ANIMAL CONTROL PLAN

for

ST. VINCENT NATIONAL WILDLIFE REFUGE

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INTRODUCTION

St. Vincent National Wildlife Refuge, established in 1968 as a waterfowl sanctuary, consists primarily of a 12,358 acre barrier island in the Gulf of Mexico, Franklin County, Florida. St. Vincent Island is separated from the mainland by Apalachicola Bay and St. Vincent Sound. The east end of the island is located approximately nine miles southwest of Apalachicola, and the west end is approximately one-quarter mile east of the mainland at Indian Pass. Access to the island is across these coastal waters.

The island is dominated by a series of nearly parallel east to west sand ridges less than 20 feet above mean sea level. Many natural biocommunities are contained within the island's unique mix of beach dunes, saltwater and freshwater marshes, sloughs and lakes, pine-palmetto flatlands and hardwood hammocks (Table 1).

For more than 60 years of private ownership prior to 1968, the public was not allowed on St. Vincent Island. It was used by various owners as a private hunting and fishing preserve. The Service inherited the remains of the island's exotic fauna that had been introduced by former owners. All exotics, except sambar deer and feral hogs were removed during an extensive round-up immediately prior to and following acquisition.

The primary objectives of St. Vincent NWR are: (1) to manage and preserve the natural barrier island and associated native plant and animal communities, and (2) to provide protection for endangered species, migratory birds and their habitats.

Table 1. St. Vincent Island habitat/vegetation types.

Habitat/Vegetative Type	Acres
Tidal Marsh	2,822
Slash Pine-Mixed Understory	2,340
Slash Pine-Cabbage Palm-Hammock	1,226
Scrub Oak Dunes	1,200
Sawgrass, Brush, Hypericum Marsh	1,369
Slash Pine/Palmetto/Ilex	1,038
Live Oak Dunes	566
Beach	361
Cattail (primarily in marshes around Lakes 1-5 and in Oyster Pond)	88
Freshwater Lakes and Oyster Pond	313
Cabbage Palm	239
Mixed Live-Scrub Oak Dunes	200
Hardwood Hammock	183
Live Oak/Grass Dune	124
Saltwater Pond	148
Slash Pine/Grass Dune	134
Sand Pine/Scrub Oak	7
TOTAL	12,358

CONTROL CONSIDERATIONS

A. Sambar Deer

A few sambar deer which are native to India were introduced on St. Vincent in 1908. These animals adapted well to the island's varied habitats and established a stable population. Research on sambar deer and how they interacted with native white-tailed deer on the island was conducted in 1984-86. No indications were found that the sambar represents an immediate threat to white-tailed deer or other native species on the island.

Service policy is eradication of exotic species. Total eradication of sambar deer was proposed in 1978 and received strong opposition from mainland residents.

Control Method Recommended

1. Removal through public hunts.

   Sambar deer are highly sought after as big game/trophy deer. A public hunt will be held each year with a bag limit set to keep the population in balance with the habitat and other native species requirements.

B. Feral Hogs

The feral hogs on St. Vincent Island are descendants of domestic stock, Brown Russian and Poland China hogs, which were introduced by private owners as game species. These wild hogs compete with and predate upon true native wildlife species and represent an undesirable presence in all habitat/vegetative types on St. Vincent Island.

Service and refuge policy is eradication of the species. At this time the policy will be that of control. Control in this case means a general absence of hog sightings and hog sign.

Control Methods Recommended

1. Removal through public hunts.
2. Shooting by refuge personnel.
3. Trapping and destruction by refuge personnel.

Removal Through Public Hunts

Feral hogs are not considered a desirable presence by Service and refuge policy. All managed hunts administered by the refuge will identify feral hogs as a target species. There will be no limit on the size or number of hogs that can be taken by a hunter during these hunts.

Shooting by Refuge Personnel

This method has not been employed in past years. Properly used, this method can be incorporated into other routine refuge operations as a general control. In the hands of sensitive and responsible employees, it can be incorporated into routine duties so as not to attract undue attention. Accordingly, this method will be used routinely in general situations and somewhat more intensively in specific locations and situations by selected refuge employees only.

Trapping and Destruction by Refuge Employees

The refuge has the expertise to conduct a general trapping and destruction program which could effectively reduce the hog population. This would require a considerable expenditure in manpower. However, with the recent addition of a permanent full-time biologist, the refuge has the manpower to conduct such a program.

Summary

Feral hogs were discussed during the team Forest Management Review in June 1991. All team members felt the feral hog was a major problem, and serious predation to certain species including two endangered species. A recommendation was made for a concerted program of hog control through unrestricted trapping and destruction by refuge staff and removal of all hog limits during hunts with the long term goal of completely extirpating the species from the island. At this time the policy will be that of control.

C. Raccoons

Raccoons are a problem on St. Vincent Island and need to be controlled to reach management objectives. Problems include predation on sea turtle and shorebird nests and interfering with duck baiting stations.

Control Methods Recommended

1. Removal through public hunts.
2. Shooting by refuge personnel.
3. Trapping and destruction by refuge personnel.

Removal Through Public Hunts

All managed hunts administered by the refuge will identify raccoons as a target species. There will be no limit on the size or number of raccoons that can be taken by a hunter during these hunts.

Shooting by Refuge Personnel

Current control actions include killing raccoons year-round with emphasis on the south end of the island. Killing is done with firearms. Along the beach, raccoons are actively pursued by two people in a vehicle at night with a spotlight and shotgun. Away from the beach, they are shot opportunistically.

It is recommended that general shooting of raccoons continue over the island, except the beach area. This would decrease man power needed to carry out the program and would eliminate driving over dunes and beach vegetation in pursuit of raccoons. It was observed in a study conducted by Florida Game & Fresh Water Fish Commission that shorebird nests and young birds, especially snowy plovers, are being crushed by vehicles on the beach. Snowy plover nests are usually located above the storm tide line but in front of the primary dune line. This is also the area of the beach that is driven upon. To avoid crushing shorebird nests and young hatchlings, it is suggested that any necessary vehicles used during routine patrols be driven below the high tide line when possible. Also, unless absolutely necessary, never drive vehicles, including four wheelers, over or near vegetation on the beach or dunes.

Trapping and Destruction by Refuge Personnel

Trapping and destroying raccoons in problem areas can be an effective method to control raccoons. Trapping efforts will be limited to the beach area bounded by Road A, Dune Road and Gulf Beach, and any duck baiting stations. Traps can be set and checked daily by one person, refuge biologist. Trapping efforts will occur prior to and during sea turtle nesting season, and ,if needed, during duck banding season. Traps will also be placed around the shorebird nesting area on the west end of the island. Approximately 20 live traps will be needed. Only live traps will be used to avoid catching any other small animals, especially red wolf pups.

Summary

For control efforts to be effective, a combination of shooting and trapping of raccoons is recommended. The objective with this program is to control raccoons in problem areas but not to eliminate them refuge wide.

WILDLIFE CONTROL PROPOSAL

for Raccoon (Procyon lotor)

St. Vincent National Wildlife Refuge

PART I

Relation to Refuge Objectives

In order to reach refuge objectives for sea turtle production, least terns, and turkeys, it is necessary to carry out nest preservation programs. The purpose of this proposal is to set forth procedures in controlling vertebrate predation on sea turtle, least tern, and turkey nests located on St. Vincent National Wildlife Refuge. Major target species will be raccoons.

PART II

Policies and Administrative Control

Authority for implementation of a control program is found in 50 CFR 31.14. The target species (raccoon) has no closed season imposed by the State of Florida. This plan calls for trapping before and during the turtle, tern, and turkey nesting seasons. The program has received concurrence from the Florida Game and Fresh Water Fish Commission.

After investigation of possible transplant areas for disposal of live-trapped raccoons, it is evident that all local areas currently have a raccoon over-population problem which precludes a transplant program. Therefore, all raccoons live-trapped will be buried in an isolated area of St. Vincent Island.

PART III

Program Description (Problems - Solutions)

Raccoon populations are high on St. Vincent Island and sea turtle nest destruction has exceeded 60% during most years. Nest destruction of least terns by raccoons has been 100% during the past several years. While we do not have any accurrate estimates on destruction of turkey nests, it is obvious that the raccoon population has continued to have profound adverse effects on the nesting success of this species. We feel an intensive trapping program can yield substantial benefits in increased production of these three species. If nest losses due to raccoons can be reduced 30 to 50%, we would consider the program a definite success.

Lower-preference methods such as poisoning or "night-lighting" would be very successful and much less time-consuming; however, live trapping would probably be the most appropriate means of removal. The traps to be used are of the collapsible Hav-a-Heart design.

Turtle nesting begins as early as mid-May and extends to mid-August, with the peak "crawling" period in June and July. Control, therefore, would best be started in mid-April and run through July as trapping success indicates.

Least tern nesting normally occurs in June. Traditional nesting areas are the low, open dunes near Flag Island Pond and St. Vincent Point. Trapping at the Flag Island Pond area can be done in conjunction with the trapping for turtle nesting. Traps at the St. Vincent Point area should be set as soon as nesting is observed and extensive enough to remove any raccoons in the area which may present problems.

Turkey nesting activity is most common during late April and early May. Hopefully, we can conduct an extensive trapping program during the third or fourth week of March in those areas with greatest concentration of raccoons. We would combine our efforts and equipment with Mr. Dave Peterson of the Division of Technical Assistance, depending on his availability of services and equipment.

PART IV

Program Units

The entire Gulf beach of St. Vincent Island from Indian Pass to West Pass is suitable for sea turtle nesting. However, from year to year nesting will be concentrated in one or two areas depending upon the suitability of the beach. The area where traps will be set is approximately 10 miles long and of varying widths up to 1/4 mile. The number of trapping stations will be adjusted to meet the need, but 15 to 20 traps should be sufficient. Flag Island Pond and St. Vincent Point will probably be the only areas trapped for protection of least tern nests. Two or three traps should be enough in these areas. During our March trapping efforts we plan to have 70 to 80 traps set in those areas of turkey nesting which are most susceptible to raccoon predation.

Ideally, we would pre-bait the trapping sites and leave the trap set open and rigged so as not to spring before actually setting the traps for capture. Traps would be checked on a daily basis when set. Continuation of the program will depend on turtle and least tern nest predation rates. Our "all-out" effort in March prior to the turkey nesting season would probably entail four or five consecutive days of trapping.

PART V

Physical Plan and Equipment Use Requirements

The following is a list of equipment and supplies that will be needed to carry out the trapping program:

1. Live traps of the collapsible wire type to be supplied by the Division of Technical Assistance.
2. Bait would be canned sardines and/or shrimp. Blue crab or fish scraps could also be used and obtained from any of the local seafood dealers in Apalachicola.
3. A four-wheel drive vehicle, probably a Jeep.
4. A wood box or foot locker for picking up the carcasses.
5. "NOTICE - Government Property" signs.
6. One .22 caliber rifle with ammunition.

PART VI

Funds and Manpower Requirements

Traps for the project could be provided by the Division of Technical Assistance as mentioned earlier, thus saving the refuge the cost of purchasing traps.

Running the trap line is expected to take about three or four hours per day. If a great many traps are set, and captures are numerous, proportionally more time will be involved. Arriving at manpower cost estimates for this type of program is a sheer guess at best, but the following calculations represent our best estimates. Figuring a season of 16 weeks and assuming we would be trapping on an off and on basis 25% of the time (4 weeks), a total of 224 man hours would be required. Total manpower cost would then be approximately $1,200 (224 hrs. X $5.25 ph)

Other expenses would include gas, oil, and general vehicle upkeep as well as bait. These costs would probably total about $300 for the season.

Total cost for the season would therefore be approximately $1,500. It would probably take several years before the full benefits of the program could be felt, but we firmly believe that we could begin to detect a pronounced improvement in nesting success of these three species with initiation of the control plan.