

ROUTING SLIP

DIVISION OF WILDLIFE REFUGES

DATE: 9-10-48 194

MR. SALYER

~~MR. KRUEGER~~~~MR. DUMONT~~

MISS BAUM

SECTION OF HABITAT IMPROVEMENT:

~~Mr. Griffith~~~~Dr. Brown~~~~Miss Cook~~

SECTION OF OPERATIONS:

~~Mr. Bell~~~~Mr. Bogan~~

SECTION OF LAND MANAGEMENT:

~~Mr. Kent~~~~Mr. Ackenkrueger~~

SECTION OF STRUCTURES:

~~Mr. Taylor~~

STENOGRAPHERS:

~~Mr. 2248~~~~Mr. 10/18/48~~

REMARKS:

MONTEZUMA NARRATIVE REPORT

MAY-AUGUST 1948

Return to:

Montezuma National Wildlife Refuge
May - August, 1948

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Montezuma National Wildlife Refuge
May - August, 1948

I GENERAL

A - Weather Conditions - Data as taken from the records of the New York State Canal System are as follows:

<u>Period</u>	<u>Precipitation</u>	<u>Max. T.</u>	<u>Min. T.</u>
May	4.75	82	36
June	3.13	88	44
July	2.62	90	50
August	2.90	92	48
Total	13.40	92	36

The period actually featured the hottest day on record for this vicinity for August 26, 98 degrees. For some reason the New York State records did not show this. Extremely cool nights thru most of the summer was also the rule. While precipitation for the period was normal the manner in which it came was not conducive to the maintenance of refuge water levels. Frequent and slow rains soaked into the ground rather than supplying water to our feeders.

B - Water Conditions - were good from a waterfowl standpoint in spite of the weather conditions described above. The storage pool stands at about 6 inches below the spring starting level, while the main pool is about 3 inches below spillway.

II WILDLIFE

A - Migratory Birds - Waterfowl production, we feel, has been very successful on this refuge this year. A good population of nesting birds, ideal food and cover conditions, few flying predators, and the lack of serious floods are probably responsible. From broods recorded, nesting success was apparently good, but succeeding predation by turtles, raccoon, etc. cut the survival somewhat. Wood duck have the largest broods and as good a survival as other species. Most of the blue wing teal production was later than usual, young broods being observed in mid-August. Nesting sites were primarily the edges of the various marshes and timbered swamps of both pools. Muskrat houses very often served to produce muskrats in the lower level and waterfowl on the top. The first baldpates arrived on August 27 this year which is the average arrival date for the past several years. Coots and gallinules continued their usual population and nesting.

Waterbirds also included unusual items this season. American egrets have visited the area for several years but not in the numbers that arrived this period.

Over 100 were present for at least two weeks in August. Among them were also 2 snowy egrets and 5 immature little blue herons, both of these the first records for the refuge. Most outstanding, however, was the observation by two graduate students at Cornell University, of 4 sandhill cranes. Neither refuge personnel nor any of the numerous bird clubs were successful in seeing them. Cornell has the record included on their list and Prof. Arthur Allen states that this is the first for sandhill crane in this state for about 100 years. Great blue herons, black crowned night herons, little green herons and American bittern are common as usual. Small fish and frogs provided food for many of these.

Shorebirds have been much more numerous here this season than usual and have been a great source of attraction to the many bird clubs and nature students visiting the area. Lesser yellow-legs have been very common along with many other species of the sandpiper group. Shorebirds began building up following the middle of July. Exposed tops of eroded spoil banks together with dike shores provided the primary attraction for this group.

Mourning doves are again common on the sanctuary and consist primarily of the nesting population. Several pairs nested in the immediate vicinity of the Headquarters buildings. Plenty of weed and grass seed exists for food and thickets provided nesting sites. No woodcock were seen during this period.

B - Upland Game Birds consisting of pheasants have again started toward the top of the cycle. At least 8 broods of pheasants were seen on the refuge with an average number of 8. It is estimated that more than 100 native birds will be present by the end of the season. Very good food and cover are available over widely scattered areas the year around. In addition, thru cooperation with the New York State Conservation Dep't 100 brooder-reared pheasants were released here on August 25. This experimental release is further described under the heading - Research. To date we have seen practically no predation on the birds.

C - Big Game Animals - on this area consist of white tail deer of which the population remains fairly constant under the present fall open season in this County of one buck. Swamp, brush, high marsh grass areas and ridges provide good cover, while the undergrowth of tree and shrub species together with grasses and grain fields furnish good food. During the spring season frequent twin fawns were seen. Does and fawns regularly play on the Headquarters lawn in the late P.M. or evening.

D - Fur Animals, Predators & Small Mammals - The muskrat population thru management for waterfowl is down to what we may expect to maintain with only normal fluctuation. At the same time it is too early to predict the removal to be planned for the coming season.

✓ Survey note
me

It may be desirable to undertrap the Black Lake and Tyre marshes to allow the muskrat to open it up more for waterfowl. Rat activity is vigorous over widely scattered areas and no indications have been seen of disease. Food consists of cattail, bur-reed and grasses of various kinds.

The population of mink seems to decline directly in proportion to the muskrat population and we can expect the coming seasons catch to be between 30 and 40. Primary predation is apparently on muskrats. Removal is chiefly during the fall trapping program.

The red and gray fox population remains fairly constant, migrants entering the refuge each year after nearly complete removal by trapping. Their diet includes woodchuck, muskrat, pheasant and field mice. Pheasants are also consumed when there is any number of birds present. We have seen no evidence of predation on ducks. Both species will be included in our fall predator program.

The raccoon and opossum are without doubt our worst predators both in numbers and activity. It is known that the coon interfere with duck traps considerably and it is assumed that considerable predation takes place on waterfowl and their eggs in the marshes. Opossum are in the same category. We expect to trap about 200 raccoon during the fall program.

Cottontail rabbits are again heading toward the top of the cycle and their present numbers indicate the advisability of another removal program in the near future. Removal will probably be effected thru cooperative live trapping for the State Conservation Department for stocking elsewhere.

E - Predaceous Birds are not much of a problem on this area. Observations and test pole traps indicate only occasional activity by horned owls and hawks. Crows destroy some waterfowl eggs but the amount of damage is not believed serious in spite of the thousands that have access to the refuge. Good waterfowl nesting cover may partially account for this.

F - Fish population has always been primarily carp. However, we can thank occasional severe freezing winters for cutting them down. Last winter effected this control and spring floods were such that we have had no further influx. The difference can readily be seen in the vegetation of the pools. Bullheads and other fish in smaller quantities are also present.

III REFUGE DEVELOPMENT and MAINTENANCE

A - Physical Development and maintenance jobs accomplished during the period are summarized as follows:

- Graded 5 miles of roads.
- Completely rebuilt & repaired 3/4 mile of the main pool dike.
- Planted 3/4 mile of dike shore with bulrush rootstalks.
- Hauled 30 truckloads of cinders for surface on service court.

- Painted barn and CCC storage bldg.
- Recharged water filters with sand, gravel and charcoal.
- Made repairs on disc harrow and John Deere mower.
- Mounted new IH mower on new IH Farmall Super A tractor.
- Mowed 7 miles of dike slopes and burned areas of weeds.
- Mowed an estimated 25 acres of roadsides, areas adjacent to bldgs., exhibition pond area & other areas to control weeds and popple.
- Trimmed 2 miles of telephone line.
- Repaired 2 spillways.
- Pinioned 6 geese in exhibition pond.
- Set up 2 duck traps.
- Repaired and lined granery with sheet metal.
- Repaired dike roads.
- Crated and shipped Kohler Plant & gas stove.
- Excavated channel to connect main pool with Connecting Spillway.
- Constructed substantial chicken yard.
- Reapiored & maintained part of refuge signs & boundary markers.
- Worked on the conversion of dry marsh areas.

B - Plantings

1 - Aquatic & Marsh - Plantings of wildrice, wild celery and hardstem bulrush have all been successful. Plantings of the first two were made last year and the wildrice reached at least the stage of heading out. Muskrats have been devouring it and it is doubtful that the stand will be able to maintain itself. Additional plantings of wildcelery are planned for this fall. Bulrush was planted last fall on mud bars and spoil banks in the main pool marsh and during the present period along 3/4 mile of dike shore to prevent erosion.

4 - Cultivated Crops have been very good this season. The refuge share under the cropping program has consisted of winter wheat, barley and rye and those yet to be harvested are buckwheat and corn. A very good crop of corn has been produced this year by the permittees but as in previous years the blackbirds have started working on it. Efforts in the past to scare the birds away haven't been very successful. The slopes of 3/4 mile of dike that was rebuilt were seeded with grasses with barley for a nurse crop.

IV ECONOMIC USE OF THE REFUGE

A - Grazing has involved about 250 acres of lands in 3 different units with a rental of \$.50 per AUM on all units. These areas used for grazing are mostly tracts distinctly segregated from the marsh proper and intensive waterfowl areas. The usage not only helps to maintain sodded areas and better browse for deer, but also promotes friendliness in the community.

D - Timber Removal - One Permit was issued for 15 cords of firewood for the period May 15 to October 31 while 2 other Permits were extended into the present period for small quantities of wood. Prices were \$1.00 per cord and \$10 per MBM of sawlogs.

E - Other Uses includes the harvesting of flagg(cattail), an industry peculiar to only a few sections of the United States. Two types of flagg are cut - chair flagg and butts - and the market often becomes flooded for one or the other or both types. This year the market seems to be well supplied with butts so that our only sale has been that of 500 bundles of chair flagg. Our price of \$.01 per bundle in line with local sales is negligible from an income standpoint but the harvesting of butt flagg can often be utilized to kill out sections of cattail where desirable. Ordinarily the cattail is killed when cut underneath the water during the month of August.

V FIELD INVESTIGATION AND RESEARCH

Duck traps have been set up but actual banding will not start until after this period. Approval has also been obtained for research men of the New York State Conservation Department to operate several banding traps on this refuge.

The muskrat research project by Maurice Alexander, graduate student at the New York State College of Forestry has been progressing very well without the removal of any large number of animals. A few specimens were taken in the spring following the trapping program while live trapping has been conducted thru the summer in an attempt to tag all age classes in scattered locations. This study is expected to continue at least into the coming winter trapping season in order to record tagged muskrats that may be retaken.

In order to build up the pheasant stock on the refuge a cooperative research venture was promoted with the New York State Conservation Department. During August the State set up a release pen in a section of good food and cover where they released 100 brooder reared birds. Fox sets were made and pole traps set. Feed and water were provided until the pheasants were gradually released. At the present they have spread up to a distance of a half mile and several have been killed on the highway. We have provided about an acre of field corn adjacent to the release site for winter food. This project is intended for comparison with releases under different sets of conditions.

Secretary's Permit was issued to Arthur Cook of the State Conservation Dep't to live trap 200 muskrats for research purposes but to date one day has been spent in taking 4 animals. The balance of the permit may not be exercised.

Secretary's Permit was issued to the Syracuse University Museum to take a muskrat nest and a complete muskrat family but to date nothing has been done on it.

VI PUBLIC RELATIONS

A - Recreational Use of the refuge has consisted of wildlife study and fishing at the areas set aside for that purpose. Hundreds of fishermen from all over the State have used the fishing area for fishing and picnics. Individuals, student groups, sportsmen, and ornithological clubs from the entire northeast have visited

the refuge this season.

B - Refuge Visitors as above have consisted of individuals and groups from all walks of life and from many States and sections of the country. Variety of species, ease of observation, rare birds and public relations efforts have gradually attracted visitors from far and wide.

Student Groups have included:

Prof. Stegeman & student group, N.Y. State Forestry College	May 12
Prof. Arthur Allen, Cornell U.	Aug 7
Prof. Wm. J. Hamilton, Cornell U.	Aug 26
Prof. Holley, Syracuse U. Museum	Aug 12

Other officials have included:

State Assemblyman Lawrence VanCleaf	July 18
Messrs Cook, Bradley, Nemes, NYS Conservation Dep't	Various Dates
D.S. Miller, Dep't of Lands & Forests, Toronto, Canada	Aug 22
Messrs Senning, Greeley, Greene & Kingsbury,	Jun 17

NYS Conservation Dep't, Albany, N.Y.

U.S. Fish & Wildlife Service Officials:

Wm. V. Taylor, Washington Office	May 7
Arthur Miller, Regional Office	May 7 & 8
Ennio Abbiati, Div. of Lands, Reg. Office	May 22
R.E. Griffith, Wash. Office	July 8
Arthur Miller, Regional Office	July 8
Clifford Presnall, Washington Office	Aug 30
Wm. Fitzwater, Field Agent	Aug 30
Game Management Agent Dewey	Various Dates

Beginning on May 15 a sign was erected for the registration and direction of visitors. During the period 221 vehicles registered. Not more than 50% register; therefore, with an average of 4 persons per car there were at least 1500 visitors. Many states and groups were represented in this registration.

C - Refuge Participation - Refuge personnel did not participate in any organization activities formally but we have been in touch with many clubs during the period.

VII OTHER ITEMS

A - Items of Interest - With funds available for really repairing a 3/4 mile section of dike we were able to perform many jobs that have been waiting a long time. Increasing maintenance of buildings, pipelines, etc is necessary each year. Each season offers increasing opportunities for manipulation or improvement of marshes and habitat.

B - Photographs showing improvements or conditions of special interest are shown on the following pages.

C - Signature as follows:

Date September 4, 1948

Merton Radway
Merton Radway, Refuge Mgr.

Date Arthur I. Miller 9/8/48

Regional Office

Ernest Bailey 9/9/48
Ad. Reg. Dir.



Difficulties in Dike Reconstruction



Dike Finally Roughed Into Shape



Planting Dike Shore With Hardstem Bulrush



Scattered Growth of Wildrice in Foreground
(Sowed in Fall of 1947)



Snapping Turtle Adjacent to Main Pool



Registration and Directional Sign

WATERFOWL

Refuge MontezumaMonths of Mayto August1948

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total
	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Period
I. <u>Swans:</u> Whistling swan									
II. <u>Geese:</u> Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose									
III. <u>Ducks:</u> Mallard Black duck Gadwall Baldpate Pintail Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck	18	8/27	1500 1500 100 10 1000 1200	8/31 8/31 8/31 8/31 8/31 8/31			15 20 15 10	500 500 300 500	2500 2500 1200 1500
IV. <u>Coot:</u> Flor. gallinule American coot			1000 1000	8/31 8/31			30 30	400 400	1000 1000

3-1750
(July 1946)

(over)

Form NR-1

SUMMARIES

Total Production:

Geese _____
 Ducks 1800
 Coots 800

Total waterfowl usage during period 9800

Peak waterfowl numbers 7300

Areas used by concentrations marshes and vicinity

Principal nesting areas this season marshes

Reported by Merton Radway, Refuge Mgr.

INSTRUCTIONS

- (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) First Seen: The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
- (3) Peak Concentration: 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 in the reporting period.
- (5) Young Produced: 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.
- (6) Total: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

3-1751
Form NR-1A
(Nov. 1945)

MIGRATORY BIRDS
(other than waterfowl)

Refuge Montezuma

Months of May to August 1948

(1) Species -	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. <u>Water and Marsh Birds:</u>										
American egret	4	7/11	100	8/14						
little blue heron	5	7/18								
snowy egret	2	8/11								
sandhill crane	4	8/7								
glossy ibis	1	6/17								
pied billed grebe										500
American bittern										100
great blue heron										800
black crowned night heron										500
northern clapper rail										100
II. <u>Shorebirds, Gulls and Terns:</u>										
<u>Terns:</u>										
ringbill gull	20	8/2	50	8/15						50
herring gull										100
black tern										300
lesser yellowlegs										100
least	}									1000
solitary										
spotty										
killdeer										500

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u>					
Mourning dove					200
White-winged dove					
IV. <u>Predaceous Birds:</u>					
Golden eagle					
Duck hawk					
Horned owl					
Magpie					
Raven					
Crow					
Reported by <u>Merton Radway, Refuge 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 Montezuma

Months of May to August, 1948

(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	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
King-necked pheasant	Grass-brush	4	10				200	Nesting increasing. Av. brood survival 8.

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

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 GRAIN REPORTRefuge MontezumaMonths of May thru August 1948

(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 USE		
				TRANS- FERRED	SEEDED	FED	TOTAL		SEED	FEED	SURP.
winter wheat	5	20	25					25		25	
winter barley	10	20	30			5		25		25	
oats		25	25					25		25	

(8) Indicate shipping or collection points.....

(9) Grain is stored at.....

(10) Remarks.....

NR-8a - 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 lbs., Corn (ear)--70 lbs., Wheat--60 lbs., Barley--50 lbs., Rye--55 lbs., Oats--30 lbs., Soy Beans--60 lbs., Millet--50 lbs., Cowpeas--60 lbs., and Mixed--50 lbs. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels.

- (1) List each type of grain separately: Corn, wheat, proso millet, etc. 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 breakdown by varieties of grain listed in Column 6.
- (8) Nearest railroad station for shipping and receiving.
- (9) Where stored on refuge: "Headquarters grainary", etc.
- (10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.