

Questions about Thayer's Gull

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Two recent papers (Howell 1999, Pittaway 1999) have expressed opinions about the taxonomy of Thayer's Gull (*Larus thayeri*) and its presumed close relatives. Both express the viewpoints of the authors, seemingly based on reports of unpublished studies weighted by opinions published by others. Both chide the AOU Check-list (American Ornithologists' Union 1983, 1998) for retaining specific status for Thayer's Gull, and Pittaway (1999) suggests that "The AOU is bound to change its position as more authors independently adopt a taxonomy recognizing that Thayer's is a form of the Iceland Gull".

This response is at two levels. One of us (RCB) chairs the AOU's Committee on Classification and Nomenclature (=Check-list Committee) and will respond to what "the AOU is bound to..." do. Beyond that, we have long had an intense interest in the systematic position and taxonomy of the Thayer's Gull complex and have done a great deal of research on it which, unfortunately, we are not yet prepared to publish. The length of that interest is suggested by the fact that most of the comments below are from a paper that we presented to a meeting of the Wilson Ornithological Society in 1990.

The Committee on Classification and Nomenclature is a conservative group that is inclined to maintain the taxonomic status quo until there is sufficient published scientific evidence for us to consider and vote on a change. Aside from the publication of opinions, there has been nothing to instigate even serious discussion of Thayer's Gull by the committee, although the committee is aware that there is a problem and that its treatment may be wrong. There are, in fact, a fair number of species in that category. The committee may eventually change its position, but the reason will not be unfounded opinions of others.

Some years ago, we (B and B) compiled a taxonomic history of Thayer's Gull similar to that of Pittaway (1999). Rather than leading us to conclusions, our compilation generated additional questions that we believe must be addressed before an informed taxonomic decision can be made. Our studies since we posed these questions in 1990 have addressed some of these problems, but to our knowledge none of them has been fully resolved. Along with our questions, we give some comments on why they remain unanswered. What follows is only slightly modified from our oral presentation.

As everyone knows, Thayer's Gull was named as a species in 1915, reduced to the level of a subspecies of the Herring Gull, *Larus argentatus*, a few years later, revived as a distinct species in the 1970s, and is now considered by some to be a subspecies of the Iceland Gull, *L. glaucooides*. The nomenclature and history of Thayer's Gull is so closely tied to that of Kumlien's Gull, first described as a species, *L. kumlieni*, in 1883, and now generally considered a subspecies of the Iceland Gull, that it is impossible to discuss one without frequent reference to the other.

1. Is the Thayer's Gull the same bird in the western part of its range as in the eastern part?

The original description of Thayer's Gull was based on birds breeding on Ellesmere Island, although two birds from the Arctic coast of Alaska were also assigned to the species. No information on the true range of the species was then available. Dwight (1917) quickly placed it in the Canadian Arctic Archipelago, and extended its range as far west as Banks Island by assigning to the form several specimens from intervening localities. The August adult from Alaska has been ignored in subsequent statements of the breeding range, but who knows if that bird was a breeder, or if it was even what we now call Thayer's Gull.

Taverner (1933) stated that the

characters of Thayer's Gull in the east were stable, showing little or no intergradation with the Herring Gull, but that in the western Arctic there was complete and perfect intergradation of characters so that "it is difficult to tell where one form begins and the other leaves off". Manning et al. (1956) similarly found no sign of intergradation with the Herring Gull in the Frozen Straits area of eastern Canada, even though the range of variation there was sufficient to overlap Kumlien's Gull, but *contra* Taverner, they had no difficulty in assigning western birds. One is forced to wonder if Manning et al. had a better set of criteria than Taverner. At any rate, their confidence was so much better that they did not give their criteria or the distinguishing characters of the two forms.

Is it possible that the western birds assigned to *thayeri* are different from the eastern birds? We cannot tell, because eastern and western *thayeri* have never been directly compared in the literature. Most published measurements of *thayeri* lump all specimens available into a single sample, and aside from the very large numbers of Thayer's Gulls measured by Smith (1966) on Baffin Island and in the Frozen Straits area, all told there are measurements in the literature of fewer than 50 male Thayer's Gulls – and some of these may be the same birds measured by different workers. Despite the fact that Thayer's

Gull acts like a species in the east, relative to the Herring Gull, and like a subspecies in the west, according to some accounts, no one has reported looking at the possibility of differences in eastern and western birds.

2. With that in mind, we ask how reliable are identifications of Thayer's Gull? One of our favourite quotations is from a 1986 *American Birds* Regional Summary, where Ken Able noted that "A bird matching the description of what usually passes for an adult Thayer's Gull was seen . . ."

As a subspecies, Thayer's Gull was reduced to observational obscurity only two years after it was described. There were few birders then, so there is no record of a lot of these gulls being seen. Field workers in the Canadian Arctic did identify and study Thayer's Gulls, and museum workers labeled some specimens with that name. But many of us grew up before there was an entity called Thayer's Gull to be seen on field trips, and not surprisingly there are few records of it in most of the literature for about 50 years, and no illustrations of it in field guides of those times. Soon after studies purported to show that it didn't interbreed with anything and it was elevated back to species status, Thayer's Gulls popped out of the woodwork everywhere, showing up on life lists, state lists, and so on, particularly in the west where the liter-

ature said it occurred abundantly, but to some extent all over North America. It is not only observations or sight records that we wonder about; we wonder also about identifications of specimens.

Consider the following. In 1945, a gull taken in the Niagara Falls area was sent to the American Museum where it was identified as *L. glaucooides kumlieni*. Another "almost identical" bird taken in the same area in 1957 was therefore also considered to be Kumlien's, or Iceland, Gull. After Thayer's Gull was recognized as a species, those specimens were considered to be the first records of *Larus thayeri* for the Niagara Frontier region (Andrle 1969). There is no indication that the specimens were re-examined or re-compared – just re-identified. We wonder which species they really represent, and why, if the first was Thayer's Gull after 1973, it was not identified as *L. argentatus thayeri* originally. Kumlien's Gulls did not automatically become Thayer's Gulls when *thayeri* was split from *argentatus*. We wonder, too, about records for the north shore of the Gulf of St. Lawrence, where what appears to be the same individual has been identified in the literature as Thayer's, Herring, and Kumlien's gull. Most current literature seems to reflect the first identification, by Dwight (1925), and ignore the two later identifications. How can the range of a form be recorded if we

don't know which identification of an individual is correct?

Taverner (1933) wrote in reference to Kumlien's Gull: "Juveniles of sure identity have never been positively demonstrated and specimens so designated have been named more by process of elimination and careful judgement (neither of which I care to question here but suggest possibilities of doubt) than by evidence of parentage". Surely that statement could be extended to Thayer's Gull, many records of which are based on juvenile birds.

3. Have there been recent range extensions of either or both Thayer's and Kumlien's Gulls creating a zone of secondary contact where they are now reported to interbreed?

On Southampton Island, Sutton (1932) found only *L. argentatus* on the south side of the island. Manning et al. (1956) found *L. thayeri* in a small area at the northern tip, and Smith (1966) found Thayer's much farther eastward. Kumlien's were unknown from the island. But Gaston and Decker (1985) found Thayer's and Kumlien's interbreeding on the north side of the Bell Peninsula, the easternmost part of Southampton Island, where neither species had been reported – although perhaps no one ever had a chance to look there.

On Baffin Island, Soper (1928, 1946) reported that Thayer's Gull was confined to a northern area

extending only to Pond Inlet, which is very far north, and Kumlien's Gull was found north only to Cumberland Sound, which is pretty far south. Wynne-Edwards (1952) noted that there were no gulls of the *glaucooides-argentatus* group in several intermediate localities, and that there was a gap of about 500 miles (800 km) on the east coast of Baffin Island without any gulls of this group. Maps published by Macpherson (1961) show this large gap. There were, however, several colonies of Glaucous Gull (*Larus hyperboreus*) known from the area, so it is not strictly a matter of the area being unexplored. Yet, for some reason, Smith went to Home Bay, in the middle of this no-gull's-land, in 1961 and found not only Glaucous but also Thayer's, Kumlien's, and Herring Gulls, breeding in variously mixed colonies in large numbers, and mating assortatively. In 1975 and 1976, Knudsen revisited Home Bay and found Thayer's and Kumlien's interbreeding (Godfrey 1986, Snell 1989).

Thus, by early accounts, Thayer's and Kumlien's gulls were well separated geographically, but suddenly they were interbreeding all over the place, especially where neither had been before. If these are truly zones of secondary contact, how much do they tell us about species relationships? Might not the situation stabilize in a decade or two, as it may have in a similar situ-

ation in orioles in the Great Plains? How much do we need to know before we rush to judgement?

4. And anyway, what happens when *thayeri* and *kumlieni* interbreed?

Normally, when two species interbreed, the progeny are intermediate in most respects. If this happens frequently, and there is a fair number of F-1 hybrids, they may interbreed and backcross and form a hybrid swarm. Perhaps this is the situation in the Thayer's-Kumlien's Gull, where individual variation was said to be so extensive as to bridge the difference between the two types even before they were known to interbreed. Yet where they occur together, investigators seem to have no trouble telling them apart. Smith apparently had no trouble on Baffin Island where they bred assortatively. Gaston and Decker (1985) had no trouble on Southampton Island, reporting six pairs of Thayer x Thayer, five pairs of Thayer x Kumlien, and one pair of Kumlien x Kumlien. They did mention two intermediate birds, but did not list them among known pairs. How do you tell intermediates when the range of variation bridges the gap?

Snell (1989) wisely didn't use names, but reported dark- and light-winged pair combinations and cited Knudsen's unpublished paper as reporting pairs consisting of light x dark, two of "fairly intermediate" coloration, and intermediate x light-winged. Since Snell considered the

birds to form an unbroken continuum from dark to white, and Knudsen's criteria are not available, these data are not readily interpretable.

The results of any of these interbreedings, in terms of young produced, have never been reported, so we do not know (except as judged from the range of variation) whether the forms are interfertile. No young from mixed nests have ever been collected or raised to adulthood, so we don't know what they look like. And when you get right down to it, seeing two birds at a nest does not necessarily mean that those two birds copulated and laid the eggs in that nest, if there are any. Most of these nests have been viewed only from afar, e.g., from a boat.

5. Even if interbreeding is regular and mixing is thorough, why is Kumlien's Gull, and therefore Thayer's, associated with the Iceland Gull? When it was first described, *kumlieni* was differentiated from and compared to the Glaucous-winged Gull, *Larus glaucescens*, of the Pacific coast. The English name proposed was "Lesser Glaucous-winged Gull." Its similarity to the Iceland Gull was noted and a possible relationship mentioned, mainly on the basis of color.

Taverner (1933) stated that *kumlieni* "is of the Herring Gull type" with the "wing tip pattern washed out to grey and greatly reduced in area. In all other charac-

ters it seems indistinguishable from that species." Manning et al. (1956:98fn) quoted Wynne-Edwards as writing that "in life Kumlien's Gull does not differ greatly from the Herring Gull except in the paler pigmentation of the primaries, whereas they were 'obviously different from Iceland Gulls on any but the most superficial examination'".

Rand (1942) was the first to list *kumlieni* as a subspecies of the Iceland Gull, on the basis of a series of immatures intergrading in color. Salomonsen (1950) thought that both *kumlieni* and *thayeri* should be treated as the same species as the Iceland. Characters he gave were smaller size, less melanin on the primaries, and "having a very different, much paler juvenile plumage". But according to Godfrey (1986), some young *thayeri* are darker than Herring Gulls.

The fact that both Thayer's and Kumlien's Gulls have dark fleshy eye rings, in contrast to the yellow eye ring of the Herring Gull, has been of primary importance in merging these two forms. This eye ring is also dark in the Iceland Gull, and the Glaucous-winged. Both Kumlien's and Thayer's have variable dark flecking in the iris, in contrast to the pure yellow iris of the Herring Gull and the yellow iris of the Iceland Gull. There is much variation reported in iris color of both Thayer's and Kumlien's gulls, ranging from nearly pure yellow to very dark. Eye color and contrast do not

really provide any definitive evidence of relationship. No one has reported a contact zone between Iceland Gulls and Kumlien's Gulls. Indeed, they are well separated by the Davis Straits.

Is it conceivable that Thayer's and Kumlien's could represent a species distinct from both Herring and Iceland? That seems to be about the only combination that has not been proposed seriously.

6. And finally, has everyone forgotten that regardless of one's concepts of the characters of these birds, or how many of each are identified in the field in or out of the expected range, their nomenclatural disposition depends on the characters of the type specimens? Despite all that has been written about Thayer's Gull in the past two or three decades, there is no indication in the literature that anyone (besides us) has examined the type specimen or the rest of the type series since Dwight in the early 1920s. The same can be said for Kumlien's Gull. Even Howell (1999), who gave measurements of birds from the Museum of Comparative Zoology, does not mention examining the type of *thayeri*, which is housed there.

The purpose of this paper is not specifically to rebut or refute anything published on the subject by others. Rather, we hope that it might stimulate work that will eventually lead to the resolution of the problem.

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