

OCCURRENCES OF THE PIPING PLOVER IN CUBA

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Abstract.—Piping Plovers (*Charadrius melodus*) have been seen in Cuba as early as the 1800s. There are at least 14 known records of the Piping Plover in the Cuban archipelago for the period 1965–1992. The number of individuals seen ranged from 1 to 25 with most sightings made on Cuba's northern keys in the Sabana and Camagüey archipelagos. A cursory evaluation of Cuba's insular habitats, through limited surveys and examination of coastal relief and vegetation maps, suggests that Cuba is marginally suitable for wintering Piping Plovers. Habitats in some of the northern keys may be more suitable. Additional surveys are required to confirm this evaluation. Currently, the status of the Piping Plover in Cuba appears to be that of a rare winter visitor.

PRESENCIA DE CHARADRIUS MELODUS EN CUBA

Sinopsis.—El playero melódico (*Charadrius melodus*) ha sido observado en Cuba desde comienzos del siglo XIX. Hay al menos 14 informes de esta ave en el archipiélago cubano desde el 1965–1992. El número de individuos observados ha variado de 1–25. La mayoría de los avistamientos se han llevado a cabo en los cayos al norte de la Isla, en los archipiélagos de Sabana y Camagüey. Una evaluación primaria de los habitat insulares, a través de encuestas, y el análisis, aunque limitado, de las costas y mapas de vegetación, sugieren que en Cuba tan solo existe habitat marginal para la especie, siendo el mas adecuado los de algunos cayos de la costa norte. Se requieren estudios adicionales para confirmar esta evaluación. Al playero melódico debe considerarse en Cuba como un raro visitante invernal.

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Piping Plovers (*Charadrius melodus*) winter primarily in the United States, along the Gulf of Mexico and Atlantic coasts (Haig and Oring 1988, Haig and Plissner 1993, Nicholls and Baldassarre 1990a). Elsewhere relatively few individuals have been noted for Mexico, the Caribbean, the Bahamas (Haig and Oring 1985, Haig and Plissner 1993) and Bermuda (Haig and Oring 1985). There is one extralimital record for Ecuador (Marchant 1956) and a hypothetical record for Belize (Russell 1964). The Piping Plover is listed as endangered in Canada (Haig 1985) and in the United States Great Lakes area and as threatened elsewhere (Sidle 1985). Concern has been expressed over the security of wintering habitats of this species (Haig 1987, United States Fish and Wildlife Service 1988), but not all of its wintering sites have been located. In 1991, wintering ground censuses accounted for only about 63% of the breeding population, which totalled 5482 adults (Haig and Plissner 1993). This percentage suggests that Piping Plovers were missed during winter censuses or not all wintering habitats were surveyed (see Haig and Plissner 1992). If one assumes disjunct wintering locations of inland and coastal populations, then approximately 11% of the Atlantic breeding population was accounted for on the Atlantic and Caribbean wintering grounds, whereas about 92% of the inland breeding population was accounted for on the Gulf of Mexico coast. Even though both of these percentages are overestimates, however, as about 15% of inland birds and about 11% of Atlantic birds cross over to the Atlantic coast and the Gulf of Mexico coast, respectively, one can still conclude that the wintering locations of most of the Atlantic population are unknown (Haig and Plissner 1993).

Surveys for Piping Plovers are lacking for most Caribbean islands where their abundance and distribution remain largely undetermined. The largest of these islands, Cuba, has been suggested as possibly having suitable habitat along its north coast (Haig and Oring 1985). Cuba appears to be a reasonable place to which plovers could migrate, because it is a large land mass lying immediately south of Florida (see map in Haig and Oring 1988) which itself is a wintering location for both inland and coastal Piping Plovers (Haig and Plissner 1993). In February 1990, we carried out ground and boat surveys to search for Piping Plovers in the Cuban province of Matanzas (Fig. 1). We searched coastal shorelines, lagunas and cayos on foot or with the aid of a jeep or boat. We searched or evaluated an estimated 50 km of coastal and inland habitats. In this paper, we report our findings, summarize all known records of Piping Plovers in Cuba, and comment on the suitability of the Cuban archipelago as a wintering location for this species.

J. Gundlach, an active ornithologist in Cuba during 1839 to 1896 (Barbour 1923), saw Piping Plovers on the beach at Matanzas and Punta de la Maya in early April (Gundlach 1893). Piping Plovers that he collected were likely from this general area, but the fate of these specimens is unknown to us. Later, Barbour (1923) encountered the species at Havana. Todd (1916) does not list the species as occurring on the Isla de la Juventud (formerly Isla de Pinos). Confirmation of the Piping

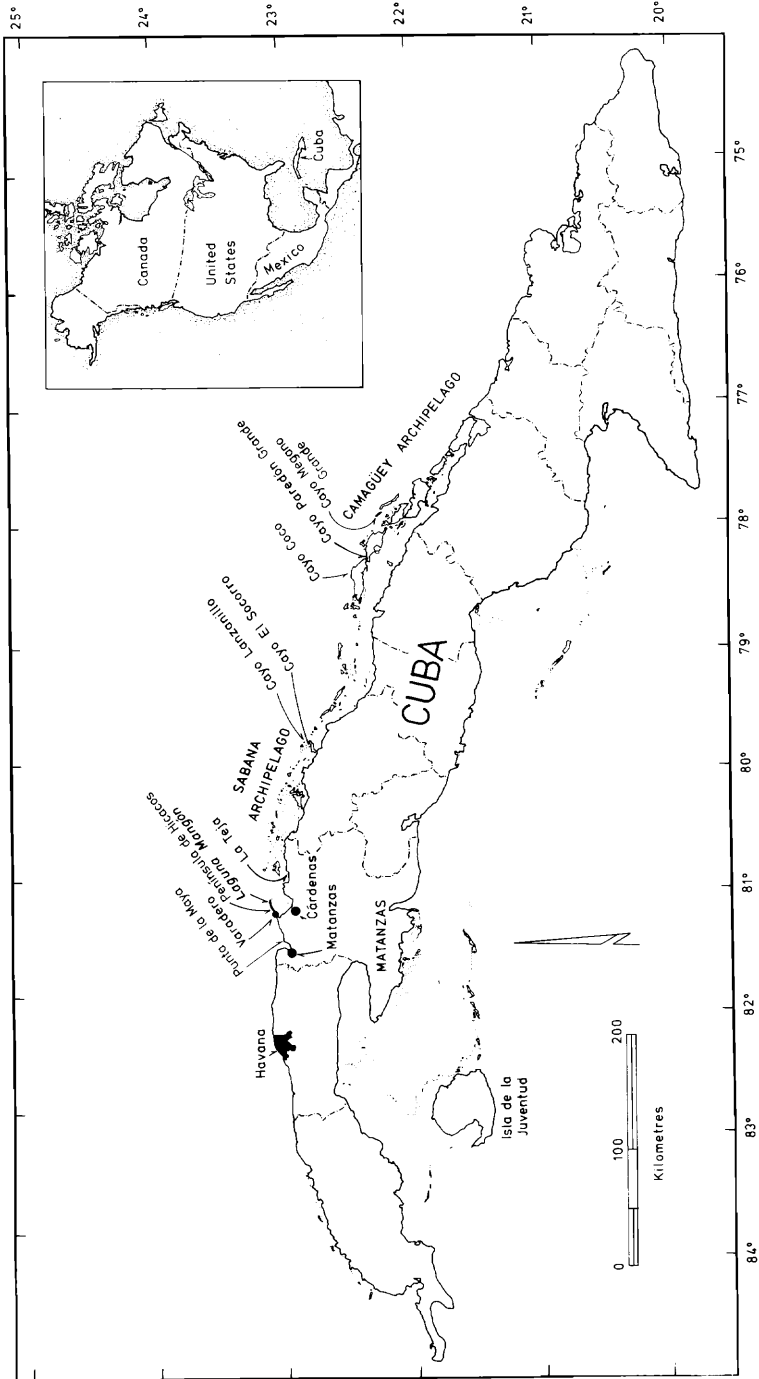


FIGURE 1. Locations of Piping Plover sightings in Cuba (see Table 1 for specific sites).

Plover's occurrence in Cuba came in March 1965 when O. H. Garrido collected two individuals on Cayo Lanzanillo (Table 1; Fig. 1). Thereafter, sightings of 1–25 Piping Plovers were reported at least 12 other times. Sixty-two percent of the records for which the number of plovers was noted were of single individuals. The absence of Cuban records from an examination of 1297 Piping Plover museum skins from 136 North American museums (S. Haig, pers. comm.) further suggests the rarity or lack of surveys for this species in Cuba.

Sightings of Piping Plovers in Cuba are limited to the north-central coast and the keys of the Sabana and Camagüey archipelagos. Our knowledge of the plover's distribution in Cuba may, however, be an artifact of research and birdwatcher activity. Given that most Cuban coastal and inland shorebird habitat, including over 1500 keys, has not been inventoried, it is probable that more Piping Plovers winter in the Cuban archipelago.

Piping Plover wintering habitat along the United States coast consists of beaches, sandflats (Haig and Plissner 1993, Johnson and Baldassarre 1988, Nicholls and Baldassarre 1990b), mudflats (Johnson and Baldassarre 1988, Nicholls and Baldassarre 1990b), sandy mudflats (Nicholls and Baldassarre 1990b), algal flats (Haig and Plissner 1993) and dredge spoil (Nicholls and Baldassarre 1990b). In Cuba, however, habitat may be a limiting factor. Large intertidal flats, which are favored by Piping Plovers (Nicholls and Baldassarre 1990b), appear to be mostly lacking along Matanzas's coastline and absent in its nearby keys. Our observations of coastal habitat in Matanzas in February 1990 suggested that a small daily tidal amplitude (Goossen et al. 1993) precludes the occurrence of expansive tidal flats needed by foraging plovers. Seasonal tidal variation, however, may favor suitable mudflat exposure. In October 1989, P. Blanco and H. González Alonso saw extensive mudflats near Cárdenas, but visits to this site in February 1990 revealed relatively little mudflat area. Food availability on narrow sandy beaches may also be a limiting factor as evidenced by the limited number of shorebirds we saw during surveys in Matanzas.

Judging from coastal relief and vegetation maps (Sánchez Herrero 1989), it appears that, in general, most coastal areas of Cuba do not provide good habitat for this species. Much of Cuba's coastline appears unsuitable owing to the presence of mangroves, rocks or cliffs. Adjacent beach, mudflats, or sandflats may be present (see Barbour 1923), however. Also, the keys in the Sabana Archipelago are generally not suitable. These low lying islands are near sea level (≤ 2 m) (A. Magaz García, pers. comm.) and therefore have narrow beaches and are subject to flooding. Farther east, the keys are higher (> 14 m above sea level; A. Magaz García, pers. comm.) and the possibility of more suitable habitat exists. Indeed some of the Piping Plover sightings come from this latter area, suggesting that these keys should be thoroughly searched. Cayo Paredón Grande is reported to have tidal floodplains with many marine invertebrates and may be suitable as Piping Plover wintering habitat (D. Rodríguez, pers. comm.).

TABLE 1. Records of Piping Plovers in Cuba, 1800s-1992.

Date	Location	# plovers	Remarks	Source
Apr. 1800s	Matanzas ^a	+ ^b		Gundlach 1893
Apr. 1800s	Punta de la Maya ^c	+		Gundlach 1893
?	Havana ^d	+		Barbour 1923
22 Mar. 1965	Cayo Lanzasnillo	1	CZIES No. 1202 ^e	Garrido 1973
23 Mar. 1965	Cayo Lanzasnillo	1	CZIES No. 1200	Garrido 1973
22 Mar. 1969	Cayo El Socorro	1		O. Garrido, pers. comm.
Oct. 1973	Cayo Coco	1		Garrido 1976; O. Garrido, pers. comm.
1979-1981	Cayo Coco	1		González et al. 1986; H. González Alonso, unpubl. data
Nov. or Dec. 1987	Varadero	+		T. Dolan, A. Mitchell, I. Williams and D. Greenall, pers. comm.
Oct. 1989	Cayo Paredón Grande	25		A. Kirkconnell, pers. comm.
17 Feb. 1990	La Teja ^f	1	photographed	Authors of this note, pers. obs.
3 Mar. 1990	Cayo Megano Grande	1		A. Llanes, pers. comm.
15 Oct. 1990	Cayo Paredón Grande	11	four first banded in Cuba	A. Kirkconnell, D. Rodríguez and B. Sánchez, pers. comm.
16 Oct. 1990	Laguna Mangón, Península de Hicacos	1	photographed	P. Blanco and H. González Alonso, pers. obs.
Oct. 1991	Cayo Paredón Grande	7	banded three	A. Kirkconnell, D. Rodríguez and B. Sánchez, pers. comm.
Oct. 1991	Cayo Coco	5-7		A. Kirkconnell, D. Rodríguez and B. Sánchez, pers. comm.
15 Jan. 1992	Laguna Mangón, Península de Hicacos	2		P. Blanco, pers. obs.

^a City of Matanzas.^b Number of individuals unknown.^c Gundlach uses a former name Punta de Maya.^d Barbour (1923) saw "them occasionally in early spring . . . between Morro Castle and Cojimar."^e CZIES = Colecciones Zoológicas del Instituto de Ecología y Sistemática. The number refers to the collection number on the specimen label.^f Location of sighting was about 3.5 km east-northeast of La Teja.

Those Piping Plovers, which migrate through or winter in the relatively isolated habitats of the keys, are free from most human disturbance. Wintering habitat in these areas appears to be relatively secure. In contrast, tourism on the Hicacos Peninsula, particularly at Varadero, contributes to disturbance on beach habitat.

Although some Piping Plovers may winter in Cuba, it is possible that others only stage enroute to other Caribbean locales. The fact that most records are for the fall or early spring suggests that these plovers may be migrants. This interpretation may be biased by the timing of researcher activity in Cuba.

Until more extensive surveys show otherwise, we will agree with Garrido and García Montaña (1975) that the Piping Plover is a rare winter visitor to Cuba. Further surveys, particularly in the Camagüey Archipelago, are required to clarify its status. The combination of a small tidal amplitude, limited tidal flats and possibly limited food availability appears to contribute to the scarcity of this species in Cuba.

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