



BRANCH OF WILDLIFE REFUGES NARRATIVE REPORTS

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REFUGE OKEFENOKEE

PERIOD Sept - Dec 1958

OKEFENOCKEE NATIONAL WILDLIFE REFUGE

NARRATIVE REPORT

SEPTEMBER - DECEMBER - 1958.

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# OKEFENOKEE NATIONAL WILDLIFE REFUGE

## NARRATIVE REPORT

SEPTEMBER - DECEMBER  
1958.

### I. GENERAL.

#### A. Weather Conditions.

<u>Precipitation - 1958</u>		<u>Averages (1945-1957)</u>
September	1.93	6.79
October	2.06	4.26
November	1.48	1.70
December	1.62	2.92
	<u>7.09</u>	<u>15.67</u>

Precipitation for this period was less than half of the average amount for 1945-1957 during the same period. It was a little less than four inches below the total amount for the same period in 1957. The annual amount of rainfall for 1958 was 44.64 inches compared to 48.22 inches for the year 1957. The yearly average for the period 1945-1957 was 50.56.

<u>Temperatures - 1958</u>			
	<u>Maximum</u>	<u>Minimum</u>	<u>Averages</u>
			<u>Maximum</u>
			<u>Minimum</u>
September	96	53	85
October	94	40	78
November	87	35	77
December	79	26	65

#### Averages - (1945-1957)

	<u>Maximum</u>	<u>Minimum</u>
September	95	59
October	89	44
November	85	32
December	82	26

#### B. Water Conditions.

<u>Suwannee Canal</u>					
<u>1958</u>	<u>High</u>	<u>Low</u>	<u>1957</u>	<u>High</u>	<u>Low</u>
September	120.84	120.28		121.24	121.08
October	120.28	120.00		121.40	121.10
November	120.20	119.84		121.26	120.94
December	119.92	119.76		121.38	121.20

Suwannee Canal

1954 (Drouth Year)

	<u>High</u>	<u>Low</u>
September	118.16	117.92
October	118.04	117.70
November	117.76	117.56
December	117.90	117.64

Water levels in the Suwannee Canal at the end of this period were 1.38 feet lower than at the end of the same period in 1957. The reading at the end of this period was 119.88 feet above sea level. At the end of the year during the drouth (1954) the reading was 117.78. Over a 15-year period (1941-1956), the average water level on the canal was approximately 121 feet at the end of September-December period.

Billy's Lake19581957

	<u>High</u>	<u>Low</u>		<u>High</u>	<u>Low</u>
September	114.20	114.04		114.38	114.28
October	113.92	113.70		114.72	114.32
November	113.80	113.64		114.28	114.22
December	113.68	113.58		115.12	114.88

1954 (Drouth Year)

September	111.12	111.11
October	111.00	110.66
November	110.58	110.44
December	110.58	110.50

The water gauge reading on Billy's Lake at the end of this period was 113.68 feet. At the end of the same period during 1957 the reading was 114.88 feet.

2. Food and Cover.

There are sufficient food and cover distributed throughout the refuge for the amount of wildlife we have on the refuge.

## II. WILDLIFE.

### A. Migratory Birds.

1. Ducks. Mallards and other winter resident dabblers arrived late this year. It was not until November 4 that any appreciable numbers were observed. By middle December there was an estimated 17,000 of all species in the refuge. This is lower than last year's estimates. This difference may be attributed to low water levels and the unusually warm weather all during the period.

The principal species in order of abundance were mallards, wood ducks, black ducks, pintails, shovellers and green-winged teals.

### 2. Water and Marsh Birds.

Migrant sandhill cranes arrived late this year. All through October and November cranes were observed in about the usual numbers seen through the summer. The northern birds must have arrived along the first part of December. 54 were observed December 5. Since then they have appeared to be as numerous as last year. 216 were reported by three parties on the Christmas Bird Count held December 20.

Common egrets and little blue herons have been more numerous than last year. Great blue herons appear to be about the same.

Wood ibises and white ibises have been much more numerous this fall than last year, probably because the low water level resulted in shallowly flooded prairies which were more favorable for them. Probably because of the unusually warm fall and the favorable conditions, both of these species have stayed here so far this winter. On the Christmas bird count, December 20, eight wood ibises and 542 white ibises were reported. Both species were common along Big Water run December 23.

Common snipes have been very numerous in the prairies this year. The "soupy wet" condition has been favorable to them. December 2, 287 were counted in one mile of prairie between Suwannee Canal and Cooter Lake.

### B. Upland Game Birds.

#### 1. Bob-white Quail.

The quail population on refuge lands is small. There are few places where there is enough clearing to be favorable for them. Apparently there is little difference in this year's and last year's populations.

Sep-Dec  
1958

## 2. Wild Turkeys.

Turkeys appear to be holding their own. They have been observed on Cowhouse Island, just east of the swamp near Chesser Island, near Camp Cornelia, and at several points on the northwest side of the swamp.

## C. Big Game Animals.

Bears are probably holding their own. Observations have been made on all sides of the swamp: The Pocket, Billy's Lake, Honey Island, Chase Prairie, Pine Island, Camp Cornelia, north edge of swamp, and along the Florida line.

Deer and deer signs have been seen on all sides of the swamp.

## D. Fur Animals, Predators, etc.

Raccoons are still quite numerous.

Otters have not increased noticeably since the drouth. During 1958, observations have been made at Big Water, Durden Prairie and Suwannee Canal.

## E. Hawks, Eagles, etc.

There is no apparent difference in the populations of hawks, owls and crows. No bald eagles have been reported this year. A golden eagle was seen during the Christmas bird count.

## F. Other Birds.

A new species has been added to the refuge bird list. Two blue geese were observed in Chesser Prairie, December 20, by Raymond Johnson and Eugene Cypert.

## G. Fish.

Sport fishing has improved considerably during the past year. The warmouth bass and other bream were especially numerous. Largemouth bass have not yet regained their usual numbers.

## H. Reptiles.

The alligator population is higher. Small 'gators about three or four feet long are numerous which indicates that survival of young has been good since the drouth.

### III. REFUGE DEVELOPMENT AND MAINTENANCE.

#### A. Physical Development.

A new telephone line was constructed from Camp Cornelia to Folkston, a distance of about eleven miles. This line was built with treated poles and high strength steel wire and should give trouble-free service for several years.

Thirteen miles of boundary line was painted and signs installed where needed.

The park at Suwannee Canal was improved by filling in low places and cutting underbrush.

The electric wiring in Units 1 and 2 were reworked to comply with our safety code.

The refuge personnel made numerous checks on the timber operations to see if the permittee was complying with the conditions in the special use permit.

We also put several days on the perimeter road locating it and showing it to prospective bidders.

The entrance to Camp Cornelia Headquarters was improved by building a board fence at the entrance gate.

All buildings and equipment were kept neat and in a safe condition.

#### B. Plantings.

About 80 acres on Soldier Camp Island was planted with treated longleaf pine seed and 20 acres was planted with slash pine seed in December.

#### C. Collections and Receipts.

##### 1. Seed or other Propagules.

586 pounds of dewinged longleaf pine seed and 126 pounds of slash pine seed were received from the U. S. Forest Service nursery in Pollock, Louisiana.

##### 2. Specimens.

Two brown-headed nuthatches and one cardinal were collected for the use of Frederick V. Hebard to determine sub-specific status of the Okefenokee birds of these species. Mr. Hebard is working up a paper of the Okefenokee birds. The specimens were collected on private land.



#### D. Control of Vegetation.

Treatments for the eradication of the water hyacinth in the Okefenokee watershed appears to **have** been getting results. In the past ten years, nine infestations have been found and treated. It now appears that eight of these infestations have been successfully eradicated.

✓  
Glossed over!

During the past two summers, only spot treatments have been used on the infestations at Argyle, Homerville, Manor and Ribbon's Pond. As it appears at present, only the infestation at Homerville will require further treatment.

Since only spot treatment was used no estimate of the rate of application was made. - *That's not all that's missing!*

#### E. Fires.

There were no fires on the refuge in 1958.

### IV. RESOURCE MANAGEMENT.

#### A. Timber Removal.

Approximately 665,000 board feet of turpentine faced trees on Cowhouse Island was sold to the high bidder, the South Georgia Timber Company, for \$17,050.00. Removal was about 80% completed by the end of the period.

All pulpwood above the Suwannee River sill below the 115 feet contour was sold to the St. Regis Paper Company at the rate of \$4.00 per cord. By the end of the period 3822.45 cords had been removed.

All pulpwood on the right of way where the proposed perimeter road crosses the refuge portion of Cowhouse Island was sold to S. V. Gowen and J. V. Gowen at the rate of \$10.00 per unit, 68.97 units were removed.

40.83 units of diseased trees on Fiddler's Island were sold to Owen Ratliff at the rate of \$5.00 per unit.

The Hercules Powder Company has removed 6,826.10 tons of pine stumps from Soldier Camp Island and the Pocket this period at the rate of 15¢ per ton.

#### F. Concessions.

The Okefenokee Swamp Park has a special permit to take sightseers onto the refuge from the north entrance. They pay a fee of \$25.00 annually for this permit.

The State of Georgia has a permit to operate a concession and rent boats at Camp Stephen Foster, near Fargo, Georgia. There is no charge for this privilege.

During the past year O. E. Raynor has had a permit to rent boats and motors and all items needed by fishermen and sightseers at the Camp Cornelia boat landing. For this concession he has paid \$100.00 per year plus 3% of gross income.

## V. FIELD INVESTIGATION AND APPLIED RESEARCH.

### 1. Plant Succession Studies.

The plant cover in the severe burns at Soldier Camp Island and north of Suwannee Canal were remapped again this fall for the purpose of determining changes which may have taken place in the vegetation in the past two years. The cover was mapped and designated by species and the maps were used to determine the percentage of cover.

As would be expected, regrowth of woody species which were killed back by the fires of 1954-55 is occupying the area.

It is also interesting that paintroot (*Gyrotheca tinctoria*), an important crane and duck food, which was prominent on these plots in 1956 and 1957, is being replaced by other species, principally by a sedge (*Carex*, sp.)

Details of this study will be submitted in the Biological Report.

In early February, 1958, a freshly risen battery was found in Sapling Prairie. At that time it was raw peat. It was photographed at the time. In September the species which had occupied it were recorded. For comparison, the vegetation on a battery which rose in 1955 was also recorded. The details of this study will be given separately in the biologist's report.

### 2. Peat Deposition Studies.

It has been commonly believed that the lakes in the Okefenokee prairies were the result of burned out pockets in the peat rather than of depressions in the underlying floor of the swamp. In order to gain information which would have a bearing upon this problem, a series of soundings were run across three typical prairie lakes, Cooter, Monkey and Buzzard's Roost. There was no depression in the underlying sand floor at any of the lakes. In short, the lakes are holes in the peat rather than holes in the ground which gives credence to the theory that the lakes are the result of burns. Details of this study will be reported separately.

### 3. Wildlife Inventory.

Wildlife, especially waterfowl, water birds, hawks and alligators have been tallied at about two week intervals along two routes, one extending from Camp Cornelia to Gannett Lake; the other from Jones Island to the upper end of Big Water. The results of these trips are reported separately.

The information gotten on these trips and otherwise on the abundance of the various species of birds is being reported regularly to "Audubon Field Notes."

## VI. PUBLIC RELATIONS.

### A. Recreational Uses.

Approximately 20,000 people visited the refuge during this period. Most of these were tourists. However, the use made of the Camp Cornelia and Camp Stephen Foster entrances by fishermen was several fold larger than last year.

### B. Refuge Visitors.

- 9/10/58 - Dan Shuptrine, Georgia Game and Fish Commission. Meeting of Georgia Sportsmen Federation on refuge.
- 9/25-26/58 - Messrs. Seaman and Cherry of U.S.D.A., Soil Conservation Service, and Mr. Myers of the Florida Game and Fish Commission. Water hyacinth control.
- 10/6/58 - Dean Tom Cordell, Abraham Baldwin College. Program for farmers short course in wildlife management.
- 10/20-23/58 - Carl Fermanich, Assistant Regional Refuge Supervisor. Refuge concessions.
- 10/29/58 - Bill Hammock and Kenneth Rogers, feature writer and photographer, Atlanta Journal-Constitution. An article on the construction of the sill.
- 11/19/58 - Richard Dittman, Regional Engineer. Sill and perimeter road.
- 11/24/58 - George Wall and Jimmy Vessels, St. Regis Paper Company. Pulpwood purchase.
- 12/17/58 - Mr. and Mrs. Torsten Malmberg, Lund University, Sweden. Observation of birds on refuge.
- 12/20/58 - Ivan Tomkins, Savannah, Ga. and Sam Grimes, Jacksonville, Florida. Christmas Bird Count.
- 12/22-23/58 - Dr. and Mrs. T. T. Bannister, Botany Department, Rochester University, N. Y.  
Dr. and Mrs. Stanley Ainsworth, Botany Dept., University of Illinois  
Mrs. and Mrs. Andrew Ammon, Michigan Department of Conservation.  
Visit into swamp.
- 12/25-to  
12/29/58 - Messrs. Carl Buessow, Robert Simonson, Robert Fuessle, Bart Trexler, John Stair and Pete Van Steenberg. Hackley School, Tarryton, N. Y.  
Visit to swamp.

- 12/28/58 - Dr. and Mrs. Gustav Swanson, Cornell University.  
Visit to swamp.
- 12/30/58 - Colonel Charles H. S. Russell, Executive Director,  
Georgia Sportsmen Federation. Condition of refuge  
roads.

### C. Refuge Participation.

Three members of the refuge personnel, Manager Joe Morton, Clerk-Stenographer Margaret B. Barrett and Biologist Cypert, participated in monthly meetings and monthly field trips of the Okefenokee Bird Club.

September 14, the refuge entertained the Georgia Sportsmen's Federation and their families at Camp Stephen Foster. The group enjoyed a picnic, scenic trips and fishing. Messrs. Morton, Hall, Cone and Cypert participated.

September 17, Mr. Cypert gave a talk, illustrated with projected color slides, on the plants of the Okefenokee Swamp to the Pine Cone Garden Club.

November 6, Mr Cypert participated in the Farmers Short Course in Wildlife Management at Abraham Baldwin College, Tifton, Georgia.

December 20, A Christmas bird count was organized and held on Okefenokee Refuge. Eleven participants including members of the Okefenokee Bird Club, Waycross, Georgia, and bird watchers from Savannah, Georgia and Jacksonville, Florida participated. A copy of the results of this count is included herewith.

A feature article entitled "They are Saving the Okefenokee", by William Hammock, which appeared in the Magazine Section of the Atlanta Journal-Constitution, November 16, explained the reasons of the construction of the sill on the Suwannee River.

The following sketches by Mr. Cypert were submitted to the Waycross Journal-Herald, Charlton County Herald and Clinch County News:

American Bittern makes Appearance in the Swamp - September 25

New Refuge Employee Meets Mr. Alligator - October 31

Turkey is Part of American Tradition - November 26

Okefenokee Bird Club Holds Annual Christmas Count - December 27

The following account appeared in the Waycross Journal-Herald and were picked up by other Georgia papers:

Contract Let for Fire Prevention Units - October 4.

Swamp Perimeter Road Contract is Awarded - December 3.

Okefenokee Area Road to Be Built - December 5.

#### VII. OTHER ITEMS.

##### A. Items of Interest.

On September 19, Charles F. Noble, Assistant Refuge Manager, was transferred from this refuge to Pea Island Refuge to assume duties as refuge manager there.

On October 7, Myer L. Carmichael entered on duty at the Okefenokee Refuge as Highway Construction Engineer, GS-11. He is resident engineer in connection with the construction of the perimeter road around the swamp and the sill and two spillways on the west side of the swamp.

On October 20, James H. Roberts entered on duty at Okefenokee as Forestry Aid (General), GS-4.

On November 3, George F. Ludvigsen entered on duty at Okefenokee Refuge as Construction Representative (Roadways), GS-9. Mr. Ludvigsen's duties are in connection with the construction of the sill on the west side of the refuge.

On December 15, John A. Dankel, Jr. entered on duty at Okefenokee as Engineering Aid (Survey, GS-6. His duties are in connection with the construction of the perimeter road around the swamp.

Respectfully submitted,

*Joe Morton*  
Joe Morton  
Refuge Manager

Date: January 14, 1959.

Approved: *Samuel A. Quinn*  
Regional Refuge Supervisor

JAN 19 1959

## CHRISTMAS BIRD COUNT

Okefenokee National Wildlife Refuge, Georgia (all points within a 15-mile diameter circle, centering at a point on Trail Ridge about four miles north of Camp Cornelia, extending northward to Durden Landing, eastward to the St. Marys River and including the town of Folkston, southward to include Chesser Island and Chesser Prairie, and westward to the forks of Suwannee Canal and including Chase Prairie. Water courses 10%, swamp prairies, 30%, open fields and field borders 25%, pine barrens, 15%, urban 10%, deciduous forest river bottom 10%.

December 20, 1958; 7:00 A.M. to 5:00 P.M. Partly cloudy; temperature 39° to 71°; wind 0 to 10 m.p.h. Water level in Okefenokee Swamp low. Camp Cornelia gage reading 119.86. Upland dry. 11 observers in 5 parties. Total party-hours 42 (32 on foot, 2 by car and 8 by boat); total party-miles, 93 (21 on foot, 60 by car, 12 by boat).

Pied-billed Grebe, 1  
Anhinga, 24  
Great Blue Heron, 14  
Common Egret, 89  
Yellow-crowned Night Heron, 12  
American Bittern, 7  
Wood Ibis, 8  
White Ibis, 542  
Blue Goose, 2  
Mallard, 500  
Black Duck, 71  
Pintail, 33  
Blue-winged Teal, 2  
Green-winged Teal, 5  
Wood Duck, 22  
Bufflehead, 1  
Hooded Merganser, 21  
Turkey Vulture, 75  
Black Vulture, 20  
Sharp-shinned Hawk, 1  
Cooper's Hawk, 3  
Red-tailed Hawk, 1  
Red-shouldered Hawk, 23  
Golden Eagle, 1  
Marsh Hawk, 3  
Sparrow Hawk, 8  
Bobwhite, 16  
Sandhill Crane, 216  
American Coot, 5  
Killdeer, 137  
American Woodcock, 1  
Common Snipe, 175  
Mourning Dove, 24  
Ground Dove, 3  
Barred Owl, 2  
Belted Kingfisher, 15

Yellow-shafted Flicker, 19  
Pileated Woodpecker, 14  
Red-bellied Woodpecker, 23  
Red-headed Woodpecker  
Yellow-billed Sapsucker, 4  
Hairy Woodpecker, 2  
Downy Woodpecker, 4  
Red-cockaded Woodpecker, 3  
Eastern Phoebe, 36  
Tree Swallow, 13  
Blue Jay, 25  
Common Crow, 17  
Tufted Titmouse, 3  
Brown-headed Nuthatch, 17  
House Wren, 3  
Carolina Wren, 13  
Short-billed Marsh Wren, 2  
Mockingbird, 24  
Catbird, 10  
Robin, 5000 (Est.)  
Hermit Thrush, 2  
Eastern Bluebird, 19  
Ruby-crowned Kinglet, 4  
Water Pipit, 53  
Cedar Waxwing, 31  
Loggerhead Shrike, 7  
Starling, 12  
Myrtle Warbler, 90  
Pine Warbler, 3  
Yellowthroat, 3  
Eastern Meadowlark, 45  
Red-winged Blackbird (1000 est.)  
Common Grackle, 5  
Cardinal, 19  
Purple Finch, 4  
American Goldfinch, 100

Rufous-sided Towhee, 20  
Savannah Sparrow, 1  
Henslow's Sparrow, 2  
Vesper Sparrow, 17  
Bachman's Sparrow, 1  
Chipping Sparrow, 51  
Field Sparrow, 8  
White-throated Sparrow, 23  
Swamp Sparrow, 10  
Song Sparrow, 5

Total species - 82 - About 8851 individuals.

Participants: Eugene Cypert, Mary Louise Cypert, Ronald Derringer,  
Samuel A. Grimes, Mrs. Lois Groszmann, Raymond Johnson,  
Roy Moore, Jane Park, Margaret Scott, Ivan Tomkins,  
Jane Whiteman, Okefenokee Bird Club

Blue Goose - These were observed by Cypert and Johnson in Chesser Prairie. Identification was certain. This appears to be a new record for Okafenokee Swamp.

Wood Ibis - Unusual here this time of year. These were observed by three parties: One party reported 6, two parties reported one each.

White Ibis - Unusual this time of year, they are very numerous this year.

Henslow's Sparrow - Observed by Grimes.



PUBLIC USE - C. Y. 1958

Please supply figures, or your best estimates for the following categories when applicable to your refuge:

A. Okefenokee National Wildlife Refuge.

B. Estimated total use of all types 113,000 visitor-days.

1. Hunting use (for those refuges having public or regulated hunting.)

Estimated visitor-days None.

2. Fishing use.

Estimated visitor-days 17,000

3. Miscellaneous use (lump such uses as picnicking, swimming, wildlife observation, birdwatching, as well as those on the area for business or official use, including economic uses such as farming or trapping.)

Estimated visitor-days 96,000

C. Remarks.

January 8, 1959

Date

Joe Morton  
Refuge Manager

Joe Morton



Right of way clearing for construction of sill  
on Suwannee River.



Removing peat from right of way for con-  
struction of sill.



Average type of swamp to be cleared for  
sill.



Typical swamp in Suwannee River bottom  
where sill will be constructed.



Sill right of way cleared and grubbed.



New shelter at Coffee Bay.



Camp Cornelia Landing was busier this year than at any time since before the drouth.



Two members of Georgia Sportsman's Federation proudly display their catch in Billy's Lake.



WATERFOWL

REFUGE Okefenokee

MONTHS OF September TO December, 1958

(1) Species	(2) Weeks of reporting period									
	1	2	3	4	5	6	7	8	9	10
<u>Swans:</u>										
Whistling										
Trumpeter										
<u>Geese:</u>										
Canada										
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other										
<u>Ducks:</u>										
Mallard									2,000	2,000
Black										
Gadwall										
Baldpate										
Pintail										
Green-winged teal										
Blue-winged teal						550				
Cinnamon teal						20				
Shoveler								550		
Wood					2000	2700	2000	2000	3,000	3,000
Redhead										
Ring-necked										
Canvasback										
Scaup										
Goldeneye										
Bufflehead										
Ruddy										
Other										
<u>Coot:</u>										

WATERFOWL  
 (Continuation Sheet)

REFUGE Okefenokee MONTHS OF September TO December, 1958

(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											
Trumpeter											
Geese:											
Canada											
Cackling											
Brant											
White-fronted											
Snow											
Blue											
Other											
Ducks:											
Mallard	10,000	10,000	4,700	4,700	11,400	11,400	3,400	3,400	441,000		
Black					2,000	2,100			28,700		
Gadwall											
Baldpate						1,000			7,000		
Pintail						150			1,050		
Green-winged teal									3,850		
Blue-winged teal											
Cinnamon teal											
Shoveler	2,000	2,000	2,400	2,400	2,400	2,400	3,300	3,300	239,400		
Wood											
Redhead											
Ring-necked											
Canvasback											
Scaup											
Goldeneye											
Bufflehead											
Ruddy											
Other											
Coot:						150			1,050		
					(over)						

	(5) Total Days Use	(6) Peak Number	(7) Total Production	SUMMARY
Swans	:	:	:	Principal feeding areas
Geese	:	:	:	
Ducks	721,000	:	:	Principal nesting areas
Coots	:	:	:	
				Reported by

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 OkefenokeeMonths of September to December 1958...

(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>										
Common Egret										1000
Great Blue Heron	Resident		33	10/8/58						300
Little Blue Heron	Resident		35	9/9/58						500
Black-crowned Night Heron	Resident		11	11/18/58						100
American Bittern	1	9/9/58	7	12/20/58	Winter Resident					?
Wood Ibis	Resident all fall		250	10/8/58	Still here					1000
White Ibis	" " "		500	12/20/58	Still here					2000
Sandhill Crane	Resident		191	12/20/58	" "					700
Anhinga	Resident		26	12/5/58	" "					200
Green Heron	Summer Resident		4	9/23/58	1	12/2/58				200
II. <u>Shorebirds, Gulls and Terns:</u>										
Common Snipe	10	10/8/58	287	12/2/58	Still here					10,000

(over)

Reported by Eugene Cyport  
Wildlife Management Biologist

(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 Okefenokee Months of September to December, 1958

(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.
Bob-white Quail	18,000 acres pine woods	30 360							600	
Wild Turkey	18,000 acres pine woods								50	



## 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.

3-1753  
Form NR-3  
(June 1945)

BIG GAME

Refuge Okefenokee Calendar Year 1958

(1) Species	(2) Density	(3) Young Produced	(4) Removals				(5) Losses			(6) Introductions	(7) Estimated Total Refuge Population		(8) Sex Ratio
			Hunting	For Re- stocking	Sold	For Research	Predation	Disease	Winter Loss		At period of Greatest use	As of Dec. 31	
Common Name	Cover types, total Acreage of Habitat	Number								Number	Source		
Black Bear	Pine woods, swamps, scrub brush, 250,000 acres										150	150	
White-tailed Deer	Pine woods and brushland, 30,000 acres										500	500	

Remarks:

Reported by Eugene Cypert  
Wildlife Management Biologist

# INSTRUCTIONS

## Form NR-3 - BIG GAME

- (1) SPECIES: Use correct common name; i.e., Mule deer, black-tailed deer, white-tailed deer. It is unnecessary to indicate sub-species such as northern or Louisiana white-tailed deer.
- (2) DENSITY: 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 total number of young produced on refuge.
- (4) REMOVALS: Indicate total number in each category removed during the year.
- (5) LOSSES: On the basis of known records or reliable estimates indicate total losses in each category during the year.
- (6) INTRODUCTIONS: Indicate the number and refuge or agency from which stock was secured.
- (7) TOTAL REFUGE POPULATION: Give the estimated population of each species on the refuge at period of its greatest abundance and also as of Dec. 31.
- (8) SEX RATIO: Indicate the percentage of males and females of each species as determined from field observations or through removals.

116000



DISEASE

Refuge Okefenokee Year 19 58

Botulism

Period of outbreak \_\_\_\_\_

Period of heaviest losses No disease evident.

Losses:

	Actual Count	Estimated
(a) Waterfowl	_____	_____
(b) Shorebirds	_____	_____
(c) Other	_____	_____

Number Hospitalized	No. Recovered	% Recovered
(a) Waterfowl	_____	_____
(b) Shorebirds	_____	_____
(c) Other	_____	_____

Areas affected (location and approximate acreage) \_\_\_\_\_

Water conditions (average depth of water in sickness areas, reflooding of exposed flats, etc.)

Condition of vegetation and invertebrate life \_\_\_\_\_

Remarks \_\_\_\_\_

Lead Poisoning or other Disease

Kind of disease \_\_\_\_\_

Species affected \_\_\_\_\_

Number Affected Species	Actual Count	Estimated
_____	_____	_____
_____	_____	_____
_____	_____	_____

Number Recovered \_\_\_\_\_

Number lost \_\_\_\_\_

Source of infection \_\_\_\_\_

Water conditions \_\_\_\_\_

Food conditions \_\_\_\_\_

Remarks \_\_\_\_\_

Refuge

Ok ef enokee

Year 19 <sup>58</sup>

Species	Relative Abundance	Sport Fishing		Commercial Fishing		Restocking		Number removed for Restocking
		Man days Fishing	Number Taken	No. of Permits	Pounds Taken	Number Stocked	Area Stocked	
Largemouth Bass		17,000	1,000					
Largemouth Bass			170,000					
Bluegills and other Bream			40,000					
Spotfin			10,000					

REMARKS:



3-1757  
Form NR-7  
(April 1946)

PLANTINGS  
(Marsh - Aquatic - Upland)

Refuge.....Okefenokee.....Year 194~~X~~ 58

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
Pinus palustris	Soldier Camp Is.	5 lb. per A.	80A.		12/29/58	?		
Pinus elliottii	"	1.5 lb. per A.	20 A.		12/31/58	?		

TOTAL ACREAGE PLANTED:

Marsh and aquatic.....  
Hedgerows, cover patches.....  
Food strips, food patches.....  
Forest plantings.....100 Acres

3-1758  
Form NR-8  
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Okefenokee County Ware, Charlton and Clinch State Georgia

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested		Unharvested				
			Acres	Bu./Tons	Acres	Bu./Tons			
None.									
								Fallow Ag. Land	

No. of Permittees: Agricultural Operations \_\_\_\_\_ Haying Operations \_\_\_\_\_ Grazing Operations \_\_\_\_\_

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
				1. Cattle				
				2. Other				
				1. Total Refuge Acreage Under Cultivation				
Hay - Wild				2. Acreage Cultivated as Service Operation				

DIRECTIONS FOR PREPARING FORM NR-8  
CULTIVATED CROPS - HAYING - GRAZING

Report Form NR-8 should be prepared on a calendar-year basis for all crops which were planted during the calendar year and for haying and grazing operations carried on during the same period.

Separate reports shall be furnished for Refuge lands in each county when a refuge is located in more than one county or State.

Cultivated Crops Grown - List all crops planted, grown and harvested on the refuge during the reporting period regardless of purpose. Crops in kind which have been planted by more than one permittee or this Service shall be combined for reporting purposes.

Permittee's Share - Only the number of acres utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. Report all crops harvested in bushels or fractions thereof except such crops as silage, watermelons, cotton, tobacco, and hay, which should be reported in tons or fractions thereof.

Government's Share or Return - Harvested - Show the acreage and number of bushels harvested for the Government of crops produced by permittees or refuge personnel. Unharvested - Show the exact acreage and the estimated number of bushels of grain available for wildlife. If grazing is made available to waterfowl through the planting of grain, cover, green manure, grazing or hay crops, estimate the tonnage of green food produced or utilized and report under Bushels Unharvested column.

Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops - Specify the acreage, kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation - Report total land area devoted to agricultural purposes during the year.

# REFUGE GRAIN REPORT

Refuge Okefenokee

Months of September through December, 1958

(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
None.	None	None	None					None			

(8) Indicate shipping or collection points \_\_\_\_\_

(9) Grain is stored at \_\_\_\_\_

(10) Remarks \_\_\_\_\_

\*See instructions on back.

## 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.



COLLECTIONS AND RECEIPTS OF PLANTING STOCK  
(Seeds, rootstocks, trees, shrubs)

Refuge Okefenokee Year 194<sup>X58</sup>

Species	Collections				Receipts		Total Amounts on Hand	Amount Surplus
	Amount	Date or Period or Collection	Method	Unit Cost	Amount	Source		
Pinus palustris					586	U.S.Forest Service	186	0
Pinus elliottii					126	U. S. Forest Service	96	0

TIMBER REMOVAL

Refuge Okefenokee

Year 1958

Permittee	Permit No.	Unit or Location	Acreage	No. of Units Expressed in B. F., ties, etc.	Rate of Charge	Total Income	Reservations and/or Diameter Limits	Species Cut
South Ga. Timber Co.	23273	Cowhouse Is.	1200	?	Bid	\$14000.	Faced trees only	Longleaf Pine Slash "
Heroules Powder Co.	14-19-004-410	Pocket	1700	6,826.10 Tons	.15	1023.92		Pine Stumps
St. Regis Paper Co.	31685	Pocket	1700	3822.45 Cords	4.00	15,289.80	Everything of pulpwood size below 115' contour	Pine (Pulpwood)
S. V. Gowen and J. V. Gowen	31689	Cowhouse Is.	240	68.97 units	10.00	689.70	Everything on right of way	Pine (Pulpwood)
Owen Ratliff	22537	Fiddler's Island	100	40.83 "	5.00	204.15	Marked trees	Pine (Pulpwood)

Total acreage cut over..... Total income \$31,207.57.....

No. of units removed B. F. .... Method of slash disposal.....

Cords.....

Ties.....