

Spots before the eyes, an aid to identifying wintering loons.—Distinguishing between Common Loons (*Gavia immer*) and Arctic Loons (*Gavia arctica*) is difficult in winter because of the similarity of their basic plumages. The question of identity has frequently risen on the eastern Atlantic coast (summaries from Griscom 1943 and Carlson 1971). This is outside the normal wintering range of the Arctic Loon, but more and more reports of this species have been made there in recent years (Buckley 1972).

Field marks given in the literature include bill size and shape, body size, and the shade of gray of the feathers of the nape and back (Witherby 1940, Griscom 1943, Pough 1951, Palmer 1962, Robbins et al. 1966). The identifying feature most often recommended was bill size. The average bill length of the Common Loon is larger than that of the Arctic Loon, but our measurements (Figure 1) show a region of overlap. We thus feel that this is not a reliable field mark for a bird that generally must be identified from a considerable distance over open water.

Many field marks also rely on other continuous characters. It seems to us that one that is either present or absent could be more readily verified. Feathers anterior to and above the eyes of Common Loons in basic plumage have fine white spots that give the appearance of an eye-ring, whereas Arctic Loons do not exhibit this white pattern (Figure 2). Illustrations in two field guides (Pough 1951, Robbins et al. 1966) show observant artists painted this difference. Witherby (1940) mentions that feathers are tipped with white between the nostrils and eyes; but the white eye-ring of the Common Loons has not been noted as a distinguishing feature in the literature.

All Arctic Loons (60) collected from September to March had uniform dark gray plumage above and anterior to the eyes. Of 54 Common Loons, 50 had some white about the eyes; only 4 did not show a definite pattern. During a study of Common Loons made during the winter of 1972 off the Virginia coast, we found the eye-ring readily observable. We suggest that this character, especially

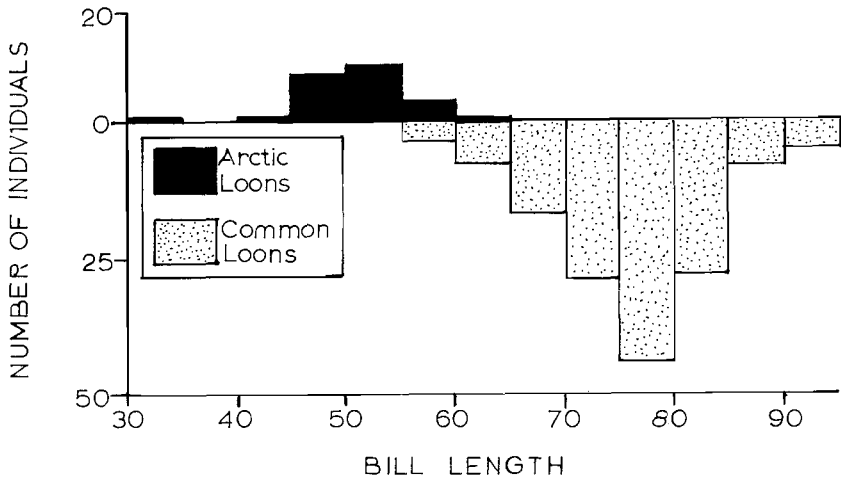


Figure 1. Frequency histogram of culmen lengths (in mm) as measured from 135 Common Loons and 27 Arctic Loons.

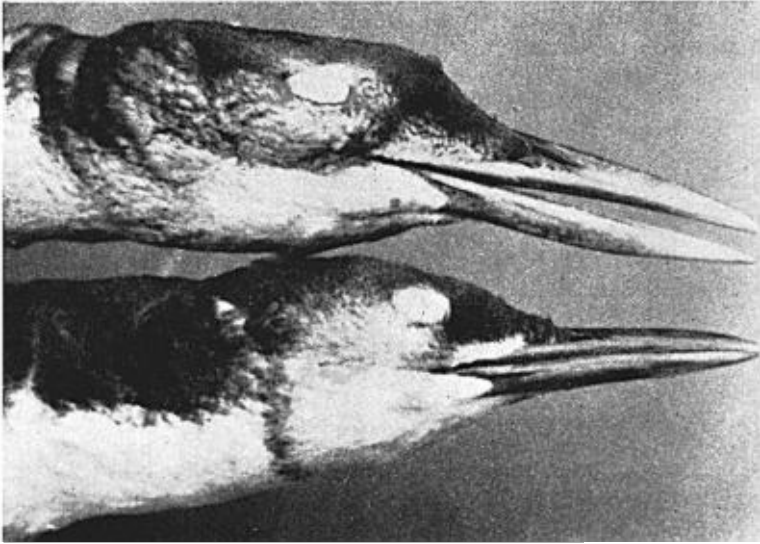


Figure 2. Upper: Common Loon in basic plumage. Feathers above and anterior to the eye are white. Lower: Arctic Loon in basic plumage. Feathers are uniformly dark gray above and anterior to the eye.



Figure 3. Adult Common Loon photographed during the prebasic molt.

when used together with the field marks others have described, will be useful in distinguishing between these two species during the winter.

Figure 3 shows an adult Common Loon just beginning the prebasic molt. Those feathers that form the white eye-ring are among the first to erupt. Possibly such patterning serves as a mechanism for conspecific recognition on the wintering grounds.

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Diving times of grebes and Masked Ducks.—Least Grebes (*Podiceps dominicus*) and Masked Ducks (*Oxyura dominica*) were found to have significantly different diving times at a small pond near Turrialba, Costa Rica in 1963 (Jenni 1969, *Auk* 86: 355). Additional data on diving times were collected at the same pond in 1970 and 1972. Between 1963 and 1970 the pond was intensively managed and its aspect changed from that of a wild marsh to a parklike lily pond (Jenni and Collier 1972, *Auk* 89: 743). Although management efforts decreased between 1970 and 1972, the pond was still intensively managed. Pied-billed Grebes (*Podilymbus podiceps*) did not visit the pond during July and August of 1963, but the species was found there during 1970, 1971, and 1972.

The intervals between dives varied more from year to year than did the dive times (Table 1). A bird on the surface was more apt to be distracted briefly by other stimuli and was probably more apt to interrupt the feeding bout with preening, drinking, or other behavior. However the duration of the individual dives while the birds searched for food or actually fed is more important ecologically. The following discussion is restricted to dive times.

Because the numbers of observations varied by species and year, a random sample of nine diving times was drawn for each species from each year. These data were used to calculate analyses of variance. The overall differences between the species in diving times was significant ($P < 0.001$, $F = 32.1$). The differences in diving times between species were significant each year ($P < 0.001$, $F \geq 14.5$ for all years). The differences in diving between years were significant for the Masked Duck ($P < 0.001$, $F = 13.8$), but not quite significant for the Pied-billed and Least Grebes.