

## SNOWY PLOVER NESTING ON EEL RIVER GRAVEL BARS, HUMBOLDT COUNTY

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The Pacific coast population of the Western Snowy Plover (*Charadrius alexandrinus nivosus*) nests typically on sand spits, dune-backed beaches, around estuaries, and on beaches at river mouths. Less common nesting habitat includes saltpans, dredge-spoil disposal sites, dry salt ponds, and salt-pond levees (Miller 1993). In northwestern California, it has been considered mostly restricted to sandy ocean beaches, rarely occurring on gravel bars of the lower Eel River upstream nearly to Fernbridge, 6 miles inland (Harris 1991).

On 24 May 1996, we observed four adult plovers foraging on a gravel bar of the lower Eel River known locally as the Worswick Gravel Bar, about 4000 feet upstream of the bridge at Fernbridge. On 10 June 1996, we found an adult male and two chicks on another gravel bar of the lower Eel River approximately 1000 feet downstream of the same bridge (Figures 1 and 2). Subsequently we discovered three nests with eggs on the Worswick Bar, on 20 June, 26 June, and 6 July 1996. The first and last nests were 1400 feet apart and each contained three eggs. The second nest was about 130 feet from the first and contained one cracked egg.

The substrate of the gravel bar ranges from fine silt and sand to a mixture of sand and pebbles to a mixture of rounded stones and cobbles. The first two nests were in areas of sand and pebbles 500 feet inland from the water's edge. The third was 80 feet from the water's edge in an area of rounded stones and cobbles, covered with a thin layer of fine silt (Figures 3 and 4). Our last observation of the birds on the Worswick Bar was on 14 August 1996.

Our observations during the summer of 1996 suggest that at least eight adult Snowy Plovers established at least four nests and hatched eight chicks on the gravel bars near Fernbridge. In comparison, Gary Page (pers. comm.) estimated the 1996 population of the entire 71 miles of Humboldt County's coastline at 15 adults.



Figure 1. Adult male Western Snowy Plover on Eel River gravel bar, 10 June 1996.

Photo by Gary Lester

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Figure 2. Western Snowy Plover chick on Eel River gravel bar, 10 June 1996.

*Photo by Gary Lester*

The nesting of these birds at a straight-line distance of 7 miles from the nearest ocean beach represents a departure from their usual nesting sites, which have not been reported along the Pacific coast along rivers more than 0.5 mile upstream from their mouths (Page pers. comm.). Of course, the species nests widely around inland lakes.

Following the discovery of plovers near Fernbridge, surveys were extended 4 miles upstream to the mouth of the Van Duzen River and 1 mile downstream of Fernbridge. Plovers were observed on four bars upstream and two bars downstream of the Worswick Bar. The maximum number observed at one time on any bar was eleven (Ron LeValley unpubl. notes).

Other rivers in Humboldt County were not systematically surveyed because of lack of staff and funding. The gravel beds of Redwood Creek and the Mad, Van Duzen, and Mattole rivers are fairly narrow (200 to 300 feet) except in their lower reaches (1.5 to



Figure 3. Western Snowy Plover nest with eggs on Worswick Bar, 20 June 1996. Substrate is mixture of sand and small rocks.

*Photo by Donald Tuttle*

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Figure 4. Western Snowy Plover nest with eggs on Worswick Bar, 6 July 1996. Substrate is mixture of small rocks and cobbles.

*Photo by Donald Tuttle*

3 miles) and a 3-mile section of the Mad River located 4–8 miles inland (the unvegetated portion, however, is only about 200 feet wide). The lowest 1.5-mile section of the Van Duzen was surveyed; no plovers were observed. The Eel River bed near Fernbridge is 1200 to 1400 feet wide. The unvegetated gravel bar at Worswick is about 600 feet wide and 2000 feet long.

The plovers nested on the Worswick Bar despite frequent human disturbance, evidenced by tracks of four-wheel-drive vehicles and empty shotgun shell casings, and the presence of predators such as ravens, gulls, and raccoons. We recorded noise levels of the traffic on Highway 101 (1000 feet east) and the County of Humboldt's portable rock crusher (600 feet northeast) adjacent to the first and third nests. At 50 to 60 dBA (decibels on the A scale) this noise had no observable effect on plover behavior and did not inhibit nesting.

### LITERATURE CITED

- Harris, S. W. 1991. *Northwestern California Birds*. Humboldt State Univ. Press, Arcata, CA.
- Miller, K. J. 1993. Endangered and threatened wildlife and plants; Determination of threatened status for the Pacific coast population of the Western Snowy Plover. Federal Register 58 (42): 12864–12874.

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