Friends of Whitefish Point

Unveiling the Mysteries of Long-eared Owl Movements

Although distributed worldwide, the Long-eared Owl's life history, especially migratory movements, is poorly known in North America. Analysis of Christmas Bird Count data shows a decline of over 50% since 1970, and Partners in Flight estimates the North American population of Long-eared Owls to have declined by ~90% since 1970. A highly migratory owl species, long-eareds banded in the northern U.S. and southern Canada have been recovered as far south as Mexico. By expanding our knowledge of the life history and migratory patterns of this species, scientists and policy-makers can more accurately adjust future management and conservation plans for the Great Lakes region.

Since the early 1900s, Whitefish Point, Chippewa County, MI has been recognized as a continentally important area for bird observation and monitoring. During spring migration, the southern shore of Lake Superior acts as a natural barrier for northbound birds, funneling significant numbers to Whitefish Point. Once at Whitefish Point, the protected habitat provides a critical stopover area for these migrant birds. Whitefish Point is North America's premier Long-eared Owl migration site. During spring migration from 2016-2025, a total of 2,511 long-eareds were banded at Whitefish Point, representing 44% of all Long-eared Owls banded in North America during that period. However, only 28 (1%) of these owls have been recaptured at Whitefish Point. Furthermore, of the approximately 20,000 Long-eared Owls banded in North America from the early 1960s to 2021, only 150 (0.75%) were recaptured, demonstrating the difficulty of documenting migratory movements of this species solely through traditional banding practices. Thanks to new technology, it is now possible to track these secretive owls using more advanced methods.

The Friends of Whitefish Point plans to document migration connectivity of Long-eared Owls using advanced GPS telemetry systems. The model for this work comes from Project SNOWstorm, a highly successful long-term project using cutting-edge GPS/GSM wildlife telemetry with Snowy Owls. Recent technological developments have widened transmitter choices and decreased transmitter weight to the point where we can now track much smaller owls, such as the long-eared. During 2021, Christensen and Ward (2022) used these smaller transmitters to track two Long-eared Owls from central New Jersey to areas in Quebec that were well north of their known breeding limits.

We plan to place GPS transmitters on 10 Long-eared Owls during migration in 2026 & 2027. Transmitters will be programmed to collect data for 1-2 years to document spring migration to breeding areas, summering locations, and fall migration to wintering areas. This will provide data on full migratory connectivity for Long-eared Owls banded near the center of their North American distribution. As well as providing information on the life history & migratory habits of this species, data collected may serve as indicators of the behavior of other similar species that are harder to measure. Knowing the routes individual birds take can be crucial for identifying key stopover sites and wintering grounds that declining bird populations rely on and will enable scientists and agencies to take action to better manage and conserve those areas.