

## SANDHILL CRANES BREEDING IN SIERRA VALLEY, CALIFORNIA

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The number of Greater Sandhill Cranes (*Grus canadensis tabida*) breeding in California has greatly decreased since the turn of the century. This subspecies was given "fully protected" status by the California Legislature in 1970. The current breeding range in the state is believed to be restricted to the northeastern plateau region, in Siskiyou, Modoc, Shasta and Lassen counties (Grinnell and Miller 1944, McCaskie and DeBenedictis 1966, Naylor et al. 1954). Carroll D. Littlefield of Malheur National Wildlife Refuge, Oregon, has records of 109 pairs breeding in northeastern California, but was unaware of any nesting south of Lassen Co. (pers. comm.). I observed a small breeding population south of the plateau region in Sierra Valley, Sierra and Plumas counties. This is the southernmost breeding locality for the state.

In the southern (Sierra Co.) portion of Sierra Valley, in late May 1976, Stephen Benner photographed a pair of Sandhill Cranes at a nest containing two eggs. The nest was in a wet cattle pasture approximately 2.4 km north of Sierraville. The dominant plants surrounding the nest were rushes (*Juncus* sp.) and sedges (*Carex* sp.). I visited the site on 20 November 1976 but found that the marsh was dry and cattle had destroyed the nest.

In the northern (Plumas Co.) part of Sierra Valley, from June through August 1976, I located nine cranes; usually the birds were in pairs, but on 5 July I saw a flock of seven. On 1 April and again on 30 April 1977 I noted a pair frequenting an area about 1.6 km south of the large steel bridge on Dyson Lane (=Marble Lane), 8 km south of Beckwourth. As I approached these birds, which were in a stand of dead tules (*Scirpus*), one flew to a nearby field, jabbed at the ground, jumped, and crouched in the low vegetation. I was unable to find evidence of a nest, but on 14 May, when I returned to the same stand of *Scirpus* with David K. James, I found a bird sitting on a nest. On our approach the bird stood up and walked away, but stayed within a few meters of the nest. On 21 May a bird was still on the nest, presumably incubating. Instead of flying it crouched flat on the nest with neck outstretched, so that its entire body was concealed by young *Scirpus* stalks about 0.6 m in height. I did not flush the bird. On 14 June I found the nest empty. It was composed of floating Common Tules (*Scirpus acutus*) that formed a flat bed 1.2 x 0.9 m in size and only a few inches above the water level. The depth of the water under the nest was about 0.6 m, and the nearest open water was about 2.4 m away. I collected fragments of the nest and eggs (both CAS No. 9496) on 7 August. About 1.5 km north of the nest I saw another pair and a lone individual on 1 April and again on 30 April.

The middle toe of a footprint found near the nest measured 120 mm, within the range of variation of the subspecies *tabida* (100 to 123 mm) and too large for the more northern race *canadensis* (76 to 95 mm) (Buller 1967).

Littlefield (pers. comm.) has observed recent breeding invasions of cranes in isolated valleys in Oregon. My observations do not represent such an invasion. Cranes have been recorded since 1957 on waterfowl breeding ground survey flights over Sierra Valley (Table 1; California Fish and Games files). These surveys have been flown every year between 1 and 10 June since 1954. Other observations from Sierra Valley include five birds on 18 August 1963 and a pair on 23 July 1973 (unpublished data in *American Birds* Middle Pacific Coast Region files). A cursory survey of Sierra Valley from 1 July 1972 to 30 June 1973 by the California Department of Water Resources (1973) listed the Sandhill Crane without com-

## NOTES

Table 1. Number of Sandhill Cranes recorded on annual waterfowl breeding ground survey flights over Sierra Valley, Plumas and Sierra counties, California.

|                              |  |
|------------------------------|--|
| 1957 1 adult, 1 nest         | 1973 1 pair with 1 imm.; 6 single adults |
| 1960 1 adult                 | 1974 2 pairs, 1 single adult             |
| 1965 1 pair, 2 single adults | 1975 1 adult                             |
| 1969 1 adult, 1 immature     | 1976 1 adult                             |
| 1970 5 adults in a group     | 1977 2 pairs, 1 single adult             |

ment. The large wetland areas in the center of the valley, which have only limited private access and cannot be observed from any public road, were not surveyed by me; these could well support undetected cranes. Also, the valley receives little attention from field observers, as evidenced by the scarcity of records of other species.

Sierra Valley, embracing 110,000 acres, is composed primarily of hay fields and cattle pastures, with extensive wetlands and sagebrush. It seems to offer optimum crane habitat as described by Littlefield and Ryder (1968). Because of its inaccessibility, size and combination of habitats, the valley may well support a small permanent breeding population of Greater Sandhill Cranes.

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