短 報 Short Communications

First Observations of Copulatory Behavior of White-fronted and Bean Geese during Migration in Japan

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It is rare for sexual behavior of wild migratory geese to be observed, either on migration or at the breeding grounds (OWEN, 1980). The copulatory behavior of both the White-fronted Goose *Anser albifrons* and the Bean Goose *A. fabalis* have recently been observed on their spring staging grounds in Hokkaido, northern Japan for the first time.

Pre-copulation, copulation and post-copulation behavior of the White-fronted Goose (M. KURECHI)

While observing a flock of some 70 White-fronts, two birds were found performing pre-copulation behavior at the edge of the water at Lake Oikamanae (143°30'E, 42°33'N), eastern Hokkaido, on 19 April 1983. It was a calm, cloudy morning, about 5:40 a.m.; the birds were observed using a telescope ($\times 25$) at a range of 300 m.

The two birds seemed to be paired and were swimming slowly side by side. One of them, supposedly the male, was larger and floating much higher on the water than the other (presumed to be female). While swimming they began to make 'head-dipping' movements, similar to low-intensity bathing, except that the wings were folded and motionless. They continued synchronized head-dipping for about 5 seconds until disturbed by another White-front nearby.

The two birds swam away for about 20 m and began to perform the head-dipping behavior again. After head-dipping for 15 seconds or so, the 'male' mounted the 'female.' Mounting lasted for some 3 seconds. The mounted bird, apparently a female, stretched its neck down and sank most of its body below the water.

After dismounting, the pair started head-dipping again side by side on the water; this lasted for about 5 seconds. Then after 'head-dipping', they flapped their wings 6-8 times while raising their bodies up in the water so as to show the black barring on the belly of the male. Then they rested for a while on the shore nearby before entering the water again to swim side by side. No other noteworthy behavior relating to copulation was noticed.

Copulation of the Bean Goose (Y. FUKUDA)

While watching a flock of about 100 Bean Geese at Lake Utonai (141°43'E, 42°42'N) in central Hokkaido on 26 March 1983, two geese were found copulating on the water near the lake shore. It was a fine morning, about 10:00 a.m., with a maximum temperature of 4°C. The birds were observed at a range of a few hundred meters using a telescope ($\times 25$). Mounting had already begun when they were noticed. The 'male' often moved its body and swung its tail sideways during copulation, which lasted for about 10 seconds. The 'female' lowered its body, slightly spread and sometimes moved its wings. The male's wings were half open and flapped in synchrony with the movements of the female. No post-copulatory behavior was noticed after dismounting.

These are the first observations of the copulatory behavior of White-fronted and Bean geese in Japan. Several authors have described the copulatory behavior of wild geese (e.g. COLLIAS & JAHN, 1959; JOHNSGARD, 1965; OGILVIE, 1978; OWEN, 1980). Our observation in Japan was basically similar except for the following components.

- a) During copulation the male was not seen to grasp the feathers of the back of the female's neck.
- b) Post-copulatory stretching-the-head-up, lifting-the-folded-wings and cocking-the-tail were not

seen.

- c) Post-coital vocalizations were not heard, perhaps because of the distance involved.

Literature Cited

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渡りの中継地におけるマガンおよびヒシクイの交尾行動の観察 1983年4月19日に、北海道十勝支庁の生花苗沼で、マガンの交尾前・交尾・交尾後の行動を観察した。同年3月26日には北海道胆振支庁のウトナイ湖でヒシクイの交尾行動を観察しているので、それらを併せて報告する。野生ガンの生殖行動の観察例は少なく、本報告は日本での初記録と思われる。——吳地正行・福田佳弘。