

BRANCH OF WILDLIFE REFUGES NARRATIVE REPORTS

MR. SALYER _____

MISS BAUM _____

MR. GRIFFITH _____

Operations

MR. ~~REGAN~~ WJR

MR. ~~D. MONT~~ DMD

Land Management

MR. ACKERKNECHT _____

~~DR. MCRIEY~~ LCM

Habitat Improvement

DR. ERICKSON _____

MR. STILES _____

MR. KUBICHEK _____

Stenographers

REFUGE MONTEZUMA

PERIOD JANUARY-APRIL 1957

NARRATIVE REPORT
MONTEZUMA NATIONAL WILDLIFE REFUGE
JANUARY - APRIL, 1957

PERSONNEL

Permanent Employees

Lawrence S. Smith	Refuge Manager
Vernon A. Dewey	Refuge Clerk
J. Kenneth Magargel	Refuge Assistant

Wage Board Employees

John B. Salerno	Trapping Inspector Maintenance Man
Albert Schultz	Carpenter
Walter O'Bryan	Maintenance Man

DEPARTMENT OF THE INTERIOR, FISH AND WILDLIFE SERVICE
Montezuma National Wildlife Refuge
Seneca Falls, New York

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NARRATIVE REPORT
MONTEZUMA NATIONAL WILDLIFE REFUGE

January - April, 1957

I. GENERAL

A. Weather Conditions

The following summary of weather conditions is taken from the records of the New York State Barge Canal's May's Point Lock which is near the center of the refuge. Since only periodic temperature readings were taken from an ordinary thermometer there were undoubtedly some extremes greater than those recorded.

	Snowfall	Total Precipitation	Temperature Max	Min
January	18.5	1.64	50	-23
February	2.75	1.42	61	16
March	10.125	2.06	69	21
April	<u>5.0</u>	<u>3.09</u>	<u>83</u>	<u>30</u>
Total	36.375	8.21	83	-23

This past winter period seems to require no severe adjectives one way or another. January and February were typical winter months. March weather seemed to lack the snow and wind usually associated with that period. April remained rather bitter and raw until the last ten days.

B. Water Conditions

We are pleased to report that we passed through this period without the usual problem with above normal water levels. Pool levels were held six inches low throughout the winter to minimize ice action against the dikes. There was not enough precipitation and thawing snow to create high levels during March which is the usual case. The Cayuga Lake level and canal levels in general had been held low for this condition. A fall of heavy snow in early April threatened to give us a water problem. Pool levels were only slightly exceeded, however. Dry weather for the latter half of April has created a dry condition and little water is leaving the pools.

C. Fires

No uncontrolled fires occurred during this period. The major portion of the Main Pool marsh was burned over during this period - most of it for the first time in four years.

II. WILDLIFE

A. Migratory Birds

1. Population and Behavior

a. Waterfowl

At the time of the winter inventory, waterfowl were about as scarce as they could ever be on this area. We had at that time two female and one male American mergansers making out at the outlet to a spillway. The canal and river above May's Point had been drained to the extent that all water usually open had frozen over.

Canada geese dominated the waterfowl picture this period. A new peak of 25,000 geese utilized the refuge - an increase over last Spring's record of 14,000. Absence of the usual flooded lands along the canal and river system resulted in better waterfowl populations on the refuge. Pintails and Canada geese first appeared before the end of February and by the end of the first week of March, the northward flight gave us opportunity for entries after the name of most species of ducks. A peak duck population was reached in mid-April.

Swans - One whistling swan was observed the second week of April.

Geese - Canada geese were the only species of geese represented until April 24 when a single blue goose was observed. At the close of the period a group of snow and blue geese were following the pattern of the Canada geese and coming into the Main Pool overnight. Geese continued their habit of past years and utilized our Main Pool as an overnight area and foraged to the southeast and southwest during the daytime on farm corn fields, meadows, pasture lots; and, at the end of the period on winter grain fields. The main group would leave with a mass take off at about 5:00 A. M. standard time and some bird watchers learned of this and drove out to see it. It was indeed spectacular when the population hit 25,000. I wish it hadn't been too early for picture taking. Geese would start returning from 9:00 A. M. on with the most coming in from 5:30 P. M. until sunset and even after dark. The increased usage of the refuge by geese has made the public much more aware of the refuge than normally. (See other items.) Our increased goose

population would seem to be due to our attracting a greater percentage of the Cayuga Lake Basin geese rather than to any increase in total goose population.. Geese noticed our own fields only late in the period. Winter grain fields utilized last Fall were utilized but lightly. Geese dropped in on fields of buckwheat stubble on several occasions. It would not seem that they could obtain any seed following the going over these fields had by crows during the winter. During the last week of the period, geese favored us by utilizing field 18 just north of headquarters. This area had been cleared of trees and brush two years ago with this objective in mind. Our one mated pair of geese started nesting in early April. At the close of the period one pair of two pairs purchased from a commercial hatchery are also nesting.

Ducks - The peak duck population occurred in late March. Our Spring refuge population was higher due to the absence of flood waters which usually makes several hundred acres of muckland attractive to waterfowl. An European widgeon was observed this period. Pintails as usual led the parade and a thousand of these birds utilized our field 17 on two successive days. This had been in red kidney beans by a permittee last year. A flight of pintails and baldpates developed between the Storage Pool and the Main Pool at evening time. The numbers of these species would have been badly underestimated if this sunset flight had not been discovered. Apparently the birds were feeding in the dead timber area of the Storage Pool and flying back to the Main Pool area for the night. At the close of the period no duck broods have been observed. A favorable nesting population is indicated by presence of paired ducks of all the common nesting species.

b. Other Waterbirds

The usual representation of grebes, herons, egrets, bitterns, and gallinule put in appearance this period. Missing in observation has been the least bittern and the green heron. One lone American egret appeared on April 23, a week later than the past two years. A highlight in this category of birds has been the presence of a Glossy Ibis which put in appearance on April 27 and remained through the end of the period. Considerable traffic into the refuge was occasioned by this bird as the bird watchers grapevine worked with surprising rapidity. A radio announcement was made about this bird being here before any refuge personnel were aware of its presence.

c. Shorebirds

Killdeer as usual, are the most frequently observed member of this group. A few spotted sandpipers and both greater and lesser yellowlegs put in appearance the last week of the period. A golden plover added interest along with the glossy ibis and was found at the same location - our flooded field 14.

d. Doves

Several nests of mourning doves are located in the evergreen hedge west of headquarters. A dove trap has taken two adults, one a retrap from our 1954 banding.

2. Food and Cover

Lower than normal water levels brought more ducks onto the refuge and food apparently was adequate. Several thousand ducks utilized the Storage Pool where millet had been thick last Fall. Our paddy, field 14, has received constant usage through the end of the period by a few ducks of several species and this has been the area affording most interest to bird watchers since shorebirds are congregating along with waterfowl, herons, the egret, the ibis, and the golden plover.

Use of dry buckwheat fields has been observed, both by ducks and geese. Usage of our newly cleared area of field 18 has finally occurred at the end of this period when 1,000 geese have been on the wheat and buckwheat ground each evening.

3. Botulism

None

4. Lead Poisoning and Other Diseases

None

B. Upland Game Birds

1. Populations and Behaviour

Ring-necked pheasants are our only upland game bird. Pheasants find a good habitat situation where our soybean and buckwheat fields are adjacent to brush or cattail for cover. Pheasants did not come to our headquarters feeder in numbers as last winter but the refuge population seems to be about the same.

2. Food and Cover

Both requirements are well met for pheasants in our management for waterfowl.

3. Disease

None

C. Big Game Animals (con't on following page)

C. Big Game Animals

1. Population and Behaviour

Our estimate of last period following our managed deer hunt seems reliable from observations made this period. We estimate 50 deer on the refuge. A verbal report from James Reilly, State Conservation Department pathologist, was that all blood samples taken from the 152 deer last December 1 tested negative for disease. The State Conservation Department welcomed the opportunity for a health checkup of the deer in this area for, in more ways than one, the deer in this area are sitting on a powder keg. A terrific deer population exists at the Seneca Ordnance Depot which is closed area to hunters. A fence serves to keep most of the deer within this area. This refuge, the Howland's Island State refuge, and the Sampson Air Base area have all contributed toward an above average deer population in this area. While managed hunts on the refuge areas have eased the problem on these areas, State Conservation Department personnel feel that the situation at the Seneca Ordnance Depot is ready for a "deer disaster". Old does and fawns starved to death this past winter on this 11, 000 acre Depot area. The situation is ripe for disease which of course would not stop at the fence. It is hoped that public opinion will go along with a removal by Depot personnel since security regulations and actual danger would not permit a public hunt.

Deer damage complaints from neighboring farmers to the west have been greater following the refuge deer reduction than at any time previous. (Refer to Other Items for a note on a landowner petition regarding deer.) Apparently deer driven off the refuge during our one day public hunt ran from one refuge into another - the large block of posted private lands immediately west of the refuge. It is improbable that any amount of deer herd reduction on the refuge will aid these landowners unless they permit more hunters to utilize their lands during the deer season.

2. Food and Cover

Food has been adequate for the few remaining deer. Winter grain fields were available almost continuously since snow cover did not remain heavy for a prolonged period. No browsing of headquarter ornamentals occurred as was the case a year ago, although the browse line will always be in evidence.

D. Fur Animals, Predators, and Rodents

1. Fur Animals

This was a highlight season for muskrat trapping on this refuge from almost every angle except the total number taken. This

was the fifteenth year of muskrat harvest on the refuge. On February 10, the 50,000th muskrat taken here was trapped. Several muskrats challenged the weight record and one 5 pound 9 ounce specimen is believed to hold the record weight for the 50,000 muskrats, the average weight of which is close to 3 pounds; including both sexes and all age groups. (We use the word believe since in the initial years the weights were rounded off to the closest quarter of a pound rather than recorded to the ounce.)

A table of some of the muskrat harvest statistics is given for the 15 year period on the following page.

The value of the muskrat meats has been included for the years for which the information could be readily located. Another by-product of the muskrat harvest has been the musk glands which on occasion are sold to manufacturer's of trapping lures and scents. At this particular station the difference between the income the trappers have obtained from their half of the furs and what the Government gets for its half has been quite substantial in favor of locally sold furs.

It is interesting to note that over the fifteen year period the value of furs resulting from the development of this marsh area has equaled the acquisition cost of the refuge lands. If one had been managing strictly for muskrats, the income would have been greater. Summer drawdowns for production of crops of Japanese millet and smartweeds for waterfowl have adversely affected muskrat populations and in general is the prime factor responsible for low harvests during the past few seasons. (With the present trend of fur prices, we wouldn't jump to the conclusion that an individual could purchase and develop an area such as this and over a fifteen year period get his money back.)

Aside from the monetary value of the muskrat and the part it has played in providing supplemental income to local trappers, the muskrat has been an important management tool on this area. At the present stage of herbicidal control of cattail, biological control by regulation of the muskrat population is our most practical means of opening up the otherwise solid stands of this emergent.

During the fifteen year period a considerable change has occurred in the emergent vegetation which can be briefly summarized as follows:

- 1943-1948 Dense stands of cattail resulting from the initial flooding reached peak muskrat production section by section depending upon water level and development of the marsh vegetation.
- 1949-1955 Over population of muskrats and carp combined to eliminate emergent and submerged vegetation

Year	Total Take	No. Trappers	Average Price		Total Value of Furs	Estimated Population in thousands	Net Value of Meat
			Trappers Half	Refuge Half			
1943	1,504	3	\$2.60		\$3,910.40	10	
1944	3,959	3	3.57		14,133.63	20-22	
1945	7,959	5	2.30		18,305.70	20-30	
1946	7,624	5	2.30		17,535.20	20-21	
1947	6,901	6	3.75		25,878.75	14-18	
1948	3,779	5	3.90		14,738.10	10-12	
1949	1,523	3	3.00		4,569.00	4-5	
1950	1,274	2	2.75	2.55	3,503.50	4-5	
1951	2,465	3	3.71	3.44	9,141.44	7	
1952	5,020	5	2.47	1.95	11,100.00	10-11	1,255.63
1953	4,435	5	2.35	1.95	9,580.00	9-10	794.61
1954	1,027	3	1.85	1.90	1,926.00	4-5	239.44
1955	1,472	2	2.56	* unsold	3,770.00**	3-4	241.01
1956	730	2	2.14	* unsold	1,562.00**	3-4	141.37
1957	876	2	1.92	* unsold	1,682.00**	3-4	161.05

TOTAL VALUE OF FURS \$141,335.72

* Held unsold by New York Auction Company

** Total value based on the trappers half that has been sold.

on much of the marsh. Draining for carp control and summer plantings carried out.

1956-1957 Summer drawdowns carried out for carp control measures and plantings of Japanese millet served to stimulate growth of cattail. Conditions believed now to be similar to 1943. A full cycle has come and we hope muskrat prices remain high enough to attract share trappers for the increased harvests ahead.

I must point out that the above is almost an oversimplification of statement since several types of habitat were flooded initially resulting in variations in the flooded habitat. A thesis could be written on the complete history of the vegetative changes.

The muskrat harvest this period was limited to unit 8 of the Main Pool and to the dike burrows. A harvest of 304 was made from unit 8 and 571 from the dike burrows (mostly from a mile and a half section of the Main Pool dike which is much like a honeycomb at this time). This was a much more adequate harvest from the dike burrows than had been possible in many years. Absence of drifted snow which usually makes it difficult or impossible to locate the dike burrows was the prime factor permitting this harvest. The daily take held at about 50 muskrats from the dike for several days indicating that muskrats were moving in from the marsh area. The only answer as far as our dike protection is concerned will be to have clay fill hauled in for the inner dike slope. Where this has been done on portions of our dike both burrowing by muskrats and woodchucks has been discouraged considerably. As has been reported above, we can't do completely without the muskrat and have to tolerate these dike burrows to a certain degree.

One mink was taken by the muskrat trappers. None were taken a year ago and only this one this season. Chance observation of mink would indicate that there are more present than trapping results prove.

2. Predators

Included in this category are raccoon, opossum, foxes, and stray cats and dogs. Of these we usually consider the raccoon our most serious predator. The fox has probably come close as top contender this period. General observation indicated through the winter that we had many foxes on the area. Predator trappers operating during mid-April took 35 foxes in one week-stimulated by the \$3.00 bounty paid by the county. We doubt if the county knows where these foxes came from. Five raccoon were taken by predator trappers. Highway casualties indicate opossum to remain at about the same population level.

3. Rodents

Woodchucks appear to be making a gain from their low numbers existing after floods of 1956. Dike burrows have been gone over with gas cartridges once. We hope to run a comparative study of gas cartridges and cyanogas treatment of burrows this summer by treating something like 100 burrows with each and noting the number of dug out.

4. Other Mammals

Cottontails, gray and red squirrels, and chipmunks are present.

E. Predacious Birds

Crows are numerous during this period due to the large winter rookery located a few miles northeast of the refuge. Crows consume great quantities of our unharvested grains during the winter period and it would seem that little would be left for waterfowl during the Spring. The bald eagles have constructed a new nest during the winter in a live elm northwest of Clark's Ridge and a few hundred feet out in the Storage Pool. They apparently nested successfully this period.

F. Fish

Fish at this station means carp. Our present pool situation in regard to carp is pretty fair. The Main Pool had a re-infestation during the floods of 1956 but the present population does not make the water turbid. The Storage Pool has a minimum population following treatment last summer. This area will be drained again this summer and if many carp are observed, another treatment will be given since this area will undoubtedly be carried at spillway level for one or more years following.

III. REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Development - Fiscal Year 1957

1. Project 622-R

a. Development of Field 12

The only additional work completed on this project has been the hauling of gravel to resurface the dike road where the dike was cut for the installation of culvert pipe. Rock gathered from the fields has been used to rip-rap around the ends of the culvert pipe.

b. Additional Clearing at Clark's Ridge

No work accomplished to date. It is planned to construct a pond between two of the agricultural fields in this area to furnish greater attraction to waterfowl. This land has proven to be excellent cropland but to date waterfowl have not taken to this section.

2. Project 622-C

a. Construction of Corn Crib and Grain Storage Building

This building was nearly completed last period and all funds expended that had been allotted. Hardware cloth obtained surplus was used to ratproof the building this period. Painting of trim and corn crib portion of the building remains.

B. Construction of One Stall Garage with Residence # 1

This building was likewise nearly completed last reporting period. The overhead door, entrance door, and window were installed this period. Further painting and pouring of concrete floor remain on this building.

c. Development of Big Spring Pool

Funds were made available this reporting period to initiate development of the area west of route 414 which has been proposed for many years. Bids were let for dragline work and this work is to start in early May. Materials were obtained for use in constructing a water control structure. This development should put stable water over about 150 acres of cedar swamp and hardwood swampland which only temporarily has water on it presently.

3. Project 170

Soil and Moisture Work

Fertilizers have been procured this period for use next period. Liming of fields 5 and 6 has been accomplished by a commercial lime spreading service. This practice has really improved other fields. Several acres of brush control was carried out by use of rotary brush cutter powered with the Oliver OC-6 crawler.

4. Miscellaneous Maintenance and Operational Activities

Winter overhaul and maintenance performed on:

Farmall M
IHC Dump # 4
IHC Dump # 2

Farmall Super A Dodge Dump
Oliver Crawler OC-6 3 water pumps

New sleeves and pistons were placed in I. H. C. # 4, 4 yard dump truck and Caterpillar D-6.

A great deal of time has been spent in making our dump trucks (which are used off highway most of the time) comply with new state regulations regarding lights and wheel flaps.

Office was repainted and office furniture re-finished.

Installation of the base station radio antenna was made on the observation tower. Surplus RG/24U coaxial cable was used to run the line from the office to the tower and only a slight output loss occurs with this hook-up of approximately 375 feet of cable.

Sixteen metal wood duck nesting boxes were constructed from surplus sheet metal and placed on pipes driven into the Main Pool marsh. It was decided to try these nests where there is a lack of wood duck nesting sites rather than try and compete where natural cavities are available.

A half-mile of roadway at the Northeast corner of the Main Pool area was improved by grading of the higher shoulders into the center of the roadway so that better drainage will occur. This section has been passable with four wheel drive vehicles only at times when the remainder of the road is dry.

Considerable time was spent in attempts to take geese with net traps. Only twelve geese were taken. Forty ~~one~~ were obtained by transfer from the Oak Orchard State Refuge for holding at this station and at Missisquoi Refuge.

Much of the dry marsh and cattail portions of the Main Pool were burned off in early April. This was the first time in four years that most of this area was burned.

The gravel area north of headquarters which has been quite an eyesore was leveled by bulldozer while it was wet and has been seeded to oats and grass seed.

Air compressor received last period was installed in equipment building with 220 volt wiring. This machine works our hydraulic floor hoist much more satisfactorily than the older and smaller compressor.

Several trips were made for surplus property to Naval and Army installations in New York and Pennsylvania. Surplus equipment and supplies obtained this period are as follows:

1. stencil cutter
- 1 16mm projector
- 2 1,000 gallon tanks for underground fuel storage

(cont)

1 winch powered by 8 h.p. engine
3400 feet of 2 ft wide bronze screening

B. Plantings

1. Aquatic and Marsh

None this period. Japanese millet seed has been procured for use this next period.

2. Cultivated Crops

No farming operations have been carried out by refuge or share croppers this period, other than seeding of clover.

C. Collections

None made this period

D. Receipt of Seed and Nursery Stock

Japanese Millet - 40 bushels purchased locally
Sunflower seed - 100# small black variety

E. Weed Control Operations

None other than 2-4-D on thistles in the lawn.

IV. ECONOMIC USAGE

A. Grazing

None this period. Permits have been prepared for rental of three of the four grazing units.

B. Haying

None

C. Fur Harvest

Applications of two trappers were accepted this period and units 8 and the dikes were trapped. Division of the furs was 50-50, and all muskrat meats were sold by the refuge.

The refuge share of furs for seasons 1955, 1956 and 1957, presently remain unsold.

The two share trappers operated together during this 1957 season and their sales were made as follows:

256 muskrats @ \$1.90	(Sold to Wm. R. Schaffer,	\$486.40
3 " @ 1.00	Honesdale, Pennsylvania)	3.00
2 " @ .50		1.00
2 " @ .35		.70
53 muskrats @ \$2.00	(Sold to Francis Herendeen	106.00
117 " @ 2.00	Macedon, New York)	234.00
3 " @ 1.00		3.00
Total		<u>834.10</u>

One mink taken by the trappers was adjusted by two extra muskrat furs for the Government's share. This skin is presently unsold.

Muskrat carcasses were shipped to Baltimore, Maryland and brought a gross return of \$250.00. Net return was \$161.05 after shipping charges and commission. Average net return per carcass was \$.21.

D. Timber Removal

Three permits were issued this period for crate bolt material as follows - all to the Union Springs Academy for their wood working shop.

25 cords crate bolts @ \$3.50	\$87.50
50 " " " @ 3.50	175.00
20 " " " @ 3.50	70.00
Total timber receipts:	<u>332.50</u>

V. FIELD INVESTIGATION OR APPLIED RESEARCH

Activity under this heading this period was the taking of weight and sex data from the muskrats trapped. This information is taken in cooperation with New York State College of Forestry personnel.

A small bird trap has been utilized to take cowbirds until work was received that the blackbird banding program has been temporarily discontinued. By use of this trap returns were obtained from a mourning dove banded here in 1954, and a cowbird and chipping sparrow banded last year (1956).

VI. PUBLIC RELATIONS

(con't on following page)

VI. PUBLIC RELATIONS

A. Following is a list of the official and more important non-official visitors; Listed on our visitors list on the following page.

B. Refuge Participation

Requests for talks, film, and "show me" trips increases every year. About ten requests for a showing of our film had to be turned down due to conflict with other dates and to permit the manager some semblance of family life. All requests for group visits were accomodated since they could be directed on a tour when they could not be accomodated with a talk and guided tour.

Development of a set of slides of refuge activities and wildlife has lagged somewhat but was put into a semi-complete form this period for loan to scout groups, etc., that cannot be accomodated with a showing of the refuge motion picture. Reaction has been favorable and we hope this will help ease the strain of personal appearances. A descriptive sheet has been prepared describing the slides and background information is furnished the scoutleader for his further use in presenting the slides. Our experience to date indicates that it is cheaper to use unbound slides, -but loan duplicates. Keep originals to replace damaged or lost slides. It costs as much to bind a slide as it does to duplicate. A good source of close-up wildlife shots is often the advanced amateur photographers using the refuge area. They have the time that we so often lack and will often take extra shots for the refuge. For NR Club members, Mr. Kubicheck of the Central Office would probably supply close-ups of any species required to complete a refuge slide series.

The following groups visited the refuge:

3-29	Cub Scout pack, Ovid, N. Y., 15 members.
3-29	Seneca Falls Boy Scouts with Mr. McMillan for Wildlife Management Merit Badge, 4 present.
4-6	Class in Wildlife Management, Cornell Univ., 5 present
4-13	Burroughs Audubon Club, Rochester, led by Dirk Benson, 30 present
4-14	Onondaga Audubon Club, Syracuse, N. Y., 42 present
	Tri-City Naturalists Club, Binghamton, N. Y., 20 present
4-22	Girl Scout Troop, Waterloo, N. Y., 33 present.
4-26	Cub Pack, #36, Aurora, N. Y., 21 present.
4-27	Cub Pack # 1, Auburn, with parents, 45 present.

The following organizations requested a talk and the refuge film which was provided by the refuge manager in each case except for the Cornell Farm and Home Week slide lecture given by Jack Saunders, a graduate student doing research on the refuge;

MONTEZUMA REFUGE VISITORS

DATE	NAME AND ADDRESS	TITLE - BUSINESS	PURPOSE OF VISIT
1-15	Ralph Minns, Swanton, Vermont	Refuge Manager, Missisquoi Refuge	Law Enforcement Meeting
	Adolf Vanslette, Swanton Vermont	Refuge Maintenance Man, " "	" " "
	David Dupee, Essex Junction, Vt.	U.S.G. M. A., Vermont	" " "
	John Buckalew, Wolcott, N. Y.	U.S.G.M.A., New York, Pa	" " "
	Merton Radway, Boston, Mass.	Assistant Refuge Supervisor	" " "
1-21	M. E. Moore, Union Springs, N.Y.	Arrange sale crate bolt material	
	Colvin Dence, Union Springs, N.Y.	Union Springs Academy,	
1-25	A. S. Taormina, Syracuse, N. Y.	District Game Manager, N.Y. S. Cons. Dept.	Archery hunting on refuge
	W. H. Wadsworth, Syracuse, N. Y.	Rep. Central New York Bowmen	" " "
2-1	Kenneth Laxton, Skaneateles, N. Y.	Rep. Skaneateles Sportsmen's Club	Request for talk..
2-12	Dick Knowlton, Geneva, N. Y.	Geneva Scout Master	" " "
2-19	Arthur Cook, Ithaca, N. Y.	N. Y. S. Game Research Investigator	
2-25	H. R. Martin, Newark, N. Y.	Contractor	Inspect site of dike.
2-27	Elmer Kilmer, Port Byron, N. Y.	Contractor	" " " "
2-28	James E. Baach, Boston, Mass	Regional Office	Courtesy call
	Robert L. Schueler, Boston, Mass	Regional Office	" "
3-22	Ronald Sell, Waterloo, N. Y.		Interview regard Wildlife field
3-26	Dirk Benson, Rochester, N. Y.	NEW YORK STATE S. C. S.	Waterfowl research
4-6	Bill De Lancey, Geveva, N. Y.	Reporter	Interview & "show me" trip.
4-10	James W. Coslick, Ithaca, N.Y.		Predator & rodent control.
4-11	Robert W. Fuller, Vermont	Fish and Game Service	Visit
	Roger Seaman, Vermont	" " " "	Visit
4-15	Lee Brackett, Boston, Mass. R.O.	Assistant Regional Supervisor	Visit
4-24	Emery L. Will, Oneonta, N. Y.	State Teacher's College	Arrange for trip
4-28	Arthur Cook, Ithaca, N. Y.	N. Y. S. Game Research Investigator	Obtain carp for business men's
	Dr. Ozola	" " " " " " (will cook carp)	dinner in Syracuse, N. Y.

- 1-3 Keuka Park Conservation Club, 35 present.
- 1-7 Adult Education Class in Bird Study, Geneva, 24 present.
- 1-17 Family Night at Half Acre, N. Y., 48 present
- 1-19 Waterloo Grange meeting, 38 present.
- 1-23 North Seneca Sportsmen's Club (Juniors), 28 present
- 1-24 Skaneateles Rotary, 49 present
- 2-6 Scout Troop #1, Parent's Night program, Auburn, 130 pres.
- 2-20 Father & Son Banquet, Waterloo Methodist Church, 128 pres.
- 2-21 Cayuga American Legion & Scouts, 35 present.
- 3-19 Syracuse College Women's Club of Auburn, 32 present.
- 3-20 Onondaga Chapter Audubon Society, Syracuse, 36 present
- 3-21 Cornell Farm & Home Week lecture by Saunders, 45 present.
- 4-2 Scout Troop # 4, Geneva, N. Y., 36 present.

The fourty minute 8mm film of refuge activities and wildlife has now been shown to Central New York organizations with a total attendance of 3,000. This size film becomes inadequate for large groups and has been usable only with a superior 8mm projector. Sixteen millimeter film totaling 1500 feet has now been taken but requires editing. We hope to have it in use another winter. A fair 16mm projector has been obtained surplus.

D. Violations

None to report.

VII. OTHER ITEMS

A. Refuge Assistant, Ralph Holderby, left this station in late January with his house trailer and moved to the Missisquoi refuge in Vermont. We have heard little from him since, except that the got there. We are still without a replacement and from all indications will have to get used to operating without one.

B. Complaints from deer damage west of the refuge culminated in a petition to Congressman Tabor (attached for benefit of NR Club) to halt the removal of crops from refuge lands by share croppers. Apparently during our one day deer hunt on last December 1st, the deer driven off the refuge ran from one refuge into another-the large block of posted land west of the refuge. Adequate harvest is the only answer.

C. Increased usage by Canada geese has caused an increased awareness of the refuge by local citizens - a public relations value that ducks cannot equal. Feeding flights from the refuge to farm cropland brought flights of geese low over Seneca Falls. One ~~shopkeeper~~ explained that he "rushed out of his store to see the geese and the leader was over Tyre and the tail end just passing over the business section " (3 miles). A few geese can cause a great exaggeration.

One elderly Seneca Falls resident was moved to make a toll call to the refuge to enquire how many geese we had, where they were going, etc. He mentioned that he, like many others, had witnessed the land purchase for the refuge (late 1930's) with the idea that it would be a waste of a lot of money. His concluding statement was "I've changed my mind". This was public relations by Canada geese.

An animal rare to these parts was trapped near the refuge in February - a white fox. Controversy raged over its identity - quite unmistakably an arctic fox. This animal was taken alive and reposes in a cage in a back yard in Montezuma. Speculation as to its method of travel from the arctic to Central New York closed with the eventual revelation of the loss of a pair of arctic foxes by a woman in Rochester, New York.

Respectfully submitted

Lawrence S. Smith

13 May 1957

Lawrence S. Smith,
Refuge Manager.

Approved: Arthur Truitt 5/14-57

Approved: _____



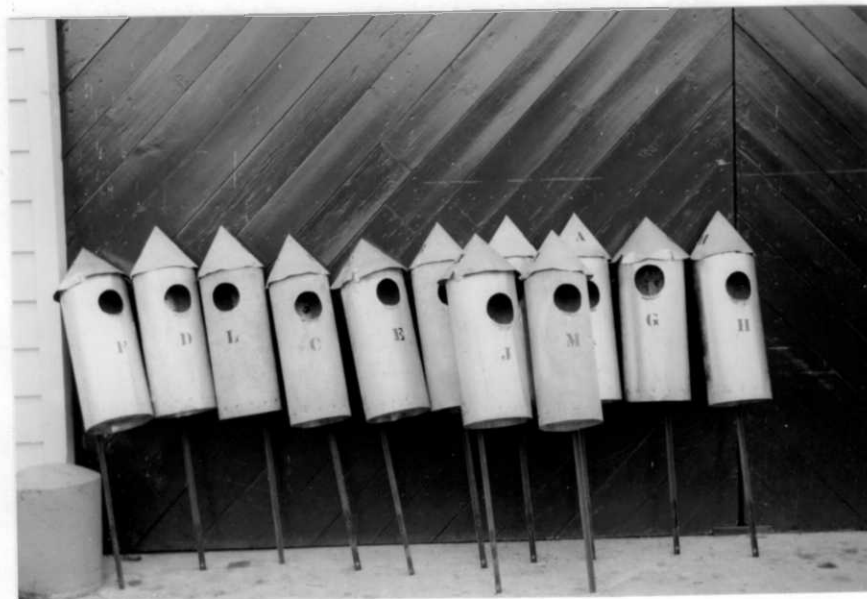
Above: One of several muskrats taken during the 1957 trapping season which weighed in at more than 5 pounds. One muskrat weighed 5 pounds 9 ounces which holds the weight record for the 50,549 muskrats taken during the 15 years of trapping on the refuge. The carcass of this animal ready for shipping to market weighed more than the average weight of the muskrats, which is 3 pounds.

Below: Muskrat meats (marsh rabbit) ready for shipment to Baltimore, Maryland for human consumption.





Dr. Maurice Alexander of State College of Forestry at Syracuse displaying patterns of symmetry and lack of same in muskrat hides, indicating young and adults. Weight and sex information has been kept on the muskrats at this station since trapping was initiated in 1943. Dr. Alexander carried out a study here during the 1940's leading to his Phd. and has since maintained a continuous record of the Montezuma Muskrats.



Wood duck nesting houses constructed of sheet metal. The angle irons were slid into pipes driven into the marsh and kept from swinging in the wind by wooden wedges. Little usage has been made of former boxes placed near or within areas containing many natural nest sites. These houses were placed in the Main Pool area to learn if they will be accepted in areas lacking natural nest sites. Hardware cloth was bent over the lower edge of the opening and extended on the inside down to the shavings to aid the young in making an exit.



- A path was cut out by hand tools so that Model 25 International brush cutter could get started in this alder. Machine handled alder up to 3-1/2 inches through by taking a narrow swath at a time. View is along path of dike to be constructed to enclose 150 acres Big Spring Pool.



- Note brush piles in center left from the initial 8 foot swath cut by hand. Nothing left to burn following the rotary brush cutter.



- View, BEFORE, of clearing carried out for construction of the east end of dike for development of our long-proposed Big Spring Pool. Rotary brush cutter cut all but the heaviest material. Ditch cleared out to point of outlet of new control structure.



View, AFTER, clearing was carried out for construction of the east end of dike for development of our long proposed Big Spring Pool.



With the luck of a dry Spring, we have been able to winch dump truck loads of concrete materials back to the site of control structure for the Big Spring Pool.



Culvert pipe carried to site with the D-6



A riveting gun adapted as a tool to cut sheet metal and remove barrel ends by Clerk Dewey. This sheet metal was too heavy to cut with accuracy with tin shears but was readily cut with this tool.



The gun fitted with a blank tool that can be purchased and altered to suit ones needs. The end of this blank was shaped on a grinder as shown. A normal riveting attachment is shown below. (Surplus property.)



Model 25 I. H. C . rotary cutter. Guard around wheel was fabricated to prevent saplings from pulling intbetween the wheel support arm and the housing of the machine which happened several times and sprung the wheel out at an angle. This guard will also permit working close to fence lines without hooking the posts with the wheel. Swinging knife principal seems a good one. One large rock was hit without damaging anything aside from the edge on the short knives.



Base station aerial placed above cab of tower - 120 feet above the ground. Three hundred seventy-five feet of RG/24U cable obtained surplus connects aerial with unit in refuge office. Sixty watt set transmits at 58 watts with this line. Another use for tower - pulling fire hoses up to hang and dry.



The little over a mile of rather straight highway of route 5 and 20 which crosses the width of the swampland claims many vehicles each year. This was one heartbreaker when four new Buicks felt the gash of old stumps. A new car hauler lost control after hitting one of five bumps caused by culverts being placed on piling which don't settle with the remainder of the road. Lesson of possible application to refuge hauling - adequate chaining of the load would have prevented most damage.

3-1750
Form NR-1
(Rev. March 1953)

WATERFOWL

REFUGE MONTIZUMA

MONTHS OF JANUARY TO APRIL, 19 57

(1) Species	(2) Weeks of reporting period									
	1	2	3	4	5	6	7	8	9	10
Swans:										
Whistling										
Trumpeter										
Geese:										
Canada								50	50	200
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other										
Ducks:										
Mallard									20	200
Black										200
Gadwall										
Baldpate										100
Pintail								100	100	2,000
Green-winged teal										
Blue-winged teal										
Cinnamon teal										
Shoveler										
Wood										2
Redhead										
Ring-necked										100
Canvasback								2	2	100
Scaup										50
Goldeneye								2		100
Bufflehead										25
Ruddy										
Other										
American Merganser		3		100	200	200	200	200	200	200

Coot:

3 -1750a

Cont. NR-1

(Rev. March 1953)

W A T E R F O W L
(Continuation Sheet)

REFUGE MONTEZUMA MONTHS OF JANUARY TO APRIL, 19 57

(1) Species	(2) Weeks of reporting period								(3) Estimated waterfowl days use	(4) Production : Broods: Estimated : seen : total	
	11	12	13	14	15	16	17	18			
Swans:					1				7		
Whistling											
Trumpeter											
Geese:								3 days)			
Canada	5,000	8,000	12,000	15,000	25,000	18,000	7,000	7,000	639,100		
Cackling											
Brant											
White-fronted											
Snow							4	15	133		
Blue			1	1		2	8	10	154		
Other											
Ducks:											
Mallard	2,000	2,000	1,500	1,000	1,000	1,000	600	400	68,040		
Black	2,000	2,000	1,500	800	800	500	400	250	33,950		
Gadwall			200	200	200	200	200	80	7,560		
Baldpate	1,000	3,000	2,000	2,000	2,000	600	200	50	76,650		
Pintail	6,000	6,000	5,000	3,000	2,000	800	500	200	179,900		
Green-winged teal	100	100	100	100	100	100	100	100	5,600		
Blue-winged teal			10	50	200	250	250	250	7070		
Cinnamon teal											
Shoveler		100	200	800	200	200	200	100	12,600		
Wood			300	300	300	300	300	150	11,564		
Redhead											
Ring-necked	500	500	500	200	200				14,000		
Canvasback	500	500	100	50	50				9,128		
Scaup	100	100	100	100	200	100			5,250		
Goldeneye	100	100	50	50	50				3,164		
Bufflehead	100	100	100	100	100	10			3,745		
Ruddy			10	100	100				1,470		
Other											
American Merganser	300	300	300	200	200	20	20	4	17,129		
European Widgeon					1				7		
Coot:	100	100	200	300	300	300	300	350	13,650		

(over)

	(5) Total Days Use	:	(6) Peak Number	:	(7) Total Production
Swans	<u>7</u>	:	<u>1</u>	:	
Geese	<u>639,387</u>	:	<u>25,000</u>	:	
Ducks	<u>456,827</u>	:	<u>14,600</u>	:	
Coots	<u>13,650</u>	:	<u>350</u>	:	

SUMMARY
Principal feeding areas - <u>Buckwheat and winter grain fields.</u>
<u>Geese on burned dry marsh.</u>
Principal nesting areas _____
Reported by <u>Lawrence S. Smith.</u>

Lawrence S. Smith

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance.
- (2) Weeks of Reporting Period: Estimated average refuge populations.
- (3) Estimated Waterfowl Days Use: Average weekly populations x number of days present for each species.
- (4) Production: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (5) Total Days Use: A summary of data recorded under (3).
- (6) Peak Number: Maximum number of waterfowl present on refuge during any census of reporting period.
- (7) Total Production: A summary of data recorded under (4).

3-1751
Form NR-1A
(Aug. 1952)

MIGRATORY BIRDS
(Other than Waterfowl)

Refuge MONTZUMA

Months of JANUARY to APRIL 195 7

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Inclusive Dates	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Use
I. <u>Water and Marsh Birds:</u>										
Common Loon	1	4/18			1	4/15				1
Pied-billed grebe	10	3/5			20	4/30				25
Great-blue heron	4	1/1			50	4/30				70
American egret	1	4/23			1	4/23				1
Bl. Cr. night heron	10	4/5			40	4/30				50
American bittern	10	3/12			20	4/30				30
Glossy ibis	1	4/25			1	4/30				1
II. <u>Shorebirds, Gulls and Terns:</u>										
Killdeer	4	3/5		summer resident						150
Golden Plover	1	4/27			1	4/30				1
Common snipe	2	4/10			2	4/10				20
Spotted sandpiper	20	4/20			20	4/30				40
Greater yellowlegs	1	4/15			20	4/30				20
Lesser yellowlegs	4	4/30		only record						4
Herring gull	25	4/13		400 present throughout period						1,000
Ring-billed gull				100 present throughout period						200
Bonapart's gull	25	4/13		only observation						25
Common tern	1	4/30		only observation						1
Caspian tern	1	4/27		only observation						1

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u>					
Mourning dove	2	3/10	40	4/30	summer resident
White-winged dove					
IV. <u>Predaceous Birds:</u>					
Bald eagle	2	1/1	resident pair nesting		
Duck hawk					
Horned owl					
Magpie					
Raven					
Crow					
Turkey vulture	2	4/10	75,000 present throughout winter period		130,000
Red-tailed hawk	7	1/10	4	4/30	4
Rough legged hawk	2	2/28	8	4/30	50
Marsh hawk	2	3/12	2	5/25	10
Sparrow hawk	2	1/24	10	4/30	20
			10	4/30	40
Reported by <u>Lawrence S. Smith</u>					

INSTRUCTIONS (See Sec. 7532, Wildlife Refuges Field Manual)

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
 II. Shorebirds, Gulls and Terns (Charadriiformes)
 III. Doves and Pigeons (Columbiformes)
 IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first migration record for the species for the reporting period.
- (3) Peak Numbers: Estimated number and inclusive dates when peak population of the species occurred.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated species days use (average population X no. days present) of refuge during the reporting period.

3-1752
Form NR-2
(April 1946)

UPLAND GAME BIRDS

1613

Refuge MONTTEZUMA Months of JANUARY to APRIL, 19 57

(1) Species	(2) Density		(3) Young Produced	(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd. Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Pheasant	grass, brush, cattail swamp 1500 acres Pheasants utilize unharvested soybean and buckwheat fields. Several flew into display pool to feed on corn placed for geese.			(estimate) 25% cocks				300	

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

* Only columns applicable to the period covered should be used.

Refuge MONTICELLOApril 30, 1957

(1) Species	(2) Density	(3) Removals					(4) Disposition of Fur						(5) Total Popula- tion		
Common Name	Cover Types & Total Acreage of Habitat	Acres Per Animal	Hunting	Fur Harvest	Predator Control	For Re- stocking	For Research	Share Trapping			Total Refuge Furs Shipped	Refuge Income	Furs Donated	Furs Destroyed	
								Permit Number	Trappers' Share	Refuge Share					
Opossum	5000 acres marsh, hardwood swamp, & bordering upland	25			4			T-4388 T-4389						4	200
Raccoon	"	50			5			"	5						100
Red Fox	"	100			35			T-4392	35						50
Gray Fox	"	630													8
Skunk	"	250													20
Muskrat	3000 acre pool & adj. marsh	.75		876				T-4390A T-4391	436		445				4,000
Mink	"	300		1				"	1						10
Weasel	"	60													50
Woodchuck **	1500 acres dikes & upland	1													1,500
Cottontail Rabbit	"	1													1,500
Gray Squirrel	principally a 5 acre Black Walnut grove	.2													50
Red Squirrel		.25													20

REMARKS: ● Sale of muskrat meat - \$161.05. Furs for three trapping seasons remain unsold by New York Auction 1615 Company

** Control efforts by gas cartridge and Cyanogas.

INSTRUCTIONS

Form NR-4 - SMALL MAMMALS (Include data on all species of importance in the management program; i.e., muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

- (1) SPECIES: Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan. "List of North American Recent Mammals" by G. S. Miller, Jr., a very good reference, is now out of print, although a revision is scheduled for publication in the near future.)
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.) Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottom land hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) REMOVALS: Indicate the total number under each category removed since April 30 of the previous year. Also show any removals not falling under heading listed.
- (4) DISPOSITION OF FUR: On share-trapped furs list the permit number, trapper's share, and refuge share. Indicate the number of pelts shipped to market and the total income to the refuge by species, including share-trapped furs and furs taken by Service personnel. Total number of pelts of each species destroyed because of unprimeness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.
- (5) TOTAL POPULATION: Estimated total population of each species reported on as of April 30.
- REMARKS: Indicate inventory method(s) used, size of sample area(s), introductions, and any other pertinent information not specifically requested.

REFUGE GRAIN REPORT

Refuge NOVA SCOTIAMonths of JANUARY through A PRIL, 1957

(1) VARIETY*	(2) ON HAND BEGINNING OF PERIOD	(3) RECEIVED DURING PERIOD	(4) TOTAL	(5) GRAIN DISPOSED OF				(6) ON HAND END OF PERIOD	(7) PROPOSED OR SUITABLE USE*		
				Transferred	Seeded	Fed	Total		Seed	Feed	Surplus
Oats	6		6		6						
Winter wheat	6		6			1	1	5		15	
Winter rye	6		6					6	6		
Corn (ear)	350		350			110	110	240		240	
Buckwheat	94		94	30			30	64	64		
Soybeans	28		28					28	28		
Japanese millet	2	40	42					42	42		
Sunflower (small black) **		2	2					2	2		

(8) Indicate shipping or collection points ● Parker River National Wildlife Refuge, Newburyport, Massachusetts

(9) Grain is stored at _____

(10) Remarks ** 100 lb sunflower seed purchased from Scarlett & Co.; buckwheat transferred to Parker River by rail*See instructions on back. freight; 1 ton Jap millet purchased from Culver & Sons at Trumansburg, New York.

REFUGE GRAIN REPORT

This report should cover all grain on hand, received, or disposed of, during the period covered by this narrative report.

Report all grain in bushels. For the purpose of this report the following approximate weights of grain shall be considered equivalent to a bushel: Corn (shelled)—55 lb., corn (ear)—70 lb., wheat—60 lb., barley—50 lb., rye—55 lb., oats—30 lb., soy beans—60 lb., millet—50 lb., cowpeas—60 lb., and mixed—50 lb. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels.

- (1) List each type of grain separately and specifically, as flint corn, yellow dent corn, square deal hybrid corn, garnet wheat, red May wheat, durum wheat, spring wheat, proso millet, combine milo, new era cowpeas, mikado soy beans, etc. Mere listing as corn, wheat, and soybeans will not suffice, as specific details are necessary in considering transfer of seed supplies to other refuges. Include only domestic grains; aquatic and other seeds will be listed on NR-9.
- (3) Report all grain received during period from all sources, such as transfer, share cropping, or harvest from food patches.
- (4) A total of columns 2 and 3.
- (6) Column 4 less column 5.
- (7) This is a proposed break-down by varieties of grain listed in column 6. Indicate if grain is suitable for seeding new crops.
- (8) Nearest railroad station for shipping and receiving.
- (9) Where stored on refuge: "Headquarters granary," etc.
- (10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.