

ORAL HISTORY 01-83-05-09

Erich Follmann

Fairbanks, Alaska

1980s

Steve Lay

University Focus series

Tape starts in the middle of comments by Erich Follman. He said there are similarities between the [fox] populations between Russia and the United States and Canada. The population does cycle on the average of three to four years. He made a trip to Russia to collect fox carcasses for the surveys but he was there during a low population year and he was only able to collect 33 specimens. He has close to 600 fox carcasses from the Barrow area. He thinks it was a good time to go to Russia during a low year since that is the point in the population cycle where they have the least amount of information on the disease status of these animals. He said they are working with Don Ritter who is with the Virology Rabies Unit of the Alaska Health Department. He is a co-investigator on the project.

They did find rabies and distemper in his samples. Some work that was done by Bob Rausch previously suggested that rabies is one of the more significant mortality factors for foxes and other canids in Alaska. The break outs seem to occur when the population is crashing. The crashes in population are due to a reduced food supply mostly mice, lemmings and small rodents like this. The fox population builds up because of the increase in their food sources. Rabies is fatal in foxes as it is in other canids. Over the past ten years based on animal heads sent to Don Ritter for analysis over forty percent of the samples were rabid. The animals that were sent in had abnormal behavior. Abnormal behavior is associated with rabies. The populations that they have sampled from trappers are a better example of the population. From past evidence they would anticipate that animals which were collected during a crash would have a higher percentage of rabies. They only found several animals in the Russian collection that were rabid.

Steve asked if ones that were caught were more likely to have rabies. Erich said rabid animals usually are not eating. Trappers are using bait in their traps and that would like attract non-rabid animals. They may not be getting a good fair sample. They would be able to get an animal prior to clinical rabies but still be infected.

He talked about their results. He said from the 33 animals they collected in Russia two were positive for rabies. They didn't have distemper or hepatitis. There was some evidence of previous infections such as encephalitis. The males were not reproductively active since they breed in April and the young are born in June. His samples were from December and February. He said two of the females had had previous litters. Steve asked what differences were found between the eastern and western populations. Erich said they didn't find differences. The fox has a circumpolar distribution.

He lived in Barrow for two years. During the fall there is a build-up of the population on the coast and then they move onto the pack ice. In February and March they move back to the tundra presumably to set up their territories and eventual breeding. Out on the ice they follow the polar bear and are scavengers. The foxes get out onto the ice and the ice is moving toward the west. They may get on the ice in Barrow and get off in Russia so he thinks there is a significant mixing of the animals from the continents. It is just the nature of the environment.

He said the animals in Russia have different behavior. The Russians have reported mass migrations to the south presumably because of food supply. Most of the big rivers in Russia flow north to the ocean which may allow the migration to occur. He talked about the possibility of a similar migration in Canada because of the terrain. He talked about reproduction in foxes. The Canadians feel that there is no difference in the number of ovulations and implantations between abundant food supplies and low food supplies. The same numbers of young are born each year. The population changes based on the mortality of the pups are due to food supply. When food supply is good there are more pups surviving. The Russians view it differently. They believe the population changes based on the condition of the adult population during the winter before reproduction takes place. There are fewer ovulations and implantations during poor years. They believe that post-natal mortality is not as important. And the opposite takes place during good years when food is abundant. Erich said he will be looking at about 600 samples taken over a five year cycle. The high point in the population cycle was in 1977 and the low point was in 1981-82. Hopefully his research will shed some light and corroborate one of the two different positions taken by the Canadians and Russians. He feels it might be both theories. He has collected the reproductive tracts from the females.

Erich talked about not having the funding in a consistent fashion so far to complete his studies of the samples. He has aged about 500 of the samples. The vast proportions of the collected animals were young animals which was to be expected. There are a few that are eight or nine years old which is quite rare. Following a crash one might expect older animals and as the population increases then younger animals would be the majority. When he goes to Barrow and Russia he gets the carcasses from trappers and cuts the heads off to check for diseases. He pulls out a canine tooth for aging the animal and the reproductive organs and part of the liver. He has processed most of the head. They use an incinerator to destroy the animals and any materials used on them. He said the Russians have done the majority of the work on foxes but their interests are different. He has worked with foxes for eighteen years. They are so different than the red or gray fox. The arctic fox's behavior changes throughout the year. They are territorial through the breeding period. In the winter they roam around looking for food and they are more social or at least tolerate each other. He talked about having thirty or forty animals at a whale carcass during the winter. They are keenly adapted to the northern environment that they are living in.