AVIFAUNA ASSOCIATED WITH THE AQUATIC AND COASTAL ECOSYSTEMS OF CAYO COCO, CUBA

BÁRBARA SÁNCHEZ AND DAYSI RODRÍGUEZ

Instituto de Ecología y Sistemática, Apartado 8029, La Habana, C.P. 10800, Cuba; e-mail: ecologia@ceniai.inf.cu

Abstract.—We present the distribution and abundance of waterbirds, along with an assessment of the four habitats (beach, coastal and interior lagoons, and temporarily flooded areas) of Cayo Coco, Archipiélago de Sabana-Camagüey, Cuba. A total of 73 bird species is present at Cayo Coco, including seven new records for the cay (*Botaurus lentiginosus*, *Anas americana*, *Aythya affinis*, *Mergus serrator*, *Calidris fuscicollis*, *Calidris mauri* and *Sterna dougallii*). The temporarily flooded areas were the most important habitat for waterbirds in Cayo Coco. The Greater Flamingo (*Phoenicopterus ruber*) was the most abundant and attractive bird in the cay during our observations.

Resumen.—AVIFAUNA ASOCIADA A LOS ECOSISTEMAS ACUÁTICOS Y COSTEROS DE CAYO COCO, CUBA. Se dan a conocer la distribución de los hábitats disponibles para las aves acuáticas y la abundancia de estas aves en cuatro hábitats diferentes de Cayo Coco, Archipiélago de Sabana-Camagüey, Cuba (playas, lagunas costeras, lagunas interiores y zonas temporalmente inundadas). Un total de 73 especies de aves están presentes en Cayo Coco, incluyendo 7 nuevos reportes para esta localidad (*Botaurus lentiginosus, Anas americana, Aythya affinis, Mergus serrator, Calidris fuscicollis, Calidris mauri* y *Sterna dougallii*). Las áreas temporalmente inundadas fue el hábitat más diverso, destacándose entre las especies más abundantes y de mayor atracción turística al Flamenco (*Phoenicopterus ruber*).

Key words.—*aquatic ecosystems, Archipiélago de Sabana-Camagüey, biodiversity, bird abundance, Cayo Coco, coastal ecosystems, Cuba, waterbirds, wetlands*

IN THE CUBAN SATELLITE, CAYO COCO, beaches, coastal and interior lagoons, temporarily flooded areas, and mangrove vegetation contribute to the presence of a high diversity and abundance of waterbirds, which find adequate resources for their feeding, shelter, and reproduction in these habitats. Previous observations of the avifauna in Cayo Coco have been reported by Garrido (1976), Regalado (1981), Acosta and Berovides (1984), Rodríguez *et. al.* (1990), Sánchez *et. al.* (1994), Wallace *et. al.* (1994), and Rodríguez and Sánchez (1995), among others. Nevertheless, the abundance and distribution of waterbirds in Cayo Coco are poorly known. Consequently, the goal of our investigations was to establish the geographic location of the available habitats suitable for aquatic and coastal birds, as well to determine the composition and abundance of the species in those habitats.

STUDY AREA AND METHODS

Cayo Coco (N22°30′, W78°27′) is part of the Sabana-Camagüey Archipelago off the northern coast of Cuba (Fig. 1). With an area of 370 km^2, Cayo Coco is the fourth largest island in the Cuban archipelago, after Cuba proper, the Isla de la Juventud (formerly Isla de Pinos), and Cayo Romano.

Cartographic charts 4483 I, II and 4583 III, IV of the series of Cuba´s 1:50 000 maps were used to locate the potential habitats available for waterbirds, including beach, coastal lagoon, interior lagoon, and wetland habitats. Beaches are on the northern coast of Cayo Coco and extend along an area over 20 km (Fig. 2). The width of the beach sand strip ranges from 5 to 30 m. The sand is fine and it is of a cream-yellow color (I. C. G. C. and A. C. C. 1990). These beaches are characterized by being shallow, with the exception of La Concha beach. In many beaches, sargassum (*Sargassum* sp.) is plentiful.

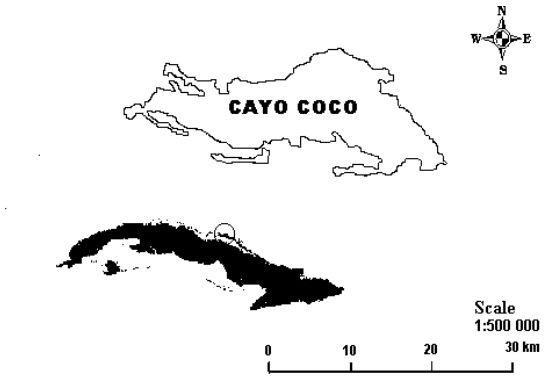

Fig. 1. Cuba, in silhouette, showing the Cayo Coco study area (within circle) within Archipiélago de Sabana-Camagüey and an enlargement of Cayo Coco.

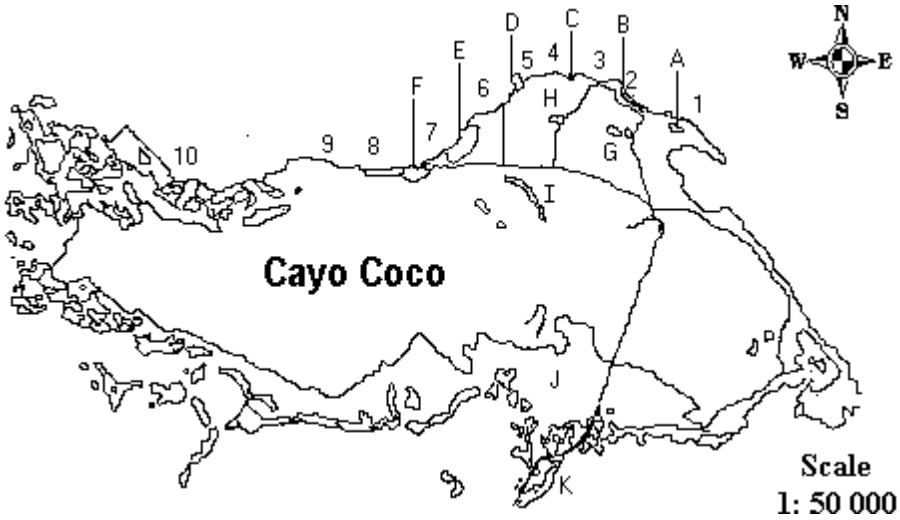

Fig. 2. Distribution of the habitats available for the aquatic birds of Cayo Coco. Beaches: Las Coloradas (1), Larga (2), La Concha (3), Prohibida (4), Loma del Puerto (5), Flamenco (6), La Jaula (7), Uva Caleta (8), La Petrolera (9), and Los Perros (10). Coastal lagoons: Las Coloradas (A), Larga (B), Farallón del Negro (C), Flamenco (D), Tiburón (E), and La Jaula (F). Interior lagoons: El Hoyo (G), Vereda de Los Marquez (H) and Potrero del Cinco (I). Temporarily flooded areas (J) and Bahía de los Perros (K).

A system of six coastal lagoons extends parallel to the beaches (Fig. 2). The coastal lagoons are elongated, surrounded by mangrove vegetation, are generally shallow (1-2 m), and their water is brackish.

The interior lagoons, are distributed inside the cay. They are generally small (Fig. 2), and somewhat deeper than the coastal lagoons. Interior lagoons are circular or oval in shape and are also surrounded by mangrove forests.

Lastly, the temporarily flooded zone (low zone), in the southern part of the islet (Fig. 2), belongs to a low plain, practically at sea level, and thus remains flooded most of the year. This zone is characterized by its mangrove vegetation and halophyte communities. Accessibility is limited and difficult. Other areas that are devoid of vegetation make up the salt flat and marshes or playas that are temporarily drained in the dry season (November to April). The marshes become veritable lagoons during the rainy season (May to October). The low zones in the innermost part of Cayo Coco are characterized by vegetation mainly composed of *Conocarpus erecta* trees.

To determine the area of each lagoon, we transferred the map image to a blueprint and using lined graph paper we counted all the totally occupied squares. Partially occupied squares were additionally grouped until a square was completed. The number of the totally occupied squares was added to that of the squares resulting from summation of the partially occupied ones and, thus, the area of the lagoon water surface was calculated. This procedure was repeated three times for each lagoon and the total number of calculated squares was averaged for the estimate of mean lagoon size. We visited each lagoon to determine its visibility and to select our observation points. If any part of the lagoon was found to be hidden from our view, that portion was subtracted from the total area of the lagoon.

We used observation points in the coastal and interior lagoons to determine the composition and abundance of birds there. We used one observation point at lagoons having an area of less than 10 ha, such as Farallones del Negro, El Hoyo, Vereda de Los Marquez, and Potrero del Cinco. At lagoons having an area of 19-20 ha, such as La Jaula and Flamenco, two observation points were used. We used three observation points at Tiburón lagoon (70 ha). At these observation points, all birds seen or heard were recorded.

In the beach and temporarily flooded zones, we used the itinerary transect method (Blondel 1969), which consisted of recording all birds either seen or heard on both sides of the transect. The width of beach transects was limited by the coastal strip (5-30 m), whereas width of transects in temporarily flooded zones ranged from 100 m to 500 m, depend-

Table 1. Bird species using the wetlands of Cayo Coco, Archipiélago de Sabana-Camagüey, Cuba, February 1993 to March 1994. PR= Permanent Resident, WR= Winter Resident, SR= Summer Resident, TR= Transient, A= Accidental.

Family	Species	Status in Cuba
Podicipedidae	Least Grebe *Tachybaptus dominicus*	PR
	Pied-billed Grebe *Podilymbus podiceps*	PR
Pelecanidae	Brown Pelican *Pelecanus occidentalis*	PR
Phalacrocoracidae	Double-crested Cormorant *Phalacrocorax auritus*	PR
Anhingidae	Anhinga *Anhinga anhinga*	PR
Fregatidae	Magnificent Frigatebird *Fregata magnificens*	PR
Ardeidae	Great Blue Heron *Ardea herodias*	PR
	Great Egret *Ardea alba*	PR
	Snowy Egret *Egretta thula*	PR
	Little Blue Heron *Egretta caerulea*	PR
	Reddish Egret *Egretta rufescens*	PR
	Tricolored Heron *Egretta tricolor*	PR
	Green Heron *Butorides striatus*	PR
	Black-crowned Night-Heron *Nycticorax nycticorax*	PR
	Yellow-crowned Night-Heron *Nyctanassa violacea*	PR
	American Bittern *Botaurus lentiginosus* *	WR
Ciconiidae	Wood Stork *Mycteria americana*	PR
Threskiornithidae	Glossy Ibis *Plegadis falcinellus*	PR
	White Ibis *Eudocimus albus*	PR
	Scarlet Ibis *Eudocimus ruber*	A
	Roseate Spoonbill *Ajaia ajaja*	PR
Phoenicopteridae	Greater Flamingo *Phoenicopterus ruber*	PR
Anatidae	West Indian Whistling-Duck *Dendrocygna arborea*	PR
	Blue-winged Teal *Anas discors*	WR
	Northern Pintail *Anas acuta*	WR
	White-cheeked Pintail *Anas bahamensis*	PR
	Gadwall *Anas strepera*	A
	American Wigeon *Anas americana**	WR
	Northern Shoveler *Anas clypeata*	WR
	Lesser Scaup *Aythya affinis**	WR
	Red-breasted Merganser *Mergus serrator**	A
Accipitridae	Common Black-Hawk *Buteogallus anthracinus*	PR
	Northern Harrier *Circus cyaneus*	WR
	Osprey *Pandion haliaetus*	PR
Falconidae	Crested Caracara *Caracara plancus*	PR
Aramidae	Limpkin *Aramus guarauna*	PR
Rallidae	Clapper Rail *Rallus longirostris*	PR
	Purple Gallinule *Porphyrula martinica*	PR
	Common Moorhen *Gallinula chloropus*	PR
	American Coot *Fulica americana*	PR
Jacanidae	Northern Jacana *Jacana spinosa*	PR
Haematopodidae	American Oystercatcher *Haematopus palliatus*	A
Charadriidae	Semipalmated Plover *Charadrius semipalmatus*	WR
	Piping Plover *Charadrius melodus*	WR
	Wilson's Plover *Charadrius wilsonia*	PR
	Killdeer *Charadrius vociferus*	PR
	Black-bellied Plover *Pluvialis squatarola*	WR
Recurvirostridae	Black-necked Stilt *Himantopus mexicanus*	PR
Scolopacidae	Whimbrel *Numenius phaeopus*	TR
	Greater Yellowlegs *Tringa melanoleuca*	WR
	Lesser Yellowlegs *Tringa flavipes*	WR
	Solitary Sandpiper *Tringa solitaria*	WR
	Spotted Sandpiper *Actitis macularia*	WR
	Willet *Catoptrophorus semipalmatus*	PR
	Short-billed Dowitcher *Limnodromus griseus*	WR
	Ruddy Turnstone *Arenaria interpres*	WR
	Sanderling *Calidris alba*	WR
	Semipalmated Sandpiper *Calidris pusilla*	WR
	Western Sandpiper *Calidris mauri**	TR
	White-rumped Sandpiper *Calidris fuscicollis**	TR
	Least Sandpiper *Calidris minutilla*	WR

Table 1. Bird species using the wetlands of Cayo Coco (continued).

Laridae	Herring Gull *Larus argentatus*	WR
	Laughing Gull *Larus atricilla*	PR
	Common Tern *Sterna hirundo*	SR
	Roseate Tern *Sterna dougallii**	SR
	Bridled Tern *Sterna anaethetus*	SR
	Sooty Tern *Sterna fuscata*	PR
	Least Tern *Sterna antillarum*	SR
	Royal Tern *Sterna maxima*	PR
	Sandwich Tern *Sterna sandvicensis*	PR
	Caspian Tern *Sterna caspia*	WR
	Brown Noddy *Anous stolidus*	PR
Alcedinidae	Belted Kingfisher *Ceryle alcyon*	WR

*= New report from Cayo Coco.

ing on habitat complexity.

Observations of bird abundance were conducted in November 1993 and March 1994 in beach, coastal lagoon, interior lagoon, and temporarily flooded zone habitats. Interior lagoons were additionally sampled in February and June 1993. Counts were made from dawn through ca. 11:00 hr. Some additional observations were made at dusk to determine use of resting or roosting habitat. The Sorensen index was used to determine similarities among habitats (Sorensen 1948).

RESULTS AND DISCUSSION

The avifauna of Cayo Coco wetlands is composed of 73 species belonging to 8 orders and 21 families, which account for 50% of the aquatic birds reported in Cuba (Table 1). Of these species, 40 are permanent residents, 22 winter residents, 4 summer residents, 3 transients and 4 accidentals or vagrants. Seven of these species are reported for the first time at Cayo Coco: American Bittern (*Botaurus lentiginosus*), American Wigeon (*Anas americana*), Lesser Scaup (*Aythya affinis*), Red-breasted Merganser (*Mergus serrator*), White-rumped Sandpiper (*Calidris fuscicollis*), Western Sandpiper (*Calidris mauri*), and Roseate Tern (*Sterna dougallii*) (Table 1).

Most of the families are represented by all or nearly all the species reported in Cuba. Nonetheless, the families Anatidae, Rallidae, Scolopacidae, and Laridae were scarcely represented at Cayo Coco, since many of the species are considered rare or vagrant in Cuba (Raffaele *et al.* 1998).

We detected 50 bird species during our abundance samplings conducted in the four wetland habitats. We recorded the fewest species (N = 12) in beach habitat (Table 2). Las Coloradas and Larga beaches had the largest diversity and abundance of birds among beach habitat sites. These beaches, unlike the others, were characterized by the presence of sargassum, where small invertebrates serving as food for the birds seek shelter. The most abundant species in beach habitat were Ruddy Turnstone (*Arenaria interpres*), Sanderling (*Calidris alba*), Royal Tern (*Sterna maxima*), and Semipalmated Plover (*Charadrius semipalmatus*).

The coastal lagoons (Table 3) and the interior lagoons (Table 4) were characterized by being rich in species (34 and 25, respectively). The Black-necked Stilt (*Himantopus mexicanus*) is abundant in this habitat, mainly in Flamenco Lagoon (Table 3). The variety of species and numbers of individuals present in coastal and interior lagoons depends on the degree of flooding of the lagoons and the season of the year. For example, late in the dry season the Killdeer (*Charadrius vociferus*) was the most abundant species in the La Jaula lagoon, where it associated with a dry area of the lagoon (sandy soil area) (Table 3).

Ducks occurred in the coastal (Table 3) and the interior lagoons (Table 4). The area of the surface water and the depth of the lagoons favor the presence of ducks, including West Indian Whistling-Duck (*Dendrocygna arborea*) in the Potrero del Cinco interior lagoon. Northern Shoveler (*Anas clypeata*) and Blue-winged Teal (*A. discors*) were the most abundant birds in the Farallones del Negro lagoon, which is one of the deepest of the lagoons .

Temporarily flooded areas showed the greatest diversity of bird species, with 41 species (Table 5). This diversity was to be expected if we bear in mind that in this zone there are different microhabitats, from areas with low levels of water, and even nearly dry, to veritable lagoons. This variability in microhabitats contributes, to a large extent, to increase the structural complexity of these habitats and, at the

Table 2. Relative abundance (birds/km) of waterbirds at beaches sampled using transects in Cayo Coco, Archipiélago de Sabana-Camagüey, Cuba, November 1993 and March 1994.

	Beach							
	Coloradas		Larga		Flamenco		La Jaula	Prohibida
Species[1]	Nov 1993	Mar 1994	Nov 1993	Mar 1994	Nov 1993	Mar 1994	Nov 1993	Mar 1994
Pelecanus occidentalis	1		2	1				2
Fregata magnificens			1			1	1	
Pandion haliaetus	1			1		1		
Pluvialis squatarola	4	4	1					
Charadrius wilsonia		3	3					
Charadrius semipalmatus	10	7	10					
Arenaria interpres	21	52	8					
Calidris alba	41	30	5					
*Calidris fuscicollis**								1
Calidris pusilla		1						
Sterna maxima	9	19	2	1	1			1
Sterna caspia							1	

[1]See Table 1 for common names.
*= New report from Cayo Coco.

same time, facilitates the presence of a variety of avian species having different capabilities to exploit the available resources. About 4500 Greater Flamingos (*Phoenicopterus ruber*) were observed in shallow water at an approximate distance of 10 m at each side of the rock-fill road. The flamingo's beauty, abundance, and easy observation make this bird the most important tourism attraction in the area.

Wilson's Plover (*Charadrius wilsonia*) was found in all the habitats, whereas most of the species (74%) were limited to two or three habitats. The combination of temporarily flooded areas, coastal lagoons, and interior lagoons had the largest number of species in common. The greatest similarity was found between the temporarily flooded areas and the interior lagoons, and between the latter and the coastal lagoons, both having an equal percentage of species (57.6%).

Twelve species were only observed in one habitat; i.e., American Bittern, Yellow-crowned Night-Heron (*Nyctanassa violacea*), and Gadwall (*Anas strepera*) in the coastal lagoon (Table 3); American Wigeon, Lesser Scaup, West Indian Whistling-Duck, Common Moorhen (*Gallinula chloropus*), and Least Tern (*Sterna antillarum*) in the interior lagoons (Table 4); and Red-breasted Merganser, Limpkin (*Aramus guarauna*), Northern Jacana (*Jacana spinosa*), Laughing Gull (*Larus atricilla*), and Roseate Tern in the temporarily flooded areas (Table 5). Notwithstanding, we cannot consider their distribution as being very specific, since most of them were detected in one count in particular. Thus, a larger number of samples will allow us to determine a more exact distribution of these birds.

The findings of our study show that the high structural diversity of the vegetation and the maintenance of the temporarily flooded areas allow a notable diversity and abundance of water birds in Cayo Coco. Furthermore, these areas are sites of regional importance for the communities of resident and migratory birds that find adequate resources for feeding, shelter, and reproduction. These resources guarantee the protection of this group and, at the same time, they provide a high potential for the development of ecotourism, especially the observation of birds. The incorporation of ecotourism within the current tourist development in Cayo Coco is particularly timely in conservation of habitat and wildlife.

LITERATURE CITED

ACOSTA, M., AND V. BEROVIDES. 1984. Ornitocenosis de los cayos Coco y Romano, Archipiélago de Sabana-Camagüey, Cuba. Poeyana (274):1-10.

BLONDEL, J. 1969. Méthodes de dénombrement des populations des oisseaux. Pp. 97-151 *in* M. Lamotte et F. Bourlier (Eds.). Problemes d' ecologie: L' échantillonage des peuplement animaux des milieux terres tres. Masson et Cie, Paris.

GARRIDO, O. H. 1976. Aves y reptiles de Cayo Coco, Cuba. Miscelánea Zoologia, Instituto Zoologia, Academia de Ciencia Cuba (3):3-4.

Table 3. Density of waterbirds (birds/ha) of the coastal lagoons sampled using observation points in Cayo Coco, Archipiélago de Sabana-Camagüey, Cuba, November 1993 and March 1994.

	Coastal lagoon						
	Tiburón	La Jaula		Flamenco		Farallón del Negro	
Species[1]	Nov 1993	Nov 1993	Mar 1994	Nov 1993	Mar 1994	Nov 1993	Mar 1994
Pelecanus occidentalis		1		10	24		
Phalacrocorax auritus					1		
Fregata magnificens							2
Ardea alba	2	5	1	14	25		3
Ardea herodias		3	1		1		
Egretta thula	1	3	10	2	13		1
Egretta caerulea	1					1	
Egretta rufescens		2	1				
Egretta tricolor	2	8	3	2	5		1
Butorides striatus					1		
*Botaurus lentiginosus**				1			
Nyctanassa violacea		1					
Eudocimus albus							7
Ajaia ajaja		2	2		5		1
Phoenicopterus ruber	1						
Anas strepera				3			
Anas clypeata					22	33	50
Anas discors						6	28
Pandion haliaetus					1		
Buteogallus anthracinus				1			
Pluvialis squatarola	2						
Charadrius wilsonia	2	2					1
Charadrius vociferous	1		120		3		1
Himantopus mexicanus	12	15	27	7	295		2
Tringa melanoleuca	7				26		9
Tringa flavipes	38				1		
Catoptrophorus semipalmatus	7	1					
Actitis macularia	2						16
Arenaria interpres	2						
Calidris minutilla					3		3
*Calidris mauri**	3						
Sterna maxima	6				3		
Sterna caspia		2				1	
Ceryle alcyon		1				1	

[1]See Table 1 for common names.
*= New report from Cayo Coco.

I. C. G. C. (INSTITUTO CUBANO DE GEODESIA Y CARTOGRAFÍA) AND A. C. C. (ACADEMIA DE CIENCIAS DE CUBA). 1990. Estudio de los grupos insulares y zonas litorales del Archipiélago Cubano con fines turísticos. Cayos Coco, Guillermo y Paredón Grande. Editorial Científico-Técnica, La Habana.

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

REGALADO, P. 1981 El género *Torreornis* (Aves: Fringillidae). Descripción de una nueva subespecie en Cayo Coco, Cuba. Ciencia Agricultura (2):87-112.

RODRÍGUEZ, D., A. GONZÁLEZ, L. BIDART, L. GONZÁLEZ, J. ESPINOSA, A. KIRKCONNELL, A. R. ESTRADA, A. LLANES, AND A. HERNÁNDEZ. 1990. Fauna silvestre e introducida. ICGC y ACC, Eds. Estudio de los grupos insulares y zonas litorales del Archipiélago Cubano con fines turísticos. Cayos Guillermo, Coco y Paredón Grande. Editorial Científico Técnica, La Habana.

Table 4. Density of waterbirds (birds/ha) of the interior lagoons sampled using observation points in Cayo Coco, Archipiélago de Sabana-Camagüey, Cuba, February, June, and November 1993, and March 1994.

	Interior lagoon						
	Vereda de Los Marquez			Potrero del Cinco		El Hoyo	
Species[1]	Feb 1993	Nov 1993	Mar 1994	Jun 1993	Nov 1993	Jun 1993	Nov 1993
Podilymbus podiceps			1			1	
Phalacrocorax auritus						25	
Ardea alba	1	2	2		2	1	1
Ardea herodias	1		1				
Egretta thula	1	1	1				
Egretta caerulea	1		1			1	
Egretta rufescens			1				
Egretta tricolor	2	1	2		1	2	
Butorides striatus	2						
Eudocimus albus		1			18		
Phoenicopterus ruber				100		66	
Anas clypeata		10					
Anas discors	5	25	5				
*Anas americana**	40						
*Aythya affinis**							47
Dendrocygna arborea				13	200	17	
Caracara plancus				2			
Gallinula chloropus	1						
Charadrius wilsonia				2			
Charadrius vociferous	3				4		
Himantopus mexicanus			2	4		2	
Tringa melanoleuca		1	7	1			
Catoptrophorus semipalmatus				1			
Sterna antillarum						5	
Ceryle alcyon	1		1				

[1]See Table 1 for common names.
*= New report from Cayo Coco.

RODRÍGUEZ, D., AND B. SÁNCHEZ. 1995. Avifauna del matorral xeromorfo en la región oriental de Cuba durante la migración otoñal (octubre de 1989, 1990 y 1991). Poeyana (447):1-12.

SÁNCHEZ, B., D. RODRÍGUEZ, AND A. KIRKCONNELL. 1994. Avifauna de los cayos Paredón Grande y Coco durante la migración otoñal de 1990 y 1991. Avicennia (1):31-38.

SORENSEN, T. 1948. The method of establishing groups of equal amplitude in plant sociology based on similarity of species content and its applications to analyses of the vegetation on Danish commons. Kongelige Danske Videnskabernes Selskab Copenhagen, Oversigt af Forhandlinger 5:1-34.

WALLACE, G. E., H. GONZÁLEZ, M. K. MCNICHOLL, D. RODRÍGUEZ, R. OVIEDO, A. LLANES, B. SÁNCHEZ, AND E. WALLACE. 1996. Forest-dwelling Neotropical migrant and resident birds wintering in three regions of Cuba. Condor 98 (4):745-768.

Table 5. Relative abundance (birds/km) of aquatic birds in the temporarily flooded zones sampled using transects in Cayo Coco, Archipiélago de Sabana-Camagüey, Cuba, November 1993 and March 1994. ( ) = Estimated data.

Species[1]	Temporarily flooded zones		Bahía de Los Perros	
	Nov 1993	Mar 1994	Nov 1993	Mar 1994
Podilymbus podiceps		3		
Pelecanus occidentalis	25	36	1	1
Phalacrocorax auritus	207	12	1020	147
Fregata magnificens	1			3
Ardea alba	15			
Ardea herodias	5			
Egretta thula	7	5		3
Egretta caerulea	6			
Egretta rufescens	10	12		
Egretta tricolor	27	4		6
Butorides striatus	2			
Eudocimus albus	4			
Ajaia ajaja	6	3		
Phoenicopterus ruber	(4000)	(4600)		385
*Mergus serrator**				4
Pandion haliaetus	1			
Buteogallus anthracinus	3			
Caracara plancus	2	1		
Aramus guarauna	3			
Pluvialis squatarola		1		
Charadrius wilsonia	6			
Charadrius vociferous	5	1		1
Charadrius semipalmatus		1		
Himantopus mexicanus	13	15		
Jacana spinosa	3			
Tringa melanoleuca	32	9		
Tringa flavipes	14			
Catoptrophorus semipalmatus	1			
Actitis macularia		1		
Arenaria interpres				13
Calidris alba				1
Calidris minutilla	10			
*Calidris fuscicollis**		1		
Calidris pusilla		1		
*Calidris mauri**		134		34
Larus atricilla	6		57	11
Sterna maxima	51			
Sterna caspia				1
*Sterna dougallii**				6
Ceryle alcyon	3	2		

[1]See Table 1 for common names
*= New report from Cayo Coco..

REQUEST FOR ASSISTANCE

COLOR BANDED LITTLE EGRETS

During 2000, several Little Egrets (*Egretta garzetta*) were ringed with US Fish and Wildlife Service aluminum and color bands at Graeme Hall, Barbados, the only location in the Western Hemisphere where this species is known to breed. The objective of this study is to determine egret movements within, and away from, Barbados. If you have observed such color-banded birds, please contact Martin Frost with full information at Featherbed Lane, St. John, Barbados, or by e-mail at mfrost@sunbeach.net