



DATA FILE

Wood Duck Nest Box Success within the New Brunswick - Nova Scotia Border Area, 1977. W.R. Barrow, February, 1978.

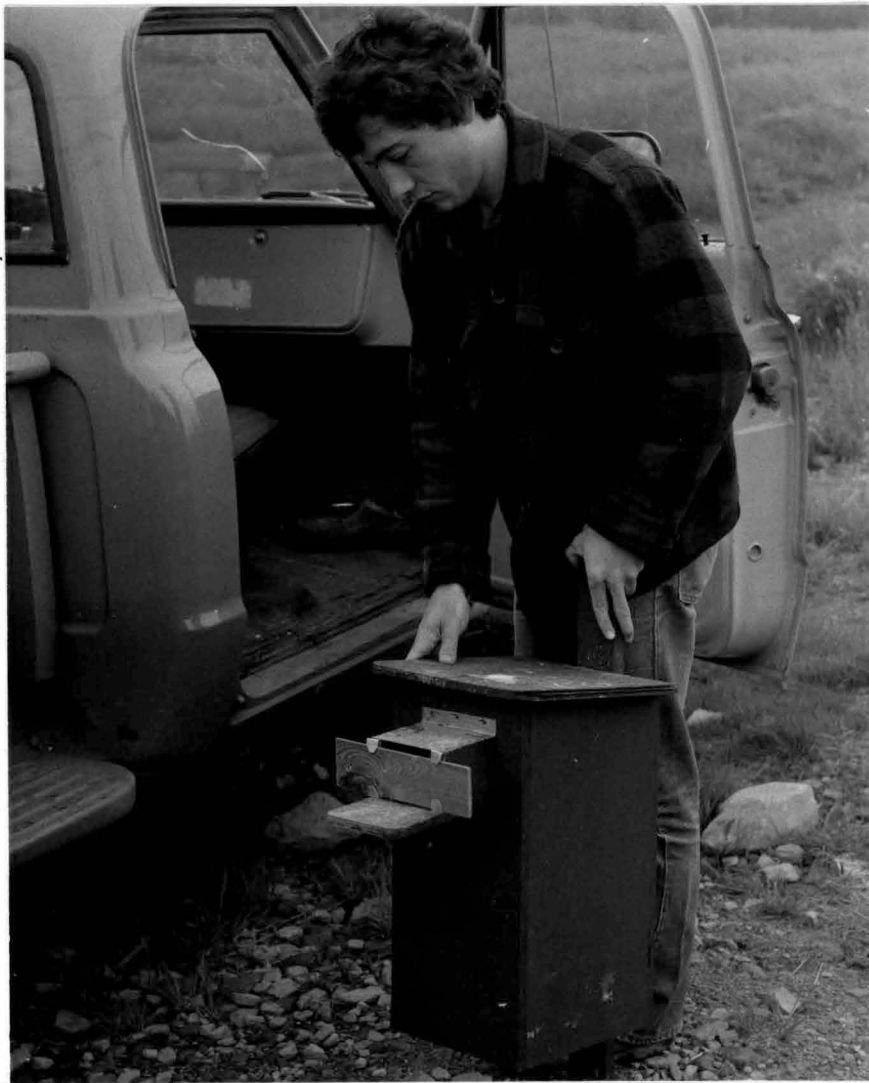
Wood Duck Nest Box Success within the
New Brunswick - Nova Scotia Border Area, 1977

Regular maintenance and inspection of nest boxes has been carried out over a three year period (1975-77) at two locations in the Border Area (Figures 1 and 2).

During that period there was no use of the boxes by waterfowl, while other bird species (Starling, Kestrel, Grackle, and Redwinged Blackbird) have nested with regularity. Only one mammal, A red squirrel, made use of any of the nest boxes. The results of the 1977 nesting season are shown in Tables 1 and 2.

Ducks Unlimited, Amherst, N.S. have initiated an ambitious Wood Duck program in the Border Area. Ninety-two immature Wood Ducks received from the Shubenacadie Wildlife Park in 1976 were reared in an enclosed pen near the Missaquash marsh and released as part of a passive release program. The following year two clutches hatched successfully on the Missaquash marsh. In 1977, 151 Wood Ducks received from the Wildlife Park were also released in the same area. A brood transplant program was initiated in 1977. Ten broods were transplanted at three locations in New Brunswick and Nova Scotia. One hundred Wood Ducks boxes were constructed during the winter of 1976-77. Fifty-five of those were distributed over six areas in New Brunswick and Nova Scotia, with the remainder to be installed in 1978.

A summary report of Ducks Unlimited Wood Duck management activities and proposals for the Maritimes by Keith McAloney is included with this brief. Canadian Wildlife Service involvement for 1978 will include routine maintenance, installation of additional boxes, and inspections to determine use of the boxes.



Photographs 1 and 2. Preliminary preparation by Ducks Unlimited personnel prior to release of Wood Duck brood in the Border Area.





Photographs 3 and 4. Forbes style nest boxes constructed by Ducks Unlimited were used in the brood release program.



Table 1. Results of a check of Wood Duck boxes at the Amherst Point
Migratory Bird Sanctuary June 1, 1977

Box Number	Active	Non-active	Species	Comments
1		x		
2	x		Red Squirrel	Nest with no young
3	x		Starling	2 young
4	x		Grackle	5 eggs (pipping)
5		x		
6		x		
7		x		
8		x		
9		x		
10		x		
11		x		
12	x		Starling	2 young, 1 egg
13		x		
14		x		
15		x		
16		x		
17		x		

Table 2. Results of a check of Wood Duck boxes at the Tintamarre National Wildlife Area June 2, 1977

Box number	Active	Non-active	Species	Comments
1		x		
2		x		
3		x		
4		x		
5		x		
6		x		
7		x		
8		x		
9		x		
10		x		
11	x		Grackle	6 eggs
12		x		
13		x		

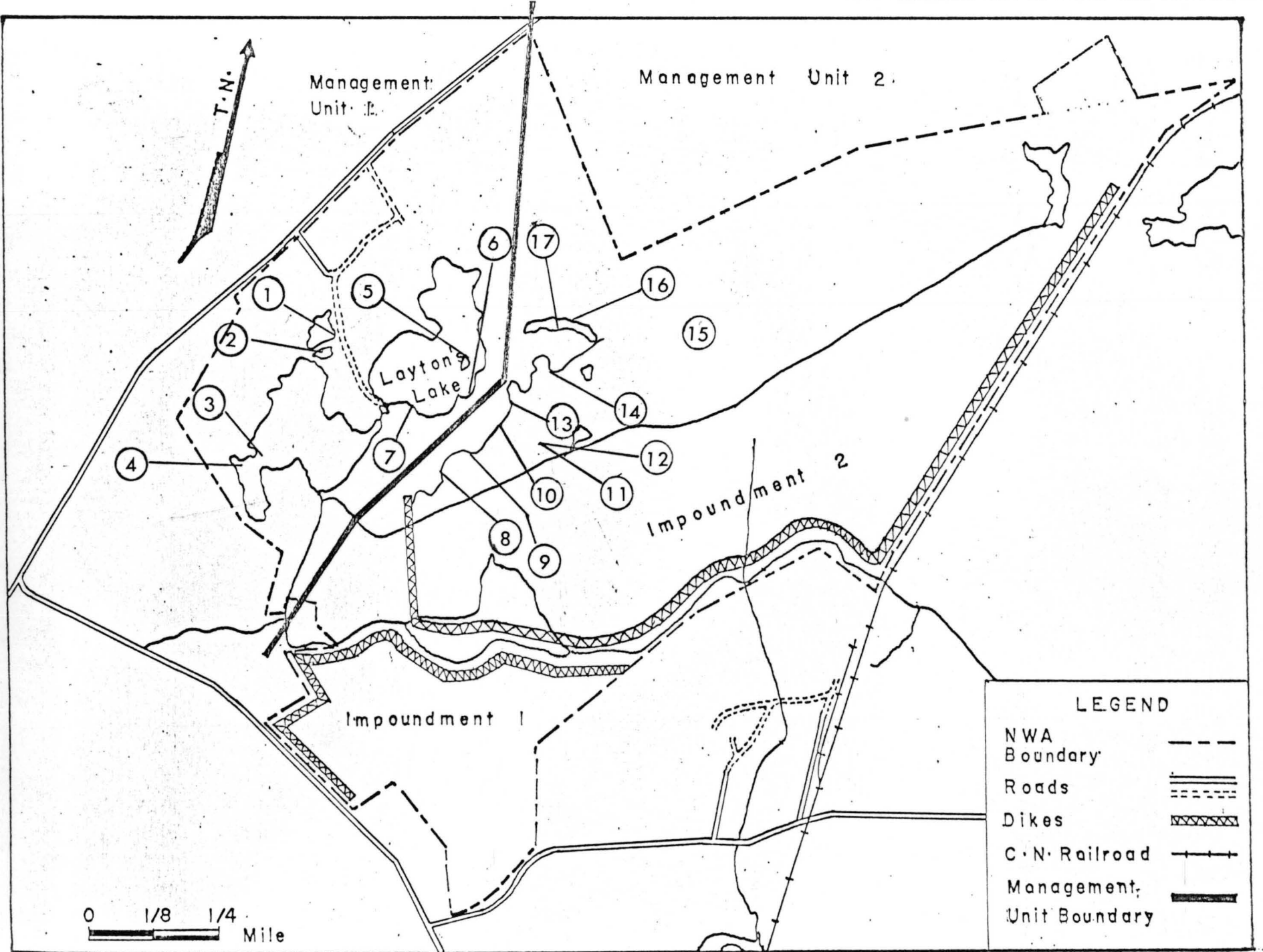
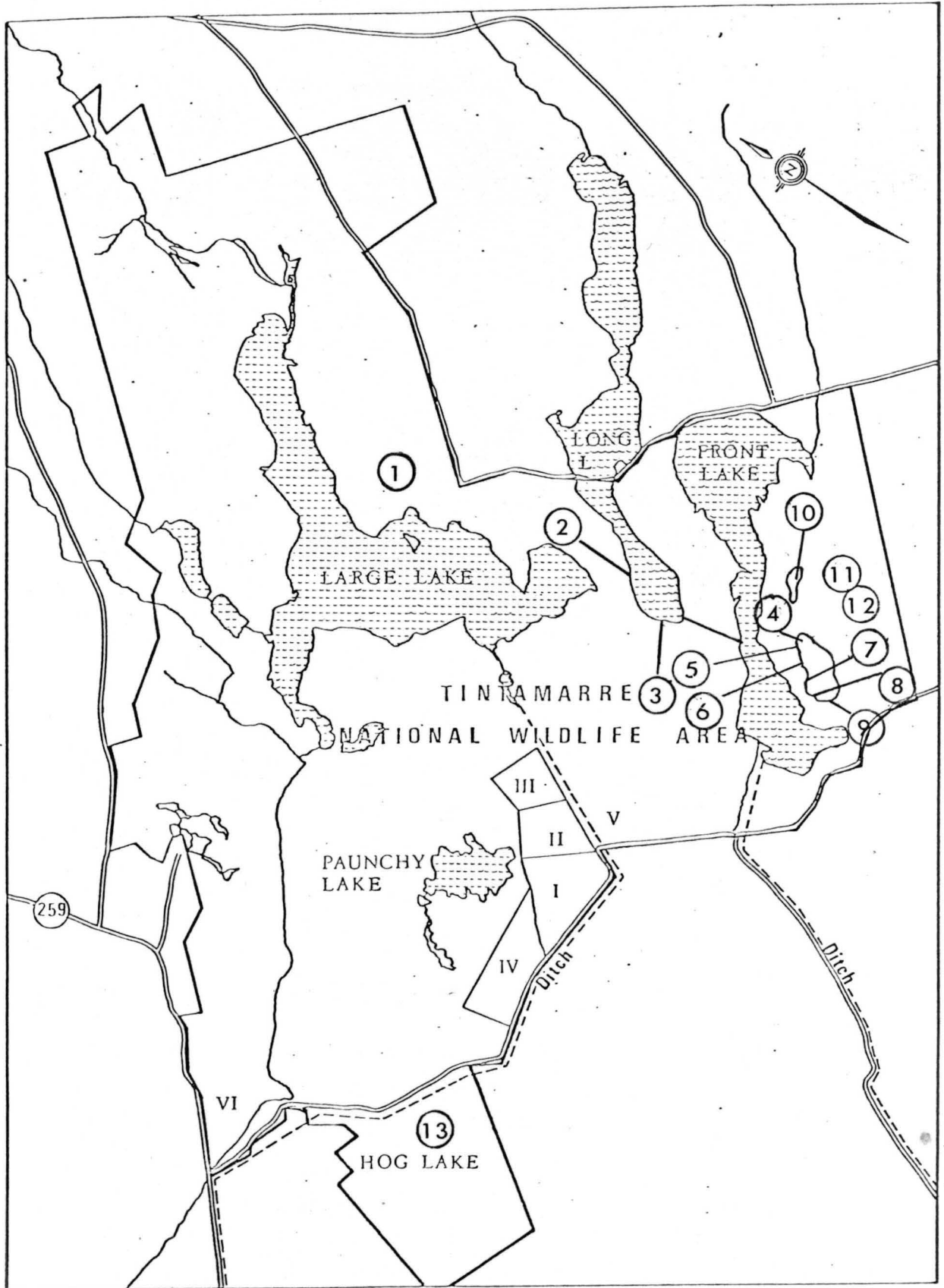


Figure 1. Nest box location within the Amherst Point Migratory Bird Sanctuary - 1977.



SCALE 1:35,500

960 0 960 1920 2880 ft

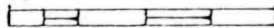


Figure 2. Nest box location within the Tintamarre National Wildlife Area - 1977.

Report on Biological Activity - 6199
Woodduck Release 1977

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Ducks Unlimited
October 4, 1977

Woodduck Release - 6199

Purpose:

To attempt to establish a breeding woodduck population in Cumberland and Colchester Counties of Nova Scotia and adjacent New Brunswick marshes and to maintain and improve existing woodduck populations in other parts of New Brunswick via a nest box program.

Methods:

- (1) Gentle release of hand-reared woodducks from an enclosed pond bordering the Missaquash Marsh.
- (2) Transplant of woodduck boxes containing woodduck female and day old brood from Shubenacadie Wildlife Park to Amherst Point Sanctuary and Debert Sanctuary.
- (3) Construction of Forbes-style woodduck boxes for installation at release marshes and areas of known woodduck breeding.

Evaluation:

- (1) Annual check and maintenance of boxes
- (2) Brood counts on release areas.
- (3) Compilation of band returns.

Co-operating Agencies:

- (1) Province of Nova Scotia - supplied day old and 5 week old woodducks for release.
- (2) C.W.S. - Woodduck box installation.
- (3) Province of New Brunswick - box installation.

Recap of 1976 Release:

92 woodducks were received from Shubenacadie Wildlife Park at 5 weeks of age. 91 survived to flying age and left the enclosed pen at will. To date, 7 direct (first year) band recoveries have been received as follows:

<u>Recovery Location</u>	<u>Recovery Date</u>	<u>Number of Recoveries</u>
Missaquash - Tintramarre	October, 1976	4
Yarmouth, N.S.	October, 1976	1
South Carolina	November, 1976	1
South Carolina	December, 1976	1
		<hr/>
		7

Following spring migration a flock of 15 - 20 woodducks were observed on various marshes in the Amherst - Sackville area. Nesting box checks revealed that 4 boxes were used on the Missaquash Marsh during the 1977 nesting season; 2 with incomplete clutches which were abandoned and two which hatched successfully. No boxes were occupied on the Tintramarre National Wildlife Area.

Nest Box Program:

During the winter of 1977, 100 Forbes-style boxes were constructed and distributed as follows:

Missaquash	-	22
Tintramarre	-	5
Amherst Pt.#2	-	5
Bathurst, N.B.	-	6
Minto, N.B.	-	12
Amherst Marsh	-	5
		<hr/>

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The remainder will be installed at areas of brood transplants prior to the 1978 nesting season although a few will be given as patterns to groups wishing to build their own.

1977 Release Program:

(1) Gentle Release:

A total of 151 young woodducks were received from the wildlife park in 3 groups. They were banded and released into the fenced pond at Missaquash where they were fed commercial duck starter until they attained flight. Cracked corn was then provided and feeding will stop October 11th. to encourage the birds to migrate. The reason for continued feeding during September and October was to keep the birds returning to the pond nightly, thereby reducing early hunting season mortality.

Raccoon depredation in early September is known to have accounted for the loss of at least 6 woodducks and a considerable amount of feed. It is safe to assume that approximately 140 woodducks fledged from the pond.

(2) Brood Transplant:

A student was employed at the Wildlife Park for six weeks to keep track of incubation periods in boxes and assist in the care of the incubator hatched young. The student and bio-technician were responsible for the transport and release of hens and newly hatched broods. In some cases, day old young were taken from the incubator and added to the brood in the box to increase the number of young released. In two instances, incubator young were used instead of naturally hatched young which were too wet and young to be released. This was done in order to move two boxes at the same time in order to reduce time and travel involved. Ten broods totalling 127 ducklings were transplanted in this manner. The hens were wing-clipped to prohibit their flying back to the Wildlife Park. In all cases the transplant was successful in that the hen waited at the base of the box until she had called all her ducklings to her, gathered them around her and swam off into the emergent vegetation.

<u>Location</u>	<u>No. of Broods</u>	<u>No. of Ducklings</u>
Amherst Point #2	5	64
Debert Sanctuary	4	58
St. Andrews	1	5
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	10	127

The enclosed series of slides illustrate the release technique utilizing a long string, side door opening and concealed observer.

(3) Additional Provincial Use of Woodducks:

- (a) The Wildlife Park retained 50 pair of woodducks from the earliest hatches to increase their brood stock for 1978.
- (b) District Biologists in Yarmouth and Cape Breton North each received 35 woodducks for gentle release.

Plans for 1978:

(1) Brood Transplant:

This aspect of the program will be continued at an increased level. With a larger brood stock, more hens and day-old broods should be available for transplant. This will involve the hiring of a student at the Park for a minimum of 8 weeks.

(2) Gentle Release:

It is recommended that this technique be continued for at least one more year. The objective being that if the technique proves successful, D.U. will discontinue the active role in gentle releases and it will become a function of District Biologists and Fish and Game Groups under the supervision of Nova Scotia Wildlife with D.U. participation limited to selection of release sites and construction of release ponds.

In order to ensure a successful gentle release in 1978 it will be necessary to install an electric hot-wire around the top of the fenced pond to reduce predator problems.

(3) Evaluation:

(1) Nest Box check

(2) Brood counts

(3) Band recovery compilation. The 1978 gentle release will be the third year and afford more opportunities for indirect (after first year) recoveries which could be a better index of success or failure of the program.

(4) Research Proposal:

Mr. Reg Newell, biologist of the Wildlife Park, has tentatively been accepted back to Acadia University in 1978 to do his Masters on Woodducks. His work will involve banding recovery analysis of woodducks previously released under violent release techniques to compare with returns from the gentle and transplant release methods as well as refining and evaluating the latter methods. New Brunswick and P.E.I. have expressed

interest in woodduck releases and will be approached for co-operative funding of the study. Ducks Unlimited support would consist of hiring Mr. Newell for the summer student position at the Wildlife Park. A detailed research proposal and request for funds will be included in our 1978 budget request.