



Fig. 1. Distribution of track and heading of birds detected by radar at Maui, Hawaii and Antigua, West Indies. The data from the two sites are not plotted on the same scale. All data for Maui are shown, but only southbound birds are shown for Antigua.

on W gave $G = 43 - 0.027 W$. The r^2 of 0.07 was not significant ($P > 0.05$). The greater variance in the airspeeds and the close relationship to the magnitude of the following wind component indicate that the birds were compensating for wind conditions so as to maintain a constant ground speed. This phenomenon is well documented for waterfowl flights over land, most recently by Wege and Raveling (1984), and has been reported for birds moving over the Atlantic (Larkin 1980). The mean airspeeds recorded in Hawaii are low for waterfowl and shorebirds and probably reflect reduced flight speeds as the birds prepare for landing.

All data obtained at Hawaii are consistent with the hypothesis that birds that arrive from the north are preparing to land on the islands rather than to continue flight over the islands, as is observed in the Caribbean. Birds that migrate further south in the Pacific presumably depart from the islands after feeding. The flight behavior of birds arriving at Maui shows compensation for wind effects in maintaining ground speed and track, while birds arriving over the Caribbean appear to maintain airspeed and heading (Richardson 1980, Williams 1985).

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Calcarius lapponicus coloratus in the Aleutian Islands, Alaska

DANIEL D. GIBSON

University of Alaska Museum, 907 Yukon Drive, Fairbanks, Alaska 99775 USA

Recent observations of *Calcarius lapponicus coloratus* Ridgway, 1898, on Attu Island suggest that this Commander Islands form of the Lapland Longspur, which has not been reported previously from Alaska, may occur with some regularity in the westernmost Aleu-

tian Islands, where it apparently interbreeds with *C. l. alasensis* Ridgway, 1898.

On 23 May 1983 I identified a male longspur on territory at Alexai Point (52°48'N, 173°18'E) as *C. l. coloratus*. It was readily distinguishable from the

abundant, territorial *C. l. alascensis* males in the area by its dark back and wing coverts, black of the throat extending onto upper breast and solidly connecting with black flanks, and white, not ochre, supercilium. Two or three other males answering this description were seen by other observers in the ensuing 2 weeks, and on 31 May and 1 June 1983 I studied another male *coloratus*, on territory along the aircraft runways above Casco Cove, 9 km west of Alexai Point. I could not distinguish its aerial songs from those of nearby *alascensis*, but its call notes were mellower and more musical than those of *alascensis*. In late May–early June 1984 at least two territorial male *coloratus* were identified by T. G. Tobish (pers. comm.) and N. S. Proctor, one again in the runway area and at least one at Alexai Point. On 1 June 1985 a territorial male *coloratus*, its mate, and a nearby pair of longspurs, the male of which appeared to be intermediate between *coloratus* and *alascensis* in plumage characters, were collected at Alexai Point by M. E. Isleib.

I prepared the specimens and found the first male taken to be clearly *coloratus*, by the characters seen in the field and described above. Noticeable in hand were its chestnut-edged tertials and greater coverts [University of Alaska Museum (UAM) 5239, 31.7 g, light fat, left testis 12×8 mm, cloacal protuberance, flattened wing 100.0 mm]. The second male was an intergrade (UAM 5241, 27.8 g, very light fat, left testis 10×8 mm, flattened wing 97.1 mm). The two females were difficult to assess with the limited material available [UAM 5240 (known mate of 5239), 33.7 g, heavy fat, laying bird with ova to 9 mm, flattened wing 89.5 mm; UAM 5242 (known mate of 5241), 28.8 g, light–moderate fat, ovary 7×5 mm, varied-sized ova to 2.3 mm, flattened wing 89.1 mm]. All specimens were examined subsequently by R. C. Banks (U.S. Fish and Wildlife Service, National Museum of Natural History), who concurred in the identifications of the males. He identified the females as *alascensis*, while stating (in litt.), “it is tempting to call 5242 an intergrade with *coloratus*” because of its well-defined chestnut collar, typical of females of *coloratus*. Thus, the *coloratus* male was mated with a typical *alascensis* female and the intermediate male was mated with a female that Banks found “showed at least a tendency to be intermediate.”

Some authors regard the three subspecies of *C. lapponicus* to be doubtfully distinct (e.g. Ornithological Society of Japan 1974), but, although extremely dark *coloratus* is only “moderately well-differentiated” (Vaurie 1959) from dark nominate *lapponicus*, pale *alascensis* is well-differentiated from the other two.

Ridgway (1901) was impressed that the great contrast in coloration between *coloratus* and *alascensis* was just as pronounced between specimens from the Commanders and those from the adjacent western Aleutians as between specimens from the Commanders and those from the distant Pribilofs or eastern Aleutians. That is, no cline connects these two Beringian taxa. Populations of the darkest and of the lightest forms of Lapland Longspur, which each year reach their respective breeding ranges in the Aleutian-Commander axis from opposite directions, are segregated by the waters between the Commander and the Aleutian islands.

While there is no prior evidence of sympatry between these forms, several lines of evidence, in addition to the foregoing, suggest that small numbers of *coloratus* may occur with some regularity in the westernmost Aleutians. Lapland Longspurs are long-distance migrants; there are numerous other examples of western Beringian and Palearctic passerines that regularly reach the western Aleutians at least as migrants (Gibson 1981); and Copper Island—the type locality, where *C. l. coloratus* is “the most common summer resident among the Passeriformes” (Johansen 1961)—is the nearest (at about 320 km) land west of Attu Island.

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