

PEA ISLAND NATIONAL WILDLIFE REFUGE

Narrative Report

Fiscal Year 1975
(July 1974 to June 1975)

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I. GENERAL

A. Weather

Total rainfall for FY '75 came to 48.9 inches or 2.4 inches below normal. The driest month this year was November with only 1.49 inches being recorded and the wettest month being August with 8.05 inches.

No bad storms were encountered this year; however, high winds did hit the Outer Banks several times. Highest winds reached 40 knots on April 3, but did little damage.

B. Habitat Condition - Food and Cover

A total of approximately 50 acres of annual ryegrass were planted on the refuge during September. A ratio of 400 pounds of 10-10-10 fertilizer to 50 pounds of annual ryegrass seed was used. Decreased acreages from FY 1974 was due mainly to 2 factors, the high cost of seed and fertilizer and the absence of our maintenance man, who was in the hospital for treatment of several ailments. Because of this, only New Field was planted this year. However, the use that this area got was considered good as large numbers of Canada and greater snow geese were frequently seen feeding in this area.

Production of natural foods on the refuge this year was fair with good waterfowl foods dropping 11% and only comprising 13.3% of all the plants found. However, fair food plants increased 22% to 78% and non-food plants dropped nearly 11%, as only 8.7% of all plants found.

The major plant found along the transect line this year was muskgrass, a fair waterfowl food. This made up over 60% of all the plant life found. Next in abundance was glasswort, another fair waterfowl food, followed by salt meadow cordgrass and dwarf spikerush. These five plants made up nearly 84% of all plant life found on the transect lines.

II. WILDLIFE

A. Migratory Birds

1. Waterfowl

Total use days for all waterfowl was down from the previous year. Ducks were the only group that use did not drop. Use day data are as follows:

| Species | Use Days | | | |
|---------|-----------|-----------|-----------|-----------|
| | 1972 | 1973 | 1974 | 1975 |
| Swans | 29,820 | 34,356 | 28,260 | 24,724 |
| Geese | 1,026,311 | 954,737 | 997,980 | 764,939 |
| Ducks | 1,690,805 | 1,797,593 | 1,601,370 | 1,691,032 |
| Coots | 249,529 | 247,247 | 216,150 | 166,075 |
| Total | 2,996,465 | 3,033,933 | 2,843,760 | 2,646,770 |

Total use days for FY '75 dropped again this year by 196,990. The biggest percentage of this drop could be attributed to the drop in use days of the greater snow geese. Snow goose use days was down by 40.9%, the lowest in 10 years. Coots experienced the third consecutive year of decrease to their lowest use and peak since 1968-69.

Duck use days rose by 18.3% with peak numbers increasing by 12,000 birds. A peak of nearly 29,000 birds was highest duck peak on Pea Island in the last 10 years. Pintail was the most important specie this year with 335,461 use days with a peak population of 4,555 birds. Red-breasted merganser had the highest peak population of any ducks, 12,500 birds. This is the highest population for this specie for the refuge. Other species showing significant increases were widgeon, gadwall, shoveler, and ruddy duck.

Waterfowl breeding population for FY '75 was estimated at 160 individuals while in FY '74 it was 300. Production of waterfowl was down from 370 individuals to 262 individuals. Of these 262 individuals, 140 were black ducks and 122 were gadwalls.

2. Wading Birds, Gulls, Terns, and Shorebirds

The wading bird rookery this year consisted of only one small island, 4 acres, in North Pond. Estimated production for FY '75 was 530 individuals. This can be broken down into 110 black-crowned night herons, 150 Louisiana herons, 110 glossy ibises, 55 snowy egrets, 55 great egrets, 36 little blue herons, 7 little green herons, and 7 cattle egrets.

Nesting willets were numerous with production estimated at 175 individuals. Ten oystercatchers nested on the refuge this year eventually producing 10 young.

Great black-back, herring, ring-billed, and laughing gulls were abundant at times.

Marbled godwits and American avocets were commonly seen in North Pond and Salt Flats area during the fall and winter.

Least terns nested successfully on Pea Island Refuge this year. Four established colonies were found on the refuge beaches this year and contained an estimated 125 pairs of terns that fledged an estimated 80 young. The largest colony with about 50 pairs, was located at mile post 9. These birds nested in an area covered with broken up asphalt and were hard to census. The other colonies were located on the open beach from mile post 13.5 to mile post 15.5. The smallest colony contained 10 pairs.

Problems were incurred; however, with people and vehicles traveling through the colonies. Because of this, several citations for trespassing in a closed area had to be issued. Also, predation by crows and feral cats was suspected this year.

Eight black skimmers appeared to be attempting to nest on the refuge at mile post 14.5 this year, when disturbance by vehicles in this area probably caused them to abandon this nesting area.

B. Upland Game Birds

Mourning doves and ring-necked pheasants are the only upland game birds found on the refuge. Mourning dove population jumped from about 30 individuals in FY '74 to an estimated peak population of some 300 individuals in FY '75. These birds stayed only a few days, utilizing New Field for food and then continuing south on their migration.

Ring-necked pheasant population was estimated at 575 individuals and it's believed that as many as 200 individuals were produced. Moderate numbers of these birds were killed by cars as they passed through the refuge on N. C. highway 12. Also, some predation by feral cats is believed to have occurred.

C. Big Game Animals

None occur on the refuge.

D. Fur Animals, Predators, Rodents and Other Mammals

Nutria and muskrats were numerous on the refuge this year. They continue to do some damage to our dikes and bulkheads. Large numbers of muskrats and some nutria were killed by cars as they attempted to cross the highway.

Several otters were seen again this year utilizing the refuge's impoundments as fishing holes.

Feral cat numbers were high and have become a threat to some wildlife, especially pheasant and young ducks. Numbers of cats are reduced at every opportunity.

E. Hawks, Eagles, Owls and Crows

This year, as last, the American kestrel remained the most abundant raptorial on the refuge. Marsh hawks came in second with sharp-shinned hawks and barn owls tying for third. Only 8 peregrine falcons were seen this year on the refuge. Other raptors seen included red-tailed, red-shouldered, rough-legged hawks and merlins.

Five ospreys were seen fishing on the refuge this year. No nesting occurs on the refuge.

One snowy owl was seen and photographed by Refuge Manager, Williamson. This bird drew many interested birders to the area.

Other owls seen this year included the short-eared and saw-whet owls.

Large numbers of fish crows were again present on the refuge this year. Some problems with them getting into and scattering garbage occurred.

F. Other Birds

The annual Christmas Bird Count was held on December 30, 1974 with some 106 species of birds found on the refuge. Several of the unusual birds seen were; a common eider, a rough-legged hawk and a long-billed curlew.

Several other unusual birds were seen during FY '75. These included a swallow-tailed kite, a white-tailed tropic bird, and a great cormorant.

G. Fish

Fishing was good this year with large numbers of big blue fish being caught off the refuge's beaches around Thanksgiving.

H. Reptiles

Snapping turtles, yellow-bellied sliders and diamondback terrapins were commonly seen both in the Sound and in the refuge ponds.

Water snakes, glass lizards, and large numbers of black racers were seen on the refuge this year.

Eleven Atlantic loggerhead sea turtle crawls were found on the refuge beaches this year. Of these, only 2 were true crawls, a decline of 60% over last years total of 5. These 2 nests contained 237 eggs and had to be moved to a protected enclosure to protect them from beach traffic and high water. Approximately 64 days were required for the eggs to hatch and the young turtles to emerge. One of these two nests containing 139 eggs was totally infertile. The other nest with 98 eggs produced 92 young turtles. These were released into the ocean with the remaining eggs being infertile.

I. Diseases

Very few sick or dead birds were noted on the refuge this year. There was a large number of sick and/or dead loons washed up on the beaches. This situation was discussed with East Coast Biologist, Florschutz. It was agreed that we would wait and see approach. The number of birds decreased; therefore, no determination as to cause of death was made.

III. REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Development

Replaced boundary signs as needed and posted some new regulatory signs.

Minor maintenance and repairs to vehicles, pumps, and farm equipment has kept us busy much of the year.

Parking lots on the refuge had parking stripes painted on them this year.

The outside of the residence and office buildings were painted.

Approximately 75 old Coast Guard telephone poles, located on Pea Island, were removed by Mattamuskeet Refuge personnel. These were later used in constructing a bridge on Mattamuskeet Refuge.

The installation of Pea Island's new radio tower was completed early this year.

Two new information plaques were put up on one of our North Pond platforms.

The roof on our 13,000 gallon water storage tank for the refuge headquarters water system was replaced.

B. Planting

1. Aquatics

None.

2. Trees and Shrubs

None.

3. Upland Herbaceous Plants

None.

4. Cultivated Crops

Approximately 50 acres of annual ryegrass was planted for green browse this year in New Field area.

C. Collections and Receipts

Approximately one hundred and twenty-five bushels of shelled corn was received from Pungo National Wildlife Refuge this year. This corn was used in the refuge banding program.

D. Control of Vegetation

Dike roads were mowed several times during the summer. This allowed visitors to walk around the impoundments and prevented the encroachment of undesirable shrubs such as waxmyrtle, bayberry and groundsel bush on dikes.

No herbicides were used to control undesirable plants this year.

E. Planned Burning

A controlled burn was accomplished on 185 acres. This burn was located on the south end of the refuge. Good results were obtained on most of the area.

F. Fires

Two accidental fires occurred on the refuge this year. One occurred at the public use area on the north end of the refuge and the other just south of the refuge office. Both fires were believed to have been caused by an accumulation of salt on electrical lines, which in turn caused arcing that ignited the dry grass around the poles. Approximate acreage burned was 25 acres with no damage being incurred. Park Service responded to both fires; however, since the fires couldn't go anywhere they were left to burn themselves out.

IV. RESOURCES MANAGEMENT

A. Grazing

None on refuge.

B. Haying

None on refuge.

C. Fur Harvest

None on refuge.

D. Timber Removal

None on refuge.

E. Commercial Fishing

All fishing is in State controlled Sound waters and along the beach. A permit is required from the National Park Service to commercially fish on the beach.

F. Other Uses

None.

V. FIELD INVESTIGATION OR APPLIED RESEARCH

Pea Island Refuge personnel picked up 9 Atlantic loggerhead sea turtle nests from Cape Romain National Wildlife Refuge again this year in connection with a project to extend their breeding range north along the Atlantic coast. These 9 nests contained a total of 875 eggs and were placed in a protective enclosure and surrounded individually in a wire cage. These nests were checked two or three times daily and all emerging hatchlings were released into the ocean. Of the 875 eggs transferred, 528 young or 60.3% were released. Of the remainder, 232 eggs contained dead embryos, 24 were found dead in the nest and 91 were infertile.

On September 11, a census of the refuge's ring-necked pheasant population was conducted by the N. C. Wildlife Resource Commission and refuge personnel. The census areas consisted of 5 drive count routes that typified each type of habitat present on the refuge. A total of 19 pheasants were seen and with this, a population of 834 birds or .1872 pheasants per acre was obtained by State Biologists. However, refuge personnel believe that some of the habitat used to get this figure is not suitable for pheasants. We; therefore, estimate our population at about 575 individuals.

Two field studies conducted by Conservation Aid, Craig Leggere were completed the first of this year. They were entitled, "Least Tern Nesting Colonies" and "Gadwall Brood Study".

A study entitled, "Population Study of the Peregrine Falcon on Carolina's Coastal Refuges" was initiated this year on Pea Island. Purpose of this study was to document sightings of peregrine falcons in this area and gather other pertinent information on this endangered specie. A total of 8 peregrine falcons were seen on the refuge with 7 more being reported by interested bird watchers off the refuge. Additional information can be found in the Wildlife Management Study Report by Biologist, Florschutz's report dated May 30, 1975.

Dr. Lytton J. Musselman of Old Dominion University was issued permit # 4-74-10 to study Agatiris maritima, a parasitic marsh plant found in Pea Island's marshes.

NOAA, National Ocean Survey, was issued a permit to establish survey targets and photographic panels on Pea Island National Wildlife Refuge. These were used to acquire data to update existing nautical charts and to provide a data base for a Corp of Engineers model of Oregon Inlet for studying sand movement in the inlet area.

Waterfowl banding on Pea Island was primarily for black and gadwall ducks. Other species were banded when trapped.

This year banding accomplishments were as follows:

| | |
|-------------|----|
| Pre-season | |
| Black Duck | 7 |
| Gadwall | 46 |
| Post-season | |
| Mallard | 2 |
| Black Duck | 21 |
| Spring | |
| Black Duck | 8 |

Pre-season banding is done in August and is primarily to supply information on locally nesting gadwall.

VI. PUBLIC RECREATION

A. Recreational Uses

Visitation to the refuge was up in FY '75 compared with FY '74. Total visits was 1,177,799 and 1,047,638 respectively. This is an increase of some 130,161 visits.

Heaviest use, as usual, was during the months of June, July, and August with 174,294; 223,750; and 267,729 visits being recorded respectively. Saltwater fishing and wildlands appreciation auto accounted for much of the public use during these three months. Lowest use was in January and February when 20,487 and 16,106 visits were reported respectively.

B. Refuge Participation

Several interested groups were given tours and talks by refuge personnel this year. In addition to this, the refuge is being used by an ever increasing number of birding clubs and school groups which find it most acceptable to their needs.

C. Hunting

No hunting is allowed on the refuge.

D. Violations

A total of 80 cases were made during FY '75. These cases can be broken down into the following violations:

| <u>Violation</u> | <u>Forfeited Collateral</u> | <u>Pending</u> | <u>Dropped</u> |
|---|---------------------------------|----------------|----------------|
| Parking in closed area | 15 | 1 | |
| Driving off designated roadway | 10 | 4 | |
| Camping in undesignated campground | 10 | 3 | |
| Trespass in closed area (tern colony) | 10 | 1 | |
| Hunting on National Wildlife Refuge | 6 | 1 | |
| Animal trespass | 6 | 1 | |
| Possession of firearms on refuge | 4 | | |
| Disorderly conduct | 1 | 1 | |
| Littering | 1 | 1 | |
| Theft of Government property | 1 | | |
| Unlicensed operator | | | 1 |
| Being drunk on refuge | | 1 | |
| Prohibiting officer from doing his duty | | 1 | |

E. Safety

Monthly safety meetings were held at refuge headquarters. Regional safety materials were discussed and safety films shown. Some of the topics discussed included defensive driving techniques, automobile tire hydroplaning, how to make a perfect pass, and other safety topics.

The last lost time accident was January 21, 1958. As of July 1, 1975 there has been 6,338 calendar days since the last lost time accident with approximately 102,114 man hours worked.

Future plans are to continue with monthly safety meetings and to correct any hazardous conditions that might occur before an accident happens.

Protective clothing and equipment will be acquired as needed.

VIII. OTHER ITEMS

A. Items of Interest

Maintenanceman Toler retired from the Service on disability after some 15 years of faithful service at the very end of FY '74. We want to wish him a happy retirement.

