

<i>Species</i>	<i>Number Banded</i>	<i>No. of Repeating Individuals</i>	<i>No. of Returns</i>	<i>No. of Recoveries</i>
Slate-colored Junco	314	140		
Lincoln's Sparrow	5			
Swamp Sparrow	16	9		
Fox Sparrow	164	68		
Indigo Bunting	2	1		
Towhee	47	10		
Rose-breasted Grosbeak	2			
TOTALS — 112 Species	13,600	1,501	19	25
		<i>1930</i>	<i>1931</i>	<i>Total</i>
Birds Banded		3,001	13,600	16,601
Species Banded		87	112	
Total Takes		10,670	23,176	33,846
Old Birds		5,540	7,319	12,859
Repeating Individuals		2,032	1,749	3,781

REPORT OF TERN-BANDING ON CAPE COD
DURING 1931¹

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DURING the season of 1931 we endeavored to band as many juvenile birds as possible on the tern rookeries of Cape Cod between Provincetown on the north and Lewis Bay on the south, with the following results:

<i>Locality</i>	<i>S. hirundo</i>	<i>S. dougalli</i>	<i>Total</i>
Tern Island, Chatham	4,983	1,045	6,028
Egg Island, Lewis Bay	1,721	55	1,776
Billingsgate Island, Eastham	418		418
Pamet River Rookery, Truro	125		125
Hopkins Island, Orleans	122		122
Nauset (west colony), Eastham	41		41
Rocky Island, Orleans	40		40
TOTALS	7,450	1,100	8,550

Comparatively little time was spent in attempting to trap adults, but on Tern Island 77 adult *hirundo* were banded; in the Pamet River rookery, 31 *hirundo* and 4 *paradisæa*; and at Hopkins Island, 9 *hirundo* and 3 *paradisæa*—a total of 124 adults.

Five of these colonies have been described previously in *Bird-Banding* and the *Bulletin of the Northeastern Bird-Banding*

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*Association*²—Tern Island, Billingsgate Island, Pamet River rookery, Hopkins Island, and Rocky Island. The small colony which heretofore occupied Nauset Point, where it was continually washed over by high tides and despoiled by picnickers, has moved to a small islet in the salt marsh a mile to the westward, where it is still in danger from the tide.

Egg Island in Lewis Bay was visited this year for the first time. It is a cigar-shaped body of land an eighth of a mile in length and about two hundred feet wide at its widest place, partly covered with a thin growth of beach grass and dusty miller which affords adequate shelter for the chicks from the hot rays of the sun. Where the grass is thickest a few Roseate Terns nest, but Common Terns form the bulk of the colony's population. Its insular conditions (the island lies a half-mile off shore and cannot be waded to at low tide) make it inaccessible to rats, weasels, skunks, and snakes, and, as it is not near frequented waterways, it is disturbed very little by humans.

The trapping of adults during the past three seasons, while scarcely thorough enough to provide incontestable proof of the theory, nevertheless indicates that Tern Island, Chatham, the largest and most successful of the Cape colonies, is the "mother colony" of the region, and that the other rookeries near-by act largely as "annexes" to take care of the overflow. Terns banded as nestlings at Chatham have been captured later breeding on each of the other rookeries except Egg and Rocky Islands, where no trapping for adults has been done. None of the young banded on the other rookeries has ever been captured nesting on Tern Island.

Owing to the high mortality among the nestlings from natural enemies and human interference on the smaller colonies, there is seldom enough of an increase in the Billingsgate, Pamet River, and Nauset rookeries to offset the annual mortality in the adult population. The percentage of yearly increase on Tern Island, however, is far greater than the adult death-rate, and the island has been populated to "capacity" continually for the past decade. The stimulus which induces the terns to return "home" to breed is a strong one, and there is much competition for the territory suitable for nesting on Tern Island, for there is not enough of it to accommodate the birds available to

²Austin, O. L. Jr., *Bul. N. E. B. B. A.*, Vol. V, October, 1929, p. 123.
Austin, O. L. Jr., and Dallavalle, J. M., *Bird-Banding*, Vol. I, January, 1930, p. 20.
Floyd, Charles B., *Bul. N. E. B. B. A.*, Vol. I, October, 1925, p. 58.
Floyd, Charles B., *Bul. N. E. B. B. A.*, Vol. II, October, 1926, p. 68.
Floyd, Charles B., *Bul. N. E. B. B. A.*, Vol. IV, October, 1928, p. 125.
Floyd, Charles B., *Bul. N. E. B. B. A.*, Vol. V, October, 1929, p. 144.
Floyd, Charles B., *Bird-Banding*, Vol. I, October, 1930, p. 181.

use it. Those that are unsuccessful in the competition must move elsewhere, and there is always unoccupied space to be found at the other near-by colonies.

That adults born on Tern Island returning to breed for the first time stop there to compete for territory before establishing themselves elsewhere, partially explains the fact that the nesting is always from one to three weeks earlier at Tern Island than on any of the other Cape colonies. But it does not explain the phenomenon entirely, for theoretically birds raised on each of these other sites, and adults which have already established themselves successfully thereupon, should return directly to their "home" grounds to nest, and, other things being equal, should breed as early as those native to Tern Island, which they do not. The remainder of the explanation must lie on ecological rather than distributional grounds, but as yet no differences have been noted in the environmental conditions on the respective rookeries sufficient to account for it.

We have observed that young birds banded on Tern Island may breed on other islands on the Cape. It is twenty-three miles as the tern flies in a north-northwesterly direction from Tern Island to the Pamet River rookery, where many of the birds reared at Chatham have been found nesting. Muskeget Island, which boasts of one of the largest tern colonies in New England, is but twenty-nine miles south-southwest of Tern Island, while Penikese, the one other large rookery in the region, lies fifty-two miles west-southwestward of Chatham. On each of these two rookeries many thousand terns have been banded in the past decade, but never yet has any interchange of breeding stock between Muskeget, Penikese, and the Cape colonies been noted. Hence it seems logical to consider the Cape rookeries as a single, scattered entity, rather than as separate, unrelated units.