

DIFFERENTIAL NESTING SCHEDULES OF HERRING GULLS ON LONG ISLAND, NEW YORK

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On 1 June 1966 each of us visited large, well-established Herring Gull (*Larus argentatus*) colonies on Long Island (Suffolk County, N.Y.). We found the two colonies at notably different stages of breeding.

The colony on Gardiner's Island (41° N., 72° W.) consisted of approximately 4000 gulls (in two groups about five miles apart). Nests contained one-, two-, and three-egg clutches as well as nestlings estimated to be no more than three to four days of age. (J.B.)

At the other colony near Captree Park (40° 30' N., 73° W.), located 65 miles southwest of Gardiner's Island, in which at least 2000 birds were breeding, only eggs were found and a substantial number of these were in incompleated clutches. (R.G.W.) A count of 16 nests (made for another purpose) showed eight two-egg clutches and eight three-egg clutches. One-egg clutches were common but were not counted. One of a three-egg clutch was opened and the embryo estimated to be incubated for five to seven days.

On 11 June a brief second visit was made to the Captree colony. At this time no evidence of hatching was observed. A small collection of eggs was taken into the laboratory to be incubated. The first of these hatched on 13 June. A third visit was made on 16 June. At this time several nestlings were found, the oldest estimated to be no more than four days of age.

Using these data one can estimate the earliest date of hatching in each colony (see Table 1). If the oldest gull chick observed on Gardiner's Island was in fact three days old, it hatched on 29 May. If the oldest chick at Captree was four days old on 16 June, it hatched on 12 June. This corresponds well with the incubator-hatched chick (13 June) and with the observation of no chicks on 11 June. According to the shortest reliably-recorded incubation period (Paludan, 1951: 90-91) of 23 days, the expected date of hatching for the examined embryo would be no earlier than 17 June.

The data give us a *minimum* difference of 14 days between the estimated dates of first hatching for the two colonies.

Table 1. Summary of Field Observations.

Date of Visit	Gardiner's Island Colony	Captree Colony
June 1	Eggs and Young (oldest 3-4 days old)	Eggs only
June 11	—	Eggs only
June 16	—	Eggs and Young (oldest 4 days old)

A difference of this magnitude between two nearby colonies suggests that the timing of the reproductive cycle may be substantially affected by local conditions. These conditions may be one or more environmental factors or behavioral factors. Although it is conceivable, we have no information which indicates that behavioral mechanisms are operating here. Likewise, it seems unlikely that any climatic differences over so short a distance would be significant.

Our suggestion is that the breeding schedule difference is a result of the differential isolation of the two places. The colony on Gardiner's Island is well-isolated and is subject to almost no disturbance from man or other potential ground predators, while the birds at Captree are continually disturbed by people passing nearby and through the colony. One wonders that the birds manage to breed there at all!

Because our visits were made for purposes other than preparing this report, the data supporting our conclusion are incomplete. We present our findings with a view towards encouraging others located near gull or tern colonies to collect similar information on relative breeding schedules. We further suggest that data be obtained more systematically so that a sizeable nest census (with information on clutch size, ages of nestlings, etc.) is taken in as many different sections of a colony as feasible. This will give comparative information on the range of variation in the progress of nesting within each colony.

We would welcome receipt of any data of this nature either before they are published or after.

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Reference Cited

Paludan, Knud. Contributions to the breeding biology of *Larus argentatus* and *Larus fuscus*. *Vidensk. Medd. fra Dansk naturh. Foren.*, 114: 1-128, 1951.

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Ed. Note: This is the type of data the North American Nest-Record Card Program is designed to obtain and make available for study. Anyone making such systematic surveys of Herring Gull nesting is requested to report the data to this program, Laboratory of Ornithology, 33 Sapsucker Woods Road, Ithaca, N.Y. 14850 in addition to sending it to the above authors.