The First Record of *Locustella lanceolata* for North America

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An unprecedented passage of Lanceolated Warblers (*Locustella lanceolata*) occurred in June and July 1984 on Attu Island (52°49'N, 173°10'E) in the western Aleutian Islands, Alaska. At least 25 individuals of this eastern palearctic species were recorded on the southeast perimeter of Attu Island from Massacre Bay to Temnac Valley, 4 June to 15 July. Although observers were present on Attu into September, no warblers were observed after 15 July. The maximum one-day count was 11 birds on 8 June. Two or 3 adjacent singing males in several locations established "clustered" territories. Most individuals were observed within the *Elymus arenarius–Heracleum lanatum*-dominated community of the upper beach terrace; a few birds sang inland in *Salix* thickets. One territorial bird was observed carrying dried blades of *Elymus* on 9 June. These warblers typically sang from dawn (0600) to midday (1400) and from 2300 to 0200. Photographs of several of these warblers are on file at the University of Alaska Museum. An adult male was collected on 9 June (UAM 5005, 13.3 g, light to moderate fat in the furcula, left testis 8.5 × 5.0 mm, right testis 8.25 × 5.75 mm). It was actively singing from a defended territory adjacent to a second male's territory. Both territories were 30 m from the upper edge of sand beach, in *Elymus* and *Heracleum* on the north shore of Casco Cove.

Monotypic *Locustella lanceolata* breeds in northern Asia from the Urals to Kamchatka, the Kurile Islands, and northern Japan, and it winters across most of southern Asia from India to the Andaman and Greater Sunda islands and the Malay Peninsula (Vaurie 1959). This record appears to be the first east of central Kamchatka (Dement'ev and Gladkov 1954).

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Differential Distribution of Wintering Brant by Necklace Type

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Abraham et al. (1983) demonstrated that positive assortative mating by necklace type, the white feather pattern around the neck, occurs among Brant (*Branta bernicla hrota*) breeding at East Bay, Southampton Island, N.W.T. They also suggested that differential distribution of Brant by necklace type also may occur on the wintering grounds. We tested the "differential distribution" hypothesis by collecting Brant on three major wintering areas along the Atlantic Coast: 1) Nassau County, Long Island, New York; 2) Cape May County, New Jersey; and 3) Chincoteague National Wildlife Refuge and near Folley Creek, Accomac County, Virginia (Smith et al. 1985). Brant were shot in bays and estuaries in the three locations, except for 18 birds that were cannon-netted on golf courses on Long Island. Collections were made during a 2-week period in late January 1984 so that Brant movements among the three locations were minimal.

Upon collection, sex and age were determined for each bird (Penkala 1977, Kirby et al. 1983) and necklace type was scored (by LDV) according to the system of Boyd and Maltby (1979). The completeness of the necklace was scored with birds "in hand" as: ½ = very incomplete, 1 = incomplete front and back, 1½ = incomplete either front or back, or 2 = white necklace completely encircles neck. In May 1984, approximately 700 Brant died on a Long Island golf course

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as a result of diazinon poisoning. One hundred of these birds were obtained from the New York Department of Environmental Conservation. Age, sex, and necklace type were determined for 41 of these birds. This sample of Brant allowed us to compare necklace type frequencies in New York during the spring migration with necklace type frequencies in New York when Brant movements were minimal (January 1984). Data on necklace type also were collected (by LDV) from the breeding grounds on Baffin Island, N.W.T.

The sexes were combined for the following necklace-type analysis because the proportions of New Jersey males (8/28) and females (3/13) with the necklace type 1½ were not different ($Z = 0.24$, $P > 0.50$). Differential distribution of Brant by necklace type occurred among the three locations during January 1984. The proportion of Brant with necklace type 1 was not different between New York and Virginia ($Z = 0.575$, $P > 0.20$), but the proportion of Brant with necklace type 1 did differ between New Jersey and New York ($Z = 3.28$, $P < 0.001$) and New Jersey and Virginia ($Z = 2.21$, $P < 0.03$). These differences occurred because, during January, only Brant in New Jersey had necklace type 1½. However, by May 1984, when migratory movements were occurring, Brant with all necklace types appeared in the New York sample (Table 1). The distribution of necklace types in New York during May was different from that in New York during January ($Z = 3.67$, $P < 0.005$).

In contrast to our results, Abraham et al. (1983) reported no difference in necklace type composition of Brant wintering in New York (116/177 had necklace type 1) and New Jersey (191/260 had necklace type 1). No necklaces of type 1½ or 2 were observed (Ken Abraham pers. comm.). The difference between our results and those of Abraham et al. (1983) suggests that the scoring methods differed. Brant scored by LDV were scored "in hand," while those scored by Abraham et al. (1983) were scored from a distance (Ken Abraham pers. comm.). The scoring system we used was based *only* on the completeness of the necklace and did not incorporate the height (i.e. area) of the white necklace, while the scoring method of Abraham et al. (1983) incorporated both the completeness and amount of white present. Boyd and Maltby (1979) measured the completeness and the height (i.e. area) of the necklace separately. They found no difference between the sexes in the completeness of the necklace, as we did, but they did find a difference between the sexes in the height of the necklace, as did Abraham et al. (1983). Scoring necklace type from a distance may have resulted in Abraham et al.'s (1983) failure to detect the 1½ and 2 necklace types. Their scoring method, which combined the completeness measure and the height measure, also would result in an overestimate of the number of ½'s in the population when compared to the estimate obtained using the completeness measure only.

TABLE 1. Frequency distribution of necklace types of Brant from three wintering locations.

	½	1	1½	2
Virginia (January)	0	13	0	0
New Jersey (January)	1	29	11	0
New York (January)	1	39	0	0
New York (May)	2	27	10	2

Data on necklace type variation on the breeding grounds also suggest that our scoring method differed from that of Abraham et al. (1983). Brant nesting at East Bay, Southampton Island, N.W.T. had necklace types of either ½ or 1 and no 1½ or 2 types were recorded (Abraham et al. 1983). Data on necklace type variation collected by us at the Dewey Soper Migratory Bird Sanctuary, Baffin Island, N.W.T. in August 1984 had all necklace types present (½ = 6%, 1 = 80%, 1½ = 12%, 2 = 2%; $n = 50$). Data collected by Boyd and Maltby (1979: Fig. 3) on Brant breeding around the Foxe Basin (i.e. *Branta bernicla hrota*) also show necklace type 1½ to be present. Boyd and Maltby's (1979) data also show that Brant with darker belly color (i.e. *Branta bernicla nigricans*) tend to have a necklace that has greater height but is less complete, while Brant with lighter belly color (i.e. *Branta bernicla hrota*) tend to have a necklace that has less height but tends to be more complete.

The presence of Brant with necklace type 1½ on breeding areas and their absence from Long Island wintering areas suggests that Brant from certain breeding areas may be represented disproportionately in certain wintering locations.

Thus, differential distribution of Brant by necklace type may occur on wintering areas, and different nesting areas may contribute birds differentially to certain wintering locations. However, data are needed on the movements of wintering Brant to determine when groups are most stable or have reached their terminal wintering area, if one exists. This will allow determination of optimal times to sample population characteristics such as necklace type. Indeed, results indicate that necklace type frequency varies with season. These data, in conjunction with data on the chronology of pair formation, will provide the information needed to evaluate questions concerning breeding populations and segregation on the wintering grounds. Segregation of breeding populations during winter has obvious implications toward the management of the highly fluctuating Brant populations on the Atlantic seaboard.

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Leg-band Color and Mortality Patterns in Captive Breeding Populations of Zebra Finches

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Color-banding is a research technique widely utilized to facilitate recognition of individuals and membership in "groups" such as age classes. Despite the fact that many species of birds routinely attire themselves in colorful plumes, the possibility that color-marking by humans may affect the social behavior of birds has hardly been considered (but see Bennett 1939, Goforth and Baskett 1965). Instead, it appears that researchers have proceeded largely on the tacit assumption that no such effects occur. Here I report that in long-term breeding experiments involving Zebra Finches (*Poephila guttata*), mortality patterns of birds varied with the color of the bands placed on them prior to the beginning of experiments.

The experiments reported here were conducted to investigate the significance of other results from my laboratory (Burley et al. 1982, Burley 1985), which indicated that Zebra Finches find certain colors of leg bands attractive when worn by opposite-sex individuals and find other colors unattractive. In those experiments, attractiveness was measured as the time test subjects spent associating with stimulus birds banded with one of several colors in relation to the time spent with unbanded birds. Attractive colors were those that test birds preferred, and unattractive colors were those test birds appeared to avoid, relative to their tendency to associate with birds wearing no color bands. The present experiments were designed primarily to explore the effects of altered attractiveness on reproduction.

Two experiments were performed. In one (the Banded Male Experiment), adult males were banded, prior to their release into the experimental aviary, with one of the following colors: bright red (previously determined to be attractive to females), light green (unattractive to females), or orange (neutral with respect to the unbanded condition—adult Zebra Finches have orange legs). In the reciprocal experiment (the Banded Female Experiment), females were banded with black (attractive to males), light blue (unattractive to males), or orange (neutral). Randomization procedures were employed in assigning band colors. Color-banded birds wore one color band on each leg. In addition, each bird wore one uniquely coded aluminum band. (All bands were supplied by A. C. Hughes, Middlesex, England.) In the Banded Male Experiment, females were not color-banded, and males were not color-banded in the Banded Female Experiment.

All individuals were adults (5–11 months of age at the beginning of experiments) that had been placed in unisexual groups prior to sexual maturation and that, as a result, had no previous reproductive experience. All birds had wild-type plumage characteristics and appeared in excellent physical condition at the beginning of experiments. The founding populations of the two experiments came from identical sources.

Experiments were initiated by releasing 24 adults of the color-banded sex into an aviary; 1 week later, 24 opposite-sex individuals were added. Approximately 1 week later, nest sites and other resources needed for reproduction were made available in