

tically every patch of cane in which I worked, a pair of these birds or a small colony was found breeding. Once the habitat was located and an individual noted, it was a none too difficult task to find additional birds. The most definite clue to the presence of Swainson's Warbler in a suitable environment in the spring, was its distinctive song—one that stood out above that of any other member of its family.

The writer is indebted to Messrs. J. Fred Denton, H. L. Stoddard and F. M. Uhler for supplying nesting and environmental data on Swainson's Warbler.

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BARROW'S GOLDEN-EYE IN MASSACHUSETTS

BY LUDLOW GRISCOM

IN a recent interesting article on the Barrow's Golden-eye in eastern North America (*Auk*, 61: 544-554, Oct., 1944), Dr. A. M. Hasbrouck amasses evidence to prove that this little-known species is by no means as rare as stated in most general works of reference. The article appears to me to be open to minor criticism in the method adopted, and the author's inevitable lack of detailed local knowledge has led him into minor geographical errors and unwitting duplication of records. Moreover it was quite impossible for him to make any general or summary statements.

It so happens that the coast of Massachusetts lies within the normal and regular winter range of the relatively small population of the Barrow's Golden-eyes of eastern North America. Twenty years of intensive modern observation by well over 100 individuals per annum gives us a picture of the status of the species in this state, which is, I think, well worth bringing out, but which, naturally enough, Dr. Hasbrouck was unable to do.

Dr. Hasbrouck states that a search of the literature and the replies to his questionnaire yielded a total of 244 records from Massachusetts. He prints only 29 of these, of which nearly one-third are accidental duplications. If the number of individuals is added up, the total is far higher than 244. While I do not know how he arrived at 244 records, or on what basis he printed what would appear to be 29 of

them only, the *actual* number of *valid* records comes to nowhere near so enormous a total. I conclude, therefore, that my definition of a "record" is quite different from Dr. Hasbrouck's.

Historically, Barrow's Golden-eye was thought to be an accidental straggler to Massachusetts until the winter of 1919, when Dr. C. W. Townsend and Francis H. Allen found a male at the Red or Sliding Rocks in Lynn Harbor, a section of park where no gun has been fired for many years. Here, at high tide, the ducks feed right off the edge of the low cliff, and the two species of Golden-eye can be watched together, often within shotgun range. Under these 'abnormal' conditions, it is possible to distinguish the females accompanying the male Barrow's as differing from the adjacent female American Golden-eyes in just those respects which are well known to constitute the external specific characters of minor importance between the two species.

After the discovery given above, a constant succession of visitors, members of the Nuttall and Essex County Ornithological Clubs, proved that a small group of Barrow's Golden-eyes spent the winter there annually. As Forbush put it (*Birds of Massachusetts*, 1: 251, 1925) from two to four males and five to twelve females were there every winter. This was generally known, and Mr. J. T. Nichols and I made a special trip to Lynn from New York in February, 1925, to see for the first time Barrow's Golden-eye alive.

The Bulletins of the Essex County Ornithological Club from 1922 to 1938 give annual details of the number of birds, and the dates of their arrival and departure, of which more later. The question of the number of 'records' now arises. If 50 observers see the same little group of birds in any given winter, and several of them make several to many visits, I submit that it all boils down to one 'record.' If six of these observers happened to fill out Dr. Hasbrouck's circular, I suspect he counted their observations as six records, thus accounting for his total of 244. Either, therefore, the number of 'records' is far less than 244 or very much greater, as the same flock of Lynn birds seen by 50 observers on two visits each would be 100 'records'! In any event, for convenience we shall designate Lynn as Locality 1. This locality began to fail in the winter of 1936-1937 when only one adult male showed up. Presumably a failure of the favorite mussel beds was the cause. Practically no birds appeared in 1937-1938, some birds occurred erratically during January 1939, and after this time this winter flock disappeared for good.

Locality 2.—Mr. S. Gilbert Emilio discovered another small flock at Mingo Beach, Beverly, also a protected park, in the winter of 1935-1936. A small flock wintered here annually for six years, and

then abandoned this locality also. The maximum number of adult males any winter was four. Conditions of observation were not so favorable, the birds were never so near shore, and it was never possible to be certain how many of the females were Barrow's.

Locality 3.—Newburyport Harbor.—Regular weekly trips throughout the winter began here in 1929. From then on to the present year, male Barrow's Golden-eyes are seen here occasionally, but I feel convinced that the species is a regular winter resident in very small numbers. There are several square miles of water, and 500–1500 American Golden-eyes are scattered over it. Two hours after high tide, a small number came to the mouth of the city sewer near the Yacht Club, where they are reasonably close to shore, and it is here and here only that occasional drake Barrow's Golden-eyes can be readily identified. Females can never be recognized.

Locality 4.—Cape Ann (Gloucester and Rockport).—American Golden-eyes are abundant on the open ocean and in the tiny coves of this rocky headland. They are wild and wary, and rush away in flight the moment the observer appears around a curve. One or more male Barrow's Golden-eyes are seen here annually, and the species is again almost certainly of regular occurrence. The conditions for observation are difficult, and the detection of females is impossible.

To sum up, all four of these localities are on the coast of northern Massachusetts, north of Boston, bathed by a notably cold ocean with a well known 'northern' marine invertebrate fauna. These conditions are actually a southern extension of those on the coast of Maine. It has been established for forty years that Barrow's Golden-eye is a common winter resident of extreme eastern Maine (Washington Co.) decreasing westward, and unrecorded off the small stretch of sandy coast-line in extreme southwestern Maine. The small number of Maine 'records' in Dr. Hasbrouck's article merely proves the much smaller number of observers, the lack of continuous observation, and the much greater coast-line.

Returning to Massachusetts, the Barrow's Golden-eye is a regular winter resident in very small numbers to that portion of the coast which is bathed by a cold ocean with a 'northern' marine fauna. It has no use for a sandy shore. South of this area it is apparently a casual straggler only. There are only three records for Cape Cod, one for Buzzard's Bay and one for Vineyard Sound, in spite of greatly increased observation in the past 20 years. The species reappears off the rocky coast of Rhode Island (where Dr. Hasbrouck's article is particularly useful in having compiled the relatively numerous recent records), and very rarely off the rocky tip of eastern Long Island

(Cruickshank, *Birds around New York City*: 112, 1942). An interesting point develops; the southward occurrence of Barrow's Golden-eye is *almost an exact parallel* with that of the King Eider!

There has been some evidence of cyclic change in Massachusetts. Peak numbers were reached in the winter of 1935-1936, when the Lynn flock was at maximum numbers, the Beverly colony was discovered, and there were "numerous records," to quote the Bulletin of the Essex County Ornithological Club, from Newburyport, Cape Ann, and elsewhere. Since then the species has been steadily declining. Since 1941 it has been reported only once or twice a year.

Little or nothing has been published on the migration of Barrow's Golden-eye. It is a very late and hardy species, exceeding in this respect its common cousin, and never lingers so late in the spring. Full numbers have never been reached earlier than late December. Eighteen years of continuous observation at Lynn yield two arrival dates in November, only five the first week in December; earliest for the state, November 11, 1936—Lynn; November 15, 1936, at Newburyport; November 16, 1913, one shot off Gloucester by Thorvald Ross and G. W. Cobb. The fall of 1936 was notable for the early arrival of winter and the very early general arrival of Golden-eyes. On the other hand, it should be noted that the earliest American Golden-eyes (mid October-early November) are always females and immature, and these plumages of Barrow's are not identifiable in life. In spring, adult males have lingered at Lynn to the last week in March in only four years, into April in five years, in particularly cold and backward seasons. This is a very different picture from the American Golden-eye, males of which are seen every May.

Readers are urged to reread Major Brooks's fine article in the *Auk*, 37: 356 *et seq.*, 1920 and examine the lovely plate XVI and the drawing of the skulls of the two species (figs. 1 and 2, p. 362). As Major Brooks says, the adult male can be identified as far away as any other duck, but there is no use under normal conditions in speculating on the identity of females and immatures. One character in the male he does not mention, though it is shown in Plate XVI. The crown of the American Golden-eye is peaked or subtriangular, the crown of Barrow's is *low, long, and evenly rounded*. The forehead *rises steeply*, forming a *right angle* with the line of the culmen or even a subacute angle. The forehead of the American Golden-eye always forms an obtuse angle with the line of the culmen. The frontal bulge of the skull of the adult male Barrow's Golden-eye fully accounts for this difference in outline, which is noticeable at distances where the purple gloss is invisible and the shape of the white crescent is observable with

difficulty. Every picture and colored plate of Barrow's Golden-eye in eastern books is erroneous in this respect.

Unfortunately, the tendency of modern bird-study is towards oversimplification. Since Major Brooks's article, it has become a settled tenet of faith that the adult male Barrow's Golden-eye is (1) readily identifiable and (2) that the best field character is the row of white spots on a dark wing. Proposition no. 1 is true, but proposition no. 2 is, alas, false. Most unfortunately, the male American Golden-eye occurs annually in November and December and again in April in an eclipse or transitional plumage, which has a row of white spots on a dark wing. At a distance or in poor light, the careless or inexperienced observer fails to detect that the "dark" wing is dingy grey, not jet black, and no effort is made to note the other characters, which a real adult drake Barrow's Golden-eye actually possesses. In this way an imaginary Barrow's Golden-eye is quickly materialized out of whole cloth! This has become an annual event on Fresh Pond, Cambridge. Every fall I see transitional male American Golden-eyes which, the day before, the same day or the next day, some other observer happily reports as Barrow's! I have even seen a bird with the round head spot coming in, which was only *partly in*, making it appear crescent-shaped! November, December and April sight records of Barrow's Golden-eye by inexperienced observers, in places where the species does not normally occur, should be dismissed as unworthy of scientific consideration, unless evidence is put on record to show that all the excellent characters of the beautiful drake were noted, and the species was known to arrive particularly early or remain late that year in its regular haunts. All such records from inland localities in Massachusetts are open to suspicion and require validation in my best judgement, as they are either remarkably early or remarkably late.

Cambridge

Massachusetts

AN EXAMPLE OF BUMBLEFOOT IN THE GREAT HORNED OWL

BY DAYTON STONER AND LILLIAN C. STONER

Plate 19

ON March 10, 1944, Dr. Stoner received from E. P. Hotaling, a taxidermist in Gloversville, New York, the carcass of an adult male Great Horned Owl, *Bubo v. virginianus* (Gmelin). The bird was reported to have been taken near Summit, Schoharie County, a few