

SHOREBIRDS IN SOUTH-WEST FLORIDA

by Theodore H. Below

Shorebirds are present in Florida throughout the year; in winter good numbers occur at many sites, but little has been published on their population fluctuations. During population censuses of Brown Pelicans *Pelecanus occidentalis* near Marco Island (Figure 1), I regularly census shorebirds of the families Charadriidae and Scolopacidae. In this note I offer a preliminary analysis and summary of these observations. A fuller account will appear subsequently in *The Florida Field Naturalist*.

METHODS

To obtain an overview of shorebirds in Florida I analyzed shorebird numbers for 9 sites (Figure 1) in the Christmas Bird Counts published by *American Birds*. These counts are annual censuses conducted throughout North America during three weeks in each December. For each Florida location that reported every year from 1972 to 1981 I determined a ten-year mean of all shorebirds.

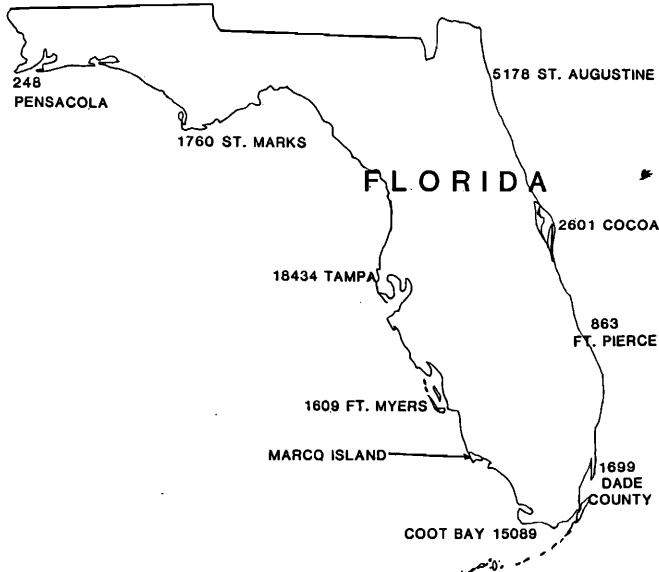


Figure 1. Map of Florida showing the distribution of shorebirds and the study location at Marco Island. Numerals give Christmas Bird Count ten-year mean numbers.

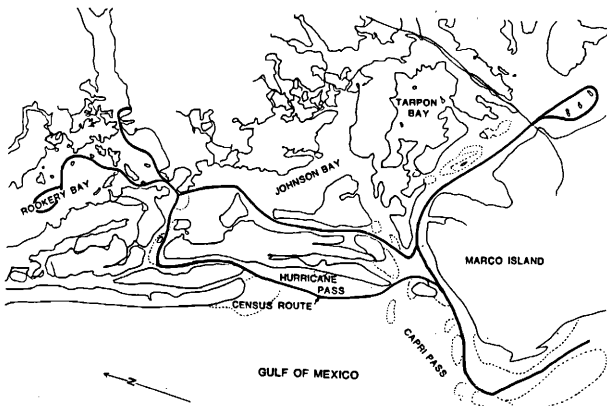


Figure 2. The study area at Marco Island, showing the 43 km boat census route.

Since 1974 I have counted birds along a 43 km boat census route north of Marco Island (Figure 2). The center of the route lies at 26° N, 81° W. The study area contains mangrove islands, mud-flats, sand-bars, beaches and shallow bays. It borders on the Gulf of Mexico.

From 1974 through 1980 I censused every 7-10 days. Thereafter I have censused once every two weeks. Censusing begins at 08:30h and is done as rapidly as possible to minimize bird movements. I have censused at all tide levels. While this may constrain the precision of the counts, because my counts spanned the whole diversity of habitats present in the area they provide a reasonable overview of population patterns in the region.

RESULTS

In ten years of censusing (353 separate counts) I have recorded 20 species of shorebirds in the area. By comparison, in South Carolina (approximately 900 km to the north) Bildstein et al. (1982) reported 21 species.

Shorebirds are present throughout the year with the numbers of birds being highest in mid-winter and lowest in mid-summer. The decline in spring is about equal to the increase in fall (Figure 3). By comparison South Carolina had highs in spring and fall (Bildstein et al. 1982).

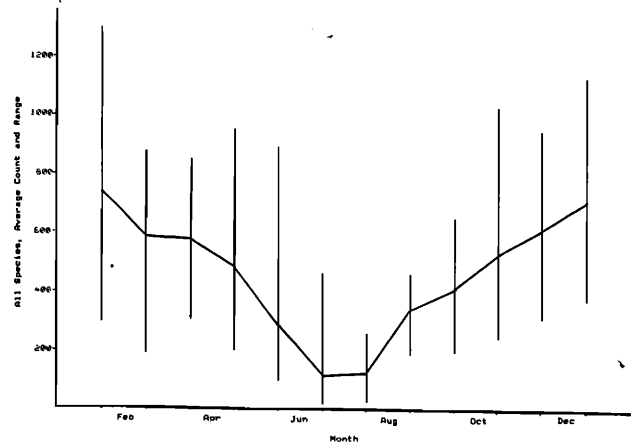


Figure 3. Total shorebird numbers, showing the ten-year mean and range of monthly mean.

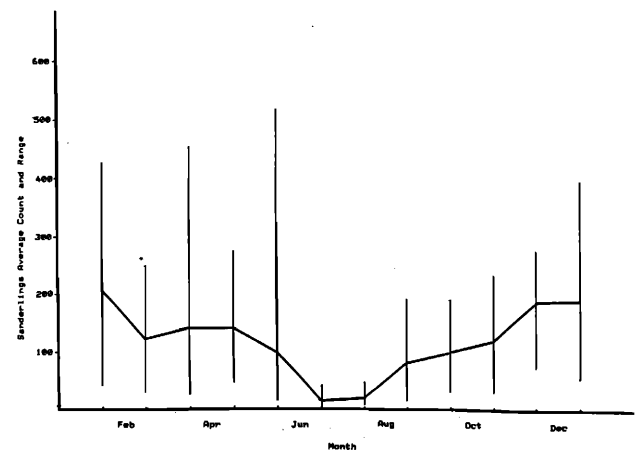


Figure 4. Sanderling numbers, showing the ten-year mean and range of monthly mean.

Table 1. Abundance of waders at Marco Island.

	Winter*	Spring	Summer	Fall	Total Numbers
Black-bellied Plover <i>Pluvialis squatarola</i>	1 ^b	3	4	2	9 050*
Snowy Plover <i>Charadrius alexandrinus</i>	1	2	2B	3	121
Wilson's Plover <i>Charadrius wilsonia</i>	1	3	3B	2	972
Semipalmated Plover <i>Charadrius semipalmatus</i>	4	3	2	1	980
Piping Plover <i>Charadrius melodus</i>	1	3	A	2	195
American Oystercatcher <i>Haematopus palliatus</i>	3	2	4	1	286
American Avocet <i>Recurvirostra americana</i>	2	A	A	1	44
Greater Yellowlegs <i>Tringa melanoleuca</i>	1	2	4	2	52
Lesser Yellowlegs <i>Tringa flavipes</i>	1	4	A	4	18
Willet <i>Catoptrophorus semipalmatus</i>	2	4	3	1	9 766*
Spotted Sandpiper <i>Actitis macularia</i>	2	3	4	1	393
Whimbrel <i>Numenius phaeopus</i>	A	A	A	1	6
Marbled Godwit <i>Limosa fedoa</i>	4	4	4	1	57
Ruddy Turnstone <i>Arenaria interpres</i>	3	2	4	1	3 749*
Red Knot <i>Calidris canutus</i>	4	1	2	3	18 975*
Sanderling <i>Calidris alba</i>	1	3	4	2	42 051*
Western Sandpiper <i>Calidris mauri</i>	1	3	4	2	39 356*
Least Sandpiper <i>Calidris minutilla</i>	1	3	A	2	459
Dunlin <i>Calidris alpina</i>	1	2	A	3	13 989*
Short-billed Dowitcher <i>Limnodromus griseus</i>	2	3	4	1	19 976*

* Winter = Dec, Jan, Feb; Spring = Mar, Apr, May; Summer = Jun, Jul, Aug; Fall = Sep, Oct, Nov.

^b 1 = season of most abundance; 2 = less abundant than 1; 3 = less abundant than 2; 4 = season of least abundance.

A = Absent.

B = Breeding.

* = The eight most abundant species.

The eight most abundant species comprise 97% of the total count (Table 1). Of these eight, only the Dunlin *Calidris alpina* is completely absent during summer. The others all remain in varying numbers, with peaks in abundance for the most part being either in mid-winter or during northward or southward migration. The one exception is the Red Knot *Calidris canutus*. This species is more abundant in summer.

Abundance patterns in Ruddy Turnstone *Arenaria interpres* and Short-billed Dowitcher *Limnodromus griseus* follow the South Carolina pattern of spring and fall peaks. The remaining 5 species are most abundant in mid-winter (Table 1).

The seasonal pattern of Sanderling *Calidris alba* numbers in SW Florida resembles that in California (Myers 1980), with one difference (Figure 4): although birds reach the two areas at approximately the same time in fall migration, in Florida the sharp decline in spring occurs April-May, compared to March-April, in California.

COMMENTS

Shorebirds occur in Florida in large numbers and in a regular seasonal pattern: with low numbers in the summer and highs in the winter (Figure 3) as would be expected. The large

variations in numbers in spring and fall can be attributed to migration. It is not clear whether the winter population is resident or in transit; the wide ranges in December and January (Figure 3) indicate some transient movement. This would lead me to believe that many shorebirds are not wintering but moving through. The differences and similarities between the Florida, California and South Carolina birds are intriguing and would be a good subject for investigation. For most species of birds much research has been done in their breeding habitats. Now more attention has turned to wintering areas and the details of migration; Florida would be ideal to fill in many of the gaps in these areas.

REFERENCES

- Bildstein, K.L., Christy, R.L. and DeCoursey, P. 1982. Energy flow through a South Carolina salt-marsh shorebird community. *Wader Study Group Bull.* 34: 35-37.
- Myers, J.P. 1980. Sanderlings *Calidris alba* at Bodega Bay: facts, inferences and shameless speculations. *Wader Study Group Bull.* 30: 26-32.

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