25 m of the perch, identified the prey as a Canada Goose (*Branta canadensis*) gosling. The gosling was flapping its wings as the Osprey began to tear pieces of flesh from the gosling's back. Observation was continued for 5 min. Consumption of the gosling continued through this time. At the attack site, I found two adult Canada Geese and three, 2-week-old goslings near the waters edge.

An Osprey had been seen catching fish at the hatchery for 5 weeks prior to the attack. In addition to fish production at the hatchery large Canada Geese are also reared in hopes of establishing a resident flock in Kansas. During the spring of 1983 65 goslings were hatched at the fish hatchery. Only two gosling mortalities were recorded the entire spring. One, as described, was the result of Osprey predation. The cause of the second mortality was unknown.

Canada Geese at the hatchery do not react to the Osprey's presence in a noticeable manner (T. Dorzab, pers. comm.). With an abundance of fish in the shallow culture ponds and in the adjacent river, it is puzzling that the Osprey preyed upon the gosling.

Ospreys occasionally catch prey other than fish (Wiley and Lohrer, Wilson Bull. 85:468–470, 1973). Bert (U.S. Natl. Mus. Bull. 167, 1937) describes the lining of nests with various items including the wings and parts of shorebirds and waterfowl. I could find no references to Osprey predation on Canada Geese goslings in the literature.—WILLIAM G. LAYHER, *Environmental Services, Kansas Fish and Game Commission, RR #2, Box 54A, Pratt, Kansas 67124.* *Accepted 23 May 1984.*

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Pellet casting by Common Grackles.—While conducting field tests in central Tennessee during the winter of 1982–83, I noted numerous cylindrical, pellet-shaped masses among the accumulated guano deposits in blackbird (Icterinae)-starling (*Sturnus vulgaris*) roosts. These 'pellets' appeared to have been 'cast' or regurgitated. They were composed primarily of corn hulls and chaff, and contained no discernible guano. Based on the size of these pellets (about 1 cm in diameter and 1–3 cm in length) and the species composition of these roosts, I assumed they were produced by Common Grackles (*Quiscalus quiscula*). This assumption was later supported when captive grackles, fed cracked corn, produced similar pellets. European Starlings held in captivity at the same time, failed to produce these pellets. Conversely, captive Brown-headed Cowbirds (*Molothrus ater*) produced a similar, albeit considerably smaller (5 × 7 mm) pellet, when fed a mixed corn and poultry mash diet. Hansen (Internatl. Bird Pellet Study Group, Bull. No. 7, 1977; G. E. Duke, pers. comm.) found that Shiny Cowbirds (*Molothrus bonariensis*) cast similar pellets. Whether Red-winged Blackbirds (*Agelaius phoeniceus*) produce similar pellets is not known. However, since red-wings and cowbirds represented only a small proportion of the bird population at the roosts containing these pellets, it is doubtful they contributed significantly to their deposition.

To obtain a rough estimate of the number of these pellets produced, a total of 30, 0.5 m^2-paper plots were randomly placed within a 1.2-ha roost of small (3–5 m) hardwoods near Lawrenceburg, Lawrence Co., Tennessee. Ten plots were placed on each of the evenings of 8, 14, and 15 February 1983, collected the following morning, and the number of pellets deposited during the night enumerated. This roost had an estimated bird population of 0.6–0.8 million birds, comprised of an estimated 61% grackles, 35% European Starlings, 3% Red-winged Blackbirds, and 1% cowbirds. Therefore, the estimated density of grackles in this roost was between 31 and 41 grackles/m^2.

The number ($\bar{x} \pm$ SE) of pellets cast per evening at this roost was estimated at 5.2 ± 0.8 pellets/m^2 for an estimated total of 62,400 pellets. Although the number of these pellets per plot ranged from 0–11, probably varying with the bird density within the site, the rate of deposition did not vary significantly ($F = 0.40$, $P = 0.67$) among the three nights.

Ten randomly selected pellets were fragmented and their composition by volume estimated by a random plot method (Dolbeer et al., Wilson Bull. 90:31–44, 1978) to include 90% hulls, chaff, and other vegetable residue (primarily corn), 5% rock, 4% insect exoskeletons, and 1% bone and shell.

Pellet casting has been well summarized for raptors by Duke et al. (Comp. Biochem. Physiol. 53A:1–6, 1976) and has been reported for several other species including: Northwestern Crows (*Corvus caurinus*) (Butler, Can. Field-Nat. 88:313–316, 1974) and Killdeer (*Charadrius vociferus*) (DeVlaming, Wilson Bull. 79:449–450, 1967). Additionally, Warham (Emu 57:78–81, 1957) collected pellets cast by Splendid Blue Wrens (*Malurus splendens*) from beneath their roosting site. However, to the best of my knowledge, this is the first reported observation and quantification of pellets cast by Common Grackles.—DANIEL J. TWEDT, *U.S. Fish and Wildlife Service, Denver Wildlife Research Center, Kentucky Research Station, 334 15th Street, Bowling Green, Kentucky 42101.* *Accepted 28 Mar. 1984.*

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Preflight behavior of Sandhill Cranes.—The purpose of this paper is to describe and quantify preflight behavior of Sandhill Cranes (*Grus canadensis*), including the exit of cranes from overnight roost sites. Preflight behaviors are social signals that convey information from one individual or group to another (Heymer, Ethological Dictionary, Garland Publ. Inc., New York, New York, 1977), and understanding the preflight behavior of Sandhill Cranes may assist in interpretation of social organization.

Methods.—Preflight behavior of Sandhill Cranes was studied from early January through February 1978–1980 near Rich Lake, Terry Co., Texas; during March and early April 1978–1980 along the Platte River between Sutherland and North Platte in Lincoln Co., Nebraska; during the last 2 weeks of April 1980 near the north end of Last Mountain Lake, Saskatchewan; during May 1980 near Delta Junction, Alaska; and immediately prior to nesting in May 1980 near Old Chevak, Clarance Rhode National Wildlife Refuge, Alaska.

Observations were aided by a 15 × 60 telescope. Postures and movements were photographed (35 mm) and filmed (16 mm). Descriptions and social interactions were recorded on tape during 1109 observation periods totaling 369.7 h. Behaviors were recorded continuously for 20 min during these observation periods using behavioral categories defined in this paper (preflight behaviors) and elsewhere (Tacha, Ph.D. diss., Oklahoma State Univ., Stillwater, Oklahoma, 1981).

Juvenile (young-of-the-year) cranes were distinguished from adults by brown feathering on the nape (Lewis, J. Wildl. Manage. 43:211–214, 1979). Sex of some cranes was determined in the field by observation of the unison call (Archibald, Ph.D. diss., Cornell Univ., Ithaca, New York, 1975). Sex was determined during 54 of the observation periods when both members of a pair were present, by assuming that females follow males. None of these sex identifications was found to be incorrect when unison calls were subsequently observed. Observation of one crane of a pair following another was used to designate sex during some observation periods in which the unison call was not observed. Pairs (two adults) and family units (two adults and one or two juveniles) were identified by their close proximity (compared to other cranes in larger flocks); the tendency was for adult females of pairs to follow the