

Banding operations were started on August 9th and were completed on the 11th. A total of 719 white-fronted geese, including 31 recaptures, were trapped. Of these, 688 were banded, 598 were fitted with neck collars, 23 had blood and feather samples taken for DNA typing, while 105 were measured for morphometric comparison in an effort to verify the presence of the Tule subspecies. In addition, ten Canada geese were captured and banded.

This year, one of the recaptures was field identified by its neck collar as a Tule subspecies. It was a female Tule banded by Mike Nege in California in 1980.

No ducks were banded this year.

H. PUBLIC USE

1. General:

Challenge Cost Share Proposals submitted and funded in the fall of 1992 were completed in the spring and summer of 1993. Public use activities primarily revolved around the three Challenge Cost Share Grants awarded the Refuge for 1993. In May, the Refuge, in conjunction with the Iditarod Area School District (IASD), sponsored the second annual week long Earth Week program at the McGrath School. This was followed in June with a Refuge sponsored McGrath Girl Scout Day Camp. One of the many outdoor activities at the day camp included the Girl Scouts and parent volunteers helping collect and plant native flowers, trees, and shrubs in the new Refuge headquarters native plant garden. Grant monies will pay for interpretive signs as well as bog and marsh liners for the garden.

The final grant was for a 15-day Environmental Education (EE) Science Camp located on the Refuge. This program, in cooperation with IASD, McGrath School, Tanana Chiefs Conference (TCC), and Alaska Department of Fish and Game (ADF&G), was broken into two phases. The first group of students were involved with building six, wall-tent frames at the Refuge field cabin area in March. The second phase took place in August with 13 students attending the EE Science Camp classes while staying in the new tent frames on the Refuge.

Classroom visits at the McGrath School by ROS Skinner included topics ranging from local birds, plants, and animals, to a one hour, eight-week natural resources class for a middle school group. Several field trips were taken to area bogs and marshes as well as a day spent dip netting invertebrates at an area lake with a fifth grade class.

WB/P Finley participated in Career Day at the McGrath School, offering advice regarding careers in both natural resource management and aviation.

American Wetlands Month activities included two public service announcements (PSA'S) on the local public radio station, KSKO McGrath, and were repeated on KIYU Galena. The first PSA aired for the first three weeks in May and was produced by the local Junior Girl Scout Troop under ROS Skinner's supervision. The second was produced by ROS Skinner and recorded by returning summer BT Andrea Medeiros on her first day back to work at the Refuge. As a newcomer to McGrath, her voice had people guessing all week as to the identity of this mystery radio personality. The Refuge staff plans to use this means of communication more in the future.

The Alaska Natural History Association (ANHA) bookstore opened in March, a little behind schedule. By year's end, the bookstore had met it's proposed 1993 sales projections and was gearing up for another and hopefully more profitable year in 1994. The December ANHA manager's meeting was attended this year by our new DM Reid. Much of the fall sales were handled by AT Collins while ROS Skinner was on a leave of absence to complete her student teaching at the McGrath School.

Both ROS Skinner and DM Reid attended the third annual Regional Environmental Education Training at Anchorage from September 20 to the 24th.

New Challenge Cost Share Proposals for 1994 were submitted in the fall of 1993. Proposals included a second year of the EE Science Camp, a third year of Refuge sponsored Earth Week activities at the McGrath School, and tent frame construction by IASD students at two remote sites on the Refuge, to be used as substations for fisheries and waterfowl programs.

The Refuge slide library got a much needed overhaul this summer thanks to BT Medeiros. Long range plans include numbering all the slides and putting together a data base so we will no longer have to search through boxes of slides to find something we need. A summer volunteer, Phyllis Benham, from Mammoth Lakes, California, was recruited specifically for providing photo documentation of the summer field season.

A display of National Fishing Week posters was put up in the McGrath Post Office for the month of June. Several positive comments were received from McGrath residents on the posters, especially the fish species poster. Recreational fishing is not a common activity in many interior villages. Typically fish nets are used to harvest subsistence catches and fish for dog food. However, since children everywhere (and every age) seem to enjoy fishing, the Refuge will continue to participate and upgrade Fishing Week activities. An application was submitted to the Sport Fishing Institute Fund for free fishing equipment for the Refuge EE Science camp as well as future fishing programs. We were very appreciative of the boxes of fishing line, hooks, and fishing poles we received. They were all put to good use in August by our camp students.

The 1993 McGrath Ducks Unlimited (DU) committee included three Refuge staff members; RM Merritt, DM Reid, and ROS Skinner. The theme this year was fashioned after a Hawaiian luau which further demonstrates where interior Alaskan's thoughts are going during the long winter. An additional 100 dollars was raised for ducks by auctioning off the grass skirts and hats worn by some of the committee members. After a successful banquet in November, DM Reid and ROS Skinner agreed to co-chair the 1994 banquet.

ROS Skinner submitted a grant proposal to the Alaska Gold Rush Centennial Task Force in December of 1993 to fund travel expenses for AT Collins to continue her archival research into the historical uses of the Refuge, including gold mining of lands within and adjacent to the Refuge boundaries. Since airfare from McGrath to Juneau (location of the state library) will cost the Refuge over \$700, the addition of grant monies would be a great benefit to this project. Applicants will be notified in mid-February of 1994 whether they have been funded. One other use of the grant money will be to assemble a photo display of historic sites and people, to be used in the headquarters interpretive area as well as a traveling display to the outlying villages.

2. Outdoor Classrooms - Students

The annual McGrath School Science Fair was conducted in March. The Refuge again supplied a National Geographic Society book, *Wild Lands for Wildlife-America's Refuges*, used as a prize for the best wildlife-related high school project. The ANHA bookstore also donated two books to be awarded to the two best elementary classroom project. ROS Skinner also assisted in judging the event.

ROS Skinner completed teaching a 14-week Natural Resources class to a group of 10 middle school boys at the McGrath School. This class was offered by the school as an elective starting the second quarter of classes. Several classes concentrated on forest succession and the effects of fire on moose and furbearer populations. This is an especially important subject for our future Alaskan subsistence hunters and trappers. The *Role of Fire in Alaska* curriculum was put to good use in several of the classes. Another class involved wolf communication. ROS Skinner was accompanied to class by her sled dog pup who displayed on cue all the ear movements, grins and submissive behaviors of his second cousin removed, the wolf. Students also made goldeneye duck boxes for use around the Refuge cabin lake. At least one of the boxes was checked out and possibly used by a hen this first summer. The favorite class project involved using M&M's to demonstrate moose population dynamics. Students quickly learned when the first students in the circle took all the M&M candies (moose), there weren't any left for them. As we explored different hunting regulations and their effects on populations, students had the opportunity to regulate each other so they would all get their fair share of candy (moose) to eat. They took home a new appreciation for why there are the various hunting regulations and how small changes in these regulations can change the total picture of available wildlife.