

and alighted with the golden-plovers, and (3) fed intensely when with the plovers. The plovers tried to chase their company without success, as is the case with Greater Golden-Plovers and Dunlins (Byrkjedal and Kålås 1983).

Except when several shorebird species flocked on common feeding grounds (e.g., along the shore and at muskeg ponds), I never saw dowitchers associate with any of the other species on the tundra, although both Hudsonian Godwits (*Limosa haemastica*) and Whimbrels (*Numenius phaeopus*) were numerous. Plovers may be attractive "watch dogs" for other birds, because they feed in run-stop-peck sequences, which may provide them with a better opportunity for detecting predators when feeding than exists in shorebirds that feed by probing. The large plovers may be especially attractive as partners because their height gives them a better view than small plovers have, and their size makes them more easily seen by predators (e.g., hawks), so that they may have to be more vigilant than the smaller plovers. I suggest that dowitchers associated with golden-plovers for vigilance, but data on flushing distances and feeding activities of dowitchers in association with golden-plovers and with conspecifics are needed.

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Foraging behavior and diet of Lesser Sandhill Cranes in low arctic tundra near Eskimo Point, Northwest Territories, Canada.—Although the Lesser Sandhill Crane (*Grus canadensis canadensis*) is commonly observed in the south during migration and in winter, relatively few observations have been made of the behavior and foraging strategies of this subspecies during the breeding season in the arctic. Surveys done in the United States during the nonbreeding season indicate Sandhill Cranes forage on a wide variety of food items, including insects, grubs, spiders, rootlets, herbage, grain, berries, and occasionally mice and young birds (Bent 1926, Walkinshaw 1949, Salt and Wilk 1958, Littlefield 1976). Harvey et al. (1968) observed cranes on the breeding grounds at McConnell River, N.W.T., where they fed on Snow Goose (*Chen caerulescens*) eggs, Willow Ptarmigan (*Lagopus lagopus*) young, and varying lemmings (*Dicrostonyx groenlandicus*).

During May, July, and August 1985 I observed Lesser Sandhill Cranes at close range at Eskimo Point, Northwest Territories, Canada (61°06'N, 93°59'W). The first cranes were seen 18 May 1985, and their numbers increased dramatically with each passing day. At this time of year, snow covered the ground (ca 25 cm) except on the tops of the higher eskers, which were mostly covered with a thin carpet of lichens (ca 77%), comprised mainly of *Coelocaulon divergens*, *Cetraria nivalis*, and *Cetraria cucullata* (Mallory and Heffernan, in press). Lakes and rivers were still frozen, except in small areas where the water was shallow and the currents strong. The first birds occurred in tight flocks of 6 to 12 individuals that fed on lichens in the snow-free areas. Cranes were never observed fishing in or along the openings in the rivers or lakes, but they did scavenge at sites where fish remains were left by local fishermen. Birds remained in small flocks through the end of May, and I saw no evidence that pairs separated from the main flocks to establish territories. As snow melted, feeding occurred farther down the eskers. During this time, cranes appeared to subsist on a diet composed mainly of lichens and old growth vegetation. Data (Krapu et al. 1985) on

fat deposition occurring on spring staging areas indicate that cranes increase their fat reserves during the northern migration from an average of 250 to 990 g/bird. These reserves would presumably allow individuals to survive on the breeding grounds earlier in the season when food is scarce.

In July, a blind was built on the top of an esker, approximately 50 m from an arctic fox (*Alopex lagopus*) den that contained a mated pair and 11 pups. Prey brought back to the den site was mainly young Snow Geese and a few arctic ground squirrels (*Spermophilus parryii*). Small pieces of food were often left near the burrow entrances. On 7 occasions, when the foxes were below ground, pairs of adult cranes with young approached the den site and put their heads 30 to 60 cm into the burrows. The smaller young cranes often entered the burrows completely. Small pieces of meat (mainly young Snow Geese) were given to or placed in front of the young cranes by the adults. Sibling rivalry was observed among the young for these food items, and the larger offspring frequently chased the smaller chick away from the area being searched. These excursions lasted for approximately 20 min, after which the cranes returned to the wet meadow areas. This behavior was not observed in May, before food was available at the site, nor in August when the fox pups were active outside the den.

On one occasion, a pair of cranes with a single young was observed foraging in a wet meadow area. The adults walked slowly to each hummock, and with heads lowered, inspected the base, often cocking their heads. After approximately 5 min, one of the adults made a quick stab with its bill and stood up holding a varying lemming. The adult ran ahead a short distance followed closely by the young, which begged and was fed the entire carcass. Trapping data indicated that small mammal populations were high during 1985.

In August, cranes foraged on the upper slopes and tops of the eskers. During this period, the mast of the season was ripening, and cranes consumed large numbers of berries, especially crow berry (*Empetrum nigrum*), bilberry (*Vaccinium uliginosum*), and mountain cranberry (*Vaccinium Vitis-idaea*).

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