# Relationships Between Macrophyte Presence and Chemical Characteristics of Eight Lakes and Two Streams

BIOS 569 - Practicum in Aquatic Biology

Christie Brown

459 Cavanaugh Hall

Advisor: Dr. Hellenthal

1997

## Abstract

The presence or absence of certain species and families of macrophytes can be compared to the water chemistry of aquatic habitats to determine if any relationships exist. Because trends exist, macrophytes can be used as an indicator of a body of water's productivity. This study included 21different sites ranging from bog-like condition to more neutral lake conditions. Two creeks were also included in the study. Water chemistry tests included: pH, alkalinity, conductivity, $O_2$, sulfide, color and secchi depth. The results of the water chemistry test were then compared to the 72 different families and the 240 species collected in the sites. By comparing the water chemistry and the presence or absence of certain macrophytes, significant trends were observed and indicate a drastic difference of macrophytes present for certain water characteristics.

## Introduction

Since its beginnings in the early years of the twentieth century, the development of freshwater biomonitoring has been considerably slower than some of the other branches of science that emerged at about the same time. However, in recent years with the greater concern for the environment, biomonitoring has made substantial progress and may have come of age because of the recent adoption, by North American and European governments, of national programs of environmental monitoring and assessment that include the use of aquatic biota (Rosenberg 1993). Freshwater biomonitoring is necessary because it is important to be able to determine the effects industries and humans are having on wetland environments. It is especially important to monitor the aquatic vegetation because it plays a more profound role in the biology of the water realm than would terrestrial plants in the biology of the terrestrial world since the water environment is more limited (Sculthorpe 1967). One of the ways for determining the effects of external factor on wetlands is through the use of macrophytes as indicators of water chemistry.

Aquatic plant species, like most aquatic organisms, are more widely distributed than terrestrial organisms. This is primarily true because the factors or conditions to which aquatic plants adjust are, in general, more uniform than on land. Yet species are selective of their habitat, so much so that a combination of species often can be used as an index of the physical-chemical nature of the habitat (Prescott).

Although, many of the bodies of water at UNDERC have been chemically characterized, the relationships between the species of macrophytes present and the chemical composition for the lakes has not been fully studied. In 1996, a study at UNDERC looked at the relationship of macrophytes and the physical-chemical characteristics of ten bog-like habitats and three lakes(Francl 1996). Many interesting trends were found and therefore, this study will be a continuation with an emphasis on lakes as eight lakes and two streams have been chosen for sampling.

## Materials and Methods

Materials

- ◇ Plant press with corrugated cardboard, newspapers, and blotter sheets, approximately 12" x 18"
- ◇ Microscope (magnification at least x 10)
- ◇ Garden tools (small spade, clippers, and dandelion digger)
- ◇ Ziploc storage bags, gallon-size and sandwich bags
- ◇ Wax paper
- ◇ Water-resistant labeling tape
- ◇ Fine point water-resistant marker or pencil
- ◇ Hach Chemistry Kit
- ◇ Dissolved oxygen-temperature meter
- ◇ Van Dorn sampler
- ◇ Conductivity meter
- ◇ Portable pH meter
- ◇ Secchi disc
- ◇ 6-ft. Rake with mesh wiring on the comb end
- ◇ Snorkel and fins
- ◇ 500 ml plastic bottles
- ◇ Computer to compile data
- ◇ Dichotomous keys for aquatic and terrestrial macrophytes Lab notebook to record data

Methods

In order to expound upon last year's study, bodies of water with higher pH's were chosen instead of the more bog-like conditions. Therefore, for this study eight lakes and two streams were selected as the sites for sampling. The eight chosen lakes are Bay, Bergner, Kickapoo, Mullahy, Nansen, Raspberry, Tenderfoot Lake and Ward. The sites for the stream sampling are Tenderfoot Creek (near gravel pit) and Brown Creek (near where the road crosses). Last years sites included Tender Bog, Bolger, Ed's Bog, Bogpot, Forest Service Bog, Tuesday, Humming bird, Reddington, Northgate Bog, and Cranberry. The three lake sites were Brown, Crampton and Morris.

During the ten weeks of UNDERC two samples were taken of the water chemistry and macrophytes. The first sampling took place June 1-4, 1997, while the second sampling was June 29- July 1, 1997. The lakes were chemically characterized through assessing the pH, conductivity, Hach color, alkalinity, oxygen-temperature profile, sulfide (only presence/absence) and secchi depth. Conductivity, pH, oxygen-temperature profiles were conducted in the deepest part of the lake while, water samples (two at half secchi depth and two at surface) were taken from the deepest part of each site and further tests were ran in the lab a few hours after collection. The alkalinity and color were tested by using Hach kits. The macrophytes were collected at the same time the water chemistry analysis was done. The entire plants were collected and placed in a separate plastic baggies. The bags were marked with the date and site at which the plant was taken from. The collecting was done using a rake and snorkeling for submerged plants, while garden tools were used for plants along the immediate shore (two feet ) and on the peatmats.

Upon collection of the macrophytes, the samples were returned to the laboratory and placed in a plant press or refrigerated until time and presses permitted. Pressing the plants preserved them in a flattened fashion with the moisture removed for later identification. The moisture is removed by placing the plant between newspaper and blotter sheets, and allowing the plants to dry for several days. Once the plants are dried they were identified using a dichotomous key and any new species will be placed in the collection of plants from UNDERC. After the bodies of water had been chemically characterized and the macrophytes specific to each body of water were identified, the data was compiled using a computer and examined to determine any trends between water chemistry and the macrophytes that are present or absent.

**Results** (Results include data from Karen Francl 1996 and Christie Brown 1997)

WATER CHEMISTRY DATA

**Ph**

The range of the mean pH extends from 4.2 at Northgate to 8.05 at Brown Lake (see Table1).

**Table 1: pH**

| SITE | MEAN pH |
|---|---|
| Bay Lake | 7.6 |
| Bergner Lake | 6.0 |
| Bogpot | 5.75 |
| Bolger | 7.1 |
| Brown Creek | 7.1 |
| Brown Lake | 8.05 |
| Crampton | 6.05 |
| Cranberry | 4.8 |
| Ed's Bog | 4.7 |
| Forest Service Bog | 4.9 |
| Hummingbird | 4.8 |
| Kickapoo Lake | 7.6 |
| Morris | 7.25 |
| Mullahy Lake | 7.6 |
| Nansen Lake | 7.0 |
| Northgate | 4.2 |
| Raspberry Lake | 7.3 |
| Reddington | 6.25 |
| Tender Bog | 4.35 |
| Tenderfoot Lake | 7.9 |
| Tenderfoot Creek | 7.6 |
| Tuesday | 6.15 |
| Ward Lake | 7.6 |

## Conductivity

Conductivity is a measurement of the amount of dissolved ions in the water. The lowest recorded reading was 4.9 uS/cm from Forest Service Bog, while Ward had the highest with 144.5 uS/cm (see Table 2).

### Table 2: Conductivity

| SITE | CONDUCTIVITY (uS/cm) First Sampling | CONDUCTIVITY (uS/cm) Second Sampling |
|---|---|---|
| Bay Lake | 14.7 | 14.8 |
| Bergner Lake | 10.7 | 11.6 |
| Bogpot | 13.4 | 8.1 |
| Bolger | 30.3 | 28.2 |
| Brown Lake | 101 | 108.5 |
| Brown Creek | 78.8 | 105.4 |
| Crampton | 14.4 | 12.6 |
| Cranberry | 15.1 | 10.5 |
| Ed's Bog | 16.0 | 14.3 |
| Forest Service Bog | 8.0 | 4.9 |
| Hummingbird | 20.3 | 18.7 |
| Kickapoo Lake | 42.4 | 73.6 |
| Morris | 56.2 | 63.4 |
| Mullahy Lake | 86.0 | 110.3 |
| Nansen Lake | 27.1 | 31.6 |
| Northgate | 30.8 | 24.8 |
| Raspberry Lake | 11.4 | 11.3 |
| Reddington | 22.5 | 22.7 |
| Tender Bog | 26.4 | 23.0 |
| Tenderfoot Creek | 77.5 | 95.5 |
| Tenderfoot Lake | 76.7 | 84.3 |
| Tuesday | 11.5 | 11.3 |
| Ward Lake | 135.4 | 144.5 |

## Alkalinity

Alkalinity is an indication of the buffering capacity of a body of water. The alkalinity ranged from zero at a number of the sites sampled to 58 (mg/L) at Ward. The majority of the sites indicate a poor buffering capacity with alkalinity less than 10 (mg/L).

**Table 3: Alkalinity**

| SITE | MEAN ALKALINITY (mg/L) |
|---|---|
| Bay Lake | 0.0 |
| Bergner Lake | 0.0 |
| Bogpot | 2 |
| Bolger | 12 |
| Brown Lake | 50 |
| Brown Creek | 47 |
| Crampton | 5 |
| Cranberry | 0.0 |
| Ed's Bog | 3 |
| Forest Service Bog | 3 |
| Hummingbird | 1 |
| Kickapoo Lake | 39.5 |
| Morris | 27 |
| Mullahy Lake | 36 |
| Nansen Lake | 10.5 |
| Northgate | 0.0 |
| Raspberry Lake | 0.0 |
| Reddington | 10 |
| Tender Bog | 0.0 |
| Tenderfoot Lake | 33.5 |
| Tenderfoot Creek | 38 |
| Tuesday | 1.5 |
| Ward Lake | 58 |

## Secchi Depth

Secchi depths were taken to determine the amount of suspended particles in the water which influence the depth that light is able to penetrate into the water. The measurements ranged from 0.6 meters in Reddington to 3.7 meters in Bay Lake (see Table 4).

### Table 4: Secchi Depth

| SITE | SECCHI DEPTH FIRST SAMPLING | SECCHI DEPTH SECOND SAMPLING |
|---|---|---|
| Bay Lake | 3.70 | 3.40 |
| Bergner Lake | 2.20 | 2.20 |
| Bogpot | 0.9 | 0.8 |
| Bolger | 0.9 | 0.95 |
| Brown Lake | 1.1 | 1.6 |
| Brown Creek | N/A | N/A |
| Crampton | 3.1 | 3.5 |
| Cranberry | 1.2 | 1.3 |
| Ed's Bog | 1.2 | 1.6 |
| Forest Service Bog | 1.2 | 2.3 |
| Hummingbird | 0.7 | 0.75 |
| Kickapoo Lake | 1.40 | 1.60 |
| Morris | 1.0 | 0.7 |
| Mullahy Lake | 1.60 | 1.30 |
| Nansen Lake | N/A | 1.40 |
| Northgate | 0.8 | 0.7 |
| Raspberry Lake | 2.60 | 2.70 |
| Reddington | 0.6 | 0.7 |
| Tender Bog | 1.2 | 1.6 |
| Tenderfoot Creek | N/A | N/A |
| Tenderfoot Lake | 2.70 | 3.50 |
| Tuesday | 1.5 | 1.75 |
| Ward Lake | 2.70 | 2.25 |

## Color

Color was also used as an indicator of the transparency of water to light. In accordance with the secchi depth results Bay had the lowest reading for color at 13.5 (PtCo); however, Northgate gave the highest reading at 402 (PtCo) (see Table 5).

### Table 5: Color

| SITE | COLOR (PtCo) First Sampling | COLOR (PtCo) Second Sampling |
|---|---|---|
| Bay Lake | 13.5 | 16 |
| Bergner Lake | 70 | 54.75 |
| Bogpot | 127 | 182 |
| Bolger | 144 | 145 |
| Brown Lake | 104 | 54 |
| Brown Creek | 104 | 76.5 |
| Crampton | 62 | 20 |
| Cranberry | 98 | 95 |
| Ed's Bog | 114 | 140 |
| Forest Service Bog | 51 | 36 |
| Hummingbird | 217 | 274 |
| Kickapoo Lake | 90 | 66 |
| Morris | 208 | 183 |
| Mullahy Lake | 80.25 | 79.4 |
| Nansen Lake | 137.5 | 132.25 |
| Northgate | 402 | 239 |
| Raspberry Lake | 37.25 | 35 |
| Reddington | 298 | 246 |
| Tender Bog | 151 | 177 |
| Tenderfoot Creek | 69.5 | 71 |
| Tenderfoot Lake | 36.5 | 43.5 |
| Tuesday | 63 | 58 |
| Ward Lake | 58 | 56.5 |

## Sulfide

No significant amount of sulfide were detected in any of the sites except during the second round of sampling in which Bogpot, Bolger and Tuesday showed signs of sulfide.

## Oxygen and Temperature Profiles

All lakes from the 1997 sampling (Bay, Bergner, Kickapoo, Mullahy, Nansen, Raspberry, Tenderfoot Lake and Ward) were supersaturated with oxygen. The highest point of saturation usually occurred around the 3 meter mark for most of the lakes. Saturation had not been computed for the 1996 samplings.

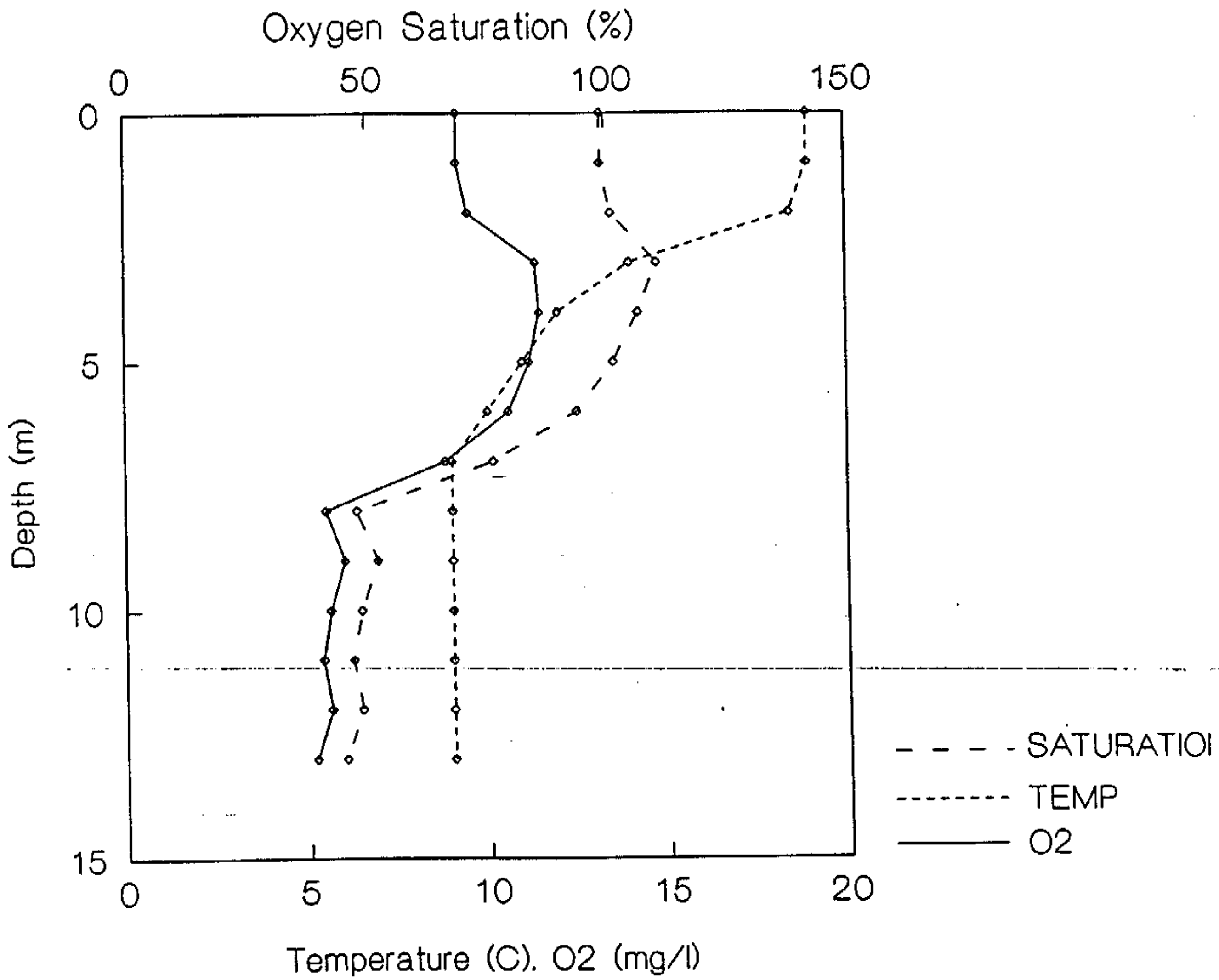
## Macrophyte Collection

The collection of macrophytes at the 23 sites yielded a total of 72 families and 240 different species. The number of families and species for each lake are provided in table 6. The greatest diversity was found in the two creeks, Brown and Tenderfoot, as the tended to have more families and species comparatively. The bogs generally had the least diversity for family and species.

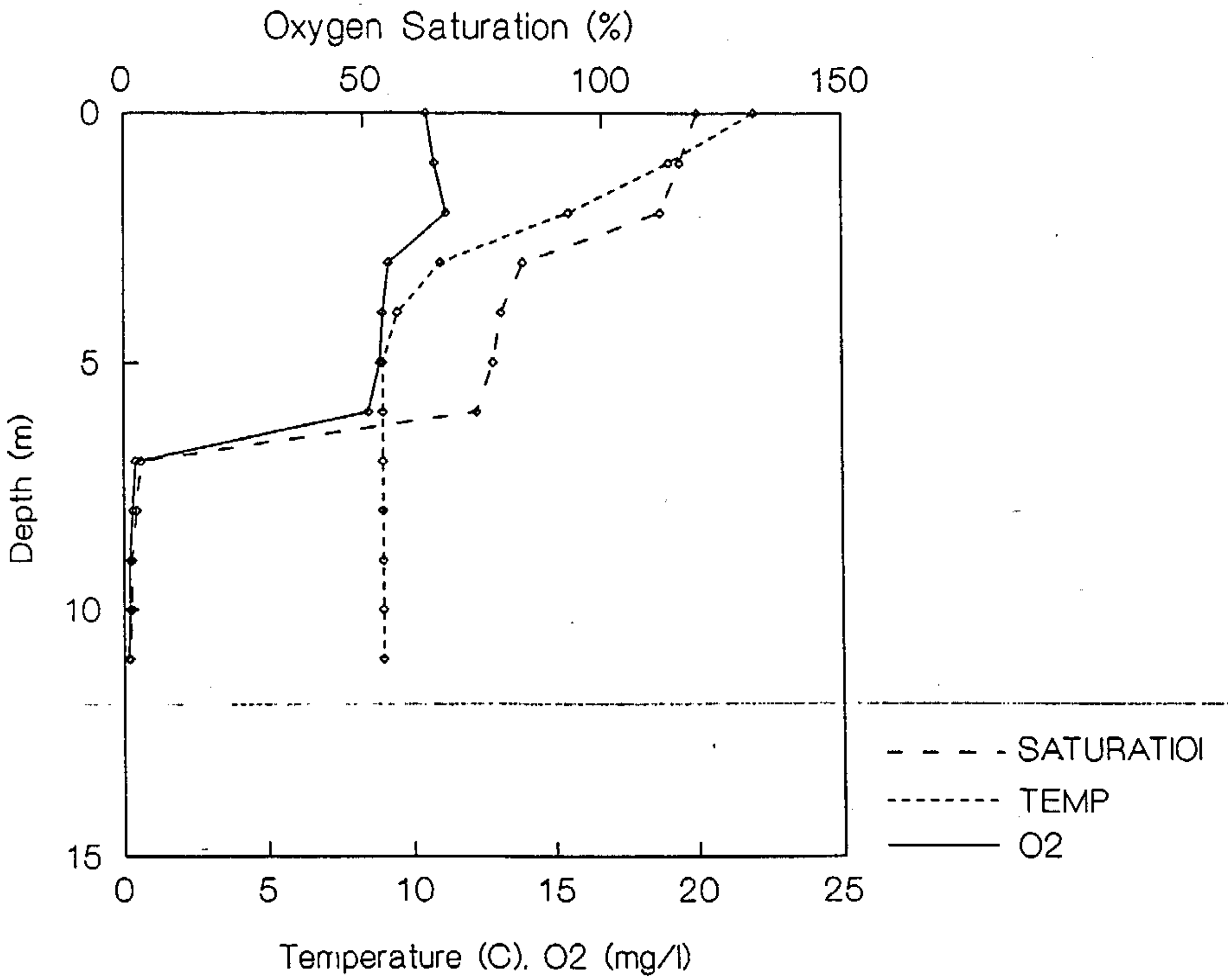
**Table 6: Macrophytes collected**

| SITE | TOTAL FAMILIES | TOTAL SPECIES |
|---|---|---|
| Bay | 35 | 42 |
| Bergner | 25 | 28 |
| Bogpot | 22 | 34 |
| Bolger Bog | 20 | 32 |
| Brown Creek | 33 | 54 |
| Brown Lake | 24 | 39 |
| Crampton | 26 | 36 |
| Cranberry | 13 | 28 |
| Ed's Bog | 10 | 22 |
| Forest Service Bog | 8 | 14 |
| Hummingbird | 18 | 31 |
| Kickapoo | 30 | 41 |
| Morris | 29 | 41 |
| Mullahy | 25 | 34 |
| Nansen | 20 | 32 |
| Northgate | 8 | 20 |
| Raspberry | 25 | 43 |
| Reddington | 27 | 44 |
| Tenderfoot Bog | 13 | 24 |
| Tenderfoot Creek | 31 | 41 |
| Tenderfoot Lake | 27 | 51 |

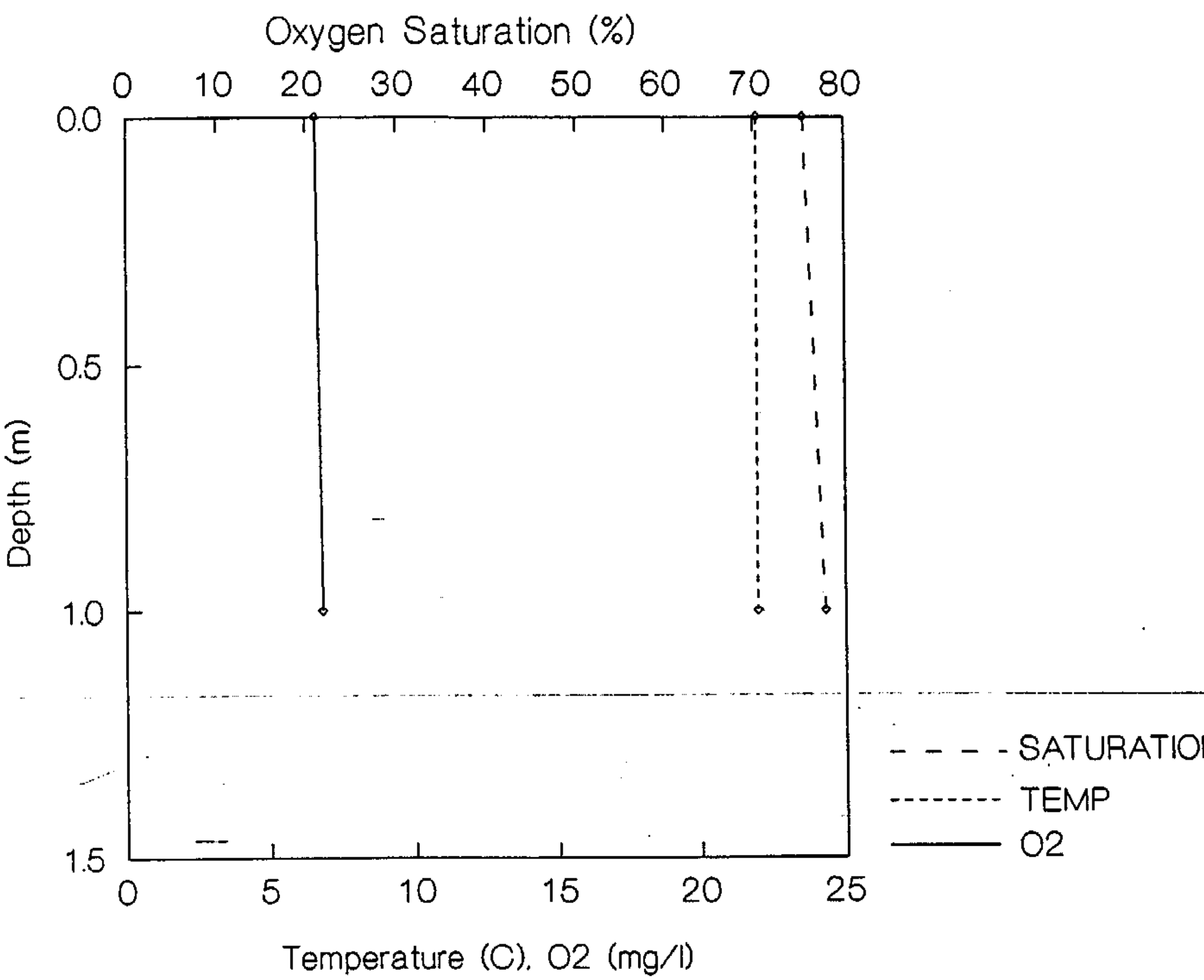
Bay June 4, 1997



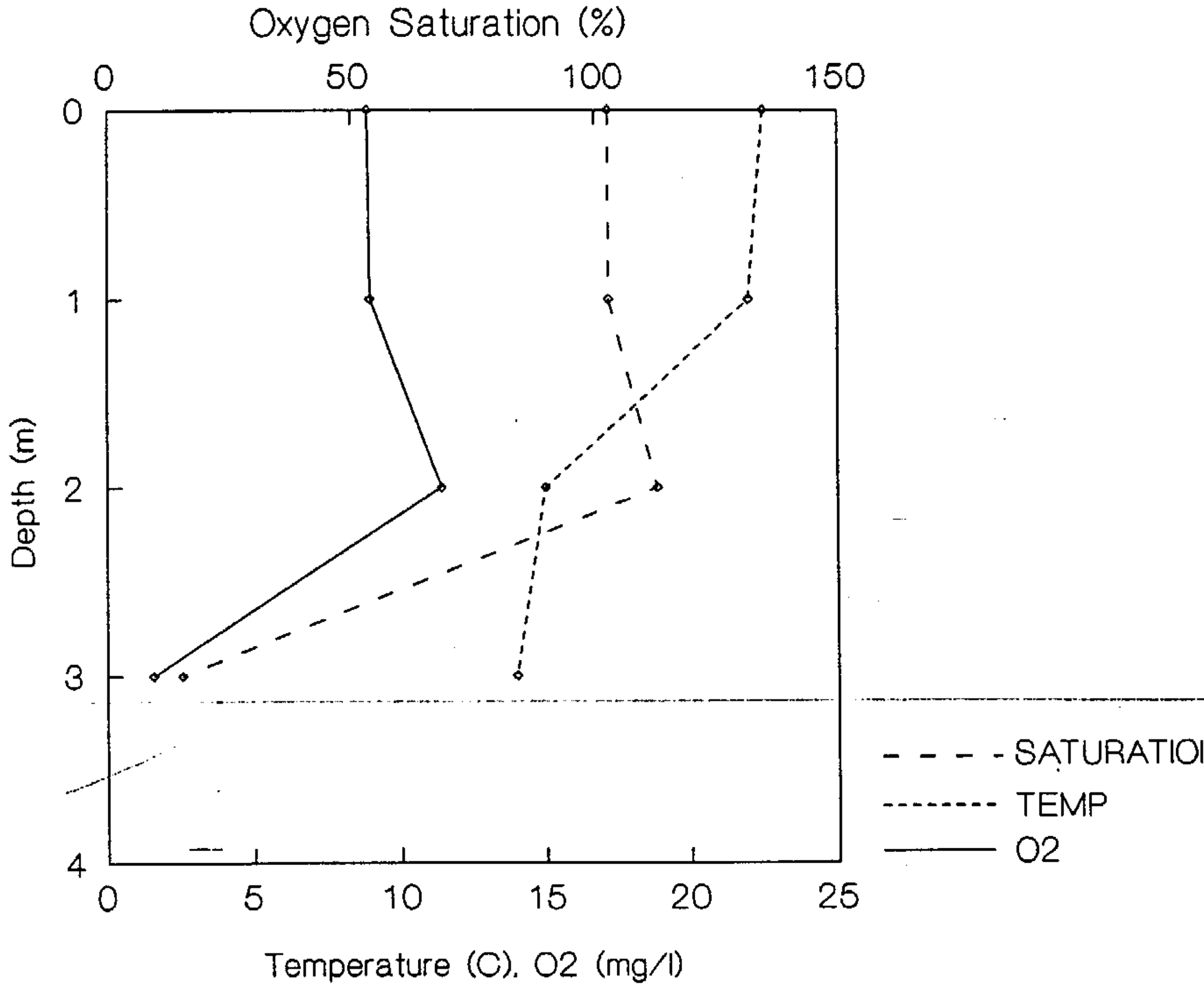
Bergner June 1, 1997



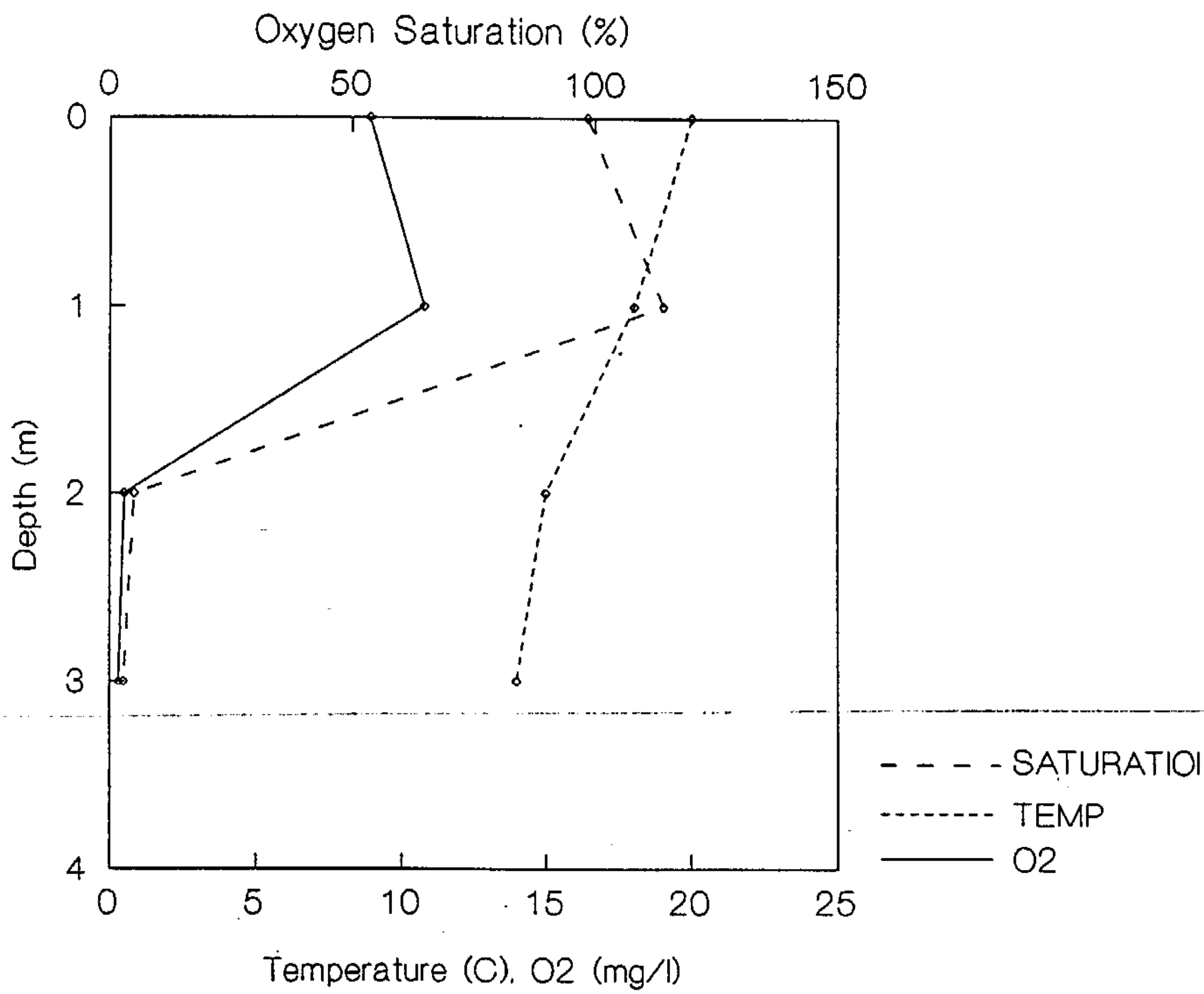
Brown Crk.    June 3, 1997



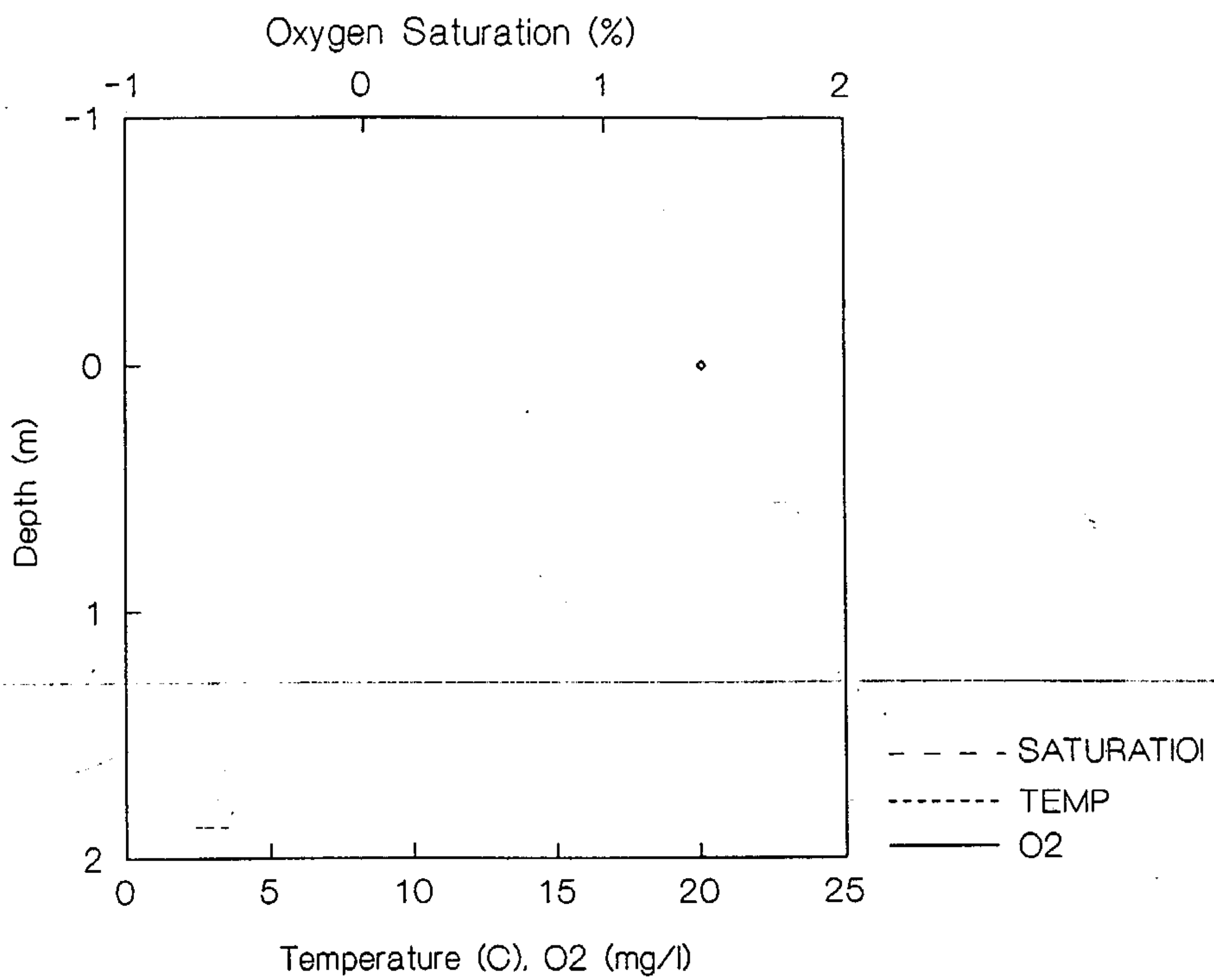
Kickapoo June 2, 1997



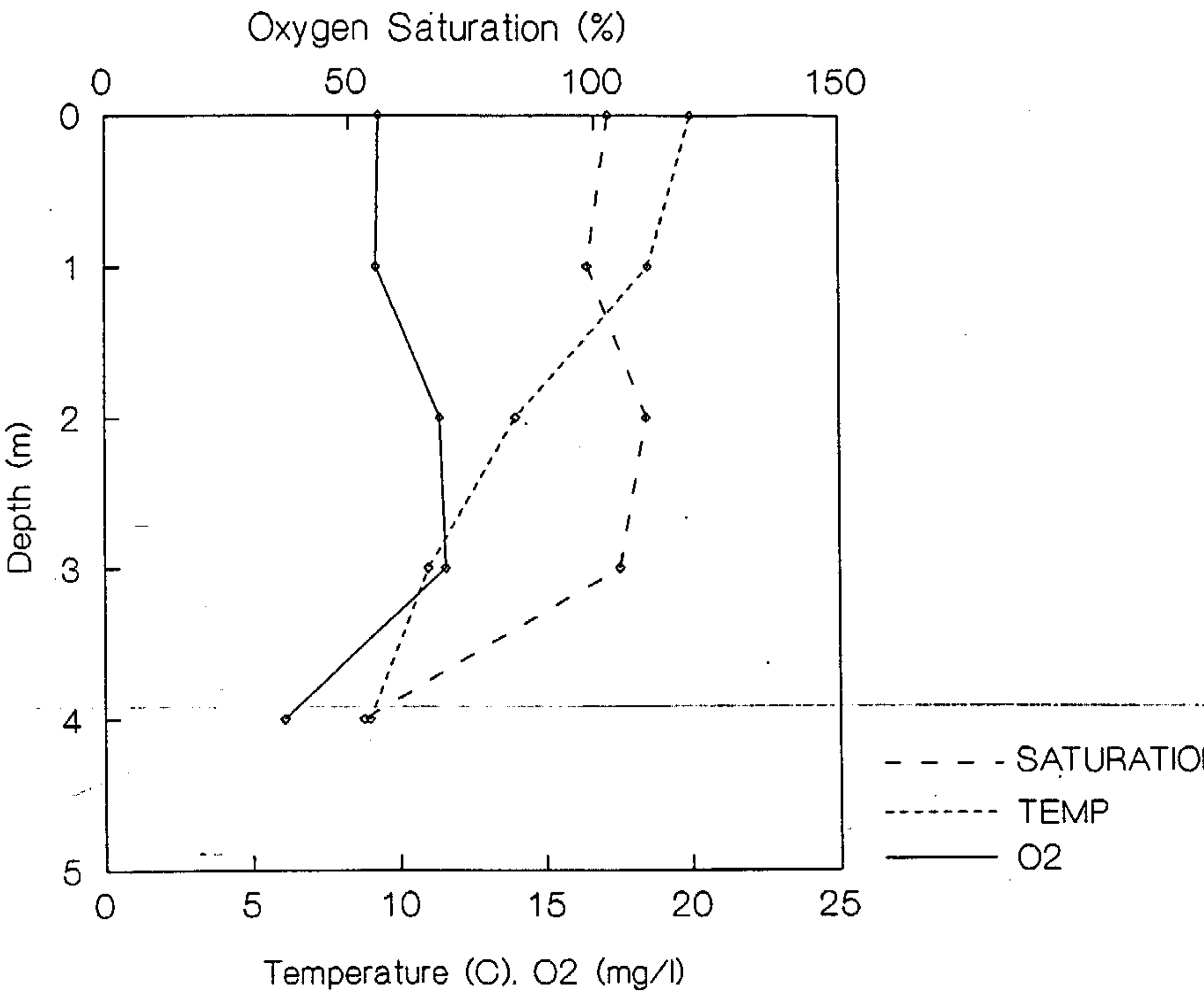
Mullahy June 2, 1997



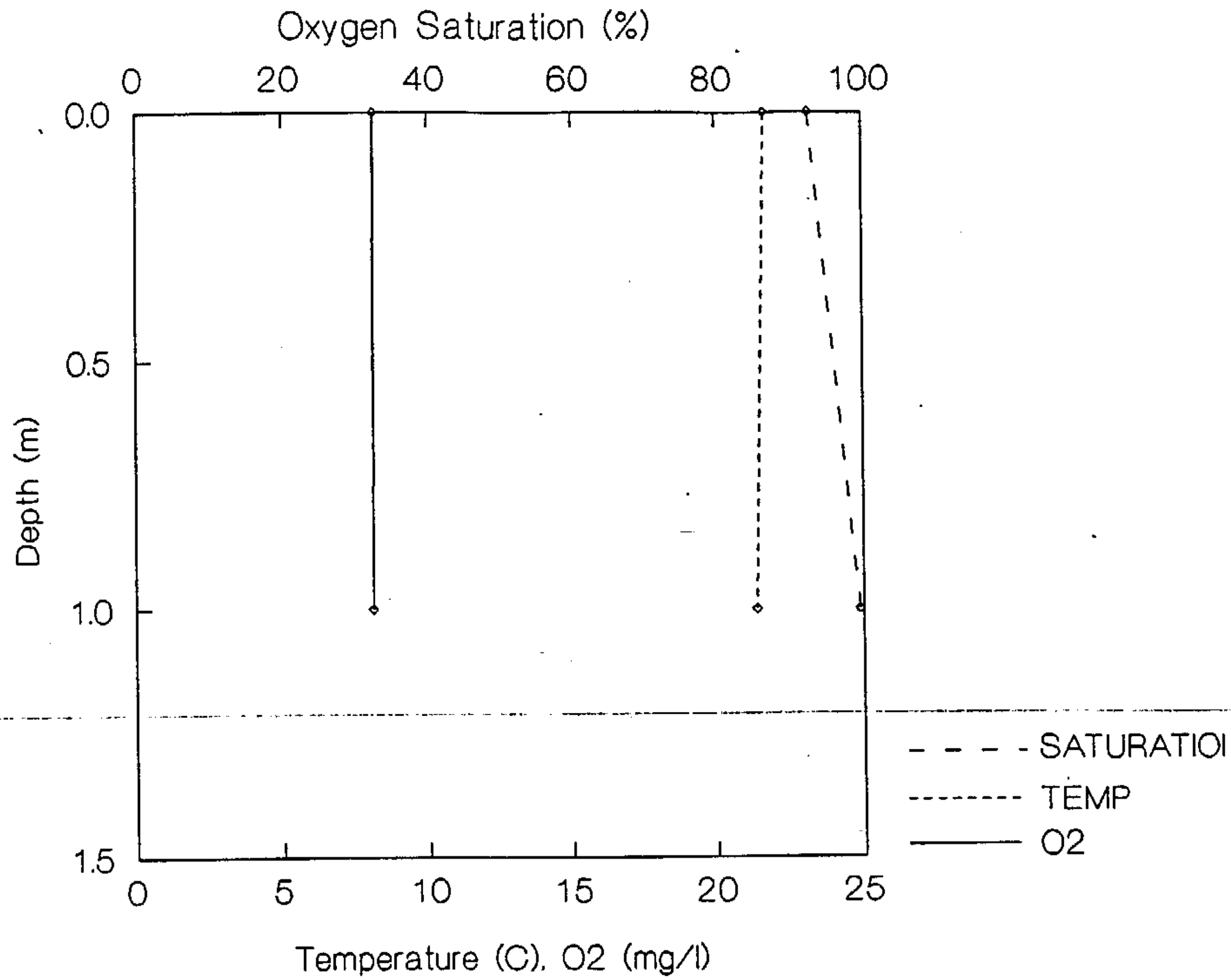
Nansen June 3, 1997



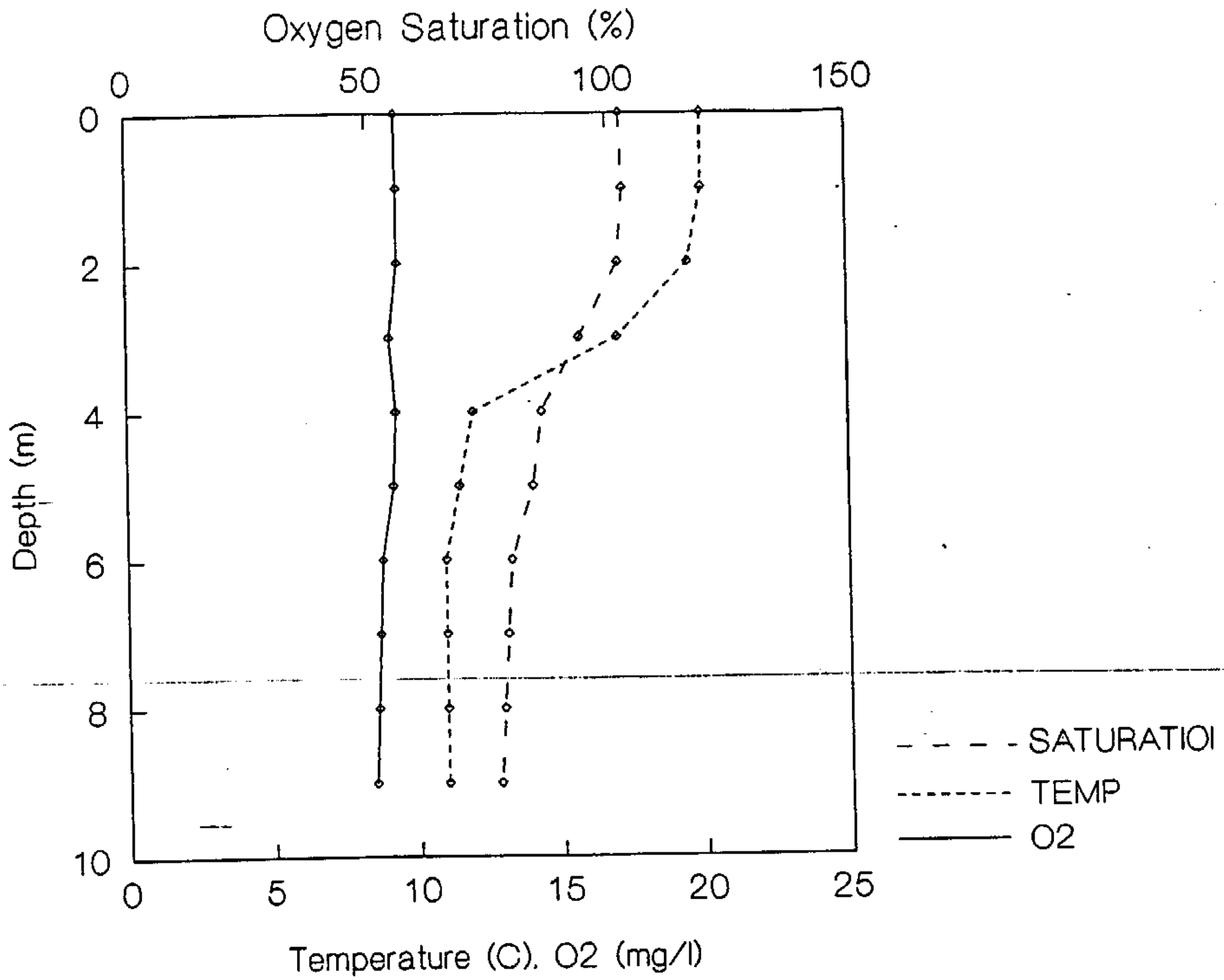
Raspberry June 1, 1997



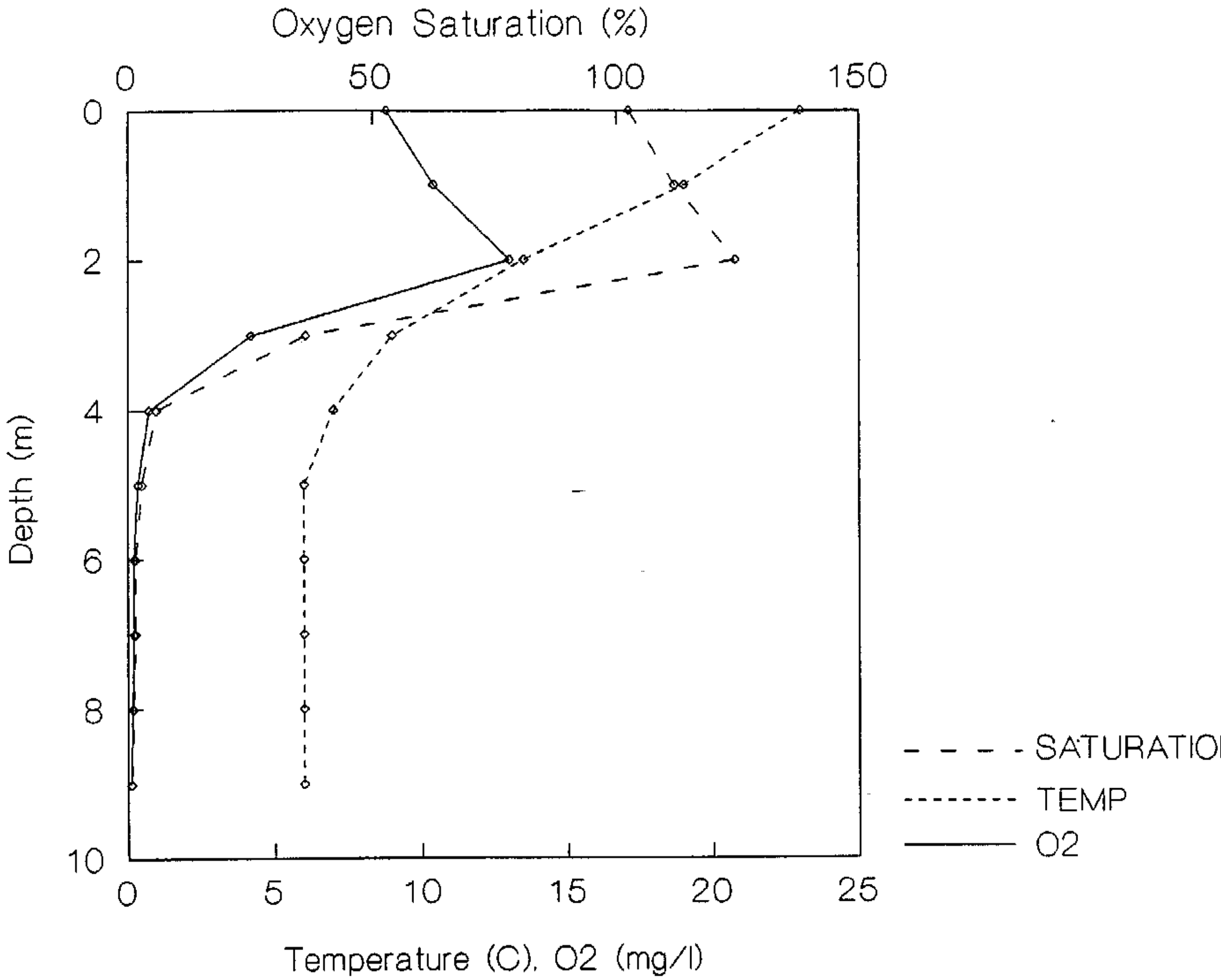
Tenderfoot Crk June 3, 1997



Tenderfoot Lake June 4, 1997



Ward June 2, 1997



| | | |
|---|---|---|
| Tuesday | 23 | 39 |
| Ward | 22 | 36 |

In order to facilitate the attempt to find basic trend in macrophyte presence and water chemistry, the data in organized into spreadsheets. The charts are as follows: #1- Mean pH, #2- Alkalinity, #3- Maximum Depth, #4- Maximum Length, #5- Relative Size, #6- Mean Conductivity, #7- Secchi Depth, #8- Color.

MEAN pH

One of the most noticeable trends is in the family Asteraceae, the second largest family of flowering plants in the world. Most of the species collected were found in habitats with a pH of 7.1 or higher, while only one species, Aster lateriflorus (L.) Britt., was found in Tuesday which has a pH of 6.15. The family Ericaceae appeared to favor the more acidic habitats with Vaccinium myrtilloides found only at or below pH 6.25. However, Vaccinium macrocarpon was found only in habitats of pH 6 or higher. While, Vaccinium oxycoccus L. was found in a large range of pH (4.2-7.6). Nymphaeaceae was not found in habitats with a pH below 4.8. In the family Potamogetonaceae, Potamogeton amplifolius Tuckerman, show trends of appearing only in more neutral habitats as it was found in a pH range of 6.25-8.05. Few species of Potamogetonaceae were found below a pH of 6.25. Sphagnaceae also had two different species showing the same trends. Sphagnum recurvum P.-Beauv. was found only in habitats at pH 7 or higher while Sphagnum recurvum var. brevifolium was collected only in habitats with a pH 6.15 or lower. Violaceae appeared to prefer more neutral habitats as the majority of the specimens were found in habitats with a pH of 5.75 or higher.

ALKALINITY

Alkalinity, or the buffering capacity of a body of water appeared to be an important factor in determining the presence of several species. Sagittaria latifolia Willd.(Alismataceae) was found only when alkalinity was at 5 (mg/L) or high and while in the family, Apiaceae, Cicuta bulbifera L. required an alkalinity of 38 (mg/L) and Daucus carota L. was found in habitats with 2 (mg/L) or above. In Asclepiadaceae, Asclepias incarnata L. was collected in sites above 10 (mg/L). The family of Asteraceae appeared to prefer higher alkalinities of 27 (mg/L) or greater with the only exceptions occurring in Raspberry which did not have any alkalinity. The family of Hydrocharitaceae with Elodea canadensis Michx. and Vallisneria americana Michx. also showed trends of higher alkalinity as it was only present if site with alkalinity greater than 33 (mg/L). Prunella vulgaris L. and Scutellaria integrifolia L. of Lamiaceae and member of the family Lemnaceae also preferred alkalinities greater than 10 (mg/L). In the family Sphagnaceae, Sphagnum recurvum P.-Beauv. was found in habitats with an alkalinities greater that 10 (mg/L). While, Sphagnum recurvum var. brevifolium was found only in habitats with an alkalinity of 3 (mg/L) or less. The family Urticaceae with Urtica dioica L. and Urtica urens L. were only found in habitats with alkalinities of 38 (mg/L) or above.

MAXIMUM DEPTH

Maximum depth of a body of water did not have any significant effect on the species of macrophytes present as many of the specimens were collected on the immediate shores or in the littoral zones.

MAXIMUM LENGTH

Maximum length also does not appear to be a good indicator of macrophyte presence as much of the data appeared to be random and may be a better indicator of quantity which was not studied.

RELATIVE SIZE

Relative size also did not appear to be a good indicator of the presence of macrophytes and may possibly be a better indicator of relative abundance or how prevalent a macrophyte is for a specific type of environment. Relative size may also be looked at and possible trends could be made that the large the bodies of water tend to have more species and families present.

A1:Y3

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 1 | MEAN pH | 4.2 | 4.35 | 4.7 | 4.8 | 4.8 | 4.9 | 5.75 | 6 | 6.05 | 6.15 | 6.25 | 7 | 7.1 | 7.1 | 7.25 | 7.3 | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 7.9 | 8.05 |
| FAMILY | GENUS & SPECIES | N'GA | TE'B | ED'S | HUM | CRN | FSB | BOG | BER | CRM | TUE | RED | NAN | BOL | BR'C | MOR | RAS | KIC | BAY | MUL | WAR | TE'C | TE'L | BR'L |
| Aceraceae | Acer rubrum L. | NC | NC | NC | NC | NC | NC | NC | | NC | NC | NC | X | NC | X | NC | X | | X | X | | | | NC |
| Alismataceae | Sagittaria latifolia Willd. | | | | | | | | | X | | X | | | | X | | X | | | | X | X | X |
| | Sagittaria sp. | | | | | | | | | | | | | | | | | | X | | | | | |
| Apiaceae | Cicuta bulbifera L. | | | | | | | | | | | | | | X | | | X | | | X | X | | |
| | Daucus carota L. | | | | | | | X | | X | | X | | X | | X | | X | | | | | | X |
| Aquifoliaceae | Ilex verticillata (L.) Gray | | | | | | | | | | | | | | | | | | X | | | | | |
| Araceae | Calla palustris L. | | X | | X | X | | X | | X | X | X | | | X | X | X | X | X | X | X | X | | X |
| Araliaceae | Aralia nudicaulis L. | | | | | | | X | | | | | | | | | | | | | | | | |
| Asclepiadaceae | Asclepias incarnata L. | | | | | | | | | | | | X | | X | X | | X | | X | X | X | X | |
| Asteraceae | Achillea millefolium L. | | | | | | | | | | | | | | X | | | | | | | | X | |
| | Actaea rubra (Ait.) Willd. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Antennaria howellii Greene | | | | | | | | | | | | | | X | | | | | | | | | |
| | Aster lateriflorus (L.) Britt. | | | | | | | | | | X | | | | | | | | | | | | X | |
| | Aster sp. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Conyza canadensis (L.) Cronq. | | | | | | | | | | | | | | | X | | | | | | | | |
| | Erigeron annuus (L.) Pers. | | | | | | | | | | | | | | | | X | | | | | | | |
| | Eupatorium maculatum L. | | | | | | | | | | | | | | | | | | | X | | | | |
| | Euthamia graminifolia (L.) Nutt. | | | | | | | | | | | | | | | | X | X | | X | | | | |
| | Hieracium aurantiacum L. | | | | | | | | | | | | | | | | | | | | X | X | | |
| | Hieracium caespitosum Dumort. | | | | | | | | | | | | | | | | | | | | | X | X | |
| | Hieracium piloselloides Vill. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Lactuca canadensis L. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Leucanthemum vulgare Lam. | | | | | | | | | | | | | | X | | X | | | | | | X | |
| | Solidago gigantea Ait. | | | | | | | | | | | | | | X | | | | | | | | | |
| | Solidago juncea Ait. | | | | | | | | | | | | | | X | | X | | | | | | | |
| | Solidago ptarmicoides (Nees) Boivin | | | | | | | | | | | | | | | | | | | | | X | | |
| | Solidago uliginosa Nutt. | | | | | | | | | | | | | | X | | | | | | | | | |
| | Tragopogon dubius Scop. | | | | | | | | | | | | | | | | X | | | | | | | |

A1:Y3

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 1 | MEAN pH | 4.2 | 4.35 | 4.7 | 4.8 | 4.8 | 4.9 | 5.75 | 6 | 6.05 | 6.15 | 6.25 | 7 | 7.1 | 7.1 | 7.25 | 7.3 | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 7.9 | 8.05 |
| FAMILY | GENUS & SPECIES | N'GA | TE'B | ED'S | HUM | CRN | FSB | BOG | BER | CRM | TUE | RED | NAN | BOL | BR'C | MOR | RAS | KIC | BAY | MUL | WAR | TE'C | TE'L | BR'L |
| Balsaminaceae | Impatiens capensis Meerb. | | | | | | | | X | | | | | | | | | | X | | | | | |
| Betulaceae | Alnus incana ssp. rugosa (D | NC | NC | NC | NC | NC | NC | NC | | NC | NC | NC | X | NC | X | NC | X | | X | X | X | X | X | NC |
| | Betula papyrifera Marsh. | | | | | | | | X | X | | | | | | | | | | | | | | |
| Boraginaceae | Myosotis laxa Lehm. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Myosotis scorpioides L. | | | | | | | | | | | | | | | | | | X | | | | | |
| Brassicaceae | Barbarea vulgaris Ait. f. | | | | | | | | | | | | | | | | | | | | | | X | |
| Callitrichaceae | Callitriche palustris L. | | | | | | | | | | | | | | X | X | | | | | | | | |
| Caprifoliaceae | Lonicera canadensis Batr. ex Marsh. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Lonicera x-bella Zabel | | | | | | | | | | | | | | | | X | | | | | X | X | |
| | Viburnum opulus var. americanum Ait. | | | | | | | | | | | | | | X | | | | | | | | | |
| Caryophyllaceae | Silene latifolia ssp. alba (P. Mill.) Greuter & Burdet | | | | | | | | | | | | | | X | | | | | | | X | | |
| | Stellaria graminea L. | | | | | | | | | | | | | | | | | | | | | X | X | |
| | Stellaria longifolia Muhl. ex Willd. | | X | | | | | | | | | | | | | | | | | | | | | |
| Ceratophyllaceae | Ceratophyllum demersum L. | | | | | | | | | | | | | X | X | | | X | | | | X | X | X |
| Clusiaceae | Hypericum ascyron L. | | | | | X | | | | | | X | | | | | | | | | | | | X |
| | Hypericum boreale (Britt.) Bickn. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Hypericum ellipticum Hook. | | | | | | | | | | | | | | | X | | | | | | | | |
| | Hypericum majus (Gray) Britt. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Hypericum perforatum L. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Hypericum sp. | | | | | X | | | | X | | X | | | | X | | | | | | | | |
| | Triadenum fraseri (Spach) Gleason | | | | X | X | | X | | | | | | | | | X | X | | X | X | | | |
| Cornaceae | Cornus alternifolia L. f. | | | | | | | X | | | | | | | X | | | | | | | | | |
| | Cornus canadensis L. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Cornus sericea L. | | | | | | | | | | | | | | | | | | | X | X | X | | |
| Cyperaceae | Carex bebbii Olney ex Fern. | | | X | | | | X | | | X | X | | | | | | | | | | | | X |
| | Carex canescens L. | | | | | X | | X | | | | | | X | | | | | | | | | | |
| | Carex comosa Boott | | | | | | | | | | | | | | | | | | | | X | | X | |
| | Carex crawfordii Fern. | | | | | | | | | | | X | | | | | | | | | | | | |

A1:Y3

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 1 | MEAN pH | 4.2 | 4.35 | 4.7 | 4.8 | 4.8 | 4.9 | 5.75 | 6 | 6.05 | 6.15 | 6.25 | 7 | 7.1 | 7.1 | 7.25 | 7.3 | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 7.9 | 8.05 |
| FAMILY | GENUS & SPECIES | N'GA | TE'B | ED'S | HUM | CRN | FSB | BOG | BER | CRM | TUE | RED | NAN | BOL | BR'C | MOR | RAS | KIC | BAY | MUL | WAR | TE'C | TE'L | BR'L |
| | Carex crinata Lam. | | | | X | | | | | | | | | | | | | | X | | | | X | |
| | Carex diandra Schrank | | | | | | | | | X | | | | | | | | X | | X | X | | | |
| | Carex gracillima Schwein | | X | | | | | | | X | | X | | | | | | | | | | | | |
| | Carex interior Bailey | X | | | X | X | | | X | | X | | X | X | | | X | | | | | | | |
| | Carex lasiocarpa Ehrh. | | | | | | | | | | | | X | | | | | X | | X | X | | | |
| | Carex limosa L. | X | X | X | | X | | | | | | | | | | | | | | | | | | |
| | Carex pauciflora Lightf. | | X | | | | X | | | | | X | | | | | | | | | | | | |
| | Carex paupercula Michaux. | X | | X | X | | X | | | | | | | | | X | | | | | | | | |
| | Carex pseudocyperus L. | | | | | | | | | | | | | | | X | | | | | | | | |
| | Carex retrorsa Schwein | | | | | | | | | | | | | | | | | | | | | | | X |
| | Carex rostrata Stokes | | | X | | | | | X | X | | | X | | | | X | | X | | | X | X | |
| | Carex stipata Muhl. ex Willd. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Carex stricta Lam. | | | | | | | | | | X | | | X | X | | | | | | X | | X | X |
| | Carex tribuloides Mackenzie | | | | | | | X | | | | X | | X | | X | | | | | | | | X |
| | Carex tribuloides Wahl. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Carex trisperma Dewey | | X | | | X | | | | | | | | X | | | | | | | | | | X |
| | Carex tuckermanii Dewey | | | | | | | | | | | | | | | | X | | | | | | | |
| | Carex versicolor L. | | | | | | | | | | | | | | X | | | | | | | | | |
| | Dulichium arundinaceum (L.) Britt. | | | | X | | | X | X | X | X | X | | | | | | | X | X | | | | |
| | Eleocharis obtusa (Willd.) J. A. Schultes | | | | | | | | X | | | | X | | | | | | | | X | | | |
| | Eleocharis smallii Britt. | | | | | | | | | | X | | | | | X | | | | | | | | |
| | Eriophorum gracile W.D.J. Koch | | | | | | | | | | | | | | | | | X | | | X | | | |
| | Eriophorum vaginatum var. s | X | X | X | | | X | | | | X | | | | | | | | | | | | | |
| | Luzula acuminata Raf. | | | | | | | X | | | | | | | | | | | | | | | | |
| | Rhynchospora alba (L.) Vah | X | X | X | | X | | | | | X | | | X | | X | | | | | | | | |
| | Scirpus acutus Muhl. ex Bigelow | | | X | | | | X | | | X | | | | | | | | | | | | | X |
| | Scirpus americanus Pers. | | | | | | | | | | | | | | | | | | | | | | X | X |
| | Scirpus atrovirens Willd. | | | | | | | | | X | | | | | | | X | | | | | | | |

A1:Y3

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 1 | MEAN pH | 4.2 | 4.35 | 4.7 | 4.8 | 4.8 | 4.9 | 5.75 | 6 | 6.05 | 6.15 | 6.25 | 7 | 7.1 | 7.1 | 7.25 | 7.3 | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 7.9 | 8.05 |
| FAMILY | GENUS & SPECIES | N'GA | TE'B | ED'S | HUM | CRN | FSB | BOG | BER | CRM | TUE | RED | NAN | BOL | BR'C | MOR | RAS | KIC | BAY | MUL | WAR | TE'C | TE'L | BR'L |
| | Scirpus cyperinus (L.) Kunth | | | | | X | | | | | | | | X | | | | | | | | | | |
| Dennstaedtiaceae | Pteridium aquilinum (L.) Kuhn | | | | | | | | | | | | | | | | X | | X | | | X | | |
| Droceraceae | Drosera rotundifolia L. | X | X | X | X | X | X | X | X | X | X | X | | | | | X | | | X | | | | |
| Equisetaceae | Equisetum arvense L. | | | | | | X | | | X | | X | | X | | X | X | X | X | | X | | X | |
| | Equisetum fluviatile L. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Equisetum sylvaticum L. | | | | | | | | | | | | | | X | | | | | | | | | |
| Ericaceae | Andromeda glaucophylla Lin | X | X | X | X | X | X | | | X | X | X | X | | | | | X | | X | X | | | |
| | Chamaedaphne calyculata ( | X | X | X | X | X | X | X | X | X | X | X | X | X | | X | X | X | X | X | X | | | |
| | Gaultheria hispidula (L.) Muh | X | X | X | X | X | | | | | | | | X | | | | | | | | | | |
| | Kalmia polifolia Wangenh | X | X | X | X | X | X | | | X | X | X | X | X | | | X | | | | X | | | |
| | Ledum groenlandicum Oeder | X | X | X | X | X | X | | | | X | | | | | | X | | | X | | | | |
| | Vaccinium macrocarpon Ait. | | | | | | | | X | | | | X | | | | X | | | X | | | | |
| | Vaccinium myrtilloides Michx | X | | X | | X | | | | | X | X | | | | | | | | | | | | |
| | Vaccinium oxycoccus L. | X | X | X | | X | | | | | X | | X | X | | | X | | | | X | | | |
| Eriocaulonaceae | Eriocaulon aquaticum (Hill) Druce | | | | | | | | X | | | | | | | | | | X | | | | | |
| Fabaceae | Melilotis officinalis (L.) Lam. | | | | | | | X | | | | | | | | | | | | | | | X | |
| | Trifolium repens L. | | | | | | | | | | | | | | | X | | | | | | | | |
| Gentianaceae | Menyanthes trifoliata L. | X | | | | | | | | | X | | | X | | | | | | | | | | |
| Haloragaceae | Myriophyllum sibiricum Komarov | | | | | | | | X | | | | X | | | | | X | X | | | | X | |
| Hydrocharitaceae | Elodea canadensis Michx. | | | | | | | | | | | | | | X | | | X | | | | X | X | X |
| | Vallisneria americana Michx. | | | | | | | | | | | | | | | | | | | | | | X | |
| Iridaceae | Iris versicolor L. | | | | X | | | X | | X | X | X | X | X | X | | | X | X | X | X | | | |
| Isoetaceae | Isoetes echinospora Durieu | | | | | | | | | X | | | | | | | X | | | | | | | |
| | Isoetes riparia Engelm. ex A. Braun | | | | | | | | | | | | | | | | | | X | | | | | |
| | Isoetes sp. | | | | | | | | X | | | | | | | | | | | | | | | |
| Juncaceae | Juncus effusus L. | X | | | X | | | | X | X | X | X | | X | | | | X | X | | | | | |
| | Juncus tenuis Willd. | | | | | | | | | | X | | | | | | | | | | | | | |
| Juncaginaceae | Scheuchzeria palustris L. | | | X | | | | | | | | X | | | | | | | | X | | | | |

A1:Y3

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 1 | MEAN pH | 4.2 | 4.35 | 4.7 | 4.8 | 4.8 | 4.9 | 5.75 | 6 | 6.05 | 6.15 | 6.25 | 7 | 7.1 | 7.1 | 7.25 | 7.3 | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 7.9 | 8.05 |
| FAMILY | GENUS & SPECIES | N'GA | TE'B | ED'S | HUM | CRN | FSB | BOG | BER | CRM | TUE | RED | NAN | BOL | BR'C | MOR | RAS | KIC | BAY | MUL | WAR | TE'C | TE'L | BR'L |
| Lamiaceae | Clinopodium vulgare L. | | | | | | | | | | | | | | X | | | | | | | X | X | |
| | Lycopus uniflorus Michx. | | | | X | X | | | | X | X | X | | | | | X | X | X | X | | | | |
| | Prunella vulgaris L. | | | | | | | | | | | | | | | | | | | | | | X | X |
| | Scutellaria integrifolia L. | | | | | | | | | | | X | | | | X | | | | | | | | X |
| Lemnaceae | Lemna minor L. | | | | | | | | | | | X | | X | X | X | | | | | | | | X |
| | Spirodela polyrrhiza (L.) Scheid. | | | | | | | | | | | | | | | X | | | | | | | | |
| Lentibulariaceae | Utricularia macrorhiza Le Co | X | X | X | X | | | X | X | | X | X | | | X | X | X | X | | | | | | |
| Liliaceae | Maianthemum canadense Desf. | | | | | | | | | | X | | | | | | X | | X | | | | | |
| | Maianthemum trifolium (L.) S | X | | | | X | | | | | | | | X | | | | | | | | | | |
| Lobeliaceae | Lobelia dortmanna L. | | | | | | | | | X | | | | | | X | | | X | | | | | |
| Lycopodiaceae | Lycopodium annotinum L. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Lycopodium clavatum L. | | | | | | | | | | | | | | | | | | X | | | | | |
| Menyanthaceae | Menyanthes trifoliata L. | | | | | | | | | | | | X | | | | | | | X | | | | |
| Myricaceae | Myrica gale L. | | | X | | | | | X | | | | X | | | | | | X | | | X | X | |
| Najadaceae | Najas flexilis (Willd.) Rostk. & Schmidt | | | | | | | | | | | | | | | | | | | X | | | | |
| Nymphaeaceae | Brasenia schreberi J.F. Gmel. | | | | | | | | X | | X | X | X | X | | | | | X | | X | | X | |
| | Nuphar lutea ssp. variegata (Dur.) E. O. Beal | | | | X | | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | X | X |
| | Nymphaea odorata Ait. | | | | | | X | X | | X | | | X | X | | X | | X | | | X | X | X | X |
| Onagraceae | Epilobium ciliatum Raf. | | | | | | | | | | | | | | | | | | | | | X | | |
| Orchidaceae | Arethusa bulbosa L. | | | | | | | | | | | | X | | | | | | | X | | | | |
| | Calopogon tuberosus (L.) B. S. P. | | X | | X | X | X | | | X | | | X | X | | | | | | X | | | | X |
| | Cypripedium acaule Ait. | | | | X | | | | | | X | | | | | | | | | | | | | |
| | Pogonia ophioglossoides (L.) Ker-Gawl | | | X | | X | | | | | X | | X | X | | | | | | X | | | | |
| | Spiranthes cernua (L.) L. C. Rich | | | | | | | | | | | | | | | | | | | X | | | | |
| Osmundaceae | Osmunda cinnamomea L. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Osmunda claytoniana L. | | | | | | | | | | | | | | | | X | | X | | | | | |
| | Osmunda regalis L. | | | | | | | | | | | | | | | | | | | | | X | | |
| Pinaceae | Abies balsamea (L.) P. Mill. | | | | | | | | | | | | | | | | X | | | | | | | |

A1:Y3

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 1 | MEAN pH | 4.2 | 4.35 | 4.7 | 4.8 | 4.8 | 4.9 | 5.75 | 6 | 6.05 | 6.15 | 6.25 | 7 | 7.1 | 7.1 | 7.25 | 7.3 | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 7.9 | 8.05 |
| FAMILY | GENUS & SPECIES | N'GA | TE'B | ED'S | HUM | CRN | FSB | BOG | BER | CRM | TUE | RED | NAN | BOL | BR'C | MOR | RAS | KIC | BAY | MUL | WAR | TE'C | TE'L | BR'L |
| | Larix laricina (Du Roi) K. Koch | | | | | | | | | | | | X | | | | | | | | | | | |
| Poaceae | Agrostis gigantea Roth | | | | | | | | | | | | | | | | | | | | | | | X |
| | Agrostis hyemalis (Walt.) B. S. P. | | | | | | | X | | | | | | | | | | | | | | X | | |
| | Calamagrostis canadensis (Michs.) Beauv. | | | | X | | | X | | | X | X | | X | X | X | X | | X | | X | X | | X |
| | Dactylis glomerata L. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Dichanthelium depauperatum (Muhl.) Gould | | | | | | | | | | | X | | | | | | | | | | | | |
| | Gylceria canadensis (Michaux) Trin. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Phleum pratense L. | | | | | | | | | | | | | | X | | | | | | | | | |
| Polygonaceae | Polygonum amphibium Waldst. & Kit. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Polygonum persicaria L. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Rumex crispus L. | | | | | | | | | | | X | | | | | | | | | | | | |
| | Rumex orbiculatus Gray | | | | | | | | | | | | | | | | | X | | | | X | X | |
| Pontederiaceae | Heteranthera dubia (Jacq.) MacM. | | | | | | | | | | | X | | | | | | | | | | | | |
| | Pontederia cordata L. | | | | X | | | | | X | X | | | | | X | | X | X | X | X | | X | X |
| Potamogetonacea | Potamogeton amplifolius Tuckerman | | | | | | | | | | | X | X | | X | X | | X | | | X | | X | X |
| | Potamogeton epihydrus Raf. | | | | | | | X | | | | X | | | X | | | | | | | | | |
| | Potamogeton foliosus Raf. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Potamogeton gramineus L. | | | | | | | | X | | X | | | | | | X | | | | | | x | |
| | Potamogeton illinoensis Morong | | | | | | | | | | | | | | | | | | | | | | x | |
| | Potamogeton natans L. | | | | | | | | | | | X | | | | | | X | | | | | | |
| | Potamogeton obtusifolius Mert. & Koch | | | | | | | | | | | | | | | X | | X | | | | | | X |
| | Potamogeton praelongus Wulfen | | | | | | | | | | | | | | | | | | | | | | X | |
| | Potamogeton pusillus L. | | | | | | | | | | | X | | | X | X | | | | | | X | | |
| | Potamogeton pusillus var. tenuissimus Mert. & Koch | | | | | | | | | | | | | | X | | | | | | | | | |
| | Potamogeton richardsonii (Benn.) Rydb. | | | | | | | | | | | | | | | | | | | | | X | X | |
| | Potamogeton robbinsii Oakes | | | | | | | X | X | | | | | | X | | | X | | | | | X | X |
| | Potamogeton zosteriformis Fern. | | | | | | | | | | | | | | | X | | | | | | | X | |
| Primulaceae | Lysimachia terrestris (L.) B. S. P. | | | | | X | | X | X | | | | | X | X | | X | | | X | X | | | |

A1:Y3

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 1 | MEAN pH | 4.2 | 4.35 | 4.7 | 4.8 | 4.8 | 4.9 | 5.75 | 6 | 6.05 | 6.15 | 6.25 | 7 | 7.1 | 7.1 | 7.25 | 7.3 | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 7.9 | 8.05 |
| FAMILY | GENUS & SPECIES | N'GA | TE'B | ED'S | HUM | CRN | FSB | BOG | BER | CRM | TUE | RED | NAN | BOL | BR'C | MOR | RAS | KIC | BAY | MUL | WAR | TE'C | TE'L | BR'L |
| | Lysimachia thyrsiflora L. | | | | X | | | | | | | | | | X | X | X | X | X | | | | X | |
| | Trientalis borealis Raf. | | X | | X | | | | | X | | | | | | | | | | | | | | |
| Ranunculaceae | Caltha palustris L. | | | | | | | | | | | | | | | X | | X | | | | | | |
| | Coptis trifolia (L.) Salisb. | | | | | | | X | | | | | | | | | | | | | | | | |
| | Ranunculus acris L. | | | | | | | | | | | | | | X | | | | | | | | X | |
| | Ranunculus longirostris Godr. | | | | | | | | | | | | | | | | | X | | | | | X | |
| | Thalictrum dioicum L. | | | | | | | | | | | | | | X | | | | | | | X | X | |
| Rosaceae | Agrimonia gryposepala Wallr. | | | | | | | | | | | | | | X | | | | | | | | | |
| | Comarum palustre L. | | | | X | | | | | X | X | X | X | X | X | X | | X | | X | X | | | X |
| | Fragaria virginiana Duchesne | | | | | | | | | | | | | | | | X | | | | | | | |
| | Geum rivale L. | | | | | | | | | X | | | | | | | | | | | | | | |
| | Potentilla arguta Pursh | | | | | | | | | | | | | | X | | | | | | | | | |
| | Potentilla norvegica L. | | | | | | | | | | | X | | | X | | | | | | | X | | |
| | Prunus pensylvanica L. f. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Prunus pumila L. | | | | | | | | | | | | | | | | X | | | | | | | |
| | Prunus virginiana L. | | | | | | | | | | | | | | | | X | | | | | | | |
| | Rubus allegheniensis Porter | | | | | | | | | | | | | | | | X | | | | | | | |
| | Rubus canadensis L. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Rubus hispidus L. | | | | | | | | | | X | | | | | | X | | | | | | X | |
| | Rubus iadaeus ssp. strigosus (Michx.) Focke | | | | | | | | | | | | | | X | | | | | | X | X | X | |
| | Waldsteinia fragarioides (Michx.) T | | X | | X | | | | | | | | | | | | | | | | | | | |
| Rubiaceae | Galium asprellum Michx. | | | | | | | | | | | | | | X | | | | | | | X | | |
| | Galium labradoricum (Wieg.) Wieg. | | | | | | | | | X | X | | | | | X | | | | | | | | |
| | Galium obtusum Bigelow | | | | | | | | X | | | | | | | | | | | | | | X | |
| | Galium palustre L. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Galium trifidum L. | | | | | | | | | | | | | | | | | X | | | | | | |
| Salicaceae | Salix discolor Muhl. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Salix exigua Nutt. | | | | | | | X | | | | | | | | | | X | | | | | | |

A1:Y3

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 1 | MEAN pH | 4.2 | 4.35 | 4.7 | 4.8 | 4.8 | 4.9 | 5.75 | 6 | 6.05 | 6.15 | 6.25 | 7 | 7.1 | 7.1 | 7.25 | 7.3 | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 7.9 | 8.05 |
| FAMILY | GENUS & SPECIES | N'GA | TE'B | ED'S | HUM | CRN | FSB | BOG | BER | CRM | TUE | RED | NAN | BOL | BR'C | MOR | RAS | KIC | BAY | MUL | WAR | TE'C | TE'L | BR'L |
| | Salix humilis Marsh | | | | | | | | | | | | X | | | | | | | | | | | |
| | Salix sericea Marsh. | | | | | | | | | | | | | | X | | | | | | | | | |
| Sarraceniaceae | Sarracenia purpurea L. | X | X | X | | X | X | | | | X | | X | X | | | | | | X | | | | |
| Saxifragaceae | Mitella nuda L. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Ribes cynosbati L. | | | | | | | | | | | | | | | | | | | | | X | | |
| Scrophulariaceae | Chelone glabra L. | | | | | | | | | | | | | | X | | | | | | | | | |
| | Scrophularia lanceolata Pursh | | | | | | | | | | | | | | X | | | | | X | | | | |
| | Veronica officinalis L. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Veronica serpyllifolia L. | | | | | | | | | | | X | | | | | | | | | | | | |
| Solanaceae | Solanum dulcamara L. | | | | | | | | | | | | | | X | | | | | | | X | | |
| Sparganiaceae | Sparganium angustifolium Michx. | | | | | | | | X | | | | | | | | | | X | | | | | |
| | Sparganium sp. | | | | | | | X | | X | | X | | | X | X | | X | X | X | X | X | X | X |
| Sphagnaceae | Sphagnum cappillifolium var. tenellum Ehrh. | | | | | | | | | | X | | | | | | X | | | | | | | |
| | Sphagnum cuspidatum Ehrh. ex Hoffm. | | | | | X | | | | | | | | | | | | | | | | | | |
| | Sphagnum fimbriatum Wils. | | | | | | | | X | | | | | | | | X | | | | | | | |
| | Sphagnum girgensohnii | | | | | | | | | X | | | | | | | | | | | | | | |
| | Sphagnum magellanicum Bri | X | X | X | X | X | X | X | | | X | X | X | X | | | X | | | | | | | |
| | Sphagnum magellanica var. magellanica | | | | X | X | | | | | | | | X | | | | | | | | | | |
| | Sphagnum recurvum P.-Beauv. | | | | | | | | | | | | X | | | | | | | X | X | | | |
| | Sphagnum recurvum var. br | X | X | | | | X | X | | | X | | | | | | | | | | | | | |
| | Sphagnum recurvum var. tenue Klinggr. (anguti | | | | X | | | | | | | | | | | | X | | | | | | | |
| | Sphagnum teres (Schimp.) Angstr. ex C. Hartm. | | | | | | | | | | | X | | | | | | | | | | | | |
| Thelyteridaceae | Thelypteris palustris Schott | | | | | | | | | | | | | | | | | X | X | | | | | |
| Thymelaeaceae | Dirca palustris L. | | | | | | | | | | | | | | | | | | X | | | | | |
| Typhaceae | Typha latifolia L. | | | | X | | | X | | X | X | X | X | X | | X | | X | X | X | X | | X | X |
| Urticaceae | Urtica dioica L. | | | | | | | | | | | | | | X | | | | | | | X | | |
| | Urtica urens L. | | | | | | | | | | | | | | | | | | | | | | | X |
| Violaceae | Viola cucullata Ait. | | | | | | | X | | X | | | | | X | X | | | | | | X | X | X |

A1:Y3

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 1 | MEAN pH | 4.2 | 4.35 | 4.7 | 4.8 | 4.8 | 4.9 | 5.75 | 6 | 6.05 | 6.15 | 6.25 | 7 | 7.1 | 7.1 | 7.25 | 7.3 | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 7.9 | 8.05 |
| FAMILY | GENUS & SPECIES | N'GA | TE'B | ED'S | HUM | CRN | FSB | BOG | BER | CRM | TUE | RED | NAN | BOL | BR'C | MOR | RAS | KIC | BAY | MUL | WAR | TE'C | TE'L | BR'L |
| | Viola macloskeyi Lloyd | | | | | | | X | | X | | X | | X | | X | | | | | | | | |
| | Viola pubescens Ait. | | | | | | | | | | | | | | X | | | | | | | | | |
| | Viola renifolia Gray | | X | | | | | X | X | X | | | X | | X | | | | | | X | | | |
| BRYOPHYTES | | | | | | | | | | | | | | | | | | | | | | | | |
| Aulacomniaceae | Aulacomnium palustre | | X | X | X | | | | | | | X | | | | X | | | | | | | | X |
| Ditrichaceae | Ceratodon purpureus | | | | | | | | | X | | | | | | | | | | | | | | |
| Mniceae | Mnium cuspidatum | | | | | | | | | | | | | | | | | X | | | | | | |
| | Rhizomnium sp. | | | | X | X | | | | | | | | | | | | | | | | | | |
| ALGAE | | | | | | | | | | | | | | | | | | | | | | | | |
| Chlorophyceae | Hydrodictyon sp. | | | | | | | | | | | | | | | | | | | | | | | X |
| Characeae | Chara vulgaris | | | | | | | | | | | | | | | | | | | | X | | | |
| | Nitella flexilus | | | | | | | | | | | | | | | X | X | | | | | | | X |
| | Nitella sp. | | | | | | | | | | | | | | | X | | | | | | | | |
| BRYOZOA | | | | | | X | | | | X | | | | | | | | | | | | | | |
| PTERIDOPHYTA | | | | | | | | | | | | | | | | | | | | | | | | |
| Dryopteridaceae | Athyrium filix-femina ssp. angustum (Willd.) Clausen | | | | | | | | | | | | | | | | | | | | | X | | |
| | Deparia acrostichoides (Sw.) M. Kato | | | | | | | | | | | | | | X | | | | | | | | | |
| | Dryopteris carthusiana (Vill.) H.P. Fuchs | | | | | | | | | | | | X | | X | | | | | | | | X | |
| | Matteuccia struthiopteris (L.) Todaro | | | | | | | | | | | | | | | | | | | | X | | | |
| | Onoclea sensibilis L. | | | | | | | X | X | | | X | | | X | X | X | X | X | | X | X | X | X |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 2 | MEAN ALKALINITY (mg/L) | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1.5 | 2 | 3 | 3 | 5 | 10 | 10.5 | 12 | 27 | 33.5 | 36 | 38 | 39.5 | 47 | 50 | 58 |
| FAMILY | GENUS & SPECIES | N'GA | TE'B | RAS | BER | CRN | BAY | HUM | TUE | BOG | ED'S | FSB | CRM | RED | NAN | BOL | MOR | TE'L | MUL | TE'C | KIC | BR'C | BR'L | WAR |
| Aceraceae | Acer rubrum L. | NC | NC | X | | NC | X | NC | NC | NC | NC | NC | NC | NC | X | NC | NC | | X | | | X | NC | |
| Alismataceae | Sagittaria latifolia Willd. | | | | | | | | | | | | X | X | | | X | X | | X | X | | X | |
| | Sagittaria sp. | | | | | | X | | | | | | | | | | | | | | | | | |
| Apiaceae | Cicuta bulbifera L. | | | | | | | | | | | | | | | | | | | X | X | X | | X |
| | Daucus carota L. | | | | | | | | | X | | | X | X | | X | X | | | | X | | X | |
| Aquifoliaceae | Ilex verticillata (L.) Gray | | | | | | X | | | | | | | | | | | | | | | | | |
| Araceae | Calla palustris L. | | X | X | | X | X | X | X | X | | | X | X | | | X | | X | X | X | X | X | X |
| Araliaceae | Aralia nudicaulis L. | | | | | | | | | X | | | | | | | | | | | | | | |
| Asclepiadaceae | Asclepias incarnata L. | | | | | | | | | | | | | | X | | X | X | X | X | X | X | | X |
| Asteraceae | Achillea millefolium L. | | | | | | | | | | | | | | | | | X | | | | X | | |
| | Actaea rubra (Ait.) Willd. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Antennaria howellii Greene | | | | | | | | | | | | | | | | | | | | | X | | |
| | Aster lateriflorus (L.) Britt. | | | | | | | | X | | | | | | | | | X | | | | | | |
| | Aster sp. | | | | | | | | | | | | | | | | | | | X | | | | |
| | Conyza canadensis (L.) Cronq. | | | | | | | | | | | | | | | | X | | | | | | | |
| | Erigeron annuus (L.) Pers. | | | X | | | | | | | | | | | | | | | | | | | | |
| | Eupatorium maculatum L. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Euthamia graminifolia (L.) Nutt. | | | X | | | | | | | | | | | | | | | X | | X | | | |
| | Hieracium aurantiacum L. | | | | | | | | | | | | | | | | | | | X | | | | X |
| | Hieracium caespitosum Dumort. | | | | | | | | | | | | | | | | | X | | X | | | | |
| | Hieracium piloselloides Vill. | | | | | | | | | | | | | | | | | | | X | | | | |
| | Lactuca canadensis L. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Leucanthemum vulgare Lam. | | | X | | | | | | | | | | | | | | X | | | | X | | |
| | Solidago gigantea Ait. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Solidago juncea Ait. | | | X | | | | | | | | | | | | | | | | | | X | | |
| | Solidago ptarmicoides (Nees) Boivin | | | | | | | | | | | | | | | | | | | X | | | | |
| | Solidago uliginosa Nutt. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Tragopogon dubius Scop. | | | X | | | | | | | | | | | | | | | | | | | | |
| Balsaminaceae | Impatiens capensis Meerb. | | | | X | | X | | | | | | | | | | | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 2 | MEAN ALKALINITY (mg/L) | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1.5 | 2 | 3 | 3 | 5 | 10 | 10.5 | 12 | 27 | 33.5 | 36 | 38 | 39.5 | 47 | 50 | 58 |
| FAMILY | GENUS & SPECIES | N'GA | TE'B | RAS | BER | CRN | BAY | HUM | TUE | BOG | ED'S | FSB | CRM | RED | NAN | BOL | MOR | TE'L | MUL | TE'C | KIC | BR'C | BR'L | WAR |
| Betulaceae | Alnus incana ssp. rugosa (D | NC | NC | X | | NC | X | NC | NC | NC | NC | NC | NC | NC | X | NC | NC | X | X | X | | X | NC | X |
| | Betula papyrifera Marsh. | | | | X | | | | | | | | X | | | | | | | | | | | |
| Boraginaceae | Myosotis laxa Lehm. | | | | | | | | | | | | | | | | | | | X | | | | |
| | Myosotis scorpioides L. | | | | | | X | | | | | | | | | | | | | | | | | |
| Brassicaceae | Barbarea vulgaris Ait. f. | | | | | | | | | | | | | | | | | X | | | | | | |
| Callitrichaceae | Callitriche palustris L. | | | | | | | | | | | | | | | | X | | | | | X | | |
| Caprifoliaceae | Lonicera canadensis Batr. ex Marsh. | | | | | | X | | | | | | | | | | | | | | | | | |
| | Lonicera x-bella Zabel | | | X | | | | | | | | | | | | | | X | | X | | | | |
| | Viburnum opulus var. americanum Ait. | | | | | | | | | | | | | | | | | | | | | X | | |
| Caryophyllaceae | Silene latifolia ssp. alba (P. Mill.) Greuter & Burdet | | | | | | | | | | | | | | | | | | | X | | X | | |
| | Stellaria graminea L. | | | | | | | | | | | | | | | | | X | | X | | | | |
| | Stellaria longifolia Muhl. ex Willd. | | X | | | | | | | | | | | | | | | | | | | | | |
| Ceratophyllaceae | Ceratophyllum demersum L. | | | | | | | | | | | | | | | X | | X | | X | X | X | X | |
| Clusiaceae | Hypericum ascyron L. | | | | | X | | | | | | | | X | | | | | | | | | X | |
| | Hypericum boreale (Britt.) Bickn. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Hypericum ellipticum Hook. | | | | | | | | | | | | | | | | X | | | | | | | |
| | Hypericum majus (Gray) Britt. | | | | | | X | | | | | | | | | | | | | | | | | |
| | Hypericum perforatum L. | | | | X | | | | | | | | | | | | | | | | | | | |
| | Hypericum sp. | | | | | X | | | | | | | X | X | | | X | | | | | | | |
| | Triadenum fraseri (Spach) Gleason | | | X | | X | | X | | X | | | | | | | | | X | | X | | | X |
| Cornaceae | Cornus alternifolia L. f. | | | | | | | | | X | | | | | | | | | | | | X | | |
| | Cornus canadensis L. | | | | X | | | | | | | | | | | | | | | | | | | |
| | Cornus sericea L. | | | | | | | | | | | | | | | | | | X | X | | | | X |
| Cyperaceae | Carex bebbii Olney ex Fern. | | | | | | | | X | X | X | | | X | | | | | | | | | X | |
| | Carex canescens L. | | | | | X | | | | X | | | | | | X | | | | | | | | |
| | Carex comosa Boott | | | | | | | | | | | | | | | | | X | | | | | | X |
| | Carex crawfordii Fern. | | | | | | | | | | | | | X | | | | | | | | | | |
| | Carex crinata Lam. | | | | | | X | X | | | | | | | | | | X | | | | | | |
| | Carex diandra Schrank | | | | | | | | | | | | X | | | | | | X | | X | | | X |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 2 | MEAN ALKALINITY (mg/L) | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1.5 | 2 | 3 | 3 | 5 | 10 | 10.5 | 12 | 27 | 33.5 | 36 | 38 | 39.5 | 47 | 50 | 58 |
| FAMILY | GENUS & SPECIES | N'GA | TE'B | RAS | BER | CRN | BAY | HUM | TUE | BOG | ED'S | FSB | CRM | RED | NAN | BOL | MOR | TE'L | MUL | TE'C | KIC | BR'C | BR'L | WAR |
| | Carex gracillima Schwein | | X | | | | | | | | | | X | X | | | | | | | | | | |
| | Carex interior Bailey | X | | X | X | X | | X | X | | | | | | X | X | | | | | | | | |
| | Carex lasiocarpa Ehrh. | | | | | | | | | | | | | | X | | | | X | | X | | | X |
| | Carex limosa L. | X | X | | | X | | | | | X | | | | | | | | | | | | | |
| | Carex pauciflora Lightf. | | X | | | | | | | | | X | | X | | | | | | | | | | |
| | Carex paupercula Michaux. | X | | | | | | X | | | X | X | | | | | X | | | | | | | |
| | Carex pseudocyperus L. | | | | | | | | | | | | | | | | X | | | | | | | |
| | Carex retrorsa Schwein | | | | | | | | | | | | | | | | | | | | | | X | |
| | Carex rostrata Stokes | | | X | X | | X | | | | X | | X | | X | | | X | | X | | | | |
| | Carex stipata Muhl. ex Willd. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Carex stricta Lam. | | | | | | | | X | | | | | | | X | | X | | | | X | X | X |
| | Carex tribuloides Mackenzie | | | | | | | | | X | | | | X | | X | X | | | | | | X | |
| | Carex tribuloides Wahl. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Carex trisperma Dewey | | X | | | X | | | | | | | | | | X | | | | | | | X | |
| | Carex tuckermanii Dewey | | | X | | | | | | | | | | | | | | | | | | | | |
| | Carex versicolor L. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Dulichium arundinaceum (L.) Britt. | | | | X | | X | X | X | X | | | X | X | | | | | X | | | | | |
| | Eleocharis obtusa (Willd.) J. A. Schultes | | | | X | | | | | | | | | | X | | | | | | | | | X |
| | Eleocharis smallii Britt. | | | | | | | | X | | | | | | | | X | | | | | | | |
| | Eriophorum gracile W.D.J. Koch | | | | | | | | | | | | | | | | | | | | X | | | X |
| | Eriophorum vaginatum var. s | X | X | | | | | | X | | X | X | | | | | | | | | | | | |
| | Luzula acuminata Raf. | | | | | | | | | X | | | | | | | | | | | | | | |
| | Rhynchospora alba (L.) Vah | X | X | | | X | | | X | | X | | | | | X | X | | | | | | | |
| | Scirpus acutus Muhl. ex Bigelow | | | | | | | | X | X | X | | | | | | | | | | | | X | |
| | Scirpus americanus Pers. | | | | | | | | | | | | | | | | | X | | | | | X | |
| | Scirpus atrovirens Willd. | | | X | | | | | | | | | X | | | | | | | | | | | |
| | Scirpus cyperinus (L.) Kunth | | | | | X | | | | | | | | | | X | | | | | | | | |
| Dennstaedtiaceae | Pteridium aquilinum (L.) Kuhn | | | X | | | X | | | | | | | | | | | | | X | | | | |
| Droceraceae | Drosera rotundifolia L. | X | X | X | X | X | | X | X | X | X | X | X | X | | | | | X | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 2 | MEAN ALKALINITY (mg/L) | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1.5 | 2 | 3 | 3 | 5 | 10 | 10.5 | 12 | 27 | 33.5 | 36 | 38 | 39.5 | 47 | 50 | 58 |
| FAMILY | GENUS & SPECIES | N'GA | TE'B | RAS | BER | CRN | BAY | HUM | TUE | BOG | ED'S | FSB | CRM | RED | NAN | BOL | MOR | TE'L | MUL | TE'C | KIC | BR'C | BR'L | WAR |
| Equisetaceae | Equisetum arvense L. | | | X | | | X | | | | | X | X | X | | X | X | X | | | X | | | X |
| | Equisetum fluviatile L. | | | | | | X | | | | | | | | | | | | | | | | | |
| | Equisetum sylvaticum L. | | | | | | | | | | | | | | | | | | | | | X | | |
| Ericaceae | Andromeda glaucophylla Lin | X | X | | | X | | X | X | | X | X | X | X | X | | | | X | | X | | | X |
| | Chamaedaphne calyculata ( | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | X | | X | | | X |
| | Gaultheria hispidula (L.) Muh | X | X | | | X | | X | | | X | | | | | X | | | | | | | | |
| | Kalmia polifolia Wangenh | X | X | X | | X | | X | X | | X | X | X | X | X | X | | | | | | | | X |
| | Ledum groenlandicum Oeder | X | X | X | | X | | X | X | | X | X | | | | | | | X | | | | | |
| | Vaccinium macrocarpon Ait. | | | X | X | | | | | | | | | | X | | | | X | | | | | |
| | Vaccinium myrtilloides Michx | X | | | | X | | | X | | X | | | X | | | | | | | | | | |
| | Vaccinium oxycoccus L. | X | X | X | | X | | | X | | X | | | | X | X | | | | | | | | X |
| Eriocaulonaceae | Eriocaulon aquaticum (Hill) Druce | | | | X | | X | | | | | | | | | | | | | | | | | |
| Fabaceae | Melilotis officinalis (L.) Lam. | | | | | | | | | X | | | | | | | | X | | | | | | |
| | Trifolium repens L. | | | | | | | | | | | | | | | | X | | | | | | | |
| Gentianaceae | Menyanthes trifoliata L. | X | | | | | | | X | | | | | | | X | | | | | | | | |
| Haloragaceae | Myriophyllum sibiricum Komarov | | | | X | | X | | | | | | | | X | | | X | | | X | | | |
| Hydrocharitaceae | Elodea canadensis Michx. | | | | | | | | | | | | | | | | | X | | X | X | X | X | |
| | Vallisneria americana Michx. | | | | | | | | | | | | | | | | | X | | | | | | |
| Iridaceae | Iris versicolor L. | | | | | | X | X | X | X | | | X | X | X | X | | | X | | X | X | | X |
| Isoetaceae | Isoetes echinospora Durieu | | | X | | | | | | | | | X | | | | | | | | | | | |
| | Isoetes riparia Engelm. ex A. Braun | | | | | | X | | | | | | | | | | | | | | | | | |
| | Isoetes sp. | | | | X | | | | | | | | | | | | | | | | | | | |
| Juncaceae | Juncus effusus L. | X | | | X | | X | X | X | | | | X | X | | X | | | | | X | | | |
| | Juncus tenuis Willd. | | | | | | | | X | | | | | | | | | | | | | | | |
| Juncaginaceae | Scheuchzeria palustris L. | | | | | | | | | | X | | | X | | | | | X | | | | | |
| Lamiaceae | Clinopodium vulgare L. | | | | | | | | | | | | | | | | | X | | X | | X | | |
| | Lycopus uniflorus Michx. | | | X | | X | X | X | X | | | | X | X | | | | | X | | X | | | |
| | Prunella vulgaris L. | | | | | | | | | | | | | | | | | X | | | | | X | |
| | Scutellaria integrifolia L. | | | | | | | | | | | | | X | | | X | | | | | | X | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 2 | MEAN ALKALINITY (mg/L) | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1.5 | 2 | 3 | 3 | 5 | 10 | 10.5 | 12 | 27 | 33.5 | 36 | 38 | 39.5 | 47 | 50 | 58 |
| FAMILY | GENUS & SPECIES | N'GA | TE'B | RAS | BER | CRN | BAY | HUM | TUE | BOG | ED'S | FSB | CRM | RED | NAN | BOL | MOR | TE'L | MUL | TE'C | KIC | BR'C | BR'L | WAR |
| Lemnaceae | Lemna minor L. | | | | | | | | | | | | | X | | X | X | | | | | X | X | |
| | Spirodela polyrrhiza (L.) Scheid. | | | | | | | | | | | | | | | | X | | | | | | | |
| Lentibulariaceae | Utricularia macrorhiza Le Co | X | X | X | X | | | X | X | X | X | | | X | | | X | | | | X | X | | |
| Liliaceae | Maianthemum canadense Desf. | | | X | | | X | | X | | | | | | | | | | | | | | | |
| | Maianthemum trifolium (L.) S | X | | | | X | | | | | | | | | | X | | | | | | | | |
| Lobeliaceae | Lobelia dortmanna L. | | | | | | X | | | | | | X | | | | X | | | | | | | |
| Lycopodiaceae | Lycopodium annotinum L. | | | | | | X | | | | | | | | | | | | | | | | | |
| | Lycopodium clavatum L. | | | | | | X | | | | | | | | | | | | | | | | | |
| Menyanthaceae | Menyanthes trifoliata L. | | | | | | | | | | | | | | X | | | | X | | | | | |
| Myricaceae | Myrica gale L. | | | | X | | X | | | | X | | | | X | | | X | | X | | | | |
| Najadaceae | Najas flexilis (Willd.) Rostk. & Schmidt | | | | | | | | | | | | | | | | | | X | | | | | |
| Nymphaeaceae | Brasenia schreberi J.F. Gmel. | | | | X | | X | | X | | | | | X | X | X | | X | | | | | | X |
| | Nuphar lutea ssp. variegata (Dur.) E. O. | | | X | X | | X | X | X | X | | | X | X | X | X | X | X | X | | X | X | X | X |
| | Nymphaea odorata Ait. | | | | | | | | | X | | X | X | | X | X | X | X | | X | X | | X | X |
| Onagraceae | Epilobium ciliatum Raf. | | | | | | | | | | | | | | | | | | | X | | | | |
| Orchidaceae | Arethusa bulbosa L. | | | | | | | | | | | | | | X | | | | X | | | | | |
| | Calopogon tuberosus (L.) B. S. P. | | X | | | X | | X | | | | X | X | | X | X | | | X | | | | X | |
| | Cypripedium acaule Ait. | | | | | | | X | X | | | | | | | | | | | | | | | |
| | Pogonia ophioglossoides (L.) Ker-Gawl | | | | | X | | | X | | X | | | | X | X | | | X | | | | | |
| | Spiranthes cernua (L.) L. C. Rich | | | | | | | | | | | | | | | | | | X | | | | | |
| Osmundaceae | Osmunda cinnamomea L. | | | | | | X | | | | | | | | | | | | | | | | | |
| | Osmunda claytoniana L. | | | X | | | X | | | | | | | | | | | | | | | | | |
| | Osmunda regalis L. | | | | | | | | | | | | | | | | | | | X | | | | |
| Pinaceae | Abies balsamea (L.) P. Mill. | | | X | | | | | | | | | | | | | | | | | | | | |
| | Larix laricina (Du Roi) K. Koch | | | | | | | | | | | | | | X | | | | | | | | | |
| Poaceae | Agrostis gigantea Roth | | | | | | | | | | | | | | | | | | | | | | X | |
| | Agrostis hyemalis (Walt.) B. S. P. | | | | | | | | | X | | | | | | | | | | X | | | | |
| | Calamagrostis canadensis (Michs.) Beau | | | X | | | X | X | X | X | | | | X | | X | X | | | X | | X | X | X |
| | Dactylis glomerata L. | | | | | | | | | | | | | | | | | | | | | | X | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 2 | MEAN ALKALINITY (mg/L) | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1.5 | 2 | 3 | 3 | 5 | 10 | 10.5 | 12 | 27 | 33.5 | 36 | 38 | 39.5 | 47 | 50 | 58 |
| FAMILY | GENUS & SPECIES | N'GA | TE'B | RAS | BER | CRN | BAY | HUM | TUE | BOG | ED'S | FSB | CRM | RED | NAN | BOL | MOR | TE'L | MUL | TE'C | KIC | BR'C | BR'L | WAR |
| | Dichanthelium depauperatum (Muhl.) Gould | | | | | | | | | | | | | X | | | | | | | | | | |
| | Gylceria canadensis (Michaux) Trin. | | | | X | | | | | | | | | | | | | | | | | | | |
| | Phleum pratense L. | | | | | | | | | | | | | | | | | | | | | X | | |
| Polygonaceae | Polygonum amphibium Waldst. & Kit. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Polygonum persicaria L. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Rumex crispus L. | | | | | | | | | | | | | X | | | | | | | | | | |
| | Rumex orbiculatus Gray | | | | | | | | | | | | | | | | | X | | X | X | | | |
| Pontederiaceae | Heteranthera dubia (Jacq.) MacM. | | | | | | | | | | | | | X | | | | | | | | | | |
| | Pontederia cordata L. | | | | | | X | X | X | | | | X | | | | X | X | X | | X | | X | X |
| Potamogetonacea | Potamogeton amplifolius Tuckerman | | | | | | | | | | | | | X | X | | X | X | | | X | X | X | X |
| | Potamogeton epihydrus Raf. | | | | | | | | | X | | | | X | | | | | | | | X | | |
| | Potamogeton foliosus Raf. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Potamogeton gramineus L. | | | X | X | | | | X | | | | | | | | | x | | | | | | |
| | Potamogeton illinoensis Morong | | | | | | | | | | | | | | | | | x | | | | | | |
| | Potamogeton natans L. | | | | | | | | | | | | | X | | | | | | | X | | | |
| | Potamogeton obtusifolius Mert. & Koch | | | | | | | | | | | | | | | | X | | | | X | | X | |
| | Potamogeton praelongus Wulfen | | | | | | | | | | | | | | | | | X | | | | | | |
| | Potamogeton pusillus L. | | | | | | | | | | | | | X | | | X | | | X | | X | | |
| | Potamogeton pusillus var. tenuissimus Mert. & Koch | | | | | | | | | | | | | | | | | | | | | X | | |
| | Potamogeton richardsonii (Benn.) Rydb. | | | | | | | | | | | | | | | | | X | | X | | | | |
| | Potamogeton robbinsii Oakes | | | | X | | | | | X | | | | | | | | X | | | X | X | X | |
| | Potamogeton zosteriformis Fern. | | | | | | | | | | | | | | | | X | X | | | | | | |
| Primulaceae | Lysimachia terrestris (L.) B. S. P. | | | X | X | X | | | | X | | | | | | X | | | X | | | X | | X |
| | Lysimachia thyrsiflora L. | | | X | | | X | X | | | | | | | | | X | X | | | X | X | | |
| | Trientalis borealis Raf. | | X | | | | | X | | | | | X | | | | | | | | | | | |
| Ranunculaceae | Caltha palustris L. | | | | | | | | | | | | | | | | X | | | | X | | | |
| | Coptis trifolia (L.) Salisb. | | | | | | | | | X | | | | | | | | | | | | | | |
| | Ranunculus acris L. | | | | | | | | | | | | | | | | | X | | | | X | | |
| | Ranunculus longirostris Godr. | | | | | | | | | | | | | | | | | X | | | X | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 2 | MEAN ALKALINITY (mg/L) | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1.5 | 2 | 3 | 3 | 5 | 10 | 10.5 | 12 | 27 | 33.5 | 36 | 38 | 39.5 | 47 | 50 | 58 |
| FAMILY | GENUS & SPECIES | N'GA | TE'B | RAS | BER | CRN | BAY | HUM | TUE | BOG | ED'S | FSB | CRM | RED | NAN | BOL | MOR | TE'L | MUL | TE'C | KIC | BR'C | BR'L | WAR |
| ALGAE | | | | | | | | | | | | | | | | | | | | | | | | |
| Chlorophyceae | Hydrodictyon sp. | | | | | | | | | | | | | | | | | | | | | | X | |
| Characeae | Chara vulgaris | | | | | | | | | | | | | | | | | | | | | | | X |
| | Nitella flexilus | | | X | | | | | | | | | | | | | X | | | | | | X | |
| | Nitella sp. | | | | | | | | | | | | | | | | X | | | | | | | |
| BRYOZOA | | | | | | X | | | | | | | X | | | | | | | | | | | |
| PTERIDOPHYTA | | | | | | | | | | | | | | | | | | | | | | | | |
| Dryopteridaceae | Athyrium filix-femina ssp. angustum (Willd.) Clausen | | | | | | | | | | | | | | | | | | | X | | | | |
| | Deparia acrostichoides (Sw.) M. Kato | | | | | | | | | | | | | | | | | | | | | X | | |
| | Dryopteris carthusiana (Vill.) H.P. Fuchs | | | | | | | | | | | | | | X | | | X | | | | X | | |
| | Matteuccia struthiopteris (L.) Todaro | | | | | | | | | | | | | | | | | | | | | | | X |
| | Onoclea sensibilis L. | | | X | X | | X | | | X | | | | X | | | X | X | | X | X | X | X | X |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 2 | MEAN ALKALINITY (mg/L) | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1.5 | 2 | 3 | 3 | 5 | 10 | 10.5 | 12 | 27 | 33.5 | 36 | 38 | 39.5 | 47 | 50 | 58 |
| FAMILY | GENUS & SPECIES | N'GA | TE'B | RAS | BER | CRN | BAY | HUM | TUE | BOG | ED'S | FSB | CRM | RED | NAN | BOL | MOR | TE'L | MUL | TE'C | KIC | BR'C | BR'L | WAR |
| | Thalictrum dioicum L. | | | | | | | | | | | | | | | | | X | | X | | X | | |
| Rosaceae | Agrimonia gryposepala Wallr. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Comarum palustre L. | | | | | | | X | X | | | | X | X | X | X | X | | X | | X | X | X | X |
| | Fragaria virginiana Duchesne | | | X | | | | | | | | | | | | | | | | | | | | |
| | Geum rivale L. | | | | | | | | | | | | X | | | | | | | | | | | |
| | Potentilla arguta Pursh | | | | | | | | | | | | | | | | | | | | | X | | |
| | Potentilla norvegica L. | | | | | | | | | | | | | X | | | | | | X | | X | | |
| | Prunus pensylvanica L. f. | | | | | | X | | | | | | | | | | | | | | | | | |
| | Prunus pumila L. | | | X | | | | | | | | | | | | | | | | | | | | |
| | Prunus virginiana L. | | | X | | | | | | | | | | | | | | | | | | | | |
| | Rubus allegheniensis Porter | | | X | | | | | | | | | | | | | | | | | | | | |
| | Rubus canadensis L. | | | | X | | | | | | | | | | | | | | | | | | | |
| | Rubus hispidus L. | | | X | | | | | X | | | | | | | | | X | | | | | | |
| | Rubus iadaeus ssp. strigosus (Michx.) Focke | | | | | | | | | | | | | | | | | X | | X | | X | | X |
| | Waldsteinia fragarioides (Michx.) T | | X | | | | | X | | | | | | | | | | | | | | | | |
| Rubiaceae | Galium asprellum Michx. | | | | | | | | | | | | | | | | | | | X | | X | | |
| | Galium labradoricum (Wieg.) Wieg. | | | | | | | | X | | | | X | | | | X | | | | | | | |
| | Galium obtusum Bigelow | | | | X | | | | | | | | | | | | | X | | | | | | |
| | Galium palustre L. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Galium trifidum L. | | | | | | | | | | | | | | | | | | | | X | | | |
| Salicaceae | Salix discolor Muhl. | | | | X | | | | | | | | | | | | | | | | | | | |
| | Salix exigua Nutt. | | | | | | | | | X | | | | | | | | | | | X | | | |
| | Salix humilis Marsh | | | | | | | | | | | | | | X | | | | | | | | | |
| | Salix sericea Marsh. | | | | | | | | | | | | | | | | | | | | | X | | |
| Sarraceniaceae | Sarracenia purpurea L. | X | X | | | X | | | X | | X | X | | | X | X | | | X | | | | | |
| Saxifragaceae | Mitella nuda L. | | | | | | X | | | | | | | | | | | | | | | | | |
| | Ribes cynosbati L. | | | | | | | | | | | | | | | | | | | X | | | | |
| Scrophulariaceae | Chelone glabra L. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Scrophularia lanceolata Pursh | | | | | | | | | | | | | | | | | | X | | | X | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 2 | MEAN ALKALINITY (mg/L) | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1.5 | 2 | 3 | 3 | 5 | 10 | 10.5 | 12 | 27 | 33.5 | 36 | 38 | 39.5 | 47 | 50 | 58 |
| FAMILY | GENUS & SPECIES | N'GA | TE'B | RAS | BER | CRN | BAY | HUM | TUE | BOG | ED'S | FSB | CRM | RED | NAN | BOL | MOR | TE'L | MUL | TE'C | KIC | BR'C | BR'L | WAR |
| | Veronica officinalis L. | | | | X | | | | | | | | | | | | | | | | | | | |
| | Veronica serpyllifolia L. | | | | | | | | | | | | | X | | | | | | | | | | |
| Solanaceae | Solanum dulcamara L. | | | | | | | | | | | | | | | | | | | X | | X | | |
| Sparganiaceae | Sparganium angustifolium Michx. | | | | X | | X | | | | | | | | | | | | | | | | | |
| | Sparganium sp. | | | | | | X | | | X | | | X | X | | | X | X | X | X | X | X | X | X |
| Sphagnaceae | Sphagnum cappillifolium var. tenellum Eh | | | X | | | | | X | | | | | | | | | | | | | | | |
| | Sphagnum cuspidatum Ehrh. ex Hoffm. | | | | | X | | | | | | | | | | | | | | | | | | |
| | Sphagnum fimbriatum Wils. | | | X | X | | | | | | | | | | | | | | | | | | | |
| | Sphagnum girgensohnii | | | | | | | | | | | | X | | | | | | | | | | | |
| | Sphagnum magellanicum Bri | X | X | X | | X | | X | X | X | X | X | | X | X | X | | | | | | | | |
| | Sphagnum magellanica var. magellanica | | | | | X | | X | | | | | | | | X | | | | | | | | |
| | Sphagnum recurvum P.-Beauv. | | | | | | | | | | | | | | X | | | | X | | | | | X |
| | Sphagnum recurvum var. br | X | X | | | | | | X | X | | X | | | | | | | | | | | | |
| | Sphagnum recurvum var. tenue Klinggr. ( | | | X | | | | X | | | | | | | | | | | | | | | | |
| | Sphagnum teres (Schimp.) Angstr. ex C. Hartm. | | | | | | | | | | | | | X | | | | | | | | | | |
| Thelyteridaceae | Thelypteris palustris Schott | | | | | | X | | | | | | | | | | | | | | X | | | |
| Thymelaeaceae | Dirca palustris L. | | | | | | X | | | | | | | | | | | | | | | | | |
| Typhaceae | Typha latifolia L. | | | | | | X | X | X | X | | | X | X | X | X | X | X | X | | X | | X | X |
| Urticaceae | Urtica dioica L. | | | | | | | | | | | | | | | | | | | X | | X | | |
| | Urtica urens L. | | | | | | | | | | | | | | | | | | | | | | X | |
| Violaceae | Viola cucullata Ait. | | | | | | | | | X | | | X | | | | X | X | | X | | X | X | |
| | Viola macloskeyi Lloyd | | | | | | | | | X | | | X | X | | X | X | | | | | | | |
| | Viola pubescens Ait. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Viola renifolia Gray | | X | | X | | | | | X | | | X | | X | | | | | | | X | | X |
| BRYOPHYTES | | | | | | | | | | | | | | | | | | | | | | | | |
| Aulacomniaceae | Aulacomnium palustre | | X | | | | | X | | | X | | | X | | | X | | | | | | X | |
| Ditrichaceae | Ceratodon purpureus | | | | | | | | | | | | X | | | | | | | | | | | |
| Mniceae | Mnium cuspidatum | | | | | | | | | | | | | | | | | | | | X | | | |
| | Rhizomnium sp. | | | | | X | | X | | | | | | | | | | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 3 | MAXIMUM DEPTH (M) | 1 | 1 | 2 | 3.25 | 3.25 | 3.5 | 4.5 | 5.5 | 6 | 6 | 6.71 | 7 | 7 | 7 | 7.5 | 9.14 | 12 | 13.7 | 15 | 15.3 | 16 | 19 | ND |
| FAMILY | GENUS & SPECIES | BR'C | TE'C | BOG | NAN | KIC | BOL | FSB | BR'L | RAS | N'GA | MOR | WAR | ED'S | HUM | CRN | TE'L | BER | BAY | TE'B | CRM | RED | TUE | MUL |
| Aceraceae | Acer rubrum L. | X | | NC | X | | NC | NC | NC | X | NC | NC | | NC | NC | NC | | | X | NC | NC | NC | NC | X |
| Alismataceae | Sagittaria latifolia Willd. | | X | | | X | | | X | | | X | | | | | X | | | | X | X | | |
| | Sagittaria sp. | | | | | | | | | | | | | | | | | | X | | | | | |
| Apiaceae | Cicuta bulbifera L. | X | X | | | X | | | | | | | X | | | | | | | | | | | |
| | Daucus carota L. | | | X | | X | X | | X | | | X | | | | | | | | | X | X | | |
| Aquifoliaceae | Ilex verticillata (L.) Gray | | | | | | | | | | | | | | | | | | X | | | | | |
| Araceae | Calla palustris L. | X | X | X | | X | | | X | X | | X | X | | X | X | | | X | X | X | X | X | X |
| Araliaceae | Aralia nudicaulis L. | | | X | | | | | | | | | | | | | | | | | | | | |
| Asclepiadaceae | Asclepias incamata L. | X | X | | X | X | | | | | | X | X | | | | X | | | | | | | X |
| Asteraceae | Achillea millefolium L. | X | | | | | | | | | | | | | | | X | | | | | | | |
| | Actaea rubra (Ait.) Willd. | | | | | X | | | | | | | | | | | | | | | | | | |
| | Antennaria howellii Greene | X | | | | | | | | | | | | | | | | | | | | | | |
| | Aster lateriflorus (L.) Britt. | | | | | | | | | | | | | | | | X | | | | | | X | |
| | Aster sp. | | X | | | | | | | | | | | | | | | | | | | | | |
| | Conyza canadensis (L.) Cronq. | | | | | | | | | | | X | | | | | | | | | | | | |
| | Erigeron annuus (L.) Pers. | | | | | | | | | X | | | | | | | | | | | | | | |
| | Eupatorium maculatum L. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Euthamia graminifolia (L.) Nutt. | | | | | X | | | | X | | | | | | | | | | | | | | X |
| | Hieracium aurantiacum L. | | X | | | | | | | | | | X | | | | | | | | | | | |
| | Hieracium caespitosum Dumort. | | X | | | | | | | | | | | | | | X | | | | | | | |
| | Hieracium piloselloides Vill. | | X | | | | | | | | | | | | | | | | | | | | | |
| | Lactuca canadensis L. | | | | | | | | | | | | | | | | X | | | | | | | |
| | Leucanthemum vulgare Lam | X | | | | | | | | X | | | | | | | X | | | | | | | |
| | Solidago gigantea Ait. | X | | | | | | | | | | | | | | | | | | | | | | |
| | Solidago juncea Ait. | X | | | | | | | | X | | | | | | | | | | | | | | |
| | Solidago ptarmicoides (Nees) Boivi | | X | | | | | | | | | | | | | | | | | | | | | |
| | Solidago uliginosa Nutt. | X | | | | | | | | | | | | | | | | | | | | | | |
| | Tragopogon dubius Scop. | | | | | | | | | X | | | | | | | | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 3 | MAXIMUM DEPTH (M) | 1 | 1 | 2 | 3.25 | 3.25 | 3.5 | 4.5 | 5.5 | 6 | 6 | 6.71 | 7 | 7 | 7 | 7.5 | 9.14 | 12 | 13.7 | 15 | 15.3 | 16 | 19 | ND |
| FAMILY | GENUS & SPECIES | BR'C | TE'C | BOG | NAN | KIC | BOL | FSB | BR'L | RAS | N'GA | MOR | WAR | ED'S | HUM | CRN | TE'L | BER | BAY | TE'B | CRM | RED | TUE | MUL |
| Balsaminaceae | Impatiens capensis Meerb. | | | | | | | | | | | | | | | | | X | X | | | | | |
| Betulaceae | Alnus incana ssp. rugosa (D | X | X | NC | X | | NC | NC | NC | X | NC | NC | X | NC | NC | NC | X | | X | NC | NC | NC | NC | X |
| | Betula papyrifera Marsh. | | | | | | | | | | | | | | | | | X | | | X | | | |
| Boraginaceae | Myosotis laxa Lehm. | | X | | | | | | | | | | | | | | | | | | | | | |
| | Myosotis scorpioides L. | | | | | | | | | | | | | | | | | | X | | | | | |
| Brassicaceae | Barbarea vulgaris Ait. f. | | | | | | | | | | | | | | | | X | | | | | | | |
| Callitrichaceae | Callitriche palustris L. | X | | | | | | | | | | X | | | | | | | | | | | | |
| Caprifoliaceae | Lonicera canadensis Batr. ex Marsh. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Lonicera x-bella Zabel | | X | | | | | | | X | | | | | | | X | | | | | | | |
| | Viburnum opulus var. americ | X | | | | | | | | | | | | | | | | | | | | | | |
| Caryophyllaceae | Silene latifolia ssp. alba (P. | X | X | | | | | | | | | | | | | | | | | | | | | |
| | Stellaria graminea L. | | X | | | | | | | | | | | | | | X | | | | | | | |
| | Stellaria longifolia Muhl. ex Willd. | | | | | | | | | | | | | | | | | | | X | | | | |
| Ceratophyllaceae | Ceratophyllum demersum L. | X | X | | | X | X | | X | | | | | | | | X | | | | | | | |
| Clusiaceae | Hypericum ascyron L. | | | | | | | | X | | | | | | | X | | | | | | X | | |
| | Hypericum boreale (Britt.) Bickn. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Hypericum ellipticum Hook. | | | | | | | | | | | X | | | | | | | | | | | | |
| | Hypericum majus (Gray) Britt. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Hypericum perforatum L. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Hypericum sp. | | | | | | | | | | | X | | | | X | | | | | X | X | | |
| | Triadenum fraseri (Spach) Gleason | | | X | | X | | | | X | | | X | | X | X | | | | | | | | X |
| Cornaceae | Cornus alternifolia L. f. | X | | X | | | | | | | | | | | | | | | | | | | | |
| | Cornus canadensis L. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Cornus sericea L. | | X | | | | | | | | | | X | | | | | | | | | | | X |
| Cyperaceae | Carex bebbii Olney ex Fern. | | | X | | | | | X | | | | | X | | | | | | | | X | X | |
| | Carex canescens L. | | | X | | | X | | | | | | | | | X | | | | | | | | |
| | Carex comosa Boott | | | | | | | | | | | | X | | | | X | | | | | | | |
| | Carex crawfordii Fern. | | | | | | | | | | | | | | | | | | | | | X | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 3 | MAXIMUM DEPTH (M) | 1 | 1 | 2 | 3.25 | 3.25 | 3.5 | 4.5 | 5.5 | 6 | 6 | 6.71 | 7 | 7 | 7 | 7.5 | 9.14 | 12 | 13.7 | 15 | 15.3 | 16 | 19 | ND |
| FAMILY | GENUS & SPECIES | BR'C | TE'C | BOG | NAN | KIC | BOL | FSB | BR'L | RAS | N'GA | MOR | WAR | ED'S | HUM | CRN | TE'L | BER | BAY | TE'B | CRM | RED | TUE | MUL |
| | Carex crinata Lam. | | | | | | | | | | | | | | X | | X | | X | | | | | |
| | Carex diandra Schrank | | | | | X | | | | | | | X | | | | | | | | X | | | X |
| | Carex gracillima Schwein | | | | | | | | | | | | | | | | | | | X | X | X | | |
| | Carex interior Bailey | | | | X | | X | | | X | X | | | | X | X | | X | | | | | X | |
| | Carex lasiocarpa Ehrh. | | | | X | X | | | | | | | X | | | | | | | | | | | X |
| | Carex limosa L. | | | | | | | | | | X | | | X | | X | | | | X | | | | |
| | Carex pauciflora Lightf. | | | | | | | X | | | | | | | | | | | | X | | X | | |
| | Carex paupercula Michaux. | | | | | | | X | | | X | X | | X | X | | | | | | | | | |
| | Carex pseudocyperus L. | | | | | | | | | | | X | | | | | | | | | | | | |
| | Carex retrorsa Schwein | | | | | | | | X | | | | | | | | | | | | | | | |
| | Carex rostrata Stokes | | X | | X | | | | | X | | | | X | | | X | X | X | | X | | | |
| | Carex stipata Muhl. ex Willd. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Carex stricta Lam. | X | | | | | X | | X | | | | X | | | | X | | | | | | X | |
| | Carex tribuloides Mackenzie | | | X | | | X | | X | | | X | | | | | | | | | | X | | |
| | Carex tribuloides Wahl. | | | | | | | | | | | | | | | | X | | | | | | | |
| | Carex trisperma Dewey | | | | | | X | | X | | | | | | | X | | | | X | | | | |
| | Carex tuckermanii Dewey | | | | | | | | | X | | | | | | | | | | | | | | |
| | Carex versicolor L. | X | | | | | | | | | | | | | | | | | | | | | | |
| | Dulichium arundinaceum (L.) Britt. | | | X | | | | | | | | | | | X | | | X | X | | X | X | X | X |
| | Eleocharis obtusa (Willd.) J. A. Schultes | | | | X | | | | | | | | X | | | | | X | | | | | | |
| | Eleocharis smallii Britt. | | | | | | | | | | | X | | | | | | | | | | | X | |
| | Eriophorum gracile W.D.J. Koch | | | | | X | | | | | | | X | | | | | | | | | | | |
| | Eriophorum vaginatum var. spissum (Fern.) Boivin | | | | | | | X | | | X | | | X | | | | | | X | | | X | |
| | Luzula acuminata Raf. | | | X | | | | | | | | | | | | | | | | | | | | |
| | Rhynchospora alba (L.) Vahl | | | | | | X | | | | X | X | | X | | X | | | | X | | | X | |
| | Scirpus acutus Muhl. ex Bigelow | | | X | | | | | X | | | | | X | | | | | | | | | X | |
| | Scirpus americanus Pers. | | | | | | | | X | | | | | | | | X | | | | | | | |
| | Scirpus atrovirens Willd. | | | | | | | | | X | | | | | | | | | | | X | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 3 | MAXIMUM DEPTH (M) | 1 | 1 | 2 | 3.25 | 3.25 | 3.5 | 4.5 | 5.5 | 6 | 6 | 6.71 | 7 | 7 | 7 | 7.5 | 9.14 | 12 | 13.7 | 15 | 15.3 | 16 | 19 | ND |
| FAMILY | GENUS & SPECIES | BR'C | TE'C | BOG | NAN | KIC | BOL | FSB | BR'L | RAS | N'GA | MOR | WAR | ED'S | HUM | CRN | TE'L | BER | BAY | TE'B | CRM | RED | TUE | MUL |
| | Scirpus cyperinus (L.) Kunth | | | | | | X | | | | | | | | | X | | | | | | | | |
| Dennstaedtiaceae | Pteridium aquilinum (L.) Kuhn | | X | | | | | | | X | | | | | | | | | X | | | | | |
| Droceraceae | Drosera rotundifolia L. | | | X | | | | X | | X | X | | | X | X | X | | X | | X | X | X | X | X |
| Equisetaceae | Equisetum arvense L. | | | | | X | X | X | | X | | X | X | | | | X | | X | | X | X | | |
| | Equisetum fluviatile L. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Equisetum sylvaticum L. | X | | | | | | | | | | | | | | | | | | | | | | |
| Ericaceae | Andromeda glaucophylla Link | | | | X | X | | X | | | X | | X | X | X | X | | | | X | X | X | X | X |
| | Chamaedaphne calyculata (L.) Moench | | | X | X | X | X | X | | X | X | X | X | X | X | X | | X | X | X | X | X | X | X |
| | Gaultheria hispidula (L.) Muhl.ex Bigelow | | | | | | X | | | | X | | | X | X | X | | | | X | | | | |
| | Kalmia polifolia Wangenh | | | | X | | X | X | | X | X | | X | X | X | X | | | | X | X | X | X | |
| | Ledum groenlandicum Oeder | | | | | | | X | | X | X | | | X | X | X | | | | X | | | X | X |
| | Vaccinium macrocarpon Ait. | | | | X | | | | | X | | | | | | | | X | | | | | | X |
| | Vaccinium myrtilloides Michx. | | | | | | | | | | X | | | X | | X | | | | | | X | X | |
| | Vaccinium oxycoccus L. | | | | X | | X | | | X | X | | X | X | | X | | | | X | | | X | |
| Eriocaulonaceae | Eriocaulon aquaticum (Hill) Druce | | | | | | | | | | | | | | | | | X | X | | | | | |
| Fabaceae | Melilotis officinalis (L.) Lam. | | | X | | | | | | | | | | | | | X | | | | | | | |
| | Trifolium repens L. | | | | | | | | | | | X | | | | | | | | | | | | |
| Gentianaceae | Menyanthes trifoliata L. | | | | | | X | | | | X | | | | | | | | | | | | X | |
| Haloragaceae | Myriophyllum sibiricum Komarov | | | | X | X | | | | | | | | | | | X | X | X | | | | | |
| Hydrocharitaceae | Elodea canadensis Michx. | X | X | | | X | | | X | | | | | | | | X | | | | | | | |
| | Vallisneria americana Michx. | | | | | | | | | | | | | | | | X | | | | | | | |
| Iridaceae | Iris versicolor L. | X | | X | X | X | X | | | | | | X | | X | | | | X | | X | X | X | X |
| Isoetaceae | Isoetes echinospora Durieu | | | | | | | | | X | | | | | | | | | | | X | | | |
| | Isoetes riparia Engelm. ex A. Braun | | | | | | | | | | | | | | | | | | X | | | | | |
| | Isoetes sp. | | | | | | | | | | | | | | | | | X | | | | | | |
| Juncaceae | Juncus effusus L. | | | | | X | X | | | | X | | | | X | | | X | X | | X | X | X | |
| | Juncus tenuis Willd. | | | | | | | | | | | | | | | | | | | | | | X | |
| Juncaginaceae | Scheuchzeria palustris L. | | | | | | | | | | | | | X | | | | | | | | X | | X |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 3 | MAXIMUM DEPTH (M) | 1 | 1 | 2 | 3.25 | 3.25 | 3.5 | 4.5 | 5.5 | 6 | 6 | 6.71 | 7 | 7 | 7 | 7.5 | 9.14 | 12 | 13.7 | 15 | 15.3 | 16 | 19 | ND |
| FAMILY | GENUS & SPECIES | BR'C | TE'C | BOG | NAN | KIC | BOL | FSB | BR'L | RAS | N'GA | MOR | WAR | ED'S | HUM | CRN | TE'L | BER | BAY | TE'B | CRM | RED | TUE | MUL |
| Lamiaceae | Clinopodium vulgare L. | X | X | | | | | | | | | | | | | | X | | | | | | | |
| | Lycopus uniflorus Michx. | | | | | X | | | | X | | | | | X | X | | | X | | X | X | X | X |
| | Prunella vulgaris L. | | | | | | | | X | | | | | | | | X | | | | | | | |
| | Scutellaria integrifolia L. | | | | | | | | X | | | X | | | | | | | | | | X | | |
| Lemnaceae | Lemna minor L. | X | | | | | X | | X | | | X | | | | | | | | | | X | | |
| | Spirodela polyrrhiza (L.) Scheid. | | | | | | | | | | | X | | | | | | | | | | | | |
| Lentibulariaceae | Utricularia macrorhiza Le Co | X | | X | | X | | | | X | X | X | | X | X | | | X | | X | | X | X | |
| Liliaceae | Maianthemum canadense Desf. | | | | | | | | | X | | | | | | | | | X | | | | X | |
| | Maianthemum trifolium (L.) Sloboda | | | | | | X | | | | X | | | | | X | | | | | | | | |
| Lobeliaceae | Lobelia dortmanna L. | | | | | | | | | | | X | | | | | | | X | | X | | | |
| Lycopodiaceae | Lycopodium annotinum L. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Lycopodium clavatum L. | | | | | | | | | | | | | | | | | | X | | | | | |
| Menyanthaceae | Menyanthes trifoliata L. | | | | X | | | | | | | | | | | | | | | | | | | X |
| Myricaceae | Myrica gale L. | | X | | X | | | | | | | | | X | | | X | X | X | | | | | |
| Najadaceae | Najas flexilis (Willd.) Rostk. & Schmidt | | | | | | | | | | | | | | | | | | | | | | | X |
| Nymphaeaceae | Brasenia schreberi J.F. Gmel. | | | | X | | X | | | | | | X | | | | X | X | X | | | X | X | |
| | Nuphar lutea ssp. variegata ( | X | | X | X | X | X | | X | X | | X | X | | X | | X | X | X | | X | X | X | X |
| | Nymphaea odorata Ait. | | X | X | X | X | X | X | X | | | X | X | | | | X | | | | X | | | |
| Onagraceae | Epilobium ciliatum Raf. | | X | | | | | | | | | | | | | | | | | | | | | |
| Orchidaceae | Arethusa bulbosa L. | | | | X | | | | | | | | | | | | | | | | | | | X |
| | Calopogon tuberosus (L.) B. S. P. | | | | X | | X | X | X | | | | | | X | X | | | | X | X | | | X |
| | Cypripedium acaule Ait. | | | | | | | | | | | | | | X | | | | | | | | X | |
| | Pogonia ophioglossoides (L.) Ker-Gawl | | | | X | | X | | | | | | | X | | X | | | | | | | X | X |
| | Spiranthes cernua (L.) L. C. Rich | | | | | | | | | | | | | | | | | | | | | | | X |
| Osmundaceae | Osmunda cinnamomea L. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Osmunda claytoniana L. | | | | | | | | | X | | | | | | | | | X | | | | | |
| | Osmunda regalis L. | | X | | | | | | | | | | | | | | | | | | | | | |
| Pinaceae | Abies balsamea (L.) P. Mill. | | | | | | | | | X | | | | | | | | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 3 | MAXIMUM DEPTH (M) | 1 | 1 | 2 | 3.25 | 3.25 | 3.5 | 4.5 | 5.5 | 6 | 6 | 6.71 | 7 | 7 | 7 | 7.5 | 9.14 | 12 | 13.7 | 15 | 15.3 | 16 | 19 | ND |
| FAMILY | GENUS & SPECIES | BR'C | TE'C | BOG | NAN | KIC | BOL | FSB | BR'L | RAS | N'GA | MOR | WAR | ED'S | HUM | CRN | TE'L | BER | BAY | TE'B | CRM | RED | TUE | MUL |
| | Larix laricina (Du Roi) K. Koch | | | | X | | | | | | | | | | | | | | | | | | | |
| Poaceae | Agrostis gigantea Roth | | | | | | | | X | | | | | | | | | | | | | | | |
| | Agrostis hyemalis (Walt.) B. S. P. | | X | X | | | | | | | | | | | | | | | | | | | | |
| | Calamagrostis canadensis ( | X | X | X | | | X | | X | X | | X | X | | X | | | | X | | | X | X | |
| | Dactylis glomerata L. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Dichanthelium depauperatum (Muhl.) Gould | | | | | | | | | | | | | | | | | | | | | X | | |
| | Gylceria canadensis (Michaux) Trin. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Phleum pratense L. | X | | | | | | | | | | | | | | | | | | | | | | |
| Polygonaceae | Polygonum amphibium Waldst. & Kit. | | | | | X | | | | | | | | | | | | | | | | | | |
| | Polygonum persicaria L. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Rumex crispus L. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Rumex orbiculatus Gray | | X | | | X | | | | | | | | | | | X | | | | | | | |
| Pontederiaceae | Heteranthera dubia (Jacq.) MacM. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Pontederia cordata L. | | | | | X | | | X | | | X | X | | X | | X | | X | | X | | X | X |
| Potamogetonacea | Potamogeton amplifolius Tuc | X | | | X | X | | | X | | | X | X | | | | X | | | | | X | | |
| | Potamogeton epihydrus Raf. | X | | X | | | | | | | | | | | | | | | | | | X | | |
| | Potamogeton foliosus Raf. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Potamogeton gramineus L. | | | | | | | | | X | | | | | | | x | X | | | | | X | |
| | Potamogeton illinoensis Morong | | | | | | | | | | | | | | | | x | | | | | | | |
| | Potamogeton natans L. | | | | | X | | | | | | | | | | | | | | | | X | | |
| | Potamogeton obtusifolius Mert. & Koch | | | | | X | | | X | | | X | | | | | | | | | | | | |
| | Potamogeton praelongus Wulfen | | | | | | | | | | | | | | | | X | | | | | | | |
| | Potamogeton pusillus L. | X | X | | | | | | | | | X | | | | | | | | | | X | | |
| | Potamogeton pusillus var. t | X | | | | | | | | | | | | | | | | | | | | | | |
| | Potamogeton richardsonii (Benn.) R | | X | | | | | | | | | | | | | | X | | | | | | | |
| | Potamogeton robbinsii Oake | X | | X | | X | | | X | | | | | | | | X | X | | | | | | |
| | Potamogeton zosteriformis Fern. | | | | | | | | | | | X | | | | | X | | | | | | | |
| Primulaceae | Lysimachia terrestris (L.) B. | X | | X | | | X | | | X | | | X | | | X | | X | | | | | | X |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 3 | MAXIMUM DEPTH (M) | 1 | 1 | 2 | 3.25 | 3.25 | 3.5 | 4.5 | 5.5 | 6 | 6 | 6.71 | 7 | 7 | 7 | 7.5 | 9.14 | 12 | 13.7 | 15 | 15.3 | 16 | 19 | ND |
| FAMILY | GENUS & SPECIES | BR'C | TE'C | BOG | NAN | KIC | BOL | FSB | BR'L | RAS | N'GA | MOR | WAR | ED'S | HUM | CRN | TE'L | BER | BAY | TE'B | CRM | RED | TUE | MUL |
| | Lysimachia thyrsiflora L. | X | | | | X | | | | X | | X | | | X | | X | | X | | | | | |
| | Trientalis borealis Raf. | | | | | | | | | | | | | | X | | | | | X | X | | | |
| Ranunculaceae | Caltha palustris L. | | | | | X | | | | | | X | | | | | | | | | | | | |
| | Coptis trifolia (L.) Salisb. | | | X | | | | | | | | | | | | | | | | | | | | |
| | Ranunculus acris L. | X | | | | | | | | | | | | | | | X | | | | | | | |
| | Ranunculus longirostris Godr. | | | | | X | | | | | | | | | | | X | | | | | | | |
| | Thalictrum dioicum L. | X | X | | | | | | | | | | | | | | X | | | | | | | |
| Rosaceae | Agrimonia gryposepala Wallr | X | | | | | | | | | | | | | | | | | | | | | | |
| | Comarum palustre L. | X | | | X | X | X | | X | | | X | X | | X | | | | | | X | X | X | X |
| | Fragaria virginiana Duchesne | | | | | | | | | X | | | | | | | | | | | | | | |
| | Geum rivale L. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Potentilla arguta Pursh | X | | | | | | | | | | | | | | | | | | | | | | |
| | Potentilla norvegica L. | X | X | | | | | | | | | | | | | | | | | | | X | | |
| | Prunus pensylvanica L. f. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Prunus pumila L. | | | | | | | | | X | | | | | | | | | | | | | | |
| | Prunus virginiana L. | | | | | | | | | X | | | | | | | | | | | | | | |
| | Rubus allegheniensis Porter | | | | | | | | | X | | | | | | | | | | | | | | |
| | Rubus canadensis L. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Rubus hispidus L. | | | | | | | | | X | | | | | | | X | | | | | | X | |
| | Rubus iadaeus ssp. strigosu | X | X | | | | | | | | | | X | | | | X | | | | | | | |
| | Waldsteinia fragarioides (Michx.) Tratt. | | | | | | | | | | | | | | X | | | | | X | | | | |
| Rubiaceae | Galium asprellum Michx. | X | X | | | | | | | | | | | | | | | | | | | | | |
| | Galium labradoricum (Wieg.) Wieg. | | | | | | | | | | | X | | | | | | | | | X | | X | |
| | Galium obtusum Bigelow | | | | | | | | | | | | | | | | X | X | | | | | | |
| | Galium palustre L. | | | | | | | | | | | | | | | | X | | | | | | | |
| | Galium trifidum L. | | | | | X | | | | | | | | | | | | | | | | | | |
| Salicaceae | Salix discolor Muhl. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Salix exigua Nutt. | | | X | | X | | | | | | | | | | | | | | | | | | |

MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC — Christie Brown, UNDERC 1997

| CHART 3 | MAXIMUM DEPTH (M) | 1 | 1 | 2 | 3.25 | 3.25 | 3.5 | 4.5 | 5.5 | 6 | 6 | 6.71 | 7 | 7 | 7 | 7.5 | 9.14 | 12 | 13.7 | 15 | 15.3 | 16 | 19 | ND |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FAMILY | GENUS & SPECIES | BR'C | TE'C | BOG | NAN | KIC | BOL | FSB | BR'L | RAS | N'GA | MOR | WAR | ED'S | HUM | CRN | TE'L | BER | BAY | TE'B | CRM | RED | TUE | MUL |
| | Salix humilis Marsh | | | | X | | | | | | | | | | | | | | | | | | | |
| | Salix sericea Marsh. | X | | | | | | | | | | | | | | | | | | | | | | |
| Sarraceniaceae | Sarracenia purpurea L. | | | | X | | X | X | | | X | | | X | | X | | | | X | | | X | X |
| Saxifragaceae | Mitella nuda L. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Ribes cynosbati L. | | X | | | | | | | | | | | | | | | | | | | | | |
| Scrophulariaceae | Chelone glabra L. | X | | | | | | | | | | | | | | | | | | | | | | |
| | Scrophularia lanceolata Purs | X | | | | | | | | | | | | | | | | | | | | | | X |
| | Veronica officinalis L. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Veronica serpyllifolia L. | | | | | | | | | | | | | | | | | | | | | X | | |
| Solanaceae | Solanum dulcamara L. | X | X | | | | | | | | | | | | | | | | | | | | | |
| Sparganiaceae | Sparganium angustifolium Michx. | | | | | | | | | | | | | | | | | X | X | | | | | |
| | Sparganium sp. | X | X | X | | X | | | X | | | X | X | | | | X | | X | | X | X | | X |
| Sphagnaceae | Sphagnum cappillifolium var. tenellum Ehrh. | | | | | | | | | X | | | | | | | | | | | | | X | |
| | Sphagnum cuspidatum Ehrh. ex Hoffm. | | | | | | | | | | | | | | | X | | | | | | | | |
| | Sphagnum fimbriatum Wils. | | | | | | | | | X | | | | | | | | X | | | | | | |
| | Sphagnum girgensohnii | | | | | | | | | | | | | | | | | | | | X | | | |
| | Sphagnum magellanicum Brid. | | | X | X | | X | X | | X | X | | | X | X | X | | | | X | | X | X | |
| | Sphagnum magellanica var. magellanica | | | | | | X | | | | | | | | X | X | | | | | | | | |
| | Sphagnum recurvum P.-Beauv. | | | | X | | | | | | | | X | | | | | | | | | | | X |
| | Sphagnum recurvum var. brevifolium | | | X | | | | X | | | X | | | | | | | | | X | | | X | |
| | Sphagnum recurvum var. tenue Klinggr. (angutifolium) | | | | | | | | | X | | | | | X | | | | | | | | | |
| | Sphagnum teres (Schimp.) Angstr. ex C. Hartm. | | | | | | | | | | | | | | | | | | | | | X | | |
| Thelyteridaceae | Thelypteris palustris Schott | | | | | X | | | | | | | | | | | | | X | | | | | |
| Thymelaeaceae | Dirca palustris L. | | | | | | | | | | | | | | | | | | X | | | | | |
| Typhaceae | Typha latifolia L. | | | X | X | X | X | | X | | | X | X | | X | | X | | X | | X | X | X | X |
| Urticaceae | Urtica dioica L. | X | X | | | | | | | | | | | | | | | | | | | | | |
| | Urtica urens L. | | | | | | | | X | | | | | | | | | | | | | | | |
| Violaceae | Viola cucullata Ait. | X | X | X | | | | | X | | | X | | | | | X | | | | X | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 3 | MAXIMUM DEPTH (M) | 1 | 1 | 2 | 3.25 | 3.25 | 3.5 | 4.5 | 5.5 | 6 | 6 | 6.71 | 7 | 7 | 7 | 7.5 | 9.14 | 12 | 13.7 | 15 | 15.3 | 16 | 19 | ND |
| FAMILY | GENUS & SPECIES | BR'C | TE'C | BOG | NAN | KIC | BOL | FSB | BR'L | RAS | N'GA | MOR | WAR | ED'S | HUM | CRN | TE'L | BER | BAY | TE'B | CRM | RED | TUE | MUL |
| | Viola macloskeyi Lloyd | | | X | | | X | | | | | X | | | | | | | | | X | X | | |
| | Viola pubescens Ait. | X | | | | | | | | | | | | | | | | | | | | | | |
| | Viola renifolia Gray | X | | X | X | | | | | | | | X | | | | | X | | X | X | | | |
| BRYOPHYTES | | | | | | | | | | | | | | | | | | | | | | | | |
| Aulacomniaceae | Aulacomnium palustre | | | | | | | | X | | | X | | X | X | | | | | X | | X | | |
| Ditrichaceae | Ceratodon purpureus | | | | | | | | | | | | | | | | | | | | X | | | |
| Mniceae | Mnium cuspidatum | | | | | X | | | | | | | | | | | | | | | | | | |
| | Rhizomnium sp. | | | | | | | | | | | | | | X | X | | | | | | | | |
| ALGAE | | | | | | | | | | | | | | | | | | | | | | | | |
| Chlorophyceae | Hydrodictyon sp. | | | | | | | | X | | | | | | | | | | | | | | | |
| Characeae | Chara vulgaris | | | | | | | | | | | | X | | | | | | | | | | | |
| | Nitella flexilus | | | | | | | | X | X | | X | | | | | | | | | | | | |
| | Nitella sp. | | | | | | | | | | | X | | | | | | | | | | | | |
| BRYOZOA | | | | | | | | | | | | | | | | X | | | | | X | | | |
| PTERIDOPHYTA | | | | | | | | | | | | | | | | | | | | | | | | |
| Dryopteridaceae | Athyrium filix-femina ssp. angustum | | X | | | | | | | | | | | | | | | | | | | | | |
| | Deparia acrostichoides (Sw.) | X | | | | | | | | | | | | | | | | | | | | | | |
| | Dryopteris carthusiana (Vill.) | X | | | X | | | | | | | | | | | | X | | | | | | | |
| | Matteuccia struthiopteris (L.) Todaro | | | | | | | | | | | | X | | | | | | | | | | | |
| | Onoclea sensibilis L. | X | X | X | | X | | | X | X | | X | X | | | | X | X | X | | | X | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 4 | MAXIMUM LENGTH (M) | 51.9 | 52.8 | 64.1 | 73 | 123 | 141 | 149 | 155.6 | 181 | 189 | 221.1 | 322 | 332 | 335 | 335 | 490 | 685 | 773 | 785 | 1610 | 2126 | N/A | N/A |
| FAMILY | GENUS & SPECIES | ED'S | TE'B | FSB | N'GA | TUE | RED | MUL | HUM | BOL | CRN | WAR | RAS | NAN | MOR | BOG | KIC | BER | BR'L | CRM | BAY | TE'L | TE'C | BR'C |
| Aceraceae | Acer rubrum L. | NC | NC | NC | NC | NC | NC | X | NC | NC | NC | | X | X | NC | NC | | | NC | NC | X | | | X |
| Alismataceae | Sagittaria latifolia Willd. | | | | | | X | | | | | | | | X | | X | | X | X | | X | X | |
| | Sagittaria sp. | | | | | | | | | | | | | | | | | | | | X | | | |
| Apiaceae | Cicuta bulbifera L. | | | | | | | | | | | X | | | | | X | | | | | | X | X |
| | Daucus carota L. | | | | | | X | | | X | | | | | X | X | X | | X | X | | | | |
| Aquifoliaceae | Ilex verticillata (L.) Gray | | | | | | | | | | | | | | | | | | | | X | | | |
| Araceae | Calla palustris L. | | X | | | X | X | X | X | | X | X | X | | X | X | X | | X | X | X | | X | X |
| Araliaceae | Aralia nudicaulis L. | | | | | | | | | | | | | | | X | | | | | | | | |
| Asclepiadaceae | Asclepias incarnata L. | | | | | | | X | | | | X | | X | X | | X | | | | | X | X | X |
| Asteraceae | Achillea millefolium L. | | | | | | | | | | | | | | | | | | | | | X | | X |
| | Actaea rubra (Ait.) Willd. | | | | | | | | | | | | | | | | X | | | | | | | |
| | Antennaria howellii Greene | | | | | | | | | | | | | | | | | | | | | | | X |
| | Aster lateriflorus (L.) Britt. | | | | | X | | | | | | | | | | | | | | | | X | | |
| | Aster sp. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Conyza canadensis (L.) Cronq. | | | | | | | | | | | | | | X | | | | | | | | | |
| | Erigeron annuus (L.) Pers. | | | | | | | | | | | | X | | | | | | | | | | | |
| | Eupatorium maculatum L. | | | | | | | X | | | | | | | | | | | | | | | | |
| | Euthamia graminifolia (L.) Nutt. | | | | | | | X | | | | | X | | | | X | | | | | | | |
| | Hieracium aurantiacum L. | | | | | | | | | | | X | | | | | | | | | | | X | |
| | Hieracium caespitosum Dumort. | | | | | | | | | | | | | | | | | | | | | X | X | |
| | Hieracium piloselloides Vill. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Lactuca canadensis L. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Leucanthemum vulgare Lam. | | | | | | | | | | | | X | | | | | | | | | X | | X |
| | Solidago gigantea Ait. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Solidago juncea Ait. | | | | | | | | | | | | X | | | | | | | | | | | X |
| | Solidago ptarmicoides (Nees) Boivin | | | | | | | | | | | | | | | | | | | | | | X | |
| | Solidago uliginosa Nutt. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Tragopogon dubius Scop. | | | | | | | | | | | | X | | | | | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 4 | MAXIMUM LENGTH (M) | 51.9 | 52.8 | 64.1 | 73 | 123 | 141 | 149 | 155.6 | 181 | 189 | 221.1 | 322 | 332 | 335 | 335 | 490 | 685 | 773 | 785 | 1610 | 2126 | N/A | N/A |
| FAMILY | GENUS & SPECIES | ED'S | TE'B | FSB | N'GA | TUE | RED | MUL | HUM | BOL | CRN | WAR | RAS | NAN | MOR | BOG | KIC | BER | BR'L | CRM | BAY | TE'L | TE'C | BR'C |
| Balsaminaceae | Impatiens capensis Meerb. | | | | | | | | | | | | | | | | | X | | | X | | | |
| Betulaceae | Alnus incana ssp. rugosa (D | NC | NC | NC | NC | NC | NC | X | NC | NC | NC | X | X | X | NC | NC | | | NC | NC | X | X | X | X |
| | Betula papyrifera Marsh. | | | | | | | | | | | | | | | | | X | | X | | | | |
| Boraginaceae | Myosotis laxa Lehm. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Myosotis scorpioides L. | | | | | | | | | | | | | | | | | | | | X | | | |
| Brassicaceae | Barbarea vulgaris Ait. f. | | | | | | | | | | | | | | | | | | | | | X | | |
| Callitrichaceae | Callitriche palustris L. | | | | | | | | | | | | | | X | | | | | | | | | X |
| Caprifoliaceae | Lonicera canadensis Batr. ex Marsh. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Lonicera x-bella Zabel | | | | | | | | | | | | X | | | | | | | | | X | X | |
| | Viburnum opulus var. americanum Ait. | | | | | | | | | | | | | | | | | | | | | | | X |
| Caryophyllaceae | Silene latifolia ssp. alba (P. Mill.) Greuter & Burdet | | | | | | | | | | | | | | | | | | | | | | X | X |
| | Stellaria graminea L. | | | | | | | | | | | | | | | | | | | | | X | X | |
| | Stellaria longifolia Muhl. ex Willd. | | X | | | | | | | | | | | | | | | | | | | | | |
| Ceratophyllaceae | Ceratophyllum demersum L. | | | | | | | | | X | | | | | | | X | | X | | | X | X | X |
| Clusiaceae | Hypericum ascyron L. | | | | | | X | | | | X | | | | | | | | X | | | | | |
| | Hypericum boreale (Britt.) Bickn. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Hypericum ellipticum Hook. | | | | | | | | | | | | | | X | | | | | | | | | |
| | Hypericum majus (Gray) Britt. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Hypericum perforatum L. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Hypericum sp. | | | | | | X | | | | X | | | | X | | | | | X | | | | |
| | Triadenum fraseri (Spach) Gleason | | | | | | | X | X | | X | X | X | | | X | X | | | | | | | |
| Cornaceae | Cornus alternifolia L. f. | | | | | | | | | | | | | | | X | | | | | | | | X |
| | Cornus canadensis L. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Cornus sericea L. | | | | | | | X | | | | X | | | | | | | | | | | X | |
| Cyperaceae | Carex bebbii Olney ex Fern. | X | | | | X | X | | | | | | | | | X | | | X | | | | | |
| | Carex canescens L. | | | | | | | | | X | X | | | | | X | | | | | | | | |
| | Carex comosa Boott | | | | | | | | | | | X | | | | | | | | | | X | | |
| | Carex crawfordii Fern. | | | | | | X | | | | | | | | | | | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 4 | MAXIMUM LENGTH (M) | 51.9 | 52.8 | 64.1 | 73 | 123 | 141 | 149 | 155.6 | 181 | 189 | 221.1 | 322 | 332 | 335 | 335 | 490 | 685 | 773 | 785 | 1610 | 2126 | N/A | N/A |
| FAMILY | GENUS & SPECIES | ED'S | TE'B | FSB | N'GA | TUE | RED | MUL | HUM | BOL | CRN | WAR | RAS | NAN | MOR | BOG | KIC | BER | BR'L | CRM | BAY | TE'L | TE'C | BR'C |
| | Carex crinata Lam. | | | | | | | | X | | | | | | | | | | | | X | X | | |
| | Carex diandra Schrank | | | | | | | X | | | | X | | | | | X | | | X | | | | |
| | Carex gracillima Schwein | | X | | | | X | | | | | | | | | | | | | X | | | | |
| | Carex interior Bailey | | | | X | X | | | X | X | X | | X | X | | | | X | | | | | | |
| | Carex lasiocarpa Ehrh. | | | | | | | X | | | | X | | X | | | X | | | | | | | |
| | Carex limosa L. | X | X | | X | | | | | | X | | | | | | | | | | | | | |
| | Carex pauciflora Lightf. | | X | X | | | X | | | | | | | | | | | | | | | | | |
| | Carex paupercula Michaux. | X | | X | X | | | | X | | | | | | X | | | | | | | | | |
| | Carex pseudocyperus L. | | | | | | | | | | | | | | X | | | | | | | | | |
| | Carex retrorsa Schwein | | | | | | | | | | | | | | | | | | X | | | | | |
| | Carex rostrata Stokes | X | | | | | | | | | | | X | X | | | | X | | X | X | X | X | |
| | Carex stipata Muhl. ex Willd. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Carex stricta Lam. | | | | | X | | | | X | | X | | | | | | | X | | | X | | X |
| | Carex tribuloides Mackenzie | | | | | | X | | | X | | | | | X | X | | | X | | | | | |
| | Carex tribuloides Wahl. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Carex trisperma Dewey | | X | | | | | | | X | X | | | | | | | | X | | | | | |
| | Carex tuckermanii Dewey | | | | | | | | | | | | X | | | | | | | | | | | |
| | Carex versicolor L. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Dulichium arundinaceum (L.) Britt. | | | | | X | X | X | X | | | | | | | X | | X | | X | X | | | |
| | Eleocharis obtusa (Willd.) J. A. Schultes | | | | | | | | | | | X | | X | | | | X | | | | | | |
| | Eleocharis smallii Britt. | | | | | X | | | | | | | | | X | | | | | | | | | |
| | Eriophorum gracile W.D.J. Koch | | | | | | | | | | | X | | | | | X | | | | | | | |
| | Eriophorum vaginatum var. s | X | X | X | X | X | | | | | | | | | | | | | | | | | | |
| | Luzula acuminata Raf. | | | | | | | | | | | | | | | X | | | | | | | | |
| | Rhynchospora alba (L.) Vah | X | X | | X | X | | | | X | X | | | | X | | | | | | | | | |
| | Scirpus acutus Muhl. ex Big | X | | | | X | | | | | | | | | | X | | | X | | | | | |
| | Scirpus americanus Pers. | | | | | | | | | | | | | | | | | | X | | | X | | |
| | Scirpus atrovirens Willd. | | | | | | | | | | | | X | | | | | | | X | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 4 | MAXIMUM LENGTH (M) | 51.9 | 52.8 | 64.1 | 73 | 123 | 141 | 149 | 155.6 | 181 | 189 | 221.1 | 322 | 332 | 335 | 335 | 490 | 685 | 773 | 785 | 1610 | 2126 | N/A | N/A |
| FAMILY | GENUS & SPECIES | ED'S | TE'B | FSB | N'GA | TUE | RED | MUL | HUM | BOL | CRN | WAR | RAS | NAN | MOR | BOG | KIC | BER | BR'L | CRM | BAY | TE'L | TE'C | BR'C |
| | Scirpus cyperinus (L.) Kunth | | | | | | | | | X | X | | | | | | | | | | | | | |
| Dennstaedtiaceae | Pteridium aquilinum (L.) Kuhn | | | | | | | | | | | | X | | | | | | | | X | | X | |
| Droceraceae | Drosera rotundifolia L. | X | X | X | X | X | X | X | X | | X | | X | | | X | | X | | X | | | | |
| Equisetaceae | Equisetum arvense L. | | | X | | | X | | | X | | X | X | | X | | X | | | X | X | X | | |
| | Equisetum fluviatile L. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Equisetum sylvaticum L. | | | | | | | | | | | | | | | | | | | | | | | X |
| Ericaceae | Andromeda glaucophylla Lin | X | X | X | X | X | X | X | X | | X | X | | X | | | X | | | X | | | | |
| | Chamaedaphne calyculata ( | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | X | X | | | |
| | Gaultheria hispidula (L.) Muh | X | X | | X | | | | X | X | X | | | | | | | | | | | | | |
| | Kalmia polifolia Wangenh | X | X | X | X | X | X | | X | X | X | X | X | X | | | | | | X | | | | |
| | Ledum groenlandicum Oeder | X | X | X | X | X | | X | X | | X | | X | | | | | | | | | | | |
| | Vaccinium macrocarpon Ait. | | | | | | | X | | | | | X | X | | | | X | | | | | | |
| | Vaccinium myrtilloides Michx | X | | | X | X | X | | | | X | | | | | | | | | | | | | |
| | Vaccinium oxycoccus L. | X | X | | X | X | | | | X | X | X | X | X | | | | | | | | | | |
| Eriocaulonaceae | Eriocaulon aquaticum (Hill) Druce | | | | | | | | | | | | | | | | | X | | | X | | | |
| Fabaceae | Melilotis officinalis (L.) Lam. | | | | | | | | | | | | | | | X | | | | | | X | | |
| | Trifolium repens L. | | | | | | | | | | | | | | X | | | | | | | | | |
| Gentianaceae | Menyanthes trifoliata L. | | | | X | X | | | | X | | | | | | | | | | | | | | |
| Haloragaceae | Myriophyllum sibiricum Komarov | | | | | | | | | | | | | X | | | X | X | | | X | X | | |
| Hydrocharitaceae | Elodea canadensis Michx. | | | | | | | | | | | | | | | | X | | X | | | X | X | X |
| | Vallisneria americana Michx. | | | | | | | | | | | | | | | | | | | | | X | | |
| Iridaceae | Iris versicolor L. | | | | | X | X | X | X | X | | X | | X | | X | X | | | X | X | | | X |
| Isoetaceae | Isoetes echinospora Durieu | | | | | | | | | | | | X | | | | | | | X | | | | |
| | Isoetes riparia Engelm. ex A. Braun | | | | | | | | | | | | | | | | | | | | X | | | |
| | Isoetes sp. | | | | | | | | | | | | | | | | | X | | | | | | |
| Juncaceae | Juncus effusus L. | | | | X | X | X | | X | X | | | | | | | X | X | | X | X | | | |
| | Juncus tenuis Willd. | | | | | X | | | | | | | | | | | | | | | | | | |
| Juncaginaceae | Scheuchzeria palustris L. | X | | | | | X | X | | | | | | | | | | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 4 | MAXIMUM LENGTH (M) | 51.9 | 52.8 | 64.1 | 73 | 123 | 141 | 149 | 155.6 | 181 | 189 | 221.1 | 322 | 332 | 335 | 335 | 490 | 685 | 773 | 785 | 1610 | 2126 | N/A | N/A |
| FAMILY | GENUS & SPECIES | ED'S | TE'B | FSB | N'GA | TUE | RED | MUL | HUM | BOL | CRN | WAR | RAS | NAN | MOR | BOG | KIC | BER | BR'L | CRM | BAY | TE'L | TE'C | BR'C |
| Lamiaceae | Clinopodium vulgare L. | | | | | | | | | | | | | | | | | | | | | X | X | X |
| | Lycopus uniflorus Michx. | | | | | X | X | X | X | | X | | X | | | | X | | | X | X | | | |
| | Prunella vulgaris L. | | | | | | | | | | | | | | | | | | X | | | X | | |
| | Scutellaria integrifolia L. | | | | | | X | | | | | | | | X | | | | X | | | | | |
| Lemnaceae | Lemna minor L. | | | | | | X | | | X | | | | | X | | | | X | | | | | X |
| | Spirodela polyrrhiza (L.) Scheid. | | | | | | | | | | | | | | X | | | | | | | | | |
| Lentibulariaceae | Utricularia macrorhiza Le Co | X | X | | X | X | X | | X | | | | X | | X | X | X | X | | | | | | X |
| Liliaceae | Maianthemum canadense Desf. | | | | | X | | | | | | | X | | | | | | | | X | | | |
| | Maianthemum trifolium (L.) Sloboda | | | | X | | | | | X | X | | | | | | | | | | | | | |
| Lobeliaceae | Lobelia dortmanna L. | | | | | | | | | | | | | | X | | | | | X | X | | | |
| Lycopodiaceae | Lycopodium annotinum L. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Lycopodium clavatum L. | | | | | | | | | | | | | | | | | | | | X | | | |
| Menyanthaceae | Menyanthes trifoliata L. | | | | | | | X | | | | | | X | | | | | | | | | | |
| Myricaceae | Myrica gale L. | X | | | | | | | | | | | | X | | | | X | | | X | X | X | |
| Najadaceae | Najas flexilis (Willd.) Rostk. & Schmidt | | | | | | | X | | | | | | | | | | | | | | | | |
| Nymphaeaceae | Brasenia schreberi J.F. Gmel. | | | | | X | X | | | X | | X | | X | | | | X | | | X | X | | |
| | Nuphar lutea ssp. variegata (Dur.) E. O. Beal | | | | | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | | X |
| | Nymphaea odorata Ait. | | | X | | | | | | X | | X | | X | X | X | X | | X | X | | X | X | |
| Onagraceae | Epilobium ciliatum Raf. | | | | | | | | | | | | | | | | | | | | | | X | |
| Orchidaceae | Arethusa bulbosa L. | | | | | | | X | | | | | | X | | | | | | | | | | |
| | Calopogon tuberosus (L.) B. S. P. | | X | X | | | | X | X | X | X | | | X | | | | | X | X | | | | |
| | Cypripedium acaule Ait. | | | | | X | | | X | | | | | | | | | | | | | | | |
| | Pogonia ophioglossoides (L.) | X | | | | X | | X | | X | X | | | X | | | | | | | | | | |
| | Spiranthes cernua (L.) L. C. Rich | | | | | | | X | | | | | | | | | | | | | | | | |
| Osmundaceae | Osmunda cinnamomea L. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Osmunda claytoniana L. | | | | | | | | | | | | X | | | | | | | | X | | | |
| | Osmunda regalis L. | | | | | | | | | | | | | | | | | | | | | | X | |
| Pinaceae | Abies balsamea (L.) P. Mill. | | | | | | | | | | | | X | | | | | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 4 | MAXIMUM LENGTH (M) | 51.9 | 52.8 | 64.1 | 73 | 123 | 141 | 149 | 155.6 | 181 | 189 | 221.1 | 322 | 332 | 335 | 335 | 490 | 685 | 773 | 785 | 1610 | 2126 | N/A | N/A |
| FAMILY | GENUS & SPECIES | ED'S | TE'B | FSB | N'GA | TUE | RED | MUL | HUM | BOL | CRN | WAR | RAS | NAN | MOR | BOG | KIC | BER | BR'L | CRM | BAY | TE'L | TE'C | BR'C |
| | Larix laricina (Du Roi) K. Koch | | | | | | | | | | | | | X | | | | | | | | | | |
| Poaceae | Agrostis gigantea Roth | | | | | | | | | | | | | | | | | | X | | | | | |
| | Agrostis hyemalis (Walt.) B. S. P. | | | | | | | | | | | | | | | X | | | | | | | X | |
| | Calamagrostis canadensis (Michs.) Beauv. | | | | | X | X | | X | X | | X | X | | X | X | | | X | | X | | X | X |
| | Dactylis glomerata L. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Dichanthelium depauperatum (Muhl.) Gould | | | | | | X | | | | | | | | | | | | | | | | | |
| | Gylceria canadensis (Michaux) Trin. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Phleum pratense L. | | | | | | | | | | | | | | | | | | | | | | | X |
| Polygonaceae | Polygonum amphibium Waldst. & Kit. | | | | | | | | | | | | | | | | X | | | | | | | |
| | Polygonum persicaria L. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Rumex crispus L. | | | | | | X | | | | | | | | | | | | | | | | | |
| | Rumex orbiculatus Gray | | | | | | | | | | | | | | | | X | | | | | X | X | |
| Pontederiaceae | Heteranthera dubia (Jacq.) MacM. | | | | | | X | | | | | | | | | | | | | | | | | |
| | Pontederia cordata L. | | | | | X | | X | X | | | X | | | X | | X | | X | X | X | X | | |
| Potamogetonacea | Potamogeton amplifolius Tuckerman | | | | | | X | | | | | X | | X | X | | X | | X | | | X | | X |
| | Potamogeton epihydrus Raf. | | | | | | X | | | | | | | | | X | | | | | | | | X |
| | Potamogeton foliosus Raf. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Potamogeton gramineus L. | | | | | X | | | | | | | X | | | | | X | | | | x | | |
| | Potamogeton illinoensis Morong | | | | | | | | | | | | | | | | | | | | | x | | |
| | Potamogeton natans L. | | | | | | X | | | | | | | | | | X | | | | | | | |
| | Potamogeton obtusifolius Mert. & Koch | | | | | | | | | | | | | | X | | X | | X | | | | | |
| | Potamogeton praelongus Wulfen | | | | | | | | | | | | | | | | | | | | | X | | |
| | Potamogeton pusillus L. | | | | | | X | | | | | | | | X | | | | | | | | X | X |
| | Potamogeton pusillus var. tenuissimus Mert. & Koch | | | | | | | | | | | | | | | | | | | | | | | X |
| | Potamogeton richardsonii (Benn.) Rydb. | | | | | | | | | | | | | | | | | | | | | X | X | |
| | Potamogeton robbinsii Oakes | | | | | | | | | | | | | | | X | X | X | X | | | X | | X |
| | Potamogeton zosteriformis Fern. | | | | | | | | | | | | | | X | | | | | | | X | | |
| Primulaceae | Lysimachia terrestris (L.) B. S. P. | | | | | | | X | | X | X | X | X | | | X | | X | | | | | | X |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 4 | MAXIMUM LENGTH (M) | 51.9 | 52.8 | 64.1 | 73 | 123 | 141 | 149 | 155.6 | 181 | 189 | 221.1 | 322 | 332 | 335 | 335 | 490 | 685 | 773 | 785 | 1610 | 2126 | N/A | N/A |
| FAMILY | GENUS & SPECIES | ED'S | TE'B | FSB | N'GA | TUE | RED | MUL | HUM | BOL | CRN | WAR | RAS | NAN | MOR | BOG | KIC | BER | BR'L | CRM | BAY | TE'L | TE'C | BR'C |
| | Lysimachia thyrsiflora L. | | | | | | | | X | | | | X | | X | | X | | | | X | X | | X |
| | Trientalis borealis Raf. | | X | | | | | | X | | | | | | | | | | | X | | | | |
| Ranunculaceae | Caltha palustris L. | | | | | | | | | | | | | | X | | X | | | | | | | |
| | Coptis trifolia (L.) Salisb. | | | | | | | | | | | | | | | X | | | | | | | | |
| | Ranunculus acris L. | | | | | | | | | | | | | | | | | | | | | X | | X |
| | Ranunculus longirostris Godr. | | | | | | | | | | | | | | | | X | | | | | X | | |
| | Thalictrum dioicum L. | | | | | | | | | | | | | | | | | | | | | X | X | X |
| Rosaceae | Agrimonia gryposepala Wallr. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Comarum palustre L. | | | | | X | X | X | X | X | | X | | X | X | | X | | X | X | | | | X |
| | Fragaria virginiana Duchesne | | | | | | | | | | | | X | | | | | | | | | | | |
| | Geum rivale L. | | | | | | | | | | | | | | | | | | | X | | | | |
| | Potentilla arguta Pursh | | | | | | | | | | | | | | | | | | | | | | | X |
| | Potentilla norvegica L. | | | | | | X | | | | | | | | | | | | | | | | X | X |
| | Prunus pensylvanica L. f. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Prunus pumila L. | | | | | | | | | | | | X | | | | | | | | | | | |
| | Prunus virginiana L. | | | | | | | | | | | | X | | | | | | | | | | | |
| | Rubus allegheniensis Porter | | | | | | | | | | | | X | | | | | | | | | | | |
| | Rubus canadensis L. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Rubus hispidus L. | | | | | X | | | | | | | X | | | | | | | | | X | | |
| | Rubus iadaeus ssp. strigosus (Michx.) Focke | | | | | | | | | | | X | | | | | | | | | | X | X | X |
| | Waldsteinia fragarioides (Michx.) T | | X | | | | | | X | | | | | | | | | | | | | | | |
| Rubiaceae | Galium asprellum Michx. | | | | | | | | | | | | | | | | | | | | | | X | X |
| | Galium labradoricum (Wieg.) Wieg. | | | | | X | | | | | | | | | X | | | | | X | | | | |
| | Galium obtusum Bigelow | | | | | | | | | | | | | | | | | X | | | | X | | |
| | Galium palustre L. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Galium trifidum L. | | | | | | | | | | | | | | | | X | | | | | | | |
| Salicaceae | Salix discolor Muhl. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Salix exigua Nutt. | | | | | | | | | | | | | | | X | X | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 4 | MAXIMUM LENGTH (M) | 51.9 | 52.8 | 64.1 | 73 | 123 | 141 | 149 | 155.6 | 181 | 189 | 221.1 | 322 | 332 | 335 | 335 | 490 | 685 | 773 | 785 | 1610 | 2126 | N/A | N/A |
| FAMILY | GENUS & SPECIES | ED'S | TE'B | FSB | N'GA | TUE | RED | MUL | HUM | BOL | CRN | WAR | RAS | NAN | MOR | BOG | KIC | BER | BR'L | CRM | BAY | TE'L | TE'C | BR'C |
| | Salix humilis Marsh | | | | | | | | | | | | | X | | | | | | | | | | |
| | Salix sericea Marsh. | | | | | | | | | | | | | | | | | | | | | | | X |
| Sarraceniaceae | Sarracenia purpurea L. | X | X | X | X | X | | X | | X | X | | | X | | | | | | | | | | |
| Saxifragaceae | Mitella nuda L. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Ribes cynosbati L. | | | | | | | | | | | | | | | | | | | | | | X | |
| Scrophulariaceae | Chelone glabra L. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Scrophularia lanceolata Pursh | | | | | | | X | | | | | | | | | | | | | | | | X |
| | Veronica officinalis L. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Veronica serpyllifolia L. | | | | | | X | | | | | | | | | | | | | | | | | |
| Solanaceae | Solanum dulcamara L. | | | | | | | | | | | | | | | | | | | | | | X | X |
| Sparganiaceae | Sparganium angustifolium Michx. | | | | | | | | | | | | | | | | | X | | | X | | | |
| | Sparganium sp. | | | | | | X | X | | | | X | | | X | X | X | | X | X | X | X | X | X |
| Sphagnaceae | Sphagnum cappillifolium var. tenellum Ehrh. | | | | | X | | | | | | | X | | | | | | | | | | | |
| | Sphagnum cuspidatum Ehrh. ex Hoffm. | | | | | | | | | | X | | | | | | | | | | | | | |
| | Sphagnum fimbriatum Wils. | | | | | | | | | | | | X | | | | | X | | | | | | |
| | Sphagnum girgensohnii | | | | | | | | | | | | | | | | | | | X | | | | |
| | Sphagnum magellanicum Bri | X | X | X | X | X | X | | X | X | X | | X | X | | X | | | | | | | | |
| | Sphagnum magellanica var. magellanica | | | | | | | | X | X | X | | | | | | | | | | | | | |
| | Sphagnum recurvum P.-Beauv. | | | | | | | X | | | | X | | X | | | | | | | | | | |
| | Sphagnum recurvum var. brevifoliu | | X | X | X | X | | | | | | | | | | X | | | | | | | | |
| | Sphagnum recurvum var. tenue Klinggr. (angutifolium) | | | | | | | | X | | | | X | | | | | | | | | | | |
| | Sphagnum teres (Schimp.) Angstr. ex C. Hartm. | | | | | | X | | | | | | | | | | | | | | | | | |
| Thelyteridaceae | Thelypteris palustris Schott | | | | | | | | | | | | | | | | X | | | | X | | | |
| Thymelaeaceae | Dirca palustris L. | | | | | | | | | | | | | | | | | | | | X | | | |
| Typhaceae | Typha latifolia L. | | | | | X | X | X | X | X | | X | | X | X | X | X | | X | X | X | X | | |
| Urticaceae | Urtica dioica L. | | | | | | | | | | | | | | | | | | | | | | X | X |
| | Urtica urens L. | | | | | | | | | | | | | | | | | | X | | | | | |
| Violaceae | Viola cucullata Ait. | | | | | | | | | | | | | | X | X | | | X | X | | X | X | X |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 4 | MAXIMUM LENGTH (M) | 51.9 | 52.8 | 64.1 | 73 | 123 | 141 | 149 | 155.6 | 181 | 189 | 221.1 | 322 | 332 | 335 | 335 | 490 | 685 | 773 | 785 | 1610 | 2126 | N/A | N/A |
| FAMILY | GENUS & SPECIES | ED'S | TE'B | FSB | N'GA | TUE | RED | MUL | HUM | BOL | CRN | WAR | RAS | NAN | MOR | BOG | KIC | BER | BR'L | CRM | BAY | TE'L | TE'C | BR'C |
| | Viola macloskeyi Lloyd | | | | | | X | | | X | | | | | X | X | | | | X | | | | |
| | Viola pubescens Ait. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Viola renifolia Gray | | X | | | | | | | | | X | | X | | X | | X | | X | | | | X |
| BRYOPHYTES | | | | | | | | | | | | | | | | | | | | | | | | |
| Aulacomniaceae | Aulacomnium palustre | X | X | | | | X | | X | | | | | | X | | | | X | | | | | |
| Ditrichaceae | Ceratodon purpureus | | | | | | | | | | | | | | | | | | | X | | | | |
| Mniceae | Mnium cuspidatum | | | | | | | | | | | | | | | | X | | | | | | | |
| | Rhizomnium sp. | | | | | | | | X | | X | | | | | | | | | | | | | |
| ALGAE | | | | | | | | | | | | | | | | | | | | | | | | |
| Chlorophyceae | Hydrodictyon sp. | | | | | | | | | | | | | | | | | | X | | | | | |
| Characeae | Chara vulgaris | | | | | | | | | | | X | | | | | | | | | | | | |
| | Nitella flexilus | | | | | | | | | | | | X | | X | | | | X | | | | | |
| | Nitella sp. | | | | | | | | | | | | | | X | | | | | | | | | |
| BRYOZOA | | | | | | | | | | | X | | | | | | | | | X | | | | |
| PTERIDOPHYTA | | | | | | | | | | | | | | | | | | | | | | | | |
| Dryopteridaceae | Athyrium filix-femina ssp. angustum (Willd.) Clausen | | | | | | | | | | | | | | | | | | | | | | X | |
| | Deparia acrostichoides (Sw.) M. Kato | | | | | | | | | | | | | | | | | | | | | | | X |
| | Dryopteris carthusiana (Vill.) H.P. Fuchs | | | | | | | | | | | | | X | | | | | | | | X | | X |
| | Matteuccia struthiopteris (L.) Todaro | | | | | | | | | | | X | | | | | | | | | | | | |
| | Onoclea sensibilis L. | | | | | | X | | | | | X | X | | X | X | X | X | X | | X | X | X | X |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 5 | RELATIVE SIZE (acres) | 0.15 | 0.21 | 0.53 | 0.7 | 1.87 | 2.25 | 2.64 | 2.75 | 3.06 | 3.09 | 4.52 | 6.77 | 9.99 | 11.4 | 14.6 | 19.4 | 44.1 | 63.8 | 81.2 | 166 | 480 | N/A | N/A |
| FAMILY | GENUS & SPECIES | TE'B | ED'S | FSB | N'GA | HUM | TUE | BOL | MUL | RED | CRN | BOG | WAR | NAN | RAS | MOR | KIC | BER | CRM | BR'L | BAY | TE'L | TE'C | BR'C |
| Aceraceae | Acer rubrum L. | NC | NC | NC | NC | NC | NC | NC | X | NC | NC | NC | | X | X | NC | | | NC | NC | X | | | X |
| Alismataceae | Sagittaria latifolia Willd. | | | | | | | | | X | | | | | | X | X | | X | X | | X | X | |
| | Sagittaria sp. | | | | | | | | | | | | | | | | | | | | X | | | |
| Apiaceae | Cicuta bulbifera L. | | | | | | | | | | | | X | | | | X | | | | | | X | X |
| | Daucus carota L. | | | | | | | X | | X | | X | | | | X | X | | X | X | | | | |
| Aquifoliaceae | Ilex verticillata (L.) Gray | | | | | | | | | | | | | | | | | | | | X | | | |
| Araceae | Calla palustris L. | X | | | | X | X | | X | X | X | X | X | | X | X | X | | X | X | X | | X | X |
| Araliaceae | Aralia nudicaulis L. | | | | | | | | | | | X | | | | | | | | | | | | |
| Asclepiadaceae | Asclepias incarnata L. | | | | | | | | X | | | | X | X | | X | X | | | | | X | X | X |
| Asteraceae | Achillea millefolium L. | | | | | | | | | | | | | | | | | | | | | X | | X |
| | Actaea rubra (Ait.) Willd. | | | | | | | | | | | | | | | | X | | | | | | | |
| | Antennaria howellii Greene | | | | | | | | | | | | | | | | | | | | | | | X |
| | Aster lateriflorus (L.) Britt. | | | | | | X | | | | | | | | | | | | | | | X | | |
| | Aster sp. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Conyza canadensis (L.) Cronq. | | | | | | | | | | | | | | | X | | | | | | | | |
| | Erigeron annuus (L.) Pers. | | | | | | | | | | | | | | X | | | | | | | | | |
| | Eupatorium maculatum L. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Euthamia graminifolia (L.) Nutt. | | | | | | | | X | | | | | | X | | X | | | | | | | |
| | Hieracium aurantiacum L. | | | | | | | | | | | | X | | | | | | | | | | X | |
| | Hieracium caespitosum Dumort. | | | | | | | | | | | | | | | | | | | | | X | X | |
| | Hieracium piloselloides Vill. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Lactuca canadensis L. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Leucanthemum vulgare Lam. | | | | | | | | | | | | | | X | | | | | | | X | | X |
| | Solidago gigantea Ait. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Solidago juncea Ait. | | | | | | | | | | | | | | X | | | | | | | | | X |
| | Solidago ptarmicoides (Nees) Boivin | | | | | | | | | | | | | | | | | | | | | | X | |
| | Solidago uliginosa Nutt. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Tragopogon dubius Scop. | | | | | | | | | | | | | | X | | | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 5 | RELATIVE SIZE (acres) | 0.15 | 0.21 | 0.53 | 0.7 | 1.87 | 2.25 | 2.64 | 2.75 | 3.06 | 3.09 | 4.52 | 6.77 | 9.99 | 11.4 | 14.6 | 19.4 | 44.1 | 63.8 | 81.2 | 166 | 480 | N/A | N/A |
| FAMILY | GENUS & SPECIES | TE'B | ED'S | FSB | N'GA | HUM | TUE | BOL | MUL | RED | CRN | BOG | WAR | NAN | RAS | MOR | KIC | BER | CRM | BR'L | BAY | TE'L | TE'C | BR'C |
| Balsaminaceae | Impatiens capensis Meerb. | | | | | | | | | | | | | | | | | X | | | X | | | |
| Betulaceae | Alnus incana ssp. rugosa (D | NC | NC | NC | NC | NC | NC | NC | X | NC | NC | NC | X | X | X | NC | | | NC | NC | X | X | X | X |
| | Betula papyrifera Marsh. | | | | | | | | | | | | | | | | | X | X | | | | | |
| Boraginaceae | Myosotis laxa Lehm. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Myosotis scorpioides L. | | | | | | | | | | | | | | | | | | | | X | | | |
| Brassicaceae | Barbarea vulgaris Ait. f. | | | | | | | | | | | | | | | | | | | | | X | | |
| Callitrichaceae | Callitriche palustris L. | | | | | | | | | | | | | | | X | | | | | | | | X |
| Caprifoliaceae | Lonicera canadensis Batr. ex Marsh. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Lonicera x-bella Zabel | | | | | | | | | | | | | | X | | | | | | | X | X | |
| | Viburnum opulus var. americanum Ait. | | | | | | | | | | | | | | | | | | | | | | | X |
| Caryophyllaceae | Silene latifolia ssp. alba (P. Mill.) Greuter & Burdet | | | | | | | | | | | | | | | | | | | | | | X | X |
| | Stellaria graminea L. | | | | | | | | | | | | | | | | | | | | | X | X | |
| | Stellaria longifolia Muhl. ex | X | | | | | | | | | | | | | | | | | | | | | | |
| Ceratophyllaceae | Ceratophyllum demersum L. | | | | | | | X | | | | | | | | | X | | | X | | X | X | X |
| Clusiaceae | Hypericum ascyron L. | | | | | | | | | X | X | | | | | | | | | X | | | | |
| | Hypericum boreale (Britt.) Bickn. | | | | | | | | | | | | | | | | | | | X | | | | |
| | Hypericum ellipticum Hook. | | | | | | | | | | | | | | | X | | | | | | | | |
| | Hypericum majus (Gray) Britt. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Hypericum perforatum L. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Hypericum sp. | | | | | | | | | X | X | | | | | X | | | X | | | | | |
| | Triadenum fraseri (Spach) Gleason | | | | | X | | | X | | X | X | X | | X | | X | | | | | | | |
| Cornaceae | Cornus alternifolia L. f. | | | | | | | | | | | X | | | | | | | | | | | | X |
| | Cornus canadensis L. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Cornus sericea L. | | | | | | | | X | | | | X | | | | | | | | | | X | |
| Cyperaceae | Carex bebbii Olney ex Fern. | | X | | | | X | | | X | | X | | | | | | | | X | | | | |
| | Carex canescens L. | | | | | | | X | | | X | X | | | | | | | | | | | | |
| | Carex comosa Boott | | | | | | | | | | | | X | | | | | | | | | X | | |
| | Carex crawfordii Fern. | | | | | | | | | X | | | | | | | | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 5 | RELATIVE SIZE (acres) | 0.15 | 0.21 | 0.53 | 0.7 | 1.87 | 2.25 | 2.64 | 2.75 | 3.06 | 3.09 | 4.52 | 6.77 | 9.99 | 11.4 | 14.6 | 19.4 | 44.1 | 63.8 | 81.2 | 166 | 480 | N/A | N/A |
| FAMILY | GENUS & SPECIES | TE'B | ED'S | FSB | N'GA | HUM | TUE | BOL | MUL | RED | CRN | BOG | WAR | NAN | RAS | MOR | KIC | BER | CRM | BR'L | BAY | TE'L | TE'C | BR'C |
| | Carex crinata Lam. | | | | | X | | | | | | | | | | | | | | | X | X | | |
| | Carex diandra Schrank | | | | | | | | X | | | | X | | | | X | | X | | | | | |
| | Carex gracillima Schwein | X | | | | | | | | X | | | | | | | | | X | | | | | |
| | Carex interior Bailey | | | | X | X | X | X | | | X | | | X | X | | | X | | | | | | |
| | Carex lasiocarpa Ehrh. | | | | | | | | X | | | | X | X | | | X | | | | | | | |
| | Carex limosa L. | X | X | | X | | | | | | X | | | | | | | | | | | | | |
| | Carex pauciflora Lightf. | X | | X | | | | | | X | | | | | | | | | | | | | | |
| | Carex paupercula Michaux. | | X | X | X | X | | | | | | | | | | X | | | | | | | | |
| | Carex pseudocyperus L. | | | | | | | | | | | | | | | X | | | | | | | | |
| | Carex retrorsa Schwein | | | | | | | | | | | | | | | | | | | X | | | | |
| | Carex rostrata Stokes | | X | | | | | | | | | | | X | X | | | X | X | | X | X | X | |
| | Carex stipata Muhl. ex Willd. | | | | | | | | | | | | | | | | | | | X | | | | |
| | Carex stricta Lam. | | | | | | X | X | | | | | X | | | | | | | X | | X | | X |
| | Carex tribuloides Mackenzie | | | | | | | X | | X | | X | | | | X | | | | X | | | | |
| | Carex tribuloides Wahl. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Carex trisperma Dewey | X | | | | | | X | | | X | | | | | | | | | X | | | | |
| | Carex tuckermanii Dewey | | | | | | | | | | | | | | X | | | | | | | | | |
| | Carex versicolor L. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Dulichium arundinaceum (L.) Britt. | | | | | X | X | | X | X | | X | | | | | | X | X | | X | | | |
| | Eleocharis obtusa (Willd.) J. A. Schultes | | | | | | | | | | | | X | X | | | | X | | | | | | |
| | Eleocharis smallii Britt. | | | | | | X | | | | | | | | | X | | | | | | | | |
| | Eriophorum gracile W.D.J. Koch | | | | | | | | | | | | X | | | | X | | | | | | | |
| | Eriophorum vaginatum var. s | X | X | X | X | | X | | | | | | | | | | | | | | | | | |
| | Luzula acuminata Raf. | | | | | | | | | | | X | | | | | | | | | | | | |
| | Rhynchospora alba (L.) Vah | X | X | | X | | X | X | | | X | | | | | X | | | | | | | | |
| | Scirpus acutus Muhl. ex Bigelow | | X | | | | X | | | | | X | | | | | | | | X | | | | |
| | Scirpus americanus Pers. | | | | | | | | | | | | | | | | | | | X | | X | | |
| | Scirpus atrovirens Willd. | | | | | | | | | | | | | | X | | | | X | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 5 | RELATIVE SIZE (acres) | 0.15 | 0.21 | 0.53 | 0.7 | 1.87 | 2.25 | 2.64 | 2.75 | 3.06 | 3.09 | 4.52 | 6.77 | 9.99 | 11.4 | 14.6 | 19.4 | 44.1 | 63.8 | 81.2 | 166 | 480 | N/A | N/A |
| FAMILY | GENUS & SPECIES | TE'B | ED'S | FSB | N'GA | HUM | TUE | BOL | MUL | RED | CRN | BOG | WAR | NAN | RAS | MOR | KIC | BER | CRM | BR'L | BAY | TE'L | TE'C | BR'C |
| | Scirpus cyperinus (L.) Kunth | | | | | | | X | | | X | | | | | | | | | | | | | |
| Dennstaedtiaceae | Pteridium aquilinum (L.) Kuhn | | | | | | | | | | | | | | X | | | | | | X | | X | |
| Droceraceae | Drosera rotundifolia L. | X | X | X | X | X | X | | X | X | X | X | | | X | | | X | X | | | | | |
| Equisetaceae | Equisetum arvense L. | | | X | | | | X | | X | | | X | | X | X | X | | X | | X | X | | |
| | Equisetum fluviatile L. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Equisetum sylvaticum L. | | | | | | | | | | | | | | | | | | | | | | | X |
| Ericaceae | Andromeda glaucophylla Lin | X | X | X | X | X | X | | X | X | X | | X | X | | | X | | X | | | | | |
| | Chamaedaphne calyculata ( | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | X | | | |
| | Gaultheria hispidula (L.) Muh | X | X | | X | X | | X | | | X | | | | | | | | | | | | | |
| | Kalmia polifolia Wangenh | X | X | X | X | X | X | X | | X | X | | X | X | X | | | | X | | | | | |
| | Ledum groenlandicum Oeder | X | X | X | X | X | X | | X | | X | | | | X | | | | | | | | | |
| | Vaccinium macrocarpon Ait. | | | | | | | | X | | | | | X | X | | | X | | | | | | |
| | Vaccinium myrtilloides Michx. | | X | | X | | X | | | X | X | | | | | | | | | | | | | |
| | Vaccinium oxycoccus L. | X | X | | X | | X | X | | | X | | X | X | X | | | | | | | | | |
| Eriocaulonaceae | Eriocaulon aquaticum (Hill) Druce | | | | | | | | | | | | | | | | | X | | | X | | | |
| Fabaceae | Melilotis officinalis (L.) Lam. | | | | | | | | | | | X | | | | | | | | | | X | | |
| | Trifolium repens L. | | | | | | | | | | | | | | | X | | | | | | | | |
| Gentianaceae | Menyanthes trifoliata L. | | | | X | | X | X | | | | | | | | | | | | | | | | |
| Haloragaceae | Myriophyllum sibiricum Komarov | | | | | | | | | | | | | X | | | X | X | | | X | X | | |
| Hydrocharitaceae | Elodea canadensis Michx. | | | | | | | | | | | | | | | | X | | | X | | X | X | X |
| | Vallisneria americana Michx. | | | | | | | | | | | | | | | | | | | | | X | | |
| Iridaceae | Iris versicolor L. | | | | | X | X | X | X | X | | X | X | X | | | X | | X | | X | | | X |
| Isoetaceae | Isoetes echinospora Durieu | | | | | | | | | | | | | | X | | | | X | | | | | |
| | Isoetes riparia Engelm. ex A. Braun | | | | | | | | | | | | | | | | | | | | X | | | |
| | Isoetes sp. | | | | | | | | | | | | | | | | | X | | | | | | |
| Juncaceae | Juncus effusus L. | | | | X | X | X | X | | X | | | | | | | X | X | X | | X | | | |
| | Juncus tenuis Willd. | | | | | | X | | | | | | | | | | | | | | | | | |
| Juncaginaceae | Scheuchzeria palustris L. | | X | | | | | | X | X | | | | | | | | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 5 | RELATIVE SIZE (acres) | 0.15 | 0.21 | 0.53 | 0.7 | 1.87 | 2.25 | 2.64 | 2.75 | 3.06 | 3.09 | 4.52 | 6.77 | 9.99 | 11.4 | 14.6 | 19.4 | 44.1 | 63.8 | 81.2 | 166 | 480 | N/A | N/A |
| FAMILY | GENUS & SPECIES | TE'B | ED'S | FSB | N'GA | HUM | TUE | BOL | MUL | RED | CRN | BOG | WAR | NAN | RAS | MOR | KIC | BER | CRM | BR'L | BAY | TE'L | TE'C | BR'C |
| Lamiaceae | Clinopodium vulgare L. | | | | | | | | | | | | | | | | | | | | | X | X | X |
| | Lycopus uniflorus Michx. | | | | | X | X | | X | X | X | | | | X | | X | | X | | X | | | |
| | Prunella vulgaris L. | | | | | | | | | | | | | | | | | | | X | | X | | |
| | Scutellaria integrifolia L. | | | | | | | | | X | | | | | | X | | | | X | | | | |
| Lemnaceae | Lemna minor L. | | | | | | | X | | X | | | | | | X | | | | X | | | | X |
| | Spirodela polyrrhiza (L.) Scheid. | | | | | | | | | | | | | | | X | | | | | | | | |
| Lentibulariaceae | Utricularia macrorhiza Le Co | X | X | | X | X | X | | | X | | X | | | X | X | X | X | | | | | | X |
| Liliaceae | Maianthemum canadense Desf. | | | | | | X | | | | | | | | X | | | | | | X | | | |
| | Maianthemum trifolium (L.) Sloboda | | | | X | | | X | | | X | | | | | | | | | | | | | |
| Lobeliaceae | Lobelia dortmanna L. | | | | | | | | | | | | | | | X | | | X | | X | | | |
| Lycopodiaceae | Lycopodium annotinum L. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Lycopodium clavatum L. | | | | | | | | | | | | | | | | | | | | X | | | |
| Menyanthaceae | Menyanthes trifoliata L. | | | | | | | | X | | | | | X | | | | | | | | | | |
| Myricaceae | Myrica gale L. | | X | | | | | | | | | | | X | | | | X | | | X | X | X | |
| Najadaceae | Najas flexilis (Willd.) Rostk. & Schmidt | | | | | | | | X | | | | | | | | | | | | | | | |
| Nymphaeaceae | Brasenia schreberi J.F. Gmel. | | | | | | X | X | | X | | | X | X | | | | X | | | X | X | | |
| | Nuphar lutea ssp. variegata (Dur.) E. O. Beal | | | | | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | X | | X |
| | Nymphaea odorata Ait. | | | X | | | | X | | | | X | X | X | | X | X | | X | X | | X | X | |
| Onagraceae | Epilobium ciliatum Raf. | | | | | | | | | | | | | | | | | | | | | | X | |
| Orchidaceae | Arethusa bulbosa L. | | | | | | | | X | | | | | X | | | | | | | | | | |
| | Calopogon tuberosus (L.) B. | X | | X | | X | | X | X | | X | | | X | | | | | X | X | | | | |
| | Cypripedium acaule Ait. | | | | | X | X | | | | | | | | | | | | | | | | | |
| | Pogonia ophioglossoides (L.) Ker- | | X | | | | X | X | X | | X | | | X | | | | | | | | | | |
| | Spiranthes cernua (L.) L. C. Rich | | | | | | | | X | | | | | | | | | | | | | | | |
| Osmundaceae | Osmunda cinnamomea L. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Osmunda claytoniana L. | | | | | | | | | | | | | | X | | | | | | X | | | |
| | Osmunda regalis L. | | | | | | | | | | | | | | | | | | | | | | X | |
| Pinaceae | Abies balsamea (L.) P. Mill. | | | | | | | | | | | | | | X | | | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 5 | RELATIVE SIZE (acres) | 0.15 | 0.21 | 0.53 | 0.7 | 1.87 | 2.25 | 2.64 | 2.75 | 3.06 | 3.09 | 4.52 | 6.77 | 9.99 | 11.4 | 14.6 | 19.4 | 44.1 | 63.8 | 81.2 | 166 | 480 | N/A | N/A |
| FAMILY | GENUS & SPECIES | TE'B | ED'S | FSB | N'GA | HUM | TUE | BOL | MUL | RED | CRN | BOG | WAR | NAN | RAS | MOR | KIC | BER | CRM | BR'L | BAY | TE'L | TE'C | BR'C |
| | Larix laricina (Du Roi) K. Koch | | | | | | | | | | | | | X | | | | | | | | | | |
| Poaceae | Agrostis gigantea Roth | | | | | | | | | | | | | | | | | | | X | | | | |
| | Agrostis hyemalis (Walt.) B. S. P. | | | | | | | | | | | X | | | | | | | | | | | X | |
| | Calamagrostis canadensis (Michs.) Beauv. | | | | | X | X | X | | X | | X | X | | X | X | | | | X | X | | X | X |
| | Dactylis glomerata L. | | | | | | | | | | | | | | | | | | | X | | | | |
| | Dichanthelium depauperatum (Muhl.) Gould | | | | | | | | | X | | | | | | | | | | | | | | |
| | Gylceria canadensis (Michaux) Trin. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Phleum pratense L. | | | | | | | | | | | | | | | | | | | | | | | X |
| Polygonaceae | Polygonum amphibium Waldst. & Kit. | | | | | | | | | | | | | | | | X | | | | | | | |
| | Polygonum persicaria L. | | | | | | | | | | | | | | | | | | | X | | | | |
| | Rumex crispus L. | | | | | | | | | X | | | | | | | | | | | | | | |
| | Rumex orbiculatus Gray | | | | | | | | | | | | | | | | X | | | | | X | X | |
| Pontederiaceae | Heteranthera dubia (Jacq.) MacM. | | | | | | | | | X | | | | | | | | | | | | | | |
| | Pontederia cordata L. | | | | | X | X | | X | | | | X | | | X | X | | X | X | X | X | | |
| Potamogetonacea | Potamogeton amplifolius Tuckerman | | | | | | | | | X | | | X | X | | X | X | | | X | | X | | X |
| | Potamogeton epihydrus Raf. | | | | | | | | | X | | X | | | | | | | | | | | | X |
| | Potamogeton foliosus Raf. | | | | | | | | | | | | | | | | | | | X | | | | |
| | Potamogeton gramineus L. | | | | | | X | | | | | | | | X | | | X | | | | X | | |
| | Potamogeton illinoensis Morong | | | | | | | | | | | | | | | | | | | | | X | | |
| | Potamogeton natans L. | | | | | | | | | X | | | | | | | X | | | | | | | |
| | Potamogeton obtusifolius Mert. & Koch | | | | | | | | | | | | | | | X | X | | | X | | | | |
| | Potamogeton praelongus Wulfen | | | | | | | | | | | | | | | | | | | | | X | | |
| | Potamogeton pusillus L. | | | | | | | | | X | | | | | | X | | | | | | | X | X |
| | Potamogeton pusillus var. tenuissimus Mert. & Koch | | | | | | | | | | | | | | | | | | | | | | | X |
| | Potamogeton richardsonii (Benn.) Rydb. | | | | | | | | | | | | | | | | | | | | | X | X | |
| | Potamogeton robbinsii Oakes | | | | | | | | | | | X | | | | | X | X | | X | | X | | X |
| | Potamogeton zosteriformis Fern. | | | | | | | | | | | | | | | X | | | | | | X | | |
| Primulaceae | Lysimachia terrestris (L.) B. S. P. | | | | | | | X | X | | X | X | X | | X | | | X | | | | | | X |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 5 | RELATIVE SIZE (acres) | 0.15 | 0.21 | 0.53 | 0.7 | 1.87 | 2.25 | 2.64 | 2.75 | 3.06 | 3.09 | 4.52 | 6.77 | 9.99 | 11.4 | 14.6 | 19.4 | 44.1 | 63.8 | 81.2 | 166 | 480 | N/A | N/A |
| FAMILY | GENUS & SPECIES | TE'B | ED'S | FSB | N'GA | HUM | TUE | BOL | MUL | RED | CRN | BOG | WAR | NAN | RAS | MOR | KIC | BER | CRM | BR'L | BAY | TE'L | TE'C | BR'C |
| | Lysimachia thyrsiflora L. | | | | | X | | | | | | | | | X | X | X | | | | X | X | | X |
| | Trientalis borealis Raf. | X | | | | X | | | | | | | | | | | | | X | | | | | |
| Ranunculaceae | Caltha palustris L. | | | | | | | | | | | | | | | X | X | | | | | | | |
| | Coptis trifolia (L.) Salisb. | | | | | | | | | | | X | | | | | | | | | | | | |
| | Ranunculus acris L. | | | | | | | | | | | | | | | | | | | | | X | | X |
| | Ranunculus longirostris Godr. | | | | | | | | | | | | | | | | X | | | | | X | | |
| | Thalictrum dioicum L. | | | | | | | | | | | | | | | | | | | | | X | X | X |
| Rosaceae | Agrimonia gryposepala Wallr. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Comarum palustre L. | | | | | X | X | X | X | X | | | X | X | | X | X | | X | X | | | | X |
| | Fragaria virginiana Duchesne | | | | | | | | | | | | | | X | | | | | | | | | |
| | Geum rivale L. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Potentilla arguta Pursh | | | | | | | | | | | | | | | | | | | | | | | X |
| | Potentilla norvegica L. | | | | | | | | | X | | | | | | | | | | | | | X | X |
| | Prunus pensylvanica L. f. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Prunus pumila L. | | | | | | | | | | | | | | X | | | | | | | | | |
| | Prunus virginiana L. | | | | | | | | | | | | | | X | | | | | | | | | |
| | Rubus allegheniensis Porter | | | | | | | | | | | | | | X | | | | | | | | | |
| | Rubus canadensis L. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Rubus hispidus L. | | | | | | X | | | | | | | | X | | | | | | | X | | |
| | Rubus iadaeus ssp. strigosus (Michx.) Focke | | | | | | | | | | | | X | | | | | | | | | X | X | X |
| | Waldsteinia fragarioides (Mic | X | | | | X | | | | | | | | | | | | | | | | | | |
| Rubiaceae | Galium asprellum Michx. | | | | | | | | | | | | | | | | | | | | | | X | X |
| | Galium labradoricum (Wieg.) Wieg. | | | | | | X | | | | | | | | | X | | | X | | | | | |
| | Galium obtusum Bigelow | | | | | | | | | | | | | | | | | X | | | | X | | |
| | Galium palustre L. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Galium trifidum L. | | | | | | | | | | | | | | | | X | | | | | | | |
| Salicaceae | Salix discolor Muhl. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Salix exigua Nutt. | | | | | | | | | | | X | | | | | X | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 5 | RELATIVE SIZE (acres) | 0.15 | 0.21 | 0.53 | 0.7 | 1.87 | 2.25 | 2.64 | 2.75 | 3.06 | 3.09 | 4.52 | 6.77 | 9.99 | 11.4 | 14.6 | 19.4 | 44.1 | 63.8 | 81.2 | 166 | 480 | N/A | N/A |
| FAMILY | GENUS & SPECIES | TE'B | ED'S | FSB | N'GA | HUM | TUE | BOL | MUL | RED | CRN | BOG | WAR | NAN | RAS | MOR | KIC | BER | CRM | BR'L | BAY | TE'L | TE'C | BR'C |
| | Salix humilis Marsh | | | | | | | | | | | | | X | | | | | | | | | | |
| | Salix sericea Marsh. | | | | | | | | | | | | | | | | | | | | | | | X |
| Sarraceniaceae | Sarracenia purpurea L. | X | X | X | X | | X | X | X | | X | | | X | | | | | | | | | | |
| Saxifragaceae | Mitella nuda L. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Ribes cynosbati L. | | | | | | | | | | | | | | | | | | | | | | X | |
| Scrophulariaceae | Chelone glabra L. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Scrophularia lanceolata Pursh | | | | | | | | X | | | | | | | | | | | | | | | X |
| | Veronica officinalis L. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Veronica serpyllifolia L. | | | | | | | | | X | | | | | | | | | | | | | | |
| Solanaceae | Solanum dulcamara L. | | | | | | | | | | | | | | | | | | | | | | X | X |
| Sparganiaceae | Sparganium angustifolium Michx. | | | | | | | | | | | | | | | | | X | | | X | | | |
| | Sparganium sp. | | | | | | | | X | X | | X | X | | | X | X | | X | X | X | X | X | X |
| Sphagnaceae | Sphagnum cappillifolium var. tenellum Ehrh. | | | | | | X | | | | | | | | X | | | | | | | | | |
| | Sphagnum cuspidatum Ehrh. ex Hoffm. | | | | | | | | | | X | | | | | | | | | | | | | |
| | Sphagnum fimbriatum Wils. | | | | | | | | | | | | | | X | | | X | | | | | | |
| | Sphagnum girgensohnii | | | | | | | | | | | | | | | | | | X | | | | | |
| | Sphagnum magellanicum Bri | X | X | X | X | X | X | X | | X | X | X | | X | X | | | | | | | | | |
| | Sphagnum magellanica var. magellanica | | | | | X | | X | | | X | | | | | | | | | | | | | |
| | Sphagnum recurvum P.-Beauv. | | | | | | | | X | | | | X | X | | | | | | | | | | |
| | Sphagnum recurvum var. br | X | | X | X | | X | | | | | X | | | | | | | | | | | | |
| | Sphagnum recurvum var. tenue Klinggr. (angutifolium) | | | | | X | | | | | | | | | X | | | | | | | | | |
| | Sphagnum teres (Schimp.) Angstr. ex C. Hartm. | | | | | | | | | X | | | | | | | | | | | | | | |
| Thelyteridaceae | Thelypteris palustris Schott | | | | | | | | | | | | | | | | X | | | | X | | | |
| Thymelaeaceae | Dirca palustris L. | | | | | | | | | | | | | | | | | | | | X | | | |
| Typhaceae | Typha latifolia L. | | | | | X | X | X | X | X | | X | X | X | | X | X | | X | X | X | X | | |
| Urticaceae | Urtica dioica L. | | | | | | | | | | | | | | | | | | | | | | X | X |
| | Urtica urens L. | | | | | | | | | | | | | | | | | | | X | | | | |
| Violaceae | Viola cucullata Ait. | | | | | | | | | | | X | | | | X | | | X | X | | X | X | X |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 5 | RELATIVE SIZE (acres) | 0.15 | 0.21 | 0.53 | 0.7 | 1.87 | 2.25 | 2.64 | 2.75 | 3.06 | 3.09 | 4.52 | 6.77 | 9.99 | 11.4 | 14.6 | 19.4 | 44.1 | 63.8 | 81.2 | 166 | 480 | N/A | N/A |
| FAMILY | GENUS & SPECIES | TE'B | ED'S | FSB | N'GA | HUM | TUE | BOL | MUL | RED | CRN | BOG | WAR | NAN | RAS | MOR | KIC | BER | CRM | BR'L | BAY | TE'L | TE'C | BR'C |
| | Viola macloskeyi Lloyd | | | | | | | X | | X | | X | | | | X | | | X | | | | | |
| | Viola pubescens Ait. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Viola renifolia Gray | X | | | | | | | | | | X | X | X | | | | X | X | | | | | X |
| BRYOPHYTES | | | | | | | | | | | | | | | | | | | | | | | | |
| Aulacomniaceae | Aulacomnium palustre | X | X | | | X | | | | X | | | | | | X | | | | X | | | | |
| Ditrichaceae | Ceratodon purpureus | | | | | | | | | | | | | | | | | | X | | | | | |
| Mniceae | Mnium cuspidatum | | | | | | | | | | | | | | | | X | | | | | | | |
| | Rhizomnium sp. | | | | | X | | | | | X | | | | | | | | | | | | | |
| ALGAE | | | | | | | | | | | | | | | | | | | | | | | | |
| Chlorophyceae | Hydrodictyon sp. | | | | | | | | | | | | | | | | | | | X | | | | |
| Characeae | Chara vulgaris | | | | | | | | | | | | X | | | | | | | | | | | |
| | Nitella flexilus | | | | | | | | | | | | | | X | X | | | | X | | | | |
| | Nitella sp. | | | | | | | | | | | | | | | X | | | | | | | | |
| BRYOZOA | | | | | | | | | | | X | | | | | | | | X | | | | | |
| PTERIDOPHYTA | | | | | | | | | | | | | | | | | | | | | | | | |
| Dryopteridaceae | Athyrium filix-femina ssp. angustum (Willd.) Clausen | | | | | | | | | | | | | | | | | | | | | | X | |
| | Deparia acrostichoides (Sw.) M. Kato | | | | | | | | | | | | | | | | | | | | | | | X |
| | Dryopteris carthusiana (Vill.) H.P. Fuchs | | | | | | | | | | | | | X | | | | | | | | X | | X |
| | Matteuccia struthiopteris (L.) Todaro | | | | | | | | | | | | X | | | | | | | | | | | |
| | Onoclea sensibilis L. | | | | | | | | | X | | X | X | | X | X | X | X | | X | X | X | X | X |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 6 | MEAN CONDUCTIVITY (uS/ | 6.45 | 11.2 | 11.4 | 11.4 | 12.8 | 13.5 | 14.8 | 15.2 | 19.5 | 21.5 | 22.6 | 24.7 | 27.8 | 29.3 | 29.4 | 42.3 | 58 | 59.8 | 86.5 | 92.1 | 98.2 | 105 | 140 |
| FAMILY | GENUS & SPECIES | FSB | BER | RAS | TUE | CRN | CRM | BAY | ED'S | HUM | BOG | RED | TE'B | N'GA | BOL | NAN | TE'L | KIC | MOR | TE'C | BR'C | MUL | BR'L | WAR |
| Aceraceae | Acer rubrum L. | NC | | X | NC | NC | NC | X | NC | NC | NC | NC | NC | NC | NC | X | | | NC | | X | X | NC | |
| Alismataceae | Sagittaria latifolia Willd. | | | | | | X | | | | | X | | | | | X | X | X | X | | | X | |
| | Sagittaria sp. | | | | | | | X | | | | | | | | | | | | | | | | |
| Apiaceae | Cicuta bulbifera L. | | | | | | | | | | | | | | | | | X | | X | X | | | X |
| | Daucus carota L. | | | | | | X | | | | X | X | | | X | | | X | X | | | | X | |
| Aquifoliaceae | Ilex verticillata (L.) Gray | | | | | | | X | | | | | | | | | | | | | | | | |
| Araceae | Calla palustris L. | | | X | X | X | X | X | | X | X | X | X | | | | | X | X | X | X | X | X | X |
| Araliaceae | Aralia nudicaulis L. | | | | | | | | | | X | | | | | | | | | | | | | |
| Asclepiadaceae | Asclepias incarnata L. | | | | | | | | | | | | | | | X | X | X | X | X | X | X | | X |
| Asteraceae | Achillea millefolium L. | | | | | | | | | | | | | | | | X | | | | X | | | |
| | Actaea rubra (Ait.) Willd. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Antennaria howellii Greene | | | | | | | | | | | | | | | | | | | | X | | | |
| | Aster lateriflorus (L.) Britt. | | | | X | | | | | | | | | | | | X | | | | | | | |
| | Aster sp. | | | | | | | | | | | | | | | | | | | X | | | | |
| | Conyza canadensis (L.) Cronq. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Erigeron annuus (L.) Pers. | | | X | | | | | | | | | | | | | | | | | | | | |
| | Eupatorium maculatum L. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Euthamia graminifolia (L.) Nutt. | | | X | | | | | | | | | | | | | | X | | | | X | | |
| | Hieracium aurantiacum L. | | | | | | | | | | | | | | | | | | | X | | | | X |
| | Hieracium caespitosum Dumort. | | | | | | | | | | | | | | | | X | | | X | | | | |
| | Hieracium piloselloides Vill. | | | | | | | | | | | | | | | | | | | X | | | | |
| | Lactuca canadensis L. | | | | | | | | | | | | | | | | X | | | | | | | |
| | Leucanthemum vulgare Lam. | | | X | | | | | | | | | | | | | X | | | | X | | | |
| | Solidago gigantea Ait. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Solidago juncea Ait. | | | X | | | | | | | | | | | | | | | | | X | | | |
| | Solidago ptarmicoides (Nees) Boivin | | | | | | | | | | | | | | | | | | | X | | | | |
| | Solidago uliginosa Nutt. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Tragopogon dubius Scop. | | | X | | | | | | | | | | | | | | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 6 | MEAN CONDUCTIVITY (uS/ | 6.45 | 11.2 | 11.4 | 11.4 | 12.8 | 13.5 | 14.8 | 15.2 | 19.5 | 21.5 | 22.6 | 24.7 | 27.8 | 29.3 | 29.4 | 42.3 | 58 | 59.8 | 86.5 | 92.1 | 98.2 | 105 | 140 |
| FAMILY | GENUS & SPECIES | FSB | BER | RAS | TUE | CRN | CRM | BAY | ED'S | HUM | BOG | RED | TE'B | N'GA | BOL | NAN | TE'L | KIC | MOR | TE'C | BR'C | MUL | BR'L | WAR |
| Balsaminaceae | Impatiens capensis Meerb. | | X | | | | | X | | | | | | | | | | | | | | | | |
| Betulaceae | Alnus incana ssp. rugosa (D | NC | | X | NC | NC | NC | X | NC | NC | NC | NC | NC | NC | NC | X | X | | NC | X | X | X | NC | X |
| | Betula papyrifera Marsh. | | X | | | | X | | | | | | | | | | | | | | | | | |
| Boraginaceae | Myosotis laxa Lehm. | | | | | | | | | | | | | | | | | | | X | | | | |
| | Myosotis scorpioides L. | | | | | | | X | | | | | | | | | | | | | | | | |
| Brassicaceae | Barbarea vulgaris Ait. f. | | | | | | | | | | | | | | | | X | | | | | | | |
| Callitrichaceae | Callitriche palustris L. | | | | | | | | | | | | | | | | | | X | | X | | | |
| Caprifoliaceae | Lonicera canadensis Batr. ex Marsh. | | | | | | | X | | | | | | | | | | | | | | | | |
| | Lonicera x-bella Zabel | | | X | | | | | | | | | | | | | X | | | X | | | | |
| | Viburnum opulus var. americanum Ait. | | | | | | | | | | | | | | | | | | | | X | | | |
| Caryophyllaceae | Silene latifolia ssp. alba (P. Mill.) Greuter & Burdet | | | | | | | | | | | | | | | | | | | X | X | | | |
| | Stellaria graminea L. | | | | | | | | | | | | | | | | X | | | X | | | | |
| | Stellaria longifolia Muhl. ex Willd. | | | | | | | | | | | | X | | | | | | | | | | | |
| Ceratophyllaceae | Ceratophyllum demersum L. | | | | | | | | | | | | | | X | | X | X | | X | X | | X | |
| Clusiaceae | Hypericum ascyron L. | | | | | X | | | | | | X | | | | | | | | | | | X | |
| | Hypericum boreale (Britt.) Bickn. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Hypericum ellipticum Hook. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Hypericum majus (Gray) Britt. | | | | | | | X | | | | | | | | | | | | | | | | |
| | Hypericum perforatum L. | | X | | | | | | | | | | | | | | | | | | | | | |
| | Hypericum sp. | | | | | X | X | | | | | X | | | | | | | X | | | | | |
| | Triadenum fraseri (Spach) Gleason | | | X | | X | | | | X | X | | | | | | | X | | | | X | | X |
| Cornaceae | Cornus alternifolia L. f. | | | | | | | | | | X | | | | | | | | | | X | | | |
| | Cornus canadensis L. | | X | | | | | | | | | | | | | | | | | | | | | |
| | Cornus sericea L. | | | | | | | | | | | | | | | | | | | X | | X | | X |
| Cyperaceae | Carex bebbii Olney ex Fern. | | | | X | | | | X | | X | X | | | | | | | | | | | X | |
| | Carex canescens L. | | | | | X | | | | | X | | | | X | | | | | | | | | |
| | Carex comosa Boott | | | | | | | | | | | | | | | | X | | | | | | | X |
| | Carex crawfordii Fern. | | | | | | | | | | | X | | | | | | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 6 | MEAN CONDUCTIVITY (uS/ | 6.45 | 11.2 | 11.4 | 11.4 | 12.8 | 13.5 | 14.8 | 15.2 | 19.5 | 21.5 | 22.6 | 24.7 | 27.8 | 29.3 | 29.4 | 42.3 | 58 | 59.8 | 86.5 | 92.1 | 98.2 | 105 | 140 |
| FAMILY | GENUS & SPECIES | FSB | BER | RAS | TUE | CRN | CRM | BAY | ED'S | HUM | BOG | RED | TE'B | N'GA | BOL | NAN | TE'L | KIC | MOR | TE'C | BR'C | MUL | BR'L | WAR |
| | Carex crinata Lam. | | | | | | | X | | X | | | | | | | X | | | | | | | |
| | Carex diandra Schrank | | | | | | X | | | | | | | | | | | X | | | | X | | X |
| | Carex gracillima Schwein | | | | | | X | | | | | X | X | | | | | | | | | | | |
| | Carex interior Bailey | | X | X | X | X | | | | X | | | | X | X | X | | | | | | | | |
| | Carex lasiocarpa Ehrh. | | | | | | | | | | | | | | | X | | X | | | | X | | X |
| | Carex limosa L. | | | | | X | | | X | | | | X | X | | | | | | | | | | |
| | Carex pauciflora Lightf. | X | | | | | | | | | | X | X | | | | | | | | | | | |
| | Carex paupercula Michaux. | X | | | | | | | X | X | | | | X | | | | | X | | | | | |
| | Carex pseudocyperus L. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Carex retrorsa Schwein | | | | | | | | | | | | | | | | | | | | | | X | |
| | Carex rostrata Stokes | | X | X | | | X | X | X | | | | | | | X | X | | | X | | | | |
| | Carex stipata Muhl. ex Willd. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Carex stricta Lam. | | | | X | | | | | | | | | | X | | X | | | | X | | X | X |
| | Carex tribuloides Mackenzie | | | | | | | | | | X | X | | | X | | | | X | | | | X | |
| | Carex tribuloides Wahl. | | | | | | | | | | | | | | | | X | | | | | | | |
| | Carex trisperma Dewey | | | | | X | | | | | | | X | | X | | | | | | | | X | |
| | Carex tuckermanii Dewey | | | X | | | | | | | | | | | | | | | | | | | | |
| | Carex versicolor L. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Dulichium arundinaceum (L.) Britt. | | X | | X | | X | X | | X | X | X | | | | | | | | | | X | | |
| | Eleocharis obtusa (Willd.) J. A. Sch | | X | | | | | | | | | | | | | X | | | | | | | | X |
| | Eleocharis smallii Britt. | | | | X | | | | | | | | | | | | | | X | | | | | |
| | Eriophorum gracile W.D.J. Koch | | | | | | | | | | | | | | | | | X | | | | | | X |
| | Eriophorum vaginatum var. s | X | | | X | | | | X | | | | X | X | | | | | | | | | | |
| | Luzula acuminata Raf. | | | | | | | | | | X | | | | | | | | | | | | | |
| | Rhynchospora alba (L.) Vahl | | | | X | X | | | X | | | | X | X | X | | | | X | | | | | |
| | Scirpus acutus Muhl. ex Bigelow | | | | X | | | | X | | X | | | | | | | | | | | | X | |
| | Scirpus americanus Pers. | | | | | | | | | | | | | | | | X | | | | | | X | |
| | Scirpus atrovirens Willd. | | | X | | | X | | | | | | | | | | | | | | | | | |

MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC

Christie Brown, UNDERC 1997

| CHART 6 | MEAN CONDUCTIVITY (uS/ | 6.45 | 11.2 | 11.4 | 11.4 | 12.8 | 13.5 | 14.8 | 15.2 | 19.5 | 21.5 | 22.6 | 24.7 | 27.8 | 29.3 | 29.4 | 42.3 | 58 | 59.8 | 86.5 | 92.1 | 98.2 | 105 | 140 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FAMILY | GENUS & SPECIES | FSB | BER | RAS | TUE | CRN | CRM | BAY | ED'S | HUM | BOG | RED | TE'B | N'GA | BOL | NAN | TE'L | KIC | MOR | TE'C | BR'C | MUL | BR'L | WAR |
| | Scirpus cyperinus (L.) Kunth | | | | | X | | | | | | | | | X | | | | | | | | | |
| Dennstaedtiaceae | Pteridium aquilinum (L.) Kuhn | | | X | | | | X | | | | | | | | | | | | X | | | | |
| Droceraceae | Drosera rotundifolia L. | X | X | X | X | X | X | | X | X | X | X | X | X | | | | | | | | X | | |
| Equisetaceae | Equisetum arvense L. | X | | X | | | X | X | | | | X | | | X | | X | X | X | | | | | X |
| | Equisetum fluviatile L. | | | | | | | X | | | | | | | | | | | | | | | | |
| | Equisetum sylvaticum L. | | | | | | | | | | | | | | | | | | | | X | | | |
| Ericaceae | Andromeda glaucophylla Lin | X | | | X | X | X | | X | X | | X | X | X | | X | | X | | | | X | | X |
| | Chamaedaphne calyculata ( | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | X | X | | | X | | X |
| | Gaultheria hispidula (L.) Muhl.ex Bigelow | | | | | X | | | X | X | | | X | X | X | | | | | | | | | |
| | Kalmia polifolia Wangenh | X | | X | X | X | X | | X | X | | X | X | X | X | X | | | | | | | | X |
| | Ledum groenlandicum Oeder | X | | X | X | X | | | X | X | | | X | X | | | | | | | | X | | |
| | Vaccinium macrocarpon Ait. | | X | X | | | | | | | | | | | | X | | | | | | X | | |
| | Vaccinium myrtilloides Michx. | | | | X | X | | | X | | | X | | X | | | | | | | | | | |
| | Vaccinium oxycoccus L. | | | X | X | X | | | X | | | | X | X | X | X | | | | | | | | X |
| Eriocaulonaceae | Eriocaulon aquaticum (Hill) Druce | | X | | | | | X | | | | | | | | | | | | | | | | |
| Fabaceae | Melilotis officinalis (L.) Lam. | | | | | | | | | | X | | | | | | X | | | | | | | |
| | Trifolium repens L. | | | | | | | | | | | | | | | | | | X | | | | | |
| Gentianaceae | Menyanthes trifoliata L. | | | | X | | | | | | | | | X | X | | | | | | | | | |
| Haloragaceae | Myriophyllum sibiricum Komarov | | X | | | | | X | | | | | | | | X | X | X | | | | | | |
| Hydrocharitaceae | Elodea canadensis Michx. | | | | | | | | | | | | | | | | X | X | | X | X | | X | |
| | Vallisneria americana Michx. | | | | | | | | | | | | | | | | X | | | | | | | |
| Iridaceae | Iris versicolor L. | | | | X | | X | X | | X | X | X | | | X | X | | X | | | X | X | | X |
| Isoetaceae | Isoetes echinospora Durieu | | | X | | | X | | | | | | | | | | | | | | | | | |
| | Isoetes riparia Engelm. ex A. Braun | | | | | | | X | | | | | | | | | | | | | | | | |
| | Isoetes sp. | | X | | | | | | | | | | | | | | | | | | | | | |
| Juncaceae | Juncus effusus L. | | X | | X | | X | X | | X | | X | | X | X | | | X | | | | | | |
| | Juncus tenuis Willd. | | | | X | | | | | | | | | | | | | | | | | | | |
| Juncaginaceae | Scheuchzeria palustris L. | | | | | | | | X | | | X | | | | | | | | | | X | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 6 | MEAN CONDUCTIVITY (uS/ | 6.45 | 11.2 | 11.4 | 11.4 | 12.8 | 13.5 | 14.8 | 15.2 | 19.5 | 21.5 | 22.6 | 24.7 | 27.8 | 29.3 | 29.4 | 42.3 | 58 | 59.8 | 86.5 | 92.1 | 98.2 | 105 | 140 |
| FAMILY | GENUS & SPECIES | FSB | BER | RAS | TUE | CRN | CRM | BAY | ED'S | HUM | BOG | RED | TE'B | N'GA | BOL | NAN | TE'L | KIC | MOR | TE'C | BR'C | MUL | BR'L | WAR |
| Lamiaceae | Clinopodium vulgare L. | | | | | | | | | | | | | | | | X | | | X | X | | | |
| | Lycopus uniflorus Michx. | | | X | X | X | X | X | | X | | X | | | | | | X | | | | X | | |
| | Prunella vulgaris L. | | | | | | | | | | | | | | | | X | | | | | | X | |
| | Scutellaria integrifolia L. | | | | | | | | | | | X | | | | | | | X | | | | X | |
| Lemnaceae | Lemna minor L. | | | | | | | | | | | X | | | X | | | | X | | X | | X | |
| | Spirodela polyrrhiza (L.) Scheid. | | | | | | | | | | | | | | | | | | X | | | | | |
| Lentibulariaceae | Utricularia macrorhiza Le Conte | | X | X | X | | | | X | X | X | X | X | X | | | | X | X | | X | | | |
| Liliaceae | Maianthemum canadense Desf. | | | X | X | | | X | | | | | | | | | | | | | | | | |
| | Maianthemum trifolium (L.) Sloboda | | | | | X | | | | | | | | X | X | | | | | | | | | |
| Lobeliaceae | Lobelia dortmanna L. | | | | | | X | X | | | | | | | | | | | X | | | | | |
| Lycopodiaceae | Lycopodium annotinum L. | | | | | | | X | | | | | | | | | | | | | | | | |
| | Lycopodium clavatum L. | | | | | | | X | | | | | | | | | | | | | | | | |
| Menyanthaceae | Menyanthes trifoliata L. | | | | | | | | | | | | | | | X | | | | | | X | | |
| Myricaceae | Myrica gale L. | | X | | | | | X | X | | | | | | | X | X | | | X | | | | |
| Najadaceae | Najas flexilis (Willd.) Rostk. & Schmidt | | | | | | | | | | | | | | | | | | | | | X | | |
| Nymphaeaceae | Brasenia schreberi J.F. Gmel. | | X | | X | | | X | | | | X | | | X | X | X | | | | | | | X |
| | Nuphar lutea ssp. variegata (Dur.) E | | X | X | X | | X | X | | X | X | X | | | X | X | X | X | X | | X | X | X | X |
| | Nymphaea odorata Ait. | X | | | | | X | | | | X | | | | X | X | X | X | X | X | | | X | X |
| Onagraceae | Epilobium ciliatum Raf. | | | | | | | | | | | | | | | | | | | X | | | | |
| Orchidaceae | Arethusa bulbosa L. | | | | | | | | | | | | | | | X | | | | | | X | | |
| | Calopogon tuberosus (L.) B. | X | | | | X | X | | | X | | | X | | X | X | | | | | | X | X | |
| | Cypripedium acaule Ait. | | | | X | | | | | X | | | | | | | | | | | | | | |
| | Pogonia ophioglossoides (L.) Ker-Gawl | | | | X | X | | | X | | | | | | X | X | | | | | | X | | |
| | Spiranthes cernua (L.) L. C. Rich | | | | | | | | | | | | | | | | | | | | | X | | |
| Osmundaceae | Osmunda cinnamomea L. | | | | | | | X | | | | | | | | | | | | | | | | |
| | Osmunda claytoniana L. | | | X | | | | X | | | | | | | | | | | | | | | | |
| | Osmunda regalis L. | | | | | | | | | | | | | | | | | | | X | | | | |
| Pinaceae | Abies balsamea (L.) P. Mill. | | | X | | | | | | | | | | | | | | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 6 | MEAN CONDUCTIVITY (uS/ | 6.45 | 11.2 | 11.4 | 11.4 | 12.8 | 13.5 | 14.8 | 15.2 | 19.5 | 21.5 | 22.6 | 24.7 | 27.8 | 29.3 | 29.4 | 42.3 | 58 | 59.8 | 86.5 | 92.1 | 98.2 | 105 | 140 |
| FAMILY | GENUS & SPECIES | FSB | BER | RAS | TUE | CRN | CRM | BAY | ED'S | HUM | BOG | RED | TE'B | N'GA | BOL | NAN | TE'L | KIC | MOR | TE'C | BR'C | MUL | BR'L | WAR |
| | Larix laricina (Du Roi) K. Koch | | | | | | | | | | | | | | | X | | | | | | | | |
| Poaceae | Agrostis gigantea Roth | | | | | | | | | | | | | | | | | | | | | | X | |
| | Agrostis hyemalis (Walt.) B. S. P. | | | | | | | | | | X | | | | | | | | | X | | | | |
| | Calamagrostis canadensis (Michs.) Beauv. | | | X | X | | | X | | X | X | X | | | X | | | | X | X | X | | X | X |
| | Dactylis glomerata L. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Dichanthelium depauperatum (Muhl.) Gould | | | | | | | | | | | X | | | | | | | | | | | | |
| | Gylceria canadensis (Michaux) Trin. | | X | | | | | | | | | | | | | | | | | | | | | |
| | Phleum pratense L. | | | | | | | | | | | | | | | | | | | | X | | | |
| Polygonaceae | Polygonum amphibium Waldst. & Kit. | | | | | | | | | | | | | | | | | X | | | | | | |
| | Polygonum persicaria L. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Rumex crispus L. | | | | | | | | | | | X | | | | | | | | | | | | |
| | Rumex orbiculatus Gray | | | | | | | | | | | | | | | | X | X | | X | | | | |
| Pontederiaceae | Heteranthera dubia (Jacq.) MacM. | | | | | | | | | | | X | | | | | | | | | | | | |
| | Pontederia cordata L. | | | | X | | X | X | | X | | | | | | | X | X | X | | | X | X | X |
| Potamogetonacea | Potamogeton amplifolius Tuckerman | | | | | | | | | | | X | | | | X | X | X | X | | X | | X | X |
| | Potamogeton epihydrus Raf. | | | | | | | | | | X | X | | | | | | | | | X | | | |
| | Potamogeton foliosus Raf. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Potamogeton gramineus L. | | X | X | X | | | | | | | | | | | | x | | | | | | | |
| | Potamogeton illinoensis Morong | | | | | | | | | | | | | | | | x | | | | | | | |
| | Potamogeton natans L. | | | | | | | | | | | X | | | | | | X | | | | | | |
| | Potamogeton obtusifolius Mert. & Koch | | | | | | | | | | | | | | | | | X | X | | | | X | |
| | Potamogeton praelongus Wulfen | | | | | | | | | | | | | | | | X | | | | | | | |
| | Potamogeton pusillus L. | | | | | | | | | | | X | | | | | | | X | X | X | | | |
| | Potamogeton pusillus var. tenuissimus Mert. & Koch | | | | | | | | | | | | | | | | | | | | X | | | |
| | Potamogeton richardsonii (Benn.) Rydb. | | | | | | | | | | | | | | | | X | | | X | | | | |
| | Potamogeton robbinsii Oakes | | X | | | | | | | | X | | | | | | X | X | | | X | | X | |
| | Potamogeton zosteriformis Fern. | | | | | | | | | | | | | | | | X | | X | | | | | |
| Primulaceae | Lysimachia terrestris (L.) B. S. P. | | X | X | | X | | | | | X | | | X | | | | | | | X | X | | X |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 6 | MEAN CONDUCTIVITY (uS/ | 6.45 | 11.2 | 11.4 | 11.4 | 12.8 | 13.5 | 14.8 | 15.2 | 19.5 | 21.5 | 22.6 | 24.7 | 27.8 | 29.3 | 29.4 | 42.3 | 58 | 59.8 | 86.5 | 92.1 | 98.2 | 105 | 140 |
| FAMILY | GENUS & SPECIES | FSB | BER | RAS | TUE | CRN | CRM | BAY | ED'S | HUM | BOG | RED | TE'B | N'GA | BOL | NAN | TE'L | KIC | MOR | TE'C | BR'C | MUL | BR'L | WAR |
| | Lysimachia thyrsiflora L. | | | X | | | | X | | X | | | | | | | X | X | X | | X | | | |
| | Trientalis borealis Raf. | | | | | | X | | | X | | | X | | | | | | | | | | | |
| Ranunculaceae | Caltha palustris L. | | | | | | | | | | | | | | | | | X | X | | | | | |
| | Coptis trifolia (L.) Salisb. | | | | | | | | | | X | | | | | | | | | | | | | |
| | Ranunculus acris L. | | | | | | | | | | | | | | | | X | | | | X | | | |
| | Ranunculus longirostris Godr. | | | | | | | | | | | | | | | | X | X | | | | | | |
| | Thalictrum dioicum L. | | | | | | | | | | | | | | | | X | | | X | X | | | |
| Rosaceae | Agrimonia gryposepala Wallr. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Comarum palustre L. | | | | X | | X | | | X | | X | | | X | X | | X | X | | X | X | X | X |
| | Fragaria virginiana Duchesne | | | X | | | | | | | | | | | | | | | | | | | | |
| | Geum rivale L. | | | | | | X | | | | | | | | | | | | | | | | | |
| | Potentilla arguta Pursh | | | | | | | | | | | | | | | | | | | | X | | | |
| | Potentilla norvegica L. | | | | | | | | | | | X | | | | | | | | X | X | | | |
| | Prunus pensylvanica L. f. | | | | | | | X | | | | | | | | | | | | | | | | |
| | Prunus pumila L. | | | X | | | | | | | | | | | | | | | | | | | | |
| | Prunus virginiana L. | | | X | | | | | | | | | | | | | | | | | | | | |
| | Rubus allegheniensis Porter | | | X | | | | | | | | | | | | | | | | | | | | |
| | Rubus canadensis L. | | X | | | | | | | | | | | | | | | | | | | | | |
| | Rubus hispidus L. | | | X | X | | | | | | | | | | | | X | | | | | | | |
| | Rubus iadaeus ssp. strigosus (Michx.) Focke | | | | | | | | | | | | | | | | X | | | X | X | | | X |
| | Waldsteinia fragarioides (Michx.) Tratt. | | | | | | | | | X | | | X | | | | | | | | | | | |
| Rubiaceae | Galium asprellum Michx. | | | | | | | | | | | | | | | | | | | X | X | | | |
| | Galium labradoricum (Wieg.) Wieg. | | | | X | | X | | | | | | | | | | | | X | | | | | |
| | Galium obtusum Bigelow | | X | | | | | | | | | | | | | | X | | | | | | | |
| | Galium palustre L. | | | | | | | | | | | | | | | | X | | | | | | | |
| | Galium trifidum L. | | | | | | | | | | | | | | | | | X | | | | | | |
| Salicaceae | Salix discolor Muhl. | | X | | | | | | | | | | | | | | | | | | | | | |
| | Salix exigua Nutt. | | | | | | | | | | X | | | | | | | X | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 6 | MEAN CONDUCTIVITY (uS/ | 6.45 | 11.2 | 11.4 | 11.4 | 12.8 | 13.5 | 14.8 | 15.2 | 19.5 | 21.5 | 22.6 | 24.7 | 27.8 | 29.3 | 29.4 | 42.3 | 58 | 59.8 | 86.5 | 92.1 | 98.2 | 105 | 140 |
| FAMILY | GENUS & SPECIES | FSB | BER | RAS | TUE | CRN | CRM | BAY | ED'S | HUM | BOG | RED | TE'B | N'GA | BOL | NAN | TE'L | KIC | MOR | TE'C | BR'C | MUL | BR'L | WAR |
| | Salix humilis Marsh | | | | | | | | | | | | | | | X | | | | | | | | |
| | Salix sericea Marsh. | | | | | | | | | | | | | | | | | | | | X | | | |
| Sarraceniaceae | Sarracenia purpurea L. | X | | | X | X | | | X | | | | X | X | X | X | | | | | | X | | |
| Saxifragaceae | Mitella nuda L. | | | | | | | X | | | | | | | | | | | | | | | | |
| | Ribes cynosbati L. | | | | | | | | | | | | | | | | | | | X | | | | |
| Scrophulariaceae | Chelone glabra L. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Scrophularia lanceolata Pursh | | | | | | | | | | | | | | | | | | | | X | X | | |
| | Veronica officinalis L. | | X | | | | | | | | | | | | | | | | | | | | | |
| | Veronica serpyllifolia L. | | | | | | | | | | | X | | | | | | | | | | | | |
| Solanaceae | Solanum dulcamara L. | | | | | | | | | | | | | | | | | | | X | X | | | |
| Sparganiaceae | Sparganium angustifolium Michx. | | X | | | | | X | | | | | | | | | | | | | | | | |
| | Sparganium sp. | | | | | | X | X | | | X | X | | | | | X | X | X | X | X | X | X | X |
| Sphagnaceae | Sphagnum cappillifolium var. tenellum Ehr | | | X | X | | | | | | | | | | | | | | | | | | | |
| | Sphagnum cuspidatum Ehrh. ex Hoffm. | | | | | X | | | | | | | | | | | | | | | | | | |
| | Sphagnum fimbriatum Wils. | | X | X | | | | | | | | | | | | | | | | | | | | |
| | Sphagnum girgensohnii | | | | | | X | | | | | | | | | | | | | | | | | |
| | Sphagnum magellanicum Bri | X | | X | X | X | | | X | X | X | X | X | X | X | X | | | | | | | | |
| | Sphagnum magellanica var. magellanica | | | | | X | | | | X | | | | | X | | | | | | | | | |
| | Sphagnum recurvum P.-Beauv. | | | | | | | | | | | | | | | X | | | | | | X | | X |
| | Sphagnum recurvum var. br | X | | | X | | | | | | X | | X | X | | | | | | | | | | |
| | Sphagnum recurvum var. tenue Klinggr. (a | | | X | | | | | | X | | | | | | | | | | | | | | |
| | Sphagnum teres (Schimp.) Angstr. ex C. Hartm. | | | | | | | | | | | X | | | | | | | | | | | | |
| Thelyteridaceae | Thelypteris palustris Schott | | | | | | | X | | | | | | | | | | X | | | | | | |
| Thymelaeaceae | Dirca palustris L. | | | | | | | X | | | | | | | | | | | | | | | | |
| Typhaceae | Typha latifolia L. | | | | X | | X | X | | X | X | X | | | X | X | X | X | X | | | X | X | X |
| Urticaceae | Urtica dioica L. | | | | | | | | | | | | | | | | | | | X | X | | | |
| | Urtica urens L. | | | | | | | | | | | | | | | | | | | | | | X | |
| Violaceae | Viola cuculliata Ait. | | | | | | X | | | | X | | | | | | X | | X | X | X | | X | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 6 | MEAN CONDUCTIVITY (uS/ | 6.45 | 11.2 | 11.4 | 11.4 | 12.8 | 13.5 | 14.8 | 15.2 | 19.5 | 21.5 | 22.6 | 24.7 | 27.8 | 29.3 | 29.4 | 42.3 | 58 | 59.8 | 86.5 | 92.1 | 98.2 | 105 | 140 |
| FAMILY | GENUS & SPECIES | FSB | BER | RAS | TUE | CRN | CRM | BAY | ED'S | HUM | BOG | RED | TE'B | N'GA | BOL | NAN | TE'L | KIC | MOR | TE'C | BR'C | MUL | BR'L | WAR |
| | Viola macloskeyi Lloyd | | | | | | X | | | | X | X | | | X | | | | X | | | | | |
| | Viola pubescens Ait. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Viola renifolia Gray | | X | | | | X | | | | X | | X | | | X | | | | | X | | | X |
| BRYOPHYTES | | | | | | | | | | | | | | | | | | | | | | | | |
| Aulacomniaceae | Aulacomnium palustre | | | | | | | | X | X | | X | X | | | | | | X | | | | X | |
| Ditrichaceae | Ceratodon purpureus | | | | | | X | | | | | | | | | | | | | | | | | |
| Mniceae | Mnium cuspidatum | | | | | | | | | | | | | | | | | X | | | | | | |
| | Rhizomnium sp. | | | | | X | | | | X | | | | | | | | | | | | | | |
| ALGAE | | | | | | | | | | | | | | | | | | | | | | | | |
| Chlorophyceae | Hydrodictyon sp. | | | | | | | | | | | | | | | | | | | | | | X | |
| Characeae | Chara vulgaris | | | | | | | | | | | | | | | | | | | | | | | X |
| | Nitella flexilus | | | X | | | | | | | | | | | | | | | X | | | | X | |
| | Nitella sp. | | | | | | | | | | | | | | | | | | X | | | | | |
| BRYOZOA | | | | | | X | X | | | | | | | | | | | | | | | | | |
| PTERIDOPHYTA | | | | | | | | | | | | | | | | | | | | | | | | |
| Dryopteridaceae | Athyrium filix-femina ssp. angustum (Willd.) Clausen | | | | | | | | | | | | | | | | | | | X | | | | |
| | Deparia acrostichoides (Sw.) M. Kato | | | | | | | | | | | | | | | | | | | | X | | | |
| | Dryopteris carthusiana (Vill.) H.P. Fuchs | | | | | | | | | | | | | | | X | X | | | | X | | | |
| | Matteuccia struthiopteris (L.) Todaro | | | | | | | | | | | | | | | | | | | | | | | X |
| | Onoclea sensibilis L. | | X | X | | | | X | | | X | X | | | | | X | X | X | X | X | | X | X |

MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC

Christie Brown, UNDERC 1997

| CHART 7 | SECCHI DEPTH (M) | 0.65 | 0.725 | 0.75 | 0.85 | 0.85 | 0.93 | 1.25 | 1.35 | 1.4 | 1.4 | 1.4 | 1.45 | 1.5 | 1.625 | 1.75 | 2.2 | 2.475 | 2.65 | 3.1 | 3.3 | 3.55 | N/A | N/A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FAMILY | GENUS & SPECIES | RED | HUM | N'GA | MOR | BOG | BOL | CRN | BR'L | TE'B | ED'S | NAN | MUL | KIC | TUE | FSB | BER | WAR | RAS | TE'L | CRM | BAY | TE'C | BR'C |
| Aceraceae | Acer rubrum L. | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | X | X | | NC | NC | | | X | | NC | X | | X |
| Alismataceae | Sagittaria latifolia Willd. | X | | | X | | | | X | | | | | X | | | | | | X | X | | X | |
| | Sagittaria sp. | | | | | | | | | | | | | | | | | | | | | X | | |
| Apiaceae | Cicuta bulbifera L. | | | | | | | | | | | | | X | | | | X | | | | | X | X |
| | Daucus carota L. | X | | | X | X | X | | X | | | | | X | | | | | | | X | | | |
| Aquifoliaceae | Ilex verticillata (L.) Gray | | | | | | | | | | | | | | | | | | | | | X | | |
| Araceae | Calla palustris L. | X | X | | X | X | | X | X | X | | | X | X | X | | | X | X | | X | X | X | X |
| Araliaceae | Aralia nudicaulis L. | | | | | X | | | | | | | | | | | | | | | | | | |
| Asclepiadaceae | Asclepias incarnata L. | | | | X | | | | | | | X | X | X | | | | X | | X | | | X | X |
| Asteraceae | Achillea millefolium L. | | | | | | | | | | | | | | | | | | | X | | | | X |
| | Actaea rubra (Ait.) Willd. | | | | | | | | | | | | | X | | | | | | | | | | |
| | Antennaria howellii Greene | | | | | | | | | | | | | | | | | | | | | | | X |
| | Aster lateriflorus (L.) Britt. | | | | | | | | | | | | | | X | | | | | X | | | | |
| | Aster sp. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Conyza canadensis (L.) Cronq. | | | | X | | | | | | | | | | | | | | | | | | | |
| | Erigeron annuus (L.) Pers. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Eupatorium maculatum L. | | | | | | | | | | | | X | | | | | | | | | | | |
| | Euthamia graminifolia (L.) Nutt. | | | | | | | | | | | | X | X | | | | | X | | | | | |
| | Hieracium aurantiacum L. | | | | | | | | | | | | | | | | | X | | | | | X | |
| | Hieracium caespitosum Dumort. | | | | | | | | | | | | | | | | | | | X | | | X | |
| | Hieracium piloselloides Vill. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Lactuca canadensis L. | | | | | | | | | | | | | | | | | | | X | | | | |
| | Leucanthemum vulgare Lam. | | | | | | | | | | | | | | | | | | X | X | | | | X |
| | Solidago gigantea Ait. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Solidago juncea Ait. | | | | | | | | | | | | | | | | | | X | | | | | X |
| | Solidago ptarmicoides (Nees) Boivin | | | | | | | | | | | | | | | | | | | | | | X | |
| | Solidago uliginosa Nutt. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Tragopogon dubius Scop. | | | | | | | | | | | | | | | | | | X | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 7 | SECCHI DEPTH (M) | 0.65 | 0.725 | 0.75 | 0.85 | 0.85 | 0.93 | 1.25 | 1.35 | 1.4 | 1.4 | 1.4 | 1.45 | 1.5 | 1.625 | 1.75 | 2.2 | 2.475 | 2.65 | 3.1 | 3.3 | 3.55 | N/A | N/A |
| FAMILY | GENUS & SPECIES | RED | HUM | N'GA | MOR | BOG | BOL | CRN | BR'L | TE'B | ED'S | NAN | MUL | KIC | TUE | FSB | BER | WAR | RAS | TE'L | CRM | BAY | TE'C | BR'C |
| Balsaminaceae | Impatiens capensis Meerb. | | | | | | | | | | | | | | | | X | | | | | X | | |
| Betulaceae | Alnus incana ssp. rugosa (D | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | X | X | | NC | NC | | X | X | X | NC | X | X | X |
| | Betula papyrifera Marsh. | | | | | | | | | | | | | | | | X | | | | X | | | |
| Boraginaceae | Myosotis laxa Lehm. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Myosotis scorpioides L. | | | | | | | | | | | | | | | | | | | | | X | | |
| Brassicaceae | Barbarea vulgaris Ait. f. | | | | | | | | | | | | | | | | | | | X | | | | |
| Callitrichaceae | Callitriche palustris L. | | | | X | | | | | | | | | | | | | | | | | | | X |
| Caprifoliaceae | Lonicera canadensis Batr. ex Marsh. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Lonicera x-bella Zabel | | | | | | | | | | | | | | | | | | X | X | | | X | |
| | Viburnum opulus var. americanum Ait. | | | | | | | | | | | | | | | | | | | | | | | X |
| Caryophyllaceae | Silene latifolia ssp. alba (P. Mill.) Greuter & Burdet | | | | | | | | | | | | | | | | | | | | | | X | X |
| | Stellaria graminea L. | | | | | | | | | | | | | | | | | | | X | | | X | |
| | Stellaria longifolia Muhl. ex Willd. | | | | | | | | | X | | | | | | | | | | | | | | |
| Ceratophyllaceae | Ceratophyllum demersum L. | | | | | | X | | X | | | | | X | | | | | | X | | | X | X |
| Clusiaceae | Hypericum ascyron L. | X | | | | | | X | X | | | | | | | | | | | | | | | |
| | Hypericum boreale (Britt.) Bickn. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Hypericum ellipticum Hook. | | | | X | | | | | | | | | | | | | | | | | | | |
| | Hypericum majus (Gray) Britt. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Hypericum perforatum L. | | | | | | | | | | | | | | | | X | | | | | | | |
| | Hypericum sp. | X | | | X | | | X | | | | | | | | | | | | | X | | | |
| | Triadenum fraseri (Spach) Gleason | | X | | | X | | X | | | | | X | X | | | | X | X | | | | | |
| Cornaceae | Cornus alternifolia L. f. | | | | | X | | | | | | | | | | | | | | | | | | X |
| | Cornus canadensis L. | | | | | | | | | | | | | | | | X | | | | | | | |
| | Cornus sericea L. | | | | | | | | | | | | X | | | | | X | | | | | X | |
| Cyperaceae | Carex bebbii Olney ex Fern. | X | | | | X | | | X | | X | | | | X | | | | | | | | | |
| | Carex canescens L. | | | | | X | X | X | | | | | | | | | | | | | | | | |
| | Carex comosa Boott | | | | | | | | | | | | | | | | | X | | X | | | | |
| | Carex crawfordii Fern. | X | | | | | | | | | | | | | | | | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 7 | SECCHI DEPTH (M) | 0.65 | 0.725 | 0.75 | 0.85 | 0.85 | 0.93 | 1.25 | 1.35 | 1.4 | 1.4 | 1.4 | 1.45 | 1.5 | 1.625 | 1.75 | 2.2 | 2.475 | 2.65 | 3.1 | 3.3 | 3.55 | N/A | N/A |
| FAMILY | GENUS & SPECIES | RED | HUM | N'GA | MOR | BOG | BOL | CRN | BR'L | TE'B | ED'S | NAN | MUL | KIC | TUE | FSB | BER | WAR | RAS | TE'L | CRM | BAY | TE'C | BR'C |
| | Carex crinata Lam. | | X | | | | | | | | | | | | | | | | | X | | X | | |
| | Carex diandra Schrank | | | | | | | | | | | | X | X | | | | X | | | X | | | |
| | Carex gracillima Schwein | X | | | | | | | | X | | | | | | | | | | | X | | | |
| | Carex interior Bailey | | X | X | | | X | X | | | | X | | | X | | X | | X | | | | | |
| | Carex lasiocarpa Ehrh. | | | | | | | | | | | X | X | X | | | | X | | | | | | |
| | Carex limosa L. | | | X | | | | X | | X | X | | | | | | | | | | | | | |
| | Carex pauciflora Lightf. | X | | | | | | | | X | | | | | | X | | | | | | | | |
| | Carex paupercula Michaux. | | X | X | X | | | | | | X | | | | | X | | | | | | | | |
| | Carex pseudocyperus L. | | | | X | | | | | | | | | | | | | | | | | | | |
| | Carex retrorsa Schwein | | | | | | | | X | | | | | | | | | | | | | | | |
| | Carex rostrata Stokes | | | | | | | | | | X | X | | | | | X | | X | X | X | X | X | |
| | Carex stipata Muhl. ex Willd. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Carex stricta Lam. | | | | | | X | | X | | | | | | X | | | X | | X | | | | X |
| | Carex tribuloides Mackenzie | X | | | X | X | X | | X | | | | | | | | | | | | | | | |
| | Carex tribuloides Wahl. | | | | | | | | | | | | | | | | | | | X | | | | |
| | Carex trisperma Dewey | | | | | | X | X | X | X | | | | | | | | | | | | | | |
| | Carex tuckermanii Dewey | | | | | | | | | | | | | | | | | | X | | | | | |
| | Carex versicolor L. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Dulichium arundinaceum (L.) | X | X | | | X | | | | | | | X | | X | | X | | | | X | X | | |
| | Eleocharis obtusa (Willd.) J. A. Schultes | | | | | | | | | | | X | | | | | X | X | | | | | | |
| | Eleocharis smallii Britt. | | | | X | | | | | | | | | | X | | | | | | | | | |
| | Eriophorum gracile W.D.J. Koch | | | | | | | | | | | | | X | | | | X | | | | | | |
| | Eriophorum vaginatum var. spissum (Fern. | | | X | | | | | | X | X | | | | X | X | | | | | | | | |
| | Luzula acuminata Raf. | | | | | X | | | | | | | | | | | | | | | | | | |
| | Rhynchospora alba (L.) Vahl | | | X | X | | X | X | | X | X | | | | X | | | | | | | | | |
| | Scirpus acutus Muhl. ex Bigelow | | | | | X | | | X | | X | | | | X | | | | | | | | | |
| | Scirpus americanus Pers. | | | | | | | | X | | | | | | | | | | | X | | | | |
| | Scirpus atrovirens Willd. | | | | | | | | | | | | | | | | | | X | | X | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 7 | SECCHI DEPTH (M) | 0.65 | 0.725 | 0.75 | 0.85 | 0.85 | 0.93 | 1.25 | 1.35 | 1.4 | 1.4 | 1.4 | 1.45 | 1.5 | 1.625 | 1.75 | 2.2 | 2.475 | 2.65 | 3.1 | 3.3 | 3.55 | N/A | N/A |
| FAMILY | GENUS & SPECIES | RED | HUM | N'GA | MOR | BOG | BOL | CRN | BR'L | TE'B | ED'S | NAN | MUL | KIC | TUE | FSB | BER | WAR | RAS | TE'L | CRM | BAY | TE'C | BR'C |
| | Scirpus cyperinus (L.) Kunth | | | | | | X | X | | | | | | | | | | | | | | | | |
| Dennstaedtiaceae | Pteridium aquilinum (L.) Kuhn | | | | | | | | | | | | | | | | | | X | | | X | X | |
| Droceraceae | Drosera rotundifolia L. | X | X | X | | X | | X | | X | X | | X | | X | X | X | | X | | X | | | |
| Equisetaceae | Equisetum arvense L. | X | | | X | | X | | | | | | | X | | X | | X | X | X | X | X | | |
| | Equisetum fluviatile L. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Equisetum sylvaticum L. | | | | | | | | | | | | | | | | | | | | | | | X |
| Ericaceae | Andromeda glaucophylla Lin | X | X | X | | | | X | | X | X | X | X | X | X | X | | X | | | X | | | |
| | Chamaedaphne calyculata ( | X | X | X | X | X | X | X | | X | X | X | X | X | X | X | X | X | X | | X | X | | |
| | Gaultheria hispidula (L.) Muhl.ex Bi | | X | X | | | X | X | | X | X | | | | | | | | | | | | | |
| | Kalmia polifolia Wangenh | X | X | X | | | X | X | | X | X | X | | | X | X | | X | X | | X | | | |
| | Ledum groenlandicum Oeder | | X | X | | | | X | | X | X | | X | | X | X | | | X | | | | | |
| | Vaccinium macrocarpon Ait. | | | | | | | | | | | X | X | | | | X | | X | | | | | |
| | Vaccinium myrtilloides Michx | X | | X | | | | X | | | X | | | | X | | | | | | | | | |
| | Vaccinium oxycoccus L. | | | X | | | X | X | | X | X | X | | | X | | | X | X | | | | | |
| Eriocaulonaceae | Eriocaulon aquaticum (Hill) Druce | | | | | | | | | | | | | | | | X | | | | | X | | |
| Fabaceae | Melilotis officinalis (L.) Lam. | | | | | X | | | | | | | | | | | | | | X | | | | |
| | Trifolium repens L. | | | | X | | | | | | | | | | | | | | | | | | | |
| Gentianaceae | Menyanthes trifoliata L. | | | X | | | X | | | | | | | | X | | | | | | | | | |
| Haloragaceae | Myriophyllum sibiricum Komarov | | | | | | | | | | | X | | X | | | X | | | X | | X | | |
| Hydrocharitaceae | Elodea canadensis Michx. | | | | | | | | X | | | | | X | | | | | | X | | | X | X |
| | Vallisneria americana Michx. | | | | | | | | | | | | | | | | | | | X | | | | |
| Iridaceae | Iris versicolor L. | X | X | | | X | X | | | | | X | X | X | X | | | X | | | X | X | | X |
| Isoetaceae | Isoetes echinospora Durieu | | | | | | | | | | | | | | | | | | X | | X | | | |
| | Isoetes riparia Engelm. ex A. Braun | | | | | | | | | | | | | | | | | | | | | X | | |
| | Isoetes sp. | | | | | | | | | | | | | | | | X | | | | | | | |
| Juncaceae | Juncus effusus L. | X | X | X | | | X | | | | | | | X | X | | X | | | | X | X | | |
| | Juncus tenuis Willd. | | | | | | | | | | | | | | X | | | | | | | | | |
| Juncaginaceae | Scheuchzeria palustris L. | X | | | | | | | | | X | | X | | | | | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 7 | SECCHI DEPTH (M) | 0.65 | 0.725 | 0.75 | 0.85 | 0.85 | 0.93 | 1.25 | 1.35 | 1.4 | 1.4 | 1.4 | 1.45 | 1.5 | 1.625 | 1.75 | 2.2 | 2.475 | 2.65 | 3.1 | 3.3 | 3.55 | N/A | N/A |
| FAMILY | GENUS & SPECIES | RED | HUM | N'GA | MOR | BOG | BOL | CRN | BR'L | TE'B | ED'S | NAN | MUL | KIC | TUE | FSB | BER | WAR | RAS | TE'L | CRM | BAY | TE'C | BR'C |
| Lamiaceae | Clinopodium vulgare L. | | | | | | | | | | | | | | | | | | | X | | | X | X |
| | Lycopus uniflorus Michx. | X | X | | | | | X | | | | | X | X | X | | | | X | | X | X | | |
| | Prunella vulgaris L. | | | | | | | | X | | | | | | | | | | | X | | | | |
| | Scutellaria integrifolia L. | X | | | X | | | | X | | | | | | | | | | | | | | | |
| Lemnaceae | Lemna minor L. | X | | | X | | X | | X | | | | | | | | | | | | | | | X |
| | Spirodela polyrrhiza (L.) Scheid. | | | | X | | | | | | | | | | | | | | | | | | | |
| Lentibulariaceae | Utricularia macrorhiza Le Co | X | X | X | X | X | | | | X | X | | | X | X | | X | | X | | | | | X |
| Liliaceae | Maianthemum canadense Desf. | | | | | | | | | | | | | | X | | | | X | | | X | | |
| | Maianthemum trifolium (L.) Sloboda | | | X | | | X | X | | | | | | | | | | | | | | | | |
| Lobeliaceae | Lobelia dortmanna L. | | | | X | | | | | | | | | | | | | | | | X | X | | |
| Lycopodiaceae | Lycopodium annotinum L. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Lycopodium clavatum L. | | | | | | | | | | | | | | | | | | | | | X | | |
| Menyanthaceae | Menyanthes trifoliata L. | | | | | | | | | | | X | X | | | | | | | | | | | |
| Myricaceae | Myrica gale L. | | | | | | | | | | X | X | | | | | X | | | X | | X | X | |
| Najadaceae | Najas flexilis (Willd.) Rostk. & Schmidt | | | | | | | | | | | | X | | | | | | | | | | | |
| Nymphaeaceae | Brasenia schreberi J.F. Gme | X | | | | | X | | | | | X | | | X | | X | X | | X | | X | | |
| | Nuphar lutea ssp. variegata ( | X | X | | X | X | X | | X | | | X | X | X | X | | X | X | X | X | X | X | | X |
| | Nymphaea odorata Ait. | | | | X | X | X | | X | | | X | | X | | X | | X | | X | X | | X | |
| Onagraceae | Epilobium ciliatum Raf. | | | | | | | | | | | | | | | | | | | | | | X | |
| Orchidaceae | Arethusa bulbosa L. | | | | | | | | | | | X | X | | | | | | | | | | | |
| | Calopogon tuberosus (L.) B. S. P. | | X | | | | X | X | X | X | | X | X | | | X | | | | | X | | | |
| | Cypripedium acaule Ait. | | X | | | | | | | | | | | | X | | | | | | | | | |
| | Pogonia ophioglossoides (L.) Ker-Gawl | | | | | | X | X | | | X | X | X | | X | | | | | | | | | |
| | Spiranthes cernua (L.) L. C. Rich | | | | | | | | | | | | X | | | | | | | | | | | |
| Osmundaceae | Osmunda cinnamomea L. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Osmunda claytoniana L. | | | | | | | | | | | | | | | | | | X | | | X | | |
| | Osmunda regalis L. | | | | | | | | | | | | | | | | | | | | | | X | |
| Pinaceae | Abies balsamea (L.) P. Mill. | | | | | | | | | | | | | | | | | | X | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 7 | SECCHI DEPTH (M) | 0.65 | 0.725 | 0.75 | 0.85 | 0.85 | 0.93 | 1.25 | 1.35 | 1.4 | 1.4 | 1.4 | 1.45 | 1.5 | 1.625 | 1.75 | 2.2 | 2.475 | 2.65 | 3.1 | 3.3 | 3.55 | N/A | N/A |
| FAMILY | GENUS & SPECIES | RED | HUM | N'GA | MOR | BOG | BOL | CRN | BR'L | TE'B | ED'S | NAN | MUL | KIC | TUE | FSB | BER | WAR | RAS | TE'L | CRM | BAY | TE'C | BR'C |
| | Larix laricina (Du Roi) K. Koch | | | | | | | | | | | X | | | | | | | | | | | | |
| Poaceae | Agrostis gigantea Roth | | | | | | | | X | | | | | | | | | | | | | | | |
| | Agrostis hyemalis (Walt.) B. S. P. | | | | | X | | | | | | | | | | | | | | | | | X | |
| | Calamagrostis canadensis ( | X | X | | X | X | X | | X | | | | | | X | | | X | X | | | X | X | X |
| | Dactylis glomerata L. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Dichanthelium depauperatu | X | | | | | | | | | | | | | | | | | | | | | | |
| | Gylceria canadensis (Michaux) Trin. | | | | | | | | | | | | | | | | X | | | | | | | |
| | Phleum pratense L. | | | | | | | | | | | | | | | | | | | | | | | X |
| Polygonaceae | Polygonum amphibium Waldst. & Kit. | | | | | | | | | | | | | X | | | | | | | | | | |
| | Polygonum persicaria L. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Rumex crispus L. | X | | | | | | | | | | | | | | | | | | | | | | |
| | Rumex orbiculatus Gray | | | | | | | | | | | | | X | | | | | | X | | | X | |
| Pontederiaceae | Heteranthera dubia (Jacq.) | X | | | | | | | | | | | | | | | | | | | | | | |
| | Pontederia cordata L. | | X | | X | | | | X | | | | X | X | X | | | X | | X | X | X | | |
| Potamogetonacea | Potamogeton amplifolius Tuc | X | | | X | | | | X | | | X | | X | | | | X | | X | | | | X |
| | Potamogeton epihydrus Raf. | X | | | | X | | | | | | | | | | | | | | | | | | X |
| | Potamogeton foliosus Raf. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Potamogeton gramineus L. | | | | | | | | | | | | | | X | | X | | X | x | | | | |
| | Potamogeton illinoensis Morong | | | | | | | | | | | | | | | | | | | x | | | | |
| | Potamogeton natans L. | X | | | | | | | | | | | | X | | | | | | | | | | |
| | Potamogeton obtusifolius Mert. & Koch | | | | X | | | | X | | | | | X | | | | | | | | | | |
| | Potamogeton praelongus Wulfen | | | | | | | | | | | | | | | | | | | X | | | | |
| | Potamogeton pusillus L. | X | | | X | | | | | | | | | | | | | | | | | | X | X |
| | Potamogeton pusillus var. tenuissimus Mert. & Koch | | | | | | | | | | | | | | | | | | | | | | | X |
| | Potamogeton richardsonii (Benn.) Rydb. | | | | | | | | | | | | | | | | | | | X | | | X | |
| | Potamogeton robbinsii Oakes | | | | | X | | | X | | | | | X | | | X | | | X | | | | X |
| | Potamogeton zosteriformis Fern. | | | | X | | | | | | | | | | | | | | | X | | | | |
| Primulaceae | Lysimachia terrestris (L.) B. S. P. | | | | | X | X | X | | | | | X | | | | X | X | X | | | | | X |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 7 | SECCHI DEPTH (M) | 0.65 | 0.725 | 0.75 | 0.85 | 0.85 | 0.93 | 1.25 | 1.35 | 1.4 | 1.4 | 1.4 | 1.45 | 1.5 | 1.625 | 1.75 | 2.2 | 2.475 | 2.65 | 3.1 | 3.3 | 3.55 | N/A | N/A |
| FAMILY | GENUS & SPECIES | RED | HUM | N'GA | MOR | BOG | BOL | CRN | BR'L | TE'B | ED'S | NAN | MUL | KIC | TUE | FSB | BER | WAR | RAS | TE'L | CRM | BAY | TE'C | BR'C |
| | Lysimachia thyrsiflora L. | | X | | X | | | | | | | | | X | | | | | X | X | | X | | X |
| | Trientalis borealis Raf. | | X | | | | | | | X | | | | | | | | | | | X | | | |
| Ranunculaceae | Caltha palustris L. | | | | X | | | | | | | | | X | | | | | | | | | | |
| | Coptis trifolia (L.) Salisb. | | | | | X | | | | | | | | | | | | | | | | | | |
| | Ranunculus acris L. | | | | | | | | | | | | | | | | | | | X | | | | X |
| | Ranunculus longirostris Godr. | | | | | | | | | | | | | X | | | | | | X | | | | |
| | Thalictrum dioicum L. | | | | | | | | | | | | | | | | | | | X | | | X | X |
| Rosaceae | Agrimonia gryposepala Wallr. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Comarum palustre L. | X | X | | X | | X | | X | | | X | X | X | X | | | X | | | X | | | X |
| | Fragaria virginiana Duchesne | | | | | | | | | | | | | | | | | | X | | | | | |
| | Geum rivale L. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Potentilla arguta Pursh | | | | | | | | | | | | | | | | | | | | | | | X |
| | Potentilla norvegica L. | X | | | | | | | | | | | | | | | | | | | | | X | X |
| | Prunus pensylvanica L. f. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Prunus pumila L. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Prunus virginiana L. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Rubus allegheniensis Porter | | | | | | | | | | | | | | | | | | X | | | | | |
| | Rubus canadensis L. | | | | | | | | | | | | | | | | X | | | | | | | |
| | Rubus hispidus L. | | | | | | | | | | | | | | X | | | | X | X | | | | |
| | Rubus iadaeus ssp. strigosus (Michx.) Focke | | | | | | | | | | | | | | | | | X | | X | | | X | X |
| | Waldsteinia fragarioides (Michx.) Tr | | X | | | | | | | X | | | | | | | | | | | | | | |
| Rubiaceae | Galium asprellum Michx. | | | | | | | | | | | | | | | | | | | | | | X | X |
| | Galium labradoricum (Wieg.) Wieg. | | | | X | | | | | | | | | | X | | | | | | X | | | |
| | Galium obtusum Bigelow | | | | | | | | | | | | | | | | X | | | X | | | | |
| | Galium palustre L. | | | | | | | | | | | | | | | | | | | X | | | | |
| | Galium trifidum L. | | | | | | | | | | | | | X | | | | | | | | | | |
| Salicaceae | Salix discolor Muhl. | | | | | | | | | | | | | | | | X | | | | | | | |
| | Salix exigua Nutt. | | | | | X | | | | | | | | X | | | | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 7 | SECCHI DEPTH (M) | 0.65 | 0.725 | 0.75 | 0.85 | 0.85 | 0.93 | 1.25 | 1.35 | 1.4 | 1.4 | 1.4 | 1.45 | 1.5 | 1.625 | 1.75 | 2.2 | 2.475 | 2.65 | 3.1 | 3.3 | 3.55 | N/A | N/A |
| FAMILY | GENUS & SPECIES | RED | HUM | N'GA | MOR | BOG | BOL | CRN | BR'L | TE'B | ED'S | NAN | MUL | KIC | TUE | FSB | BER | WAR | RAS | TE'L | CRM | BAY | TE'C | BR'C |
| | Salix humilis Marsh | | | | | | | | | | | X | | | | | | | | | | | | |
| | Salix sericea Marsh. | | | | | | | | | | | | | | | | | | | | | | | X |
| Sarraceniaceae | Sarracenia purpurea L. | | | X | | | X | X | | X | X | X | X | | X | X | | | | | | | | |
| Saxifragaceae | Mitella nuda L. | | | | | | | | | | | | | | | | | | | | | X | | |
| | Ribes cynosbati L. | | | | | | | | | | | | | | | | | | | | | | X | |
| Scrophulariaceae | Chelone glabra L. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Scrophularia lanceolata Pursh | | | | | | | | | | | | X | | | | | | | | | | | X |
| | Veronica officinalis L. | | | | | | | | | | | | | | | | X | | | | | | | |
| | Veronica serpyllifolia L. | X | | | | | | | | | | | | | | | | | | | | | | |
| Solanaceae | Solanum dulcamara L. | | | | | | | | | | | | | | | | | | | | | | X | X |
| Sparganiaceae | Sparganium angustifolium Michx. | | | | | | | | | | | | | | | | X | | | | | X | | |
| | Sparganium sp. | X | | | X | X | | | X | | | | X | X | | | | X | | X | X | X | X | X |
| Sphagnaceae | Sphagnum cappillifolium var. tenellum Ehrh. | | | | | | | | | | | | | | X | | | | X | | | | | |
| | Sphagnum cuspidatum Ehrh. ex Hoffm. | | | | | | | X | | | | | | | | | | | | | | | | |
| | Sphagnum fimbriatum Wils. | | | | | | | | | | | | | | | | X | | X | | | | | |
| | Sphagnum girgensohnii | | | | | | | | | | | | | | | | | | | | X | | | |
| | Sphagnum magellanicum Bri | X | X | X | | X | X | X | | X | X | X | | | X | X | | | X | | | | | |
| | Sphagnum magellanica var. magell | | X | | | | X | X | | | | | | | | | | | | | | | | |
| | Sphagnum recurvum P.-Beauv. | | | | | | | | | | | X | X | | | | | X | | | | | | |
| | Sphagnum recurvum var. brevifolium | | | X | | X | | | | X | | | | | X | X | | | | | | | | |
| | Sphagnum recurvum var. tenue Kli | | X | | | | | | | | | | | | | | | | X | | | | | |
| | Sphagnum teres (Schimp.) A | X | | | | | | | | | | | | | | | | | | | | | | |
| Thelyteridaceae | Thelypteris palustris Schott | | | | | | | | | | | | | X | | | | | | | | X | | |
| Thymelaeaceae | Dirca palustris L. | | | | | | | | | | | | | | | | | | | | | X | | |
| Typhaceae | Typha latifolia L. | X | X | | X | X | X | | X | | | X | X | X | X | | | X | | X | X | X | | |
| Urticaceae | Urtica dioica L. | | | | | | | | | | | | | | | | | | | | | | X | X |
| | Urtica urens L. | | | | | | | | X | | | | | | | | | | | | | | | |
| Violaceae | Viola cucullata Ait. | | | | X | X | | | X | | | | | | | | | | | X | X | | X | X |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 7 | SECCHI DEPTH (M) | 0.65 | 0.725 | 0.75 | 0.85 | 0.85 | 0.93 | 1.25 | 1.35 | 1.4 | 1.4 | 1.4 | 1.45 | 1.5 | 1.625 | 1.75 | 2.2 | 2.475 | 2.65 | 3.1 | 3.3 | 3.55 | N/A | N/A |
| FAMILY | GENUS & SPECIES | RED | HUM | N'GA | MOR | BOG | BOL | CRN | BR'L | TE'B | ED'S | NAN | MUL | KIC | TUE | FSB | BER | WAR | RAS | TE'L | CRM | BAY | TE'C | BR'C |
| | Viola macloskeyi Lloyd | X | | | X | X | X | | | | | | | | | | | | | | X | | | |
| | Viola pubescens Ait. | | | | | | | | | | | | | | | | | | | | | | | X |
| | Viola renifolia Gray | | | | | X | | | | X | | X | | | | | X | X | | | X | | | X |
| BRYOPHYTES | | | | | | | | | | | | | | | | | | | | | | | | |
| Aulacomniaceae | Aulacomnium palustre | X | X | | X | | | | X | X | X | | | | | | | | | | | | | |
| Ditrichaceae | Ceratodon purpureus | | | | | | | | | | | | | | | | | | | | X | | | |
| Mniceae | Mnium cuspidatum | | | | | | | | | | | | | X | | | | | | | | | | |
| | Rhizomnium sp. | | X | | | | | X | | | | | | | | | | | | | | | | |
| ALGAE | | | | | | | | | | | | | | | | | | | | | | | | |
| Chlorophyceae | Hydrodictyon sp. | | | | | | | | X | | | | | | | | | | | | | | | |
| Characeae | Chara vulgaris | | | | | | | | | | | | | | | | | X | | | | | | |
| | Nitella flexilus | | | | X | | | | X | | | | | | | | | | X | | | | | |
| | Nitella sp. | | | | X | | | | | | | | | | | | | | | | | | | |
| BRYOZOA | | | | | | | | X | | | | | | | | | | | | | X | | | |
| PTERIDOPHYTA | | | | | | | | | | | | | | | | | | | | | | | | |
| Dryopteridaceae | Athyrium filix-femina ssp. angustum (Willd.) Clausen | | | | | | | | | | | | | | | | | | | | | | X | |
| | Deparia acrostichoides (Sw.) M. Kato | | | | | | | | | | | | | | | | | | | | | | | X |
| | Dryopteris carthusiana (Vill.) H.P. Fuchs | | | | | | | | | | | X | | | | | | | | X | | | | X |
| | Matteuccia struthiopteris (L.) Todaro | | | | | | | | | | | | | | | | | X | | | | | | |
| | Onoclea sensibilis L. | X | | | X | X | | | X | | | | | X | | | X | X | X | X | | X | X | X |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 8 | COLOR (PtCo) | 14.8 | 36.1 | 40 | 41 | 43.5 | 57.25 | 60.5 | 62.4 | 70.25 | 78 | 79 | 79.8 | 90.3 | 96.5 | 127 | 135 | 145 | 155 | 164 | 196 | 245.5 | 272 | 321 |
| FAMILY | GENUS & SPECIES | BAY | RAS | TE'L | CRM | FSB | WAR | TUE | BER | TE'C | KIC | BR'L | MUL | BR'C | CRN | ED'S | NAN | BOL | BOG | TE'B | MOR | HUM | RED | N'GA |
| Aceraceae | Acer rubrum L. | X | X | | NC | NC | | NC | | | | NC | X | X | NC | NC | X | NC | NC | NC | NC | NC | NC | NC |
| Alismataceae | Sagittaria latifolia Willd. | | | X | X | | | | | X | X | X | | | | | | | | | X | | X | |
| | Sagittaria sp. | X | | | | | | | | | | | | | | | | | | | | | | |
| Apiaceae | Cicuta bulbifera L. | | | | | | X | | | X | X | | | X | | | | | | | | | | |
| | Daucus carota L. | | | | X | | | | | | X | X | | | | | | X | X | | X | | X | |
| Aquifoliaceae | Ilex verticillata (L.) Gray | X | | | | | | | | | | | | | | | | | | | | | | |
| Araceae | Calla palustris L. | X | X | | X | | X | X | | X | X | X | X | X | X | | | | X | X | X | X | X | |
| Araliaceae | Aralia nudicaulis L. | | | | | | | | | | | | | | | | | | X | | | | | |
| Asclepiadaceae | Asclepias incarnata L. | | | X | | | X | | | X | X | | X | X | | | X | | | | X | | | |
| Asteraceae | Achillea millefolium L. | | | X | | | | | | | | | | X | | | | | | | | | | |
| | Actaea rubra (Ait.) Willd. | | | | | | | | | | X | | | | | | | | | | | | | |
| | Antennaria howellii Greene | | | | | | | | | | | | | X | | | | | | | | | | |
| | Aster lateriflorus (L.) Britt. | | | X | | | | X | | | | | | | | | | | | | | | | |
| | Aster sp. | | | | | | | | | X | | | | | | | | | | | | | | |
| | Conyza canadensis (L.) Cronq. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Erigeron annuus (L.) Pers. | | X | | | | | | | | | | | | | | | | | | | | | |
| | Eupatorium maculatum L. | | | | | | | | | | | | X | | | | | | | | | | | |
| | Euthamia graminifolia (L.) Nutt. | | X | | | | | | | | X | | X | | | | | | | | | | | |
| | Hieracium aurantiacum L. | | | | | | X | | | X | | | | | | | | | | | | | | |
| | Hieracium caespitosum Dumort. | | | X | | | | | | X | | | | | | | | | | | | | | |
| | Hieracium piloselloides Vill. | | | | | | | | | X | | | | | | | | | | | | | | |
| | Lactuca canadensis L. | | | X | | | | | | | | | | | | | | | | | | | | |
| | Leucanthemum vulgare Lam. | | X | X | | | | | | | | | | X | | | | | | | | | | |
| | Solidago gigantea Ait. | | | | | | | | | | | | | X | | | | | | | | | | |
| | Solidago juncea Ait. | | X | | | | | | | | | | | X | | | | | | | | | | |
| | Solidago ptarmicoides (Nees) Boivin | | | | | | | | | X | | | | | | | | | | | | | | |
| | Solidago uliginosa Nutt. | | | | | | | | | | | | | X | | | | | | | | | | |
| | Tragopogon dubius Scop. | | X | | | | | | | | | | | | | | | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 8 | COLOR (PtCo) | 14.8 | 36.1 | 40 | 41 | 43.5 | 57.25 | 60.5 | 62.4 | 70.25 | 78 | 79 | 79.8 | 90.3 | 96.5 | 127 | 135 | 145 | 155 | 164 | 196 | 245.5 | 272 | 321 |
| FAMILY | GENUS & SPECIES | BAY | RAS | TE'L | CRM | FSB | WAR | TUE | BER | TE'C | KIC | BR'L | MUL | BR'C | CRN | ED'S | NAN | BOL | BOG | TE'B | MOR | HUM | RED | N'GA |
| Balsaminaceae | Impatiens capensis Meerb. | X | | | | | | | X | | | | | | | | | | | | | | | |
| Betulaceae | Alnus incana ssp. rugosa (D | X | X | X | NC | NC | X | NC | | X | | NC | X | X | NC | NC | X | NC | NC | NC | NC | NC | NC | NC |
| | Betula papyrifera Marsh. | | | | X | | | | X | | | | | | | | | | | | | | | |
| Boraginaceae | Myosotis laxa Lehm. | | | | | | | | | X | | | | | | | | | | | | | | |
| | Myosotis scorpioides L. | X | | | | | | | | | | | | | | | | | | | | | | |
| Brassicaceae | Barbarea vulgaris Ait. f. | | | X | | | | | | | | | | | | | | | | | | | | |
| Callitrichaceae | Callitriche palustris L. | | | | | | | | | | | | | X | | | | | | | X | | | |
| Caprifoliaceae | Lonicera canadensis Batr. ex | X | | | | | | | | | | | | | | | | | | | | | | |
| | Lonicera x-bella Zabel | | X | X | | | | | | X | | | | | | | | | | | | | | |
| | Viburnum opulus var. americanum Ait. | | | | | | | | | | | | | X | | | | | | | | | | |
| Caryophyllaceae | Silene latifolia ssp. alba (P. Mill.) Greuter & Burdet | | | | | | | | | X | | | | X | | | | | | | | | | |
| | Stellaria graminea L. | | | X | | | | | | X | | | | | | | | | | | | | | |
| | Stellaria longifolia Muhl. ex Willd. | | | | | | | | | | | | | | | | | | | X | | | | |
| Ceratophyllaceae | Ceratophyllum demersum L. | | | X | | | | | | X | X | X | | X | | | | X | | | | | | |
| Clusiaceae | Hypericum ascyron L. | | | | | | | | | | | X | | | X | | | | | | | | X | |
| | Hypericum boreale (Britt.) Bickn. | | | | | | | | | | | X | | | | | | | | | | | | |
| | Hypericum ellipticum Hook. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Hypericum majus (Gray) Britt | X | | | | | | | | | | | | | | | | | | | | | | |
| | Hypericum perforatum L. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Hypericum sp. | | | | X | | | | | | | | | | X | | | | | | X | | X | |
| | Triadenum fraseri (Spach) Gleason | | X | | | | X | | | | X | | X | | X | | | | X | | | X | | |
| Cornaceae | Cornus alternifolia L. f. | | | | | | | | | | | | | X | | | | | X | | | | | |
| | Cornus canadensis L. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Cornus sericea L. | | | | | | X | | | X | | | X | | | | | | | | | | | |
| Cyperaceae | Carex bebbii Olney ex Fern. | | | | | | | X | | | | X | | | | X | | | X | | | | X | |
| | Carex canescens L. | | | | | | | | | | | | | | X | | | X | X | | | | | |
| | Carex comosa Boott | | | X | | | X | | | | | | | | | | | | | | | | | |
| | Carex crawfordii Fern. | | | | | | | | | | | | | | | | | | | | | | X | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 8 | COLOR (PtCo) | 14.8 | 36.1 | 40 | 41 | 43.5 | 57.25 | 60.5 | 62.4 | 70.25 | 78 | 79 | 79.8 | 90.3 | 96.5 | 127 | 135 | 145 | 155 | 164 | 196 | 245.5 | 272 | 321 |
| FAMILY | GENUS & SPECIES | BAY | RAS | TE'L | CRM | FSB | WAR | TUE | BER | TE'C | KIC | BR'L | MUL | BR'C | CRN | ED'S | NAN | BOL | BOG | TE'B | MOR | HUM | RED | N'GA |
| | Carex crinata Lam. | X | | X | | | | | | | | | | | | | | | | | | X | | |
| | Carex diandra Schrank | | | | X | | X | | | | X | | X | | | | | | | | | | | |
| | Carex gracillima Schwein | | | | X | | | | | | | | | | | | | | | X | | | X | |
| | Carex interior Bailey | | X | | | | | X | X | | | | | | X | | X | X | | | | X | | X |
| | Carex lasiocarpa Ehrh. | | | | | | X | | | | X | | X | | | | X | | | | | | | |
| | Carex limosa L. | | | | | | | | | | | | | | X | X | | | | X | | | | X |
| | Carex pauciflora Lightf. | | | | | X | | | | | | | | | | | | | | X | | | X | |
| | Carex paupercula Michaux. | | | | | X | | | | | | | | | | X | | | | | X | X | | X |
| | Carex pseudocyperus L. | | | | | | | | | | | | | | | | | | | | X | | | |
| | Carex retrorsa Schwein | | | | | | | | | | | X | | | | | | | | | | | | |
| | Carex rostrata Stokes | X | X | X | X | | | | X | X | | | | | | X | X | | | | | | | |
| | Carex stipata Muhl. ex Willd. | | | | | | | | | | | X | | | | | | | | | | | | |
| | Carex stricta Lam. | | | X | | | X | X | | | | X | | X | | | | X | | | | | | |
| | Carex tribuloides Mackenzie | | | | | | | | | | | X | | | | | | X | X | | X | | X | |
| | Carex tribuloides Wahl. | | | X | | | | | | | | | | | | | | | | | | | | |
| | Carex trisperma Dewey | | | | | | | | | | | X | | | X | | | X | | X | | | | |
| | Carex tuckermanii Dewey | | X | | | | | | | | | | | | | | | | | | | | | |
| | Carex versicolor L. | | | | | | | | | | | | | X | | | | | | | | | | |
| | Dulichium arundinaceum (L.) | X | | | X | | | X | X | | | | X | | | | | | X | | | X | X | |
| | Eleocharis obtusa (Willd.) J. A. Schultes | | | | | | X | | X | | | | | | | | X | | | | | | | |
| | Eleocharis smallii Britt. | | | | | | | X | | | | | | | | | | | | | X | | | |
| | Eriophorum gracile W.D.J. Koch | | | | | | X | | | | X | | | | | | | | | | | | | |
| | Eriophorum vaginatum var. spissum (Fern.) Boivin | | | | | X | | X | | | | | | | | X | | | | X | | | | X |
| | Luzula acuminata Raf. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Rhynchospora alba (L.) Vahl | | | | | | | X | | | | | | | X | X | | X | | X | X | | | X |
| | Scirpus acutus Muhl. ex Bigelow | | | | | | | X | | | | X | | | | X | | | X | | | | | |
| | Scirpus americanus Pers. | | | X | | | | | | | | X | | | | | | | | | | | | |
| | Scirpus atrovirens Willd. | | X | | X | | | | | | | | | | | | | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 8 | COLOR (PtCo) | 14.8 | 36.1 | 40 | 41 | 43.5 | 57.25 | 60.5 | 62.4 | 70.25 | 78 | 79 | 79.8 | 90.3 | 96.5 | 127 | 135 | 145 | 155 | 164 | 196 | 245.5 | 272 | 321 |
| FAMILY | GENUS & SPECIES | BAY | RAS | TE'L | CRM | FSB | WAR | TUE | BER | TE'C | KIC | BR'L | MUL | BR'C | CRN | ED'S | NAN | BOL | BOG | TE'B | MOR | HUM | RED | N'GA |
| | Scirpus cyperinus (L.) Kunth | | | | | | | | | | | | | | X | | | X | | | | | | |
| Dennstaedtiaceae | Pteridium aquilinum (L.) Kuh | X | X | | | | | | | X | | | | | | | | | | | | | | |
| Droceraceae | Drosera rotundifolia L. | | X | | X | X | | X | X | | | | X | | X | X | | | X | X | | X | X | X |
| Equisetaceae | Equisetum arvense L. | X | X | X | X | X | X | | | | X | | | | | | | X | | | X | | X | |
| | Equisetum fluviatile L. | X | | | | | | | | | | | | | | | | | | | | | | |
| | Equisetum sylvaticum L. | | | | | | | | | | | | | X | | | | | | | | | | |
| Ericaceae | Andromeda glaucophylla Link | | | | X | X | X | X | | | X | | X | | X | X | X | | | X | | X | X | X |
| | Chamaedaphne calyculata ( | X | X | | X | X | X | X | X | | X | | X | | X | X | X | X | X | X | X | X | X | X |
| | Gaultheria hispidula (L.) Muhl.ex Bigelow | | | | | | | | | | | | | | X | X | | X | | X | | X | | X |
| | Kalmia polifolia Wangenh | | X | | X | X | X | X | | | | | | | X | X | X | X | | X | | X | X | X |
| | Ledum groenlandicum Oeder | | X | | | X | | X | | | | | X | | X | X | | | | X | | X | | X |
| | Vaccinium macrocarpon Ait. | | X | | | | | | X | | | | X | | | | X | | | | | | | |
| | Vaccinium myrtilloides Michx. | | | | | | | X | | | | | | | X | X | | | | | | | X | X |
| | Vaccinium oxycoccus L. | | X | | | | X | X | | | | | | | X | X | X | X | | X | | | | X |
| Eriocaulonaceae | Eriocaulon aquaticum (Hill) | X | | | | | | | X | | | | | | | | | | | | | | | |
| Fabaceae | Melilotis officinalis (L.) Lam. | | | X | | | | | | | | | | | | | | | X | | | | | |
| | Trifolium repens L. | | | | | | | | | | | | | | | | | | | | X | | | |
| Gentianaceae | Menyanthes trifoliata L. | | | | | | | X | | | | | | | | | | X | | | | | | X |
| Haloragaceae | Myriophyllum sibiricum Kom | X | | X | | | | | X | | X | | | | | | X | | | | | | | |
| Hydrocharitaceae | Elodea canadensis Michx. | | | X | | | | | | X | X | X | | X | | | | | | | | | | |
| | Vallisneria americana Michx. | | | X | | | | | | | | | | | | | | | | | | | | |
| Iridaceae | Iris versicolor L. | X | | | X | | X | X | | | X | | X | X | | | X | X | X | | | X | X | |
| Isoetaceae | Isoetes echinospora Durieu | | X | | X | | | | | | | | | | | | | | | | | | | |
| | Isoetes riparia Engelm. ex A. | X | | | | | | | | | | | | | | | | | | | | | | |
| | Isoetes sp. | | | | | | | | X | | | | | | | | | | | | | | | |
| Juncaceae | Juncus effusus L. | X | | | X | | | X | X | | X | | | | | | | X | | | | X | X | X |
| | Juncus tenuis Willd. | | | | | | | X | | | | | | | | | | | | | | | | |
| Juncaginaceae | Scheuchzeria palustris L. | | | | | | | | | | | | X | | | X | | | | | | | X | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 8 | COLOR (PtCo) | 14.8 | 36.1 | 40 | 41 | 43.5 | 57.25 | 60.5 | 62.4 | 70.25 | 78 | 79 | 79.8 | 90.3 | 96.5 | 127 | 135 | 145 | 155 | 164 | 196 | 245.5 | 272 | 321 |
| FAMILY | GENUS & SPECIES | BAY | RAS | TE'L | CRM | FSB | WAR | TUE | BER | TE'C | KIC | BR'L | MUL | BR'C | CRN | ED'S | NAN | BOL | BOG | TE'B | MOR | HUM | RED | N'GA |
| Lamiaceae | Clinopodium vulgare L. | | | X | | | | | | X | | | | X | | | | | | | | | | |
| | Lycopus uniflorus Michx. | X | X | | X | | | X | | | X | | X | | X | | | | | | | X | X | |
| | Prunella vulgaris L. | | | X | | | | | | | | X | | | | | | | | | | | | |
| | Scutellaria integrifolia L. | | | | | | | | | | | X | | | | | | | | | X | | X | |
| Lemnaceae | Lemna minor L. | | | | | | | | | | | X | | X | | | | X | | | X | | X | |
| | Spirodela polyrrhiza (L.) Scheid. | | | | | | | | | | | | | | | | | | | | X | | | |
| Lentibulariaceae | Utricularia macrorhiza Le Conte | | X | | | | | X | X | | X | | | X | | X | | | X | X | X | X | X | X |
| Liliaceae | Maianthemum canadense D | X | X | | | | | X | | | | | | | | | | | | | | | | |
| | Maianthemum trifolium (L.) Sloboda | | | | | | | | | | | | | | X | | | X | | | | | | X |
| Lobeliaceae | Lobelia dortmanna L. | X | | | X | | | | | | | | | | | | | | | | X | | | |
| Lycopodiaceae | Lycopodium annotinum L. | X | | | | | | | | | | | | | | | | | | | | | | |
| | Lycopodium clavatum L. | X | | | | | | | | | | | | | | | | | | | | | | |
| Menyanthaceae | Menyanthes trifoliata L. | | | | | | | | | | | | X | | | | X | | | | | | | |
| Myricaceae | Myrica gale L. | X | | X | | | | | X | X | | | | | | X | X | | | | | | | |
| Najadaceae | Najas flexilis (Willd.) Rostk. & Schmidt | | | | | | | | | | | | X | | | | | | | | | | | |
| Nymphaeaceae | Brasenia schreberi J.F. Gme | X | | X | | | X | X | X | | | | | | | | X | X | | | | | X | |
| | Nuphar lutea ssp. variegata ( | X | X | X | X | | X | X | X | | X | X | X | X | | | X | X | X | | X | X | X | |
| | Nymphaea odorata Ait. | | | X | X | X | X | | | X | X | X | | | | | X | X | X | | X | | | |
| Onagraceae | Epilobium ciliatum Raf. | | | | | | | | | X | | | | | | | | | | | | | | |
| Orchidaceae | Arethusa bulbosa L. | | | | | | | | | | | | X | | | | X | | | | | | | |
| | Calopogon tuberosus (L.) B. S. P. | | | | X | X | | | | | | X | X | | X | | X | X | | X | | X | | |
| | Cypripedium acaule Ait. | | | | | | | X | | | | | | | | | | | | | | X | | |
| | Pogonia ophioglossoides (L.) Ker-Gawl | | | | | | | X | | | | | X | | X | X | X | X | | | | | | |
| | Spiranthes cernua (L.) L. C. Rich | | | | | | | | | | | | X | | | | | | | | | | | |
| Osmundaceae | Osmunda cinnamomea L. | X | | | | | | | | | | | | | | | | | | | | | | |
| | Osmunda claytoniana L. | X | X | | | | | | | | | | | | | | | | | | | | | |
| | Osmunda regalis L. | | | | | | | | | X | | | | | | | | | | | | | | |
| Pinaceae | Abies balsamea (L.) P. Mill. | | X | | | | | | | | | | | | | | | | | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 8 | COLOR (PtCo) | 14.8 | 36.1 | 40 | 41 | 43.5 | 57.25 | 60.5 | 62.4 | 70.25 | 78 | 79 | 79.8 | 90.3 | 96.5 | 127 | 135 | 145 | 155 | 164 | 196 | 245.5 | 272 | 321 |
| FAMILY | GENUS & SPECIES | BAY | RAS | TE'L | CRM | FSB | WAR | TUE | BER | TE'C | KIC | BR'L | MUL | BR'C | CRN | ED'S | NAN | BOL | BOG | TE'B | MOR | HUM | RED | N'GA |
| | Larix laricina (Du Roi) K. Koch | | | | | | | | | | | | | | | | X | | | | | | | |
| Poaceae | Agrostis gigantea Roth | | | | | | | | | | | X | | | | | | | | | | | | |
| | Agrostis hyemalis (Walt.) B. S. P. | | | | | | | | | X | | | | | | | | | X | | | | | |
| | Calamagrostis canadensis ( | X | X | | | | X | X | | X | | X | | X | | | | X | X | | X | X | X | |
| | Dactylis glomerata L. | | | | | | | | | | | X | | | | | | | | | | | | |
| | Dichanthelium depauperatum (Muhl.) Gould | | | | | | | | | | | | | | | | | | | | | | X | |
| | Gylceria canadensis (Michaux) Trin. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Phleum pratense L. | | | | | | | | | | | | | X | | | | | | | | | | |
| Polygonaceae | Polygonum amphibium Waldst. & Kit. | | | | | | | | | | X | | | | | | | | | | | | | |
| | Polygonum persicaria L. | | | | | | | | | | | X | | | | | | | | | | | | |
| | Rumex crispus L. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Rumex orbiculatus Gray | | | X | | | | | | X | X | | | | | | | | | | | | | |
| Pontederiaceae | Heteranthera dubia (Jacq.) MacM. | | | | | | | | | | | | | | | | | | | | | | X | |
| | Pontederia cordata L. | X | | X | X | | X | X | | | X | X | X | | | | | | | | X | X | | |
| Potamogetonacea | Potamogeton amplifolius Tuckerman | | | X | | | X | | | | X | X | | X | | | X | | | | X | | X | |
| | Potamogeton epihydrus Raf. | | | | | | | | | | | | | X | | | | | X | | | | X | |
| | Potamogeton foliosus Raf. | | | | | | | | | | | X | | | | | | | | | | | | |
| | Potamogeton gramineus L. | | X | x | | | | X | X | | | | | | | | | | | | | | | |
| | Potamogeton illinoensis Morong | | | x | | | | | | | | | | | | | | | | | | | | |
| | Potamogeton natans L. | | | | | | | | | | X | | | | | | | | | | | | X | |
| | Potamogeton obtusifolius Mert. & Koch | | | | | | | | | | X | X | | | | | | | | | X | | | |
| | Potamogeton praelongus Wulfen | | | X | | | | | | | | | | | | | | | | | | | | |
| | Potamogeton pusillus L. | | | | | | | | | X | | | | X | | | | | | | X | | X | |
| | Potamogeton pusillus var. tenuissimus Mert. & Koch | | | | | | | | | | | | | X | | | | | | | | | | |
| | Potamogeton richardsonii (Benn.) Rydb. | | | X | | | | | | X | | | | | | | | | | | | | | |
| | Potamogeton robbinsii Oakes | | | X | | | | | X | | X | X | | X | | | | | X | | | | | |
| | Potamogeton zosteriformis Fern. | | | X | | | | | | | | | | | | | | | | | X | | | |
| Primulaceae | Lysimachia terrestris (L.) B. S. P. | | X | | | | X | | X | | | | X | X | X | | | X | X | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 8 | COLOR (PtCo) | 14.8 | 36.1 | 40 | 41 | 43.5 | 57.25 | 60.5 | 62.4 | 70.25 | 78 | 79 | 79.8 | 90.3 | 96.5 | 127 | 135 | 145 | 155 | 164 | 196 | 245.5 | 272 | 321 |
| FAMILY | GENUS & SPECIES | BAY | RAS | TE'L | CRM | FSB | WAR | TUE | BER | TE'C | KIC | BR'L | MUL | BR'C | CRN | ED'S | NAN | BOL | BOG | TE'B | MOR | HUM | RED | N'GA |
| | Lysimachia thyrsiflora L. | X | X | X | | | | | | | X | | | X | | | | | | | X | X | | |
| | Trientalis borealis Raf. | | | | X | | | | | | | | | | | | | | | X | | X | | |
| Ranunculaceae | Caltha palustris L. | | | | | | | | | | X | | | | | | | | | | X | | | |
| | Coptis trifolia (L.) Salisb. | | | | | | | | | | | | | | | | | | X | | | | | |
| | Ranunculus acris L. | | | X | | | | | | | | | | X | | | | | | | | | | |
| | Ranunculus longirostris Godr. | | | X | | | | | | | X | | | | | | | | | | | | | |
| | Thalictrum dioicum L. | | | X | | | | | | X | | | | X | | | | | | | | | | |
| Rosaceae | Agrimonia gryposepala Wallr. | | | | | | | | | | | | | X | | | | | | | | | | |
| | Comarum palustre L. | | | | X | | X | X | | | X | X | X | X | | | X | X | | | X | X | X | |
| | Fragaria virginiana Duchesne | | X | | | | | | | | | | | | | | | | | | | | | |
| | Geum rivale L. | | | | X | | | | | | | | | | | | | | | | | | | |
| | Potentilla arguta Pursh | | | | | | | | | | | | | X | | | | | | | | | | |
| | Potentilla norvegica L. | | | | | | | | | X | | | | X | | | | | | | | | X | |
| | Prunus pensylvanica L. f. | X | | | | | | | | | | | | | | | | | | | | | | |
| | Prunus pumila L. | | X | | | | | | | | | | | | | | | | | | | | | |
| | Prunus virginiana L. | | X | | | | | | | | | | | | | | | | | | | | | |
| | Rubus allegheniensis Porter | | X | | | | | | | | | | | | | | | | | | | | | |
| | Rubus canadensis L. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Rubus hispidus L. | | X | X | | | | X | | | | | | | | | | | | | | | | |
| | Rubus iadaeus ssp. strigosus (Michx.) Fo | | | X | | | X | | | X | | | | X | | | | | | | | | | |
| | Waldsteinia fragarioides (Michx.) Tratt. | | | | | | | | | | | | | | | | | | | X | | X | | |
| Rubiaceae | Galium asprellum Michx. | | | | | | | | | X | | | | X | | | | | | | | | | |
| | Galium labradoricum (Wieg.) Wieg. | | | | X | | | X | | | | | | | | | | | | | X | | | |
| | Galium obtusum Bigelow | | | X | | | | | X | | | | | | | | | | | | | | | |
| | Galium palustre L. | | | X | | | | | | | | | | | | | | | | | | | | |
| | Galium trifidum L. | | | | | | | | | | X | | | | | | | | | | | | | |
| Salicaceae | Salix discolor Muhl. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Salix exigua Nutt. | | | | | | | | | | X | | | | | | | | X | | | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 8 | COLOR (PtCo) | 14.8 | 36.1 | 40 | 41 | 43.5 | 57.25 | 60.5 | 62.4 | 70.25 | 78 | 79 | 79.8 | 90.3 | 96.5 | 127 | 135 | 145 | 155 | 164 | 196 | 245.5 | 272 | 321 |
| FAMILY | GENUS & SPECIES | BAY | RAS | TE'L | CRM | FSB | WAR | TUE | BER | TE'C | KIC | BR'L | MUL | BR'C | CRN | ED'S | NAN | BOL | BOG | TE'B | MOR | HUM | RED | N'GA |
| | Salix humilis Marsh | | | | | | | | | | | | | | | | X | | | | | | | |
| | Salix sericea Marsh. | | | | | | | | | | | | | X | | | | | | | | | | |
| Sarraceniaceae | Sarracenia purpurea L. | | | | | X | | X | | | | | X | | X | X | X | X | | X | | | | X |
| Saxifragaceae | Mitella nuda L. | X | | | | | | | | | | | | | | | | | | | | | | |
| | Ribes cynosbati L. | | | | | | | | | X | | | | | | | | | | | | | | |
| Scrophulariaceae | Chelone glabra L. | | | | | | | | | | | | | X | | | | | | | | | | |
| | Scrophularia lanceolata Pursh | | | | | | | | | | | | X | X | | | | | | | | | | |
| | Veronica officinalis L. | | | | | | | | X | | | | | | | | | | | | | | | |
| | Veronica serpyllifolia L. | | | | | | | | | | | | | | | | | | | | | | X | |
| Solanaceae | Solanum dulcamara L. | | | | | | | | | X | | | | X | | | | | | | | | | |
| Sparganiaceae | Sparganium angustifolium Mi | X | | | | | | | X | | | | | | | | | | | | | | | |
| | Sparganium sp. | X | | X | X | | X | | | X | X | X | X | X | | | | | X | | X | | X | |
| Sphagnaceae | Sphagnum cappillifolium var. tenell | | X | | | | | X | | | | | | | | | | | | | | | | |
| | Sphagnum cuspidatum Ehrh. ex Hoffm. | | | | | | | | | | | | | | X | | | | | | | | | |
| | Sphagnum fimbriatum Wils. | | X | | | | | | X | | | | | | | | | | | | | | | |
| | Sphagnum girgensohnii | | | | X | | | | | | | | | | | | | | | | | | | |
| | Sphagnum magellanicum Brid. | | X | | | X | | X | | | | | | | X | X | X | X | X | X | | X | X | X |
| | Sphagnum magellanica var. magellanica | | | | | | | | | | | | | | X | | | X | | | | X | | |
| | Sphagnum recurvum P.-Beauv. | | | | | | X | | | | | | X | | | | X | | | | | | | |
| | Sphagnum recurvum var. brevifolium | | | | | X | | X | | | | | | | | | | | X | X | | | | X |
| | Sphagnum recurvum var. tenue Kli | | X | | | | | | | | | | | | | | | | | | | X | | |
| | Sphagnum teres (Schimp.) Angstr. ex C. Hartm. | | | | | | | | | | | | | | | | | | | | | | X | |
| Thelyteridaceae | Thelypteris palustris Schott | X | | | | | | | | | X | | | | | | | | | | | | | |
| Thymelaeaceae | Dirca palustris L. | X | | | | | | | | | | | | | | | | | | | | | | |
| Typhaceae | Typha latifolia L. | X | | X | X | | X | X | | | X | X | X | | | | X | X | X | | X | X | X | |
| Urticaceae | Urtica dioica L. | | | | | | | | | X | | | | X | | | | | | | | | | |
| | Urtica urens L. | | | | | | | | | | | X | | | | | | | | | | | | |
| Violaceae | Viola cucullata Ait. | | | X | X | | | | | X | | X | | X | | | | | X | | X | | | |

| MACROPHYTE SURVEY OF BOGS AND LAKES AT UNDERC | | | | | | | | | | | | | | | | | | Christie Brown, UNDERC 1997 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHART 8 | COLOR (PtCo) | 14.8 | 36.1 | 40 | 41 | 43.5 | 57.25 | 60.5 | 62.4 | 70.25 | 78 | 79 | 79.8 | 90.3 | 96.5 | 127 | 135 | 145 | 155 | 164 | 196 | 245.5 | 272 | 321 |
| FAMILY | GENUS & SPECIES | BAY | RAS | TE'L | CRM | FSB | WAR | TUE | BER | TE'C | KIC | BR'L | MUL | BR'C | CRN | ED'S | NAN | BOL | BOG | TE'B | MOR | HUM | RED | N'GA |
| | Viola macloskeyi Lloyd | | | | X | | | | | | | | | | | | | X | X | | X | | X | |
| | Viola pubescens Ait. | | | | | | | | | | | | | X | | | | | | | | | | |
| | Viola renifolia Gray | | | | X | | X | | X | | | | | X | | | X | | X | X | | | | |
| BRYOPHYTES | | | | | | | | | | | | | | | | | | | | | | | | |
| Aulacomniaceae | Aulacomnium palustre | | | | | | | | | | | X | | | | X | | | | X | X | X | X | |
| Ditrichaceae | Ceratodon purpureus | | | | X | | | | | | | | | | | | | | | | | | | |
| Mniceae | Mnium cuspidatum | | | | | | | | | | X | | | | | | | | | | | | | |
| | Rhizomnium sp. | | | | | | | | | | | | | | X | | | | | | | X | | |
| ALGAE | | | | | | | | | | | | | | | | | | | | | | | | |
| Chlorophyceae | Hydrodictyon sp. | | | | | | | | | | | X | | | | | | | | | | | | |
| Characeae | Chara vulgaris | | | | | | X | | | | | | | | | | | | | | | | | |
| | Nitella flexilus | | X | | | | | | | | | X | | | | | | | | | X | | | |
| | Nitella sp. | | | | | | | | | | | | | | | | | | | | X | | | |
| BRYOZOA | | | | | X | | | | | | | | | | X | | | | | | | | | |
| PTERIDOPHYTA | | | | | | | | | | | | | | | | | | | | | | | | |
| Dryopteridaceae | Athyrium filix-femina ssp. angustum (Willd.) Clausen | | | | | | | | | X | | | | | | | | | | | | | | |
| | Deparia acrostichoides (Sw.) M. Kato | | | | | | | | | | | | | X | | | | | | | | | | |
| | Dryopteris carthusiana (Vill.) H.P. Fuchs | | | X | | | | | | | | | | X | | | X | | | | | | | |
| | Matteuccia struthiopteris (L.) Todaro | | | | | | X | | | | | | | | | | | | | | | | | |
| | Onoclea sensibilis L. | X | X | X | | | X | | X | X | X | X | | X | | | | | X | | X | | X | |

## Macrophyte and Water Chemistry Trends

### CONDUCTIVITY

Conductivity may be a determining factor in the presence of Cicuta bulbifera L. (Apiaceae) as no specimens were found in habitats with less than 58 (uS/cm). Asclepias incarnata L. (Asclepiadaceae) also appears to favor habitats with greater than 29 (uS/cm). The majority of species in Asteraceae were also found in habitats with greater than 40 (uS/cm) with the major exceptions occurring in Raspberry. Ceratophyllum demersum L. (Ceratophyllaceae) also showed a tendency towards higher conductivity levels as it was only collected in habitats above 29 (uS/cm). Many of the species in Ericaceae were found in great abundance in sites with less than 30 (uS/cm). Elodea canadensis Michx. and Vallisneria americana Michx. in the family, Hydrocharitaceae, also tended to be present only in habitats with greater than 40 (uS/cm). All specimens in the family isoetaceae were found in habitats with less than15 (uS/cm). Most species of Potamogetonaceae inhabited waters with a conductivity over 20 (uS/cm). Potamogeton gramineus L and Potamogeton robbinsii Oakes were the two exceptions as they were found in sites with conductivities less than 12 (uS/cm). The species of Ranunculaceae was only found in waters with a conductivity over 20 (uS/cm). All species in Sphagnaceae showed trends. The majority were found in habitats with conductivities of less than 29.4 (uS/cm), while only one species, Sphagnum recurvum P.-Beauv. was found in sites with conductivies above 29.4 (uS/cm). Species in Urticaceae also appeared to favor waters with conductivities over 40 (uS/cm).

### SECCHI DEPTH

The transparency of water to light seems to be a significant factor for the presence of Myriophyllum sibiricum Komarov (Haloragaceae) as the secchi depth had to be at least 1.4 m before it was found. Isoetaceae is also greatly effected by the transparency of the water as its presence was only in waters with secchi depth 2.475 m or greater. Species of Osmundaceae also appear to prefer clearer water with its presence only in habitats having secchi depths 2.65 m or greater. Most species of Potamogetonaceae were not influenced by the particulate matter in the water except for Potamogeton gramineus L. was only present in site having a secchi depth of 1.625 or greater. While species in the Asteraceae and Rosaceae families were not completely absent from sites with lesser secchi depths, most species appeared to favor habitats with secchi depths of greater than 2 m.

### COLOR

As with secchi depth, color measured by a Hach kit in (PtCo) is also an indicator of particulate matter in water and thus the transparency to light. In accordance with the secchi depth results, Elodea canadensis Michx. and Vallisneria americana Michx. both from the family Hydrocharitaceae were found only in sites with color values less than 92 (PtCo). Isoetaceae also showed trends with its presence only in habitats of less than 71 (PtCo). Scheuchzeria palustris L. (Juncaginaceae) was only found in waters with higher particulate matter and values of greater than 79 (PtCo). On the other hand, Osmundaceae was only found in waters with color less than 79 (PtCo) which follow the trends observed for secchi depth.

**Discussion**

Most of the water chemistry tests prove to be useful for predicting certain species of plants or the probability that a certain family may be found in an area; however, from this study one would not be able to predict the relative abundance of a macrophyte. Many of the tests appear to be interrelated, but may show trends in some families and not others which suggests that one would be able to get a better idea of what macrophytes were present in a habitat if looking at several different tests. Looking at several different tests to predict the macrophytes would provide a more holistic view of the habitat and would also be beneficial in that some tests are somewhat variable in the readings. It should also be noted that many of the macrophytes collected were found on the immediate shore and were not actually standing in the water which may explain why some families and species did not show significant trends. From this study, certain macrophytes present in a habitat could also be used to predict characteristics of the water. The study also suggest that streams have the most diverse macrophytes with lakes following and bog-type habitats being the least diverse.

While water chemistry proved to be beneficial to correlating macrophyte presence, maximum depth, maximum length and relative size did not show significant trends. The percent of littoral zone may offer more insight than maximum depth as most macrophytes do not grow in the deepest parts and tend to be found closer to the shores. Many plants live only partially in the water and are not truly aquatic (Morgan 1930). In addition with increasing depth, species of plants change along with their structures (Curtis 1959). While maximum length and relative size did not proved to be useful in this experiment, they may be useful if correlating relative abundance of a macrophyte which was not looked at in this experiment.

It should be noted that I did not discuss hard woody plants because Karen Francl did not seem to have collected them. I also do not mention much about members in the families of Cyperaceae and Poaceae although a few species such as Carex Lasiocarpa Ehrh could prove to be interesting topics. I do not discuss these families as Karen appeared to have concentrated more of her collecting on these two families than I had. Thus, any strong conclusions may be faulty until it is proven that these species favor bog-like habitats.

This experiment could be used as a stepping stone to provide families and species that appear to show trends and which may prove to be useful if further study is continued. The families of Asteraceae and Ericaceae appear to be promising topics of further study as they showed general trends towards more lake-type and bog-like habitats respectively (Curtis 1959). One may also want to consider further study of Raspberry as it was often the only exception to many of the major trends in these two families. Members in the families: Hydrocharitaceae, Isoetaceae, Osmundaceae and Sphagnaceae show the most significant trends and look to be the most promising. The first three families thrive in more neutral conditions. Sphagnaceae, in particular, looks favorable because within the family there are differences in the types of habitats certain species prefer. Most species of Sphagnum were collected in habitats that are more bog-like and stereotypical of Sphagnum. Sphagnum is usually thought to grow in habitats too poor in nutrients to support larger vascular plants (McQueen). However, Sphagnum recurvum P.-Beauv. appeared to go against the typical bog-type habitats that Sphagnum is known to inhabit and help create with continued growth (Crum 1922). This variety was found in more lake like habitats while, members of the same species but different variety were collected in the bog-like habitats and appear to have very specific cut-off points. More information is still needed to make any solid conclusion. This study may provide a basis for choosing water chemistry experiments and species that might be of interest.

**Acknowledgments**

I would like to thank the Bernard J. Hank Family Endowment which provided the funding for the UNDERC program. I would also like to thank Dr. Ronald Hellenthal for his direction and Barbara Hellenthal for providing me with space in the Herbarium and for her many hours of helping with identifications. Thanks also to my other group members Maria Goodrich, Hollis Janowak and Amy Zulich for keeping collecting organized and fun and for keeping me company on the hike to Nansen.

## References Cited

Crum, Howard. A Focus on Peatlands and Peat Mosses. Ann Arbor: University of Michigan Press, 1992.

Curtis, John T. The Vegetation of Wisconsin. Madison: The University of Wisconsin Press, 1959.

McQueen, Cyrus B. Field Guide to the Peat Mosses of Boreal North America. Hanover: The University Press of New England, 1990.

Morgan, A. Field Book of Ponds and Steams. NewYork: G.P. Putman's Sons, 1930.

Prescott, G. W. How to Know the Aquatic Plants. Dubuque: W. C. Brown Company, 1967.

Rosenberg, D. M. Freshwater Biomonitoring and Benthic Macroinvertebrates. New York: Routledge, Chapman & Hall, Inc., 1993.

Sculthorpe, C. D. The Biology of Aquatic Vascular Plants. New York: St. Martin's Press, 1967.

## Unpublished Data

Francl, Karen. Relationship Between Macrophyte Presence and Chemical Composition of Ten Bog-like Habitats and Three Streams. UNDERC 1996.