

GEOGRAPHIC VARIATION IN PREDATOR-MOBGING BEHAVIOR - A HYPOTHESIS

by Brian J. McCaffery

Predator-mobbing in North American shorebirds has recently been reviewed by Sordahl (1981, MS). One of the questions he raises concerns geographic variation in mobbing behavior, specifically citing the example of the Lesser Golden Plover Pluvialis dominica which apparently mobs in the Canadian archipelago, but not at Barrow, Alaska. As noted by Sordahl (1981, pers. comm.), such variation may be due to geographic variation in predator regimes. Whether or not a shorebird mobs a predator should ultimately be determined by the risk to itself if it does mob, and the risk to its eggs or young if it does not. An observation at Franklin Bluffs, Alaska during the summer of 1981 supports this idea.

At Franklin Bluffs (69°41'N, 148°42'W), Lesser Golden Plovers do mob predators. However, unlike the Black-bellied Plover Pluvialis squatarola at the same site, the Lesser Golden Plovers do not leave the nest and fly long distances to meet and deter an approaching predator. Rather, attack-mobbing is usually limited to a small area immediately surrounding the nest, no more than 20 m in diameter. Predators passing beyond this distance are not attacked by the incubating bird. These findings agree with Sordahl's (1981) suggestion that smaller mobbing species tend to be less aggressive than larger species.

On 8 July 1981, I observed a male Lesser Golden Plover vigorously attack-mobbing a Long-tailed Jaeger Sterncorarius longicaudus that was hovering above the plover's nest. As the jaeger descended, the swooping dives of the plover increased in intensity, effectively preventing the jaeger from landing for several minutes. At one point as the jaeger neared the ground, the plover swooped particularly close and while passing by, was grabbed by the jaeger. The jaeger then banked away and began flying off with the plover in its bill. The plover struggled free and immediately resumed its anti-predator tactics as the jaeger returned to the nest site. Despite the plover's aggressive attack-mobbing, the jaeger eventually succeeded in grabbing an egg. It then carried the egg to its nest.

This interaction clearly indicates the predation risk faced by a mobbing bird. Myers (1978) made a similar observation in which a Southern Lapwing Vanellus chilensis was killed while mobbing a raptor. It is possible that predation risk is an important factor contributing to geographic variation in mobbing behavior among shorebirds. At Franklin Bluffs, the resident breeding jaegers are the Long-tailed and the Parasitic S.parasiticus. However, at Barrow, these two species generally occur as visitors only (Pitelka 1974, pers. obs.), and the resident breeding species is the Pomarine Jaeger S.pomarinus. The Pomarine Jaeger is the largest of the three species, all of which are known to prey occasionally on adult shorebirds (Maher 1974). However, it is likely that the Pomarine Jaeger could overpower a large shorebird like a Lesser Golden Plover more effectively than the two smaller species. Thus, mobbing behavior in Lesser Golden Plovers at Barrow may be strongly selected against due to a higher risk of predation than that faced by the same species at Franklin Bluffs. Differences in the suite of predators present at a given site, and thus variation in the risks faced by a mobbing shorebird, are probably critical in understanding geographic variation in mobbing behavior, and may also help to explain why Sordahl's (1981) mobbing size threshold spans a range of body weights.

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CORRECTION TO BULLETIN 34

The 1980 Dutch Mini-Expedition to Suriname

P.34, table 2: delete column e, add the numbers of this column to the numbers in the column "unknown".