# LYNX MANAGEMENT IN ALASKA

by

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In Alaska the lynx (Lynx canadensis) traditionally has been considered a fur animal. There has been little interest in controlling or eliminating lynx even though they are, at times, very abundant. This is because few domestic prey species exist and because wild prey species consist largely of snowshoe hare (Lepus americanus) and other small mammals and birds, whose utilization by lynx does not conflict with man.

Lynx populations in Alaska fluctuate with hare populations, as they have long done in many portions of their range. Lynx harvests have followed these fluctuations or cycles, except during the period 1941 through 1953 (TABLE 1).

### High Expected Soon

During this period, which included one expected population high, there was no notable increase in the number of lynx pelts exported from the state. Since that time, increases in the lynx harvest have been related to observed lynx abundance. The last lynx high, as reflected by harvest, occurred between 1963 and 1966, and the next high probably will be from 1972 through about 1975.

The amplitude of lynx population fluctuations, as indicated by the exports of pelts, is very great. However lynx harvest may or may not be directly correlated with lynx numbers. Trapping effort is affected by fur prices, and commercial trapping appears to be a dying profession. These variables undoubtedly influence the correlation between harvest and population.

Over 21,000 lynx were exported annually in both 1916 and 1917. This contrasts with only a few hundred animals being taken during the periods of low lynx populations. Since 1928 the most recent recorded high was in 1966, when slightly over 5,000 pelts were recorded (TABLE 1).

From 1967 through 1970 the harvest was almost 100 percent higher than during previous lows. The estimated harvest for this period was 1,900 to about 2,300 annually and in all probability, these harvests were stimulated by the high value of lynx pelts, or were the result of improved data collection.

If the current market value of lynx pelts remains about the same, it is likely that during the next period of lynx abundance the harvest will increase beyond the high obtained in 1966.

### Fur Animal, Not Predator

Because lynx are considered fur animals, rather than predators, they have been subject to regulated harvest. For many years the trapping season was generally limited to the months of November, December and January, with some local variations. However, lynx pelts are considered to be of prime market value in other months, so in 1963, the seasons were extended through March 31 throughout much of Alaska.

The vulnerability of lynx to trap-

ping is well known. Since the 1964-65 season, we have sampled the success of lynx trappers from the central portion of Alaska (TABLE 2). Our sample was not representative of all trappers from all areas of Alaska.

During the 1964-65 season, trappers averaged a catch of 19 lynx each. The average dropped to 17 the next year when the highest reported harvest by a single trapper was 231. The 1967-68 trapping season had the lowest average of 1.5 lynx per trapper, and the highest reported catch of a single trapper was 25. In the two subsequent trapping seasons, both the average catch and the highest reported catch increased concurrent to an expected lynx population increase.

Despite the increased relative vulnerability of lynx during the population high, as reflected by the high individual catches, it is apparent that lynx harvests are related to population levels. Thus it is highly unlikely that the harvesting of lynx will affect future population levels.

## Lynx Project Continued

A lynx research project was begun by the Department of Fish and Game in 1961, and has continued to the present time. Much of the data are still being interpreted, but few general assumptions can be made at this time, which I feel will be substantiated by the proper analysis of research findings.

Lynx population highs are not synchronous throughout Alaska. The broad two-to-four year peaks of catch probably reflect consecutive population peaks in different areas.

The lack of synchrony is further substantiated by a variation in lynx productivity observed between areas. It appears that in increasing lynx populations the females breed in the first year of life, and almost 100 percent of the females conceive. After snowshoe hare populations decline, lynx productivity decreases significantly. Females may not breed during their first year, and there is very significant decrease in kit production, as indicated by the number of placental scars per female.

Other very interesting and worthwhile information concerning lynx management should be available soon.

In recent years there has been a general decline in the reliance upon trapping as a contribution to the general subsistence of Alaskans, and a shift toward trapping, and the harvest of furbearers, as a recreational activity. The regulations controlling hunting and trapping reflect this by allowing the limited hunting of lynx, but it appears that these changes will not significantly



influence the harvest of lynx. I believe that the extremely low success by hunters and trappers in the years of low lynx populations will result in a selfregulating situation.

## Little Effect Seen

The present increasing emphasis on the management of wildlife populations for nonconsumptive purposes may ultimately affect the management of lynx populations. Lynx, however, are not often seen by the general public, even

Year or Period	Number	Year	Number	Year	Number
1798-1821	76*	1926	7,495	1948	862
1822-1842	203*	1927	9,809	1949	777
1843-1862	346*	1928	10,173	1950	608
1863-1867	802*	1929	7,575	1951	843
1868-1870	804*	1930	2,980	1952	600
1871-1880	631*	1931	623	1953	900
1881-1909	n.d.	1932	502	1954	2,000
1910	1,049	1933	591	1955	3,100
1911	1,208	1934	723	1956	2,900
1912	2,720	1935	1,338	1957	2,200
1913	4,772	1936	2,421	1958	1,500
1914	6,930	1937	2,089	1959	605
1915	9,374	1938	2,130	1960	782
1916	21,008	1939	2,705	1961	864
1917	21,210	1940	1,698	1962	1,107
1918	7,692	1941	781	1963	2,312
1919	1,085	1942	639	1964	4,700
1920	649	1943	713	1965	3,957
1921	318	1944	990	1966	5,134
1922	628	1945	922	1967	1,920**
1923	1,385	1946	601	1968	2,270**
1924	3,323	1947	883	1969	2,000**
1925	7,920		-		·



Note 1: These figures should be interpreted cautiously and if quoted, should be qualified. See text.



when populations are high; therefore, there is at present little interest in preservation as opposed to conservation.

All of the evidence currently available on lynx in Alaska indicates that regulatory influences over the lynx harvest will not affect lynx populations, or lynx management, in the near future.

If humans are to affect lynx populations in Alaska, it is more likely that this influence will be exerted

through habitat changes that will directly influence snowshoe hare popu-The influence that man most lations. probably will exert upon snowshoe hare habitat will be the control of natural wildfire, which would tend to allow forests to mature, thereby reducing snowshoe hare habitat. The need for fiber ultimately will cause utilization of the forests of interior Alaska which will result in young forests that support the snowshoe hare and directly benefit the lynx.

	Season								
	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70			
Average catch per trapper	19	17	5	1.5	3.5	3.6			
Highest catch reported	170	231	31	25	40	40			

TABLE 2--Results of Questionnaire to Trappers on Lynx Trapping Success $\frac{1}{2}$ 

1/ This was a very limited survey of trappers from the central portion of Alaska, and it should not be used as a statewide average or construed to be indicative of other areas of Alaska.

### PROCEEDINGS OF A SYMPOSIUM

ON

## THE NATIVE CATS OF NORTH AMERICA

## THEIR STATUS AND MANAGEMENT

# Held in conjunction with the Thirty-Sixth North American Wildlife and Natural Resources Conference

Portland, Oregon

March 9, 1971

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# UNITED STATES DEPARTMENT OF THE INTERIOR Fish and Wildlife Service BUREAU OF SPORT FISHERIES AND WILDLIFE Region 3

Federal Building Fort Snelling Twin Cities, Minnesota 55111

September 1971

Second Printing, October, 1973