

SPECIAL REPORT
ON
DEER BROWSE AND DEER POPULATION
ACADIA NATIONAL PARK

Submitted by:
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The basis of this report resulted from field studies made in Acadia National Park, the Park Extension and other portions of Mount Desert Island, January 31, February 1, 2, 1939, and from information supplied by Acting Superintendent Benjamin L. Hadley and others. Superintendent Hadley gave me a rather graphic description of the deer situation at the time of my arrival. He is interested in the survey under way and manifested a splendid spirit of cooperation.

Acknowledgment is made of the assistance rendered by Park Naturalist Maurice Sullivan who accompanied me on all field work; Professor C. M. Aldous and Assistant Biologist John Pearce, both of the Biological Survey; Park Ranger O. Y. Thompson and Warden Smith, with whom most of my study was conducted.

The inspection was made for the purpose of determining whether the deer herd is endangering the forest. While it is obvious that a thorough investigation could not be completed in three days, the study enabled me to observe typical areas during the season when food is reduced largely to dormant twigs and woody shoots. An effort was made to observe typical areas throughout the Park. The higher elevation of the mountains could not be reached in the time allotted as the roads were covered with 12 inches of snow.

Pretty Marsh:

Modification of the forest by itinerant lumbermen, wood choppers and forest fires over a long period of time has retarded the vegetation. It is evident that the variation has produced the maximum amount of food for deer. At this time the vegetation varies from herbaceous plants to a climax forest of Red Spruce (Picea canadensis) and Hemlock (Tsuga canadensis). Excessive deer browse is restricted to small sections and to species which appear to be well distributed. The favorite food is White Cedar (Thuja occidentalis), Red Maple (Acer rubrum), Gray Birch (Betula populifolia) and Sweet Fern (Comptonia sp.) Warden Smith believes this is one of the best ranges on the Island.

Trailer Camp Ground:

A considerable amount of seed reproduction and stump sprouts resulted from the removal of mature trees to provide for recreational facilities. Deer are destroying Ground Hemlock (Taxus canadensis) and they are severely pruning Hobblebush (Viburnum alnifolium) and White Ash (Fraxinus americana). Sumac is used to some extent, while Beech (Fagus americana), Red Maple and White Cedar are rarely browsed. Striped Maple, Hemlock, Alder, Gray Birch and Red Pine (Pinus resinosa) have been fed upon, but there is little evidence of it this winter.

Great Meadow:

This is an important summer range. Azalea rhodora literally covers the lowland, attaining the height of about three feet. No evidence was found of winter feeding, although five deer passed around the border the previous night. They fed sparingly on Hobblebush and Gray Birch. Visitors are reported to drive here in the summer to see the deer.

Aunt Betty Pond:

Other investigators spent the day, prior to my arrival, investigating the oak forest. Red Oak (Quercus borealis) is thought to attain its best development west of the pond. The interior was inaccessible due to the snow, but a portion of the border substantiated the statement of others that there is danger that the forests will be destroyed. Acorns are eaten and stump sprouts are extensively pruned by the deer.

In this location, oak is a preferred winter food. Further, Ranger Thompson believes the largest concentration on the Island is found in the oak forest.

Influences Affecting the Deer Population:

Influences affecting the population are not always apparent. This is true of Mount Desert Island.

There are no records of death from disease, starvation, parasites or predators. Some are killed by cars and poachers. There is considerable speculation on the probable effectiveness of poaching as a means of holding the herd in check. No conclusions can be made for apparently no one knows the number killed this way. It seems unreasonable to believe that with the protection afforded, illegal killing is a major factor in deer control. *Changed my mind.*

Deer emigration to the mainland is believed by Warden Smith to be responsible for a decrease in number. *C.B.T. 4/11/42.*

Summary and Recommendations:

1. Deer provide much pleasure for all classes of people on the Island. It is desirable to retain the maximum number consistent with the carrying capacity of the range.

2. A deer census is important, but will be of value only to the extent concrete plans are made well in advance and successfully executed.

3. In recognition of the fact that less food will be available as a result of present forest practices, and in the belief that deer

are increasing, further study of the browse situation is imperative. It is believed that another survey should be undertaken after the snow has melted in order to determine the extent of winter browsing.

4. In order that a scientific understanding may be gained of food taken, it is believed desirable to perfect a cooperative plan with some university whereby the stomachs of all deer killed by automobiles may be analyzed carefully.

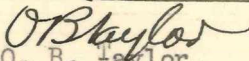
5. In other states, fenced and unfenced quadrants have proved to be especially valuable in studying the effect of browsing. While the results are not shown immediately, they may be important in the future.

6. Deer are known to cross the highway at given places. Simple signs calling attention to this fact would serve a dual purpose - the cars will slow down and the public will have a better opportunity of seeing the deer.

7. Any plan of controlling deer outside of the Park may have little effect upon the population within the boundary. Deer are eccentric and often prefer to remain on a depleted range rather than move a short distance to a favorable habitat.

8. Control measures are of equal importance to the Service, State and local citizens. It is desirable to have representatives of the various interests present when control measures are formulated.

9. In the event further studies are undertaken by representatives of our Service in the spring, it is my belief that we should invite Mr. Aldous and Mr. Pearce to participate. At that time sample pots should be designated for study, plans made for species now severely damaged and methods suggested for the most plausible means of controlling the deer, in the event control becomes necessary.


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CC: Washington, Wildlife Division (2)
The Superintendent, Acadia National Park
Park Naturalist, " " "