WATERFOWL HABITAT SURVEY
CANVASBACK GUN CLUB
1969 3

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# WATERFOWL HABITAT SURVEY
# CANVASBACK GUN CLUB
# 1963

## INTRODUCTION

On August 30 and September 3, 1963, a survey of the submergent and emergent vegetation in the Canvasback Club was made as a follow-up to the surveys made in 1960, 1961, and 1962. The survey was conducted for the purpose of: 1) surveying the submergent and emergent aquatics growing in the marsh, and 2) comparing these data with observations of previous years.

The marsh area on the Club is mature. This is due partly to the constant high water levels and partly to the heavy population of carp on the area. The marsh is characterized by an increasing growth of cattail, (Typha sp.), and hardstem bulrush, (Scirpus acutus). The only ponds in the marsh producing good submergent plant growth are Big Arthur, Little Arthur and Johnson Ponds.

The ponds around the edge of the Club--Heward, Sbragia, Golick, and Pappy's Pond--are not in the marsh proper. They have shallow water with hard bottoms, and no carp populations, except for Pappy's which contains a few carp. These areas supply practically all of the food used on the Club by waterfowl.

The personnel of the Bureau of Sport Fisheries and Wildlife who made this year's survey were new to the area. It would be difficult for them to compare carp populations and emergent plant growth of this year with those of past years' observations. So, no comparisons were made.

## PROCEDURE

The methods used on the survey were the same as past years. A canoe and long-handled rake were used in the larger and deeper ponds. The smaller pools around the edge were waded. Plants were identified and density of the vegetation was estimated. The water depth and carp activity were also observed.

The recording procedure was the same as last year. This is known as the Jessen and Lound procedure. This method involves four casts at each station from which the following results are obtained.

| Rake Recovery of Any Kind of Aquatic Plant | Density Rating | Description |
|---|---|---|
| Teeth full in four casts | 5 | Dense |
| Taken in all four casts | 4 | Heavy |
| Taken in three casts | 3 | Medium |
| Taken in two casts | 2 | Scattered |
| Taken in one cast | 1 | Sparse |

With this method, data are easy to analyze and a good description of the plant densities is obtained.

RESULTS

Freeman Lakes Group. This group is composed of Big Freeman, Little Freeman and Short Pond. They were surveyed on August 30 by canoe. The open water area contained very little in the way of plant life, with sparse quantities of Nevada pondweed, (Potamogeton latifolius), sago pondweed, (Potamogeton pectinatus), and coontail, (Ceratophyllum demersum), being found. The borrow pit, connecting with Big Freeman on the northeast, contained substantial quantities of both sago and Nevada pondweed, with a little coontail. These plants had some seeds.

The water in Freeman Lakes had an average depth of 31 inches and was quite turbid.

The vegetation found around the ponds is composed primarily of hardstem bulrush, with some cattail also being present.

Dutch Bill Lakes. This area, comprising Dutch Bill and Little Dutch Bill, was sampled on August 30. No submergent vegetation was found at any of the sample stations.

Quite a little carp activity was observed. The average depth was 36 inches. The water was turbid with an oozy bottom.

The ponds were surrounded by both hardstem bulrush and cattails.

Mallard - Sans Lakes. This group was surveyed on September 3. The lakes surveyed were Big Mallard, Little Mallard, Howell, Bony, and Sans.

The only submergents found were sparse growths of coontail and bladderwort, (Ultricularia sp.).

All of the lakes were characterized by an ooze bottom and turbid water. Carp were observed in all of the ponds. The average water depth was 36 inches.

The emergent vegetation surrounding the lakes was hardstem bulrush and cattail, with hardstem being predominant.

Arthur - Johnson Group. This area is composed of three lakes--Big Arthur, Little Arthur, and Johnson. They were surveyed on September 3.

A good growth of sago pondweed was found on all of the ponds, along with some seeds.

The average water depth was 31 inches, and the water was clear. No carp were observed in any of the ponds.

Big Arthur and Little Arthur were surrounded with cattail mostly and some hardstem bulrush. Johnson Pond was surrounded by hardstem bulrush.

Stewart Pond. This area was waded on September 3. It contained only a few scattered stands of widgeongrass, (Ruppia maritima), and sago pondweed.

A few large carp were observed and the water was fairly clear. The water depth ranged from 6 to 36 inches and averaged about 30 inches.

The pond was surrounded with hardstem bulrush.

Pappy's Pond. This unit is on the northeast corner of the Club near Stewart Pond. It was waded on September 3, and held a heavy stand of sago pondweed and widgeongrass. There was also some Nevada pondweed.

The shoreline was rimmed with saltgrass, spikerush and hardstem bulrush. The average water depth was 14 inches. Some large carp were observed.

Sbragia, Heward and Golick Ponds. These were all dry during the survey and did not receive any water until the middle of September.

It's too bad the ponds didn't receive any water this summer, as they were among the best producers of emergent plants on the Club. They received very little use by waterfowl this fall.

East Side Ponds. The flat area on the east side of the Club and just southeast of the Club Headquarters was flooded, making three small ponds, in August. A dike had been built to help hold the water in the ponds earlier in the summer.

These were shallow and ranged in depth from 6 inches to 30 inches. The water was clear and no submergent growth was found. No carp were observed in the ponds.

The pond shorelines were rimmed with saltgrass and spikerush.

These ponds received medium to heavy use by ducks throughout the fall. A good concentration of coots could be seen there all the time, until they froze over in early December.

SUMMARY

The marsh portion of the Canvasback Club is definitely of a mature nature. As long as present conditions exist it will remain that way. Right now the water in the Freeman Group, Mallard-Sans Group, and Dutch

Bill Lakes is deep and turbid, allowing very little light penetration. Carp are abundant in all of these ponds and increase the turbidity even more. The emergent vegetation, hardstem bulrush and cattail, is growing well and leaving very little room for anything else.

The Arthur-Johnson group of ponds is the only part of the marsh that holds any food value for waterfowl. These ponds all have good growths of sago pondweed. They are fairly shallow, averaging 31 inches in depth. The water is clear and the bottom hard. No carp have been observed. All of these characters exemplify a good producing marsh pond.

If the recommendations that have already been made in past reports are followed, the rest of the marsh ponds could become good producers similar to the Arthur-Johnson group.

APPENDIX

Field data for marsh units and tables summarizing the findings of the study are appended to this report.

Submitted by,

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January 23, 1964

# APPENDIX

Table 1

OCCURRENCE AND DENSITY OF SUBMERGENTS IN THE FREEMAN LAKE GROUP

| Station | Depth | Nevada pondweed | Sago pondweed | Coontail |
|---|---|---|---|---|
| 1 | 38" | 100-2 | | |
| 2 | 32 | 50-3 | 50-3 | |
| 3 | 30 | 50-3 | 50-3 | |
| 4 | 29 | | | |
| 5 | 30 | 100-1 | | |
| 6 | 32 | | | |
| 7 | 31 | | | 100-1 |
| 8 | 31 | | | |
| 9 | 32 | | | 100-1 |
| 10 | 31 | | | |
| 11 | 32 | | | |
| 12 | 31 | | | |
| 13 | 29 | | | 100-1 |
| 14 | 28 | | | |
| 15 | 28 | | | |
| 16 | 26 | | | |
| 17 | 28 | | | 100-1 |
| 18 | 29 | | | |
| 19 | 31 | | | |
| 20 | 32 | 100-1 | | |
| 21 | 34 | | | |
| 22 | 33 | 50-2 | 50-1 | |
| 23 | 32 | | | |
| 24 | 34 | | | |
| 25 | 34 | 100-3 | | |
| 26 | 33 | 100-3 | | |
| 27 | 31 | | | |
| 28 | 23 | 50-4 | 50-3 | |
| 29 | 24 | 50-4 | 40-3 | 10-2 |
| 30 | 20 | 45-3 | 45-4 | 10-2 |

Table 2

OCCURRENCE AND DENSITY OF SUBMERGENTS IN THE DUTCH BILL LAKES

| Station | Depth | |
|---|---|---|
| 1 | 31" | |
| 2 | 34 | |
| 3 | 33 | |
| 4 | 35 | |
| 5 | 36 | |
| 6 | 35 | |
| 7 | 35 | |
| 8 | 34 | |
| 9 | 37 | No plant life in these units |
| 10 | 36 | |
| 11 | 37 | |
| 12 | 38 | |
| 13 | 40 | |
| 14 | 42 | |
| 15 | 38 | |

Table 3

OCCURRENCE AND DENSITY OF SUBMERGENTS IN THE MALLARD-SANS LAKES

| Station | Depth | Coontail | Bladderwort |
|---|---|---|---|
| 1 | 31" | 100-1 | |
| 2 | 30 | | |
| 3 | 34 | | |
| 4 | 36 | | |
| 5 | 35 | | |
| 6 | 38 | | |
| 7 | 36 | | |
| 8 | 38 | 100-1 | |
| 9 | 35 | | 100-1 |
| 10 | 37 | | |
| 11 | 38 | | |
| 12 | 39 | 50-1 | 50-1 |
| 13 | 40 | | |
| 14 | 37 | | 100-1 |
| 15 | 36 | 100-1 | |
| 16 | 35 | 100-1 | |
| 17 | 35 | | |
| 18 | 35 | | |
| 19 | 37 | | |
| 20 | 36 | | |
| 21 | 36 | | |
| 22 | 35 | | |
| 23 | 37 | 100-1 | |
| 24 | 37 | | |
| 25 | 36 | | |

Table 4

OCCURRENCE AND DENSITY OF SUBMERGENTS IN THE ARTHUR-JOHNSON PONDS

| Station | Depth | Sago pondweed |
|---|---|---|
| 1 | 28" | 100-4 |
| 2 | 32 | 100-3 |
| 3 | 31 | 100-4 |
| 4 | 31 | 100-4 |
| 5 | 33 | 100-3 |
| 6 | 32 | 100-4 |
| 7 | 34 | 100-4 |
| 8 | 33 | 100-3 |
| 9 | 34 | 100-3 |
| 10 | 29 | 100-4 |
| 11 | 28 | 100-3 |
| 12 | 26 | 100-2 |
| 13 | 29 | |
| 14 | 29 | 100-4 |
| 15 | 33 | 100-4 |

Table 5

OCCURRENCE OF SUBMERGENTS IN STEWART POND

| | |
|---|---|
| Sago pondweed | 50-2 |
| Widgeongrass | 50-2 |

Table 6

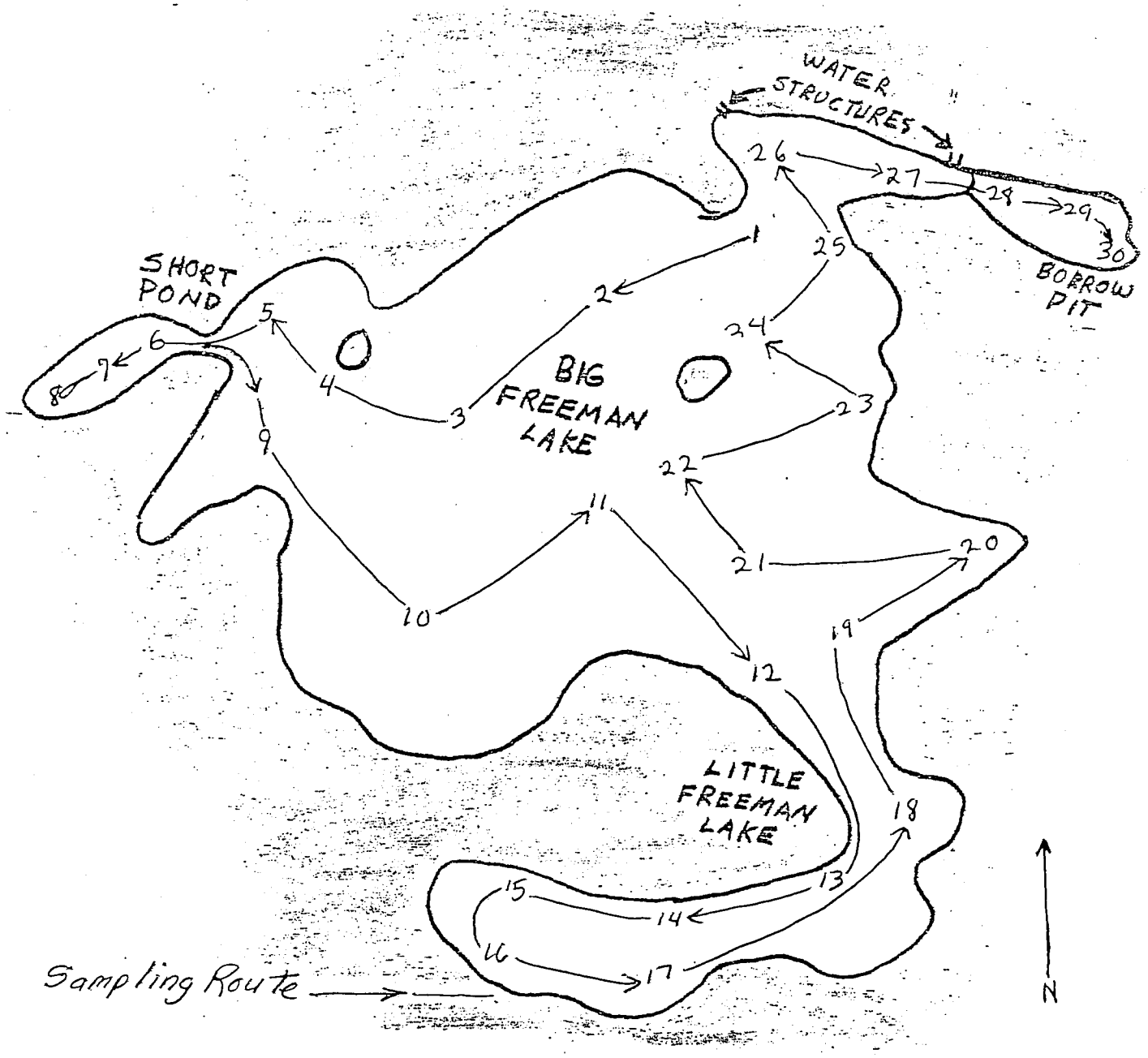
OCCURRENCE OF SUBMERGENTS IN PAPPY'S POND

| | |
|---|---|
| Sago pondweed | 40-4 |
| Widgeongrass | 40-4 |
| Nevada pondweed | 20-3 |

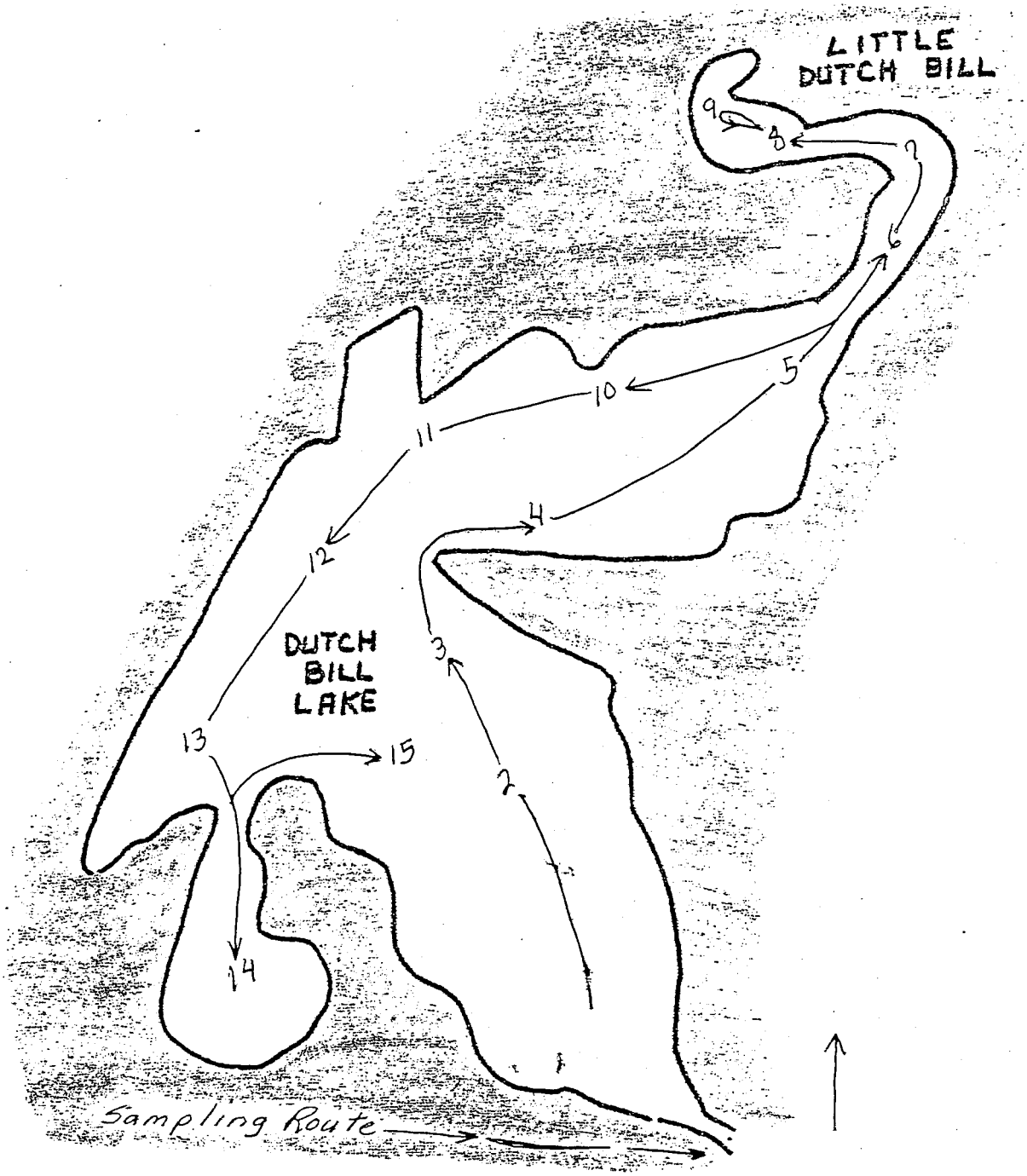
Table 7

CHECKLIST OF SPECIES RECORDED, AQUATIC PLANT SURVEY

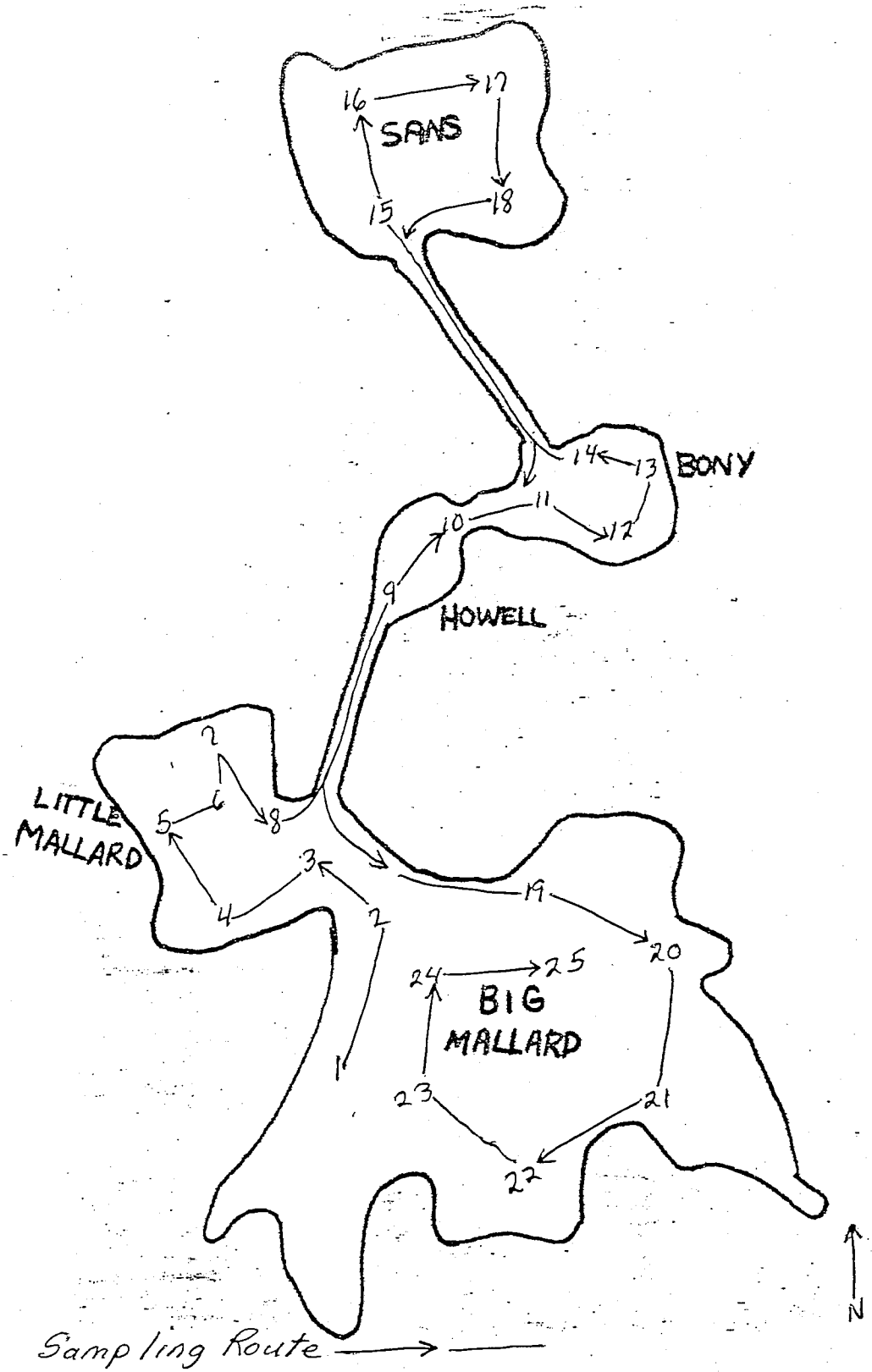
| Common Name | Scientific Name |
|---|---|
| Cattail | Typha sp. |
| Sago pondweed | Potamogeton pectinatus |
| Nevada pondweed | Potamogeton latifolius |
| Widgeongrass | Ruppia maritima |
| Saltgrass | Distichlis stricta |
| Spikerush | Eleocharis sp. |
| Hardstem bulrush | Scirpus acutus |
| Coontail | Ceratophyllum demersum |
| Bladderwort | Ultricularia vulgaris |



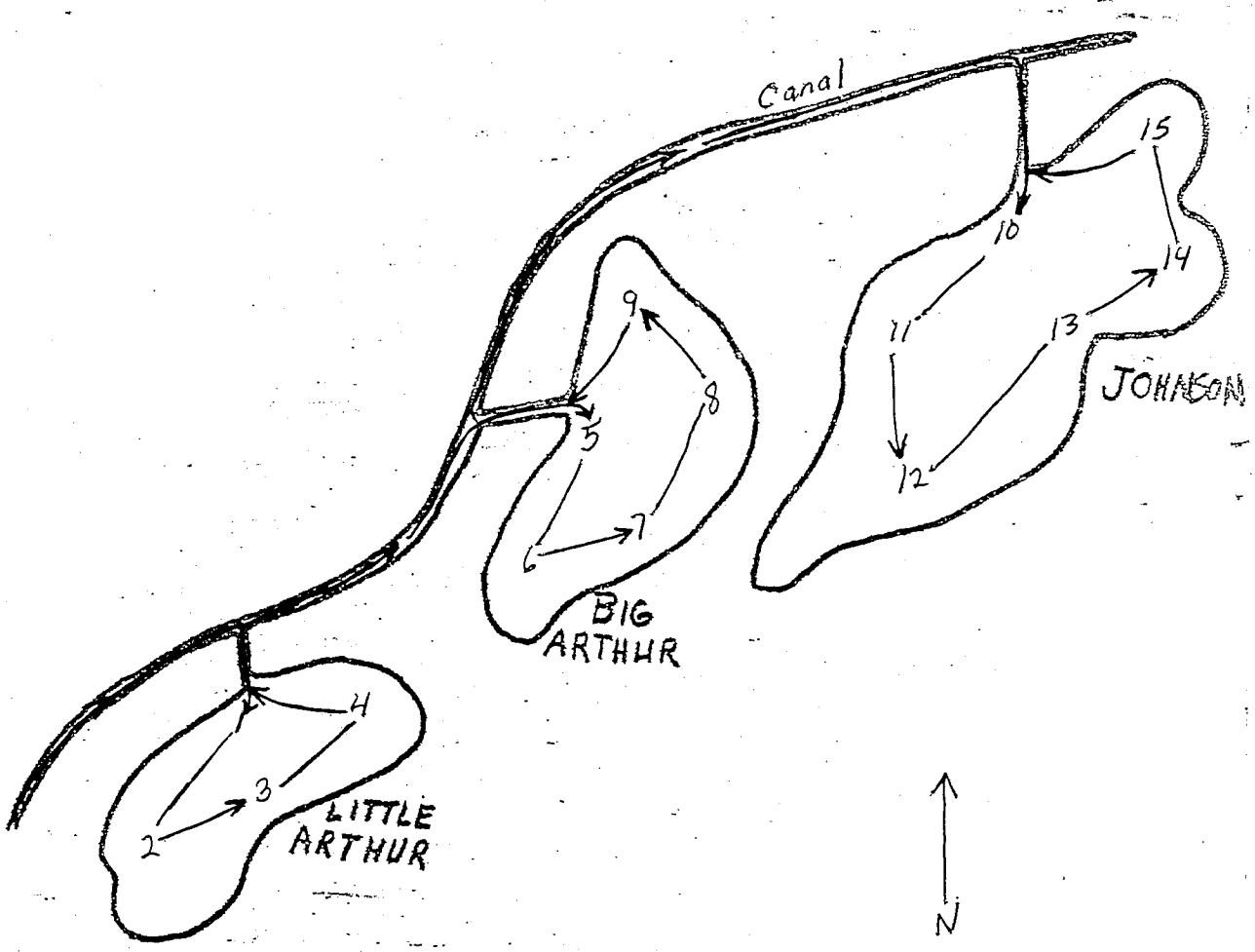

FREEMAN LAKES GROUP
Approximate water area - 123 acres
Sampling stations numbered
Green - Marsh




DUTCH BILL LAKES
Approximate water area - 432 acres
Sampling stations numbered
Green - Marsh




MALLARD - SANS GROUP
Approximate water area - 154 acres
Sampling stations numbered
Green - Marsh




ARTHUR - JOHNSON GROUP
Approximate water area - 10 acres
Sampling stations numbered
Green - Marsh