

THE BREEDING OF THE BLUE-WINGED TEAL
IN MARYLAND.

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THE Blue-winged Teal (*Querquedula discors*), is a common breeding bird on the marshes of the Blackwater River in Dorchester County, Maryland. The first written record of this fact appeared in the 'Maryland Conservationist,' Fall Issue, 1929. The article containing the information is unsigned, but I am assured by the editor of the journal, E. Lee LeCompte, that he himself wrote the following:—

"E. Lee LeCompte, State Game Warden, for some years past, has had an argument with one of the prominent officials of the Bureau of Biological Survey relative to the propagation of blue-winged teal in Maryland territory, that official claiming that the blue-winged teal would not propagate south of New Jersey, Mr. LeCompte claiming that they would and that they have for some years past propagated in the Maryland marshes, but admitted that, due to spring shooting, this species of wild fowl had decreased, owing to the fact that they were killed in numbers during March and up until April 10, and claimed that, since the laws were passed providing for the closing of the wild fowl season on January 31 which provided protection for the mating and nesting birds, the blue-winged teal were coming back into Maryland territory and showing a heavy increase, and, to prove the assertion, Mr. LeCompte authorized W. G. Tregoe, Deputy Game Warden of Cambridge, Maryland, to secure some young birds which had been hatched in that area. These little fellows are very hard to catch and Mr. Tregoe found that he had some job on his hands in securing the birds for scientific investigation and propagation. However, on July 13, Mr. Tregoe secured one and, on July 21, two, and delivered the three birds to Mr. LeCompte who transferred them to the State Game Farm, at which time Dr. H. C. Oberholser of the Bureau of Biological Survey, was notified and requested to send someone to the State Game Farm to make an investigation of proof that these birds were blue-winged teal.

"On July 31, Mr. Talbott Denmead, Assistant United States Game Conservation Officer, examined the birds and pronounced them to be blue-winged teal."

In an article entitled 'The Blackwater Marshes in Summer' in the same periodical, Summer Issue, 1930, p. 8, Talbott Denmead reports the bird life he observed on a trip down the Blackwater River on July 21, 1930. He says:—

"It has long been a question whether the blue-winged teal was a regular breeder in Maryland or only an occasional pair nested in this section. We saw four different broods of little blue-wings, containing a total of 14 or 15 youngsters of various sizes."

Rather vague evidence indicates that the species bred many years ago, on Long Island, New York, and that it may nest occasionally today in the coastal marshes of New Jersey, but, other than the recent Maryland records, the only well substantiated breeding record of the Blue-winged Teal for the Atlantic coastal region south of Rhode Island is one from West Virginia. Why the fact that the species breeds in Maryland did not long ago find its way into ornithological literature is inexplicable, especially when one considers that sportsmen from all over the country, as well as from nearby Baltimore, Washington, and Philadelphia have for many years recognized and utilized Maryland's "Eastern Shore" as one of the finest ducking areas on the Atlantic Coast. The hypothesis that the Blue-winged Teal has begun but recently to breed commonly in Maryland is not tenable, for the oldest marshmen and baymen who live in the neighborhood of the Blackwater marshes claim the bird has nested there in goodly numbers ever since they can remember.

To carry on investigations in the Blackwater region the itinerant ornithologist must make his headquarters at Cambridge, Maryland, and travel fifteen miles southward over an excruciatingly painful road which crosses the marshes to Shorter's Landing, a small settlement in the heart of the Blue-winged Teal country. From there, if fortunate, one may hire a motor boat and reach the more accessible parts of the marsh that lie along the Blackwater River. This stream winds its slow, serpentine way through some twenty-five square miles of flat, low, brackish swamp land which supports a lush flora of rushes, grasses and pond weeds and which is studded with many shallow, muddy lakes and sloughs. Tide waters from Fishing Bay flow ten miles up the river to Big Blackwater Bridge, five miles beyond Shorter's Landing, and occasionally, during extremely high courses of tides backed by winter gales, they inundate the whole area. The main river, many of its tributaries and most of the ponds are navigable to small shallow-draft boats, but to see the greater portion of the marshes one must travel afoot over an exceedingly precarious terrain.

On my first visit to the region on April 28, 1931, accompanied by United States Game Protector Orin D. Steele, I waded about a half mile eastward from the road across the marsh to Backgarden Pond, the largest body of water in the area. There I observed twelve Blue-winged Teal swimming quietly about in mated pairs, close in under the muddy banks. They were fairly tame, permitting approach within twenty yards before they flushed. Then they arose in pairs, uttering faint, soft whistles, to drop again a few hundred yards away around the next point. Frequently, for no apparent reason, a pair arose and flew swiftly across the marshes, the female usually slightly in the lead. Their actions indicated that courtship was in progress. On April 30 I observed five pairs of teal at the same place, going through the same procedure.

From Backgarden Pond a creek of the same name makes a deceptive and tortuous horse-shoe bend eastward and southward and returns unobtrusively westward to join the main river a half mile below Shorter's Landing. On May 6 I chartered a boat at the Landing and chugged up this creek in company with old "Cap'n Billy" Tregoe, the warden who had obtained the young teal for LeCompte in 1929. We covered in a straight line, no more than two miles, but by following the twists and turns of the old-age stream we travelled at least five. In that five miles of stream we jumped thirty-seven pairs of Blue-wings. The birds were sitting in couples along the river bank, and they always flushed together, the female usually being the first to take alarm at our proximity. The first time or two each pair was flushed, the birds flew ahead of us a short way and alighted out of sight around the next bend, but on the second or third flushing they swung out around us over the marsh, the female slightly in the lead, to drop in the stream behind us. Each pair seemed loath to leave the immediate vicinity of the spot whence we first encountered it, and I hoped this was an indication that nesting territories were being established. It was evident, however, that the birds had not yet started to build their nests. We combed all the likely looking spots, especially where we encountered teal, but all we found were seven nests of Black Duck.

The inhabitants of the settlement at Shorter's Landing, who live on and from the marsh and hence are familiar with the habits

of its bird life, assured me the teal would not commence to nest for another two weeks. A friendly and inquisitive people, they were interested in my search and volunteered much valuable information. They told me that whereas the Black Ducks nest from late March through May, the Blue-winged Teal seldom start to lay before the middle of May. Secondly, during the incubation period the birds become very shy; while lone males are to be seen occasionally dabbling in the sloughs or flying over the marsh, the females are rarely encountered until they appear with their broods. Finally, the young usually hatch early in July, and spend most of their time in the sheltered sloughs and up the narrow "reaches" and tributaries of the main river. When disturbed they take refuge immediately in the tall marsh grasses where it is next to impossible to find them. The veracity of all these statements was borne out by my subsequent experiences.

During the following two weeks, spent mostly in scouting the marshes of Wicomico and Somerset counties for breeding waterfowl, although I found Black Ducks nesting in abundance everywhere, I did not observe a single Blue-winged Teal. Nor had any native in that vicinity, of the many I questioned about teal, ever known the species to breed there.

I returned to Dorchester County and went down the Blackwater on May 21 with Game Protector Steele. In traversing the same territory I had covered the preceeding 6th of May and encountered thirty-six pairs of Blue-wings, I observed but two teal, both males. We searched all day amid clouds of mosquitoes, but were unable to find a nest.

The next day I took "Cap'n Billy" Tregoe with me and, accompanied by two marshmen from Shorter's Landing who volunteered to help us in our hunt, we went several miles farther down the river. I observed on this trip sixteen male and three female teal, each female accompanied by a single male. Four of us combed both banks of the river for five miles, and investigated every likely spot in the vicinity. We searched along all the small tributaries and around the sloughs and ponds, but although we again encountered many Black Duck nests, we were unsuccessful as to Blue-winged Teal.

During the afternoon I collected one of the lone male birds,

which I found, as was to be expected, fully developed sexually. Its stomach and intestinal tract were empty.

On May 25, Tregoe and I made still another intensive search for nests. This time, with four volunteers to help us (the natives were taking a keen interest in the matter) we covered thoroughly every bit of the marsh from the road across it at the Landing, westward four miles to Harper's Pond, an area of some nine square miles. We encountered five pairs of teal, and four lone male birds, to say nothing of many Black Ducks with broods of young. But the teal nests still remained one of the mysteries of the marsh, along with the will-o'-the-wisp and the "fly-by-night."

We finally located a nest two days later (May 27) not two hundred yards from the houses at Shorter's Landing. It was on the bare, needle-covered ground in an open grove of loblolly pine, fully four hundred yards from the nearest water, ingeniously concealed under an overhanging grass tuft out of which grew an eighteen-inch seedling loblolly. The twelve eggs, carpeted in thick down, were incubated closely by the female bird, which did not flush until one approached to within five feet of her. Even then the cleverly camouflaged nest would not have been noticed by the casual observer. I collected it with the eggs, and found the latter to have been incubated about five days. The embryos averaged four millimeters in length and the optic cups were well formed.

The teal, during the incubation period, as the natives had intimated they would be, proved very shy and retiring. The females were seldom to be seen, but when in evidence were always accompanied by their mates. The non-incubating males of the Black Duck generally congregate in small companies and dally about together in the secluded ponds, but I never observed the male teal doing this. Occasionally two or three might be seen together, but there was no definite flocking.

I next returned to the Blackwater marshes on July 10. I hoped at that time to be able to gain more of an insight into the number of teal that actually had nested there by counting the broods of young, which would be more easily observable than the incubating parents. I first investigated the region from Harper's Pond to Shorter's Landing, running up most of the tributaries of the river

and pushing into the ponds and slough holes. I encountered just two broods of young teal, one mother with five young, the other with eight. The young birds were about one-fourth grown, each about as big as my fist. My troubles began, however, when I endeavored to catch them for banding. We first tried to get near enough to them in the motor boat to dip them out with a crab net. While we could run them down with ease when we surprised them in open water, they invariably dove just before coming within reach of the net, and managed to reach the cover of shore by swimming under water. A favorite device of the mother teal was to swim her brood into water too shoal for the boat, and, swimming rapidly along the bank, to scatter the youngsters one at a time into the marsh grass at widely separated intervals. In trying to keep tab on the whole brood at once, in the flurry and excitement one generally lost track of every one of them. I decided to chase just one youngster at a time. When the first one left the flock to enter the marsh, we beached the boat a few seconds behind it and jumped ashore to chase it. These few seconds, however, were ample to allow it to vanish. Except for the burbling of an excited marsh-wren and the scampering of a meadow mouse, the grass was silent. Not a blade quivered. Two of us combed the marsh for a radius of a hundred yards from the spot where the young teal went ashore, all to no avail. We tried similar tactics on the next bird, and by pure luck, a few minutes after going ashore, we found the youngster a good hundred and fifty yards from the river bank, still travelling unobtrusively through the grass. Evidently when the young teal take to shore they do not squat immediately in the first cover they encounter, but adopt the much safer procedure of going on for some distance before hiding. So agile and expert are they at scooting rail-like through the grass, that their route cannot be traced.

On the next day, July 11, Tregoe and I returned to the area where I had encountered so many teal carrying on their courtship in May, from Shorter's Landing down the river and up into Backgarden Creek. It was in this same five miles, Tregoe informed me, that he had obtained the young birds for LeCompte in 1929. At that time he saw some ten or fifteen broods containing a total of about one hundred young teal. We, however, encountered

but four broods, varying from three to twelve per brood. Again we tried to capture the young to band them, and again we were unsuccessful. The old birds distributed them, one at a time, all along the river bank at our approach, and search as we might, we could not find a single one. In every case the female was alone with her brood, and not once did I observe a male bird assisting in the care of them.

The following day I reconnoitered the area which Denmead had covered in 1930, from Harper's Pond upstream three miles to Big Blackwater Bridge. In Raymond's Pond and Coulson's Pond were one hundred and twenty-seven Black Ducks, many of which seemed to be young of the year already on the wing. We saw one pair of adult Blue-winged Teal sitting on a mudbank, and two lone males flying over the marshes. But a single brood of seven were all the young we observed. Again we failed to catch any.

The question which arises is, how many Blue-winged Teal bred on the Blackwater marshes this year, and how many young were raised? I was unable to cover thoroughly more than about twenty percent of the marsh, and I did not reach at all the adjoining Transquaking River area, where, also, the natives claim the teal breed abundantly. I observed in all fifty-one partly grown young, and have evidence that at least eight nests were built, which is doubtless but a small fraction of the actual number.

When I first observed the Blue-winged Teal on the Blackwater marshes in late April and early May, the birds were obviously congregated along the main water-courses carrying on their courtship. A few were scattered in pairs in some of the smaller slough holes, but most of them were concentrated in Blackwater River, Backgarden Creek, and the larger ponds. I observed at that time at least fifty-three pairs of birds. There undoubtedly were more, for it is inconceivable that I counted all the teal in the marshes at any one time, but I could not be sure that in some cases I was not counting the same pair twice. As the breeding season progressed, the number of birds observed dwindled markedly. This may have been because some of the birds previously seen had moved on to breed elsewhere, but I believe it more likely that all of them were still there, but were not observed

because they became more retiring and secretive in their habits with the start of actual nesting. If the nests were all built as was the one found in the dry lands fringing the marshes, and if after hatching many of the young stayed back in the acres of impenetrable marsh grass instead of coming out into the open water-courses, which is a plausible and likely hypothesis, the discrepancy between the fifty odd pairs observed during courtship and the seven broods of young seen after hatching is accounted for.

Let us assume that fifty pairs of Blue-winged Teal, certainly a most conservative estimate, nested during 1931 in the Black-water area. It is safe to venture that at least half of them were successful in rearing fifty percent of their broods to the point where they were able to fly and to take care of themselves. Granting that twenty-five pairs of birds laid average clutches of ten eggs apiece, there were produced during the season five young per pair, or one hundred and twenty-five young birds on this one small stretch of marsh land. It is certainly sufficient, conservative in the extreme as it is, to warrant taking the area into consideration as a source of supply of Blue-winged Teal and preserving it for posterity as such.

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