

not significantly larger,  $P > 0.05$ ) than eggs from peripheral nests. Protein, carbohydrate, and lipid weights and their energy values from both locations were equal (Table 2).

These results support the finding that embryos of equivalent age from the center and periphery of the Granite Island colony (Ryder and Somppi, *Wilson Bull.* 89:243-252, 1977) showed no significant differences in developmental characteristics and size. It appears that the differences in hatching success in relation to nest location in our colony may not be due solely to differential quantities of proteins, carbohydrates, and lipids in the yolks. The results do not preclude the possibility that differences exist in the types and quantities of essential amino acids and/or other compounds which may be important in determining egg hatchability. Additionally, low egg success in peripheral areas may reflect lower parental attentiveness than in central regions.

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**Roof-nesting by Common Terns.**—During the summer of 1975 a pair of Common Terns (*Sterna hirundo*) nested on the flat roof of a building on Great Gull Island, New York (at the eastern end of Long Island Sound). Gill (Auk 70:89, 1953) reported Common Terns nesting on a boat on Long Island. I find no reference in the literature to Common Terns nesting on buildings. Least Terns (*S. albifrons*) have been reported nesting on roofs in Florida (Fisk, *Am. Birds*, 29:15-16, 1975).

On 12 July 1975 I first noticed a Common Tern sitting on the roof of 1 of the old army buildings, now used as sleeping quarters on Great Gull Island. On 13 July I climbed onto the roof and found 2 warm eggs in a shallow depression where I had seen the adult tern sitting. A loose layer of pebbles on the flat surface of the roof covered most of the tar and roofing paper. The nest depression was shielded on 1 side by a piece of roofing paper and was partly lined with small pieces from a rotting board lying on the roof about 1 m from the nest. While I was on the roof one of the adult terns dove at me. A tern was last seen incubating on 25 July during a storm. On 26 July and on following days no birds were seen on the nest. On 18 August 1 egg was left in the nest. I opened it and found an embryo which I judged to be 11 to 12 days old using the criteria of Hays and LeCroy (*Wilson Bull.* 84:187-192, 1971).

On Great Gull Island Common Terns often nest on the crumbling concrete of the old fort which covers most of the island (Cooper et al., *Proc. Linn. Soc.* 71:108-118, 1970). Most of the concrete surfaces are effectively at ground level. At times terns have nested on concrete lookout platforms at least 2 m above the ground. This roof nest was about 4 m above the ground. The roof's pebble surface gave the nest a substrate similar to the island's pebble beaches. During the period when the roof-nest terns probably chose their nest site, many of the traditional nesting areas were overgrown or still being defended. A resulting shortage of nesting habitat may have caused the selection of the roof as a nest site. I do not think that the desertion of the eggs on the roof was due to any particular disadvantage in the nest site, rather, it may have been caused by factors which influenced the desertion of many nests on the night of the storm of 25-26 July.

Roof-nesting, like the use of other man-made structures on Great Gull Island, demonstrates the adaptability of Common Terns in their choice of nest sites. It will be interesting to see whether the use of roofs for nesting continues and increases in future seasons.

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This note is contribution No. 42 from the Great Gull Island Project.—ANNE E. MACFARLANE, 325 E. 72nd St., New York 10021. Accepted 20 April 1976.

**Rapid chick separation in Whip-poor-wills.**—This note describes a poorly known aspect of Whip-poor-will (*Caprimulgus vociferus*) behavior and emphasizes the possible importance of nestling behavior to survival.

While hiking through second-growth deciduous forest in Jasper County, Illinois, on 5 May 1972, I flushed a female adult Whip-poor-will from 2 eggs resting in a shallow leafy depression. The nest site, "nest," and eggs were typical of published descriptions for the species. During the next 13 days I visited the site 5 times and always found the female incubating at precisely the same location with the eggs slightly rearranged within the nest. On 22 May (4 days from the last visit) the female allowed me to approach to 1 m before flushing. As she flushed, 2 chicks simultaneously separated in opposite directions to a distance of about 15 cm from each other. Their separation occurred so rapidly and unexpectedly to me that I am uncertain whether the chicks were flipped apart by the female with her feet as she flushed, or whether they separated under their own power. I noted no discrete hops. That one chick rather forcefully tumbled forward to rest, left me with the immediate impression that it had been propelled. The chicks remained perfectly motionless, and their eyes remained closed during several minutes of observation.

Two days later, as the female flushed, the chicks separated about 40 cm from each other by a series of rapid but perceptible hops. They moved in exactly opposite directions as before. I was impressed again by the rapidity of their separation, by their motionlessness after a simultaneous and quick stop, and by the effectiveness of their camouflage. The chicks' eyes were first noted to be open on 27 May when the chicks hopped apart about 65 cm along perpendicular paths as the female flushed.

On 31 May only 1 chick hopped from the nest (to about 60 cm). The second chick "froze" within the nest. On this visit I saw the male adult and droppings around the nest for the first time. The male appeared at the moment of typical distraction behavior by the female (sharp "thurp" calls; posturing with dropped wings, fanned tail and erect head; injury-feigning skirmishes through the leaves).

The original nest site was abandoned on 2 June and was littered with droppings. I unexpectedly flushed the brooding male about 8 m away, but was looking in the wrong direction to observe the chicks directly as he flushed. They rested about 1 m apart and faced in opposite directions. The male exhibited distraction behavior similar to that of the female. The male was brooding at this same site on 4 June, but neither chick moved when he flushed.

On 6 June the male was brooding the chicks about 15 m from the original nest site. All 3 flushed together. The chicks each flew in straight lines about 45° from one another to a distance of about 12 m. One chick landed in a branch 2 m up, and the other landed on the forest floor. The male immediately placed himself between me and