



Wood Duck Nest Box Installation
at the Amherst Point Bird Sanctuary
and Their Use by Birds in 1975

by

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Introduction

Mr. George V. Burger (1964) listed four American developments which point strongly to the need to explore the possibilities of man-made nest sites as a means of enlarging nesting range and increasing productivity of many waterfowl species:

- (1) Drainage, agriculture, and settlement continue to encroach on already limited breeding grounds;
- (2) as some waterfowl populations become more concentrated, relatively localized weather conditions could threaten maintenance of desired population sizes;
- (3) thousands of new water areas in the form of man-made farm and stock ponds, impoundments, etc. offer yet unexploited possibilities for waterfowl production; and,
- (4) success with elevated nest structures for Canada geese in new range has been attained.

Also, a study carried out by Strange (1971) indicated that artificial nest boxes, if evenly spread over a wide area, should be more beneficial than natural cavities, and that such boxes seem to be preferred as nesting sites by Wood Duck.

While the nest box program within the Amherst Point Migratory Bird Sanctuary was small by comparison to most North American programs, this brief report is to document our efforts at Amherst Point Bird Sanctuary and to hopefully provide guidance on any such programs in the future.

Purpose

To install within the Amherst Point Bird Sanctuary Wood Duck nest boxes in an effort to encourage such desirable cavity nesters as Wood Duck, Kestrel, and possibly Goldeneye or Hooded Merganser.

Location

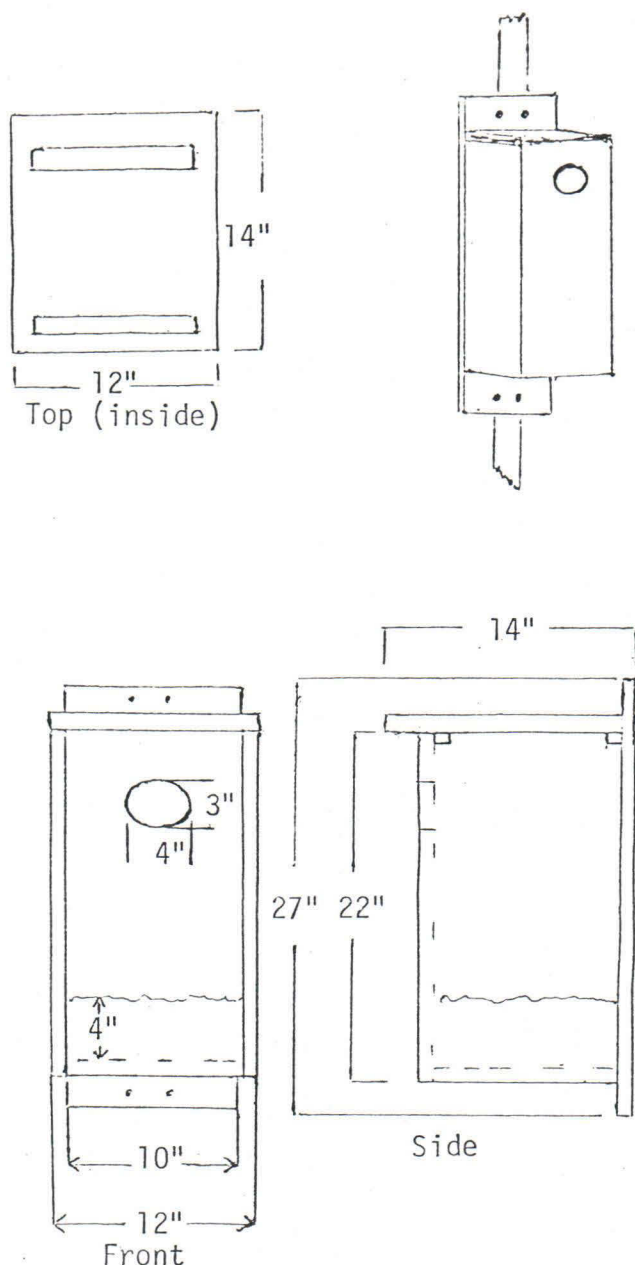
Amherst Point Bird Sanctuary, Cumberland County, Nova Scotia, two miles west of the town of Amherst.

Materials needed

- (a) sufficient nest boxes
- (b) 12' boat
- (c) conduit pipe and couplings
- (d) 10 pound mallet
- (e) clamps, wrenches, hammer and spikes
- (f) wood shavings (nesting material)

Procedure

Construction (Figure 1) of nest boxes should really be done during winter months using either old or weathered lumber so as to provide a "natural" appearance. Once nest box location is determined, two men and the previously mentioned equipment are required for actual installation. Threaded conduit pipe (1 3/4" - 2 1/4") of varying lengths should be pounded into the pond bottom until stable. As this pipe is submerged, additional lengths may be added until the desired secureness and height above water is attained. A spare coupling is necessary while pounding the pipe for thread protection. Clamps (U-bolts) fitted



Recommendations for nest box construction

- (1) 1"x12" rough lumber (allow wood to age before installation)
- (2) 3"x4" elliptical entrance hole
- (3) Erect house near water with entrance facing the water
- (4) As long as houses are securely fastened, two may be installed on one support post
- (5) Predator guards may be necessary in some areas
- (6) Interior must have a rough surface
- (7) Install in 2' of water and at least 4' above high water mark
- (8) Nest box should have a drainage hole
- (9) Houses may be erected in groups to attract birds or if there is a breeding population of desirable density, two or more per acre is advised
- (10) Annual or pre-nesting season maintenance is a necessity

Figure 1. Basic plan for a Wood Duck nest box and some points to remember before installation.

with nuts and washers and constructed of 5/16" threaded rod are installed on the nest box which in turn is slid over and secured on the mounting pole. Nesting material is then put in the box and the top secured with a small clasp-type hook and a nail for extra security.

Results

Eleven nest boxes were erected on May 13 and 14, 1975. Eight were installed over water at heights varying from 2.5 to 4.0 feet. Two were attached to trees at the water's edge and one was put on an island (Figure 2). Barrow later checked those boxes on June 23. The results of that check are presented in Table 1. Seven boxes were used by starlings, one contained a deserted Red-winged Blackbird nest, and three were unoccupied. Box #11 located on a small island was utilized, however. A small hornet's nest broken open upon examination made life interesting for several minutes.

Discussion and Recommendations

Large numbers of boxes were erected on the Missaquash Marsh and, to a lesser degree, within the Tintamarre National Wildlife Area, however, little follow-up in the form of maintenance or evaluation was ever initiated or documented. Three nest boxes of similar design were also erected at Amherst Point Bird Sanctuary by the Canadian Wildlife Service in 19 , however, they were either destroyed by vandals or taken out by winter ice. Eight of the more recent boxes were erected over water and this may have been in vain if ice movement proves destructive. A close monitor on such ice effect, regular inspections with maintenance

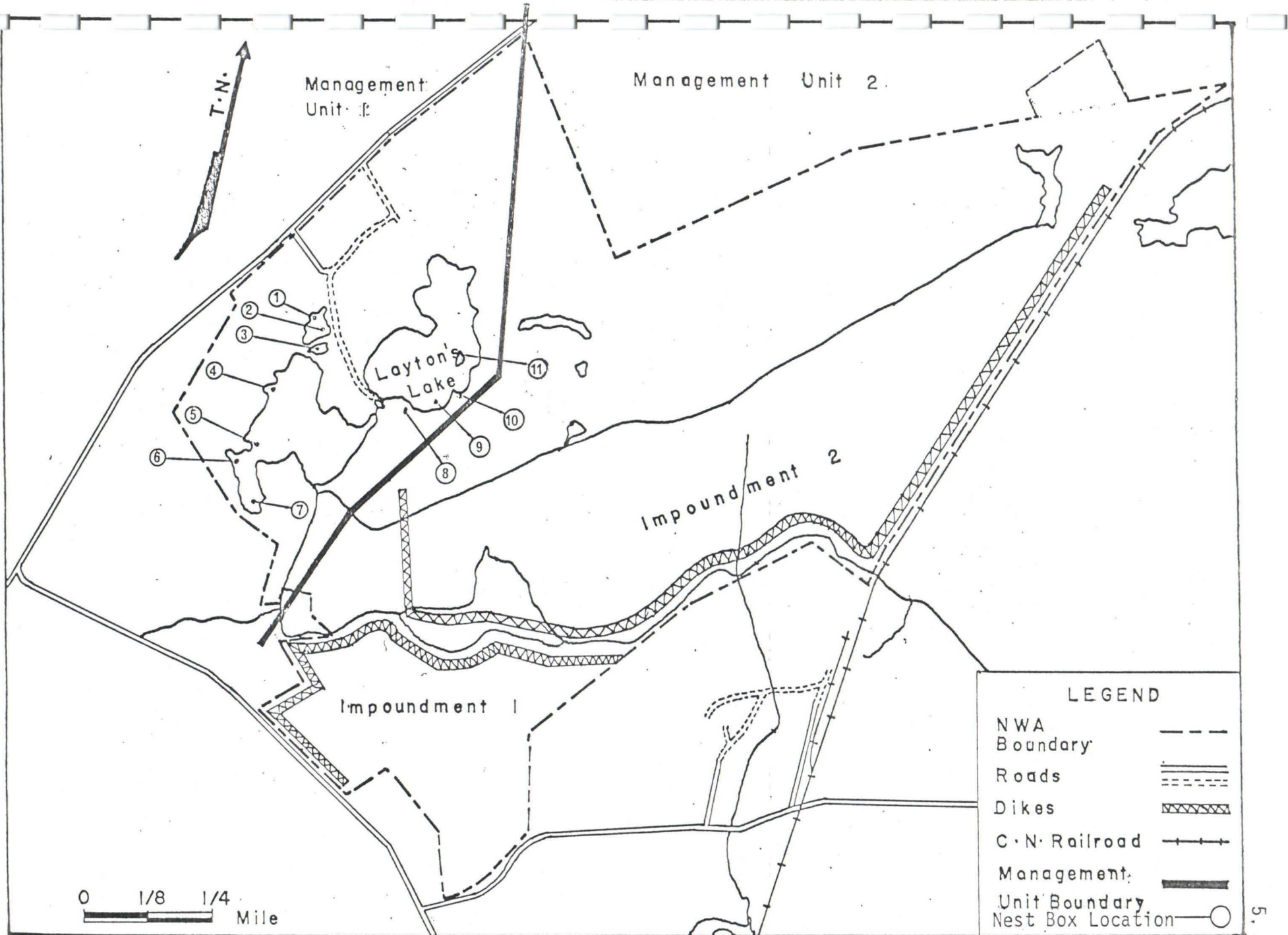


Figure 2. Nest box locations within Amherst Point Migratory Bird Sanctuary - 1975.

Table 1. Results of a check of Wood Duck boxes at Amherst Point Bird Sanctuary on June 23, 1975

Box number	Active	Non-active	Species	Comment
1	Yes	-	Starling	4 young birds capable of flight
2	Yes	-	Starling	5 young birds capable of flight
3	Yes	-	Starling	5 young birds non-flying
4	Yes	-	Starling	3 starlings capable of flight
5	Yes	-	Starling	1 starling capable of flight
6	Yes	-	Red-winged Blackbird	Nest was deserted when box top was replaced
7	Yes	-	Starling	Birds hatched and departed nest
8	-	Yes	-	
9	Yes	-	Starling	5 starlings nearly capable of flight
10	-	Yes	-	
11	Yes	-	Hornet nest	Very active

and tabulation of all effort etc. should be conducted. Those boxes may have to be moved to trees or the program cancelled. A large majority of nest boxes appear to lose the top either from weather action or human interference. A nail, along with the regular clasp, should be used. Starlings moved into the area and occupied the boxes probably shortly after their erection. The available waterfowl habitat within the sanctuary area has increased greatly (400+ acres) because of Ducks Unlimited development. Nest boxes should be erected along the new diking for comparative purposes. Those boxes would be more isolated from human activity and, hopefully, starlings and ice conditions would not be a factor. If such an effort is recommended and carried out, predator guards should be installed.

Wood Duck nest box programs have proven most successful at numerous locations in the northeastern United States. Boxes installed at a variety of locations along the Saint John River estuary have provided nesting facility for Wood Duck, Goldeneye, and Hooded Merganser. In the past the occasional Wood Duck has been reported nesting in boxes installed at the Missaquash Marsh (M.N.R.S. - 1966 and 1967) and Amherst Point Sanctuary (M.N.R.S. - 1967) in the New Brunswick - Nova Scotia Border Region. Although it appears that a sparse Wood Duck population exists in the Border Region, a limited nest box program could enhance that population significantly.

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January 12, 1976

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- Strange, T.H. 1971. Use of Nest Boxes by Wood Ducks in Mississippi. Journal of Wildlife Management, Vol. 35(4):786-793. 1971.

Appendix I. Available literature at Canadian Wildlife Service
Sackville office

- Brander, T. 1958. Goldeneye nesting boxes. Var Fagelvård 17: 241-247. (In Bird Banding Vol. 30(2): Abstract only.
- Burger, G.V. 1964. Experiments with nest boxes for Mallard Ducks at Remington Farms. N.E. Fish and Wildl. Conf. Hartford. 1964. 12p.
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