

PEA ISLAND NATIONAL WILDLIFE REFUGE

NARRATIVE REPORT

MAY 1, TO AUGUST 31, 1951

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PEA ISLAND NATIONAL WILDLIFE REFUGE

NARRATIVE REPORT

MAY 1, TO AUGUST 31, 1951

I. GENERAL

A. Weather Conditions

All data contained in this report and listed below was furnished by Mrs Rosa Drinkwater, Operator and Manager of the local Metrological Station located in Manteo, N. C. To whom I am indebted.

Past experience have shown that data recorded on Roanoke Island does not reflect the actual conditions as they exist on Pea Island most of the time, This especially true concerning Rainfall.

Temperatures for this period have been well above that for the same period last year averaging from 3, to 6, Degrees hotter, June was the hottest month of the period with a high of 97 on the 25th. and well above 90 for most of the month.

Precipitation was far below normal with an actual reading of 9.80" for the period compared with 22.80" last year, There have been no severe North Easters, Or Hurricanes up until the end of August, Find listed in the table below Data recorded by the Month.

Precipitation		Dept. From Normal	Temperatures	
	Actual		Max.	Min.
May	2.26	-2.40	85	52
June	1.10	-3.40	97	53
July	4.06	- .44	96	62
August	2.38	-2.12	93	62
Tot.	9.80	Tot.-8.20	Max. 97	52

B. Water Conditions

With rainfall the last four months being just about half normal it can be readily understood that water conditions in the two ponds have been critical, neither one of them went completely dry as the south pond did last year but water levels have been at such a low ebb that the Vegetative Growth have been greatly retarded and it is doubted that it will recover unless we get enough rain in the near future to bring levels back up to normal.

Guage readings at the end of August was North Pond 3.60 South Pond 3.80 which is some what higher than for the months of june and july but still to low for Maximum plant growth,

Waters in the sound have been normal for this season of the year with salinity running about 54 to 60 % sea strength with normal tidal action having no extreme highs as they occure during the fall and winter months.

II. Wildlife

1 Population and Behavior

As is usual some 150 to 200 Canada Geese remained on the refuge area until after the first of May. But continued to dribble out until at the end of July only about 30 was still present and at the end of August only 14 could be found these in groups of two to five are still using around the ponds and new Inlet.

Gadwall Ducks have shown an increase in numbers for the last three seasons to return and nest on the refuge Area, a Total of 619 young Gadwalls hatched off in the north pond this season compared with 427, last year, Black ducks also had an increase with a hatch of 128 compared with 66, for last season, one brood of Blue wing Teal also hatched off in the north pool numbering 6,

The migration of Gulls, Terns Herons, Egrets were about on schedule starting to arrive the latter part of April and all thru May, Nesting thru June and July, Several surveys were made on the Island where the nesting colonies were and it was estimated there were at least 2000 laughing gull nests on two islands alone with scattering in other localities, ~~XXXXXX~~ also nesting all mixed up with the Gulls were Little Blue herons, Snowy Egrets, Louisiana Herons, There were also about 40 Yellow and Black Crowned night herons nested in the rank growth of wax Myrtle just south of the over night Cabin.

Shore birds were on schedule, Migration started about the 18th. of April and they were at their peak during May, Consisting mostly of the following Species, Sandpipers, Sanderlings, Turnstones, Plovers, Yellowlegs, Willets, and Curlews There were thousands of them and no accurate estimate of the numbers are available, 12 Avocets came in on Schedule April 18th. but contrary to last years behavior did not remain, Only stayed four day and departed, last year 7 Stayed on the area until some time in ~~XXXX~~ August Rest of the Species have been present in about their usual numbers through out the period with a marked decrease in the numbers of Hudsonian Curlews.

2

2, Food and Cover

Lack of normal rainfall as shown under weather conditions have had a very detrimental effect on the Aquatic Growth in the open water areas in both of the fresh water ponds, a very puny growth is the results, and it is estimated that not over 65% normal stand exist more especially in the south pond, The Marginal edges have not suffered to such an extent and very good stands of Smartweed, Three Square and some wild millet plus other seed bearing plants will perhaps compensate for the lack of Grasses in the open water Areas, The East side of the North pond has an unusual stand of Scirpus Robustus and seems to increase annually.

Beach Pea, Strophostyles Helvela is very abundant all over the Island where the terrain is suitable for it growth since it prefers dry dune type most of this Species can be found along the entire east side of the Island, It is of interest to note that the Area farmed last fall and winter has a crop exceeding over 100% over adjacent areas which was not farmed, In addition the growth is very rank compared to unbroken ground stands and gives promise of bearing an exceeding good crop of beans, It is the opinion of the writer that instead of wasting time and money trying to propagate crops of an unknown quantity that more attention be given to trying to find ways of improving the stands and quality of plants that is native to the Area and of definite value.

2. Food and Cover

Periodic Surveys of about every three weeks for the last two months of the sound waters and bottom lying adjacent to the refuge along the west side of the refuge, reveal that from about one mile south of Oregon Inlet south to our southern boundary that the Vegetative Growth are in very good condition, Dominant types are Widgeon Grass, Sago Pond weed, Shoal Grass with small areas of Eel Grass intermingled, This is the third consecutive summer that these surveys have been made and it is estimated that available foods from this source will be at least normal if not better than past years, Barring Hurricanes.

Areas set up for burning this fall and winter have excellent stands of Spartina Patens mixed up with various ~~XXX~~ Species of weeds and other grasses which should enable us to get good clean burns and with purposed plan of over seeding with Rye Grass it is hoped to supplement the natural food supply to an extent not heretofore possible.

Cover, There is no lack of cover on the refuge area for all species needing cover for nesting or otherwise.

3. Botulism and other diseases

None prevalent on the refuge for this period.

4. Fur Bearing Animals

Fur bearers on the refuge are limited to Otter and muskrats, Both seem to be thriving but show no marked increase from year to year, former and present estimates are about 800 rats, with 30 to 40 Otter and it is thought that perhaps they have reached a saturation point.

III Refuge Development and Maint.

A. Physical Developments

No actual new Developments have been undertaken for this period.

B. Maintenance

This phase of activities goes on on the project whether we have any new developments or not, In fact it is the one never ending tasks on any refuge, This periods Maint. Jobs are so many and ~~XXX~~ Varied that it is not practical to list them individually, But to list a few that are included are Buildings, Roads, Dykes, Boats, Tractors, Trucks Etc. Refuge personnel expended a total of 84 man days on Preventive Maint. and 103 day on all other including Posting and several others

E

C. Fires

None for the period

D. Farming and other plantings

No farming was carried on this period, But App. 2000 Scirpus Acutes Plants was dug out and hauled to Pea Island From Mattamuskeet Refuge and transplanted out along the East side of the south pond last inspection ~~xxxx~~ showed about 75% survival.

IV

Economic Uses

None for the period.

V.

Field Investigations

Throughout the period numerous surveys have been carried on to determine the Status of nesting birds of all Species, Also factors relating to the production of food, Inland on the Island, Also off Shore in the waters of the sound covering the entire shore line for a distance of three miles.

During the third week of July refuge personnel expended seven man days catching and banding Laughing Gulls, Herons, and Egrets, In company with Mr. Harry T. Davis and party from Raleigh, N. C. who it seems have been engaged in this activity for some 9 or 10 years on Pea Island with the exceptions of 1950, a total of 345 birds was banded, It is in doubt if this project can be classified as Field Investigations ? (Refer to XV May-Sept. Issue North Carolina Bird Club Bulletin the Chat) Copies not available from this Station.

XIX VI, Public Relations

A, Recreational Uses

For years gone by Pea Island have had the reputation of having some of the best surf fishing anywhere along the N. C. Coast Line, and has had its share of visitors in connection with this sport, But since the completion of the paved road from Nags Head to Oregon Inlet it seems to be a mecca for all the Surf fishermen within a radius of several hundred miles, Average days there are anywhere from 30 to 40 individuals fishing, and on week ends, (for the last few week ends) there has been from 75 to 100 people a day taking advantage of the opportunities offered, It is impossible to keep an accurate check on the numbers or pounds of fish actually taken as it varies with seasons and involves too much time on the part of the personnel, In the future public relations and public use will become an important factor in the management of this refuge.

B, Violations

No Violations of a serious nature have occurred this period, on two occasions small dogs have been found running at large, and steps were taken to have them confined to the automobiles belonging to their owners.

VI, Public Relations, Cont.

C, VisitorsOfficial

Congressman, August H. Baeuer	6/1/51	Washington, D. C.
Mr. Claude Lawrence	6/1/51	" D. C.
Mr. Robert Halstead	6/1/51	Little Wash, N. C.
Mr. Howard A. Miller	6/15/51	Atlanta, Ga.
Mr. W. P. Baldwin	6/15/51	P. Wenthworth Ga.
Dr. and Mrs Linduska and family	6/15-22/51	Washington, D. C.
Mr. Lawrence S. Givens	7/19/51	Atlanta, Ga.
Mr. James Silver	7/30/51	Atlanta, Ga.

Unofficial

Mr. & Mrs. P. W. Preston	6/21/51	Butler, Pa. Butler, Pa.
Mr. Harry T. Davis	6/16-22/51	Raleigh, N. C.
Dr. John Gray	6/16/51	Williamsburg, N. C.
Mr. William Polner	6/16-22/51	Raleigh, N. C.
Mr. W. E. Joyner	6/16-22/51	Rocky Mount, N. C.
Mr. Sandy McCulloh	6/16-22/51	Raleigh, N. C.
Miss Heather E. Thorpe	8/21/51	Buffalo, N. Y.

WATERFOWL

Refuge Pea Island

Months of May 1, to Aug. 31 to 19 51

(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	188	May 11	185	May 1,	14	Aug. 28			
III. <u>Ducks:</u> Mallard Black duck Cadwall 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			225 430	May 14, " 14,	Nesting Nesting		18 77	Actual Count 128 619	200 800
	(Also seen 38 on July 30, Thought to be Migrating)		22	" 14,	2	July 2,	1	6	6
IV. <u>Coot:</u>			28	May 11,	28	May 11			28

SUMMARIES

Dates waterfowl counts made 6/15-7/15-8/2

Percent of waterfowl area covered 80%

Dates brood counts made 6/15-7/15-8/2

Percent of area covered in brood counts 90%

Total production:

Geese _____

Ducks 747

Coots _____

Total waterfowl usage during period 1028

Peak waterfowl numbers 1200

Areas used by concentrations Two Pond Areas

Principal nesting areas this season North and south Ponds

Reported by Lewis E. Turner

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 the 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 Pea IslandMonths of May 1. to Aug. 31. 1951

(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>										
Herons, American	5	5/4/51	56	6/18/51	23	8/21/51				
" Snowy	16	5/4/51	81	6/18/51	56	8/21/51				
Pelicans, Brown	4	5/8/51	26	6/1/51	6	7/8/51				
Grebes, Piebill	2	7/30/51	16	8/23/51	16	8/23/51				
Rails, Clapper	Seen Throughout the Season									
Herons, Great Blue	5	5/4/51	9	6/1/51	2	8/23/51				
Herons, Louisiana	12	5/8/51	62	6/18/51	31	8/23/51	1	8	20	85
Herons, Little Blue	9	5/8/51	50	6/18/51	23	8/23/51	1	12	30	75
Herons, Black Crowned	Seen throughout the season						1	20	56	100
Herons, A Yellow crowned	Seen throughout the season						1	18	40	80
II. <u>Shorebirds, Gulls and Terns:</u>										
Plover, Black belly	43	5/20/51	300	6/5/51	75	8/23/51				1200
" Semi-palmated	160	5/4/51	1000	6/5/51	600	7/20/51				2500
Turnstones, dudy	140	5/4/51	1200	6/5/51	650	7/23/51				3000
Willetts	18	5/4/51	84	6/5/51	32	7/23/51				150
Yellowlegs	65	5/4/51	1000	6/5/51	200	8/23/51				1250
Dowitchers	8	5/20/51	750	6/5/51	120	8/23/51				1000
Sandpipers, (All Species)	300	5/4/51	3500	6/5/51	800	8/23/51				6000
Gulls, Herring	1000	5/4/51	3000	5/20/51	200	8/23/51	X2	1500X	2500X	3500
" Laughing	400	5/4/51	3500	6/5/51	400	8/32/51	2	1500	2000	4000
Gulls, Bonatarties	85	5/4/51	400	5/20/51	22	8/23/51				
Terns, Royal	15	5/4/51	500	5/20/51	80	8/23/51				800
" Common	20	5/4/51	450	6/5/51	35	8/23/51				
" Least	50	5/4/51	800	6/5/51	200	8/23/51				
Skimmers, Black	2	5/4/51	300	7/30/51	280	8/23/51				500

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons</u> : Mourning dove White-winged dove	Occasional Visitors, seen in small numbers thru the fall months				
IV. <u>Predaceous Birds</u> : Golden eagle Duck hawk Horned owl Magpie Raven Crow	Seen in small numbers throughout the winter months, (lto 3) Fish crows in small numbers during winter months.				
				Reported by <u>Lewis B. Turner</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.

Months of May 1. to Aug 31, 1941

(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.
	Does not apply to Pea Island Refuge. Only Upland Game birds prevalent on the Refuge is an occasional Dove, mostly migrating.									

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.

3-1570
NR-8a

REFUGE GRAIN REPORT

Refuge Pea Island

Months of May 1. thru Aug. 31. 19451.

(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.
No Grain on Hand. Rye Grass, (Italian)	0	500 Lbs.	500Lbs					500Lbs	Seed		

(8) Indicate shipping or collection points Sandhills Refuge, McGee, S. C.

(9) Grain is stored at H. Q. Pea Island Refuge

(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.

PLANTINGS
(Marsh - Aquatic - Upland)

Refuge Pea IslandYear 1951

Species	Location of Area Planted	Rate of Seeding or Planting	Amount Planted (Acres or Yards of Shoreline)	Amount & Nature of Propagules	Date of Planting	Survival	Cause of Loss	Remarks
Scirpus Acutes	South Pond	4' Square	2000 Plants	Root Stock	5/17/51	75%	Unknown	

TOTAL ACREAGE PLANTED:

Marsh and aquatic Strip App. 400 Yrds longHedgerows, cover patches Food strips, food patches Forest plantings



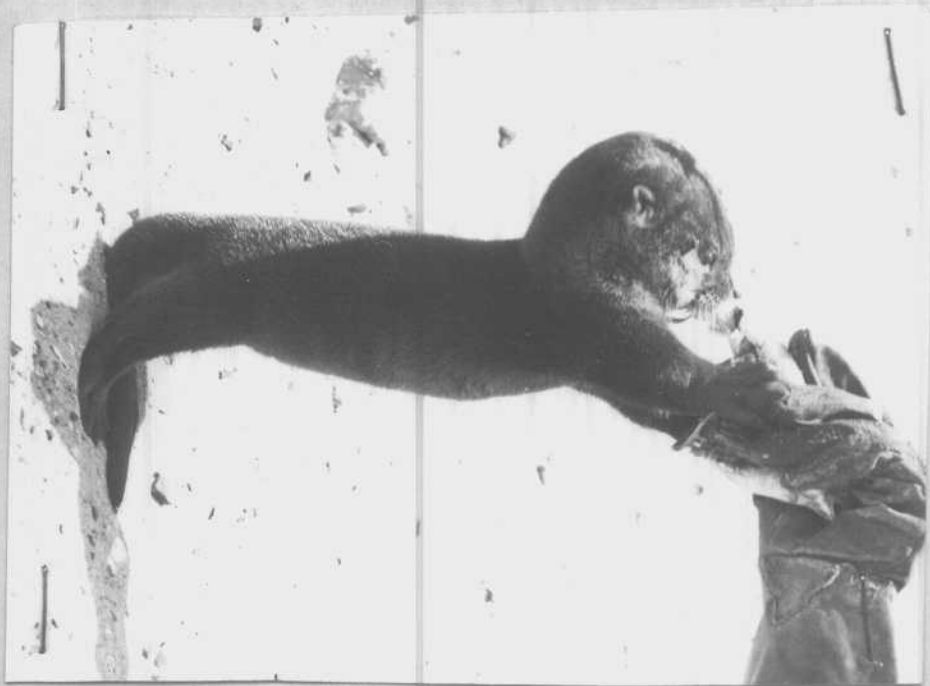
Rank Growth of Beach Pea (Stephostyles Helvola) Increased about 10 fold by discing. This picture was taken on the area, farmed last year.



Beach Pea, Climbing upon Sea Oats, Nurse crop for harvesting purposes should be pratical for this Specie.



Rank Growth of Bocopa Monnsira, South Pond Area used very extensively by waterfowl for food and somewhat by muskrats



One of the pair of Otter that was collected and shipped to Mr. Borden, Boston Mass.



Random Shots of some of the Surf Fishermans
who come to Pea Island, for Recreation

Regional Director, Atlanta, Ga.

5/6/61

Refuge Manager, Pea Island

Narrative Report

Find transmitted herewith Narrative report covering all activities carried out upon the Pea Island Refuge for the Period, January 1, to April 30, 1961.

It will be found that the Information contained therein has been condensed down to pertinent facts rather than in unimportant lengthy details, Which it is thought is of useless value in such reports, and only serves to show a bulky and tiresome Narrative, That no one appreciates.

Louis B. Lewis