

REPORT ON SIX RECENT SIGHTINGS OF THE ICELAND GULL IN NORTH CAROLINA WITH COMMENTS ON PROBLEMS OF FIELD IDENTIFICATION

JOHN O. FUSSELL III, MICHAEL J. TOVE,
and HARRY E. LeGRAND JR.

Abstract.—Observations of six Iceland Gulls, seen in Carteret and Dare Counties in 1980 and 1981, are discussed. Evidence is presented to show that these gulls were not hybrids, or albinistic or leucistic individuals, or Glaucous or Thayer's Gulls. Separation of Iceland Gull and Thayer's Gull can be difficult and some individuals probably cannot be safely identified. Emphasis is placed on "building a case" for the identification of any "white-winged" gull.

Reports of "white-winged" gulls [in this paper, Glaucous Gull (*Larus hyperboreus*) and Iceland Gull (*L. glaucooides*)] in the Carolinas are increasing. Including those in this paper, there are 78 known records—51 of Glaucous Gull, 23 of Iceland Gull, and four of unidentified species. Almost three-fourths of these records were made during the last decade. This increase is probably due in part to an increase in gull populations and in part to an increase in the number of capable observers, especially in regard to coverage along the coast in winter. Many of the recent winter records were made after periods of abnormally cold weather.

With the increase in "white-winged" gull sightings, there have been some controversies in the Carolinas (see *Am. Birds* 31:321, *Chat* 42:10). This is not surprising, for this group of birds can pose identification problems in the field (and sometimes in the hand). A frequent problem is that in areas where Glaucous and Iceland Gulls are uncommon to rare, or among observers unfamiliar with these species, there has been a strong tendency to misidentify small Glaucous Gulls as Iceland Gulls. This tendency appears to be largely due to two common misconceptions that can be traced to the popular field guides: (1) the primaries of a Glaucous Gull at rest never extend beyond the tail, and (2) all "white-winged" gulls that are approximately the same "size" as Herring Gulls (*L. argentatus*) are Iceland Gulls, Glaucous Gulls always being obviously larger than Herring Gulls. In fact, the primaries of a Glaucous Gull *usually extend beyond the tail* (Kay 1947, Hume 1975, Grant 1981), and, no matter how size is defined, there is some overlap between the Glaucous Gull and the Herring Gull. Another identification problem that has recently come to light in several western states is that pale immature Thayer's Gulls (*L. thayeri*) have been called Iceland Gulls and other species (*Am. Birds* 32:1030, 33:296; Pulich 1980; Weber 1981). On the other hand, darker adults of the Kumlien's race of Iceland Gull have probably been misidentified as Thayer's Gulls (*Am. Birds* 26:577). Still more problems are the

occurrence of albinism and leucism in gulls and the relatively frequent occurrence of hybridization in gulls.

Although there are specimens of Glaucous Gull for both North and South Carolina, there are no specimens of Iceland Gull for either state. (There is an Iceland specimen for Georgia.) In 1964, a detailed account of an Iceland Gull sighting in South Carolina was published in *Chat* (28:49-51) and in 1978 three more detailed South Carolina sightings were published (*Chat* 42:10-12). Although there were 12 records of Iceland Gulls in North Carolina prior to this paper, none had been truly well documented, i.e. to a degree desirable for a species that is part of such controversies or in a manner that rules out the recently recognized Thayer's Gull. In the winters of 1979-1980 and 1980-1981, we observed six Iceland Gulls in North Carolina, four in Carteret County and two in Dare County, and photographed four of these birds. Three of the Carteret birds were present for long periods and were studied under exceptional conditions and on numerous occasions. However, attempts to collect a specimen were unsuccessful. Thus the purpose of this paper is to document these Iceland Gulls in a manner that rules out other species, albinistic and leucistic birds, and hybrids.

ICELAND GULL OBSERVATIONS

Birds 1, 2, 3, and 6 were seen in Carteret County; Birds 4 and 5 were found in Dare County. Color slides have been deposited at the North Carolina State Museum of Natural History, Raleigh, N.C.

BIRD 1. A first-winter immature (Fig. 1 and 2) was found by Dana Carter and John Fussell at Fort Macon on 17 January 1980. From then until 12 March, it was seen nine times by a total of nine observers: Allen Bryan, Dana Carter, Larry Crawford, John Fussell, Kevin Hints, Dwight Lee, Bob Lewis, Mike Tove, and Ray Winstead. All sightings, except one at Atlantic Beach, were within a mile of Beaufort Inlet. On three occasions, this gull was seen feeding behind a hopper dredge that worked in the inlet much of the winter.

This bird, although it usually associated with Ring-billed Gulls (*L. delawarensis*), was seen several times next to Herring Gulls for size comparison. Best studies were made on: 18 January, when it was studied next to a Herring Gull through a 20X scope at 75 feet for about a minute; 1 February, when studied for several minutes at 150 feet through a Questar at 80X; and 12 March, when studied next to a Herring Gull, both birds in full profile at 25 feet, through 10X binoculars for a minute.

Field characters.—The general aspect was of a slender, long-winged, small-headed bird. Its bill-to-wing-tip length was similar to that of a Herring Gull, but it was obviously of a lesser bulk. The extension of the wing tips beyond the tail slightly exceeded the bird's bill (culmen) length. Its plumage was generally a pale buff to a whitish buff (lighter in March than in January). Most of the plumage was finely and densely barred with buff or light tan; this barring appeared to be most prominent on the wing coverts and upper tail coverts. The unbarred primaries graded from a pale buff to whitish adjacent to the coverts to white or whitish at the tips; thus the primaries, but particularly the tips of the primaries,



Fig. 1. Immature Iceland Gull (Bird 1) near Fort Macon, 12 March 1980. An immature Ring-billed Gull is to the left of the Iceland Gull; all other birds are adult Ring-billed Gulls. (Photo by John Fussell)

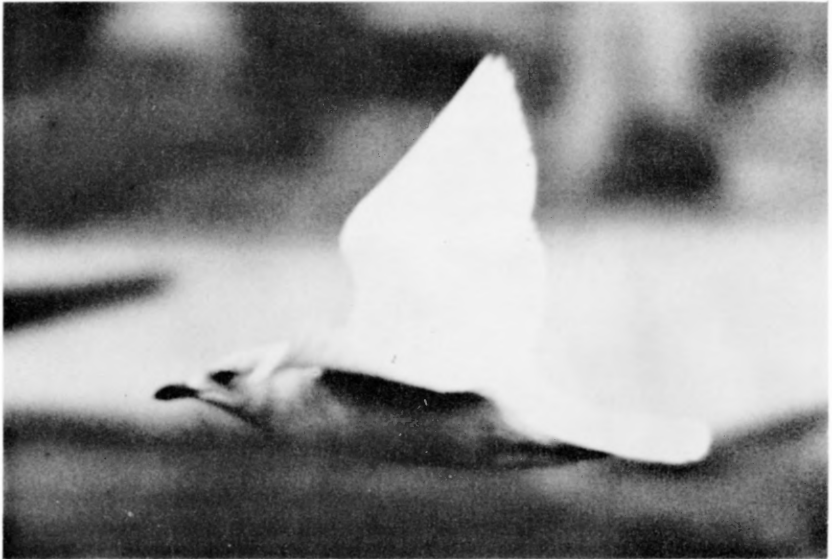


Fig. 2. Immature Iceland Gull (Bird 1) in flight, 12 March 1980. (Photo by John Fussell)



Fig. 3. Adult Iceland Gull (Bird 2) on Morehead City waterfront, 10 February 1980. This individual preferred to perch on ships' masts and other very high sites. (Photo by John Fussell)

were paler than the rest of the wing. The rectrices were mottled with buff and white; because of the high density of buff barring, there was a slight contrast between the rectrices and the upper tail coverts. Each of the rectrices appeared to be tipped with white. The iris was brown or brownish. The bill was black or blackish and was about one-third shorter than that of adjacent Herring Gulls. On at least two occasions, this bird was chased by a Herring Gull; it was never seen to dominate that species though.

BIRD 2. An adult (Fig. 3) was discovered on 18 January 1980 next to the draw-bridge at Beaufort by Fussell, Bill Moffitt, and Ray Winstead. It was seen a total of five times (latest was on 11 February) by 12 observers: Mike Alford, John Fussell, Bob Hader, Fran and Wayne Irvin, Ken Knapp, Harry LeGrand, Bill Moffitt, JoAnne Powell, Mike Tove, McDuffy Wade, and Ray Winstead. Four of the five sightings were around fish houses and all sightings were in the immediate Morehead City-Beaufort area. Several thorough searches of the fish houses at other times did not turn up the bird; possibly at these times it was offshore around fishing boats.

This bird was also closely studied for size comparison with Herring Gulls. Best studies were made on: 18 January, when it was studied through a 20X scope at 200 feet for 2 minutes, as it stood next to several Herring Gulls, all in full profile; and 19 January, when seen for several seconds by Ken Knapp and Bob Hader at 20 feet through 10X binoculars as it hovered over the water.

Field characters.—When at rest, this individual was similar in general aspect to Bird 1, although the long, attenuated appearance was not quite as pronounced. The length by which the wing tips exceeded the tail was greater than the length of the bird's bill. As compared to adjacent Herring Gulls, this bird was of a lesser bulk, had an obviously shorter bill, and had a much lighter mantle color. There was almost no streaking on the head and neck. The primary tips were white, except that the outer primaries had some of the pattern of gray bars that is typical of the Kumlien's race of the species. However, this pattern was rather faint, and at a distance, the wing tips looked all white. The rectrices were white. Iris color, as observed by Knapp and Hader, was a clear, unspckled pale yellowish; the color of the orbital ring (eye-ring) was not observed. Leg color was a duskier, more colorful pink than that of Herring Gulls. On several occasions we saw this bird dominated by Herring Gulls, both adults and immatures, but we never saw it dominate that species.

BIRD 3. A first-winter immature (Fig. 4) was seen by LeGrand and Tove for 5 minutes on 25 January 1980 as it flew around off the south end of Radio Island near Beaufort. It was not seen again.

Field characters.—This individual was seen flying near Ring-billed Gulls; it was somewhat larger than they but flew as buoyantly. It appeared to be uniformly buffy colored, but the primaries were obviously whiter. The rectrices were light, providing no contrast with the tail coverts. The bill was small and slender relative to the head and was mostly dark with a grayish-pink base.

BIRD 4. A first-winter immature was seen by Tove and Steve Graves for about 5 minutes as it followed the Ocracoke-Hatteras ferry on 9 January 1981. On this day over 1 million gulls were seen, including the Iceland Gull and two Glaucous Gulls.



Fig. 4. Immature Iceland Gull (Bird 3) in flight at Radio Island, 25 January 1980. (Photo by Mike Tove)

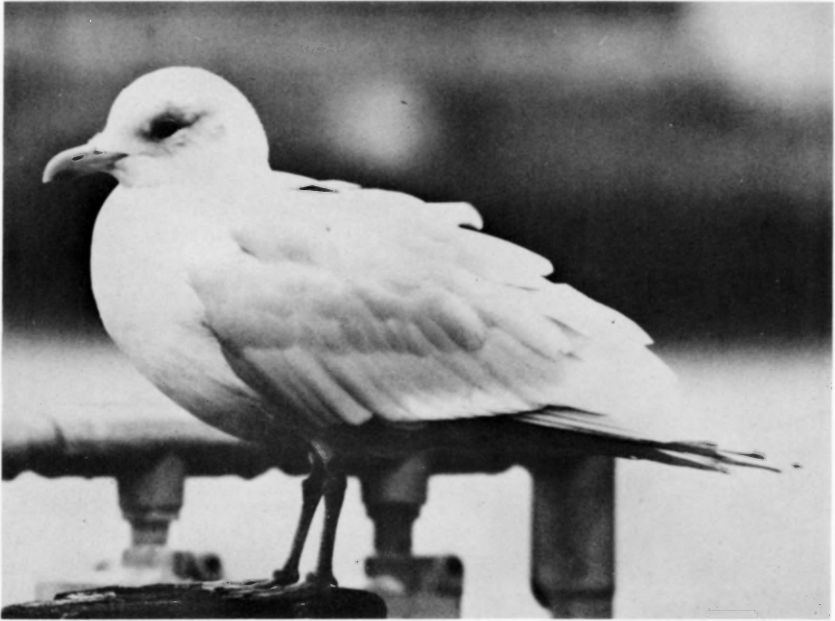


Fig. 5. Adult Iceland Gull (Bird 6) on Morehead City waterfront, 11 February 1981. Note "classic" Iceland Gull profile of small head and stubby bill. (Photo by John Fussell)

Field characters.—This bird was intermediate in size between Herring and Ring-billed Gulls. It was uniformly pale buffy-white with whiter primaries. The rectrices were white with faint tan barring and did not contrast with the tail coverts. The bill was small and mostly dark with a paler pinkish-gray base. In contrast, an immature Glaucous Gull, seen only minutes earlier, was massive, being easily as large as a Great Black-backed Gull (*L. marinus*). The bill of that bird was especially long and cleanly flesh-colored with a well-defined black tip.

BIRD 5. A first-winter immature was seen by Tove and Graves as it swam 100 feet from shore at Oregon Inlet on 10 January 1981.

Field characters.—While the bird was on the water, its folded wings extended well beyond the tail, giving the gull a very attenuated appearance. The plumage was white with pale buff barring. The bill was small relative to the head, and was dark with a horn-gray base. Eventually the bird flew and joined a small flock of Ring-billed Gulls. The Iceland Gull was slightly larger than the Ring-billeds, but flew as buoyantly.

We believe that this individual was a first-winter bird in spite of its very pale plumage. Identification of age groups is another aspect of "white-winged" gull study about which there seems to be some confusion caused by the popular field



Fig. 6. Adult Iceland Gull (Bird 6) in flight, 11 February 1981. The slate-gray bars in the outer primaries are darker and more extensive than in many Iceland Gulls, but still within the range of that species as opposed to the Thayer's Gull. (Photo by John Fussell)

guides. Kay (1950) and Hume (1975) have pointed out that first-year birds may be paler than second-year birds; Kay (1950) suggested that bill and eye coloration and other characters are probably a better indication of age than is general plumage coloration. We have noticed that most detailed accounts of "second-winter" Glaucous and Iceland Gulls in the Carolinas that mention soft parts have described the soft parts of a typical first-winter individual.

BIRD 6. Another adult (Fig. 5, 6, and 7) was found on the Morehead City waterfront on 1 February 1981 by Carter, Fussell, Graves, and Tove. It was later seen at the same site three more times, the last being on 21 February, when it was seen by Wayne Irvin. It was also seen by Larry Crawford and Thomas Newport.

This individual was studied under excellent conditions. The best study was made during 2 hours on 11 February, when this gull, and a group of Herring and Ring-billed Gulls, responded aggressively to bread thrown out to them. The Iceland Gull was studied as closely as 18 feet (minimum focus of 10X binoculars and camera) for up to a minute at a time as it perched on pilings with many Herring Gulls nearby for comparison. It was also studied and photographed at a similar distance as it fluttered over the water, vying with the other gulls for bread

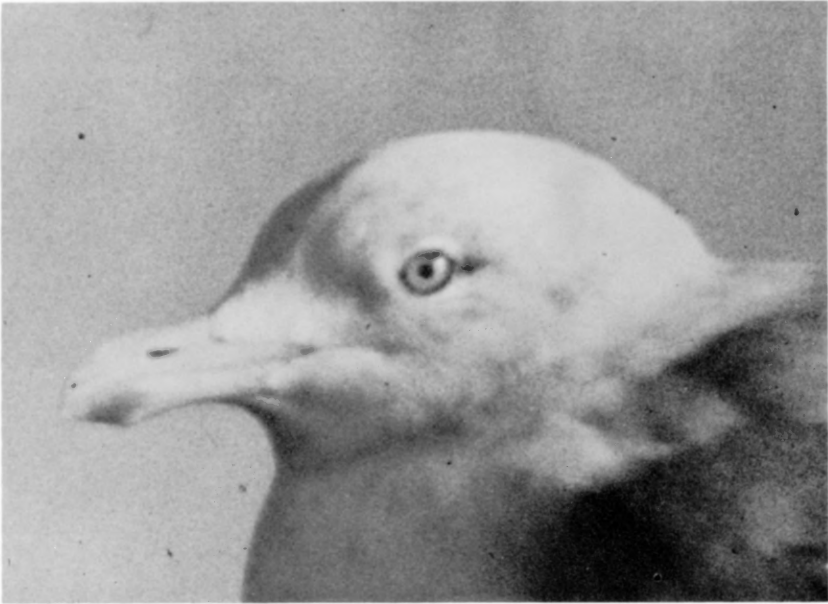


Fig. 7. Close-up of head of adult Iceland Gull (Bird 6), 13 February 1981. Only at very close range were the light irides apparent. At a little distance, due to shading around the eye, the irides looked dark, as in Figure 5. (Photo by John Fussell)

that was thrown out. At this time, the pattern of the primaries was seen exceptionally well.

Field characters.—When this bird perched, it would frequently “hang” its wings, creating a distinctive profile. The extension of the wing tips beyond the tail was greater than the bill length. Its mantle color was much paler than that of adjacent Herring Gulls; the head and neck were lightly streaked with brownish, but the breast was virtually white. The primary tips were largely white; however, the pattern of gray bars that we saw on the 1980 adult was present and was very noticeable (Fig. 6). The rectrices were white. The irides, as seen under overcast skies through 10X binoculars at 18 feet, were clear with no flecks of dark pigment and were a pale gray-green; however, in bright sunlight, they appeared yellowish (Fig. 7). The orbital ring was a dark brownish-gray. The bill was much shorter than those of adjacent Herring Gulls and appeared very stubby (Fig. 5); the yellow of the bill was duller than the yellow of the Herring Gull’s bill and had a tinge of greenish. The legs and feet were a dusky pink, much more colorful than those of the adjacent Herring Gulls. This bird was chased from its perch well over 50 times by both adult and immature Herring Gulls, but it was never seen to displace an individual of that species.

DISCUSSION

In November 1977, the CBC Records Committee decided to require a voucher specimen of Iceland Gull before admitting the species to the official North Carolina state list (Chat 42:10). Apparently that decision was made largely because of previous misidentifications of small Glaucous Gulls as Iceland Gulls in the state, and because many of the differences between immature Glaucous Gulls and immature Iceland Gulls are ones of a relative nature. Probably a more valid concern though, at least in regard to some individuals, is the "overlap zone" of appearance between the Thayer's Gull and the Iceland Gull (Kumlien's race).

We are confident that none of our six gulls were Glaucous Gulls. All these birds were of a bulk obviously less than that of *all* Herring Gulls seen adjacent to them. Also, their bills were relatively short; all had obviously shorter bills (up to one-third shorter) than those of *all* Herring Gulls with which they were compared. Such bill lengths are inconsistent with these birds' being Glaucous Gulls (see measurements in Smith 1966). The three birds that we saw while they were perched (Birds 1, 2, and 6) all had wing tips projecting beyond the tail to a length exceeding their respective bill (culmen) lengths. Grant (1981) states that, although Glaucous Gulls regularly have wing tips projecting beyond the tail, this length of projection never exceeds the bird's bill length, as is often the case with the Iceland Gull. The bill color of the immature gulls (Birds 1, 3, 4, and 5) was consistent with each of them being a first-winter Iceland Gull; it was not consistent with their being Glaucous Gulls of any age (see Hume 1975, Grant 1981). Both the adults (Birds 2 and 6) had the pattern of gray markings on the otherwise white distal portion of the outer primaries that is typical of the Kumlien's race of Iceland Gull. This primary pattern does not occur in the Glaucous Gull.

A more important consideration is the separation of our birds from Thayer's Gulls. Before we attempt this, it would be best to summarize some basic information about Thayer's and Iceland Gulls. The brief descriptions that follow refer to adults only.

Thayer's Gull.—This is a generally dark-eyed gull with a variable amount of gray to black in the wing tips and a mantle color that is generally similar to or slightly darker than that of the Herring Gull. The orbital ring is reddish or purplish (at least in the breeding season). It is mainly a cliff-nesting species that breeds primarily from Baffin Island and northern Hudson Bay north and northwest to the Arctic Ocean (at least from northwest Greenland to Banks Island). Apparently fall migration is mostly toward the southwest. The species winters primarily along the Pacific coast of North America. However, there are numerous records farther east, and the species is regular on the western Great Lakes. Along the Atlantic coast, Thayer's Gull is apparently rare, and virtually all reliable records have been of immature birds.

Iceland Gull.—This is separated into two races, the Kumlien's race (*L. g. kumlieni*), often called "Kumlien's Gull" (as a matter of convenience), which breeds on southern Baffin Island and the northwest tip of the Ungava Peninsula, and the nominate race (*L. g. glaucoides*), which breeds primarily along the coasts of Greenland. Both races of Iceland Gull are also cliff-nesters. Birds of the nominate

race have pale irides, wing tips that are all white (sometimes with a trace of gray pattern), and a very pale mantle color. Individuals of the Kumlien's race are quite variable in appearance. They range from individuals that are morphologically identical to the nominate race to "dark" individuals that have considerable speckling of dark pigment in the irides, a rather prominent pattern of slate-gray in the wing tips, and (perhaps) a mantle color that averages slightly darker than in the nominate race. The orbital ring of both races is reddish or purplish in the breeding season.

The A.O.U. *Checklist* (1957) states that both races of Iceland Gull winter along the Atlantic coast of North America (primarily southeast Canada and the northeastern United States). Macpherson (1961) suggested that it was "fairly well established" that the "Kumlien's Gull" wintered in this area and noted that a banded individual collected in Maryland was from a colony on southwest Baffin Island. However, he felt that the exact winter status of the nominate race was open to question because many individuals of the Kumlien's race are identical to the nominate race. Recently, Lehman (1980), probably reflecting the consensus of present-day gull students, suggested that the Kumlien's race winters predominantly along the Atlantic coast of North America, but that the nominate race winters predominantly in Europe. A review of British birding literature (as Hume 1975, Grant 1981) suggests that "Kumlien's Gulls" (well-marked ones, at least) are absent or nearly so in Great Britain, where birds are studied intensively.

In many respects the darker "Kumlien's Gulls" are intermediate between the Thayer's Gull and the nominate race of Iceland Gull. In fact, the "Kumlien's Gull" was formerly considered to represent a hybrid between the Thayer's Gull (then considered to be a race of Herring Gull) and the "Iceland Gull" (name then restricted to the birds with all-white wing tips) (Dwight 1925), until it was discovered that the two supposedly parental populations did not overlap. From 1959 to 1961, Smith (1966) studied breeding colonies of gulls in the Baffin Island region of Canada, including colonies with Glaucous Gulls, Thayer's Gulls, "Kumlien's Gulls," and Herring Gulls all present. Among these populations, he found complete reproductive isolation. Because of Smith's findings, the A.O.U. (1973) designated the Thayer's Gull as no longer a race of the Herring Gull, but as a separate species. Although Smith found reproductive isolation between the Thayer's Gull and "Kumlien's Gull," recent work in the Baffin Island region has found interbreeding between the two populations, and, in the future, the Thayer's Gull may be considered a race of Iceland Gull (Sutton and Parmelee 1978, Weber 1981).

Whether or not the Thayer's Gull and the Iceland Gull are regarded as conspecific in the future, it is true that the two populations are, on the average, very different in appearance; but some of the lightest Thayer's Gulls and darkest "Kumlien's Gulls" are very similar. There are probably some individuals that, even in the hand, could not safely be assigned to either species. Clearly, in the identification of one of these species, the observer must *build a case for the identification*, observing as many characters as possible that are consistent with one species and that are inconsistent (or relatively so) with the other species. This is the approach we have taken in identifying the six birds we saw as Iceland Gulls.

Identification of the four immature gulls, Iceland Gull versus Thayer's Gull.

There are two major field characters by which one can separate most first-winter Iceland and Thayer's Gulls: color of the primaries, particularly color relative to the rest of the wing; and color of the rectrices, including the degree of contrast between the general color of the rectrices and the general color of the tail coverts (Gosselin and David 1975, Lehman 1980). The upper surface of the primaries of a first-winter Iceland Gull varies from whitish to tannish and is the same color as the rest of the wing or lighter. In Thayer's Gull, the upper surface of the primaries varies from light brown to deep brown and is the same color as the rest of the wing or darker. The upper primary surface of the four immatures we saw varied from white to pale buff, but, in all cases, we observed that the color was lighter than the rest of the wing, consistent with the birds' being Iceland Gulls and inconsistent with their being Thayer's Gulls. We obtained one good color slide of the color of the primaries of Bird 1. We are confident that all our birds were first-winter individuals; however, we will mention that the pattern of contrast between the primaries and the rest of the wing cited above is repeated in second-winter individuals (see Hume 1975, Sutton and Parmelee 1978, Lehman 1980).

In first-winter Thayer's Gulls, virtually all the surface of the rectrices not hidden by the tail coverts is a solid brown or brown-gray. This general color contrasts strongly with the mottled tail coverts, creating a noticeable tail band. In contrast, rectrices of first-winter Iceland Gulls are whitish with variable amounts of buff barring. In some individuals, the density of barring is great enough to create a slight tail-band appearance as in the Thayer's Gull, but the degree of contrast is much less. The color of the rectrices of the four immature gulls we studied was whitish with light to moderate amounts of buff barring, consistent with their being first-winter Iceland Gulls and inconsistent with their being Thayer's Gulls of any age. We obtained one color slide of Bird 1 that shows the white-and-buff mottled rectrices of that bird very well.

Smith (1966) collected biometric data on 646 Thayer's Gulls and 889 Iceland Gulls (Kumlien's race) in the Baffin Island region of Canada. He measured flattened wing length, tarsus, culmen length, distance between the anterior edge of naris and bill tip, and depth of the bill at the posterior edge of naris. Within each sex, Thayer's Gull averaged greater than "Kumlien's Gull" for all five measurements; the amount of overlap varied from considerable for wing length to almost none for culmen length. (We have seen no data on Thayer's Gulls or Iceland Gulls from elsewhere that increase the amount of overlap recorded by Smith.) Male gulls average larger than females; therefore, combining Smith's data for both male and female gulls increases the range of overlap between Thayer's Gull and Iceland Gull. However, the amount of overlap of culmen length between the two species is still very slight. Of course, the applicability of Smith's data to the identification of our birds in the field is limited. Nonetheless, bill length relative to that of the Herring Gull was a character of our birds that we studied very carefully. Based on Smith's data (which include measurements on 228 Herring Gulls) and the comparison of the bills of our birds with those of Herring Gulls, we think it would be very conservative to say that the bill lengths of our birds fell either within the range of overlap between Thayer's Gull and Iceland

Gull (consistent with both species) or within the range of Iceland Gull but less than Thayer's Gull (consistent with Iceland Gull only). They definitely did not fall within the range of Thayer's Gull bill lengths that exceed all those of Iceland Gulls. Such bill lengths would be as long as those of many Herring Gulls. The bill length of Bird 1 (about one-third less than in numerous adjacent Herring Gulls) is particularly inconsistent with that bird's being a Thayer's Gull.

Identification of the two adult gulls, Iceland Gull versus Thayer's Gull.—Most of the field characters we studied—bill color, leg color, amount of streaking on the head and neck, orbital-ring color, etc.—appear to be of no value in differentiating between Thayer's Gulls and Iceland Gulls. However, we studied (and photographed) three characters that, on the average, are quite different in the two species: (1) iris color, including degree of speckling of dark pigment, (2) pattern in the distal portion of the outer primaries, and (3) mantle color.

The Iceland Gulls that overlap in appearance with Thayer's Gulls are "Kumlien's Gulls." Therefore, below we will refer almost exclusively to that race as a matter of convenience. This does not necessarily mean we are identifying these birds to race, however.

On the average, irides of "Kumlien's Gulls" are lighter than those of Thayer's Gulls. However, there is considerable overlap. The best reference on iris color variation is Smith (1966). Smith recorded (in the hand or at extremely close range) the iris color of 1170 Thayer's Gulls and 1131 "Kumlien's Gulls" in the Baffin Island-northwest Hudson Bay region. Of special interest, he compared the iris color of the two populations where they were sympatric and where they were not. Where they were sympatric, the irides of most "Kumlien's Gulls" were clear or mostly light, but, on southwest Baffin Island, where there were no Thayer's Gulls, the irides of many "Kumlien's Gulls" were moderately to all dark. The irides of Thayer's Gulls were much less variable. Both where they were sympatric with "Kumlien's Gulls" and where they were not, their irides were mostly partly to all dark. Of the 1170 Thayer's Gulls, Smith found *none* that had all-clear irides. Thus, the iris color of the two adults we observed favors their being Iceland Gulls rather than Thayer's Gulls. We obtained several color slides of the irides of the 1981 adult.

In general, the amount of melanin in the wing tips of Thayer's Gulls and "Kumlien's Gulls" appears to be related to the amount of melanin in the irides. In both species, dark-eyed individuals generally have darker wing tips (Smith 1966), but there are frequent exceptions to this rule. Smith found that, where the two populations were sympatric, "Kumlien's Gulls" generally had whitish wing tips and Thayer's Gulls had blackish wing tips. However, in the whole Baffin Island region, "Kumlien's Gulls" had wing tips typically varying from whitish to having moderate amounts of dark gray, and Thayer's Gulls had wing tips varying from having moderate amounts of dark gray to extensive amounts of blackish. Smith apparently does not include the extreme variation in wing-tip pattern he observed, but he does include (p. 64) a detailed drawing of the typical variation he observed. Both adults we studied fell within the range of "Kumlien's Gulls" as pictured in Smith, Bird 6 (Fig. 6) toward the darker end of the range and Bird 2

toward the lighter end of the range. Thus the pattern of the primaries favors these birds' being Iceland Gulls. This is especially true of Bird 2.

On the average, the mantle color of an adult Thayer's Gull is similar to or slightly darker than that of the Herring Gull and that of the "Kumlien's Gull" is lighter than that of the Herring Gull (Smith 1966, Gosselin and David 1975, Lehman 1980). However, this character is difficult to evaluate and thus there is no good information on the limits of variation of mantle color in "Kumlien's Gulls" and Thayer's Gulls. In the field, the Herring Gull can be a good "yardstick" for comparison. Fortunately, during our observations of the adult gulls in 1980 and 1981, there were many Herring Gulls present. The mantle color of our birds was obviously lighter than that of all Herring Gulls with which they were compared. We obtained several color slides of Bird 6 next to Herring Gulls (and Ring-billed Gulls) for comparison; its relatively pale mantle is obvious in all slides. Based on this character, our birds are more likely to have been Iceland Gulls than Thayer's Gulls.

Our comments regarding size of the immature birds, especially bill length, are also applicable to the adults. These birds had obviously shorter bills than all Herring Gulls seen next to them. A conservative statement is that their bill lengths might be consistent with both Thayer's Gull and Iceland Gull, but certainly not with large Thayer's Gulls. However, we believe that the bill length of Bird 6 (Fig. 5) favors its being an Iceland Gull.

As stated above, we are not attempting to prove that these gulls are members of the "Kumlien's race," only that they are Iceland Gulls. One problem in positively identifying the race of the adults is the lack of extensive information (in an English publication, at least) on the extent of variation of the nominate race. However, based on fragments of information on the nominate race in several of the papers cited earlier, the wing-tip pattern of our birds (especially Bird 6) appears to lie well outside the normal range of the nominate race, and we assume that the adults were indeed "Kumlien's Gulls." Based solely on appearance (as opposed to geographic probability), no judgment on the probable race of the immature gulls is possible (see Gosselin and David 1975), although we suspect that the all-blackish bill of Bird 1 favors its being a "Kumlien's Gull" also.

An Iceland Gull specimen for North Carolina is desirable. Meanwhile, we believe that our black-and-white prints and color slides of both immature and adult birds address the basic points regarding separation of Thayer's Gull and Iceland Gull virtually as well as a specimen would. Color slides of Birds 1 and 6, which address all the major points of separation of Iceland and Thayer's Gulls, have been deposited in the color slide collection of the North Carolina State Museum of Natural History and critically examined by authorities on bird identification. Finally, there is no reason to suspect that any of our birds were leucistic or albinistic individuals of other gull species, or that they were hybrids. All our birds fell well within the normal size range of the Iceland Gull; also, all had bill lengths well within the normal size range of the species. All four immatures had the plumage and soft-parts coloration that has been described for typical first-winter Iceland Gulls. None of these birds were pure white or had any pure white regions in the plumage. All four had primaries lighter than the rest of

the wing and mantle. None of our birds exhibited excessive wear as is typical of albinistic or leucistic individuals (Hume 1975). Certain hybrid combinations might result in a wing-tip pattern similar to the "Kumlien's wing-tip pattern." However, as stated above, our two adults fell well within the normal range of Iceland Gull body size and bill length. Also, our birds had all soft parts colored as in typical Iceland Gulls.

POSTSCRIPT

We hope that our photographs will give Carolina bird students a "feel" for the Iceland Gull and help reduce the tendency of observers to identify small Glaucous Gulls as Iceland Gulls. We also hope that our discussion of the six Iceland Gulls will lead to more caution in the reporting of "white-winged" gulls in the Carolinas. Because of considerable individual variation, albinism, leucism, and hybridization in gulls, the safest identification of a "white-winged" gull is usually of a typical individual. There are some aberrant gulls that cannot be safely identified. However, we urge observers of unidentifiable gulls to report their sightings—complete with thorough documentation—to *Chat* and *American Birds* so that we may all become more knowledgeable about the types of field identification problems associated with gulls.

More caution is urged in the identification of the age of immature "white-winged" gulls. Many first-winter "white-winged" gulls are very whitish, particularly in late winter, and we suspect that most reports of second-winter birds in the Carolinas are actually first-winter individuals. See Grant (1981) for reliable methods of aging immature Glaucous and Iceland Gulls.

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1412 Shepard Street, Morehead City, N.C. 28557; Department of Biology, Utah State University, Logan, Utah 84322; and Department of Zoology, Clemson University, Clemson, S.C. 29631

Corrections

Two plants were incorrectly identified in the report on the "Third Annual Breeding Bird Forray: Hoke County, N.C." by Clark and Potter (Chat 46:29-37). On page 30, Fetterbush should be *Leucothoe racemosa*, and Slender Clubmoss should be *Lycopodium appressum*. The authors thank Jay Carter for bringing these errors to their attention.

Additional Cowbird Host for Carolinas

The Black-throated Green Warbler should be added to the list of host species for the Brown-headed Cowbird in the Carolinas (Potter and Whitehurst, Chat 45:57-68). Meanley (Raven 48:19) reports that a female was "observed building a nest in an American holly in the North Carolina section of the [Dismal] Swamp on 17 April, 1970; on 29 April, it contained two eggs of the warbler and one of a Brown-headed Cowbird."