

THE CONDOR

VOLUME 50

MAY-JUNE, 1948

NUMBER 3

CALIFORNIA GULLS AND EXOTIC EGGS

By ARTHUR C. TWOMEY

The recent paper by Sugden (Condor, 49, 1947:93-96) referring to exotic eggs in nests of California Gulls (*Larus californicus*) suggested the recording of some of my own experiences with these birds. The purpose of this paper is to indicate more fully the range of the California Gulls' feeding impulses during the nesting season.

In July of 1947, while conducting field work in Idaho, I had an opportunity to see at first hand the unusual habit of gulls bringing other birds' eggs to their nests. Through the generous cooperation and assistance of Mr. W. Rodgers, manager of the Deer Flat Refuge in southwestern Idaho, I was able to observe a large California Gull colony (six to seven thousand pairs) on a small island at the east end of the Deer Flat Refuge. The eggs were nearly all hatched, and there were hundreds of downy young scattered over the entire nesting site. It was only a matter of a few minutes until the gulls more or less accepted my presence and began sorting out their young. Adult gulls arrived continuously with food, most of which was a mass of regurgitated material that was almost unrecognizable. In two instances, however, bits of rodent remains were apparent. As I watched, an adult suddenly dropped to within five yards of me and began feeding a three- or four-day old chick. To my surprise a Cinnamon Teal (*Querquedula cyanoptera*) egg was regurgitated intact (see fig. 23). The moment that the egg rolled out upon the ground the young began pecking at it, evidently having learned the appropriate response in past feedings of a similar nature. The adult struck the egg two or three times with its bill and the contents were quickly eaten by both adult and young (see fig. 24). I soon discovered that other birds' eggs were being brought into the colony and fed to the young, although the old birds were eating them, also. The eggs brought in were mostly those of Cinnamon Teal, Ring-necked Pheasant (*Phasianus colchicus*), Coot (*Fulica americana*), Black-necked Stilt (*Himantopus mexicanus*), and Eared Grebe (*Colymbus nigricollis*). Fifteen eggs in all were seen, but the amount of yolk stains around the nesting sites indicated an extensive egg collecting campaign on the part of the gulls. Eggs were sometimes carried in the bill, but more often they were swallowed and then regurgitated at the nesting site (see fig. 25).

The gulls are naturally colonial in their habits, and their subsequent response to competition for limited nesting sites is extremely vigorous to the point of being detrimental to the welfare of their own progeny. A great many young birds up to a week or so old were found dead on the island. In many cases fatalities were due to the vicious treatment received from adult birds. An adult would not tolerate another young bird other than its own to enter its local sphere of territorial influence. During such defense of the territory, the adult birds responded as vigorously to a four-day old chick as to another adult. On numerous occasions this resulted in critical injury to the young. Such vigorous response of the adults has been attributed to a nervous irritation caused by a

foreign disturbance in the colony. During the course of these observations the utmost care was exercised to avoid disturbing the nesting group, and within a few minutes after reaching the island, adults were feeding young and incubating eggs within five yards of us.

These large gulls apparently do tolerate other nesting species among their own nests under certain circumstances. We observed four pairs of Caspian Terns (*Hydroprogne caspia*), each with a nest of fresh eggs, on the west edge of the gull colony. Despite our



Fig. 23. Adult California Gull in the act of regurgitating a Cinnamon Teal egg.

caution, our presence upset this apparent harmony, for the gulls suddenly attacked the tern nests and devoured the eggs while we were but 20 yards away. Mr. Rodgers informed us that numerous White Pelicans (*Pelecanus erythrorhynchos*) nested on the same island three years ago, but this year only four pelicans were observed. The main pelican colony was on an island at the northwest end of the lake.

Another instance of intolerance among California Gulls was encountered in 1927 when I often visited a large colony of California and Ring-billed gulls on an island in Bittern Lake, Alberta, Canada, where we carried out rather extensive banding activities. On one of my visits in the company of Mr. Frank L. Farley of Camrose, Alberta, we had just stepped out of our canoe when we heard a Canada Goose (*Branta canadensis*) honking. There had been a goose nest on a high knoll in the center of the island, where it was completely surrounded by the gull colony. On this particular day the four young goslings had just hatched out and were at the moment of our arrival being taken by the parents to the water. The downy young were hardly more than 100 yards from shore when several California Gulls began to circle them. Almost immediately the gulls dropped to the water and began striking the young goslings on their heads with their bills. Two of the young dived at the approach of the gulls, which seemed intent upon

dispatching them. The gulls swam in circles over the spot where the downy geese had disappeared below the surface of the water, and the moment a young bird surfaced, it was struck on the head. In a matter of five minutes the four goslings were dead and were being carried to the gull colony. We had known for some time that Canada Geese nested on the island, but we had no idea that the adult geese would be so helpless in protecting their young, even from gulls. California Gulls do not choose only to take small birds and eggs for food, as our observations at Bittern Lake indicated that they would bring in such large animals as Richardson Ground Squirrels (*Citellus richardsoni*), half-grown coots, and young ducks. In one instance a half-grown gull was found dead with an adult gopher half way down its throat. The gopher was wedged in the throat so that it could not be swallowed or thrown up.

From all observations the food offered by the California Gull to its young is extremely

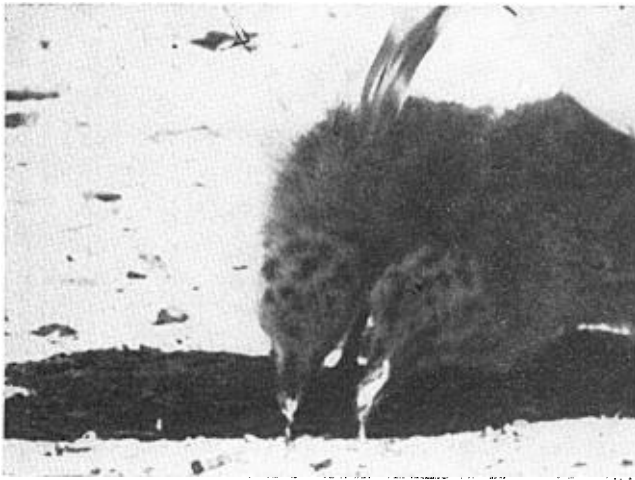


Fig. 24. Young California Gulls feeding on contents of egg.

varied. On Deer Flat Refuge we saw the remains of young ducks, coots, rodents, eggs and, in one instance, an immature robin. Such evidence of wide-ranging predation on the part of a nesting colony might possibly be used by various agencies as an excuse to destroy this beautiful bird. Certainly no action of any kind, no matter how apparently justifiable it might seem, should be taken against any of the remaining American bird or mammal predators until all phases of their feeding habits and life-histories are fully studied and evaluated. Anyone who has observed the California Gulls as they follow the farmer's plow picking up great quantities of agriculturally injurious insects knows that the birds are of very considerable importance to the farmer. This beneficial habit alone would outweigh their harmful tendency to pick up other birds' eggs and young during the nesting period.

In the literature there is ample proof of the value of this gull to the farming interests of the western plains where it has its principal breeding range. A quotation from Bent (U. S. Nat. Bull. 113, 1921:129) emphasizes more fully the agricultural usefulness of the bird.

"Gulls go all over the State [Utah] for insects, the greatest number visiting the beet fields, where they keep down the crickets, grasshoppers, cutworms, etc. They took a new diet this summer. Some alfalfa fields were so badly honeycombed with mice holes and runs that it was impossible to irrigate

them, and they were plowed up, mostly for beet culture. When the water was turned into the irrigation ditches the mice were forced out of their holes, and the gulls then caught them. They became so perfect in their work that they kept abreast of the head of the water and picked up every mouse that appeared. When gorged with victims they would vomit them up in piles on the ditch bank and recommence their feeding. Gulls are sacred in Utah, and are so tame that oftentimes they may be caught by hand as they follow the plow so closely."

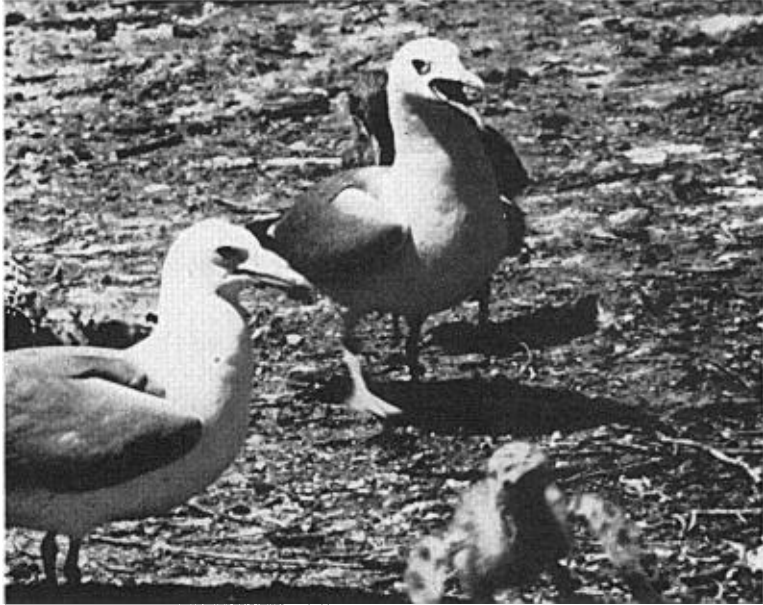


Fig. 25. California Gull with egg about to be regurgitated. Egg revealed by bulge in neck of adult in foreground.

Undoubtedly, there is a marked physiological chain of reactions set up during the breeding cycle that is in direct response to hormonal influences. The apparent outward responses of birds to such physiological changes are extremely varied in relation to their physical environment. Measured by human standards as to whether they are beneficial or harmful to man's interests, the gulls are normally considered predators in varying degrees of activity.

It seems that early in the breeding season the gulls may bring other species' eggs to their nests but because of inadequate stimuli they may not feed upon them, which possibly accounts for the appearance of these exotic eggs in their own nests. After the hatching of the young gulls, however, egg feeding begins, and the young probably figure importantly in stimulating this behavior. The nesting period over, this feeding stops and the gulls return to following the farmer's plow or spread out over a wide range as scavengers.

Carnegie Museum, Pittsburgh, Pennsylvania, January 19, 1948.