrub vegetation area to cliffs about 30 m high. Breeding of Audubon's Shearwater was previously suspected at this site but unconfirmed (Voous 1983).

Call-playback, flashlights, and a burrow camera were used to determine burrow occupancy. Searches were conducted on 16 February and 11 March 2002, and covered approximately 100 burrows. One Audubon's Shearwater was found on an egg on 16 February.

Saba is a steep, mountainous island with a range of habitats, from cloud forest to dry scrub. Audubon's Shearwater is known to nest on the island (M. Walsh-McGehee, pers. comm.). We listened for shearwater calls in appropriate habitat for six nights.

During the day, we inspected approximately 100 burrows at each of four sites using a flashlight (Table 1).

On 20 February 2002, one Audubon's Shearwater was found on an egg in a canyon wall near Sulpher Mine. One shearwater was seen flying into Sulpher Mine at 06:00 h on 6 February 2001. No other evidence of nesting, such as feathers or dead chicks, was found. No calls were heard during night observations.

Time of year may have been a factor affecting the amount of breeding activity during our surveys. Audubon's Shearwater nests have been found previously on Saba during December and January, but were absent during another survey in March (Voous 1955a). Local residents said that in recent years the shearwaters were seen landing on the roads in the town of The Bottom. Residents said they had not seen the birds in "some months," but could not remember the time of year when they are usually seen. More observations are needed to describe attendance periods on the island and appropriately design survey efforts.

Threats to nesting shearwaters are numerous. Many rats (*Rattus rattus*) were noted in the boulder-covered hillsides above The Bottom and are likely present on Isle Tintamarre as well. It is unknown whether rats are reducing local populations through predation on eggs and nestlings. Goats are ubiquitous on Saba and Isle Tintamarre and may crush burrows. Further studies are needed to determine conservation needs for Audubon's Shearwater on Saba and Isle Tintamarre.

**Red-billed Tropicbird.**—Red-billed Tropicbirds (*Phaethon aethereus*) are classified as Vulnerable in the West Indies with up to 2500 breeding pairs estimated for the region (Schreiber 2000). They breed

from Puerto Rico south to Trinidad (Walsh-McGehee 2000). Our surveys during March 2001 confirmed a suspected breeding site on Anguilla (18°15' N, 63°10' W). Surveys during February and March 2002 confirmed nesting on Isle Tintamarre and identified two potential nest sites on St. Martin.

We surveyed Windward Point, Anguilla on 4 March 2001. Although used for sand mining, this is an otherwise undeveloped rocky point of land accessible by dirt road. This was a suspected breeding area for the species, which nests in other locations on or near Anguilla (Karim Hodge, pers. comm.). We found a Red-billed Tropicbird on an egg at Windward Point, Anguilla and estimated the presence of seven potential nests based on the number of adults flying around the area, available crevices, and site use as evidenced by molted feathers. A more accurate count of breeding pairs at this and other locations is needed.

Isle Tintamarre was surveyed weekly from the French dump (18°6.43' N, 63°1.12' W) on St. Martin from January to March 2001 and January to March 2002, using an 83 mm 50x scope. Habitat is clay and sandstone boulders and cliffs. In 2001, 30–50 Red-billed Tropicbirds were seen during most weekly surveys. In 2002, the highest count was 14 individuals.

In 2002, boat access was possible and two ground surveys were conducted (16 February and 11 March) on Isle Tintamarre. We checked all crevices encountered and used a flashlight when necessary to determine the contents of a site. Nesting was confirmed when 40 occupied sites were recorded on 16 February. A site was defined as occupied if a tropicbird adult, chick, or egg was in a crevice. However, it should be noted that the presence of an adult does not necessarily indicate nesting.

During the second census on 11 March, 24 of the previously occupied sites were checked. In addition, three adults and three chicks were banded using metal numbered bands. Of the 24 sites checked on both visits, 62.5% (n = 15) had chicks or adults on eggs on 16 February. By 11 March that number had dropped to 20.8% (n = 5). Of the eight nests that had eggs on the first visit, seven had disappeared by the second visit. This high loss may be due to predation, possibly by rats. In addition, the remains of two tropicbird chicks (piles of downy feathers and some flight feathers) were found outside crevices and appear to be the result of predation by a Peregrine Falcon (*Falco peregrinus*), which was seen during both surveys.

Molly B'Day is a rocky islet off St. Martin, near

Pelikan Rock. It was observed during weekly surveys from January to March 2001 and January to March 2002 from Point Blanche using a spotting scope. Two Red-billed Tropicbirds were seen going into a crevice on the northern side of Molly B'Day twice during 2001 and nine times during 2002. We were unable to access the island to confirm breeding.

Precipice des Oiseaux is part of mainland St. Martin, near Bay Rouge. It was surveyed from an observation point (18°4.17' N, 63°8.7' W) six times during February and March 2001 and February and March 2002. Eight Red-billed Tropicbirds were seen calling, displaying courtship behavior, and disappearing into crevices on 22 February 2001. Two were seen on 10 March 2001. None was seen in the area in 2002. Access to Precipice des Oiseaux is the limiting factor in determining the nesting population. Obtaining access to these sites through cooperation with landowners is needed.

Data on Red-billed Tropicbirds in St. Martin are scarce. Preliminary surveys indicate a potentially significant predation problem on Isle Tintamarre. Small mammal surveys are necessary to determine the size of the population and the extent of depredation on tropicbird eggs and chicks. More frequent and standardized tropicbird nest surveys would provide a larger sample size and clearer picture of the issue of predation.

**White-tailed Tropicbird.**—White-tailed Tropicbirds (*Phaethon lepturus*) are classified as Vulnerable in the West Indies (Schreiber 2000). Up to 3500 breeding pairs are estimated for the West Indies, with only about 500 estimated for the Lesser Antilles. They range from the Bahamas south to Grenada (Walsh-McGehee 2000). During January to March 2001 and January to March 2002, the Cupecoy area of St. Martin was observed 5–7 days per week for flying White-tailed Tropicbirds. Ground surveys confirmed nesting at Cupecoy and identified another potential nest site on St. Martin.

The Cupecoy study area is between Cupecoy beach and Mullet Bay in St. Martin. Sea cliffs in the area are limestone and exposed reef, 5–10 m in height. The surrounding area is a mix of resorts, a golf course, and scrub marine terrace. Using a spotting scope, we made observations from a high point in the town of Maho. The last known avian survey of the area took place in 1975 when six pairs of White-tailed Tropicbirds were found (Hoogerworf 1977). Historically, however, this species has been recorded in a larger area, including Maho Bay (Voous 1983).

Our first observation of pairs entering crevices at Cupecoy cliffs was on 14 March 2002. In 2001 and

2002, the highest number of individuals seen flying in the area was nine; all were displaying courtship behavior and many went into crevices at Cupecoy, some in pairs.

Two surveys for nests were conducted by rappelling to the cliffs below Cupecoy Beach Club resort (18°2.26' N, 63°7.25' W) and using a flashlight to inspect potential crevices. Crevices were checked on 15 February 2001, but no nests were found. During the next survey, on 13 March, an adult was found sitting on an egg. The nest was in the cliffs 2 m below the eastern part of Cupecoy Beach Club. By inspecting the cliffs, we determined 18 potential nesting crevices are present in the Cupecoy area.

White-tailed Tropicbirds were seen disappearing near the caves at nearby Maho Reef in February and March 2001 and 2002, but no breeding activity was confirmed despite searches in the area.

Precipice des Oiseaux was surveyed by boat using 10x40 binoculars on 3 and 23 February 2002. Eight White-tailed Tropicbirds were observed in courtship flight at Precipice des Oiseaux on 3 February 2002. On 23 February, one tropicbird was seen in a crevice, but the species could not be determined from the boat.

The White-tailed Tropicbird population in the Cupecoy study area has most likely been affected by exotic species, development, and human activity. The occupied nests at Cupecoy and Precipice des Oiseaux are on steep cliffs not easily accessible to predators. Maho Reef, however, is at a low angle and crevices are easily reached, which may account for the lack of occupancy.

**Brown Pelican.**—The Caribbean Brown Pelican (*Pelecanus occidentalis occidentalis*) is classified as Endangered in foreign territories by the United States Fish and Wildlife Service (U.S. Federal Register 1970) and listed as Endangered in the West Indies by the Society for the Conservation and Study of Caribbean Birds (Schreiber 2000). An estimated 1500 pairs nest within the Greater and Lesser Antilles (Collazo *et al.* 2000). With such a small breeding population, the protection of individual nesting areas is critical to the health of the subspecies.

Two pelican colonies on St. Martin were surveyed weekly from 5 February to 14 March 2001 and 2 January to 12 March 2002. Fort Amsterdam (18°1.10' N, 63°3.37' W), a previously unreported breeding site, was used by approximately 48 breeding pairs during 2001, but no evidence of breeding was seen in 2002. Pelikan Rock (18°0.54' N, 63°1.57' W) is a smaller islet colony and had active nests both years.

Fort Amsterdam, a registered and protected historical site, is on a point of land on St. Martin. Vegetation is characterized by thorny scrub, composed mainly of *Acacia macracantha* and *A. tortuosa*, reaching over 2 m in height. The presence of nesting pelicans at Pelikan Rock is noted in the literature, but no mention of the Fort Amsterdam colony has been found (Danforth 1930; Voous 1954, 1955a, 1955b, 1983; Voous and Koelers 1967; Pinchon 1976; Hoogerworf 1977; Halewyn and Norton 1984; Rojer 1997; Raffaele *et al.* 1998; Collazo *et al.* 2000). The only exception is a note by David Johnston from the same year as our sighting (Norton and White 2001). The size of the Fort Amsterdam colony would seem to make it more obvious than the smaller and more distant Pelikan Rock colony. The area may have been overlooked in the past or possibly it was recently colonized.

The colony was on the western side of the point, below the fort. A smaller group of about 10 pelicans was visible nesting on the eastern side of Fort Amsterdam, but we did not follow this colony. Weekly population counts for the western side colony were conducted from the Belair Hotel (18°1.10' N, 63°3.37' W), a distance of approximately 0.5 km, using an 83 mm 50x scope. Because age classes were difficult to distinguish from this distance, all birds capable of flight, or post-fledge individuals, were counted. However, the thick vegetation obstructed views of nests, which were not counted.

An index plot, approximately 200 m from the farthest nest, was used to gain a more accurate representation of the composition of the colony. The index plot allowed us to survey approximately two-thirds of the colony. Counts were made from the first point of land past the Divi Resort, on the western side of Fort Amsterdam (18°0.56' N, 63°3.37' W) using a spotting scope. The following were counted: number of immature birds, number of adults, number of nest territories, and number of chicks.

To determine the number of nests in the index plot and generate a breeding correction factor, a "nest-territory" classification was used. The brush often obscured a complete view of a nest, which is a pile of dry vegetation. It was considered an active nest or territory if one of the following parameters applied: 1) a chick was in the nest or just outside it; 2) an adult was in incubation posture on the nest; or 3) if the nest was not visible above the brush, two adults had to be next to each other, indicating a pair (only applied to brushy areas). A nest was not classified as active if a juvenile, meaning a bird capable of flight, was on or near the nest.



During 2001, the mean number of post-fledge birds in the Divi Point index plot was 136 and the mean number of nest territories was 39, producing a breeding correction factor of 0.287. Therefore, with a total mean count of 166 post-fledge birds from -Belair, we estimated the mean breeding population at Fort Amsterdam during our study to be 48 breeding pairs.

In 2001, the average number of chicks recorded from the index plot was 36. Although all phases of breeding, from incubation to fully-feathered chicks, were visible on all visits, some were more predominant than others. On February 21, most chicks seen were downy to partly-feathered. By our final visit, on March 14, it was becoming difficult to discern fully feathered chicks from recently fledged individuals. Even during the final observations in March, however, adults were still in incubation posture.

From January to March 2002, no nesting was observed at Fort Amsterdam and non-breeding roosting activity was minimal. This lack of nesting activity may indicate that the site is used only during more productive years or during periods in which no surveys were conducted. Colony fidelity and synchrony of breeding is not known for this area. There appears to have been no change in the level of human disturbance from 2001 to 2002. A major disturbance event may have occurred in our absence, however, causing the pelicans to abandon the site.

Human disturbance is an issue at this urban location. A resort lies approximately 500 m away. The Fort ruins are approximately 10 m from the nearest nest, but the thorny vegetation restricts visitors from accessing the nesting area. The surrounding waters are used heavily by watercraft, including jet skis, dive boats, and parasail boats. The bay on the eastern side of the point is a major cruise ship port. In 2001, disturbance was noted only when a watercraft passed quickly or loudly. Over 40 pelicans flushed when a jet ski went by the colony at c. 400 m out. However, a dive boat, only 10 m off the colony did not flush any pelicans because it was going slow enough so it did not produce a wake.

Pollution may also be a concern. Little Bay Pond, where we observed pelicans feeding daily, experiences periodic fish die-offs, most likely due to the dumping of sewage. Pelicans regularly forage in surrounding bays, one of which is a major port, but these waters have not been tested for pollutants.

The Fort Amsterdam breeding colony is significant not only in size but also in location. It is one of the largest known breeding colonies of the Caribbean Brown Pelican in the Lesser Antilles (based on com-

parisons with Collazo *et al.* 2000). Annual surveys will aid in understanding factors affecting use of the site by pelicans.

Pelikan Rock, also known as Guana Key, is a small, inaccessible rock islet approximately 1 km off Point Blanche, St. Martin. It lies within a marine park and is protected. Nests were on a grassy slope on the upper portion of Pelikan Rock. We surveyed the site from Point Blanche, c. 1 km away, using an 83 mm 50x spotting scope.

In 2001, Pelikan Rock had a high count of 40 post-fledge pelicans. Of the 19 nests recorded, one contained two chicks. In 2002, a maximum of 10 nests and 3 chicks were seen. The high count of post-fledge pelicans was 24.

It appears Pelikan Rock may be a more stable nesting site than Fort Amsterdam, perhaps because of its remote location and low levels of human disturbance. Future surveys may reveal the limiting factors affecting both of these sites.

#### CONCLUSIONS

Much remains to be learned about seabird breeding in the Lesser Antilles. There is a need to investigate breeding success and causes of nesting failure while determining threats to known seabird colonies. In addition, a complete survey of islands and surrounding islets is necessary to accurately assess population levels and identify previously unknown breeding sites. Information regarding seabird nesting locations, timing of breeding, and conservation issues should be made available to the proper local governmental and non-governmental agencies.

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## UNUSUAL FEEDING BEHAVIORS IN FIVE SPECIES OF BARBADIAN BIRDS

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*Abstract.*—Field reports of new or unusual feeding behaviors may provide a valuable measure of behavioral flexibility in both birds and primates (Lefebvre *et al.* 1997, Reader and Laland 2002). In birds, many of these new behaviors are observed on islands and in urbanized habitats. We report here several unusual behavior patterns and food sources in five bird species of Barbados, a highly urbanized island of the West Indies.

*Key words:* Barbados, foraging, innovation, novel foods, tool use

*Resumen.*—CONDUCTAS RARAS DE ALIMENTACIÓN EN CINCO ESPECIES DE AVES EN BARBADOS. Reportes de campo de conductas de alimentación nuevas o inusitadas pueden proveer una medida valiosa de flexibilidad de conducta en ambas aves y primates (Lefebvre *et al.* 1997, Reader and Laland 2002). En aves, muchas de estas nuevas conductas son observadas en islas y en hábitats urbanizados. Nosotros reportamos aquí varios patrones de conducta y fuentes de alimento inusitadas en cinco especies de aves de Barbados, una isla altamente urbanizada en las Indias Occidentales.

*Palabras clave:* Barbados, forrajeo, innovación, nuevos alimentos, uso de herramientas

IN MARCH 2002, an unusual feeding interaction was observed between an adult and a juvenile Carib Grackle (*Quiscalus lugubris*). An adult wild grackle, captured that day using a baited trap, banded, and housed with five other grackles in a large aviary for a short learning experiment, was observed passing food (bread and cooked rice) through the mesh cage to a juvenile grackle. Similar observations had been made twice, on 21 April and 29 August 2000, with individually housed adult grackles passing food through the cage to juveniles. It was not possible in these two cases to identify the species of the juvenile with complete certainty because grackles are commonly victims of Shiny Cowbirds (*Molothrus bonariensis*), brood parasites thought to have first colonized Barbados in 1916 (French 1986, Evans 1990, Davies 2000). It seems likely that the adults were the parents of the juveniles, and if this is the case it is impressive that the juveniles located a captured parent and begged for food. In all three cases the capture had been made at least 50 m from the aviaries, the aviaries were out of visual contact with the capture sites, and the captured birds had been transported in a manner so their transport to the aviaries

could not be observed. We could only find one report of a similar behavior in our data base of over 2200 foraging innovations (Lefebvre 2000), a captive rehabilitant magpie (*Pica pica*) feeding a free-living conspecific outside its cage (Williams 1978), though cowbird host parents have been reported to follow cowbirds into a cage (Terpering 1999).

Carib Grackles are very diverse in their feeding habits and foraging strategies (Raffaele *et al.* 1998). In March 2002 we observed a single grackle pecking under a car's windshield wipers in Hometown, St. James, presumably feeding on trapped insects, a normal part of the grackles' diet (Evans 1990). This observation can be added to seven other cases in our data base of birds searching on cars for insects; the species include a congeneric of *Q. lugubris*, *Q. major* (Schardien and Jackson 1978); House Sparrows (*Passer domesticus*) in several parts of Europe (Creutz 1981, Goethe 1981, Bankier 1984, Simmons 1984), North America (Richards 1962), Australia (Wilson 1954), and New Zealand (Flux and Thompson 1986); as well as the Red-legged Partridge (*Alectoris rufa*, Brazier 1998) and the Greenfinch

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(*Carduelis chloris*, Flux and Thompson 1988).

Our third observation of unusual feeding was on Gray Kingbirds (*Tyrannus dominicensis*). Kingbirds usually forage in the daytime, but Raffaele *et al.* (1998) note that some Gray Kingbirds take advantage of street lights to feed at night on the attracted insects. Nocturnal feeding has been reported previously for Gray Kingbirds in the Bahamas, Cuba, and Guadeloupe (Brudenell-Bruce 1975; White 1991; Smith and Jackson, in press), and has also been reported for Western Kingbirds (*Tyrannus verticalis*) in Nebraska and Texas (Stevenson and Anderson 1994). To this literature we add two observations of nocturnal feeding in Barbados. The first observation was made on 6 April 2000 between 21:00 and 22:30 h, at a beach in Fitt's Village on Barbados' western coast. A kingbird fed near a restaurant floodlight, repeatedly perching in nearby trees before swooping in front of the light. The second observation was made on 3 October 2000, in Mullins Terrace, St. Peter, approximately 7 km north of the first observation site. At 21:35 h a kingbird was seen to swoop twice in front of a streetlight in a typical feeding flight before returning to perch on utility wires. Several species are known to use artificial lights to feed on insects attracted to them at night. These species include gulls (*Larus haurtlaubi*, Simon 1977), corvids (*Dicrurus adsimilis*, Underhill 1988), nightjars (*Caprimulgus asiaticus*, Bharos 1992), falcons (*Falco tinnunculus*, Tryjanowski and Lorek 1998), rollers (*Coracias benghalensis*, Bharos 1992), swifts (*Tachybarptis melba*, Freeman 1981; *Apus unicolor*, Rodriguez 1988), swallows (*Delichon urbica*, *Hirundo rustica*, Bulgarini and Visentin 1997; *H. neoxena*, Hobbs 1967), and songbirds (*Saxicoloides fulicata*, Bharos 1997; *Parus caeruleus*, Blackett 1970; *Setophaga ruticilla*, Bakken and Bakken 1977).

A fourth set of observations concern the consumption of unusual food sources. In the course of behavioral experiments on Carib Grackles, we provided bread, rice, dog food pellets, and water daily from 6 March to 9 June 2002 on paved terraces at the Bellairs Research Institute (St. James, Barbados) and on lawns in the adjacent Folkestone Park. During these experiments Black-faced Grassquits (*Tiaris bicolor*), Bananaquits (*Coereba flaveola*), and Scaly-naped Pigeons (*Columba squamosa*) were observed to consume bread. The details are as follows. A grassquit was observed eating bread on two occasions in the same location on 16 March. One Bananaquit was observed eating bread on eight occasions on three days from 2 March to 16 March, and two Bananaquits were observed eating bread together on three occasions on 15 and 16 March. A single Scaly-

naped Pigeon was observed eating bread twice, on 22 and 23 April. Bread eating by Scaly-naped Pigeons was also observed at other locations. Three Scaly-naped Pigeons ate bread on the ground 10 m from an open-air canteen adjacent to the Deep Water Harbor, Bridgetown on 22 May 2002. The pigeons were with c. 10 Shiny Cowbirds and Carib Grackles. The Harbor site neighbors the Barbados Mills compound, where a Scaly-naped Pigeon has previously been observed feeding on maize (Lefebvre *et al.* 2001).

To our knowledge, bread eating has not been reported previously in these species, and our observations add three more cases to the large anecdotal literature on bread as a novel food type in birds (reviewed in Lefebvre *et al.* 2001). Grassquits are diet specialists and feed almost exclusively on the seeds of herbs and grasses, whereas Bananaquits are described as mainly nectarivores, but also feed on fruits, seeds, and sometimes on small insects (Voous 1983, Ridgely and Tudor 1989, Evans 1990, French 1991, Raffaele *et al.* 1998). In fact, in describing opportunistic use of sugar sources in houses and hotels in Tobago, Gross (1958: p. 277) explicitly states that "Bananaquits were never tempted by bread crumbs." To eliminate the possibility that Bananaquits do not feed on the bread itself, but instead feed on insects attracted to the bread, we inspected the bread after one trial to confirm that no insects were present. Further, on one occasion a Bananaquit approached to within 60 cm of an observer, allowing confirmation that bread, and not insects on the bread, was ingested. As far as *C. squamosa* is concerned, Raffaele *et al.* (1998) stated that, aside from its dietary specialization on arboreal frugivory, this species sometimes feeds opportunistically on the ground, a view supported by our observations here.

Our final observation of an unusual food source was in Gray Kingbirds, seen feeding on hard, dry dog pellets provided for experiments at the Bellairs Institute. Like kingbirds eating bread (Lefebvre *et al.* 2001; also observed on several occasions in March and April 2002), the pellets were taken in flight. At least one individual beat the pellet one to four times on a metallic wire just before its consumption. The beating behavior, an example of 'proto-tool use' (Lefebvre *et al.* 2002), was first observed on 30 May 2002, at 15:30 h, and was subsequently seen several times in May and June 2002. Kingbirds appeared to have difficulties in swallowing the intact dry pellets, attempting to swallow many times before succeeding. After beating the pellets, consumption was more rapid. Raffaele *et al.* (1998) note that Gray Kingbirds often batter captured insects before con-

sumption, and thus it is the food involved, rather than the behavioral pattern, that should be regarded as unusual. Kingbirds normally specialize on catching insects in flight, as well as taking other invertebrates, seeds, lizards, berries and, more rarely, small fish (Lefebvre and Spahn 1987, French 1991, Raffaele *et al.* 1998). They are not reported to eat other food scraps (Voous 1983, Evans 1990, Raffaele *et al.* 1998).

In all our cases of unusual food consumption, the novel food had been provided by humans on a regular basis. Repeated exposure to novel food sources may allow sufficient time for usually cautious species to utilize the novel foraging resources. In addition, birds on many islands, including Barbados, are relatively tame, allowing them to respond rapidly to new food sources.

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## COMPORTEMENTS ALIMENTAIRES INHABITUELS CHEZ CINQ ESPÈCES D'OISEAUX DE LA BARBADE

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**Résumé.**—La collecte des observations de comportements alimentaires nouveaux ou inhabituels peut constituer une mesure opérationnelle de la flexibilité comportementale chez les oiseaux et les primates (Lefebvre *et al.* 1997, Reader et Laland 2002). Chez les oiseaux, ces nouveaux comportements sont souvent observés sur des îles ou dans des habitats urbanisés. Nous rapportons ici quelques comportements alimentaires inhabituels chez cinq espèces d'oiseaux de la Barbade, une île très urbanisée des Caraïbes.

EN MARS 2002, une interaction inhabituelle a été observée entre deux quiscales merles (*Quiscalus lugubris*). Un adulte gardé en captivité dans une grande volière avec cinq autres quiscales à des fins d'expérimentation sur l'apprentissage social a été observé en train de passer de la nourriture (pain et riz cuit) à un juvénile à travers le grillage de la cage. Des observations similaires ont été faites les 21 avril et 29 août 2000: des quiscales adultes gardés en captivité dans des cages individuelles passaient de la nourriture vers l'extérieur à des juvéniles. Il n'avait alors pas été possible d'identifier l'espèce des juvéniles hors de tout doute, car les quiscales merles sont souvent victimes des vachers *Molothrus bonariensis*, des parasites reproducteurs ayant colonisé la Barbade en 1916 (French 1986, Evans 1990, Davies 2000). Il est probable que les adultes étaient les parents des juvéniles; si c'est le cas, il est impressionnant que les juvéniles aient localisé un parent capturé et lui aient demandé de la nourriture. Dans les trois cas, la capture a été faite à au moins 50 m de la volière, les sites de capture n'étaient pas visibles de la volière, et les oiseaux capturés ne pouvaient être observés lors de leur transport vers la volière. Nous n'avons trouvé qu'un seul cas similaire dans notre base de données comportant plus de 2200 innovations alimentaires (Lefebvre 2000): une pie (*Pica pica*) captive nourrissant un conspécifique libre à l'extérieur de sa cage (Williams 1978). Un autre cas rapporte des parents hôtes de jeunes vachers les suivant dans une cage (Terpering 1999).

Les quiscales merles montrent une grande diversité dans leur régime alimentaire et leurs techniques de recherche de nourriture (Raffaele *et al.* 1998). En mars 2002, nous avons observé un quiscale en train de picorer sous les essuie-glace d'une voiture stationnée à Hometown, St. James, probablement pour se nourrir d'insectes pris sous les essuie-glace; les insectes font partie du régime normal des quiscales

(Evans 1990). Cette observation peut être ajoutée à sept autres cas de notre base de données mentionnant des oiseaux cherchant des insectes sur des véhicules automobiles; les espèces impliquées incluent un congénère de *Q. lugubris*, *Q. major* (Schardien et Jackson 1978); des moineaux (*Passer domesticus*) dans plusieurs parties de l'Europe (Creutz 1981, Goethe 1981, Bankier 1984, Simmons 1984), en Amérique du Nord (Richards 1962), en Australie (Wilson 1954) et en Nouvelle-Zélande (Flux et Thompson 1986); ainsi que des perdrix rouges (*Alectoris rufa*, Brazier 1998) et des verdiers d'Europe (*Carduelis chloris*, Flux et Thompson 1988).

Le tyran gris (*Tyrannus dominicensis*) est le sujet de notre troisième observation de comportement alimentaire inhabituel. Les tyrans sont habituellement des chasseurs diurnes, mais Raffaele *et al.* (1998) note que certains tyrans utilisent les lampadaires des routes pour se nourrir des insectes qui y sont attirés. L'alimentation nocturne a été rapportée aux Bahamas, à Cuba, et à la Guadeloupe pour le tyran gris (Brudenell-Bruce 1975; White 1991; Smith et Jackson, sous presse), et au Nebraska et au Texas pour les tyrans de l'ouest (*Tyrannus verticalis*) (Stevenson et Anderson 1994). Nous ajoutons ici deux nouvelles observations concernant l'alimentation nocturne chez le tyran gris à la Barbade. La première observation a été faite à une plage de Fitt's Village sur la côte ouest de la Barbade, le 6 avril 2000 entre 21:00 et 22:30 h. Un tyran s'est alimenté près du lampadaire d'un restaurant, se perchait à répétition dans les arbres avoisinants avant de plonger devant le lampadaire. La seconde observation a été faite le 3 octobre 2000, à Mullins Terrace, St. Peter, située approximativement 7 km au nord du site de la première observation. À 21:35 h, un tyran est passé deux fois devant un lampadaire de route en un vol de chasse typique avant de retourner se percher sur les fils électriques. Plusieurs espèces utilisent la lumière artifi-

cielle pour se nourrir des insectes nocturnes qui y sont attirés. Parmi elles on retrouve des goélands (*Larus haurtlaubi*, Simon 1977), des corvidés (*Dicrurus adsimilis*, Underhill 1988), des engoulevents (*Caprimulgus asiaticus*, Bharos 1992), des faucons (*Falco tinnunculus*, Tryjanowski et Lorek 1998), des rolliers (*Coracias benghalensis*, Bharos 1992), des martinets (*Tachybarptis melba*, Freeman 1981; *Apus unicolor*, Rodriguez 1988), des hirondelles (*Delichon urbica*, *Hirundo rustica*, Bulgarini et Visentin 1997; *H. neoxena*, Hobbs 1967), ainsi que des passereaux (*Saxicoloides fulicata*, Bharos 1997; *Parus caeruleus*, Blackett 1970; *Setophaga ruticilla*, Bakken et Bakken 1977).

La quatrième série d'observations concerne la consommation de nouvelles ressources alimentaires. Dans le cadre d'expériences comportementales sur le quiscale merle, nous avons disposé du pain, du riz, des boulettes de moulée pour chien et de l'eau sur des terrasses de l'institut de recherche Bellairs (St. James, Barbade) et sur les pelouses du parc adjacent à Bellairs, le Parc Folkstone, du 6 mars au 9 juin 2002. Au cours de ces expériences, des sporophiles cici (*Tiaris bicolor*), des sucriers à ventre jaune (*Coereba flaveola*) et des pigeons ramiers (*Columba squamosa*) ont été observés en train de consommer du pain. Voici les détails: un sporophile cici a été observé en train de manger du pain à deux occasions au même endroit le 16 mars. Un sucrier a été vu mangeant du pain à huit reprises en trois jours entre le 2 et le 16 mars, et deux sucriers mangeant du pain ensemble ont été vus trois fois les 15 et 16 mars. Un ramier a été observé mangeant du pain à deux occasions, le 22 et 23 avril. La consommation de pain par les ramiers a été observée aussi à d'autres endroits. Le 22 mai 2002, un groupe de trois ramiers a été observé en train de manger du pain sur le sol à 10 m d'une cantine en plein air adjacente au port en eau profonde de Bridgetown. Les ramiers étaient avec environ 10 vachers luisants et quiscales merles. Le port est voisin du site de la compagnie Barbados Mills où un ramier avait déjà été observé en train de se nourrir de maïs (Lefebvre *et al.* 2001).

À notre connaissance, la consommation de pain n'avait pas été rapportée chez ces espèces, et nos observations ajoutent trois cas supplémentaires à la vaste littérature sur le pain comme aliment nouveau chez les oiseaux (références dans Lefebvre *et al.* 2001). Les sporophiles cici ont une diète spécialisée, se nourrissant presque exclusivement de graines de graminées et d'herbes, alors que les sucriers sont principalement nectarivores, mais se nourrissent aussi de fruits, de graines, et parfois de petits insectes

(Voous 1983, Ridgely et Tudor 1989, Evans 1990, French 1991, Raffaele *et al.* 1998). En fait, lorsqu'il décrit l'utilisation opportuniste des sources de sucre dans les maisons et hôtels à Tobago, Gross (1958: p. 277) affirme de façon explicite que « les sucriers n'étaient jamais tentés par le pain ». Pour éliminer la possibilité que les sucriers se nourrissent d'insectes attirés par le pain plutôt que du pain lui-même, nous avons inspecté le pain après une observation pour confirmer qu'il n'y avait pas d'insecte présent. De plus, un sucrier s'est approché à moins de 60 cm des observateurs, nous permettant de confirmer que c'était bien le pain qui était ingéré et non des insectes. Quant à *C. squamosa*, Raffaele *et al.* (1998) affirme que, malgré sa spécialisation alimentaire de frugivore arboricole, cette espèce se nourrit parfois au sol de façon opportuniste, ce qui est appuyé par nos observations.

La dernière observation de consommation d'une ressource alimentaire inhabituelle concerne les tyrans gris se nourrissant de boulettes sèches de moulée pour chien utilisées dans le cadre d'expériences de terrain à l'institut Bellairs. Comme lorsqu'ils consomment du pain (Lefebvre *et al.* 2001; aussi observé à plusieurs reprises en mars et avril 2002), les tyrans prenaient la moulée au vol. Au moins un individu a été observé en train de frapper la moulée de une à quatre fois sur un câble métallique avant de la consommer. Le comportement de battage, un exemple d'utilisation de "proto-outil" (Lefebvre *et al.* 2002), a été observé pour la première fois le 30 mai 2002 à 15:30 h, puis à plusieurs reprises en mai et juin 2002. Les tyrans semblaient avoir de la difficulté à avaler les boulettes entières, y parvenant souvent seulement après plusieurs tentatives. Après le battage, la consommation était plus rapide. Raffaele *et al.* (1998) note que les tyrans frappent souvent les insectes capturés avant de les consommer, et donc c'est la nourriture impliquée plutôt que le comportement lui-même qui doit être notée comme étant inhabituelle. Les tyrans sont normalement des spécialistes de la capture d'insectes en vol, mais ils prennent aussi d'autres invertébrés, des graines, des lézards, des baies, et plus rarement, des petits poissons (Lefebvre et Spahn 1987, French 1991, Raffaele *et al.* 1998). La consommation de rebuts alimentaires autres que le pain n'avait pas été rapportée pour les tyrans (Voous 1983, Evans 1990, Raffaele *et al.* 1998).

Dans tous ces cas de comportements alimentaires inhabituels, la nouvelle nourriture a été rendue disponible par des humains sur une base régulière. L'exposition répétée à de nouvelles ressources alimentai-



res peut laisser suffisamment de temps aux espèces normalement prudentes d'utiliser la nouvelle ressource. De plus, sur beaucoup d'îles incluant la Barbade, les oiseaux sont relativement peu craintifs, ce qui leur permet de s'ajuster rapidement aux nouvelles ressources alimentaires disponibles.

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## ABUNDANCE AND TIME OF DAY VARIATION IN RAPTOR POPULATIONS IN MARACAS VALLEY, TRINIDAD

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*Abstract.*—We studied raptor populations in Maracas Valley, Trinidad, by conducting 20 5-min counts for each hour of daylight (21.7 total h). Of eight species observed, Black Vulture (*Coragyps atratus*) was by far the most common, followed by Turkey Vulture (*Cathartes aura*), which accounted for 96.2% and 3.2%, respectively, of all raptors censused. Four species of family Accipitridae and two species of family Falconidae represented only 0.45% and 0.15%, respectively, of all raptors. The proximity of our study site to the Beetham Dump, where large numbers of Black Vultures forage, likely explains the dominance of this species. Time of day variation in vulture abundance likely reflects movements between foraging areas and roosts.

*Key words:* abundance, Accipitridae, Cathartidae, Falconidae, populations, raptors, time of day variation, Trinidad

*Resumen.*—ABUNDANCIA Y VARIACIÓN CON HORA DEL DÍA EN POBLACIONES DE RAPACES EN LA VALLE DE MARACAS, TRINIDAD. Estudiamos las poblaciones de rapaces en la Valle de Maracas, Trinidad, a través de veinte conteos de 5 min para cada hora del día (21.7 h total). De las ocho especies observadas, el Zapilote (*Coragyps atratus*) fue la más común, seguida por el Aura Tiñosa (*Cathartes aura*), cuales constituyeron 96.2% y 3.2%, respectivamente, de todas las rapaces contados. Cuatro especies de la familia Accipitridae y dos especies de la familia Falconidae representaron solamente 0.45% y 0.15%, respectivamente, de todas las rapaces. La proximidad de nuestro sitio de estudio al Basurero Beetham, donde cantidades altas del Zopilote buscan de comer, probablemente explica la dominancia de esta especie. La variación con la hora del día en la abundancia de Zopilotes probablemente refleja movimientos entre lugares de comer y dormilones.

*Palabras clave:* abundancia, Accipitridae, Cathartidae, Falconidae, poblaciones, rapaces, variación con hora del día, Trinidad

ALTHOUGH TRINIDAD AND TOBAGO is inhabited by 35 species of raptors, of which 22 are known to breed (French 1991; 1996a,b), little is known about their population ecology within the country. Previously published studies compared the abundance of raptors in Caribbean pine (*Pinus caribaea*) and native broad-leaved forest in the Northern Range of Trinidad (Hayes and Samad 1998), and in the Bocas Islands off northwestern Trinidad (Hayes and Samad 2002). However, these studies focused on the entire avifauna and the methods used were less than ideal for counting raptors (e.g., excluding birds flying above the forest canopy). Given the alarming rate of habitat destruction within the country, further data on raptor abundance is needed to monitor the responses of raptor populations to changing environmental conditions. In this paper we provide data on the time of day variation in raptor abundance in Maracas Valley, Trinidad.

### STUDY AREA AND METHODS

We studied raptor populations from our home in La Baja Road, at an elevation of about 70 m on the western slope of the lower Maracas Valley, St.

Joseph, and southern slopes of the Northern Range of Trinidad, at 10°40' N, 61°25' W. La Baja Road bisects a residential area that is surrounded by a mosaic of anthropogenic savannas (mostly to the west), a narrow riparian forest corridor to the east, seasonal forest (mostly to the east), and a Caribbean pine plantation along the ridge to the east.

Raptors were censused intermittently from a stationary point during 5 min periods between 06:00 and 18:40 h from 10 March to 19 April 2001 and from 28 March to 5 April 2002. All raptors visible within an unlimited radius were counted; no attempt was made to avoid recounting the same individuals in successive counts. Identification was facilitated with the use of 8x32 binoculars and a 25x telescope, and by consulting Meyer de Schauensee and Phelps (1978) and National Geographic Society (1999). To avoid observer bias, all counts were conducted by B. D. Hayes. The taxonomy follows the American Ornithologists' Union (1998).

The data were compiled and descriptive statistics were computed with Statistix 3.1 software (Anonymous 1990). Because the data represented time series and did not meet the assumptions of in-

dependence, statistical tests were not used to test for differences in time of day variation.

RESULTS AND DISCUSSION

A cumulative total of 20 counts was conducted during each hour of daylight, for a total of 21.7 h of observation. A total of 12,285 raptors (many undoubtedly counted repeatedly) of eight species were censused during this survey. The vast majority of raptors were vultures (family Cathartidae), representing 99.4% of all raptors counted. The Black Vulture (*Coragyps atratus*) was by far the most common species, accounting for 96.2% of all raptors seen. Large numbers appeared throughout the day, but the highest counts were at midday, possibly representing birds soaring on thermals in search of food, and late in the afternoon when circling birds were likely moving toward their roosts (Table 1). The Turkey Vulture (*Cathartes aura*) accounted for 3.2% of all raptors observed. Its numbers were highest in the early morning and, especially, in the late afternoon (Table 1), suggesting that most individuals were moving between their roosts and foraging areas.

Hawks (family Accipitridae) comprised only 0.45% of all raptors observed. Of 55 hawk observations, Zone-tailed Hawk (*Buteo albonotatus*) accounted for 52.7%, Common Black-Hawk (*Buteogallus anthracinus*) 20.0%, Gray Hawk (*Asturina nitida*) 14.5%, and Short-tailed Hawk (*Buteo brachyurus*) 12.7%.

Falcons and caracaras (family Falconidae) represented only 0.15% of the raptors counted. Of 19 such observations, Yellow-headed Caracara (*Milvago chimachima*) accounted for 78.9% and Merlin (*Falco columbarius*), the only Nearctic migrant, 21.1%.

Six other species were observed at the study site, but not during this study: Gray-headed Kite (*Leptodon cayanensis*), Pearl Kite (*Gampsonyx swainsonii*), White Hawk (*Leucopternis albigollis*), Broad-winged Hawk (*Buteo platypterus*), Bat Falcon (*Falco rufigularis*), and Peregrine Falcon (*Falco peregrinus*).

Although Black Vultures are a conspicuous component of the avifauna throughout Trinidad, their numbers appear to be highest in areas densely populated by humans, especially in the vicinity of Port of Spain, northwestern Trinidad, where large numbers (probably exceeding 1000) routinely forage for food scraps in the Betham Dump. The proximity of our observation point to the dump, only 7.5 km to the west-southwest, likely explains the dominance of Black Vultures in the counts. Quantitative studies of raptor populations should be conducted in other areas of Trinidad.

Table 1. Mean number of raptors seen per 5-min period during different hours of the day (n = 20 for each hour) at Maracas Valley, Trinidad.

| Species                | Hour of day |       |       |       |       |       |       |       |       |       |       |       |       |
|------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                        | 06:00       | 07:00 | 08:00 | 09:00 | 10:00 | 11:00 | 12:00 | 13:00 | 14:00 | 15:00 | 16:00 | 17:00 | 18:00 |
| Black Vulture          | 34.9        | 30.6  | 23.1  | 40.5  | 76.7  | 43.1  | 41.5  | 38.4  | 56.4  | 33.9  | 37.4  | 100.4 | 34.3  |
| Turkey Vulture         | 2.2         | 2.6   | 1.1   | 1.0   | 0.9   | 0.5   | 1.1   | 0.2   | 0.7   | 0.6   | 3.4   | 4.4   | 1.6   |
| Gray Hawk              | 0.0         | 0.0   | 0.0   | 0.1   | 0.0   | 0.2   | 0.0   | 0.0   | 0.0   | 0.0   | 0.1   | 0.0   | 0.0   |
| Common Black-Hawk      | 0.0         | 0.0   | 0.0   | 0.0   | 0.1   | 0.0   | 0.0   | 0.0   | 0.1   | 0.0   | 0.1   | 0.3   | 0.0   |
| Short-tailed Hawk      | 0.0         | 0.1   | 0.0   | 0.1   | 0.0   | 0.1   | 0.1   | 0.0   | 0.0   | 0.1   | 0.1   | 0.1   | 0.0   |
| Zone-tailed Hawk       | 0.1         | 0.4   | 0.0   | 0.0   | 0.1   | 0.1   | 0.2   | 0.2   | 0.1   | 0.2   | 0.2   | 0.2   | 0.1   |
| Yellow-headed Caracara | 0.1         | 0.0   | 0.0   | 0.1   | 0.3   | 0.0   | 0.0   | 0.1   | 0.0   | 0.0   | 0.2   | 0.1   | 0.1   |
| Merlin                 | 0.0         | 0.0   | 0.0   | 0.0   | 0.1   | 0.1   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.1   | 0.0   |

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WHITE-CROWNED PIGEON WORKING GROUP

The Society for the Conservation and Study of Caribbean Birds is sponsoring the formation of an international working group to share information and develop strategies for research, management, and conservation of the White-crowned Pigeon (*Columba leucocephala*) throughout its range. The group will hold its first meeting in conjunction with the 2003 meeting of the Society in Tobago 21–26 July. If you are interested in participating in the meeting, or if you simply wish to be kept informed of the group's progress, please contact:

Brandon Hay (Caribbean co-chair) — [brandonhay@cwjamaica.com](mailto:brandonhay@cwjamaica.com)

or

Ken Meyer (U.S. co-chair) — [meyer@arcinst.org](mailto:meyer@arcinst.org)

## HIGHEST SINGLE-DAY COUNT OF MIGRATING OSPREYS (*PANDION HALIAETUS*) FOR CUBA AND THE INSULAR CARIBBEAN

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**Abstract.**—We report a count of 279 Ospreys (*Pandion haliaetus*) in 3:05 h of observation on 30 August 2001 from an observation point at La Gran Piedra, Sierra Maestra, in southeastern Cuba. This constitutes the highest count for the species reported for Cuba and the entire insular Caribbean. These data confirm the importance of Cuba for migration of the Osprey in its passage through the Caribbean.

**Key words:** *Cuba, migration, Osprey, Pandion haliaetus*

**Resumen.**—EL MAYOR CONTEO EN UN DÍA DE AGUILAS PESCADORAS (*Pandion haliaetus*) MIGRATORIAS PARA CUBA Y EL CARIBE INSULAR. Se reporta el conteo de 279 Aguilas Pescadoras (*Pandion haliaetus*) en 3:05 h de observación el 30 de agosto de 2001 en el punto de observación de La Gran Piedra, Sierra Maestra, en el sudeste de Cuba. Este constituye el conteo más grande de la especie reportado hasta el momento para Cuba y todo el Caribe insular. Estos datos confirman la importancia de Cuba para la migración del Aguila Pescadora en su viaje a través del Caribe.

**Palabras clave:** *Aguila Pescadora, Cuba, migración, Pandion haliaetus*

OSPREYS (*PANDION HALIAETUS*) are complete, long-distance migrants throughout their cosmopolitan range (Kerlinger 1989). They have been reported as common winter residents and transients in Cuba (Garrido and Kirkconnell 2000). Data based on counts (Hoffman and Darrow 1992), band recoveries (Henny and Van Velzen 1972, Poole and Agler 1987) and satellite telemetry (Martell *et al.* 2001, Rodríguez *et al.* 2001) suggest that the major part of the population of this species from the eastern seaboard of the United States passes through Cuba during autumn migration. Although great numbers of Ospreys can be seen principally in Cuba and Hispaniola during autumn migration, few counts have been done (Crouse and Keith 1999, Rodríguez *et al.* 2001). Here, we report the highest daily count for Osprey in the insular Caribbean. This effort was part of the first autumn raptor migration count made in La Gran Piedra, southeastern Cuba.

### METHODS

Observations were made from the summit of La Gran Piedra (1234 m) in the eastern Sierra Maestra mountain range, which runs parallel to the southern coast of eastern Cuba. On 30 August 2001, three persons made observations with 10x binoculars. A cumulative effort of 3:05 h was made from 10:55 h

until 14:00 h when the count was stopped because of rain. Weather conditions were recorded using the standardized daily report suggested by the Hawk Migration Association of North America. Wind speed and temperature were measured with a Kestrel 2000 weather station. A mechanical counter was used to tally hourly counts.

### RESULTS AND DISCUSSION

We observed 279 Ospreys in flight, with numbers peaking from 11:00 to 12:00 h ( $n = 171$ ) (Table 1).

The counts carried out at La Gran Piedra during the fall of 2001 (Rodríguez Santana, unpublished data) and satellite telemetry data (Martell *et al.* 2001) confirm early suggestions regarding Cuba as an important stopover site for migrating Ospreys (Henny and Van Velzen 1972, Poole and Agler 1987, Hoffman and Darrow 1992, Rodríguez *et al.* 2001). The Sierra Maestra mountain range, which is 267 km long and up to 35 km wide, appears to be an important pathway for migrating Ospreys once they reach eastern Cuba by providing a “highway” of mountainside updrafts and thermals which the birds exploit while traveling east through the region. Several previous reports exist for Ospreys migrating along the Sierra Maestra range (Rodríguez *et al.* 2001).

Table 1. Weather variables and Osprey totals per hour at La Gran Piedra study site.

| Variable <sup>1</sup> | Hour        |             |             |             |
|-----------------------|-------------|-------------|-------------|-------------|
|                       | 10:00–11:00 | 11:00–12:00 | 12:00–13:00 | 13:00–14:00 |
| WSPD (km/h)           | 4           | 3.4         | 2.5         | 3.8         |
| WFM                   | NE          | NE          | NE          | E–NE        |
| TEMP (C°)             | 24.3        | 24.5        | 25.2        | 26.4        |
| CLCV (%)              | 50          | 50          | 65          | 70          |
| VISB                  | VC          | VC          | VC          | VC          |
| FDIR                  | E           | E           | E           | E           |
| HTFL                  | M           | M           | H           | M–H         |
| OBVS                  | 1           | 3           | 3           | 3           |
| DURA                  | 5           | 60          | 60          | 60          |
| Osprey                | 5           | 171         | 79          | 24          |

<sup>1</sup>WSPD = wind speed; WFM = wind from; TEMP = temperature; CLCV = cloud cover; VISB = visibility: VH (very hazy), H (hazy), C (clear), VC (very clear); FDIR = flight direction; HTFL = height of flight overhead: L (Low), M (medium), H (high); OBVS = number of observers; DURA = duration of observations (min); Osprey = number of birds observed.

## ACKNOWLEDGMENTS

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# FIRST RECORDS OF WILSON'S PHALAROPE (*PHALAROPUS TRICOLOR*) FOR TRINIDAD

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*Abstract.*—We report the first records of Wilson's Phalarope (*Phalaropus tricolor*), a rare Nearctic migrant in the Caribbean, for Trinidad. One individual was observed in the rice fields of Caroni, Trinidad, from 28 August to 12 September 1998. Two individuals were observed and one photographed in the rice fields of Caroni, Trinidad, on 1 October 2000.

*Key words:* *distribution, migration, Phalaropus tricolor, Scolopacidae, Trinidad, Wilson's Phalarope*

*Resumen.*—PRIMEROS REGISTROS DEL FALAROPO DE WILSON (*PHALAROPUS TRICOLOR*) PARA TRINIDAD. Se relatan los primeros registros del Falaropo de Wilson (*Phalaropus tricolor*), un migrante neártico raro en el Caribe, para Trinidad. Observamos un individuo en los arrozales de Caroni, Trinidad, del 28 de agosto al 12 de septiembre de 1998. Observamos dos individuos y fotografiamos a uno en los arrozales de Caroni, Trinidad, el primero de octubre de 2000.

*Palabras clave:* *distribución, Falaropo de Wilson, migración, Phalaropus tricolor, Scolopacidae, Trinidad*

WILSON'S PHALAROPE (*Phalaropus tricolor*) breeds in North America and winters primarily in South America, with most of the population migrating through Central America (Hayman *et al.* 1986, Colwell and Jehl 1994). A few individuals migrate across the Caribbean, where the species occurs as a rare migrant on many islands, especially during autumn (Colwell and Jehl 1994, Raffaele *et al.* 1998). Here we report the first two records for Trinidad.

## OBSERVATIONS

At 09:30 h on 28 August 1998, Gomes and Hayes found a basic-plumaged bird actively feeding with a small flock of other shorebird species in a shallow flooded rice field at Caroni, Trinidad. The bird was studied carefully through a 25x telescope until 09:55 h and seen again from 10:37 to 10:38 h. In his field notes, Hayes described it as having a "long, thin black bill; yellow legs, white underparts; light gray crown, hindneck, back and scapulars, darker gray flight feathers; whitish forehead and superciliary; dark gray postocular streak, continuing as a light-gray streak down the sides of the neck; ...tail white when flying." The bird foraged by "leaning forward with outstretched neck ducked repeatedly underwater, with bill sweeping sideways fairly rapidly, just below the surface...; legs rapidly propelling it forward in shallow water." On 31 August and 1 September 1998 it was relocated by G. White, who described "brown flight feathers contrasting with the smooth gray back." Subsequent efforts to relocate it were unsuccessful until 12 September

1998, when it was observed for the last time from 17:05 to 17:10 h by Hayes.

At about 12:00 h on 1 October 2000, Kenefick found two birds actively swimming and feeding in a flooded rice field with tall, dense vegetation at Caroni, Trinidad. The birds were carefully studied through a 32x telescope until 14:00 h. In his field notes, Kenefick described the birds as having "entire underparts clean white on one bird; the other had a faint trace of peachy/buff just above the 'water line'; needle thin wholly black bill; forehead and face white; crown, nape, mantle and wing coverts the softest pearl grey; beady black eye; grey line from nape extends across the ear coverts to reach the eye [forming] an impression of a white supercilium...; lores white; flight feathers dark grey/black in folded wing; when stretching, underwing coverts white and under flight feathers pale grey." The birds swam constantly and frequently picked insects out of the air, from the grass stems, or from the surface of the water. At 13:05 h, Hayes arrived and eventually obtained several photographs of one bird (Fig. 1). When one bird was flushed, Hayes noted its white tail.

## DISCUSSION

These birds were distinguished from the Red Phalarope (*P. fulicaria*) by the relatively long, thin, needle-like bill and paler, less contrasting head markings (Hayman *et al.* 1986). They were distinguished from the Red-necked Phalarope (*P. lobatus*) by the paler, less contrasting head markings and



Fig. 1. Wilson's Phalarope (*Phalaropus tricolor*) at Caroni, Trinidad, 1 October 2000. Note the relatively long, thin bill, pale head markings, and plain gray upperparts which distinguish this species from other phalaropes. Photo by Floyd Hayes.

plain gray back lacking dark streaking (*Ibid.*).

Because the brown feathers of juvenile Wilson's Phalaropes are quickly replaced by adult-type feathers as early as August (*Ibid.*), we cannot be certain of the age of these birds. However, the presence of "brown flight feathers" described by G. White on the bird observed in 1998 and the "faint trace of peachy/buff" described by Kenefick on the flanks of at least one bird in 2000 suggests that these individuals may have been immatures.

Although a previous sight record of Wilson's Phalarope exists from Buccoo, Tobago, on 28 September 1990 (Murphy *et al.* 1991), our observations provide the first records for Trinidad. Both observations have been accepted by the Trinidad and Tobago Rare Bird Committee. Since mid-1998, we have routinely scrutinized flocks of shorebirds in the Caroni rice fields, usually a few days each week, during peak shorebird migration (May, July–October). Given the lack of further records of this species, we suspect it to be a very rare autumn migrant that does not occur annually in Trinidad.

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NOTAS SOBRE LA CONDUCTA REPRODUCTIVA DE  
LA FERMINA, *FERMINIA CERVERAI* (PASSERIFORMES: TROGLODYTIDAE)

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**Abstract.**—NOTES ON THE BREEDING BEHAVIOR OF THE ZAPATA WREN (*FERMINIA CERVERAI*) (PASSERIFORMES: TROGLODYTIDAE). A nest of *Ferminia cerverai* containing two chicks near the fledgling stage in the Zapata Swamp is described. The nest was placed near the ground over the base of a clump of *Cladium jamaicensis*, but was not in a flooded area. The chicks and the parental behavior while the nest was being photographed are described. The Zapata Wren remains one of Cuba's most endangered birds.

**Key words:** *breeding behavior, Cuba, Ferminia cervera, nest, Zapata Wren*

**Resumen.**—Notas sobre la conducta reproductiva de la Ferminia (*Ferminia cerverai*) (Passeriformes: Troglodytidae). Se describe un nido de *Ferminia cerverai* con dos pichones cerca de la etapa de levantar vuelo en la Ciénaga de Zapata. El nido estaba puesto cerca del suelo sobre la base de un matojo de *Cladium jamaicensis*, pero no estaba en un área inundada. Se describen los pichones y la conducta parental mientras el nido era fotografiado. La Ferminia sigue siendo una las aves de Cuba en mayor peligro.

**Palabras clave:** *conducta reproductiva, Cuba, Ferminia, Ferminia cervera, nido*

DESDE SU DESCRIPCIÓN en la segunda década del siglo pasado, la Fermina (*Ferminia cerverai*), continúa siendo una de las aves cubanas menos conocidas. Una distribución limitada a varios parches cenagosos de la península de Zapata y sus hábitos crípticos han motivado el escaso conocimiento que se tiene sobre la historia natural de esta ave. Hasta la fecha el mayor aporte a la biología de esta especie fue realizado por Martínez y Martínez (1991), quienes describieron por primera vez un nido y realizaron observaciones ecológicas.

Con el objetivo de realizar fotografías de la Fermina, visitamos una localidad conocida por Peralta (22°34' N y 81°19' O) en la ciénaga Occidental de Zapata, el 2 de mayo de 2002. Mediante la utilización de grabaciones, logramos localizar un individuo. Observamos que repetidamente cargaba larvas hacia un punto dentro de la vegetación y se escucharon varios reclamos agudos, los que nos hizo sospechar la presencia de un nido. Luego de una exhaustiva búsqueda y con la ayuda (indispensable) del reclamo de los pichones al acercarse los padres, y al sentir nuestra presencia cerca de ellos, logramos detectar el nido.

La forma del nido era globular, con una apertura lateral de 42 mm, similar a lo encontrado por Martínez y Martínez (1991), y una orientación sur-suroeste. La altura del nido fue de 200 mm, con un diámetro externo de 140 mm, una profundidad de

54 mm y situado a una altura sobre el suelo de 330 mm, sobre la base de un grupo de hierba cortadera (*Cladium jamaicensis*). Estaba fabricado a partir de cortadera y en la parte interior, donde reposaban los pichones, estaba tapizado con finos fragmentos de fibra vegetal y plumas. Su posición, forma y coloración lo hacían prácticamente indetectable, ya que tenía la misma coloración parda que presentan la base de los grupos de cortadera en esta época del año.

El nido se encontró aproximadamente a 10 m del borde y al final del camino de 3 km de longitud que atraviesa una zona de bosque y vegetación de ciénaga desde la Autopista Nacional hasta el canal de Peralta. En el momento de nuestra visita, el sitio donde se encontraba el nido y el suelo en un área de 20 m<sup>2</sup> alrededor del mismo, aunque no firme, no se encontraba anegado.

Se encontraron en el interior del nido dos pichones volantes de Fermina, reclamando comida, mostrando la cavidad bucal de color amarillo. Dado que podíamos correr el riesgo que abandonaran el nido por su estado avanzado de desarrollo, sólo se manipularon escasos segundos para tomarles unas fotos. Mientras nos encontrábamos con los pichones en la mano, ambos padres se mantuvieron a menos de 1 m de nosotros en el suelo o a muy baja altura entre la cortadera, emitiendo un sonido estridente.

La fecha en que fue encontrada esta nidada de

Fermina coincide con los meses de época reproductiva señalada con anterioridad para esta especie. Raffaele *et al.* (1998) ubican su período reproductivo desde enero hasta mayo, mientras que Garrido y Kirkconnell (2000) lo sitúan entre marzo y mayo.

Teniendo en cuenta los períodos lluviosos atípicos en la época seca que se vienen produciendo a consecuencia de los cambios climáticos, que elevan el nivel del agua en la ciénaga, se pudiera provocar una alta mortalidad de pichones. Lo anterior, unido a la depredación, fuegos y distribución limitada, hacen de la Fermina una de nuestras especies más amenazadas.

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## PRIMER REPORTE DE *DENDROICA PINUS* (AVES: PARULIDAE) PARA ORIENTE, CUBA

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*Resumen.*—Un individuo de Bijirita de Pinos (*Dendroica pinus*) fue observado el 7 de abril de 2001 en las elevaciones del sur del municipio de Holguín, Cuba. Éste constituye el primer reporte de la especie para la región oriental de Cuba.

*Palabras claves:* Bijirita de Pinos, Cuba, *Dendroica pinus*, distribución

*Abstract.*—FIRST REPORT OF *DENDROICA PINUS* IN EASTERN CUBA. A Pine Warbler (*Dendroica pinus*) was observed in the southern hills of Holguín municipality, Cuba. The observation constitutes the first record of the species in eastern Cuba.

*Key words:* Pine Warbler, Cuba, *Dendroica pinus*, distribution

LA DISTRIBUCIÓN de la Bijirita de Pinos (*Dendroica pinus*) comprende el noroeste de las Bahamas (Grand Bahamas, Abaco, Andros y New Providence) y La Española, encontrándose también al este de Norteamérica, donde se encuentra su área de cría. La especie es un residente permanente en las Bahamas y La Española y es considerada como transeúnte en Cuba, con cinco registros en La Habana y la península de Zapata: 22 de octubre de 1964, 8 de noviembre de 1965, marzo de 1987, 17 de enero de 1988 y 11 de febrero de 1998, en todas las ocasiones en árboles de casuarina (*Casuarina equisetifolia*) (Garrido y Kirkconnell 2000). En Haití constituye una especie amenazada debido a la destrucción de su hábitat (Raffaele *et al.* 1998).

Durante la migración primaveral, que ocurre entre la segunda quincena de marzo hasta finales de abril, se realizaron muestreos en las alturas del sur del municipio de Holguín. El área de estudio comprendió tres elevaciones continuas a 231, 220 y 249 m s. n.m. El sitio de muestreo está ubicado en El Yayal, limitando al sur con las llanuras de la cuenca del Cauto, al norte con la ciudad de Holguín, al oeste con las alturas de Ochile y al este con el valle de Mayabe. En la cima de las elevaciones predomina un bosque semideciduo alto compuesto fundamentalmente por especies deciduas y presentando dos estratos arbóreos, uno de 15 m y otro de 20 m aun-

que aparecen algunos emergentes de hasta 25 m de altura; el estrato arbustivo varía entre 3 y 5 m.

Un individuo de *Dendroica pinus* fue observado el 7 de abril de 2001 a las 08:25 h en la parcela 17 ubicada en la cima de la segunda elevación (220 m s.n.m.). El ave se encontraba alternando dentro del follaje de arbustos dispersos de yaya (*Oxandra lanceolata*) a solamente 5 m de distancia de los observadores y a una altura aproximada de 2 m. Éste constituye el primer reporte de esta especie para la región oriental de Cuba.

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# NUEVOS REGISTROS DE AVES ACUÁTICAS PARA EL HUMEDAL COSTERO DE LA LAGUNA EL MANGÓN, PENÍNSULA DE HICACOS, MATANZAS, CUBA

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**Resumen.**—Se presenta información sobre 12 nuevas especies de aves acuáticas reportadas durante el período de 2000 al 2002 en el humedal costero de la laguna El Mangón, localizada en la Reserva Ecológica Varahicacos, provincia de Matanzas, Cuba. Entre los reportes de mayor importancia se encuentran las especies *Charadrius alexandrinus*, *Calidris canutus*, *Calidris himantopus*, *Numenius phaeopus* y *Recurvirostra americana*.

**Palabras clave:** aves acuáticas, Cuba, laguna El Mangón, nuevos registros, península de Hicacos

**Abstract.**—NEW RECORDS OF WATERBIRDS FOR THE COASTAL WETLANDS OF LAGUNA MANGÓN, HICACOS PENINSULA, MATANZAS, CUBA. Information is presented for 12 new aquatic bird records at El Mangón Lagoon, Varahicacos Ecological Reserve, Matanzas province, Cuba, during the years 2000–2002. Among the most important records were the species *Charadrius alexandrinus*, *Calidris canutus*, *Calidris himantopus*, *Numenius phaeopus*, and *Recurvirostra americana*.

**Key words:** aquatic birds, Cuba, El Mangón Lagoon, Hicacos Peninsula, new records

## INTRODUCCIÓN

LA PENÍNSULA DE HICACOS constituye una región de gran importancia para el estudio de las aves acuáticas migratorias y residentes en Cuba. En los últimos años, la realización de numerosas investigaciones ornitológicas en esta localidad ha permitido obtener un notable volumen de información acerca de la distribución, composición y estructura de la comunidad de aves acuáticas presente en dicho sitio, destacándose los trabajos desarrollados por Blanco *et al.* (1993), Blanco (1994) y Goossen *et al.* (1994). Sin embargo, se considera válido y de interés cualquier esfuerzo investigativo adicional que contribuya al enriquecimiento de la información obtenida hasta la fecha y que facilite la proyección de estrategias de conservación futuras de este significativo humedal costero cubano.

En el presente trabajo se expone información sobre la obtención de 12 nuevos registros de aves acuáticas observadas en la laguna El Mangón (23° 11' N y 81° 08' O) en la península de Hicacos, durante los años 2000 y 2002.

***Phoenicopterus ruber.***—Durante el período comprendido entre los meses de octubre de 2000 y marzo de 2001 se registraron tres individuos de esta especie.

***Egretta rufescens.***—En el mes de junio de 2001 se observaron dos individuos en el sector norte de la laguna.

***Haematopus palliatus.***—El 23 de octubre de 2001, en la orilla de la playa Las Calaveras, conti-

nua a la laguna El Mangón, se registró el arribo de dos individuos de esta especie.

***Recurvirostra americana.***—En el área de estudio, la presencia de esta especie fue registrada durante noviembre de 2000 y octubre de 2001. En cada oportunidad se observó un individuo adulto en plumaje de invierno.

***Charadrius alexandrinus.***—Dos individuos de esta especie fueron registrados en el área exclusivamente durante los días comprendidos entre el 3 y el 25 de marzo de 2001.

***Numenius phaeopus.***—En el mes de octubre de los años 2000 y 2001 se observaron en el área uno y cuatro individuos, respectivamente.

***Tringa solitaria.***—En la laguna El Mangón se observaron 20 individuos durante la migración primaveral del año 2001, los que permanecieron en el área durante el período desde el 20 de marzo hasta el 7 de abril del mismo año.

***Calidris himantopus.***—Durante el período de estudio, se obtuvieron dos registros, correspondiendo al 17 de febrero de 2001 y el 25 de enero de 2002. En ambas ocasiones se reportan bandos compuestos por 75 y 40 individuos, respectivamente.

***Calidris alpina.***—Sólo se obtuvo un reporte de observación de esta especie ocurrido durante la migración primaveral del año 2001 (el 5 de abril).

***Calidris canutus.***—Aunque es considerada un raro residente invernal para las Antillas, y en particular para el territorio cubano (Raffaele *et al.* 1998,

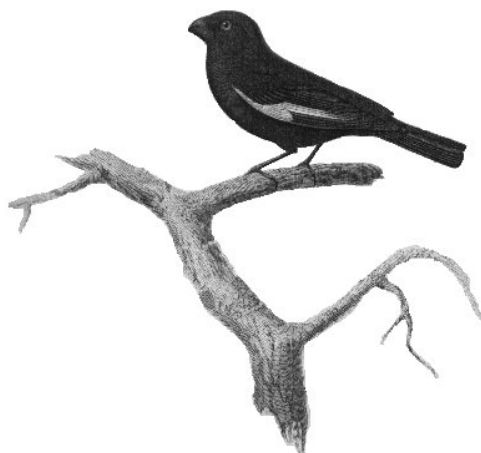
Garrido y Kirkconnell 2000), esta especie ha sido registrada en el área de estudio formando bandos integrados por 4-52 individuos durante los meses de diciembre de los años 2000 y 2001 y febrero y marzo de 2002.

***Larus delawarensis***.—Durante los meses de octubre y febrero de los años 2000 y 2002, respectivamente, se registró en cada ocasión la presencia de un individuo sobrevolando la zona de la playa Las Calaveras, continua a la laguna de El Mangón.

***Sterna antillarum***.—Aunque esta especie no ha sido reportada nidificando en la península de Hicacos, cada año se observa residiendo en el área de estudio, fundamentalmente desde marzo hasta septiembre, formando en ocasiones bandos compuestos por entre 15 y 81 individuos.

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## INTERESTING RECORDS OF SHOREBIRDS ON SAINT LUCIA

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*Abstract.*—Records are presented from September 2001 of some shorebirds rarely encountered on Saint Lucia. These represent the second record – the first for over 30 years – of Buff-breasted Sandpiper (*Tryngites subruficollis*) and the ninth of Stilt Sandpiper (*Calidris himantopus*) from the island.

*Key Words:* Buff-breasted Sandpiper, *Calidris himantopus*, distribution, Saint Lucia, Stilt Sandpiper, *Tryngites subruficollis*

*Resumen.*—INTERESANTES REGISTROS DE PLAYEROS EN SANTA LUCÍA. Se presentan registros de septiembre de 2001 de algunos playeros raramente encontrados en Santa Lucía. Estos representan el Segundo registro – el primero en treinta años – del Playero Canela (*Tryngites subruficollis*) y el noveno del Playero Patilargo (*Calidris himantopus*) en la isla.

*Palabras clave:* *Calidris himantopus*, distribución, Playero Canela, Playero Patilargo, *Tryngites subruficollis*, Santa Lucía

AT THE END OF A VISIT to Saint Lucia, I stumbled across a small area of pools in a partly flooded field near Hewonarra Airport. The field was approximately two miles west of the airport, easily viewable from the road and the top of the dyke. I have not seen any mention of this area before, yet the pools appeared semi-permanent – probably because of leakage from a neighboring dyke – and were certainly productive for shorebirds, presumably because of minimal availability of other suitable habitat on the island. On the only day I was able to visit the pools, 22 September 2001, the nine species of shorebird present included approximately 15 Semipalmated Sandpipers (*Calidris pusilla*), four Pectoral Sandpipers (*Calidris melanotos*), three Buff-breasted Sandpipers (*Tryngites subruficollis*), three Short-billed Dowitchers (*Limnodromus griseus*), and a single Stilt Sandpiper (*Calidris himantopus*). All species were observed in the pools, except the

Buff-breasted Sandpipers, which were in the wet field.

The Buff-breasted Sandpiper record comprises the second of the species from the island. The only previous record was of one at an undocumented location in October 1970 (Keith 1997). Stilt Sandpiper has only been recorded eight times previously on the island (Keith 1997). The paucity of records of these shorebirds, among others, is in part surely a reflection of observer effort on the island, and future visitors can continue to helpfully contribute to our understanding of migration patterns in the Caribbean.

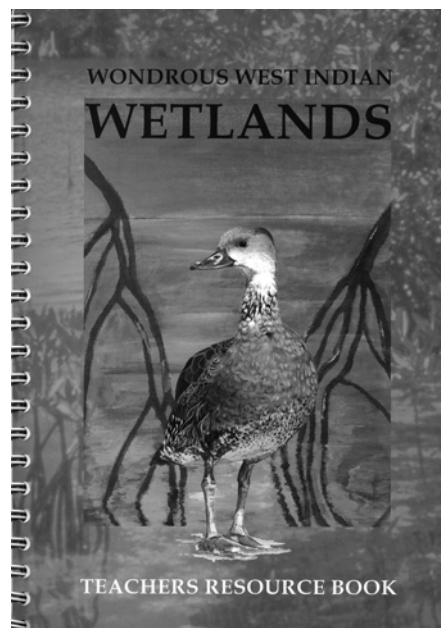
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## NEWS FROM THE WEST INDIAN WHISTLING-DUCK AND WETLANDS CONSERVATION PROJECT

LISA G. SORENSON AND PATRICIA E. BRADLEY  
West Indian Whistling-Duck Working Group Co-chairs,  
*Dept. of Biology, 5 Cummington St., Boston University, Boston, MA 02215*

TEACHER TRAINING WORKSHOPS ON THE USE OF *WONDROUS WEST INDIAN WETLANDS: TEACHERS' RESOURCE BOOK*.—The West Indian Whistling-Duck Working Group (WIWD-WG) has been busy encouraging and promoting the use of its newly published book *Wondrous West Indian Wetlands: Teacher's Resource Book*. Published in July 2001, this 276-page workbook was written by the WIWD-WG for teachers and educators in the West Indies. The workbook provides resources for conducting a complete wetlands education unit in the classroom, including background information on ecological concepts and natural history, field techniques, and detailed instructions for student activities and projects. The diversity of wetland types found in the West Indies is surveyed, along with their inhabitants, their ecology, and the many ecosystem functions they perform. Classroom and field activities emphasize factors contributing to the loss of regional wetlands and the consequences of these losses for biodiversity, ecosystems and, ultimately, for people. The workbook considers conservation issues specifically pertinent to wetlands in the Caribbean, and provides ideas for student action projects in local communities. Global warming, invasive alien species, other causes of species endangerment, as well as local conservation success stories, and the importance of international treaties and conventions (e.g., Ramsar Convention) to the region are also discussed. The comprehensive and detailed nature of the information also makes the book a valuable resource for decision-makers in government and for members of the public participating in grassroots conservation efforts. The main messages in this book are that there are almost always alternatives to wetland destruction, degradation or unsustainable use, and that protecting the environment safeguards human health and makes economic sense.



Talented wetlands educator, Michele Kading (Head Interpreter) and her staff at Oak Hammock Marsh Interpretive Centre have helped the WIWD-WG develop the curriculum for a two-day teachers' workshop focusing specifically on the use of *Wondrous West Indian Wetlands*. The workshop agenda for **Day 1** includes a presentation on wetland teaching/interpretation techniques, an overview of the workbook's contents, activities and demonstrations for the whole group, and an opportunity for teachers (working in small groups; all instructions and materials supplied) to demonstrate to the larger group a sample activity of their choice from the book. All of **Day 2** is spent at a local wetland. Participants have the opportunity to try out all of the field activities that are in the workbook (e.g., line and quadrat plant transects, keeping field records, wetland monitoring, sound maps, wetland words and poetry, wetland assessment) as well as learn to identify the four species of mangroves and other wetland plants and animals. Learning to use binoculars and identifying birds from their field marks is also emphasized.

Michele Kading and Lisa Sorenson (Project Coordinator) recently led workshops on the use of the new workbook in Trinidad and Tobago (May 22–28, 2002), Antigua and Barbuda (November 6–8, 2002) and New Providence, Bahamas (January 21–24, 2003; teachers from seven different Family Islands also attended, thanks to a generous private donation which covered their travel expenses). The response to the workshops has been overwhelmingly positive. Some sample comments from the evaluations:

- I learned many things that I did not know before and the workshop, being so interactive, was very exciting.



Bahamian school teachers try out the quadrat plant sampling technique during the wetlands field trip portion of the Wetlands Education Workshops at the Bahamas National Trust (21–24 January 2003).

- This introduction to wetlands was informative and served as an eye-opener to what is just “outside” my door. Thanks.
- Being able to see [on the fieldtrip] what was discussed in the workshop has made me aware of the importance of wetlands.
- The activities were very interesting and helped tremendously to highlight essential concepts. Activities would be very suitable for class sessions, especially pour-a-pond.
- I really learned many things from this workshop. I have gained a new appreciation for a treasure [wetlands] that I never really gave much thought to. Thank you!

We thank the Department of Natural Resources and Environmental/Education Division in Tobago, the Pointe-a-Pierre Wildfowl and Wetlands Trust in Trinidad, the Environmental Awareness Group in Antigua/Barbuda, and the Bahamas National Trust in Nassau for sponsoring the workshops and organizing local teacher and natural resource personnel participation. We also thank the Adventure Learning Centre in New Providence for providing their excellent facilities for the wetlands field trips. Beatriz Hernandez Machado (from Puerto Rico) and Florence Sergile (from Haiti) attended the recent Bahamas workshops for training as workshop facilitators in their home countries – we thank them for their time and help with the project. We are very grateful to Michele Kading for continuing to share with us her talents and gifts as a wetlands educator. We also thank the staff and volunteers at Oak Hammock Marsh for their many hours of work putting together “workshop kits”—a rolling suitcase containing all the supplies needed to deliver a wetlands workshop. Workshop kits will be supplied to all the large Caribbean countries so that local NGO personnel and teachers can use them. Workshop kits are now in the Bahamas and Puerto Rico and follow-up workshops delivered by the BNT staff are already scheduled for February 2003. Plans are underway for a series of workshops in Jamaica this spring (organized and sponsored locally by Birdlife Jamaica, Ridge to Reef Watershed Project, Negril Environment Protection Trust, Montego Bay Marine Park, Portland Environmental Protection Association, CCAM, and others). Workshops will also be held in the coming months in the Cayman Islands, Puerto Rico, Dominican Republic, Haiti, Cuba, Turks and Caicos Islands, US and British Virgin Islands, and St. Vincent and the Grenadines. Please contact Lisa Sorenson (lsoren@bu.edu) if you are interested in holding a workshop in your country.

UPDATE ON SPANISH VERSION OF *WONDROUS WEST INDIAN WETLANDS: TEACHERS’ RESOURCE BOOK*.—The Spanish translation of the workbook was completed by Maria Font (University of Puerto Rico Seagrant Pro-



gram) and the translation was proofread by Beatriz Hernandez, Lourdes Mugica, and Denis Dennis Avila. We thank them for their hard work and long hours with this endeavor. The final changes and corrections are being completed by Maria Font and the book will be sent to RSPB for publication by the end of February 2003. We expect the Spanish version of the book to be published in time for the SCSCB meeting in Tobago (July 2003). We are looking forward to workshops introducing the workbook's use in Puerto Rico, Cuba, and the Dominican Republic.

**FUNDRAISING.**—The WIWD Working Group submitted grant proposals to four agencies to fund West Indian Whistling-Duck and Wetlands Conservation Project activities over the next one to two years. We were pleased and grateful to learn that we were awarded funding from the US Fish and Wildlife Service (Division of International Conservation), American Bird Conservancy, the Neotropical Migratory Bird Conservation Act, and Wetlands International's "Partners for Wise Use of Wetlands 2002–2003 Programme" (funded by the Netherlands Ministry of Foreign Affairs Directorate-General for International Cooperation). The funds will go towards wetland education workshops in eight countries, workshop kits, publication of the Spanish version of the workbook, development of the project website ([www.whistlingduck.org](http://www.whistlingduck.org)), translation of the workbook and educational materials into French, development of Watchable Wildlife Ponds in four countries, writing of a WIWD survey manual, and the wetland flora and fauna field guide.

**WATCHABLE WILDLIFE PONDS.**—The project encourages and supports the development of wetlands equipped with interpretive signs and viewing areas where local people, school groups, and tourists can easily observe whistling-ducks and other wildlife. Often it is only through providing such opportunities to experience nature firsthand that individuals can gain appreciation of and respect for the wetland environment. We will begin development of Wilson and Harrold Ponds in New Providence, Bahamas—a newly designated National Park—as a *Watchable Wildlife Pond*. This will involve installing a viewing platform, boardwalk and interpretive signage of the most common birds seen in the area. We will also work on developing Watchable Wildlife Ponds in Antigua (Jolly Ponds), the DR (Laguna Oviedo), and Jamaica (Negril Royal Palm Reserve).



## BOOK REVIEW

AVES COMUNES DE LA REPÚBLICA DOMINICANA (COMMON BIRDS OF THE DOMINICAN REPUBLIC).— Steven C. Latta. 2002. Published by Editora Corripio, Santo Domingo, R.D. 60 pp., introduction, index.

An awareness of the nature is the first step towards learning about nature, which may in turn, lead to its appreciation. This appreciation of nature, is fundamental to its conservation. Well-illustrated and appropriately written books are key elements in developing a region's or territory's conservation ethic. The need for a conservation ethic supported by the public is especially important on the island of Hispaniola, home to 27 endemic bird species, some of which are threatened by human-mediated extinction. Within the Dominican Republic the original field guide by Annabelle Stockton de Dod (1981 *Guía de Campo para las Aves de la República Dominicana*) and her more comprehensive book (1987 *Aves de la República Dominicana*) provided the country with its only texts in Spanish devoted exclusively to the country's birdlife. Unfortunately, both are out of print, and illustrations were limited to ink line drawings, although the later text did have color plates of many, but not all of the country's species. Thus the new guide to common birds by Steve Latta fills a void in the country's bird literature, by providing the general public with the first photographic guide to some of the common birds in

the Dominican Republic.

Latta's guide provides a color photo and brief summary of 60 of the most common bird species of the Dominican Republic or those well known from the country's folklore. Suggestions for inclusion of species were provided by both the local ornithological society and avian conservation group and thus are representative of those species that local authorities believe should be familiar to Dominicans and visitors. The book's photos, provided by four different Dominican photographers, are of sufficient quality to enable field identification of all included species. Along with each photo is the common name in Spanish and English, its scientific name, length, and status (i.e., resident, endemic, migrant, introduced, threatened). A brief text in Spanish and English provides a description of the species, some general natural history notes, and in the case of threatened species, the reason(s) for its threatened status.

The overall high quality of Latta's book and especially its attractive photos should make the book popular with Dominicans and tourists alike. This work represents a valuable contribution towards developing the public's appreciation of Dominican birds. Hopefully, it can receive wide circulation within the Dominican Republic, and it should be required reading by all school children in the country.—JOSEPH M. WUNDERLE, JR., *International Institute of Tropical Forestry, USDA Forest Service, P. O. Box 490, Palmer, Puerto Rico 00721.*

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from the major professor that describes why the student deserves the award. Deadline for receipt of applications is 1 April 2003. Send application materials by e-mail or post to: BETTE A. LOISELLE, Department of Biology, University of Missouri-St. Louis, 8001 Natural Bridge Road, St. Louis, MO 63121-4499 USA. E-mail: <mailto:loiselle@umsl.edu> loiselle@umsl.edu



Fig. 1. Some of 63 participants of a morning birdwatch in Anguilla.



Fig. 2. First Caribbean Endemic Bird Festival's logo on T-shirt.

## FIRST CARIBBEAN ENDEMIC BIRD FESTIVAL

ADRIANNE G. TOSSAS

*Co-coordinator, Caribbean Endemic Bird Festival  
Alt de Mayagüez, 713 Yunque, Mayagüez PR 00682  
agtossas@hotmail.com*

The Society for the Conservation and Study of Caribbean Birds held its first Caribbean Endemic Bird Festival from 22 April to 22 May 2002 in seven countries. The purpose of this activity was to increase awareness on our unique avifauna. Over 1000 persons, many of them children, participated in 32 activities (see summary in Table 1). These included field trips (Fig. 1), slide shows, photographic exhibitions, talks, a book presentation, and magazine and newspaper articles. Also, a T-shirt was prepared by the coordinating committee in

Guadeloupe (Fig. 2). A web page will be created to post details of the first festival and announce the 2003 event.

Thanks to all coordinators for their effort and enthusiasm, and to Eric Carey, David Wege, and Jim Stevenson for ideas and support. Thanks also to Joni Ellis, from the southeastern group of Partners in Flight, who kindly made arrangements for the donation and distribution of International Migratory Bird Day posters.

Table 1. Summary of first Caribbean Endemic Bird Festival including number of events and participants per island or country. Regional coordinators were Adrienne Tossas, Leo Douglas, and Herlitz Davis.

| Country            | Host organization                   | No. of     |              | Coordinator   |
|--------------------|-------------------------------------|------------|--------------|---|
|                    |                                     | Activities | Participants |   |
| Anguilla           | Anguilla National Trust             | 4          | >80          | Karim Hodge & Jim Stevenson   |
| Bahamas            | Bahamas National Trust              | 1          | 70           | Carolyn Wardle  |
| Bermuda            | Bermuda Audubon Society             | 6          | 200          | Andrew Dobson   |
| Dominican Republic | Hispaniola Ornithological Society   | 1          | -            | Kate Wallace  |
| Guadeloupe         | AEVA                                | 2          | 123          | Anthony Levesque  |
| Puerto Rico        | Puerto Rican Ornithological Society | 14         | 600          | Rafael Rodríguez, José Salguero, Sergio Colón, José G. Rodríguez, Raúl Pérez, and Hilda Morales |
| Saint Lucia        | Forestry Department                 | 4          | 102          | Donald Anthony  |

BIRD REPORTS FROM THE CARIBBEAN WANTED

*NORTH AMERICAN BIRDS* is a quarterly publication of the American Birding Association that includes seasonal reports of birds in the West Indies. These reports are summaries of interesting bird sightings received from resident and visiting birders in the region. They include such items as breeding success, new records, and out of season records. Recently most of the material has come from Bermuda and the Bahamas, and these two countries have received a disproportionate amount of space. Reports from other islands often come from visiting birders who are more concerned with the "lifers" they saw than bird population trends on the island. The compilers of the West Indies Regional Reports urge

resident and visiting birders and ornithologists to submit timely reports on the birdlife of their country. This is a quick way to get your observations "on the record" and available to ornithologists throughout the Americas. All observers are listed by name. Send your report by e-mail to one of the compilers listed below. Thanks.

Robert Norton  
corvus0486@aol.com  
Andrew Dobson  
adobson@warwickacad.bm  
Tony White  
spindalis@aol.com

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NEW FACT SHEET ON RADIOTELEMETRY AVAILABLE FROM ORNITHOLOGICAL COUNCIL

The Ornithological Council has just published a fact sheet on the use of radio telemetry in ornithology. It can be found at [http://www.nmnh.si.edu/BIRDNET/Radio\\_tracking.html](http://www.nmnh.si.edu/BIRDNET/Radio_tracking.html). Copies can also be requested by sending me an e-mail (do not forget to include your regular postal address if you want a hard copy). Anyone who radio tracks, or plans to radio track birds should read this fact sheet. An seemingly simple question from an ornithologist about frequency assignment and coordination led us to realize that this was anything but simple. Ultimately, we hired an expert in FCC radio frequency assignments to write this fact sheet.

What we learned is that there is no current FCC frequency assignments for wildlife telemetry (for non-governmental users) that is both suitable and legal for avian radio tracking. The fact sheet ex-

plains why this is the case, suggests alternatives, and details what the Ornithological Council is doing to correct the situation.

This fact sheet was made possible by virtue of the generous support provided to the Ornithological Council by its 10 member societies and many individual ornithologists, who contributed to the OC when renewing their memberships via the OSNA dues notice. Thanks to all of you for supporting our work!

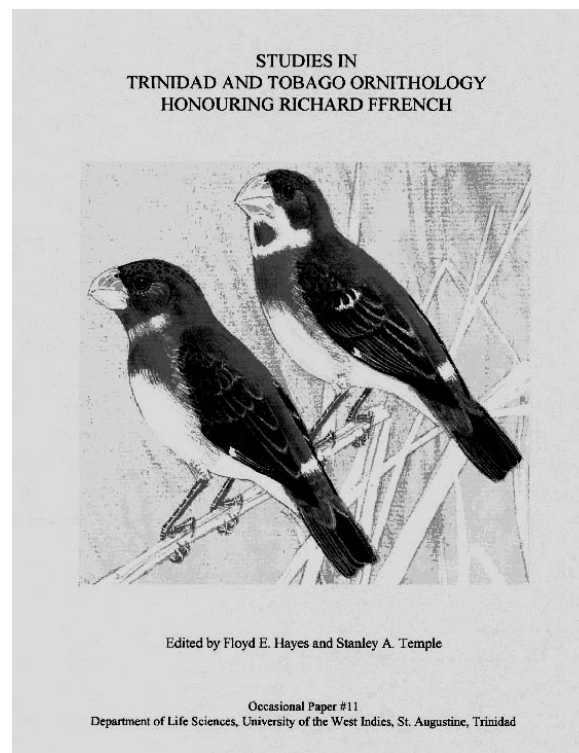
Ellen Paul  
Executive Director  
The Ornithological Council  
Mailto:epaul@concentric.net  
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**STUDIES IN  
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HONOURING RICHARD FFRENCH**

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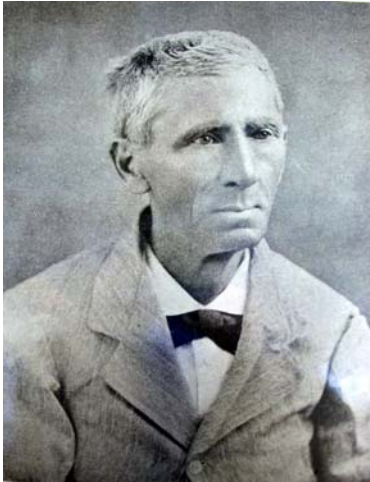
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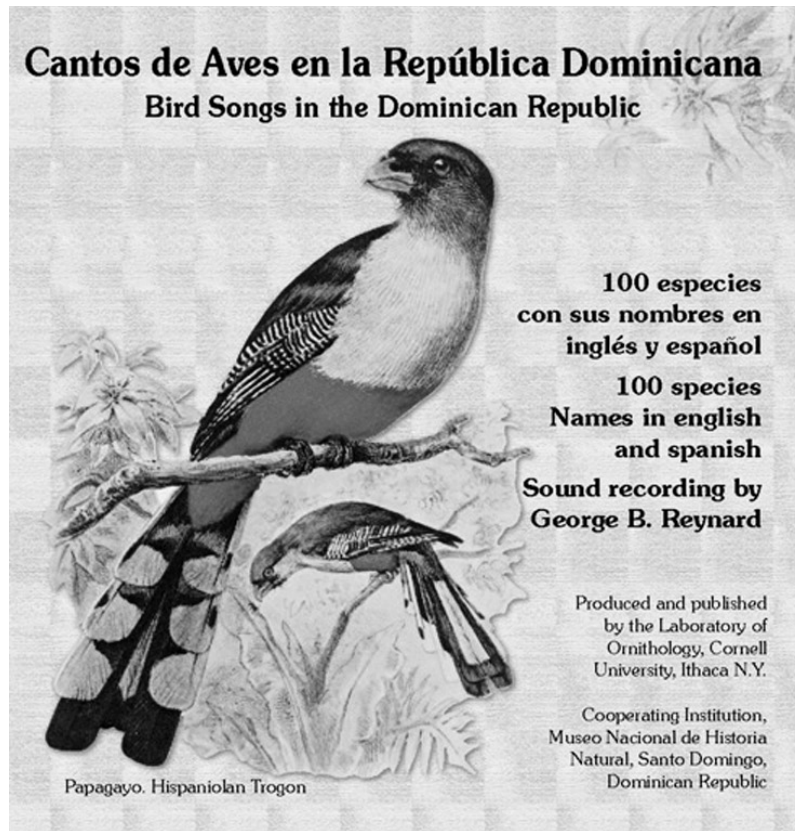
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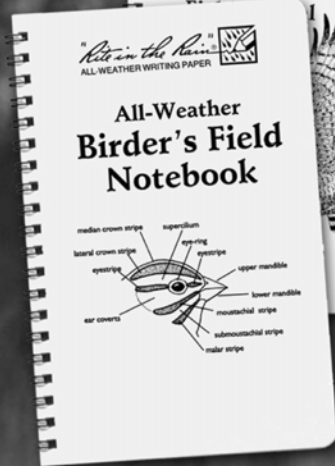
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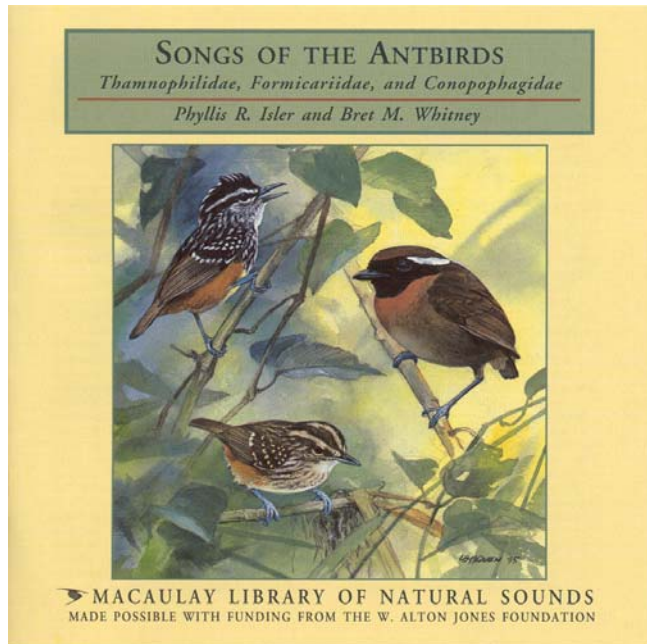
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The "Rite in the Rain" All-Weather Birder's and Hawk Watcher's Journals are ideal for the outdoor enthusiast and researcher alike.

- "Rite in the Rain" All-Weather writing paper, sheds water!
- Birder's has 1/2 blank pages for sketching, 1/2 lined for taking notes. Hawk Watcher's contains formatted pages with horizontal lines.
- 4 5/8" x 7" pocket size





## SONGS OF THE ANTBLRDS

Antbirds are one of the largest, most diverse groups of birds in the New World. They are also among the most secretive in nature. The Cornell Lab of Ornithology's Macaulay Library of Natural Sounds (MLNS) has responded by releasing an audio guide to help recreational birders and researchers alike tap into the mysteries of antbirds' wide-ranging vocal acrobatics.

Antbirds are found in the vast, complex Neotropical region between northern Mexico and north-central Argentina. Their habitats range from the steaming rainforests of western Amazonia to Andean cloud forests to the arid woodlands of the Paraguayan/Argentine *chaco*. In some locales, up to 50 species of antbirds may be present, and some sites host poorly known and very shy antpittas whose voices have become known to humans only in the past few years. Their whistles, croaks, chatters, caws, hoots, rasps, and rattles ring from the leaf litter of the forest floor to the dense green canopy above, and are captured on this audio guide.

Accompanying the CD is a 56-page booklet describing the birds' foraging strategies, habitat, and behavior information, and a play list keyed to put each song in behavioral context.

For researchers or recreational birders, it is a complete guide to these fascinating birds.

The CD may be purchased at:

The Cornell Lab of Ornithology's  
online store at

[www.withoutbricks.com/clo](http://www.withoutbricks.com/clo)

Wild Birds Unlimited at Sapsucker  
Woods — Tel.: (877) 266-4928


Bird Songs International  
Tel.: +31 595 528679

Retail price is US\$39.95 for the  
three-CD set.

**SONGS OF THE ANTBLRDS**  
*Thamnophilidae, Formicariidae, and Conopophagidae*

Antbirds make up one of the largest, most diverse groups of birds in the New World. More than 270 species have radiated to occupy virtually every wooded habitat of the vast and biogeographically complex Neotropical region between northern Mexico and north-central Argentina. Their whistles, croaks, chatters, caws, hoots, rasps, and rattles can create a staggering chorus, ringing through the forest from the leaf litter to the crowns of the canopy. This amazing vocal diversity, combined with the birds' secretive nature means that recognizing each species by its voice is a must.

This three-CD set presents the songs of nearly all currently recognized antbird species. Most feature three or four songs from a single individual, but some species for which significant geographic variation in vocalizations has been established are represented by two or more examples from different parts of the range. This audio guide is an essential tool for Neotropical researchers and recreational birders alike.



MACAULAY LIBRARY OF NATURAL SOUNDS  
CORNELL LABORATORY OF ORNITHOLOGY  
159 Sapsucker Woods Road, Ithaca, NY 14850 Tel. (607) 254-2404  
E-mail: <[libnatsounds@cornell.edu](mailto:libnatsounds@cornell.edu)> Web site: <[www.birds.cornell.edu](http://www.birds.cornell.edu)>

**VIIIth NEOTROPICAL ORNITHOLOGICAL CONGRESS**  
**VIIIth CONGRESO CHILENO DE ORNITOLOGÍA**



LLAMADO PARA LA PRESENTACIÓN DE TRABAJOS Y ANUNCIO GENERAL

La Sociedad de Ornitología Neotropical (SON) y la Unión de Ornitólogos de Chile (UNORCH) se complacen en anunciar la realización conjunta del VII Congreso Neotropical de Ornitología y el VII Congreso Chileno de Ornitología (NOC). Ambos congresos se realizarán en Puerto Varas, Región de Los Lagos, Chile, entre el 5 y el 11 de octubre de 2003.

Los detalles relativos a los costos de inscripción, traslado e información sobre hoteles estarán disponibles en el sitio web del congreso y serán enviados por correo a los miembros de la SON y UNORCH a comienzos de marzo. La dirección del sitio web del congreso es <http://www.nocchile.cl/>. Lamentamos los inconvenientes que la demora en la publicación de esta información pueden haberle ocasionado.

LLAMADO PARA LA PRESENTACIÓN DE TRABAJOS

El Comité Científico del Congreso invita a investigadores y estudiantes trabajando en Ornitología Neotropical a enviar propuestas (Inglés o Castellano) para simposia, talleres, mesas redondas, comunicaciones libres y paneles.

*Plazos.* La fecha límite para el envío de trabajos es el 30 DE JUNIO DE 2003. Se utilizará un sistema de aceptación continuo. El Comité Científico notificará a los interesados de la aceptación o rechazo de sus trabajos brevemente después de la recepción de los resúmenes o propuestas. Este sistema permitirá a los participantes comenzar la búsqueda de financiamiento para su asistencia lo antes posible. Si todos los espacios de tiempo para las presentaciones orales resultaran ocupados, las propuestas tardías deberán ser presentadas como paneles. Para asegurarse la posibilidad de hacer una presentación oral, por favor envíe su resumen lo antes posible.

*Como Enviar una Propuesta o un Resumen:* dirijase al sitio web del CON. En la sección "Programa Científico" seleccione el tipo de propuesta o resumen que desea enviar y siga las instrucciones. Todas las propuestas y resúmenes deben ser enviados a través del sitio web. Si tiene alguna dificultad con lo anterior puede contactar a Cristina Miyaki <[cymiyaki@usp.br](mailto:cymiyaki@usp.br)> o Jaime Jiménez <[jjimenez@ulagos.cl](mailto:jjimenez@ulagos.cl)>.

COMUNICACIONES LIBRES Y PANELES

Trabajos originales pueden ser presentados como contribuciones orales o como paneles. Ambos tipos de contribuciones se agruparán en sesiones temáticas. Para las comunicaciones orales se asignarán 15 min para la presentación y 5 para preguntas. Envíe un abstract de 300 palabras incluyendo título, nombre del(los) autor(es), afiliación(es)/dirección(es) y un e-mail para contacto.

SIMPOSIA

Los simposia deben abordar tópicos nuevos o síntesis significativas de campos de investigación ornitológica en el Neotrópico. Los simposia tendrán un organizador y un co-organizador y serán estructurados en bloques de 2 horas. Cada simposium contará con una introducción de 10 min, cinco presentaciones de 20 min, y una sección de cierre y conclusiones de 10 min. Cada participante tendrá 15 min para presentar y 5 min para preguntas. Los organizadores deben enviar una sinopsis de una página (Inglés o Castellano) incluyendo el objetivo, una lista tentativa de participantes, títulos de sus contribuciones, direcciones y una nota especificando si estas personas ya han aceptado participar. Las presentaciones de los simposia que sean correctamente revisados, corregidos y enviados a tiempo, serán publicados en las actas del Congreso.

PROPUESTAS PARA TALLERES Y MESAS REDONDAS

Se recibirán propuestas para talleres y mesas redondas de una hora de duración. Los talleres deben concentrarse en la discusión de nuevos conceptos o métodos. Las mesas redondas deberían tratar temas nuevos o controversiales. Los organizadores deben enviar una sinopsis de una página, incluyendo título, nombre e información de contacto del(los) organizador(es), objetivo, estructura y número estimado de participantes.

## AYUDAS DE VIAJE PARA ESTUDIANTES

Visite el sitio web del congreso para detalles sobre ayudas de viaje para estudiantes. La información deberá estar disponible a comienzos de marzo. No existirá ningún otro tipo de ayuda económica por parte de la SON o UNORCH para la asistencia al congreso.

## HAGASE MIEMBRO DE LA SOCIEDAD DE ORNITOLOGIA NEOTROPICAL

Cualquier persona interesada en la Ornitología puede ser un miembro de la Sociedad de Ornitología Neotropical previo pago de una cuota social. Todos los miembros reciben la revista ORNITOLOGÍA NEOTROPICAL. El costo de la membresía por un año calendario es: Estudiante (se requiere verificación del estado) US \$15; Latinoamericanos: US \$25; individuos de otras nacionalidades: US\$35; bibliotecas: US \$60. ORNITOLOGÍA NEOTROPICAL del año en curso es enviada por correo de tercera clase. Si se requiere el envío por correo aéreo deben agregarse US \$20 al costo de la suscripción. Todos los pagos deben hacerse al tesorero en dólares estadounidenses, ya sea por tarjeta de crédito (Visa o Master Card), cheque u orden internacional de traspaso de fondos.

Un formulario de postulación para membresía está disponible en el sitio de la SON en: <http://www.neotropicalornithology.org/>

Los formularios deben ser enviados a:

J. Michael Meyers  
Treasurer, The Neotropical Ornithological Society  
USGS Patuxent Wildlife Research Center  
Warnell School of Forest Resources  
The University of Georgia  
Athens, Georgia 30602-2152 USA

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 CALL FOR PAPERS AND GENERAL ANNOUNCEMENT

The Neotropical Ornithological Society, NOS, and the Chilean Ornithologists' Union, UNORCH (the local host), are pleased to announce their joint VII Neotropical Ornithological Congress and the VII Chilean Ornithological Congress (NOC). The two Congresses will be held in Puerto Varas, Xth region, Chile, from October 05 to October 11, 2003.

All details about registration fees, travel, and hotel information will be posted on the Congress website and mailed to NOS and UNORCH members in early March. The website address is <http://www.nocchile.cl/>. We apologize for any inconvenience that may have been caused by the delay in making this information available.

## CALL FOR PAPERS

The Scientific Program Committee (SPC) invites ornithologists and students working on Neotropical ornithology to submit proposals (in English or Spanish) for Symposia, Workshops, Round-tables, Papers, and Posters.

*Deadlines:* the deadline for submissions is 30 June 2003. A rolling acceptance system is in use. The scientific committee will notify submitters of acceptance or rejection shortly after receipt of each abstract or proposal. This system will allow submitters to begin seeking funding immediately. Submitters are encouraged to submit proposals as early as possible. If all time slots for oral presentations are filled, late submissions may have to be presented as posters. To be sure of getting a time slot for an oral presentation, be sure to submit as early as possible.

*How to Submit a Proposal or an Abstract:* Go to the NOC website. In the section on Scientific Program, click on the type of proposal or abstract you wish to submit and follow the instructions. Proposals and abstracts must be submitted through the website. If you have difficulty submitting your proposal or abstract through the website, contact Cristina Miyaki at [cymiyaki@usp.br](mailto:cymiyaki@usp.br) or Jaime Jiminez at [jjimenez@ulagos.cl](mailto:jjimenez@ulagos.cl).

## CONTRIBUTED PAPERS AND POSTERS

Original findings may be presented as an Oral Contribution or as a Poster. Oral Contributions and Posters will be grouped in sessions according to the subject. Orals will be allowed 15 min for the presentation and 5 min for questions. Provide an abstract of 300 words including title, author(s) name(s), affiliation(s)/address(es), and e-mail for contact.

SYMPOSIA

Symposia should address new topics or significant syntheses of major avian research fields conducted in the neotropics. Symposia will be chaired by one convener and one co-convener and will be organized in 2 h blocks. Each symposium will consist of a 10 min introduction, five presentations of 20 min each, and a 10 min closing conclusion section. Each speaker will have 15 min for presenting and 5 min for questions. A total of 20 symposia will be considered. Organizers should send a one-page synopsis (English or Spanish) with details on goal and purpose, a tentative list of speakers, titles of their contributions, their addresses, and a note whether they have agreed to participate. Symposia papers, if properly reviewed, corrected and delivered on due time, will be published in the Proceedings.

WORKSHOPS AND ROUND-TABLE PROPOSALS

Proposals for one-hour workshops and round-tables are also invited. Workshops should concentrate on discussions of new concepts or methods. Round-tables should cover new or controversial issues. Organizers should provide a one-page synopsis that includes a title, name and contact information of organizer(s), goal or purpose, structure, and expected number of participants.

STUDENT TRAVEL AWARDS

Check the website for details about student travel awards. Information should be posted in early March. No other funds will be made available by the NOS or UNORCH for travel or other conference-related expenses.

BECOME A MEMBER OF THE NEOTROPICAL ORNITHOLOGICAL SOCIETY

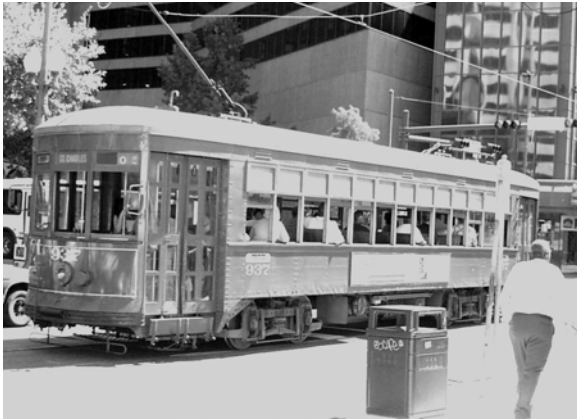
Any person interested in ornithology may become a member of the Neotropical Ornithological Society upon payment of dues. Members of all classes receive *ORNITOLOGIA NEOTROPICAL*. Membership dues per calendar year are: Students (with verification of student's status only): US \$15.00; Subscriber from Latin American countries: US \$25.00; Subscribers from all other countries: US \$35.00; Libraries US \$60.00. *ORNITOLOGIA NEOTROPICAL* of the current year sent by third class mail. If airmail delivery is required, please add US \$20.00 to the subscription above. All payments must be to the treasurer in US currency, either by credit card (Visa or Master Card), or by check or international money order drawn on a US bank.

A printable membership application form can be found on the NOS website at: <http://www.neotropicalornithology.org/>

Membership applications should be addressed to:

J. Michael Meyers  
Treasurer, The Neotropical Ornithological Society  
USGS Patuxent Wildlife Research Center  
Warnell School of Forest Resources  
The University of Georgia  
Athens, Georgia 30602-2152 USA

A GALLERY OF IMAGES OF SOCIETY ACTIVITIES AT THE *NORTH AMERICAN ORNITHOLOGICAL CONFERENCE*, NEW ORLEANS, LOUISIANA, SEPTEMBER 2002



Cable car in downtown New Orleans



Orlando Garrido, Herlitz Davis, Victor Joseph, and Joe Wunderle awaiting cable car transportation to hotel



Birdwatching in front of the InterContinental Hotel



Preparations for arrival of hurricane in hotel



Ann Haynes Sutton, Tony White, Jim Kushlan (back to camera), and Eric Carey



David Wege, Adrienne Tossas, and Rosemarie Gnam





President Eric Carey



Rosemarie Gnam and Bethany Woodworth



Jim Kushland presiding at Waterbirds Workshop



Orlando Garrido and Paul Hamel, the proud owner of Nil Navarro's hummingbird painting



Lisa Sorenson, Lynn Gape, and Tony White at Waterbirds Workshop



## **2003 MEETING ANNOUNCEMENT**

The Society for the Conservation and Study of Caribbean Birds and the Tobago Local Organizing Committee take pleasure in inviting you to the 14<sup>th</sup> meeting of the Society which will be held in the beautiful island of Tobago, in the “deep south” of the Caribbean.

The meeting will take place at the Tobago Hilton Hotel from 21 to 26 July 2003. The Hilton is just minutes away from some of the best birding in the Caribbean, and is on one of the best beaches in the entire Caribbean.

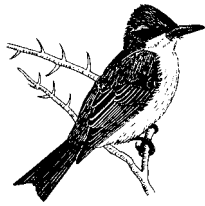
The meeting will host its usual assortment of scientific sessions, but there are also several interesting workshops planned. These include the following:

1. **Media Workshop:** to involve media representatives, as well as persons who want to learn how to effectively use the media for public education and support.
2. **Avitourism as a Business:** We have secured the services of one of the world’s leading ecotourism experts. The workshop will focus on teaching participants both from Tobago and throughout the Caribbean how to develop avitourism products and how to make it a successful business. The main objective of this workshop is to increase the awareness among participants of not only the biological but also the economic importance of birds. It is hoped that the increased value that such awareness places on birds will lead to their long-term conservation.
3. **Invasive species in the Caribbean:** Invasive species are recognized worldwide as important in the declines of native species. The Caribbean continues to face mounting invasive species problems that threaten many species of birds. Through presentations by experts and by the discussion and planning that follows, development of a regional approach to invasive species issues will be undertaken.
4. **Conflicts between Birds and Agriculture** – what happens when species that are the focus of conservation initiatives themselves begin to emerge as problems and pests? What are the solutions for these difficult scenarios? We hope to bring focused attention to this problem, and will begin developing a strategy for a regional approach to solutions. We have identified experts who have scored wonderful successes against difficult invasive species problems. They will share their experiences, and help guide us toward adapting methodologies for Caribbean invasive species problems.

### **Birding Trips:**

Several pre- and post-conference birding trips are being developed. These will include fantastic birding opportunities on Tobago, as well as great trips to the sister isle, Trinidad. The Asa Wright Nature Centre in Trinidad is acknowledged as one of the greatest birding experiences in the Caribbean — this phenomenal birding opportunity will also be offered through special arrangements to our participants.

Soon there will be a call for papers and an invitation to register. We are currently negotiating the most favorable rates possible, and working in conjunction with the local committee to provide with you with a comprehensive information package to help finalize your plans to attend.



SOCIEDAD CARIBEÑA DE ORNITOLOGÍA

# EL PITIRRE

SOCIETY OF CARIBBEAN ORNITHOLOGY

Summer 2002 Vol. 15, No. 2

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