

# Sharp-shinned Hawk Study Goes Multinational

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The investigation of observed capillaria nematode infections in Sharp-shinned Hawks is continuing. BBRR implemented a formal inspection and scoring protocol in the spring of 2020. Last fall (2022), a total of six banding stations in the U.S. and Canada followed the inspection protocol developed by Braddock Bay Raptor Research. The expansion to multiple stations is expected to continue this fall and will help us to understand what is happening on a continental scale.

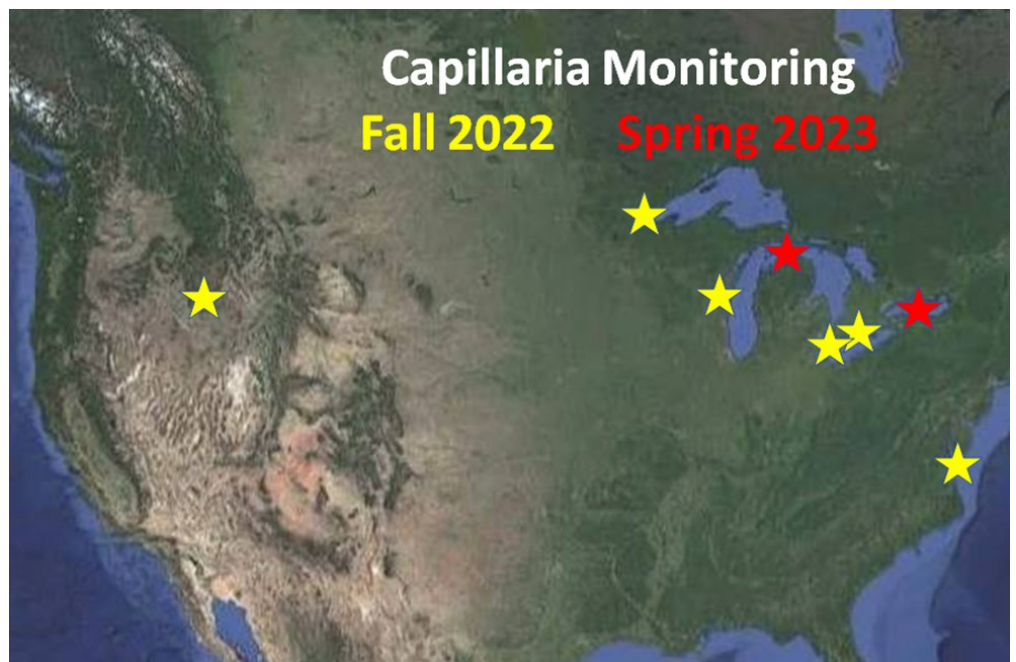
This past spring (2023), inspections of Sharp-shinned Hawks continued both at Braddock Bay and at Mackinaw City in Michigan. In both those locations, more than half of the females showed evidence of the capillaria nematode. The presence in males remains at a lower percentage, but here at Braddock Bay there was a definite uptick.



Sharp-shinned Hawk showing signs of capillaria infection. Photo by David Mathiason

As part of our continued collaboration with Dr. Sara Childs-Sanford (veterinarian at Cornell University), we collected mouth swab samples from 72 Sharp-shinned Hawks, as well as a few Cooper's Hawks and one Northern Goshawk. These samples will be tested for the presence of the capillaria nematode, not only to confirm what we are seeing but to check birds that had no visible signs of infection.

The Cedar Grove Ornithological Research station in Wisconsin has been partnering with us on this project since 2020. Last fall's effort by the Cape May Raptor Banding Project in New Jersey was an expansion of what they piloted in 2021. The other four fall banding stations: InterMountain Observatory in Idaho, Hawk Ridge in Minnesota, Hawk Cliff and Holiday Beach both in Ontario, Canada, were new additions to this project. The results were quite varied, with low



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percentages of infection observed in Idaho, Minnesota, and Ontario. The data from Wisconsin and New Jersey showed percentages that were worrisome (14% and 25%, respectively in females) but were not as high as what we have seen at Braddock Bay in the spring. We have no explanation at this time as to why we are seeing this infection in some parts of the continent but not in others.

One of the most confusing aspects of this study is the paucity of observed capillaria at the two banding stations on the north shore of Lake Erie (Hawk Cliff, Holiday Beach). BBRR routinely captures birds that were previously banded at one of those two stations; a quick hand count of encounters over the past few years showed 17 such instances. When we queried the banders at those two stations, however, they could not find any case of capturing birds that were banded at Braddock Bay. This makes us wonder what the actual migration flyways are, and perhaps adult birds take a different path than juveniles.

This discrepancy of banding encounters is just one reason to investigate flyways. It is possible that birds which do not display lesions take a different path than those that do and, if so, that might help locate the source of problem. One way to gain an understanding of flyways is through the use of radio transmitters. We hope to deploy small nanotags on Sharp-shinned Hawks next spring. These tags would be picked up by one of the many Motus towers scattered across the continent (see <https://motus.org/> for details).

The goal is to deploy about 40 transmitters in the spring of 2024. Nanotags for Sharp-shinned Hawks cost \$250 apiece. BBRR would like to extend our appreciation to the Friends of Montezuma Wetlands Complex for their generous donation of \$2,000 towards this project. We are still seeking additional funding, and donations can be made through the link to our PayPal Giving Fund via our website at <https://www.bbrr.org/> or by check sent to Braddock Bay Raptor Research, 185 Pond Road, Honeoye Falls, NY 14472. Please donate now, and make sure you indicate that your contribution is for the Sharp-shinned Hawk project. For more information and updates about the Sharp-shinned Hawk project go to <https://www.bbrr.org/sharp-shinned-hawk-project/>.