

WHITE PELICAN REPRODUCTION IN THE MOLLY ISLANDS
BREEDING COLONY, YELLOWSTONE NATIONAL PARK

Kenneth L. Diem
Department of Zoology and Physiology
University of Wyoming

Objectives

Compared to other North American White Pelican, Pelecanus erythrorhynchos, breeding colonies, the Molly Islands Colony is a minor colony consisting of +450 adults (Lier and Behle, 1966; Diem and Condon, 1967; Sloan, 1973; Diem, 1976). Despite its small size, the colony is unique for these reasons: (1) it is the only White Pelican breeding colony in a national park; (2) the location of the colony at an elevation of 7,733 ft (2,357 m) is the highest recorded for any breeding colony of the species; (3) discovered in 1890, the colony has had variable surveillance since 1917, with relatively intense monitoring since 1965; (4) the breeding population is composed of birds from both coasts of North America; and (5) the colony's nesting sites on the two Molly Islands change frequently with no predictable pattern. The major objective of this project is to continue monitoring changes in the reproductive success of the Molly Islands White Pelican colony and to continue studies of the factors influencing those changes.

Procedures

Nesting and fledgling censuses continue to be taken from a boat 100-200 ft from shore. Because landing in the colony would be too much of a destructive disturbance, clutch data cannot be collected. Some errors in nest counting probably occur, however, the fledgling censuses are very accurate.

Results

Nesting and fledgling counts for the Molly Islands White Pelican colony from 1977 through 1980 are presented in Table 1. The 285 nests in 1980 represent the second largest nest count recorded for this pelican colony. Schaller (1964) recorded 298 nests in 1962. The 340 near fledgling young represented the 4th largest production level recorded since 1945. Previous highs were 418 in 1979, 374 in 1946 and 360 in 1960.

The pelican nesting effort was above average despite a rather wet and cold month of June. It is interesting that the nesting synchronization appeared to be relatively poor with 11 nesting aggregations formed on the two islands. Nest crowding was particularly extreme on the Rocky

Table 1. Numbers of white pelican nests and young fledged in the Molly Islands breeding colony, 1977-80.

Year	Location	Date	No. of Nests	No. of Nesting Aggregations	Date	Fledglings
1977	Rocky Island	7/7	22	3		
	Sandy Island	7/7	195+	5	8/11	302
1978	Rocky Island	7/9	24	1		
	Sandy Island	7/9	167+	6	8/15	230
1979	Rocky Island	6/27	78	2		
	Sandy Island	6/27	172	2	8/8	418
1980	Rocky Island	6/23	201	6	8/12	162
	Sandy Island	6/23	84	5	8/12	178

Island with many nests being located closer than a bill length to their nearest neighbor. The lack of synchronization was evident in the wide range of physical development of the young at the August census.

Mortality of the juvenile pelicans on the islands was low with only 7 dead young being found. Bodies of several young were found in the lake several weeks later by a park ranger which did indicate an added mortality not encountered in recent years. Even so, the level of young mortality was considered to be relatively low.

Four Double-Crested Cormorant nests on the Rocky Island produced 17 young. Eighteen Caspian Tern nests on the same island produced 12 young.

For all of the water birds breeding on the island there was a wide range of physical development of the young. Two Caspian Tern chicks were estimated to be 7 days old on August 12 and 2 cormorant chicks were only 10-12 days old. In addition, 20-30 California Gull chicks on the Rocky Island were still incapable of flight on August 12.

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