

## NOTES

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## NIGHT FEEDING OF BLACK SKIMMERS AT ESTERO PUNTA BANDA, BAJA CALIFORNIA, MEXICO

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The Black Skimmer (*Rynchops niger*) feeds strictly in shallow inshore waters, alone or in small groups (Erwin 1977a). Its diet is narrow; in Virginia, silversides (*Menidia* spp.) and killifishes (*Fundulus* spp.) make up 90% of its prey (Erwin 1977b). Both its feeding method and efficiency have been reported (Irby 1951, Tomkins 1951, Zusi 1959), but until recently little was known about its nocturnal feeding behavior (Gochfeld and Burger 1994).

Black Skimmers have recently colonized southern California (McCaskie et al. 1974, Palacios and Alfaro 1992) and the Gulf of California (Massey and Palacios 1994). They are now not rare along the Baja California peninsular coast (Palacios and Alfaro 1992, Carmona et al. 1995).

We present here observations of night feeding of Black Skimmers in northwestern Baja California at Estero Punta Banda (31° 40'-31° 48' N, 116° 34'-116° 40' W), 13 km south of Ensenada, Baja California, México. On 19 January 1996 we caught six Black Skimmers (three at 20:00, one at 21:30, and two at 21:50) while netting Western Sandpipers (*Calidris mauri*). Captures were made during a new moon and a rising tide; high tide was 1.26 m at 20:49, with about a 40-minute lag between Punta Banda and the tide gauge at the port of Ensenada. We obtained from three birds a total of four Topsmelt (*Atherinops affinis*) (Rosales-Casián pers. comm.). One complete fish (length 17.1 cm) had to be extracted by hand from a gagging bird; three others were regurgitated and had no head but were otherwise undigested (partial lengths 9.5, 13.4, and 15.0 cm). These sizes are larger than most reported Black Skimmer prey (see Gochfeld and Burger 1994, Wilson 1995). Hamman and Rosales-Casián (1989) considered the Topsmelt to be a visitor to the estuary, entering at high tide and feeding at the mouth of the estuary, where the Black Skimmers were caught.

Up to 238 Black Skimmers have been recorded at Punta Banda and in the Ensenada area (October 1990), and banded birds from Bolsa Chica, Orange County, California, have been observed in the area (Palacios and Alfaro 1992). One Black Skimmer we captured had been banded as a chick on 19 July 1989 in San Diego, California (33° 40' N, 118° 10' W) (U.S. Fish and Wildlife Service band 634-54818). We counted 150 roosting Black Skimmers in the Estero Punta Banda on 13 January

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1996. These birds appear to be a winter population that breeds, at least in part, in southern Upper California. Availability of the Black Skimmer's food is determined by tide level (Erwin 1977b, 1990). In Virginia, Erwin (1977b) found most skimmers feeding in marshes at low tide, and night feeding was thought possible (Erwin 1977b). At Punta Banda it is common to see them feeding during the day, mainly near low tide (Palacios and Alfaro 1992). Our observations show that Black Skimmers do feed at night and at high tide, possibly as a consequence of food availability. Feeding habits of Black Skimmers in Baja California in winter agree with the primarily nocturnal foraging recorded for breeding birds in southern California (Wilson 1995). Further studies of their diet and feeding efficiencies could help us further understand their success as a colonizing species in this area.

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