



## The following table shows the

All the material in this report was obtained from the records of the Bureau of the Census. It is to be understood that the figures are preliminary and subject to change as more complete information is received. The figures are given in thousands of persons unless otherwise indicated. The figures for 1952 are based on the 1950 Census. The figures for 1953 are based on the 1950 Census and the 1953 Survey of Current Business. The figures for 1954 are based on the 1950 Census and the 1954 Survey of Current Business. The figures for 1955 are based on the 1950 Census and the 1955 Survey of Current Business. The figures for 1956 are based on the 1950 Census and the 1956 Survey of Current Business. The figures for 1957 are based on the 1950 Census and the 1957 Survey of Current Business. The figures for 1958 are based on the 1950 Census and the 1958 Survey of Current Business. The figures for 1959 are based on the 1950 Census and the 1959 Survey of Current Business. The figures for 1960 are based on the 1960 Census.

as follows:

| Year | 1950 | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 |
|------|------|------|------|------|------|------|------|------|------|------|------|
| ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  | ...  |

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# RESOURCE MANAGEMENT REPORT



ONTARIO

DEPARTMENT OF LANDS AND FORESTS

HON. RENE BRUNELLE  
Minister

G.H.U. BAYLY  
Deputy Minister



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Fish and Wildlife Branch



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RESOURCE MANAGEMENT REPORT

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No. 87 March, 1967

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REPORT ON THE PROGRESS OF THE WORK

1953-1954

1

The first part of the report deals with the work done during the year.

The second part of the report deals with the work done during the year.

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1953-1954



## PHEASANT HARVEST REPORT 1966

## LAKE SIMCOE DISTRICT

by  
J.S. Dorland.

Abstract

A field check of 1318 pheasant hunters in seven of our thirteen regulated townships during the open season produced a harvest of 695 pheasants, and a hunter success of .52 of a bird per hunter. It took 6.9 man-hours of hunting to kill a bird. Success figures are comparable with last year's results. Opening day figures indicate a hunter success of .66 bird per hunter in 4.9 man-hours of hunting. The townships of Whitby, Pickering and Markham provided the best hunting during the season. Wind and rain on the opening day caused many hunters to leave the field by noon.

Open Seasons

October 19 - November 5th - the counties of Peel and York except the townships of North Gwillimbury and Georgina. The townships of Adjala, Tecumseth and West Gwillimbury in the County of Simcoe; and the townships of Pickering, Reach, Uxbridge, Scott, Whitby and East Whitby in the County of Ontario.

October 19 - November 12 - the County of Dufferin (8 a.m. - 5 p.m. only)

September 24 - December 15- remainder of the district.  
Bag limit - 3 birds per day, not more than one of which shall be a hen. Three of either sex in area 3.

Statistics

Although the hunting of pheasants was open throughout the entire district, this report covers only seven of the regulated townships in the district, namely: Whitby, Pickering, Markham, Whitchurch, King, Caledon and a few figures from Chinguacousy. The remaining regulated townships either produce little pheasant hunting

CHAPTER I



A fact which is not generally known is that the first regular survey of the county was made in the year 1535, when the king's commissioners, Sir Thomas Cromwell and Sir John Heynes, were sent to take a general view of the land and tenures of the county. The result of their survey is contained in a book which is now preserved in the Public Record Office, and which is one of the most valuable documents of the reign of Henry VIII.

Open Season

Open season is a term which is applied to the period of the year when the game is open to all sportsmen. It is a custom which has prevailed in the county of York for many years, and is one of the most interesting features of the county's history. The open season is usually held during the months of August and September, and is a time when the sportsmen of the county are allowed to hunt and shoot on the lands of the lord of the manor.

The open season is a time when the sportsmen of the county are allowed to hunt and shoot on the lands of the lord of the manor. It is a time when the sportsmen of the county are allowed to hunt and shoot on the lands of the lord of the manor. It is a time when the sportsmen of the county are allowed to hunt and shoot on the lands of the lord of the manor.

Statistics

Although the county of York is one of the most fertile and productive of any in the kingdom, it is also one of the most densely populated. The population of the county in the year 1851 was 1,100,000, and in the year 1871 it had increased to 1,400,000. The increase in the population of the county has been the result of a number of causes, including the growth of the textile industry and the increase in the number of manufacturing establishments.

or closed their townships to hunting during the pheasant season. The remainder of the district, that is northward, produced only a few figures and is considered outside good pheasant habitat. The attached map indicates the regulated townships or parts of the township open this year for pheasant hunting.

|  | <u>Opening Day</u> | <u>Entire Season</u> |
|--|--------------------|----------------------|
| Number of parties checked in field     | 232                | 534                  |
| Number of parties using dogs           | 128                | 302                  |
| Number of hunters checked in the field | 614                | 1318                 |
| Number of Man-hours hunted             | 1992               | 4837                 |
| Number of cocks harvested              | 241                | 415                  |
| Number of hens harvested               | 165                | 280                  |
| Total pheasants harvested              | 406                | 695                  |
| Cock per hunter                        | .39                | .31                  |
| Hen per hunter                         | .27                | .21                  |
| Total per hunter                       | .66                | .52                  |
| Man-hours per pheasant                 | 4.9                | 6.9                  |
| Cocks seen but not shot                | 412                | 649                  |
| Hens seen but not shot                 | 344                | 530                  |
| Sex Ratio C/H harvest                  | 1.5-1              | 1.5-1                |

See Table I for complete coverage by townships

### Distribution

A total of 10,660 pheasants made up of 4960 day-olds, 5000 poults and 700 stock birds were received in the district for distribution (These figures do not include birds received for provincial parks and crown land releases). The day-olds were raised to poult size by townships, game commissions and interested sportsmen before release. Ten of our regulated townships received 8680 pheasants for distribution. No birds were released in the regulated townships of Markham, Toronto, Adjala and West Gwillimbury for different reasons and upon request of township councils. See Table II.

### Pheasant Release (Adult in fall)

As previously carried out in recent years the townships of Whitchurch and Pickering made special plantings of adult birds just prior and during the open season for pheasants. All pheasants released in these townships during the year were leg banded. (A special report on these two townships is being prepared.)



## Licences

A total of 4412 township pheasant licences (excluding E. Gwillimbury) were sold up to the close of the pheasant season, November 5, by twelve townships, two less than in the previous year (Toronto Gore and Toronto). This total consists of 1465 resident licences and 2947 non-resident licences. The township of Pickering again sold the largest number of non-resident licences 440, with Whitchurch a close second with 400. (See Table III)

## Weather

Wind and Rain greeted the pheasant hunter on opening day making hunting hazardous, difficult, and causing many to leave the field by noon. The remainder of the season was slightly warmer but turned cooler toward the end with little sunshine. The overall weather throughout the open season was considered only fair.

## Harvest

Average hunter success and man-hours to kill a pheasant in the regulated townships checked compares very closely with figures presented in 1964 and 1965. Whitby township where 1700 pheasants were distributed for raising and releasing produced the best success figure of the seven townships showing .73 of a bird per hunter during the season for 4.6 man-hours of hunting. In the townships of Pickering and Whitchurch where many of the birds were released just prior and during the season hunter success figure of around a half a bird per hunter was obtained with 6.4 man-hours to kill a pheasant. In the township of Markham which has not had a pheasant release since 1963, hunter success on the opening day was .75 of a bird per hunter, requiring only 4.2 man-hours of hunting for a bird. Hunter success in King and Chinguacousy townships was disappointing to all, with hunting in Caledon considered only fair. Close to three quarters of the birds known to be harvested in the township of Whitchurch were from releases made during the year.

| <u>Comparison with</u>                   | <u>1962</u> | <u>1963</u> | <u>1964</u> | <u>1965</u> | <u>1966</u> |
|--|-------------|-------------|-------------|-------------|-------------|
| Number of townships reporting            | 9           | 9           | 10          | 9           | 7           |
| Number of hunters checked                | 1,455       | 2,097       | 1,795       | 1,316       | 1,318       |
| Number of parties using dogs             | 263         | 457         | 427         | 317         | 302         |
| Number of pheasants shot                 | 672         | 942         | 964         | 699         | 695         |
| Number of pheasants seen<br>but not shot | 1,679       | 1,403       | 1,713       | 1,221       | 1,179       |
| Hunter success                           | .46         | .45         | .54         | .54         | .52         |
| Man-hours to kill a bird                 | 7.4         | 7.5         | 6.4         | 6.6         | 6.9         |
| Distribution of pheasants                | 15,550      | 15,000      | 9,400       | 10,350      | 8,680       |
| Township licences sold                   | 6,341       | 6,598       | 5,518       | 5,698       | 4,412       |

The first part of the document discusses the importance of maintaining accurate records. It emphasizes that every detail matters and that consistency is key to success. The text is somewhat repetitive but serves to reinforce the main points.

In the second section, the author provides a detailed analysis of the current market conditions. They note that while there are challenges, there are also significant opportunities for growth. The tone is optimistic but realistic.

The third part of the document outlines the proposed strategy for the coming year. It includes specific goals and a timeline for implementation. The author believes that this approach will lead to sustainable long-term growth.

Finally, the document concludes with a call to action. The author encourages all team members to stay focused and committed to the shared vision. They express confidence in the team's ability to overcome any obstacles.

The document is a comprehensive overview of the company's current state and future plans. It provides a clear direction and a sense of purpose for all stakeholders. The author's leadership and vision are evident throughout the text.

Remarks

Figures indicating hunter success and man-hours to kill a pheasant show little change in the past three years, with an approximate 20% rise over 1963. This small increase in a way could be attributed to the increase in the planting of adult birds just prior and during the open season in a few townships. In addition, our last few springs have had fairly good hatching weather thus increasing our natural hatch in the field. Excluding plantings and hunting licences sold, this year's figures compare favourably with 1965.

Discussion

It would appear that the pheasant hunting areas open to hunting in the township of Whitby, although not large in comparison with townships to the west, are developing into excellent pheasant areas. Hunter success here has increased from .54 of a bird per hunter with 5.6 man-hours of hunting to kill a bird in 1963 to .73 of a bird per hunter with only 4.6 man-hours of hunting per bird this year.

In the township of Markham with no pheasant releases since 1963 hunters success in the last three years has varied between .52 and .61 bird per hunter season, indicating fair to good reproduction on the land open to hunting. Observations on lands closed to hunting south of No. 7 Highway have indicated on many occasions large flocks of pheasants in and around corn fields and uncultivated lands.

Harvest of pheasants in the townships of Pickering and Whitchurch, except on the opening day, was a little disappointing as many birds here were released into the field just prior or during the season. Although a good number of hunters were checked in each township the inclement weather prevailing during the season made it difficult to flush the bird even with the use of dogs.

In the remaining townships reporting, King, Caledon and Chinguacousy, hunters really had to hunt for the pheasant as success was very poor. This year the township of King sold non-resident licences only to those hunters who produced written consent of trespass from landowners. Such procedure may in the future be in order for other townships.

The continuation of the raising and releasing of adult pheasant is to be further encouraged with those townships who in the past released only poults.

1. The first part of the document  
 discusses the general principles  
 of the system. It covers the  
 basic concepts and the overall  
 structure of the system.

2. The second part of the document  
 describes the implementation details.  
 It includes the specific components  
 and the flow of data.

3. The third part of the document  
 provides a detailed analysis of the  
 system's performance. It compares  
 the results with the theoretical  
 expectations.

4. The fourth part of the document  
 discusses the conclusions and the  
 future work. It highlights the  
 strengths and weaknesses of the  
 system.

5. The fifth part of the document  
 contains the references and the  
 appendix. It provides additional  
 information and resources.

6. The sixth part of the document  
 is the index and the table of  
 contents. It helps in navigating  
 through the document.

The document is a technical report  
 on the design and implementation  
 of a new system. It covers the  
 theoretical aspects and the  
 practical details. The report  
 is organized into six main  
 sections. The first section  
 introduces the system and  
 its objectives. The second  
 section describes the system's  
 architecture and components.  
 The third section presents the  
 experimental results and  
 compares them with the  
 theoretical models. The fourth  
 section discusses the findings  
 and suggests areas for future  
 research. The fifth section  
 lists the references used in  
 the report. The sixth section  
 is the index and the table of  
 contents.



Acknowledgements

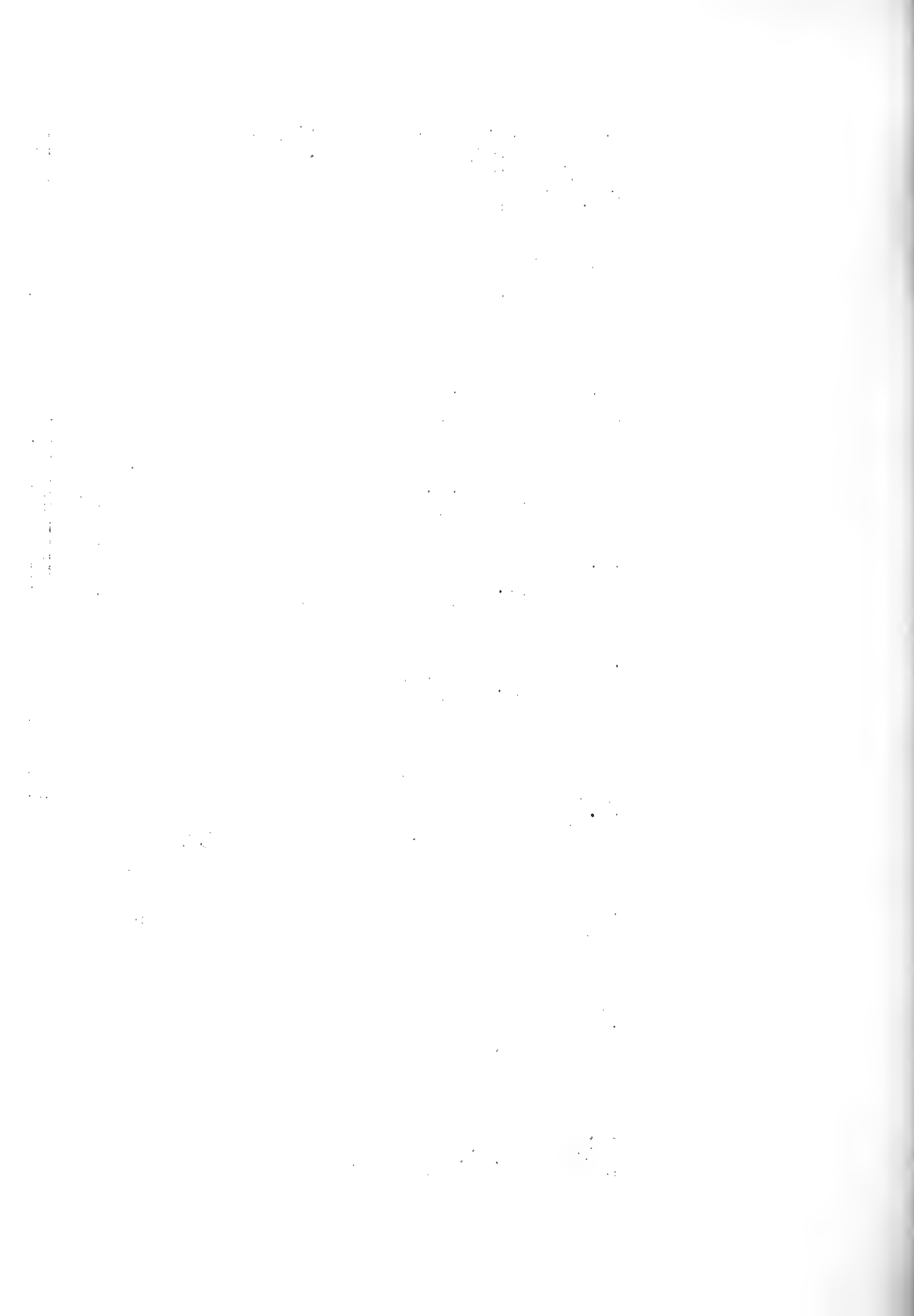
I wish to acknowledge thanks to Conservation Officers, G. Love, J. Catcher, Ben Smith, A. Fletcher, E. Smith and R. Manley; District Biologist A. Wainio, and the Deputy Conservation Officers who supplied the figures used in the compilation of this report.



TABLE I

PHEASANT HUNTING STATISTICS 1966LAKE SIMCOE DISTRICT

|                       | Whitby   |               | Pickering |               | Markham  |               | Whitchurch |               |
|-----------------------|----------|---------------|-----------|---------------|----------|---------------|------------|---------------|
|                       | Open Day | Entire Season | Open Day  | Entire Season | Open Day | Entire Season | Open Day   | Entire Season |
| No. of Parties        | 24       | 39            | 71        | 188           | 52       | 92            | 63         | 146           |
| Parties Using Dogs    | 8        | 19            | 51        | 133           | 26       | 50            | 29         | 56            |
| No. of Hunters        | 72       | 118           | 197       | 444           | 141      | 236           | 147        | 356           |
| Total Hunter Hours    | 253      | 397           | 687       | 1597          | 447      | 1032          | 431        | 1120          |
| Cocks Bagged          | 29       | 43            | 80        | 155           | 66       | 81            | 54         | 110           |
| Hens Bagged           | 29       | 44            | 48        | 96            | 40       | 58            | 39         | 64            |
| Total Bagged          | 58       | 87            | 128       | 251           | 106      | 139           | 93         | 174           |
| Per Hunter Cock       | .40      | .36           | .41       | .35           | .47      | .34           | .37        | .31           |
| Per Hunter Hen        | .40      | .37           | .24       | .22           | .28      | .25           | .26        | .18           |
| Per Hunter Total      | .80      | .73           | .65       | .57           | .75      | .59           | .63        | .49           |
| Hours to Bag a Bird   | 4.4      | 4.6           | 5.4       | 6.4           | 4.2      | 7.4           | 4.6        | 6.4           |
| Cocks Seen (Not Shot) | 61       | 90            | 111       | 206           | 152      | 195           | 67         | 125           |
| Hens Seen (Not Shot)  | 74       | 103           | 88        | 167           | 125      | 166           | 37         | 69            |
| Total Seen (Not Shot) | 135      | 193           | 199       | 373           | 277      | 361           | 104        | 194           |
| Sex Ratio C/H Shot    | 1-1      | 1-1           | 1.7-1     | 1.6-1         | 1.6-1    | 1.4-1         | 1.4-1      | 1.7-1         |
| Sex Ratio C/H Seen    | 1-1-2    | 1-1.1         | 1.3-1     | 1.2-1         | 1.2-1    | 1.2-1         | 1.8-1      | 1.8-1         |



PHEASANT HUNTING STATISTICS 1966

LAKE SIMCOE DISTRICT

|                       | King     |               | Caledon  |               | Chinguacousy |               | District Total |               |
|-----------------------|----------|---------------|----------|---------------|--------------|---------------|----------------|---------------|
|                       | Open Day | Entire Season | Open Day | Entire Season | Open Day     | Entire Season | Open Day       | Entire Season |
| Number of Parties     | 7        | 30            | 15       | 37            |              | 2             | 232            | 534           |
| Parties Using Dogs    | 6        | 20            | 8        | 22            |              | 2             | 128            | 302           |
| Number of Hunters     | 13       | 63            | 44       | 94            |              | 7             | 614            | 1318          |
| Total Hunter Hours    | 49       | 220           | 125      | 354           |              | 17            | 1992           | 4837          |
| Cocks Bagged          | 4        | 4             | 8        | 22            |              | Nil           | 241            | 415           |
| Hens Bagged           | 1        | 2             | 8        | 16            |              | Nil           | 165            | 280           |
| Total Bagged          | 5        | 6             | 16       | 38            |              | Nil           | 406            | 695           |
| Per Hunter Cock       | .31      | .6            | .18      | .23           |              |               | .39            | .31           |
| Per Hunter Hen        | .8       | .3            | .13      | .17           |              |               | .27            | .21           |
| Per Hunter Total      | .39      | .9            | .36      | .40           |              |               | .66            | .52           |
| Hours to Bag a Bird   | 9.8      | 37.0          | 7.8      | 9.0           |              |               | 4.9            | 6.9           |
| Cocks Seen (Not Shot) | 14       | 20            | 7        | 12            | 1            |               | 412            | 649           |
| Hens Seen (Not Shot)  | 12       | 12            | 8        | 13            |              |               | 344            | 530           |
| Total Seen (Not Shot) | 26       | 32            | 15       | 25            | 1            |               | 756            | 1179          |
| Sex Ratio C/H Seen    | 4-1      | 2-1           | 1-1      | 1.5-1         |              |               | 1.5-1          | 1.5-1         |
| Sex Ratio C/H Seen    | 1-1      | 1.7-1         | 1-1      | 1-1           |              |               | 1.2-1          | 1.2-1         |



TABLE II

## PHEASANT DISTRIBUTION 1966

LAKE SIMCOE DISTRICT

| <u>Township</u>                   | <u>Chicks</u> | <u>Poults</u> | <u>Adults</u> | <u>Total</u> |
|-----------------------------------|---------------|---------------|---------------|--------------|
| E. Whitby                         |               | 600           |               | 600          |
| Whitby                            | 1000          | 600           | 100           | 1700         |
| Pickering                         | 900           | 600           | 250           | 1750         |
| Whitchurch                        | 500           | 900           | 200           | 1600         |
| King                              |               | 490           |               | 490          |
| E. Gwillimbury                    |               | 250           |               | 250          |
| Tecumseth                         | 500           | 200           | 50            | 750          |
| Caledon                           | 600           | 600           | 100           | 1300         |
| Chinguacousy                      |               | 200           |               | 200          |
| Toronto Gore                      |               | 40            |               | 40           |
| <hr/>                             |               |               |               |              |
| Sub Totals                        | 3500          | 4480          | 700           | 8680         |
| <hr/>                             |               |               |               |              |
| <u>Miscellaneous</u>              |               |               |               |              |
| Georgina Island                   |               | 230           |               | 230          |
| Orillia Fish & Game Club          | 190           | 150           |               | 340          |
| Stayner Rod & Gun                 | 500           | 100           |               | 600          |
| Orangeville Schools               | 200           |               |               | 200          |
| A.S. Leigh, Adjala                | 50            |               |               | 50           |
| Andrew Chukas                     | 50            |               |               | 50           |
| Barrie Fish & Game Club           |               | 40            |               | 40           |
| Waubashene area<br>(C/o F. Bowes) | 200           |               |               | 200          |
| M. Rye, Keswick                   | 270           |               |               | 270          |
| <hr/>                             |               |               |               |              |
| Totals                            | 4960          | 5000          | 700           | 10660        |

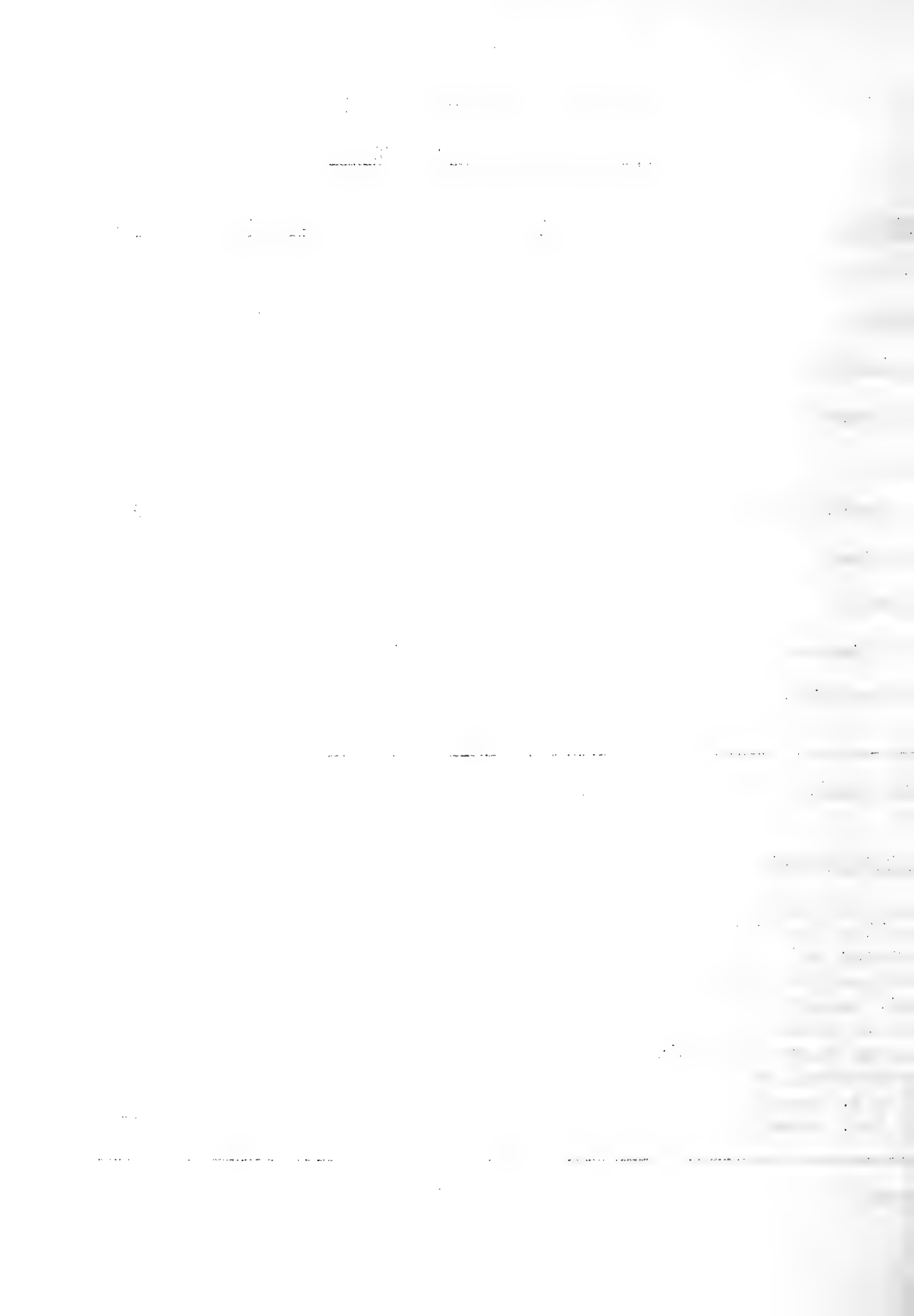




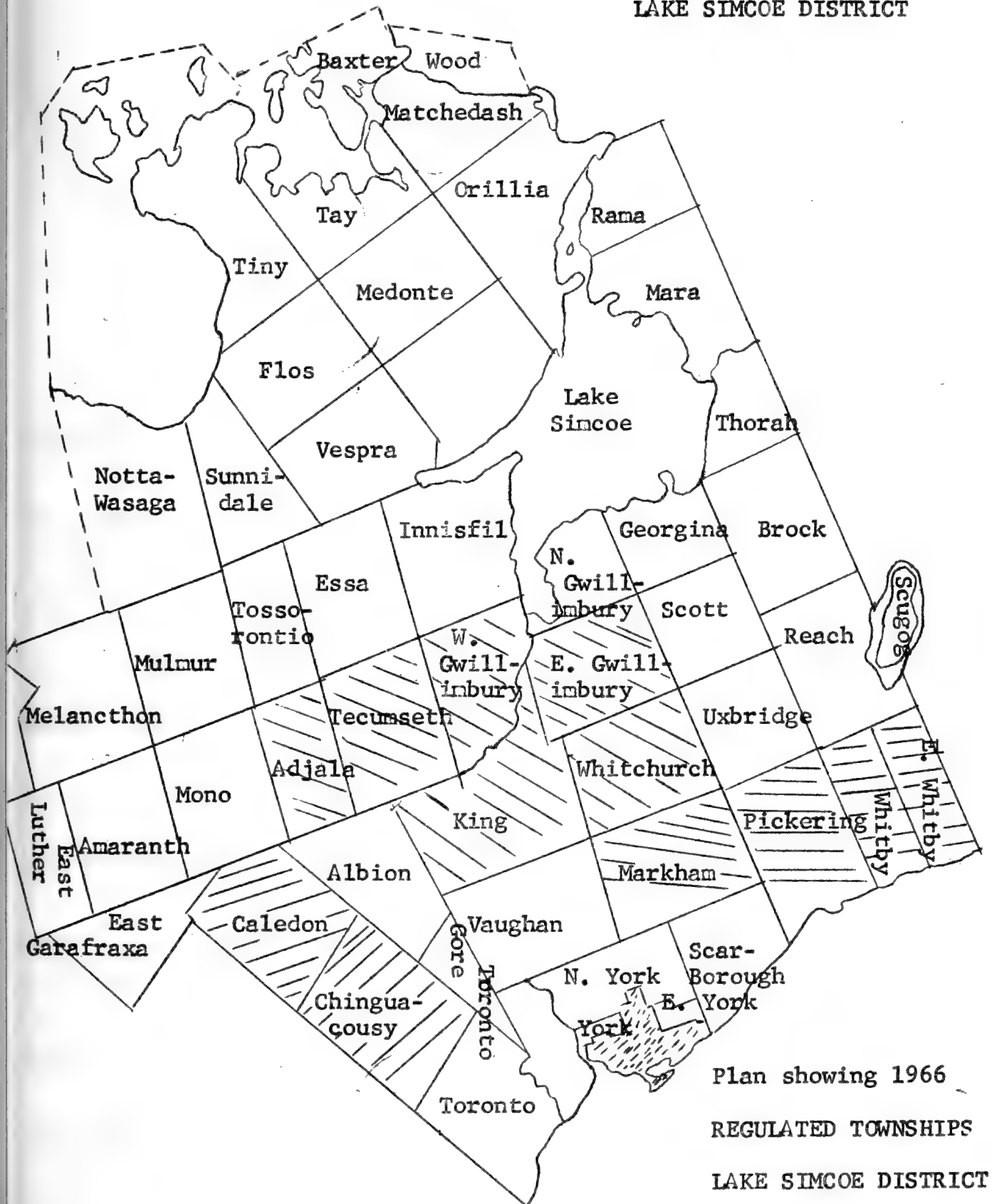
TABLE III

REGULATED TOWNSHIP HUNTING LICENCES SOLD UP TO AND INCLUDING NOV. 5/66

| <u>Township</u> | <u>Resident</u>       | <u>Non-resident</u> | <u>Total</u> |
|-----------------|-----------------------|---------------------|--------------|
| Whitby          | 223                   | 300                 | 523          |
| E. Whitby       | 55                    | 123                 | 178          |
| Pickering       | 236                   | 440                 | 676          |
| Markham         | 210                   | 350                 | 560          |
| Whitchurch      | 160                   | 400                 | 560          |
| King            | 304                   | 100                 | 404          |
| E. Gwillimbury  | (No figures received) |                     |              |
| Adjala          | 1                     | 200                 | 201          |
| Tecumseth       | 70                    | 348                 | 418          |
| W. Gwillimbury  | 40                    | 246                 | 286          |
| Caledon         | 06                    | 240                 | 336          |
| Chinguacousy    | 70                    | 200                 | 270          |
| Totals          | <u>1465</u>           | <u>2947</u>         | <u>4412</u>  |

| Year                 | 1980    | 1981    | 1982    | 1983    | 1984    | 1985    | 1986    | 1987    | 1988    | 1989    | 1990    | 1991    | 1992    | 1993    | 1994    | 1995    | 1996    | 1997    | 1998    | 1999    | 2000    | 2001    | 2002    | 2003    | 2004    | 2005    | 2006    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    | 2015    | 2016    | 2017    | 2018    | 2019    | 2020    | 2021    |         |         |         |         |         |         |         |         |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |         |
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| 1. Total population  | 1000000 | 1005000 | 1010000 | 1015000 | 1020000 | 1025000 | 1030000 | 1035000 | 1040000 | 1045000 | 1050000 | 1055000 | 1060000 | 1065000 | 1070000 | 1075000 | 1080000 | 1085000 | 1090000 | 1095000 | 1100000 | 1105000 | 1110000 | 1115000 | 1120000 | 1125000 | 1130000 | 1135000 | 1140000 | 1145000 | 1150000 | 1155000 | 1160000 | 1165000 | 1170000 | 1175000 | 1180000 | 1185000 | 1190000 | 1195000 | 1200000 | 1205000 | 1210000 | 1215000 | 1220000 | 1225000 | 1230000 | 1235000 | 1240000 | 1245000 | 1250000 |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |         |
| 2. Male population   | 500000  | 502500  | 505000  | 507500  | 510000  | 512500  | 515000  | 517500  | 520000  | 522500  | 525000  | 527500  | 530000  | 532500  | 535000  | 537500  | 540000  | 542500  | 545000  | 547500  | 550000  | 552500  | 555000  | 557500  | 560000  | 562500  | 565000  | 567500  | 570000  | 572500  | 575000  | 577500  | 580000  | 582500  | 585000  | 587500  | 590000  | 592500  | 595000  | 597500  | 600000  | 602500  | 605000  | 607500  | 610000  | 612500  | 615000  | 617500  | 620000  | 622500  | 625000  | 627500 | 630000 | 632500 | 635000 | 637500 | 640000 | 642500 | 645000 | 647500 | 650000 | 652500 | 655000 | 657500 | 660000 | 662500 | 665000 | 667500 | 670000 | 672500 | 675000 | 677500 | 680000 | 682500 | 685000 | 687500 | 690000 | 692500 | 695000 | 697500 | 700000 | 702500 | 705000 | 707500 | 710000 | 712500 | 715000 | 717500 | 720000 | 722500 | 725000 | 727500 | 730000 | 732500 | 735000 | 737500 | 740000 | 742500 | 745000 | 747500 | 750000 | 752500 | 755000 | 757500 | 760000 | 762500 | 765000 | 767500 | 770000 | 772500 | 775000 | 777500 | 780000 | 782500 | 785000 | 787500 | 790000 | 792500 | 795000 | 797500 | 800000 | 802500 | 805000 | 807500 | 810000 | 812500 | 815000 | 817500 | 820000 | 822500 | 825000 | 827500 | 830000 | 832500 | 835000 | 837500 | 840000 | 842500 | 845000 | 847500 | 850000 | 852500 | 855000 | 857500 | 860000 | 862500 | 865000 | 867500 | 870000 | 872500 | 875000 | 877500 | 880000 | 882500 | 885000 | 887500 | 890000 | 892500 | 895000 | 897500 | 900000 | 902500 | 905000 | 907500 | 910000 | 912500 | 915000 | 917500 | 920000 | 922500 | 925000 | 927500 | 930000 | 932500 | 935000 | 937500 | 940000 | 942500 | 945000 | 947500 | 950000 | 952500 | 955000 | 957500 | 960000 | 962500 | 965000 | 967500 | 970000 | 972500 | 975000 | 977500 | 980000 | 982500 | 985000 | 987500 | 990000 | 992500 | 995000 | 997500 | 1000000 |
| 3. Female population | 500000  | 502500  | 505000  | 507500  | 510000  | 512500  | 515000  | 517500  | 520000  | 522500  | 525000  | 527500  | 530000  | 532500  | 535000  | 537500  | 540000  | 542500  | 545000  | 547500  | 550000  | 552500  | 555000  | 557500  | 560000  | 562500  | 565000  | 567500  | 570000  | 572500  | 575000  | 577500  | 580000  | 582500  | 585000  | 587500  | 590000  | 592500  | 595000  | 597500  | 600000  | 602500  | 605000  | 607500  | 610000  | 612500  | 615000  | 617500  | 620000  | 622500  | 625000  | 627500 | 630000 | 632500 | 635000 | 637500 | 640000 | 642500 | 645000 | 647500 | 650000 | 652500 | 655000 | 657500 | 660000 | 662500 | 665000 | 667500 | 670000 | 672500 | 675000 | 677500 | 680000 | 682500 | 685000 | 687500 | 690000 | 692500 | 695000 | 697500 | 700000 | 702500 | 705000 | 707500 | 710000 | 712500 | 715000 | 717500 | 720000 | 722500 | 725000 | 727500 | 730000 | 732500 | 735000 | 737500 | 740000 | 742500 | 745000 | 747500 | 750000 | 752500 | 755000 | 757500 | 760000 | 762500 | 765000 | 767500 | 770000 | 772500 | 775000 | 777500 | 780000 | 782500 | 785000 | 787500 | 790000 | 792500 | 795000 | 797500 | 800000 | 802500 | 805000 | 807500 | 810000 | 812500 | 815000 | 817500 | 820000 | 822500 | 825000 | 827500 | 830000 | 832500 | 835000 | 837500 | 840000 | 842500 | 845000 | 847500 | 850000 | 852500 | 855000 | 857500 | 860000 | 862500 | 865000 | 867500 | 870000 | 872500 | 875000 | 877500 | 880000 | 882500 | 885000 | 887500 | 890000 | 892500 | 895000 | 897500 | 900000 | 902500 | 905000 | 907500 | 910000 | 912500 | 915000 | 917500 | 920000 | 922500 | 925000 | 927500 | 930000 | 932500 | 935000 | 937500 | 940000 | 942500 | 945000 | 947500 | 950000 | 952500 | 955000 | 957500 | 960000 | 962500 | 965000 | 967500 | 970000 | 972500 | 975000 | 977500 | 980000 | 982500 | 985000 | 987500 | 990000 | 992500 | 995000 | 997500 | 1000000 |

LAKE SIMCOE DISTRICT



Plan showing 1966  
REGULATED TOWNSHIPS  
LAKE SIMCOE DISTRICT



1914  
1915

1916

1917

1918

1919

## THE CREEL CENSUS OF THE WINTER FISHERY ON LAKE SIMCOE DURING 1966

by  
A.S. Holder and F.H. Marshall

Abstract

Results of the creel census of the winter fishery on Lake Simcoe during 1965 show 1,672 anglers fished 6,421 man-hours for a catch of 4,376 fish. A projection for the lake over the entire season gives an estimated fishing pressure of 340,000 man-hours for a catch of about 216,000 fish of which 140,000 were whitefish, 42,000 lake herring, 28,000 yellow perch and 1,800 lake trout. Catch per unit effort values for the major species are compared over the four year period 1963 to 1966.

Introduction

A creel census of the winter sports fishery on Lake Simcoe has been carried out on a casual basis since 1950, and on a much more intensive basis since 1960. The census serves as an index of fishing pressure and of fluctuations in availability of important game fish. It also gives an estimate of the total fishing pressure and harvest of fish from the lake during the winter months.

This paper reports on the results of the 1966 census.

Method

The methods used in this creel census have remained unchanged since 1964. In brief, this consisted of interviews with a sample of anglers selected as representatives of the winter fishery. For a detailed account of methods, reference should be made to earlier reports (Holder, 1964; Holder and Townes, 1965).

The effective length of the ice fishing in 1966 was 70 days. This covered the interval from January 15 to March 25. The season was six days shorter than in 1965 as a result of mild spring weather which made ice travel unsafe after March 25.

Results

Fifty-six man-days were spent on the creel census in 1966. The results are summarized in Table I.

1947      1948      1949      1950      1951      1952      1953      1954      1955      1956      1957      1958      1959      1960

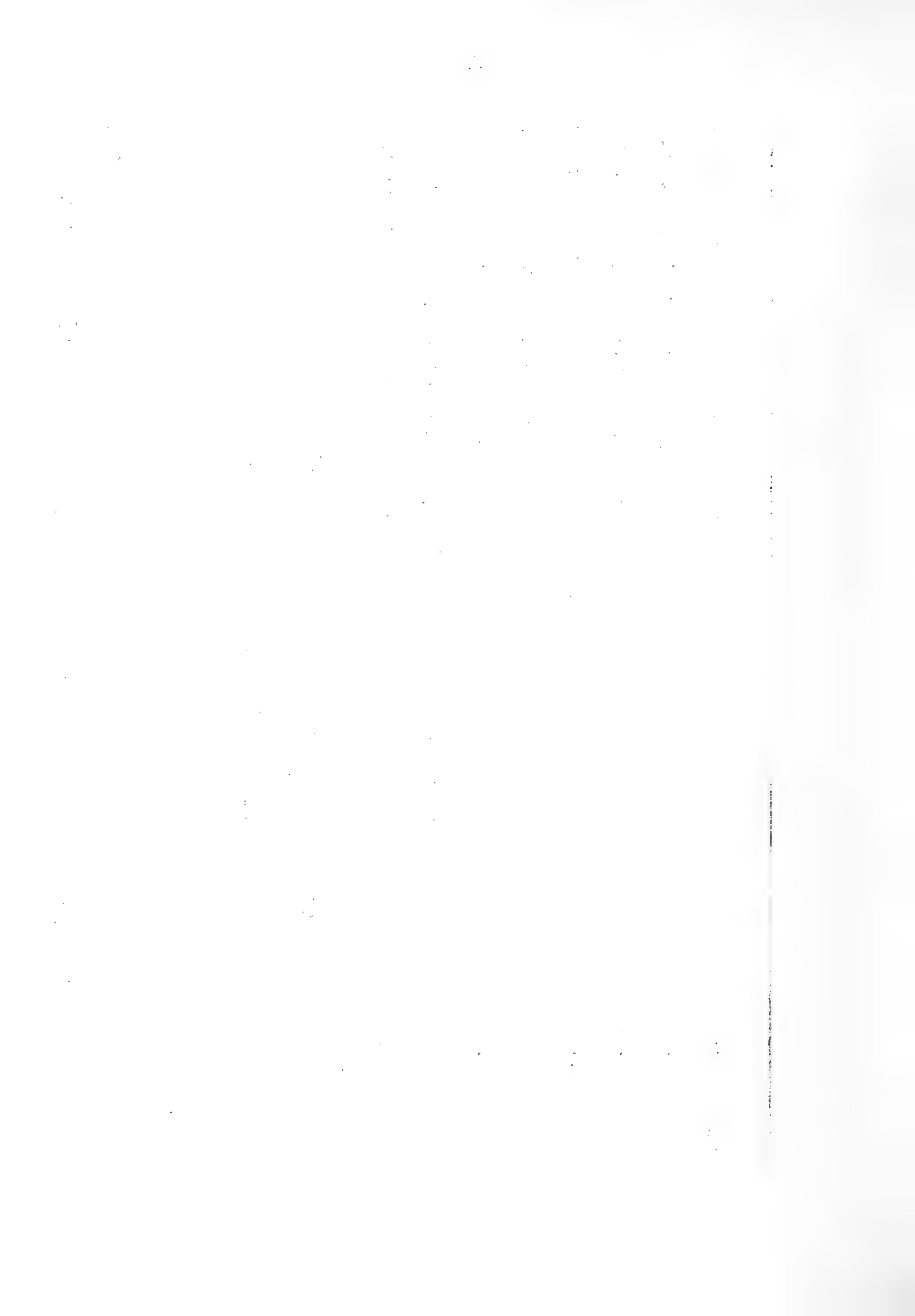
1947      1948      1949      1950      1951      1952      1953      1954      1955      1956      1957      1958      1959      1960

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1947      1948      1949      1950      1951      1952      1953      1954      1955      1956      1957      1958      1959      1960

Table I: Summary of the Results of the 1966 Winter Creel Census

| Huts   | Huts     | No. of      | Hours       | White-      | Lake      | Lake       | Yellow     | American  | Northern  |             |
|--|----------|-------------|-------------|-------------|-----------|------------|------------|-----------|-----------|-------------|
| Checked  | Occupied | Anglers     | Fished      | fish        | trout     | herring    | perch      | Burbot    | smelt     | pike        |
| 5013   | 910      | 1584        | 6097        | 2491        | 30        | 748        | 256        | 40        | 17        | 1           |
| Without<br>Huts  |          | 88          | 324         | 189         | 7         | 56         | 520        | 7         | 14        | -           |
| <b>Total</b>   |          | <b>1672</b> | <b>6421</b> | <b>2680</b> | <b>37</b> | <b>804</b> | <b>776</b> | <b>47</b> | <b>31</b> | <b>1</b>    |
| No. of fish (all species) caught by anglers in huts      |          |             |             |             |           |            |            |           |           | 3583        |
| No. of fish (all species) caught by anglers without huts |          |             |             |             |           |            |            |           |           | 793         |
| Catch per man-hour in huts                               |          |             |             |             |           |            |            |           |           | 0.58        |
| Catch per man-hour without huts                          |          |             |             |             |           |            |            |           |           | 2.44        |
| Average No. of anglers per occupied hut                  |          |             |             |             |           |            |            |           |           | 1.74        |
| Percentage of checked huts occupied                      |          |             |             |             |           |            |            |           |           | 18.13%      |
| Average length of angler day in huts                     |          |             |             |             |           |            |            |           |           | 3.85 hours. |
| Average length of angler day without huts                |          |             |             |             |           |            |            |           |           | 3.68 hours. |





On the assumption that the sample of anglers checked was representative of all anglers on the lake over the entire 70 day season, it was possible to project the total fishing pressure and harvest for the season. The results of this projection are summarized in Table II.

Table II:

Estimated Total Fishing Pressure and Catch:  
From January 15 to March 25, 1966

|  | <u>Without Huts</u> | <u>Huts</u> | <u>Total</u> |
|--|---------------------|-------------|--------------|
| No. of fish huts on ice on Feb. 22                     | --                  | 3,900       | 3,900        |
| Ave. No. of Anglers per day for entire lake            | 34                  | 1,230       | 1,264        |
| Av. Catch of fish per day per angler                   | 9.01                | 2.26        | ---          |
| Av. catch of fish per day by all anglers               | 306                 | 2,780       | 3,086        |
| Projected total catch from lake for 70 day season      | 21,420              | 194,600     | 216,020      |
| Projected man-hours fishing pressure for 70 day season | 8,758               | 331,485     | 340,243      |

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The estimated total seasonal catch of 216,020 fish is further broken down to catch by species in Table III below.

Table III: Estimated Total Catch by Species from January 15 to March 1966.

| Species        | Without Huts |        | Huts       |         | Combined Total Catch |
|----------------|--------------|--------|------------|---------|----------------------|
|                | Percentage   | Number | Percentage | Number  |                      |
| Whitefish      | 23.83        | 5,105  | 69.52      | 135,286 | 140,391              |
| Lake Trout     | 0.88         | 189    | 0.84       | 1,635   | 1,824                |
| Lake Herring   | 7.06         | 1,513  | 20.88      | 40,632  | 42,145               |
| Yellow Perch   | 65.57        | 14,045 | 7.14       | 13,894  | 27,939               |
| Burbot         | 0.88         | 189    | 1.12       | 2,180   | 2,369                |
| American Smelt | 1.77         | 379    | 0.47       | 915     | 1,294                |
| Other          | --           | --     | 0.03       | 58      | 58                   |

An effort was made last year, as in the past, to determine the fishing pressure exerted against each species. This has not proven particularly successful. Fishermen using standard whitefish gear are actually exerting fishing pressure on whitefish, lake herring and trout, since all are caught. Also fishermen within the huts frequently fish a whitefish line simultaneously with a lake trout line and census personnel have not been able to partition this effort by species. Results from previous years have indicated that over 90% of the fishing effort was directed toward the capture of whitefish and herring with the remainder being divided equally between lake trout and perch. There was no indication that pressure by species had changed significantly during 1966.

Catch per unit effort by species in 1966 was determined by expressing the species catch per hour, considering the total fishing pressure to have been exerted against each individual species. As noted above, however, partitioning of effort by individual species has not proven practical. Since past results can easily be converted to catch per unit of total effort, it was decided to use this method in 1966. Results for 1966 are given in Table IV.

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Table IV: Catch Per Unit Effort by Species  
from January 15 to March 25, 1966

| <u>Species</u> | <u>Without Huts</u> | <u>Huts</u> |
|----------------|---------------------|-------------|
| Whitefish      | 0.58                | 0.41        |
| Lake Trout     | 0.022               | 0.005       |
| Lake Herring   | 0.17                | 0.12        |
| Yellow Perch   | 1.60                | 0.04        |
| Other          | 0.06                | 0.01        |
| Total          | 2.44                | 0.58        |

### Discussion

Fishing during the winter of 1966 was hampered by unsafe ice conditions. Unseasonably warm temperatures in January and again in March shortened the season by several days. Travel by car was unsafe for much of the season. These conditions are reflected in a comparison of the hut counts, percentage occupancy and estimated fishing pressure for the past four years as given in Table V below.

Table V: A Comparison of the Annual Winter Fishing Pressure  
During the Years 1963 to 1966

|                                      | <u>1963</u> | <u>1964</u> | <u>1965</u> | <u>1966</u> |
|--------------------------------------|-------------|-------------|-------------|-------------|
| Mid-winter hut count                 | 3,963       | 4,097       | 4,051       | 3,900       |
| Average percentage occupancy of huts | 18.99       | 14.45       | 20.65       | 18.13       |
| Est. Tot. Fish. Pressure (man-hours) | 491,280     | 355,015     | 591,196     | 340,243     |

A comparison of the estimated total harvest and catch per unit effort by species for the past four years is given in Table VI.

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Table VI:  
 A Comparison of the Annual Winter Harvest and Catch per Unit  
 Effort by Species During the Years 1963 to 1966

| <u>Species</u> | 1963           |               | 1964           |               | 1965           |               | 1966           |               |
|----------------|----------------|---------------|----------------|---------------|----------------|---------------|----------------|---------------|
|                | <u>Harvest</u> | <u>C.U.E.</u> | <u>Harvest</u> | <u>C.U.E.</u> | <u>Harvest</u> | <u>C.U.E.</u> | <u>Harvest</u> | <u>C.U.E.</u> |
| Whitefish      | 160,145        | 0.33          | 93,102         | 0.26          | 223,262        | 0.38          | 140,391        | 0.41          |
| Lake trout     | 3,483          | 0.007         | 2,355          | 0.007         | 1,692          | 0.003         | 1,824          | 0.005         |
| Lake Herring   | 63,441         | 0.13          | 51,536         | 0.15          | 135,225        | 0.23          | 42,145         | 0.12          |
| Yellow Perch   | 18,460         | 0.04          | 23,482         | 0.07          | 43,010         | 0.07          | 27,939         | 0.08          |
| Burbot         | 3,259          | 0.007         | 1,203          | 0.003         | 3,057          | 0.005         | 2,369          | 0.007         |
| American Smelt | --             | --            | 224            | 0.001         | 344            | 0.001         | 1,294          | 0.004         |
| Other          | --             | --            | --             | --            | 238            | --            | 58             | --            |
| <b>Total</b>   | <b>248,783</b> | <b>0.51</b>   | <b>171,902</b> | <b>0.43</b>   | <b>406,828</b> | <b>0.69</b>   | <b>216,020</b> | <b>0.63</b>   |

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is crucial for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent data collection procedures and the use of advanced analytical techniques to derive meaningful insights from the data.

3. The third part of the document focuses on the role of technology in data management and analysis. It discusses how modern software solutions can streamline data collection, storage, and analysis processes, thereby improving efficiency and accuracy.

4. The fourth part of the document addresses the challenges associated with data management, such as data quality, security, and privacy. It provides strategies to mitigate these risks and ensure that the data remains reliable and secure throughout its lifecycle.

5. The fifth part of the document concludes by summarizing the key findings and recommendations. It stresses the importance of a data-driven approach in decision-making and the need for continuous monitoring and improvement of the data management process.



The application of total fishing pressure against each species in determining C.U.E. may not be entirely satisfactory, but to date no suitable alternative method seems practical. We are not certain that fluctuations in C.U.E. between years necessarily indicate similar fluctuations in the fish populations. Nevertheless, a continued decline in C.U.E. over several years would probably prove significant.

The C.U.E. values over the past four years (Table VI) show fluctuations but no identifiable trends, with the exception of an increase in the catch of American smelt. The decrease in catch of lake trout in 1965 had caused some alarm, however, results in 1966 are encouraging. Since we consider the status of the lake trout to be of greatest concern, we made an additional comparison of C.U.E. during the past two years among anglers fishing in the open specifically for this species. This analysis showed a catch of eight trout per hundred angler-hours in 1965 and nine per hundred hours in 1966, a slight increase.

\* C.U.E. in 1965 and 1966 is a composite value calculated from the projected total fishing pressure and catch of hut and without hut fishermen. Prior to 1965 these groups were not recorded separately.

### Acknowledgements

The contribution of Conservation Officers H. Van Wyck, T. Ross, R. Toth, M. Townes, H. Mulholland and others who helped with this creel census are gratefully acknowledged.

### References

- Holder, A.S. 1964. A creel census of the winter fishery on Lake Simcoe. Unpublished District Report.
- Holder, A.S. and M.A. Townes, 1965. The creel census of the winter fishery on Lake Simcoe from January 15 to March 31, 1965. Unpublished District Report.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions.

2. It is essential to ensure that all entries are supported by appropriate evidence and are clearly documented.

3. The second part of the document outlines the various methods used to collect and analyze data.

4. This section describes the different types of data that can be collected and how they are processed.

5. Finally, the document concludes with a summary of the key findings and recommendations.

6. The overall goal of this study is to provide a comprehensive overview of the current state of research in this field.

## WATERFOWL PRODUCTION AND HARVEST REPORT SWASTIKA DISTRICT - 1966

by  
J.F. Gardner

Abstract

During the summer of 1966, a total of 131 broods of waterfowl representing 10 species were recorded on the three Abitibi marshes, Moose Lake, the Matachewan West area, and several other scattered locations. Breeding conditions in general were much improved over those of 1965. Common Goldeneyes, Blacks and Ring-neckeds represented the most commonly encountered nesting species.

An opening day bag check on the Ghost River revealed 19 hunters harvesting 79 ducks for a success rate of 4.1 ducks per hunter. Mallards have taken over from Blacks as the number one specie shot in this area. Hunting pressure was light on Moose Lake, Long Lake and Mountain Lake with success rates of 2.6, 1.1 and 2.7 ducks per hunter, respectively.

A total of 235 duck wings were collected from a small number of co-operating hunters this year.

An airboat was used for the first time in Northern Ontario during August to capture and band waterfowl and proved to be most effective.

Section A - Brood Production SurveyIntroduction

During the summer of 1966 an effort was made for the first time to observe and record waterfowl broods in the Swastika District. The principal objective of this program was to obtain breeding indices for several of the major wetland areas in the District. The vast majority of the broods were recorded during Wetland Investigation work on the Abitibi Marshes (Ghost, Lightning and Mattawasaga) Moose Lake - Bond Township and in a series of pothole lakes west of Matachewan. The number of broods recorded and the variety of nesting species was most gratifying, notwithstanding the fact that the larger marshes appear to be well below their breeding potential. Considering complete and incomplete broods as well as broody hens, a total of 131 broods representing 10 nesting species were recorded. Nesting

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

In the second section, the author outlines the various methods used to collect and analyze the data. This includes both manual and automated processes. The goal is to ensure that the data is as accurate and reliable as possible.

The third section provides a detailed breakdown of the results. It shows that there is a significant correlation between the variables being studied. This finding is supported by statistical analysis and is consistent with previous research in the field.

Finally, the document concludes with a series of recommendations for future research. It suggests that further studies should be conducted to explore the underlying causes of the observed trends. This will help to develop more effective strategies for addressing the issues at hand.

Appendix A: List of all participants involved in the study. Each entry includes their name, age, and gender.

Appendix B: A detailed list of all the data points collected during the experiment. This includes dates, times, and specific measurements.

Appendix C: A series of graphs and charts that illustrate the trends in the data. These visual aids make it easier to understand the complex relationships between the variables.

Appendix D: A list of references to other research papers and books that have been consulted during the preparation of this document.

Appendix E: A glossary of terms used throughout the document to ensure clarity and consistency in the language.

species included Black (Anas rubripes), Common Goldeneye (Glaucionetta clangula), American Widgeon (Mareca americana), Ring-necked Duck (Nyroca collaris), Blue-winged Teal (Querquedula discors), Common Merganser (Mergus merganser americanus), Mallard (Anas platyrhynchos), Hooded Merganser (Lophodytes cucullatus), Wood Duck (Aix sponsa) and Green-winged Teal (Nettion carolinense).

Table I represents a complete summary of all waterfowl broods observed during the summer of 1966.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the integrity of the financial system and for the ability to detect and prevent fraud. The text notes that without reliable records, it would be difficult to verify the accuracy of financial statements and to identify any irregularities.

2. The second part of the document focuses on the role of internal controls in ensuring the reliability of financial information. It describes how internal controls are designed to prevent errors and to detect any unauthorized transactions. The text highlights that a strong internal control system is a key component of an organization's risk management strategy and is crucial for maintaining the trust of investors and other stakeholders.

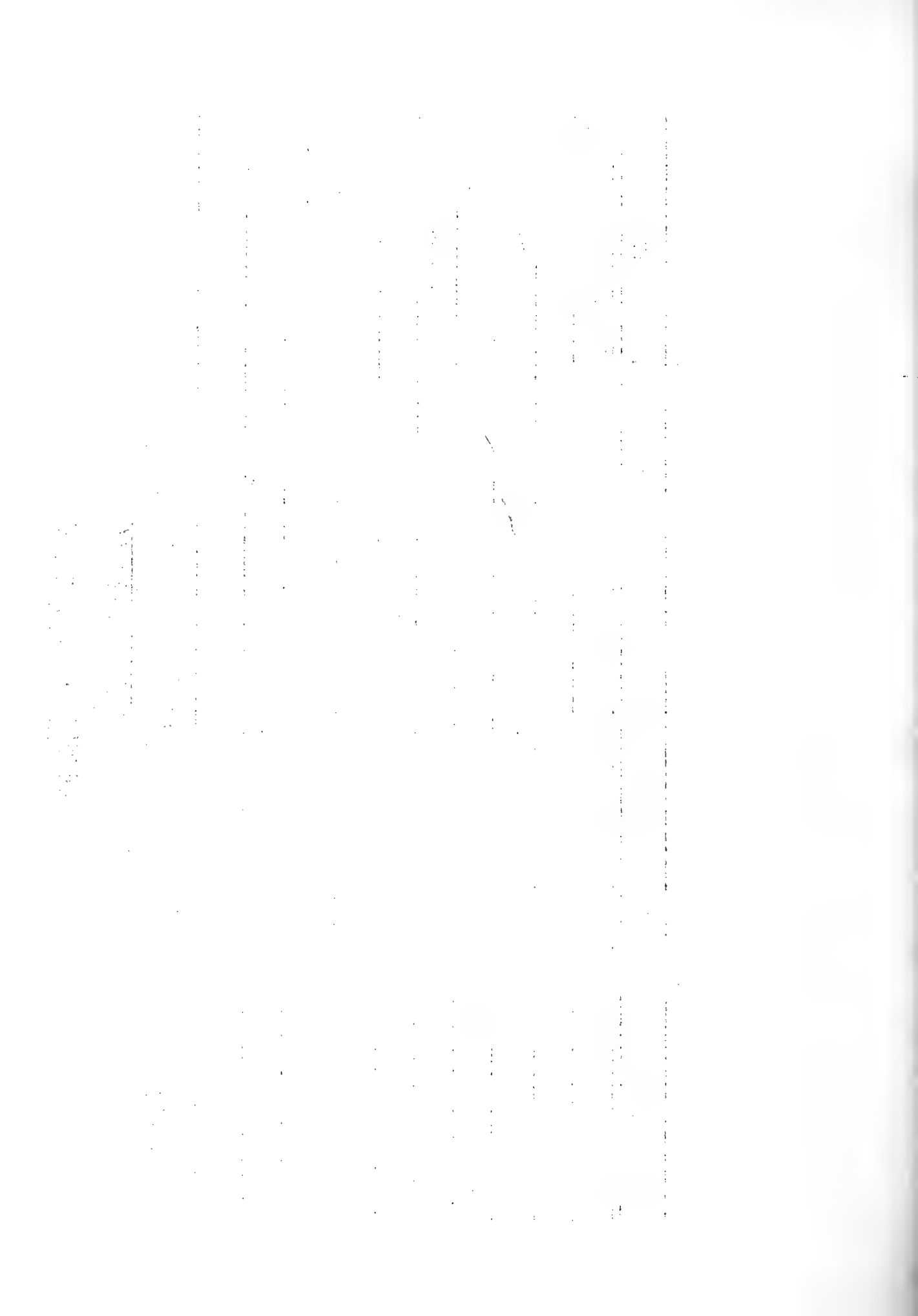
3. The third part of the document discusses the importance of transparency and disclosure in financial reporting. It explains that providing clear and concise information about an organization's financial performance and position is essential for making informed decisions. The text notes that transparency helps to build confidence in the financial system and to ensure that all stakeholders have access to the same information.

4. The fourth part of the document addresses the challenges of financial reporting in a complex and rapidly changing environment. It discusses the need for organizations to stay up-to-date on the latest accounting standards and regulations and to ensure that their reporting practices are consistent with these requirements. The text also notes that organizations must be prepared to respond to any changes in the regulatory landscape and to the needs of their stakeholders.

5. The fifth part of the document concludes by emphasizing the importance of a strong corporate governance framework in supporting the integrity of financial reporting. It notes that a robust governance structure, including a clear set of policies and procedures, is essential for ensuring that all transactions are properly recorded and reported. The text also highlights the role of the board of directors and other key stakeholders in overseeing the financial reporting process and in ensuring that the organization's financial statements are accurate and reliable.

TABLE I - DISTRICT SUMMARY

| Species           | W/F BROODS - 1966 |              | Mean | No.<br>Inc. Brds. | No.<br>Young | Broody<br>Females |
|-------------------|-------------------|--------------|------|-------------------|--------------|-------------------|
|                   | No.<br>Com. Brds. | No.<br>Young |      |                   |              |                   |
| Com. Goldeneye    | 41                | 187          | 4.5  | 4                 | 5            | 1                 |
| Black             | 20                | 95           | 4.7  | 4                 | 6            | 4                 |
| Am. Widgeon       | 13                | 63           | 4.8  | 2                 | 4            | 2                 |
| Ring-necked       | 10                | 65           | 6.5  | -                 | -            | -                 |
| Blue-winged Teal  | 7                 | 55           | 7.8  | -                 | -            | -                 |
| Com. Merganser    | 7                 | 64           | 9.1  | -                 | -            | -                 |
| Mallard           | 6                 | 34           | 5.6  | -                 | -            | -                 |
| Hooded Merganser  | 4                 | 20           | 5.0  | 2                 | 3            | 1                 |
| Wood Duck         | -                 | -            | -    | 1                 | 2            | 1                 |
| Green-winged Teal | -                 | -            | -    | -                 | -            | 1                 |
| TOTALS            | 108               | 583          |      | 13                | 20           | 10                |





BROOD SUMMARY BY AREAI - Abitibi Lake Marshes - (Ghost, Lightning, Teddy Bear)

TABLE II

| Species        | Com. Broods | Young | Mean | Inc. Broods | Broody Females |
|----------------|-------------|-------|------|-------------|----------------|
| Com. Goldeneye | 26          | 125   | 4.8  | 3           | -              |
| Black          | 6           | 28    | 4.6  | 1           | 1              |
| Ring-necked    | 4           | 20    | 5.0  | -           | -              |
| Mallard        | 2           | 13    | 6.5  | -           | -              |
| Widgeon        | 1           | 4     | -    | 1           | -              |
| Com. Merganser | 3           | 27    | 9.0  | -           | -              |
| Wood Duck      | -           | -     | -    | 1           | -              |
| TOTALS         | 42          | 217   |      | 6           | 1              |

Nesting conditions on the Ghost river were much improved over 1965 with generally higher and more stable water levels prevailing throughout most of the incubation and hatching period. These improved conditions were manifested by an increase of six in total brood counts from 10 in 1965 to 16 this year. Goldeneye mean brood size increased from 3.7 young per brood last year to 4.0 young per brood this year. Eleven broods of Goldeneye, 4 broods of Blacks and 1 brood of Mallards made up the total for the area.

Brood counts were conducted for the first time on the Lightning and Teddy Bear (Mattawasaga) rivers. While brood incidence was low on the Lightning (7 broods), Goldeneye broods averaged a respectable 6.1 yg./brood. This is the highest mean of any area in the District for this species.

On preliminary examination, the Mattawasaga River in Stroughton Township promises to be an excellent waterfowl area. Time did not permit the complete examination of all the feeder streams and the bulk of the period was spent on the flood basin known as the Teddy Bear Marsh.

Brood counts resulted in 12 broods of Goldeneye, 4 broods of Ring-necked ducks, 3 broods of Blacks, 2 broods of Widgeon and 1 brood of Wood Ducks, for a total of 22 broods. Common Goldeneye broods yielded a mean of 4.8 yg./brood based on 9 complete broods. Four

# THE HISTORY OF THE UNITED STATES

THE HISTORY OF THE UNITED STATES  
FROM THE FIRST SETTLEMENTS TO THE PRESENT TIME  
BY  
JOHN B. HENNINGSHAW  
VOLUME I  
FROM THE FIRST SETTLEMENTS TO THE END OF THE SEVENTEENTH CENTURY  
NEW YORK: G. P. PUTNAM'S SONS, 1892

broods of Ring-necked duck averaged an even 5.0.

Of particular interest was the fact that approximately 15 Wood Ducks, principally moulting males, were observed in the area as well as one incomplete brood of 2 young plus a female. Although Wood Ducks have been known to nest in this area for some time no previous breeding records exist on our District files.

As was the case on the Ghost, the water conditions were very good in both the Lightning and Mattawasaga Rivers for breeding waterfowl this year.

The control of water levels on all of the Abitibi marshes is definitely a prime limiting factor in determining waterfowl breeding success in the area. Any plans designed to realize the excellent production potential of these marshes must certainly take this factor into immediate consideration.

II - Moose Lake Marshes - Bond Twp.

TABLE III

| Species        | Com. Broods | Young | Mean | Inc. Broods | Broody Females |
|----------------|-------------|-------|------|-------------|----------------|
| Am. Widgeon    | 12          | 59    | 4.9  | 1           | 2              |
| Com. Goldeneye | 7           | 25    | 3.5  | -           | -              |
| Black          | 1           | 8     | -    | 1           | -              |
| Wood Duck      | -           | -     | -    | -           | 1              |
| TOTAL          | 20          | 92    |      | 2           | 3              |

A preliminary examination of the west shore of Moose Lake and all marshy areas of the South Driftwood River and Crooked Creek was conducted during late July, 1966. The actual make-up of the area will be dealt with in more detail under a separate report. In general the flat nature of the surrounding topography together with the excellent nesting cover bordering the river marshes at both Crooked Creek and the South Driftwood make this area one of the most potentially productive for waterfowl so far encountered in this District. The shallow lake together with extensive shore zones of aquatic vegetation provide excellent feeding areas for most species of dabbling ducks.

27

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It is significant that the number one nesting species was the American Widgeon since this is the only area in this District to date where any real concentration of Widgeon broods have been located. The majority of these broods as sighted on the sections of the two stream marshes adjacent to the lake. This area forms a large marsh since these two main water courses enter the lake only about 200 yards apart. There was evidence of broods of Blacks having already achieved their flight. In addition an immature Mallard with fully developed wing feathers was picked up, presumably the victim of a predator. Thus the area should be considered a productive one for these two important species as well.

### III - Matachewan West

(Townships - Argyle, Montrose, Bannockburn, Powell)

TABLE IV

| Species          | Com. Broods | Young | Mean | Inc. Broods | Broody Females |
|------------------|-------------|-------|------|-------------|----------------|
| Black            | 5           | 20    | 4.0  | 1           | 3              |
| Com. Goldeneye   | 5           | 27    | 5.4  | -           | -              |
| Ring-necked      | 5           | 40    | 8.0  | -           | -              |
| Com. Merganser   | 4           | 37    | 9.2  | -           | -              |
| Hooded Merganser | 2           | 8     | 4.0  | -           | -              |
| TOTAL            | 21          | 132   |      | 1           | 3              |

All the broods listed in Table IV were observed by Conservation Officer E.A. Corbould during the course of regular lake survey duties in the aforementioned townships west of Matachewan. Superficial examination of this area gives the impression that it would have to be rated as "poor" as far as waterfowl production and use capability are concerned. Rough, rocky terrain and small lakes generally low in aquatic vegetation would appear to severely restrict such an area as a duck producer. However, many small potholes and shrubby creeks do offer minimal nesting opportunities for certain species. The numerous beaver ponds and flood impoundments bear evidence of a beaver population that has flourished for several years now with a resulting production of much desirable Black duck habitat. This area, like no other in the Swastika District, is an indication of the true worth of northern woodland potholes in the production of waterfowl. For instance, on one such area measuring less than two

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is crucial for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent and reliable data collection processes to support informed decision-making.

3. The third part of the document focuses on the role of technology in data management and analysis. It discusses how modern software solutions can streamline data collection, storage, and reporting, thereby improving efficiency and accuracy.

4. The fourth part of the document addresses the challenges associated with data management, such as data quality, security, and privacy. It provides strategies to mitigate these risks and ensure that data is used responsibly and ethically.

5. The fifth part of the document concludes by summarizing the key findings and recommendations. It stresses the importance of ongoing monitoring and evaluation to ensure that data management practices remain effective and aligned with the organization's goals.

6. The sixth part of the document provides a detailed overview of the data collection process, including the identification of data sources, the design of data collection instruments, and the implementation of data collection procedures. It also discusses the importance of pilot testing and validation to ensure the reliability of the data.

7. The seventh part of the document discusses the various methods used for data analysis, including descriptive statistics, inferential statistics, and qualitative analysis. It highlights the need for appropriate statistical techniques to be used based on the nature of the data and the research objectives.

8. The eighth part of the document focuses on the interpretation and communication of data analysis results. It emphasizes the importance of presenting data in a clear and concise manner, using appropriate visual aids to enhance the understanding of the findings.

9. The ninth part of the document discusses the ethical considerations surrounding data management and analysis. It highlights the need for transparency, informed consent, and data protection to ensure that the rights and privacy of individuals are protected throughout the data management process.

10. The tenth part of the document concludes by summarizing the key findings and recommendations. It stresses the importance of ongoing monitoring and evaluation to ensure that data management practices remain effective and aligned with the organization's goals.

11. The eleventh part of the document provides a detailed overview of the data analysis process, including the selection of appropriate statistical methods, the calculation of test statistics, and the interpretation of p-values. It also discusses the importance of confidence intervals and effect sizes to provide a more comprehensive understanding of the data.

12. The twelfth part of the document discusses the various methods used for data visualization, including bar charts, line graphs, and scatter plots. It highlights the need for clear and effective visual representations to communicate complex data in a simple and intuitive way.

13. The thirteenth part of the document focuses on the role of data in decision-making. It discusses how data analysis can provide valuable insights into organizational performance, customer behavior, and market trends, thereby supporting strategic decision-making and resource allocation.

14. The fourteenth part of the document discusses the future of data management and analysis. It highlights emerging trends such as big data, artificial intelligence, and machine learning, and discusses their potential impact on the field of data management.

15. The fifteenth part of the document concludes by summarizing the key findings and recommendations. It stresses the importance of ongoing monitoring and evaluation to ensure that data management practices remain effective and aligned with the organization's goals.

acres, a total of 51 "resident" ducks were observed including 5 broods of young. Many such potholes with their characteristic bog-shrub shorezones and bays appear to offer excellent Ring-necked nesting habitat. There are literally hundreds of such areas scattered throughout the area west and south of Matachewan and Elk Lake, hence to measure production in such an area presents quite a challenge. However, during the next two or three years it should be possible to build up an index of production for such an area that will closely approximate the general mean.

### Field Aging of Duck Broods

To determine approximate hatching dates and gain some knowledge of nesting chronology of duck broods in this District, all broods observed on the Abitibi marshes, Moose Lake and Matachewan West areas were classified according to the age criteria as set down by Gollop and Marshall, 1954.

The plumage classes of Class I - Downy, Class II and Class III, were used; however, the sub-classes were not employed this year. As pointed out by these authors, the use of class and sub-class can eliminate duplications of broods when two counts are made at different times on the same marsh. Since none of our counts was to be duplicated it was deemed unnecessary to use the "sub-class" breakdown.

Since a limited number of broods are available from any one area, this information will be maintained for a period of at least three years on each particular marsh. At this point sufficient data should be available to permit the delineation of the dates of the hatching periods for the more common species. Such information will also prove invaluable in determining duckling mortality at various stages of development in an area where it is possible to make three to four brood counts in any one season.

### Section B - Opening Day Waterfowl Bag Checks

#### I - Ghost River Marshes

For the second consecutive year a waterfowl bag check was conducted in the Ghost River marshes during the opening day of the 1966 hunting season, September 15th.

At this time hunter success data and sample duck wings were collected from all hunters active in the area. Once again hunting pressure was light as only six parties comprised of 19 hunters took part in the opening day activities. The following is a summary of hunter success for opening day (September 15) only.

1000

1000

1000

1000

1000

1000

1000

1000

1000

1000



| <u>Parties</u> | <u>Hunters</u> | <u>Man-<br/>Hours</u> | <u>Total<br/>Ducks</u> | <u>Lost<br/>Cripples</u> |
|----------------|----------------|-----------------------|------------------------|--------------------------|
| 6              | 19             | 155                   | 79                     | 20                       |

|                  | <u>1965</u>          | <u>1966</u>        |
|------------------|----------------------|--------------------|
| Hunter success - | 3.5 ducks / hunter   | 4.1 ducks / hunter |
| Hunter effort -  | 0.71 ducks / man-hr. | 0.50 " / man-hr.   |
| Crippling loss - | -                    | 20.2%              |

The 1966 opening day was certainly more successful than last year although it required slightly more hunter effort to harvest one duck. It is probably safe to presume that the Ghost River marshes had one of the highest opening day success rates in the Province at 4.1 ducks per hunter; however, this is understandable when one considers the possibilities as 19 hunters spread out over 1,000 acres of marsh. A crippling loss of 20.2% doesn't seem excessive for a difficult cattail marsh like the Ghost; however, it should be considered that five of the six parties hunting employed retrieving dogs with one party of four men using three Labradors. No doubt the loss would have been in the neighbourhood of 50% had the dogs not been used.

The principal reason for the increase in hunting effort was that the morning shoot was quite slow but was followed by an excellent evening shoot under clear, calm weather conditions.

#### Hunter Origin and Comments

It is worthy of note that only one party of hunters were Northerners originating in this case from Timmins. All the other parties were from the South with one party from the U.S.A. Five of the six parties were "regulars" on the Ghost and all were veteran waterfowl hunters. The chief comment concerning the migratory bird hunting permit was that it cost too little, and also some concern was expressed as to whether the money would be directed back into waterfowl management.



HUNTER HARVEST BY SPECIES

N.B. - This data includes all ducks shot on September 15th as well as those taken up to noon of September 16th, 1966.

| <u>Specie</u>     | <u>Total</u> | <u>% Total Kill</u> |
|-------------------|--------------|---------------------|
| Mallard           | 35           | 37.6                |
| Black             | 30           | 32.3                |
| Ring-necked duck  | 6            | 6.4                 |
| Com. Goldeneye    | 5            | 5.4                 |
| Green-winged Teal | 4            | 4.3                 |
| American Widgeon  | 3            | 3.2                 |
| Blue-winged Teal  | 1            | 1.1                 |
| Wood duck         | 1            | 1.1                 |
| Hooded Merganser  | 1            | 1.1                 |
| Unidentified      | 7            | 7.5                 |
|                   | —            | —                   |
| TOTAL             | 93           | 100.00              |

As would be expected Blacks and Mallards made up the bulk of the kill during the first two days of the hunt on the Ghost marshes. However, it is rather startling that the percentage of these two species representative of the total kill, jumped from 47.4% last year to 69.9% in 1966. This can be explained in part by the fact that some of the hunters were selectively shooting these preferred species to the exclusion of the lesser known species.

The trend towards the predominance of Mallards over Blacks as the number one specie in the area is again evident as they have now surpassed the latter specie in representation in the hunter's bag. Although the Black still predominates as a nesting specie on the Ghost river itself, all indications are that the Mallard will eventually prevail in the area as a whole.

Age - Sex Data

During the first day and a half of the 1966 season the writer



obtained age - sex data on 76 ducks by the cloacal examination method. In addition, one wing was collected from each of these ducks and labelled with relevant data in each case. These wings are to be used as a reference collection for the later use of the Preliminary Keys - Age and Sex of Duck Wings by Samuel Carney and Aelred Geis.

Table V presents the age - sex data from the examined sample on the Ghost river.

TABLE V

| Total | Specie            | Adults |         | Immatures |         |
|-------|-------------------|--------|---------|-----------|---------|
|       |                   | Males  | Females | Males     | Females |
| 32    | Black             | 2      | 2       | 13        | 15      |
| 27    | Mallard           | 3      | 4       | 10        | 10      |
| 5     | Goldeneye         |        |         | 4         | 1       |
| 4     | Ring-necked       |        |         | 3         | 1       |
| 3     | Green-winged Teal |        |         | 2         | 1       |
| 2     | American Widgeon  |        |         | 1         | 1       |
| 1     | Blue-winged Teal  |        |         | 1         |         |
| 1     | Hooded Merganser  |        |         | 1         |         |
| 1     | Wood Duck         | 1      |         |           |         |
| 76    | TOTALS            | 6      | 6       | 35        | 29      |

This sample is obviously too small to establish reproductive ratios; however, the strong showing of immature Blacks and Mallards would indicate stronger hatching success this year. This factor bears out similar indications suggested by much improved summer water levels and increased brood counts in the area.

During the period September 17th to October 20th, an additional collection of duck wings was made by Master Dennis Tremblay. However, due to our inability to pick these wings up from Tremblay's camp in time, a large proportion had to be thrown away. The following identification breakdown represents that portion of the wings that were saved.

1. *Introduction*  
The purpose of this study is to investigate the effects of various factors on the performance of a system. The study is organized as follows: Section 2 describes the methodology used, Section 3 presents the results, and Section 4 discusses the conclusions.

2. *Methodology*  
The methodology used in this study is based on a series of experiments. The first experiment was designed to measure the effect of factor A on the system's performance. The second experiment was designed to measure the effect of factor B on the system's performance.

3. *Results*  
The results of the first experiment are shown in Table 1. The results of the second experiment are shown in Table 2.

4. *Conclusions*  
The results of this study indicate that factor A has a significant effect on the system's performance. Factor B also has a significant effect on the system's performance.

5. *References*  
1. Smith, J. (1998). The effect of factor A on system performance. *Journal of System Performance*, 10(1), 1-10.

2. Jones, K. (2000). The effect of factor B on system performance. *Journal of System Performance*, 12(2), 1-10.

3. Brown, L. (2002). The effect of factor C on system performance. *Journal of System Performance*, 14(3), 1-10.

4. White, M. (2004). The effect of factor D on system performance. *Journal of System Performance*, 16(4), 1-10.

5. Black, N. (2006). The effect of factor E on system performance. *Journal of System Performance*, 18(5), 1-10.

6. Green, O. (2008). The effect of factor F on system performance. *Journal of System Performance*, 20(6), 1-10.

7. Grey, P. (2010). The effect of factor G on system performance. *Journal of System Performance*, 22(7), 1-10.

8. White, Q. (2012). The effect of factor H on system performance. *Journal of System Performance*, 24(8), 1-10.

6. *Appendix*  
The appendix contains the data used in the experiments. The data for the first experiment is shown in Table 3. The data for the second experiment is shown in Table 4.

7. *Tables*  
Table 1: Results of the first experiment. Table 2: Results of the second experiment.

Table 3: Data for the first experiment. Table 4: Data for the second experiment.

8. *Figures*  
Figure 1: A line graph showing the effect of factor A on system performance. Figure 2: A line graph showing the effect of factor B on system performance.

Figure 3: A line graph showing the effect of factor C on system performance. Figure 4: A line graph showing the effect of factor D on system performance.

Figure 5: A line graph showing the effect of factor E on system performance. Figure 6: A line graph showing the effect of factor F on system performance.

Figure 7: A line graph showing the effect of factor G on system performance. Figure 8: A line graph showing the effect of factor H on system performance.

|                   |           |
|-------------------|-----------|
| Mallard           | - 19      |
| Goldeneyes        | - 5       |
| Ring-neckeds      | - 4       |
| Blacks            | - 2       |
| Green-winged Teal | - 2       |
| Blue-winged Teal  | - 1       |
| Wood duck         | - 1       |
| Pintail           | - 1       |
| TOTAL             | <u>35</u> |

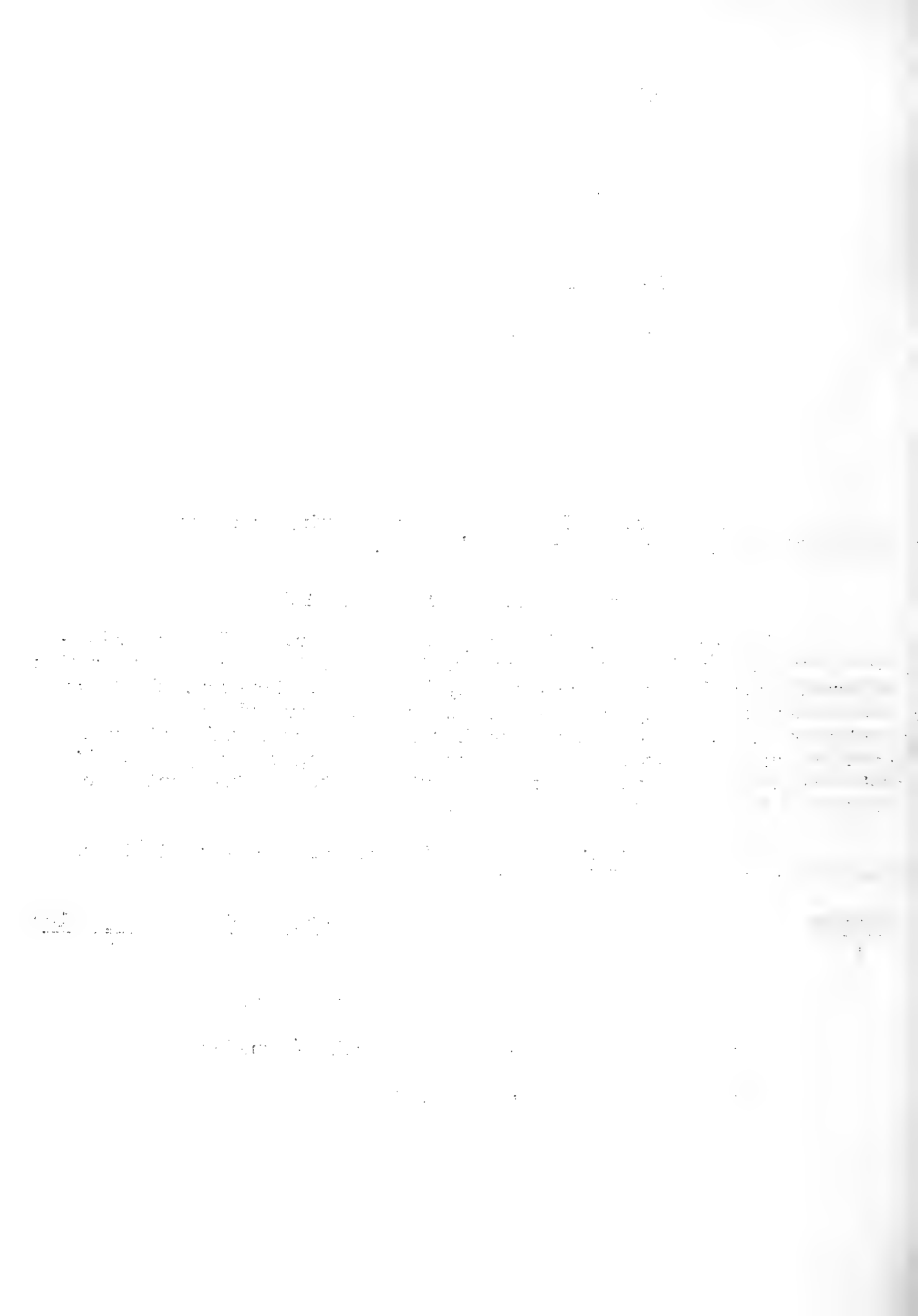
In addition, a Blue-winged Teal wearing band number 665-56600 was reported at Tremblay's camp.

## II - Moose Lake - Bond Township

Following the preliminary wetlands survey of Moose Lake - Bond Township during the past summer it was decided to obtain hunting pressure data through an opening day bag check. However, the 2 man crew encountered only two parties of hunters using the area on September 15th. Reports from local residents indicated that duck hunting has deteriorated at this location during recent years. It was also reported that the area is better suited to the hunting of migrant waterfowl later in the fall.

The following represents a summary of the Moose Lake bag check data September 15th, 1966:

| <u>Parties</u> | <u>Hunters</u> | <u>Man-Hours</u> | <u>Total Ducks</u>    | <u>Cripples</u> |
|----------------|----------------|------------------|-----------------------|-----------------|
| 2              | 6              | 24               | 16                    | 2               |
|                | Hunter success | -                | 2.6 ducks / hunter    |                 |
|                | Hunter effort  | -                | 0.66 ducks / man-hour |                 |
|                | Crippling loss | -                | 7.6%                  |                 |





Species Composition

| <u>Species</u>   | <u>Total</u> | <u>% Total Kill</u> |
|------------------|--------------|---------------------|
| Ring-necked      | 5            | 31.3                |
| Black            | 4            | 25.0                |
| Blue-winged Teal | 4            | 25.0                |
| Goldeneye        | 2            | 18.7                |
| Hooded Merganser | 1            |                     |
|                  | <hr/>        | <hr/>               |
| TOTAL            | 16           | 100.00              |

The census crew observed that ducks appeared to be fairly numerous in the area on opening day. One band number, 607-76138, from a Black duck banded as an immature female by Mr. Leo Badger and his airboat crew during August, was recovered.

III - Long Lake - Gross Township

The upper end of Long (Kinogami) Lake in Gross and Blain townships has always been a favourite early season hunting area in conjunction with the chain of potholes in the immediate area of the inflow of the Englehart river. A two man census crew interviewed eight parties of hunters in this area on opening day this year. While success was generally low, this was attributable to various cases of "sky busting" and other unsportsmanlike tactics rather than a dearth of waterfowl.

Bag Check Summary

| <u>No. Parties</u> | <u>Hunters</u> | <u>Man-Hours</u> | <u>Total Ducks</u> | <u>Cripples</u> |
|--------------------|----------------|------------------|--------------------|-----------------|
| 8                  | 15             | 54               | 17                 | 6               |

Hunter success - 1.1 ducks / hunter

Hunter effort - 0.31 ducks / man hour

Crippling loss - 26.0%

1. Introduction

2. Methodology

3. Results

4. Discussion

5. Conclusion

6. References

7. Appendix

8. Acknowledgements

9. Author Biographies

10. Index

11. Glossary

12. Bibliography

13. Appendix A

14. Appendix B

15. Appendix C

16. Appendix D

17. Appendix E

18. Appendix F

19. Appendix G

20. Appendix H

21. Appendix I

22. Appendix J

23. Appendix K

24. Appendix L

25. Appendix M

Species Composition

| <u>Species</u>   | <u>Total</u> | <u>% Total Kill</u> |
|------------------|--------------|---------------------|
| Black            | 8            | 47.0                |
| Common Merganser | 3 )          |                     |
| Mallard          | 2 )          |                     |
| Blue-winged Teal | 2 ) =        | 53.0                |
| Wood duck        | 1 )          |                     |
| Ring-necked      | <u>1</u> )   | <u>          </u>   |
| TOTAL            | 17           | 100.00              |

It should be mentioned at this point that some good hunting for ducks was reported in this particular area during the two weeks following opening day, hence it can be assumed that conditions were better than indicated by the limited data available.

IV Mountain Lake - James Township

This area has long been known as a night roosting area for waterfowl. The extensive bullrush cover on the north shore of the lake and at the mouth of the Montreal river offers excellent opportunity for such waterfowl use.

On opening day, September 15th, a party of 7 men bagged 19 ducks in 14 man-hours of hunting during the late afternoon and evening hours. The total bag consisted of 6 Ring-neckeds, 4 Blacks, 7 Hooded Mergansers, 1 Blue-winged Teal and 1 Green-winged Teal. These figures produce a success rate of 2.7 ducks per hunter.

Up until 1964, this area was known as an excellent late duck location with good numbers of migrating Ring-necks and Scaup using it as a resting and stop-over area. During the past two seasons, however, there has been a dearth of these species with only very small flocks coming in well after dark. It is felt that some factor has caused these migrants to change their fall flight pattern. It is certain that hunting had no part in affecting this change since this area has been very lightly hunted for some time.

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Waterfowl Wing Collection

A total of 235 wings were collected from ducks shot during the 1966 hunting season in Swastika District. Of this total, 123 came from the Ghost river and the bulk of the remainder were contributed by five co-operating hunters. Following local analysis and recording of data and the selection of a suitable study collection, the remainder will be forwarded to the University of Guelph for inclusion in the Provincial collection.

Section C - Duck BandingI - Air Boat Operation

This year, U.S. Game Management Agent, Leo Badger, working out of West Virginia, was detailed to band waterfowl using an air boat on the Nepawa Island and Boundary Marshes of Lake Abitibi on the Quebec side. During the period August 4 - 19th, 1966, a total of 118 ducks were banded. Due to the relatively poor success, the scene of operations was shifted to Northeastern Ontario. At Lillabelle Lake and Porcupine Lake in the Cochrane District, excellent success was achieved in a very short time. The writer worked on the Porcupine Lake endeavour for two of the four nights spent in the area and was quite impressed with the excellent results obtained. A total of 350 ducks was banded at this site. At Moose Lake in the Swastika District, a rather disappointing total of 40 ducks were captured and banded. However, examination of this marsh would indicate that it is better suited as a daytime feeding area and is not used extensively by waterfowl as a roosting site.

The Airboat

The boat itself is made up of a streamlined fibreglass hull made by Hurricane Fibreglass Products Incorporated, of Auburndale, Florida. It is 14 feet long, has a total weight of 800 lbs. and is powered by a 150 H.P. Lycoming Aircraft engine. A battery of three 1500 watt lamps provide excellent opportunity for "spotting" ducks at a considerable distance. The boat is extremely maneuverable and versatile in shallow water and provides an excellent means of banding waterfowl.

Recommendations

Since the air boat is the most efficient method of banding the most waterfowl in the shortest amount of time so far encountered in Northern waterfowl banding, we submit the following recommendations for consideration.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. This is essential for ensuring the integrity of the financial statements and for providing a clear audit trail.

2. The second part of the document outlines the various methods used to collect and analyze data. These methods include direct observation, interviews, and the use of statistical techniques.

3. The third part of the document describes the results of the study. It shows that there is a significant correlation between the variables being studied, and that the findings are consistent with previous research in the field.

4. The fourth part of the document discusses the implications of the findings. It suggests that the results have important implications for practice and for further research.

5. The fifth part of the document concludes the study. It summarizes the main findings and provides a final thought on the importance of the research.

6. The sixth part of the document provides a list of references. These references include books, articles, and other sources that have been consulted during the course of the study.

7. The seventh part of the document provides a list of appendices. These appendices include additional data, tables, and figures that are not included in the main text of the document.

8. The eighth part of the document provides a list of acknowledgments. These acknowledgments thank the individuals and organizations that have provided support and assistance during the course of the study.

9. The ninth part of the document provides a list of contact information. This information includes the author's name, address, and phone number, and is provided for those who wish to contact the author.

10. The tenth part of the document provides a list of other relevant information. This information includes details about the funding of the study, the date of completion, and other important information.

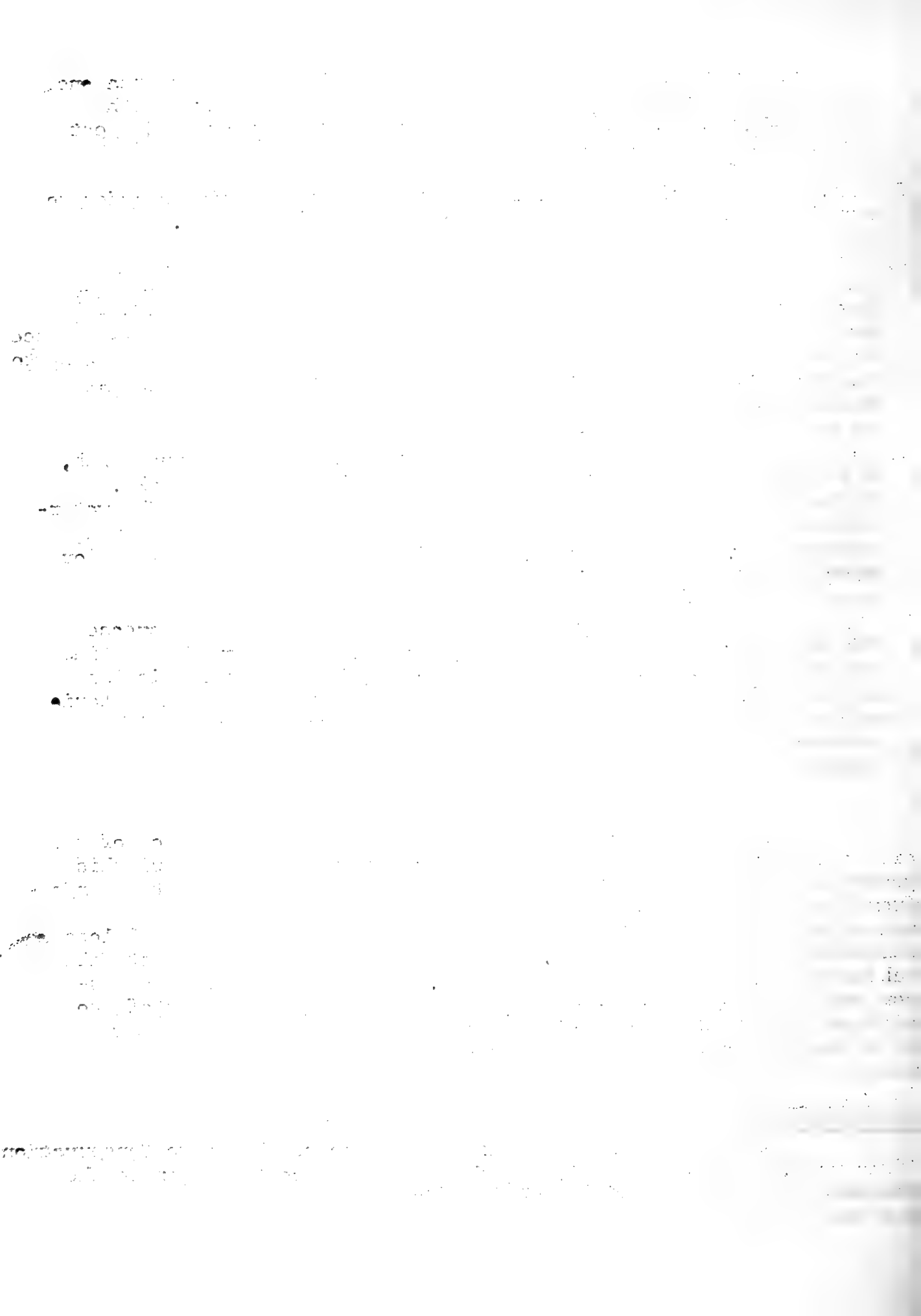
- 1) The air boat, if possible, should be reassigned to this area once again next year. A definite program should be arranged with District Fish and Wildlife personnel concerned in order to best utilize the available time.
- 2) Mr. Badger should be in charge of the boat once again in order to utilize his experience gained on this summer's program.
- 3) Since in the past, communication between Head Office staff and the Districts concerning travelling banding crews has been very poor, the Districts involved should be notified well in advance of the intended plans. This would result in the elimination to a great extent of trial runs on marginal areas. The knowledge of various marsh areas available at the District level has not as yet been utilized for such banding projects.
- 4) It is suggested that operations not commence before August 12th, 1967 and that areas such as Lillabelle Lake, Porcupine Lake, Nighthawk Lake and Moose Lake receive attention first. The waterfowl build-up on the Abitibi marshes has been quite late during recent years, hence operations in that area need not begin before August 25th at the earliest.
- 5) The third man necessary in such an operation should be someone from Fish and Wildlife in the Northeastern region on a full time basis. This will result in greater efficiency of operation as well as indicating to the Flyway representatives that the Ontario government is truly interested in the Eastern-Canada banding program.

## II - Bait Trapping

Due to the shortage of time following the completion of the air boat operation, the bait-trapping project was unsuccessful this year. The Hill Lake site requires much pre-baiting to draw the birds from natural feed on to the bait site, hence only 2 Blacks and 1 Mallard were taken this year. In addition, 14 Blue-winged Teal locals were banded by drive trapping. Since the waterfowl build-up at Hill Lake has been dropping in recent years, this operation will be discontinued unless arrangements can be made for the Hatchery staff to aid in the project. The small returns have not warranted the time spent in this project.

### Acknowledgements

The writer wishes to express his sincere thanks to Conservation Officers E.A. Corbould and J. Bradshaw for their contribution to the data used in this report.





References

Gollop, J.B. and W.H. Marshall, A Guide for Aging Duck Broods in the Field, Paper for the Mississippi Flyway Council Technical Section, 1954. 14 pp.

Gardner, J.F., Ghost River Marshes Waterfowl Bag Check - 1965, unpublished District Fish and Wildlife Report. 4 pp.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes the need for transparency and accountability in financial reporting.

2. The second part of the document outlines the various methods and techniques used to collect and analyze data. It highlights the importance of using reliable sources and ensuring the accuracy of the information gathered.

TRANSFER OF ADULT GOLDEYE FROM  
SEVERN RIVER TO SACHIGO LAKE  
IN SIOUX LOOKOUT DISTRICT  
1966

by  
C.A. Milko,  
Res. Mgt. Officer

Abstract

In order to stimulate economic growth of the Sachigo commercial fishery, a program was approved by the Federal-Provincial Resource Development committee which entails the transplant of adult goldeye from the Severn River to Sachigo, Little Sachigo and Ponask Lakes which appear to be suitable bodies of water for the production of these species.

A total of 212 adult fish were moved by otter aircraft and introduced into Sachigo Lake. Holding time in the retainer net and water temperatures are two critical factors in the successful application of a goldeye transplant.

The program can be considered partially successful in that at least 6 recoveries from Sachigo Lake have been reported this past summer.

Introduction

Under the terms of the present Resource Development Agreement funds were made available for a project designated as R.D 82, for the transplantation of adult goldeye from a spawning site on the Severn River below Sandy Lake to Sachigo, Little Sachigo and Ponask Lakes.

The main reason for implementing the project was to stimulate economic growth of the Sachigo commercial fishery in future years. Goldeye are a highly desirable species of fish on the consumers' market and are considered a gourmet dish when smoked, consequently competition by fish buyers for production is high and also results in higher bid prices for other species of fish such as pickerel and whitefish in order to secure production.

There presently is a commercial fishery on the three lakes in question, however, distances involved in flying the fish restricts the lakeside price per pound to the Indian fishermen.

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An established population of goldeyes entering the commercial fishery will almost automatically increase the value of the other commercially produced species.

Information and advice regarding the physical aspects of the project was sought from the Fisheries Research Board, and the Fisheries Branches of Manitoba, Saskatchewan and Alberta, however, no pertinent information was available so we proceeded on a trial and error basis.

Personnel participating in the project were the author, John Lessard, Resource Management Officer; Fred Gamble, Fisheries Supervisor and Walter Kakeptem, Fisheries Supervisor.

### Chemical & Physical Characteristics

Sachigo, Little Sachigo and Ponask Lakes are located in the far northwestern part of the Province in the general locality of longitude 92<sup>00</sup> x Latitude 54<sup>00</sup>' and each have water areas of 90, 38 and 20 square miles respectively.

Sachigo and Little Sachigo Lakes are shallow, turbid and relatively wide open bodies of water exposed to a great deal of wind action. Ponask Lake is a long narrow lake with a high turbidity rating.

A comparison of water sample analysis between the three lakes and lakes on the Severn River watershed, where goldeye populations exist and are produced commercially, indicate that water characteristics are similar as illustrated in Table I.

Table I

| Lake           | Total Dissolved Solids | Alkalinity | Turbidity Units |
|----------------|------------------------|------------|-----------------|
| Sandy Lake     | 114 ppm.               | 50         | 24              |
| Finger Lake    | 97 "                   | 44         | 19              |
| Muskrat-Dan    | 90 "                   | 50         | 27              |
| Asipiquobah    | 85 "                   | 37         | 2               |
| Sachigo        | 105 "                  | 57         | 12              |
| Little Sachigo | 104 "                  | 72         | 9               |
| Ponask         | 129 "                  | 97         | 11              |

The above data indicate average value taken over a three-year period.

Revised 10/1/80

Page 1 of 1

1. The purpose of this document is to provide a clear and concise summary of the project's progress to date.

2. The project has been completed on schedule and within budget.

3. The next steps are to finalize the report and distribute it to all stakeholders.

4. The project team is grateful for the support and assistance provided by all parties involved.

5. The project has been a success and we look forward to future collaborations.

6. The project team is pleased to have achieved the goals set at the beginning of the project.

7. The project has been a valuable learning experience for all team members.

8. The project team is confident that the results will be beneficial to all stakeholders.

9. The project has been a great success and we are proud of the team's achievements.

10. The project team is looking forward to the next phase of the project.

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A probable reason why goldeye never have existed in the waters in question is the height of land between the Severn and the Sachigo River watersheds.

### Methods - Capture and Transplant

On June 8, 1966, after a four day delay because of inclement flying weather, a crew of three (2 Resource Officers and 1 Fisheries Supervisor) with all necessary equipment were flown to the trapping site on the Severn River via otter aircraft ODV piloted by Harry Speight. There they were met by Walter Kakepetum from Sandy Lake settlement who is also employed as a fisheries supervisor. The attached map indicates both the capture and the planting sites.

The trapping site is approximately 215 air miles north of Sioux Lookout.

### Equipment Used

- 1 - 14' aluminum boat and motor
- 1 - 18' canoe and motor
- 3 - complete set 1-1/2" - 3-1/2" mesh 100' gill nets
- 2 - 20 gal. metal water barrels for holding fish alive in boat
- 1 - 6' retainer net
- 2 - cylinders oxygen
  - supply of large poly bags for holdings during air transit
  - supply of hose bags supplied by Forest Protection to provide reinforcement for poly bags.
  - camping gear
- 1 - P35 radio with generator.

The Severn River is very deep around the capture area (30' - 40') and all nets had to be floated in order to catch any fish. Trimmed dry poplar pegs 16" long and 3" in diameter were fastened at float intervals along the top line by means of a split notch in one end of the peg to provide floatation.

Abnormally high water levels caused the river to be very swift and full of debris creating difficult fishing conditions. The nets had to be pulled periodically, taken to camp, cleaned, and then re-set.

In order to keep mortality to a minimum nets were run at least three times daily, early morning, afternoon and late evening.

Maximum travelling distance involved with fish from the net to retainer was 6 miles. In this distance continual changing of water was required. Not more than 10 or 12 fish at any one time could be transported in the water barrels in the boat to the retainer net.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions.

2. It is essential to ensure that all data is entered correctly and that any discrepancies are identified and corrected promptly.

3. The second part of the document outlines the various methods used to collect and analyze data, including surveys, interviews, and focus groups.

4. These methods are chosen based on the specific needs of the study and the characteristics of the population being studied.

5. The third part of the document describes the process of data analysis, which involves identifying patterns and trends in the data.

6. This is done using statistical techniques and software tools to ensure the accuracy and reliability of the results.

7. The final part of the document discusses the importance of reporting the findings of the study in a clear and concise manner.

8. This involves writing a report that summarizes the key findings and provides recommendations for future research and practice.

9. The report should be written in a way that is accessible to a wide range of stakeholders, including researchers, practitioners, and the general public.

10. Finally, the document emphasizes the need for transparency and accountability in the research process, ensuring that all data and methods are clearly documented and available for review.

11. This helps to build trust in the research and ensures that the findings are based on sound evidence and rigorous analysis.

12. In conclusion, the document provides a comprehensive overview of the research process, from data collection to reporting, and highlights the key challenges and best practices involved.

13. By following these guidelines, researchers can ensure that their studies are conducted in a rigorous and ethical manner, leading to valuable insights and contributions to the field.

14. The document also serves as a useful resource for anyone interested in learning more about research methods and the importance of data in decision-making.

15. Overall, the document provides a clear and concise guide to the research process, ensuring that all steps are followed correctly and that the results are reliable and valid.

16. The document is a valuable resource for researchers and practitioners alike, providing a comprehensive overview of the research process and highlighting the key challenges and best practices involved.

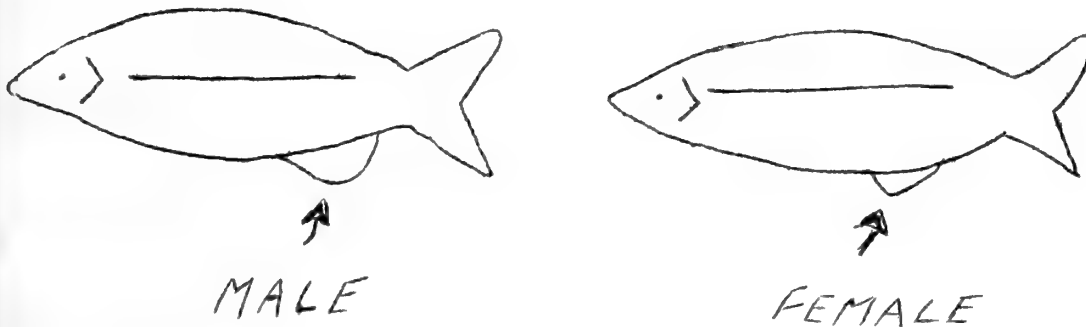
17. By following these guidelines, researchers can ensure that their studies are conducted in a rigorous and ethical manner, leading to valuable insights and contributions to the field.



Some fishing activity was carried out up river from the camp site and above the first rapids. This necessitated portaging the live fish in wash tubs and created a great deal of strenuous work. Towards the end of the project this practice was stopped.

Daily water temperatures were recorded, and revealed that a higher incidence of mortality occurred as the water temperature rose.

Only numbers of fish and sex were recorded of fish that were to be transplanted. Goldeyes can be sexed easily by visual examination of the anal fin. The anal fin of the adult male becomes elongated to form a distinct lobe whereas the adult female lacks such a lobe as illustrated below.



The actual movement of the fish to Sachigo Lake presented no problem. Large polyethylene type bags were placed in canvas hose bags into which approximately 4-5 gallons of water was placed. Ten or twelve fish were put in the bag out of the retainer net, the bag was inflated slightly with a small amount of oxygen and tied off with cord.

Ten or twelve bags of fish could be hauled quite easily in the otter aircraft, but this load could be increased if landing and take-off conditions on the river were more suitable.

Flying distance involved to the planting site in Sachigo Lake was 44 miles. Total holding time of the fish in bags from retainer net to planting site under normal conditions would be approximately one hour and ten minutes.

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Previous to transporting the fish, live specimens were held in oxygen inflated bags for as long as 12 hours with no apparent ill effects.

Because of their delicate nature great care had to be exercised in handling the live fish. Goldeye have deciduous scales and are subject to fungus with rough handling.

The actual planting of the fish posed no problem. Once landed at the planting site the pilot handed the bags to a resource officer on the float of the aircraft who untied the bag, placed it in the water and let the fish swim out.

### Results and Observations

As indicated in Table II a total of 363 goldeye were captured in 18,300 feet of net. Of this total, 97 fish or a mortality rate of 27% was observed.

Of the 266 goldeye held in the retainer during the project 47 fish died indicating a mortality rate of approximately 18%.

As was to be expected, the mortality rate increased as the water temperatures rose.

Mortality in the retainer net can probably be attributed to weak specimens being retained and too large a mesh size in the retainer itself which was 2".

On numerous occasions fish would be observed hitting the mesh and getting entangled by their teeth.

Another probable cause of mortality in the retainer would be holding fish for extended periods of time (i.e. 3 or 4 days). Had the crew been at the trapping site one week earlier when spawning activity was at its peak fishing success would have been greater thereby reducing holding time between aircraft loads. Lower water temperatures a week earlier would probably also reduce mortality.

Of the graduated nets used (1-1/2"-3-1/2") the 3-1/2" mesh nets proved to be most effective for catching numbers of fish but accounted for a higher mortality in the fish caught when compared to the smaller mesh size.

Fish caught in the 3-1/2" nets would almost invariably be gilled and drowned or so many scales would be ribbed off during removal from the nets that it was considered unadvisable to retain them for transplant.

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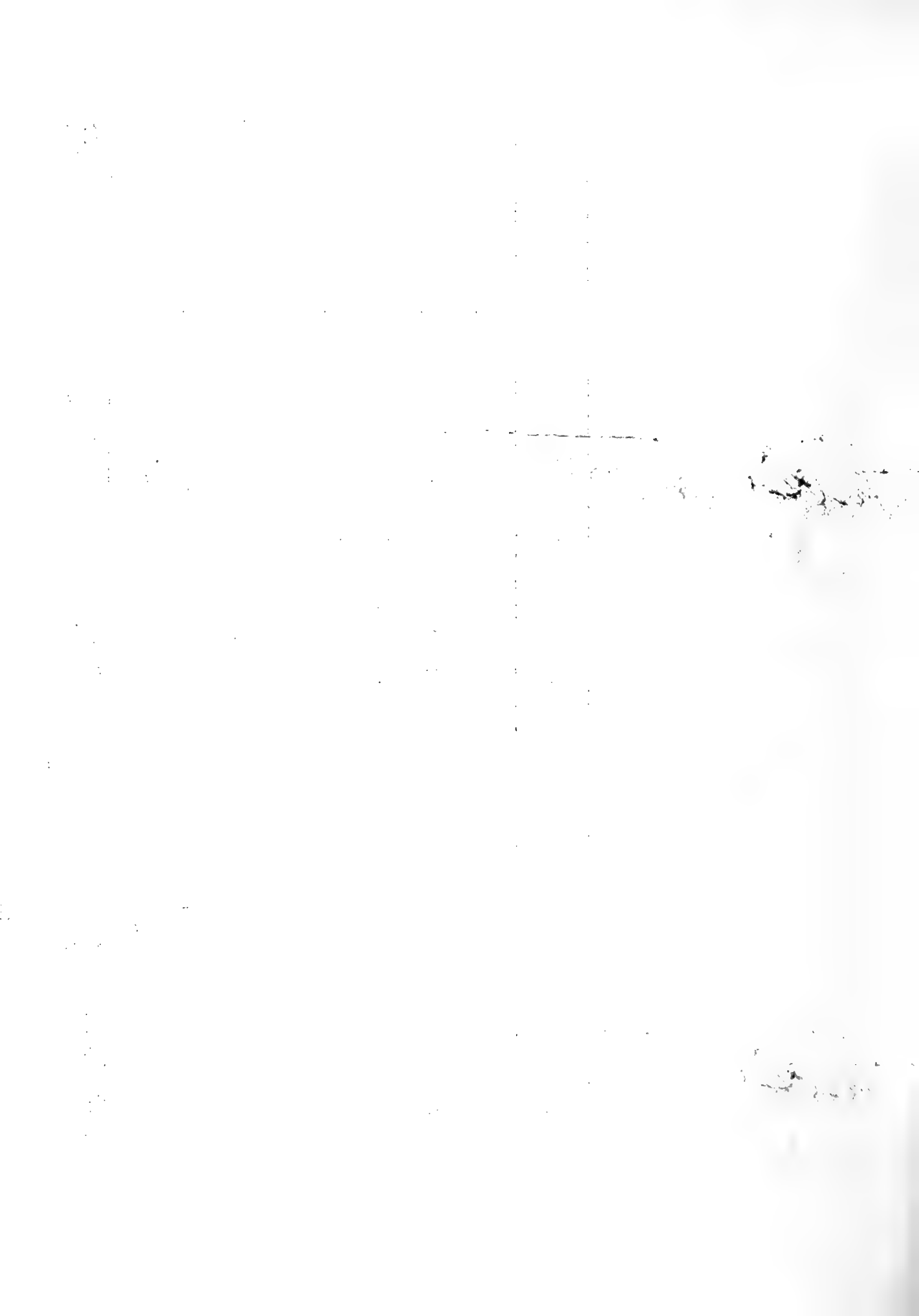
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Table II

| Date    | Net Lifted | Total Goldeye | Dead    | In Retainer | Dead in Retainer | Water Temp. | Fish Moved |
|---------|------------|---------------|---------|-------------|------------------|-------------|------------|
| June 9  | 3600'      | 52            | 9♂ 3♀   | 39♂ 1♀      |                  | 53° F       |            |
| June 10 | 3600'      | 46            | 13♂ 3♀  | 23♂ 7♀      | 3                | 54° F       |            |
| June 11 | 2700'      | 45            | 12♂ 4♀  | 21♂ 8♀      | 3                | 54° F       |            |
| June 12 |            | 44            | 10♂ 3♀  | 23♂ 3♀      | 4                | 54° F       | 99♂ 17♀    |
| June 13 | 2400'      | 66            | 12♂ 2♀  | 36♂ 16♀     | 6                | 55° F       |            |
| June 14 | 2400'      | 55            | 13♂ 1♀  | 27♂ 14♀     | 5                | 55° F       |            |
| June 15 | 1800'      | 39            | 2♂ 1♀   | 21♂ 15♀     | 19               | 57° F       | 66♂ 30♀    |
| June 16 | 1300'      | 16            | 4♂ 5♀   | 5♂ 2♀       | 7                | 58° F       |            |
| Totals  | 18,300     | 363           | 75♂ 22♀ | 200♂ 66♀    | 47               |             | 165♂ 47♀   |



The 1-1/2" nets proved to be worthless for catching adult goldeye and were removed from the water after 3 or 4 days.

The amount of debris on the river getting tangled in the 1-1/2" net probably reduced its catching ability.

The 2", 2-1/2" and 3" nets appear to be best suited for a project of this type.

Although they do not capture as many specimens as the 3-1/2" nets the fish that are captured are usually caught by the teeth and in reasonably good shape after removal from the net.

Prior to the start of the project some thought was given to the use of impounding gear, however, the depth and swiftness of the Severn River at the trapping site would render this type of gear impractical.

The water barrels used in the boats to transport the fish from the net to the retainer appear to be suitable providing water temperatures are not above 50° - 54° and the number of fish carried is held to a maximum of 10 or 12 fish.

The holding capacity of these water barrels might be increased if a steady flow of oxygen were fed into the tank in the boat during transit to the retainer.

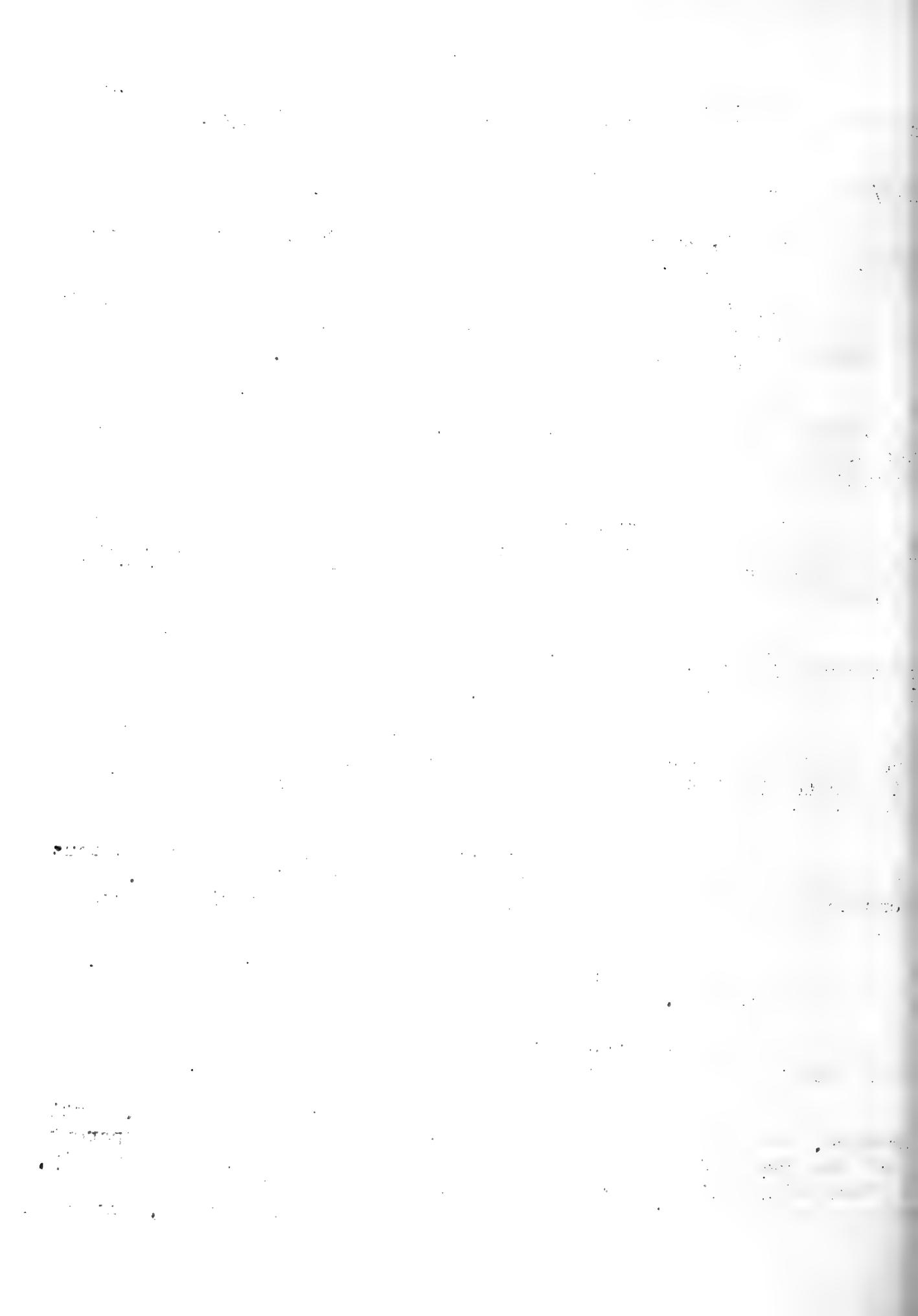
The inflated poly bags in canvas hose bags appear to be excellent containers for moving adult goldeye. No apparent ill effects to the fish were noticeable during transport by air to the planting site.

On the first trip the aircraft had to return to camp because of inclement weather between the Severn River and Sachigo Lake, consequently 116 live fish were kept in the containers for 3 hours until the weather cleared.

No mortality was observed upon release of the fish after this period of time.

Canvas hose bags provide excellent reinforcement to the poly bags and also restrict light penetration to the fish.

The original plan of transplanting fish into Sachigo, Little Sachigo, and Ponask Lakes had to be abandoned when it became apparent that the required number of fish would not be obtained. Consequently, a total of 212 fish (165♂ and 47♀) were planted in Sachigo Lake only. Had the crew been at the trapping site a week earlier, during the





peak spawning run, the entire transplant (500 fish to each lake) could have been completed quite easily.

Walter Kakepetum, one of the crew members, was at the site a week earlier (via boat from Sand Lake village) set one 100' net overnight and captured ~~some~~ 80 odd fish and reported that the fish were at the peak of their run.

Other species of fish caught during the project were: northern pike, walleye, sturgeon, suckers, common suckers, whitefish, saugers and sturgeon.

Personal communication with Indian fishermen at Sachigo Lake, in September 1966, revealed that at least 6 goldeye were caught by the fishermen during commercial operations this past summer. This would indicate that some measure of a successful transplant has been achieved.

### Conclusion

1. Adult goldeyes can be captured, held and transplanted from one locality to another without too much difficulty.
2. Gill nets in the size range of 2" - 3" mesh set in a floating position appear to be best suited for capturing and retaining fish in a live condition.
3. Goldeyes held in a retainer net stand up well, providing water temperatures are below 54° and providing that the fish are not held for periods longer than 48 hours.
4. Oxygen inflated polyethylene type bags reinforced by canvas fire hose bags are ideally suited for transporting goldeyes.
5. Gill nets should be run frequently in order to reduce mortality.
6. Reported captures of at least 6 goldeyes from Sachigo Lake indicate some measure of a successful planting.

### Recommendations

1. That funds be made available to complete this project next spring.
2. That the crew be at the capture site immediately after break-up and wait for the fish.
3. That seining for immature goldeyes be carried out on Sachigo Lake in 2 or 3 years to evaluate transplant and spawning success.

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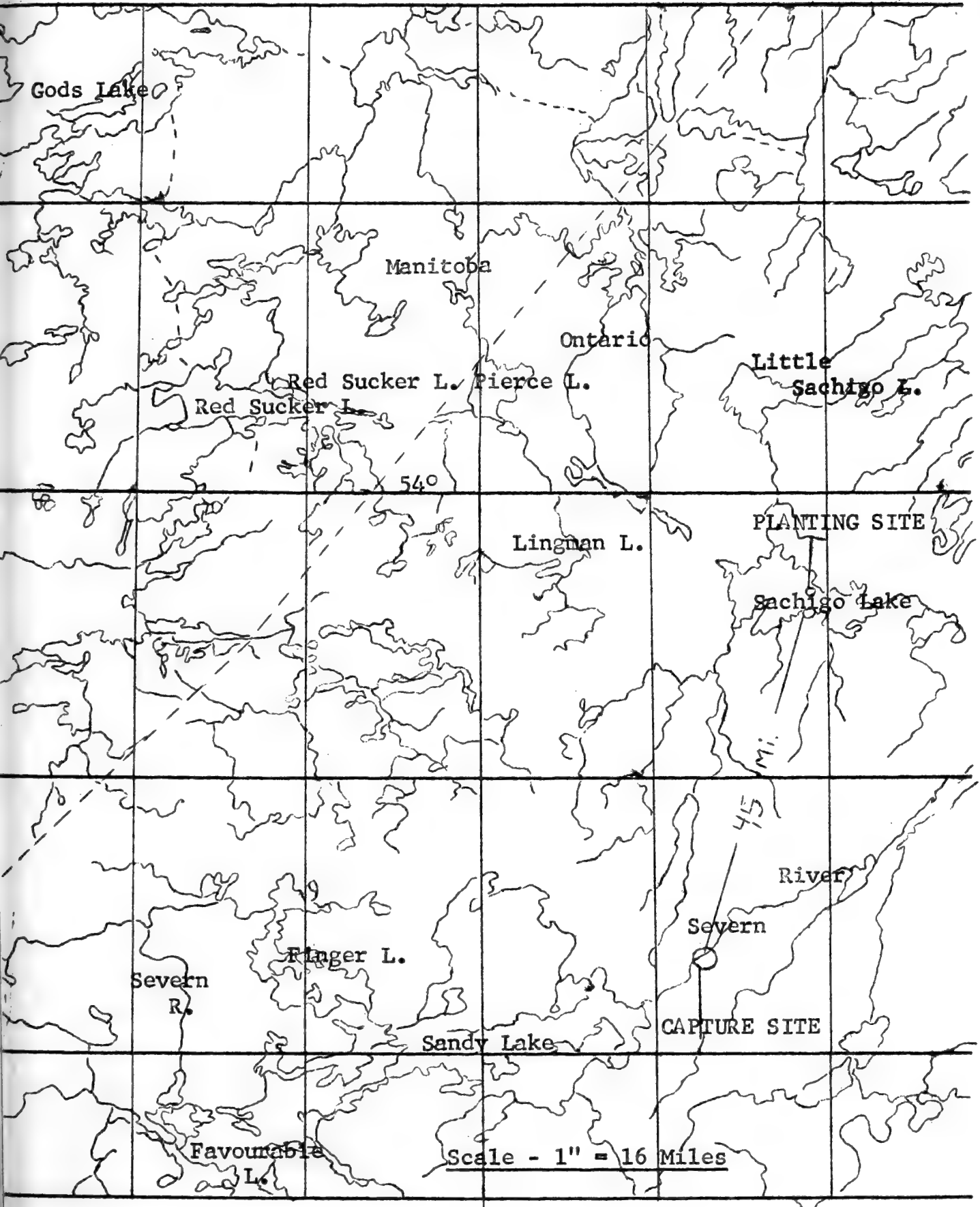
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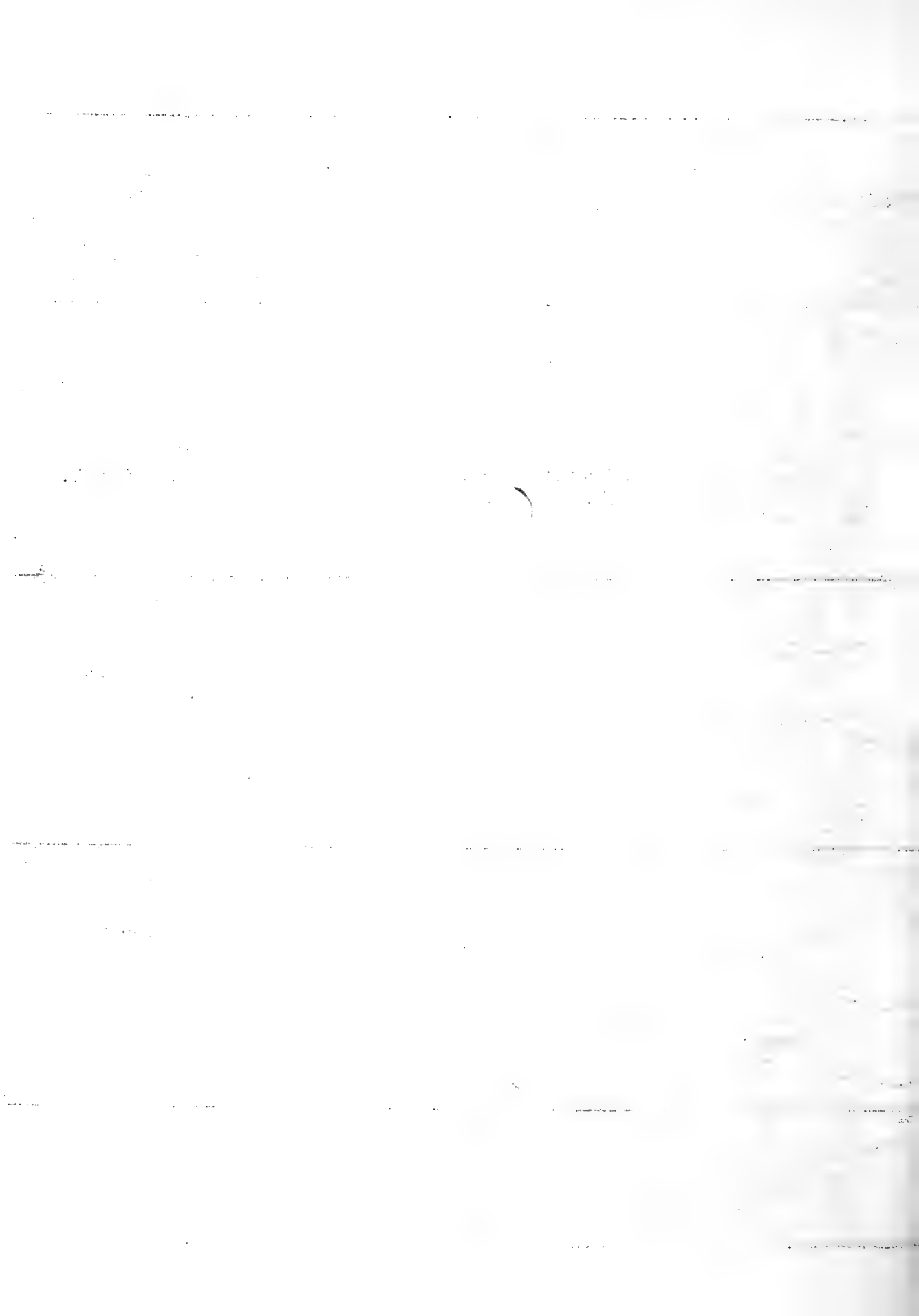
Acknowledgements

Special thanks are extended to Pilots Harry Speight and Al (Cactus) McLeod for their participation in the project.

Thanks are also extended to members of the District Fish and Wildlife staff for their help and assistance.







TAGGING MOOSE FROM A HELICOPTER  
DURING 1966 - GERALDTON DISTRICT

by  
J.A. Chappel.

Abstract

Moose tagging from a helicopter in the Geraldton District during 1966 resulted in twenty-eight (28) moose tagged. Tagging was carried out on eleven(11) days from June 23rd to July 5th inclusive.

A tagging area with a radius of thirty miles from the Town of Geraldton was used. A large number of photographs and film was taken by the National Geographic Society and "Wild Kingdom", Don Meyers Productions, Television series.

Tagging was done by two different helicopters for a total of twenty-seven hours and thirty-five minutes flying time. This gave an average of 1.03 moose tagged per hour. The average for 1965 was 1.97 per hour, and 2.61 moose per hour for 1964.

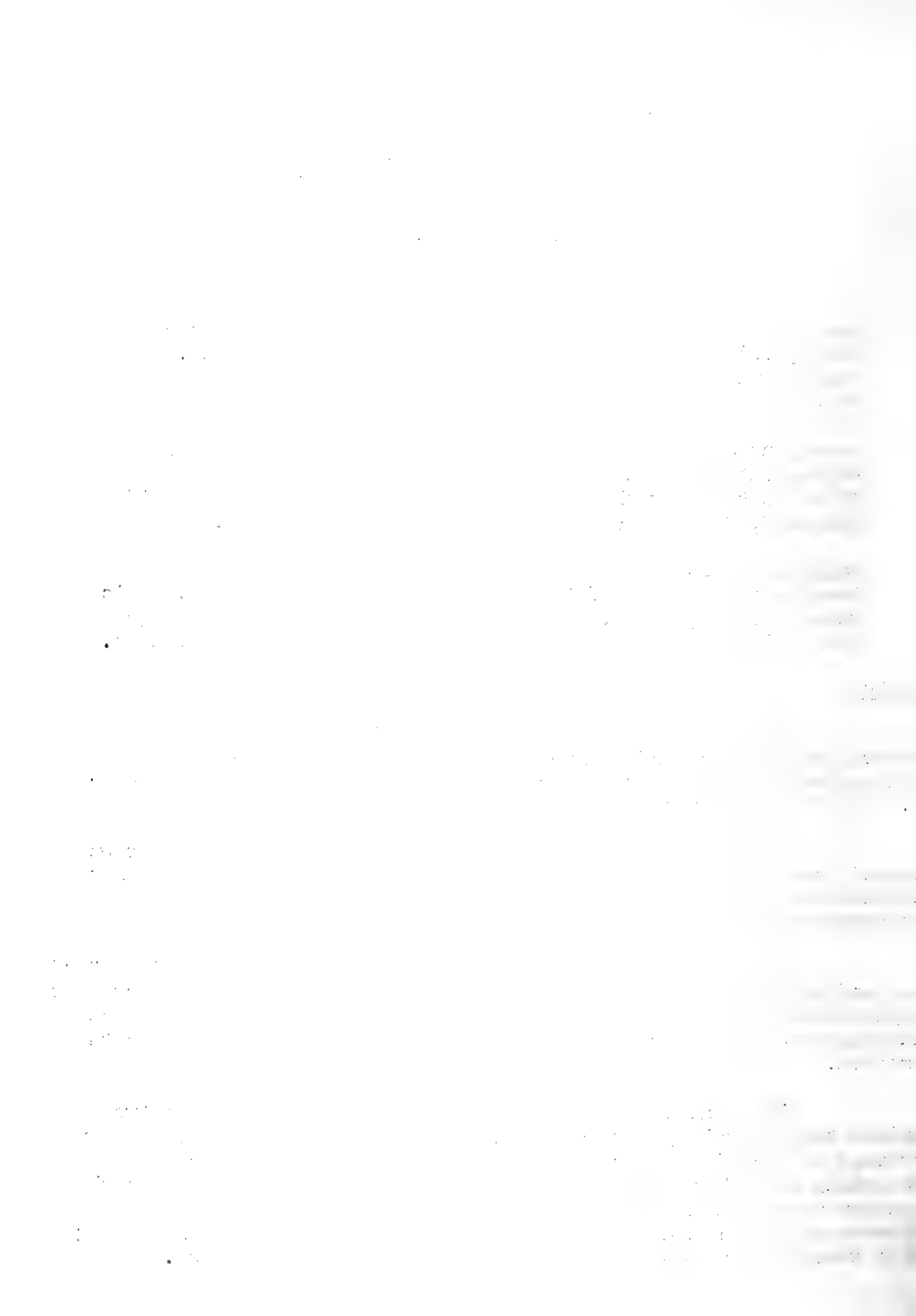
Method

During late June and early July of 1966, a moose tagging program was planned and carried out in the Geraldton District. A helicopter was used in the method described in Information Bulletin F.W. II-I issued August 2, 1963.

The helicopters used were both Bell machines. One was on rental from Dominion Helicopters Limited of Toronto while the other machine was on a short rental from Bordercities Helicopters and Construction Limited, of Fort Willian, Ontario.

Tagging was carried out on eleven days starting on June 23rd and ending on July 5th. Twenty seven hours and thirty five minutes of flying time was used in searching for and tagging moose. There was an additional two hours and twenty-five minutes of ferry time on the project.

This year there were nine bulls, seventeen cows and two calves tagged, making a total of twenty-eight animals. This gave an average of only 1.03 moose tagged per hour. However, during the searching an additional seventy-nine moose were seen, but due to the heavier weight of three men in the helicopter it was not possible to manoeuver them into a position for tagging. During the 1965 tagging only twenty-three additional moose were seen, but not tagged.





The tags used this year were the same size and shape as are used for ear-tagging cattle. They were used for the first time in 1965 and appear to be the best suited for an animal that is travelling through brush its entire life.

The tags were placed as usual on the bottom edge of the ear and on the lower half of the length of the ear.

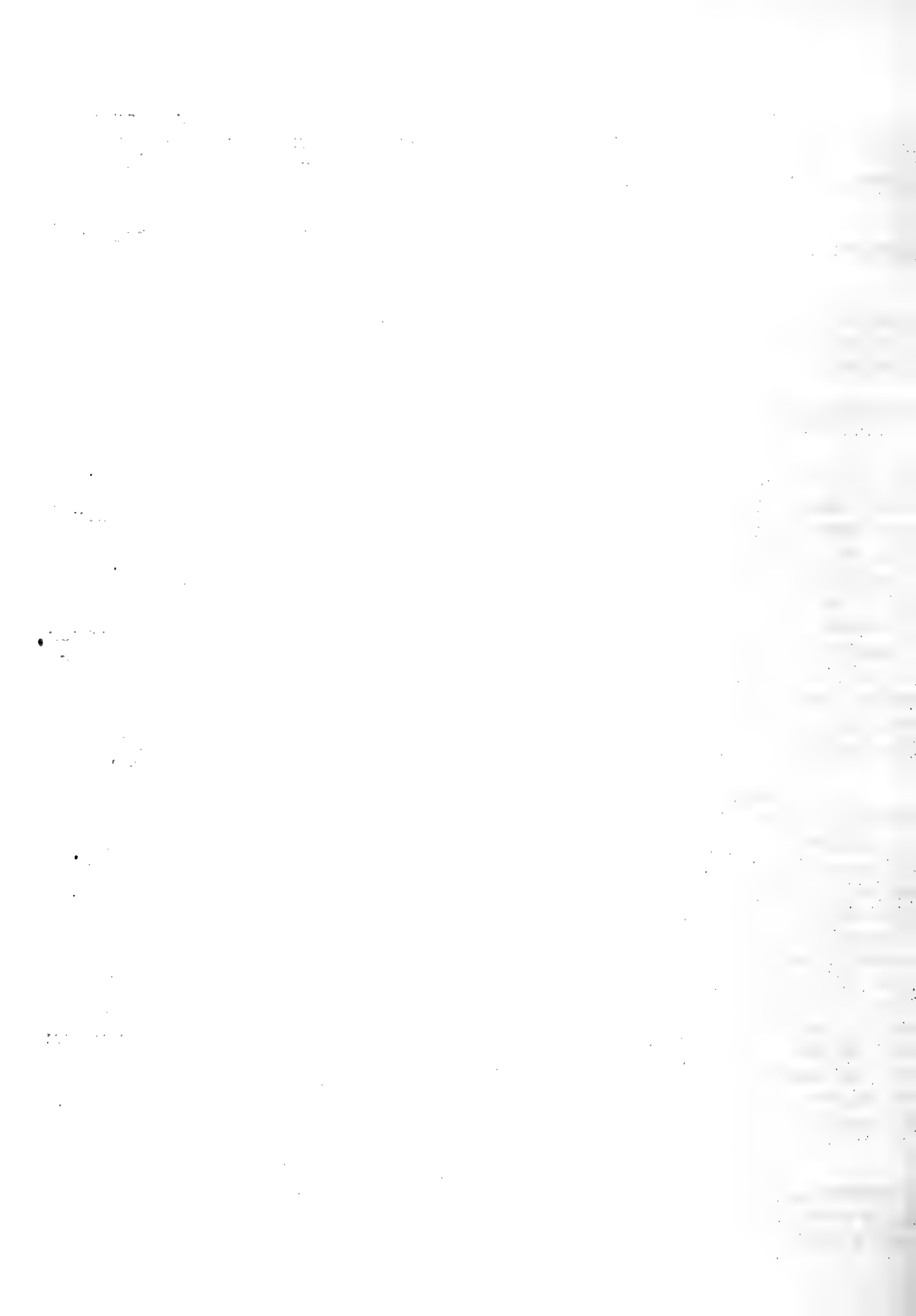
This year Conservation Officer William Cook of Nakina carried out the tagging from June 30th to the end of the program. His observations on behaviour of moose while being tagged are included in this report.

#### Observations made while tagging moose during 1966

The greater experience of the Dominion Helicopters pilot, Mr. Ed Porco, especially on moose tagging, was a definite advantage this year. With the necessity of carrying a third man (photographer) and two cameras mounted on outside booms, it increased the load of the helicopter by more than two hundred pounds. This, of course, meant that moose in the smaller waters and moose close to shore must be left because the performance of the helicopter is greatly reduced. It was evident that the pilot of the Bordercities helicopter, inexperienced in moose tagging, was reluctant to bring his helicopter close to the moose at any time. Even when the moose was caught in safe, deep water a great deal more time was used to accomplish the tagging operation. This certainly increases the hazard of tiring the animal. All moose, however, were noted to make shore safely.

The first moose was tagged on June 24th this year, it formed a group of three bulls found on an evening flight north of Geraldton. A large fire had gone through this area in June of 1965, leaving only small patches of timber around some of the low swampy areas. The ground is already becoming covered with many small weeds and plants, most of which are less than two feet in height. Even though this appears to be poor moose habitat several moose were noted throughout the area. They were probably ranging close to the lakes for the abundant aquatic foods that were unharmed in the fire. A cow and her small calf were spotted in one quite small wet marsh inside the burn. There was only a thin ring of trees surrounding the marsh. The two animals were found lying down in the open grass on the sunny side when first spotted, and were noted on another two occasions in the same marsh. It has become more evident that wind is probably the greatest factor in finding the moose in water.

This year twenty-two moose were tagged when the wind was classed as "light" or "nil". June 28, 29 and 30 were days of rather high wind, being 9, 8 and 11 miles per hour respectively. The sun was strong with only scattered cloud putting the temperature close to



80° F. On these three days sixteen moose were seen along the shorelines or in very small sheltered creeks. None of these animals were tagged. As soon as the helicopter was heard the moose moved into the bush, and would not enter water any deeper than approximately two feet.

Table III included at the end of this report attempts to show the relationship between the strength of the wind and the ability to tag moose. Wind strengths were recorded from weather records maintained at Kenogamisis Air Base, Division 17, Geraldton.

As in past years, many moose were seen in the Eldee Lake marsh area just south of Kenogamisis Air Base. On July 5th a cow and calf was noted at the bottom end of Eldee Lake. The calf was tagged first while the cow escaped. However, the noise of the machine ran four adult moose off a small island nearby. They had not even been seen as the helicopter was approaching. Two of these animals were also tagged before they reached shore.

The area to the west and north-west of Geraldton showed a good number of moose. Fourteen animals or 50% of moose tagged were taken in this area. This is working into the eastern boundary of the now abolished Nipigon-Onaman Crown Game Preserve.

Eleven, or 39% of the moose tagged this year were tagged within the boundary of the abolished preserve area. Very little success was obtained on morning flights this year, with only three moose being tagged before 9:30 a.m. Considerable flying was done around mid-day in an attempt to tag moose when there was plenty of light for the photographers. The ten moose tagged during mid-day were scattered from 10:30 a.m. to 2:30 p.m.

By far the best tagging was obtained between 6:30 p.m. and 8:00 p.m., with thirteen moose being tagged within this evening period, representing 46.4% of moose tagged in 1966. Why so very few moose were seen during early morning flights remains a mystery. During the 1964 tagging program slightly more than one-third of the moose were tagged before 7:00 a.m.

Tables I and II of this report records the number of moose tagged and the number seen but not tagged per day respectively. Table IV contains data on each moose tagged during 1966. A map showing the exact location where each animal was tagged is available for inspection in the Fish & Wildlife Library at Maple.

### Acknowledgements

I would like to thank the pilots of the helicopters, Ed Porco and Oscar Sideen, Don Butler, helicopter mechanic, Conservation Officer William Cook, and all others involved with the 1966 tagging operation for their continued support and willingness, under some trying conditions.

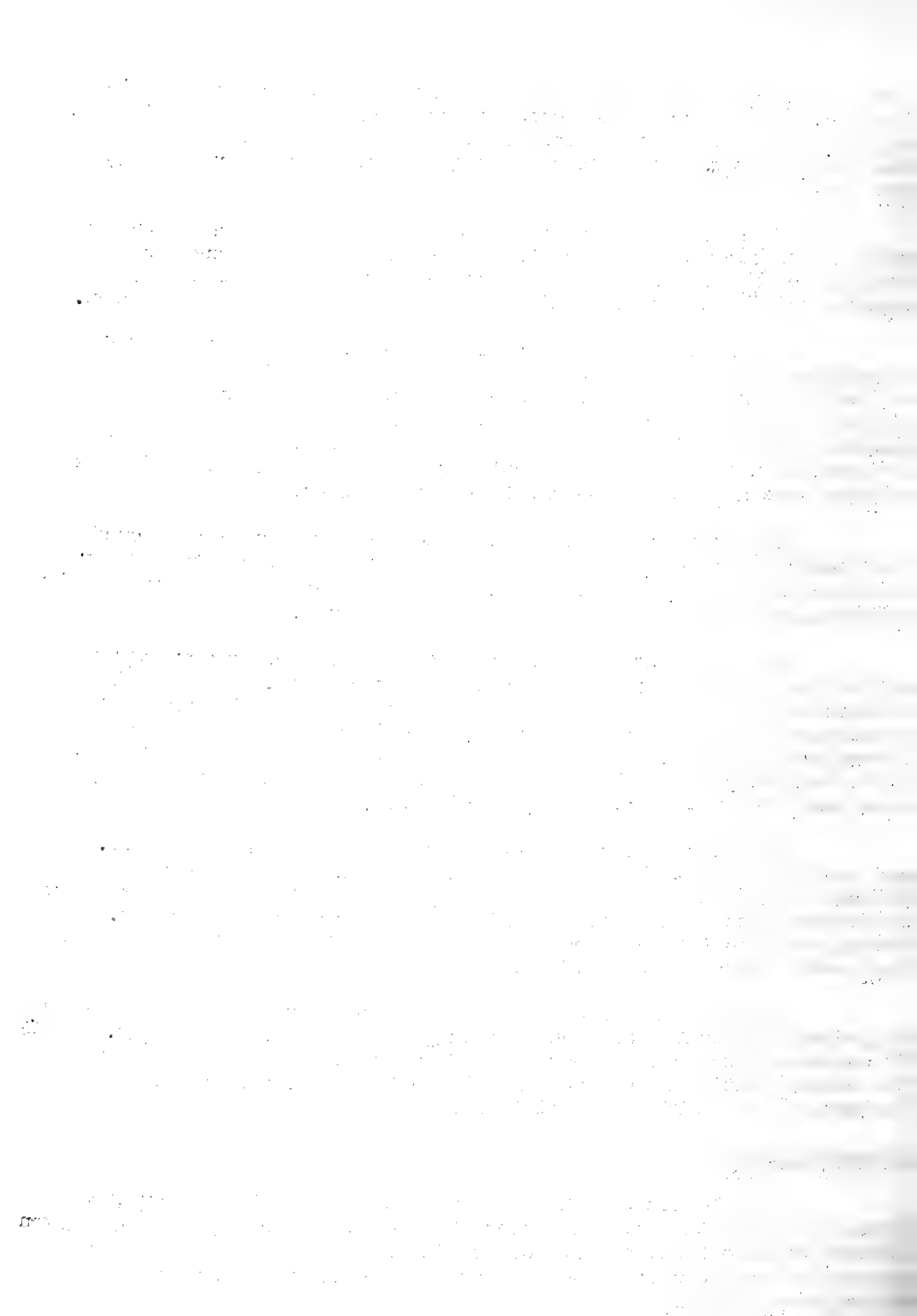


TABLE I

Moose tagged per day

| Date          | Bull | Cow | Calf | TOTAL |
|---------------|------|-----|------|-------|
| June 24       | 3    | -   | -    | 3     |
| 27            | 1    | 4   | -    | 5     |
| July 3        | -    | 2   | -    | 2     |
| 4             | 2    | 5   | 1    | 8     |
| 5             | 3    | 6   | 1    | 10    |
| <b>TOTALS</b> | 9    | 17  | 2    | 28    |

TABLE II

Moose Seen but not Tagged per Day

| Date          | Bull | Cow | Calf | Unknown | TOTAL |
|---------------|------|-----|------|---------|-------|
| June 23       | -    | -   | -    | 2       | 2     |
| 24            | -    | -   | -    | 6       | 6     |
| 25            | -    | 1   | 1    | 1       | 3     |
| 27            | 4    | 3   | 3    | 2       | 12    |
| 28            | 1    | -   | -    | 3       | 4     |
| 29            | 1    | -   | -    | -       | 1     |
| 30            | 2    | 7   | 1    | 1       | 11    |
| July 1        | 4    | 2   | 1    | 1       | 8     |
| 3             | 3    | 3   | 2    | 1       | 9     |
| 4             | 5    | 7   | 6    | -       | 18    |
| 5             | 3    | 2   | -    | -       | 5     |
| <b>TOTALS</b> | 23   | 25  | 14   | 17      | 79    |

TABLE III

Wind velocity and air temperature during tagging period

| Date    | TOTAL moose seen | Number tagged | Wind M.P.H. | Air Temperature |
|---------|------------------|---------------|-------------|-----------------|
| June 23 | 2                | -             | 11          | 81°             |
| 24      | 9                | 3             | 8           | 80°             |
| 25      | 3                | -             | 9           | 80°             |
| 27      | 17               | 5             | 1           | 74°             |
| 28      | 4                | -             | 9           | 76°             |
| 29      | 1                | -             | 8           | 74°             |
| 30      | 11               | -             | 11          | 80°             |
| July 1  | 8                | -*            | 2           | 85°             |
| 3       | 11               | 2             | 17          | 69°             |
| 5       | 17               | 10            | 3-5         | 70°             |
| 4       | 26               | 8             | 2           | 75°             |

\* Pilot's first attempt at moose tagging

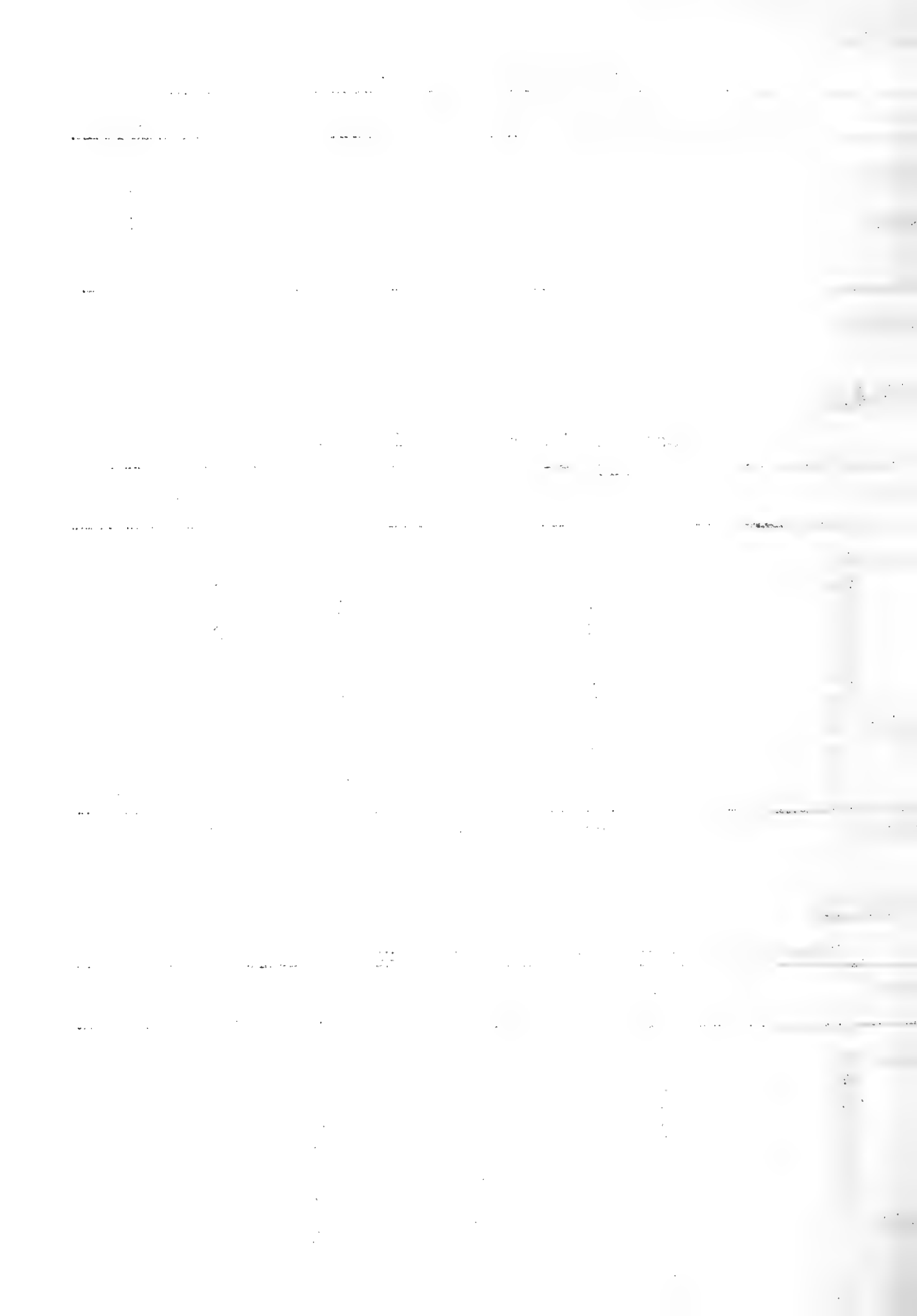


TABLE IV

Table showing moose (Alces alces) tagged in the Geraldton District with the use of a helicopter - 1966

| Tag No. | Location where tagged          | Sex | Age   | Ear    | Date Tagged | Time  | Remarks               |
|---------|--------------------------------|-----|-------|--------|-------------|-------|-----------------------|
|         |                                |     |       | Tagged |             |       |                       |
| M-20    | Lat: 49°55'35" Long: 86°47'20" | M   | Adult | Right  | June 24/66  | 18:58 | 10" spade antlers     |
| M-21    | Lat: 49°57'10" Long: 86°59'30" | M   | Adult | Right  | June 24/66  | 19:17 | Fairly lge. antlers   |
| M-22    | North end Bliss Lake           | M   | Adult | Right  | June 24/66  | 19:40 | -                     |
| M-23    | Northeast end Pussy Lake       | F   | Adult | Right  | June 27/66  | 06:50 | Small cow             |
| M-24    | Bay of Finlayson Creek         | F   | Yrlg. | Right  | June 27/66  | 07:18 | With another yrlg.    |
| M-25    | North end of Pussy Lake        | F   | Adult | Right  | June 27/66  | 13:17 | -                     |
| M-26    | South end of Marline Lake      | M   | Yrlg. | Right  | June 27/66  | 14:15 | Spike antlers 5" long |
| M-27    | Lat: 49°44'25" Long. 87°19'00" | F   | Adult | Right  | June 27/66  | 14:22 | Eating water lilies   |
| M-29    | Southwest end of Skerret Lake  | F   | Adult | Right  | July 3/66   | 17:55 | -                     |
| M-30    | North end McCluskey Lake       | F   | Adult | Right  | July 3/66   | 18:20 | - shallow             |
| M-31    | Lat: 49°38'30" Long: 86°50'25" | -   | Calf  | Right  | July 4/66   | 09:20 | With cow in pond      |
| M-32    | East side Eldee Lake           | M   | Adult | Right  | July 4/66   | 10:40 | -                     |
| M-33    | East side Eldee Lake           | M   | Adult | Right  | July 4/66   | 10:45 | -                     |
| M-34    | Lat: 49°57'20" Long: 87°00'00" | F   | Adult | Right  | July 4/66   | 11:45 | -                     |
| M-35    | Lat: 50°01'20" Long: 87°15'15" | F   | Adult | Right  | July 4/66   | 12:10 | -                     |
| M-36    | North end of Lobo Lake         | F   | Adult | Right  | July 4/66   | 13:15 | -                     |
| M-37    | Southeast side Eldee Lake      | F   | Adult | Right  | July 4/66   | 14:30 | -                     |
| M-38    | Pothole above McKelvie Lake    | F   | Adult | Right  | July 4/66   | 14:35 | -                     |
| M-40    | Lat: 50°02'15" Long: 87°10'30" | F   | Adult | Right  | July 5/66   | 18:35 | -                     |
| M-42    | Lat: 50°02'04" Long: 87°10'55" | F   | Adult | Right  | July 5/66   | 18:40 | -                     |
| M-43    | Lat: 50°01'00" Long: 87°16'25" | M   | Adult | Right  | July 5/66   | 18:50 | -                     |
| M-44    | South end Carol Lake           | F   | Adult | Right  | July 5/66   | 19:00 | -                     |
| M-45    | East side Clarinet Lake        | F   | Adult | Right  | July 5/66   | 19:05 | -                     |
| M-46    | Lat: 49°51'45" Long: 87°22'20" | F   | Adult | Right  | July 5/66   | 19:20 | -                     |
| M-47    | Lat: 49°50'50" Long: 87°23'30" | M   | Adult | Right  | July 5/66   | 19:25 | -                     |
| M-49    | Lat: 49°48'30" Long: 87°27'25" | M   | Adult | Right  | July 5/66   | 19:30 | -                     |
| M-50    | East side Marline Lake         | F   | Adult | Right  | July 5/66   | 19:45 | -                     |
| M-51    | West side Marline Lake         | -   | Calf  | Right  | July 5/66   | 19:46 | -                     |

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that this is crucial for ensuring the integrity of the financial statements and for providing a clear audit trail. The text notes that any discrepancies or errors in the records can lead to significant complications during an audit and may result in the disallowance of certain expenses.

2. The second part of the document outlines the specific procedures for recording transactions. It details the requirements for receipts, invoices, and other supporting documents. It states that all receipts must be properly dated, itemized, and signed by the individual receiving the goods or services. Additionally, it mentions that invoices should be clearly marked and filed in a systematic manner to facilitate easy access and verification.

3. The third part of the document addresses the issue of expense reporting. It explains that employees are required to submit a detailed report of their expenses at the end of each month. This report should include a breakdown of all expenses, categorized by type (e.g., travel, meals, entertainment). The text also notes that employees must retain all original receipts and invoices for a minimum of three years to support their expense reports.

4. The fourth part of the document discusses the consequences of non-compliance with the reporting requirements. It states that failure to provide accurate and complete expense reports can result in the denial of reimbursement for those expenses. Furthermore, it mentions that repeated instances of non-compliance may lead to disciplinary action, including suspension or termination of employment.

5. The fifth and final part of the document provides a summary of the key points and reiterates the importance of adherence to the reporting procedures. It encourages employees to take the time to properly document their expenses and to seek assistance if they have any questions or concerns. The text concludes by stating that the goal is to ensure a fair and equitable process for all employees while maintaining the highest standards of financial integrity.



DEER YARD MAINTENANCE IN THE  
PARRY SOUND FOREST DISTRICT

1962-66

by  
John Macfie.

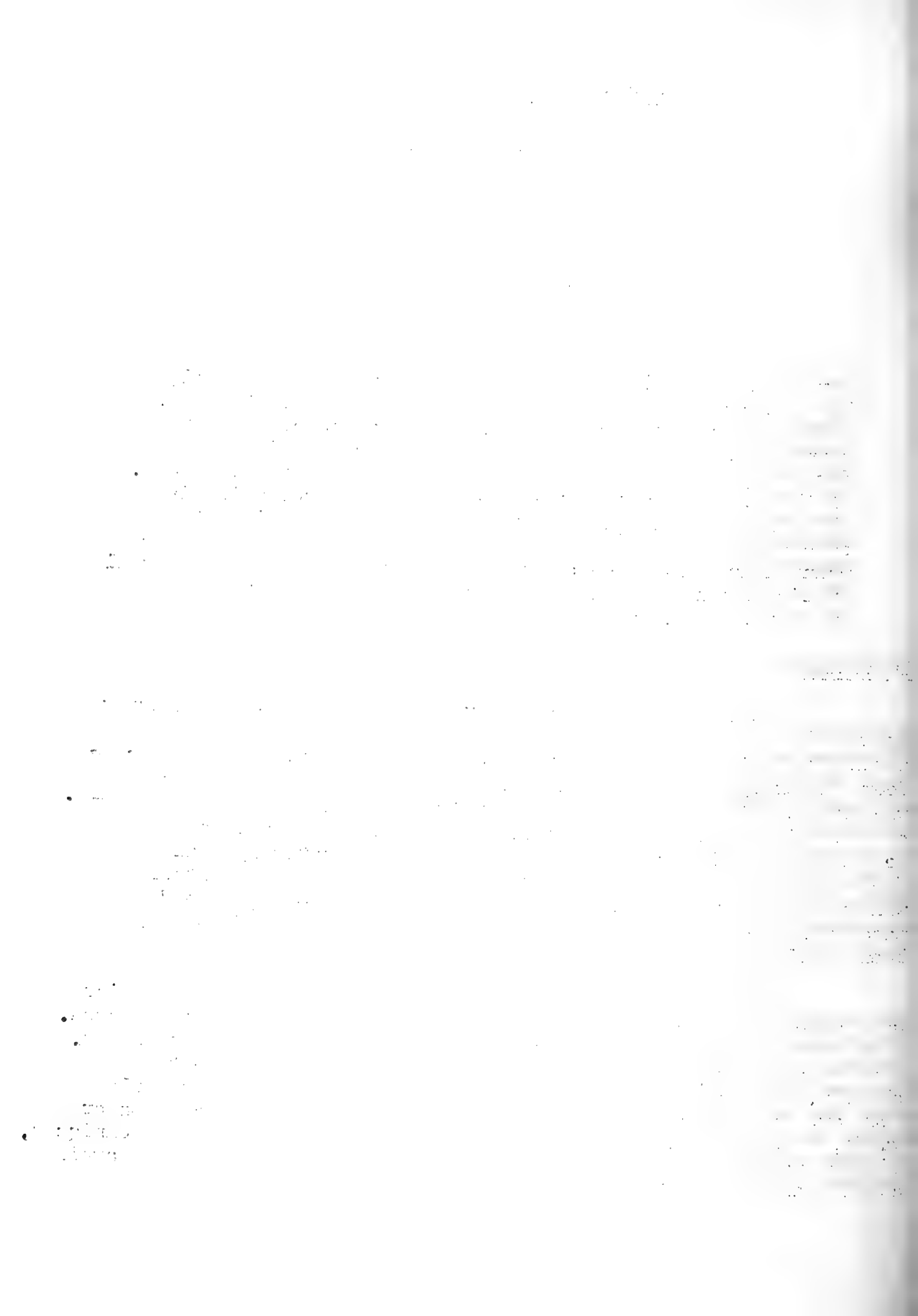
Abstract

During the past four years deer yard management techniques have been applied to several Parry Sound District yards. These are in three categories: preservation of shelter, commercial cutting oriented to production of winter food for deer, and non-commercial cutting to produce deer food. Of these, it is considered that shelter preservation is the most urgently needed at present. Commercial cutting encouraged by special inducements offers the best hope for maintaining food productivity in yards, while non-commercial cutting financed by stand improvement funds is practicable in emergency situations.

Introduction

Heavy winter losses of deer in the Parry Sound District during the severe winters of 1958-1959 and 1959-1960 focussed attention on the relationship between distribution and condition of deer wintering areas, or "yards", and abundance of deer. Those winters of extreme snow depth demonstrated vividly that the fortunes of the white-tailed deer in this part of its range are largely governed by conditions and events in the comparatively small part (less than 10%) of the District's forest that affords suitable winter shelter for deer. In the years that followed, some deer management techniques that the Department of Lands and Forests had been developing have been put into practice.

Between February 1959 and March 1962 the entire District was mapped for deer yards. Ground assessment of the yards followed. This phase, which will continue indefinitely, is in two categories, general and systematic. The former is an ocular assessment of shelter, food and winter mortality, usually done in winter while deer are yarded. The latter, applied to only a few selected major yards, is an annual measurement, using approved statistical techniques, of deer population and mortality, and in some cases, of browse availability and utilization by deer.



The third function consists of yard maintenance, the subject of this report.

(Steps that have been taken to maintain or improve deer yards are in Deer Yard Maintenance Techniques (three categories:))

1. Shelter preservation
2. Commercial cutting oriented to production of deer food
3. Non-commercial cutting to produce deer food.

### Shelter Preservation

Ground investigations have shown that nearly all Parry Sound deer yards are located in timber stands in which hemlock is the principle shelter species. It appears that hemlock is vital to the existence of deer in this region. Over half a century of hemlock logging has destroyed most of the original stands, few of which are being replaced by regeneration.

Presumably the District's carrying capacity for deer has also declined drastically in this period, and continued cutting threatens to reduce it further. Little can be done to check cutting of hemlock on privately-owned land, but on Crown Land, the Department can control cutting. The District Timber Branch recognizes that hemlock must now be regarded primarily as deer shelter, and secondarily as timber, and in 1963 it began to implement some special cutting restrictions recommended by the Fish and Wildlife Branch.

Such restrictions are not difficult to apply to operations authorized by District Cutting Licences, by inserting clauses prohibiting the cutting of hemlock, raising the minimum diameter limit, marking trees to be cut or outright refusal of the application. This power is being used fairly widely in the District.

Most logging on Crown Land is, however, conducted under Crown Timber Licences, long term agreements often covering large tracts of land, to which it is more difficult to attach special deer shelter preservation clauses. Only a little progress has been made in this area.

One licence agreed to preserve selected hemlock stands that he would otherwise have logged, without having it made a condition of licence. A total of about 40 acres of hemlock, in patches measuring roughly an acre in size, were marked using stand improvement funds (SIM Pjt. 495-63) at a cost of \$4.16 per acre.

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Deer shelter clauses, either raising the minimum diameter limit on hemlock, or calling for marking of all hemlock to be cut, have been written into a few recently issued or renewal licences. Marking is the better method of control, and ideally, a hemlock marking clause should appear in all Crown Timber Licences which encompass deer yards.

#### Commercial Cutting Oriented to Production of Deer Food

Few deer yards are being logged intensively enough under normal operating procedures, to maintain an adequate growth of deer food. A start has been made at attracting logging operators to deer yards, or increasing the amount of material they remove, by offering special inducements.

In such cases potential timber values in yards were assessed by the Fish and Wildlife Branch, and the Timber Branch located an operator and drew up an acceptable operating agreement.

#### Bethune Township Yard #1 (SIM project 364-62, 63, 64 and 65)

Once a major wintering area, this yard now harbours very few deer. New growth that followed logging in the late 1940's is now above the reach of deer. Intensive logging of hardwood was recommended as a means of stimulating browse growth to build up the herd. An operator who makes railway ties is removing all merchantable hardwoods (minimum diameter limits have been waived) from designated strips, at the usual stumpage rates. Cutting commenced in the 1962-63 season, and the fourth consecutive annual cut has now been completed. Yield of merchantable products per acre (7,000 f.b.m. in 1965-66) is proving to be very substantial.

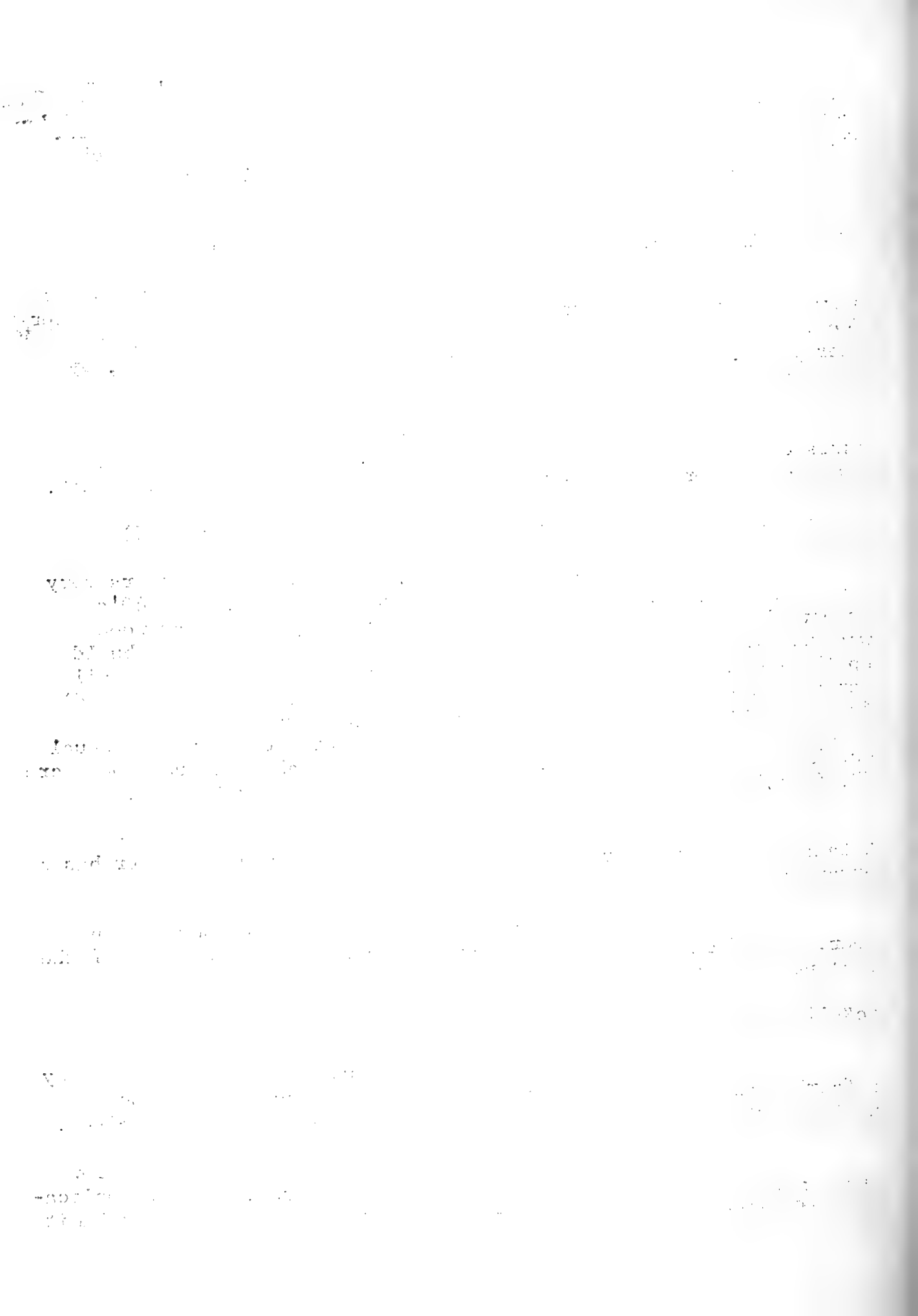
The net area treated (more or less clear-cut) to date totals 101 acres. Strip marking costs are absorbed by Timber basic organization, so no SIM funds are being expended.

Treatment has not yet caused a noticeable increase in deer. A deficiency of shelter may have been the prime cause of the decline in this herd.

#### McKellar Township Yard #3

This three square mile yard is subject to overbrowsing by a fairly large deer herd. Two logging operations were conducted at the easterly and westerly extremities in the winter of 1965-66.

On the easterly site intensive cutting of small and low grade maple adjacent to hemlock groves was desired, and the application of salvage rates and the removal of the minimum diameter limit



for this species were used to attract an operator. Trees to be cut were marked. A total of 73,500 F.B.M. of merchantable hardwood logs were removed.

In the second operation the lower diameter limits were waived on all hardwoods, but normal stumpage rates applied. The operator cut 14,153 F.B.M. of logs, mostly yellow birch.

#### Shawanaga Township Yard #1

Overbrowsing in this large (more than 10 square miles) yard is severe, and heavy winter losses of deer have occurred in recent years. To alleviate the situation in the west sector of the yard, arrangements were made for a logging operation in the winter of 1965-66.

A stand of maple and birch adjacent to hemlock shelter was selected, and all trees to be cut were marked. The minimum diameter limit on maple was waived, to intensify the cut. Regular District Cutting Licence rates were charged. About 50 hemlock trees that were considered surplus were marked and removed. In addition to the saw and veneer log operation, the operator cut a 4 or 5 acre stand of young hard and red maple for pulpwood. Fifty-seven cords of pulp wood and 56,969 F.B.M. of logs were removed.

The beneficial effect of this cut, especially the pulp operation (a non-commercial treatment of comparable scope would require about \$300.00 of stand improvement funds) is expected to be considerable.

#### Non-Commercial Cutting to Stimulate Growth of Deer Food

During the past four years much effort and money has been spent in the District clear-cutting low grade hardwoods adjacent to deer shelter, to stimulate growth of winter food for deer. Funds were provided through the Silvicultural Section of the Timber Branch. With one exception where cut material was utilized for fuelwood for use in a Provincial Park, no revenue was recovered on these SIM projects. The projects are summarized in Table I.

A standard method of treatment was used throughout the District. Hard and red maple (preferred deer foods) stands of low quality bordering hemlock groves were selected for patch or continuous strip cutting.

Strips were 1 to 1-1/2 chains wide, and patches 1 to 2 chains square. In the case of Carling Yard #2, a continuous strip was cut the first year, and systematically arranged alternate patches thereafter. In all other yards, patches were selected randomly, using potential productivity as a guide.

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All hardwood trees within outlined plots, with the exception of occasional potentially valuable stems, were felled or killed by girdling. Cluttering of plots was avoided by felling the outer belt of trees outward, and girdling those near plot centres.

Operations were conducted in winter months, employing teams of cutters consisting of one chainsaw-man, and one axe-man. Overall planning and supervision was by Fish and Wildlife personnel, while casual employees or regular staff provided on the job supervision.

Good to excellent growth of browse has followed cutting on all the sites treated prior to 1965-66. Best results occurred in red maple, a preferred deer food that has coppiced profusely. There is no question that the technique quickly creates deer food in quantity.

All treatments in the Loring area (see map) were applied to heavily populated, over-browsed yards. New growth is being nearly fully utilized by deer, causing the desired re-branching of stems, that should permit the beneficial effect to persist for the expected seven to ten years. The large Loring yards are believed to harbour many deer that summer in the more westerly parts of the District where winter cover has deteriorated. The over-crowding of these yards, coupled with the fact that most are on Crown Land, creates both a need and the opportunity for browse improvement cutting.

In the Carling yard, much browse created by the earliest cutting is already "escaping" beyond the reach of deer, in spite of intensive utilization. Here we have produced food in greater quantity than the deer herd can consume. The Carling project was designed as an experimental as well as a management program. After making a browse and population survey in 1962 (Macfie, 1962) a ten-year cutting program encompassing the entire 2,000 acre yard, to be concluded with a re-survey of browse and population, was devised. It has now been concluded that a one or two year pause in cutting should be called to encourage fuller utilization of the food that the four annual treatments have produced.

The Mowat and Blair Township treatments were applied to some scattered remnants of what was once a broad wintering area for deer, similar to the situation that still exists around Loring. Deer have declined in recent decades, and since the 1959 "crash" few have wintered there. The object of treatment was to aid in building up the herds by improving browse. So far, no noticeable increase has occurred, and it appears that much of the food it produced will be wasted. It is likely that deteriorating cover is the basic management problem in that region.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

In the second section, the author details the various methods used to collect and analyze the data. This includes both primary and secondary research techniques. The primary research involved direct observation and interviews with key stakeholders, while secondary research was conducted through a review of existing literature and industry reports.

The third section presents the findings of the study. It highlights several key trends and patterns observed in the data. For example, there was a significant increase in the use of digital tools, which has led to improved efficiency and accuracy in data collection. Additionally, the study found that communication and collaboration are essential for the success of any data-driven project.

Finally, the document concludes with a series of recommendations for future research and practice. It suggests that further exploration into the integration of artificial intelligence and machine learning into data analysis would be beneficial. It also recommends that organizations should invest in training and development to ensure their workforce is equipped with the necessary skills to handle complex data sets.

## Discussion

In the four or five years since the implementation of active deer habitat management, considerable money and effort has been devoted to increasing the food supply in certain yards by non-commercial cutting to admit sunlight. A large proportion of this work was done in the Loring area, and there it undoubtedly raised carrying capacity and contributed to an increase in deer. Whether the technique is economically sound depends on the size of the increase, and its worth to hunters, neither of which factors have been measured. It may be said with safety, however, that the extra deer are rather costly. The best course might be to restrict this treatment to the most heavily populated and severely over-browsed yards, where full utilization of the product is assured. Ideally, non-commercial cutting projects should be reserved for winters of deep snow-when food in the tops of felled trees may contribute as much to the welfare of the herd as does the new growth that follows.

Commercial cutting is less productive of browse, but it requires no stand improvement funds and produces revenue for the Crown and the local economy. By making an effort to locate merchantable timber in deer yards, and offering special inducements to operators, three deer yards have been improved at little or no cost. If markets for low grade hardwoods continue to expand, the opportunity to pursue this approach will grow. The best prospect for keeping deer yards productive, on both Crown and privately-owned land, lies here.

In the broader, long-term deer management picture, shelter appears to pose a more serious problem than food. The productive potential of the District has declined drastically in recent decades as hemlock stands were destroyed by logging and replaced by maple. Ironically, it was this very process which created the food that made possible the high deer populations of earlier years. Already, large sections of the District have no deer yards worthy of the name because suitable hemlock stands no longer exist. Some of the remaining yards continue to erode away under logging, and only in a few places, principally in the southernmost quarter of the District, is hemlock regenerating satisfactorily.

Among the things needing to be done to maintain, and perhaps increase, the carrying capacity of Parry Sound District deer yards, the most urgent is preservation of existing winter shelter.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

In addition, the document outlines the procedures for handling discrepancies. If there is a difference between the recorded amount and the actual amount received or paid, it is crucial to investigate the cause immediately. This could be due to a clerical error, a missing receipt, or a fraudulent transaction.

The document also provides guidelines for the storage and security of financial records. All records should be stored in a secure location, protected from fire, theft, and unauthorized access. Regular backups should be performed to prevent data loss.

Furthermore, the document stresses the need for regular audits. These audits help to identify any irregularities or potential fraud early on. They also provide an opportunity to review the internal controls and make necessary adjustments to improve the accuracy and reliability of the financial reporting process.

Finally, the document concludes by stating that maintaining accurate financial records is not only a legal requirement but also a key to the success of any business. It provides a clear picture of the company's financial health and enables informed decision-making by management.

The second part of the document details the specific steps for recording transactions. It includes instructions on how to properly format entries, how to handle complex transactions, and how to reconcile accounts.

For example, when recording a sale on credit, the document specifies that the entry should include the date of the sale, the amount, and the name of the customer. It also provides a sample journal entry to illustrate the correct format.

Similarly, for purchases on credit, the document explains how to record the liability and the corresponding expense. It also covers the process of recording cash receipts and payments, ensuring that all amounts are correctly transcribed and categorized.

The document also addresses the issue of rounding and the treatment of small amounts. It provides clear instructions on when to round and how to handle these amounts to ensure consistency in the financial statements.

Overall, the document serves as a comprehensive guide for anyone responsible for managing the financial records of a business. It provides the necessary knowledge and tools to ensure that all transactions are recorded accurately and in compliance with applicable laws and regulations.

Table I

## Summary of Stand Improvement Projects

Designed to Stimulate Production of Deer Food

1962-1966

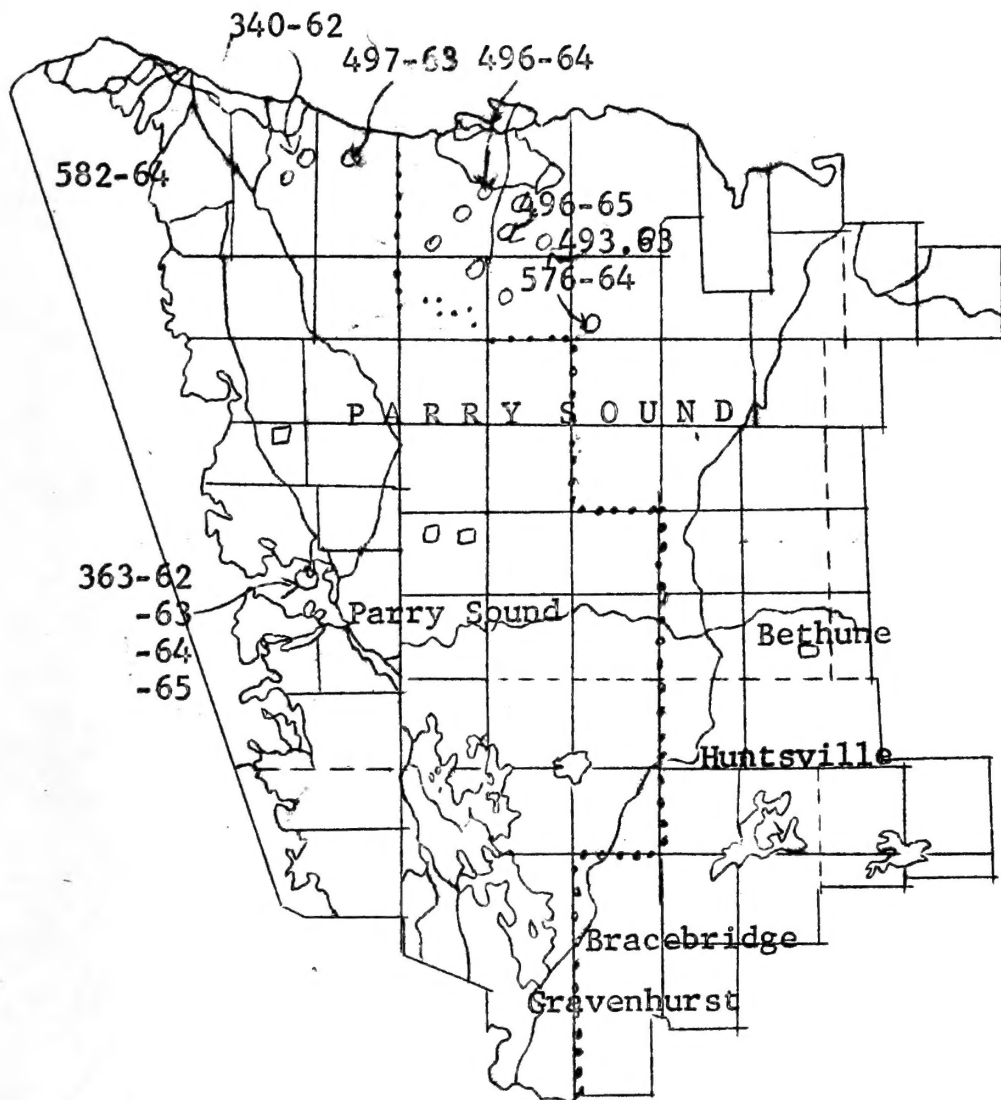
| Deer Yard  | Project | Time of Cutting | Acreage<br>Clear Cut | Total Cost  | Cost/<br>net acre |
|--|---------|-----------------|----------------------|-------------|-------------------|
| Carling #2   | 363-62  | Nov-Dec./62     | 8.5                  | \$3,017.89  | 335.05*           |
|  | 363-63  | Jan/64          | 4.5                  | 673.30      | 149.62            |
|  | 363-64  | Dec/64          | 8.4                  | 1,027.46    | 122.32            |
|  | 363-65  | Dec-Jan/65-66   | 4.5                  | 538.91      | 119.75            |
| Total for Yard   |         |                 | 25.9                 | \$5,257.56  | \$202.99av        |
| *Costs excessively high because all material cut was skidded for use as park fuelwood. |         |                 |                      |             |                   |
| Mowat #2   | 340-62  | Feb/63          | 6.7                  | \$441.94    | \$65.96           |
| Mowat #6   | 582-64  | Feb/65          | 13.5                 | \$925.41    | \$68.55           |
| Blair #1   | 497.63  | Feb/64          | 23.4                 | \$1,080.52  | \$46.18           |
| Hardy #1<br>(Includes<br>parts of Mills<br>and McConkey<br>Twps.)                      | 496.63  | Jan-Feb/64      | 32.27                | \$1,731.08  | \$53.64           |
|  | 496.64  | Dec-Jan/64-65   | 11.69                | \$1,046.38  | \$89.51           |
|  | 496.65  | Jan-Feb/66      | 54.83                | \$1,952.67  | \$35.61           |
|  | 575.65  | Feb/66          | 25.48                | \$ 848.27   | \$33.29           |
| Total for yard   |         |                 | 124.27               | \$5,578.40  | \$44.88av         |
| Pringle #1   | 496-63  | Feb/64          | 3.5                  | \$234.00    | \$66.86           |
| Wilson #1  | 574-64  | Dec-Jan/64-65   | 6.66                 | \$368.60    | \$55.34           |
| Mills #1   | 576-64  | Dec-Jan/64-65   | 20.18                | \$1,151.06  | \$57.03           |
| McConkey #3  | 575-64  | Jan/65          | 9.84                 | \$402.99    | \$40.95           |
| Patterson #1   | 669-65  | Jan/66          | 6.19                 | \$482.91    | \$78.01           |
| FOUR year District Total   |         |                 | 240.14               | \$15,923.39 | \$66.30<br>(av.)  |

STATE OF CALIFORNIA  
COUNTY OF SAN DIEGO

| Year | ... | ... | ... | ... | ... | ... | ... | ... | ... |
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| 1997 |     |     |     |     |     |     |     |     |     |
| 1998 |     |     |     |     |     |     |     |     |     |
| 1999 |     |     |     |     |     |     |     |     |     |
| 2000 |     |     |     |     |     |     |     |     |     |
| 2001 |     |     |     |     |     |     |     |     |     |
| 2002 |     |     |     |     |     |     |     |     |     |
| 2003 |     |     |     |     |     |     |     |     |     |
| 2004 |     |     |     |     |     |     |     |     |     |
| 2005 |     |     |     |     |     |     |     |     |     |
| 2006 |     |     |     |     |     |     |     |     |     |
| 2007 |     |     |     |     |     |     |     |     |     |
| 2008 |     |     |     |     |     |     |     |     |     |
| 2009 |     |     |     |     |     |     |     |     |     |
| 2010 |     |     |     |     |     |     |     |     |     |
| 2011 |     |     |     |     |     |     |     |     |     |
| 2012 |     |     |     |     |     |     |     |     |     |
| 2013 |     |     |     |     |     |     |     |     |     |
| 2014 |     |     |     |     |     |     |     |     |     |
| 2015 |     |     |     |     |     |     |     |     |     |
| 2016 |     |     |     |     |     |     |     |     |     |
| 2017 |     |     |     |     |     |     |     |     |     |
| 2018 |     |     |     |     |     |     |     |     |     |
| 2019 |     |     |     |     |     |     |     |     |     |
| 2020 |     |     |     |     |     |     |     |     |     |
| 2021 |     |     |     |     |     |     |     |     |     |
| 2022 |     |     |     |     |     |     |     |     |     |

Total  
Year

## PARRY SOUND DISTRICT



Administrative District Area -  
6,460 sq. Miles.

Less 10% for water 646 sq. Miles

Net area 5,814 sq. Miles.

**CUTTING TO STIMULATE GROWTH OF DEER  
FOOD 1962-66**

Plan showing \_\_\_\_\_

Commercial cutting

Non-commercial cutting



