

Band Wear in Arctic Terns.—This note reports the rates of wear of 28 aluminum bands carried by Arctic Terns (*Sterna paradisaea*) for 2 to 34 yr. In this species band wear is very slow and band loss affects only a few of the longest-lived individuals, unlike the Common Tern (*S. hirundo*) in which bands carried for more than 6 years are subject to substantial losses (Hatch and Nisbet 1983, *J. Field Ornithol.* 54:1–16; the background and methods for this study apply to the present note also).

Most bands were obtained from terns trapped by us and released after rebanding in Maine (7), Massachusetts (6), or New Brunswick (8). Two bands came from terns found dead in Massachusetts, and the remaining 5 were obtained from the Bird Banding Laboratory and came from terns banded in northeastern North America. We verified the specific identity of all the trapped birds: 3 of them had been identified as Common Terns when banded as chicks in mixed colonies.

The inscriptions were legible on all worn bands and most wear had occurred on the inner surface (as in Common Terns). We recorded no cases of the bands gaping, nor of any breakage. Some size 3 bands that had lost about 30% of their original weight could be pulled by hand over the tern's foot, and we were told of one worn band found in a mist-net used to catch Arctic Terns (W. Schemnitz, pers. comm.).

To determine the rate of wear of each band we compared its weight to that of unworn bands of the same or adjacent series (see Hatch and Nisbet, *op. cit.*, for details). Rates of wear are expressed as percent of original weight lost per year. For 25 size 3 bands the mean rate of wear was $0.91 \pm 0.06\%/yr$ (mean ± 1 SE). The mean rate for 3 size 2 bands, $0.90 \pm 0.12\%/yr$, was not significantly different. We found no significant difference in rates of wear associated with nesting substrate (sand in Massachusetts, grass or rocks in Maine and New Brunswick).

Where band-loss occurs it may be recognized by a decrease in the mean rate of wear of bands recovered after being carried for many years. This decrease occurs because the faster-wearing bands have fallen off. Such a change is not evident for Arctic Terns: regression of annual % weight loss against years worn for all 25 size 3 bands yielded a non-significant slope of -0.00079 . For Common Terns we found that size 3 bands fall off after losing 32 to 62% of their original weight (Hatch and Nisbet, *op. cit.*). Since Arctic Terns have somewhat smaller feet than Common Terns it is possible that worn bands would fall off the former species after less wear, but we cannot identify a specific range of fall-off weights. The most worn band in our sample had lost 38% of its original weight in 28 yr. The oldest band in our sample had worn for 34 yr at the low rate of $0.41\%/yr$ and lost only 14% of its original weight (Hatch, 1974, *Bird-Banding* 45:269–270). Coulson and Horobin (1976, *J. Zool.* 178:247–260) found the annual survival rate of adult Arctic Terns to be 0.875. If this rate is constant and applies to the North American population, less than 4% of adult birds would survive for 25 yr, the approximate age at which they would become susceptible to loss of bands. Size 2 bands are now used on Arctic Terns and these smaller bands probably last even longer than size 3 bands.

Bands on Arctic Terns lose weight at about 1/6 of the rate for Common Terns ($5.42\%/yr$ for years 2 through 6). We suggest that the pelagic existence of Arctic Terns, particularly outside the breeding season, probably leads to their low rates of band wear compared to coastal species such as the Common and the Roseate tern (*S. dougallii*) (Nisbet and Hatch, 1983, *J. Field Ornithol.* 54:90. However, Arctic Terns spend at least 3 months of each year ashore, and the magnitude of the difference is surprisingly large.

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