

Observations at a Nest of a Giant Canada Goose atNoxubee National Wildlife Refuge

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INTRODUCTION:

Resident Giant Canada geese (Branta canadensis maxima) have been seen nesting on Noxubee Refuge in the past, but to the authors' knowledge, no migratory Canadas breed there. On April 14, 1972, a Giant Canada goose was seen nesting on the south edge of Doyle Arm (see enclosed map). On April 28, we went to the nest site to observe the actions of the hen and gander. This pair is almost certainly offspring of the resident geese that were introduced on the refuge several years ago. The total time of incubation up to the day of observation is not known, but we estimate a period of three weeks.

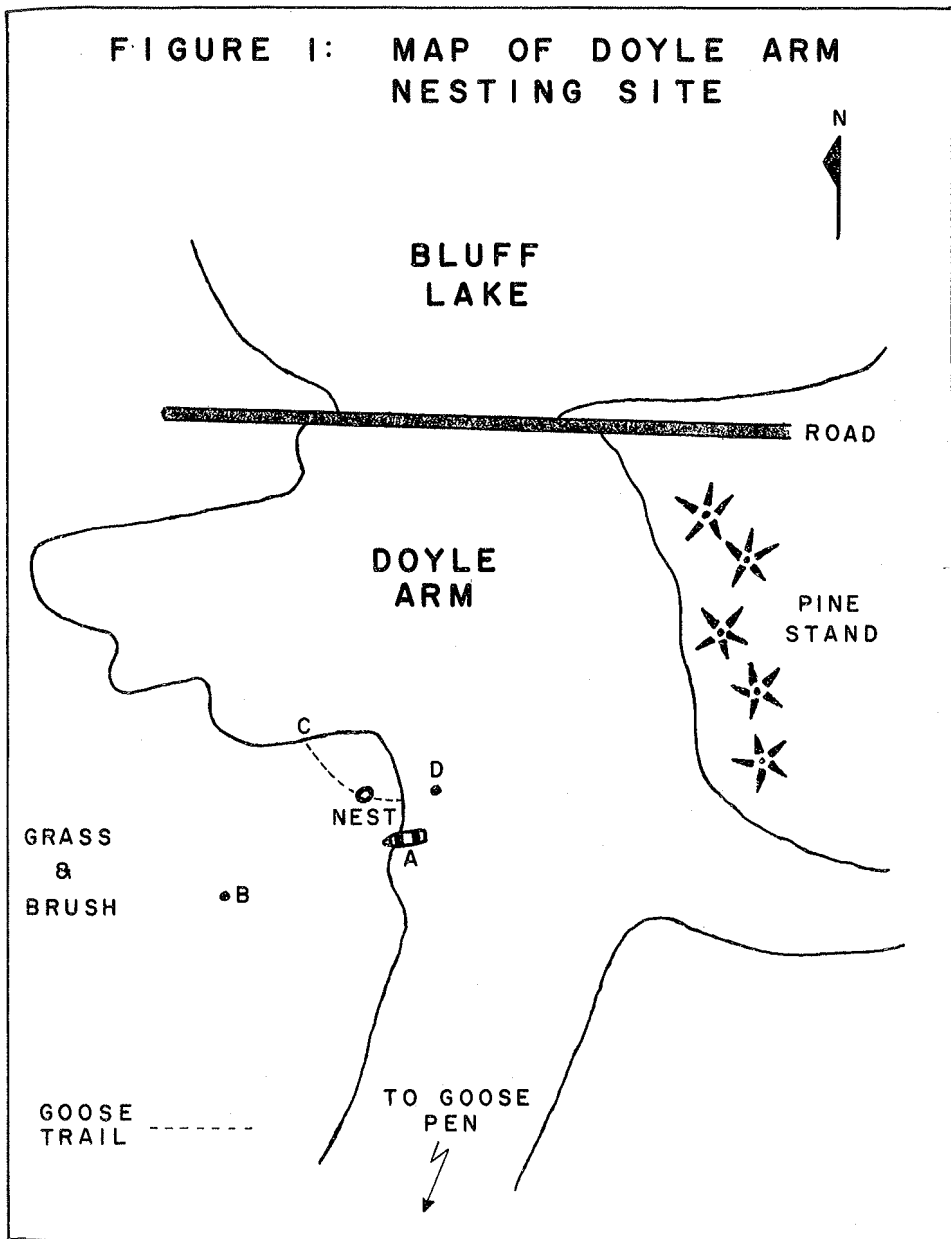
OBSERVATIONS:

We arrived at the nesting site by boat at 9:00 A.M., positioning ourselves about 35 feet south of the nest at point A as shown in Figure 1. The day was overcast with a brisk wind from the southwest. The female Canada goose was settled on her nest at this time remaining motionless as the boat approached and came to shore. Her head and neck were outstretched pointing groundward and resting on the edge of the nest. As we watched her, she watched us.

The nest stood approximately four inches high with an outside edge to edge diameter of two and one-half feet. It was oval in shape and was composed of small sticks and a dried broom sedge type of material. The edge of the water was 20 feet from the nesting site. Three scrub-like bushes about three feet high bordered the nest to the east, and a small trail led between these from the nest to the water. A large area of marsh grass and brush stood to the west of the nest.

As we made notes on the nesting habitat, the head of another Canada appeared above the marsh grass at 9:10 A.M. approximately 200 feet southwest of the nest site. We thought

FIGURE 1: MAP OF DOYLE ARM NESTING SITE



this goose to be the male as it slowly moved north toward the nest in a circling manner observing us at the same time. This goose moved from point B in Figure 1 to the edge of the water near point C. It waded and swam in this area for an hour and one-half.

At 10:00 A.M. the hen stood up over her eggs to prod and roll them. After five minutes of this activity, she sat back down on the nest with head upraised. Shortly thereafter, we shifted our boat position and moved north and to the west around the projecting point of land as shown on the map. We hoped to get a closer look at the supposed gander. This goose continued to swim and wade paying little attention to us. Then, at 11:00 A.M., the "male" swam east and around the point to the nesting site. Both geese were out of our view at this time as we heard one goose call a few times. In the next few minutes we watched both Canadas walk from the nesting site to point C and then swim out into the water. We were approximately 100 feet from the geese at this time and definitely decided that they were a mated pair. One of the geese kept ruffling its wings, dipping its head, and otherwise seemed to be stretching; we assumed this activity as customary in the female after long periods of incubation.

While both geese were away from the nest, we decided to shift our position again back to the nest site so that the number of eggs could be counted. As we eased up to shore just in front of the nest, one of us got out of the boat to peer in the nest. At that instant one of the geese, probably the gander, began to "honk", and both geese flew from point C to point D as illustrated by Figure 1. They flew just barely over our heads landing in water not 30 feet from us. Close examination of the nest revealed that the hen had left the eggs mostly covered with down. One egg was entirely visible as were parts of two others. We didn't touch the nest, but from the space occupied by the visible eggs, we estimate the clutch size at four to five eggs. After quickly inspecting the nest, we moved the boat back to the original observation point.

During this time, both birds swam up and down impatiently in front of the nest. The gander showed his displeasure by honking nervously. The hen came up on shore three times as if going to the nest, but changed her mind and went back to the water each time. At this close range, we could detect physical differences in the two birds. The male was the larger of the two and had a long, slender neck. The smaller female

had a shorter, thicker neck and made no sounds. Only the gander honked and babbled. At 11:15 A.M., the hen jumped up on a nearby stump as shown in Figure 1 at D. She stood there only 20 feet away from us preening her breast feathers. She would dip her head into the water and preen as if trying to wet these feathers. At 11:20 A.M., she moved back into the water, dunked her head a few times, and then climbed onto the stump again to continue preening. The male sat calmly in the water a few feet from here overseeing the entire performance; he preened himself and cackled a few times.

At 11:30 A.M. the hen slid off the stump and swam 15 feet to land. She then cautiously walked up to the nest along the previously mentioned trail. After watching the nest a few more minutes, she moved halfway onto the eggs. The gander maintained his same position in the water until the hen climbed onto the nest.

At 11:45 A.M. four Canada geese flew over the nest site heading south toward the goose pen; they appeared to sit down in that area. These geese honked and cackled as they flew over. The gander we had been watching then casually swam south toward the goose pen.

The hen maintained her position on the nest until 3:00 P.M. From 12 noon until this time, she stood up to prod the eggs only once. This incident occurred around 2:00 P.M. Then at 3:00 P.M. we saw the gander of the nesting pair flying north toward the nest site from the direction of the goose pen. He landed in the area of Point C. After swimming a few minutes, the male honked; the female promptly walked off the nest at 3:10 P.M., swimming around to him at point C. She preened, stretched and dipped her head as earlier in the day. At 3:40 P.M. they swam together back toward the nest. The male appeared to be "walking her home" as he dropped her off at the nest. The hen stood over the eggs for a few minutes and sat down over them with head and neck outstretched at 3:45 P.M. The gander then continued to swim around in the Arm. The hen remained motionless on the nest and constantly watched us. At 5:00 P.M. we left the observation point.

DISCUSSION:

In determining whether or not the nesting pair we observed behaved in a similar fashion to other Canada geese nesting farther north, we referred to a paper written on the nesting

habits of 141 pairs of Canada geese at the Bright Land Farm in Cook County, Illinois. We found that these geese lay on the average of four to six eggs a season depending on the age of the nesting pair. Canada geese mate for life, and as the pair grows older more eggs are laid per season (Kossack, 1950. American Midland Naturalist, 43: 627-649). Kossack also found that average nest size was 27" X 31" X 4" and that nest size also increases with age of the pair. The nest we observed was of similar dimensions. Our observations differ in that Kossack found that nests were usually seven feet from the edge of the water and that the male often stood vigil over the nest from seven to 20 feet away. The nest we observed was about 20 feet from water, and the male we watched ranged from several hundred feet to 15 feet from the nest.

Kossack also noted that both male and female defend their territory. After incubation begins, the male assumes an offensive role in protecting the nest, and the female takes on a defensive role. These observations were quite similar to ours in that the male vocally displayed his displeasure at intruders, whereas the female made no sounds. He also noticed that it is common for an incubating Canada upon observing an intruder to settle deep in the nest with head and neck out - stretched and flat against the ground or side of nest to make herself as inconspicuous as possible. Our observations were exactly the same in this respect.

Other similarities in the incubation habits were that the female usually faces a strong wind and will stand up to roll the eggs and stretch at 50 minute intervals. Kossack also stated that the hen will use her bill to cover the eggs with down every time she leaves it. Our observations showed the same movements and activities, yet Kossack noted that hens do not leave the nest to feed and rest at any particular time. We noticed a mid-morning and mid-afternoon rest session but do not know if their schedule is a daily one.

One other observation similarity is that the hens Kossack observed would stand over the nest dripping water off their breasts onto the eggs after leaving the nest for a period. We noticed a related act when the hen used water to preen her breast feathers and then stood over the eggs for a few minutes before sitting down. Kossack did not know if this activity aided in hatching the eggs, but it would seem that a high humidity could be maintained about the eggs during incubation.

Based on limited observation we can conclude that Canada geese nesting as far south as Mississippi are very similar in their nesting behavior to geese breeding farther north. However, it should be remembered that this observation was for only one nest, whereas those of Kossack's were concluded from several different nest observations.

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