

**Band Wear and Band Loss in Roseate Terns.**—Band wear and loss of bands can introduce serious biases into studies of long-lived birds, but the extent and causes of interspecific differences in the rates of band wear and loss of bands are little known. We have recently reported data on band wear and loss of bands by Common Terns (*Sterna hirundo*) (Hatch and Nisbet, J. Field Ornithol. 53:1–16, 1983a) and Arctic Terns (*S. paradisaea*) (Hatch and Nisbet, J. Field Ornithol. 53:91, 1983b). This note reports comparative data on Roseate Terns (*S. dougallii*).

We obtained 28 worn aluminum bands that had been carried by Roseate Terns for periods up to 11 years. Almost all the birds had been both banded and retrapped at either Bird Island, Massachusetts, or Great Gull Island, New York, between 1969 and 1981. Three birds had moved from Great Gull Island to Bird Island. Almost all the birds were both banded and retrapped in the months of June or July. To determine the rate of wear of each band we compared its weight to that of a sample of unworn bands of the same or adjacent series (see Hatch and Nisbet 1983a for details of methods used). Rates of wear are expressed as percent of original weight lost per year.

Our sample included only two size 3 bands, too few for meaningful analysis. The remaining 26 bands were size 2 and were manufactured from an aluminum alloy with 2% magnesium, which has been used since 1963. For 12 bands carried for 2–4 years, the mean rate of weight loss was  $6.27 \pm 0.39\%/yr$  ( $SD = 1.36\%/yr$ ). For 14 bands carried for 6–11 years, the mean rate of weight loss was  $5.67 \pm 0.24\%/yr$  ( $SD = 0.90\%/yr$ ). The reduction in the mean rate of weight loss for bands recovered after the fifth year conforms to the pattern found in other species (Ludwig, Bird-Banding 38:309–323, 1967; Hatch and Nisbet 1983a), and suggests that some of the most worn bands had been lost. The observed difference in Roseate Terns is smaller than that in Common Terns, and is not statistically significant ( $t = 1.32, P > .1$ ).

In Common Terns, we found evidence that size 3 bands fell off after losing between 32% and 62% of their initial weight, but we did not have enough size 2 bands to estimate their fall-off weight. In Roseate Terns, there was no discernible shortfall in the number of size 2 bands recovered until they had lost more than 50% of their initial weight. Applying the methods of Hatch and Nisbet (1983a) to the sample of bands carried for 8–10 yr, we estimate that size 2 bands fall off Roseate Terns after losing between 53% and 73% of their initial weight. The first bands would then be lost in the 6th year after banding, and most bands would be lost between years 8 and 13. These estimates are less precise than those for Common Terns, because of the smaller sample size for Roseates.

The initial rate of weight loss of size 2 bands carried by Roseate Terns ( $6.27 \pm 0.39\%/yr$ ) is significantly greater than that noted in size 2 bands carried by Common Terns ( $4.08 \pm 0.09\%/yr$ , Hatch and Nisbet 1983a,  $P < .001$ ), and much greater than that noted in size 2 bands carried by Arctic Terns ( $0.90 \pm .12\%/yr$ , Hatch and Nisbet 1983b,  $P < .001$ ). The marked difference between Common and Roseate terns in rates of band wear was unexpected, because the birds of these species whose bands we studied nest in the same colonies and overlap in winter quarters (Austin, Bird-Banding 24:39–55, 1953; Hamilton, J. Field Ornithol. 52:36–42, 1981). At least at Bird Island, the Common Terns nest in more sandy substrates, so that their bands should be subject to greater abrasion.

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