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1975 Woodcock Banding Report
Moosehorn National Wildlife Refuge
Calais, Maine

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Introduction

The summer of 1975 was one of change in some of the activities related to Woodcock work at Moosehorn. Banding of birds was continued as in earlier years while a large portion of the summer was also spent recover typing the refuge, and the Moosehorn Valley in particular, resulting in a more detailed, updated cover type map. Much of this work was done to prepare the way for a Ph. D. student's study on cover manipulation to increase the local woodcock population. Intensive alder sampling was also undertaken and Eldon Clark's earlier woodcock study plots were relocated to further aid in this study.

Banding operations were carried out under Crew Chief Scott Owens with Crew Member David Brownlie. Vegatative sampling and mapping was performed under Crew Chief Paul O'Neil with Crew Members Ellen Johnson, William Bicknell, and Manuel Olivera. Both crews were very fortunate to have the assistance of Ne'l Stronach who has been working with his father on the European Woodcock in Ireland. The banding crew assisted the sampling crew when help was needed, and the sampling crew assisted the banding crew throughout the summer. Initial work was carried out by all personnel in the area of vegatative sampling and when permission to proceed was given banding was begun in earnest on June 30.

Banding of birds was done to give a population estimate on the refuge in the form of a regression curve. Banding could also give indications of any movements of birds as a result of habitat manipulations undertaken by the graduate student.

The 1974 report gives instructions on proper setup and procedures of mist netting, nightlighting, and trapping operations. Suggested mist net arrangements for fields already in use are shown in the back of the report. The entire report should be read before attempting any woodcock banding. Banding areas discussed in this paper are located on the map included at the end of the report.

Nightlighting

Weather conditions were not nearly as good as last summer. There were very few of the wet, rainy nights which are necessary to make ideal lighting conditions. The Moosehorn crew often has had a very high capture success(about 80 % on most nights) while during this summer success on our best night was about 40%. Lighting was carried out anyway during the dark of the moon with a lower success in part because of noisy conditions as a result of the dry weather. Use of the Scout in the Y.C.C. field gave fairly good success on nights when cloud cover was marginal.

A great breakthrough during this summer, however, was the finding of new nightlighting areas. The Lunn Pit(area 50) was heavily used by birds early in the summer. Usage declined rapidly later in the summer but during June through early July this area should be well worth the effort. The other success occured in the

field by Barn Meadow(area 41). Several strips were cut in the field parallel to the alders adjacent to Barn Meadow Stream. Some birds were found in and near these strips and others were found in an open area of the field which had been hayed. By the time area 41 was lighted field usage had already started to decline in other fields so results should be even better earlier in the summer. Apparently this field had been checked in earlier years but at the time was not worth the effort spent there.

All roads and firewood cuts were nightlighted in the Vose Pond area and no birds were seen even though the area was checked twice. Birds were seen flying in these areas in June and early July but they did not seem to be used as night fields by woodcock.

The regular lighting fields(areas 1, 10, 11, 20, 36, 39, and 40) yielded birds fairly consistently although fields 39 and 40 seem to be growing up and as a result are used by fewer birds. These fields should be mowed completely to bring the fields back into use. Areas 18, 100, and 101 also yielded a few birds early in the summer.

Dineen(area 7) was used by birds so heavily this year that it was nightlighted in addition to the normal mist netting carried out there. This increase in usage could be a result of the cutting and chipping of invading shrubs and trees by last summer's crew. The crew also cleared the Woodcock Trail fields this summer with the help of a Y.C.C. crew. Bird usage was high in this field this year but the catch stayed low because birds were lost from the netter and lighter in the heavy vegatation. As a result of the clearing the take should be much higher next year.

Besides poor weather, the other problem affecting lighting

success was that field usage seemed to decline very early(even though the fields were put in a six day rotation as suggested by M. Lambert to prevent overuse) and drop to almost zero in the third week of August. Some of our best fields were done under good lighting conditions on August 21 and only one bird was seen by all crews.

Mist Netting

Last year Michael Lambert made the recommendation that nets be rolled after each night's use so that birds did not develope the habit of flying over the nets when they were merely furled. Because of the time this would have taken, a compromise move was made. After about two weeks of use the nets in each field were rolled for about one week. This did not take too much time and yet it got the nets out of the way of the birds for a while. It is difficult to assess the value of the periodic rolling of nets because this year was not as good a year for netting. That is, not as many birds were taken in nets for the effort expended as last year.

Analysis of this year's work is complicated by the extremely dry weather conditions prevalent throughout this summer in contrast to last year's very wet conditions. Are the birds having to work harder to find enough food and then not bothering to expend the energy necessary to fly the distance to the traditional night-time fields? The ground trap data seem to support this (Table 1.) If the population were relatively stable the ground trap data should remain fairly constant while the birds may use the fields less as a result of the dry weather and cause a higher effort per bird caught netting or lighting. As a matter-of-fact the

ground traps seem to have gone down slightly in trap nights per bird.where the effort per bird in netting is higher than last year.

Another recommendation put in last summer's report was that the fields were badly overused by the crews and as a result bird usage declined more quickly than it normally would have at the summer's end. Each field was only netted or lighted once every five to seven days this summer in accordance with the recommendation. Even with a strict rotation bird usage dropped off earlier and much more rapidly than last year reflecting that summer weather conditions(relating to food supply) and not netting or lighting seem to be what regulate nighttime bird usage. We feel that this is very important and a lot of birds ~~were not~~ were not banded because of adhering to the rotation. I am sure that field usage may be hurt some, but a three day rotation rather than a six day one is what should be followed. The total number of birds caught should be much higher when following a shorter rotation.

A new netting area with some promise was found this summer. Baker Pond Field(area 51) was netted toward the end of the summer and should be experimented with to find a better net placement in 1976. Using more nets and altering their placement should produce good results next summer(fig. 1).

Ground Trapping

This summer 85 ground traps were set for the majority of the trapping season which is similar to 1974 when 87 traps were set most of the summer. However, unlike 1974, trapping in 1975 did not begin until June 30. As a result, the advantage that ground traps have over other methods in being able to capture broods before break-up was not available to us this year. For example, trapline 11 caught only 12 birds this summer while it caught 31 in 1974. This trapline is located in one of the better brood covers on the refuge and sees little use later in the summer after the soils dry out. As a result of our late start this year, trapping in 1975 accounted f for just 175 birds while in 1974 it accounted for 214. This summer we averaged 23.1 trapnights per bird and in 1974 an average of 25.1 trapnights per bird was obtained. This shows a slight improvement over 1974.

Because of our late start and the unusually dry summer we had this year a limited number of traps, generally the more moist sites or the sites under the cooler fir stands, accounted for the majority of the birds trapped.

This year all traps on all the lines in operation were cover typed, the number of cells set, and the number of cells available for setting were recorded. That information is included in a file folder with the rest of the 1975 banding data.

Again this year Trapline 5 caught the most birds (67) in the fewest trapnights per bird (10.2 trapnights/bird) when all new, repeat and return birds were included in the total number of birds. The 1974 analysis used only the new birds and birds handled the

Table 1. Change in Trap Success on Trapline 5 From Cell Changes.

	Before Change	During Change	After Change
No. of cell-nights	459	252	1476
No. of birds caught	9	5	50
Trap success	51.0 cellnights/bird	50.4	29.5

first time as repeats or returns i.e. it did not include repeat-repeats or repeat-returns, etc. in the totals. This higher success may be due in part to the strips which were clearcut in the fall of 1973. This year some changes were made in the cell arrangement on Trapline 5 which may also have helped the trap success ratio. A sketch of these cell additions may be found in Figure 2. The cells were placed so as to run perpendicular to the clearcut strips in hopes of intercepting more birds moving through the cover of the uncut strips. Before rearranging the cells we had a ratio of 51.0 cellnights/bird while after we made the change we had a ratio of 29.5 cellnights /bird. This greater success resulted even when other traplines were declining in success due to droughty conditions. The Trapline 5 additions should be maintained in 1976 for a more complete evaluation. Refer to Figure 2 to avoid any confusion in setting the traps or in taking notes in the field. (Refer to Tab. 1.)

Trapline 1 had the next best success ratio with 12.9 trapnights per bird, then Trapline 4 with 16.1 trapnights per bird, Trapline 16 with 27.0 trapnights per bird, and finally Trapline 11 with 61.8 trapnights per bird. This is again an indication of Trapline 11's value as early season brood cover while being of marginal value as late summer diurnal cover. The ratio for Trapline 11 would no doubt have been more favorable had groundtrapping started on time.

Trapline 16 is a new line just put into operation in 1975. A very few traps (18-23 near the stream) produced the majority of the total birds caught. several traps caught no birds at all or just one or two during the entire season. Had the line been set earlier in the year, some of those would no doubt have caught more birds. A full trapping season is again needed to adequately evaluate the value of this line.

Conclusions

The dry summer of 1975 resulted in lower nighttime field usage by woodcock. Usage declined earlier than on most summers. At the end of the summer the birds were still very thin and the sternum on birds handled was quite prominent. Because of these conditions netting and lighting success was low. Lighting success was also low because of poor lighting weather. Ground traps were quite successful. In part this was probably due to the additions on line 5 and also because of the necessity of the birds to search harder for food. Some new and very promising netting and lighting fields were found and should increase the number of birds banded in 1976. Banding was started later than usual and this along with poor weather and field usage accounted for the lower number of birds banded. The trap data, however, seem to suggest that the population of woodcock remains fairly constant in the areas sampled. Summer weather seems to be the most important factor in regulating field usage rather than the disturbance of the field by banding practices. Therefore, a shorter rotation is recommended to be followed in the future summers at Moosehorn.

TABLE II: Trapping success of the Baring unit in 1971, 1972, 1973, 1974, and 1975

Year	Trap nights	# birds	Trap nights/bird
1971	8847	222	39.8
1972	6824	195	35.0
1973	2895	153	18.9
1974	5377	214	25.1
1975	4047	175	23.1

TABLE IV: Netting success of the Baring unit in 1971, 1972, 1973, 1974, and 1975

Year	Net nights	# birds	Net nights/bird
1971	548	78	7.0
1972	774	215	3.6
1973	416	158	2.6
1974	1104	188	5.8
1975	503	84	6.0

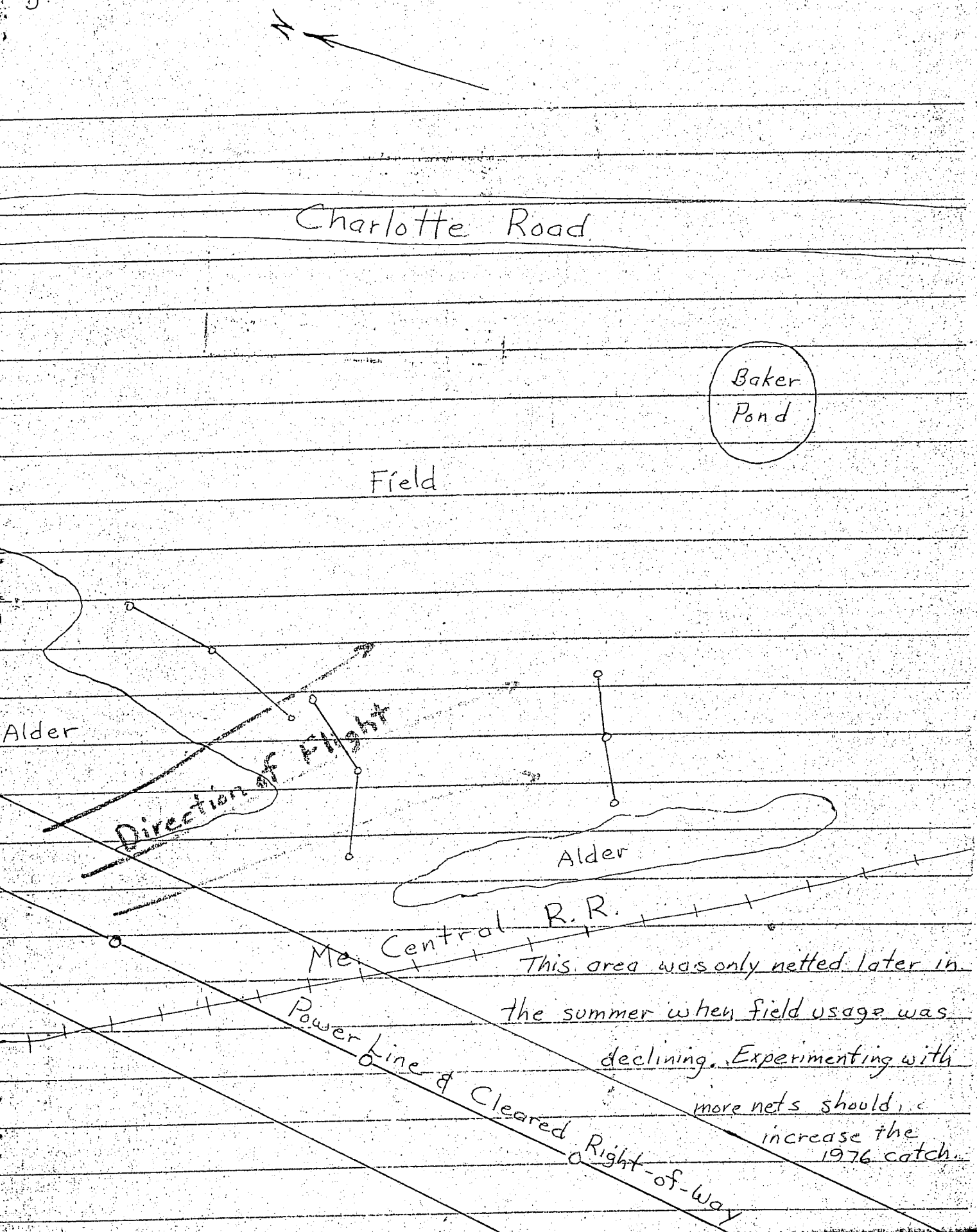
TABLE V: Nightlighting success of the Baring unit in 1971, 1972, 1973, 1974, and 1975

Year	Man-hours	# birds	Man-hours/bird
1971	132	84	1.50
1972	153	122	1.25
1973	99.5	121	0.82
1974	173.5	193	0.90
1975	143.2	130	1.10

TABLE III—Number of times woodcock were handled on the Moosehorn Refuge, Baring unit, in 1975. Data to be used for the population regression.

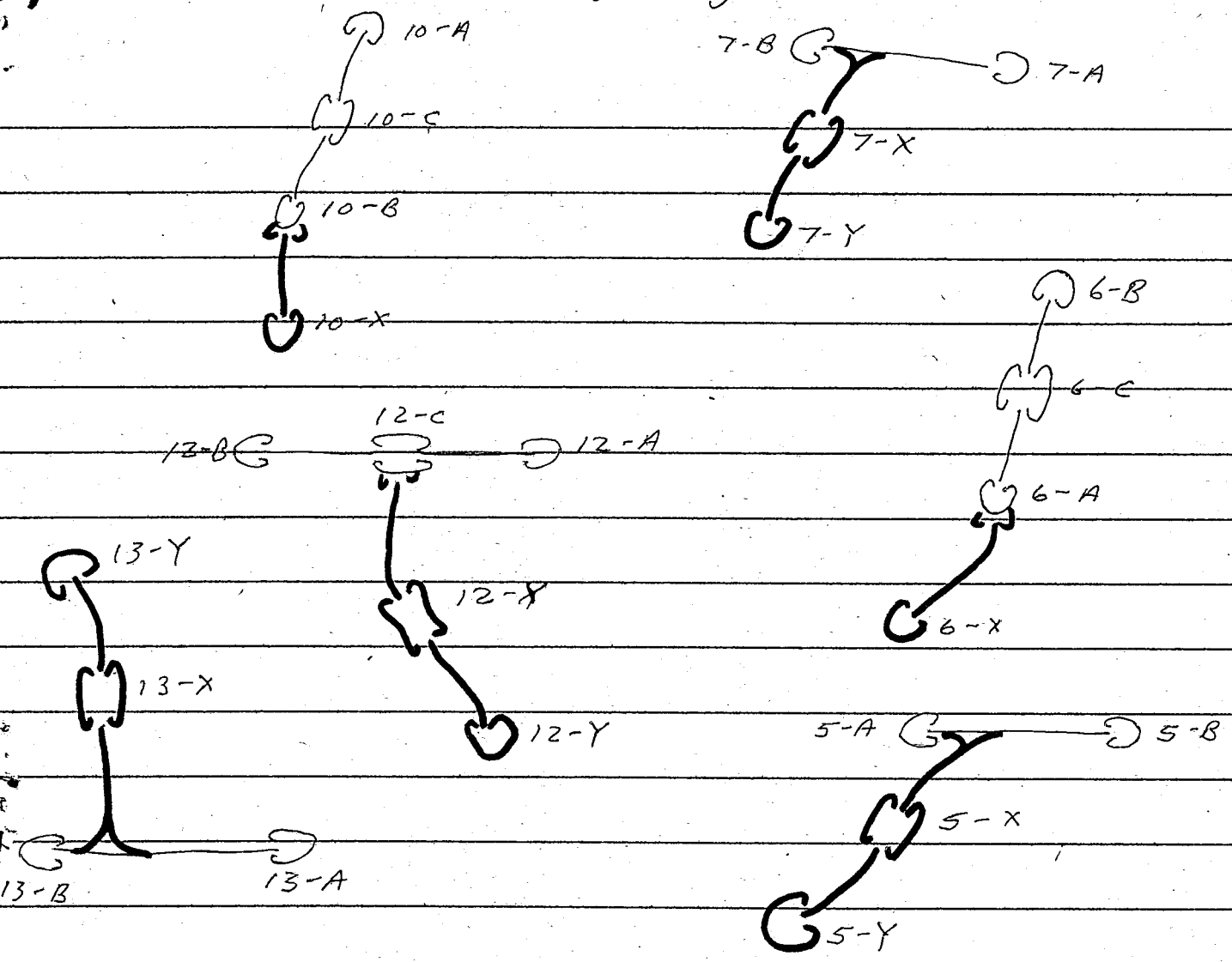
Age-Sex	# birds handled once	# birds handled twice	# birds handled three x	# birds handled four x	# birds handled five x	# birds handled six x	# birds handled seven x
HY-M	101	38	10	4			
HY-F	69	42	7	2	1		1
SY-M	7	3	1		1		
SY-F	7	1					
ASY-M	5	1					
ASY-F	5	6	5				
TOTAL	194	91	23	6	2		1
AHY-M	12	4	1		1		
AHY-F	12	7	5				

Figure 1. - Mist Net Placement in Baker Pond Field (Area 51)

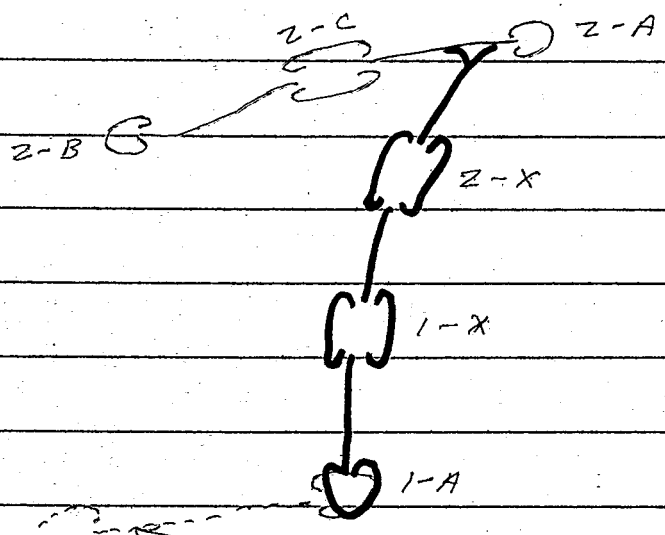


This area was only netted later in the summer when field usage was declining. Experimenting with more nets should increase the 1976 catch.

Figure 2. Additions Made on Trapline 5 to Intercept Birds Moving Along Alder Strips



All additions shown in red.



Former arrangement of trap 1. Changed because it has caught zero birds in the last two years.