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Red Phalarope eating carrion.—The Red Phalarope (*Phalaropus fulicarius*) eats numerous invertebrate species and tiny fish outside the breeding season, and at sea (Bent, U.S. Natl. Mus. Bull. 142, 1927; Niethammer, 1942, *in* Birds of the Soviet Union, Vol. 3, G. P. Dement'ev, N. A. Gladkov and E. P. Spangenberg, eds., Israel Prog. for Sci. Transl., Jerusalem, 1969). In this note I describe the behavior of a Red Phalarope eating carrion, which is the first such record for this species.

On 11, 13 and 14 September 1978, I observed a Red Phalarope in first basic plumage, at the freshwater East Pond of Jamaica Bay Wildlife Refuge, New York City. Observations were made from a distance of about 15 m using 7 × 35 binoculars and a 15× spotting scope. The phalarope vigorously picked and pulled at the flesh surrounding the ribs and sternum of three different floating bird carcasses, while swimming actively around them. It spent most of its time at the carcasses of a Red Knot (*Calidris canutus*) and a Herring Gull (*Larus argentatus*). Both carcasses had the flesh exposed in the area of the sternum and body cavity; examination in the hand revealed no invertebrates on either carcass upon which the phalarope might have been feeding. Several other observers also saw the phalarope feeding on the same carcasses at other times during the same period.

Many other carcasses of shorebirds, gulls and waterfowl in various stages of decomposition were present but all were on land and all were unopened; the phalarope was never seen visiting them.

It seems unlikely that the Red Phalarope with its rather blunt bill could have opened the carcasses by itself and although the bird was often observed on land it may not have fed on carcasses on land because they were unopened. At the end of my observations very little meat remained on the carcasses, and the phalarope was observed feeding in typical phalarope fashion, presumably on aquatic invertebrates. This observation suggests that Red Phalarope could feed facultatively on carrion while at sea, an aspect of their feeding ecology previously unreported.

I thank Joanna Burger, Charles F. Leck and Sharon Ann Brady for comments on this note. This research was funded by a grant to J. Burger from the National Park Service.—WADE WANDER, *Center for Coastal Environmental Studies, Rutgers Univ., Piscataway, New Jersey 08854.* (Present address: *RD3, Box 270AA, Somerset, New Jersey 08873.*) *Accepted 20 Aug. 1980.*

Wilson Bull., 93(4), 1981, pp. 557–559

Re-mating of a Lesser Snow Goose.—Mate selection and pair formation in most geese occurs during winter and spring (Delacour, Waterfowl of the World, Vol. IV, Country Life, London, England, 1964). Direct observation of the process in nature is difficult, but good evidence of winter pairing is provided indirectly by banding studies (e.g., Cooke et al., Auk 92:493–510, 1975). Exact timing of pair formation presumably depends on reproductive condition, availability of potential mates, previous pairing experience and perhaps social status. We describe events in the formation of a new bond by a female Lesser Snow Goose (*Anser caerulescens caerulescens*) immediately following mate loss and discuss their timing and significance.

Observations were made during May and June 1977, at La Pérouse Bay, Manitoba (58°45′N, 94°30′W), during the peak of nesting in a colony of Lesser Snow Geese. The female

involved nested 35 m from our live-in observation tower, and was identifiable by colored leg bands. Her mate was shot on 23 May 1977, on the third day of incubation. Subsequent behavior and movements of the female and her new "mate" were monitored opportunistically. In addition, during 39 one-h periods of instantaneous scan sampling (Altmann, Behaviour 49:227–267, 1974) over a 19-day period, time spent in alert, feeding, resting and maintenance activity was recorded.

General observations.—The female was sexually assaulted by neighboring territorial males (Mineau and Cooke, Behaviour 70:280–291, 1979) and harrassed by non-nesting pairs after her mate was shot. In the early morning of 25 May, between 32 and 41 h after the male's removal, she abandoned the nest and the eggs were preyed upon. Pairs searching for nest-sites, non-nesting pairs and yearlings all frequented the immediate vicinity of the nest between the time of the male's death and nest loss. Thus, we do not know when the yearling male which subsequently formed a bond with the female first visited the area. The behavior of yearlings while on the nesting colony suggests that he was present before and during the female's harassment. Although not banded, the yearling was recognizable by his distinctive plumage. We first noted his presence near the female at 07:55 on 25 May, within hours of nest loss.

Bond formation and sexual behavior.—Throughout 25 and 26 May the yearling chased the female. Both birds were on the ground and vocalizing during the chases. The female held her wings partially open at such times. The ground pursuits changed abruptly into aerial pursuits lasting less than 1 min, usually culminating with the birds landing together near the take-off point. In four of five fully observed sequences, both birds fed quietly after landing; in the first sequence seen, the male returned after the female, remained alert and fed later. These "courtship flights" were observed in decreasing frequency during the week after the first chase was seen. Prevett and MacInnes (Wildl. Monogr. No. 71, 1980) observed similar behavior by snow geese and reported its occurrence during winter and spring.

By 18:00 on 25 May, nesting pairs and other geese treated the female and yearling as a "pair," threatening them if they approached too closely to nests or other individuals. The new "pair" was not aggressive in these encounters at first and usually fled. However, late on 26 May, they began responding jointly to threats by assuming threat postures and rushing at other geese. We did not observe the two performing a triumph ceremony.

Copulation is an important pair bond reinforcement behavior in waterfowl (Delacour 1964). No complete copulations were observed but the male engaged in intensive bouts of pre-copulatory display on 27 and 28 May, and 8 June. The female ignored these displays except on 28 May when she briefly joined in typical pre-copulatory dipping. The male first displayed 3 days after nest loss, that is 7 days into the female's "incubation" stage. Mineau (M.Sc. thesis, Queen's Univ., Kingston, Ontario, 1978) noted that females of established pairs ignore their mates' sexual advances soon after incubation begins. Our failure to observe copulation by this pair probably reflects both the female's physiological condition and the infrequency of the event.

Throughout the first 10 days of the association, the male was more alert than the female (40.0% vs 23.4% of instantaneous scans) and fed less (53.8% vs 70.3%) ($\chi^2 = 9.49$, df = 1, $P < 0.01$). The frequency of rest and comfort behaviors did not differ significantly. After the first 10 days the frequency of each behavior did not differ between the two birds. Mapping of the pair's location at each scan sample (N = 269) showed that they were within 100 m of the female's destroyed nest on 75% of the scans. Distance from the nest increased gradually over the 19 days of observation. Neither goose was seen after 12 June; this last sighting coincided with a molt migration when most non-nesting snow geese left La Pérouse Bay.

The triumph ceremony is usually accepted as an absolute criterion for existence of a pair bond in geese. Although we did not observe this display, the consistent close proximity over 3 weeks, the coordination of behaviors and pair-pair interactions all indicated that a bond

of some sort existed. Because the mate selection process in geese may involve a series of temporary associations, the bond formed here need not have been permanent. However, Wood (J. Wildl. Manage. 29:237–244, 1965) reported that Canada Goose (*Branta canadensis*) pairs formed while at least one of the members is immature (as in this case) are as likely to persist as are those formed when both members are adult. In the spring of 1978, this banded female was observed nesting with a white male 80 m from her 1977 site, within the home range occupied by the newly formed "pair" in 1977.

Cooch (Ph.D. thesis, Cornell Univ., Ithaca, New York, 1958) assumed that pair formation of some snow geese began in their yearling summer; our observations confirm that possibility. Although bond formation such as we describe is likely to occur relatively infrequently, it runs counter to the assumption that all pairing occurs during winter and spring (Cooke and Sulzbach, J. Wildl. Manage. 42:271–280, 1978).

The reported length of the period between mate loss and re-mating in geese is variable. In our case, a bond of some sort was formed within 48 h. Re-mating before the next breeding season is common in snow geese (Cooke, unpubl.). Prevett and MacInnes (1980) reported that some snow geese remained unpaired in the breeding season after mate loss. Similar variability in interval from mate loss to re-mating has been reported for Canada Geese and is likely true for other species (Sherwood, Trans. N. Am. Wildl. Nat. Res. Conf. 32:340–355, 1967; Weigand et al., J. Wildl. Manage. 32:894–905, 1968; Jones and Obbard, Auk 87:370–371, 1970). Much of the variation can be explained by difference in time of mate loss relative to the next breeding opportunity and the availability of mates. Although a succession of temporary associations may usually be a part of the pair formation process in geese because it allows optimal discretion in choice of mate, circumstances may not permit. In particular, loss of mate during the nesting period characterized both cases where a new bond was formed within a very short time (Jones and Obbard 1970, this study). The male's important role in protection of the female and/or nest clearly favored the short interval (Ewaschuk and Boag, J. Wildl. Manage. 36:1097–1106, 1972; Mineau and Cooke, Wildfowl 30: 16–19, 1979). Mate loss at other times of the year could result in longer re-mating times because both need for a mate and availability of potential mates will differ.

Acknowledgments.—Funding for the La Pérouse Bay snow goose study was provided by the Canadian Wildlife Service, National Research Council of Canada and the Wildlife Management Institute. We thank M. A. Bousfield for assistance in the field and C. D. Ankney for comments on an earlier draft of the paper.—KENNETH F. ABRAHAM, PIERRE MINEAU AND FRED COOKE, *Dept. Biology, Queen's Univ., Kingston, Ontario K7L 3N6 Canada.* (Present address: KFA, *Dept. Zoology, Univ. Western Ontario, London, Ontario N6A 5B7 Canada;* PM, *Canadian Wildlife Service, P.O. Box 5050, Burlington, Ontario L7R 4A6 Canada.*) *Accepted 17 Nov. 1980.*

Wilson Bull., 93(4), 1981, pp. 559–560

Common Eider plays "possum."—Death feigning is widespread but not extensively described in animals. Reports of death feigning in birds are given by Armstrong (Bird Display and Behavior, Dover Publ. Co., New York, New York, 1965), Vogel (Auk 67:210–216, 1950), Francq (Am. Midl. Nat. 81:556–568, 1969), and others. Observations of invertebrates and vertebrates indicate that it is used only when escape is otherwise impossible and that it appears to be a stereotyped response.

At 13:30 on 17 January 1979, at Great Island, Wellfleet, Barnstable Co., Massachusetts, I observed an ill adult female Common Eider (*Somateria mollissima*) feigning death. My dog