

THE FALL FLIGHT OF COMMON LOONS OVER CAYUGA LAKE

BILL EVANS, BOB MEADE, TOM NIX, AND STEVE KELLING

To many the call of the Common Loon (*Gavia immer*) characterizes the meaning of wilderness and what is wild. The loon breeds and nests in myriad unadulterated northern lakes and ponds. Unfortunately the Common Loon population in North America is declining (St. John, 1993). The reasons for this decline are many. Habitat destruction has decreased the number of potential breeding sites. Their position high in the food chain makes them susceptible to a variety of toxins. Finally, oil spills on their wintering waters, and human recreational activity are causing Common Loon populations to decrease. Although the Common Loon prefers to nest on remote freshwater ponds and lakes, in winter it is a seabird of the Atlantic Ocean and Gulf of Mexico (Haney 1990, Root 1988). Breeding and winter counts are difficult due to the sheer area that must be covered. Thus, locating migration flyways and establishing long term migration counts are important means to monitor Common Loon populations. For example, the migration count data from Whitefish Point Bird Observatory in Northern Michigan has detected Common Loon population declines between 1970 and 1992 (WPBO, Annual Reports).

Wells (1991) reported that several large flights of Common Loons passed south above Cayuga Lake near Ithaca, New York. In 1992, Evans initiated a fall count of migrating Common Loons at Cayuga Lake. This first season of the loon count totaled almost 5000 Common Loons. A more thorough and coordinated effort was begun in 1993. In this paper we report results of the 1992 and 1993 Fall migration of Common Loons over Cayuga Lake, describe characteristics of this loon flight, and present preliminary evidence for a major Common Loon flyway.

METHODS

The Common Loon census was conducted at Taughannock State Park, located on the west side of Cayuga Lake, 10 miles north of Ithaca, New York (42° N, 76° W; Fig. 1). The watch location was at a fishing pier on the south side of Taughannock Creek, where the creek enters Cayuga Lake. This vantage point provided clear visibility of both the east and west shores, as well an excellent view of the lake. In the fall of 1992, census takers observed the flight on 16 mornings between 25 October and 18 November. During the fall of 1993, observers were at the loon watch for 42 mornings between 10 October and 29 November.

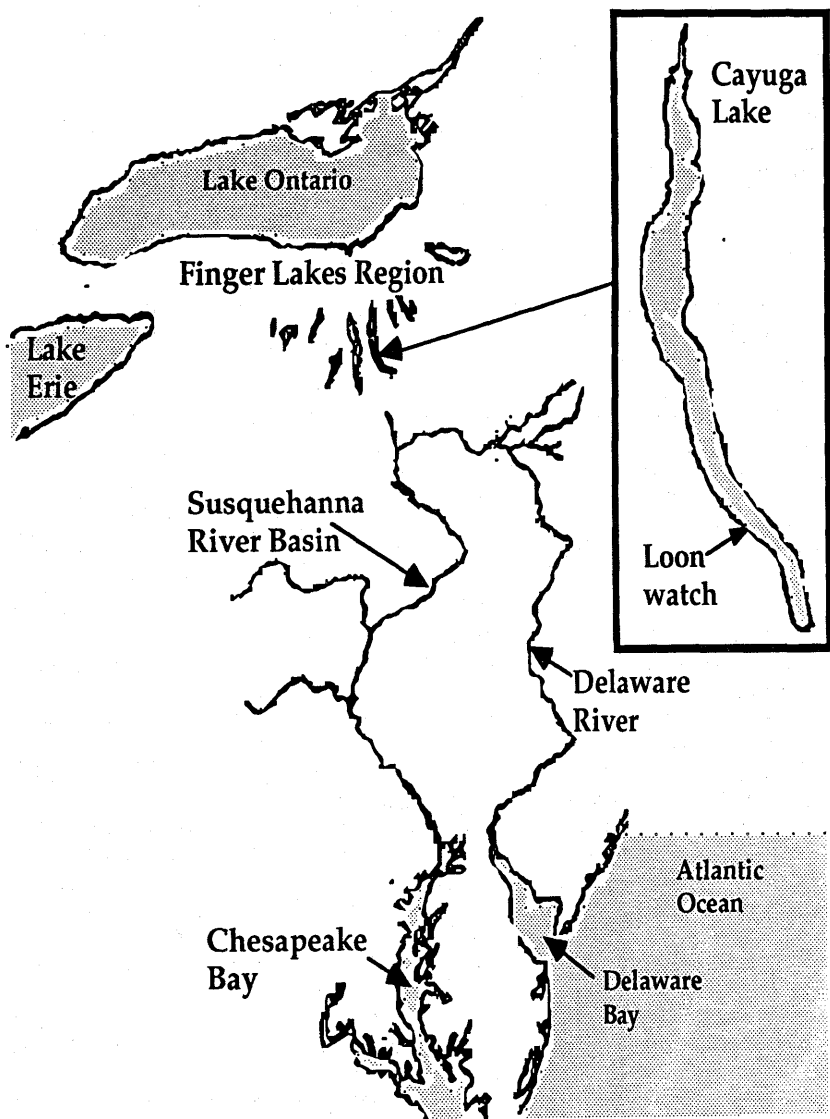


Figure 1. Location of Cayuga Lake loon watch relative to the primary water regions of central New York, eastern Pennsylvania, New Jersey and the northern portion of the Delmarva peninsula.

During the 1993 census, flying loons were totaled over 15 minute periods. The first period began 15 minutes prior to sunrise. The number of periods sampled was dependent upon weather conditions and the number of loons observed. Weather conditions, such as wind direction and speed, temperature, and cloud cover were recorded. Also noted was the number of loons flying individually and in flocks. A flock was defined as 5 or more loons flying in a group.

The loon flight over the watch extended from horizon to horizon, and could occur following several flight vectors simultaneously. To cover this expanse, observers looked for loons flying in different regions of the sky. Spotters counted loons flying low along the lake while others would count loons flying directly overhead or over the west or east shores. To eliminate double counting, another individual observed flights in all regions, and coordinated the report of loons announced to the count recorder. This procedure was necessary due to the sheer numbers of loons that could be seen flying over the watch at any given time. For example, during the peak of the migration as many as 400 loons flew over the watch during a 15 minute period.

Loons also were observed flying north. These north flying birds were noted and tabulated. The 1993 count total for the number of migrating loons was the value obtained when loons flying north were subtracted from those flying south.

RESULTS

In 1992, a total of 4942 Common Loon was counted, while in 1993, 8374 loons were counted. The increase in the loon count was likely due to increased coverage during the 1993 fall migration period. Figure 2 shows the daily totals for both years. During the 2 years of observation, the major period of the Common Loon migration over Cayuga Lake was between 30 October and 7 November. This 9 day period accounted for 66% of the total number of migrating loons.

Loons were first observed flying at daybreak, and the flight usually ended about 2 hours later. On all days in which there were high counts of migrating loons, northerly winds prevailed. Loons flew south during calm days or days with southerly winds, but accounted for less than 13% of the total migratory flight.

On most days the loon flight could be characterized as having 2 pulses (Fig. 3). The first pulse typically began at daybreak, and was characterized by birds flying over the lake at an altitude that ranged from just above water level to approximately 200 feet. This flight normally lasted around 45 minutes, and was usually followed by a lull, lasting between 15 and 30 minutes. During the second pulse, twice as many birds were usually observed, and these birds were migrating at higher altitudes (between 200 and 2000 ft). The second pulse lasted approximately 1 hour.

Loons were often observed flying in flocks. Both the number of flocks observed and the size of the flock were greater during the second pulse. During the first pulse, flocks were observed 57 times, and the average flock size was 9 birds, while in the second pulse, there were 330 flocks tallied with an average flock size of 16 birds.

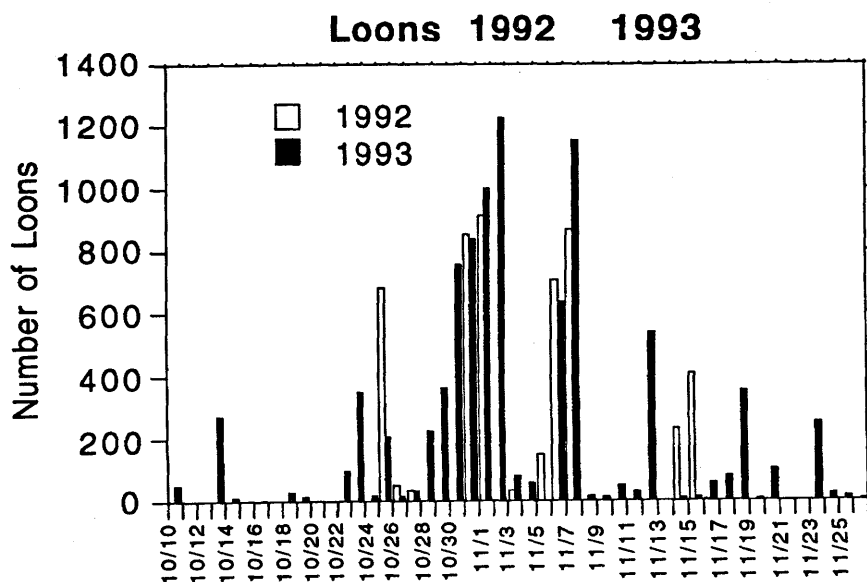


Figure 2. Daily counts of migrating Common Loon during the fall migration, 1992 and 1993.

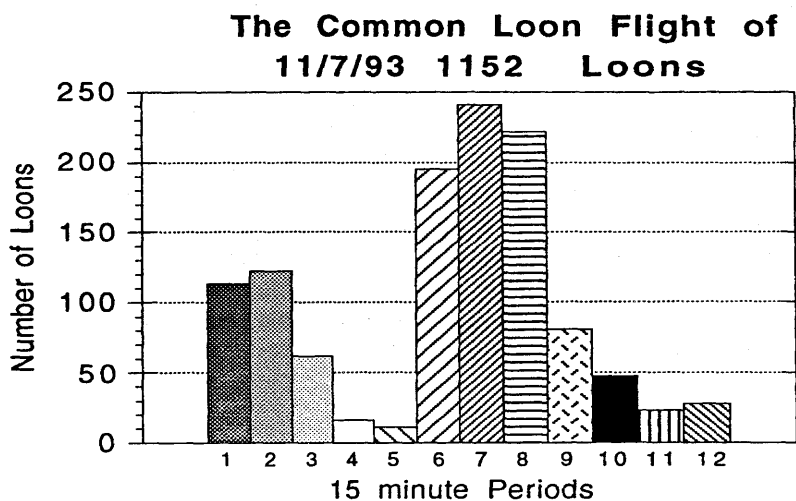


Figure 3. Number of Common Loon counted during 15 minute intervals beginning 15 minutes before sunrise on 7 November 1993.

DISCUSSION

The total of 8374 Common Loons counted in the 1993 fall migration during the loon watch is the highest fall count yet to be documented in North America. There is evidence that large loon flights are also occurring over other regions of the Finger Lakes (Melin, 1991). This indicates that the Finger Lakes region of central New York may be a major loon migratory flyway.

The pulsed nature of a daily loon flight may be attributed to different locations from which the loons begin. Based on their low flight altitude directly over the lake, we conclude that the loons of the first pulse left from sites on Cayuga Lake north of the watch. In contrast, the high altitude flight, and time of arrival suggest that the loons which composed the second pulse left from Lake Ontario. Large numbers of loons have been reported during the fall from Lake Ontario (Bull, 1974). The lull between the 2 pulses may be explained by the distance between Cayuga Lake and Lake Ontario.

Since so many loons pass over the Finger Lakes Region of New York during their fall migratory flight, the question arises as to where they are headed. We suggest that loons leave from Lake Ontario, fly through the Finger Lakes region, and continue south passing over the Susquehanna River Basin to the Chesapeake Bay. Evidence for this flyway is based on high numbers of loons on Lake Ontario, our findings, reports from hawk watch stations located in central Pennsylvania, and on loon counts reported from the Chesapeake Bay. A count of 109 loons was made on 7 November 1992 at Timmons Mountain Hawk Watch near Chambersburg, Pennsylvania, when 866 loons were tallied at Taughannock Park. A Common Loon census done on the Chesapeake Bay between 1988-1990 by Paul Spitzer found that loons were most numerous in the Chesapeake from late October to late November and in numbers comparable to those that we counted flying over Cayuga Lake. This evidence indicates that a further coordinated efforts between the Cayuga Lake watch, and other watches both north and south, as well as throughout the Finger Lakes, should be made.

In conclusion, we have found evidence that a major Common Loon Fall migratory flyway passes over Cayuga Lake in the Finger Lakes Region of central New York. Continued monitoring of this flyway should provide information concerning population trends for a segment of the eastern North American Common Loon population.

ACKNOWLEDGMENTS

We appreciate the assistance provided by the following: Adam Byrne, Ned Brinkley, and Bernard Guirey for their part in establishing this count, Don Henise for the loon count data obtained in Pennsylvania, Paul Spitzer for the detailed reports from his work on loons in the Chesapeake Bay Region, and critical comments made by Gerald Rising, and Susan Pearce-Kelling.

732 Old 76 Road, Berkshire New York 13736

LITERATURE CITED

- Bull, John, 1985. *The Birds of New York State*. Cornell Univ. Press, Ithaca, NY.
- Haney, J.C., 1990. Winter Habitat of Common Loons on the Continental Shelf of the Southeastern United States. *Wilson Bull.* 102(2): 253-263.
- Melin, C. K., 1991. Region 3 - Finger Lakes. *Kingbird* 41: 27.
- Root, T., 1988. *Atlas of Wintering North American Birds*. Univ. Chicago Press, Chicago, IL.
- St. John, P., 1993. Yodelers of the North. *American Birds* 47(2):202-205.
- Whitefish Point Bird Observatory, 1970-1993. *WPBO Annual Reports*.