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BIRTH OF A BLACK DUCK FAMILY (*ANAS RUBRIPES TRISTIS*).¹

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Plates XVIII-XIX.

FEW OF US I imagine have had the good fortune to be present at the birth of a Black Duck family, and no one has ever recorded the event photographically, at least, so far as I am aware.

However that may be, it certainly is one of the hardest Ducks' nests to find, as Mr. Bent² rightly says, since it nests in such a variety of situations not seeming to show a preference for any particular kind of surroundings provided it can find sufficient concealment, that one never knows where or how to look for it and can only happen upon it by chance. This was so in my case, as I unexpectedly stumbled across a nest in a small cattail swamp whilst looking for Rails. Not only was this a piece of good luck, but more extraordinary still, the luck held good for nearly a month during the incubation of the eggs, notwithstanding the obstacles that presented themselves owing to the unfavourable location of the nest. This as I have already said was in a small cattail bed, the Duck flushing from her clutch of nine eggs on May 30 of the present year, 1935. As to the exact state of the eggs of course I had nothing to guide me, except the fact that on several days previously I had certainly passed close to the nest without the Duck flushing, which possibly might indicate that this was the first day of earnest incubation, a supposition not very far short of the mark as will be seen later. Even after the Duck had left it was no easy matter to detect the nest so well was it concealed. Before proceeding further, it may be well to point out the various obstacles that precluded all thoughts of a close up study, i.e. by the erection of a blind, as the locality was in the proximity of a busy suburb of

¹ Read before the American Ornithologists' Union, Toronto, Ont., October 24, 1935.

² Life Histories of North American Wild Fowl by A. C. Bent, 1923, Bull. 126, Smithsonian Institution, Washington.



HATCHING BLACK DUCKS.

UPPER: EGG AT TOP SHOWS METHOD OF PUNCTURING AND BREAKING THE SHELL,
DUCKLING PARTLY EMERGED.

LOWER: BILL AND HORNY KNOB AT TIP NOW VISIBLE.

Montreal, being bounded on three sides by railways, and on the fourth by factories and a row of houses. The small swamp itself was near the end of two very large meadows, there being a shed on the east side not more than one hundred yards from the nest, where over twenty head of cattle were milked night and morning, whilst on the west side running parallel with the swamp and also within one hundred yards of the nest, was a cinder embankment supporting a connecting loop line primarily intended for freight trains only, but which is also now being used by foot passengers and even cyclists as well. In addition, ones' movements were plainly visible from all points of the compass, and to have erected a blind or even set up a camera for any length of time under such conditions, would certainly have spelt disaster for the nest and eggs. I therefore reluctantly abandoned all ideas of photographing the Duck on her nest, contenting myself with the almost forlorn hope of eventually being able to record photographically the method adopted by the young Ducks in freeing themselves from the shell, which method has been so graphically described in words by Dr. Chas. S. Allen¹ in 'The Auk' for 1893, and to which Mr. A. C. Bent refers in his 'Histories of North American Wild Fowl.' On the day of discovering the nest I had no camera with me, but two days later, June 1, I visited the site again, and obtained pictures of the very well concealed nest before partially opening it up to show the eggs. Both on this, and the previous occasion, and again on June 11, when I obtained my one and only picture of the old bird flying, the Duck had always left the nest in the orthodox fashion, i.e. by an upward spring of eight or ten feet before going away on a direct flight, but henceforth as incubation advanced, she practically abandoned the spring, always sailing away low down for a considerable distance before rising, thus making photographing her almost an impossibility. Never once did she give vent to a quack or sound of any kind, and as would be natural the drake was never seen or heard, these gallants usually forsaking their partners after the laying of the eggs. My next visit was on June 6, when I obtained an excellent picture of the nest and eggs just as they appeared when the Duck left them, without any interference of the surroundings on my part, whatever. I now let five days go by before again visiting the site, on which occasion I was fortunate enough to secure the picture of the bird leaving her nest as already mentioned, as well as one of the nest and eggs, which on this occasion seemed far more noticeable and exposed than heretofore, although I had done nothing to the surroundings to make them so. Allowing still another five days to elapse, or until June 16, I was glad to find the nest and eggs looking far more compact and less visible than on my last visit, no doubt made so by a further addition of the

¹ The nesting of the Black Duck on Plum Island by Chas. S. Allen, 'Auk,' vol. X, 1893, pp. 53-59.

Ducks' down and other material to the nest. As incubation had now been going on for some time, I decided to open one of the eggs and make sure exactly how matters stood, and it was from the examination of the embryo that I judged it would be another week or more before the eggs would hatch. In consequence I kept away from the nest until early in the morning of the 23d, or a week since my last visit, when I luckily found the eggs still unhatched. From the opening of another of these eggs and inspection of the embryo it seemed certain the eggs might hatch at any moment, so I decided to keep in close touch with the nest visiting it at short intervals, but it was not until 12.45 p.m. the next day that the long looked for event took place, and I was more than fortunate in being there at the time, and in securing a picture of at least one egg which clearly shows, I think, the method adopted by the young Duck of freeing itself from the shell. This egg is on the left of the nest, the first picture showing the young Duck partly emerged as well as the regular punctures encircling the shell, these eventually resulting in the breaking down of one-third of it, this portion usually splitting from left to right as seen in my picture and described by Dr. Allen. The next photograph depicts the head and bill with its horny knob on tip as the duckling still further emerges, whilst the third picture shows the duckling clear of the egg and the other six—of the original nine—free also of their shells. Five other pictures represent the ducklings in the drying out stage two hours after emergence.

As already mentioned, the hatching commenced somewhere about 12.45 p.m. and I remained at the nest until 3.15 p.m., when a heavy thunderstorm prevented any further work with the camera, and forced me to beat a hasty retreat as well. During my arrival at, and departure from the nest, nothing whatever was seen of the mother Duck, but it was evident from the flattened down state of the nest and empty egg shells the next morning, that she must have returned soon after I left and brooded the young during the night until they were thoroughly dried out and stronger, and then led them away, since no trace of young or old could I find anywhere notwithstanding a most persistent search. The nest was composed entirely of dry cattail leaves with down from the breast of the mother Duck added as a lining, whilst its dimensions were as follows, viz: outside diameter fourteen, inside seven inches; outside depth six, inside three inches. The measurements of the creamy buff eggs average 2.38×1.72 inches. If I was correct in assuming the first day of incubation to have been May 30 (the day on which I found the nest) then the incubation period of this set of eggs was 25 days. Various periods I find have been given, 25 to 27 days, and 26 to 28 days, so that I was not very far, if at all, short in my first assumption.

On hatching, the skin of the duckling appears to be of a dark reddish hue, wet and slimy and almost bare, except for the small dark hairs in their

protective coverings widely separated and which adhere to the skin. These on drying out no longer adhere to the skin but split open, allowing the tufts of down to escape from their protecting sheaths, and by so doing, convert a none too pretty nestling into a beautiful downy duckling.

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HATCHING BLACK DUCKS.

UPPER: DUCKLING AT TOP NOW CLEAR OF SHELL, OTHER SIX (OF ORIGINAL NINE)
ALSO FREE.

LOWER: DRYING OUT; TWO HOURS AFTER EMERGING.