## FURTHER NOTES ON CALIFORNIA BROWN PELICANS AT POINT LOBOS, CALIFORNIA

WITH THREE ILLUSTRATIONS

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In the Condor for September, 1927 (p. 246), I recorded the discovery on May 25, 1927, of California Brown Pelicans (*Pelecanus californicus*) breeding at a little island close to the base and on the south side of Point Lobos, Monterey County, California. This is some two hundred miles north of the previously known northern breeding limit for the species.

On June 12, 1928, I again succeeded in landing on the islet. No evidence of nesting pelicans was discovered. Although there appeared to be about the same



Fig. 13. CALIFORNIA BROWN PELICAN: NEST AND EGGS, SHOWING FEATHERS AND GREEN LEAVES AS FREQUENTLY FOUND WITH OTHER NESTING MATERIAL; ISLAND NEAR POINT LOBOS, MONTEREY COUNTY, CALIFORNIA, MAY 29, 1929. Photo by George Stone.

number of Brandt Cormorants (*Phalacrocorax penicillatus*) on the outlying rocks of the seaboard side, only one nest with eggs was discovered on the islet itself. Western Gulls (*Larus occidentalis*) seemed to have increased as breeders, perhaps accounting for the decrease or temporary diminution of some of the other nesting birds.

A visit to that part of Point Lobos nearest the islet and from where it is easy to identify large birds on it, even with the naked eye, was made on April 4, and another on April 9, 1929. I did not see any pelicans on the island. No other observations were taken until May 22 of the same year, when the pelicans were discovered to have returned. They had come back in numbers far greater than in 1927, the first year of their discovery. (*Cf.* Willett, Pac. Coast Avifauna No. 7, 1912, p. 21, for irregular yearly breeding on the Santa Barbara Islands.) Fully completed nests were in evidence, upon some of which old birds were sitting as though incubating. On May 29, 1929, we landed on the islet and found fifty-five nests with eggs distributed in clutches as follows:

Three with 1; 22 with 2; 30 with 3; making 137 eggs altogether.

There were twenty nests of Western Gulls containing eggs and young, mostly on the grassy part of the island, but some were on the tops of the bare, stony knolls or "humps".

A few Brandt Cormorants were nesting on the very top of the westernmost hump, but these were apparently a mere overflow from the outlying rocks which were occupied for nesting purposes exclusively by Brandt Cormorants.

Between May 29, 1929, and June 30, the day of my next visit, the pelicans were watched through a telescope from Point Lobos on eight different days, June 1, 5, 7, 12, 14, 17, 21, and 28.

There were always a few first-year birds which loafed around on the tops of some of the knolls or on the outlying rocks. But the adult birds spent most of their time incubating. While engaged in this task they were observed to rest on their eggs in three different positions. The one most frequently used was with the head drawn down between the shoulders and the bill pointing forward horizontally. The second of these postures was with the head drawn down and the bill horizontal but reversed and lying full length on the back. When the bird has attained this position the scapulars (or feathers near them) are then drawn together over the back, thus partly covering the bill. This evidently is the posture of sleep. The third position was with the head and neck erect and the bill depressed. The head and neck are held in this way when the bird is standing in the normal perching attitude. June 1 was an unusually warm day and all birds incubating on nests sheltered from the breeze kept this last position; but the bill was not held against the neck as usual, but with the mandibles slightly apart, and the pouch was palpitating as though it were from the effects of panting because of the heat.

The monotony of incubation was frequently relieved by various stretching and preening exercises. The birds would stand up and flap their wings hard enough to cause the feathers of a neighbor to be blown about by the wind thus created. They preened frequently. A characteristic preening posture was with wings partly spread and the head turned back and upside down, while the bird worked with the tip of its bill on the undersurface of the wing feathers. Sometimes the neck is stretched out in front to the utmost and slightly bent down, while the bird scratches the neck just below the pouch with the toes of one foot.

An exercise frequently observed in progress on the island, and to which may be attached more significance than is apparent, was as follows: The bill is partly opened and the rami of the mandible considerably bowed out laterally. The head is then drawn back and down and the dilated rami fitted over the backward curving neck and pressed down. This action causes the pouch to be turned inside-out. The mandible is then raised toward the maxilla and touches, or nearly touches, it, and the neck is shot up to a vertical position while the whole bill, with mandible still dilated, is thrown up with the neck to the perpendicular or even leaning to a degree slightly beyond the perpendicular. In this way the pouch is stretched out very tightly between its extreme points of attachment, that is, on the neck and mandible.

It was hinted to me in conversation by Dr. Joseph Grinnell that this "exercise" might not merely be a yawning or stretching procedure, but that the animal might be trying to rid itself of, or obtain relief from, a pouch-infesting parasite. Prof. Vernon Kellogg, in his paper on the mallophagan parasites of water birds of Monterey Bay (Proc. Calif. Acad. Sci., 2nd ser., VI, 1896, p. 163), writes of *Menopon* 

titan: "These large conspicuous parasites are found not alone among the feathers of the host, . . . but also abundantly clinging to the inner surface of the gular pouch. . . ." In a letter dated September 25, 1930, Dr. Kellogg writes that he would "think it not at all unlikely" that this behavior of the pelicans "might be caused by an attempt on the part of the birds to rid themselves of the irritating parasites", and he adds that "very often ten or twelve of these sharp-clawed, sharp-jawed little parasites may be found clinging to the membrane of the pouch and surrounded by a blood patch which indicates a very real degree of irritation."

Young pelicans were seen in the nest for the first time on June 12. However, the brooding parent, of course, completely covers the very young birds except when feeding them, and therefore, because of the narrow range of the telescope, newly hatched birds might have been overlooked on previous observation days.



Fig. 14. CALIFORNIA BROWN PELICANS ON THEIR NESTS ON ISLAND NEAR POINT LOBOS, MONTEREY COUNTY, CALIFORNIA, MAY 29, 1929.

Naked young were observed being fed on June 14. The adult was in a posture of brooding, with the head turned back and the bill, with widened lower mandible, poked into the nest. The young were beside her, sometimes reaching up into the pouch, but for the most part picking their food from near the end of the bill. Violent wretching movements were apparently necessary for the parent to bring forth food. Except for the fact that I did not always definitely observe the widened mandible, this was the typical way in which all the parents fed their small young. Sometimes, as was once noted at a particular nest (June 17), the motions of the adult's bill were enough to move considerably, or even dislodge, the sticks of the nest into which it had been thrust. After being fed, on June 21, one of the down-covered chicks of the latter family stood near the edge of the nest and flapped its featherless wings, in miniature imitation of its parents.

## March, 1931 NOTES ON CALIFORNIA BROWN PELICANS

Definite display of hostility between pelicans and Western Gulls was observed twice. An adult pelican, sometimes assisted by a neighbor, resting on the north knoll (June 21, 1929) was seen lunging out with its long neck and snapping bill at a gull hovering in air not far out of reach. The latter was attempting to come to a young one of its species sitting on the ground a few feet from the pelican's legs but well under the range of its out-stretched neck and formidable bill. Several times the gull was forced to retreat and land about six or eight feet away, but always would flutter up again and hover over its (apparent) offspring, only to be warded off by the pelicans.

The other instance of antagonism occurred on the occasion of our third landing on the islet, August 4, 1927. (See Condor, *loc. cit.*, p. 249, note.) The eight wellgrown but still flightless pelicans would move off when we approached too closely, but stood quietly if we halted at a slight distance. While one bird was standing thus, a Western Gull swooped down close to it several times and at each passing dealt a vicious blow on the head with its beak. One or two of these angry assaults soon brought forth a small amount of blood.



Fig. 15. FLIGHTLESS YOUNG CALIFORNIA BROWN PELICANS. POINT LOBOS IN BACKGROUND; AUGUST 4, 1927.

On June 30, 1929, the islet was visited again, and of the 137 pelicans' eggs discovered on May 29, 78 were found to have hatched and the emerging young to be still alive. Although most of them were covered with down, a few were still in the naked stage. The larger of the young stretched forth partly open bills toward me as I walked among them. The rami of their mandibles were somewhat distended and they emitted the characteristic young pelican cry, hoarse and rasping. Whether these were defensive attitudes and actions, or those of beggars for food from a large approaching figure, I failed to determine.

The Brandt Cormorants of the main island had apparently given way to the gulls and the pelicans. No eggs or young and hardly a trace of their nests seen on May 29 were to be found, although the colony on the outboard rocks seemed to be flourishing.

With so great an increase over the 1927 batch (from 10 nests with eggs to 55), let us hope that this northern outpost of breeding California Brown Pelicans may flourish, in spite of such complete setbacks as occurred in 1928.

Princeton, New Jersey, October 20, 1930.