

BRANCH OF WILDLIFE REFUGES NARRATIVE REPORTS

MR. SALYER

MISS BAUM

MR. CRAWFORD

Operations

MR. REGAN

MR. DuMONT

Land Management

MR. ACKERKNECHT

DR. MORLEY

Habitat Improvement

MR. BANKO

MR. STILES

MR. KUBICHEK

Stenographers

REFUGE MONTUZUMA

PERIOD Jan - Apr 1959

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NARRATIVE REPORT  
MONTEZUMA NATIONAL WILDLIFE REFUGE  
January - April, 1959

PERSONNEL

Permanent Employees

John S. Morse . . . . .	Refuge Manager
J. C. Appel . . . . .	Assistant Refuge Manager
Vernon A. Dewey . . . . .	Refuge Clerk
J. Kenneth Magargel . . . . .	Refuge Assistant

Wage Board Employees

John B. Salerno . . . . .	Trapping Inspector
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DEPARTMENT OF THE INTERIOR, U. S. FISH AND WILDLIFE SERVICE  
Bureau of Sport Fisheries and Wildlife  
Montezuma National Wildlife Refuge  
Seneca Falls, New York

# NARRATIVE REPORT

## MONTEZUMA NATIONAL WILDLIFE REFUGE

January - April, 1959

### I. GENERAL

#### A. Weather Conditions

The following summary of weather conditions, with the exception of temperatures, is taken from the records of the New York State Barge Canal's May's Point Lock which is located on the refuge boundary. Since only intermittent temperature records are now kept at the lock, we have been keeping our own temperature records since January 11, 1959, using a maximum-minimum thermometer.

	Snowfall		Precipitation		Temperature	
	1959	Normal*	1959	Normal**	Max.	Min.
January	33.00	17.10	1.83	1.68	55	-18
February	11.25	13.40	2.39	2.26	52	-4
March	22.75	12.43	2.19	2.78	63	5
April	0.00	1.04	1.81	2.80	86	19
Total	67.00	43.97	8.22	9.52	86	-18

\* 12 year average (1948-1959) in inches.

\*\* 30 year average (1930-1959) in inches.

It will be noted that the snowfall for the period was 23 inches above normal. Snow depths did not reach the extremes of the winter of 1958, when snowfall was 48 inches above normal. Snow was on the ground for a longer period, however, as the first snowfall occurred in late November and the last one March 28th. This period was further characterized by substained low temperatures. Muskrat trappers reported the thickest ice conditions that they had ever encountered on the marsh. Ice was two to three feet thick compared to the normal of eight inches. The frost line penetrated the ground to a depth of approximately 4 feet. Ice on the Main Pool did not break-up until April 5th. Rainfall in April was an inch below normal.

## B. Habitat Conditions

### 1. Water

In mid-January, water levels on both the Main Pool and the Storage Pool were 7 to 10 inches below spillway level, as per the Water Management Plan. Then the gates on both Black Brook and Seneca Spillways became frozen shut by the thick ice. This made it impossible to keep water levels below spillway levels. From late January until mid-April water levels on both pools were at or above spillway levels.

The thawing snow in early April created near flood conditions. The county line road on the north boundary of the refuge was a foot and a half under water. The Clyde River came within a few inches of topping our spillways at both White Brook and May's Point.

During this period of high water, winter grain crops were partially drowned out on Fields 10, 13, 18 and 19.

### 2. Food and Cover

Although the snowfall for the period was considerable above normal for the period, storms were so spaced that snow did not reach the depth to hamper deer movement or interfere with their feeding on refuge fields. Wind kept the refuge fields bare of snow for most of the period with the result that although the pheasants had a hard time, they did not face the starvation conditions of a year ago.

Ice on the refuge pools prevented waterfowl utilization of aquatics until April. High water that flooded the refuge fields adjacent to the Clyde River and the Cayuga-Seneca Canal in late March and early April provided the best conditions for duck feeding until the refuge pools thawed. Winter grain fields that were not flooded were available for geese grazing as soon as the snow melted. Field 8 received heavy utilization by geese and some ducks throughout April.

## II. WILDLIFE

### A. Migratory Birds

#### 1. Waterfowl

Initial usage of the refuge by waterfowl began about the same time as last year, but ice restricted the bulk of the birds to Cayuga Lake and the rivers. Peak numbers of ducks

using the refuge were only about fifteen percent of what they were last year. Peak duck usage occurred in the paddy fields during the week of March 22 to 28, before the marshes had opened up. Species composition during the peak use period was as follows: American Widgeon (700), Pintail (550), Black duck (550), Mallard (450), with a scattering of Ring-neck, Goldeneye, Wood Duck, and Green-winged Teal.

Goose usage was continuous from its inception about Mid-March to the end of the reporting period. Peak goose usage was approximately fifteen thousand during the last two weeks of April. The largest number of both Blue geese and Snow geese to ever use the refuge was recorded this spring when a flock of 35 Snow's and 80 Blue's was seen April 22. Goose usage more than doubled this Spring compared to last year.

Numerous observations were made and reports were received on small flocks of Whistling Swans during March. The largest flock observed was sixteen.

Seventy six Canada geese were obtained from Bombay Hook Refuge for the breeding colony development both here and at the Oak Orchard Refuge. All of these birds were wintered at this refuge. Only two mortalities occurred in this group of birds.

## 2. Other Waterbirds

While spring this year was as late as it was last year, first observations on several forms were a week to ten days earlier. Gull usage was up from last year probably due to the large number of winter killed fish in the ice. A new candidate for the Refuge bird list appeared on April 26 when a Cattle Egret was observed. This bird was seen several times over a five day period. Low water temperatures due to heavy ice, probably inhibited insect development and could explain absence of Tern usage during the period. A Common Egret was seen April 4 and the Horned Grebe put in an appearance on April 11.

## 3. Shorebirds

Very few shorebirds were seen during the reporting period. Greatest usage was of drying paddy fields. Greater and Lesser Yellowlegs, Killdeer, Dunlin, and Common Snipe used the paddy fields, while Woodcock and Snipe were seen near the White Brook Spillway.

## 4. Doves

Only an occasional bird was seen during the reporting period. Nesting pairs are not common, probably due to the lack of preferred nesting cover.

## B. Upland Game Birds

A combination of two bad winters and a very wet nesting last year has reduced the Ring-necked pheasant population on the area to an introduction level. While perhaps not in danger of extinction, another poor nesting season could reduce the Ring-neck to the level of a rare bird on the Refuge.

While the Ruffed Grouse probably does exist on the Refuge, no observations were made on the species during the reporting period.

## C. Big Game Animals

The White-tailed deer population on the area is approximately one hundred animals. This is the same number as was estimated for last year, but based on known mortality and more observations, last years estimate was probably too low. With the known mortality due to last fall's two archery hunts, dog kills, and road kills, the population on the Refuge is at a very satisfactory level. Another archery hunt is recommended for next fall to try and maintain the present level.

## D. Fur Animals, Predators, Rodents, and Other Mammals

### 1. Fur Animals

The primary fur animal on the Refuge is the muskrat. Last fall's population, based on a December house count, was 21,700 muskrats. This figure is up about two thousand over the previous year's estimate of over nineteen thousand. Harvest of 7,836 muskrats is slightly higher than last year's 7,770. The fur harvest, plus the accelerated natural mortality due to the severe winter, reduced the population to an estimated 5,000 animals by the end of the reporting period. This actually compares quite well with last years residual population estimate which did not consider natural mortality. Cattail development had not begun by the end of the reporting period, but it is probable that heavy trapping will have to be continued in several of the trapping units to maintain proper cover-water balance.

### 2. Predators

Opossums, usually our most numerous predator, appear to have been decimated by two tough winters in a row. Based on trappers reports, sightings, road kills and sign, this species seems to be at a very low level.

Raccoon and red fox populations were up slightly but not to unacceptable levels. Our present system of control, under which we allow local trappers to trap predators in the Fall and to trap and dig out fox dens in the Spring, seems to reduce fox popul-

ations to where we get an influx from outside of the refuge and keeps coon populations under control.

No observations were made on gray foxes during the year.

Stripped skunk, mink and weasel continue at low levels.

Free running dogs continue to be one of our worst predators. Dogs are probably most conspicuous when they chase deer, but may be even more destructive in terms of nest disturbance.

### 3. Rodents

There appears to be no significant change in rodent populations in the past year. Six hundred and sixty two gas bombs were used in controlling woodchucks in the dikes.

### 4. Other Mammals

Cottontail rabbits appear to be down even from last years low. This conditions also seems to prevail in the area around the refuge.

### E. Hawks, Eagles, Owls, Crows, Ravens and Magpies,

In general all species of hawks were down from last year. Only one observation was made on the Rough-leg, usually a common wintering hawk. Red-tail and Sparrow hawks are conspicuous by their absence as breeding birds. Marsh hawks seem to be at normal levels. One Osprey used the Storage pool area from April 12 to the end of the reporting period.

Our usual resident pair of Bald Eagles was first seen on March 2. Although the pair is frequently seen around their old nest in the Storage Pool area, it does not appear that they will successfully nest this year. One Golden Eagle was observed on March 28, but it was quickly driven off the area by the Bald Eagles.

No observations were made on Horned Owls during this period, although it is known that the birds use the refuge.

Crows were not as numerous as last year. The peak population of 2,000 occurred in February and tapered off to the usual low summer breeding numbers.

### F. Other Birds

The Cattle Egret was added to the refuge bird list during this period. This bird was first seen Sunday, April 26, by a



group of bird watchers. It was last seen on Friday, May 1. Several observations of the bird were made by station personnel.

#### G. Fish

For the second year in a row we seem to have gotten a satisfactory fish kill in our marshes. Carp populations are below problem levels and it does not appear that we will have to take any control action. As far as can be determined there was no carp invasion due to high flood water.

#### H. Reptiles

Nothing of interest to report under this category during this reporting period.

#### I. Diseases

There was no evidence of disease during this reporting period.

### III. REFUGE DEVELOPMENT AND MAINTENANCE

#### A. Physical Development

##### 1. Project 6212b

##### Goose Pen Fence

All materials to complete this project were assembled during this reporting period. The site has been selected at Sub-headquarters and approved by Game Management Agent John Buckalew.

##### 2. Miscellaneous

a. A valve job was done in our shop on the Ford stake-rack truck.

b. Carp screens were constructed and installed at the May's Point spillway.

c. A surplus two wheeled trailer was converted for use as a fire hose and fire pump carrier.

d. The following surplus equipment was obtained during the period:

1. Two, two-wheeled welding trailers from Voorheesville, New York.
2. A three-eighths yard bucket for the Bucyrus-Erie dragline from Voorheesville, New York.
3. A load of truck tires was picked up from Rome, New York and stored for Brigantine Refuge.

#### B. Plantings

##### 1. Aquatics and Marsh Plants

None this period.

##### 2. Trees and Shrubs

None this period.

##### 3. Upland Herbaceous Plants

The Main Pool dike north of the Thruway that had been repaired in the fall was seeded in early April to the S. C. S. recommended dike mixture of 5 lbs of Redtop, 15 lbs. of Creeping Red Fescue and 10 lbs. Empire strain Birdsfoot Trefoil per acre. A small experimental section was seeded with the same grass mixture but with Big Trefoil (Lotus major) substituted for Birdsfoot Trefoil. Seeding was done with a hand-operated Cyclone seeder. Dry weather since the seeding operation has prevented germination on much of the area seeded.

##### 4. Cultivated Crops

None this period.

#### C. Collections and Receipts

##### 1. Seed and other Propagules

Frederick B. Emerson of Cornell University collected 300 Three-square bullrush plants from the area south of routes 5 and 20.

##### 2. Specimens

None this period.

#### D. Control of Vegetation

None this period.

#### E. Planned Burning

##### 1. General

A partial burn of the Main Pool marsh south of the Thruway was obtained between March 16 and March 25. The total area of this unit is approximately 1500 acres and it is estimated that 200 acres were burned. The burn consisted of wind-driven "fingers" through the heaviest vegetation.

The last recorded burning of this unit was in the late fall of 1953 when a complete burn was obtained.

The burn was made to remove excess vegetation and to create "edge" prior to the nesting season.

The only costs involved were thirty-six man hours of labor and forty fusees.

##### 2. Conditions prior to burning

There was no waterfowl usage prior to burning because of ice conditions. The edge of the marsh was receiving slight usage from deer and ringneck pheasants. The vegetation burned was primarily cattail. The ground was frozen at the time.

##### 3. Conditions following burning

The vegetation was damp and burned only through the heaviest vegetation when driven by the wind. The heaviest cattail growth was removed down to a couple of inches above the ice. No significant damage was done to other plant species or to the soil, which was frozen.

Benefits derived from this burn are difficult to measure although the burned sections did green up earlier than adjacent areas, a considerable quantity of vegetation was removed from the marsh and paired ducks have been observed using burned areas.

#### F. Fires

None this period.

## IV. RESOURCE MANAGEMENT

## A. Grazing

None this period.

## B. Haying

None this period.

## C. Fur Harvest

Muskrat trapping operations were conducted from January 1 through April 4 inclusive. Five permits were issued. None of the trappers had an assistant. Trapping conditions were unusually difficult. Ice formation was the heaviest in the memory of our oldest trapper. A total of 7,836 muskrats and 3 mink was harvested. The Bureau's share of the pelts was shipped to the New York Auction Company and safe arrival receipts have been received. Notice of sale has not been received. The trappers sold their pelts locally and received an average of \$1.705 per skin. Total sales value of the trappers share was \$5,741.65.

The harvest of 7,836 muskrats this year was the second highest take in Refuge's history. In 1945 7,959 muskrats were taken. In 1958, 7,770 muskrats were taken.

## D. Timber Removal

Four permits for timber removal were issued during the reporting period. These permits covered 5,000 bf of soft maple logs, 20 cords of cottonwood, 5 cords of mixed hardwoods, 5 cords of elm, and 5 cords of ash crate bolts. Each permit was issued to a different individual. Total value of the timber removals was \$145.00. Permits were issued in accordance with the Timber Management Plan.

## E. Commercial Fishing

Does not apply.

## F. Other Uses

One permit was issued for the yearly rental of 1/10 acre of land to maintain and use a cobblestone garage - total receipts \$25.00.

## V. FIELD INVESTIGATION OR APPLIED RESEARCH

### Progress Report

We assisted Dr. Maurice Alexander of Syracuse University in sexing, aging, and weighing approximately 150 muskrats from each of the active trapping units and a sample of 130 from trapping unit number six. This is a continuation of Dr. Alexander's research into muskrat age and sex phenomena.

## VI. PUBLIC RELATIONS

### A. Recreational Uses

The principal recreational uses at this refuge are bird watching (wildlife observation) and fishing. The public fishing area at May's Point is heavily used. On weekends we get heavy usage of the sections of the dikes open to the public by bird watchers.

### B. Refuge Visitors

(See following page)

### C. Refuge Participation

(See following page)

### D. Hunting

Nothing to report this period.

### E. Violations

Several warnings were issued for trespass. Most of these arose from an attempt by fishermen to expand the size of the fishing area.

## VII. OTHER ITEMS

### A. Items of Interest

A Field Station Safety Committee was formed February 2, 1959.

Date	Name	From	Reason for Visit
1-2,3,4	Dr. Maurice Alexander	Syracuse University	Sex and age muskrats
1-19	Floyd E. Carlson	Syracuse University	Tape recording for "Tree Time"
1-19	Dr. Maurice Alexander	Syracuse University	Tape recording for "Tree Time"
1-19	Dehle Lancaster	N.Y.S. Conservation Department	Investigation
2-3	James Caslick	Predator & Rodent Control	Black bird bait
2-25	James Caslick	" " " "	Test black bird bait
3-10	Arthur Miller	Boston office	Courtesy call
3-10	Lambert, Laraby, Driver	A. T. & T. Representatives	Development South of 5 and 20
3-12	Adolph A. Vanslette	Missisquoi Refuge	Pick up material
3-12	Howard J. Vanslette	Missisquoi Refuge	Pick up material
3-17	Charles Dell Elba	GSA - New York City	Discuss surplus material
3-17	Sal A. Trovato	GSA - New York City	" " "
3-20	E. Conrad Levy	Boston office	Pick up levels
3-20	Lionel Wolpert	" " "	" " "
3-21	Hyman Holderby	Parker River Refuge	Pick up grain
3-30	Harlan B. Brunstead	Cornell University	Pick up muskrat carcasses
4-1	Mrs. Trudy White	Correspondent-Geneva Times	News story
4-1	David S. Dupee	U.S.Game Mgt. Agent-Vermont	Courtesy call
4-1	Lawrence S. Smith	Oak Orchard Refuge	Inventory
4-7	Eldred Stanwood	Parker River Refuge	Pick up material
4-7	Arthur Miller	Boston office	Inspection
4-8	Jack Brubaker	Cornell University	Courtesy call
4-18	Fredrick B. Emerson	" "	Collect marsh plants
4-20	William J. Stolte	Boston office	Land acquisition
4-21	Robert Hawley	U.S.Game Mgt. Agent-New Jersey	Courtesy call
4-23	Fred Steward	Socony Mobil Oil Company	Pipe line work permit
4-23	Ted Watson	" " " "	" " " "
4-24	John Buckalew	U.S.Game Mgt. Agent-New York	Courtesy call
4-25	William M. Ringle	Rochester Times-Union	Interview for book
4-25	Dr. Arthur Cook	N. Y. S. Conservation Department	Discuss obtaining muck

### C. Refuge Participation

Showing of Refuge Movie and Slide shows and talks.

1-21	Movie	Professional Womens Club, Auburn, New York	21 attending	Appel
1-24	Movie	Geneva Conservation Club, Geneva, New York	100 attending	Morse
1-27	Talk	Seneca Falls Rotary Club, Seneca Falls, New York	43 attending	Appel
1-27	Movie	Auburn Rotary Club, Auburn, New York	70 attending	Morse
2-4	Movie	Cady Stanton School, Seneca Falls, New York	160 attending	Appel
2-6	Movie on Str	Clinton Street School, Seneca Falls, New York	200 attending	Morse
2-25	Movie	Fayette Masons, Fayette, New York	26 attending	Appel
2-27	Movie	Westminister Supper Club, Seneca Falls, New York	55 attending	Morse
3-10	Movie	Lions Club, Union Springs, New York	32 attending	Morse
3-18	Slide show	Methodist Church Group, Penn Yan, New York	51 attending	Appel
3-19	Movie	Montezuma Sportsmen Association, Montezuma, New York	82 attending	Morse
4-6	Slide show	Waterloo Rotary Club, Waterloo, New York	33 attending	Appel
4-6	Movie	Father and Son Banquet, Ovid, New York	100 attending	Morse
4-11	Movie	Trappers Dinner, Cayuga Lake, New York	36 attending	Morse
4-14	Movie	Cayuga County Sportsmen Association, Auburn, New York	75 attending	Morse
3-20	Tape recording release. Empire State F. M. School of the air. "Tree Time" program. "Montezuma Refuge".			

The following groups visited the refuge during the period.

3-31	Cub Scouts, Stanley, New York	22 attending
4-12	Onondaga Audubon Society, Syracuse, New York	16 attending
4-18	Boy Scout Troop, North Rose, New York	15 attending
4-25	Buffalo Audubon Society, Buffalo, New York	36 attending
4-26	Eaton Bird Club, Geneva, New York	16 attending
4-30	Botany Class, Wells College, Aurora, New York	5 attending

Three safety meetings were held which included all station personnel.

Manager John S. Morse and Assistant Manager J. C. Appel attended the Regional Conference at Boston in February.

The compilation of this report reflects the joint efforts of John S. Morse, Refuge Manager and J. C. Appel, Assistant Manager. Typing and final assembly was done by Vernon A. Dewey, Refuge Clerk.

Respectfully submitted:

14 May 1959

John S. Morse  
John S. Morse, Refuge Manager.

5/18  
Approved:

Merton Radway

Approved: \_\_\_\_\_



W A T E R F O W L

REFUGE MONTENZUMA

MONTHS OF JANUARY TO APRIL, 1959

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

ALL PONDS FROZEN OVER DURING THE FIRST TEN WEEKS OF THIS PERIOD. NO WATERFOWL USAGE DURING THIS TIME.

WATERFOWL  
 (Continuation Sheet)

REFUGE MONTEZUMA MONTHS OF JANUARY TO APRIL, 1959

(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:										
Whistling	16	12							196 ✓	
Trumpeter										
Geese:										
Canada	30	1600	10,000	8,000	11,000	15,000	15,000	15,000	439,410 ✓	
Cackling										
Brant										
White-fronted										
Snow				3		35			266 ✓	
Blue					4	80	21	21	756 ✓	
Other										
Ducks:										
Mallard	18	450	200	120	80	60	100	100	7,296 ✓	
Black	11	550	70	280	40	30	50	50	7,267 ✓	
Gadwall			4	4	200	200	50	50	3,256 ✓	
Baldpate	4	700	40	250	600	300	200	200	14,858 ✓	
Pintail	6	550	100	600	10	20			9,002 ✓	
Green-winged teal		4	32	280	40	200	50	50	4,292 ✓	
Blue-winged teal			11	200	80	250	50	50	4,187 ✓	
Cinnamon teal										
Shoveler	6	2		6	400	300	50	50	5,398 ✓	
Wood		8	2		10	60	50	50	960 ✓	
Redhead		200			1	30	10	10	297 ✓	
Ring-necked	43	40	2	170	50	20	40	40	2,595 ✓	
Canvasback	1			1		3	4	4	67 ✓	
Scaup	1	7	7	85	300	150	200	200	5,450 ✓	
Goldeneye	20	15	27	10	20	3	8	8	729 ✓	
Bufflehead			2	10	10	20	50	50	694 ✓	
Ruddy	3			2	2	4	50	50	477 ✓	
Other H. Merganser	11	4	5	10					210 ✓	
Am. Merg.	2		3	2					49 ✓	
Red-Breasted Merg.	1	1							14 ✓	
Coot:	2	4	20	100	250	500	400	400	9,332 ✓	
1 Squaw					5 (over)				35 ✓	

	(5)	(6)	(7)
	<u>Total Days Use</u>	<u>Peak Number</u>	<u>Total Production</u>
Swans	196 ✓	16	
Geese	440,432 ✓	15,115	
Ducks	67,133 ✓	2,331	
Coots	9,332 ✓	500	

SUMMARY

Principal feeding areas Winter wheat and rye fields -  
paddy fields.

Principal nesting areas \_\_\_\_\_

Reported by J. C. Appel, Assistant Refuge Manager.

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

(Nov. 1945)

MIGRATORY BIRDS  
(other than waterfowl)Refuge MONTZUMA Months of JANUARY to APRIL 1959

(1) Species  Common Name	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number Use
<b>I. Water and Marsh Birds:</b>										
Common Loon	1	4-25	3	4-30	3	4-30				14
Horned Grebe	2	4-11	16	4-18	2	"				60
Pied-billed Grebe	1	3-20	26	4-25	2	"				450
Great Blue Heron	1	1-31	24	4-30	24	"				400
Cattle Egret	1	4-26	1	"	1	"				1
Common Egret	1	4-2	1	4-2	1	4-2				1
American Bittern	1	4-25	20	4-30	2	4-30				50
Virginia Rail	Heard	4-11	100		Heard	"				2000
Sora Rail	"	"	100		"	"				2000
Common Gallinule	1	"	50	"	10	"				500
<b>II. Shorebirds, Gulls and Terns:</b>										
Killdeer	1	3-28	24	4-30	4	4-30				250
American Woodcock	2	4-30	20	"	2	"				500
Common Snipe	2	4-18	20	"	3	"				500
Spotted Sandpiper	1	"	2	"	2	"				30
Greater Yellowlegs	1	4-16	10	"	2	"				200
Lesser Yellowlegs	1	4-26	10	4-26	1	4-26				50
Dunlin	1	"	1	"	1	"				10
Gr. Black-Backed Gull	1	2-1	1	3-7	1	3-7				50
Herring Gull	26	1-1	26	1-1	3	4-18				1,000
Ring-billed Gull	19	3-7	125	4-11	2	4-30				3,000
Bonaparte's Gull	100	4-11	100	4-11	100	4-15				500

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u> Mourning dove White-winged dove	1	3-16	16	4-11	1 4-30
IV. <u>Predaceous Birds:</u> Golden eagle Duck hawk Horned owl Magpie Raven Crow					200
Reported by <u>J.C. Appel, Assist. Ref. Mgr.</u>					

#### INSTRUCTIONS

- (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 refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (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 total number of the species using the refuge during the period concerned.

UPLAND GAME BIRDS

1613

Refuge MONTPEZUMA Months of JANUARY to APRIL, 1959

(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'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, cultivated fields 1500 acres	40		35M--65F				40	Population of this bird is down to an introduction level. It will require an excellent breeding season to bring the bird back to safe numbers.
Ruffed Grouse				No observations during this period.					



# 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.

3-1754

Form NR-4

(June 1945)

## SMALL MAMMALS

Refuge

MONTEZUMA

Year ending April 30, 1959

(1) Species	(2) Density	(3) Removals						(4) Disposition of Furs						(5) Total Popula tion
Common Name	Cover Types & Total Acreage of Habitat	Acres Per Animal	Hunting	Fur Harvest	Predator Control *	For Re- stocking	For Re- search	Share Trapping			Total Refuge Furs Shipped	Furs Donated	Furs Destroyed	
								Permit Number	Trappers Share	Refuge share				
Opossum	5000 acres marsh, hard wood swamp, bordering upland.	100			2			T-9251 T-9257 T-9258	25					50
Raccoon	"	100			2				28					50
Red Fox	"	500							45					10
Gray Fox	"	None	observed											
Stripped Skunk	"	250							3					20
Mink	"	250		8					5	3	3			20
Weasel (2 species)	"	100												50
Muskrat	3000 acres pools, & adjacent marsh	1/3		7836				T-9252 56	3918	3918	3918			5000
Woodchuck	1500 acres upland & dikes	3			7									500
Connontail Rabbit	"	5												300
Gray Squirrel	1500 acres swamp wood- woodland	5												300
Red Squirrel	20 acres upland wood- land border with some conifers	1												20

\* List removals by Predator Animal Hunter

\* List removals by Predator Animal Hunter

## REMARKS:

Woodchuck burrows in dikes gassed - 662  
 Predator populations based on trapping results  
 Muskrat population based on house counts and harvest  
 Rabbit and squirrel populations based on random observations

Reported by J. C. Appel, Asst. Ref. Mgr.



# 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.)
- (2) DENSITY: Applies particularly to those species considered in removal programs. 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, including any taken on the refuge by Service Predatory Animal Hunter. Also show any removals not falling under headings 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, including 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.



SPRING WAS A LITTLE LATE. LATE-MARCH AND STILL SNOWING.



NATURALLY WHEN IT DID THAW. (County Line Road)



AND THE RAINS CAME.



SO DID THE CARP.



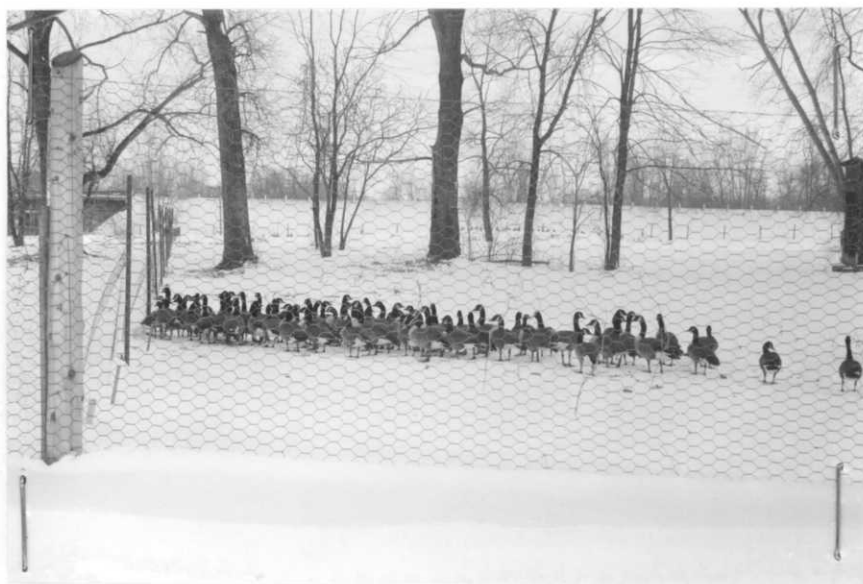
FORTUNATELY THE NEW SCREENS WORKED. (May's Point Spillway)



LOTS OF MUSKRATS.



IN SPITE OF A TOUGH WINTER, A GOOD HARVEST.



NEW EMIGRANTS IN QUARENTINE. BOMBAY HOOK GEESSE DESTINED TO BOLSTER BREEDING COLONY DEVELOPMENT HERE AND AT OAK ORCHARD. ONLY TWO MORTALITIES FROM HANDLING.





WHEN THEY SLIP ON THE ICE, EVEN A SMALL DOG CAN DO THEM IN.



BEAGLE WITH A BELLYFULL OF VENISON HE DIDN'T ENJOY LONG.



OUR OWN VERSION OF "RESCUE 8"



WITH AN ASSIST FROM THE NEW YORK STATE POLICE.