

# Shorebirds during a brief survey in Tamaulipas, Mexico, January 2000.

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## INTRODUCTION

There are few published reports of wintering shorebird distribution and species composition on the Gulf coast of northern Mexico. Large numbers of shorebirds were found in the Laguna Madre region of Mexico during aerial surveys made by Morrison *et al.* (1993) but ground-based identifications and species composition were not undertaken. This account reports numbers and varieties of shorebirds found during a three-day, ground-based reconnaissance 6-8 January 2000 in the vicinity of La Pesca, a fishing village in the state of Tamaulipas.

## METHODS AND RESULTS

Our survey included two visits to each of four locations that were accessible by vehicle near the southernmost section of Laguna Madre. We also visited the northern half of Laguna Morales two times by boat. Birds were observed using binoculars and 15-40x telescopes. Figure 1 shows locations of the sites we were able to visit and Table 1 lists species (including binomial names) found according to habitat; numbers shown in the tables are the higher of the two counts made. The major shorebird habitats we visited were as follows:

### Saline lagoon

Water depths of Laguna Madre near La Pesca are affected by wind direction, and most of the basin was dry. However, a lagoon west of La Pesca held an estimated 500 ha of surface water and had wet mudflats, most of which were little-used by shorebirds. However, a narrow arm extending to the west at the south end of the lagoon (Figure 1) was partly covered by water (<20 ha) and was used by shorebirds, especially species that hunt by probing in shoreline and bottom substrates or by picking prey from the water column (Table 1).

### Estuary

The estuary of Rio Soto de Marina is a broad, shallow,

tidal estuary (roughly 500 ha) that has extensive development of oyster beds, tidal flats and small areas of sand flats (c. 1 ha) at the inlet to the Gulf of Mexico; the bay is fringed with small patches of mangrove, most extensively in south-eastern sectors. We visited only one small section of shoreline of the estuary.

### Gulf shoreline beach

A high energy, wave-washed, steeply-sloping beach, with coralline and shell-based sand, and with little development of flats or sandbars in the 10 km section we surveyed.

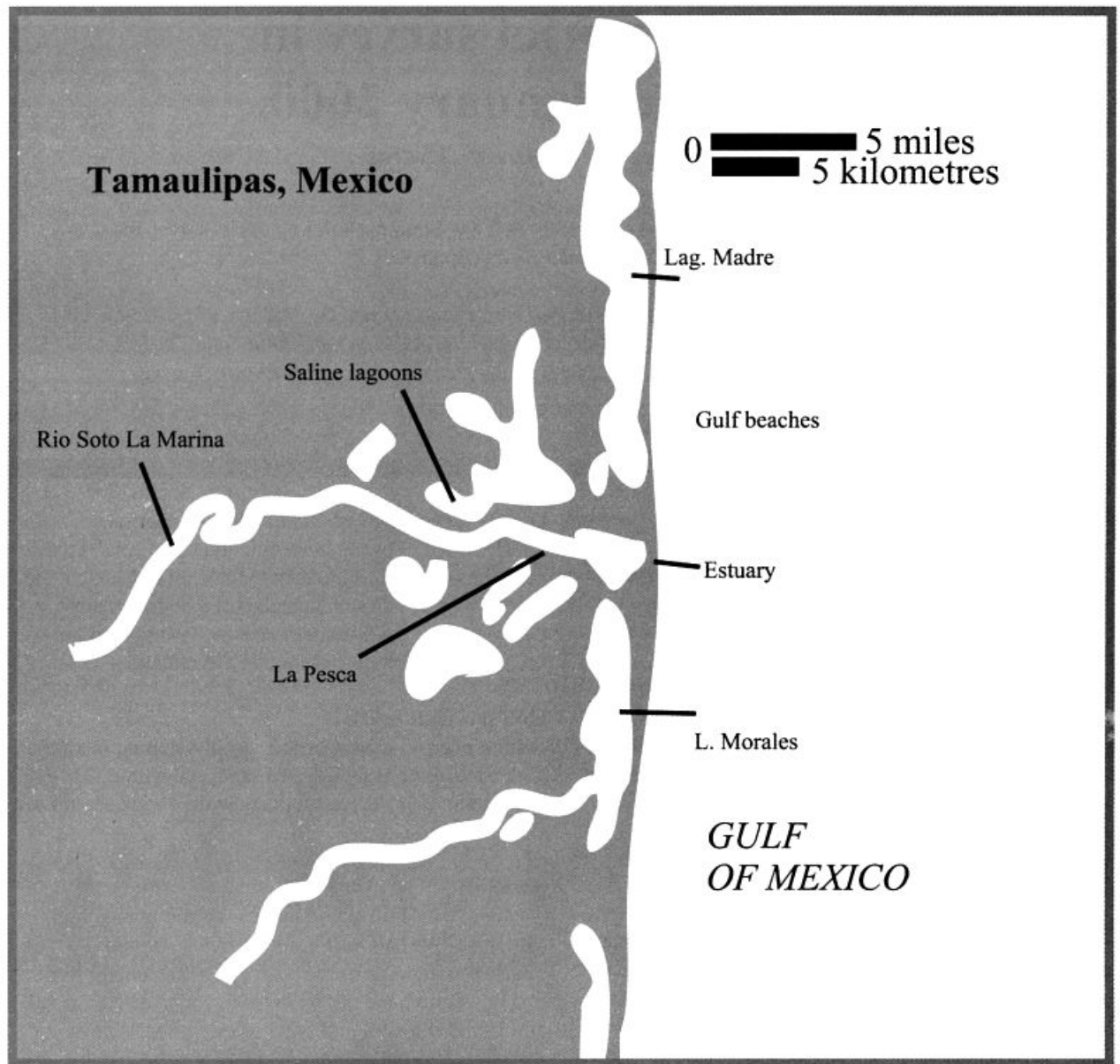
### Sacahuistal

A saline, predominantly herbaceous and grassy, high saltmarsh-like habitat dominated by halophytic vegetation and *Spartina spartinae*, occasionally flooded by high storm tides and by rainfall, with scattered small ponds and marshes and patches of shrubs such as mesquite *Prosopis glandulosa* and yuccas *Yucca treculeana*.

### Mangrove lagoon

Laguna Morales lies south of the estuary of Rio Soto de Marina, and is connected to it by a man-made canal. The lagoon area is roughly 3,200 ha and it is about 15 km long by 2.7 km wide at the widest point; evidently water depths of the lagoon are influenced by lunar tidal action, but it seems likely that wind speed and direction would also affect water depths. large, shallow-water sea grass beds exist along east-central sections of the lagoon, attracting thousands of Redhead ducks *Aithya americana*. There is a fringe of mangrove along the eastern shore with extensive development in the north-east quarter of the lagoon. Various species of Ardeids were common here. A large mudflat, extensively covered with oyster beds, exists in the northeast quarter and is extensively used by shorebirds. the numbers and species composition of shorebirds differed substantially between





**Figure 1.** Map showing shorbird habitats surveyed 6-9 January 2000 in the vicinity of La Pesca, southern Laguna Madre, Tamaulipas, Mexico.

our two visits, evidently because there was movement between the area we visited and another important habitat that we did not visit towards the south end of the lagoon (based on flight lines seen).

#### DISCUSSION AND CONCLUSIONS

The extent to which we were able to survey different habitats was variable. Our coverage of the estuary south and east of La Pesca was good, as was coverage of the south shore of the saline lagoon west of town. We also achieved virtually complete coverage of about 10 km of Gulf beaches north of the estuary, and of the eastern side of the south end of Laguna Madre, which was dry. Our

coverage for shorebirds in Laguna Morales was limited to mangroves and mudflats accessible by boat in the northern half of the Lagoon, but many of the best habitats were too distant for identification of small species. Our coverage of sacahuistal was limited to sections visible from a road running about 6 km north from La Pesca.

Laguna Morales had higher numbers of shorebirds than any of the other locations we surveyed; small calidrid sandpipers (unidentified) were the most abundant group (Table 1). In other locations Western Sandpipers were the most common small sandpiper (Table 1). The second most abundant shorebirds were dowitchers of which all



Table 1 Species and numbers of shorebirds seen in coastal habitats at the southern extreme of Laguna Madre, Mexico, 6-9 January 2000.

SPECIES	HABITAT					TOTAL
	Saline lagoon	Estuary	Gulf shore	Xacawhstal	Mangrove lagoon	
American Oystercatcher <i>Haematopus palliatus</i>		8			50	58
American Avocet <i>Recurvirostra americana</i>	30			1		31
Black-necked Stilt <i>Himantopus mexicanus</i>	20			15		35
Black-bellied Plover <i>Pluvialis squatarola</i>	10	3	8		100	121
Snowy Plover <i>Charadrius alexandrinus</i>	1					1
Semipalmated Plover <i>Ch. semipalmatus</i>	1	1		4	+	1
Killdeer <i>Ch. vociferus</i>	1	2		25	10	6
Long-billed Curlew <i>Numenius americanus</i>	5				8	42
unidentified curlew <i>Numenius spp.</i>					75	8
Marbled Godwit <i>Limosa fedoa</i>				3	3	75
Spotted Sandpiper <i>Actitis macularia</i>	1	2		15	200	9
Willet <i>Cataporphorus semipalmatus</i>	25	25				265
Greater Yellowlegs <i>Totanus melanoleucus</i>	25	3		4		32
Lesser Yellowlegs <i>T. flavipes</i>	30	5		2		37
unidentified yellowlegs <i>Totanus spp.</i>	125				25	150
Ruddy Turnstone <i>Arenaria interpres</i>		25			50	75
Least Sandpiper <i>Calidris minutilla</i>	25	2				27
Western Sandpiper <i>C. mauri</i>	200	5		2		207
Sanderling <i>C. alba</i>	1	300	8			311
Dunlin <i>C. alpina</i>	2			3		5
Stilt sandpiper <i>C. himantopus</i>	15					15
unidentified 'peeps'					4000	4000
Long-billed Dowitcher <i>Limnodromus scolopaceus</i>	15			10	30	55
unidentified dowitcher <i>Limnodromus spp.</i>					470	470
Common snipe <i>Capella gallinago</i>				1		1

+ Indicates species seen in distance but count was not possible



those identified were Long-billed Dowitchers (Table 1). Other common species included Willets, both species of yellowlegs and Black-bellied Plovers.

We recorded some differences in relative abundance of species from those recorded during aerial surveys by Morrison *et al.* (1993). Among the larger shorebird species we found more American Oystercatchers, we did not hear nor see Whimbrels, we had relatively lower numbers of American Avocets, and higher proportions of Black-necked Stilts. Among medium-sized shorebirds, we had higher proportions of yellowlegs vs. dowitchers, and higher proportions of Ruddy Turnstones.

It is risky to draw substantial conclusions from a three-day survey such as this, but a few points are worth highlighting.

Laguna Morales appears to be a major wintering location for shorebirds; a more comprehensive survey is warranted.

Water conditions in southern Laguna Madre are highly variable; because extensive, ground-based coverage would be difficult to achieve, we believe that a combination of aerial and ground-based surveys is needed under varied seasonal and water conditions to document shorebird use of this important (Morrison *et al.* 1993) habitat.

We did not visit the estuary under varied tidal conditions; it is likely that there are higher numbers and

varieties of shorebirds using the estuary than our observations indicate.

One species, Wilson's Plover, was notably absent from our observations and perhaps was missed; it was identified in the La Pesca region by Contreras-Balderas *et al.* (1990). Another species, Whimbrel, was commonly identified by Morrison *et al.* (1993) and listed as present by Contreras-Balderas *et al.* (1990). Snowy Plovers may also have been missed. Although not heard, Short-billed Dowitchers may also have been present.

#### ACKNOWLEDGEMENTS

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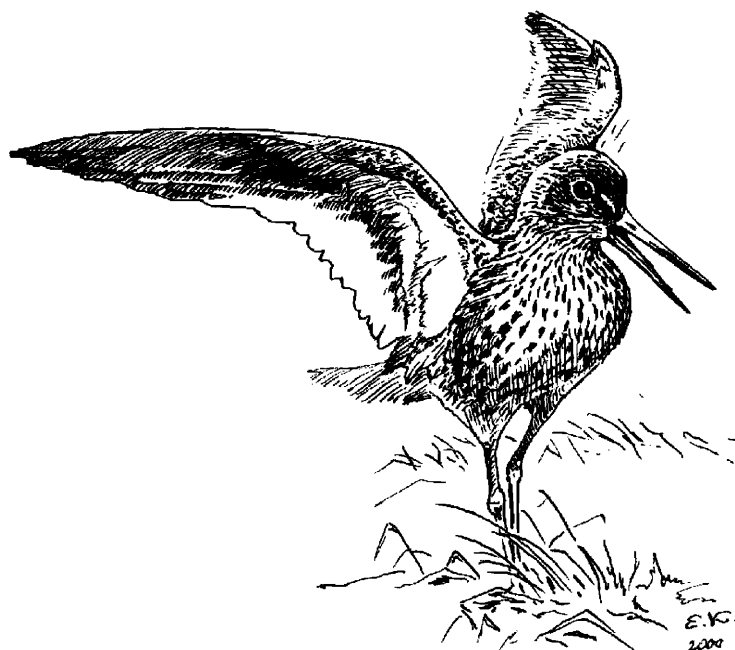


illustration - E A Koblik

