

NOTES AND OBSERVATIONS

A Multi-species Feeding Aggregation Involving Gulls and Common Loons on Lake Champlain

The unusual, frenzied predatory behavior of flocks of four gull species plus one or two Common Loons on a concentrated patch of aquatic animals was observed on Lake Champlain, New York State. Possible interpretations of the relationships between loons and gulls are presented.

On numerous occasions in late October and early November, 2014, my attention was drawn to small flocks of gulls flying, hovering, and plunging into a very small area at the surface of the lake. Observations (with a Kowa 20X-60X zoom telescope at a distance of about one mile) revealed that one or two loons were momentarily visible beneath the aerial group of gulls as the loons briefly surfaced and then apparently voraciously fed on some prey items (presumably fish) just below the water's surface, together with the plunging gulls. Superficially, it appeared that the loons' diving and surfacing behavior caused some prey animals to be brought close to the water surface, where they became vulnerable to predation by the gulls.

From the brief appearances of the loons when they surfaced it could only be determined that they were probably Common Loons, in non-breeding plumage. It seems there were only one or two individuals involved at any one occasion.

Lake Champlain has a large population of yellow perch; Decker et al. (around 1980) state that young yellow perch travel in schools, feeding on zooplankton. A school of small fish would be an example of such a prey species that would provide a large enough biomass to elicit the observed feeding behavior of the gulls and loons. McIntyre (1988) states that yellow perch is a very common prey species of the Common Loon in many lakes in its breeding range. McIntyre (1988) observed a captive Common Loon rapidly swallowing 124 fathead minnows underwater, which would agree with the fact that I never saw the loons at the surface, ingesting a fish. Also, Forbush and May (1939) state, "Often little fish are swallowed under water."

The gull species were: Great Black-backed Gull (only a few adults and immatures), Herring Gull (only a few adults and immatures), Ring-billed Gull (numerous adults and immatures), and Bonaparte's Gull (a few in nonbreeding plumage). The predatory behavior of the several gull species was different, apparently caused by the size of the gull and its ability to reach the prey animals, which must have been within less than a foot below the water surface. The Bonaparte's Gull was the smallest species and it was the most active; flying and hovering at one or two yards above the water surface, it would plunge head first into the water, totally submerging its body. Its small size must have required this behavior in order to reach the prey animals. The Great Black-backed Gull was the largest species and it always remained floating at the surface and then

lunging forward and downward to submerge the foremost half of its body to reach downward into the water. Apparently it could rely on this behavior to reach the prey animals. The Herring Gull and the Ring-billed Gull (it was not possible to always distinguish between the two species) mostly behaved similar to the Bonaparte's Gull, plunging head first into the water from about one to a few yards above the water. However, their bodies did not entirely submerge. Occasionally, what appeared to be a Herring Gull started from a swimming position and lunged forward and downward into the water, similar to the behavior of the Great Black-backed Gull.

As time progressed, this conspicuous behavior apparently attracted more gulls. The early aggregations usually numbered about a dozen birds, but sometimes this increased to around 50 gulls. The duration of these episodes could last intermittently for hours, depending on the presence and behavior of the loons.

This multi-species behavior was observed at all levels of wind strength (from calm to very windy) and water surfaces from smooth to white-capped waves. These observations occurred in Treadwell Bay, near Pointe au Roche State Park in Clinton County, Town of Beekmantown, where the water is about 25-35 feet deep.

I could not ascertain what conditions or circumstances were present to initiate these episodes of predatory behavior, because they were well underway when I noticed the swarming activity of the gulls. It may be that some underwater behavior of the loons caused an abundance of prey animals to be brought up near the lake surface, where they were fed upon. This would have attracted the attention of the gulls and they took advantage of the situation to exploit an available source of food. Whenever the gulls were feeding, there always seemed to be loons below, so it appeared that the loons' behavior was a causative factor. In support of this hypothesis, in November, although gulls were present, no swarming and plunging of them was seen. It may be a coincidence, but no loons were visible in the area.

However, another hypothesis is that the prey organisms may have come to the surface independently of the loons; coincidentally both the loons and the gulls were all exploiting the availability of this source of food, each species according to its own capability. In the very comprehensive and detailed life history summary of the Common Loon by McTyre (1988) I found no reference to loons effecting the manipulation of prey animals similar to the foregoing scenario.

Whatever the explanation might be for these episodes (and there may be others), I believe it is an uncommon event and may occur only when there are a number of conditions present. Looking back over many years of observing loons and gulls on Lake Champlain, I do not recall any sightings of the swarming and plunging of so many gulls concentrated in one small area together with the simultaneous presence of loons.

LITERATURE CITED

- Decker, D. J., R. A. Howard, W.H. Everhart, J. W. Kelley. 1980. Guide to Freshwater Fishes of New York. Ithaca, NY: Cornell University.
- Forbush, E. H. and J. B. May. 1939. A Natural History of American Birds of Eastern and Central North America. New York: Bramhall House.
- McIntyre, J. W. 1988. The Common Loon: Spirit of Northern Lakes. Minneapolis: University of Minnesota Press.

Harold G. Klein, Plattsburgh, NY

