

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

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Objectives

Compared to other North American White Pelican, Pelecanus erythrorhynchos, breeding colonies, the Molly Islands Colony is a minor colony consisting of 400-600 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 breeding water bird populations for the period 1977 through 1981 are presented in Table 1. The nesting efforts of the White Pelican are particularly notable since the 290 nests are the second largest total recorded for this colony. Schaller (1964) recorded 298 nests in 1962. Despite this auspicious start, the number of young White Pelicans fledged per nest was the lowest since 1976. The cold, late spring appears to have been largely responsible for the depressed reproductive effort of these early nesters.

By contrast, the Double-crested Cormorants, Phalacrocorax auritus, and

Table 1. Numbers of water birds nests and young fledged in the Molly Islands breeding colony, 1977-1980.

Year	Species	Nesting Census				Fledgling Census		
		Rocky Island		Sandy Island		Date	No. of Fledged Fledglings Per Nest	No. of Fledged Fledglings
		No. of Nests	No. of Nesting Aggregations	No. of Nests	No. of Nesting Aggregations			
1977	White Pelican	22	3	195+	5	8/11	302	1.39
1978	White Pelican	24	1	167+	6	8/15	230	1.20
	Double-crested Cormorant	11	2			8/15	0 <sup>a</sup>	
	Caspian Tern	0				8/15	0	
1979	White Pelican	78	2	172 <sub>b</sub>	2 <sub>b</sub>	8/9	418 <sub>b</sub>	1.67
	Double-crested Cormorant	6	1			8/9	15	1.88
	Caspian Tern	21	1			8/9	11	0.52
1980	White Pelican	201	6	84	5	8/12	340	1.19
	Double-crested Cormorant	1	1			8/12	17 <sup>c</sup>	?
	Caspian Tern	18	1			8/12	12	0.67
1981	White Pelican	91	4	199	6	8/19	232	0.80
	Double-crested Cormorant	17	3	1	1	8/19	19	1.12
	Caspian Tern	14	1			8/19	18	1.29

a Well developed young were seen in nests on 7/9 and may have fledged prior to 8/15

b Two additional nests were established on the Sandy Island after the 6/27 census.

c Three plus additional nests were established after the 6/23 census in 3 plus aggregations.

the Caspian Tern, Hydroprogne caspia, are relatively late nesters and they both had a better than average number of birds fledged per nest.

The delayed phenology of the 1981 breeding season was also reflected by 10-15 young California Gulls, Larus californicus, which were only 3/4 grown on August 19. In addition, 7 of the young White Pelicans were so poorly developed and feathered that they could not enter the water. Conservatively, the breeding season appeared to have been extended or delayed 10-14 days by cold, windy weather. Despite the existence of 10 different nesting aggregations, there appeared to be general uniformity of size among the young pelicans. This situation seemed to extend to the other species, as well.

Mortality of young White Pelicans appeared to be very low. No identifiable remains were observed on the Sandy Island. Scanning of the Rocky Island from the canoe, indicated no visible remains of young pelicans. Closer searching of the island was not possible because of the potential disturbance to non-flying cormorants and terns.

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