## WHITE PELICANS NESTING AT HONEY LAKE, CALIFORNIA

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The breeding status of the White Pelican (*Pelecanus erythrorbynchos*) has been reviewed in papers by Thompson (1933), Lies and Behle (1966) and Sloan (1973). These papers show that, although the number of breeding birds may fluctuate considerably in any one colony from year to year, colonies tend to remain in ancestral locations. For example, it appears that the only new colony established west of the Rockies between 1965 and 1972 was at Crump Lake, Oregon.

We were thus surprised to find a White Pelican nesting colony on Hartson Reservoir, adjacent to Honey Lake, Lassen County, California, in June 1976. Although pelicans reportedly laid eggs at Honey Lake in the early 1950s (A. M. Lapp pers. comm.), this appears to be the first record of a productive colony at this location.

Honey Lake is a saline sink with a water area of approximately  $120 \text{ km}^2$  in normal rainfall years and receives the flows of several streams draining the eastern escarpment of the Diamond Mountains at the northern end of the Sierra Nevada. It is located about 80 km NNW of Pyramid Lake, Nevada, and 200 km SSE of the Klamath-Clear Lake complex on the California-Oregon border, the locations of the closest White Pelican colonies.

The colony discovered on 5 June 1976 was located on a sparsely vegetated peninsula about 50 m wide by 300 m long, running parallel to the eastern shoreline of Hartson Reservoir. The pelican breeding area was shared with Double-crested Cormorants (*Phalacrocorax auritus*), Snowy Egrets (*Egretta thula*), Black-crowned Night Herons (*Nycticorax nycticorax*), Ring-billed Gulls (*Larus delawarensis*) and Caspian Terns (*Sterna caspia*). After an initial group of about 20 pelican nests with eggs was found, photographs were quickly obtained. To minimize disturbance, no further intrusion into the colony was made and consequently the total number of nests was not counted. A second visit on 20 June revealed another pelican colony on an adjacent island about 0.5 ha in extent. With the aid of a telescope, Tait counted approximately 800 adult pelicans in both colonies on this occasion. About 200 of these individuals were sitting, and possibly brooding eggs or young.

On 6 July, 705 young pelicans were counted by Kennedy and Knopf. Most of these were well feathered and nearly adult-sized. It was also noticed that some adults were still attending chicks in nests. Since these chicks were not included in the count, a return visit was made to the colony site on July 14. At that time, the smaller chicks in nests numbered 249 and were about four weeks old.

No definite conclusions relating to the production of fledged young can be drawn from these figures. The apparent anomaly of 200 possible nests counted one day, and then 705 young counted 16 days later, serves to illustrate the problems in counting tightly clumped groups of pelicans with no elevated vantage point from which to make observations. To produce 705 young would require at least 353 nests; to allow for natural mortality of young, more than 700 nests is more realistic. Careful observations in coming years are obviously required to accurately document the size and productivity of the White Pelican colony at Honey Lake.



## NOTES

No evidence of human intrusion or animal predation was observed at the colony during visits in June and July. However, on 7 August Tait found an adult pelican with shot holes through a humerus. It is hoped that the California Department of Fish and Game will take the necessary measures to prevent future incidents that could endanger the survival of the colony. Such measures should at least include the posting of an area bounded by a line 500 m (say) from the colony edge during the months of May and June. The Department should also consider suspending their routine patrols through this area over critical periods such as during nest establishment and incubation.

The water surface of Honey Lake progressively diminished during the spring and summer of 1976 due to low precipitation the previous winter. Towards year's end, the lake dried completely and remained dry through the 1977 nesting season. Fish availability, either through higher production or the concentrating effect of the decreasing water level, was very high during 1976. This may have attracted large numbers of pelicans to the lake; an observer reported more than 10,000 birds present in July (Lapp 1976) which indicates the possibility of a massive movement from one or more of the other traditional colonies. Evidence as to the sources of these birds, however, is lacking.

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