The first question we asked was whether or not transplanting nests to tires caused the terns to desert. The Least Tern is a highly adaptable species which will tolerate much disturbance at the nest site. Adults returned to the nest in less than 10 min after transplanting. Only 9% of the tire nests were abandoned (1 of 11), but this was about the same as the 9.5% (2 of 21) rate for high nests and only slightly more than the 6.6% (3 of 45) rate for all nontire nests. Moreover, the abandonment of the tire nest did not take place immediately because we saw the bird return to the nest at least once. We concluded that transplanting nests to tires does not cause desertion.

The second question we asked was whether or not nests on tires were less productive than other nests. We thought it possible that nests on tires might be more visible to predators or more susceptible to human interference. Over the season no significant difference was found ($P > 0.01$) between tire nests and high nests (71% vs 73%), but both exceeded low nests by a wide margin. The hatching rate for low nests was only 21%.

The third question we asked was whether or not putting nests on tires saves them from high tides. Over the season, 67% of the low nests failed because of high water whereas only 9% of the tire nests failed for this reason. This figure is essentially meaningless because far more low nests were active during periods of high water. Of the low nests, 67% were active during high water whereas only 36% of the high nests were active during high water.

Of a small sample of nests active during a period of high water on 19 June, all the high nests were successful (4 of 4), all the low nests were inundated (13 of 13), and 50% of the tire nests were successful (2 of 4). Of these 4 nests on tires, 1 was saved from inundation by the tire and later successful, 1 was saved and later deserted, 1 was washed out despite the tire, and the high water failed to reach the fourth, which was finally successful. Although this is a small sample, it is intuitively plausible that nests raised a few inches would stand a better chance than low nests; therefore we feel justified in concluding that some nests of the Least Tern can be saved by transplanting them to tires. Where the tidal range is low, the method would probably be less successful than in Jacksonville where it is up to 6 ft. Information on tidal range and when high tides are expected can be obtained from the *Tide Tables* published by the National Ocean Survey, Rockville, MD.

Preliminary attempts to use this method on Black Skimmers (*Rynchops nigra*) and Gull-billed Terns (*Gelochelidon nilotica*) failed because the birds deserted the transplanted nests. This indicates that this method should be used with common sense and a bit of caution. Disturbance of the nest of any wild bird may cause it to desert; therefore, we do not recommend this method for inexperienced persons. In the hands of refuge personnel, banders, or other experienced persons, we feel that this method may be of some benefit to a species that is threatened or endangered in many parts of its range.—ROBERT W. LOFTIN AND LESLIE A. THOMPSON, *University of North Florida, Box 17074, Jacksonville, FL 32216.* Received 16 October 1978, accepted 22 November 1978.

Growth of Nestling Savannah Sparrows.—During a study of the breeding biology of the Horned Lark (*Eremophila alpestris*) at Cape St. Mary's, Newfoundland (46°47′ N, 54°12′ W) the nests of four Savannah Sparrows (*Passerculus sandwichensis*) were found in moist *Osmunda cinnamomea-Sanguisorba canadensis* (Cinnamon Fern-American Burnet) habitat. Meades (1973) and Cannings and Threlfall (unpubl.) provided detailed descriptions of the study area. The nests contained 3, 4, 4, and 5 eggs, respectively.

Despite the fact that much is known about this polytypic species—its distribution, plumages, nests, egg sizes and colors (Bent, 1968), little is known about nestling growth. Maher (1972) discussed their growth in Saskatchewan. Therefore, when the aforementioned eggs hatched, the nestlings were weighed (Pesola 50-g spring balance) and measured, on a daily basis (early morning), if possible, until the birds fledged, utilizing the methods outlined by Cannings and Threlfall (unpubl.).

Measurements of 16 chicks are given in Table 1. Of the chicks that hatched, 12 fledged, the others disappearing from nests. The chicks fledged between 9 and 11 days ($\bar{x}$ = 10.4). The tarsus grew most rapidly, reaching 95.8% of the fledging size by seven days. Weight gain was slower, reaching only 83.3% of fledging weight by day 7 and wing length only 69.2%.

TABLE 1.
Measurements of Savannah Sparrow nestlings.

Age (days)	Weight (g) x̄ ± SD (n)	Tarsus (mm) x̄ ± SD (n)	Wing (mm) x̄ ± SD (n)	Rectrix (mm) x̄ ± SD (n)	Culmen (mm) x̄ ± SD (n)
1[1]	2.5 ± 0.5 (8)	7.2 ± 0.8 (5)	7.2 ± 0.3 (5)	—	—
2	3.6 ± 0.8 (8)	8.6 ± 1.3 (8)	8.1 ± 0.6 (8)	—	—
3	5.8 ± 1.2 (3)	10.0 ± 1.7 (3)	9.2 ± 1.2 (3)	—	—
4	7.5 ± 1.3 (3)	12.0 ± 1.0 (3)	11.7 ± 1.5 (3)	—	—
5	10.1 ± 1.5 (4)	15.3 ± 0.6 (3)	16.0 ± 1.8 (4)	—	—
6	12.5 ± 1.2 (11)	17.4 ± 1.0 (11)	21.1 ± 1.5 (11)	—	—
7	14.8 ± 0.7 (4)	21.0 ± 0.8 (4)	27.0 ± 1.6 (4)	—	—
8	18.0 ± 0.0 (1)	20.0 ± 0.0 (1)	35.0 ± 0.0 (1)	8.5 ± 0.0 (1)	8.0 ± 0.0 (1)
9	17.5 ± 1.0 (5)	21.1 ± 1.2 (5)	36.0 ± 2.6 (5)	8.6 ± 1.5 (4)	8.5 ± 0.4 (4)
10	17.7 ± 0.7 (5)	21.9 ± 0.6 (5)	39.0 ± 1.5 (5)	10.3 ± 1.9 (5)	8.8 ± 0.5 (5)

[1] Day on which chick hatched.

The chicks, on hatching, were heavier than those recorded by Maher (1972) from Saskatchewan (x̄ = 1.6). The asymptote (18.0 g) was also somewhat larger (16.0 g) than that calculated by the latter author. The specific rate constant (K), calculated according to Ricklefs (1967, 1968), was 0.476 with an inflection point at 4.6 days, as compared to the 0.517 and 5.0 days of Maher (1972). The asymptote of the fledglings was 85% of the adult weight (x̄ = 21.3 g, Sept., n = 12). These adults averaged 4 g heavier than those noted by Maher (1972). For other measurements, 12 fall birds had means as follows: wing length 68.8 mm, culmen length 10.7 mm, tarsus length 21.5 mm, and tail length 49.7 mm. The chicks fledged when they had achieved 57% of the adult wing length, 82% of the culmen length, 100% of the tarsus length, and 18% of the tail length.

The following description of nestlings is based on several individuals, not all the feathers/feather tracts were examined or measured.

On hatching day (day 1) down in the coronal tract was approximately 11.5 mm long, with that in the spinal tract (12 feathers) being 14 mm long. Five feathers were seen in the femoral tract and eight in the alar. On day 2 down was generally dark gray, but somewhat lighter on the alar, scapular, and femoral tracts. The skin was orange except for the eyelids and surrounding area and dorsal surface of the wings which were black. The lining of the mouth was pink with red flanges. Eyes were closed and remained so until day 5. On day 3 contour (pin) feathers were visible under the skin on the wings, legs, back and abdomen. The rectrices were now just visible and bore the down at their tips. When handled the chicks closed their toes. By day 4 the tips of the contour feathers had emerged. Down lengths at this time were as follows: spinal 13 mm, humeral 12 mm, coronal 12 mm, pelvic 10 mm. On day 5 the skin, particularly on the flanks, had become pink and the primaries were approximately 2 mm long. At this time the chicks panted when the temperatures rose to 23°C. Down was still present on the spinal, coronal, femoral, and alar tracts on day 6. By days 9–11 the nestlings were able to hop, called loudly when handled and left the nest but could not fly.

The development of Savannah Sparrow chicks is, therefore, much like other ground nesting passerines (Dawson and Evans, 1957; Banks, 1959; Maher, 1964, 1972), which show a rapid development of the legs enabling them to leave the nest before they can fly. This may well be an adaptation that allows them to escape from predators, an act aided by their habit of crouch-concealment.

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