
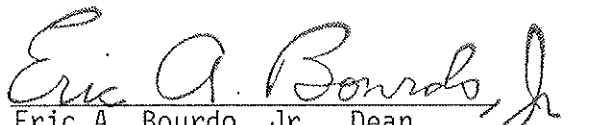


Raptor Survey Huron Mountain Club
Phase II
An Indepth Study of the Barred Owl

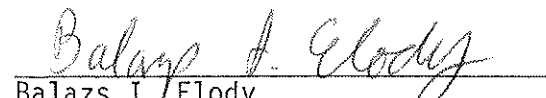
Annual Report
for 1981 and Request for
Additional Funding for 1982



N. F. Sloan
Principle Investigator



Eric A. Bourdo, Jr., Dean
School of Forestry and Wood Products



Balazs I. Elody
Graduate Student

July 31, 1981

INTRODUCTION

Phase I of this study has been concerned with identifying the various raptor species found on the lands under the ownership of the Huron Mountain Club. These surveys have resulted in the observance of a large number of barred owls (Strix varia Barton). Owl surveys conducted this past summer indicated the presence of a pair of owls per mile of sampled roads. This is a high population level and one that should be investigated.

LITERATURE REVIEW

The northern barred owl is one of our largest owls, being slightly smaller than the great horned owl. It is gray in color with the breast feather barred transversely and striped lengthwise on the belly and flanks. The eyes are black and the bill yellow. In much of its range it is a year round resident (Bent, 1938).

The nesting habitat of the barred owl has been described as being heavy white pine forest in the eastern United States. It is often associated with the red-shouldered hawk and will often nest in the old nest of this species (Ibid). In Minnesota, it was found to frequent old growth oak stands and areas of old growth mixed hardwoods and conifers (Nicholls and Warner, 1972). Nicholls and Warner (1972) used radio telemetry to define the territory size of 10 barred owls. They found the birds to be occupying an average territory size of 565 acres. The home range varied from 213 to 912 acres. Thus, they had about one pair per square mile of suitable habitat.

They were able to show that the owls occupy the same area year round and from one season to the next. Nesting occurred in old hawk nests or more often in hollows in old growth trees. Bent (1938) also noted that nests in an area are occupied year after year. He records one area where

barred owls were known to have nested for a 35 year period, many times using the same hollowed tree until the tree fell apart. Sprunt (1955) has also recorded use of individual nests for periods of 20-25 years.

Eggs are found from mid-March and to early May and usually number 2 (Wood, 1951). Bent (1938) records that most clutches are of 2 eggs with a few being 3.

PROPOSED RESEARCH

This project is proposed to cover a three year period. It will be concerned with an in-depth study of the northern barred owl. It will make use of radio-telemetry to:

1. Define home range size.
2. Determine preferred habitat.
3. Locate nests.

We will also attempt to band all barred owls within the club holdings, especially the young. It is important to determine the production and survival rates. Bent (1938) found only 10-15% of the young birds to ever be encountered again in the area.

METHODS

Night owl surveys will be conducted as they have been the past two summers by using recorded owl calls as designated points on a grid. This past summer this has been accomplished by stopping every half mile on all of the passible roads in the Club. The recording is then played and any responses noted. These responses will form the basis of the preliminary pair locations. The spot will be noted on a map. The area around the response site will then be searched during the day for the owls. This

will include looking for all hollow trees and climbing them to determine if anything is using the holes. In addition, all large stick nests and squirrel nests will be examined.

Mist net will be used to capture the owls. A double net is used with two stuffed barred owls as decoys. A recording of a barred owl is played. The owls then attack the decoys and are caught in the net. This method allows us to sex the bird caught as we can still hear the uncaught bird. There is a sexual dimorphism in the bird songs which allows for separation of the pair.

LITERATURE CITED

- Bent, A. C. 1938. Life Histories of North American Birds of Prey. U. S. Nat. Mus. Bull. 167, Part 2.
- Nicholls, T. H. and D. W. Warner. 1972. Barred owl habitat use as determined by radio-telemetry. Jour. of Wildl. Mgmt. 36:213-224.
- Sprunt, A. S., Jr. 1955. North American Birds of Prey. Harper Brothers. N. Y., N. Y.
- Wood, N. A. 1951. The Birds of Michigan. Mus. Publ. Mus. of Zoology. Univ. of Mich. No. 75. Univ. of Mich. Press, Ann Arbor.

RESULTS ACCOMPLISHED FOR 1981

Visits were made to the Club during the Christmas break during and during late February. All the known territories were visited and the caller used to detect the presence of birds. During December 20-21, 1980, we were able to locate the following owls: Guardhouse was located with the aid of the radio; Old Faithful (main road) with recording; Breakfast Roll, recording; Rush Lake, radio; Mountain Lake road (steep grade) recording; Howe Lake, recording, and Skeetfield, recording.

On February 28 we revisited the Club and surveyed the territories again. Unfortunately, the weather was not cooperative. Owls were located on Rush Lake road and Skeetfield where responses occurred. Breakfast Roll responded on the Ives Lake road and Old Faithful on the main road.

During the December survey, only one owl responded to the calls at each territory. In February, both males and females responded.

The summer field season started on May 21, 1981. We were successful in capturing the male at Breakfast Roll and placing a radio on him. With the aid of the radio, we were able to locate the nest which is in a large sugar maple (30" DBH) near the rock of Breakfast Roll. The nest is about 30' up in a hole. Three young were observed, two in the nest and one in a small hemlock about 50 feet from the nest. All the young were banded and released.

In early June, both the male and female at Skeetfield were caught. The female had been captured before, while the male was new for this year. In addition, three young were located near the nest site. Several days of search failed to locate the nest tree.

A male was captured at Rush Lake boathouse. This is a new male as the old one was marked and radioed last year. This is the only new adult known in the Club according to previous banding.

Surveys over the summer have indicated that all territories occupied last year are re-occupied this summer. In addition, two new pairs have been found on the loop road.

Additional locations where owls have been captured this year include - Ravens Roost parking lot, Ives main road junction, Guardhouse, Cristy pool and Canyon Lake turn-off (both male and female captured).

We have been trying to capture both individuals at a site this year. We now have three sets of birds marked, Old Faithful, Canyon Lake turn-off, and Skeetfield. Canyon Lake, Old Faithful and Mountain Lake boat house are all radioed with a battery life of 330 days.

RESEARCH PROPOSED FOR 1982

We will again visit the Club during Thanksgiving, Christmas and Spring breaks to survey for winter territories. Next spring we hope to be able to spend some time early in may to locate additional nests and band more young. We already have the radios for next spring so will be able to put them on earlier. The 1982 research will result in a Master's thesis which will cover three field seasons of work by Mr. Balazs Elody.