ATLANTIC FLYWAY COOPERATIVE BANDING PROGRAM

ATLANTIC PROVINCES

1984

compiled by

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The following is a summary of the 1984 waterfowl banding program in Atlantic Canada. Expenditures and numbers of birds banded are accurately reported. The individual station reports that are appended were prepared by their respective crew leaders and are intended for information purposes without major regard for literary excellence. Any publication or quotation of the contents may require substantial editing in some sections.

SUMMARY

Atlantic Flyway Cooperative Banding Program

Atlantic Region - 1984

A total of 4556 waterfowl of seventeen species was banded in the four Atlantic Provinces in 1984. The largest number was banded in Newfoundland-Labrador (1878) followed by New Brunswick (1654); Nova Scotia (667); and Prince Edward Island (357). Black Duck composed 54% of the total waterfowl banded followed by Green-winged Teal (19%) and Blue-winged Teal (12.2%). Each of the remaining species composed less than 5% of the total number banded. Most Black Duck were banded in New Brunswick (843) followed closely by Labrador with 807. The total number of most species was down from 1983. Ring-necked Duck and Green-winged Teal numbers showed the most notable declines. In the case of Green-winged Teal, declines in some locations in recent years may be sufficient to warrant special attention and possibly harvest restrictions. Tables 1 and 2 summarize banding results by location.

Significant advance was made in Black Duck banding in Labrador in 1984. A total of 807 Black Duck was banded at three locations in Labrador which is the largest success experienced at northern banding sites. In addition to data provided for survival and mortality estimates, research was initiated on some aspects of the ecology of adult male Black Duck in northern Labrador. Body weight and several structural measurements were taken on each bird banded to assess body condition throughout the molt period. Food and feeding habits

were recorded and nasal saddles and radio transmitters were employed to study movements of individual birds. This study will continue in 1985 and data will form the basis for an M.Sc. thesis. Results will subsequently be published for use by other researchers. Black Duck banded at this station represent a unique and previously unsampled population and future study should be very useful in proper management of this declining species.

Experimental rocket-netting of Canada Geese was attempted on Prince Edward Island again this year. Although success was low resulting in an excessive cost per bird banded, many logistical and equipment problems were solved. Canada Goose populations appear to be growing in some parts of the Region but almost no banding data is available. Rocket netting in the spring on Prince Edward Island ~~are~~ is one of the few opportunities to potentially sample significant numbers of that species. With improved equipment and experience, this work should be continued and good success can be anticipated.

The cost per bird banded in the Atlantic Region in 1984 was $16.87 up slightly from 1983. Each Black Duck banded cost $31.31 which is also up slightly from the previous year. The most expensive Black Duck banded was at Nutak in northern Labrador where each bird cost $71.23 while the least expensive was a bait station in the New Brunswick-Nova Scotia Border area ($9.62). These two extremes are typical of the difference in operating costs between the two areas. Transportation and material cost primarily account for inflated operating

expenses in northern areas; however, the value of the information obtained more than justifies the additional financial resources required. Table 3 summarizes the 1984 banding costs for the Atlantic Region of Canada by banding station and category.

Detailed station reports prepared by the various project leaders are included in the following sections.

Table 1. Total number of waterfowl banded by species, province and percentage - 1984

Species	New Brunswick		Nova Scotia		Newfoundland		Labrador		P.E.I.*		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Black Duck	843	51.0	446	66.9	288	36.0	807	74.8	74	20.7	2458	54.0
Mallard	40	2.4	12	1.8	2	0.3	9	0.8			63	1.4
Blk.X Mallard	7	0.4	2	0.3	1	0.1	10	0.9			20	0.4
Green-winged Teal	104	6.3	32	4.8	488	61.1	220	20.4	21	5.9	865	19.0
Blue-winged Teal	357	21.6	81	12.1	3	0.4			117	32.8	558	12.2
American Wigeon	105	6.3	7	1.1					81	22.7	193	4.2
Pintail	10	0.6	3	0.5	17	2.1	26	2.4	16	4.5	72	1.6
Wood Duck	143	8.6	2	0.3					3	0.8	148	3.2
Northern Shoveler	14	0.8									14	0.3
Ring-necked Duck	28	1.7	71	10.7					23	6.4	122	2.7
Ruddy Duck			1								1	0.02
Common Goldeneye	1	0.1									1	0.02
Merganser	1	0.1									1	0.02
Sea Ducks							1	0.1			1	0.02
Coot & Grebes	1	0.1	10	1.5					1	0.3	12	0.3
Canada Goose							6	0.6	21	5.9	27	0.6
Totals	1654		667		799		1079		357		4556	

*Includes waterfowl banded by CWS airboat and rocket netting.

Table 2. Summary of Cooperative Waterfowl Banding in Atlantic Provinces - 1984

Station	Black Duck	Mallard	Blk X Mal Hybrid	G.-w. Teal	Blue-w. Teal	American Wigeon	Northern Pintail	Northern Shoveler	Wood Duck	R.-n. Duck	Ruddy Duck	Sea Duck	C.Golden-eye	Merg.	Canada Goose	Coots& Grebes	Total
Labrador																	
Tinker Harbour	236	3	1	214			13										467
Nutak	255	5	2	5			8					1			6		282
Indian House Lk.	316	1	7	1			5										330
Insular Nfld.																	
Codroy	233	2	1	425			17										678
Carmanville	55			63	3												121
P.E.I.	3														20		23
Nova Scotia																	
NB-NS Border	344	4	2	1	1	1				49						4	406
N.B.																	
Shepody NWA	140	9		8	47				44	14							262
Bathurst	156	18		1			1										176
CWS Airboat	220	9		69	307	95	19	4	10	59	1				1	8	802
USA Airboat	500	12	7	78	200	97	9	10	94				1	1			1009
Totals	2458	63	20	865	558	193	72	14	148	122	1	1	1	1	27	12	4556

Table 3. Cooperative Waterfowl Banding Cost Summary - Atlantic Region - 1984

Station	Estimated Salaries	Bait	Food & Lodging	Trans-portation	Equipment Supplies/ Repairs	Total Cost	No. of Birds	Cost/ Bird	No. of Black Duck	Cost/ Black Duck
Labrador										
Nutak	3000.00 1500.00*	143.50	4931.84	7045.32	1543.50	18164.16	282	64.41	255	71.23
Tinker Harbour	2500.00 1500.00*	750.00*	2000.00	3149.80	793.07	10693.77	467	22.90	236	45.31
Indian House Lk.	3300.00 1900.00*	300.00*	1438.99	4011.19	2787.60	13737.78	330	41.63	316	43.47
SW Labrador	1400.00*	N/A	400.00	3015.24	N/A	4815.24	N/A	N/A	N/A	N/A
Insular Nfld.										
Codroy	1500.00 1000.00*	300.00*	1260.00	299.95	134.50	4494.45	678	6.62	233	19.29
Carmanville	700.00	300.00*	NIL	NIL	162.00	1162.00	121	9.60	55	21.13
Rocket Netting P.E.I.	1650.00*	153.00**	639.10*	92.40*	274.00	2808.50	23	157.33	N/A	N/A
N.B.-N.S. Border	2500.00*	360.00*	NIL	450.00	NIL	3310.00	406	8.15	344	9.62
Shepody NWA	500.00 1500.00*	95.60	400.00	250.00	125.00	2870.60	262	10.96	140	20.50
Bathurst	250.00 1000.00*	180.00*	400.00	600.00	NIL	2430.00	176	13.81	156	15.58
CWS Airboat	3000.00*	N/A	400.00*	800.00 1200.00*	1500.00*	6900.00	802	8.60	220	31.36
USFW Airboat	1800.00*** 1000.00*	N/A	600.00*** 300.00	500.00*** 88.00	1200.00***	5488.00	1009	5.44	500	10.98
Totals	11750.00 17950.00* 1800.00***	239.10 2190.00* 153.00**	11630.83 1039.10* 600.00***	19939.55 1292.40* 500.00***	5820.57 1500.00* 1200.00***	48650.00 23971.50* 153.00** 4100.00***	632 312			
Grand Totals	31500.00	2582.10	13269.93	21731.95	8520.57	76874.50	4556	16.87	2455	31.31

Co-op Funds
*CWS Funds - does not include costs for new and replaced equipment, vehicle mileage, and all field expenses estimated at $10,000
**P.E.I. Funds
***USFWS Funds

Tinker Harbour
Labrador

Tinker Harbor, Labrador
Bait Trapping, 1984

Banders

Tim Bowman
Danny Sears

The 1984 Tinker Harbor banding season lasted from August 31 to October 3. A total of 467 ducks were caught in traps from 9/7 to 10/2. Totals for the 1984 season are: 236 Black Ducks, 214 Green-winged Teal, 13 Pintail, 3 Mallard, and 1 Black X Mallard Hybrid. In addition, 18 Black Ducks, 6 Green-winged Teal, 1 Mallard, and 1 Pintail with old bands were captured.

Banders Tim Bowman and Danny Sears arrived in Rigolet on August 31. Two boats and crews were hired locally to help deliver gear to the campsite at Tinker Harbor. Trap caches were located and all traps except one 2'H trap were found.

Baiting of trap sites began on September 1, and the first traps were in operation on 9/6. The last traps were pulled up on October 3, and camp was vacated that day.

Trap Sites

A total of seventeen sites were trapped. Trap sites are shown in Figure 1. The most successful traps for Black Ducks were Canoe Cove, Midstream, Lookout Island, and Scumsucker Cove. The best sites for Green-winged Teal were Camp Pond, Tidal Pond, and Tiny Pond #1.

Two 5'H 2X2 mesh panel traps were placed at the Canoe Cove and Lookout Island sites. One panel trap of 4'H, 1X2" mesh welded wire was placed at Halfway Point. 2'H circular traps with one slit entrance were used at pond sites - Tiny Pond #1 and #2, Grassy Pond, Stag Island Pond, and Scumsucker Pond. All other traps used were of 4'H, 1X2" mesh circular traps with one slit entrance. The two 5'H panel traps were the preferred design, and generally the most successful.

Trap tops were of 2" mesh chicken wire, with the exception of Halfway Point and High Point traps, on which we used 1/2" mesh nylon netting. Chicken wire was the preferred top material.

Dates of operation of trap sites are as follows:

Canoe Cove	9/6 - 9/21, 9/28 - 10/2
Midstream	9/8 - 9/21
Halfway Point	9/14 - 9/21
High Point	9/14 - 9/21
Stag Island Pond	9/1 - 9/6, 9/13, 9/21 - 10/2
Stag Island Brook	9/27 - 10/2
Grassy Pond	9/24 - 10/2
Tiny Pond #1	9/12 - 10/2
Tiny Pond #2	9/14 - 10/2
Goose Cove	9/13 - 9/24
Camp Pond	9/7 - 10/3
Tidal Pond	9/6 - 10/2
Lookout Island	9/6 - 10/2

Scumsucker Cove	#1	9/7 - 10/2
	#2	9/7 - 10/2
	#3	9/15 - 10/2
Scumsucker Pond		9/15 - 10/2

The ponds on Mason Island were not baited or trapped this year because of the high hunting pressure it received.

Number of Ducks

Numbers of Black Ducks using the Tinker Harbor - Stag-Kellick Cove areas were hard to determine. Several flocks of 100-300 Black Ducks were occasionally observed on tidal areas, although the majority of the large flocks of Black Ducks were seen on, or flying to and from, the inland bog ponds S-SE of Mid-Stag-Kellick Cove and south of Mason Island. This was also noted by Stotts in 1983. These large flocks were rarely seen using tidal areas after 9/15. Black Ducks catches were highest from 9/8 to 9/17, with a daily high of 50 Black Ducks on 9/10. Catches of Black Ducks occurred only at night. Very few Black Ducks were trapped after 9/19.

One group of hunters were camped south of Tinker Harbor from 9/17 to 9/24. They hunted primarily on the inland bogs in the area, and also reported large flocks of Black Ducks using those sites. They estimated that roughly 1000 Black Ducks were using the inland bogs on any one day. (Note: Bait trapping on these bog ponds would require traps set on land, as the ponds are quite deep, and much effort on the part of banders because of long walking distances over rough terrain).

During the last few days of operation at Tinker Harbor, about 1500 Black Ducks, in flocks of 300-500 each, were observed using the area between Mason Island and Snooks Cove. These birds would move to the inland bogs when disturbed, but never used the trapping areas.

Green-winged Teal were never observed in great numbers. Maximums of about 100 were observed on any one day, mostly on baited ponds, from our arrival on 9/1 to 9/20. Use of baited areas by teal and catches of teal dropped off sharply after 9/20.

Canada Geese were present in small numbers, with maximums of about 100 towards late September. One flock of 10-12 Snow Geese frequented Stag Island from 9/9 to 9/14.

Mortality/Predators

On 9/13, two local citizens were caught red-handed poaching out of the Stag Island Pond trap. One Black Duck had been killed when I arrived on the scene, and they were attempting to remove the 6 others in the trap. A verbal assault ensued, and the trap was pulled up immediately. No other incident of poaching or shooting over baited sites was known to occur.

A red fox killed on Black Duck at the High Point trap. A red fox was also seen on Stag Island. No fresh bear sign was present.

Six Green-winged Teal died in an overcrowded trap, and one Black Duck bearing an old band was found dead in a trap of unknown causes.

Weather

It was a windy, wet September. It rained almost daily, and winds of 30-50 mph were common. A two-day gale storm, September 21 and 22, damaged all traps in Stag-Kellick Cove through kelp inundation. This necessitated pulling up all traps in that sector for cleaning and repairs, and to prevent flooding by extreme high tides. Another gale blew from 9/26 to 10/1.

Temperatures averaged 40-48°F on most days, and dropped below freezing on 5 mornings. One inch of snow fell on October 2.

Trap Caches

Trap caches were made at 6 locations. These are labeled in Figure 2.

Canoe Cove	(1) Panel trap 10X10 5'H, (2) 4'H, (3) 2'H
Halfway Point	(1) Panel trap 9X9 4'H, (1) 4'H, (1) 2'H
Stag Island Brook	(1) 4'H, makeshift dip net
Lookout Island	(1) 10X10 Panel trap 5'H, (1) 4'H
Camp Pond	(1) 4'H
Scumsucker Cove	(3) 4'H, (1) 2'H

Some miscellaneous equipment, (tent ridge poles, lumber) is stored in the woods 200 yards SW of the campsite.

Recommendations

1. Contract delivery of bait to campsite to locals.

2. Much of the chicken wire used for trap tops is in poor condition (holes, etc.). More should be supplied next year.

3. Firewood can be obtained, with some effort, from the woods along the south shore of Stag-Kellick Cove. A small chainsaw would be helpful, but not necessary.

4. The 12'X14' wall tent needs a coat of waterproofing.

5. Several decoys should be provided to entice birds into baited areas, especially when trying to initially get birds on bait. Several small ponds were baited for 2 weeks or more before ducks, especially teal, found the bait. Once found, however, the ponds were used consistently. Decoys may speed the process of getting birds on bait.

6. Poaching or hunting over trap sites is bound to occur. Traps at vulnerable sites, especially Stag Island, should be carefully observed, emptied of birds in early morning when possible, and discontinued of poaching becomes a problem.

7. Information about Tinker Harbor banding should be posted in Rigolet, Goose Bay, and Northwest River.

8. A weather band for the radio would be useful for travel and to prepare for storms.

9. Whole corn may be best for tidal tray sets, while barley or barley-corn mix is suitable for pond sites we used only the whole corn-whole barley mix and found that barley often washed away in tidal areas, especially in windy weather.

Table 1. Age & sex breakdown, Tinker Harbor, 1984.

Species	HY		AHY		Total
	M	F	M	F	
Black Duck	42	53	120	21	236
Green-winged Teal	103	95	10	6	214
Pintail	11	1		1	13
Mallard	1		2		3
Black X Mallard Hybrid		1			1
Totals	157	150	132	28	467

Tinker Harbor Bird List 1984

Common Tern
Parasitic Jaeger
Gray Jay
Black Duck
Pintail
Green-winged Teal
Greater Yellowlegs
Great Black-backed Gull
Herring Gull
Ring-billed Gull
Sharp-shinned Hawk
Goshawk
Merlin
Canada Goose
Common Eider
Common Loon
Osprey
Black Scoter
Gyr Falcon
Common Snipe
Semi-palmated Sandpiper
Great Grey Owl
Spotted Sandpiper
Black-capped Chickadee
Black Guillomat
Puffin
Double-crested Cormorant
Purple Finch
Snow Bunting
Snow Goose
White-winged Crossbill
Semi-palmated Plover
Hudsonian Godwit
Raven
Yellow-rumped Warbler
Mourning Dove
Ruby-crowned Kinglet
Arctic Tern
Eurasion Blackbird

List of bands used at Tinker Harbor 1984

1357-13101	-	13181
1357-10801	-	10900
1357-10765	-	10800
1357-48201	-	48224
664-35701	-	35772
664-13506	-	13600
664-35501	-	35551
876-62710	-	62713
896-62101	-	62109

Nutak, Labrador

Waterfowl Banding 1984

Tim Bowman

Banders Tim Bowman, Andy Weik, and Norm Rogerson arrived in Nutak on July 3 by means of two otter float planes. Most necessary equipment, food, boats, and fuel were also on board. Banding of molting waterfowl commenced on July 4, and ended August 2. Baiting of trapping sites began August 6, and bait traps were in operation from August 10 to August 19. The last trap was pulled up and store, and the house vacated on August 19. Banders Bowman and Weik returned to Goose Bay by otter aircraft on August 19. Rogerson left August 1.

Totals for the 1984 Nutak banding season are: 255 black ducks, 2 black X mallard hybirds, 8 pintail, 6 Canada geese, 5 green-winged teal, 5 mallard, and 1 oldsquaw. In addition, 25 black ducks with old bands were recovered. Tables 2 and 3 show totals of birds banded by capture method.

Methods

During the molter banding phase of the operation, ponds were systematically searched by three persons armed with dip nets. Methods of search were similar to those used last year. Each person would cover a respective zone parellel to the waters edge, and carefully search for hiding ducks in cavities, under spruce trees, and amongst alders, willows and emergents. All three banders would work a duck once located. Usually, one person would make a grab for the bird while the other two played "goalie" to prevent the bird from reaching open waters, should it escape.

Molting birds were also driven ashore at several locations. Woody Bay and Goose Cove are likely areas to drive black ducks and geese ashore. Black ducks would usually run only a short distance before hiding in vegetation, usually under spruce trees. Geese would seldom stop running, and were more apt to scatter and circle back to open water when forced ashore. A fast pair of legs is necessary when pursuing geese.

Ponds searched for molting waterfowl and labeled in Figure 1. Two new areas were worked this year - the Ublik Peninsula (including Alices Pond, Betsys Pond, and Bear Pond) and Bransons Pond. The Ublik area was an especially productive location. At Alices Pond alone, we flushed 35-50 flightless black ducks to the opposite shore on one occasion. All other ponds at Ublik host molters as well. However, only a small percentage of the molters observed there were captured. Apparently, ducks would work their way into the numerous channels and waterways that connect the whole series of ponds in that area. These channels, many of the smaller ponds, are bordered by dense thickets of willow up to 6 feet high, extending 1-10 meters from the shoreline. Ducks often flush from these thickets before a person can see them, and once on the run, a duck is hard to pursue in the dense vegetation. I believe a dog would be quite useful here. Considering the extent of the Ublik area, and the density of molters found there, there is a high potential for banding large numbers of ducks there.

Bransons Pond was not worked until late into the molt period, July 23 and 30, and many of the black ducks had regained their flight ability by that time. The amount of molted feathers washed up on the shoreline indicate that there were appreciable numbers of ducks molting there. This area should be checked at an earlier date in future years.

Most of the known molting areas compose four areas that can each be worked in a single day (Ublik Penninsula, East-West Pond, Slambang, Goose Cove-Bransons Pond). Each area can be worked once a week on a rotating basis, allowing time for new molters to move into areas already worked. On other days, shoreline areas can be cruised by boat to locate and drive ashore groups of molting black ducks. Suggested areas for shoreline cruising include Okak Bay, North River, Suigak River, and shoreline north of Martin Island. Overnight travel may be required when scouting in Okak Bay.

Molting Chronology

We banded the first molting black ducks on July 4; three black ducks forced ashore out of a group of 40 molters on the water. (More ducks could have been driven ashore had the outboard motor not run out of gas as we were herding the ducks together). These black ducks were about one week into their molt, as determined by primary feather development.

The peak of the molt appeared to be from July 4 to July 17. During this period, relative numbers of flying black ducks were lowest. After July 22, numbers of flying black ducks

increased appreciably, and by July 30, it was not worth working areas for molters because the few that were left often flushed and flew off.

Bait trapping

Four sites were trapped this year. Three were pond sites - House Pond, East Pond, and West Pond. One tidal area south of East Pond (NoName Cove) was also trapped, but with little success. Traps were in operation from August 9 to August 19.

A total of 134 black ducks, 1 black X mallard hybird, 5 mallards, and 3 pintail were bait trapped. Additionally, six black ducks with old bands were trapped. Surprisingly, no green-winged teal were trapped this year. However, molting teal were observed through the first two weeks of August, and may account for their scarcity during the trapping period.

The House Pond site proved to be the best trap, consistently catching ducks. It can be checked with a spotting scope from the hill behind the house. East and West Pond are also good trapping sites. NoName Cove and adjacent tidal areas have good potential for bait trapping, as many black ducks use these areas, especially at mid to low tide. The NoName Cove trap was in operation five days, but caught only one black duck. It was pulled up on 8/17 to divert limited bait to more productive sites.

Whole corn was used as bait. Only four bags were salvagable from the original eight shipped to Cutthroat, which got wet and moldy while stored there. Trapping was discontinued

on 8/19, when bait was depleted. More sites can be trapped, and the trapping period extended, if an ample supply of bait is available.

All traps used were 2 or 3 funnel traps made of 4 foot high, 12 gauge, 1 x 2 inch mesh welded wire. Traps at East and West Ponds were left standing on location with the top netting removed. Traps at House Pond and NoName Cove are stashed in adjacent brush.

Research

Body weights and several structural measurements were taken on each molting black duck to assess body condition throughout the molt period. The results will be discussed in a later report.

Alphabetically coded orange plastic nasal saddles were placed on 25 molting black ducks. One black duck was also fitted with a back mounted radio transmitter, but could not be located three days later.

Boats

A major problem confronting banders this year was our situation with boats. Two craft were taken to Nutak; an inflatable Zodiac and a 17 foot aluminum canoe. The Zodiac, however, had an unrepairable leak and we were forced to rely on the canoe as our only means of water transportation. Loaded with three people and gear, the canoe is a slow, unsafe craft in all but the calmest of waters. We were camp bound on several

days when seas were rough, and spent many hours on shore, waiting for seas to calm down on other occasions. Many more birds could have been banded had we been able to travel freely to molting areas and scout new areas.

An 18 foot wooden freightor canoe was purchased in Nain following this years season, and should solve the transportation problem next year.

Accommodations

Banders resided, as we did last year, in the abondoned house at Nutak. Permission was obtained by the owner Henny Lyell, of Nain, prior to our arrival, to use the house. The roof was repaired and the premises cleaned up to some extent in return for the use of the house.

Nesting Waterfowl

Black Ducks

No evidence of black duck nesting was found, and no black duck broods were seen during the banding period, despite intensive searching on many freshwater ponds.

Canada Geese

Several Canada goose nests were found. Four successful nests were found in the East Pond area alone. Observations of Canada Goose broods include:

7/4/84 - 8 adults, 2 IB goslings.

7/5/84 - Flushed female off nest at East Pond, 5 eggs in nest - 2 just hatching out, 2 pipping.

7/23/84 - Banded three IIA goslings at Goose Cove

Oldsquaw

One oldsquaw nest was found at Slam Band Pond predated. Another oldsquaw egg, but no nest, was found at Betsys Pond. Two active oldsquaw nests, each with seven eggs, were found at Big Rock Pond. At one of the nests, the hen was banded and released on 7/15. She returned immediately to the nest. However, when the nest was reached on 7/29, the nest had been abandoned that same day. The hen from the other nest was seen on the pond with three IB ducklings.

Recommendation

1. A new motor will be needed for the freighter canoe purchased in Nain. A long shaft 25 H.P. Mercury is recommended.
2. Retrieving dog(s) should be used, at least part of the time, to band molting ducks.
3. Bait trapping should run from late July through late August. Fourteen bags of bait would be required.
4. Periodic checks should be made wiht Henry Webb, our radio contact in Nain, by CWS supervisors, to keep informed of any needs, problems, or important information..
5. Banders should arrive in Nutak the last week of June by means of otter aircraft; ice permitting. The freighter canoe should be run up from Nain, but all other equipment should come in on the otter(s).
6. Tide charts should be obtained.

Acknowlegements

Special thanks go to several people for helping us out. Henry Webb was our radio contact in Nain. He helped us immensely with supplies, freight, mail, and return flight arrangements.

Maria Berger good naturedly ran errands, shipped supplies, and took care of mail for us.

Dennis Jorde, Jerry Longcore, and Dr. Pat Brown fo the University of Maine loaned the telemetry and other equipment.

Tony Locke loaned us the Zodiac.

Table 1. Nutak Waterfowl Banding - 1984.

	L		HY		AHY		
Species	M	F	M	F	M	F	Total
Black Duck				1	250	4	255[1]
Blk X Mallard Hybird						2	2
Pintail			1		5	2	8
Green-winged Teal					5		5
Canada Goose	3				1	2	6
Mallard					5		5
Oldsquaw						1	1
TOTAL	3		1	1	268	9	282

[1] In addition, 25 old recaptures, all AHY M black ducks, were captured.

Table 2. Hand Caught Molting Waterfowl - Nutak, 1984.

Species	Male	Female	Total
Black Duck	120	1	121[1]
Green-winged Teal	5		5
Pintail	5		5
Canada Goose	1	2	3[2]
Black X Mallard Hybird	1		1
TOTAL	132	3	135[3]

[1] 19 black ducks with old bands were also captured.
[2] An additional 3 local male Canada geese were banded.
[3] One incubating female oldsquaw was also banded.

Table 3. Bait Trapped Waterfowl - Nutak, 1984.

	HY		AHY		
Species	M	F	M	F	Total
Black Duck		1	130	3	134[2]
Mallard			5		5
Blk X Mallard Hybird			1		1
Pintail	1			2	3
TOTAL	1	1	136	5	143

[1]6 black ducks with old bands were also trapped.

Bird List - Nutak 1984

Pintail

Black Duck

Oldsquaw

Black Guillomot

Northern Phalarope

Canada Goose

Common Loon

Red-throated Loon

Black Scoter

White-winged Scoter

Surf Scoter

Red-breasted Merganser

Common Merganser

Green-winged Teal

Common Goldeneye

Common Eider

White-crowned Sparrow

Raven

Robin

Black-backed Gull

Glaveous Gull

Herring Gull

Greater Yellowlegs

Yellow rumped Warbler

Lapland Longspur

Horned Lark

Gray Jay

Savannah Sparrow

Water Pipit

Common Redpoll

Tree Sparrow

Northern Shrike

Blackpoll Warbler

Boreal Chickadee

Junco

Pine Grosbeak

Gray-checked Thrush

Rusty Blackbird

Solitary Sandpiper

Semipalmated Plover

Spotted Sandpiper

Willow Ptarmigan

Snipe

Bald Eagle

Golden Eagle

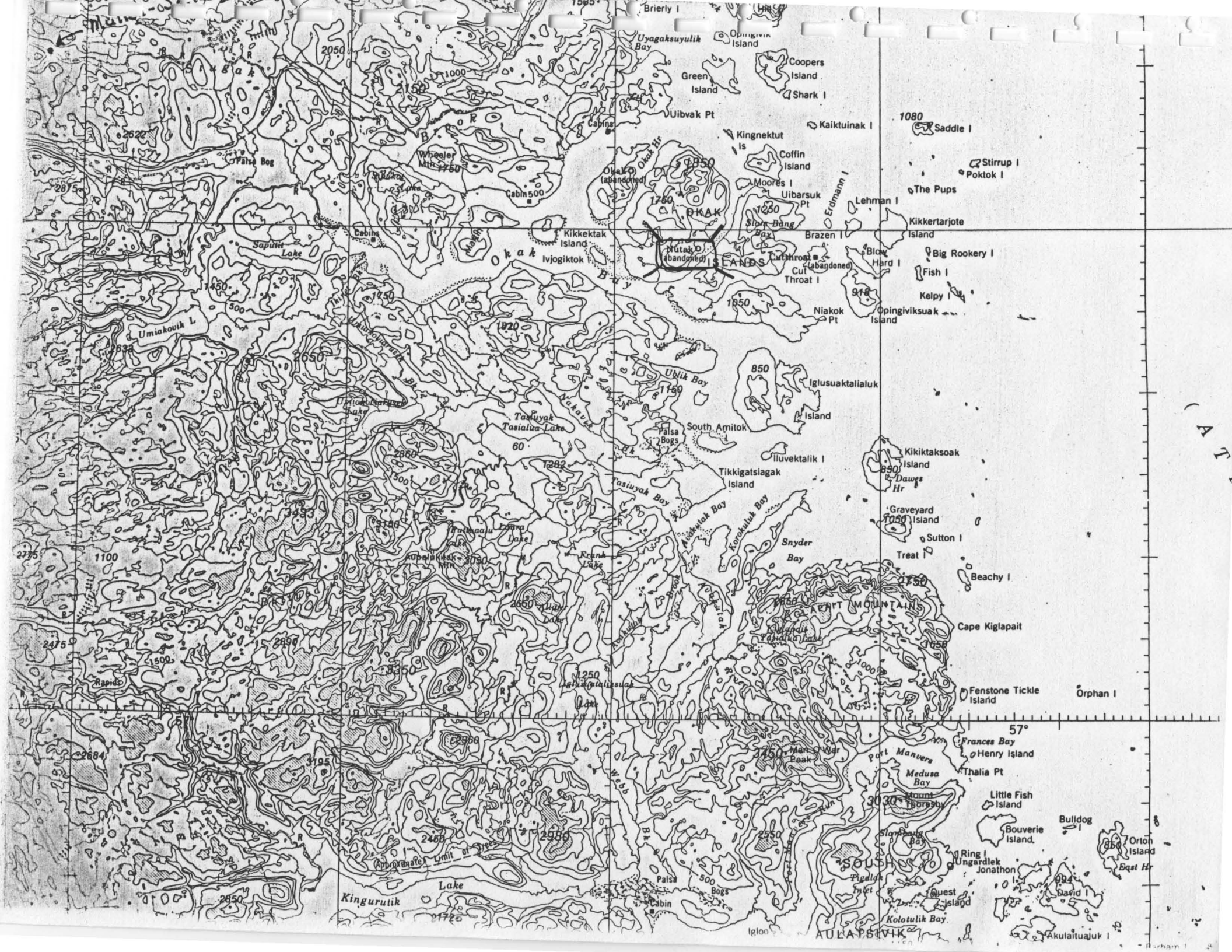
Osprey

Northern Harrier

Peregrine Falcon

Gyrfalcon

Goshawk


Brierly I
Uyagaksuyulik Bay
Opingivik Island
Coopers Island
Green Island
Shark I
Uibvak Pt
Cabins
Kaiktuinak I
1080
Saddle I
Kingnektut Is
Coffin Island
Stirrup I
Poktok I
Okak (abandoned)
Okak Hr
Moores I
Uibarsuk Pt
The Pups
Erdmann I
Lehman I
OKAK
Slam Bang Bay
Kikkertarjote Island
Brazen I
Kikkektak Island
Ivjogiktok I
Saputit Lake
Okak Bay
Hutak (abandoned)
ISLANDS
Cutthroat (abandoned)
Cut Throat I
Blow Hard I
Big Rookery I
Fish I
Kelpy I
Niakok Pt
Opingiviksuak Island
Umiakovik L
Ublik Bay
Iglusuaktalialuk Island
Tasiuyak Tasialua Lake
South Amitok
Palsa Bogs
Iluvektalik I
Kikiktaksoak Island
Dawes Hr
Tikkigatsiagak Island
Tasiuyak Bay
Graveyard Island
Sutton I
Snyder Bay
Treat
Beachy I
Frank Lake
Aupaluktuk Mtn
APART MOUNTAINS
Cape Kiglapait
Fenstone Tickle Island
Orphan I
57°
Frances Bay
Henry Island
Thalia Pt
Mon O'War Peak
Port Manvers
Medusa Bay
Mount Boresby
Little Fish Island
Bouverie Island
Bulldog
Orton Island
East Hr
Ring I
Ungardlek
Jonathon
David I
Quest Island
Kolotulik Bay
Akulaituajuk I
Kingurutik Lake
Palsa Bogs
Cabin
Igloo
AULAPSIVIK


ISLAND
Calm Cove
Mugford Bay
Sitogutyat Pt
Mugford Bay
Moss Hr
Crosby Pt
Eskimo Pt
Mugford Tickle
MOUNTAINS
COD ISLAND
Brierly Island
TABLE HILL
Opingivik I
Green Island Hr
Coopers Island
Parkavik
INUKSULUKAK HILL
Uibvak Pt
Kingnektut Islands
Coffin Island
Sungilik Pt
Tikkagolik Pt
Okak Harbour
Siugak Brook
Siugak Bay
WHEELER MTN
Sipukat L
Sipukat Bay
Okak Islands
Bransons Pond
Imnaksuk Pt
Kikkektak Island
Martin Island
Umiangujak Pt
Ivogiktok Island
OKAK BAY
TIGERSCHMITT HILL
Moores Harbour
Newaktanna Pt
Nutak Island
ISLANDS
Woody Bay
Moores Tickle
Kangekluaksuk (Slambang) Bo
MAKKAK HILL
Palsa Bay
UBILIK PENINSULA
Ublik Bay
IGLUSUAKTA
Nuasornak I
Allevik
Tikigatsiakuluk Pt
Tikigatsiak Pt
ILLUILIK HILL
Umiakoviarusek L
Nakasvik Brook
Tasiuyak Tasialua Lake
Tasiuyak Bay
South Amitok I
Iluvektaliik Island
Tikkigatsiagak Island
Tasiuyak


OKAK
Nutak
TICKLE
HOUSE POND
ISLAND
ISLANDS
MOORES
Woody Bay
WEST POND
EAST POND
SEDGE POND
NONAME COVE
SLAMBANG POND
GOOSE POND
BIG ROCK POND
OKAK
MAKKAK HILL
NU
BETSYS POND
ALICES POND
UBLIK
BEAR POND
Palsa Bog
72
71
70
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68
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60
59

Indian House Lake
Labrador

INDIAN HOUSE LAKE

LABRADOR BANDING PROJECT

1984

Banders: Vernon Stotts
Danny Murnaghan

INDIAN HOUSE LAKE, LABRADOR BANDING PROJECT, 1984

V. D. Stotts and D. L. Murnaghan

This Labrador banding project has been a part of a cooperative program between the Atlantic Flyway states, provinces and federal wildlife services. This was the first year that waterfowl were banded at Indian House Lake, Labrador. The primary objective was to band a significant, representative sample of the black ducks inhabiting the region in order to calculate survival rates.

DESCRIPTION OF AREA

Indian House Lake feeds Parke Lake in its northwest quadrant. It is located about 90 kilometers E.S.E. of Goose Bay-Happy Valley, Labrador and is part of the ten-minute block 530-0590. Elevation of the lake is about 375 meters above sea level and can be subject to early frosts and snowfall. The upland habitat is primarily open boreal forest of black spruce, balsam fir and tamarack interspersed with string bogs. Lake, pond and river shores are bordered by dense growths of alder, dwarf birch and willow with minor fringes of sedges and spikerushes. Major waterfowl feeding areas occur on shoals dominated by burreed, arrowhead, dwarf spikerush and bladderwort. The first 3 species are intensively eaten by black ducks. Deeper waters have dense beds of pondweeds (several species), aquatic moss and filamentous green algae. Being part of the Precambrian Shield the general region has major outcrops of rocks, boulders and hard sands. Many aquatic bottoms have 10-25 cm of soft sandy-silt overlaying hard sand or rock.

METHODS

The banding crew set up camp on the northeastern corner of Indian House Lake on August 25, 1984 with suitable bait (mixed, uncrushed barley and corn) not arriving until August 29. Using corn only, minor baiting was done on August 26 and August 28 with heavy, more widespread baiting of mixed bait beginning on August 30. The first traps (7) were set to catch on September 1 in the western sector of Indian House Lake. Traps (4) were not set in the southeastern sector of the lake above Willow Island Rapids (see Figure 1) until September 13. The 6 westernmost traps were temporarily closed on September 19-20 to try to reduce numbers of repeats. All traps were closed on September 27.

All traps were of 2" X 2" mesh, 14 ga., welded wire and were formed from 4' W or 3' H X 25' L sections into lily-pad shapes. Traps were covered with 6' wide, 1" mesh poultry netting. They were held in place by two 5' conduits (3/4" dia.) and 1 wooden stake that also served as a bag-holding stake. Ducks were retrieved with a long-handled dipnet and placed in burlap bags to speed drying. Initial water depth of sets was 10-25 cm, often in soft silt overlaying hard-bottomed shoals. Trap mouths were of slit design with many, especially 4' H traps, requiring additional reinforcing to maintain optimum openings.

RESULTS

A total of 330 ducks was banded (Table 1). Of these, 316 were black ducks with only 6.6 percent adults indicating excellent production in the population sampled. Only a few other species were captured, although good numbers of green-winged teal occurred at times, but inconsistently (Table 2). No retraps were captured.

Regular daily counts of birds showed peak occurrence after mid-September for all species seen on Indian House Lake (Table 2). Although 500 black ducks were estimated for the

area on September 9, 1983 (D. Dennis, pers. comm.), the highest single-day count for 1984 was 385 late in the trapping period. Then, according to repeat records most of the blacks in the area had been banded.

Predation was no problem at this station. Three black ducks, however, drowned in banding traps.

The condition of primary flight feathers was checked in all ducks captured. Green primaries were noted in young black ducks throughout the trapping period. The sample of adults (21) was too small to make a noteworthy assessment of molting. Of interest, however, was the capture of a female with 6 young where all members of the family had 2-5 green primaries.

All black ducks were checked for pinto or speckled feet. Only the adults showed this lack of foot pigment (4 of 13 females and 1 of 8 males).

The best trap sites were located in ponds (Table 3 and Figure 2), possibly influenced by lack of current that was found in stream sites. The biggest catch (many of them repeats) was 23 birds. Some catches occurred even when water levels within traps reached 24"-27" indicating that this bait was very effective.

Traps were cached relatively close to where they had been set. These sites are shown in Figure 3.

Hunters occurred in the area on only a very few days. A few shots were heard toward Willow Island Rapids during the first 2-3 days of September. A group of hunters from Labrador Wilderness Camp on Parke Lake talked with Murnaghan about hunting near baited sites on September 13, but no shots were heard thereafter.

During the period in camp, the temperature dropped to freezing on 5 days, the lowest being -3° C. The first freezing date was September 5. Snowfall or snow/ice showers occurred on September 12, 14, and 27. The early part of the period in camp was warm and dry and lake levels were said to be way below

normal. By September 9, however, rain began to fall with monotonous regularity and lake levels rose 2' from our lowest recorded level in a two-week period. Also, winds of 25-45 knots created some problems with tending traps and vacating the camp (September 29).

RECOMMENDATIONS

1. This station should be continued, especially because of the preponderance of young black ducks that can be taken here. It also seems probable that green-wings can be taken at a few selected sites (far southeast cove of Juniper Pond and at 2-3 sites along Indian House River).

2. The period of operation should begin before September 1 when waterfowl season opens so that "baited area" signs can be posted in the better trapping areas of the western lake edge. It is recommended that the southeastern sector of the lake near Rapids Island not be baited until about September 15-18 when Clyde House's Labrador Wilderness Camp closes down for the season.

3. The period of operation should end when "repeat mortality" appears imminent and new birds become scarce. That appeared to be about September 25 in 1984, but rapidly rising waters obscured the picture.

4. Banders should be aware of the possibility of rapidly rising lake levels and begin to edge their traps toward shore with each rise of about 6".

5. Mixed, uncrushed barley and corn was an excellent bait. Barley alone may be best. Geese did not seem to take to baited sites, but presence of corn may tempt them in the future, thus causing problems with duck trapping.

6. One or two 4' H X 10' W panel traps may prove lucrative, one in Juniper pond and one on Indian House River. Sufficient wire was cached at the station for this purpose. Garden netting for tops is also available - as are construction rods and conduit (must be pieced together with rod, however, because they are only 5' long).

7. A square-end canoe proved sufficient for use with 9.8 h.p. Mercury outboard and a fork prop-guard. Full power, of course, was never used. A larger craft is unnecessary unless the operation expands beyond Indian House Lake. Since winds of 20-40 knots are common, it is strongly recommended that the canoe with 5 broken ribs, a missing strut and a doubly-cracked transom never be used here again (unless suitable repairs are undertaken). It causes too many pucker problems!

8. The current campsite can not be improved upon in this area.

ACKNOWLEDGEMENTS

The Department of Fisheries and Oceans provided a 12' aluminum boat for our use and their Parke Lake cabin was made available for 2 nights while supplies were being transferred to Indian House Lake. The Newfoundland-Labrador Wildlife Division let us use a truck for equipment transfer from Otter Creek in Goose Bay. It also provided equipment storage space in Goose Bay; Al Veitch was most helpful in this respect. Dr. W. Whitman and R. Hicks of Canadian Wildlife Service supervised this operation and provided logistics and assistance in the initial phases. The Canadian Wildlife Service provided equipment and the Atlantic Waterfowl Council provided funds for salaries (in part), materials and supplies. ENVIRONMENT 2000 under Environment Canada provided funds for part of Murnaghan's salary.

Table 1. Age and sex of ducks banded at Indian House Lake, Labrador, 1984.

SPECIES	LF	LM	HYF	HYM	AHYF	AHYM	TOTAL
Mallard						1	1
Mallard X Black			2	5			7
Black Duck	7	3	154	131	13	8	316
Green-winged Teal				1			1
Pintail			2	3			5
Total							330

Table 2. Average populations of ducks and geese noted in the western and southeastern sectors of Indian House Lake in 1984.

Species	8/26-9/1	9/2-8	9/9-15		9/16-22		9/23-27	
	W.	W.	W.	S.E.	W.	S.E.	W.	S.E.
Mallard								
Ave.								Tr.
Range								0-1
Black Duck								
Ave.	56	44	24	14	59	13	67	34
Range	0-111	0-124	1-55	0-32	3-225	0-47	2-290	1-95
G.W. Teal								
Ave.	17	5	3	2	66	7	32	39
Range	0-39	0-17	0-11	0-9	13-126	0-25	7-76	0-100
Pintail								
Ave.	4			5	1	19		25
Range	0-14			0-15	0-5	0-34		6-40
Ringneck								
Ave.			Tr.					
Range			0-1					
Scaup[1]								
Ave.		Tr.	4				Tr.	
Range		0-3	0-15				0-1	
Goldeneye[2]								
Ave.	2	11	19	2	10		25	
Range	0-8	0-30	3-25	0-9	0-26		5-65	

Table 2. Average populations of ducks and geese noted in the western and southeastern (cont'd.) sectors of Indian House Lake in 1984.

Species	8/26-9/1 W.	9/2-8 W.	9/9-15 W.	9/9-15 S.E.	9/16-22 W.	9/16-22 S.E.	9/23-27 W.	9/23-27 S.E.
Scoter[3]								
Ave.	3	7	6	tr.	6	Tr.	1	1
Range	0-9	0-15	0-15	0-2	1-10	0-2	0-2	0-3
Merganser[4]								
Ave.	12	6	5	5	4	1	2	Tr.
Range	0-36	0-27	0-21	0-27	0-9	0-4	0-5	0-1
Canada Goose								
Ave.	11	16	15	4	2	8	60	3
Range	0-39	0-57	0-48	0-8	0-10	0-35	0-150	0-17

[1]possibly both greater and lesser species

[2]probably common goldeneye

[3]all identified were surf scoters

[4]believed to be red-breasted mergansers

Table 3. Date, trapsites, and weekly averages of Mallards, Black Ducks and their hybrids.

TRAP SITE	9/2-8	9/9-15	9/16-22	9/23-27	Total
1. Beaverdam Island (N)	5	18	7		30
2. Beaverdam Island (S)	15	24	9	1	48
3. Back Gut					0
4. Indian House River		3	9	7	19
5. Blueberry Pond	37	20	5	7	69
6. Juniper Pond (S)	30	35	23	12	100
7. Juniper Pond (N)		13	11		24
8. Northwest Rapids Island					0
9. East Rapids Island Pond		3	14	9	26
10. Southeast Rapids Island (N)			1	6	7
11. Southeast Rapids Island (S)			1		1
Total	87	116	79	42	324

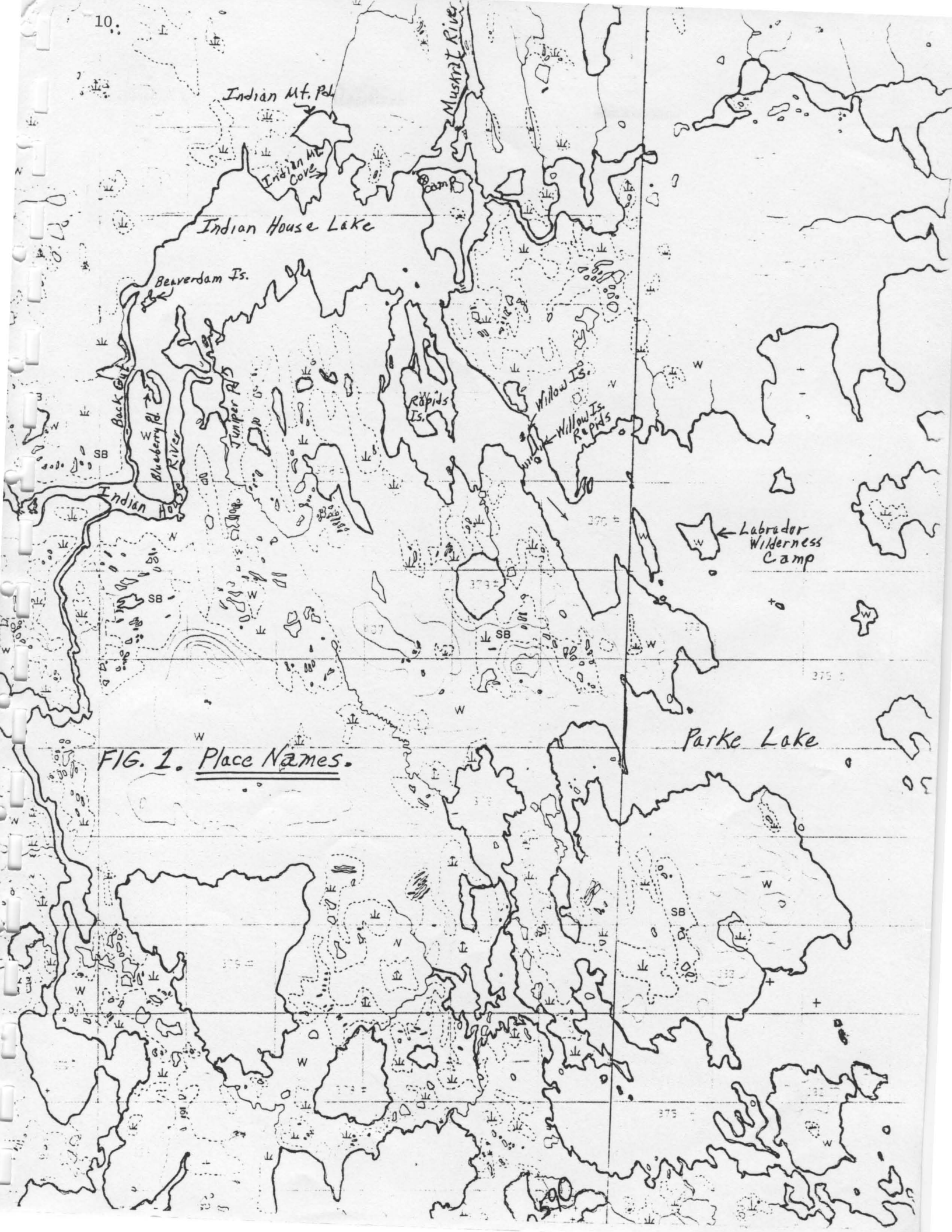


FIG. 1. Place Names.

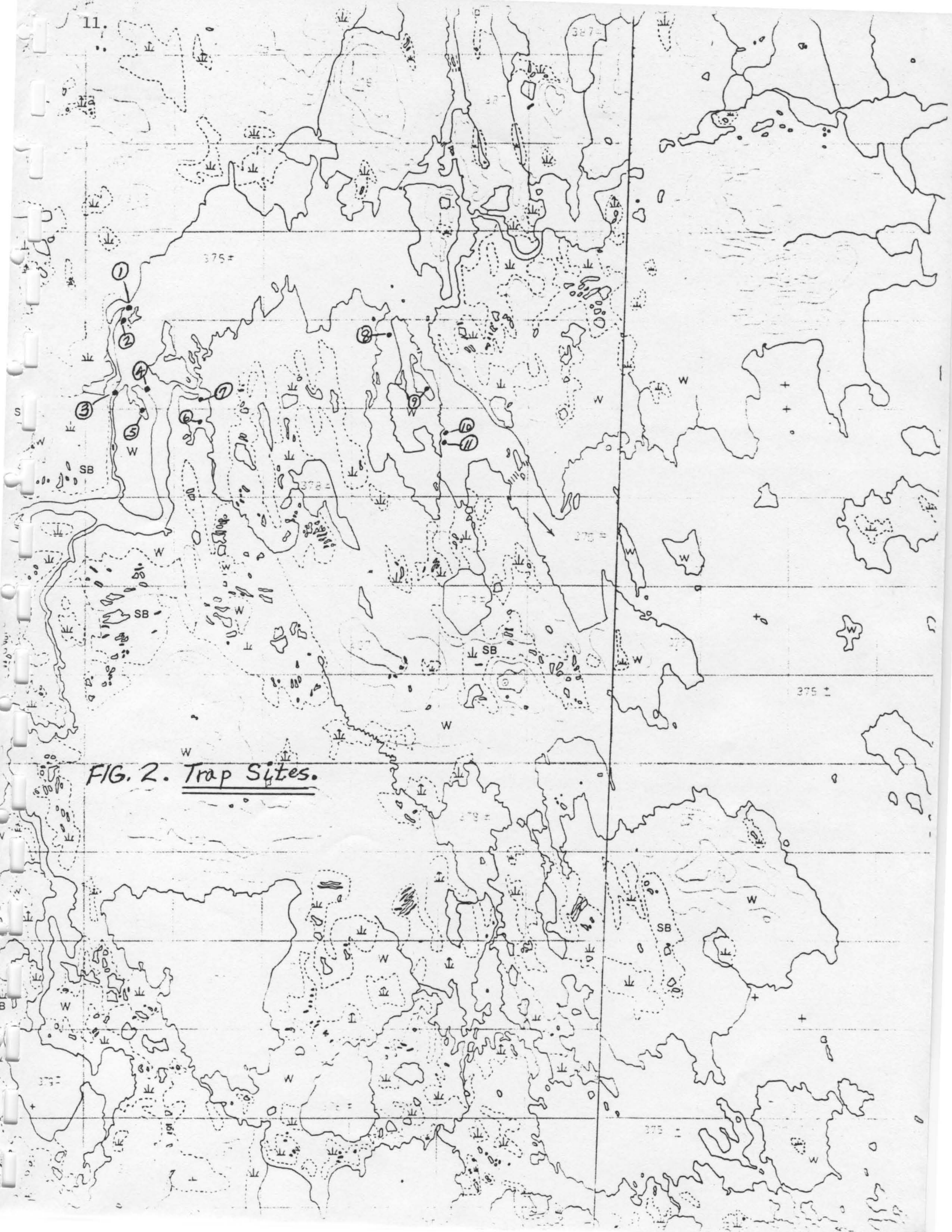


FIG. 2. Trap Sites.

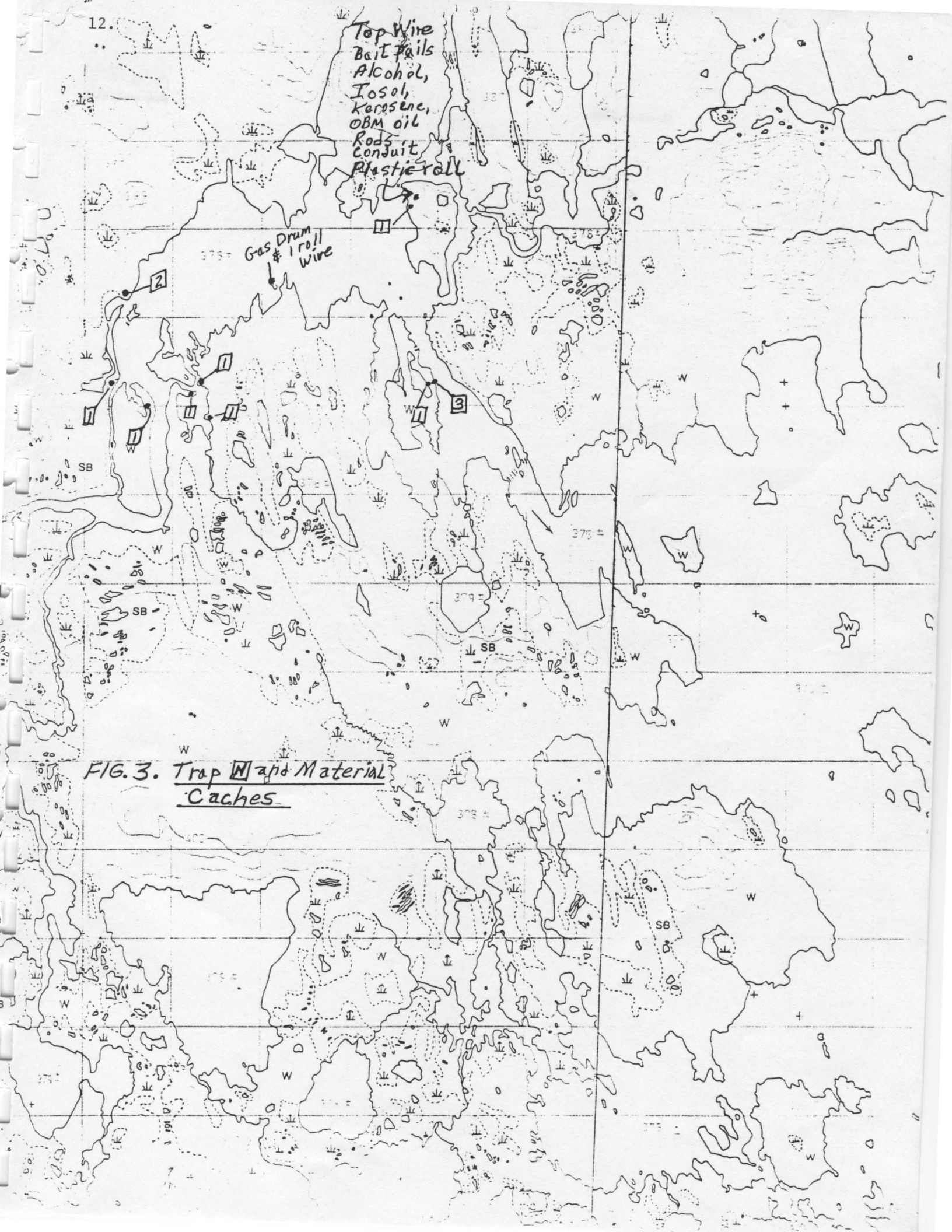


FIG. 3. Trap [N] and Material Caches

Aerial Surveys
SW Labrador

AERIAL SURVEYS OF POTENTIAL BANDING SITES

SOUTHWESTERN LABRADOR - SEPTEMBER 1984

Since 1980 aerial surveys have been conducted annually in Labrador to locate molting and staging concentrations of Black Duck and Canada Geese for potential banding operations. Those surveys have resulted in the successful establishment of banding stations at Snegamook Lake, Tinker Harbour, Nutak and most recently, Indian House Lake (Figure 1). Black Duck banded at Snegamook Lake and Nutak have been almost entirely composed of molting adult males which have not been previously sampled in comparable numbers anywhere in the Black Duck range. At all locations, eventual success has required one to two years of trial and error operation. The expense involved has been substantial; but the knowledge and experience have now been accumulated to guarantee that significant numbers of Labrador Black Duck can be banded annually at each location.

In September, 1984 aerial surveys of some potential concentration areas were conducted in southwestern Labrador. The Smallwood Reservoir and its associated drainage system are located in that part of the province and support some of the highest breeding populations of waterfowl to be found in Labrador. Specific sites surveyed were determined from intensive breeding pair survey data collected in 1980 and reports from local hunters. Those areas are identified as (1) Atikonak - Lac Joseph; (2) Julian Lake; (3) Baike Lake; and (4) Wade Lake - Wood Lake. The location of the areas are shown in figures 2 and 3 and the results of the 1984 surveys are

listed in Table 1. The numbers of waterfowl observed do not appear significant when compared to banding areas further south; however, by Labrador standards all four survey areas contained sufficient numbers to warrant a banding attempt. Fewer birds were seen on similar surveys of areas such as Indian House Lake where successful banding operations have been carried out.

Both Atikonak - Lac Joseph and Wade Lake - Wood Lake are accessible only by air; thus, increasing the cost of operating banding stations in those areas. Julian Lake and Baike Lake both appear to be accessible by road and/or canoe. While the cost of operation is significantly reduced in these areas, some disadvantages may be encountered. First, since the prime banding period will extend into September, a conflict with hunters is likely. Secondly, because they are popular hunting locations, trap vandalism and poaching may occur. Although good success can be expected in any of the survey locations operating costs and reduced budgets dictate that the accessible areas be given the higher priority.

Julian Lake and Baike Lake possess excellent banding sites for both Black Duck and Canada Geese. Water level fluctuations caused by manipulation of the reservoir create exposed mud flats around the perimeter of these lakes which provide opportunities for both bait trapping and rocket-netting. The latter technique will best enable the capture of Canada Geese, a species that has not been successfully sampled in the Atlantic Region. With some

cooperation of the Churchill Falls, Labrador Corporation in procurement of lodging, banding sites could be successfully operated for an estimated $9000.00..

A potential cost breakdown is as follows:

Personnel:	2 persons for 6 weeks	$4000.00
Equipment:	Truck, canoe, camping needs, rocket nets, etc. Provided by CWS	Nil
Materials & Supplies:	Bait, fuel, rocket net charges, wire, etc.	$2000.00
Food and Lodging:	Purchased from CFLCO	$2000.00
Miscellaneous:	Freight, travel to Churchill Falls, etc.	$1000.00
	Total	$9000.00

Table 1. Waterfowl Observed in Aerial Surveys of Potential Cooperative Banding Sites in Southwestern Labrador - September 4, 1984

Survey Area	Black Duck	G.-w. Teal	C. Geese	Goldeneye	Other	Total Waterfowl
Atikonak - Lac Joseph	196	10	48	10	4 Common Loons	164
Julian Lake	70+ Brood of 6 yg class 2c	0	7	0	1 Osprey	83
Baike Lake	25	25	100	0	0	150
Wade Lake - Wood Lake	51	10	56	0	1 Adult Bald Eagle	117

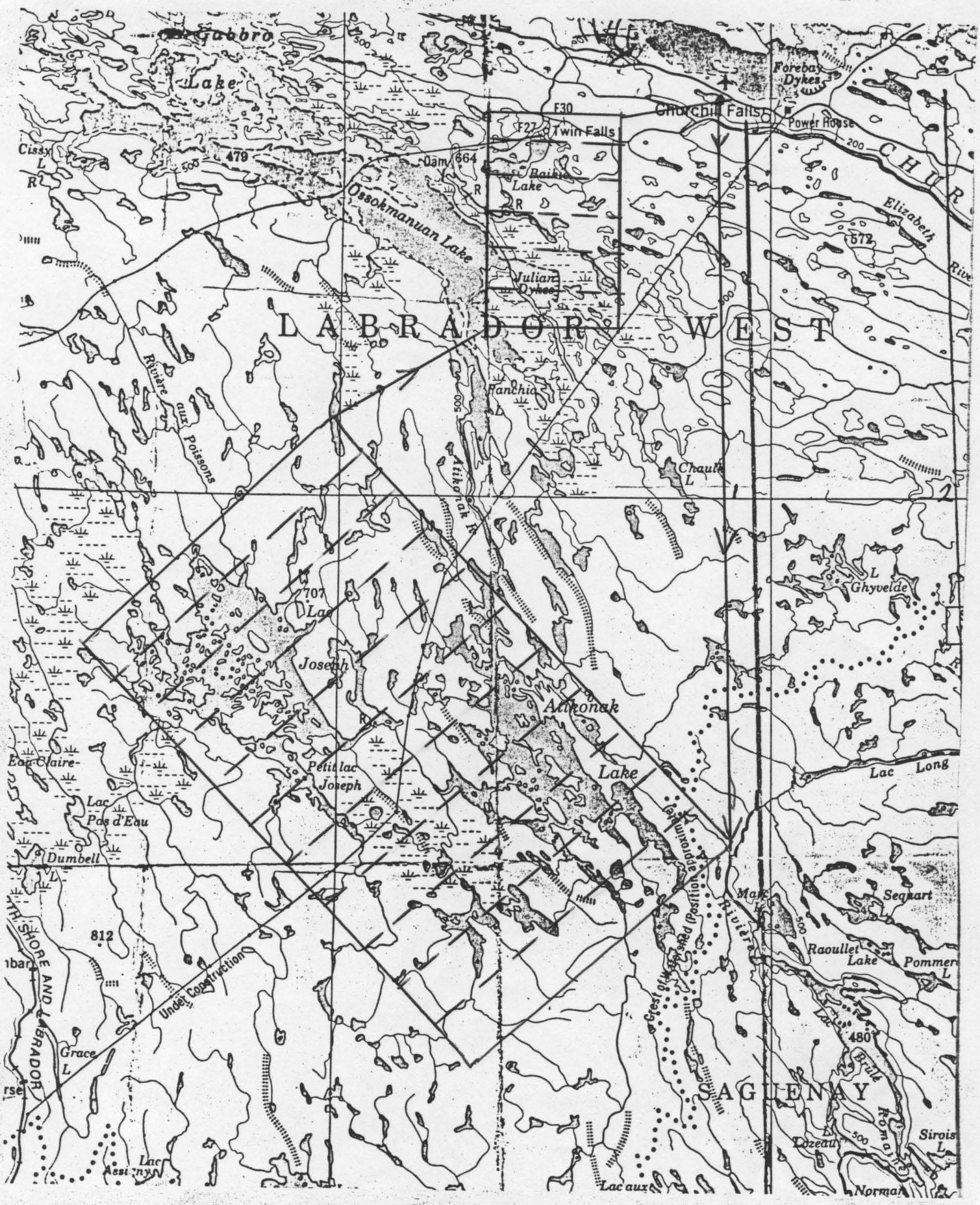


Figure 2: Atikonak Lake, Lac Joseph, Julian Lake and Baikie Lake Survey areas.

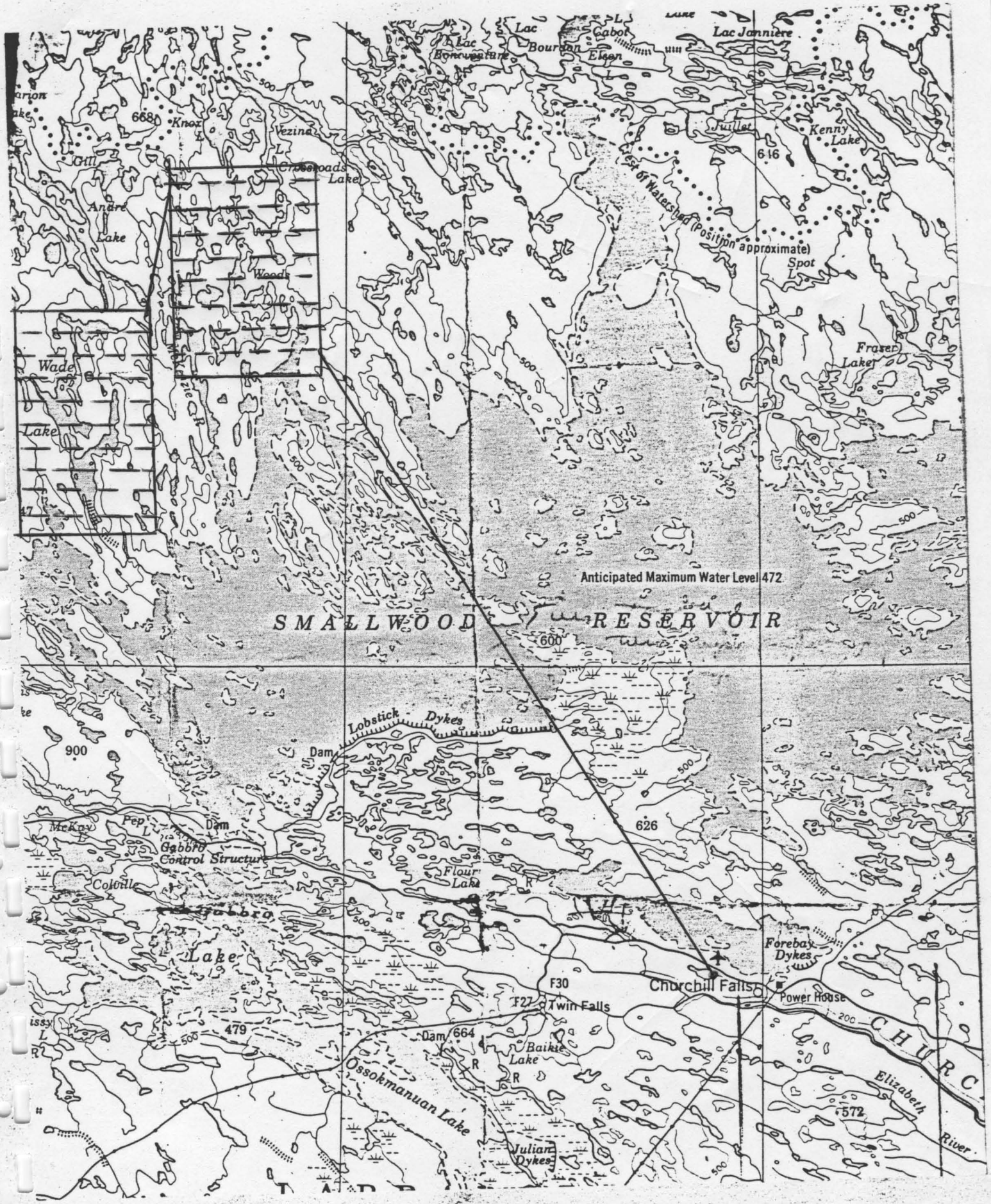


Figure 3: Wood Lake and Wade Lake Survey Areas

Codroy Valley
Newfoundland

CODROY VALLEY, NFLD.

BAIT TRAPPING

1984

Banders: David Morrow
Brent Eagles

CODROY VALLEY BAIT TRAPPING August 29 - September 24, 1984.

A total of 678 ducks of four species and one hybird were banded during the 1984 banding project.

Banders Brent Eagles and David Morrow, arrived at Gillis cabins on the 29 of August. Equipment left at the Dept. of Fisheries shed at South Branch last year was picked up and found all in good order.

A preliminary survey of the river estuary on August 30, revealed about 500 geese, 300 black duck and 250 green winged teal. Dave Morrow commented that there wasn't as many ducks compared to that date last year. A more intensive study was done on August 31, which was the following:

CANADA GEESE 900+

BLACK DUCK 300+

GREEN WINGED TEAL 250+

BLUE WINGED TEAL 4

PINTAIL 5

AMERICAN WIGEON 7

On August 30 and 31 trap site 4 (McCARTHURS Island) and trap site 5 (SAND PIT Island) also trap site 6 (CORMIERS pond) were baited with corn. By September 1 ducks were on bait and trap sites 4 and 5 were erected but not operational. Trap sites 1, 2, 3, 8, and 10 were baited but the bait was not touched.

On September 2, the first ducks were banded and trap 6 was made operational (traps 4 and 5 were made operational late evening on September 1). The most successful day with a total of 74 ducks was September 15.

On September 12, traps 4 and 5 were tampered with by poachers, we continued trapping and making sure the traps were cleared of ducks just before dark. In actual practice, a complete check of traps was initiated just before dark, and

completed after dark. The traps were tampered with on the following dates:

September 14 - trap 5

September 17 - trap 6

September 19 - traps 5 and 6

September 20 - trap 5

September 22 - trap 8

September 23 - trap 8

One black duck was found hanging by the neck in trap 8 on September 23. The R.C.M.P. were called and arrived on September 20. The two officers ED WALSH and SANDY ARCHIBALD were from the General Enforcement Service, from Corner Brook. On the following day another officer, constable WHELAN from the R.C.M.P. in Port Aux Basques came by and told us that they had a shortage of manpower and there was not much they could do. Other problems were with mink in the trap locations, the live traps were put out but with no success, the total number of ducks lost to mink were 3 black ducks and 4 green winged teal.

The number of ducks and geese in the area fluctuated during the period August 29 to September 24, black ducks in particular increased to a high of 550 during the week of September 10 - 17 and a decrease to approximately 200 by September 24. Canada Geese increased to approximately 3,000 by September 17, and remained fairly constant after that date. A similiar trend with G.W.T. showed a high of 600 on the same dates.

OBSERVATIONS AND COMMENTS

Other waterfowl seen during the 1984 banding program included:

Ring Neck Duck (20 were seen)

Mallard (4)

Red Breasted Merganser (20)

Double Crested Cormorant (25)

We did not see any of the following:

Pied-billed Grebe, Common Golden Eye, Common Loon, Great Cormorant, Common Eider, Harlequin, Oldsquaw or any of the Scoters, however we spent little time observing along the seacoast outside the estuary.

RECOMMENDATIONS

1. In relation to the poaching problem our suggestion to alleviate the problem would be to have an efforcement officer work with the crew.
2. Making sure that the traps are cleared before dark and finding good trap locations inaccessible by foot.
3. Attempt to meet land owners near trap locations and ask them to help keep an eye on traps.
4. If possible to equip truck with a spotlight and/or a nightscope - essential.
5. 600 green winged teal bands (size 4) - it seems quite feasible to band that many.
6. A public meeting should be arranged to inform residents and hopefully enlist the aid of sympathetical individuals.

CONTACT PEOPLE

ED WALSH and SANDY ARCHIBALD - General Enforcement Service of the R.C.M.P. in Corner Brook 634-4357.

Constable WHELAN - R.C.M.P. in Port Aux Basques 695-2149.

Evenrude Dealer in Port Aux Basques 695-2115.

Report submitted by: Brent Eagles
David Morrow
September 24/84

Equipment Stored at Gillis Cabins for Bait Station in Codroy

Trap wire, netting, and poles.

Bait buckets (2)

Canoe paddles (2)

Dip nets (3)

Coleman lantern (1)

Burlap bags (3)

2 beef buckets

2 live traps

"Notice" sign posts

Equipment stored at South Branch 2 life jackets

Age and Sex Breakdown - Codroy River, 1984

Species	Hatching Year			After Hatching Year			Total		
	M	F	Total	M	F	Total	M	F	Total
Black Duck	148	72	220	5	8	13	153	80	233
Black Duck X Mallard Hybird	1		1				1		1
Mallard	1	1	2				1	1	2
Green winged Teal	226	173	399	5	21	26	231	194	425
Pintail	4	13	17				4	13	17
TOTALS	380	259	639	10	29	39	390	288	678

Carmanville
Newfoundland

CARMANVILLE, NFLD.

BAIT TRAPPING

1984

Bander: George Brinson

BAIT TRAPPING, CARMANVILLE, NFLD. I984

A waterfowl bait trapping station was in operation in the Carmanville, Nfld. area, during the period August 3 to September 7, I984. I2I ducks were banded, and one recapture from I983 banding, for a total of I22 birds.

Banding took place on Middle Arm, the salt water bay east of Carmanville. The entrance to the arm is blocked by a bar, preventing full tidal fluctuation with a high to low tide range of less than Im. The inner arm has extensive beds of eelgrass and large areas of exposed mudflats, making it excellent waterfowl and shorebird habitat. Trapping took place in this area, using same sites as in I983. Fig. I. Access to the traps was by power boat, from a launch site near the end of the road at Carmanville South. A trail is also present,from highway 330. Fig. I.

Baiting began August 3. First traps were erected Aug. I6, with first birds banded August I8. Baiting continued untill September I, and banding ending September 7, one week prior to opening of hunting season in area.

A total of 55 Black Ducks, 63 Green-wing Teal and 3 Blue-wing Teal were banded. In addition, one Green-wing Teal from I983 banding, was recaptured, for a total of I22 birds.

Species, sex and age breakdown of banded birds are listed in table I.

Table I. Age and sex breakdown, I984, Carmanville, Nfld. Waterfowl banding project.

Species	HATCH YEAR			AFTER HATCH YEAR			TOTALS		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Black Duck	26	26	52	2	I	3	28	27	55
G.-w Teal	23	35	58	2	3	5	25	38	63
B.-w Teal	--	2	2	I	-	I	I	2	3
TOTALS	49	63	II2	5	4	9	54	67	I2I

There was one recapture from the I983 banding project. A Green-wing Teal, band number 554-4580I, banded 8-20-83 at location # 2 (Fig. I), and recaptured 8-30-84 at same location, and again at same location, 9-2-84.

The overall Black duck population seemed to be down throughout the general area this year. At no time were more than 40-50 blacks observed, compared to the I983 season, when approximately I00 blacks were using the arm by September I. The numbers of Teal observed were comparable to I983, with identical numbers being banded. No Blue-wing Teal were banded in I983, however.

One Mallard was observed near one trap at location I, August I8. Two Pintails were observed at location 3, August I0. One White-winged Scoter was observed on the inner arm on several occasions during the last two weeks of August. Several broods of Red-breasted Mergansers were observed throughout the arm, as this a favourite nesting area.

As stated earlier, baiting began August 3, at beaver pond, location 3. However, the scarcity of ducks on pond, and the failure to take bait, resulted in the abandonment of site Aug. I3. Baiting on salt water began August 6, at two locations (Fig.I) However, ducks did not frequent location 2 until August 20, with first birds banded at this location, August 27. Five traps were used at location I, and three at location 2.

An apparent poaching incident occurred September I, at location I, where upon arrival at site, one trap had one funnel opened and ducks either taken or released. The local detachement of the RCMP were notified immediately, along with the local wildlife law enforcement officer.

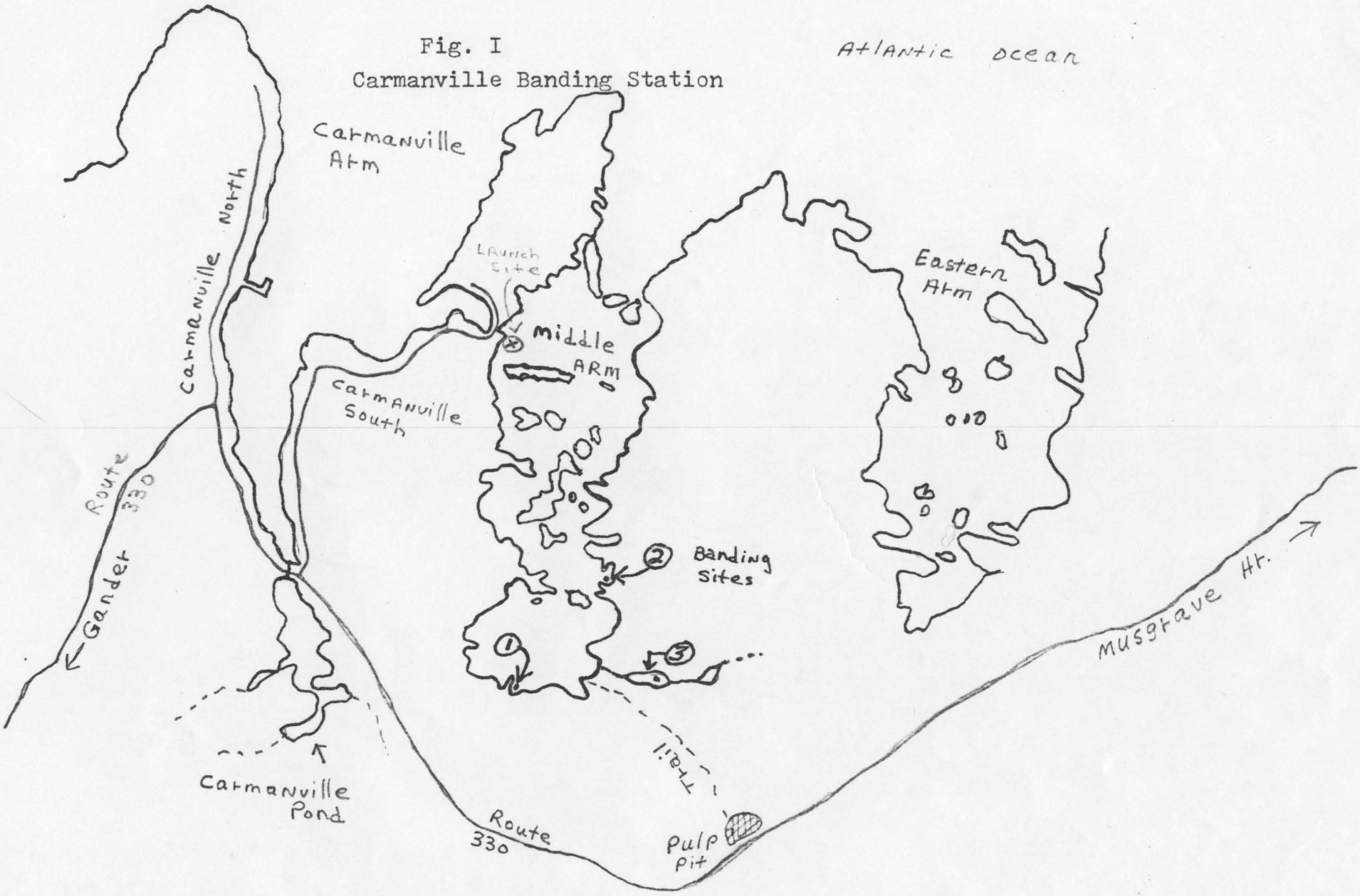
Fear of further problems at this site, resulted in all five traps being removed on that date, as only seven days remained in trapping period. Another I5-20 birds were probably possible at this site, if traps were not removed. Banding continued at location 2, until September 7, with no further problems.

No problems occurred with predators, although mink were common in area. The problem experienced with Bald Eagles in I983, did not occur this year, although two eagles were present throughout the whole banding period.

Seven traps have been stored here for further use, if banding should continue, next season.

Fig. I

Carmanville Banding Station



Conclusions:

While comparing the results of this years banding, with those of I980, the first year of banding at this station, it can be concluded the year was very successful, as the total for I980 was 58 birds, compared to I22 for I984. The total for I983 compares to this year, with I27 birds last year. If all traps had been used to end of season, possibly I40-I50 birds may have been obtained this year. Considering our location on the Atlantic Flyway, being on its north-east extremity, the numbers from the specific area should be considered excellent when compared to results from other areas of the east half of the province, in recent banding projects.

ACKNOWLEDGEMENTS

I would like to thank Wilbert Harvey, Carmanville South, for the volunteer assistance he provided again this year. Mr. Harvey assisted in the erection of most traps, and again in removal at termination of project. He also accompanied me on numerous occasions, assisting with banding.

Thanks also, to Dr. Richard Elliot, for delivery of trap materials from St. John's, and to the provincial Wildlife department for delivery of grain used for bait.

George Brinson,
Box 204, R.R. # I,
Carmanville,
Nfld. A0G IN0

Waterfowl Banding - Dog Captures, Upper Humber R. 1984

During work on marsh classification in 15-22 July 1984, seven Black Ducks were captured, banded and released using a Labrador retriever. While no special effort was made to band waterfowl it appeared that such an approach could be quite successful in this area because broods and molting hens frequently take cover on land when approached by canoe. The 1984 season appeared particularly poor for waterfowl breeding production in Birchy Basin. As had been noted in previous years during night-boat banding, the production of waterfowl in the upper Humber R. watershed can vary tremendously from year to another. This appears attributed to the unpredictable nature of water levels in this extensive floodplain area. According to Bowaters personel, the water levels reached record heights in late May due to heavy rains. This may have resulted in the loss of clutches to waterfowl nesting on the floodplain because the entire area was submerged for several days. The late timing of the flood may have resulted in little renesting because most Black Duck and Green-winged Teal clutches would have been about to hatch.

Neds Steady, Aides Stream, and Little Birchy Lake were covered during these surveys. The following are the waterfowl observed during the visit.

Black Duck - 2 broods of unknown size, dog retrieved class 3 individuals from areas were broody hens were observed.
2 adult molting hens, no broods present
2 broody hens, no broods detected
5 singles, suspect males

Green-winged Teal - 1 hen with 5 class 3 ducklings
1 single flying

Ring-necked Duck - 4 hens with broods, class 1b
10 post-breeding drakes

Common Goldeneye - 2 hens with broods (class 2c)
1 drake

Red-breasted
Merganser - 6 single hens

1 hen with 12 class 2a ducklings

Given the unpredictable nature of water levels and consequent waterfowl production in the Birchy Basin, it is likely more feasible to attempt a more intense dog-banding effort than gamble on using the air boat. In a year of good production it is conceivable that 40-50 waterfowl could be banded in this area. If other works were ongoing, then the expenses would be minimal.

R. Ian Goudie
Canadian Wildlife Service
St. John's, Newfoundland

P.E.I. Rocket
Netting

Prince Edward Island Rocket Netting

1984

Bander: Randy Hicks

Introduction

Projectile traps were first used in England in 1948 when rockets were first employed to propel the nets. Since that time, improvements and modifications have been made in the equipment and techniques.

In 1982, a complete Rocket Net was borrowed from the Middle Creek, Management Area, Pennsylvania so it could be duplicated.

In the spring of 1983 the net was used at three different pre-baited areas on P.E.I. for the purpose of banding Migrating Canada Geese. It was then decided that it would be feasible to construct two Rocket Nets for the following spring (1984).

Preparations

In the winter of 1983-84 two nets were constructed similar in design to the net from Middle Creek. The nets along with the harness were made by Aqua Equipment Ltd., Lower Caraquet, N.B. The size of the nets were 40' x 50' x 60' and were constructed of 1/16 inch nylon fish net rope with 2 inch mesh.

The rockets were made by a local resident Alf Lynch of Frosty Hollow, and were construced of two foot pieces of seamless tubing 1/4 inch thick with one end closed and the other end threaded for the lower unit cap. The lower unit cap was machined with one end threaded and the other end closed with seven port holes.

The boxes were made at the CWS office of 3/4 inch plywood, 24 inches high x 15 1/2 inches wide that narrowed from

48 inches open to a 24 1/2 closed back. The boxes also had four launching channels constructed on top. These channels were made of 22 inch 14 gauge galvanized metal triangular posts. The rear ends were bolted flush to the box and the front ends 3 inches from the box. The boxes then were painted camouflage green (Figure 1).

The charges used to propel the rockets were purchased from Wildlife Materials Inc. of Illinois and were M6 175 mm Propellant Class B charges.

The wire used to connect the charges to the power supply was bell wire which was spliced together to make a piece 130 feet long. The power supply was a dynamite plunger or house current.

Methods

Six areas were picked for the purpose of banding migrating Canada Geese by the P.E.I. Fish and Wildlife Department. These areas were first baited and dummy boxes set up. The areas were determined potential banding sites for one or all of the following reasons: (1) it was known that geese use the areas from year to year; (2) there was easy access to the banding site; (3) the banding site was easily observed without disturbing the birds; (4) they were large enough areas to project the net freely; (5) consent was given by land owners to use the areas; and (6) they were near a Wildlife officer's house or his area of patrol so he could keep an eye on the site and make sure it was kept baited (Figure 2, 3, 4, 5).

As the numbers of geese increased on there migration north and the number of birds on bait increased, the dummy boxes were replaced by the Rocket nets. These were usually placed at the edge of a field or near some kind of permanent land mark so as not to look too obvious.

The box method was the easiest to set, conceal and to move to other trap sites. When setting up the box trap, it was best to place the box on its side at the center of the trailing edge of the net with the open end raised up 2 to 3 inches facing the open net. The net was spread out on a debris-free ground to avoid picking up sticks which might cause tangles and in turn keep the net from spreading (Figure 6).

Two procedures for packing the net were used. One involved leaving the two outer most corners of the net outside of the box. This was done by extending the two rear corner drag lines full length on each side of the box, then moving them 20 to 30 degrees to the rear of the box. The middle two drag lines were placed inside of the box and the net was pulled as evenly as possible while at the same time pleating it until it was all packed in the box except for the outer most corners of the net which were camouflaged with hay.

The second method projected the net directly from the ground. This was accomplished by spreading the net out fully and then pulling as evenly as possible while at the same time pleating it until completly hauled in. Then it was covered by hay to camouflage it (Figure 7).

After the nets were set up the rockets were attached. Special care had to be taken to secure the rocket ropes on the leading edge of the net to their proper rocket channels in the case of the box type trap. If the net was projected directly from the ground, the rockets were stuck in the ground behind the rocket nets. Special care had to be taken not to set the rockets on too sharp an angle as they would shoot the net straight up in the air and the birds would have time to get away. The rockets then were wired in a series and taped. Special care also had to be taken not to have the wire hooked up to a power supply when arming the rockets. It was good practice to wire the two ends together so as to short out everything while hooking up the Rockets. The wire then was rolled out to the observation point.

Baiting the area was done with whole corn which was supplied by the P.E.I. Fish and Wildlife Department. The bait was spread out close to the packed net with a bit spread around the ground surface area that the net covered when fully stretched out (Figure 7).

The power supply was only set up when a shot was going to be executed. This took place right at the observation point so the shot could be made at the right time.

Results

A total of 23 birds were banded this year (1984) between April 13 and May 6. Of those, 20 were Canada Geese and the remaining 3 were Black Ducks. One foreign recapture was also netted which was an AHY - M Canada Goose and had a yellow

neck band. Table 1 summarizes this total by sex and age class, while table 2 summarizes the total by banding sites.

Discussion

The 1984 P.E.I. Goose banding attempt was just that, an attempt at best. A number of problems plagued this years banding and most poor catches or misses with the net were due mainly to equipment failure and inexperience. Upon the first firing of the nets it was obvious they were too heavy once the force provided by the charges was insufficient to project the nets to their full extent. It was obvious that an increase in the size of the charges was required. Initially two extra pellets wer added to each charge but the resulting force remained insufficient to fully extend the net. Next five extra pellets per charge were added. This caused the rockets to fly apart, this showed that the threads securing the lower unit on the rockets. Deeper threads were required to handle the added force.

The charges were finally increased by three pellets per charge. With this adjustment one net extended to about 3/4 of its length and spread uniformly. Since the nets were heavier than the original net from Middle Creek, they spread slower as well as covering a shorter distance which gave the birds more opportunity to fly away.

The rocket net boxes and dummy boxes were painted different color which kept the birds from moving in close to the net boxes when they replaced the dummy boxes. One dummy

box was repainted during the banding period to resemble the net boxes which helped to bring the birds in closer range.

One net, which was too large for its box, was very difficult to camouflage. In trying to keep it out of site it was packed so tightly that spreading was hampered when fired. An old net, which was projected directly from the ground, was also used. Generally, this performed well if extra care was taken to keep the wires to the charges from tangling. Even though this net spread out faster and more evenly, its smaller size left it at a disadvantage since it required that the birds be in very close range.

Only one attempt failed which was not related to the performance of the equipment. A man taking a boat to the water inadvertently drove over the wire. Therefore, when the shot was ready to be executed the power supply was cut off to the charges because of a break in the wire. Other factors that influenced success included weather, loaction of banding site, distance judgements, and intraspecific competition for bait. The birds tended to move close to the bait and the rocket net boxes on days when the weather was quite stormy; wind, rain or preferably snow. The chosen areas proved to be ideal sites for the banding project except for one site located on a plowed field which rendered it quite inaccessible and a poor place to band birds as they would end up caked with mud. When the nets were set up at the edge of a field or treeline, the shots were generally more successful than when nets were set up in the middle of a field. The box tended to be less obvious and birds moved into range more readily.

From the observation points, it was often difficult to judge the distance of the birds from the boxes. Inconspicuous, markers were set up that were visible from the observation points to facilitate distance judgements. Frequently the more aggressive birds drove others outside of the netting area resulting in reduced capture success.

Recommendations

A number of recommendations should be considered if the project is to be continued.

1) One additional rocket should be added to each of the box type
   nets increasing the number from four to five. This would result in the nets being projected faster and further.
2) The threads should be adjusted so they will withstand increased charges.
3) Metal should be used to cover the side of the box that the rocket launches are on to prevent damage to the box itself from the force of the charges.
4) Dummy boxes and rocket net boxes should be painted identically. ie. brown colors.
5) One rocket net box should be replaced by a larger one to accommodate the size of the net.
6) More areas should be pre-baited and used in the banding project.
7) It is also recommended that all nets, rockets, charges, and other equipment be thoroughly checked prior to the beginning of the banding period since, at that point, even one afternoon lost is critical.

Conclusion

The 1984 P.E.I. Goose Banding Project gave us answers to many of the questions concerning the equipment involved and provided experience in the use of projectile traps; however, only a small number of birds were banded.

Most of the problems encountered in 1984 can be overcome and it is realistic to assume that 100 to 150 Canada Geese can be netted in a season.

Acknowledgements

I would like to thank the P.E.I. Fish and Wildlife Department for their assistance in the program. Special thanks to Phil Ward for his help and hospitality throughout the banding period.

List of Bands used 1983-84 P.E.I. Goose Banding

698-84001-84003

728-15316-15332

1237-60219-60221

Table 1.

Total banded waterfowl by sex and age class, P.E.I. Rocket Netting - 1984.

Species	After Hatching Year F	M	U	Total
Canada Goose	12	8	-	20
Black Duck	1	2	-	3
Total	13	10	-	23

Table 2.

Total banded waterfowl by field, P.E.I. Rocket Netting - 1984.

	Glenfinnan After Hatching Year			St. Elenor's After Hatching Year			Vernon Bridge After Hatching Year			Total
Species	F	M	U	F	M	U	F	M	U	
Canada Goose	7	3	-	3	4	-	2	1	-	20
Black Duck	1	2	-	-	-	-	-	-	-	3
Total	8	5	-	3	4	-	2	1	-	23

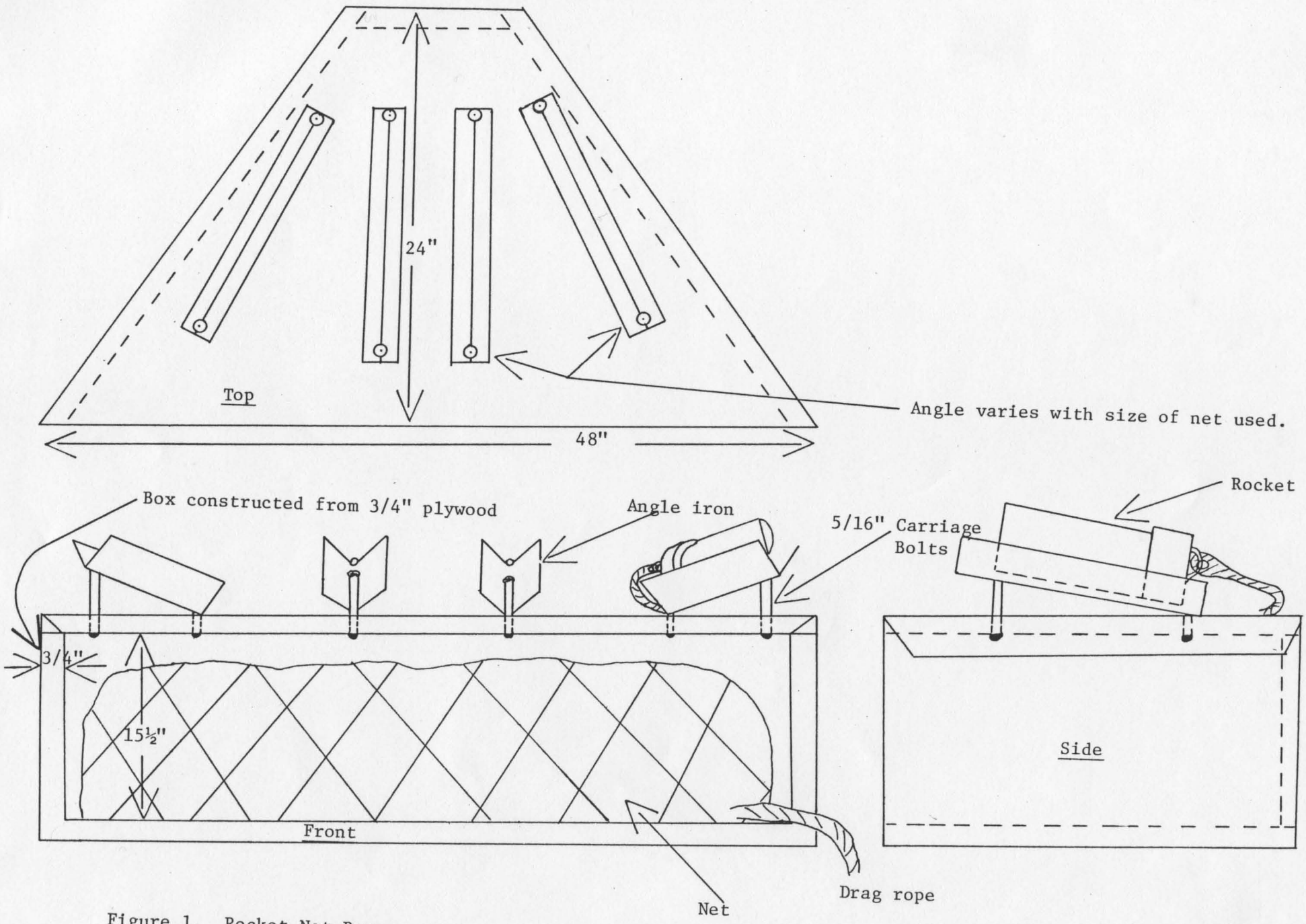


Figure 1. Rocket Net Box.

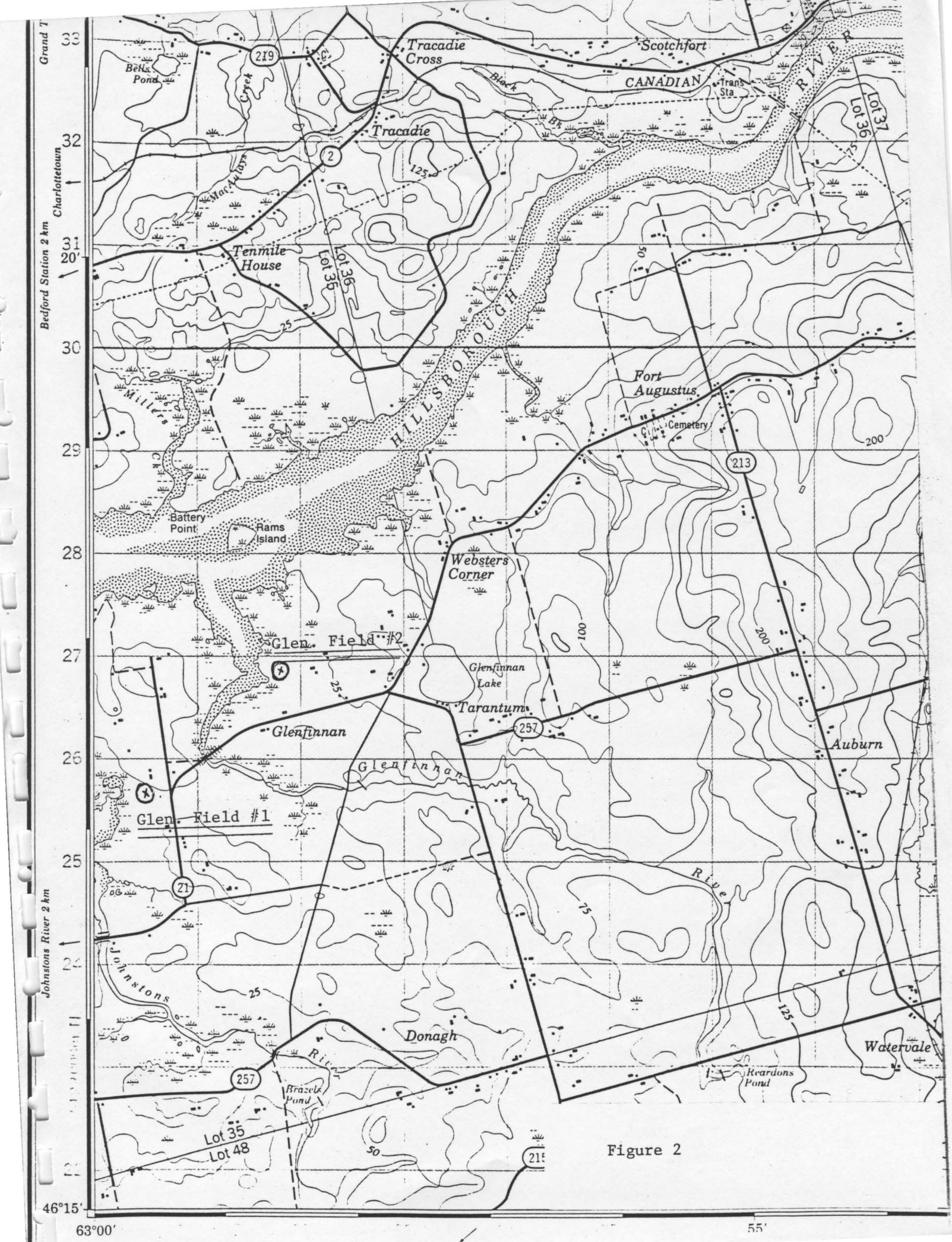

Tracadie Cross
Scotchfort
CANADIAN
Trans Sta
Bells Pond
Creek
Black
Tracadie
MacAulays
Tenmile House
Lot 36
Lot 35
Lot 37
Lot 36
HILLSBOROUGH
Fort Augustus
Cemetery
Millers
Battery Point
Rams Island
Websters Corner
Glen. Field #2
Glenfinnan Lake
Tarantum
Glenfinnan
Glenfinnan
Glen. Field #1
Auburn
River
Johnstons
Donagh
River
Brazels Pond
Reardons Pond
Watervale
Lot 35
Lot 48
219
2
213
257
21
257
215
Grand T
Bedford Station 2 km
Charlottetown
Johnstons River 2 km
46°15'
63°00'
55'

Figure 2


Carruthers
Forestview
Locke Road
143
Lot 10
Lot 9
O'Leary
142
Knutsford
125
Mount Royal
140
Pierre Jacques River
Milburn
PRINCE
Glenwood Pond
Glenwood
Dunblane
139
164
Lot 8
14
O'Leary Field #1
LG MG
Little Pierre Jacques River
Dog Creek
Wolfe Inlet
Indian Point
75
74
73
72
71
70
69
68
67
66
65
64
98
99
00
01
02
175
150
125
100
75
50
25

Figure 3


Lake Verde
C N
Lake Verde
Mount Albion
5
Moss L
Lake Verde Sdg
Lot 48
Lot 49
CANADIAN NATIONAL
125
75
100
Village Green
216
213
100
Stewarts Pond
Creek
56
150
Mount Mellick
Worths Pond
Bradley Ck
49
Ross
Millview
104
Seal River
VERNON
50
47
3
Seal
River
Wrights Ck
25
50
212
100
Cherry Valley
Trans-Canada Highway
Vernon Bridge
Vernon Sta
P
Cherry Valley Cove
Jennys Pt
Jobs Pt
Motel
Vernon River Field #1
SIR
Throggys Marsh
Finleys Pt
75
Orwell Historic
1
Dump
Orwell River
30
China Point
Davies Point
Walls
Carnscliffe
Orwell
Orwell Cove
P
R

Figure 4


MALPEQUE
BAY
Shemody Point
Rosehill
Bentick Cove
Beaton Ck
Webber Pt
Gate
Ditch
Tanks
North
St Eleanors
CFB Summerside
(Summerside Aerodrome)
Control Tower
Radio Towers
Miscouche
Carrs Creek
Middle Creek
Compton Creek
Platte River
Waite Ck
Fence
Slemon Park
Sewage Disposal
St Eleanors
Field #1
Lot 19
Sherbrooke
Asphalt Plant
Radio Towers 120'
St Eleanors
Transformer
Gravel Pit
Linkletter Creek
Linkletter
St Eleanors Sta
Gravel Pit
Lot 17
Lot 19
Trailer Park
Motel
Water
Greenhouses
Golf Course
Race Track
Hosp
Summerside
Theatre
Radio 215
Motel
Camp & Picnic Site
Skeet Range
Dam
BM 57
Reservoir
Oil
Wilmot
Seawall
BM 7
Trailer Park
Motels
Linkletter Shore
Phelan Pt
BM 12
Glovers Shore
Hilson Pt
Wilmot River
MG
Indian Spit
Breakwater
Holman Island
Lot 25
Indian Head
McDonald Pt

Figure 5

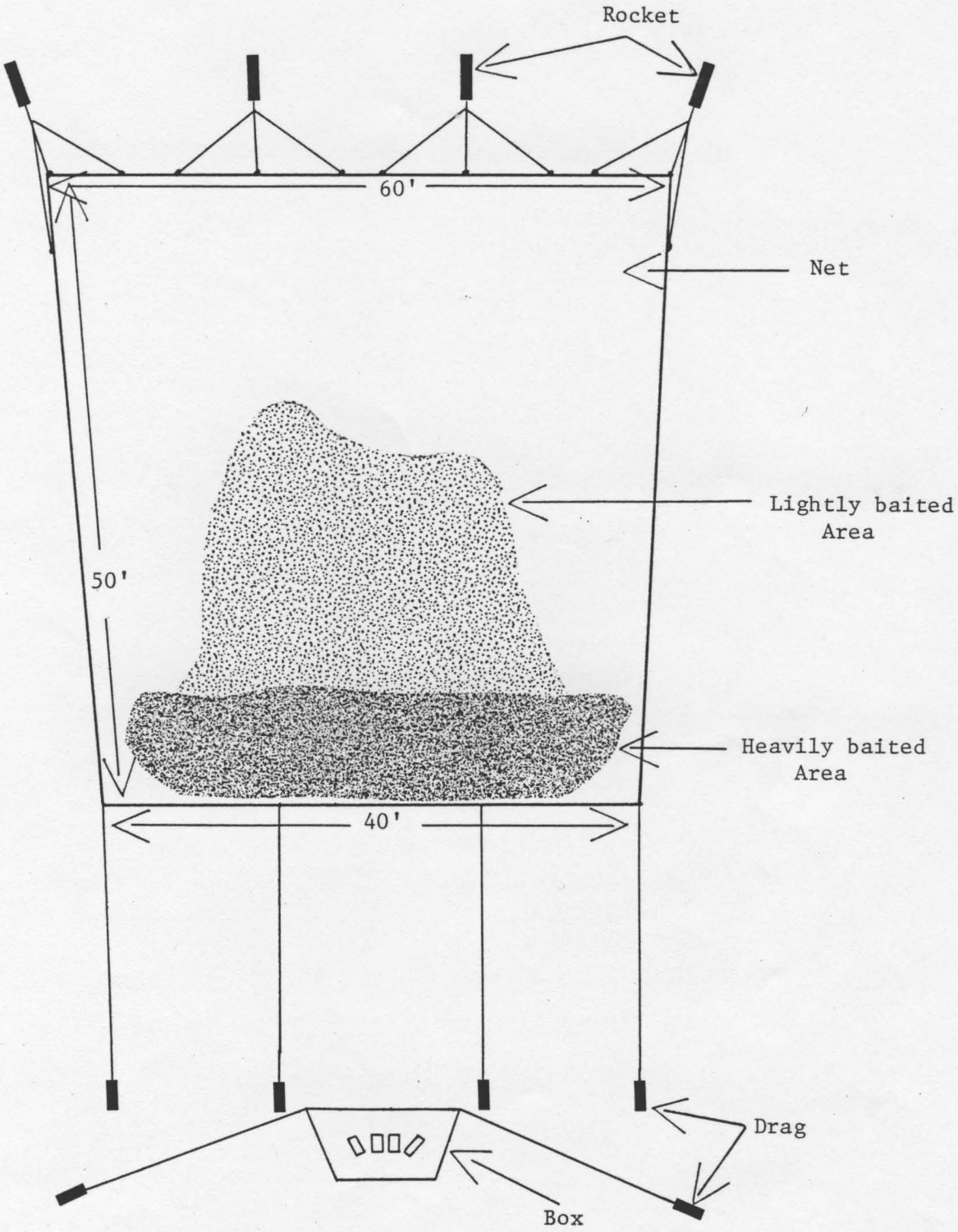


Figure 6. Box and Net before and after firing.

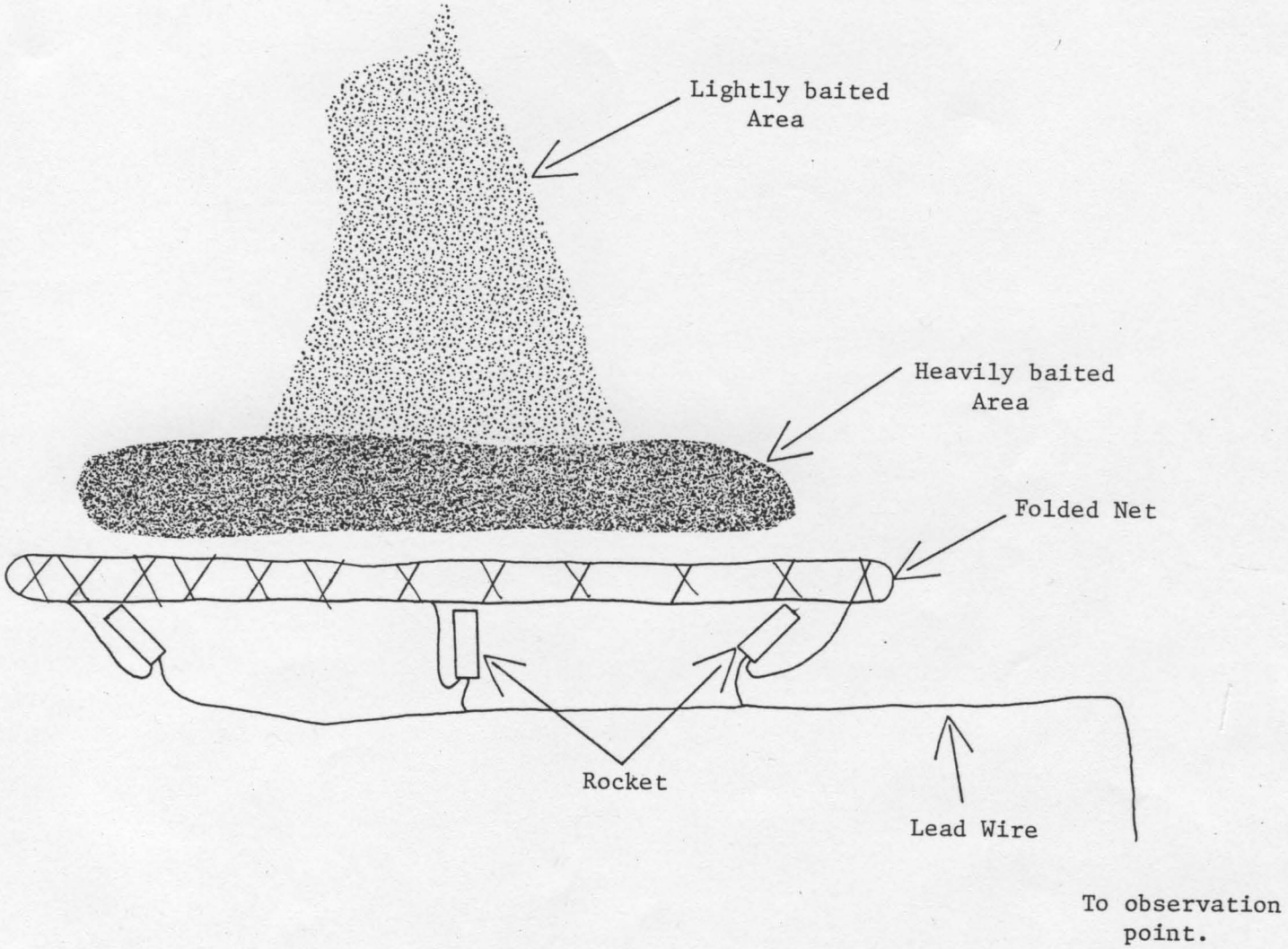


Figure 7. Ground Net

Border Region
NB/NS Bait Trap

Waterfowl Bait Trapping Report

Border Region

26th July - September 6, 1984

Banders
David Crocker
David Arsenault
Kevin Cormier

The Amherst area contained a waterfowl bait trapping station for a period of 43 days for the purpose of banding ducks, with Black ducks being the main concern.

The station was handled by a Canada Works crew consisting of David Crocker, David Arsenault and Kevin Cormier.

Baiting of potential areas started on the 18th of July and two traps were set up in Impoundment I of the Amherst Point Migratory Bird Sanctuary on the 19th in areas which had definite prospects of catching birds.

Banding first started in these two traps on the 26th of July and by the 30th a total of six more traps had been added, 3 in the Russel Impoundment of the John Lusby, 2 in Impoundment II of the Amherst Point, and a 3rd trap was added to Impoundment I. Trap locations can be seen in (Figures 2 and 3).

Banding was fully operational by the 30th of July and ended the 6th of September. Six traps were tended for this complete period and the other two traps located in Impoundment II had to be lifted August 13th as the impoundment had been drained to carry out work on the power poles.

A total of 416 birds were banded in ten different species. The Black duck was the dominate species with 344, while the other 72 were divided among the other species. (see Figure 1)

The most productive trap was trap 5 in the Russel Impoundment where 168 of the 344 Black Ducks were banded. Trap 1 in Impoundment I of Amherst Point captured many Black Ducks, most of them being our own recaptures. The rest of the traps were about the same picking up a few ducks from day to day.

The total number of ducks could have been higher if the Burgess Impoundment could of been trapped, but banding could not be carried out as the Impoundment drained 4 days after baiting started. The impoundment drained due to a leak

in the water level gate.

Trap Mortality

A total of 8 ducks were found dead in traps most of them the results of predators. Two of the eight ducks found dead in traps were ducklings and had died as a result of being entangled in between the poles and wire. Only one of the dead ducks was banded. See band attached to report.

Recaptures

A total of 30 birds were recaptured and recorded most of which were Black Ducks.

The overall banding project ran very smoothly with a minimum of problems. The Black Duck count compared to other years was average, with the teal counts down.

Recommendations

1. Other areas and pot holes on the John Lusby Salt Marsh should be considered for banding areas.
2. Trap funnels should be a good fist width or better as we found the Black Ducks had a hard time getting in smaller funnels.
3. Traps in Impoundment II need bottoms as the Impoundment bottom is very soft and easy for the ducks to dig out.
4. Salt Marsh should be checked first as they are usually many birds.
5. Traps near land should have animal live traps handy for precautions against raccoons, mink, and other predators.
6. Lots of corn should be placed mostly inside traps and little in funnels. More corn produced better results.

Figure 1. Age and Sex Breakdown.

SPECIES	Local				Hatching Year				After Hatching Year				Total			
	M	F	Unk.	Total	M	F	Unk.	Total	M	F	Unk.	Total	M	F	Unk.	Total
Black Duck	9	4	0	13	136	87	0	223	68	40	0	108	213	131	0	344
Black X Mallard	0	0	0	0	2	0	0	2	0	0	0	0	2	0	0	2
Mallard	0	0	0	0	1	0	0	1	3	0	0	3	4	0	0	4
Ring-necked Duck	21	18	0	39	5	4	0	9	0	1	0	1	26	23	0	49
Blue-winged Teal	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	1
Green-winged Teal	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1
American Widgeon	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	1
American Coot	0	0	0	0	0	2	2	0	0	0	0	0	0	0	2	2
Pied-billed Grebe	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	2

Figure 2.

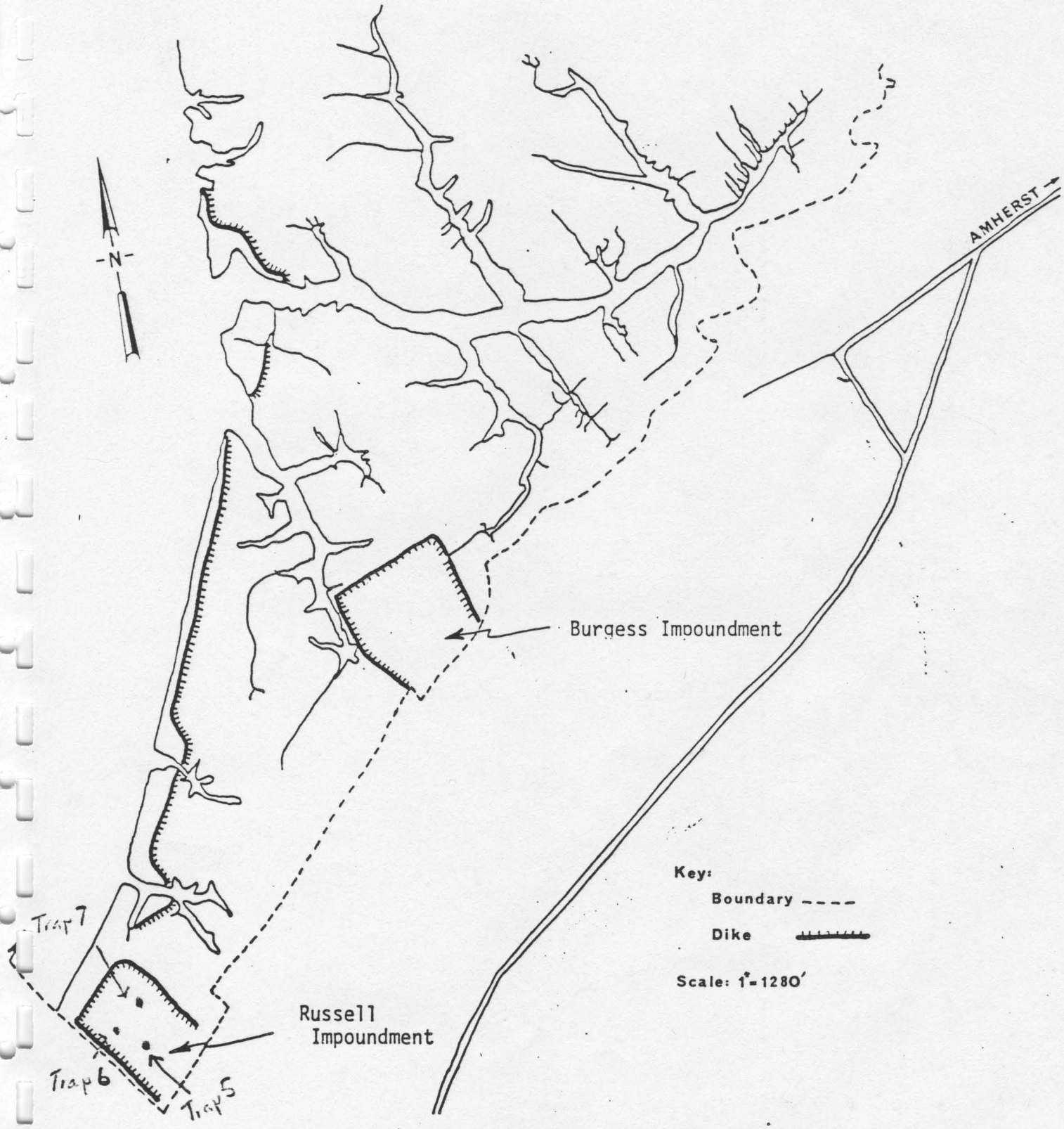
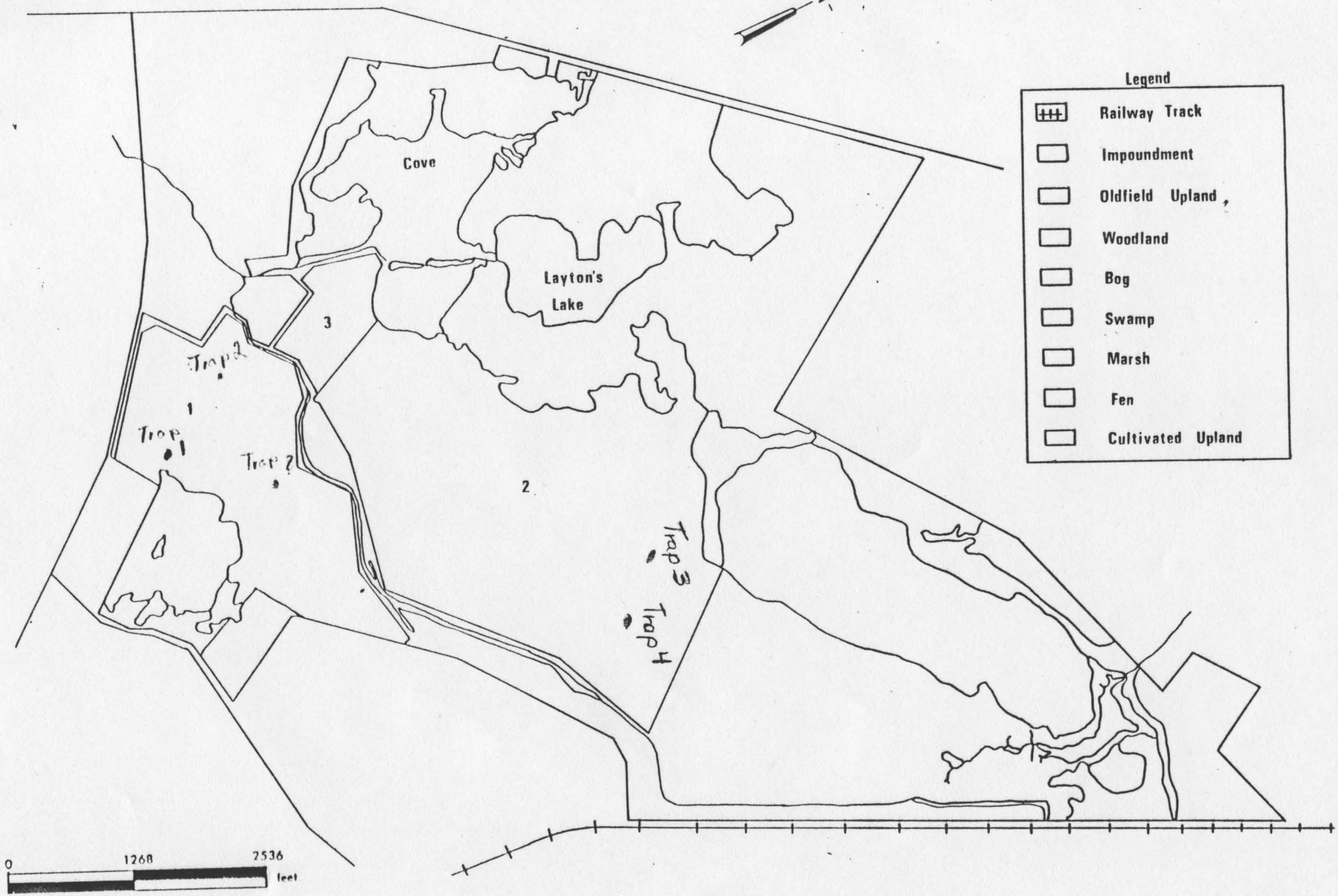
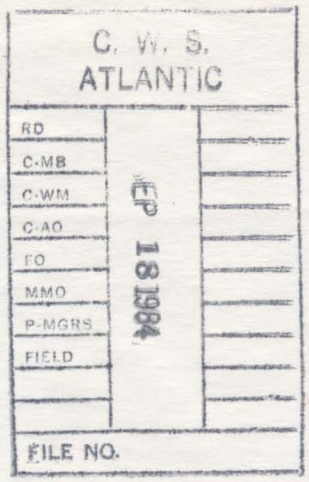


Fig. 2. Chignecto National Wildlife Area - John Lusby Marsh Unit

Figure 3.


N
Legend
Railway Track
Impoundment
Oldfield Upland
Woodland
Bog
Swamp
Marsh
Fen
Cultivated Upland
Cove
Layton's Lake
1
2
3
Trap 1
Trap 2
Trap 3
Trap 4
0
1268
2536
feet

Shepody NWA
New Brunswick



SHEPODY NATIONAL WILDLIFE AREA

BANDING STATION

Crew Leader - Mark Petrie

Assistant - Brent Eagles

CONTENTS

Introduction

As a National Wildlife Area, the Shepody Bay region is a recent establishment; a fact alone which accounts for the operation of a banding station as being a first of it's kind in the area.

As a report, the following pages should attempt to summarize the efforts of the crew in respect to the numbers and species of waterfowl banded and techniques employed to arrive at these figures. As important as it is, this, perhaps unlike previous reports, should not obscure an attempt to familiarize the future bander with the area and it's characteristics in general. Reasons for this are obvious in that as a banding station, Shepody has none of the established patterns of a station such as the one maintained at Amherst Point and as such efforts should concentrate on the region itself as much as the numbers it produces.

The banding station operated at Shepody was done so during the period of July 30 to August 29 in which a total of 263 waterfowl were banded, the primary species being the Black Duck which numbered 140, the Blue-winged Teal accounted for 47 bands, the Wood Duck 44, Ring-neck 14, Mallard 9, Green-winged Teal 8 and finally one American Coot. Though the period of July 30 to August 29 includes a total of 31 days. It was during the final 22 that over 95% of all waterfowl banded were accounted for. The first 9-10 days were concerned primarily with waterfowl observations, pre-baiting, selection of trap sites and of course the construction of the traps themselves.

Band inclusives

1417 - 60901 - 61000
1417 - 82501 - 82551
896 - 68117 - 68176
825 - 44201 - 44247
624 - 20601 - 20608

Summary of Birds Banded

Species	L	HY	AHY	Totals
Black Duck	13	107	20	140
Mallard	0	7	2	9
Wood Duck	0	0	44	44
Ring-neck	5	9	0	14
Blue-winged Teal	8	38	1	47
Green-winged Teal	0	8	0	8
Grand Total	26	170	67	262

1 American Coot

Despite the obvious preparations involved in establishing a banding operation, 13 birds banded during a 9 day period MUST seem unacceptable; in fact, it is and the majority of the blame must be placed upon myself. These low totals experienced during this period are due not to the absence of functionable traps, (these were in existence as early as August 1st) instead a basic lack of patience in areas such as waterfowl observations and pre-baiting potential trap sites accounted for such a slow start. In the case of observing birds in terms of distribution and variety, not enough can be said concerning the importance of spending as much time as deemed necessary in establishing these patterns that are peculiar to the area being trapped.

Patience is equally important in respect to attempting to get the birds on bait prior to the construction of a trap site. The size of area to be trapped alone dictates a need for this patience in that the numbers of waterfowl present are not so great as to ensure a bait be discovered quickly instead, a wait of 3 to 4 and possibly even 5 days can be expected before appreciable amounts of waterfowl are present. Unfortunately, when a month is the length of operations 5 days can seem like an eternity. If in fact Shepody is to be utilized in future as a banding station, the bander responsible for its operation should invest the better part of a week familiarizing himself with the region to ensure the ensuing days are successful ones.

Mary's Point

Of all impoundments trapped, none magnified our early problems more than did Mary's Point. Unlike the Germantown and New Horton sections, Mary's Point did not readily offer water depths of relative shallowness that enabled a bait to be easily accessible to waterfowl inhabiting the area. The difficulty in getting the birds on bait was illustrated by the successive failure of three pre-baits in which large amounts of corn remained untouched. The problem was alleviated by the use of an elevated piece of wire covered in burlap, a combination which later became the bottom component of the trap located at Mary's Point. In hopes of avoiding our early failures, future operations in this area should employ this technique.

In terms of trap success, Mary's Point was in fact a dissappointment in respect to Black Duck numbers observed shortly after our arrival. Concentrations, however, readily decreased as August progressed thus suggesting that any future operations establish an early trap site. Black Duck numbers reached a low following heavy rains during the period of August 12-17 in which water levels increased drastically. The receding water level was accompanied by a general increase in Black Duck numbers.

As an impoundment, Mary's Point, in terms of vegetation, contained emergent vegetation for the most part in the form of *bulrush* and *spartina pectinata* with much of the submergent vegetation being *potamogeton zosteriformis*, a common pondweed. As illustrated by the map, the amount of open water gradually increases in the northernly direction. This large body of open water is eventually subject to a gradual decrease in size terminating at the edge of a wooded area. The *spartina pectinata* seems to primarily border the impoundment and occasionally, in isolated stands, accommodates the large amount of *bulrush* located inside these borders.

Birds Banded at Mary's Point

Species	Totals
Black Duck	17
Mallard	2
Wood Duck	8
American Coot	1
Grand Total	28

Accounted for 10.6% of all waterfowl banded.

NEW HORTON

IMPOUNDMENT A

In terms of trapping success this area by far was the most productive in terms of Black Duck numbers accounting for exactly half of those banded, the majority of these coming from a single trap. Trapping itself was confined to large channel which paralleled the dyke surrounding the impoundment. Of the traps which operated in this area, one was of the triple funneled variety, the other possessing only two funnels. Of the 70 Black Ducks banded at New Horton, no less than 67 were taken in this particular triple funnel trap.

Though one can not argue with the success of banding operations here, the possibilities for improvement are evident, the obvious question being concerned with the failure of the second trap in an area which obviously supported a fairly large Black Duck population. Probable reasons for this failure lie with the banders mainly in the form of poor trap site selection. To future operations in this area, there are two possible avenues the first being the construction of a second trap in one of many sites which are quite familiar in respect to the successful site mentioned above. The second possibility arises from countless experiences observing birds outside of the trap due to overcrowding within the trap itself. The establishment of a second trap in close proximity to the first could solve this problem.

Either choice will aid in answering whether in fact duck populations once favouring a particular trap site will respond to another in the immediate vicinity.

IMPOUNDMENT C

While the A section of New Horton contributed 50% of all Black Ducks banded in the Shepody region its counterpart Impoundment C managed less than 14%. At the moment, two reasons stand out for the obvious difference in results, the first concerns location.

The majority of the Black Duck population that inhabits New Horton can at low tide be found on the extensive mudflats that characterize the area. Only with the advance of the tides to the birds leave these flats returning to the coastal marshes found on the edge of the bay. In this case, Impoundment A lies on the bay itslef with C being slightly inland and though the difference is slight it is a potential explanation in terms of birds banded. The difference in location concerning the two impoundments can be coupled with the differences in vegetation, its variety and distribution to offer a second explanation. An updated survey on all types of plant life familiar to each area is on file at the Wildlife Service here in Sackville.

Despite accounting for relatively little of the total waterfowl banded, New Horton C for the majority of operations was the site of three traps as compared to maintaining only two in the more successful A section. Three traps were maintained at C until August 25 due to a decline in local populations which resulted in the decision to operate only two.

Though as mentioned earlier, Black Ducks banded here were few in number, the area itself did support a rather healthy population density though the birds for the most part chose to occupy a rather small corner of the impoundment.

Summary of Birds Banded New Horton

Species	Totals
Black Duck	89
Wood Duck	25
Blue-winged Teal	30
Green-winged Teal	1
Mallard	6
Grand Total	151

Accounted for 57.4% of all waterfowl banded.

GERMANTOWN

IMPOUNDMENT A

Of the eight impoundments that comprise the Germantown section of the Shepody National Wildlife Area this partiuclar impoundment is undoubtedly the smallest. In accordance with its size it held only a single trap of double funnel construction. Despite its small size, however, trapping here is justified with 10% of all Blacks banded here and no less than 90% of all Green-wings banded were captured here.

In respects to the impoundment itself, it is unique in the amount of wild rice produced. The area is bordered by a total of three dykes with a single stretch of woodland bordering the EASTERN side. Paralleling each border runs a channel of 10 - 12 feet in width and it is alongside this channel that the trap resides. Vegetation for the most part is located inside the channel and is largely composed of typha and wild rice. Future banding operations should note a pattern which dictates particularly in the case of the Black Duck a general increase in waterfowl numbers accompanying the ripening of the wild rice.

IMPOUNDMENT F

In terms of established trap sites, Germantown F was the last to be designated as such. Problems concerned with unsuccessful attempts to pre-bait can shoulder much of the blame. When success did arrive, it was moderate at best with the two traps in the area accounting for 23.5% of all Blacks banded. The problem with pre-baiting was a troublesome combination of pondweed and algae which was very effective in hiding corn. This combination was not, however, confined solely here but was experienced in almost every other location.

Summary of Birds Banded Germantown

Species	Total
Black Duck	33
Wood Duck	11
Blue-winged Teal	23
Ring-neck	14
Green-winged Teal	8
Grand Total	89

Accounted for 33.8% of all waterfowl banded.

Mary's Point

Trap M-1 (A vegetation survey of 15M X 15M was conducted at each trap site).

This was the only trap located at Mary's Point and was of the triple funnel variety. Located at the rear of a large body of open water a vegetation survey of an area of 15M X 15M reveled a small stand of *spartina pectinata* a small distance behind the trap this emergent vegetation being quite common to Mary's Point. In terms of submergent vegetation *potamogeton zosteriformis* was the dominant pondweed.

Depth of funnel - Approximately 20 inches
Distance from dyke - not available
Distance from channel - not available

New Horton

IMPOUNDMENT A TRAPS H-1, H-2

H-1 - No information available

H-2 - Located off a small island of approximately 10 meters in length and 2 meters in width this location accounted for the largest amount of waterfowl banded in respect to a single trap. Being at the elbow of one of the large channels that characterize the A impoundment this particular trap site contained only a light concentration of *spirea latifolia* which failed ever to fall into the designated area to be surveyed. *Potamogeton pusillus* was the only pondweed found in the vicinity of the trap. This trap was triple funneled.

Depth of funnel - Approximately 15 inches
Distance from dyke - 25 meters
Distance from parallel channel - 14 meters
Distance from perpendicular channel - 15 meters

New Horton

IMPOUNDMENT C TRAPS H-3, H-4, H-5, H-6

H-3 - No information available.
Discontinued August 17, 1984

H-4 - Located in the Northern corner of the marsh emergent vegetation here was numerous. *Spiren latifolia* accounted for 50% of it, *scirpus atrovireus* in various stages of growth for the other 50%. An island for the most part consisting of *juncus sp.*, *calamagrostis canndensis* and *carex sp.* lay a distance of 4 meters from the trap. *Lemna minor* in light patches was also present. Submergent vegetation in the form of *potamogeton pusillus* was found as well. Double funnel. Depth of funnel - 12 inches.

H-5 - Centrally positioned in respect to the impoundment, this trap lay barely a meter off a large island dominating the area. In the case of emerging vegetation burried was the sole plant life and there was little of even this. Little submergent vegetation was also present and what was came in a combination of *potamogeton pusillus* and *algae*.

Depth of funnel - 8 inches
Distance from channel - 2 meters

Discontinued August 25, 1984

H-6 - This trap, originally H-3 was designed to deal with a problem concerning waterfowl, particularily of the Black Duck species which were reluctant to leave the confines of large areas *spirea latifolia* located a short distance from H-4. As a result of this, 100% of the emergent vegetation found about H-6 is *spirea latifolia* with the submergent vegetation being similar to H-4. Double funnel trap.

Depth of funnel - 12 inches

Germantown A TRAP A-1

A-1 - This trap is again an example of a site chosen alongside a particular channel. As earlier mentioned, this impoundment harbours much wild rice and emergent vegetation around the trap site is no exception consisting of at least 80% rice, the remaining being *bulrush*. No submergent vegetation was evident; the trap residing in a rather muddy area. Double funnel trap.

Depth of funnel - 13 inches
Distance from dyke - 7 meters
Distance from channel - 2 meters

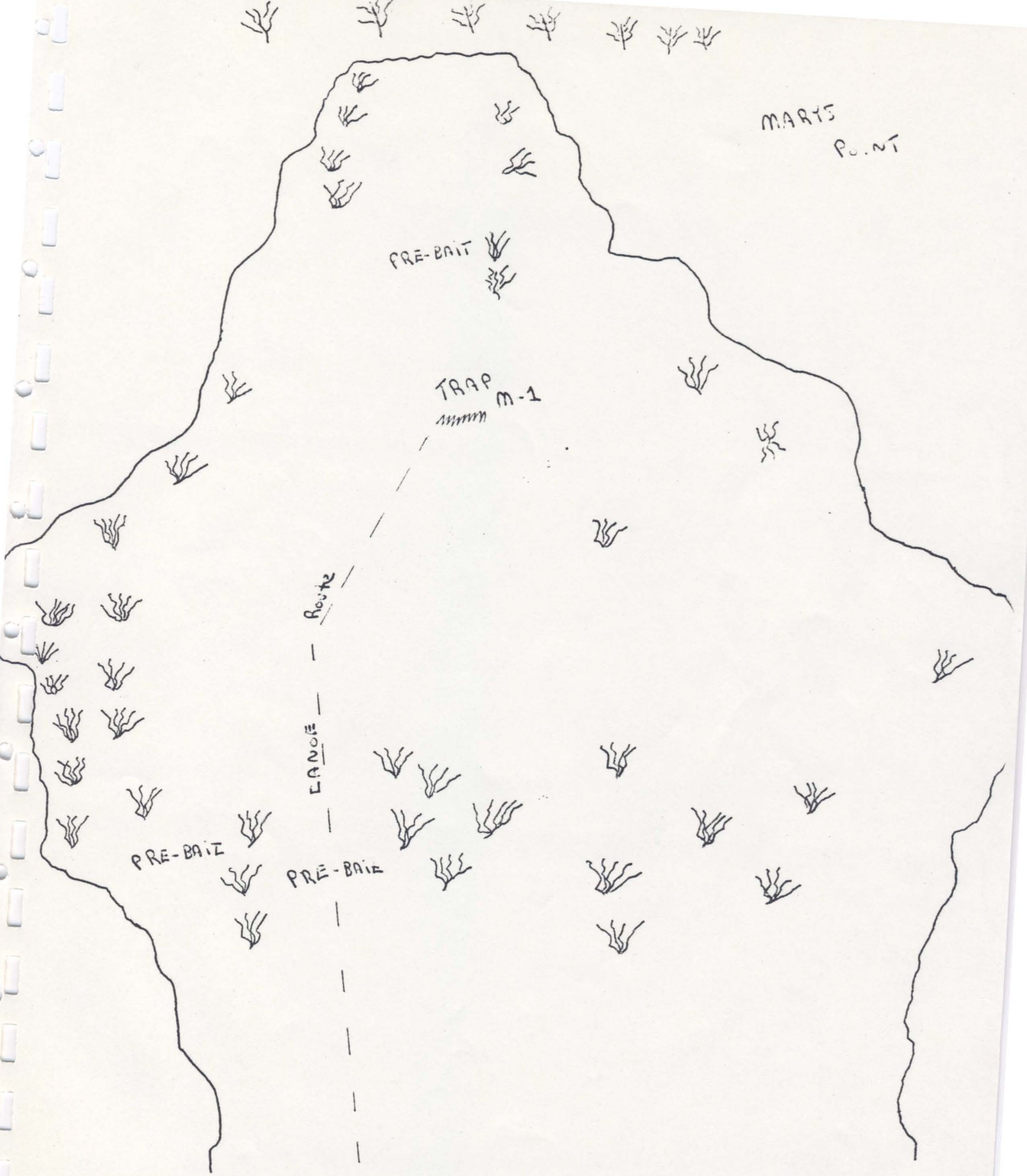
Germantown F TRAPS F-1, F-2

F-1 - Another channel trap so to speak this site lacks in terms of a great deal of emergent vegetation, what little there is is located off a small island less than 3 meters from the trap. The troublesome combination of *potamogeton pusillus* and *algae* was the only form of submergent vegetation in evidence. This trap is another of the double funnel variety.

Depth of funnel - 14 inches
Distance from dyke - 5 meters
Distance for a channel - 3 meters

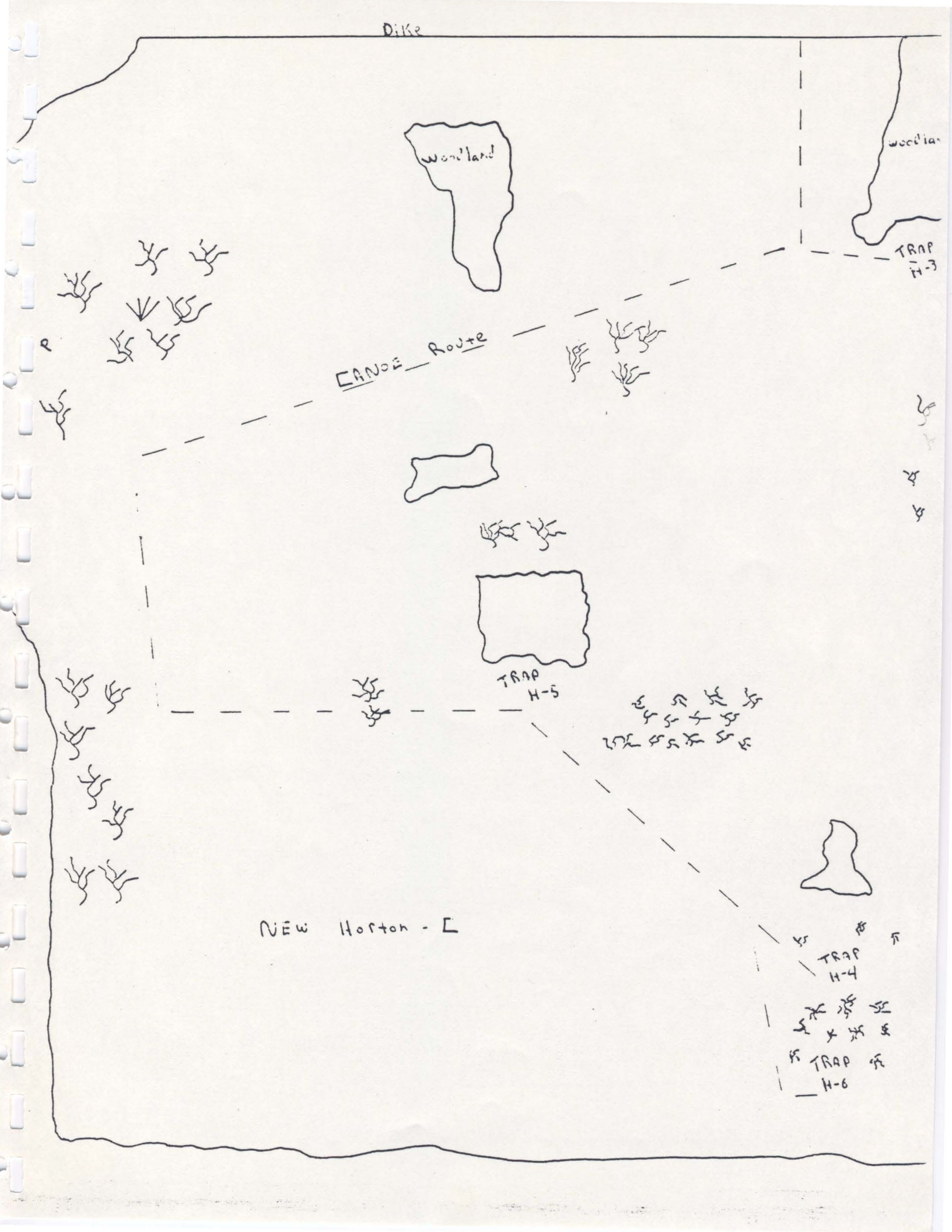
F-2 - Similarities between this trap and M-1 are numerous as this location faces a rather large body of water with the only appreciable emergent vegetation in the surveyed area being *spartina pectinata*. Submergent vegetation does not exist. Triple funnel.

Depth of funnel - 17 inches
Distance from dyke - 65 meters
Distance from channel - 60 meters



Don't STAKE your Life
on ANY of these MAPS.


WOODLAND
CHANNEL
CHANNEL
CHANNEL
RANGE ROAD
PRE-BAIT
TRAP H-2
TRAP H-2
CHANNEL


Dike
Woodland
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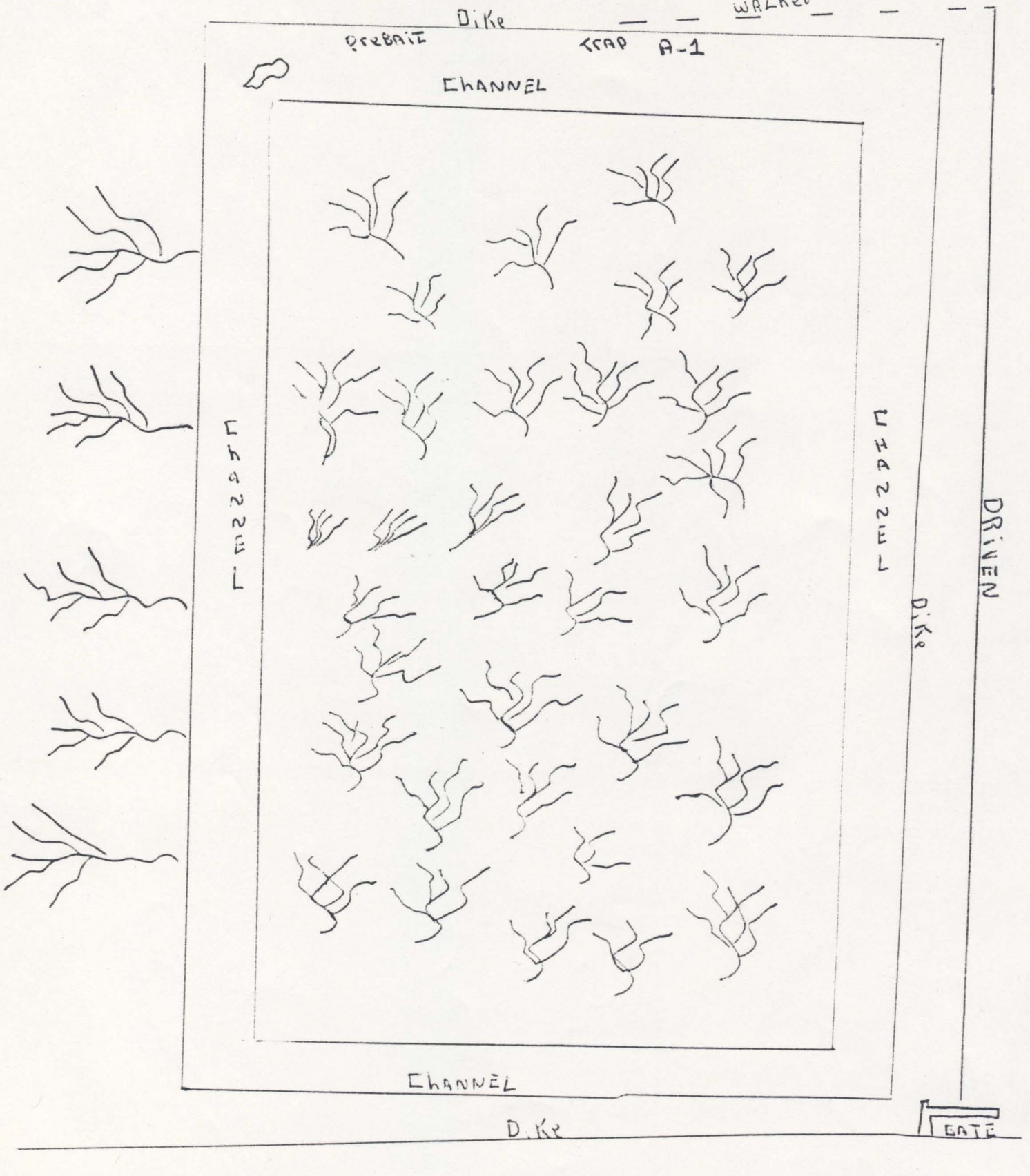
TRAP H-3
CANOE Route
TRAP H-5
TRAP H-4
TRAP H-6
NEW Horton - L

Germantown - A




CHANNEL
CHANNEL
TRAP F-2
OPEN
WATER
CANOE
ROCK DIKE
DIKE
PREBAIT
TRAP F-1
CHANNEL
CHANNEL

Trap Success

This section deals with the percentage of the total number of waterfowl banded per trap site. As well it examines trap success in terms of birds found within trap on a day to day basis.

Total Birds Banded - 263

Success rate (Percentage of traps containing at least one bird on a day to day basis) - 72%.

M-1 - Accounted 12% of all Black Ducks banded.

Accounted for 10.6% of all waterfowl banded.

During a total of 80% of all days operated M-1 contained at least one duck with no discrimination concerning species or whether in fact the bird was banded or not. Such lack of discrimination applies to all other traps.

H-1 - Accounted for 2.1% of all Blacks banded and 1.2% of all waterfowl banded.

Success rate - 45%

H-2 - Accounted for 47.9% of all Blacks banded and 33% of all waterfowl banded.

Success rate - 100%

H-3 - No Black Ducks banded. Accounted for 2.3% of all waterfowl.

Success rate - unknown

H-4 - Accounted for 7.85% Blacks banded and 12.9% of the total waterfowl.

Success rate - 66.7%

H-5 - Accounted for 4.2% of Blacks banded and 6.8% of total waterfowl.

Success rate - 50%

H-6 - Accounted for 1.42% of all Blacks banded and 1.14% of the total waterfowl.

Success rate - unknown

F-1 - Accounted for 7.1% of all Blacks banded and 8.3% of all waterfowl.

Success rate - 66.7%

F-2 - Accounted for 7.1% of all Blacks banded and 9.1% of total waterfowl.

Success rate - 77%

F-3 - Accounted for 10% of all Black Ducks banded and 12.9% of the total waterfowl banded.

Success rate - 87%

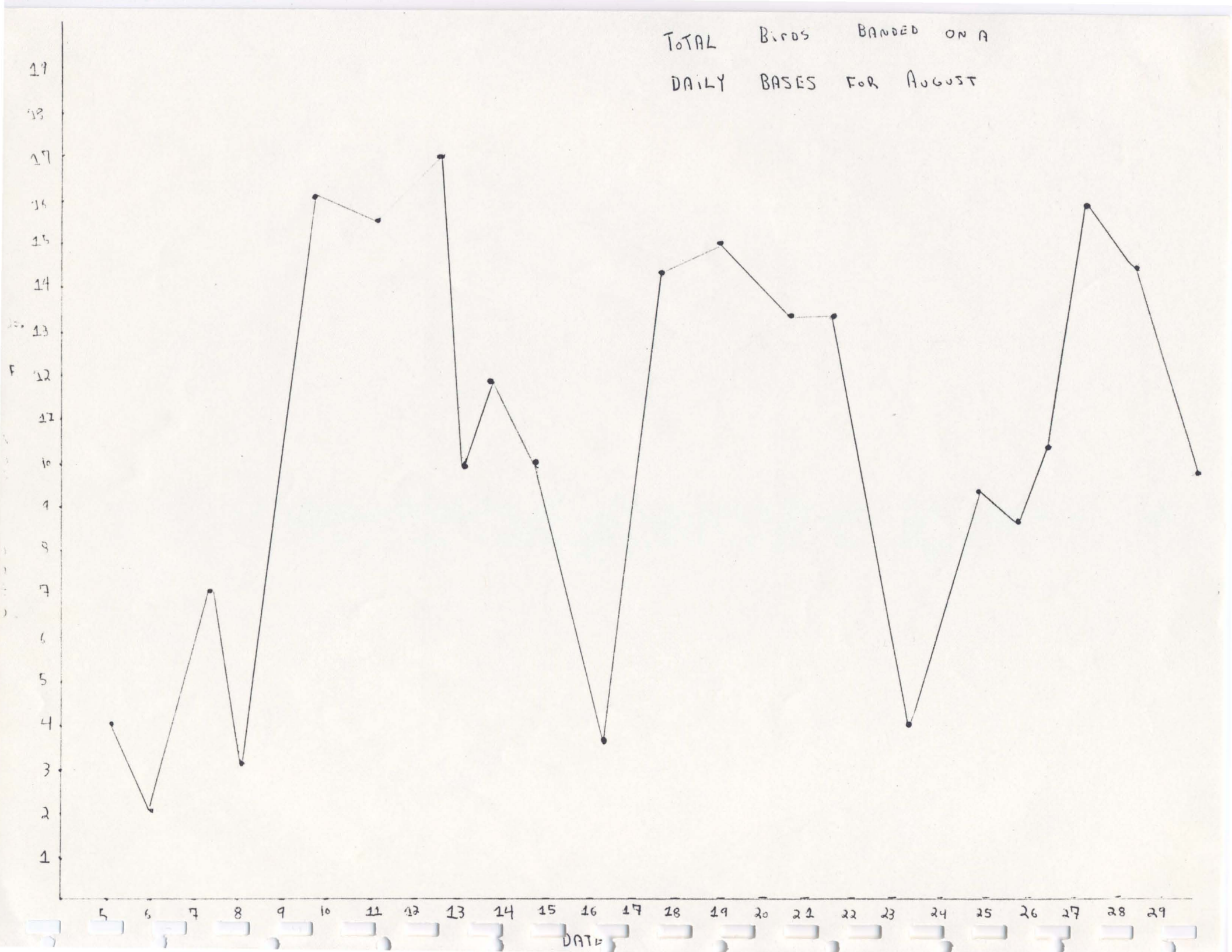
Black Duck - On the basis of both observation and trap success the New Horton region appears to encompass a large portion of the Black Duck population found within this National Wildlife Area. In respect to Germantown and Mary's Point an even distribution of Black Ducks numbers in accordance to the size of each area is evident. Mary's Point, however, experienced a drastic reduction in the Black Duck species following a period of heavy rains and in turn by a general increase in numbers as the water levels declined.

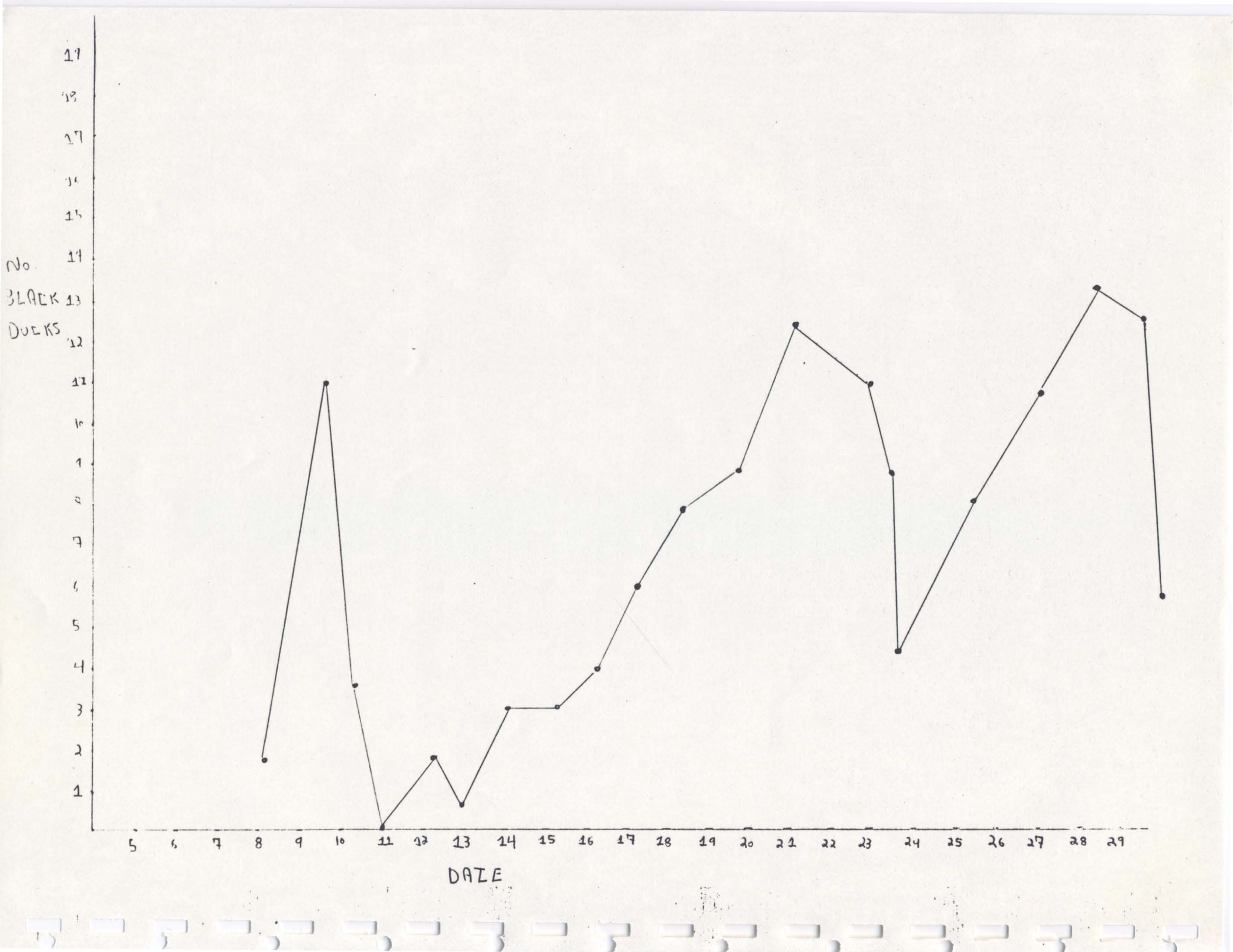
Wood Duck - A species that is a rare visitor to traps in most banding operations the number of Wood Ducks encountered this year was a surprise to say the least with a total of 44 receiving bands. In respect to the entire Shepody area Wood Ducks were found in seemingly equal proportions throughout with perhaps slightly higher concentrations found in the New Horton region. The fact that all birds banded were adult males seems to support the theory that Wood Duck in appreciable numbers are utilizing Shepody for molting purposes, frequent encounters with flightless adult birds seems to lend credit to this hypothesis as well. Though Wood Ducks were banded throughout the entire operation the majority were taken prior to August 20 and in fact during the first half of that month appeared to outnumbere the Black Duck in certain areas.

Green-winged Teal - These birds were a rarity at every location with the exception perhaps of Germantown A in which eight were banded. Excluding this impoundment, however, occasional glimpses alone of the species was rare and occurences concerning birds in the traps themselves was non-existent.

Ring-neck - Though the number of birds banded was low, this species was highly visible in the Germantown area and a small flock later inhabited Mary's Point.

Blue-winged Teal - Though a few of these birds were banded in late August, the majority, 80%, were banded in the first half of the month and the decline in Blue-wing numbers was accompanied by a general increase in the number of Blacks finding their way into traps. The number of Blue-wings observed in all areas remained high; the birds being the most visible of all species, an obvious conclusion, however, must be drawn in the fact the birds seem reluctant to enter traps in the presence of large concentrations of Black Ducks. As mentioned above, Blue-winged Teal populations seemed constant throughout with the exception of Mary's Point which experienced a gradual increase as August progressed.

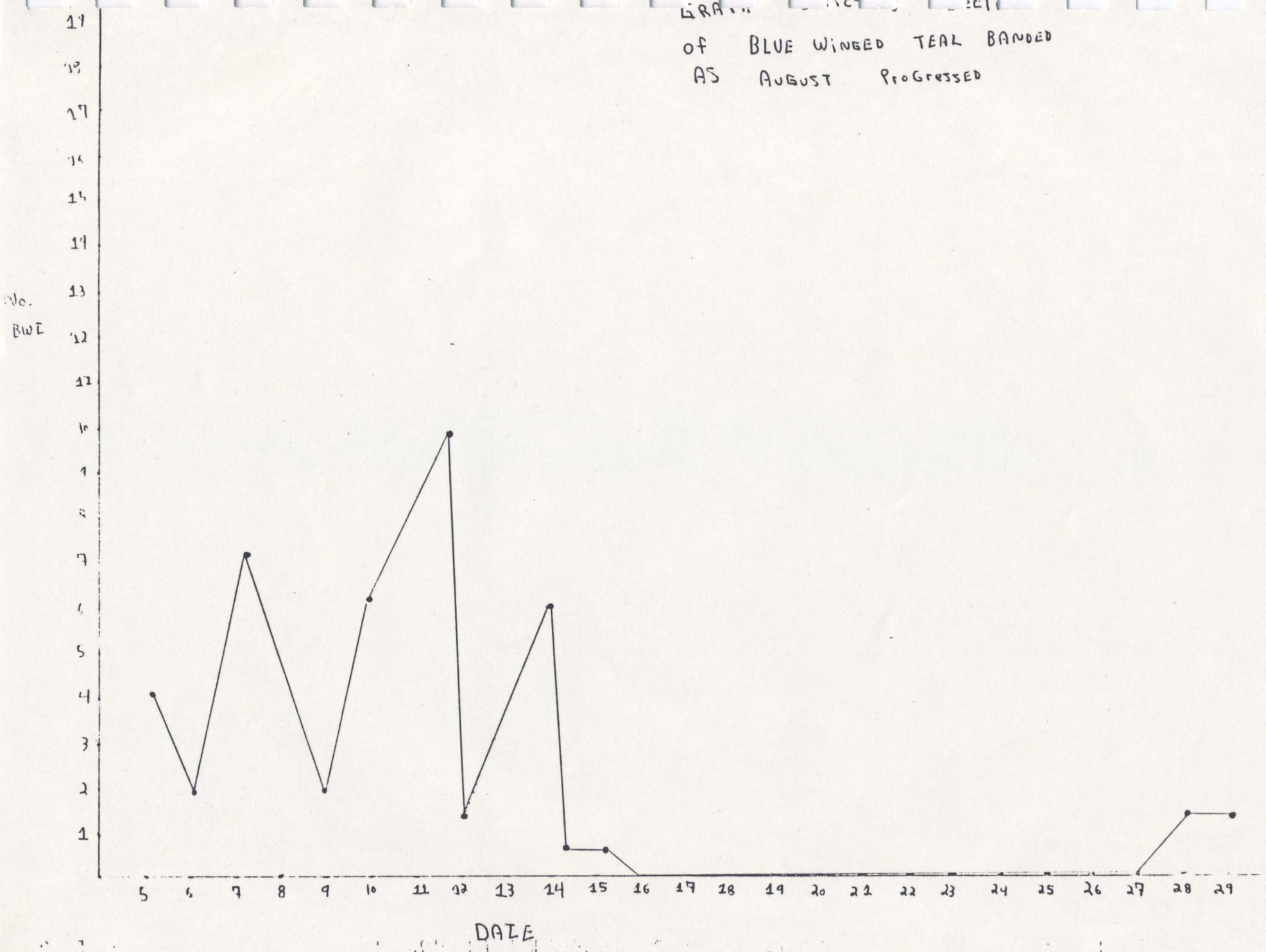

TOTAL BIRDS BANDED ON A
DAILY BASES FOR AUGUST
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29
DATE


No. BLACK DUCKS
DATE

GRA... [illegible]

of BLUE WINGED TEAL BANDED

AS AUGUST PROGRESSED



OTHER STATISTICS not on graph

Average No of BLACKS BANDED ON A DAILY BASES - 6.7

Average No. of TOTAL WATERFOWL BANDED DAILY - 12

AVERAGE No. of WATERFOWL both BANDED and UNBANDED found IN TRAPS on A DAILY BASES - 17.5

GRAPH DEPICTS PERCENTAGE of Birds UNbanded IN TRAPS DURING AUG 14 - AUG 8

WATERFOWL GRAPHS

Both the graphs concerning overall numbers of waterfowl banded and the more specific dealing solely with the Black Duck illustrate what appears to be a reoccuring pattern in terms of total birds banded during specific periods of time. Such obvious cycles raise questions to exactly what pressures establish these cycles. Two possible influences are examined here the first concerning the overall tidal impact on the Shepody Bay area. As mentioned earlier during certain tidal situations large concentrations of Black Ducks can be observed inhabiting the large tidal flats that characterize the area during these periods. Trap success not unlike the situation experienced in the Bathurst area seems to some extent dependant on the tidal schedules. Future operations in Shepody should record these tide schedules, an effort that would aide in determining their full impact.

Equally important in terms of environmental influence appears to be the variety of weather experienced during the time spent in the Shepody Bay region. Conditions recorded during a two week period revealed nights of low temperatures produced the best results in terms of birds banded due probably to heavier feeding induced by these low temperatures.

RETRAPS

(Results based on Black Duck Statistics)

Totals

28.6% of Ducks banded returned to trap sites. Of the returning Waterfowl 77% did so only once after receiving a band, 15% returned a second time and only 5% a third.

MOVEMENT

The recording of Waterfowl previously trapped may appear as a needless effort but in fact it does to a certain degree enable various Waterfowl movements to be gauged. Such acknowledgement of birds earlier banded permits an insight into these movements on an impoundment to impoundment basis.

Despite being in close proximity to one another impoundments A and C in the New Horton Section appear to support separate Black Duck populations. Evidence supporting this theory was discovered by recording previously banded birds where it was found of 70 Blacks banded in that particuliar area only 3 were ever retrapped in different locations other than where originally banded. This aids in answering the question concerned with the obviously different results each impoundment obtained in terms of birds banded. Other movement noted were those between Marys Point and both the Germantown and New Horton areas.

FINANCIAL

Cost includes all aspects of the operation excluding cost of trap materials.

Salaries - $1837.00
Gas - $ 250.00
Groceries- $ 292.00
Corn - $ 213.00

Total - $2592.00

Cost per Black Duck banded - $18.50
Cost per total Waterfowl banded - $ 9.85

INVENTORY

All materials needed in construction site at this time of writing remains at Shepody under the responsibility of Colin McKinnon who continues the Banding Station.

FUTURE OPERATIONS

Operation at Shepody this year were as already mentioned a first of their kind in the area. If in fact a banding station is to be operated during the 1985 season expections should be for Waterfowl numbers to rise in terms of birds banded. Though future predictions and goals are subject to environmental conditions at which time can not be assessed the possible banding of 200 Black Ducks and in excess of 300 total species is a conservative estimate.

Waterfowl Bait-Trapping Report

Bathurst N. B. Region

August 23 to September 26, 1984

Report by Todd Estabrooks

A SPECIAL NOTE ON THE BATHURST BASIN

The bathurst Basin was a new site this year, and this note I hope will provide some information helpfull to future banders.

After arriving on the 23 of August and setting up the traps with the help of Tim MacDonald, I was baffiled at the lack of birds at the Tetagouche. This went on for a week, at this time I contacted Charlie McAleenan. Charlie told me that the birds may come later, but in the mean time check a site on the Bathurst Basin.

On the evening of the 31 I drove to the place Charlie desribed and observed 70-100 Black Ducks feeding at the foot of a pasture. After getting the permision to cross the pasture from Mrs. Branch, I took two traps from the Tetagouche and set them up at the Basin the nex t day. It took awhile for the birds to take the bait but on September 7 there were 12 birds in the traps. This continued and this site produced 119 of the 176 birds..

There was only one problem and that occured on the 17 when I went to check the traps I found one had been damaged by someone. The damage was not that bad, but it did result in the release of a number of birds. I repaired the trap and later found out that Mrs. Branch had seen five or six youths around the traps and had called the city police, but they fled the moment the police arrived.

It is my opinion that the Basin site should be continued. I base this on the fact that the birds that are banded at the basin are not the same birds that go to the Tetagouche.

RECOMMENDATIONS

Before setting up traps contact Mrs. Branch at the Branch home (see diagram), and inform her of what you are doing.

Inform local police and wardens, they can be a big help in keeping your traps from being tampered with.

A total of 176 ducks were banded at the mouth of the Tetagouche River, and the Bathurst Basin. The majority of ducks were Black Ducks, with Mallards, American Green Wing Teal and Pintail making up the rest. Table (A) shows the species and number banded of each age and sex.

Five traps were used at the Tetagouche while two were used at the Bathurst Basin. The Tetagouche site is located in the Bathurst harbour by the mouth of the Tetagouche River. The Bathurst Golf Course occupies the northeast corner of the estuary and is next to a wooded area that extends west to route 134. The opposite shore is a mixture of wooded area and houses. On this shore there is a lookout which provides a good view of the estuary and all the traps. The traps can be checked from this point and morning and evening flights into the area can be observed. When checking the traps the truck was left on a across road across from the Bathurst Vocational School. Bait and banding equipment were carried down to the traps.

Birds began moving into the area during incoming tides, and began feeding in and around the traps. A rising tide during low light or darkness brought more birds than a rising tide during the day. Traps were checked and rebaited on low or receeding tide.

The Basin site is located in the southwest corner of Bathurst harbour. The traps were located on the western shore, directly in front of a large farm owned by Walter Branch. A housing development occupied the shore line north of the site while to the south, trees and a small group of houses. To the east a residental area occupied the far shore line. When checking the traps the truck was left ath the end on the Branch farm driveway. Bait and banding equipment were carried down across a horse pasture to the traps.

The birds can be observed from the end of the driveway. Birds at this site were around the traps most of the time except low tide.

The Ranger Cache in Petit Rocher, approximatly 12 miles from the Tetagouche and 16 miles from the basin, served as base station during the banding period.

There was only one mortality when a owl got into one of the traps and decapitated a black duck.

RECOMMENDATIONS

1. Burlap fastened to the bottem of the trap, and wetting the corn, will prevent the corn from being washed away by tidal action.
2. Traps should be set up so that there is some protection from the wind, if not on windy days the birds will not get in the traps.
3. The high wire traps should be used at the Tetagouche, locations 3, 4, 5.
4. This bait-trapping station should operate from the first week in September to the second week in October.
5. Put up lots of signs. This will help prevent human disturbance.
6. Binoculars are a must to the bait-trapper.

EQUIPMENT

Trap wire and poles are stored at the Ranger Cache in Petit Rocher. The netting and banding equipmant were returned to the C. W. S office (A few new poles are needed)

ACKNOLEDGEMENT

Thanks to Charlie MacAleenan for his advise and help.

Thanks to the Branch family for their cooperation and hospitality.

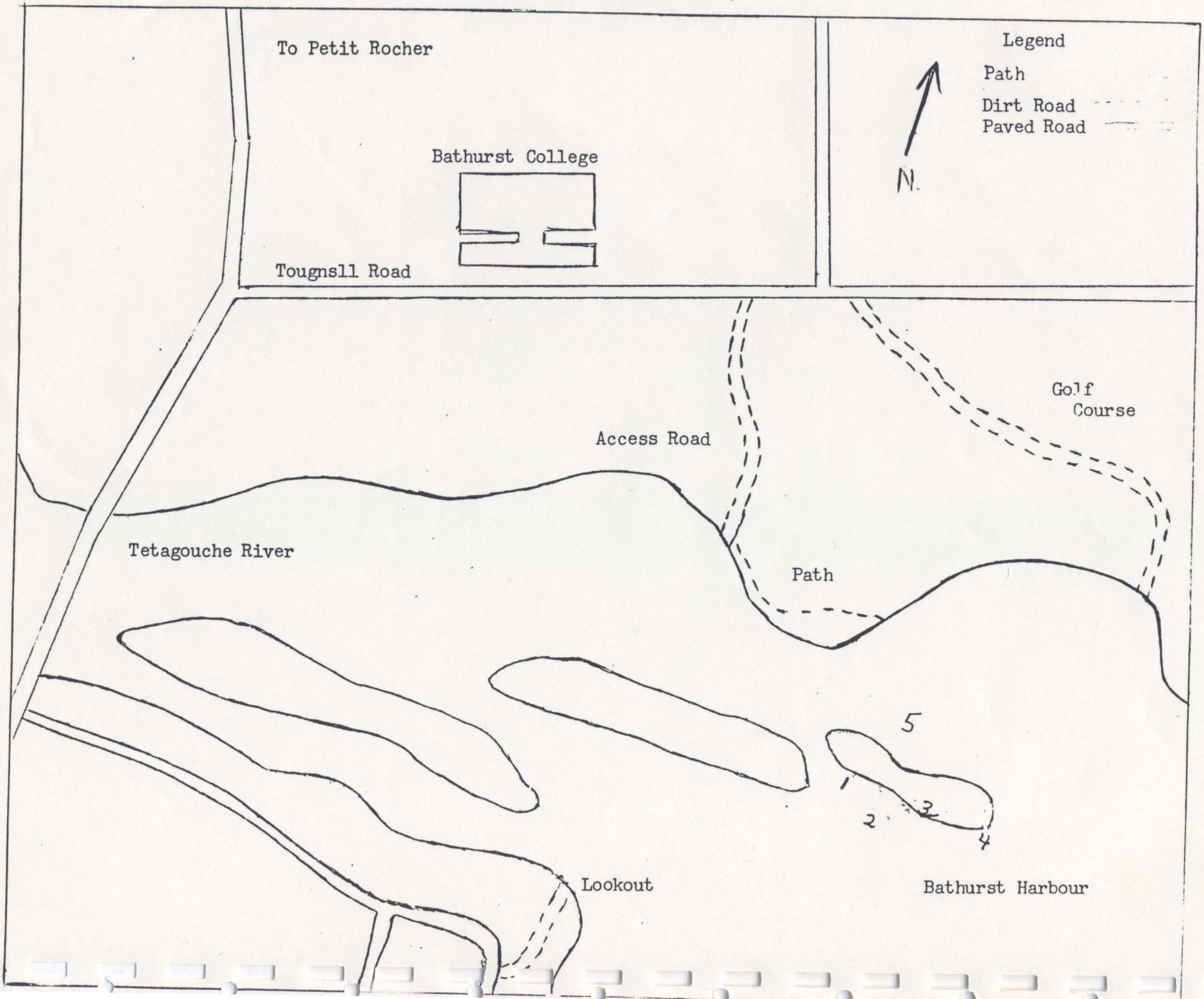
Special thanks to Alyre Tremblay for his help and friendship the last week and a half.

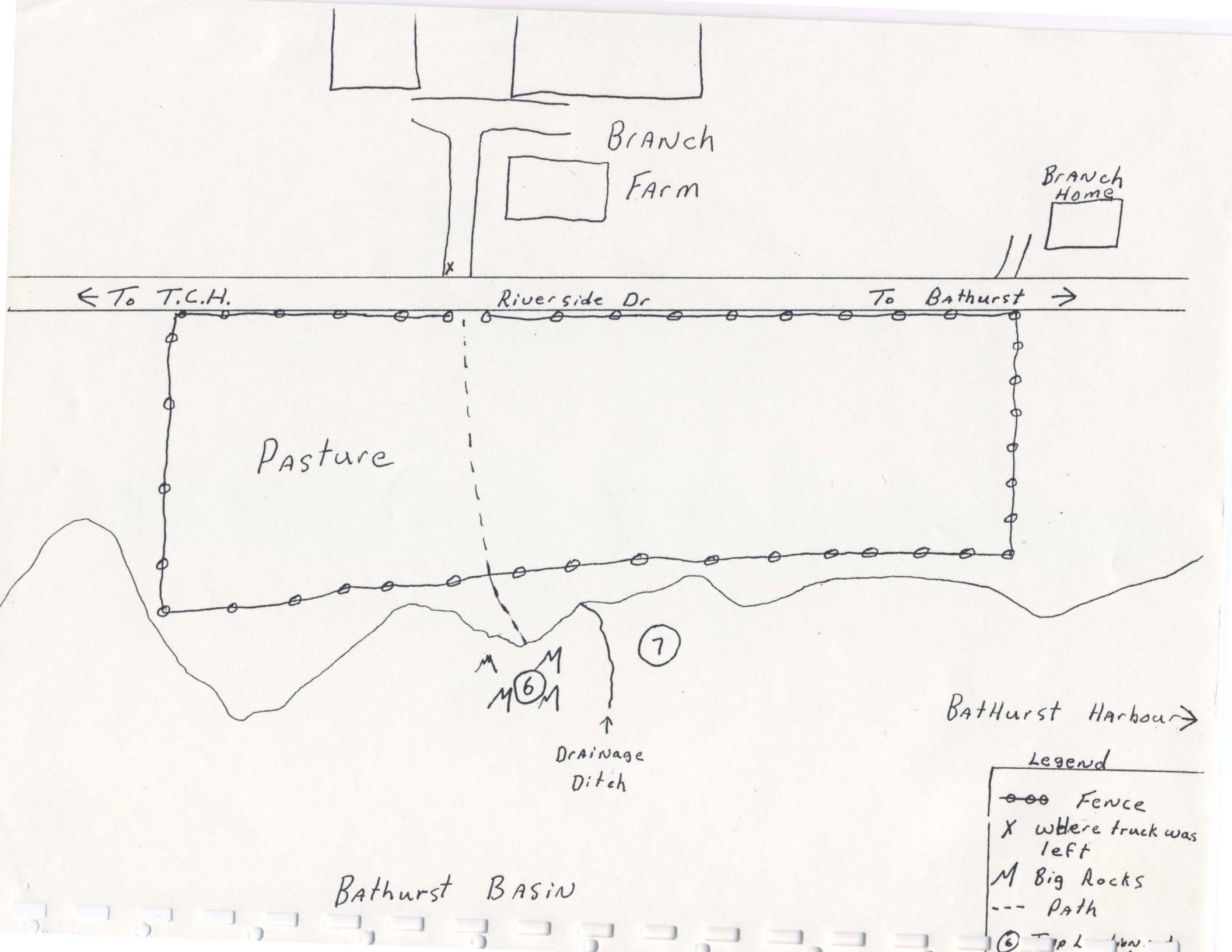
TABLE A

Age And Sex Breakdown

SPECIES	LOCAL				HATCHING YEAR				AFTER HATCHING YEAR				TOTALS			
	Male	Female	Unk.	Total	Male	Female	Unk.	Total	Male	Female	Unk.	Total	Male	Female	Unk.	Total
Black Duck					61	49	-	110	28	18	-	46	89	67	-	156
Mallard					6	5	-	11	5	2	-	7	11	7	-	18
Pintail					1	-	-	1	-	-	-	-	1	-	-	1
American Green Wing Teal					-	-	-	-	1	-	-	1	1	-	-	1

Grand Total 176


To Petit Rocher
Bathurst College
Tougnsll Road
Legend
Path
Dirt Road
Paved Road
N.
Golf
Course
Access Road
Tetagouche River
Path
5
1
2
3
4
Lookout
Bathurst Harbour


Branch Farm
Branch Home
← To T.C.H.
Riverside Dr
To Bathurst →
Pasture
7
6
Drainage Ditch
Bathurst Harbour →
Bathurst Basin
Legend
Fence
X where truck was left
Big Rocks
--- Path

CWS Airboat

C.W.S. Airboat
1984

Crew Leader: Tim MacDonald
Crew Members: Todd Esterbrooks
Danny Sears
Mark Petrie

The C.W.S. Airboat operated in the Border Area of Nova Scotia and New Brunswick. Two trips were also made to Prince Edward Island. A total of 802 birds were banded in 18 nights between July 24 and August 22. Black Ducks accounted for 220 of the 802 (27.43%), Blue-winged Teal accounted for 307 of the 802 banded (38.28%), 69 Green-winged Teal were also banded. A high percentage of the birds banded were American Wigeon, 95 birds (11.89%).

The two trips to Prince Edward Island which totalled five working nights and 334 birds. An average of 66.8 birds per night was high but the number of Blacks 71 or 14.2 per night was low in relation to the boat hours accumulated and the money spent in pursuit of these birds.

AIRBOAT MODIFICATION

Trailer

This year a second axle was added to the trailer to improve the stability and handling on the road. This second set of wheels also resulted in less time being stuck in the mud at some launch site. A new 2½" hitch was also added to handle the strain that used to bind the 2" hitch when backing into a launch site or pulling out over dykes. An electric wench was added to aid in loading the boat, a great improvement over the old hand crank winch which has broken in the past. An Army tie down strap was purchased from a Moncton surplus store and proved to be more secure and easier to secure than the usual rope that has been used.

Airboat

No major changes were made on the boat this season. The alternator was resecured, along with a spring tune-up. One night of banding was cut short when the fan belt became too worn to perform further duties. A new belt was acquired that night on Prince Edward Island and no problems have been experienced since.

New Equipment

Two new Honda 3000 generators were purchased by C.W.S. No problems were experienced with the generator this season. A high powered spot light was also purchased for the operations (200,000 candle power).

MARSHES

The two trips to Prince Edward Island resulted in 334 birds being banded. The first trip, 64 birds were banded of which 14 were blacks. The second trip improved over the first with 270 birds being banded and 57 being blacks. The number of Blacks banded is still not enough to justify the expense and time spent away from better areas in New Brunswick and Nova Scotia.

Wallace Bay

Only 143 birds were banded in Wallace this year due to the conditions of the Wallace Impoundment. The birds were harder to catch because of the low water levels. This area should not be overlooked in the future, even if the water gate is not fixed on the causeway.

Shepody Bay, NWA

Only one trip was made to Shepody this year. This single trip resulted in 154 birds being banded of which 22 were Blacks. The areas worked were Germantown B, C, and Mary's Point. Impoundment D wad being drained at the time. An excess road was found to New Horton C, which has a useable launching site. This Impoundment should be worked in the future. The Shepody Impoundment was also being bait trapped for the first time.

Amherst Marshes

The Amherst Marshes, being the Amherst Point Bird Sanctuary and the New Amherst Marsh (behind J. & P. Farm Service, Amherst), produced 71 birds, in 4 nights. The New Amherst should have more time spent on it in the future.

Tintamarre Marsh

Front lake and Impoundment 1 were worked in the Tintamarre Marsh area. These areas were worked two different nights and produced 53 birds of which 25 were Blacks. The second night saw 60 odd Blacks fly from front lake.

Missaquash Marsh

Only one night of banding was spent here because of the low number of birds banded and the time spent getting those 38 birds.

RECOMMENDATIONS

1. Starting later in August may result in a large number of birds being banded for the same cost.

2. New Horton C should be worked next year.

3. Try to avoid banding on Prince Edward Island, the time can be better spent at Shepody, Wallace and the Border Area.

4. Have a few daylight hours on the boat so that the crew can get familiar with the boat and procedures.

Table 1A. Age and Sex Breakdown, C.W.S. Airboat 1984

Species	Local				Hatching Year				After Hatching Year				Totals			
	Male	Female	Unk	Total	Male	Female	Unk	Total	Male	Female	Unk	Total	Male	Female	Unk	Total
Black Duck	38	30	-	68	70	73	-	143	1	8	-	9	109	111	-	220
B. W. Teal	22	9	-	31	98	100	-	198	46	32	-	78	166	139	-	307
G. W. Teal	5	3	-	8	14	11	-	25	22	14	-	36	41	28	-	69
American Wigeon	27	32	-	59	9	18	-	27	4	5	-	9	40	55	-	95
R. N. Duck	24	21	-	45	6	2	-	8	1	5	-	6	31	28	-	59
Pintail	5	6	-	11	3	5	-	8	-	-	-	-	8	11	-	19
Wood Duck	-	-	-	-	-	-	-	-	9	1	-	1-	9	1	-	10
Mallard	-	-	-	-	2	6	-	8	1	-	-	1	3	6	-	9
Ruddy Duck	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	1
Canada Goose	-	-	-	-	-	1	-	1	-	-	-	-	-	1	-	1
Shovlers	-	-	-	-	3	1	-	4	-	-	-	-	3	1	-	4
Pied-billed Grebe	-	-	-	-	-	-	5	5	-	-	-	1	-	-	6	6
American Coot	-	-	-	-	-	-	2	2	-	-	-	-	-	-	2	2
Totals	121	102	-	223	205	217	7	429	84	65	1	150	410	382	8	802

Table 2A. Age Breakdown, Prince Edward Island, 1984

Species	Local	Hatching Year	After Hatching Year	Totals
Black Duck	33	36	2	71
G. W. Teal	7	12	2	21
B. W. Teal	11	72	34	117
R. N. Duck	20	-	3	23
American Wigeon	53	21	7	81
Pintail	9	7	-	16
Wood Duck	-	-	3	3
Canada Goose	-	1	-	1
Grebe	-	-	1	1
Totals	133	149	52	334

Table 2B. Age Breakdown, Wallace Bay, 1984

Species	Local	Hatching Year	After Hatching Year	Totals
Black Duck	10	56	4	70
Mallards	-	2	-	2
G. W. Teal	-	2	22	24
B. W. Teal	5	8	2	35
R. N. Duck	2	4	2	8
American Wigeon	-	3	-	3
Wood Duck	-	-	1	1
Totals	17	75	51	143

Table 2C. Age Breakdown, Shepody Bay, NWA, 1984

Species	Local	Hatching Year	After Hatching Year	Totals
Black Duck	8	13	1	22
Mallard	-	-	1	1
G. W. Teal	1	8	3	12
B. W. Teal	4	83	9	96
R. N. Duck	11	2	1	14
American Wigeon	-	-	1	1
Wood Duck	-	-	4	4
Shovler	-	4	-	4
Totals	24	110	20	154

Table 2D. Age Breakdown, Amherst Marshes, 1984

Species	Local	Hatching Year	After Hatching Year	Totals
Black Duck	7	19	1	27
Mallards	-	6	-	6
Ruddy Duck	1	-	-	1
G. W. Teal	-	-	1	1
B. W. Teal	2	18	7	27
R. N. Duck	10	1	-	11
Pintail	1	-	-	1
Wood Duck	-	-	1	1
Grebe	-	2	-	2
American Coot	-	2	-	2
Totals	21	48	10	79

Table 2E. Age Breakdown, Tintamarre NWA, 1984

Species	Local	Hatching Year	After Hatching Year	Totals
Black Duck	7	18	-	25
G. W. Teal	-	1	4	5
B. W. Teal	6	6	2	14
American Wigeon	6	1	-	7
Grebe	-	1	-	1
Wood Duck	-	-	1	1
Totals	19	21	7	53

Table 2F. Age Breakdown, Missiquash Marsh, 1984

Species	Local	Hatching Year	After Hatching Year	Totals
Black Duck	3	1	1	5
G. W. Teal	-	2	4	6
B. W. Teal	2	10	5	17
R. N. Duck	2	1	-	3
American Wigeon	1	1	1	3
Pintail	1	1	-	2
Grebe	-	1	1	2
Totals	9	17	12	38

USF&W Airboat

1984 Waterfowl Banding Assignment

St. John River

New Brunswick, Canada

Crew Members

Carl Ferguson, Parker River N.W.R., Newburyport, MA

Andrew French, Iroquois N.W.R., Alabama,NY

Tim McDonald, C.W.S., Sackville, New Brunswick, Canada

Dan Murnaghan, C.W.S., Sackville, New Brunswick, Canada

Introduction

The U.S. Fish and Wildlife Service provided a two-man crew, airboat, and nightlighting equipment for the waterfowl banding assignment on marshes along the St. John River, east of Fredericton, New Brunswick. The two Canadian crew members were from the Sackville, New Brunswick office of the Canadian Wildlife Service.

A quota of 500 black ducks was set for the St. John River banding station with all other waterfowl species captured incidental to black ducks being banded also.

The initial banding crew was experienced with all members having participated on at least one banding assignment. The Canadian Wildlife Service replacement crew member had a week of netting and banding experience prior to working on this assignment.

Preparation

The airboat and nightlighting equipment is stored and maintained at Parker River National Wildlife Refuge in Newburyport, Massachusetts. A new airboat, purchased from Panther Airboat Incorporated, Cocoa, Florida, was used for the banding assignment. Its 455 cubic inch Buick engine had only 19 hours use on it. The airboat, as purchased, needed extensive modifying and outfitting by the Parker River N.W.R. personnel. This included moving the front seat forward and cutting a new footwell, installing lights on the airboat, installing a 2000 watt generator to run these lights, installing hinges and latches on the deck lids, welding a support stand for the airboat operator, reinforcing the fuel tank cradle, modifying the rudder linkage, shortening the trailer hitch, construct waterfowl holding cages for the boat, installing plywood in the bottom of the boat to store gear on, making a support frame for the banding box, and numerous other minor adjustments and modifications to bring the airboat up to par with previously used airboats on this banding assignment.

Coordination with C.W.S. in Sackville, New Brunswick included arranging for a reconnaissance flight over the banding area, having lodging reserved and obtaining a oversized trailering permit in New Brunswick for the airboat. Arrangements also were made to rendevous with the Canadian crew Members.

The 1984 banding crew received information but no letter of introduction for the border crossing into Canada. A temporary work permit was needed for Canadian Immigrations and a letter explaining the banding program with an attached equipment list was needed for Canadian Customs. The border crossing took approximately 40 minutes.

This banding assignment is normally scheduled to begin the last week of July to take advantage of moon phases in using the nightlighting capture technique.

Results

Although the crew experienced little rain during the banding period, the water level in the St. John River and adjacent marshes was, according to the locals, at a 75 year high for this time of year. Several of the marshes were unrecognizable due to the change in aquatic vegetation species and increased size. Many individual marshes were indistinquishable and were part of a larger single wetland area. The crew was capturing and banding waterfowl in fields where cattle had been grazing this time last year. The water level dropped approximately 18 inches during the banding period making some marshes inaccessible to the airboat toward the ending of the assignment. It appeared that the waterfowl were more dispersed in this increased wetland acreage.

A total of 1,009 ducks were captured and banded by the airboat crew in 44.0 hours of operations or approximately eleven nights within seven marshes along the St. John River (Tables 1, 2, 3, & 4).

The major difficulty encountered this year was mechanical problems with the new airboat in the ignition, electrical, fuel, and cooling systems. Approximately three nights of banding were missed and several hundred dollars were spent for parts and labor on the airboat. The airboat was performing poorer at the end of the banding assignment than at the beginning. Consequently, the crew put in some long hours in attempting to solve the variety of mechancial problems.

Approximately 75 percent of the waterfowl banded were captured in Spartina pectinata "hayfields" communities. These thick stands of Spartina in the flooded areas of the marsh made observation and capture of the ducks more difficult. Black ducks and the other waterfowl species were found in several other communities of aquatic vegetation. Listed in order of waterfowl occurrence, they included Menyanthes trifoliata (buckbean), Equisetum fluviatile (horsetail), Scirpus spp. (bulrush), and Pontederia cordata (pickerel weed). Many of the wood ducks were located in stands of Scirpus fluviatillis (river bulrush).

The nightly capture rate listed in Table 1 for each species is somewhat deceiving this year due to the amount of mechancial problems encountered with the airboat. There were several "false starts" and other nights that the efficiency of the operation was hampered due to these problems. The percent of the total for each waterfowl species banded each year from 1979 to 1984 is shown in Table 2. Banding success within each and a comparison for the six years is reflected in Table 3. Most of the black ducks (73.8 percent) were captured and banded at either Grand

Lake or Foshay Lake marshes. The banding crew returned to these productive marshes several times. Large numbers of black ducks were staging in Foshay Lake during the first week of August. Blue-winged teal and wood ducks were the most common adult birds banded. Of the marshes visited, Long Island appeared to be the molting spot for blue-winged teal; Portabello and Long Island the molting spots for wood ducks.

The number of adult black ducks increased from last year, 4.6 compared to 0.7 percent (Table 4). The age structure and sex is shown in Table 4 for all species banded. The age structure of the banded black ducks this shifted from 46.1 and 53.2 percent for local hatching yera birds for 1983 to 28.6 and 66.8 percent respectively for 1984. It appears that the majority of the young black ducks banded in the area were from early nesters. Waterfowl species other than black ducks were predominantly local birds (Table 4).

Recommendations

Personnel

An aerial flight is recommended for first time crew leaders to familiarize themselves with the different marshes and channels. Information from private individuals or organization and public agencies on the concentration of black ducks in the area marshes should be sought. This information can range from observations to waterfowl survey flights. If available, this information can reduce the time needed to operate this banding station.

In order to shorten the time spent at Canadian Customs, the crew leader should have a copy of a past temporary work permit and should have provided Customs with a letter of introduction including an equipment list for the banding assignment at least one week prior to crossing the border. The crew leader should also have enclosed a copy of a previous Customs form listing the equipment.

Equipment

Hopefully the problems will be worked out of the airboat engine before the next banding assignment. Some suggestions for improvements and further modifications include:

1. "Gates" should be installed in the metal cage around the engine to facillitate engine adjustment and maintennance. These gates should be placed to provide access to the ignition points and carburetor areas.

2. The present system of using a hand winch and sand anchor to extract a grounded airboat needs to be improved. An improved hand winch or an electric winch is needed for this situation and should be added to the airboat's equipment list.

3. More holding cage capacity, especially for black ducks, is needed. The capacity should be increased from the present 35-40 birds to 60 birds. The cages could be "added on" and attached with stretch cords to the existing cages.

4. The steel support that the electric winch is attached to on the trailer needs to be reinforced. Some of the airboat retrievals are "dry hauls".

5. Backup lights on the trailer would improve operational safety.

6. Additional anti-skid material on the airboat deck would improve traction and help prevent accidents.

7. A bumper cushion on the front edges of the airboat would assist in docking at piers during the night.

The crew members continued the tradition of long hours complicated with mechanical problems with the airboat. This involved almost daily trips to Fredericton the first week, resulting in only a few hours sleep a night. A well deserved thanks to Andy, Tim, and Dan who accomplished this assignment in a timely and professional manner. Bill Whitman, Canadian Wildlife Service, Sackville, New Brunswick and John Baird, Fish and Wildlife Branch, Department of Natural Resources, New Brunswick continued to provide their excellent assistance and support for this banding assignment.

Good luck to next year's banding crew.

Prepared by: Carl F. Ferguson September 5, 1984

Carl F. Ferguson
Crew Leader - 1984

TABLE 1 - NIGHTLY CAPTURE RATES OF THE MOST COMMON WATERFOWL SPECIES BANDED ALONG THE ST. JOHN RIVER IN NEW BRUNSWICK.

	1979	1980	1981	1982	1983	1984
Black Ducks/Night	36	45	57	29	65	46
Blue-Winged Teal/Night	22	27	62	28	28	18
American Wigeon/Night	5	22	6	7	6	9
Green-Winged Teal/Night	4	8	14	3	6	7
Other Waterfowl Species	8	16	12	6	9	12
TOTAL DUCKS/NIGHT	75	118	151	73	114	92

TABLE 2 - WATERFOWL BANDED ALONG THE ST. JOHN RIVER, NEW BRUNSWICK, FROM 1979 TO 1984.

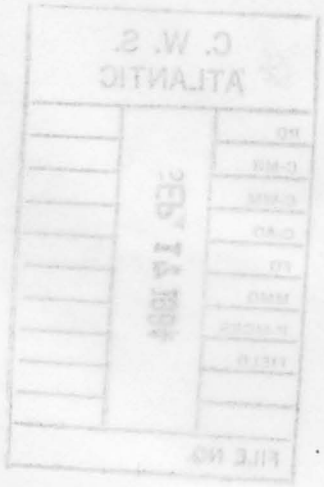
Species	1979		1980		1981		1982		1983		1984	
	#	%	#	%	#	%	#	%	#	%	#	%
Black Duck	505	48.1	631	38.4	511	37.6	436	40.0	521	56.9	500	49.6
Blue-Winged Teal	306	29.2	374	22.7	557	41.0	421	38.6	225	24.6	200	19.8
American Wigeon	67	6.4	305	18.5	52	3.8	109	10.0	49	5.5	97	9.6
Green-Winged Teal	57	5.4	106	6.4	129	9.5	51	4.7	51	5.6	78	7.7
Wood Duck	49	4.7	148	9.0	34	2.5	25	2.3	33	3.6	94	9.3
Mallard	26	2.5	32	1.9	18	1.3	7	0.6	19	2.1	12	1.3
Mallard X Black	--	--	3	0.2	5	0.4	7	0.6	6	0.6	7	0.7
Goldeneye	10	1.0	1	0.1	11	0.8	6	0.6	4	0.4	1	0.1
Shoveler	--	--	25	1.6	25	1.8	15	1.3	4	0.4	10	1.0
Pintail	28	2.6	16	1.0	12	0.9	6	0.6	3	0.3	10	0.8
Ring-Necked	1	0.1	2	0.1	3	0.4	6	0.6	--	--	--	--
Hooded Merganser	--	--	2	0.1	--	--	1	0.1	--	--	1	0.1
TOTALS	1049	100	1645	100	1357	100	1090	100	915	100	1009	100

TABLE 3 - NIGHTLY SUCCESS WITHIN EACH MARSH WORKED DURING 1984 ST. JOHN RIVER BANDING ASSIGNMENT.

		BLACK DUCKS	BLUE-WINGED TEAL	AMERICAN WIGEON	GREEN-WINGED TEAL	WOOD DUCK	MALLARD	PINTAIL	SHOVELER	MALLARD X BLACK	GOLDENEYE	HOODED MERGANSER	TOTOLS
7/28	Foshay Lake	3	0	0	0	0	0	0	0	0	0	0	3
7/29	Grand Lake	36	8	0	4	4	1	1	0	0	0	0	54
	Little Lake	0	0	0	0	0	0	0	0	0	0	0	0
7/30	Grand Lake	82	26	1	4	8	0	1	0	0	0	0	122
7/31	Farmham Marsh	29	9	0	1	4	0	0	0	1	0	0	44
8/01	Grand Lake	66	22	14	9	10	0	0	0	1	0	0	122
8/02	Lower Musquash Isle	15	2	13	0	0	0	1	0	3	0	0	34
8/03	Grand Lake	49	30	17	13	10	1	1	0	0	0	1	122
8/04	Long Island	54	43	19	13	18	0	4	6	0	0	0	158
8/05	Portabello	33	17	0	22	26	3	0	2	0	0	0	103
8/06	Foshay Lake	115	39	31	11	4	6	1	0	1	1	0	209
8/07	Foshay Lake	18	4	2	1	10	1	0	2	1	0	0	39
		500	200	97	78	94	12	9	10	7	1	1	1,009

TABLE 4 AGE STRUCTURE AND SEX OF EACH WATERFOWL SPECIES BANDED ALONG THE ST. JOHN RIVER, NEW BRUNSWICK IN 1984.

	Local		Hatching Year		After Hatching Year		Totals		
	Male	Female	Male	Female	Male	Female	Male	Female	PERCENTAGE
Black Duck	65	78	166	168	9	14	240	260	49.6
lue-Winged Teal	56	56	13	15	51	9	120	80	19.8
American Wigeon	42	42	0	3	4	3	46	48	9.3
reen-Winged Teal	32	17	13	6	3	7	48	30	7.7
Wood Duck	30	26	6	6	27	2	63	34	9.6
allard	0	0	0	4	7	1	7	5	1.3
Mallard X Black	1	0	0	5	1	0	2	5	0.7
hoveler	3	3	2	1	0	1	5	5	1.0
intail	1	2	0	5	0	0	1	7	0.8
Goldeneye	0	1	0	0	0	0	0	1	0.1
ooded Merganser	0	0	0	1	0	0	0	1	0.1
					TOTAL WATERFOWL ----------		1,009		100.0%



Atlantic Flyway Cooperative Banding Program:
Atlantic Provinces, 1984.

Name	Date
M. Bateman	March 14, 1986

Atlantic Fly. Cooperative Banding
Programs: Atlantic Provinces