Necropsy Finding Summaries – Draft

August 2024

Loon Preservation Committee

Case: LPC-24-22-SU/TV240065. Canaan Street Lake, Canaan, NH.

Collection Date: 26 July 2024; E. Jutila, volunteer.

Necropsy Date: 31 July 2024; K. Baxter, Tufts University, DVM Candidate, Class of 2027.

This adult loon was found floating near the shoreline on Canaan Street Lake on Friday, July 26, and collected by lake resident Elizabeth Jutila. There had been multiple loons on the lake in July, in addition to the resident breeding pair, so the territorial status of the collected loon is uncertain.

A necropsy at the Loon Preservation Committee found several factors that may have contributed to the mortality. The carcass was decomposed, but the body condition or nutritional status of this adult female loon was intermediate. Her weight was 5.0 kg (11.0 lbs), average for the New Hampshire breeding population (adult female mean: 4.9 kg /10.8 lbs).

A pre-necropsy x-ray showed six shot pellets in the loon, scattered through the head, wing, ankle, and back and abdomen. The injuries from these pellets did not appear to be very recent, or to have caused acute problems, since the loon survived the initial injury and was able to dive and forage for at least some weeks, if not months or years. Any chronic or cumulative deficit from the injuries is harder to determine.

The necropsy also found a healed injury to the shoulder, or coracoid, that may have been unrelated to the shot injury. The shoulder injury could have made it harder for the loon to take flight and stay airborne, although the extent of this impact is also uncertain.

Finally, the loon was found to have a markedly enlarged spleen. Although this can have several causes, an enlarged spleen is consistent with infection by avian malaria, a mosquito-borne disease like human malaria. The July timing of this case also matches avian malaria mortalities documented in breeding loons in New Hampshire in the last decade, especially in nesting females; nesting loons are more likely to be bitten by mosquitoes. The Canaan Street Lake loon had active ovaries and could have nested earlier in the summer. Tissue samples will be submitted to Dr. Ellen Martinsen, a collaborator at the University of Vermont investigating malaria and other vector-borne diseases in birds.

In summary, necropsy findings showed that injury, disease, and bad luck (the gunshot wounds) may all have contributed to the loon's death. We are grateful to loon watchers on the lake for helping to collect and document this unfortunate case, and look forward to sharing any additional results, like the avian malaria findings, as we receive them in the coming months. Please contact Loon Preservation Committee staff (field@loon.org, or sunapee@loon.org, or 603.476.LOON) with any questions.

Radiograph of Canaan Street Lake Common Loon collected in late July, 2024, (TV240065/LPC 24-22-SU) showing shot pellets (bright round dots) in head, wing, ankle, and body cavity.