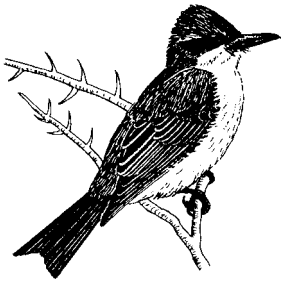


SOCIEDAD CARIBEÑA DE ORNITOLOGÍA

EL PITIRRE

SOCIETY OF CARIBBEAN ORNITHOLOGY

Summer 2001 Vol. 14, No. 2

(ISSN 1527-7151)

CONTENTS

INTERESTING DISTRIBUTIONAL AND TEMPORAL RECORDS FROM CUBA, WINTER 2000–2001. *Guy M. Kirwan, G. Michael Flieg, Rob Hume, and Sherri LaBar* 43

THE SOCIETY OF CARIBBEAN ORNITHOLOGY TO CO-HOST THE THIRD NORTH AMERICAN ORNITHOLOGICAL CONFERENCE IN NEW ORLEANS, LOUISIANA. 46

STATUS, ABUNDANCE, AND DISTRIBUTION OF BIRDS OF MARICAO STATE FOREST, PUERTO RICO. *Adrianne G. Tossas and Carlos A. Delannoy* 47

STATUS OF THE LITTLE EGRET (*EGRETTA GARZETTA*) IN TRINIDAD AND TOBAGO. *Floyd E. Hayes and Graham L. White* 54

FIRST SIGHT RECORD OF PHILADELPHIA VIREO (*VIREO PHILADELPHICUS*) FOR CURAÇAO, NETHERLANDS ANTILLES, WITH NOTES ON OTHER MIGRANT SONGBIRDS. *Jeffrey V. Wells and Allison M. Childs Wells* 59

FIRST RECORDS OF CARIBBEAN MARTIN (*PROGNE DOMINICENSIS*) FOR TRINIDAD, WITH COMMENTS ON ITS SUPPOSED MIGRATION TO SOUTH AMERICA. *William L. Murphy and Floyd E. Hayes* 61

FIRST SIGHT RECORDS OF SWAINSON'S HAWK (*BUTEO SWAINSONI*) FOR TRINIDAD AND CHACACHACARE ISLAND, WITH COMMENTS ON ITS STATUS AND TRANS-CARIBBEAN MIGRATION. *Floyd E. Hayes* 63

WE CALLED IN THE MILITARY. *Rolf G. Krahe* 66

ABSTRACTS OF PAPERS AND POSTERS, THIRTEENTH MEETING OF THE SOCIETY OF CARIBBEAN ORNITHOLOGY, TOPES DE COLLANTE, CUBA, JULY 2001. 67

A SURVEY AND INVENTORY OF THE AVIFAUNA OF THE MASON RIVER GAME SANCTUARY, CLARENDON, JAMAICA. *Suzanne Davis and Catherine Levy* 67

NOTABLE BIRDS OF THE DOMINICAN REPUBLIC. *R. Eduardo Vásquez, Kate Wallace, and Steven Latta* 67

CHARACTERIZATION OF AVIAN DIVERSITY IN EASTERN CUBA, WITH AN EMPHASIS ON THE SIERRA MAESTRA AND NIPE-SAGUA BARACOA MOUNTAIN CHAINS. *Luis Omar Melián Hernández, Freddy Rodríguez Santana, and José A. Saco* 67

THE STATUS OF RESIDENT AND MIGRANT BIRD COMMUNITIES IN CUBAN ECOSYSTEMS. *Hiram González Alonso, Alejandro Llanes Sosa, Bárbara Sánchez Oria, Daysi Rodríguez Batista, Eneider Pérez Mena, Pedro Blanco Rodríguez, Ramona Oviedo Prieto, and Alina Pérez Hernández* 68

MONITORING BIRD MIGRATION THROUGH THE SOUTHEASTERN UNITED STATES. *Cecilia Riley, William C. Hunter, Mark Woodrey, George Wallace, Lynda Wyant, and Paul Hamel* 68

RAPTOR MIGRATION THROUGH THE FLORIDA KEYS AND INTO THE CARIBBEAN. *Casey Lott* 69

CUBA'S ROLE AS A STOP-OVER FOR MIGRATING SWALLOW-TAILED KITES. *Kenneth D. Meyer and Gina M. Zimmerman* 69

STATUS OF THE ENDANGERED ENDEMIC GRENADA DOVE (*LEPTOTILA WELLSI*) ON GRENADA, WEST INDIES. *Bonnie L. Rusk and David E. Blockstein* 70

REGIONAL AND INTERNATIONAL BIRD CONSERVATION EFFORTS ON MEXICO'S YUCATAN PENINSULA. *Barbara Mackinnon De Montes* 70

IMPORTANT BIRD AREAS (IBAS) IN CUBA. *Susana Aguilar and Antonio Perera* 71

BIRD CONSERVATION IN THE BERMEJAS LOCALITY, CIÉNAGA DE ZAPATA, CUBA. *Arturo Kirkconnell and Rosa M. Posada* 71

A REVIEW OF HURRICANE EFFECTS ON BIRDS AND THEIR RESOURCES WITH IMPLICATIONS FOR CONSERVATION. *Joseph M. Wunderle* 72

Continued on back outside cover

EL PITIRRE

THE BULLETIN OF THE SOCIETY OF CARIBBEAN ORNITHOLOGY
EL BOLETÍN INFORMATIVO DE LA SOCIEDAD CARIBEÑA DE ORNITOLOGÍA

Editor: James W. Wiley, *Maryland Cooperative Fish and Wildlife Research Unit, 1120 Trigg Hall, University of Maryland Eastern Shore, Princess Anne, Maryland 21853 USA; Telephone: (410) 651-7654; Fax: (410) 651-7662; e-mail: jwwiley@mail.umes.edu*
Associate Editor for French West Indies: Philippe Feldmann, *CIRAD-Micap, TA 179/03, F-34398 Montpellier cedex 5, France; e-mail: philippe.feldmann@cirad.fr*
Associate Editor for Spanish-Language Materials: José Placer*, Coereba Society* (*www.coereba.org*); *e-mail: jplacer@coereba.org*

News, comments, requests, and manuscripts should be mailed to the Editor or an Associate Editor for inclusion in the newsletter.
Noticias, comentarios, peticiones y manuscritos deben ser enviadas al Editor o Editor Asociado para inclusión en el boletín.

THE SOCIETY OF CARIBBEAN ORNITHOLOGY

The Society of Caribbean Ornithology is a non-profit organization whose goals are to promote the scientific study and conservation of Caribbean birds and their habitats, to provide a link among island ornithologists and those elsewhere, to provide a written forum for researchers in the region, and to provide data or technical aid to conservation groups in the Caribbean.

La Sociedad Caribeña de Ornitología es una organización sin fines de lucro cuyas metas son promover el estudio científico y la conservación de la avifauna caribeña, auspiciar un simposio anual sobre la ornitología caribeña, ser una fuente de comunicación entre ornitólogos caribeños y en otras áreas y proveer ayuda técnica o datos a grupos de conservación en el caribe.

MEMBERSHIP AND SUBSCRIPTIONS

Any person interested in West Indian birds may become a member of the Society of Caribbean Ornithology. All members receive the Society's bulletin, *El Pitirre*. Regular membership rates are US$20 per year. Institutional subscriptions are US$120 per year. Memberships of interested persons who are not able to pay regular

The Society of Caribbean Ornithology thanks Winged Ambassadors and the Division of International Conservation of the U. S. Fish and Wildlife Service for their support.

COEREBA

We thank the Coereba Society (www.coereba.org) for their editorial and translation assistance.

SOCIEDAD CARIBEÑA DE ORNITOLOGÍA

EL PITIRRE

SOCIETY OF CARIBBEAN ORNITHOLOGY

Summer 2001 Vol. 14, No. 2

INTERESTING DISTRIBUTIONAL AND TEMPORAL RECORDS FROM CUBA, WINTER 2000–2001

GUY M. KIRWAN[1], G. MICHAEL FLIEG[2], ROB HUME[3], AND SHERRI LABAR[4]
[1]*74 Waddington Street, Norwich NR2 4JS, UK*; [2]*6803 Nashville Avenue, St. Louis, MO 63139, USA*; [3]*15 Cedar Gardens, Sandy, Bedfordshire SG19 1EY, UK*; and [4]*252 Persimmon Lane, Bangor, PA 18013, USA*

Abstract.—We present interesting ornithological observations of 12 species from Cuba, made during fieldwork in December 2000 and January 2001. Of principal interest are the following: the first January records of Stilt Sandpiper (*Calidris himantopus*), Chestnut-sided (*Dendroica pensylvanica*) and Blackpoll warblers (*D. striata*); the fourth and fifth records of Lesser Black-backed Gull (*Larus fuscus*); the fifth record of Marbled Godwit (*Limosa fedoa*); the first records in the Oriente of White-cheeked Pintail (*Anas bahamensis*) and Spotted Rail (*Padirallus maculates*); and the first winter record in the West Indies of Warbling Vireo (*Vireo gilvus*).

Resumen.—REGISTROS DE DISTRIBUCIÓN Y ESTACIONALIDAD DE INTERÉS EN CUBA, INVIERNO 2000–2001. Presentamos observaciones ornitológicas de interés para 12 especies, resultado de visitas a Cuba en diciembre 2000 y enero 2001, principalmente los primeros registros en enero de *Calidris himantopus*, *Dendroica pensylvanica* y *D. striata*; el quinto y seis registro de *Larus fuscus*; el quinto registro de *Limosa fedoa*; el primer registro para la zona oriental de *Anas bahamensis* y *Padirallus maculates*; y el primer registro invernal de *Vireo gilvus* en las Antillas.

Key words: Anas bahamensis, Anas platyrhynchos, *Blackpoll Warbler*, Calidris himantopus, *Chestnut-sided Warbler*, *Cuba*, *Cyanerpes cyaneus*, Dendroica pensylvanica, Dendroica striata, Larus fuscus, *Lesser Black-backed Gull*, Limosa fedoa, *Mallard*, *Marbled Godwit*, Padirallus maculates, *Red-legged Honeycreeper*, *Spotted Rail*, *Stilt Sandpiper*, *Thick-billed Vireo*, Vireo crassirostris, Vireo gilvus, *Warbling Vireo*, *White-cheeked Pintail*, Wilsonia pusilla, *Wilson's Warbler*, *winter records*

THE PUBLICATION OF Garrido and Kirkconnell (2000) has permitted ornithologists and birders working in Cuba ready access to information on the precise status and distribution of bird species occurring in the island. During winter 2000–2001, we were present in Cuba for varying periods (Kirwan from 31 December 2000 to 22 January 2001, and from 27 to 31 January 2001; Flieg from 4 to 22 January; LaBar from 14 to 22 January; and Hume from 29 November to 13 December), and made several observations that augment our knowledge of the status and distribution of Cuban birds, as presented below. All dates refer to 2001, unless otherwise noted. Nomenclature follows the American Ornithologists' Union (1998).

Mallard (*Anas platyrhynchos*).—A drake was at the northwestern end of Embalse La Yaya, Guantánamo province, on 7 January, among a large, tight flock of Blue-winged Teal (*A. discors*). Few previous records exist for Cuba (Garrido and Kirkconnell 2000).

White-cheeked Pintail (*Anas bahamensis*).—Kirwan and Flieg located 43 of these distinctive ducks at the northwestern end of Embalse La Yaya, Guantánamo province, on 7 January. The species is not mapped for the Oriente in Garrido and Kirkconnell (2000).

Spotted Rail (*Padirallus maculates*).—An adult was observed, close to sunset, on a small marsh on the eastern side of Siboney village, Santiago de Cuba province, on 6 January. Other species available for

comparison included Common Moorhen (*Gallinula chloropus*) and American Coot (*Fulica americana*). This is the first report in Cuba east of the Zapata region (Garrido and Kirkconnell 2000).

Marbled Godwit (*Limosa fedoa*).—Hume located one, the fifth report in Cuba (Garrido and Kirkconnell 2000), at Playa Santa Lucia, near Playa Los Cocos, on 9 December 2000, observing the principal identification features through both telescope and binoculars.

Stilt Sandpiper (*Calidris himantopus*).—A group of at least 15 was feeding, among a tight flock of Lesser (*Tringa flavipes*) and Greater yellowlegs (*T. solitaria*), and Short-billed Dowitchers (*Limnodromus griseus*), on saltpans close to Baitiquirí village, Guantánamo province, on 7 January. Garrido and Kirkconnell (2000) do not list any January reports for Cuba.

Lesser Black-backed Gull (*Larus fuscus*).—Hume reported two as follows. The first was at Playa Santa Lucia, on the northern coast, on 1 December 2000. It was larger than nearby Laughing Gulls (*Larus atricilla*), and approximately the size of a Herring Gull (*L. argentatus*). It was observed resting on the water, through a 30x telescope, at ca. 100 m in excellent light, and on the beach for a short time. Flight views were quite good but, in the windy conditions, details of its exact wingtip pattern proved difficult to ascertain. Its mid-gray upperparts appeared to be exactly the shade typical of a British Lesser Black-backed Gull *L. fuscus graellsii* (which is also the race most frequently reported on the eastern USA coast, including Florida; George Wallace, *in litt.* 2001). Its coloration was roughly equivalent to a Laughing Gull, or a shade darker, on the back and wings. Hume is familiar with various races of Herring Gull and the previous March had studied the Atlantic race of Yellow-legged Gull (*L. michahellis* [*cachinnans*] *atlantis*) on Madeira. This individual was darker than any West European Yellow-legged or Herring Gull and had a much less contrasted black wingtip. It also had a more heavily streaked head and neck than Yellow-legged Gulls.

The head and neck were dull white, extensively streaked grayish: the streaks were fine but obvious on the crown, broader on the cheeks and neck-sides, and broad but more diffuse on the chest-sides. There was a concentration of thin dark streaks around the eye (producing a slight masked effect in flight), a thick dark eyering, and a thin dark line behind the eye. The hindneck had a patch of denser, darker streaks in a diamond-shaped area. Apart from smudging on the chest, the underside, as well as the rump and tail, was white. The back, scapulars, and upperwing were leaden gray. The scapulars had only tiny white tips. The tertials and secondaries had a much broader, obvious white area at the tips. The closed wingtips were black with white marks: apparently three large, fresh white spots on new feathers and old, unmolted feathers at the extreme tip, dull white edged narrowly with black (presumably a white "mirror" and worn feather tips). In flight it was clearly in molt with several new inner and middle primaries, and some missing or short outer ones, producing a ragged appearance; the tail also had gaps on each side where feathers were missing or short. This is late for such as state of molt, but not unusual.

The upperwing also possessed a feature exhibited by a small proportion of large gulls, most often on Lesser Black-backed Gull: some primary coverts were white. On the left wing two or three feathers formed a single broad white triangle, whereas on the right wing two white feathers were separated by a dark one. The underwing was typical of the species, with dark gray on the underside of the secondaries and primaries, and a black tip with white terminal spots (exact pattern not determined, but the black area was reduced by some missing or short primaries). The eyes appeared pale cream-colored with a blackish ring; the bill yellow with a paler yellow tip and a red patch around the gonys; the legs, seen well several times, were rich yellow. The combination of back color, streaked head, and leg color eliminate any other species.

Remarkably, at nearby Playa Los Cocos, on 9 December 2000, Hume discovered another adult Lesser Black-backed Gull at the edge of a freshwater lagoon close to the beach. It was different in minor detail when seen at rest but clearly different in flight, as it had no white on the primary coverts. It, too, was a typical winter adult, standing close to Laughing and first-winter Herring Gulls (intermediate in size, but closer to Herring). It was more slender than Herring Gull, with longer wings. The upperparts were typical *L. f. graellsii* slate- or lead-gray. The head was more uniformly marked than the first, without the dark diamond-shaped patch on the nape, but broad dark streaks on the lower neck; the neck-sides and chest were broadly streaked. The scapulars had a large white tip; the tertials two slightly separated white crescents above broad white secondary tips. The closed wingtips appeared all black except for a single white spot on the shortest exposed feather. Unfortunately, the wingtip pattern was again not seen well, because it flew off while Hume was taking notes: he looked up to see it flying away, revealing that it was obviously in molt with ragged outer primaries and an

uneven tail. The bill was yellow with a red spot; the eyes pale; the legs clearly rich, but slightly greenish, yellow.

These records are the fourth and fifth reports in Cuba, following one videotaped by Arturo Kirkconnell and Alvaro Jaramillo, on Cayo Romano, on 5 April 2000 until at least mid-month (Mazar Barnett and Kirwan 2000). Full details of this record, which was made after Garrido and Kirkconnell (2000) had gone to press, have not yet been published. There are also two earlier reports: Smith and Smith (2000) observed three near Playa Santa Lucia, on 11 November 1999, and mention an earlier report from the same location, by Paul Prior, on 14 November 1998. Given this, it has been deemed worthwhile to present full descriptions in support of these reports.

Thick-billed Vireo (*Vireo crassirostris cubensis*).—Kirwan and others heard the distinctive song of this recently described endemic subspecies (Kirkconnell and Garrido 2000) on Cayo Guillermo, Archipiélago de Sabana-Camagüey, on 20 January. Kirwan is familiar with the songs of this subspecies through regular visits to Cayo Paredón Grande and had, indeed, tape-recorded this taxon on the last-named cay the same morning. Records away from Cayo Paredón Grande, the type locality, are few and principally come from one area on Cayo Coco (Wallace *et al*. 1999), which has recently been extensively degraded by continuing human development (A. Kirkconnell, pers. comm.). We are aware of only one previous report from Cayo Guillermo.

Warbling Vireo (*Vireo gilvus*).—The first winter report for Cuba and the West Indies (Raffaele *et al.* 1998, Garrido and Kirkconnell 2000) was of the nominate eastern race (which is sometimes treated as a species, Eastern Warbling-Vireo), observed by Kirwan in woodland at the northwestern end of Embalse La Yaya, Guantánamo province, on 7 January. Nominate *gilvus* typically winters in Oaxaca to Chiapas, Mexico, and south through Guatemala and El Salvador, more rarely Honduras and Nicaragua; it is accidental on Bermuda at this season (American Ornithologists' Union 1998).

Chestnut-sided Warbler (*Dendroica pensylvanica*).—LaBar observed one on Cayo Coco, on 20 January; it had some yellow on the crown; the cheeks were grayish-white; there was some black in the malar streak; the chestnut coloration on the breast-sides was not extensive, starting around the "shoulder" and ending above the flanks; and it had whitish wingbars and some white in the tail. This is the first January report for Cuba (Garrido and Kirkconnell 2000), and one of the few such reports from the West Indies. It winters principally in southeastern Mexico, Central America, and northwestern South America (American Ornithologists' Union 1998).

Blackpoll Warbler (*Dendroica striata*).—A separate male and female of this distinctive warbler were observed in woodland at the northwestern end of Embalse La Yaya, Guantánamo province, on 7 January. This is the first January report for Cuba (Garrido and Kirkconnell 2000), and one of the few such reports from the West Indies. It winters principally in northwestern South America (American Ornithologists' Union 1998).

Wilson's Warbler (*Wilsonia pusilla*).—Singles were closely watched in woodland at the northwestern end of Embalse La Yaya, Guantánamo province, on 7 January, and at Parque Nacional La Güira, Pinar del Río, on 22 January. These are the second and third January reports for Cuba (Garrido and Kirkconnell 2000), and suggest that the species may be overlooked at this season. Interestingly, George Wallace (*in litt*. 2001) reported unprecedented numbers of this species present in Florida, where it is normally considered a rare transient in fall and a very rare winter resident, during autumn 2000 and winter 2000–2001. Care was taken during both observations to eliminate this species from Hooded Warbler (*W. citrina*); on both occasions the lack of white tail spots was clearly noted.

Red-legged Honeycreeper (*Cyanerpes cyaneus*).—On 13 January, Flieg and Kirwan, together with Arturo Kirkconnell, observed at least four or five, including juveniles, of this distinctive species in the grounds of the Hotel Kohly, Playa, within La Habana, constituting a minor range extension and perhaps the first report of this species in the city limits.

ACKNOWLEDGEMENTS

We are grateful to George Wallace for his many pertinent comments on the manuscript and sharing his consummate knowledge of Cuban birds. Juan Mazar Barnett checked the Spanish summary.

LITERATURE CITED

AMERICAN ORNITHOLOGISTS' UNION. 1998. Checklist of North American birds. 7th ed. American Ornithologists' Union, Washington DC.

GARRIDO, O. H., AND A. KIRKCONNELL. 2000. Field guide to the birds of Cuba. Cornell Univ. Press, Ithaca, New York.

KIRKCONNELL, A., AND O. H. GARRIDO. 2000. Nueva subespecie del Vireo de Bahamas *Vireo*

crassirostris de Cayo Paredón Grande, archipiélago de Sabana-Camagüey, Cuba. Cotinga 14: 79–87.

MAZAR BARNETT, J., AND G. M. KIRWAN. 2000. Neotropical Notebook. Cotinga 14: 101–107.

RAFFAELE, H., J. WILEY, O. GARRIDO, A. KEITH, AND J. RAFFAELE. 1998. A guide to the birds of the West Indies. Princeton Univ. Press, Princeton, New Jersey.

SMITH, P. W. AND S. A. SMITH. 2000. Recent sight reports of Lesser Black-backed Gulls (*Larus fuscus*) from Cuba. El Pitirre 13:43–44.

WALLACE, G. E., E. A. WALLACE, D. R. FROELICH, A. KIRKCONNELL, E. S. TORRES, H. CARLISLE, AND E. MACHELL. 1999. Hermit Thrush and Black-throated Gray Warbler, new for Cuba, and other significant bird records from Cayo Coco and vicinity, Ciego de Ávila province, Cuba, 1995–1997. Florida Field Nat. 27: 37–51.

THE SOCIETY OF CARIBBEAN ORNITHOLOGY TO CO-HOST THE THIRD NORTH AMERICAN ORNITHOLOGICAL CONFERENCE IN NEW ORLEANS, LOUISIANA

The Society of Caribbean Ornithology (SCO) has accepted an invitation to co-host the third North American Ornithological Conference, to be held 24–31 September 2002 in New Orleans. Although SCO will not hold a Society meeting at the conference (the next SCO meeting is scheduled for 2003), SCO will be sponsoring a symposium on the conservation and study of Caribbean birds. Rosemarie Gnam, Brandon Hay, and Carolyn Wardle will be organizing this effort. Please check the SCO website for further details.

SCO encourages its members, especially from the Caribbean region, to submit papers for the general paper sessions and for other symposia. Topics under consideration include: the impact of birds and bird biologists on conservation; an array of coffee-related topics, such as the bird–plant–insect interactions and economic and other issues that are related to efforts to increase the market share of shade-grown, organic, free-traded coffee; and the importance of fragmentation and edge effects in tropical habitats. Watch the North American Ornithological Conference (NAOC) website at http://www.tulane.edu/~naoc-02/ for further details on the program and for information on registration.

SCO particularly encourages students to submit papers. Three of the co-hosts – the American Ornithologists' Union (AOU), the Cooper Ornithological Society (COS), and the Raptor Research Foundation (RRF) – offer student travel awards. Although each limits eligibility to members of the societies, student memberships are inexpensive – $15/year for RRF, $22/year for COS, and $20/year for AOU. In fact, the AOU provides several hundred grants in the form of a three-year AOU membership to qualifying western hemisphere undergraduate or graduate students interested in pursuing a career in ornithology (see page 83 of this issue). Membership grants will provide full membership in the AOU (including subscription to *The Auk*) for three consecutive years, and are not renewable. See the AOU website at http://www.aou.org/aou/Member.html for details. Details for membership in COS and RRF can be found by visiting BIRDNET – the website of the Ornithological Council – at http://www.nmnh.si.edu/BIRDNET/index.html.

SCO members interested in attending this meeting should begin to look for funding immediately. Although some funding may be available from the Ornithological Council, the conference organizers, or other sources, there is no certain source of funding at this time. Should funding be available, SCO will give preference to those who (a) have demonstrated a commitment to the study and/or conservation of Caribbean birds, (b) will participate in the symposium it is organizing or some other Conference-related event, (c) are current members of the SCO, and (d) have demonstrated an effort to raise funding. SCO will be reluctant to provide full funding to anyone.

This is a great opportunity for SCO members to meet and talk with their colleagues, who rarely have an opportunity to attend SCO meetings, and to show how much SCO's capacity and energy have grown over the years. It is also a very good opportunity for students to meet potential mentors and advisors.

STATUS, ABUNDANCE, AND DISTRIBUTION OF BIRDS OF MARICAO STATE FOREST, PUERTO RICO

ADRIANNE G. TOSSAS[1] AND CARLOS A. DELANNOY[2]

[1]*Department of Biology*, *University of Puerto Rico*, *Río Piedras*, *Puerto Rico 00931*; and
[2]*Department of Biology*, *University of Puerto Rico*, *Mayagüez*, *Puerto Rico 00681*

Abstract.—We report 73 birds species in 26 families, including 31 new records, based on observations made during visits to Maricao State Forest from 1978 to 2000. The best-represented family was the Parulidae, with 19 species, including some rare migratory species in Puerto Rico, such as Swainson's (*Limnothlypis swainsonii*) and Kentucky Warblers (*Oporornis formosus*). The species total in Maricao corresponded closely with the number of species in other montane forests in Puerto Rico. Maricao State Forest seems to be marginal habitat for the endemic and endangered Puerto Rican Nightjar (*Caprimulgus noctitherus*) and Puerto Rican Broad-winged Hawk (*Buteo platypterus brunnescens*), but is prime habitat for the endangered Puerto Rican Sharp-shinned Hawk (*Accipiter striatus venator*) and the endemic Puerto Rican Vireo (*Vireo latimeri*). Populations of the resident Adelaide's Warbler (*Dendroica adelaidae*) and Elfin Woods Warbler (*D. angelae*) occur in sympatry only in Maricao State Forest.

Resumen.—ESTADO, ABUNDANCIA Y DISTRIBUCIÓN DE LAS AVES DEL BOSQUE DE MARICAO, PUERTO RICO. Reportamos 73 especies de aves, incluyendo 31 nuevos registros, basados en observaciones hechas durante visitas al Bosque Estatal de Maricao de 1978 a 2000. La familia mejor representada fue la Parulidae, con 19 especies, incluyendo algunas especies migratorias raras en Puerto Rico como la Reinita de Swainson (*Limnothlypis swainsonii*) y la Reinita de Kentucky (*Oporornis formosus*). El número total de especies en el Bosque Estatal de Maricao es similar al informado para otros bosques montanos en Puerto Rico. El Bosque Estatal de Maricao aparenta ser hábitat marginal para el Guabairo Pequeño de Puerto Rico (*Caprimulgus noctitherus*) y el Guaraguao de Bosque (*Buteo platypterus brunnescens*), ambas formas endémicas y en peligro de extinción, pero es hábitat primario para el Halcón de Sierra (*Accipiter striatus venator*), en peligro de extinción, y para el endémico Bien-te-veo (*Vireo latimeri*). Poblaciones residentes de la Reinita Mariposera (*Dendroica adelaidae*) y la Reinita del Bosque Enano (*D. angelae*) coexisten en simpatría únicamente en el Bosque Estatal de Maricao.

Key words: *abundance, biodiversity*, *bird populations, Puerto Rico, status*

INTRODUCTION

LITTLE IS KNOWN ABOUT the avian species richness of Maricao State Forest, the second largest forest reserve in Puerto Rico. An inventory and species list of the avifauna is important for developing management plans, implementing conservation measures, as well as serving as baseline information for developing research projects at the community level. Furthermore, a species list can be used to compare richness among different forests in the island and with other regions.

In this report we present an updated account of the avifauna present in Maricao State Forest compiled from visits made during two decades. The present study is the only comprehensive effort to update the list of species in the Forest since Raffaele (1975). We also classify species according to their relative abundance, and comment on their status and distribution.

STUDY AREA AND METHODS

Maricao State Forest comprises 4150 ha in the municipalities of Mayagüez, San Germán, Sabana Grande, and Maricao, in the westernmost part of the Cordillera Central. Elevations range from 150 to 875 m above sea level. Annual rainfall and temperature average 2326 mm and 21.7°C, respectively (Silander *et al.* 1986).

Over 85% of the soils in Maricao State Forest are derived from ultramafic rocks. These rocks represent 1% of the total area of Puerto Rico, limited in distribution to the southwestern part of the island (Figueroa Colón 1992). Even with high levels of rainfall, the soils are dry because of their fast drainage and high permeability. Soils derived from ultramafic rocks are characterized by high contents of iron, chromium, nickel, and cobalt; low calcium/magnesium ratio; and low contents of clay (Figueroa Colón 1992). High levels of plant endemism are promoted by these nutritional imbalances and high levels of phytotoxics, such as nickel and magnesium (Silander *et al.* 1986; Figueroa Colón 1992).

Three life zones are found in Maricao Forest. The subtropical moist forest comprises 32.9% of the Forest, the subtropical wet forest 65.2%, and the lower montane wet forest 1.9% (Ewel and Whitmore 1973; Colón *et al*. 1976). The vegetation can be classified

into five associations: dry slope forest, slope forest, mixed hardwood, exposed ridge woodland, and *Podocarpus* mixed hardwood (Colón *et al*. 1976). The moist life zone is found at elevations up to approximately 600 m on the southern slopes of the Forest. The woody vegetation in the moist life zone is characterized by narrow crowns, slender stems, and an average canopy height of 6–9 m. The most common trees are *Bursera simaruba*, *Homalium racemosum*, *Plumeria obtusa*, *Clusia rosea*, *Eugenia confusa*, *Pimenta racemosa*, and *Dipholis cubensis*. In areas of high humidity with moderate slopes and deep soils (e.g., along the narrow drainage basins), a more mesic vegetation grows. This vegetation resembles that which grows in the wetter life zones.

The wet life zone receives 2000–4000 mm of rainfall per year and in Maricao State Forest occurs at approximately 550–750 m elevation. The Forest in the wet life zone has a poorly developed emergent tree layer (Colón *et al*. 1976), and the canopy height ranges from 12 to 20 m. Dominant trees include: *Buchenavia capitata*, *Zanthoxylum martinicense*, *Turpinia paniculata*, *Pithecellobium arboreum*, and *Coccoloba pubescens*. Parts of this forest were previously cleared and reforested in the 1920s and 1930s (Colón *et al.* 1976).

The lower montane wet life zone occurs from 700 to 900 m elevation and receives approximately 2550 mm of precipitation yearly. Two forest types dominate this zone. A dwarf spinescent vegetation dominates the narrow ridges and peaks exposed to strong winds and along the steep slopes with shallow serpentine soils. The trees range from 2 to 5 m in height and 5 to 20 cm in diameter at breast height (dbh). The principal species are *Dipholis cubensis*, *Guettarda pungens*, *G. scabra*, *Randia aculeata*, *Ilex riedlaei*, *Coccoloba pirifolia*, and *Comocladia glabra* (Colón *et al.* 1976). Where the slopes are not steep and the ridges are wide, more soil and humus accumulate to produce a more mesic habitat. Here the leaves are sclerophyllous but large, and the trees larger (5–10 m in height and 10–40 cm in dbh) than on the narrow ridges, peaks, and steep slopes with shallow soils. The principal trees are *Clusia grisebachiana*, *Coccoloba sintenisi*, *Eugenia confusa*, and *Tabebuia schumanniana*. A different forest type grows on deep serpentine soils of the moderate slopes that characterize the wide upper ridges at elevations of 800–850 m (Colón *et al.* 1976). There the forest type forms a more or less continuous canopy at 15–20 m. Epiphytic growth is not abundant, however vines are common. Dominant tree species are: *Micropholis chrysophyloides*, *Matayba dominguensis*, *Podocarpus coriacea*, *Sloanea amygdalina*, *Buchenavia capitata*, *Ocotea acuneata*, and *Magnolia portorricensis*. The palm, *Prestoea montana*, and the tree ferns, *Cyathea arborea* and *C. aquiline*, are common in the understory.

The headwaters of various important rivers are found in Maricao State Forest. Five rivers originate in the southern slopes of the Forest and three to the north, including the río Maricao (Colón *et al.* 1976). The pools of a fish hatchery are filled with the water of the río Maricao.

Species list.—We compiled a bird species list from observations made during approximately 1500 visits to Maricao State Forest from 1978 to 2000. Delannoy repeatedly visited Maricao from 1978 to 1995, whereas Tossas visited from 1998 to 2001. Most visits were associated with ornithological research we have conducted over the years. The list includes all bird species we observed, as well as those reported by Raffaele (1975). We used field guides (Biaggi 1970, Raffaele 1989, Raffaele *et al.* 1998) to identify the birds observed with binoculars or trapped in mist nets.

The frequency in which birds were encountered during our visits was used as a measure of their relative abundance. Accordingly, species were categorized as *very common*, if observed five or more times in a single visit; *common*, if at least one individual was observed in more than half of the visits; *uncommon*, if observed in less than half the visits; and *rare*, if two or fewer individuals were observed per year. *Accidentals* or *vagrants* were those species that occurred in Maricao State Forest only once every decade or greater. We also categorized birds according to their status. *Resident* species, either permanent or seasonal, are those known to breed in Maricao State Forest, *non-breeding residents* do not breed in the Forest, but do breed elsewhere on the island, and *Neotropical migrants* are birds that breed in the Nearctic and spend several months in the Forest. A *naturalized* bird is an introduced species thriving in the wild.

We include information on the distribution of each species in the Forest. The species list follows the taxonomic classification and nomenclature of the American Ornithologists' Union (1998). Endemic species appear in bold.

RESULTS

Ardeidae

Snowy Egret (*Egretta thula*).—Common non-breeding resident observed feeding in creeks, fish hatchery ponds, and margins of the río Maricao.

Little Blue Heron (*Egretta caerulea*).—Common non-breeding resident observed feeding along the margins of the río Maricao and ponds in the fish hatchery.

Cattle Egret (*Bubulcus ibis*).—Common non-breeding resident observed feeding from the margins of the fish hatchery ponds and the río Maricao.

Green Heron (*Butorides virescens*).—Common resident observed feeding along the margins of the fish hatchery ponds and the río Maricao.

Cathartidae

Turkey Vulture (*Cathartes aura*).—Very common non-breeding resident observed flying over the Forest canopy from low to high elevations, mainly above the drier southern slopes. Turkey Vultures commute back and forth from the southwest to the Añasco valley in western Puerto Rico, crossing over the Maricao State Forest. The vultures take advantage of the strong slope and thermal updrafts in the Forest that create a corridor. They stop to feed in Maricao when carrion is available.

Accipitridae

Sharp-shinned Hawk (*Accipiter striatus venator*).—Locally common resident in dense mesic forest and maría (*Calophyllum brasiliense*) plantations from middle to high elevations. Maricao holds one of five known breeding populations. Other populations are in Toro Negro, Carite, Luquillo, and Guilarte Forests. Only 130 individuals remain of this endangered subspecies endemic to Puerto Rico (Delannoy 1997).

Broad-winged Hawk (*Buteo platypterus brunnescens*).—Accidental in the Forest. Not observed by the authors, but reported by Raffaele (1975). It is an endangered subspecies with extant populations in Luquillo, Carite, and Río Abajo Forests, totaling 125 individuals (Delannoy 1997).

Red-tailed Hawk (*Buteo jamaicensis*).—Common resident widespread throughout the Forest, observed at all elevations and habitats.

Falconidae

American Kestrel (*Falco sparverius*).—Uncommon resident found in disturbed habitats (e.g., vacation center) and forest edges at all elevations.

Merlin (*Falco columbarius*).—Accidental migrant in the Forest. One individual observed hunting in the edge of a mesic forest at 700 m elevation on 28 October 2000 by AGT.

Columbidae

Scaly-naped Pigeon (*Columba squamosa*).—Very common resident observed in dense forest at all elevations. The species becomes uncommon in the months following the breeding season. It forms monospecific flocks in July and presumably migrates to lowland forests during fall and winter. This flocking behavior was reported by Rivera-Milán (1992) in wet and moist zones throughout the island.

White-crowned Pigeon (*Columba leucocephala*).—Accidental non-breeding resident in the Forest. Not observed by us, but reported by Raffaele (1975).

White-winged Dove (*Zenaida asiatica*).—Uncommon non-breeding resident observed in forest edges and disturbed habitats. Three individuals were seen by AGT, from February to April 1999, at 650 m elevation in the Forest interior in an area heavily affected by Hurricane Georges (1998). The species is common in disturbed habitats around Maricao State Forest.

Zenaida Dove (*Zenaida aurita*).—Uncommon resident in winter, spring, and summer; found in dry slope forest, plantation forest, and *Podocarpus*–mixed hardwood forest at different elevations.

Common Ground-Dove (*Columbina passerina*).—Uncommon resident found at middle and low elevations in the dry southern slopes.

Key West Quail-Dove (*Geotrygon chrysia*).—A rare breeding resident at lower elevations in the dry southeastern slopes. Locally common near Cerro Avispa (450–500 m elevation) in the western slopes. However, AGT captured two adults in mist nets at 750 m elevation on 2 April 1999, and found a pair building a nest at 770 m on 1 June 2000. The nest was depredated.

Ruddy Quail-Dove (*Geotrygon montana*).—Very common resident in dense forests at all elevations before Hurricane Georges, but uncommon thereafter. The species seems to be highly affected by canopy loss from hurricane winds, as reported after Hurricane Hugo (1989) in the Luquillo Experimental Forest, in eastern Puerto Rico (Wunderle 1995).

Cuculidae

Mangrove Cuckoo (*Coccyzus minor*).—Rare resident, found mainly at middle and low elevations near forest edges, in disturbed habitats, and dry forests of the southern slopes.

Puerto Rican Lizard-Cuckoo (*Saurothera vieilloti*).—Common resident, more frequently heard than seen. Widespread throughout the Forest.

Strigidae

Puerto Rican Screech-Owl (*Otus nudipes*).—A common resident, widespread throughout the Forest.

Short-eared Owl (*Asio flammeus portoricensis*).—Rare resident, one individual was observed on 1 August 1982 by CAD at 770 m in dense brush dominated by fern mats in the dry southeastern slopes.

Caprimulgidae

Puerto Rican Nightjar (*Caprimulgus noctitherus*).—Vagrant, one individual was observed and photographed on 10 January 1988 by CAD in a maría plantation, 300 m north of the west fork of the río Maricao, at 600 m above sea level. Possibly it was a stray bird from the nearby population in Susúa State Forest.

Apodidae

Black Swift (*Cypseloides niger*).—Seasonal resident, common in spring and summer at high elevations. The breeding status in the Forest is unknown. Observed in groups of four to six individuals, feeding with swallows.

Trochilidae

Antillean Mango (*Anthracothorax dominicus*).—Rare resident species, observed at low elevations in the south- and east-facing slopes.

Green Mango (*Anthracothorax viridis*).—Common breeding resident widespread throughout the Forest.

Puerto Rican Emerald (*Chlorostilbon maugaeus*).—Common breeding resident widespread throughout the Forest.

Todidae

Puerto Rican Tody (*Todus mexicanus*).—Very common breeding resident found in forested habitats at all elevations.

Alcedinidae

Belted Kingfisher (*Ceryle alcyon*).—Common Neotropical migrant, observed mainly in the pools of the fish hatchery and along the río Maricao.

Picidae

Puerto Rican Woodpecker (*Melanerpes portoricensis*).—Very common resident present at all elevations and habitats. Commonly seen and heard in groups of up to six individuals.

Yellow-bellied Sapsucker (*Sphyrapicus varius*).—Accidental Neotropical migrant in the Forest. An adult male was observed on 19 February 2001 at 880 m elevation (José A. Colón López, pers. comm.).

Tyrannidae

Lesser Antillean Pewee (*Contopus latirostris*).—Common breeding resident found at all elevations, mainly in the understory of dense woodland.

Puerto Rican Flycatcher (*Myiarchus antillarum*).—Rare resident found mainly in disturbed areas and forest edges at all elevations. Common in shade coffee plantations around the Maricao State Forest.

Gray Kingbird (*Tyrannus dominicensis*).—Common breeding resident found in open and disturbed woodlands at all elevations.

Loggerhead Kingbird (*Tyrannus caudifasciatus*).—Rare resident found mainly in secondary forests, disturbed woodland, and edges at all elevations.

Vireonidae

Puerto Rican Vireo (*Vireo latimeri*).—Very common breeding resident widespread throughout the Forest.

Black-whiskered Vireo (*Vireo altiloquus*).—Very common resident widespread throughout the Forest. Breeds in Maricao State Forest but presumably migrates to northern South America from September to February (Raffaele *et al*. 1998).

Hirundinidae

Caribbean Martin (*Progne dominicensis*).—Common non-breeding resident observed flying over the Forest canopy during spring and summer. Possibly migrates to South America in the winter months (Raffaele *et al*. 1998).

Cave Swallow (*Petrochelidon fulva*).—Common non-breeding resident observed in groups of five or more flying over the Forest canopy at all elevations.

Turdidae

Red-legged Thrush (*Turdus plumbeus*).—Very common resident found at all elevations and habitats in the Forest.

Mimidae

Pearly-eyed Thrasher (*Margarops fuscatus*).—Uncommon resident found mainly in disturbed woods, forest edges, and forest stands along rivers from low to high elevations.

Sturnidae

Hill Myna (*Gracula religiosa*).—Accidental exotic in the Forest. CAD observed one individual from March to May 1993 near the Department of Natural and Environmental Resources headquarters at an elevation of 770 m.

Parulidae

Northern Parula (*Parula americana*).—Common Neotropical migrant widespread in the Forest from fall until early spring.

Magnolia Warbler (*Dendroica magnolia*).—Rare Neotropical migrant observed in dense forest. CAD observed one adult male 10 April 1981 at 650 m elevation.

Cape May Warbler (*Dendroica tigrina*).—Common Neotropical migrant observed in a wide range of habitats and elevations from fall to spring.

Black-throated Blue Warbler (*Dendroica caerulescens*).—Common Neotropical migrant widespread in the Forest from fall until early spring.

Yellow-rumped Warbler (*Dendroica coronata*).—Rare Neotropical migrant observed in dense forest and edges. CAD observed a pair of adults on 7, 13, and 25 February 1981 at 800 m elevation.

Black-throated Green Warbler (*Dendroica virens*).—Accidental Neotropical migrant observed in dense forest. Two adult males observed by CAD from 5 January until 7 April 1981 at 875 m elevation. AGT observed an adult male on 1 April 1999 at 700 m.

Yellow-throated Warbler (*Dendroica dominica*).—Accidental Neotropical migrant in the Forest. Observed by AGT on 11 and 26 November 2000 at 650 m elevation, in pine (*Pinus caribaea*) and eucalyptus (*Eucalyptus robusta*) plantations, respectively.

Adelaide's Warbler (*Dendroica adelaidae*).—Common resident found in shrub vegetation at all elevations.

Prairie Warbler (*Dendroica discolor*).—Rare Neotropical migrant observed in dense forest from fall to spring.

Blackpoll Warbler (*Dendroica striata*).—Uncommon Neotropical migrant, observed mainly in dense forest at high elevations during its southward migration.

Elfin Woods Warbler (*Dendroica angelae*).—Common resident found mainly in the *Podocarpus*–mixed hardwood association from 700–900 m, but also can be observed in dense forest at lower elevations.

Black-and-white Warbler (*Mniotilta varia*).—Common Neotropical migrant widespread throughout the Forest from fall until early spring.

American Redstart (*Setophaga ruticilla*).—Common Neotropical migrant widespread throughout the Forest from fall to early spring.

Swainson's Warbler (*Limnothlypis swainsonii*).—Accidental Neotropical migrant in the Forest. One record: CAD trapped and banded an adult on 16 January 1992 in dense forest at 770 m elevation.

Ovenbird (*Seiurus aurocapillus*).—Common Neotropical migrant frequently observed near the ground in dense forest over a wide range of elevations from fall to spring.

Northern Waterthrush (*Seiurus noveboracensis*).—Neotropical migratory wood warbler not observed by the authors, but reported by Raffaele (1975).

Louisiana Waterthrush (*Seiurus motacilla*).—Common Neotropical migrant observed along creeks and the río Maricao from fall until early spring.

Kentucky Warbler (*Oporornis formosus*).—Accidental Neotropical migrant in the Forest. One record: an adult male trapped and banded by CAD on 9 March 1992 in dense forest at 770 m elevation.

Hooded Warbler (*Wilsonia citrina*).—Accidental Neotropical migrant observed in dense woodland. One adult male trapped and banded by AGT on 22 March 1999 in dense forest at 700 m elevation.

Coerebidae

Bananaquit (*Coereba flaveola*).—Very common resident found at all elevations and habitats.

Thraupidae

Puerto Rican Tanager (*Nesospingus speculiferus*).—Very common resident widespread throughout the Forest.

Scarlet Tanager (*Piranga olivacea*).—Accidental Neotropical migrant in the Forest. One record: an adult female trapped and banded by AGT in dense forest at 700 m elevation on 25 October 1998, probably passing through in its southward migratory route.

Puerto Rican Spindalis (*Spindalis portoricensis*).—Very common resident widespread throughout the Forest.

Antillean Euphonia (*Euphonia musica*).—Common resident observed at different elevations and habitats. The species became uncommon in the Forest after Hurricane Georges (Tossas, pers. obs.).

Emberizidae

Yellow-faced Grassquit (*Tiaris olivacea*).—Uncommon resident observed mainly in openings and forest edge over a wide range of elevations.

Black-faced Grassquit (*Tiaris bicolor*).—Very common resident in openings, disturbed areas, and for-

est edge over a wide range of elevations.

Puerto Rican Bullfinch (*Loxigilla portoricensis*).—Very common resident widespread throughout the Forest.

Cardinalidae

Rose-breasted Grosbeak (*Pheucticus ludovicianus*).—Accidental Neotropical migrant in the Forest. CAD observed two adults, male and female, on 4 March 2001 at 750 m elevation.

Icteridae

Shiny Cowbird (*Molothrus bonariensis*).—Uncommon resident. Observed in disturbed habitats, along edges, and forest fragments from low to high elevations.

Greater Antillean Oriole (*Icterus dominicensis*).—Uncommon resident found in a variety of habitats at all elevations. We have seen Shiny Cowbird females entering oriole nests in disturbed habitats in the Forest.

Estrildidae

Indian Silverbill (*Lonchura malabarica*).—Naturalized species in Puerto Rico, rarely observed in Maricao State Forest. CAD observed a flock of 14 on 11 January 1986 at 650 m in the dry south-facing slopes.

Tricolored Munia (*Lonchura malacca*).—Naturalized species in Puerto Rico, rarely observed in Maricao State Forest. On 8 September 1985, CAD observed a flock of 15 in a forest edge at 650 m in the dry south-facing slopes.

DISCUSSION

In this work we report 73 bird species in 26 families for Maricao State Forest, including 13 species and two subspecies endemic to Puerto Rico. This number increases the size of the previous list (Raffaele 1975) by 31 species. More species, however, might be added with further effort, particularly from censuses or mist-netting when Neotropical migrants are present or passing through. Other published bird lists for montane forests in Puerto Rico closely correspond to our species total. Miranda-Castro *et al.* (2000) reported 72 species in Los Tres Picachos State Forest, and Wiley and Bauer (1985) reported 66 in Luquillo Forest.

The largest taxonomic group in the Forest is represented by wood warblers (Parulidae), with 19 species. Two species in this bird family are residents in Maricao State Forest, the Elfin Woods and Adelaide's warblers. Both are common in the Forest but segregate ecologically, selecting habitats that differ in vertical structure. Adelaide's Warbler prefers shorter shrub vegetation, whereas Elfin Woods Warbler prefers taller and dense forest (Cruz and Delannoy 1984). These congeners occur in sympatry over a wide elevational gradient in Maricao State Forest. This is the only reported habitat in Puerto Rico where the two species coexist (Cruz and Delannoy 1984).

Wood warblers are also the most represented group in other montane forests in Puerto Rico. Miranda-Castro *et al.* (2000) reported 13 species, including the resident Adelaide's Warbler in Los Tres Picachos State Forest. Wiley and Bauer (1985) reported 18 species in Luquillo Forest, including the resident Elfin Woods Warbler. Among the migratory wood warblers found in Maricao, several are rare in Puerto Rico. These include the Kentucky, Swainson's, Yellow-throated, and Black-throated Green warblers. The presence of these rare warbler species, along with Scarlet Tanager, can be related to the vast extension of this forest reserve, and high quality and diversity of habitats available. Moreover, shade coffee plantations around Maricao State Forest act as buffer zones and further increase the amount of forest cover.

Leopold (1963) and Raffaele (1975) reported the Broad-winged Hawk in Maricao State Forest. However, we have not seen any in this forest or adjacent habitats in 20 years. We conclude that this bird is not a regular member of the Forest avifauna. Its status better fits the category of a vagrant species. Similarly, Raffaele (1975) reported White-crowned Pigeons in Maricao State Forest, and Wiley (1979) sighted an unreported number in March 1975 while conducting monthly and bimonthly censuses in 1974 and 1975. However, we did not see or hear this species in Maricao during our study period. We suggest the White-crowned Pigeon should be considered a vagrant in Maricao.

Maricao State Forest may be at the upper limit of the endemic and endangered Puerto Rican Nightjar's range. Vilella and Zwank (1993) reported two nightjars in an eucalyptus plantation in the eastern boundary of the Forest. Nightjar abundance tapered off considerably to extremely low levels from a transitional zone between dry coastal and dry limestone forest south of Susúa and Maricao State Forests (Vilella and Zwank 1993). The Puerto Rican Nightjar sighting we report is from a plantation near the northern boundary of the Forest.

The sightings of the naturalized exotic Indian Silverbill and Tricolored Munia in Maricao State Forest seem to be the movement of flocks from low-

lands into the interior mountains during the non-breeding period. Delannoy (pers. obs.) has seen flocks of Tricolored Munias in farmlands close to the foothills of the Luquillo Forest at elevations of 700 m during the fall and winter months. Also, Wiley and Bauer (1985) reported the Bronze Mannikin (*Lonchura cucullata*) from the Luquillo Forest as an uncommon resident in edges and interface of pastures, croplands, and fallow lands. Miranda-Castro *et al.* (2000) reported naturalized exotic Orange-cheeked Waxbill (*Estrilda melpoda*) and Bronze Mannikin to be common in Los Tres Picachos State Forest at elevations of 550 m. In addition, they reported the Pin-tailed Whydah (*Vidua macroura*) as uncommon, but present, at an elevation of 690 m.

Maricao State Forest provides important habitat for the endangered and endemic Puerto Rican Sharp-shinned Hawk. This subspecies, whose population is estimated at 130 individuals, is one of the most endangered on the island (Delannoy 1997). The Maricao subpopulation, with 56 individuals, is the largest in Puerto Rico. Other endemic birds common in the Forest, such as the Elfin Woods Warbler, Puerto Rican Tanager, and Puerto Rican Vireo, have disjunct or relatively small populations elsewhere on the island (Raffaele 1989). Therefore, the conservation of the habitat in Maricao State Forest, and the surrounding buffer lands, will guarantee the subsistence of a high species diversity, particularly of endangered, endemics, and rare birds.

ACKNOWLEDGEMENTS

We are grateful for the comments and suggestions of R. A. Pérez-Rivera, J. A. Collazo, E. H. Williams, Jr., J. Colón-López, J. M. Wunderle, Jr., and an anonymous reviewer of an earlier version of this paper.

LITERATURE CITED

AMERICAN ORNITHOLOGISTS' UNION. 1998. Checklist of North American birds: 7th ed. American Ornithologists' Union, Washington, DC.

BIAGGI, V. 1970. Las aves de Puerto Rico. Editorial Univ. Puerto Rico, San Juan, Puerto Rico.

COLÓN, E., D. J. POOL, F. RHOADES, AND R. DWORSKY. 1976. The Master Plan for the Commonwealth forests of Puerto Rico. Dept. Nat. Res., San Juan, Puerto Rico.

CRUZ, A., AND C. A. DELANNOY. 1984. Ecology of the Elfin Woods Warbler (*Dendroica angelae*). I. Distribution, habitat usage, and population densities. Caribb. J. Sci. 20:89–96.

DELANNOY, C. A. 1997. Status of the Broad-winged Hawk and Sharp-shinned Hawk in Puerto Rico. Caribb. J. Sci. 33:21–33.

EWEL, J. J., AND J. L. WHITMORE. 1973. The ecological life zones of Puerto Rico and the U. S. Virgin Islands. US For. Serv. Res. Pap. ITF–18.

FIGUEROA COLÓN, J. C. 1992. La ecología de los suelos ultramáficos. Acta Científica 6:49–58.

LEOPOLD, N. F. 1963. Checklist of birds of Puerto Rico and the Virgin Islands. Univ. Puerto Rico Agric. Exp. Sta. Bull. 168:1–119.

LITTLE, E. L., JR., AND F. W. WADSWORTH. 1964. Common trees of Puerto Rico and the Virgin Islands. US For. Serv. Agric. Handbook No. 249, Washington, DC.

MIRANDA-CASTRO, L., A. R. PUENTE-ROLÓN, AND S. VEGA-CASTILLO. 2000. First list of the vertebrates of Los Tres Picachos State Forest, Puerto Rico, with data on relative abundance and altitudinal distribution. Caribb. J. Sci. 36:117–126.

RAFFAELE, H. 1975. Wildlife management in Maricao State Forest. Dept. Nat. Res., San Juan, Puerto Rico.

RAFFAELE, H. A. 1989. A guide to the birds of Puerto Rico and the Virgin Islands. Princeton Univ. Press, Princeton, New Jersey.

RAFFAELE, H., J. WILEY, O. GARRIDO, A. KEITH, AND J. RAFFAELE. 1998. A guide to the birds of the West Indies. Princeton Univ. Press, Princeton, New Jersey.

RIVERA-MILÁN, F. F. 1992. Distribution and relative abundance patterns of columbids in Puerto Rico. Condor 94:224–238.

SILANDER, S., H. GIL DE RUBIO, M. MIRANDA, AND M. VÁZQUEZ. 1986. Compendio enciclopédico de los recursos naturales de Puerto Rico. 10:210–236.

VILELLA, F. J., AND P. J. ZWANK. 1993. Geographic distribution and abundance of the Puerto Rican Nightjar. J. Field Ornithol. 64:223–238.

WILEY, J. W. 1979. The White-crowned Pigeon in Puerto Rico: Status, distribution, and movements. J. Wildl. Manage. 43:402–413.

WILEY, J. W., AND G. P. BAUER. 1985. Caribbean National Forest, Puerto Rico. Am. Birds 39:12–18.

WUNDERLE, J. M., JR. 1995. Responses of bird populations in a Puerto Rican forest to Hurricane Hugo: the first 18 months. Condor 97:879–896.

STATUS OF THE LITTLE EGRET (*EGRETTA GARZETTA*) IN TRINIDAD AND TOBAGO

FLOYD E. HAYES[1] AND GRAHAM L. WHITE[2]

[1]*Department of Life Sciences*, *University of the West Indies*, *St. Augustine*, *Trinidad and Tobago*; and *Department of Biology*,*Caribbean Union College*, *Maracas Valley*, *Trinidad and Tobago*; and
[2]*Waterloo Estate, Carapichaima, Trinidad and Tobago*

Abstract.—The Little Egret (*Egretta garzetta*) is an Old World species that has appeared with increasing frequency in the New World since 1954 and began breeding in Barbados in 1994. We summarize data for at least 33 records of the species for Trinidad and 17 for Tobago from 1959 to 2001. It has been recorded during each month of the year on each island, with no marked seasonal variation, though the highest monthly totals are from the first few months of the year. High counts include five for Trinidad and two for Tobago. Breeding is expected but has not been documented.

Resumen.—ESTADO DE LA GARCETA COMÚN (*EGRETTA GARZETTA*) EN TRINIDAD Y TOBAGO. La Garceta Común (*Egretta garzetta*) es una especie del viejo mundo que ha sido avistada con mayor frecuencia en el nuevo mundo desde 1954 y que comenzó a nidificar en Barbados en 1994. Se resumen datos de por lo menos 33 registros en Trinidad y 17 en Tobago de 1959 a 2001. La especie ha sido registrada en todos los mes del año en ambas islas, sin una variación estacional muy notable aunque los registros mensuales más altos son en los primeros meses del año. Los conteos más altos incluyen cinco para Trinidad y dos para Tobago. Se anticipa la nidificación pero no ha sido documentada.

Key words: Ardeidae, Egretta garzetta, *Little Egret*, *status*, *Trinidad and Tobago*

THE LITTLE EGRET (*Egretta garzetta*), Western Reef-Heron (*E. gularis*), and Mascarene Reef-Heron (*E. dimorpha*) of the Old World and the Snowy Egret (*E. thula*) of the New World are closely related taxa comprising a superspecies (American Ornithologists' Union 1998). The Little Egret was first recorded in the New World on 16 April 1954, when an alternate-plumaged adult female was collected at Graeme Hall Swamp, Barbados (Bond 1966). In subsequent decades it was recorded with increasing frequency in eastern North America, the eastern Caribbean, and in northeastern South America (see review by Murphy 1992).

The first breeding colony of Little Egrets in the New World was established in December 1994 at Graeme Hall Swamp, Barbados, where they nested with Snowy Egrets (Massiah 1996). The population has rapidly expanded to about 20 pairs (Raffaele *et al*. 1998). Although cross mating between the two species rarely has been observed and individuals suspected to be hybrids have been observed, most individuals mate assortatively and hybridization is thought to be rare (Massiah 1996; Norton 1999; M. Frost and E. Massiah, pers. comm.). Given the potential for this species to rapidly colonize the Americas, its range expansion should be thoroughly documented. In this paper we review the historical status of the Little Egret in Trinidad and Tobago.

METHODS

We compiled and reviewed all reports of the Little Egret within Trinidad and Tobago through August 2001. Details of many recent records have been or are currently under review by the Trinidad and Tobago Rare Bird Committee (TTRBC; Hayes and White 2000; see website at http://www.wow.net/ttfnc). Because of the TTRBC's decision not to review historical records and the lengthy interval between observation and the TTRBC's acceptance of a record, we include many records not yet accepted by the Committee but judged acceptable by us. Although we have attempted to consider multiple observations of the same bird(s) as a single record, in many cases it was impossible to determine whether a bird was the same individual observed repeatedly. Because the country is frequently visited by birders who do not report their sightings to us, our records are undoubtedly incomplete.

RESULTS

Geographical distribution.—We compiled 33 records of the Little Egret for Trinidad and 17 for Tobago through June 2001 (Table 1). The country's first record was an immature banded as a nestling at Doñana, Hueva Province, Spain, on 24 July 1956, that was recovered at Caroni Swamp, Trinidad, on 13 January 1957 (Downs 1959; American Museum

Table 1. Summary of Little Egret (*Egretta garzetta*) records for Trinidad and Tobago, 1957–2001.

Location	Date(s)	Number/plumage/age	Documentation[1]	Source(s)[2]
TRINIDAD				
Caroni	13 Jan 1957	1	specimen	Downs 1959
Port of Spain	17 Nov to 12 Dec 1989	1	photograph	WM; Murphy 1992
Trincity	02 Jan 1990	2 adults	photograph	FO; Murphy 1992
Trincity	04 to 08 Mar 1990	3 adults	sight	WM; Murphy 1992
Port of Spain	08 Mar 1990	1	sight	WM; Murphy 1992
Trincity	23 Jun 1990	1 adult	sight	JK; Murphy 1992
Trincity	25 Sept 1990	1 adult	sight	WM; Murphy 1992
Trincity	14 Feb 1991	1 alternate adult	sight	WM; Murphy 1992
Port of Spain	17 Feb 1991	1 basic adult	sight	WM; Murphy 1992
Trincity	02 Oct 1991	1 basic adult	sight	WM; Murphy 1992
Caroni	28 Jun 1992	1	sight	GW
Caroni	07 Nov 1992	2	sight	GW
Caroni	30 May 1994	1	sight	GW
Nariva	13 Jan 1997	1 basic	sight*	DF; ffrench & White 1999
Trincity	14 Jan 1997	1 basic	sight*	DF; ffrench & White 1999
Caroni	16 May 1997	1	sight	GW
Trincity	16 to 17 Jun 1997	2 basic	sight*	FH
Nariva	31 Aug 1997	1	sight*	PW; ffrench & White 1999
Port of Spain	04 Sept 1997	1	sight*	PW; ffrench & White 1999
Waterloo	07 Dec 1997	1 basic	sight	FH, GW
Caroni	01 Jan 1998	1 alternate adult	sight	GW
Caroni/Valsayn	20 Apr to 22 May 1998	1 alternate adult	sight	GW; FH
Caroni	11 Jul to 08 Sept 1998	1 basic	sight	FH
Valsayn	02 Nov 1998	1 basic	sight	FH
Trincity	05 to 11 Jan 1999	1	sight	DM; DF
Trincity	31 Mar to 09 Apr 1999	3 basic, 2 alt. adults	photograph	FH; HL
Fullerton	21 Aug to 12 Sept 1999	1 basic	sight	FH; GW, RN
Caroni	25 Feb 2000	1 alternate adult	sight	GW
Trincity	24 Apr 2000	2 basic, 1 alt. adult	sight	FH
Caroni	24 May to 03 Sept 2000	3 basic	sight	MK; FH
Trincity/Orange Grove	07 Sept 2000 to 30 May 2001	2 basic, 2 alt. adult	photograph	FH, MK
San Fernando	10 Nov to 12 Dec 2000	1 basic	photograph	FH; MK
Caroni	10 Jun to 02 Jul 2001	1 alternate adult	photograph	FH; MK
TOBAGO				
Buccoo	04 Jan to 22 Jun 1990	1 dark-phased immature	photograph	Murphy 1992
Buccoo	14 Aug to 28 Sept 1990	1 basic adult	photograph*	GW; WM; Murphy 1992; ffrench & White 1999
Buccoo	04 Oct 1991	1 basic adult	sight	Murphy 1992
Bon Accord	23 Dec 1993	1 basic	sight*	FH; Hayes 1996
Speyside	07 Nov 1994	1 basic	sight*	FH; Hayes 1996
Buccoo	20 Jan to 26 Mar 1995	2 basic	sight*	DF; FH; ffrench & Hayes 1998, Hayes 1998
Buccoo	18 Jan to 20 Mar 1997	2 basic	sight*	DF; FH; ffrench & White 1999
Kendal/Argyle	09 Feb to 30 Mar 1998	2 basic	sight	DF; FH
Lowlands/Buccoo	21 Jun to 08 Sept 1998	1 basic	sight	FH
Buccoo	23 Nov 1998	2	sight	GW
Kendal/Argyle	12 to 29 Jan 1999	1	sight	DF
Buccoo	16 to 17 Jan 1999	1	sight	DF
Buccoo	02 Apr to 02 Jul 1999	1 basic, 1 alt. adult	sight	RN; CS; FH
Buccoo	28 Jun 2000	1 alternate adult	sight	FH
Speyside	16 Oct 2000	1 basic	sight	FH, MK
Buccoo	16 Oct 2000 to 23 Jan 2001	1 basic	sight	FH, MK
Buccoo/Lowlands	24 May to 18 Aug 2001	1 alternate adult	photograph	FH; RN

[1]Asterisk indicates accepted by Trinidad and Tobago Rare Bird Committee (Hayes and White 2000).
[2]Initials of authors and other observers listed in Acknowledgments.

Table 2. Monthly distribution of the Little Egret in Trinidad and Tobago, 1957–2001, by year, based on observations. Birds thought to represent the same individuals from one extreme date to another are not included for intervening months when not observed.

	Month											
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Trinidad												
1957	1											
1989											1	1
1990	2		4			1			1			
1991		2*								1		
1992						1					2	
1994					1							
1997	2				1	2		1	1			1
1998				1*	1*		1		1		1	
1999	1		1	5*				1	1			
2000		1*		3*	1			3	3	2	2	3*
2001	1*	3*	4*		1*	1*	1*					
Tobago												
1990	1					1		1	1			
1991										1		
1993												1
1994											1	
1995	1		2									
1997	2	2	2									
1998		2	1			1			1		2	
1999	2			2			2*					
2000						1*				2		1
2001	1				1*			1*				
Totals												
Trinidad	7	6	9	9	5	5	2	5	7	3	6	5
Tobago	7	4	5	2	1	3	2	2	2	3	3	2
Combined	14	10	14	11	6	8	4	7	9	6	9	7

*Alternate-plumaged adult(s) observed.

of Natural History specimen 325358). With the exception of this specimen and a few records documented by photographs, most reports are sight records. It remains uncertain whether the same individuals have been recorded repeatedly or whether the same individuals travel from one wetland to another. In Trinidad, most records are from the west-central Caroni Plain (Caroni to Trincity) and along the western coast (Port of Spain to Fullarton), with few records from the eastern coast (Nariva). In Tobago, most records are from the southwest (Buccoo, Bon Accord, Lowlands), with a few from the southeastern (Kendal, Argyle) and northeastern (Speyside) coasts.

Abundance and seasonal distribution.—Little Egrets have been recorded during each month of the year on each island, with no marked seasonal variation, though the highest monthly totals are from the first few months of the year (Table 2). In Trinidad, up to five birds have been recorded from Trincity in April (H. Lehto, pers. comm.; Table 1). The highest count from Tobago is two birds (several occasions since 1995; Table 1). In Trinidad, the ratio of Snowy:Little Egrets is several hundred to one. Little Egrets have actually outnumbered Snowy Egrets in Tobago within the last decade; from 1993–2001, Hayes recorded 7 observations of Snowy Egrets and 17 of Little Egrets (some repeatedly).

Habitat use.—In Trinidad, habitats used by Little Egrets included sewage ponds (Trincity and Port of Spain), rice fields (Caroni, Valsayn, and Nariva), mangrove lagoons (Fullerton), coastal mudflats (Waterloo), fishing boats (San Fernando), and a pier (San Fernando). In Tobago, habitats included a freshwater pond (Lowlands), mangrove lagoons (Buccoo), small tidal marshes (Buccoo, Kendal, Argyle, and Speyside), and a sandy beach (Buccoo).

Age, plumage and soft parts.—Most Little Egret records are of immatures or basic-plumaged adults, which observers had difficulty distinguishing. The few records of alternate-plumaged adults range from December to August (Table 1). All have been white morph birds, except for an apparent immature dark morph bird with scattered dark feathers at Tobago in

1990 (Murphy 1992). Lores coloration has been remarkably variable; although most birds possessed bluish-gray lores, several had pale grayish-white lores, a few immatures or basic-plumaged adults had a slight tinge of yellow, an alternate-plumaged adult had a brick-red lores (at Trinicity, Trinidad, 14 December 2000; Hayes, pers. obs.), and a basic-plumaged bird had a rufous-brown lores (at Trincity, Trinidad, 5 April 1999; Hayes, pers. obs.). A few individuals have appeared intermediate between Snowy and Little Egrets; these are not listed in Table 1 and their identity remains unresolved.

DISCUSSION

The Little Egret appears to be gradually increasing in abundance within Trinidad and Tobago, though numbers remain small. The fewer summer records from Trinidad and Tobago may indicate dispersal northward (Murphy 1992), though more data are needed to reveal a clearer pattern. In Barbados, breeding occurs throughout the year, even by basic-plumaged adults (Massiah 1996).

The few records of alternate-plumaged adults suggest that breeding may occur, but the nesting colonies of egrets within Trinidad and Tobago have not been thoroughly examined for several decades. Given its recent colonization followed by explosive population growth in neighboring Barbados, the persistently small numbers in Trinidad and Tobago suggest that a breeding population has not been established yet, but may be expected soon. Thorough searches of egret breeding colonies are urgently needed.

Until 1994, all Little Egrets presumably arrived via a cross-Atlantic voyage at tropical latitudes (Murphy 1992). More recent records, however, may represent dispersal of birds fledged from the recently established breeding colony in Barbados. In 2000, the color-banding of nestling Little Egrets in Barbados was initiated with the objective of documenting dispersal and survivorship (M. Frost and E. Massiah, pers. com.). All Little Egrets in Trinidad and Tobago should be scrutinized for the presence of leg bands.

To document more accurately the range and population expansion of Little Egrets within the region, we encourage visiting and resident birders to report all sightings to the Southeastern Caribbean Bird Alert and to the Trinidad and Tobago Rare Bird Committee (see http://www.wow.net/ttfnc). Care should be exercised in distinguishing Little Egret from Snowy Egret and Western Reef-Heron, and identification should be based on several criteria rather than just one.

Although Little Egrets usually have dark grayish-blue or pale grayish-white lores contrasting with the bright yellow lores of Snowy Egrets, Little Egrets may acquire bright yellow lores during the breeding season and immature Snowy Egrets may have grayish lores. The feet are usually brighter yellow in Snowy Egret and greener in Little Egret, but some overlap occurs. Structural differences, including the larger body size, flatter forehead, longer and heavier bill, and thicker legs of the Little Egret should be noted, as well as the presence of long, lanceolate head plumes in alternate-plumaged adult Little Egrets contrasting with shorter, filamentous head plumes of alternate-plumaged Snowy Egrets.

The Western Reef-Heron has been recorded once from Trinidad (Nariva Swamp, 22 January 1986, photographed; Murphy and Nanan 1987) and once from Tobago (Buccoo and Bon Accord, 16 December 2000 to 25 July 2001, photographed; M. Kenefick, Hayes, and White, pers. obs.). White morph birds, which are rare and have not been documented yet from the New World, closely resemble Little Egret but usually have a few dark feathers, possess a notably paler, thicker, blunt-tipped and more downward-curved bill, and have paler legs. For further information on field identification of Little Egrets, see Murphy (1992) and Massiah (1996).

ACKNOWLEDGMENTS

We thank D. McNair for suggesting that we write this paper. Additional observers contributing to this report include Richard ffrench, Davis Finch, Martyn Kenefick, John Kricher, Harry Lehto, Douglas McNair, William Murphy, Roger Neckles, Frank Oatman, Chris Sharpe, and Paul Willoughby. For providing pertinent references, we thank E. Massiah and W. Murphy. Literature research by Hayes in the American Museum of Natural History was funded by the University of the West Indies. Field research by Hayes in Tobago was funded primarily by the American Bird Conservancy, Amoco Trinidad Oil Co., Benton Basham, BirdLife International, British Petroleum, Caribbean Union College, Center for the Study of Tropical Birds, Fauna and Flora International, Floyd Murdoch, Guardian Life of the Caribbean Ltd., Lincoln Park Zoo, Republic Bank Ltd., Sigma Xi, Trinidad and Tobago National Marketing Co. Ltd., and Trinmar Ltd.

LITERATURE CITED

AMERICAN ORNITHOLOGISTS' UNION. 1998. Check-list of North American birds. 7th ed. American Ornithologists' Union, Washington, DC.

BOND, J. 1966. Eleventh supplement to the Check-list of birds of the West Indies (1956). Acad. Nat. Sci., Philadelphia.

DOWNS, W. G. 1959. Little Egret banded in Spain taken in Trinidad. Auk 76:241–242.

FFRENCH, R., AND F. E. HAYES. 1998. Rare bird records from Trinidad & Tobago in 1997. Cotinga 9:84–85.

FFRENCH, R., AND G. WHITE. 1999. Verification of rare bird records from Trinidad & Tobago. Cotinga 12:80–82.

HAYES, F. E. 1996. Noteworthy bird records for Trinidad & Tobago, 1993–1994. Living World, Journal of the Trinidad and Tobago Field Naturalists' Club 1995–1996:20–21.

HAYES, F. E. 1998. Noteworthy bird records for Trinidad & Tobago, 1995–1996. Pitirre 11:5–6.

HAYES, F. E., AND G. WHITE. 1999. First report of the Trinidad and Tobago Rare Bird Committee. Living World, Journal of the Trinidad and Tobago Field Naturalists' Club 1999–2000:39–45.

MASSIAH, E. 1996. Identification of Snowy Egret and Little Egret. Birding World 9:434–444.

MURPHY, W. L. 1992. Notes on the occurrence of the Little Egret (*Egretta garzetta*) in the Americas, with reference to other Palearctic vagrants. Colon. Waterbirds 15:113–123.

MURPHY, W. L., AND W. NANAN. 1987. First confirmed record of Western Reef-Heron (*Egretta gularis*) for South America. Am. Birds 41:392–394.

NORTON, R. L. 1999. West Indies region. Am. Birds 53:333–335.

RAFFAELE, H., J. WILEY, O. GARRIDO, A. KEITH, AND J. RAFFAELE. 1998. A guide to the birds of the West Indies. Princeton Univ. Press, Princeton, New Jersey.

FIRST SIGHT RECORD OF PHILADELPHIA VIREO (*VIREO PHILADELPHICUS*) FOR CURAÇAO, NETHERLANDS ANTILLES, WITH NOTES ON OTHER MIGRANT SONGBIRDS

JEFFREY V. WELLS[1] AND ALLISON M. CHILDS WELLS[2]

[1]*National Audubon Society, Bird Conservation Program, c/o Cornell Lab of Ornithology, 159 Sapsucker Woods Rd., Ithaca, NY 14850, USA*; and [2]*Cornell Lab of Ornithology, 159 Sapsucker Woods Rd., Ithaca, NY 14850, USA*

Abstract.—We observed a Philadelphia Vireo (*Vireo philadelphicus*) on 1 April 2000 at Malpais, Curaçao, the first record for the Netherlands Antilles. We also present observations of several migrant warblers.

Resumen.—PRIMER REGISTRO VISUAL DEL VIREO DE FILADELFIA (*VIREO PHILADELPHICUS*) EN CURAZAO, ANTILLAS HOLANDESAS, CON NOTAS SOBRE OTRAS AVES CANORAS MIGRATORIAS. Se describe el primer registro del Vireo de Filadelfia (*Vireo philadelphicus*) en Curazao, Antillas Holandesas, y se presentan algunos datos de otras aves canoras en migración hacia el norte.

Key words: Blackpoll Warbler, *Chestnut-sided Warbler*, *Curaçao*, Dendroica pensylvanica, Dendroica striata, *Netherlands Antilles*, *Northern Parula*, *Northern Waterthrush*, *Ovenbird*, Parula americana, *Philadelphia Vireo*, *record*, *Red-eyed Vireo*, Seiurus aurocapillus, Seiurus noveboracensis, Vireo olivaceus, Vireo philadelphicus

THE PHILADELPHIA VIREO (*Vireo philadelphicus*) breeds in northern North America and regularly winters from southern Mexico south to western Panama (American Ornithologists' Union 1998) but is not known to occur east of the Canal Zone in Panama (Ridgely and Gwynne 1989, Ridgely and Tudor 1989). In South America, there are three fall records, all in northwestern Colombia (Hilty and Brown 1986), and the species has not been previously recorded from Curaçao or the other Netherland Antilles (Voous 1983). The Philadelphia Vireo has also been recorded only rarely from the Bahamas, Cuba, and Jamaica, and as a vagrant from the Cayman Islands and Antigua (Raffaele *et al*. 1998).

While surveying and audio-recording birds on 1 April 2000 at Malpais, Curaçao, Netherlands Antilles, we visually identified a Philadelphia Vireo. We had arrived at the site at dawn (06:15 h AST) and had been counting various marsh birds, columbids, and other resident species from a wide dam at the southwestern end of a small wetland. In the moist soil below the dam was a thicker growth of vegetation, including some relatively large trees as high as 12–15 m. Beginning at approximately 07:30 h AST, we moved into this thicker vegetation and began "spishing" – making sounds imitating various scolding and alarm calls of birds – to lure birds in from the surrounding area for visual identification. We had found that this technique worked well in past years to attract both resident and migrant birds in various habitats on Aruba. Several migrants appeared, including two or three Northern Waterthushes (*Seiurus noveboracensis*), two or three Northern Parulas (*Parula americana*), one Ovenbird (*Seiurus aurocapillus*), one Blackpoll Warbler (*Dendroica striata*), and the vireo. We studied the vireo for 15 min, from as close as 5 m, with 10x50 and 10x40 binoculars under excellent light conditions as the bird investigated our "spishing" sounds and foraged nearby.

Description.—The bird had obvious vireo-type bill, thicker and blunter than typical small warbler bill, but not as long or as large as that of Red-eyed Vireo (*V. olivaceus*) or Black-whiskered Vireo (*V. altiloquus*); undersides uniform pale yellow including undertail coverts; back dull greenish; crown gray with light supercilium lacking contrasting dark upper edge; dark lores and dark behind eye. Iris dark but clearly not red. Bird was smaller and shorter than Red-eyed Vireo; crown not as light gray as in Red-eyed Vireo but somewhat darker and less contrasting than in that species.

Analysis.—The blunt vireo-type bill, yellow undertail coverts, and typical vireo behavior separated this bird from the similar-appearing Tennessee Warbler (*Vermivora peregrina*), which winters to northwestern Venezuela (Ridgley and Tudor 1989), and for which there are several records from the Netherlands Antilles (Voous 1983). Red-eyed and Black-whiskered Vireos are the only other vireo species recorded from the Netherlands Antilles that potentially could be confused with Philadelphia Vireo, and both were ruled out by the smaller bill and overall size, lack of dark line above white supercilium, darker gray cap, and, in Black-whiskered Vireo, the lack of dark malar stripe. We were both familiar with identification of Philadelphia Vireo, Red-eyed Vireo, and Tennessee Warbler, each hav-

ing 15–20 years of field experience with the birds of eastern North America and having both seen Black-whiskered Vireos on many occasions. The Brown-capped Vireo (*V. leucophrys*) is superficially similar but has a brown, rather than gray, crown and is highly unlikely to occur on Curaçao because it is a sedentary resident of montane forest that occurs no closer than approximately 150 km from Curaçao.

This sighting constitutes the first record of Philadelphia Vireo for the Netherlands Antilles and, considered with the three previous records from Colombia, suggests that the species may be a rare winterer in northwestern Colombia and northeastern Venezuela. Of note is the fact that on the previous day (31 March), at the same location, we observed several other migrant species not detected on 1 April, including two Red-eyed Vireos and one Chestnut-sided Warbler (*Dendroica pensylvanica*). Likewise, several species that we saw on 1 April were not detected on 31 March, including Philadelphia Vireo, Northern Parula, and Ovenbird. Such changes in species composition suggest that these birds were spring migrants returning north from a South American mainland wintering area. We note also that Voous (1983) lists relatively few records of several of these species from the Netherlands Antilles, especially during spring migration even though most (with the exception of the more Central American wintering Chestnut-sided Warbler, and the West Indian wintering Northern Parula) winter regularly on the South American mainland.

ACKNOWLEDGMENTS

We extend our grateful thanks to the CARMABI Foundation, especially Adolphe Debrot, for various forms of assistance, advice, good company and the use of a vehicle during our stay on Curaçao.

LITERATURE CITED

AMERICAN ORNITHOLOGISTS' UNION. 1998. Checklist of North American birds. 7th ed. American Ornithologists' Union, Washington, DC.

HILTY, S. L., AND W. L. BROWN. 1986. A guide to the birds of Colombia. Princeton Univ. Press, Princeton, New Jersey.

RAFFAELE, H., J. WILEY, O. GARRIDO, A. KEITH, AND J. RAFFAELE. 1998. A guide to the birds of the West Indies. Princeton Univ. Press, Princeton, New Jersey.

RIDGELY, R. S., AND J. A. GWYNNE, JR. 1989. A guide to the birds of Panama. Princeton Univ. Press, Princeton, New Jersey.

RIDGELY, R. S., AND G. TUDOR. 1989. The birds of South America, Vol. I. Univ. Texas Press, Austin, Texas.

VOOUS, K. H. 1983. Birds of the Netherlands Antilles. de Walburg Pers, Utrecht.

FIRST RECORDS OF CARIBBEAN MARTIN (*PROGNE DOMINICENSIS*) FOR TRINIDAD, WITH COMMENTS ON ITS SUPPOSED MIGRATION TO SOUTH AMERICA

WILLIAM L. MURPHY[1] AND FLOYD E. HAYES[2]

[1]*8265 Glengarry Court*, *Indianapolis*, *Indiana 46236*, *USA*; and [2]*Department of Life Sciences*, *University of the West Indies*, *St. Augustine*, *Trinidad and Tobago*

Abstract.—We report the first records of the Caribbean Martin (*Progne dominicensis*) for Trinidad. We saw an adult male from 14 April to 15 May 1999, another male (photographed) from 9 April to 27 May 2000, and two adult males from 11 February to 7 April 2001. All observations were at Galera Point, the northeastern tip of Trinidad, only 35 km from its nearest known breeding locality in Tobago. There is little evidence that the Caribbean Martin migrates to South America through Trinidad from the Lesser Antilles or Tobago.

Resumen.—PRIMEROS REGISTROS VISUALES DE LA GOLONDRINA DE IGLESIAS (*PROGNE DOMINICENSIS*) PARA TRINIDAD, CON COMENTARIOS SOBRE SU MIGRACIÓN A SUDAMÉRICA. Se relata los primeros registros de la Golondrina de Iglesias (*Progne dominicensis*) para Trinidad. Observamos un macho adulto del 14 de abril al 15 de mayo de 1999, otro macho (fotografiado) del 9 de abril al 27 de mayo de 2000, y dos machos adultos del 11 de febrero al 7 de abril de 2001. Todas las observaciones fueron hechas en la punta de Galera, la punta noreste de Trinidad, a solamente 35 km de la localidad de nidificación más cercana en Tobago. Existe poca evidencia que la Golondrina de Iglesias emigra a Sudamérica por Trinidad desde las Antillas Menores o Tobago.

Key words: Caribbean Martin, distributional records, migration, Progne dominicensis*, South America, Trinidad*

THE CARIBBEAN MARTIN (*Progne dominicensis*) is resident from January to October in the Greater Antilles (except Cuba), Lesser Antilles, and Tobago, and is thought to migrate to South America from October to December (e.g., Ridgely and Tudor 1990, American Ornithologists' Union 1998, Raffaele *et al*. 1998), though small numbers winter in Barbados (M. Frost and E. Massiah, pers. comm.). It is a regular migrant in Curaçao and Bonaire, occurring only during fall (8 September to 13 October) and spring (7 to 30 May; Voous 1983), suggesting that it passes through the islands on its way between the Greater Antilles and South America. Vagrants have been reported from the southern Bahamas and Cayman Islands (Raffaele *et al*. 1998).

Although there are sight records of the Carribean Martin from coastal Guyana (without details; Snyder 1966), there are no other records from South America except from the continental island of Tobago, 118 km from the South American continent, where it is resident from January to October (ffrench 1991). Thus, the wintering destination of Caribbean Martins remains a mystery.

Situated only 19 km from the South American mainland, the continental island of Trinidad is along a potential migratory pathway connecting the Lesser Antilles and Tobago with South America. Here we report the first records of Caribbean Martin from Trinidad and comment upon its status as a possible migrant through Trinidad.

OBSERVATIONS

At 12:16 hr on 14 April 1999, Murphy found an adult male Caribbean Martin sweeping the air above Galera Point, the northeastern tip of Trinidad, among about a dozen birds including several Gray-breasted Martins (*P. chalybea*), several Short-tailed Swifts (*Chaetura brachyura*), and a lone Barn Swallow (*Hirundo rustica*). The bird was immediately pointed out to Hayes and C. Ramjohn and was studied as it repeatedly swooped within 5 m of us and soared, nearly motionless at times, into northeasterly winds.

The bird was a metallic, steely blue on the back, head, breast and flanks. The belly was immaculate white, sharply demarkated from the dark breast and flanks and broken only by the dark legs. The primaries and secondaries appeared black. The tail was slightly forked. When relocated by Hayes, B. Sanasie, and C. Shameerudeen on 24 April 1999 and observed intermittently from 08:44–17:55 hr, Hayes noted that it was slightly larger than associating Gray-breasted Martins. It was last seen by Hayes at 07:11 on 15 May 1999.

Another (or perhaps the same) male Caribbean Martin was found by Hayes on 9 April 2000 at Galera Point, where it was observed from 12:51–13:20 hr and photographed (Fig. 1). It was subsequently seen by Hayes and G. White from 09:45–10:10 hr on 16 April 2000, by Hayes, B. Sanasie, and B. Taylor from 10:21–11:35 hr on 23 April 2000, by I. Samad on 1 May 2000, and by Hayes

Fig. 1. Adult male Caribbean Martin at Galera Point, Trinidad, 9 April 2000. Photograph by Floyd E. Hayes.

from 10:14–11:00 hr on 27 May 2000.

On 11 February 2001, Hayes, N. Hacking and B. Hayes found two male Caribbean Martins at Galera Point, where they were observed from 09:45–10:31 hr. The birds frequently chased each other. Only a single male was seen by M. Kenefick on 2 April but Hayes noted two from 14:34–15:33 hr on 7 April 2001.

DISCUSSION

The adult male Caribbean Martin is readily separable from the Gray-breasted Martin, which is resident in Trinidad, by its slightly larger size and dark breast and flanks sharply demarcated from the white belly (Ridgely and Tudor 1990, ffrench 1991, Raffaele *et al*. 1998). Female and immature Caribbean Martins closely resemble female and immature Gray-breasted Martins, respectively, and are difficult to distinguish in the field. The male Caribbean Martins observed at Galera Point associated with slightly smaller martins thought to be Gray-breasted Martins, based on our intimate familiarity with the species from previous field work in Trinidad. However, it is possible that some of the birds present were female or immature Caribbean Martins.

Hayes has noted Gray-breasted Martins entering and leaving crevices presumably used for nesting on rocky outcrops along the northern coast of Trinidad, including an islet just off Galera Point. However, we never observed any evidence of courtship or nesting in the male Caribbean Martins. Furthermore, the male Caribbean Martins observed appeared to be pure individuals lacking any evidence of hybridization with the Gray-breasted Martin. Such hybridization has never been documented but, if were it to occur, it could do so either in Trinidad or Tobago.

During the last several years, Hayes often scanned Gray-breasted Martin flocks elsewhere in Trinidad, including a large flock at Piarco International Airport, for Caribbean Martins, but failed to find any. Galera Point is only 35 km from Crown Point, Tobago, the nearest known breeding locality of the Caribbean Martin. Because our observations of Caribbean Martin occurred only at Trinidad's closest point to Tobago, within a narrow range of dates (11 February to 27 May) and without any evidence of courtship or nesting, we suspect that the martins were non-breeding individuals merely wandering across from their nearest known breeding locality in Tobago. There is no substantial evidence that the Caribbean Martin migrates to South America through Trinidad from the Lesser Antilles or Tobago.

ACKNOWLEDGMENTS

Fieldwork in northeastern Trinidad was funded by a grant from the St. Louis Zoo to Hayes and S. Temple for studying the Trinidad Piping-Guan (*Pipile pipile*). Others who shared their observations with us include N. Hacking, B. Hayes, M. Kenefick, C. Ramjohn, I. Samad, B. Sanasie, C. Shameerudeen, and B. Taylor. We thank M. Frost and E. Massiah for comments on the status and identification of Caribbean Martins in Barbados.

LITERATURE CITED

AMERICAN ORNITHOLOGISTS' UNION. 1998. Checklist of North American birds. 7th ed. American Ornithologists' Union, Washington, DC.

FFRENCH, R. 1991. A Guide to the Birds of Trinidad and Tobago. 2nd ed. Cornell University Press, Ithaca, New York.

RAFFAELE, H., J. WILEY, O. GARRIDO, A. KEITH, AND J. RAFFAELE. 1998. A guide to the birds of the West Indies. Princeton Univ. Press, Princeton, New Jersey.

RIDGELY, R. S., AND G. TUDOR. 1989. The Birds of South America. Vol. I. The Oscine Passerines. Univ. Texas Press, Austin, Texas.

SNYDER, D. E. 1966. The birds of Guyana. Peabody Museum, Salem, Massachusetts.

VOOUS, K. H. 1983. Birds of the Netherlands Antilles. 2nd ed. Foundation for Scientific Research in Surinam and the Netherlands Antilles, Utrecht.

FIRST SIGHT RECORDS OF SWAINSON'S HAWK (*BUTEO SWAINSONI*) FOR TRINIDAD AND CHACACHACARE ISLAND, WITH COMMENTS ON ITS STATUS AND TRANS-CARIBBEAN MIGRATION

FLOYD E. HAYES

Department of Life Sciences, University of the West Indies, St. Augustine, Trinidad and Tobago

Abstract.—I report sight records of a light-morph adult Swainson's Hawk (*Buteo swainsoni*) at Grande Riviere and Matelot, Trinidad, on 16 and 17 May 1998, and a light-morph immature at Chacachacare Island, northwest of Trinidad, from 29 October 1999 to 13 January 2000. A review of records from the region is provided as evidence for migration across the Caribbean Sea.

Resumen.—PRIMEROS REGISTROS VISUALES DEL GAVILÁN DE SWAINSON (*BUTEO SWAINSONI*) PARA TRINIDAD Y LA ISLA DE CHACACHACARE, CON COMENTARIOS SOBRE SU ESTADO Y MIGRACIÓN TRANS-CARIBEÑA. Se resume un registro visual de un Gavilán de Swainson (*Buteo swainsoni*) adulto de la fase pálida en Grande Riviere y Matelot, Trinidad, el 16 y 17 de mayo de 1998, y un inmaduro de la fase pálida en la isla de Chacachacare, noroeste de Trinidad, del 29 de octubre de 1999 hasta el 13 de enero de 2000. Se resumen los registros de la región como evidencia para la migración sobre el mar Caribe.

Key words: Buteo swainsoni, *Caribbean*, *Chacachacare Island, distribution*, *migration*, *Swainson's Hawk*, *Trinidad*

THE SWAINSON'S HAWK (*Buteo swainsoni*) breeds in western North America and winters chiefly in southern South America, though a small percentage of individuals migrate through eastern North America and winter in southern Florida (e.g., England *et al*. 1997, American Ornithologists' Union 1998). Given the long distances routinely flown by this species, vagrancy probably occurs more frequently than reported, especially in the Caribbean region and in northern South America where few experienced observers are present. In this note I report the first sight records of this species from Trinidad and nearby Chacachacare Island, review further records from Tobago, and review West Indian records as evidence for trans-Caribbean migration.

OBSERVATIONS

In the afternoon of 16 May 1998, I observed a large, distant hawk soaring over forest just south of Grande Riviere, along the northern coast of Trinidad. Other than distinctive gaps in the primaries of both wings and a notably pale upper surface of the tail, I could not make out any further details. On three occasions, however, the hawk gave a distinct, drawn-out, descending whistle. Earlier in the day the same bird, recognized by the distinctive gaps in its primaries, was briefly observed by C. Ramjohn and F. Lucas as it soared over forest west of Matelot.

The following day, 17 May 1998, I was hiking at Matelot with Ramjohn and Lucas when at 11:33 hr we observed the same bird, again recognized by the distinctive gaps in its primaries, for about 1.5 min as it circled about 30 m above us. I immediately recognized it as a light-morph adult Swainson's Hawk by the dark breast contrasting with the pale underparts, except for a few dark streaks extending from the dark breast into the belly. Fine bars were visible on the wings. The tail was finely barred with a broader terminal dark band. The basal two-thirds of the tail were white on the upper surface, contrasting with the dark upperparts. We did not notice a white throat or a strong contrast in the underwing linings, though these may have been obscured by strong backlighting. The hawk was briefly chased by a Plumbeous Kite (*Ictinia plumbea*) before it disappeared. I did not notice or look for a dihedral wing profile.

While surveying birds on Chacachacare Island, one of the Bocas Islands off northwestern Trinidad, several students and I repeatedly observed a light-morph immature Swainson's Hawk soaring over the island's southern peninsula for about 1.25 hr during 29–31 October and for about 1.25 hr on 14 November 1999. The upperparts could not be observed well, but appeared uniformly dark. The bird had a pale head with a dark blotch behind the eye. The broad wings were relatively pointed for a *Buteo*; from below, the pale, slightly cream-colored underwing linings contrasted strongly with the darker, finely barred flight feathers. The underparts were white, with no noticeable spotting or streaking; the throat appeared slightly darker. The legs were orangeish. The fairly broad tail had 6–7 narrow bars, with a wider subterminal dark band. I did not notice or look for a dihedral wing profile. The hawk repeatedly ut-

tered a long, descending whistle, 2–3 sec in length, while flying and while perched on a distant tree; each day it responded initially to whistled imitations, soaring directly overhead within 25 m and peering downward at us. On one occasion it hovered for 1–2 min. Once it chased an immature Gray Hawk (*Asturina nitida*) similar in size; another time it flew beside a much smaller Short-tailed Hawk (*B. brachyurus*).

During 12–13 January 2000, the hawk was heard repeatedly, but not seen, by J. Teixeira and G. Lalsingh, who had observed and heard the bird repeatedly while with me in October and November 1999. I could not relocate the hawk during a 50 min search on 23 January 2000.

DISCUSSION

The field marks observed on the Trinidad bird are diagnostic for a typical adult Swainson's Hawk (e.g., Clark and Wheeler 1987). The head and underparts of the Chacachacare bird were unusually pale for a Swainson's Hawk, but light-morph immature birds occasionally exhibit such feathers (W. Clark, C. Lott, M. Orsag, and Z. Smith; pers. comm..), possibly because of feather lice damaging the darker tips of the feathers (C. Lott, pers. comm.). Although these sight records represent the first for Trinidad and the Bocas Islands, there are several previous reports from the adjacent island of Tobago. Andres *et al*. (1991) described a sight record of a light-morph adult from Little Tobago, off the northeastern tip of Tobago, on 22 March 1990, and reported an earlier sighting at the same locality by D. Finch on 27 January 1989. Another light-morph adult was seen at Little Tobago on 31 December 1996 (Petersen and McRae, in press). What may have been the same light-morph adult was seen at Flagstaff Hill, northeastern Tobago, by R. ffrench on 17 March 1998 and at Little Tobago by G. Engblom on the remarkably late date of 21 June 1998 (unpublished records accepted by Trinidad and Tobago Rare Bird Committee). W. Murphy (pers. Comm.) briefly viewed through a camcorder a light-phased adult videotaped at Flagstaff Hill by a birder on 10 April 1999; unfortunately the birder's name and whereabouts of the video footage are unknown. An immature bird was seen by R. Neckles (pers. comm.) near Flagstaff Hill on 28 January 2001.

The fall and early winter record from Chacachacare and winter records from northeastern Tobago may represent individuals straying eastward across northern South America, rather than migrating southward as usual, after migrating through Central America. Alternatively, they may represent trans-Caribbean migrants arriving in the fall and wintering in the islands.

In the Florida Keys, most Swainson's Hawks are immatures, whose numbers peak in late October and November; although some winter, most apparently retreat northward to winter on the mainland of southern Florida (Hoffman and Darrow 1992). Conceivably, a few individuals may migrate southward across the Caribbean. If correctly identified, a sight record from Jamaica on 15 October 1974 (Bond 1976) provides the only direct evidence of southbound migration across the Caribbean.

The spring records in northeastern Trinidad and northeastern Tobago may represent northbound migrants from southern South America that traversed northeastward rather than northwestward across South America, or simply birds that had wintered in the islands. The persistent appearance of birds on the northeastern side of both Trinidad and Tobago during spring suggests that they lingered before attempting a trans-Caribbean flight, though at least one bird appears to have spent the summer. Bradshaw *et al*. (1997) described a light-morph adult seen in the Dominican Republic on 22 April 1996, providing the only direct evidence of northbound migration across the Caribbean.

The fairly regular appearance of Swainson's Hawk in frequently birded Trinidad and Tobago since 1989 suggests that it may have been unnoticed previously. The few West Indian records suggest that it may also be overlooked as a potential fall and spring transient. Birders and ornithologists should be alert for this species throughout the region.

ACKNOWLEDGMENTS

Field work in Grande Riviere was funded by a grant from the Saint Louis Zoo to Hayes and S. Temple for a study of the Trinidad Piping-Guan (*Pipile pipile*). I thank Floyd Lucas and Carol Ramjohn for sharing their observations from Grande Riviere. Field work in Chacachacare was funded by the University of the West Indies; transportation was provided by the Trinidad and Tobago Coast Guard. I thank Giancarlo Lalsingh and Jason Teixeira for sharing their observations from Chacachacare. Gunnar Engblom, Richard ffrench, William Murphy, Roger Neckles, and Wayne Petersen kindly provided details on recent sightings from Tobago. For reassuring comments on the Chacachacare record, I thank W. Clark, C. Lott, W. Murphy, M. Orsag, and Z. Smith. Library research in the American Museum of Natural History was funded by the University of the

West Indies and facilitated by P. Sweet and J. Weicker; C. Lott provided a pertinent reference.

LITERATURE CITED

ANDRES, B., W. HAAG, AND S. ANDRES. 1991. Recent records of the Swainson's Hawk in Trinidad and Tobago. Living World, J. Trin. Tob. Field Nat. Club 1991–1992:45.

BOND, J. 1976. Twentieth supplement to the Checklist of birds of the West Indies (1956). Acad. Nat. Sci., Philadelphia.

BRADSHAW, C. G., G. M. KIRWAN, AND R. S. R. WILLIAMS. 1997. First record of Swainson's Hawk *Buteo swainsoni* for the West Indies. Bull. Brit. Ornithol. Club 117:315–316.

CLARK, W. S., AND B. K. WHEELER. 1987. A field guide to hawks of North America. Houghton Mifflin Co., Boston.

ENGLAND, A. S., M. J. BECHARD, AND C. S. HOUSTON. 1997. Swainson's Hawk, *Buteo swainsoni*. Birds N. Amer. 265:1–28.

HOFFMAN, W., AND H. DARROW. 1992. Migration of diurnal raptors from the Florida Keys into the West Indies. Hawk Migration Assoc. N. Am. Migration Stud., Oct.:7–14.

PETERSEN, W. R., AND D. MCRAE. In press. Noteworthy bird records for Trinidad and Tobago, including first reports of Wood Sandpiper (*Tringa glareola*) and White-eyed Vireo (*Vireo griseus*). Dept. Life Sci., Univ. West Indies, St. Augustine, Occ. Pap. 11.

WE CALLED IN THE MILITARY

ROLF G. KRAHE

Executive Director, Society of Conservation and Research of Owls-Canada, Site 57, Comp. 18, R. R. #2, Smithers, British Columbia VOJ 2NO, Canada

What comes to mind when you hear the word military? Certainly, each person will react differently, depending on one's own experiences or simply what one believes in. For some, the military is an organization longing for war and destruction; for others, these are men and women who keep order and peace and are very helpful when natural catastrophes occur. People who believe in the good of the military can add a new dimension to their importance. The honor for this achievement belongs to the army of the Dominican Republic. This army will take part in a life-saving mission by participating in our Dominican Republic Owl Conservation Project (DROCP) to save the endemic owl species of their country from extinction. They will finance and build three aviaries for the Hispaniolan Burrowing Owl (*Athene cunicularia troglodytes*) at ZOODOM, the National Zoo of the Dominican Republic (Fig. 1). I can understand that you, reading this, are a little bit puzzled because it is something globally unheard of. At the beginning of the 21st Century, the Dominican Republic put a new positive meaning to the word military, which can be described as a milestone in military history. Can you imagine if other countries would follow and use their army power in nature conservation and that soldiers would join the battle to protect their countries nature treasures? How much better our world would be. Hats off to the men and women in the Dominican Republic who made this decision.

But there is even more good news about our DROCP. The Banco de Reservas (the government bank) will pay the food costs for the captive owl population.

And how do our owls fare under human care at ZOODOM? We have completed two aviaries for the endemic Ashy-faced Owl (*Tyto glaucops*). The only pair we have so far occupies one aviary, and that pair produced five owlets in 2001. Five females occupy the second aviary. Our three unrelated pairs of Hispaniolan Burrowing Owls are awaiting the completion of their aviaries. We have also taken four colorful Hispaniolan Short-eared Owls (*Asio flammeus domingensis*) into our care. The fourth Owl species for which we have concern, the Hispaniola Stygian Owl (*Asio stygius noctipetens*), is still absent from our breeding project.

Please consider how much engagement, dedication, understanding, and love is needed to make this all possible. I think we (the rest of the world) owe the people of the Dominican Republic, especially the military, the Banco de Reservas, the administration at ZOODOM and last, but not least, Prof. Simón Guerrero, our project leader, a profound and heartfelt "Thank you."

From the Annual Report 2000 for *The Society for the Conservation and Research of Owls*.

Fig. 1. Captive Burrowing Owl (*Athene cunicularia troglodytes*) in nesting chamber at ZOODOM, Dominican Republic.

THIRTEENTH MEETING OF THE SOCIETY OF CARIBBEAN ORNITHOLOGY
TOPES DE COLLANTE, CUBA
JULY 2001

A SURVEY AND INVENTORY OF THE AVIFAUNA OF THE MASON RIVER GAME SANCTUARY, CLARENDON, JAMAICA

SUZANNE DAVIS[1] AND CATHERINE LEVY[2]
[1]*Natural History Division, Institute of Jamaica, 10-16 East Street, Kingston, Jamaica (nhd.ioj@mail.infochan.com)*; and [2]*BirdLife Jamaica, c/o 2 Starlight Avenue, Kingston 6, Jamaica (mclevy@cwjamaica.com)*

The Institute of Jamaica (IOJ) faces an extremely challenging task in the conservation of the avifauna at the Mason River Game Sanctuary (MRGS), Clarendon. The Natural History Division (NHD) of the IOJ manages the Game Sanctuary, which is an important part of the NHD's contribution to environmental conservation. Recently, the IOJ was appointed coordination centre or National Focal Point for the Jamaica Clearing-House Mechanism (JACHM). This is a national biodiversity information network established through the United Nations Convention on Biological Diversity – a convention that Jamaica ratified in 1995. BirdLife Jamaica and the NHD consider the conservation and sustainable development of Jamaica's biodiversity a major priority. The two organizations are collaborating on a project funded by the Environmental Foundation of Jamaica to bridge an existing information gap on the birds of the MRGS. The project, entitled "Survey & Inventory of the Avifauna at the Mason River Game Sanctuary, Clarendon," seeks to acquire scientific baseline data that will initiate the effective and sustainable management of the birds of the Sanctuary. The study will also contribute to the Important Bird Areas Programme being developed by BirdLife Jamaica, which involves an islandwide assessment of bird conservation needs.

RECONOCIMIENTO E INVENTARIO DE LA AVIFAUNA DEL SANTUARIO DE CAZA DEL RÍO MASON, CLARENDON, JAMAICA

El Instituto de Jamaica (IDJ) enfrenta una tarea extremadamente retante en la conservación de la avifauna en el Santuario de Caza del Río Mason (SCRM), Clarendon. La División de Historia Natural (DHN) del IDJ maneja el santuario, el cual es una parte importante de la contribución del DHN a la conservación ambiental. Recientemente, el IDJ fue designado como centro coordinador o Punto Nacional Focal para el Mecanismo del Banco de Liquidación de Jamaica (MBLJA). Esto es una red nacional de información de la biodiversidad establecido a través de la Convención de Diversidad Biológica de las Naciones Unidas- una convención que Jamaica ratificó en 1995. BirdLife Jamaica y la DHN consideran la conservación y el desarrollo sustentable de la biodiversidad de Jamaica como una prioridad importante. Las dos organizaciones están colaborando en un proyecto auspiciado por la Fundación Ambiental de Jamaica para cerrar el vacío de información sobre las aves del SCRM. El proyecto, titulado "Reconocimiento e Inventario de la Avifauna del Santuario de Caza del Río Mason, Clarendon", busca adquirir una base de datos científicos e información que inicie el manejo efectivo y sustentable de las aves del Santuario de Caza del Río Mason. El estudio también contribuirá al Programa de Áreas Importantes para Aves desarrollado por BirdLife Jamaica, el cual incluye una evaluación de las necesidades de conservación de las aves a través de toda la isla.

NOTABLE BIRDS OF THE DOMINICAN REPUBLIC

R. EDUARDO VÁSQUEZ, KATE WALLACE, AND STEVEN LATTA
Club de Observadores de Aves Annabelle Dod, Santo Domingo, República Dominicana

Our book, "Notable birds of the Dominican Republic," was created as an educational tool for the use of bird-watchers, students, ornithologists, and interested national and international institutions. It includes photos of 60 birds, including resident as well as migratory species, which are common or known in the folklore. A brief description is given, in English as well as Spanish, of each bird, its habitat, behavior, or special interest.

AVES NOTABLE DE LA REPÚBLICA DOMINICANA

Se presenta el libro "Aves de la República Dominicana," creado con fines educativos y divulgativos para el uso de aficionados, escolares, ornitólogos y demás instituciones nacionales e internacionales de interés. Proporciona las fotografías de 60 especies residentes permanentes y migratorias que son comunes, reconocidas y de un alto valor en el folklore popular. También describe, tanto en español como en inglés, el nombre de cada especie, hábitat, alimentación, hábitos inusuales y comportamiento.

CHARACTERIZATION OF AVIAN DIVERSITY IN EASTERN CUBA, WITH AN EMPHASIS ON THE SIERRA MAESTRA AND NIPE-SAGUA BARACOA MOUNTAIN CHAINS

LUIS OMAR MELIÁN HERNÁNDEZ[1], FREDDY RODRÍGUEZ SANTANA[1], AND JOSÉ A. SACO[2]
[1]*Centro Oriental de Ecosistemas y Biodiversidad (BIOECO), (melian@bioeco.ciges.inf.cu, freddy@bioeco.ciges.inf.cu);* and [2]*No. 601 Esq. Barnada, Santiago de Cuba C. P. 90 100, Cuba*

We used data published in scientific journals, a review of ornithological collections, and fieldwork to characterize the avifauna of eastern Cuba, especially the regions of the Sierra Maestra and Nipe-Sagua-Baracoa mountain chains. Distribution, status, abundance, and breeding cycle are

given for each species. New records for the eastern part of Cuba are presented. We conclude that the eastern region, especially the Sierra Maestra and Nipe-Sagua-Baracoa mountain chains, are of primary concern for the conservation of Cuban avian diversity. A check-list of the area with the information collected during this work will facilitate conservation, environmental education, and management plans.

CARACTERIZACIÓN DE LA DIVERSIDAD DE AVES DE LA REGIÓN ORIENTAL DE CUBA, CON ÉNFASIS EN LOS MACIZOS MONTAÑOSOS SIERRA MAESTRA Y SAGUA BARACOA

Se presenta toda la información obtenida en revisiones de colecciones ornitológicas, bibliografías y, especialmente, en trabajos de campo, que permitieron caracterizar la diversidad de aves presente en la región oriental, fundamentalmente en los macizos montañosos de sierra Maestra y Nipe-Sagua-Baracoa. De cada especie se analizan aspectos importantes como su distribución, estado y abundancia, reproducción, y nuevos reportes. Se concluye que el territorio oriental es muy importante para la conservación de la diversidad de aves de Cuba. Toda esta información se incorpora a una lista anotada del área conformando una gran base de datos que permite trazar planes de manejo, educación ambiental y protección.

THE STATUS OF RESIDENT AND MIGRANT BIRD COMMUNITIES IN CUBAN ECOSYSTEMS

HIRAM GONZÁLEZ ALONSO, ALEJANDRO LLANES SOSA, BÁRBARA SÁNCHEZ ORIA, DAYSI RODRÍGUEZ BATISTA, ENEIDER PÉREZ MENA, PEDRO BLANCO RODRÍGUEZ, RAMONA OVIEDO PRIETO AND ALINA PÉREZ HERNÁNDEZ
Instituto de Ecología y Sistemática, Ministerio de Ciencia Tecnología y Medio Ambiente, Cuba (ecologia@unepnet.inf.cu)

From 1988 to 1999, we worked in 34 localities of 10 regions of Cuba to evaluate terrestrial bird communities and, in four regions, to evaluate aquatic bird communities. We used transect counts, circular plots, and capture by mist-nets in our efforts. In addition, we sampled vegetation plots to learn the structure and composition of plant communities within these regions. The parameters that most influence bird populations are canopy cover, ground cover, and foliage density between 0 and 1 m. We estimated the composition and abundance of terrestrial bird communities during winter. The results that we obtained in 12 localities of six regions of Cuba during fall migration suggest that many individuals and species of migrant birds use the regions of Guanahacabibes, Península de Hicacos, Cayo Santa María, Cayo Coco, and Gibara. Hurricane Lily affected the structure of vegetation and composition and abundance of birds in the Zapata Swamp. We examined the composition and abundance of shorebirds in four regions of Cuba. We offer recommendations for the management and conservation of different localities that have been affected by socio-economic development. Results of our efforts could be used in biodiversity studies in Cuba.

ESTADO DE LAS COMUNIDADES DE AVES RESIDENTES Y MIGRATORIAS EN ECOSISTEMAS CUBANOS

Entre 1988 y 1999, se trabajó en 34 localidades de 10 regiones de Cuba para evaluar las comunidades de aves terrestres, mientras que en las acuáticas se trabajó en cuatro localidades. Se aplicaron los métodos de transecto lineal, parcela de conteo y captura con redes ornitológicas. Se determinó la estructura y composición de las formaciones vegetales mediante el método de parcela de vegetación. Las variables estructurales que más influyen en la ordenación de los hábitats y en las poblaciones de las aves son la cobertura del dosel, la cobertura del suelo y la densidad del follaje de 0-1m, por lo que la estructura de la vegetación determina la composición y abundancia de las comunidades de aves. Se determinó la composición y abundancia de las comunidades de aves terrestres durante la residencia invernal. Los resultados obtenidos en 12 localidades de seis regiones de Cuba durante la migración otoñal demuestran que por las localidades de Guanahacabibes, península de Hicacos, cayo Santa María, cayo Coco y Gibara pasan o permanecen en las mismas un gran número de individuos y especies migratorias terrestres neárticas-neotropicales. Se concluyó que el ciclón Lily, a su paso por la ciénaga de Zapata, afectó la estructura de la vegetación, así como la composición y abundancia de la avifauna. Se pudo conocer la composición y abundancia de la avifauna litoral de cuatro regiones de Cuba. Se ofrecen recomendaciones para el manejo y conservación de las áreas que están siendo sometidas a los impactos provocados por el desarrollo socioeconómico actual en Cuba. Estos resultados sirven de base a estudios sobre la biodiversidad cubana.

MONITORING BIRD MIGRATION THROUGH THE SOUTHEASTERN UNITED STATES

CECILIA RILEY[1], WILLIAM C. HUNTER[2], MARK WOODREY[3], GEORGE WALLACE[4], LYNDA WYANT[5], AND PAUL HAMEL[6]
[1]*Gulf Coast Bird Observatory, Lake Jackson, TX (criley@gcbo.org);* [2]*(chuck_hunter@fws.gov);* [3]*US Fish and Wildlife Service, Atlanta, GA, and Jackson, MS (mark_woodrey@fws.gov);* [4]*Florida Fish and Wildlife Conservation Commission, Panama City, FL, USA (wallacg@fwc.state.fl.us);* [5]*Greenville, MS (l_wyant@hotmail.com);* and [6]*USDA Forest Service, PO Box 227, Stoneville, MS 38776, USA (phamel@fs.fed.us)*

The Gulf Coast Bird Observatory (GCBO) and the Southeastern Working Group of Partners-in-Flight have developed a protocol to monitor landbird migration. The GCBO distributes data sheets, and compiles and maintains the database. The GCBO has also assembled a group to analyze data. The goals of this monitoring program are several: to obtain data on arrival in spring and departure in autumn, identify staging and dispersal areas, determine species-specific migration pathways, compare movements among sites and years, identify 'hot-spots' and their movements between years, assess weather effects on flight pathways, and identify habitats used for stopover and as corridors between coastal and interior breeding sites. To date, 25 participants have submitted data on spring and fall observations made in the United States (six different states) and Belize. This program is completing its first year and benefits from the extensive experience of a similar project in Florida. Results will allow us to make appropriate deci-

sions for conservation of habitats for migratory songbirds during the passage through the southeastern United States. Because the protocol is easy to perform and widely applicable, we suggest it as a means to monitor migration throughout the Caribbean Basin.

MONITOREANDO LA MIGRACIÓN DE AVES EN EL SUDESTE DE LOS EE.UU.

El Gulf Coast Bird Observatory (GCBO) y el Grupo Sudeste de Compañeros en Vuelo (Partners in Flight) han desarrollado un protocolo para monitorear la migración de aves terrestres. El GCBO distribuye hojas para apuntar datos y también recopila y mantiene la base de datos. El GCBO también ha reunido un grupo para analizar los datos. Este programa de monitoreo tiene varios objetivos: la obtención de datos sobre la llegada primaveral y la partida otoñal, la identificación de zonas de agrupamiento y dispersión, la determinación de las rutas migratorias de cada especie, la comparación de los cambios en movimiento entre sitios y años, la identificación de lugares de concentración y cómo éstos cambian de un año para otro, la evaluación de eventos metereológicos sobre las rutas migratorias, y la identificación de sitios donde paran las aves en trámite y los corredores de hábitat que utilizan entre las zonas costeras y las zonas interiores de anidación. Hasta la fecha, 25 participantes han entregado datos sobre sus observaciones de primavera y otoño en los EE.UU. (en seis estados) y Belice. Este programa está completando su primer año y se beneficia de un proyecto similar en la Florida. Los resultados nos ayudarán en la toma acertada de decisiones sobre la conservación de hábitats para las aves migratorias terrestres en sus desplazamientos por el sudeste de los EE.UU. Siendo que la metodología es muy fácil y ampliamente aplicable, la recomendamos como una manera de monitorear la migración de aves por las islas caribeñas.

RAPTOR MIGRATION THROUGH THE FLORIDA KEYS AND INTO THE CARIBBEAN

CASEY LOTT

Director, Florida Keys Raptor Migration Project, HawkWatch International and Audubon's Tavernier Science Center, 115 Indian Mound Trail, Tavernier, FL 33070 (caseylott@hotmail.com)

Each fall many raptors fly through the Florida Keys on their southbound migration. Over 13,000 individuals of 17 species are observed annually during systematic counts conducted by HawkWatch International and Audubon of Florida. More Peregrine Falcons (*Falco peregrinus*) pass through the Keys during fall migration than have been recorded at any other count location in the world. Long-term counts in the Keys will help assess the recovery of peregrine populations and document population trends for eight other common species. The nine most commonly observed species, in order of abundance, are: Sharp-shinned Hawk (*Accipiter striatus*), American Kestrel (*Falco sparverius*), Turkey Vulture (*Cathartes aura*), Peregrine Falcon, Broad-winged Hawk (*Buteo platypterus*), Osprey (*Pandion haliaetus*), Northern Harrier (*Circus cyaneus*), Cooper's Hawk (*Accipiter cooperii*), and Merlin (*Falco columbarius*). Band recoveries, satellite tracks, or sightings of marked birds exist for 10 species of North American raptors in the Caribbean. Still, the migration routes of some species beyond the Keys are largely unknown. In this paper, I summarize the timing, magnitude, and species composition of raptor migration through the Florida Keys and recoveries of North American migrants from the Caribbean. I suggest that exploratory counts between late September and early November at several locations throughout the Caribbean may reveal concentrated flights of migrants, greatly contributing to our knowledge of raptor migration through this region.

MIGRACIÓN DE RAPACES A TRAVÉS DE LOS CAYOS DE LA FLORIDA Y EN EL CARIBE

Cada otoño, muchas rapaces vuelan a través de los cayos de la Florida en su migración al sur. Más de 13,000 individuos de diecisiete especies diferentes son observados anualmente durante los conteos sistemáticos llevados a cabo por HawkWatch Internacional y Audubon de la Florida. Durante la migración otoñal por los cayos de la Florida pasan más Halcones Peregrinos (*Falco peregrinus*) que en cualquier otra parte del mundo que haya sido censada. Conteos a largo plazo en los cayos ayudarán a evaluar la recuperación de las poblaciones de Peregrinos y a documentar las tendencias poblacionales de ocho especies adicionales. Las nueve especies más comunes, en orden de abundancia, son: Halcón de Sierra (*Accipiter striatus*), Cernícalo (*Falco sparverius*), Aura Tiñosa (*Cathartes aura*), Halcón Peregrino, Guaraguao de Bosque (*Buteo platypterus*), Águila Pescadora (*Pandion haliaetus*), Gavilán de Ciénaga (*Circus cyaneus*), Gavilán de Cooper (*Accipiter cooperii*), y Esmerejón (*Falco columbarius*). Para diez especies de rapaces americanas, en el Caribe existen anillas recuperadas, rastreos por satélite, y/o avistamientos de aves marcadas. Sin embargo, más allá de los cayos las rutas migratorias de algunas especies permanecen desconocidas. En esta ponencia resumo fechas, magnitud y composición de especies en la migración de rapaces a través de los cayos de la Florida y los registros de los migrantes norteamericanos en el Caribe. Sugiero que los conteos exploratorios entre finales de septiembre y comienzos de noviembre en varias localidades a través del Caribe pueden mostrar concentraciones de vuelos migratorios, contribuyendo a nuestro conocimiento de la migración de las rapaces a través de esta región.

CUBA'S ROLE AS A STOP-OVER FOR MIGRATING SWALLOW-TAILED KITES

KENNETH D. MEYER AND GINA M. ZIMMERMAN

[1]*Avian Research and Conservation Institute, Gainesville, FL, USA (meyer@arcinst.org);* and [2]*Avian Research and Conservation Institute, Gainesville, FL, USA (zimmerman@arcinst.org)*

Since 1996, Swallow-tailed Kites (*Elanoides forficatus*) of the United States breeding population have been tracked by satellite to determine their migration route and over-wintering destinations. Most leave the United States from southern Florida and pass through western Cuba (mainly coastal areas), the Yucatán Peninsula, and Central America before reaching their winter range in southwestern Brazil. The United States-to-Yucatán portion of the migration

corridor, however, is the most variable among individuals, apparently the result of shifts in wind direction during the over-water segments of the flight (tropical storms and hurricanes are a factor during the southbound migration). Some Swallow-tailed Kites by-pass Cuba entirely; others reach the eastern part of the island and proceed southward via Jamaica and a lengthy Caribbean crossing to Central or South America. The data suggest that the United States-to-Yucatán segment of the route may be critical, posing the greatest risks to the survival of migrant kites. We hope to study the stop-over ecology of Swallow-tailed Kites on Cuba by combining satellite telemetry with VHF radio-tracking and visual observations in the study area. The objectives would be to determine habitat associations, movement patterns, critical areas, and conservation concerns. Swallow-tailed Kites are rarely observed in Cuba, so we seek sighting reports from Cuban ornithologists.

EL ROL DE CUBA COMO LUGAR DE PASO DE LOS GAVILANES DE COLA DE TIJERA (*ELANOIDES FORFICATUS*) MIGRATORIOS

Desde 1996, Gavilanes de Cola de Tijera de la población reproductora de los EE.UU. han sido rastreados por satélite para determinar su ruta migratoria y destinos de invernada. La mayoría abandona los EE.UU. por la parte sur de la Florida y pasa a través del oeste de Cuba (principalmente por áreas costeras), la península de Yucatán, y América Central antes de llegar a su ámbito de invierno en el suroeste de Brasil. Sin embargo, la porción del corredor de migración entre EE.UU. y Yucatán es la más variable entre invididuos, aparentemente como resultado de cambios en la dirección del viento durante el segmento del vuelo sobre agua (las tormentas tropicales y los huracanes son un factor durante la migración al sur). Algunos Gavilanes de Cola de Tijera se desvían de Cuba totalmente; otros alcanzan la parte oriental de la isla y siguen hacia el sur a través de Jamaica y un largo cruce caribeño hacia Centro y Suramérica. Los datos sugieren que el segmento de la ruta de EE.UU. a Yucatán puede ser crítico, presentando el mayor riesgo para la supervivencia de los gavilanes migratorios. Esperamos estudiar la ecología del paso de los Gavilanes de Cola de Tijera por Cuba combinando telemetría de satélite con rastreo con radio VHF y observaciones en el área de estudio. Los objetivos serán determinar las asociaciones de hábitat, patrones de movimiento, áreas críticas, e inquietudes de conservación. Los Gavilanes de Cola de Tijera son observados raramente en Cuba y por lo tanto buscamos reportes de avistamientos de ornitólogos cubanos.

STATUS OF THE ENDANGERED ENDEMIC GRENADA DOVE (*LEPTOTILA WELLSI*) ON GRENADA, WEST INDIES

BONNIE L. RUSK[1] AND DAVID E. BLOCKSTEIN[2]
[1]*Grenada Dove Conservation Program, c/o Forestry Department, Queen's Park, Grenada, West Indies (blrusk@aol.com);* and [2]*Ornithological Council, 1725 K St. NW, Suite 212, Washington DC 20006-1401, USA (oc@cnie.org)*

The Grenada Dove (*Leptotila wellsi*), the national bird of Grenada, is still under threat of extinction. Population declines were noted between 1987 and 1991, though the most recent distribution and abundance study by Rusk in 1998 suggests that numbers of Grenada Doves may have increased slightly since 1991. The 1998 study estimates that there are 60–72 Grenada Doves in southwestern Grenada and 38–52 on the western coast. The Government of Grenada declared portions of the wooded hillsides of the Mt. Hartman Estate a National Park and part of the Perseverance Estate on the western coast a Protected Area/Dove Sanctuary, with financing from the World Bank/GEF. A GEF four-year Medium-sized Grant for the Grenada Dry Forest Biodiversity Conservation Project, developed by dry forest stakeholders, has been approved for funding, though project implementation has not yet begun. Ongoing participatory management activities, proper protection of the remaining Grenada Dove habitat, further research, and timely implementation of management and recovery programs are all essential to help ensure that these populations not only persist, but become viable self-sustaining populations.

LA PALOMA DE GRENADA: SITUACIÓN EN GRENADA

La Paloma de Granada (*Leptotila wellsi*), el ave nacional de Granada, aún está bajo amenaza de extinción. Se observó una disminución de la población entre 1987 y 1991, pero el más reciente estudio de distribución y abundancia, de Rusk en 1998, sugiere que el número de palomas quizás ha aumentado ligeramente desde 1991. El estudio de 1998 estimó que había 60-72 palomas en el suroeste y 38-52 en la costa oeste. El gobierno de Granada declaró porciones del bosque de laderas de la finca Mt. Hartman Estate como parque nacional y parte de la finca Perseverance en la costa oeste como área protegida/santuario de palomas, con financiamiento del Banco Mundial/GEF. Una subvención de 4 años del GEF para el Proyecto de Biodiversidad y Conservación del Bosque Seco de Granada, desarrollado por los propietarios de terreno del bosque seco, tiene fondos aprobados aunque su implementación aún no ha comenzado. La continuación de las actividades de manejo participativo, la protección de remanentes de hábitat para la Paloma de Granada, la implementación a tiempo de programas de manejo y recuperación, y los estudios científicos más extensos son esenciales para asegurar que las poblaciones no solamente persistan, sino que puedan ser autosustentables y viables.

REGIONAL AND INTERNATIONAL BIRD CONSERVATION EFFORTS ON MEXICO'S YUCATÁN PENINSULA

BARBARA MACKINNON DE MONTES
Calle 13A No. 98 entre 18 y 20, Itzimná, 97100 Mérida, Yucatán, México (barbaram@sureste.com)

CAPY (Conservación de Aves en la Península de Yucatán) is a concerted effort to conserve the populations of birds of the Yucatán Peninsula. In its initial phase, it is coordinated by two conservation organizations, Amigos de Sian Ka'an and Pronatura Península de Yucatán. However, the vision includes creating an open network of interested member groups. Goals include: (1) creating a common vision for bird conservation on the Yucatán Peninsula; (2)

building a sound scientific foundation for bird conservation; (3) creation of a bird conservation culture prevalent throughout the region; (4) capitalizing on interest in birds as a tool to conserve biodiversity more broadly; and (5) establishing mechanisms for continued communication and participation among practitioners and organizations committed to regional bird conservation. CAPY also actively participates in the international "Gulf Crossings" project of the Gulf Coast Bird Observatory, TNC–Wings of the Americas, and Canon, which seeks to protect critical habitat for birds around the Gulf of Mexico. Presently the project incorporates 34 coastal site partners in the United States, Mexico, and Cuba. Integrated strategies include: (1) identification of important bird areas, particularly migratory land birds and resident species of special interest; (2) prioritizing needed scientific studies; (3) identification of key actions for future habitat management, protection, or restoration; (4) training and educational workshops in strategic communities; and (5) promotion of avitourism in benefit of local communities.

ESFUERZOS REGIONALES E INTERNACIONALES PARA CONSERVAR AVES EN LA PENÍNSULA DE YUCATÁN, MÉXICO

CAPY (Conservación de Aves en la Península de Yucatán) busca conservar las aves en la península de Yucatán. En principio, estará coordinado por dos organizaciones no-gubernamentales, Amigos de Sian Ka'an y Pronatura Península de Yucatán. Sin embargo, se contempla la creación de una red abierta entre diferente instituciones y organizaciones. Los objetivos incluyen: (1) crear una visión común para conservar las aves en la región; (2) establecer una base científica para conservar las aves; (3) crear una cultura sobre las aves; (4) aprovechar el interés en aves para promover la conservación de la biodiversidad en general; (5) establecer mecanismos para dar continuidad a la comunicación y participación de personas y organizaciones comprometidas con la conservación de las aves en la península. CAPY participa también en el proyecto internacional "Viajeras del Golfo" del Gulf Coast Bird Observatory, TNC-Alas de las Américas y Canon, que busca proteger hábitat importante para las aves alrededor del golfo de México. Actualmente el proyecto incorpora 34 sitios en los E.U.A., México y Cuba. Las estrategias incluyen: (1) identificar áreas importantes para las aves, particularmente aves terrestres migratorias y especies residentes de interés especial; (2) determinar prioridades sobre los estudios científicos requeridos; (3) identificar acciones claves para un futuro manejo, protección o restauración de hábitat; (4) organizar talleres de capacitación y educación en comunidades estratégicas; (5) promover aviturismo que beneficie a los habitantes locales.

IMPORTANT BIRD AREAS (IBAs) IN CUBA

SUSANA AGUILAR AND ANTONIO PERERA
National Center of Protected Areas (CNAP), Ministry of Science Technology and Environment, Calle 18-A No. 4114 e/41 y 47 Playa, CP 11300, Ciudad Habana, Cuba

Important Bird Areas (IBAs) are places of international importance for threatened birds with restricted distribution, birds confined to specific habitats, and birds that congregate in great numbers for their reproduction and migration, for example. The IBA Program was begun by BirdLife in 1985. Its purpose is to establish a world net of protected areas for conservation of birds and other forms of wildlife. In Cuba, the first steps have begun for the development of the IBA Program, which would be part of a Regional Program for the Caribbean and of the Program for the America. In this work, a preliminary identification of the Cuban important bird areas is presented according to the internationally established approaches. The protected areas are presented, along with their management categories, main present ecosystems, as well as an evaluation of the protection given by the existence or not of protected areas in that site, its infrastructure level, personnel, and appropriate management. The National Center of Protected Areas will be in charge of carrying out this program, along with other institutions, such as the National Museum of Natural History, Institute of Ecology and Systematics, Facultad de Biologìa of the Universidad de La Habana, and BIOECO. The approval of the project will unite these institutions and give an initial impulse to the program.

ÁREAS DE IMPORTANCIA PARA LAS AVES (IBAS) EN CUBA

Las Areas de Importancia para las Aves (o IBAs, por sus siglas en inglés) son sitios de importancia internacional para las aves amenazadas con rangos de distribución restringidos, aquellas confinadas a hábitats específicos, o aquellas que se congregan en grandes números para su reproducción o migración, por ejemplo. El Programa de las IBAs, iniciado por BirdLife en 1985, busca establecer una red mundial de áreas protegidas para la conservación de las aves y otras formas de vida silvestre. En Cuba se han comenzado los primeros pasos para el desarrollo del Programa de las IBAs, el cual formaría parte a su vez de un Programa Regional para el Caribe y del Programa para las Américas. En este trabajo se expone una identificación preliminar de las áreas de importancia para las aves cubanas según los criterios establecidos internacionalmente, las áreas protegidas que le dan cobertura con sus categorías de manejo junto a los principales ecosistemas presentes, así como una evaluación de la protección dada por la existencia o no de áreas protegidas en esa zona, su nivel de infraestructura, personal y manejo adecuado. El Centro Nacional de Areas Protegidas será el encargado de llevar a cabo este programa junto a otras instituciones como el Museo Nacional de Historia Natural, el Instituto de Ecología y Sistemática, la Facultad de Biología de la Universidad de La Habana y BIOECO, para lo cual ya se ha aprobado un proyecto que reúne a estas instituciones y que dará un impulso inicial al programa.

BIRD CONSERVATION IN THE BERMEJAS LOCALITY, CIÉNAGA DE ZAPATA, CUBA

ARTURO KIRKCONNELL AND ROSA M. POSADA
Museo Nacional de Historia Natural, La Habana, Cuba

The locality of Bermejas is arguably the most important area to protect in the Ciénaga de Zapata. It is, however, one of the areas most disturbed by illegal hunting and in-

discriminate deforestation. Thirteen endemic species nest in the area, five of which are threatened. This project presents the general list of the species present, as well as their degree of endemism and endangerment category.

CONSERVACIÓN DE LAS AVES EN LA LOCALIDAD DE BERMEJAS, CIÉNAGA DE ZAPATA, CUBA

Bermejas es hoy en día una o quizás la más importante área a proteger en la ciénaga de Zapata. Sin embargo, es una de las zonas más perturbadas por la cacería furtiva y la tala indiscriminada. En esta área nidifican 13 especies endémicas y de ellas 5 se encuentran amenazadas. En esta trabajo se ofrece el listado general de las especies presentes así como su grado de endemismo y categoría de amenaza.

A REVIEW OF HURRICANE EFFECTS ON BIRDS AND THEIR RESOURCES WITH IMPLICATIONS FOR CONSERVATION

JOSEPH M. WUNDERLE
International Institute of Tropical Forestry, USDA Forest Service, PO Box 490, Palmer, Puerto Rico 00721 (wunderle@coqui.net)

Recent studies on the effects of hurricanes on birds and their resources have important implications for conservation and are reviewed in this presentation. Various studies demonstrate that frugivores, seedeaters, and nectarivores are more likely to show population declines after hurricanes than insectivores. These declines are associated with loss of fruits, seeds, and flowers after storms. The fact that population declines are associated with diet suggests that the greatest effects of hurricanes on terrestrial bird populations are indirect, that is, occur in the storm's aftermath (because of resource loss) rather than direct effects which occur during storm impact. Avian population declines are more severe in montane regions than in lowlands where vegetation recovers more quickly. Some population declines are attributable to mortality (e.g., Puerto Rican Parrot), whereas other declines result from movement from heavily damaged areas to less-damaged sites. This was found in canopy-dwelling species that became more abundant at ground level; montane species which moved into lowlands; and species that moved into fruit-rich patches after storms. At least one Caribbean species with hurricane vulnerability traits (montane frugivore/seedeater) became extinct after a hurricane. Appropriate forest reserve or park design can help limit vulnerability of sensitive wildlife to hurricanes.

REVISIÓN DE LOS EFECTOS DE HURACANES EN LAS AVES Y SUS RECURSOS CON IMPLICACIONES PARA LA CONSERVACIÓN

Nuevos estudios sobre los efectos de los huracanes en las aves y sus recursos tienen implicaciones importantes para la conservación y son revisados en esta presentación. Varios estudios demuestran que las poblaciones de frugívoros, granívoros y nectarívoros disminuyen más que las poblaciones de insectívoros. Estas mermas están relacionadas a la pérdida de frutos, semillas y flores después del paso de una tormenta. El hecho que las mermas poblacionales estén asociadas con la dieta sugiere que el principal efecto de los huracanes en las aves terrestres es uno indirecto, o sea, uno que ocurre después del paso de una tormenta (debido a la pérdida de recursos) y no uno directo ocurriendo durante el transcurso de la tormenta. La disminución de aves es más severa en zonas montañosas ya que en las zonas bajas la vegetación se recupera más rápidamente. Algunas disminuciones pueden ser atribuidas a la mortalidad (Cotorra Puertorriqueña) mientras que otras se deben al traslado hacia zonas menos afectadas desde lugares más afectados. Esto se observó en especies que habitan el dosel, las cuales se volvieron más abundantes en el sotobosque; especies de zonas montañosas que descendieron a zonas más bajas; y especies que se movieron a parchos de bosque con abundantes frutos pasada la tormenta. Por lo menos una especie caribeña vulnerable a los huracanes (un frugívoro/granívoro montano) se extinguió tras el paso de un huracán. Los parques o reservas forestales con un diseño más apropiado pudieran disminuir la vulnerabilidad de las especies sensitivas a estos huracanes.

TOWARDS A BIRD CONSERVATION STRATEGY IN ANGUILLA

JULIAN HUGHES[1], KARIM HODGE[2], IJAHNYA CHRISTIAN[2], JIM STEVENSON[1], STEVE HOLLIDAY[1], IAN FISHER[1], AND MELANIE BRYER[1]
[1]*Royal Society for the Protection of Birds, The Lodge, Sandy, Bedfordshire, United Kingdom SG19 2DL*; and [2]*Anguilla National Trust, PO Box 1234, The Valley, Anguilla, British West Indies*

Developments in ornithological fieldwork since 1998 have enabled a detailed assessment to be made of the status of birds in Anguilla, the northernmost of the Leeward Islands. These studies have indicated the importance of some of the outer islands for populations of seabirds and of the mainland saline lagoons for shorebirds. This paper presents an overview of the fieldwork so far undertaken in Anguilla, identifies some of the key ornithological and conservation interests of the islands, highlights the work undertaken to promote interest in the birds in Anguilla, and suggests ways in which site protection and bird conservation may be enhanced.

HACIA UNA ESTRATEGIA DE CONSERVACIÓN PARA LAS AVES DE ANGUILLA

Avances en el trabajo de campo ornitológico desde 1998 han permitido hacer una evaluación detallada del estado de las aves en Anguilla, la más septentrional de las islas de Sotavento. Estos estudios han indicado la importancia de algunas de las islas periféricas para las poblaciones de aves marinas y de las salinas en la isla principal para las aves limícolas. Este trabajo ofrece una panorámica del trabajo de campo llevado a cabo hasta la fecha en Anguilla, identifica algunos de los principales intereses ornitológicos y de conservación de las islas, subraya el trabajo llevado a cabo para promover el interés en las aves de Anguilla y sugiere formas para aumentar la protección de localidades y la conservación de aves.

THE BALCONES CANYONLANDS CONSERVATION PLAN: A LOCAL INITIATIVE FOR THE PROTECTION OF ENDANGERED MIGRATORY BIRDS

JUAN VALERA-LEMA
Division of Natural Resources, City of Austin, 301 Nature Center Drive, Austin, Texas 78746, USA (juan.valera-lema@ci.austin.tx.us)

The Balcones Canyonlands Conservation Plan (BCCP) is a regional species protection initiative in central Texas, established to meet the requirements of the US Endangered Species Act. The plan is the product of cooperation and partnerships between the federal and local governments, nonprofit organizations, and the private sector. Among the species protected by the Plan are two migratory birds that nest in central Texas: the Golden-cheeked Warbler (*Dendroica chrysoparia*), which winters in the mountains of southern Mexico and Central America, and the Black-capped Vireo (*Vireo atricapillus*), which winters along the western coast of Mexico. The completion of the plan requires the acquisition of over 30,000 acres of land, which will make the BCCP one of the largest urban preserves in the United States. In addition, a management plan for the restoration and protection of habitats has been prepared and is being implemented. Because the conservation success of the migratory species also depends on protection of their wintering habitats in Mexico and Central America, the City of Austin is seeking to develop cooperative programs with entities in those regions. This presentation will provide a summary of the implementation and management activities of the Balcones Canyonlands Conservation Plan and of cooperative plans under consideration with several Mexican organizations for the protection of the Golden-cheeked Warbler and the Black-capped Vireo.

EL PLAN DE CONSERVACIÓN DE LAS CANADAS DE BALCONES, UNA INICIATIVA LOCAL PARA LA PROTECCIÓN DE AVES MIGRATORIAS AMENAZADAS

El Plan de Conservación Balcones Canyonlands es una iniciativa regional para la protección de especies en el centro de Texas que tiene como propósito cumplir con los requisitos federales delineados en la Ley Federal Sobre Especies Amenazadas de los Estados Unidos. El plan es producto de la cooperación entre el gobierno nacional, gobiernos locales, organizaciones no gubernamentales y el sector privado. Entre las especies protegidas se encuentran dos aves migratorias que anidan en la zona central de Texas: el Chipe Mejilla Dorada (*Dendroica chrysoparia*), que inverna en las montañas del sur de México y América Central, y el Vireo Gorrinegro (*Vireo atricapillus*), que ocupa territorios invernales a lo largo de la costa occidental mexicana. La conclusión del plan requiere la adquisición de 13,600 hectáreas para ser designadas como un área de reserva, lo que la convertirá en una de las más extensas reservas urbanas en los Estados Unidos. Además se ha preparado un plan de manejo para la restauración y protección de hábitat que actualmente se viene implementando. Dado que el éxito de la conservación de estas dos aves depende además de la protección de sus territorios invernales en México y Centroamérica, la ciudad de Austin está buscando entablar relaciones con entidades en esas regiones para establecer programas cooperativos. Esta presentación dará un resumen del establecimiento y los planes de manejo del Plan de Conservación Balcones Canyonlands y los programas de cooperación que se están iniciando con varias organizaciones mexicanas para la protección del Chipe Mejilla Dorada y el Vireo Gorrinegro.

CATALOGUE OF EGGS IN THE BIRD COLLECTION OF THE INSTITUTE OF ECOLOGY AND SYSTEMATICS (CITMA), CUBA

RAFAELA AGUILERA ROMÁN AND ALEJANDRO LLANES SOSA
Instituto de Ecología y Sistemática, Ministerio de Ciencia Tecnología y Medio Ambiente, Cuba (ecologia@unepnet.inf.cu)

Zoological collections are an essential resource in our understanding of the biology of particular species. They are indispensable in biogeographic, phenological, autoecological, and biodiversity studies. In addition, they are the basis for biosystematic and taxonomic studies, and, in turn, are the result of such research. They are an obligatory reference for scientists, field researchers, ecologists, systematists, illustrators and others. Collections are composed of samples and associated information. They constitute a biological and taxonomic standard from which we get a wide array of information used in systematic studies. The egg collection at the Institute of Ecology and Systematics is a rich resource used by many specialists. In this paper, we will give details about the material we have found in the Institute's egg collection. This includes material from Bauzá, Gundlach, and a basic collection. The collection is comprised of 473 clutches, including 2,135 eggs, belonging to 19 orders, 42 families, and 104 species. Information in the catalog includes important data such as clutch size, locality, collector and date.

CATÁLOGO DE HUEVOS EN EL COLECCIÓN DE AVES DEL INSTITUTO DE ECOLOGÍA Y SISTEMÁTICA, CITMA, CUBA

Las colecciones zoológicas constituyen una herramienta imprescindible para el conocimiento de la biología de las especies. Son indispensables en estudios biogeográficos, fenológicos, autoecológicos y de biodiversidad. Además son la base de investigaciones biosistemáticas y taxonómicas y, a la vez, son el resultado de las mismas, por lo que resultan consulta obligada en el trabajo de científicos, investigadores de campo, ecólogos, sistemáticos, ilustradores y otros. Las colecciones están compuestas de ejemplares y de información asociada y constituyen el soporte biológico y taxonómico de donde se extrae amplia información en los estudios sistemáticos. Las colecciones de huevos son también una rica fuente de información que es utilizada por diversos especialistas. Es por eso que en el presente trabajo nos proponemos dar a conocer el material depositado en la colección de huevos del Instituto de Ecología y Sistemática, procedente de las colecciones Bauzá, Gundlach y de la Colección Básica, para lo cual se revisaron las mismas y se extrajo su composición sistemática, la cual consta de 473 nidadas y 2,135 huevos, pertenecientes a 19 órdenes, 42 familias y 104 especies. En este trabajo se

aportan también datos de interés, como número de huevos por nidada, localidad, colector y fecha de colecta.

AGE AND SEX DIFFERENCE OF MIGRATORY BIRDS AT THREE CUBAN LOCALITIES

ENEIDER E. PÉREZ MENA, ALEJANDRO LLANES SOSA, DAYSI RODRÍGUEZ BATISTA, BÁRBARA SÁNCHEZ ORIA, AND HIRAM GONZÁLEZ ALONSO

Instituto de Ecología y Sistemática, Carretera de Varona km 3½, Capdevila, Boyeros, A. P. 8029 C. P. 10800, Ciudad de La Habana, Cuba (ecología@unepnet.inf.cu; ecologia@cniai.inf.cu)

We studied age and sex differences in migrant birds during fall migration and during winter residence at three localities in Cuba. Studies were done in three vegetative habitats on Cayo Coco (during migration and winter), three in the Alejandro de Humboldt National Park (during winter), and two in Guanahacabibes (during migration). In Alejandro de Humboldt National Park we did not find significant differences in the proportions of females (F = 0.108) and males (F = 0.817). However, there was a tendency towards a prevalence of females for the Black-throated Blue Warbler (*Dendroica caerulescens*). The same prevalence was noted on Cayo Coco during the winter. In Guanahacabibes, we found significant differences between the proportions of females and males ($P < 0.01$), but not between the age groups. In the case of Indigo Bunting (*Passerina cyanea*), we found significant differences ($P < 0.05$) between the proportions of females and males.

ÁNALISIS DEL COMPORTAMIENTO POR SEXO Y EDAD DE ESPECIES MIGRATORIAS EN TRES LOCALIDADES DE CUBA

El estudio se realizó durante la migración otoñal (MO) y la residencia invernal (RI) en tres localidades de Cuba. Se analizaron tres formaciones vegetales de cayo Coco en RI y MO, tres del Parque Nacional Alejandro de Humboldt en la RI y dos de Guanahacabibes en la MO. En el Parque Nacional Alejandro de Humboldt no se encontraron diferencias significativas al comparar las medias numéricas de hembras (F = 0.108, ns) y machos (F = 0.817, ns). Sin embargo, la Bijirita Azul de Garganta Negra (*Dendroica caerulescens*) presentó una tendencia al predominio de hembras, lo que coincide con lo encontrado en cayo Coco durante la RI. En esta localidad se presenta además un análisis comparativo entre la MO y la RI por formación vegetal y por especie. En Guanahacabibes, por su parte, se encontraron diferencias significativas entre las proporciones de hembras y machos ($P < 0.01$), pero no entre las edades. En el caso del Azulejo (*Passerina cyanea*), sí presentó diferencias significativas ($P < 0.05$) entre las proporciones de hembras y machos.

ASPECTS OF THE REPRODUCTION OF THE GREATER ANTILLEAN NIGHTJAR (*CAPRIMULGUS CUBANENSIS*) STUDIED UNDER NATURAL CONDITIONS

ERNESTO REYES

CITMA, Holguín, Cuba

Observations were made of nesting Greater Antillean Nightjars (*Caprimulgus cubanensis*) during February-April on "La Sabina" ecological trail at the Estación de Investigación de la Montaña, in Pinares de Mayarí, Holguín province. Morphometrics of chick development, including tarsus, bill, wing, and body length, are presented. Chick weights were taken every fourth day following hatching. Adult behavior before and after egg hatching is reported, following Alayón, 1985.

ASPECTOS REPRODUCTIVOS DEL GUABAIRO CUBANO *CAPRIMULGUS CUBANENSIS* (AVES: CAPRIMULGIDAE) EN CONDICIONES NATURALES

En el Sendero Ecológico "La Sabina" de la Estación de Investigación de la Montaña en Pinares de Mayarí, Provincia Holguín, es observado el Guabairo Cubano (*Caprimulgus cubanensis*) durante el periodo de febrero-abril y se relacionan aspectos reproductivos del mismo. Se tomaron medidas de la longitud del tarso, pico ala y largo del cuerpo, además del peso al nacer de los pichones con un período de cuatro días a partir del primer día de nacidos. Se relacionan patrones de conductuales desplegados por el ave antes y después de la eclosión de los huevos, descritos por Alayón (1985).

INFLUENCE OF THE FLORA AND VEGETATIVE STRUCTURE ON POPULATIONS OF TERRESTRIAL BIRDS ON CAYO COCO

DAYSI RODRÍGUEZ, ALFREDO GUTIÉRREZ, AND BÁRBARA SÁNCHEZ

Instituto de Ecología y Sistemática, Carretera de Varona km 3½, Capdevila, Boyeros, A. P. 8029 C. P. 10800, Ciudad de La Habana, Cuba (ecología@unepnet.inf.cu; ecologia@cniai.inf.cu)

During January and Febuary 1993 and 1994, we characterized the avian communities in six habitat types on Cayo Coco, Cuba. The habitat types, which are representative of the main vegetation types found on the Cayo, were: semideciduous forest (high, medium, and low), xeromorphic scrub habitat (coastal and subcoastal), and mixed mangrove forests. We analyzed the influence of floristic and vegetative structure variables on avian populations. We detected 58 bird species, of which 53% were year-round residents. Among the most abundant were: *Turdus plumbeus*, *Melopyrrha nigra*, *Spindalis zena*, and *Teretistris fornsi*. The remaining 46% of bird species were migrants, with *Setophaga ruticilla, Mniotilta varia, Seiurus aurocapillus*, and *Dendroica caerulescens* the most abundant. We captured and banded 1,718 birds, and the greatest abundance and richness in our captures were in the mixed mangrove forest habitat. We identified a total of 91 plant species, with *Coccoloba diversifolia*, *Eugenia monticola*, *Conocarpus erectus*, and *Metopium brownei* being the most abundant. The scrub habitats had the highest floristic diversity, whereas the highest abundance of plants was

found in the coastal scrub and low-lying semideciduous forest habitats. The six habitat types exhibited a high variability in vegetation structure and floristic components, suggesting the important influences of these habitat variables on avian populations at each of our sampled areas.

INFUENCIA DE LA FLORA Y LA ESTRUCTURA DE LA VEGETACIÓN EN LAS POBLACIONES DE AVES TERRESTRES EN CAYO COCO

Durante la etapa invernal correspondiente a los meses de enero-febrero de 1993 y 1994, se caracterizaron las comunidades de aves en seis hábitats de cayo Coco que pertenecen a las formaciones vegetales más representativas del mismo: bosque semideciduo alto, medio y bajo; matorral xeromorfo subcostero y costero; y bosque de mangle mixto. Se determinó la composición florística en cada sitio así como las principales características estructurales de la vegetación. Se analizó la influencia de las variables florísticas y estructurales de la vegetación sobre las poblaciones de aves. Se detectaron 58 especies de aves, de las cuales 53% fueron residentes permanentes, siendo las más abundantes *Turdus plumbeus*, *Melopyrrha nigra, Spindalis zena* y *Teretistris fornsi*. El resto (46%) fueron migratorias y de ellas las más abundantes fueron *Setophaga ruticilla*, *Mniotilta varia*, *Seiurus aurocapillus* y *Dendroica caerulescens*. Se capturaron y anillaron 1,718 aves, ocurriendo la mayor riqueza y abundancia de éstas en el bosque de mangle mixto. En total se identificaron 91 especies de plantas, siendo las más abundantes *Coccoloba diversifolia*, *Eugenia monticola*, *Conocarpus erectus* y *Metopium brownei*. Los matorrales xeromorfos fueron los sitios de mayor riqueza florística, mientras que la mayor abundancia de plantas correspondió al matorral xeromorfo costero y al bosque semideciduo bajo. Los seis hábitats presentaron una alta variabilidad en relación con los valores estructurales de la avifauna, la vegetación y sus componentes florísticos, poniéndose de manifiesto la mayor influencia que ejercen determinadas variables del hábitat sobre las poblaciones de aves en cada sitio de muestreo.

A STUDY OF THE RESIDENT AND MIGRANT BIRD COMMUNITIES IN THREE VEGETATIVE ASSOCIATIONS IN ALEJANDRO DE HUMBOLDT PARK DURING WINTER

EDWIN RUIZ ROJAS[1], ENEIDER E. PÉREZ MENA[2], AND ALEJANDRO LLANES SOSA[2]

[1]*CITMA (Villa Clara), Centro Meteorológico Provincial, Marta Abreu # 59 Altos, Santa Clara, Villa Clara, Cuba*; and [2]*Instituto de Ecología y Sistemática, Carretera Varona, km 3½, Boyeros, Ciudad de La Habana*

During the winter season (1997, 1998, and 1999) in Alejandro de Humboldt National Park, three birds communities (in evergreen, pine, and rainforest) were studied using a Circular Plot Method and mist-nets. In evergreen forest, we registered the greater values of total and resident species richness, and in pine forest the greatest migratory individual percentage. On the other hand, rainforest showed the greater number of endemic species and higher percentage of resident species. The evergreen forest community had a more natural behavior and pine forest community showed a certain tendency to a Geometric Model, maybe because of its monoculture condition and young age. Guilds were more represented in evergreen forest and were mostly insectivores. A Principal Components Analysis was performed, considering birds and vegetation parameters. That analysis showed marked differences among forests according to the initial objective of analyzing different bird's habitat.

ESTUDIO DE LAS COMUNIDADES DE AVES RESIDENTES Y MIGRATORIAS EN TRES FORMACIONES VEGETALES DEL PARQUE NACIONAL ALEJANDRO DE HUMBOLDT DURANTE LA RESIDENCIA INVERNAL

El estudio se realizó durante el período de residencia invernal (1997, 1998 y 1999) en el Parque Nacional Alejandro de Humboldt (provincia de Guantánamo) en localidades de bosque siempreverde, pluvisilva esclerófila y pinar, empleando el método de conteos por parcelas circulares y el de captura con redes ornitológicas. El bosque siempreverde presentó los mayores valores de riqueza total de especies y de residentes permanentes, ocurriendo lo contrario en el pinar que, sin embargo, mostró el mayor porcentaje de individuos migratorios. En la pluvisilva esclerófila se registró el mayor número de endémicos y el mayor porcentaje de residentes permanentes. La comunidad de aves que habita en el bosque siempreverde presentó el comportamiento más natural mientras que en el caso del pinar mostró cierta tendencia al modelo geométrico, posiblemente debido a su condición de monocultivo y su corta edad como formación vegetal. En el bosque siempreverde se registró el mayor número de gremios tróficos seguido por la pluvisilva esclerófila y, por último, el pinar. Los gremios en su mayoría fueron de insectívoros debido al aporte de las especies migratorias, que en su mayoría utilizan este alimento. El análisis de componentes principales realizado reflejó apreciables diferencias entre las formaciones vegetales analizadas, lo cual correspondió con el objetivo inicial de caracterizar la avifauna en ecosistemas diferentes.

CHARACTERIZATION OF THE AVIFAUNA OF THE WEST-CENTRAL PORTION OF THE JARDINES DE LA REINA ARCHIPELAGO, CUBA

ELISER SOCARRÁS TORRES

Centro de Investigaciones de Ecosistemas Costeros, Cayo Coco, CP 69400, Cuba

This paper presents the results of a study conducted from 1995 to 1998 on birds of Bretón, Cinco Balas, Alcatracito, Alcatraz, Grande, Caballones, Anclitas, and Algodón Grande cays, Jardines de la Reina Archipelago, south of the province of Ciego de Ávila. Eighty-two taxa of birds were recorded; eight are endemic, and among them one had a distribution restricted to the study area: Greater Antillean Pewee (*Contopus caribaeus nerleyi*). Others, such as Tawny-shouldered Blackbird (*Agelaius humeralis* ssp.), Cuban Green Woodpecker (*Xiphidiopicus percussus* ssp.), and Red-legged Thrush (*Turdus plumbeus* ssp.), present in several of the cays studied, could be found to be new races endemic to the archipelago in future studies. Data on the taxa distribution in the main habitats of these keys, abun-

dance, diet, and behavioral habits are given. A special focus is placed on birds that may be of interest for nature tourism or conservation efforts. These results show that the avifauna of this archipelago has distinctive features that are related to a high level of specialization demanded by the living conditions and the genetic and geographic isolation of the populations of the archipelago. Thus, the avifauna of the region is of great importance to the biodiversity of Cuba.

CARACTERIZACIÓN DE LA AVIFAUNA PRESENTE EN LA PORCIÓN CENTRO-OCCIDENTAL DEL ARCHIPIÉLAGO JARDINES DE LA REINA

Se ofrecen los resultados de un estudio realizado en el período de 1995-1998 sobre las aves presentes en los cayos Bretón, Cinco Balas, Alcatracito, Alcatraz, Grande, Caballones, Anclitas y Algodón Grande pertenecientes al archipiélago Jardines de la Reina, al sur de la provincia de Ciego de Avila. Se registraron un total de 82 taxones de aves, de los cuales 8 son endémicos y entre ellos uno presenta distribución restringida al área de estudio: *Contopus caribaeus nerleyi* (Bobito chico). Otros, como *Agelaius humeralis* (Mayito), *Xiphidiopicus percussus* (Carpintero Verde) y *Turdus plumbeus* (Zorzal Real), observados en varios de los cayos estudiados, pudieran estar representados por razas endemicas aún sin describir. Se brindan además datos sobre la distribución de los taxones en los principales hábitats de los cayos estudiados, abundancia en el territorio, y hábitos alimentarios y de conducta, así como se seleccionan los que puedan considerarse carismáticos o de interés para el desarrollo del turismo de naturaleza o con fines conservacionistas. Los resultados obtenidos demuestran que la avifauna de este archipiélago presenta particularidades distintivas, asociadas a una alta especialización a condiciones extremas de vida y al aislamiento geográfico y genético de las poblaciones que en él habitan, lo cual resulta de gran importancia para la biodiversidad de Cuba.

THE TAXONOMIC STATUS OF THE PUERTO RICAN BULLFINCH (*LOXIGILLA PORTORICENSIS)* [AVES: EMBERZIDAE] IN PUERTO RICO AND ST. KITTS

ORLANDO H. GARRIDO[1] AND JAMES W. WILEY[2]
[1]*31706 Calle 60, entre 17 y 19, Playa, La Habana, Cuba;* and [2]*Maryland Cooperative Fish and Wildlife Research Unit, University of Maryland Eastern Shore, 1120 Trigg Hall, Princess Anne, MD 21853, USA; e-mail: jwwiley@mail.umes.edu*

The St. Kitts Bullfinch (*Loxigilla portoricensis grandis*) was described by Lawrence (1881) as a subspecies of the Puerto Rican Bullfinch (*L. p. portoricensis*) based on a series of nine specimens collected by Ober in 1880. With our analysis of over 650 specimens of the three species of *Loxigilla*, we concluded that the St. Kitts (St. Cristopher) form should be elevated to full-species status, *L. grandis*. The St. Kitts birds are consistently and substantially larger in the size of the wing chord, tail, tarsus, and culmen. The two forms also consistently differ in color and pattern. We present the first description of juvenal plumage. We share the belief of some other authors that this form may still survive in the remote high forest of Mt. Misery, St. Kitts.

ESTADO TAXONÓMICO DEL COMEÑAME DE PUERTO RICO (*LOXIGILLA PORTORICENSIS)* [AVES: EMBERZIDAE] EN PUERTO RICO Y ST. KITTS

El Comeñame de St. Kitts (*Loxigilla portoricensis grandis*) fue descrito por Lawrence (1881) como una subespecie del Comeñame de Puerto Rico (*L. p. portoricensis*) basado en una serie de nueve ejemplares colectados por Ober en 1880. En base a nuestros análisis de 650 ejemplares de las tres especies del género *Loxigilla*, concluimos que la forma de St. Kitts (San Cristóbal) debería ser elevada al status de especie, *L. grandis*. Las aves de St. Kitts son consistentemente y substancialmente mayores en el tamaño del ala, cola, tarso y pico. Ambas formas se diferencian también consistentemente en coloración y patrón. Presentamos la primera descripción de la coloración del plumaje juvenil. Compartimos la opinión de algunos autores en considerar que esta forma no esté en realidad extinguida y sobreviva en ciertas remotas áreas de Mt. Misery en St. Kitts.

A NEW SUBSPECIES OF THE CUBAN PYGMY-OWL (*GLAUCIDIUM SIJU*) (AVES: STRIGIDAE) WITH COMMENTS ON OTHER SPECIES OF THE FAMILY

ORLANDO H. GARRIDO
31706 Calle 60, entre 17 y 19, Playa, La Habana, Cuba

A new subspecies of the Cuban Pygmy-Owl is described for Pico Turquino, Santiago de Cuba province. This form differs from the other two races of Cuba and the Isle of Pines (Isla de la Juventud) in being darker, with a different pattern of markings on the head. Unpublished information on behavior is presented, along with a table with weights and meristic data. References to all taxa of Cuban members of the Family Strigidae are also given, as well as a systematic new arrangement for the species *Otus lawrencii* and *Asio flammeus*. A list of the birds collected by Rollo Beck in 1917 in Pico Turquino is also presented.

NUEVA SUBESPECIE PARA CUBA DE SIJÚ PLATANERO (*GLAUCIDIUM SIJU*) (AVES: STRIGIDAE) CON COMENTARIO SOBRE OTRAS ESPECIES DE LA FAMILIA

Se describe una nueva subespecie de Sijú Platanero (*Glaucidium siju*) para el pico Turquino, provincia de Santiago de Cuba. Esta forma se diferencia, tanto de la que vive en Cuba como en isla de Pinos, por ser más oscura y con un patrón de manchas diferentes en la cabeza. Se aportan datos inéditos sobre su comportamiento. Se brindan los datos de los conteos merísticos convencionales y el peso. Se expone la relación de todos los taxones de la familia Strigidae reportados para Cuba y se plantea un nuevo arreglo sistemático de las especies *Gymnoglaux lawrencii* y *Asio flammeus*. Se da la relación de las aves colectadas por Rollo Beck en el pico Turquino en 1917.

PHYLOGENETIC RELATIONSHIPS AMONG LONG-TAILED NEOTROPICAL PARROTS (PSITTACIDAE, AVES) BASED ON MITOCHONDRIAL DNA SEQUENCES

C. Y. MIYAKI[1,2] AND E. S. TAVARES[2]
[1]*cymiyaki@usp.br, erika@usp.br;* and [2]*Departamento de Biologia, Instituto de Biociências, Universidade de São Paulo, Rua do Matão, 277, CEP 05508-900, São Paulo, SP, Brazil*

Neotropical parrots can be separated into two distinct groups: the long- and the short-tailed genera. However, the relationships within the long-tailed genera has not been well established. In the present work, we determined the partial sequence of 12S and 16S rDNAs, cytochrome b, and the control region of 18 long-tailed species (*Cyanopsitta spixii*, *Anodorhynchus hyacinthinus*, *A. leari*, *Ara ararauna*, *A. severa*, *Guaruba guarouba*, *Aratinga aurea*, *A. leucophthalmus*, *A. cactorum*, *Diopsittaca nobilis*, *Orthopsittaca manilata*, *Prophyrrhura auricolis*, *P. maracana*, *P. couloni*, *Myiopsitta monachus*, *Deroptyus accipitrinus*, *Nandayus nenday*, *Pyrrhura picta*) and the short-tailed *Amazona aestiva* (outgroup). The data were analyzed by distance, maximum parsimony, and maximum likelihood methods. The results suggest that the genera *Anodorhynchus*, *Ara*, and *Propyrrhura* are monophyletic. *Diopsittaca nobilis* and *Guaruba guarouba* are sister groups, and *C. spixii* is related to *Ara* and *Aratinga*. *Aratinga* is not a monophyletic genus: *A. leucophthalmus* does not form a clade with the sister taxa *A. aurea* and *A. cactorum*. The molecular clock analysis based on 1.7kb shows that most of these groups radiated from 17 to 25 million years ago. In this period, South America suffered various climate and geomorphological changes, such as the Andes rise, that could have affected the evolutionary history of this group.

PARENTESCO FILOGENÉTICO ENTRE LAS COTORRAS NEOTROPICALES DE COLA LARGA (PSITTACIDAE, AVES) BASADO EN SECUENCIAS DE AND MITOCONDRIAL

Las cotorras neotropicales se pueden separar en dos grupos distintos: los géneros de cola corta y los de cola larga. Sin embargo, las relaciones dentro del género de cola larga no se han podido establecer claramente. En este trabajo, determinamos la secuencia parcial de la ADNr 12S y 16S, el citocromo b y la región de control de 18 especies de cola larga (*Cyanopsitta spixii*, *Anodorhynchus hyacinthinus*, *A. leari*, *Ara ararauna*, *A. severa*, *Guaruba guarouba*, *Aratinga aurea, A.. leucophthalmus*, *A. cactorum*, *Diopsittaca nobilis*, *Orthopsittaca manilata*, *Prophyrrhura auricolis*, *P. maracana*, *P. couloni*, *Myiopsitta monachus*, *Deroptyus accipitrinus*, *Nandayus nenday*, *Pyrrhura picta*) y el grupo de cola corta de *Amazona aestiva*. Los datos se analizaron mediante los métodos de distancia, parsimonia máxima y probabilidad máxima. Los resultados muestran que los géneros *Anodorhynchus*, *Ara* y *Propyrrhura* son monofiléticos. *Diopsittaca nobilis* y *Guaruba guarouba* son grupos hermanos, y *C. spixii* está emparentado con los géneros *Ara* y *Aratinga*. *Aratinga* no es un género monofilético: *A. leucophthalmus* no constituye un clado con las taxa *A. aurea* y *A. cactorum*. Un análisis del reloj molecular basado en 1.7 kb demuestra que la irradiación de la mayoría de estos grupos ocurrió hace 17 a 25 millones de años cuando América del Sur estaba atravesando por varios cambios climáticos y geomorfológicos tales como el surgimiento de los Andes, eventos que pudieron afectar la historia evolucionaria de este grupo.

EVOLUTIONARY RELATIONSHIPS AMONG THE *ARATINGA SOLSTITIALIS* (PSITTACIDAE, AVES) GEOGRAPHIC RACES INFERRED THROUGH THE ANALYSIS OF MITOCHONDRIAL DNA SEQUENCES

C. Y. MIYAKI[1], C. C. RIBAS[2], AND E. S. TAVARES
Departamento de Biologia, Instituto de Biociencias, Universidade de São Paulo, Rua do Matão, 277, CEP 05508-900, São Paulo, SP, Brazil; [1]*(cymiyaki@usp.br),* [2]*(ribasc@usp.br)*

Aratinga solstitialis is considered, by some authors, as one species which comprises three distinct geographic races or semispecies (*A. s. solstitialis*, *A. s. jandaya* and *A. s. auricapilla*), whereas other authors prefer to consider them as three distinct species. These races or species occur allopatricaly in South America (*solstitialis* occurs in the northeastern Amazonia, Guiana and Venezuela; *jandaya* in eastern and central Brazil; and *auricapilla* in southeastern Brazil) and have quite different color patterns. In the present work, we are investigating the phylogenetic relationships between these three taxa through the sequencing of some regions of their mitochondrial DNA, including 12S rDNA (~400 base pairs), 16S rDNA (~600 bp), cytochrome b (~400 bp), and control region (~1000 bp). The sequences obtained from five individuals from each taxon were analyzed using distance, maximum parsimony, and maximum likelihood methods. The results obtained indicate that: (1) *auricapilla* and *jandaya* individuals are more closely related and *solstitialis* is their sister group; and (2) there is a molecular differentiation among the three taxa, but the distances among them are very small if compared to other groups of species belonging to the same genus, suggesting a process of recent differentiation.

RELACIONES EVOLUCIONARIAS ENTRE LAS *ARATINGA SOLSTITIALIS* (PSITTACIDAE, AVES) RAZAS INFERIDAS MEDIANTE EL ANÁLISIS DE SECUENCIAS DE ADN MITOCONDRIAL

Aratinga solstitialis es considerada por algunos investigadores como una especie que incluye tres razas direfentes o semiespecies (*A. s. solstitialis*, *A. s. jandaya* y *A. s. auricapilla*), mientras que otros investigadores prefieren considerarlas como tres especies diferentes. Estas razas o especies ocurren de forma alopátrica en América del Sur (*solstitialis* se encuentra en el noreste de la Amazonía, Guyana y Venezuela; *jandaya* en el este y centro de Brasil; y *auricapilla* en el sureste de Brasil) y todas tienen patrones diferentes de colores. En este trabajo investigamos la relación filogenética entre estas tres especies mediante el análisis de la secuencia de algunas regiones de su ADN mitocondrial, incluyendo 12S ADNr (~400 pares de bases), 16S ADNr (~600 pb), citocromo b (~400 pb) y la región de control (~1000 pb). Las secuencias obtenidas de 5 individuos de cada taxon se analizaron mediante los métodos de distancia, parsimonia máxima y probabilidad máxima. Los resultados obtenidos indican que: (1) los in-

dividuos de *auricapilla* y *jandaya* están más cercanamente emparentados y *solstitialis* es su grupo hermano; y (2) existe una diferenciación a nivel molecular entre las tres especies, pero la distancia entre ellas es pequeña cuando se compara con otros grupos del mismo género, sugiriendo un proceso de diferenciación reciente.

WHAT IS *VIREO CRASSIROSTRIS APPROXIMANS* OF ISLA PROVIDENCIA – THICK-BILLED OR MANGROVE VIREO?

JON C. BARLOW, CAROL CROKE, AND RICHARD LAI
CBCB, Royal Ontario Museum, Toronto, Ontario, Canada

The late James Bond visited the southwestern Caribbean island of Providencia before 1950, encountering there the scrub vireo described as *V. pallens approximans* by Ridgway (1884). Bond (pers. comm.) told me years ago that he had not heard the bird sing during his brief stay and, accordingly, in the early editions of his West Indian field-guide he referred to this bird as a Thick-billed Vireo. A. R. Phillips (1991) noted that E. R. Blake treated *approximans* as a thick-bill in Peters (1968) and subsequently, in the 6th edition of the American Ornithologists' Union Check-list (1983), it was so listed. Phillips (1991) correctly considered *approximans* to be a race of *pallens*. Confirmation of Phillip's view was obtained by Barlow during visits to Providencia in 1972 and 1986. The local scrub vireo of Providencia is, in fact, a chatter singer with a song of repeated like-syllables, totally different from the song of *V. crassirostris*, which is polysyllabic and diverse, closely resembling that of the White-eyed Vireo (*Vireo griseus*). A big beak – not unexpected in island populations of otherwise mainland birds – has been the main cause of the confusion over the correct nomenclature. Comparison of songs of other chatter singers – the Cozumel Vireo (*V. bairdi*), and the races of eastern and western coast Mexican *V. pallens* ssp. and the coast of Belize – provide confirmation that *approximans* is indeed a *V. pallens*.

¿QUÉ ES *VIREO CRASSIROSTRIS APPROXIMANS* DE LA ISLA PROVIDENCIA: UN VIREO DE PICO GRUESO O UN VIREO DE MANGLE?

Cuando James Bond visitó la isla de Providencia en el sudoeste del Caribe antes de 1950, encontró allí al "scrub vireo", descrito y llamado *V. pallens approximans* por Ridgway (1884). Bond (comunicación personal) le comunicó a Barlow hace varios años que él no había oído esta ave cantando durante su breve estadía y por lo tanto en las primeras ediciones de su guía de campo se refería a este vireo como un Vireo de Pico Grueso. A. R. Phillips (1191) señaló que E. R. Blake consideró *approximans* como un Vireo de Pico Grueso en Peters (1968) y después, en la sexta edición de la lista de la AOU (1983), fue incluido com tal. Phillips (1991) correctamente consideró *approximans* como una subespecie de *pallens*. Barlow confirmó la opinión de Phillip cuando visitó Providencia en 1972 y 1986. El «scrub vireo" local de Providencia es, de hecho, un "chatter singer." Es decir, tiene un canto con sílabas parecidas y repetidas, totalmente distinto al canto de *V. crassirostris,* el cual es polisilábico y diverso, muy parecido al canto del Vireo de Ojo Blanco (*V. griseus*). Un pico grande, algo no inesperado en las poblaciones insulares de especies continentales, ha sido la principal causa de confusión sobre la nomenclatura correcta. La comparación del canto de otros "chatter singers" – el Vireo de Cozumel (*V. bairdi*) y subespecies de la costa este y oeste de México y de la costa de Belice de *V. pallens* – proveen confirmación que *approximans* es de hecho un *V. pallens*.

CURRENT STATUS OF THE FAMILY PSITTACIDAE IN THE OJITA DE AGUA SECTOR OF "ALEJANDRO DE HUMBOLDT" NATIONAL PARK, GUANTÁNAMO PROVINCE, CUBA

GERARDO BEGUÉ QUIALA
Unidad Presupuestada de Servicios Ambientales Delegación Territorial del CITMA, Calle Ahogados #14 e/ 12 y 13 Norte, Guantánamo, CP 95200 (acebal@uap.gtmo.inf.cu)

I studied the status of parakeets and parrots in the Ojito de Agua sector of Alejandro de Humboldt National Park in Guantánamo province, Cuba. My studies included aspects of their movements, feeding, and breeding, as well as some of the causes of population declines and main threats in the sector. Groups were counted, nest searches conducted, and local residents interviewed concerning the birds. In spite of having a vulnerable status in Cuba, these birds seemed plentiful in the area. Habitat is provided by the extensive forests of the park which, according to the New National Atlas of the Republic of Cuba (1989), include broadleave evergreen forest and coffee and forestry plantations. Finally, the material and expenses associated with these studies were minimal due to the methods used.

SITUACIÓN ACTUAL DE LA FAMILIA PSITTACIDAE EN EL SECTOR OJITO DE AGUA, PARQUE NACIONAL "ALEJANDRO DE HUMBOLDT," GUANTÁNAMO

Se estudió la situación actual que presentan los psitácidos en el sector Ojito de Agua, Parque Nacional Alejandro de Humboldt, Guantánamo, Cuba. Se determinaron algunos aspectos referentes al movimiento, alimentación y nidificación de las aves, así como algunas de las causas que están incidiendo en el estado de las poblaciones, determinando las principales amenazas en el sector. Utilizamos los métodos de conteos de bandos, búsqueda de nidos, la localización de las zonas de alimentación y la determinación de los principales corredores habituales que utilizan estas aves en el área para su movimientos. También realizamos indagaciones y entrevistas con los pobladores, algo que nos permitió acumular mayor cantidad de datos. A pesar de estar catalogadas como vulnerables, las poblaciones de psitácidos del área son relativamente abundantes, sustentadas por la amplia cobertura boscosa del parque que incluye formaciones de bosque siempreverde de hoja ancha submontano y vegetación cultural (cafetales y plantaciones forestales, etc.), según el Nuevo Atlas Nacional de la República de Cuba (1989). Los gastos materiales y económicos para el desarrollo de la investigación fueron bajos debido a la metodología empleada en la ejecución del mismo.

CHARACTERISTICS AND MANAGEMENT OF CUBAN PARAKEET (*ARATINGA EUOPS*) NEST SITES IN THE ALTURAS DE BANAO ECOLOGICAL RESERVE, CUBA

MAIKEL CAÑIZARES MORERA
Reserva Ecológica "Alturas de Banao," Empresa Nacional para la Protección de la Flora y la Fauna, Cuba

The Cuban Parakeet (*Aratinga euops*) population in the Alturas de Banao Ecological Reserve, on the southeastern side of the Guamuhaya Mountains, is slightly reduced because of a lack of nesting sites. In my study area (15.6 ha) in the upper basin of the Banao River, the species has seven potential competitors for the same resources, and the density of nest sites, usually in dead royal palms (*Roystonea regia*), is less than 1 palm/ha. During the present work I found 13 potential nest sites and measured their cavity height and orientation. Cuban Parakeets had used only five of these cavities previously. Based on the used nest characteristics, I provided eight artificial nests; only two were occupied by the parakeets, whereas three were occupied by West Indian Woodpeckers (*Melanerpes superciliaris*). In the post-reproductive stage, honeybees invaded three of the artificial nests and two were modified by its dwellers. After nesting, I characterized surrounding vegetation and provided 20 additional artificial nests for the Cuban Parakeet.

CARACTERIZACIÓN Y MANEJO DE LOS SITIOS DE NIDIFICACIÓN DEL CATEY (*ARATINGA EUOPS*) EN LA RESERVA ECOLÓGICA "ALTURAS DE BANAO," CUBA

La población de Cateyes de la Reserva Ecológica Alturas de Banao, ubicada en el extremo sur-oriental del macizo montañoso Guamuaya, presenta una ligera disminución en número debido fundamentalmente a la disponibilidad de sitios de nidificación. En el área de estudio, que ocupa 15.6 ha. de la cuenca superior del río Banao, la especie posee siete competidores potenciales por este recurso y la densidad de posibles nidos, representados exclusivamente por ejemplares muertos de palma real (*Roystonea regia*), es inferior a 1 tronco/hectárea. Durante el presente trabajo se localizaron 13 sitios potenciales a los que se les determinó el tipo de cavidad, número, altura y orientación de la misma. De éstos, sólo cinco fueron utilizados con anterioridad por la especie. Basándose en las características de los nidos utilizados, se colocaron 8 nidos artificiales, y de éstos dos fueron ocupados por el Catey y tres por el Carpintero Jabado (*Melanerpes superciliaris*). En la etapa postreproductiva tres fueron invadidos por abejas y dos de ellos modificados por los ocupantes. Posteriormente se hace una caracterización de la vegetación circundante y se colocan otros 20 nidos artificiales, los cuales se monitorean durante la etapa reproductiva.

DISTRIBUTION AND POPULATION SIZE OF *AMAZONA* PARROTS IN THE COCKPIT COUNTRY, JAMAICA

HERLITZ DAVIS
Department of Life Sciences, University of the West Indies, Mona, Jamaica

Jamaica has two endemic species of *Amazona* parrots – the Yellow-billed Parrot (*Amazona collaria*) and Black-billed Parrot (*A. agilis*). Both species are near threatened and are presently restricted to mid-level wet limestone forests, which cover less than 10% of Jamaica as compared to an estimated 60% in pre-Colombian times. Previous authors estimated the global population of Yellow-billed Parrots as approximately 10,000 and the Black-billed Parrot as 5000. Before Hurricane Gilbert (1988), Black-billed Parrots were reported to be as abundant as Yellow-billed Parrots within the Cockpit Country. Post-hurricane assessments revealed an apparent decline in the Black-billed Parrot population in this area. In view of the behavioral idiosyncrasy of both parrot species and the karst topography of Cockpit Country, a modified point count method was used to obtain a population estimate from territorial pairs in the Cockpit Country. A total of 140 points was sampled during the breeding seasons of 1998 and 1999. The population estimate shows an approximate 1:1 ratio of Black-billed to Yellow-billed parrots in the Cockpit Country, overall. Distribution within the Cockpit Country differed between the two parrot species. Black-billed Parrots outnumber Yellow-billed Parrots by as much as two to one in edge habitat, whereas parrot numbers are close to equal in the Cockpit Country interior. Parrot distribution appears to be related to forest disturbance level.

DISTRIBUCIÓN Y TAMAÑO POBLACIONAL DE COTORRAS *AMAZONA* EN EL COCKPIT COUNTRY, JAMAICA

Jamaica tiene dos especies endémicas de cotorras *Amazona* – la Cotorra Piquiamarilla (*Amazona collaria*) y la Cotorra Piquinegra (*A. agilis*). Ambas especies están consideradas como casi amenazadas y actualmente están restringidas a los bosques muy húmedos de piedra caliza a mediana elevación, los cuales cubren menos del 10% de la isla comparado con un estimado del 60% en tiempos precolombinos. Pasados autores estimaron la población global de la Cotorra Piquiamarilla en aproximadamente 10,000 individuos y la Cotorra Piquinegra en 5,000. Antes del huracán Gilbert (1988), se reportaba que la Cotorra Piquinegra era tan abundante como la Piquiamarilla en la zona del Cockpit Country. Evaluaciones post-huracán han revelado una aparente disminución en la población de la Cotorra Piquinegra en esta área. Tomando en cuenta la idiosincracia de la conducta de ambas especies de cotorras y la topografía del carso en el Cockpit Country, se usó un método modificado de censo de punto para obtener un estimado de la población de las parejas territoriales. Un total de 140 puntos fueron muestrados durante las épocas reproductivas de 1998 y 1999. El estimado de la población muestra una proporción de aproximadamente 1:1 de Cotorras Piquinegras y Piquiamarillas en todo el Cockpit Country. La distribución dentro del Cockpit Country fue dife-

rente para las dos especies de cotorra. Las Cotorras Piquinegras sobrepasan numéricamente a las Piquiamarillas dos a una en hábitat de borde, mientras que los números de las dos especies son casi iguales en el interior del Cockpit Country. La distribución parece estar relacionada a los niveles de perturbación en el bosque.

RE-ESTABLISHMENT OF A VIABLE POPULATION OF SCARLET MACAWS

JENIFER HILBURN

Gerente del Sitio de Reintroducción, Zoo–Ave Centro de Reintroducción, Apartado 181, Golfito, Costa Rica (ecojen@hotmail.com)

The Nature Restoration Foundation, in coordination with Zoo–Ave Wildlife Conservation Park, has been working to re-establish a viable population of Scarlet macaws (*Ara macao*) within the San Josecito Valley of Costa Rica since 1998. This species was once prevalent in this area but was extirpated in the 1940s because of the combined factors of hunting and poaching pressures and the aerial spraying of pesticides. These and other pressures no longer exist. In addition, the San Josecito Valley Release Site is located adjacent to a newly established National Park, Piedras Blancas. Zoo–Ave has bred over 50 Scarlet Macaws through its captive breeding efforts. These birds make up the majority of the release candidates for this project. This project will take place over a 10-year period. The first group of Scarlet Macaws has been screened for behavioral abnormalities, DNA fingerprinted, sexed, given physical examinations, and tested for disease. Of the original 28 birds, 21 were released during May and December 1999, and December 2000. Over the next 10 years, a minimum of 100 individuals will be screened, trained, and released at the San Josecito Valley Release Site. All birds will be monitored after release using various methods, including observations at feeding station, nestbox monitoring, and radio telemetry.

RESTABLECIMIENTO DE UNA POBLACIÓN VIABLE DE LAPA ROJA

La Fundación para la Restoración de la Naturaleza, en coordinación con el Parque de Conservación Zoo-Ave, ha estado trabajando para restablecer una población viable de lapas rojas (*Ara macao*) dentro el valle San Josecito, Costa Rica, desde 1998. Esta especie era común en el área pero fue extirpada en la década de 1940 debido a la presión de la caza y la aplicación aérea de pesticidas por la industria bananera. Estas y otras presiones han sido eliminadas en el área. Además, el sitio de reintroducción del valle San Josecito se ubica adyacente al nuevo Parque Nacional Piedras Blancas. Todos estos factores, y la existencia de hábitat apropiado para lapas rojas, hacen del valle San Josecito un sitio apropiado para la reintroducción de esta especie. Más de 50 lapas rojas han sido criadas en cautiverio en Zoo-Ave y estas aves representan la mayoría de las aves candidatas para reintroducción en este proyecto. Aves confiscadas por el gobierno de Costa Rica y aquellas donadas por individuos también serán candidatas en la reintroducción, ya que pueden proveer una variación genética adicional para la población reintroducida. Esto proyecto se realizará durante un período de 10 años. El primer grupo de lapas rojas ha sido revisado para evitar comportamientos irregulares, el ADN de cada individuo ha sido catalogado, el sexo determinado, y ha sido sometido a examinaciones físicas y pruebas de salud. De las 28 aves originales, 21 fueron reintroducidas durante los meses de mayo y diciembre de 1999 y diciembre de 2000. Las demás aves están alojadas actualmente en una jaula grande de reintroducción donde se les provee de alimentación natural y son observados diariamente. Durante los próximos 10 años, un mínimo de 100 individuos serán seleccionados, entrenados, y puestos en libertad en el lugar de reintroducción del valle San Josecito. Todas las aves serán monitoreadas después de la reintroducción usando varios métodos, incluyendo observaciones en las estaciones de alimentación, monitoreo de nidos artificiales, y radiotelemetría.

REPRODUCTIVE ECOLOGY OF THE CATEY (*ARATINGA EUOPS*) IN BIRAMAS, CUBA DURING THE YEAR 2000

OMAR LABRADA VEGA AND PEDRO LABRADA LABRADA

Empresa para la Conservación de la Flora y la Fauna, Refugio de Fauna "Delta del Cauto," Granma, Cuba

The psittacine group has historically been one of the most affected by human activities. Therefore, they are an important group for ecological studies. In Cuba, only two species exist, one of which, the Catey (*Aratinga euops*), has received little attention and therefore is a species for which we have little data. The present work offers reproductive data of the Ciénaga de Biramas population in the Delta del Cauto Wildlife Refuge. We monitored 24 nesting cavities in an 8-ha parcel; 83% of the cavities were occupied by birds, 75% by the Catey. All of the cavities were oriented to the north and had an average diameter opening of 64.7 mm, a depth of 31.1 cm, and were 4.6 m above from the ground. The maximum and most-frequent clutch size was 4 eggs, averaging 27.9 mm x 21.8 mm in size. Ninety-five percent of the eggs hatched, although others were lost to infertility and depredation. Of all hatchlings, 3.7% died early, for a final reproductive success of 91.2%. Moreover, we detected six potential competitors for cavities in palm trees in the area.

ECOLOGÍA REPRODUCTIVA DEL CATEY (*ARATINGA EUOPS*) EN BIRAMAS, CUBA EN EL AÑO 2000

El grupo de los psittácidos ha sido históricamente uno de los más afectados por la acción del hombre, por lo que los estudios sobre su ecología son tan importantes. En Cuba existen actualmente sólo dos especies, de las cuales el Catey (*Aratinga euops*) ha recibido una menor atención, siendo la especie de la que se tienen menos datos. El presente trabajo brinda datos reproductivos de la población de la ciénaga de Biramas, en el Refugio de Fauna Delta del Cauto. Para ello se midieron y monitorearon 24 huecos en una parcela de 8 ha, de los cuales el 83% fue ocupado por aves, y el Catey ocupó el 75% de éstos. Todos los huecos se orientaban hacia el norte y tenían un diámetro promedio de 64.7 mm y una profundidad de 31.1 cm, ubicándose a 4.6 m de altura. El tamaño de puesta más frecuente fue de 4 huevos, que medían como promedio 27.9 mm x 21.8

mm. El 95% de los huevos eclosionó exitosamente, perdiéndose algunos por infertilidad y depredación. De los pichones nacidos vivos, el 3.7% murió en etapas tempranas, para un éxito reproductivo total del 91.2%. Se detectaron además en el área seis especies potencialmente competidoras por los huecos de las palmas.

PHYLOGEOGRAPHIC STUDY IN WILD POPULATIONS OF THE BLUE-AND-YELLOW MACAW (*ARA ARARAUNA*) BY THE ANALYSIS OF MITOCHONDRIAL DNA SEQUENCES

C. Y. MIYAKI[1a], R. CAPARROZ[1b], C. A., BIANCHI[2], AND J. S. MORGANTE[3]

[1]*Departamento de Biologia, Instituto de Biociências, Universidade de São Paulo, Rua do Matão, 277, CEP 05508-900, São Paulo, SP, Brazil;* [1a]*(cymiyaki@ib.usp.br),* [1b]*(renabio@ib.usp.br)*; [2]*Jardin Zoológico de Brasília/FUNPEB, bianchic@hotmail.com*; and [3]*Departamento de Biologia, Instituto de Biociências, Universidade de São Paulo, Rua do Matão, 277, CEP 05508-900, São Paulo, SP, Brazil*

The Blue-and-yellow Macaw (*Ara ararauna*) is not considered threatened, but the status of its populations is of concern in some regions. Phylogeographic studies can provide important information about the genetic structure of populations and these results can be helpful in the elaboration of conservation strategies. In this study, we sequenced a fragment of DNA from the mitochondrial control region of wild specimens. The analyzed DNA sequences were obtained from blood samples collected from 46 individuals from six regions of northern and central Brazil. Of the 829 base pairs sequenced for each individual, 32 variable sites were observed and only 19 were phylogenetically informative for maximum parsimony and maximum likelihood analyses. The sequences obtained yielded 25 distinct haplotypes, of which three can be found in two or more studied regions. There was no correlation between the analyzed sequences and their geographic origin. These preliminary results suggest that the populations studied are not genetically structured, or divergence events among these populations occurred recently and they could not be detected in this analysis.

ESTUDIO FILOGEOGRÁFICO DE POBLACIONES SILVESTRES DEL GUACAMAYO AZUL Y AMARILLO (*ARA ARARAUNA*) MEDIANTE EL ANÁLISIS DE SECUENCIA DE ADN MITOCONDRIAL

El Guacamayo Azul y Amarillo (*Ara ararauna*) no se considera como una especie amenazada, pero la condición de sus poblaciones es preocupante en algunas regiones. Los estudios filogeográficos pueden aportar información importante sobre la estructura genética de las poblaciones, y estos resultados pueden ser útiles para elaborar estrategias de conservación. En este trabajo estudiamos la secuencia de un fragmento de ADN de la región de control mitocondrial de especímenes silvestres. Las secuencias analizadas se obtuvieron de muestras de sangre recolectadas de 46 individuos provenientes de seis regiones diferentes del norte y centro de Brasil. De los 829 pares de bases secuenciados para cada individuo, 32 sitios con variabilidad fueron observados y tan sólo 19 presentaron información filogenética para los análisis de parsimonia máxima y probabilidad máxima. Las secuencias obtenidas identifican 25 haplotipos distintivos, de los cuales 3 se encuentran en dos o más de las regiones estudiadas. No se encontró correlación alguna entre las secuencias analizadas y su origen geográfico. Estos resultados preliminares sugieren que las poblaciones estudiadas no están genéticamente estructuradas, o que los eventos que provocan divergencia entre ellas ocurrieron recientemente y no se pueden detectar en este análisis.

CHARACTERIZATION OF THE AVIFAUNA OF HOLGUÍN PROVIDENCE

NILS NAVARRO[1], CARLOS PEÑA[2], AND BÁRBARA SÁNCHEZ[3]

[1]*Proambiente Group ENIA, Holguin, Cuba*; [2]*Department of Natural Resources, CITMA, Holguin, Cuba;* and [3]*Institute of Ecology and Systematics, CITMA, Cuba (ecologia@unepnet.net.inf.cu; ecologia@cniai.inf.cu)*

We present the results of bird surveys from 98 localities in Holguín province's 14 municipalities as derived from historical data, compiled bibliographies, mist-net studies, point counts, transects, and aerial observations over a period of 16 years. Of the 203 species counted, 6.4% were endemic. We make comparisons among the composition of three habitat types: coastal, plains, and mountains. Six endangered species were encountered, two of which are considered critical, and seven threatened. Besides noting vulnerable areas, we mention the principal problems affecting the conservation of these species.

CARACTERIZACIACIÓN DE LA AVIFAUNA DE LA PROVINCIA DE HOLGUÍN

Se presenta el resultado de los muestreos de avifauna realizados en 98 localidades de los 14 municipios de la provincia de Holguín a partir de datos históricos, recopilación bibliográfica, muestreos con redes ornitológicas, conteos por parcelas circulares, transectos y observaciones aleatorias durante un período de 16 años. Fueron registradas 203 especies con un endemismo del 6.4 %. Se realizan comparaciones entre la composición de 3 sectores: costero, llano y montañoso. Seis especies se encuentran en peligro, dos de ellas en situación crítica, y siete especies están en la categoría de amenazadas. Se señalan, además, las áreas vulnerables y se mencionan los principales problemas de conservación que las afectan.

EXTENT OF THE PRACTICE OF KEEPING THE CUBAN BULLFINCH IN CAPTIVITY IN THE CITY OF CAIBARIÉN, VILLA CLARA, CUBA

AMAURY CAMACHO SAURA[1] AND VICENTE BEROVIDES ÁLVAREZ[2]

[1]*Empressa Nacional para la Protección de la Flora y la Fauna*; and [2]*Facultad de Biología, Universidad De la Habana, Cuba*

In the city of Caibarién, there is a tradition of keeping cagebirds captured in nearby woods. Owners of cage birds (30 people) were surveyed, and field studies were conducted to assess the abundance and effect of this use of species, taking Cuban Bullfinch (*Melopyrrha nigra*) as a

model. Owners of singing birds were men only, aged from 13 to 65 years. They did not have much schooling and they had been involved in such activities for more than 10 years. A total of 20 hunting locations were registered (1–5 per owner). Eight species of singing birds were registered, too; but Cuban Bullfinch, Yellow-faced Grassquit (*Tiaris olivacea*), and Indigo Bunting (*Passerina cyanea*) were most commonly kept. These species were mainly caught during the breeding season. In the case of Cuban Bullfinch, owners caught up to 60 birds a year, most of them male and young. In the field, population densities of the Cuban Bullfinch vary widely and lower numbers may be the result of such bird capture, as well as habitat loss.

ABUNDANCIA Y UTILIZACIÓN DEL NEGRITO (*MELOPYRRHA NIGRA*) EN EL MUNICIPIO CAIBARIÉN, VILLA CLARA

En la ciudad de Caibarién existe la tradición del mantenimiento de aves de jaula tomadas de los bosques cercanos. Se evaluó este uso por medio de 30 encuestas a personas que poseían dichas aves y se hicieron trabajos de campo para evaluar la abundancia e impacto de este uso sobre las especies, tomando como modelo al Negrito (*Melopyrrha nigra*). Los dueños de aves canoras fueron exclusivamente del sexo masculino, oscilaban entre los 13 y 65 años de edad, tenían baja escolaridad y llevaban en promedio más de 10 años en dicha actividad. Se registraron 1 - 5 localidades de captura por dueño para un total de 20. Se estudiaron 8 especies de aves canoras, pero fueron predominantes el Negrito, el Tomeguín de la Tierra (*Tiaris olivacea*) y el Azulejo (*Passerina cyanea*). Estas especies se capturan mayormente durante la época de cría y, para el Negrito, cada dueño capturó hasta 60 aves por año, casi todos machos y juveniles. En el campo, las densidades variaron ampliamente y su descenso puede deberse tanto a las extracciones como a la deforestación.

ABUNDANCE AND HABITAT SELECTION OF THE CUBAN TROGON IN THE ALTURAS DE BANAO ECOLOGICAL RESERVE, SANCTI SPÍRITUS, CUBA

MAIKEL CAÑIZARES MORERA[1] AND VICENTE BEROVIDES ALVAREZ[2]

[1]*Reserva Ecológica "Alturas de Banao," Empresa Nacional para la Protección de la Flora y la Fauna*; and [2]*Facultad de Biología, Universidad de la Habana*

Little is known of the ecology of the Cuban Trogon (*Priotelus temnurus*), the national bird of Cuba. We studied forest habitat and song perch site microhabitat preferences of Cuban Trogons in the Alturas de Banao Ecological Reserve, Sancti Spíritus, Cuba. Species abundance was examined in relation to woody plant basal area and canopy cover, indicators of forest health. Five vegetation variables were measured for 20 song perches and 20 paired points, and 15 0.04-ha. plots were examined for a correlation between trogon density and basal area and canopy cover. The Cuban Trogon seems to be a good indicator of forest health.

ABUNDANCIA Y SELECCIÓN DE HÁBITAT DEL TOCORORO (*PRIOTELUS TEMNURUS*) EN LA RESERVA ECOLÓGICA ALTURAS DE BANAO, SANCTI SPÍRITUS, CUBA

El Tocororo (*Priotelus temnurus*) es el ave nacional de Cuba, pero poco se conoce de su ecología. Este trabajo presenta un estudio de las preferencias de hábitat (bosques) y microhábitat (sitio de percha para el canto) de esta especie en la Reserva Ecológica Alturas de Banao, Sancti Spíritus, Cuba. Nuestro objetivo fue conocer la relación de la abundancia de esta especie con variables claves de las formaciones boscosas como área basal y cobertura del dosel, ambas variables indicadoras de la salud de dichas formaciones. Se midieron cinco variables de la vegetación en 20 perchas de canto y 20 puntos apareados y se examinaron 15 parcelas (0.04 ha.) para determinar la correlación entre la densidad del Tocororo y el área basal y la cobertura del dosel. Nuestro resultado básico muestra al Tocororo como especie indicadora de la salud del bosque, asociando su presencia con las variables indicadoras de la salud forestal.

ANALYSIS OF THE USE OF CUBAN BIRDS, WITH SPECIAL REFERENCE TO THEIR USE FOR SUBSISTENCE

VICENTE BEROVIDES ÁLVAREZ

Facultad de Biología, Universidad de la Habana

In this work I analyze the different real or potential uses of Cuban birds (feeding, medical, pets, ornamental, artistic, religious, cynegetics, and recreational) by rural communities and fishermen. Twenty-five bird species are used in several ways for subsistence by the farming communities from Valle de los Ingenios, Trinidad, Sancti Spíritus. Fourteen species were recorded there as food (meat and soups), four used for handicrafts (claws and feathers), four used in religious ceremonies (African religion), and five had other purposes (pets, manure, and singing). The most commonly used species were *Columba squamosa, Saurothera merlini*, and *Colinus virginianus.* These results are discussed and the possible sustainable use of such species considered.

ANÁLISIS DE LOS USOS DE LAS AVES CUBANAS, CON ESPECIAL REFERENCIA AL USO DE SUBSISTENCIA

En este trabajo se analizan los diferentes usos reales o potenciales (alimentario, medicinal, mascota, ornamental, artístico, religioso, cinegético y recreativo) de las aves cubanas por parte de las comunidades de campesinos y pescadores. Se destaca en especial el uso de 25 especies de aves que son utilizadas de varias formas por las comunidades campesinas del Valle de los Ingenios, en Trinidad, Sancti Spíritus. Aquí se registraron 14 especies para uso alimentario (carnes y sopas), 4 para objetos artesanales (garras y plumas), ritos religiosos (religión africana) y 5 para otros fines (mascota, abono y canto). Las especies en uso más frecuentemente mencionadas fueron *Columba squamosa, Saurothera merlini* y *Colinus virginianus.* Se discuten estos resultados y el posible uso sostenible de dichas especies.

TO BE CONTINUED IN THE NEXT ISSUE OF THE BULLETIN.

AMERICAN ORNITHOLOGISTS' UNION MEMBERSHIP GRANTS NOW AVAILABLE FOR STUDENTS

The American Ornithologists' Union will provide several hundred grants in the form of a three-year AOU membership to qualifying graduate students in the Western Hemisphere interested in pursuing a career in ornithology. To qualify, students must: (1) Have no current or prior membership in the AOU. (2) Send a letter of interest and a 2−3 page curriculum vitae to the AOU Membership Chairman (see below). Letters of interest should outline ornithological interests and professional goals, clearly specify the degree program in which the student is registered, his or her expected date of completion, and the name and e-mail address of the academic advisor. (3) Provide a one-page letter of support from an academic advisor on letterhead from the institution in which the student is currently enrolled. Membership grants will provide full membership in the AOU (including subscription to *The Auk*) for three consecutive years and are not renewable. Deadline for materials is 10 March 2002. Mail all materials together to Dr. Susan Haig, AOU Membership Committee, USGS/FRESC, 3200 SW Jefferson Way, Corvallis, OR 97331, USA.

ANNONCE IMPORTANTE POUR LES ÉTUDIANTS

DES SUBVENTIONS DESTINEES AUX ETUDIANTS POUR DEVENIR MEMBRE DE L'UNION ORNITHOLOGIQUE AMÉRICAINE

L'AOU octroie plusieurs centaines d'adhésions de 3 années à des étudiants dans l'hémisphère occidental intéressés par poursuivre une carrière en ornithologie.
Les demandeurs doivent:

1) ne pas avoir été ou être membre de l'AOU
2) envoyer une lettre de motivation et un curriculum vitae de 2-3 pages au responsable des adhésions de l'AOU (voir ci-dessous). Les lettres d'intérêt doivent souligner les motivations ornithologiques et les objectifs professionnels, en spécifiant précisément le diplôme préparé, sa date de passage, ainsi que le nom et l'adresse électronique de son responsable
3) fournir une lettre de références d'un responsable académique sur un papier à en-tête de l'institution.

Le soutien consiste en une adhésion complète à l'AOU (incluant l'abonnement à *The Auk*) pour 3 années consécutives et n'est pas renouvelable. La date limite de soumission est le 10 mars 2002. Les demandes doivent être envoyées à Dr. Susan Haig, AOU Membership Committee, USGS/FRESC, 3200 SW Jefferson Way, Corvallis, OR 97331, USA.

OPORTUNIDAD IMPORTANTE PARA ESTUDIANTES

La American Ornithologists' Union (AOU) otorgará cientos de subvenciones cubriendo 3 años de membresía en la organización a estudiantes de escuela graduada en el hemisferio occidental que aspiren a una carrera en ornitología. Los interesados deben:

1) carecer de membresía actual, o haber sido miembros, de AOU
2) enviar una carta de interés y un curriculum vitae de 2-3 páginas al AOU Membership Chairman (vea abajo). Las cartas de interés deben resumir intereses ornitológicos y metas profesionales, especificar claramente el programa de estudio en el cual el estudiante está registrado, la fecha estimada de graduación, así como el nombre y dirección electrónica del asesor académico.
3) Proveer una carta de recomendación de un asesor académico, de una página de largo, con membrete de la institución de estudio.

Las subvenciones consisten de una membresía en la AOU (incluyendo la suscripción a *The Auk*) por tres años consecutivos y no es renovable. La fecha límite es el 10 de marzo de 2002. Los interesados deben enviar toda la información a la Dra. Susan Haig, AOU Membership Committee, USGS/FRESC, 3200 SW Jefferson Way, Corvallis, OR 97331, USA.

MARTÍN ACOSTA CRUZ

ORLANDO TORRES FUNDORA
Maestro en Ciencias y Profesor Titular de La Universidad de la Habana

Hace ya algo más de 25 años, un joven estudiante de cuarto año de la entonces Escuela de Biología (hoy Facultad) de la Universidad de La Habana, comenzó a compartir conmigo el enorme disfrute de salir al campo y observar y contar las aves que nos rodeaban. Por supuesto, teníamos que llegar hasta muy cerca de ellas, porque contábamos solamente con nuestros ojos y oídos; los binoculares llegarían muchos años después.

Ya en ese entonces ese joven, cuyo nombre es Martín Acosta Cruz, mostraba excepcionales cualidades para convertirse más tarde en un excelente investigador en el campo de la ornitología: fortaleza corporal y de espíritu, gran capacidad de observación y de reflexión, y un afán de superación ilimitado. Sus conocimientos sobre las aves cubanas eran ya importantes.

Este joven obtuvo su licenciatura en Ciencias Biológicas en 1978 y desde entonces ha publicado 60 artículos científicos en revistas nacionales y extranjeras. Ha presentado ponencias en 53 eventos internacionales y ha impartido más de 30 cursos de pre y postgrado.

En 1998 obtuvo el doctorado en Ciencias Biológicas en la Universidad de La Habana y en 1999 la categoría de Investigador Auxiliar. Mientras hacía todo esto ha desarrollado diferentes responsabilidades.

Hoy es:

Director del Museo de Historia Natural Felipe Poey de la Universidad de La Habana
Presidente de la Sección Cubana de Birdlife International
Miembro de la Comisión Nacional de Caza
Miembro del Grupo de Expertos del Ministerio de Ciencia, Tecnología y Medio Ambiente
Coordinador del Programa Cubano del Wildlife Trust

Pero no sólo este enorme cúmulo de esfuerzo y resultados ha hecho a la comunidad cubana de ornitólogos elegir a Martín como nuestro más destacado exponente. Han sido, en esencia, sus valores humanos los que le han permitido ser tan sobresaliente. Entre estos, deseo destacar su **consagración**, que ha creado en el colectivo que dirige un clima de autodisciplina individual y colectiva que logra la necesaria correspondencia entre el tiempo de trabajo y la calidad de los resultados; su **excelencia** y **profesionalismo**, que promueven lo mismo en aquellos que lo rodean; su **visión** de futuro, buscando perspectivas y asumiendo riesgos y su **integridad**, nacida de las duras y difíciles condiciones económicas en las que vivió durante su niñez y adolescencia, y del clima familiar de honestidad, austeridad y amor al trabajo que lo rodeaba.

El Martín que hoy tenemos por suerte con nosotros, ha sido siempre un hijo y hermano excelente y es un padre exigente y ocupado en la educación de su hija y en la atención a su familia.

He recogido criterios de muchos de sus compañeros que lo califican como inteligente, buen amigo, profesional, trabajador y bromista (aunque le gustan más las bromas que él hace, que las que le hacen a él).

Su signo zodiacal es Escorpión y le gusta el color azul y, por si alguno desea regalarle algo, les diré en secreto que le gustan el platino y las esmeraldas, y no tiene ninguna de las dos cosas.

Hay quien dice que los líderes nacen, pero estamos en presencia de un líder que se ha convertido en tal a base del esfuerzo y resultados en el trabajo.

Martín, te queremos porque disfrutas lo que haces y nos contagias tu propia alegría, porque los proyectos que consigues los compartes con nosotros, porque a pesar de tu ceño fruncido eres toda bondad y sentimiento. Tu trabajo nos compulsa a conocer y conservar mejor estos seres con plumas a los que dedicamos la vida.

Por mi parte quiero decir que sentí mucho orgullo cuando fuiste mi alumno y hoy me enorgullece que seas mi maestro.

MARTÍN ACOSTA CRUZ

ORLANDO TORRES FUNDORA
Science and Titular Professor at the Universidad de La Habana

More than 25 years ago, a young student in his fourth year in the then School of Biology (today Faculty of Biology) of the Universidad de La Habana, began to share with me the enormous joy of going out to the field to observe and count the birds around us. Of course, we had to get very near the birds, because we only had our eyes and hearing – binoculars would be a luxury of many years later.

Already, that youth, whose name is Martín Acosta Cruz, showed exceptional qualities that would allow him to develop into an excellent investigator in the field of ornithology: strength of body and spirit, great capacity of observation and reflection, and a limitless zeal for self-improvement. Even then, his knowledge of Cuban birds was substantial.

This young man obtained his bachelor's degree in Biological Sciences in 1978 and since then has published 60 scientific articles in national and international journals, presented at 53 international events, and has taught more than 30 undergraduate and graduate courses. In 1998, Martín earned his doctorate in Biological Sciences at the Universidad de La Habana and, in 1999, achieved the category of Auxiliary Investigator. While achieving all of this, Dr. Acosta has taken on a myriad responsibilities, including:

Director of the Museum of Natural History "Felipe Poey" of the Universidad de La Habana
President of the Cuban Section of BirdLife International
Member of the National Hunting Commission
Member of the Group of Experts of the Ministry of Science, Technology, and Environment
Coordinator of the Cuban Program for the Wildlife Trust

But it is not only this enormous amount of effort and scientific achievement that has led the Cuban ornithological community to choose Martín as our most outstanding exponent. His human values are, in essence, what have made him such an outstanding individual. Among these values, I want to highlight his **dedication**, which has created in the community a climate of individual and collective self-discipline necessary to achieve a correlation between working time and the quality of results; his **excellence** and **professionalism**, which permeates those around him; his **vision** for the future, looking for perspectives and assuming risks; and his **integrity**, derived from the hardships and difficult economic conditions in which he lived during his childhood and adolescence, and of the family environment of honesty, austerity, and love of work which surrounded him.

Fortunately for us, the Martín that we have with us today has always been an exceptional son and brother, and is a demanding father who is dedicated to the education of his daughter and is attentive of his family. I have gathered the opinions of many of his colleagues, who deem him intelligent, a good friend, professional, hard working, and a prankster (although he likes the practical jokes he inflicts on others more than the pranks others wreak on him). His sign is Scorpio, he likes the color blue and, for someone who wants to give him a special gift, I will tell them secretly that he likes platinum and emeralds, and that he has neither of these two things.

There are those who say that leaders are born, but we are in the presence of a leader who has become such through his effort and the results of his hard work. Martin, we love you because you enjoy what you do and your happiness is contagious, because of the projects that you share with us, and because, in spite of your frown, you are all kindness and compassion. Your work compels us to better understand and better protect those feathered beings to which we dedicate our lives.

I want to say that I felt a great deal of pride when you were my student and today it makes me proud that you are my teacher.

THE SOCIETY OF CARIBBEAN ORNITHOLOGY'S WEBSITE AND LISTSERV

Did you know that Society of Caribbean Ornithology has a website? The SCO website – hosted by the Ornithological Council – is at http://www.nmnh.si.edu/BIRDNET/SCO/index.html. On the SCO website, you will find a list of the officers, information about meetings, and resolutions adopted by the SCO. Soon, we will include the table of contents and sample articles from *El Pitirre*. We would also like to feature articles about the research and conservation activities of our members.

And while you are there, be sure to visit BIRDNET, the website of the Ornithological Council – at http://www.nmnh.si.edu/BIRDNET/index.html.

Please be sure to visit the SCO website and give us your suggestions for information we should include.

We are also looking for a webmaster who can prepare new content for the website. No technical skills are necessary because we do not have direct access to the server. The webmaster would prepare the text and forward it to the Ornithological Council for posting. It would be helpful, but it is not necessary, for the webmaster to be fluently bilingual in English and Spanish. We would also appreciate having a volunteer to translate into French. If you are interested, please contact Ellen Paul at epaul@concentric.net.

SCO now has a listserv, too. We already have 83 members and hope to soon have many more. To join, just go to and click on "join this group" on the right-hand side of the screen. Once you join, you can choose to have messages delivered to you via e-mail or you can opt to simply read the messages on the website. The SCO is increasingly using this listerver to enhance communication among members and to provide timely updates about important conservation and ornithological developments in the region. The benefits of joining this listserver group are many and will keep you better informed about SCO activities. The opportunities for discussion among SCO members about key issues is enhanced by your active participation in the listerver group.

EL SITIO WEB SCO Y EL LISTSERV DE SCO

¿Sabía usted que la SCO tiene una página en Internet? El sitio de la SCO - creado por el Ornithological Council - es En esta página encontrará una lista de los directores, información sobre reuniones, y las resoluciones adoptadas por la SCO. Pronto incluiremos la tabla de contenido y artículos selectos de *El Pitirre*. También nos gustaría presentar artículos sobre las investigaciones y las actividades de conservación de nuestros miembros.

Y mientras estén ahí, asegúrense de visitar BIRDNET, la página web del Ornithological Council: http://www.nmnh.si.edu/BIRDNET/index.html.

Por favor visiten la página de la SCO y sugieran qué información debemos incluir.

También estamos buscando un "webmaster" que pueda preparar contenido nuevo para la página. No es necesario tener conocimiento o entrenamiento técnico porque no tenemos acceso directo al servidor. El "webmaster" prepararía el texto y lo mandaría al Ornithological Council para presentarlo en la página. Sería provechoso, pero no es necesario, que el "webmaster" fuese bilingüe en inglés y español. También nos gustaría tener un voluntario para traducir al francés. Si le interesa, por favor contacte a Ellen Paul: epaul@concentric.net.

La SCO ahora tiene un listserv, también. Ya tenemos 83 miembros y pronto esperamos tener muchos más. Para hacerse parte del listserv, visite http://groups.yahoo.com/group/SocietyCaribOrnit y haga clic en "Join this group" al lado derecho de la página. Después de hacerse miembro, usted puede escoger si quiere que se le envíen los mensajes por correo electrónico o si sólo los quiere leer en la página en Internet. La SCO está aumentando el uso del listserv para fortalecer la comunicación entre los miembros y proveer avisos actualizados sobre desarrollos regionales de importancia en las áreas de conservación y ornitología. Los beneficios al incorporarse al listserv son muchos y se mantendrá mejor informado de las actividades de la SCO. Su participación activa en el listserv realza las oportunidades para dialogar sobre temas importantes entre los miembros de la SCO.

A BIBLIOGRAPHY OF ORNITHOLOGY IN THE WEST INDIES.–James W. Wiley. 2000. Proceedings of the Western Foundation of Vertebrate Zoology, Volume 7. 817 pp. illustr. ISSN 0511-7550. US$42.50, including postage (paper).

A perpetual problem for biologists, naturalists, and conservationists on many Caribbean islands is the difficulty of finding relevant biological information relating to one's home island, particularly when most of the information resides off-island. This problem is especially acute in a region of the world where many of the biological studies are (or were) conducted by visiting biologists who leave the island or region at the end of their study. Although reports summarizing the research findings are often provided to the local government and various NGOs, these are largely inaccessible to most folks who remain unaware of the relevant work. Local and regional publications may be helpful in "repatriating" some island research findings, but most Caribbean studies have been published in a staggering variety of North American and European books, magazines, and journals, partly reflecting the diverse colonial histories of the region. Even with access to a major university research library, finding the widely scattered Caribbean biological literature can be a frustratingly difficult task.

Given the difficulties of finding the relevant Caribbean literature, Wiley's bibliography of ornithology in the West Indies is an especially important contribution to ornithology and avian conservation in the region. The geographical scope of the bibliography includes the bird literature within Bond's classic West Indian avifaunal region — Bahamas, Greater and Lesser Antilles, Barbados, Cayman Islands, Swan Island, and islas San Andrés and Providencia. Excluded are citations specific to avian studies on the continental islands such as Cozumel, Trinidad and Tobago, the Venezuelan islands, and the Dutch Islands of Aruba, Bonaire, and Curaçao. The literature from 1750 to 1994 has been summarized, although some more recent citations have been included. The bibliography includes titles gleaned from a diversity of books, journals (591 different journal titles), theses, and gray literature (e.g., government reports, reports to funding agencies, and newspaper and popular local magazine articles).

Each bibliographic entry contains the following: a sequential unique number for each reference arranged alphabetically by author; name(s) of author (s); publication date; title; English translation of French, German, and Spanish titles; journal, or if a chapter, book title; publisher and publication location (or university location for theses); series, volume and/or number for journal articles; inclusive page numbers; and annotations on the information in the reference (brief abstract for titles involving more detailed studies). Three indices are included — taxonomic, geographic key words, and subject key words. Also, several appendices are included — serial titles, titles of serial literature by region, taxonomic list, geographic key words arranged by island groups, list of subject key words, libraries and other sources in the West Indies. Finally, a floppy disk or CD-ROM version of the bibliography will be available, which will greatly facilitate bibliographic searches.

Wiley's bibliography opens with the following quote from G. F. Mees (1969):

"Bibliography is a most unrewarding occupation, because one tends to get blamed for what one has overlooked, rather than praised for what one has accomplished"

With a noteworthy total of 11,648 titles in his bibliography, it is difficult to believe that Wiley overlooked much relating to West Indian ornithology. However, the author notes that he does not consider the bibliography to be comprehensive, but rather contains most of the published and much of the unpublished references to West Indian birds of which he was aware. What Wiley has found and summarized in the bibliography represents many years of dedicated, meticulous sleuthing in a variety of West Indian, North American, and European institutions. It is obvious that the bibliography was not put together by simply conducting key word computer library searches. Considerable shoe leather was lost in his search as evident in the numerous unpublished reports, theses, and limited edition books cited in the bibliography. He personally inspected 97% of the titles listed in the bibliography and designates "not seen" for those sources he was unable to inspect. In the introduction Wiley admits to being erratic and eccentric in his approach to some general publications that discuss West Indian birds — an apparently honest admission, for how else would anyone find information on West Indian birds in Pennants' (1784–1785) *Arctic Ornithology*? Obscure and nontraditional literature was routinely probed in his search, such as the 1879 volume of *Cronica Medico-Quirugica de la Habana* which contained a brief note on olfactory abilities of Turkey Vultures (*Cathartes aura*). Wiley's bibliography will undoubtedly be remembered for the gems he has uncovered and not for any of the literature he overlooked.

These examples and the 11,648 titles make it abundantly clear that Wiley's literature search was remarkably thorough. Despite careful review of this bibliography, I could not find anything which Wiley missed. In fact, to my surprise, I discovered two titles for which I was an author or co-author and had not realized the work had been published!

In summary, Wiley's thorough, annotated bibliography is a significant contribution to West Indian ornithology which will be a fundamental reference for all interested in birdlife in this region. The bibliography belongs in the personal libraries of every student of West Indian ornithology and should be available in all institutional libraries in the region as well as those libraries with a focus on ornithology and/or the Caribbean. Finally, I would encourage those with the resources to consider donating copies of Wiley's bibliography to appropriate individuals and institutions in the West Indies to facilitate repatriation of this valuable ornithological knowledge.—JOSEPH M. WUNDERLE, JR., International Institute of Tropical Forestry, USDA–Forest Service, PO Box 490, Palmer, Puerto Rico 00721; e-mail: wunderle@coqui.net

THE BIRDS OF THE CAYMAN ISLANDS. AN ANNOTATED CHECKLIST.–Patricia E. Bradley. 2000. BOU Checklist No 19. British Ornithologists' Union, Herts, UK. ISBN 0907446 23 X. xvi + 253 pp. 32 pp. of color photographs by Patricia Bradley and Yves-Jacques Rey-Millet. £35.00 (hardback).

The birds of several of the West Indies are the subject of recent and forthcoming check-lists, including St. Lucia (Keith 1997), Hispaniola (Keith *et al*., in prep.), Cuba (Garrido and Kirkconnell, in prep.), and the subject volume by Patricia E. Bradley. What an excellent book Ms. Bradley has afforded us! Because she has for 20 years been studying the Cayman Islands' habitats and avifauna, Ms. Bradley is uniquely qualified for the task of compiling an extraordinary check-list. Among her earlier publications are *Birds of the Cayman Islands* (1985, 1995) and *The avifauna of the Cayman Islands: an overview* (1994), both full of new and useful information about the islands' bird life. Her research has focused on the Islands' parrots; breeding and migrant seabirds; migrant shorebirds, waterfowl, and warblers; the West Indian Whistling-Duck; and, perhaps her most important contribution, on defining the entire avifauna of the three Cayman Island and its relationship to habitats on each island. Our appreciation of the islands' avifauna is much the richer for Ms. Bradley's efforts.

The detail and depth of Ms. Bradley's investigations into the birds of the Cayman Islands, both in the field and museum collections, are evident throughout her check-list. She traveled extensively, visiting all major collections in North America, as well as the British Museum of Natural History (Tring), in search of Cayman specimens. The presentation is enhanced through the author's use of tables (9), figures (8) and, especially, the 71 color plates, including relief and vegetation zone maps, habitat photographs, and splendid portraits of several species of birds photographed by the author and Yves-Jacques Rey-Millet. A special bonus is John O'Neil's beautiful painting of Cuban Bullfinches that dresses the cover of the book.

Ms. Bradley provides an excellent introduction to the Islands', including a general history of the Cayman Islands, sections on geology and geography, climate, vegetation types and habitats, a detailed history of ornithological work, paleornithology, migration, and introduced species. Of particular interest is the author's examination of West Indian and Cayman zoogeography, particularly the analyses of the origins of the Islands' avifauna, and landbird affinities and distribution within the Cayman Islands. Bradley also provides a meticulous analysis of population trends and status changes of Cayman breeding land and water birds, making effective use of tables to summarize her investigation. I was particularly pleased to see the author's detailed summary of conservation, including an enumeration of protected areas, discussion of threats to biodiversity and avifauna, and highlights of conservation efforts in the islands.

The main body (pp. 57–205) of the book consists of a comprehensive systematic list that summarizes what is known of the birds that have occurred in the three Cayman Islands from 1886 to 1999. In addition to extant species, included in the list are recently extinct species, species known only from sub-fossil remains, and introduced feral breeders. Each species account includes information on range, status, abundance, frequency, breeding (with clutch size), collected specimens, habitat preference, and distribution within the Islands. Data for the accounts were amassed from published records, unpublished field notes of visiting and resident observers, specimen labels, and Bradley's fieldwork. For those species for which large amounts of data are available (e.g., herons), Bradley has summarized the information in a general statement before giving samples of the records. All information is provided for species for which few data exist.

Ten appendices of associated materials, including a gazetteer of all localities mentioned in the text, further enhance the value and utility of the book. An extensive 21-page list of literature pertinent to the birds of the Cayman Islands provides the reader with a indispensable base for avian investigations. Finally, access to the information in the check-list is provided by indexes of scientific (including subspecies) and English names of bird species included in the volume.

This is an exceptionally useful volume for students of the subject islands' birds, as well as for our understanding of the avian distribution patterns in surrounding areas. With Bradley's extensive, thorough analyses of the Islands' avian origins and distribution patterns, we have a valuable tool for deciphering the puzzle that is the zoogeography of the West Indies. As with her *Birds of the Cayman Islands*, Patricia Bradley's check-list sets high standards as a benchmark by which other publicationss will be compared.—JAMES W. WILEY, Maryland Cooperative Fish and Wildlife Research Unit, 1120 Trigg Hall, University of Maryland Eastern Shore, Princess Anne, MD 21853, USA; e-mail: jwwiley@mail.umes.edu

LITERATURE CITED

BRADLEY, P. E. 1985. Birds of the Cayman Islands. Publ. by the author.

BRADLEY, P. E. 1994. The avifauna of the Cayman Islands: an overview. Pp. 377-407 *in* The Cayman Islands: natural history and biogeography (Brunt, M. A., and J. Davis). Kluwer Acad. Publ., The Netherlands.

BRADLEY, P. E. 1995. Birds of the Cayman Islands. 2nd Ed. Caerulea Press, Italy.

GARRIDO, O. H., AND A. KIRKCONNELL. In prep. [Check-list of birds of Cuba].

KEITH, A. 1997. The birds of St. Lucia, West Indies. An annotated check-list. BOU Checklist No. 15, British Ornithologists' Union, UK

KEITH, A. R., J. W. WILEY, S. C. LATTA, AND J. A. OTTENWALDER. In prep. The birds of Hispaniola, an annotated checklist.

BIBLIOGRAPHY OF THE NATURAL HISTORY OF THE LESSER ANTILLES WITH PARTICULAR REFERENCE TO THE TERRESTRIAL AND FRESHWATER ENVIRONMENT (1900-2000).—Georg Waldmann and Michael Stevens. 2001. Acta Biologica Benrodis Supplement 8. 209 pp. ISBN 3-927889-90-3. 14.3 x 21 cm paperback, one figure. ca. US$13.00, including package and shipping.

With the publication of this fine bibliography, authors Georg Waldmann and Michael Stevens have provided workers with convenient and efficient access to the natural history literature of the Lesser Antilles. This region is particularly challenging to the bibliographer because of the complex history of discovery, exploration, colonization, and association with many nations, leading to the literature being widely scattered among the numerous publication outlets of those countries. The authors have done an admirable job of sifting through the conventional, as well as obscure, publications and archives of unpublished reports to compile an excellent bibliography for the Lesser Antilles.

The bibliography project began when the authors' fieldwork in Montserrat was interrupted by volcanic eruptions in 1999. In the short period since that interruption, Waldmann and Stevens amassed a total of 3480 entries, including books, journal articles, proceedings, symposia, reports, and unpublished Ph. D. dissertations. The authors include 27 islands or island groups in their bibliography, which is conveniently divided into 10 subject areas, as well as Basic Literature and other media sections. Each reference is assigned to one thematic section (although several appear in more than one section). Bird literature, included as a subsection under "Vertebrates," contains 138 references, although additional literature pertinent to birds is found among other sections (e.g., Biogeography, Veterinary Zoology). The references are arranged in alphabetical order within the sections. In addition to the expected thematic sections, the authors include chapters on Internet sources, bibliographies, and regional journals.

As Waldmann and Stevens acknowledge, no bibliography is ever complete. Commendably, they have pledged to supplement their bibliography at regular intervals. Their present contribution serves, however, as the starting resource for developing worthy investigations in the Lesser Antilles.—JAMES W. WILEY, Maryland Cooperative Fish and Wildlife Research Unit, 1120 Trigg Hall, University of Maryland Eastern Shore, Princess Anne, MD 21853, USA; e-mail: jwwiley@mail.umes.edu

BIRD SONGS IN JAMAICA.—George B. Reynard and Robert L. Sutton. 2000. Library of Natural Sounds, Cornell Laboratory of Ornithology, Ithaca, NY 14850. ISBN 0-938027-48-4. Two-CD set (US $18.95 + $1.87 postage and handling) or two cassettes (US$18.95 + $2.09 postage and handling), both with 15 pp. booklet.

This sound guide is another fine contribution in George Reynard's series that has included guides to the vocalizations of birds in Puerto Rico and the Virgin Islands (1969), the Dominican Republic (1981), and Cuba (1988; with O. H. Garrido). *Bird songs in Jamaica* presents sound recordings of all the resident land birds and some water birds of Jamaica, a total of 119 species, the vocalizations of most of which have not been available before. Included are 28 endemic species (including 4 endemic genera) and 18 endemic subspecies, as well as migrant species. Except for the recordings of the Golden Swallow (made in the Dominican Republic), all were made of free-flying birds in Jamaica from 1960 to 1998. Most species have at least two, and some as many as 13, different examples of vocalizations. All species have a unique track number that allows rapid access, at least on the CD version.

The authors describe the recordings as an audio companion to *A field guide to the birds of the West Indies*, by Herbert Raffaele *et al*. (1998), and *Birds of Jamaica, a photographic field guide*, by Audrey Downer and Robert L. Sutton (1990). Included with the CDs and cassettes is a 15-page booklet, which has introductory information, as well as a species-by-species and track-by-track listing of the included recordings. Locations where each recording was made, as well as species recorded in the backgrounds of tracks, are identified. An alphabetized species list provides the compact disc and track number, and cassette side, thereby facilitating locating a desired species.

The Jamaica recordings and production of the CD and cassette versions meet the high standards set by the Library of Natural Sounds at the Cornell Laboratory of Ornithology. I recommend *Bird songs in Jamaica* to all visitors to Jamaica interested in the island's birds. The CD version, particularly, when used with a portable player, provides a convenient means of learning vocalizations in the field. Reynard and Sutton, however, request conscientious use of the recordings, asking users to refrain from using playback near nesting birds or when a bird shows signs of agitation. Sadly, George Reynard has announced this will be the last of his compilations of West Indian bird songs. Nevertheless, Dr. Reynard and his collaborators have provided us with an outstanding series of recordings from all of the major Greater Antilles. Thank you, George.–JAMES W. WILEY, Maryland Cooperative Fish and Wildlife Research Unit, 1120 Trigg Hall, University of Maryland Eastern Shore, Princess Anne, MD 21853, USA; e-mail: jwwiley@mail.umes.edu

LITERATURE CITED

DOWNER, A., AND R. L. SUTTON. 1990. Birds of Jamaica. A photographic field guide. Cambridge Univ. Press, Cambridge, UK.

RAFFAELE, H., J. WILEY, O. GARRIDO, A. KEITH, AND J. RAFFAELE. 1989. A guide to the birds of the West Indies. Princeton Univ. Press, Princeton, New Jersey.

OISEAUX DES ANTILLES.—Jean C. Roché, Édouard Bénito-Espinal, and Patricia Hautcastel. 2000. Guides Sonores CEBA (Centre Bioacoustique Alpin). Réf. CA-17-18. Distributor: Frémeaux & Associés, 20 rue Robert Giraudineau, 94300 Vincennes, France. Two-CD set with 34 page illustrated booklet. 199.00 FF - 30.34€.

This two-CD set consists of the sounds of birds, amphibians, and insects from several of the Lesser Antilles, and is a fine successor to the authors' earlier recordings, *Oiseaux des Antilles, les Petites Antilles de Grenada à la Guadeloupe* (1971; vinyl disk), and *A l'écoute des oiseaux de Guadeloupe et de Martinique* (1987, 1 audio cassette; 1988, 2 audio cassettes and guide). The team's latest effort, *Oiseaux des Antilles*, includes additonal recordings, made in Guadeloupe, Martinique, and Dominica in 1999 and 2000. In total, recordings are included from 22 islands (mainly Guadeloupe, Martinique, Dominica, St. Vincent, Grenada, and St. Lucia), with 78 bird species represented. Disk One (67 min) includes 90 tracks of bird vocalizations, some of which are recordings of subspecies or populations in different islands. Accompanying the CD is a useful guidebook, with a table of the French common name of each recorded bird, along with a description of the call or song in each entry. The main body (25 pp.) of the guidebook consists of information on each of the species included on the CD. The species are arranged by family, with an index to the recorded track, a long and useful list of local names, and valuable natural history and distributional information. A two-page insert of Bénito-Espinal's lovely photographs of seven bird species is also included.

Disk Two (64 min 31 sec) is a natural concert of Antillean frogs, birds, and insects, arranged in 15 tracks of charming sunrise and night choruses in various forest and freshwater pond locations, including in Dominica, Guadeloupe, Martinique, Grenada, and St. Vincent. These natural symphonies, so appreciated especially by Édouard Bénito-Espinal, range in length from less than two minutes to passages as long as 13½ minutes.

The two-CD set is available through Frémeaux & Associés at the address listed above, or by contacting the distributor by telephone ([33] 01-43-74-9024) or fax ([33] 01-43-65-2422).

Oiseaux des Antilles is well produced and useful as a guide to the vocalizations to the region's birds. The natural symphonies included on the second CD are to be enjoyed during moments of contemplation and recollection of visits to the islands by those of us who need a "fix" of island nature as we face a cold computer screen.—JAMES W. WILEY, Maryland Cooperative Fish and Wildlife Research Unit, 1120 Trigg Hall, University of Maryland Eastern Shore, Princess Anne, MD 21853, USA; e-mail: jwwiley@mail.umes.edu

---

REGIONAL SOCIETY

THE PUERTO RICAN ORNITHOLOGICAL SOCIETY

ADRIANNE G. TOSSAS AND LEOPOLDO MIRANDA

The Puerto Rican Ornithological Society (PROS) is a non-profit organization incorporated under the Laws of the Commonwealth of Puerto Rico. Our main interests are the study, protection, and enjoyment of the native avifauna. It is the only organization committed to the conservation of Puerto Rican birds. Founded in 1995, it comprises more than a hundred members of all backgrounds and ages.

The Board of Directors consists of the President (Leopoldo Miranda), Vice-President (Sergio Colón), Treasurer (Beatriz Hernández), Secretary (Sondra Vega), and two advisors (José Colón and Raúl Pérez-Rivera). The budget is based on annual membership fees and special activities, such as the sale of Mark Oberle's book, *Puerto Rico's Birds in Photographs*.

One of our main education tools is a bimonthly publication, *El Bien-te-veo* (Adrianne Tossas and Ramón Del Moral, Editors). This bulletin includes field observations of our members, summaries of research projects conducted in the island, short articles, announcements, recent ornithological literature, and a special section for kids. Also, the PROS has a list server and web page (http://home.coqui.net/sopi/), which is regularly visited by students, visiting birdwatchers, environmentalists, and nature lovers. It includes photographs and sounds of the island's birds, articles, past bulletins, and information on new memberships.

The PROS organizes symposia focusing on different subjects each year. This year's symposium was on hunting in Puerto Rico. Participants included researchers, environmental groups, hunters, representatives of the Department of Natural and Environmental Resources (DNER), and a politician. In addition, we regularly organize field trips to important bird sites, such as Cabo Rojo Salt Flats, Tiburones Swamp, and shade coffee plantations in the central mountain range. Rare, accidental, and new species have been recorded in these field trips. At present, we are actively monitoring shorebird populations. A recently created Shorebird Monitoring Network includes 17 volunteers who conduct monthly surveys at 12 locations.

Among the activities planned for this year are two workshops: one on ducks and the other on shorebird monitoring. The duck workshop will be organized by the PROS, along with personnel of the DNER. With these activities, we intend to improve the identification skills of our members so they can participate in existing monitoring programs, as well as to promote avian conservation.

Any person interested in Puerto Rican birds can become a member of the PROS. To join, send your annual membership fee ($15.00 individual membership, $6.00 student, $25.00 family, $50.00 institution) to: PROS, PO Box 1112, Ciales, Puerto Rico 00638.

THE BAHAMA ISLANDS
July 2001

CAROLYN WARDLE

GENERAL COMMENTS

The Ornithology Group of the Bahamas National Trust on New Providence continues to flourish with monthly field trips, off-island field trips, and Christmas Bird Counts, all of which provide check-lists to add to our database. Tony White has started a new Christmas Bird Count on Grand Bahama.

With the explosion of interest in birding around the world, the Bahamas Government continues to encourage ecotourism and several more Bahamians have become qualified ecotour birding guides. Although ecotourism can be a two-edged sword, it is a major tool in the Bahamas in efforts to appreciate and preserve the natural environment and to heighten awareness in the importance of conservation.

Since a change of government in 1992 and a major lifting of land ownership restrictions, there continues to be widespread land clearance for residential communities, office complexes, shopping plazas, and road improvement. The latest census revealed that of a human population of 300,000, two-thirds now reside on New Providence. Infrastructure is becoming strained, especially with increasing numbers of visitors. The Atlantis development on Paradise Island has put severe stress on the environment of that island.

Many of the major islands of the Bahamas are receiving their share of development. Numerous small islands have now come under foreign ownership and are also being altered dramatically. There is particular concern for nesting seabirds, whose hitherto remote breeding sites are now being threatened by greater use of these islands, because of easier access by sea and air.

It is difficult to discern any attempt by government to control development, despite a recent law to regulate the filling in of wetlands, the removal of hills, or the destruction of "old growth" trees. Pressure from the general public recently won a temporary halt of a major development at the western end of New Providence, which would have placed 600 acres of woodland and wetland and a mile of pristine coastline behind gates.

Several new ecolodges have been opened on some of the family islands, with a corresponding environmental awareness. A recent competition to design the ultimate "green" ecolodge has taken place in The Bahamas, with plans to build the winning design on Andros.

PROJECTS AND ACTIVITIES IN THE BAHAMAS

Wetlands

On Andros, a local group has formed the National Creeks and Wetlands Restoration Initiative, now evolving into "Wetland Care Bahamas," to address preservation of wetlands on Andros and elsewhere in The Bahamas, and to identify degraded wetlands and seek funding to restore as many as possible. The initiative is working with Government, Ducks Unlimited, Ducks Unlimited Canada, the Bahamas National Trust, and local businesses. Some restoration has already taken place on Andros.

On New Providence, a proposal was submitted to Government to place the wetlands area of Harrold and Wilson Ponds under protection, following a resolution of the Society of Caribbean Ornithology in Aruba in 1997. To date no response has been received.

Unfortunately a summary report of the work of the West Indian Whistling-Duck Working Group in The Bahamas was not available in time for this report.

Seabirds

Will Mackin has been working extensively on the nesting ecology of the Audubon's Shearwater in the Exuma Cays Land and Sea Park. A report from David Lee suggests that the colony nesting in the Exumas may be the largest in the world, with well over 1000 pairs.

In November 2000, a workshop, "Protected Areas Management Strategy for Bahamian Terrestrial Vertebrates, Iguanas and Seabirds," was held in conjunction with the IUCN, the Conservation Unit of the Bahamas Department of Agriculture, the College of the Bahamas, Bahamas National Trust, Ardastra

Gardens Conservation Centre, and local government agencies. David Lee and Tony White provided background information on seabird nesting throughout the Bahamas. The resulting report has been submitted to the Department of Agriculture as a working document to assist in identifying locations of importance and establishing management plans for the protection of rock iguana and seabird nesting sites.

Pine Woodland

Presentation of 75 slides and script has been completed, duplicated, and distributed to several Government agencies in the Bahamas, including the Ministry of Education and the Ministry of Tourism.

Neotropical Migrants

Efforts are being concentrated on Kirtland's Warbler, known to winter in The Bahamas and Turks & Caicos Islands. Eric Carey is in dialog with Dave Ewert and Joe Wunderle to develop a research and training program for the conservation of wintering Kirtland's Warblers and associated species in the Bahamas. A Kirtland's Warbler recovery plan is now well underway to train and use local residents to monitor various habitats and areas on Andros, considered to be a suitable target island. All winter migrants will be monitored in the same program. Funds are expected shortly to provide scholarships for two Bahamian students to complete degrees in Wildlife Management, which is beyond the capacity of the College of the Bahamas. The results of the initial monitoring program should lead to long-term protection of critical habitat. The Bahamas is working closely with the Kirtland's Warbler Recovery Program in Michigan.

Hunting

The Bahamas Government continues to review proposals to allow tourist hunting, both for native and released non-native game birds. Quantities of Mallards and pheasants have been released into the Andros ecosystem.

The Department of Agriculture and the Bahamas National Trust recently held a National Hunting Symposium, bringing together various stakeholders, hunters, game wardens, park rangers, law enforcement agencies, NGOs, and naturalists. The symposium recommended urgent action with regard to monitoring, a licensing system, bag limits, and education. A full report is not yet available.

Big Green Cay off Andros has been identified as supporting the largest colony of White-crowned Pigeons in the Bahamas. Government has compulsorily acquired the island and goats will be removed as soon as this can be done without disturbing the nesting pigeons. The Game Bird Committee of the Bahamas National Trust monitors the breeding colony closely.

Introduced Species

The problem of introduced raccoons on Abaco and the threat to the native Bahama Parrot are being addressed, with advice from the US Fish and Wildlife Service. Feral cats also threaten the ground-nesting parrots.

JAMAICA

July 2001

SUZANNE DAVIS

Natural History Division, Institute of Jamaica, 10–16 East Street, Kingston, Jamaica; e-mail: suzmdavis@yahoo.com

NATIONAL INITIATIVES

Important Bird Areas Programme

In June 2001, BirdLife International's Partner in Jamaica (BirdLife Jamaica) began implementing the Important Bird Areas [IBA] programme for Jamaica. The IBA programme identifies and assesses sites of international importance for birds and seeks to establish, at a national level, a network of protected areas critical for those species which are site dependent or habitat sensitive. This network will be part of the global network for IBA's coordinated by BirdLife International (i.e., the Partners).

Activities will include the development of a national inventory of sites critical for bird and biodiversity conservation in Jamaica, training and fieldwork, advocacy and education programmes, and strengthening partnerships with local, regional, and international organizations. National support is being sought through the establishment of a National Liaison Committee, which includes representatives from relevant government and non-government organizations. This committee is expected to ensure cooperation and participation among all the participants in the IBA programme and make recommendations for goals, policies, IBA's conservation planning, and action.

BirdLife Jamaica envisions the IBA programme as a long-term strategy towards effective conservation of Jamaica's birds and their habitats.

Forest Conservation and Management

The Forestry Department has received approval from the Ministry of Agriculture for the National Forest Management and Conservation Plan (NFMCP). They are awaiting adoption of the Plan after it has been tabled before Parliament. The overall goal of this five-year Plan is to promote and improve the conservation and sustainable use of Jamaica's forest resources.

One of the outcomes of developing the NFMCP was recognition of the need to revise the 1996 Forestry Land Use Policy. The revision is in progress and major related issues are covered in the Forest Plan. Further information which may be downloaded from the Forestry Department's website at www.forestry.gov.jm.

Parks and Protected Areas

Jamaica has two national parks, the Blue and John Crow Mountain National Park (BJCMNP) and the Montego Bay Marine Park. Other protected areas that have been declared include the Portland Bight Area, and the Negril and Green Island Watersheds. Several other areas, such as the Cockpit Country, Dolphin Head area, and the Black River Morass, are slated to be declared national parks or various categories of protected areas eventually.

The Natural Resources Conservation Authority (NRCA) is the government agency responsible for the development of appropriate policy and authorization of management. In the mid-1990s, the NRCA began delegating park management to non-government organizations (NGOs). According to the "State of the Environment Report 1997," the Jamaica Conservation Development Trust (JCDT) was delegated manager of the BJCMNP in 1996. The development of trails and the resulting increase by users was expected to generate income that would enable employment of guides and help meet operational costs. To date, the BJCMNP has struggled continually to overcome financial administrative and technical difficulties.

In spite of the "Policy for the National System of Protected Areas" approved by Parliament in November 1997, the future of parks and protected areas in Jamaica remains questionable. Up to 1999, the BJCMNP was the only park or protected area that had been delegated legal NGO management. Since then, only intent of legal delegation has been indicated to NGOs for existing protected areas. As is expected, this matter has become one of great concern for the Jamaican environmental community.

Legislation and Related Issues

In accordance with the United Nations Convention on Biological Diversity (CBD), a national biodiversity information network known as the Jamaica Clearing-House Mechanism (JA CHM) was established in 1999. Jamaica ratified to the CBD in 1995. The JA CHM website can be seen at http://www.jamaicachm.org.jm

During the period October 1999 through June 2001, the Endangered Species Protection, Conservation and Regulation of Trade Act 1999 was passed and the green paper, "Towards a National Policy and Strategy on Environmental Systems," was tabled in parliament.

ORGANIZATION

BirdLife Jamaica was granted Charitable Status by the Government of Jamaica, and also launched its web site: www.birdlifejamaica.com.

BIRD CONSERVATION AND RESEARCH

Jamaica Seabird Group

The Jamaica Seabird Group was launched by BirdLife Jamaica on 16 December 2000. The objectives of the Group are:

- To stimulate interest in and provide a forum for the discussion of Jamaican seabird issues.
- To determine seabird status and conservation needs through field study, and to promote conservation projects for seabirds.
- To provide a link between BirdLife Jamaica and international seabird groups.
- To clarify the status of the Jamaican Petrel.

The major activity of the Group over the past year has been a seabird survey of the Kingston Harbour. The surveys have been led by Group Chairman, Leo Douglas, and active member John Fletcher. Contrary to previous thoughts, the survey has revealed that the Laughing Gull is most abundant from October to March. An estimated average of 35 birds has been recorded from May to August, whereas over 1500 individuals have been estimated for the rest of the year.

There is also an ongoing band recovery programme which has resulted in information exchange with the US Fish and Wildlife Service.

Bird Projects at University of the West Indies, Mona

Shaun Shawn Morrison (formerly of the Department of Life Sciences, University of the West Indies) completed a project on the effects of species such as the Brown Pelican, Least Tern, and Great Egrets on *Tilapia* fish ponds in St. Catherine. There is also an ongoing band recovery programme which has resulted in information exchange with the US Fish & Wildlife Service (USFWS).

Other projects carried out as partial requirement for the Behavourial Ecology course at the university were: "The use of 'pishing' and playback to investigate territorial behaviour in some birds," by Marlon Beale, and "Territorial defense of a food source by a male Red-billed Streamertail," by Kamika Fletcher. Both reports were reproduced in BirdLife Jamaica's *Broadsheet* No. 76 (March 2001). Marlon Beale is now working with BirdLife Jamaica and will be registered as a post-graduate student in the next semester.

West Indian Whistling-Duck (WIWD) and Wetlands Conservation Activities (1999-2001)

BirdLife Jamaica has continued to promote conservation of the West Indian Whistling-Duck and its habitat through its education and media-related activities. Three hundred more WIWD posters were ordered for distribution to schools, NGOs, and other interest groups. The "Keep the Whistlers Whistling" badges have been popular at public outreach exhibits. A slide presentation on the WIWD and its conservation issues was given to BirdLife Jamaica members. The WIWD was prominently featured by BirdLife Jamaica in four newspaper articles. Three articles appeared in the national newspapers, the *Gleaner* and the *Observer*, whereas the other appeared in the *Jamaica Observer Tourist Times*.

In preparation for its activities on World Wetlands Day (2 February 2001), the Institute of Jamaica, Natural History Division (NHD), used the performing arts. The "Wetland Rap Song," composed by WIWD Working Group members at the WIWD and Wetlands Education Workshop of 1999, was dubbed by one of Jamaica's recording dub poets. Mr. Cleon Golding, alias "Ras Jaja," who works with the Natural History Division, made some minor changes to the wetland song and then brought it to life with his talents.

The NHD, while conducting a biodiversity survey at the Negril Royal Palm Reserve in July 2001, detected seven West Indian Whistling-Ducks. In conversation with the groundsmen, Suzanne Davis learned that the ducks had been seen at the Reserve for over 10 years. They tended to move around in relatively small flocks of about eight individuals.

The largest flock seen, however, had about 25 birds.

Dolphin Head Project

A United Nations Development Programme-funded project has been conducted in the Dolphin Head area in cooperation with the Forestry Department. On behalf of BirdLife Jamaica, Susan Koenig conducted surveys of birds, as well as other wildlife. These surveys form part of the biophysical survey under the procedure established by the Forestry Department.

Bird Conservation Research Activities

Eight bird research projects are currently underway in Jamaica, whereas four have been completed since 1999 (Table 1).

PUBLIC EDUCATION, PUBLICITY, AND OTHERS

The Education Sub-committee of BirdLife Jamaica has taken up the US Fish and Wildlife Service's offer to fund the publication of guides for common birds in Caribbean islands. The guide for the common birds of Jamaica is in the draft stage and will be completed by the end of 2001.

Over the past two years, the Media Relations Committee of BirdLife Jamaica has brought commendable recognition to Jamaican birds and their habitats and related conservation issues. On an almost monthly basis, either a newspaper feature, or radio or television interview via the Jamaican media, is produced. The Society of Caribbean Ornithology has also participated in interviews with Earth Alert of IRIE FM radio.

In early 2001, a new CD entitled "Bird Songs in Jamaica," became available. The CD was produced by George B. Reynard and Robert L. Sutton, with the support of Cornell Laboratory of Ornithology.

Mr. Brandon Hay represented Jamaica at the following regional training workshops:

Shorebird Monitoring Techniques in French Guiana, November 1999 – organised by the National Hunting Office.

Seabird Monitoring Techniques in Culebra, Puerto Rico, May 2000 – organised by the US Fish and Wildlife Service.

Table 1. Bird research in Jamaica for the period 1999 through 2001.

Project	Project leader/ coordinator	Institution/participants	Funder[1]	Status
Important Bird Areas in Jamaica	Catherine Levy/ Azalee Lawson	BirdLife Jamaica and BirdLife International	Environmental Foundation of Jamaica (EFJ), National Fishand Wildlife Foundation NFWF)	In progress
A Survey and Inventory of the Birds of the Mason River Game Sanctuary, Clarendon	Catherine Levy/ Suzanne Davis	BirdLife Jamaica and Institute of Jamaica	EFJ	In progress
West Indian Whistling Duck (WIWD) and Wetlands Conservation	Suzanne Davis and Ann Sutton	Collaborative effort among Jamaicans involved in WIWD and Wetlands Conservation		In progress
Aerial Surveys of Migratory Ducks Islandwide	Ann Sutton and Brandon Hay	Caribbean Coastal Area Management Foundation (CCAM)	Natural Resources Conservation Authority (NRCA) and Ducks Unlimited	In progress
Seabird Survey of Kingston Harbour	Leo Douglas and John Fletcher	BirdLife Jamaica	Private funds	In progress
Constant Effort Mist Netting at Marshalls Pen, Mandeville	Ann and Robert Sutton		Private funds	In progress
Game Birds in Portland Bight, Jamaica	Brandon Hay	University of West Indies, Mona Campus	NRCA, Private funds	In progress
Community Composition of Birds for 6 Habitats in the Blue and John Crow Mountains National Park	Marcia Mundle	Jamaica Conservation and Development Trust and the Connecticut Chapter of The Nature Conservancy (TNC)	TNC	In progress
Population and Distribution of Psittacines in the Cockpit Country, Jamaica	Herlitz Davis	BirdLife Jamaica and University of the West Indies (UWI)	EFJ and American Bird Conservancy	Completed
The Impact of Human Disturbance on Tropical Dry Limestone Forest of Jamaica on Resident and Migrant Bird Communities	Leo Douglas	University of the West Indies, Mona Campus, Jamaica and Tulane University, USA	Ministry of Education, UWI, and National Science Foundation	Completed
Assessment of Landbirds in the Wetlands of Portland Bight (1999 -2000)	Ann Sutton and Brandon Hay	CCAM	NFWF	Completed
Survey of the Avifauna of Dolphin Head area	Susan Koenig	Forestry Department and BirdLife Jamaica	United Nations Development Programme	Completed

[1]Funders do not include in-kind contributors.

2001 MEETING OF THE SOCIETY OF CARIBBEAN ORNITHOLOGY AT TOPES DE COLLANTES, CUBA

LEO DOUGLAS
BirdLife Jamaica, 2 Starlight Avenue, Kingston 6, Jamaica

From 16 to 22 July 2001, the Society of Caribbean Ornithology, the largest regional organization devoted to wildlife conservation issues in the Caribbean, held its 13th meeting Cuba. The meeting, which took place at the Kur-Hotel in the Topes de Collantes National Park, brought together the leading authorities in regional bird conservation from the Caribbean, North America, and Europe. The main objectives of the conference were a scientific interchange about species, habitat conservation, and environmental education. Among its 175 participants were 163 members from 24 countries (Table 1) . Delegates participated in field trips to Codina, Guanayara, El Cubano, and Vegas Grandes.

One of the major accomplishments of the meeting was the formation of several task forces that will work towards the development of comprehensive Caribbean-wide plans to:

1. promote environmental education, information access, and exchange;
2. identify a network of sites throughout the region (Important Bird Areas), in an initiative towards the protection of sites necessary to conserve the region's unique native species; and
3. promote Caribbean waterbirds conservation, including the conservation of the West Indian Whistling-Duck, a West Indian endemic species of particular conservation concern.

Dr. Martín Acosta Cruz was honored for his outstanding contribution to the development of bird ecology in Cuba. He is the Director of the Museum of Natural History Felipe Poey of the Universidad de La Habana, and an Auxiliary Researcher in the Faculty of Biology of the Havana University. Dr. Acosta has worked on bird ecology for the last 25 years, and has published more than 60 papers and participated in more than 40 national and international conferences and events. He is the representative of BirdLife International in Cuba, member of the National Committee for the Ph.D. program in Forestry and Science, and member of the Hunting National Commission, among others. Drs. Hiram Gonzalez, Lourdes Mugica, and Martín Acosta were also recognized by the Society for their outstanding work towards the success of the meeting. In addition, Dr. James Wiley of the University of Maryland was recognized for his significant role in the development of Cuban ornithology and the training of Cuban nationals.

The Society of Caribbean Ornithology meeting forms part of international focus on the Cuban environment for the year 2001. Earlier this year, the city of La Habana was nominated, jointly with Torino (Italy), to host the World Environmental Day celebrations of 5 June. World Environmental Day is one of the principal vehicles through which the United Nations stimulates worldwide awareness of the environment and enhances political attention and action. The islands of the Caribbean are now recognized as one of the top three areas on the planet for biodiversity conservation action, given the immense species richness of the islands combined and the high risk of extinction many species face.

Cuba is the largest island in the Caribbean. It accounts for over half of the Caribbean's landmass, and is home to over 350 species of birds. Twenty-five of these are found nowhere else in the world, including the smallest bird (and warm-blooded vertebrate) on the planet, the Bee Hummingbird. Unfortunately, a staggering 16+ species of Cuba's birds are globally threatened with extinction.

This year's meeting of the Society was made possible through the financial support of the U. S. Fish and Wildlife Service, U. S. Forest Service, Ducks Unlimited, and Royal Society for the Preservation of Birds (RSPB). Participating Cuban organizations included Instituto de Ecología y Sistemática, Facultad de Biología de la Universidad de la Habana, Empresa para la protección de la Flora y la Fauna, Museo Nacional de Historia Natural, Sociedad Cubana de Zoología, and Sociedad ProNaturaleza.

Table 1. Participants in the Society of Caribbean Ornithology's 2001 meeting at Topes de Collantes, Cuba.

Country	Number of delegates
Anguilla	2
Bahamas	4
Barbuda	1
Bermuda	3
Brazil	1
British Virgin Islands	5
Canada	4
Cayman Islands	2
Cuba	40
Dominican Republic	8
French Guiana	1
Great Britain	6
Guadeloupe	5
Haiti	1
Jamaica	8
Mexico	2
Montserrat	2
Puerto Rico	8
Surinam	1
Trinidad and Tobago	3
Turks and Caicos	2
United States	52
U. S. Virgin Islands	1
Venezuela	1

SOCIETY OF CARIBBEAN ORNITHOLOGY BYLAWS AVAILABLE ON WEBSITE FOR REVIEW

Current members* are urged to look at the proposed Society of Caribbean Ornithology bylaws, which have been posted on the SCO website (www.nmnh.si.edu/BIRDNET/SCO/index.html), together with an explanatory statement. By separate mailing, current members will soon receive a ballot for voting to accept or reject these bylaws.

The proposed bylaws were drafted to further SCO's effort to incorporate. As soon as the vote has been taken on these new bylaws, SCO will file Articles of Incorporation, which will confer a number of benefits – most notably, it will allow SCO to apply for tax-exempt status, which, in turn, will allow donors to deduct their contributions to SCO from their taxes.

SCO is encouraging discussion of the proposed bylaws on the SCO listserv (see notice, page 86, for instructions on joining the listserv). SCO will also accept comments by regular mail from current members ONLY. If you wish to review the bylaws but for some reason cannot access the website, please write to Ellen Paul, 3713 Chevy Chase Lake Dr., Apt.3, Chevy Chase, MD 20815 (epaul@concentric.net) and request a written or electronic copy.

*You can determine your membership status by looking at the mailing label on the envelope of *El Pitirre*. Current memberships are denoted as "-01," "-02," or "-03" (preceeded by either "M" or "I"). If you are not listed as a current member, you can become so by paying your 2001 dues! Please remit payment of your yearly dues (individuals – $20.00 U.S. and institutions $120.00 U.S.) to Rosemarie Gnam, PO Box 863208, Ridgewood NY 11386, USA.

SWALLOW-TAILED KITES IN THE CARIBBEAN

Avian Research and Conservation Institute is seeking information on the occurrence of the Swallow-tailed Kite (*Elanoides forficatus)* in the Caribbean region. Swallow-tailed Kites migrate from late July through September and early February through April. They may be seen, however, at any time of year.

Please send your sighting reports to:

Gina M. Zimmerman
Department of Biology
Georgia Southern University
PO Box 8042
Statesboro, Georgia 30460-8042, USA
e-mail: zimmerman@arcinst.org
Phone: (912)764-2880

In your report, please include:

- Date of your sighting
- Specific location
- Number of birds
- Behavior (e.g., flocking, feeding, calling, roosting)
- Your name and contact information

Thank you very much!

CARIBBEAN BIODIVERSITY CONGRESS IV
21 to 24 January 2002

The Autonomous University of Santo Domingo is pleased to invite the international scientific community to present the results of research at the FOURTH CARIBBEAN BIODIVERSITY CONGRESS in Santo Domingo, Dominican Republic, 21 to 24 January 2002. The Congress will welcome original presentations on Caribbean biodiversity in the fields of systematics, biogeography, ecology, conservation, bio-ethics, environmental education, and sustainable development. The organizing committee is interested in receiving proposals for special sessions related to these themes. Modules have been organized on the use of the Internet in environmental education, management of biodiversity, and on genomes and their significance for conservation and the understanding of biodiversity. A second announcement will provide information about lodging, registration, social activities, and visits to protected areas.

Modes of presentations: podium and poster.

More information can be obtained at http://caribbeanfish.org or by contacting the Organizing Committee, Caribbean Biodiversity Congress IV, Department of Biology, Autonomous University of Santo Domingo (UASD), Dominican Republic. Telephone and fax: (809) 686-3346.

Prof. Carlos Ml. Rodríguez
Coordinator
e-mail: carlos_rguez96@hotmail.do

Prof. Lourdes Rojas
Director Department of Biology, UASD
e-mail: mojarra_lo@hotmail.com

IV CONGRESO DE BIODIVERSIDAD CARIBEÑA
21 al 24 de Enero del 2002
PRIMER LLAMADO

La Universidad Autónoma de Santo Domingo (UASD) tiene el placer de invitar a la comunidad científica nacional e internacional al sometimiento de trabajos a ser presentados en el IV CONGRESO DE BIODIVERSIDAD CARIBEÑA que será celebrado en la ciudad de Santo Domingo, del 21 al 24 de enero de 2002. El objetivo del mismo es el intercambio científico mediante la presentación y discusión de resultados de investigaciones sobre biodiversidad del Caribe en los campos de la sistemática, biogeografía, ecología, conservación, bioética, educación ambiental y desarrollo sostenible.

El comité organizador está abierto a la recepción de propuestas de simposia sobre tópicos acorde con los objetivos del evento.

Modalidades de presentación: oral y poster.

Se organizarán varios módulos sobre el uso de Internet en labores de educación ambiental y manejo de biodiversidad. También uno sobre genoma y su incidencia en el entendimiento y conservación de la biodiversidad.

El segundo llamado tendrá información acerca de los hoteles, precio de participación, actividades sociales y visitas a áreas protegidas.

Para más información, buscar en http://caribbeanfish.org o comunicarse con el Comité Organizador del IV CONGRESO DE BIODIVERSIDAD CARIBEÑA, Departamento de Biología, Universidad Autónoma de Santo Domingo; teléfono y fax (809) 686-3346.

Prof. Carlos Ml. Rodríguez
Coordinador
e-mail: carlos_rguez96@hotmail.com

Prof. Lourdes Rojas
Directora, Departamento de Biología, UASD
e-mail: mojarra_lo@hotmail.com

Nedra Klein and Assistant, John Gerwin, collecting in the Sierra de Bahoruco, Dominican Republic, June 1998. Photograph by Kate Wallace.

EL PITIRRE ISSUE TO BE DEDICATED TO THE MEMORY OF DR. NEDRA KLEIN

To honor Nedra Klein, The Society Of Caribbean Ornithology will dedicate a 2002 issue of its bulletin, *El Pitirre*, to her memory. We are soliciting contributions on topics in which Nedra was keenly interested, such as systematics, zoogeography, and conservation of Caribbean passerines, particularly from islands where Nedra worked (i.e., especially The Bahamas, Cuba, and Dominican Republic). Articles that highlight the contributions she made to the study of an island's avifauna and its conservation, along with any personal reflections, are particularly sought. Please send ideas and/or contributions to *El Pitirre*'s Editor, Jim Wiley at jwwiley@mail.umes.edu or 1120 Trigg Hall, University of Maryland Eastern Shore, Princess Anne, MD 21853, USA, by **12 April 2002.**

NEDRA KLEIN

The Society of Caribbean Ornithology, with its more than three hundred members from all over the wider Caribbean region, North America, and Europe, wishes to express its deepest sympathy to the family and friends of Nedra Klein.

Dr. Klein's research on the birds of the Caribbean Islands significantly increased our knowledge of their biology and taxonomy but most importantly, helped us to appreciate and conserve our fragile ecosystems.

She assisted in the training of many Caribbean nationals at every opportunity and nurtured the love of ornithology among many aspiring biologists in the Caribbean.

Nedra was a colleague, mentor, and friend to SCO. Her tireless participation and smiles at our meeting are memories that we will never forget. SCO had been privileged to work with Nedra and we mourn her loss.

WHARF + HARBOR + POWER PLANT: GUADELOUPE GRAND CUL-DE-SAC MARIN, FRENCH WEST INDIES (2001)

The Society of Caribbean Ornithology resolves not to support the proposal to construct a "loose coal sorting and treating complex," added with a power plant, within the Ramsar site of Grand Cul-de-Sac Marin, managed by the National Park of Guadeloupe. This project would coincide with a designated Biosphere Reserve, and would result in running great risks of marine pollution and aesthetic degradation in a sensitive zone for marine ecosystems and bird reproduction. The risk of pollution is worsened by natural hazards, such as hurricanes and earthquakes. This industrial project, obviously, is utterly incompatible with Ramsar convention and Biosphere Reserve, the aims of which are to afford a sustainable development while protecting natural ecosystems. Building this complex would imply canceling the Biosphere Reserve, unless a zone of strictly equivalent ecological value is given as a compensation.

The Society requests that the French authorities seek a suitable alternative site outside of the Ramsar site/ Biosphere Reserve boundary. This alternative site should take into account the ecological and aesthetic values, and human safety, so that the integrity of the Ramsar site/Biosphere Reserve of Guadeloupe be retained.

Distributed to:

- Président de la République
- Premier Ministre
- Ministère de l'Aménagement du Territoire et de l'Environnement
- Secrétariat d'État chargé de l'Outre-Mer
- Préfecture de la Région Guadeloupe,
- DIREN Guadeloupe
- DDE Guadeloupe
- DDAF Guadeloupe
- Parc National de la Guadeloupe
- Conseil Général de la Guadeloupe
- Conseil Régional de la Guadeloupe
- Office National des Forêts Guadeloupe
- Office National des Forêts Paris
- Ligue pour la Protection des Oiseaux
- Conservatoire de l'Espace Littoral et des Rivages lacustres
- URAPEG

The birds of THE CAYMAN ISLANDS

An annotated Checklist

Patricia E. Bradley

2000
BOU Checklist Series: 19
British Ornithologists' Union
The Natural History Museum, Tring, Herts HP23 6AP, UK
ISBN 0907446 23 X
253 pages (Hardback)
32 pages of colour photographs
£35

This monograph is an analysis of the breeding and migrant avifauna of the three Cayman Islands since the first ornithologists visited in 1886. It describes status, distribution, and habitats of all 222 species, and breeding data for 49 species. It aims to place the Cayman Islands' avifauna in its historic and modern biogeographical context in the western Caribbean and to contribute to the database on Neotropical migrants, presently 79% of the Islands' avifauna.

Distributed for the BOU by
NHBS Mailorder Bookstore Ltd
2-3 Wills Road
Devon TQ9 5XN, United Kingdom
Tel.: 803-865-913
Fax: 803-865-280
e-mail: nhbs@nhbs.co.uk
Web: www.nbs.com

STATUS AND CONSERVATION OF WEST INDIAN SEABIRDS

EDITED BY E. A. SCHREIBER AND DAVID S. LEE

Society of Caribbean Ornithology Special Publication No. 1

2000

v + 225 pp. 25 maps, 30 tables, figs. 21.5 x 28 cm. Contains 20 papers and a bibliography.
Paper: ISBN 0-9677824-0-6

Copies may be ordered from:

Jim Wiley
Maryland Cooperative Fish and Wildlife Research Unit, University of Maryland, Eastern Shore, 1120 Trigg Hall, Princess Anne, MD 21853, USA
Telephone: 410-651-7654
Facsimile: 410-651-7662
e-mail: jwwiley@mail.umes.edu

Within USA – US$12.00; includes shipping
Elsewhere – US$17.00; includes shipping
Make checks payable to the *Society of Caribbean Ornithology*

A BIBLIOGRAPHY OF ORNITHOLOGY IN THE WEST INDIES

by James W. Wiley

Proceedings of the Western Foundation of Vertebrate Zoology, Volume 7 – 2000

817 pp.
11,648 bibliographic entries, each annotated
3 indices (taxonomic, geographical, and subject)
6 appendices. Paper: ISSN 0511-7550

Available from:
Western Foundation of Vertebrate Zoology
439 Calle San Pablo
Camarillo, California 93012 USA

Price: US$42.50; includes shipping

BIBLIOGRAPHY OF THE NATURAL HISTORY OF THE LESSER ANTILLES WITH PARTICULAR REFERENCE TO THE TERRESTRIAL AND FRESHWATER ENVIRONMENT (1900 - 2000)

GEORG WALDMANN AND MICHAEL STEVENS

Acta Biologica Benrodis Supplement 8
2001
209 pp.
ISBN 3-927889-90-3

Available from:

Verlag Natur und Wissenschaft
c/o: Mr. Harro Hieronimus
Postfach 170209
D-42624 Solingen, Germany
Telephone: + 49 212 819878; Telefax: + 49 212 816216
E-mail: info@verlagnw.de

Price: ca. US$14.00, including package and shipping (air mail is not included).
Credit Cards: Visa, Master Card, Diners Club, American Express

---

AVAILABLE OCTOBER 2001

ANIMAL BIODIVERSITY OF THE LESSER ANTILLEAN ISLAND OF MONTSERRAT (BRITISH WEST INDIES): AN ANNOTATED CHECKLIST OF TERRESTRIAL AND FRESHWATER ANIMALS

MICHAEL STEVENS AND GEORG WALDMANN

Archiv Zoologischer Publikationen 6
2001
149 pp.
ISBN 3-931251-82-9

Available mid-October 2001 from:

Martina Galunder-Verlag
c/o Mr. Rainer Galunder
Alte Ziegelei 22
D-51588 Nuembrecht, Germany
Telephone: +49 2293 909873; Telefax: +49 2293 909874
E-mail: rgalunder@Martina-Galunder-Verlag.de

Price: ca. US$32.00, including package and shipping (air mail is not included).
Credit Cards: Visa, Master Card, Diners Club, American Express

BIOLOGY OF MARINE BIRDS

EDITED BY E. A. SCHREIBER AND J. BURGER

CRC Press
700 pages
ISBN: 0849398827

Biology of Marine Birds, with 19 chapters written by well known authorities, provides the first comprehensive summary of information about marine birds. It summarizes and analyzes information on their breeding biology, ecology, taxonomy, demography, evolution, fossil history, physiology, energetics, and conservation. Four orders of marine birds are covered in detail: (1) penguins (Sphenisciformes), (2) albatross, shearwaters, petrels (Procellariiformes), (3) pelicans, boobies, frigatebirds, tropicbirds, cormorants (Pelecaniformes), and (4) gulls, terns, guillemots (Charadriiformes; Families Laridae and Alcidae). Two summary chapters address the biology of shorebirds and wading birds and their lives in the marine environment. It is a very comprehensive book and numerous summary tables present detailed information on various aspects of seabird life histories, breeding biology, physiology and energetics, and demography. There are extensive references at the end of each chapter. Three chapters dealing with conservation issues will be very useful for land managers.

Available from:

CRC Press, 2000 NW Corporate Blvd., Boca Raton, FL 33431, USA; 800 272-7737;
e-mail: orders@crcpress.com. price: $ 79.95.

CONTENTS: CONTINUED FROM OUTSIDE COVER

RECONOCIMIENTO ESPECIAL A UN MIEMBRO DE LA SOCIEDAD: MARTÍN ACOSTA CRUZ. *Orlando Torres Fundora* 84

SPECIAL RECOGNITION OF SOCIETY MEMBER: MARTÍN ACOSTA CRUZ *Orlando Torres Fundora* 85

SCO WEBSITE AND SCO LISTSERV 86

REVIEWS OF RECENT PUBLICATIONS 87

A BIBLIOGRAPHY OF ORNITHOLOGY IN THE WEST INDIES, by James W. Wiley. *Joseph M. Wunderle, Jr.* 87

THE BIRDS OF THE CAYMAN ISLANDS. AN ANNOTATED CHECKLIST, by Patricia E. Bradley. *James W. Wiley* 88

BIBLIOGRAPHY OF THE NATURAL HISTORY OF THE LESSER ANTILLES WITH PARTICULAR REFERENCE TO THE TERRESTRIAL AND FRESHWATER ENVIRONMENT (1900-2000), by Georg Waldmann and Michael Stevens. *James W. Wiley* 89

BIRD SONGS IN JAMAICA, by George B. Reynard and Robert L. Sutton. *James W. Wiley* 90

OISEAUX DES ANTILLES, by Jean C. Roché, Édouard Bénito-Espinal, and Patricia Hautcastel. *James W. Wiley* 90

REGIONAL SOCIETY: THE PUERTO RICAN ORNITHOLOGICAL SOCIETY, *Adrianne G. Tossas and Leopoldo Miranda* 91

ISLAND REPRESENTATIVE REPORTS 92

THE BAHAMA ISLANDS. *Carolyn Wardle* 92

JAMAICA. *Suzanne Davis* 94

REPORT ON SOCIETY'S MEETING: 2001 MEETING OF THE SOCIETY OF CARIBBEAN ORNITHOLOGY AT TOPES DE COLLANTE, CUBA. *Leo Douglas* 98

SOCIETY BYLAWS 99

REQUEST FOR INFORMATION: SWALLOW-TAILED KITES IN THE CARIBBEAN 99

MEETING ANNOUNCEMENT: CARIBBEAN BIODIVERSITY CONGRESS IV 100

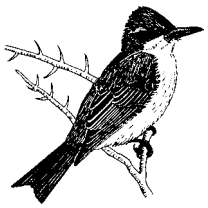
SPECIAL ISSUE OF BULLETIN PLANNED: *EL PITIRRE* ISSUE TO BE DEDICATED TO THE MEMORY OF DR. NEDRA KLEIN 101

RESOLUTIONS ADOPTED BY THE SOCIETY AT ITS THIRTEENTH MEETING 102

NEDRA KLEIN 102

WHARF + HARBOR + POWER PLANT: GUADELOUPEGRAND CUL-DE-SAC MARIN, FRENCH WEST INDIES (2001) 102

NEW PUBLICATIONS ON WEST INDIAN BIRDS 103



SOCIEDAD CARIBEÑA DE ORNITOLOGÍA

EL PITIRRE

SOCIETY OF CARIBBEAN ORNITHOLOGY

Summer 2001 Vol. 14, No. 2

ABSTRACTS OF PAPERS AND POSTERS (CONTINUED)

TOWARDS A BIRD CONSERVATION STRATEGY IN ANGUILLA. *Julian Hughes, Karim Hodge, Ijahnya Christian, Jim Stevenson, Steve Holliday, Ian Fisher, and Melanie Bryer* 72

THE BALCONES CANYONLANDS CONSERVATION PLAN: A LOCAL INITIATIVE FOR THE PROTECTION OF ENDANGERED MIGRATORY BIRDS. *Juan Valera-Lema* 73

CATALOGUE OF EGGS IN THE BIRD COLLECTION OF THE INSTITUTE OF ECOLOGY AND SYSTEMATICS (CITMA), CUBA. *Rafaela Aguilera Román and Alejandro Llanes Sosa* 73

AGE AND SEX DIFFERENCE OF MIGRATORY BIRDS AT THREE CUBAN LOCALITIES. *Eneider E. Pérez Mena, Alejandro Llanes Sosa, Daysi Rodríguez Batista, Bárbara Sánchez Oria, and Hiram González Alonso* 74

ASPECTS OF THE REPRODUCTION OF THE GREATER ANTILLEAN NIGHTJAR STUDIED UNDER NATURAL CONDITIONS. *Ernesto Reyes* ... 74

INFLUENCE OF THE FLORA AND VEGETATIVE STRUCTURE ON POPULATIONS OF TERRESTRIAL BIRDS ON CAYO COCO. *Daysi Rodríguez, Alfredo Gutiérrez, and Bárbara Sánchez* 74

A STUDY OF THE RESIDENT AND MIGRANT BIRD COMMUNITIES IN THREE VEGETATIVE ASSOCIATIONS IN ALEJANDRO DE HUMBOLDT PARK DURING WINTER. *Edwin Ruiz Rojas, Eneider. E. Pérez Mena, and Alejandro Llanes Sosa* 75

CHARACTERIZATION OF THE AVIFAUNA OF THE WEST-CENTRAL PORTION OF THE JARDINES DE LA REINA ARCHIPELAGO, CUBA. *Eliser Socarrás Torres* 75

THE TAXONOMIC STATUS OF THE PUERTO RICAN BULLFINCH (*LOXIGILLA PORTORICENSIS)* [AVES: EMBERZIDAE] IN PUERTO RICO AND ST. KITTS. *Orlando H. Garrido and James W. Wiley* 76

A NEW SUBSPECIES OF THE CUBAN PYGMY-OWL (*GLAUCIDIUM SIJU*) (AVES: STRIGIDAE) WITH COMMENTS ON OTHER SPECIES OF THE FAMILY. *Orlando H. Garrido* 76

PHYLOGENETIC RELATIONSHIPS AMONG LONG-TAILED NEOTROPICAL PARROTS (PSITTACIDAE, AVES) BASED ON MITOCHONDRIAL DNA SEQUENCES. *C.Y. Miyaki and E.S. Tavares* 77

EVOLUTIONARY RELATIONSHIPS AMONG THE *ARATINGA SOLSTITIALIS* (PSITTACIDAE, AVES) GEOGRAPHIC RACES INFERRED THROUGH THE ANALYSIS OF MITOCHONDRIAL DNA SEQUENCES. *C. Y. Miyaki, C. C. Ribas, and E. S. Tavares* 77

WHAT IS *VIREO CRASSIROSTRIS APPROXIMANS* OF ISLA PROVIDENCIA – THICK-BILLED OR MANGROVE VIREO? *Jon C. Barlow, Carol Croke and Richard Lai* 78

CURRENT STATUS OF THE FAMILY PSITTACIDAE IN THE OJITA DE AGUA SECTOR OF "ALEJANDRO DE HUMBOLDT" NATIONAL PARK, GUANTÁNAMO PROVINCE, CUBA. *Gerardo Begué Quiala* 78

CHARACTERISTICS OF NEST SITES OF THE CUBAN PARAKEET (*ARATINGA EUOPS*) IN THE ALTURAS DE BANAO RESERVE, CUBA. *Maikel Cañizares Morera* 79

DISTRIBUTION AND POPULATION SIZE OF *AMAZONA* PARROTS IN THE COCKPIT COUNTRY, JAMAICA, WEST INDIES. *Herlitz Davis* 79

RE-ESTABLISHMENT OF A VIABLE POPULATION OF SCARLET MACAWS. *Jenifer Hilburn* 80

REPRODUCTIVE ECOLOGY OF THE CATEY (*ARATINGA EUOPS*) IN BIRAMAS, CUBA DURING THE YEAR 2000. *Omar Labrada Vega and Pedro Labrada Labrada* 80

PHYLOGEOGRAPHIC STUDY IN WILD POPULATIONS OF THE BLUE-AND-YELLOW MACAW (*ARA ARARAUNA*) BY THE ANALYSIS OF MITOCHONDRIAL DNA SEQUENCES. *C.Y. Miyaki, R. Caparroz, C.A., Bianchi, and J.S. Morgante* 81

CHARACTERIZATION OF THE AVIFAUNA OF THE HOLGUÍN PROVIDENCE. *Nils Navarro, Carlos Peña, and Bárbera Sánchez* 81

EXTENT OF THE PRACTICE OF KEEPING THE CUBAN BULLFINCH IN CAPTIVITY IN THE CITY OF CAIBARIEN, VILLA CLARA, CUBA. *Amaury Camacho Saura and Vicente Berovides Álvarez* 81

ABUNDANCE AND HABITAT SELECTION OF THE CUBAN TROGON IN THE "RESERVA DE BANAO" ECOLOGICAL RESERVE, SANCTI SPIRITUS, CUBA. *Maikel Cañizares Morera and Vicente Berovides Alvarez* 82

ANALYSIS OF THE USE OF CUBAN BIRDS, WITH SPECIAL REFERENCE TO THEIR USE FOR SUBSISTENCE. *Vicente Berovides Álvarez* .. 82

AOU MEMBERSHIP GRANTS NOW AVAILABLE FOR STUDENTS 83

Continued on inside back cover