

Some observations on the breeding of Northern Phalaropes at Scammon Bay, Alaska.—These observations on Northern Phalaropes (*Lobipes lobatus*) were made from 10 May to 30 June 1965, at the village of Scammon Bay, Yukon-Kuskokwim Delta, Alaska. Many field notes were lost when fire destroyed the quarters my assistant and I occupied on 29 June, hence the brevity of this account.

Breeding season.—These birds arrived near Scammon Bay in mid-May, but, for at least a week only females were seen. Gabrielson and Lincoln (*The birds of Alaska*, Harrisburg, Pennsylvania, Stackpole Co., 1959; p. 421) state that females of this species are seldom found on the breeding grounds in Alaska after 20 June, but they were still present in numbers about Scammon Bay 28 June, and a female was also seen in the Lithkealik River valley 29 June.

Nesting habitat.—In this area Northern Phalaropes nest on the sedge grass marshlands, in clearings in the alder-willow scrub zone on the lower slopes of the Askinuk Mountains, even on the lower heath-covered slopes just above the scrub zone. Both in 1964, when Michael Wooton (pers. comm.) spent two weeks in this area, and in 1965, nests were found in the greatest concentration along the lower edge of the scrub zone at the very foot of the hills (I found eight nests in a quarter-mile stretch there). The cover the alders and willows provide may make this zone particularly attractive, or perhaps the runoff from the hills is a factor. Red Phalaropes (*Phalaropus fulicarius*) were seen on the ground, only on the north side of the Kun River which runs past the village. They almost certainly nest there, but no nests were found in 1963 or 1964 (A. and S. Baldrige and M. Wooton, pers. comm.) or in 1965. In the marshlands north of the river, I thought that both Northern and Red phalaropes appeared to use identical habitats (on 13 June, Northern Phalaropes were seen feeding only 10 yards away from a pond occupied by a pair of Red Phalaropes). However, the Baldriged (pers. comm.) thought that in the other years the Red Phalaropes appeared to prefer pools with muddy shores while the Northern Phalaropes preferred areas with emergent vegetation. D. F. Parmelee (pers. comm.) found that on Jenny Lind Island off southern Victoria Island, N.W.T., Canada, in 1962, a small number of Northern Phalaropes nested in the same area of wet tundra where Red Phalaropes were common; he saw no antagonism between the two species.

Mating.—I observed 14 copulations. All took place on the water, with the female apparently afloat. The female often sank during mating, so that only her head and neck remained above the water. Although on one occasion a male touched the back of the female's head with his beak, males were never seen to seize the feathers of the female's head or nape.

Some copulations were preceded by the female swimming near the male with her neck and breast puffed out and her bill held horizontally. I did not see any specific invitation to copulation as described by N. Tinbergen (*Ardea*, 24: 9, 1935). Some copulations were initiated by the male—he merely fluttered his wings and hovered onto the female's back, where he maintained himself during coitus by wing-fluttering. One female took wing while the male was still fluttering on her back, about six seconds after he had settled on her. At least one male was seen to attempt to mount first one and then another female. Wing-whirring by both males and females was often observed, but it had no obvious relation to copulation; often it preceded flying. It seemed to indicate a general, momentary excitement such as one may expect to accompany the intention to take flight, rather than to signal a specifically sexual excitement as Tinbergen (*op. cit.*: 19) suggested.

Absence of territorialism.—Tinbergen (*op. cit.*: 4-5) gives an elaborate description of the territorial behavior of one female of this species in eastern Greenland. I have

also observed behavior which I interpreted (wrongly as I now believe) as a sign of territorialism in several females one day at Tuktoyaktuk on the eastern edge of the Mackenzie Delta (*Arctic*, 11: 98-99, 1958). However, I saw absolutely no evidence of territorial behavior in the many individuals observed about Scammon Bay. On many occasions females fed peaceably within a foot of one another, and only about four momentary chasings of one female by another were seen. Even at the height of the breeding season these birds showed a strong social tendency and kept together in groups of about 20 while feeding (I saw a group of this size along a 50-yard stretch on the shore of a small lake, with the rest of the lake unused, on 19 June). Two out of at least 25 nests found were only 9 yards apart. The phalaropes never showed any aggression toward the Western Sandpipers (*Ereunetes mauri*) or Dunlins (*Erolia alpina*) that often fed very close to them.

Nesting.—At least 25 nests were found in 1965, and all but 1, which had three eggs, eventually contained four eggs. The interval between the laying of successive eggs of any one clutch was generally 24 hours and, about equally often, 48 hours. The nests were simple cups in dead grass or heath; none had an obvious lining and they could all have been made by a mere rotation of the bird's breast without any actual nest building.

In 11 nests that I checked repeatedly, 2 hatched young (on 25 and 28 June), 2 were deserted by the adults (1 after one egg had been laid, the other after four eggs had been incubated for over a week), and 7 were robbed, almost certainly by predators other than the natives. In one case the predator was a Long-tailed Jaeger (*Stercorarius longicaudus*) which, according to some of the children of the village, took the last two eggs from a nest from which two other eggs had already disappeared earlier. Thus, of the clutches laid, circa 18 per cent hatched, and of eggs laid, circa 19 per cent hatched. The weights of four downy young less than 24 hours old were 4.0, 3.6, 3.7, and 3.7 g.

Incubating males disturbed on the nest often took off silently while the observer was still about 50 yards away. On other occasions, probably when hatching was imminent the bird sat tight, then flew about 10 yards away and performed a distraction display, which consisted of his standing in a crouch with tail depressed and fanned-out tail and wings lowered and partly extended. This display was generally silent, but on two occasions it was accompanied by a soft call—*gwook*. A male and, on another occasion, a female disturbed from the nest gave a very snipe-like *caatch* call. At one of the two nests in which the young hatched both parents were present and responded to the presence of an observer.

Additional observations.—Spinning was seen only during the first two weeks the phalaropes were present. This suggests that spinning is used only when the birds are feeding on certain types or on certain life stages of prey. A female was seen swallowing, with great difficulty, a dead fish about an inch long. Another was seen on 14 June feeding in shallow water with side to side sweeps of the bill like an Avocet.

Males showed marked individual differences in plumage, some being almost as highly colored as females, while others were brown and white only. E. W. Pfeiffer (pers. comm.) has also noted this in Wilson's Phalaropes (*Steganopus tricolor*). One abnormally colored male I saw had a large white patch on either side of his head towards the nape.

The journey during which these observations were made was supported by grants from the Arctic Institute of North America and the Boreal Institute of the University of Alberta.—E. OTTO HÖHN, *Department of Physiology, University of Alberta, Edmonton, Alberta, Canada*.