

Sarracenia

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Spring-Summer 2006

Newsletter of the Wildflower Society of Newfoundland and Labrador
c/o Botanical Garden, Memorial University of Newfoundland, St. John's, NL, A1C 5S7

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Any articles from members would be most welcomed and may be sent via email to todd.boland@warp.nfld.net or via regular mail

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PRESIDENT'S MESSAGE

Guess it's safe to say that Spring 2006 has arrived!

I think most members will be pleased with the line-up of summer walks. (See Attached). As many members were keen to have extra time for more intense botanizing, in addition to our week-long Summer Field Trip, we have arranged a two-day exploration to the Trepassey- Cape Shore Area. We be heading back to the Whitbourne Pond area and looking forward to possible new discoveries. We are delighted that the Fall 2006 Mushroom Foray is being held on the East Coast (September 15-17th).

There is presently 30 members participating in our trip to the Twillingate- Fogo Island- Cape Freels area and I continue to urge the few

remaining procrastinators to make the necessary bookings.

On behalf of all members, I would like to sincerely thank our winter lecturers (**John Bridson, Brian Bursey, Todd Boland and John Maunder**) for sharing their knowledge and expertise with us. Your talks help get us through the long cold winter.

I would like to thank all executive members for agreeing to stay on board another term, and welcome the addition of **Karen Herzberg and Ross Traverse** to our executive.

Finally, on reading and thoroughly enjoying **Getting to Know the Weeds**, Charlie had such wonderful words for the poem, *Bogwood*, written by Greg Power, that I decided to share it with you.

May summer bring many wildflower delights!

WEBSITE MASTER WANTED!

The Society's website which was constructed by Howard Clase several years ago, has become more-or-less dormant since Howard's retirement from the University.

But, let it be said, with the greatest enthusiasm, that the Society owes Howard a big debt of gratitude for dragging the Society, "kicking-and-screaming", into the Cyber-Age! Thanks Howard!

At the last Executive meeting, in April, it was resolved that we really need to get the website ball rolling again, for the following reasons:

1. If we aspire to be a "provincial organization", we need to better serve and communicate with our members, province-wide [not to mention those several members living outside of the Province!]

2. The "Sarracenia" is a great journal, which has *fifteen and a half years* [!] of history behind it. However, in this age of computers, it might be better delivered to MANY of our members as *.pdf files*, over the Internet.

3. Moreover, the extensive and valuable content of the "Sarracenia" is presently "unsearchable"; and its older content is completely unavailable to newer members who do not have a personal library of back issues, or to other interested persons, and researchers, worldwide.

4. A whole range of added-value web-contributions, of interest to both the members, and to the public at large, might be explored through a variety of website elements, such as newsgroups, listservs, members photo albums, and other special features, etc.

What we need is an enthusiastic and dedicated [voluntary] webmaster, to work with the executive, and the Editor of the "Sarracenia", to produce a vibrant and informative, frequently-updated, Society website, that will take us into the future with much renewed vigour. It would be HELPFUL if this new Webmaster had access to a free Internet Service Provider account which would accommodate a fair amount of file storage [that might include *.pdf files* and photo images], but this is NOT a critical requirement.

Anyone interested in this challenging [voluntary] position should contact the President, Carmel Conway, at: abcrhynd@nl.rogers.com

DAY FIELD TRIPS FOR 2006

We have quite a number of 'day' field trips planned for the summer. Here is what we have planned:

June 3 or 4: Hawke Hills: Diapensia, Loiseleuria and Clubmosses

We will meet on June 3, 10:00 am at the top of the hill at Hawke Hills. If the weather is inclement on June 3, then we will push the trip to Sunday June 4. Bring a lunch for this walk as we may botanize into the early afternoon.

June 25: Long Pond Titford Memorial Walk

Meet at the Fluvarium Parking Lot at 10am. We will botanize around Long Pond, a favourite trail of the late Bill Titford.

August 2: Soldier's Pond Orchid Bog

Drive out the TCH past the Foxtrap Access Road and Weigh Scales. Beyond the weigh scales you will see a transmission line crosses the TCH. We will meet under the transmission line at 10 am. You may want to bring a lunch for this walk.

Aug.19-20: Southern Shore Weekend

You have a few options for this full weekend field trip. On Saturday, Aug. 19 we will meet at the Trepassey Motel parking lot at 10 am. It is 1.5 to 2 hours to reach Trepassey from St. John's. If you want, you can overnight at the Trepassey Motel on Aug. 18 but you will have to book accommodations on your own (438-2934 or 745-1185). Throughout Aug. 19 we will botanize our way to Cape St. Mary's with an overnight in St. Brides. You

will have to book your accommodations for Aug. 19 at either the Bird Island Resort (888-337-2450), Capeway Motel (888-337-2163) or the Atlantica Inn (888-999-2860).

We will meet in the Atlantic Inn parking lot at 10 am on Sunday, Aug. 20. If you don't want to tie up the entire weekend, you can join us only on Aug. 20 (again, it is about 2 hours from St. John's to St. Brides). We will botanize Cape St. Mary's proper on Aug. 20 then work our way to Argentia then back home to St. John's that evening.

September 2: Whitborne Pond Aquatics

This trip is tentative depending on boat access. If you have a boat that you can bring on this day, please call John Maunder. Assuming this trip is a go, we will meet at the Bond Estate parking lot at 10 am. To reach the Bond Estate, turn off the TCH into Markland. When driving through Markland, look for the turn off to Colinet. Follow this road until you pass the old railroad track then look for a sign directing you to the Estate. Please bring a lunch for this day trip.

September 15-17: Mushroom Foray 2006

This year's mushroom foray is set for Sept 15-17 on the Avalon Peninsula. Please check on our website for further details, info, registration sheets, etc.

<http://hnhs.ca/mushrooms/foray-2006/>
Please note that there are good savings for registering before the end of June.

We are exploring new areas, and many varied habitats, staying at a new centre, have an excellent faculty, our biggest to date, and an excellent program. Additions to program are expected. You will forage in some very spectacular sites, including near one of the largest gannet colonies of North America at Cape

St. Mary's.

We regret that we do not have partial registration options. Registrants are registered for the full weekend. We encourage all participants to stay on site and regret that there is no discount for those electing to sleep off site.

Please note that because the foray is so close to St John's we expect a large number of registrants this year. Our resources will be stretched; in order to ensure a good experience for all participants we have decided to restrict the total number of participants to 60. Spots will be filled on a first-come-first-served basis, others going on a waiting list in case of cancellations.

Register early to avoid disappointment.

October 15: Tree Walk in Victoria Park with Ross Traverse. Meeting location and time TBA.

BOOK REVIEW: GETTING TO KNOW THE WEEDS

By: Charlie Horwood

Reviewed by: Carmel Conway

Searching for something new to read on wildflowers, or at least nature-related, and finding little on the shelves, I hit upon wildflower friend, John Maunder for a suggestion. John inquired whether I had read Charlie Horwood's **Getting to Know the Weeds**. I immediately thought of Newfoundland writer and former politician, Harold Horwood. John informed me that the two were brothers, both inheriting a love of nature, and writing.

While an accountant by profession, Charlie Horwood wrote a regular nature column for *The Evening Telegram*; in addition to writing for a natural history newsletter, *Osprey*.

Getting to Know the Weeds is a selection of Charlie's writings, compiled by long-time friend, Don Barton, after Charlie's death, due to cancer, in 1994. Published in 1996 by Harry Cuff Publications, the book is no longer in print, and finding a copy proved no easy task. After checking local bookstores, including used books, contacting various rare book collectors, the only copy I could get my hand on was at the Public Library.

This book is a delightful and informative read. Charlie not only writes about the flora and fauna of the eastern Newfoundland region, but touches on many aspects of life, from insects working the soil, incredible life-form in our stagnant bog pools, fossil markings at Manuel's River and Mistaken Point, to many wonderful chapters on our migratory birds. I was amazed to learn that bird eyes (except owls) do not focus together, each eye frames a different picture and I will forever think of this and grin, when looking overhead as a spectacular flock flies by. I was equally surprised to learn that the common carpenter is not a member of the insect family, but more closely related to lobster, crab and shrimp.

Over the years, I have become more curious of lichen, captivated by their brilliant colour and pattern, and there are two superb chapters devoted solely to lichen. Did you realize that lichen is the result of the symbiotic process of alga and fungi, and that there are as many species of lichen as vascular plants?

For the orchid enthusiast, his *Blueprints in the Snow* is a tribute to our native orchids. It was the first time I heard of a moccasin slipper (*Cypripedium acaule*) near Groves Road, producing some twelve blossoms, or that a white form had been discovered in this area. I could not help but wonder how these plants are doing. The author's homage to our native spruce tree is noble; suggesting that, perhaps the spruce should have been considered as our national emblem, as the range of both the black and white spruce far exceeds the maple tree.

Getting to Know the Weeds was somewhat difficult book to review; and this is certainly not a criticism. It is so loaded with information; it is hard to know where to begin! However, Charlie Horwood had that extraordinary ability to describe the complexities of nature in very straightforward language. He clearly understood the interconnections of life. I have encouraged my husband and sons, to read this book; and feel that it would make an excellent school textbook. I felt a certain sadness on finishing, realizing that such a wonderful observer, and philosopher had passed on; yet, thankful that his knowledge remains with us. A highly recommended read!

BOGWOOD

The year we plowed the river field, we found
 Deep in the silt, the warped and blackened bones
 Of ancient trees; the most of them were sound,
 Though every bit as heavy as stones.
 Among them were ribs, backbones, and knees,
 Thin fingers that had held green leaves, or fed
 White blossoms to the wind, lost springs, when these
 Made magic here. For days we harvested
 These bones of trees from soft, black furrows where
 The land was wet; and when the field was done
 We left them in loose tangles, here and there,
 To season in the summer wind and sun.

Around the coast, old custom sets a time
 For certain work, and in our neighbourhood,
 When April comes we tidy up and lime;
 December is the month for getting wood.
 So, while the meadows slept, benumbed and white,
 And skies were little more than half-awake,
 We cut them into junks and they were light
 As feathers now, but hard enough to break
 An axeman's heart. One bitter night we burned
 This wood that time had tempered in the mire.
 It charmed those hours of rest, when we concerned
 Ourselves with dreams, and made a ghostly fire,
 Beyond its blue transparent flame, we saw
 The heat waves dancing in a parched July;
 Its light, transformed by some enchanted law,
 Was hoarded sunlight from an age gone by.

By: Gregory Power, born in 1909, Dunville,
 Placentia Bay, Minister of Finance under J.R.
 Smallwood

BOOK LAUNCH AT THE GARDEN

GIN & TONIC GARDENER

By: **Janice Wells**

Published by Key Porter

May 25th, 2006, 5 pm- 7:30 pm.

Percentage of Sale to Benefit the Garden

NOTICE

Wildflower Member, **Robin Day** has just finished Part 2: The Very Ancient Roots to Cattle (and pig) Domestication following Part 1. The Very Ancient Roots to Tropical Agriculture. If any member would like a copy please e-mail Robin at: cowboy4444@hotmail.com

Wildflower Magazines and Deptford Pink Revisited

by Henry Mann

With issue number 1, volume 20 (2004), "North America's Magazine of Wild Flora" ceased publication, a victim of rising costs. Having been a subscriber since the first issue of "Wildflower" appeared in the winter of 1985, I always looked forward to something new, interesting and enjoyable in its pages. It often provided ideas and information useful for my activities. When the last issue arrived with the unexpected announcement of publication termination, I began considering the options available to fill the void. Although it will be difficult to replace a magazine edited from a Canadian perspective, two more broadly based possibilities come to mind. There surely must be others, and newsletters as well, that readers of *Sarracenia* know about. If so, let us know through a note to our newsletter.

Firstly, along with the last issue of "Wildflower" a sample copy of "Native Plants" was included. "Native Plants" is published quarterly by the Lady Bird Johnson Wildflower Center in Austin, Texas. Their mission statement is as follows: *"The Lady Bird Johnson Wildflower Center educates people about the environmental necessity, economic value, and natural beauty of native plants. The vision is to preserve and restore the natural beauty and biological richness of North America by inspiring people to love the land. We want all Americans to think differently about the plants around them. We want people to understand the role of native plants in a healthy ecosystem, to value the beauty and health of the natural landscape that defines their heritage and to take action to protect, conserve, and restore the natural*

landscape of North America." For more information readers may visit their web-site at www.wildflower.org

The second possibility is "Plant Talk", a quarterly semi-scientific magazine with highly readable and enjoyable articles written in journalistic style and packed with botanical news, even the odd botanical cartoon. Material is *"relevant and of interest to a readership of botanists and conservationists around the world."* This publication has a broader "global" perspective and is published by a consortium of North American and European organizations devoted to conservation. Further information may be obtained from www.plant-talk.org

Upon reading through a few years of "Plant Talk" back issues obtained from a local acquaintance, I noted a brief news item from Volume 22/23 (2000) which relates to an article published in *Sarracenia* Volume 10(3):22-24 (2001), "Deptford Pink (*Dianthus armeria* L.) in western Newfoundland." The item, *"Rare Pink Derails Trains"* is reprinted below with permission of the editor of "Plant Talk". Would one of our rarities "derail trains" here in Newfoundland? Enjoy!

Rare Pink Derails Trains

*One of Britain's most threatened plants has delayed the building of a new stretch of railway track in the English Midlands. Engineers had planned to upgrade a 13-mile stretch of line on the Nottinghamshire-Leicestershire border for testing new high-speed electric trains. Their plans to lay a new track alongside the existing railway line were, however, thrown into disarray by the presence in a cutting of a thriving lineside population of Deptford Pink (*Dianthus**

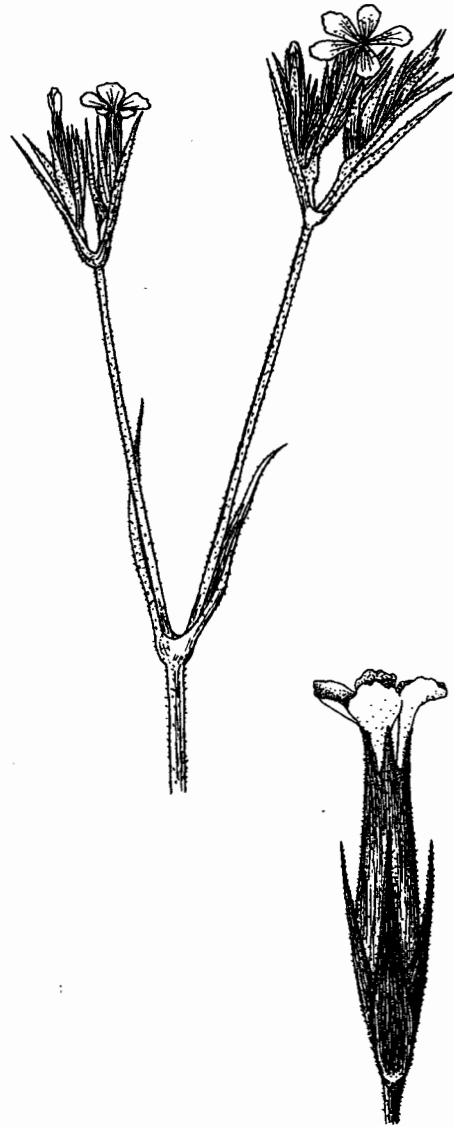
armeria).

The plant survives here at one of its only 30 or so UK sites, mostly small populations outside protected areas. Over the last 40 years this once widespread, bright pink-flowered annual or biennial of dry heaths and sandy banks has decreased dramatically in England and Wales (although turning up in Co. Cork, new to Ireland). Sadly botanists apparently ignored the decline, until recording for the 1994 Scarce Plants in Britain revealed just how fragile its survival had become. A priority species under the UK Biodiversity Action Plan (BAP), Deptford Pink is now listed on Schedule 8 of the Wildlife and Countryside Act 1981 as a strictly protected plant.

Hence the present concern. Working in close partnership, statutory government conservation agency English Nature and wild plant conservation charity Plantlife have objected to the granting of planning permission for an immediate start to the construction of the new railway line. They have also rejected a plan put forward by consultants for the developers that the plants be translocated to a new site. "We need to ensure that the development has no impact on the population", Martin Harper, Plantlife's Conservation Director, told Plant Talk. "We cannot be Luddites but we must speak up for the species, and be satisfied that its future is not compromised."

Further progress on the new railway line awaits a final decision on an action plan to conserve Deptford Pink at this site. As a short-term measure English Nature has fenced off the pinks and has cleared scrubby vegetation further up the bank - hoping other plants will grow from buried seed. Seed collected from lineside plants will be available to augment any emerging

population. As a safety precaution, a sample has been lodged in Kew's Millennium Seed-bank. "We must protect this population, and the best place is where the plant is growing", says Harper.



The Bladderworts (*Utricularia* spp.) of Newfoundland and Labrador (Family Lentibulariaceae)

by Henry Mann

While searching our freshwaters for stoneworts (charophytes), bladderworts are often encountered. For my own curiosity I decided to get to know our seven species so I could readily identify them (Table 1). Unfortunately, as with many northern aquatics, blooming is sporadic from year to year and most often only the underwater stems and leaves are encountered. To identify some flowerless bladderwort plants requires detailed microscopic examination of stems, leaves, and traps. However, wildflower enthusiasts are likely to only notice the bladderworts when they are in bloom, so I have produced a relatively simple key to flowering material using features that can readily be observed in the field with the naked eye and/or with a 10X handlens. This key is a modification of the keys provided to participants of the Wildflower Society Annual Field Trip of July 2004. Information has largely been gleaned from personal observations and the works of Fernald (1950), Schnell (2002) and Taylor (1989). For those who wish to pursue more detailed microscopic examination, I recommend the article and keys of Peter Taylor (1991) as listed in the reference section. In addition, I have here also included two sheets from the Humber Natural History Society "Rare Newfoundland Wildflowers" series, numbers 47 and 48 which describe and illustrate our two rare *Utricularia* species.

Our bladderworts are herbacious aquatic plants with one species (*U. cornuta*) being terrestrial on wet soil. They do not have roots but only stolons (stems) bearing

much divided leaves and animal catching bladders (Figure 1). In autumn the stolon tips produce compact bud-like structures (hibernacula or turions). These sink to the bottom of ponds, overwinter, and grow into new plants the following spring. This ability to vegetatively reproduce permits survival from year to year in the absence of conditions which promote flowering and seed production and is a feature of several aquatic northern plant groups. Turions also adhere to feathers and muddy feet of waterfowl and so are dispersed from pond to pond. Apparently, turions are the only means of reproduction and dispersal in our sterile hybrid species *U. ochroleuca* (Pale Bladderwort) in which viable seed production is unknown.

The stolons with their traps and leaves are either free floating in the water, or in some species stolon parts or entire stolon branches with bladders penetrate the substrate on the pond bottom, anchoring these species. With careful manipulation the submerged stolons of attached aquatic species can usually be freed from the substrate, something not easily done with terrestrial *U. cornuta* (Horned Bladderwort). Only the leafless flower stalks (scapes or peduncles) bearing one or more blossoms are noted above the water surface by the casual observer, providing no clue to the incredible ability of these plants to capture and digest tiny animals.

Bladderwort flowers are strongly two-parted with an upper petal and a lower petal (Figure 2). The upper petal often shows two major lobes and the lower three. The lower petal has a raised and swollen region known as a palate at its base where it meets the upper petal. There is always a spur on the underside of the lower corolla lip. The spur can be long and very

conspicuous as in *U. cornuta*, short and sac-like as in *U. minor*, or somewhat intermediate.

Bladders are marvelous and ingenious traps for capturing small aquatic (or wet soil) invertebrates and are probably the most sophisticated structures in the whole plant kingdom. The detailed mechanisms of their functioning are not yet fully understood, nor is their origin clear. Each trap is a water-filled bladder with a trap door and projecting bristles around the door to help funnel small organisms towards the entrance (Figure 3). There is some evidence that traps also produce secretions which attract invertebrates. With the trap door tightly sealed, bladders "pump" out some water to create a reduced pressure inside. We can create the same effect by sealing our lips and sucking air out of our mouth cavity causing our cheeks to pull inward. When we quickly open our lips, air is sucked in with a "pop" and a blackfly sitting on our lips would be sucked in with the rushing air. The bladder trap works on the same principle; when an invertebrate contacts the trigger hairs the trap door is released and water rushes in carrying the animal with it (Figure 4). With the prey inside, the door quickly closes and the victim inside is digested for its valuable nutrients, such as nitrogen and phosphorous compounds, which are absorbed by the plant to supplement its meagre diet from the nutrient-poor waters in which it lives. This is almost analagous to us supplementing our diet of highly refined, but nutrient poor foods, by "popping" vitamin pills!

Take home a bladderwort in a jar and examine the traps with a handlens, or even better, with a microscope. One cannot help

but be amazed at this complex miniature trapping mechanism. At least three of our species can also be easily grown in backyard ponds or even in plastic containers (*U. geminiscapa*, *U. macrorhiza* and *U. cornuta*).

References

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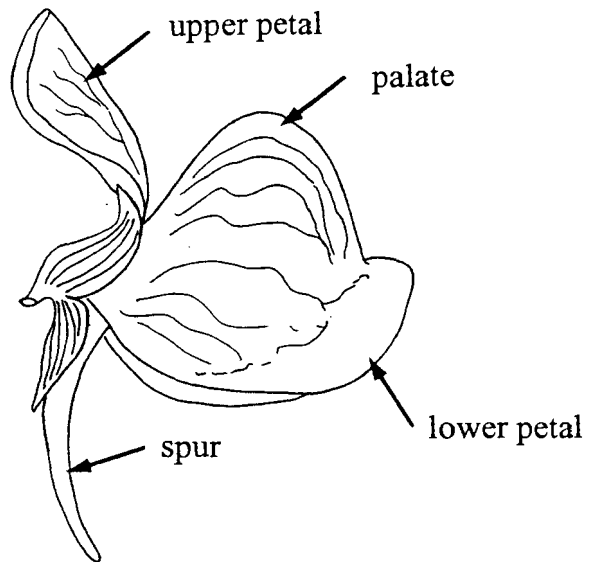


Table 1: Bladderworts of Newfoundland and Labrador (after Meades et al. 2000).

Utricularia cornuta Michx. - horned bladderwort

Utricularia geminiscapa Benj. - hiddenfruit bladderwort (RARE)

Utricularia intermedia Hayne - flatleaf bladderwort

Utricularia macrorhiza LeConte - common bladderwort (= *U. vulgaris* of North America)

Utricularia minor L. - small bladderwort

Utricularia purpurea Walter - purple bladderwort (RARE)

Utricularia X *ochroleuca* R.W. Hartm. - pale bladderwort (hybrid: *intermedia* X *minor*)

Figure 1: Common Bladderwort (*U. macrorhiza*)

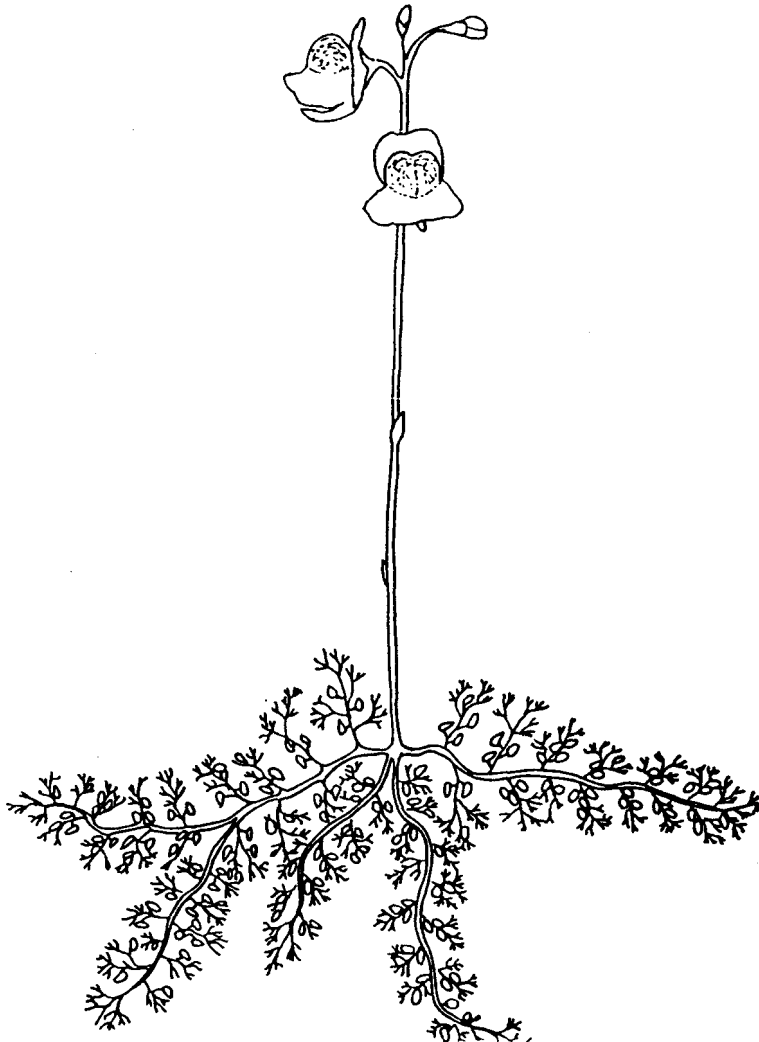


Figure 2: Bladderwort Flowers: a. *U. cornuta* (side view); b. *U. intermedia* (faceview); c. *U. macrorhiza* (side view); d. *U. minor* (side view). The spur is illustrated as a dotted line when it cannot be seen in the view depicted in the illustration. Illustrations are not drawn to scale.

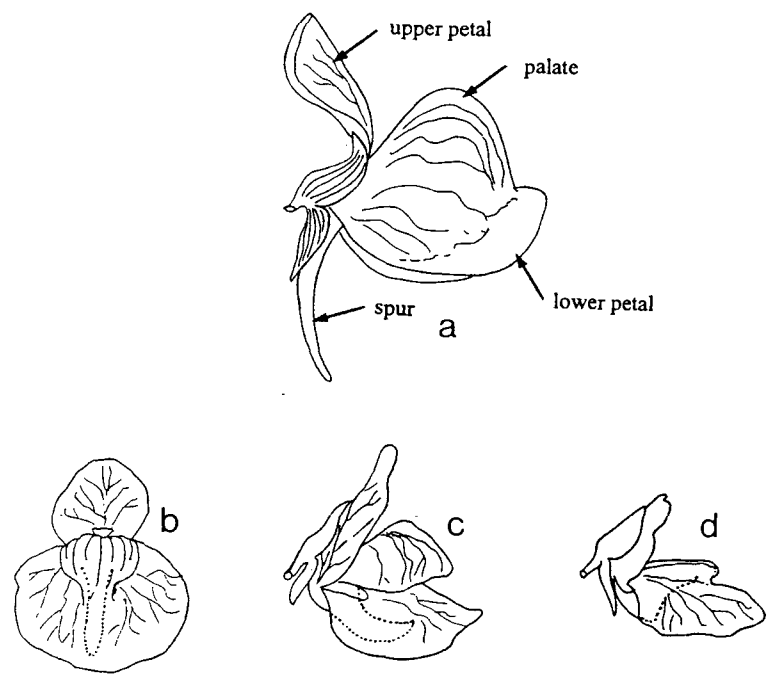


Figure 3: A bladderwort trap sliced open to reveal structures. a. trap door; b. secretory glands; c. trigger hairs; d. appendages and bristles around mouth; e. internal glands.

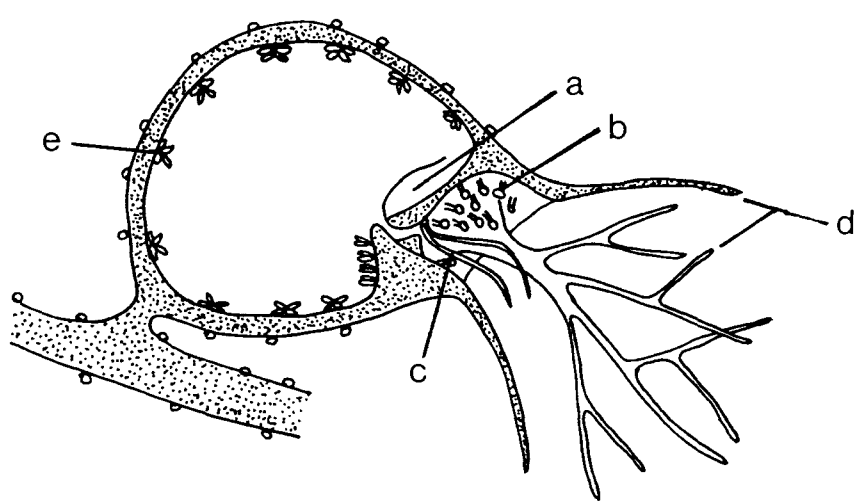


Figure 4: Sequence of events in the capturing of an invertebrate. a. external view of entire bladder trap; b - e. section of trap with external details removed showing trapping events.

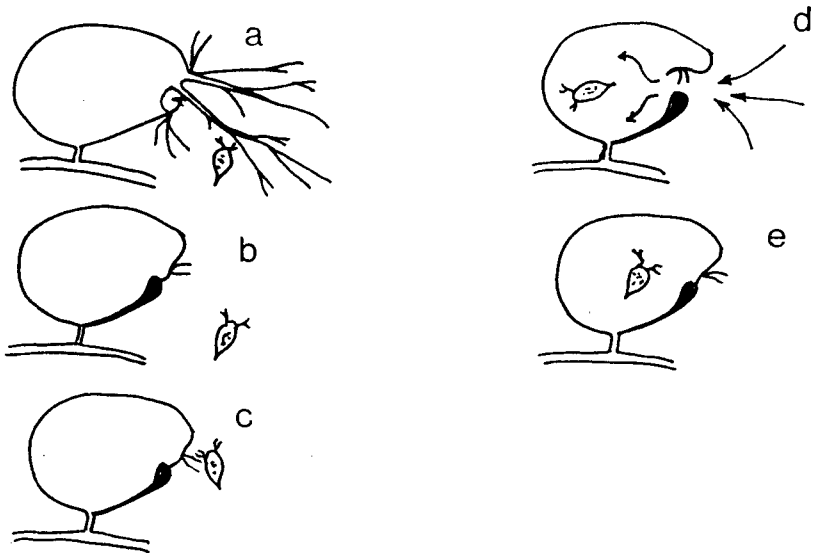
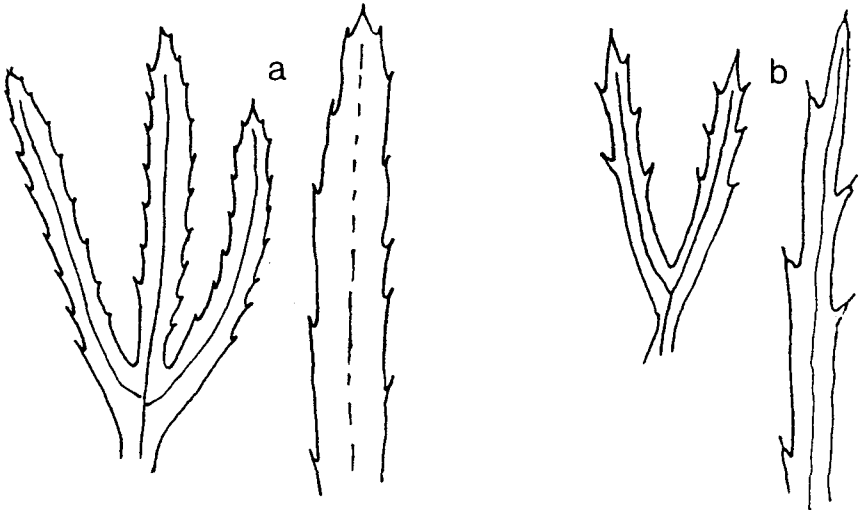


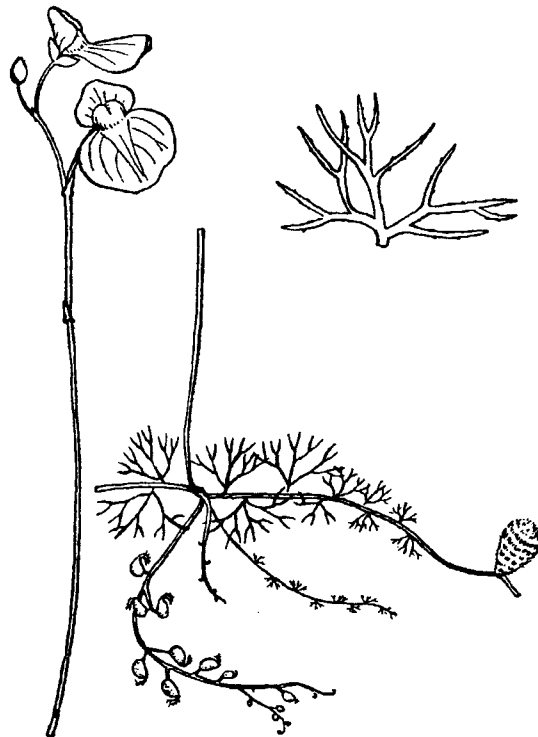
Figure 5: Comparison of leaf segments and lateral bristles of *U. intermedia* (a), and *U. ochroleuca* (b), as seen at a magnification of about 20X.



Flower Key to Newfoundland and Labrador Bladderworts (*Utricularia* spp.)

- 1. Flowers pink to purple *U. purpurea*
- 1. Flowers yellow 2
- 2. Plants terrestrial, growing on wet soil, sometimes temporarily and shallowly inundated; narrow vertically oriented spur prominently visible beneath lower corolla lip *U. cornuta*
- 2. Plants truly aquatic; spurs not vertically displayed, but appressed to bottom of lower corolla lip 3
- 3. Plants free floating, easily removed from water 4
- 3. Plants obviously partly attached to substrate at bottom of pool 5
- 4. Plants with two types of flowers, normal yellow showy ones above water surface on leafless peduncles, and tiny green flowers without a showy corolla beneath the water arising from the underwater stems (stolons); showy flowers up to 1.0 cm long, lower lip of corolla distinctly, but shallowly 3-lobed; spur shorter than lower corolla lip, tip not distinctly up-turned *U. geminiscapa*
- 4. Plants with only yellow showy flowers held above water surface on a leafless peduncle, flowers to 2.0 cm in length, lower corolla lip entire to slightly wavy, but not distinctly 3-lobed; spur about as long as lower lip with a distinctly up-turned tip *U. macrorrhiza*
- 5. Lower corolla lip 1.0 cm or less in length, appearing narrow, about half as wide as long because of some marginal infolding, little or no palate; spur extremely short, sac-like, wider than long; parts of underwater stolons colorless with many traps and buried in the substrate, other parts of the same stolons exposed and bearing divided green leaves, with only a few traps (i.e. stolons with alternating submerged and exposed portions) *U. minor*

- 5. Corolla to 1.6 cm long, lower lip visibly rounded, not much longer than broad, lower lip with a prominent palate at base; spur cylindric, about half as long as the lower corolla lip; rather than a stolon having alternating submerged and exposed portions as in *U. minor*, these species have separate stolon branches, those with traps submerged in substrate, and those with divided green leaves on surface of substrate 6
- 6. Corolla deep yellow, spur almost as long as lower corolla lip; producing normal viable seeds; green leaf segments with lateral bristles arising directly from leaf margins (10X handlens required) *U. intermedia* (Figure 5)
- 6. Corolla pale yellow, spur about half as long as lower corolla lip; sterile, never producing viable seeds; green leaf segments with lateral bristles arising from small marginal teeth (antler-like knobs), (10X handlens required) *U. ochroleuca* (Figure 5)



The above illustration of *Utricularia intermedia* Hayne is from Britton, N.L. and A. Brown. 1913. An Illustrated Flora of the Northern United States and Canada. Dover Publications, New York (republished 1970).

Humber Natural History Society

RARE NEWFOUNDLAND WILDFLOWERS 47

In order to develop a better understanding of the distribution of our rare plants, especially those of the West Coast, a series of these sheets will be made available to interested naturalists. Each sheet will deal with a single species known only from a few localities on the Island. Please report any sightings of rare plants to Henry Mann, Biology Department, Sir Wilfred Grenfell College, Corner Brook, Newfoundland, A2H 6P9, or call 637-6245 (work) or 686-2340 (home). Records will be kept in the S.W.G. College Herbarium.

Plant Name: **Common -** Purple Bladderwort

Scientific - Utricularia purpurea Walter

Characteristics:

Purple Bladderwort is a floating aquatic carnivorous plant with little bladders at the leaf tips for trapping tiny animals. The floating stems have whorls of leaves, each leaf is simply a much branched series of fine filaments with traps at their tips. The bladders are unique in this species, under the microscope having a cluster of gland-tipped hairs arising from the centre of the trap door. One to three flowers terminate a stalk which arises above the water surface. Each flower corolla is made of an upper and a lower petal; the lower petal is 3-lobed and has a short spur(sac) at its base ventrally. The two side lobes appear inflated. Petals are purple to deep pink with a yellow spot at the base of the lower petal. All our other bladderworts have yellow flowers. Flowers are 8 -18 mm long. The characteristic seeds are globular with a rough bumpy surface.

Habitat:

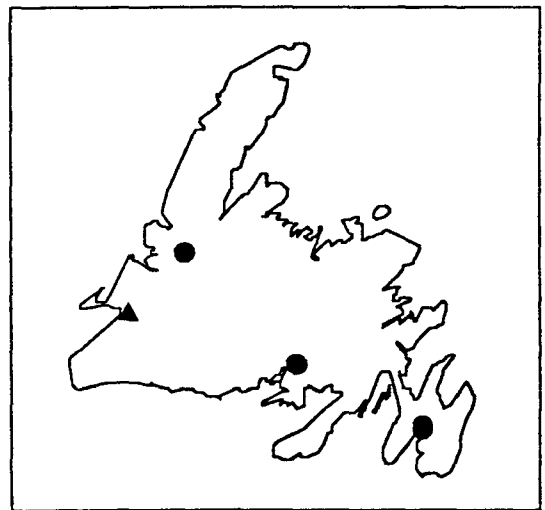
Free floating in shallow waters of lakes and ponds and in sluggish pools of streams; often caught-up in other aquatic vegetation.

Flowering Season:

August to September

Known Distribution:

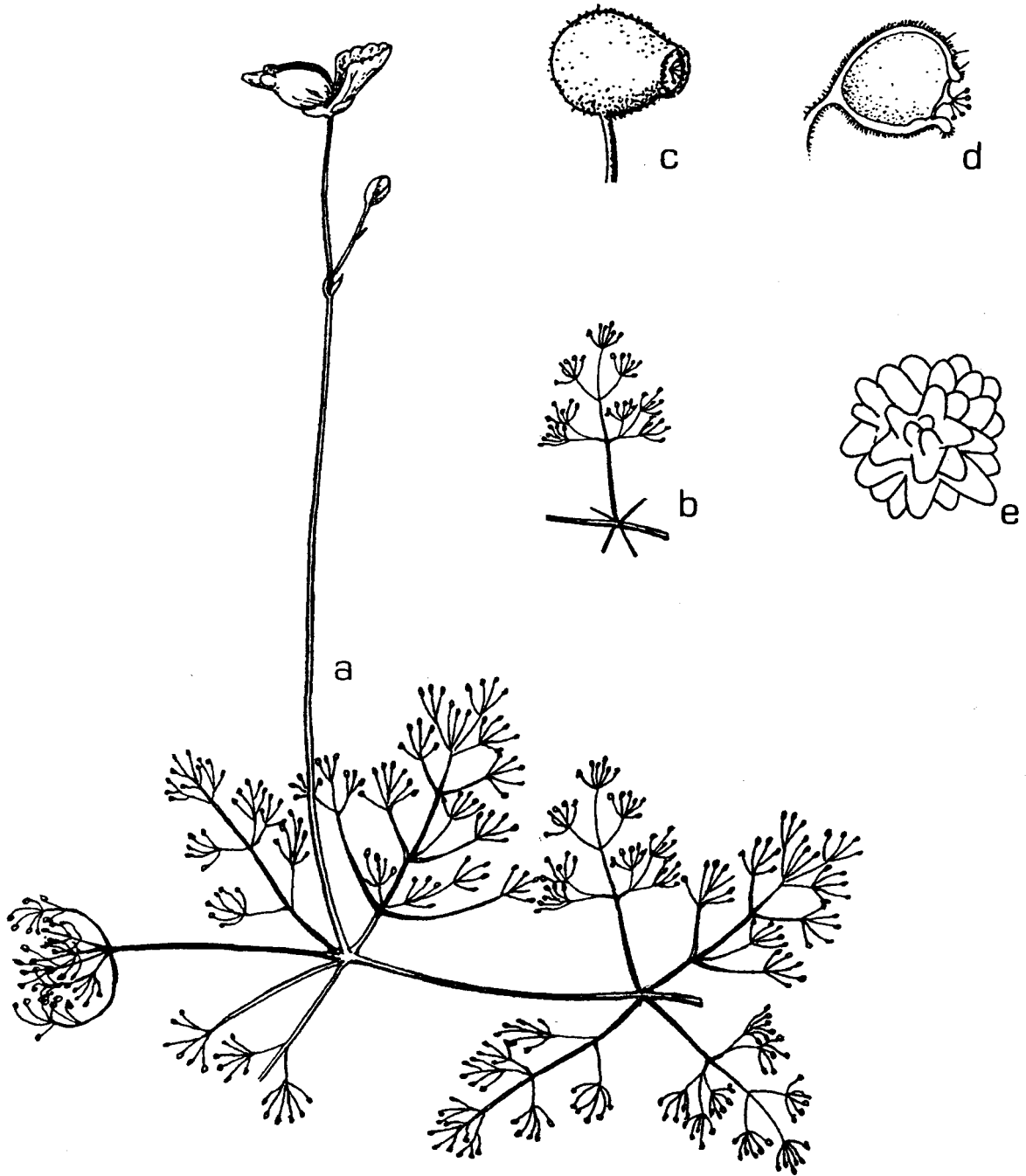
Only known from a few locations scattered from the west coast of the Island to the Avalon Peninsula; eastern North America and south to Central America.



(Distribution Map After Bouchard et al. 1991)

Diagrams: **See reverse side of page.**

Included in the Peterson/McKenny field guide pp. 230-231 and in Newcomb's guide pp. 16-17.



Utricularia purpurea Walter (Purple Bladderwort)

- a. Plant with submerged, whorled filamentous leaves bearing bladders at the filament tips. b. Single, much divided filamentous leaf with bladder-traps. c. A much enlarged bladder, external view. d. A bladder showing internal view with a cluster of gland-tipped hairs on the outside of the trap door. e. A much enlarged seed; seed drawing modified from: Taylor, Peter. 1989. The Genus Utricularia - a Taxonomic Monograph. HMSO, London.

RARE NEWFOUNDLAND WILDFLOWERS 48

In order to develop a better understanding of the distribution of our rare plants, especially those of the West Coast, a series of these sheets will be made available to interested naturalists. Each sheet will deal with a single species known only from a few localities on the Island. Please report any sightings of rare plants to Henry Mann, Biology Department, Sir Wilfred Grenfell College, Corner Brook, Newfoundland, A2H 6P9, or call 637-6245 (work) or 686-2340 (home). Records will be kept in the S.W.G. College Herbarium.

Plant Name: Common - Hiddenfruit Bladderwort

Scientific - Utricularia geminiscapa Benj.

Characteristics:

This aquatic plant has leaves made of finely dissected filaments attached alternately to underwater stems (stolons). The animal-trapping bladders are attached laterally to the leaf filaments. Two to six yellow flowers are borne on a stalk above the water surface. Each flower is strongly two-lipped with an upper and lower petal. The lower petal is three-lobed and bears a spur at its base ventrally. Flowers are 6 to 10 mm. long. This species is unique from all our bladderworts in having a second type of flower (cleistogamous flowers) produced on short stalks beneath the water surface. These flowers are tiny, green and lack petals. Seeds are shaped like fattened disks.

Habitat:

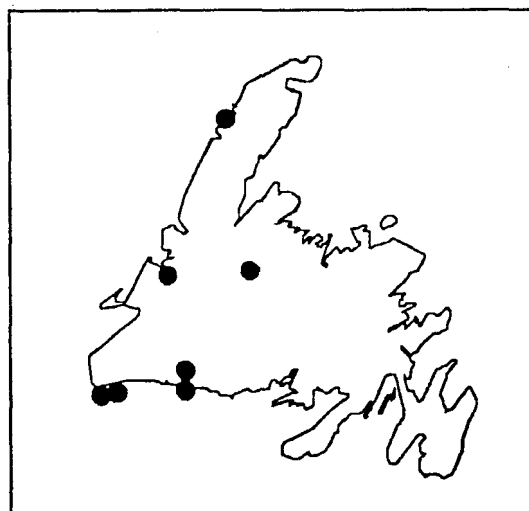
Plants are free-floating in bogpools, ponds, and sluggish streams or caught up in other vegetation or lying on the bottom in very shallow water. Only three of our bladderworts are unattached and free floating; the other two are U. macrorhiza and U. purpurea. Others are more or less attached to the substrate.

Flowering Season:

Mid-to late summer.

Known Distribution:

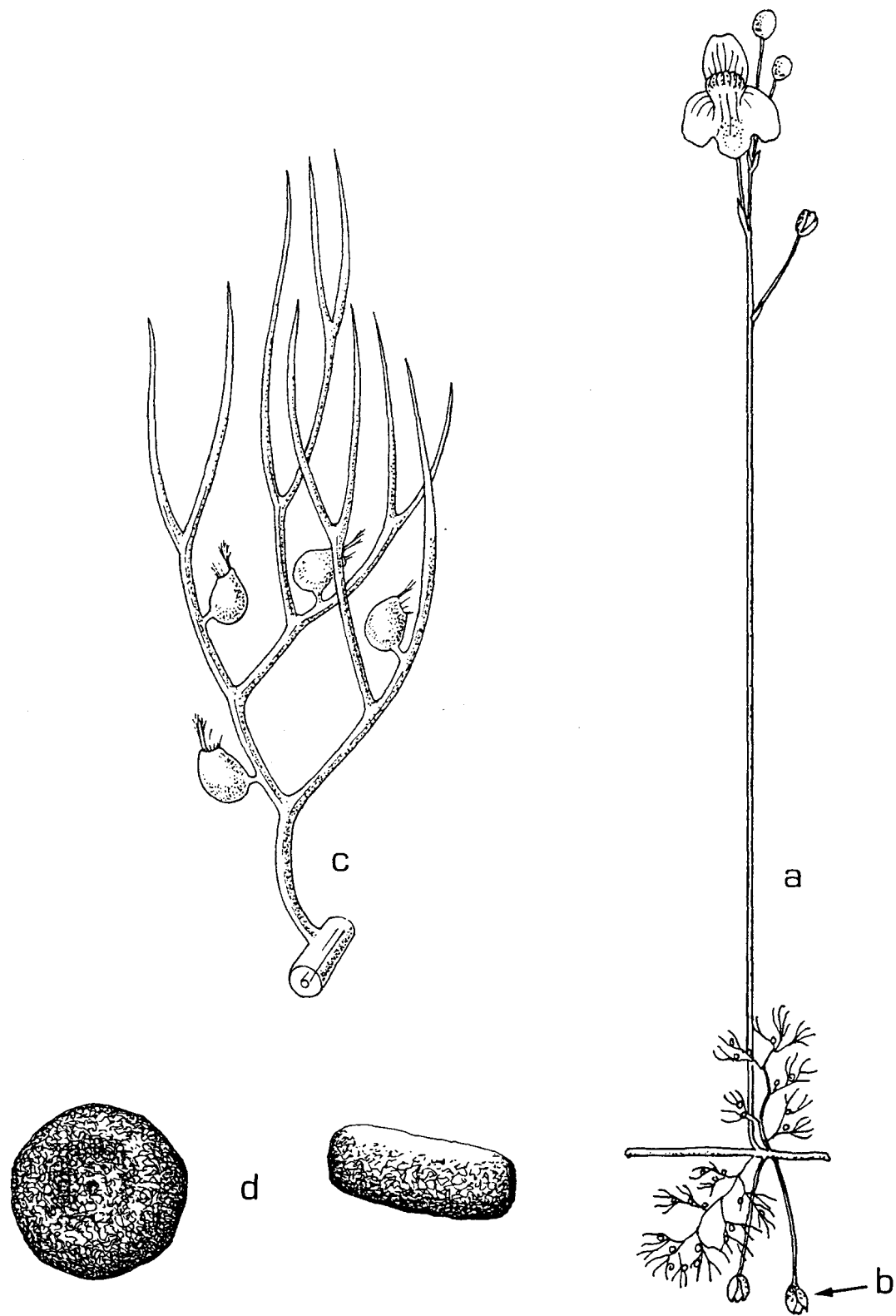
Scattered locations in western and central Newfoundland; north eastern North America.



(Distribution Map After Bouchard et al. 1991)

Diagrams: See reverse side of page.

This species is not included in the common wildflower guides for our area.



Utricularia geminiscapa Benj. (Hiddenfruit Bladderwort).
 a. upright flowering stalk and small portion of underwater creeping stem (stolon) with two finely dissected leaves bearing bladder-traps.
 b. cleistogamous flower. c. enlarged leaf with lateral bladder-traps.
 d. seed, lateral and edge views

Wildflower Society of Newfoundland & Labrador

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Ms. Jackie Feltham, Treasurer
Wildflower Society of Newfoundland and Labrador
c/o MUN Botanical Garden, Memorial University,
St. John's, NL, Canada, A1C 5S7

Or bring along to our next meeting