



SARRACENIA

Newsletter of the
Canadian Wildflower Society

Newfoundland Chapter

Volume 3, Number 1

Fall 1992

Fall Schedule

Oct. 14, 1992 - Fall Fruits - rescheduled from Oct. 7, due to the storm.

An informal talk with slides by Sue Meades and Dr. Joanne MacDonald on the edible (and some non-edible) fleshy fall fruits; also with food samples (provided by members).

Nov. 4, 1992 - Medicinal Plants of Newfoundland

A talk by Dr. John Crellin about the ethnobotanical value of some of our native plants.

Dec. 2, 1992 - Cones and Fruits of Trees

An illustrated talk by Dr. Joanne MacDonald on the various cones and fruits of our native trees. Wreath makers take note!

NOTE!!! NEW MEETING PLACE!!!

Because the biology room is no longer available, we will be having our meetings in **Engineering X-4000** (S.J. Carew Building) at 8 P.M on the first wednesday of each month (Oct. to Dec., Feb. to June). Take the elevators (to the right) in the main lobby; then go to the first door on the left after getting off the elevator. Pay parking is \$2.00 entry in the Earth Sciences Building or .50/hour at meters on Arctic Avenue.

Notice: Dues

Annual dues (\$10.00/single membership; \$15.00/family) may be paid at the November meeting, or sent by mail to our treasurer, Janet Craske. If dues are not received by the end of November, future editions of the newsletter will not be mailed. Your dues cover the cost of duplicating and mailing the newsletter. Thank you!

Janet Craske, treasurer; Nfld. Chapter, CWS; Box 278, RR 1; Paradise, A1L 1C1

Fall Fruits

by Sue Meades

One of the nicest things about autumn in Newfoundland is the abundance of fall fruits in our forests, barrens, and wetlands. This month, we will be discussing the fall fruits at our scheduled meeting. We tend to think of all the fleshy fruits as berries, but actually there are several different types of fruits among our native plants. A **fruit** is a mature ovary, and the **seeds** inside are mature ovules which contain the developing embryo. There are three layers of tissue in the fruit (ovary) wall: the **endocarp** (inner layer), **mesocarp** (middle layer), and **exocarp** (outer layer). The type of fruit is determined by whether these layers are fleshy, dry, or hard. **Fleshy fruits** have *at least* one tissue layer that is soft and fleshy. Also, fleshy fruits do not usually split open, so they are called **indehiscent**. Their dispersal depends upon animals ingesting the appealing fruits and spreading the seeds in their droppings. You can tell whether the fruit was derived from a superior or inferior ovary by looking at the remains of the calyx lobes on the fruit. If the calyx lobes are at the stem end of the fruit, the ovary was superior, if the calyx lobes are at or near the tip of the fruit, the ovary was inferior or perigynous. Definitions for the fruit types of our native fruits are given below. There are many other types of fruits, but we will not deal with them now. Following the definitions is a list of our native fleshy fruits and nuts. This list provides common and scientific names, edibility, and the fruit type and color. Beginning on page 5 are recipes, using berries, from some of our members.

Simple fleshy fruits: derived from a flower with one ovary:

berry - a fleshy fruit with a thin, skin-like outer layer and fleshy middle and inner layers. There are usually many small seeds in a berry. True berries are derived from flowers with a superior ovary; that is, the flower parts are attached below the ovary [example: currants, tomatoes, grapes]. However, many flowers with inferior ovaries produce fleshy fruits that we also call berries [examples: blueberries, snowberry, honeysuckle "berry"]. The extra layers of tissue that surround the ovary wall become part of the "skin" of the berry and cannot be differentiated, except microscopically. You can differentiate between a blueberry and a blue poisonberry by examining the tip of the fruit. The poisonberry is derived from a superior ovary, so there are no calyces at the tip, only a small dimple, from where the style dehisced. Blueberries always have a crown of calyces at the tip of the berry.

drupe - a fleshy fruit with a thin, skin-like outer layer and a fleshy middle layer and a hard stone-like inner layer surrounding a seed [examples: wild raisin, cherries]. True drupes have one seed inside the endocarp. A variation of the drupe, with several seeds, each enclosed in a stony endocarp, is called a pyrene [example: winterberry]. A **drupelet** is a small drupe, containing only one seed; many drupelets are attached to a central axis to form an aggregate fruit (see next page).

accessory - the fleshy part of accessory fruits are derived from floral parts other than the ovary wall: the wall of the calyx tube (hypanthium) in flowers with inferior or perigynous ovaries; or the base of the flower (receptacle) in flowers with superior ovaries [examples: strawberries]. In the strawberry, there are many superior ovaries situated on the receptacle of the flower. The receptacle enlarges and develops into the fleshy part of the "fruit", in which are embedded the true fruits. The small "seeds" are actually small achenes (see next page), each of which contains one seed.

pome - a type of accessory fruit that develop from a flower with an inferior or perigynous ovary; the calyx tube wall is fused to the ovary [example: apple]. The fleshy part of the pome is composed mainly of the calyx tube, the ovary wall develops into the core in apples, pears, and quinces, or the inner portions of the fruit in chuckley-pears or chokeberries.

Aggregate fleshy fruits: derived from a flower with several ovaries:

aggregate - a fleshy fruit derived from one flower with many ovaries. The many small fruits are loosely attached to an elongate, central axis (the receptacle). The only type of aggregate fruit we have is an aggregate of drupelets [examples: raspberries, bakeapple, blackberries]. A drupelet is a small drupe, containing only one seed.

hip - an aggregate of achenes surrounded by a somewhat-fleshy receptacle and hypanthium [example: rose hips]. The rose fruit is derived from a flower with many superior ovaries; each ovary develops into an achene.

Dry fruits: fruits with all layers of the ovary wall becoming dry:

achene - derived from a flower with superior ovaries; this one-seeded, dry, indehiscent fruit has the seed attached to the fruit wall only at the base [example: strawberry "seeds", sunflower "seeds"].

nut - a one-seeded, dry indehiscent fruit with a hard, stony fruit wall, subtended by a cup or dry bracts [example: beaked hazelnut, oaks].

Native Fleshy Fruits and Nuts:

Edible fruits, used fresh or in baking:

Blueberry	<i>Vaccinium angustifolium</i>	blue-purple berry
Bilberry	<i>Vaccinium spp.</i>	blue or blue-black berry
Partridgeberry	<i>Vaccinium vitis-idaea</i>	red to maroon berry
Bog Cranberry	<i>Vaccinium macrocarpon</i> ,	red berry
Marshberry	<i>V. oxycoccos</i>	red berry
Huckleberry	<i>Gaylussacia spp.</i>	black drupe
Raspberry	<i>Rubus idaeus</i>	red aggregate of drupelets
Bakeapple	<i>Rubus chamaemorus</i>	red to salmon to yellow aggregate
Blackberry	<i>Rubus spp.</i>	deep purple-black aggregate
Wild Strawberry	<i>Fragaria spp.</i>	red accessory fruit with seed-like achenes
Crowberry	<i>Empetrum spp.</i>	black, purple, or pink berry-like drupe

Edible fruits, used fresh, but usually found too infrequently:

Creeping Snowberry	<i>Gaultheria hispidula</i>	white berry
Dewberry	<i>Rubus pubescens</i>	red aggregate of drupelets
N. Fly Honeysuckle	<i>Lonicera villosa</i>	deep blue berry
Beaked Hazelnut	<i>Corylus cornuta</i>	brown nut

Edible fruits, used mainly in jams:

Chuckley Pear	<i>Amelanchier spp.</i>	red to purplish pome
Wild Raisin	<i>Viburnum cassinoides</i>	white-red to deep purple-black drupe
Squashberry	<i>Viburnum edule</i>	red drupe
Highbush Cranberry	<i>Viburnum trilobum</i>	red drupe
Wild Currants	<i>Ribes spp.</i>	red, black, or purplish berry
Chokeberry	<i>Aronia spp.</i>	deep purple-black pome
Pin Cherry	<i>Prunus pennsylvanica</i>	red drupe
Choke Cherry	<i>Prunus virginiana</i>	red to purplish drupe
Wild Roses	<i>Rosa spp.</i>	orange-red hip with seedy achenes

Edible fruits, used mainly in liqueurs and wines:

Elderberry	<i>Sambucus pubens</i>	red to reddish purple drupe
Dogberry, Mt. Ash	<i>Sorbus spp.</i>	red-orange drupe

Edible fruits, but used mainly as a flavouring:

Juniper	<i>Juniperus communis</i>	blue berry-like cone
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Edible, but not very palatable: pithy or mealy tasting:

Bearberry	<i>Arctostaphylos spp.</i>	red drupe
Crackerberry or Bunchberry	<i>Cornus canadensis</i>	red drupe
Hawthorns	<i>Crataegus spp.</i>	yellow-orange to reddish pome

Inedible fruits:

Red-osier Dogwood	<i>Cornus stolonifera</i>	white drupe
Alternate-leaved Dogwood	<i>Cornus alternifolia</i>	dark blue drupe
Wild Lily-of-the-Valley	<i>Maianthemum canadense</i>	red berry
Three-leaved Solomon's Seal	<i>Smilacina trifolia</i>	greenish to red berry
Twisted Stalk	<i>Streptopus spp.</i>	red or orange-red berry
Wild Sarsaparilla	<i>Aralia nudicaulis, A. hispida</i>	black drupe
Alder-leaved Buckthorn	<i>Rhamnus alnifolium</i>	deep purple-black drupe
Buffalo berry	<i>Shepherdia canadensis</i>	red drupe with scattered scales
Mountain Holly	<i>Nemopanthus mucronata</i>	magenta drupe

Inedible fruits: - POISONOUS to some or all:

Canadian Yew	<i>Taxus canadensis</i>	red fleshy aril around poisonous seed
Poison Berry, Corn Lily	<i>Clintonia borealis</i>	blue berry
Red Baneberry	<i>Actaea rubra</i>	red or white berry
Winterberry	<i>Ilex verticillata</i>	orange to red drupe

Partridgeberry-Banana Bread (from Carolyn Harley)

¼ C margarine	orange rind, grated
¾ - 1 C sugar	1 C mashed banana
1 egg	½ C milk
2 C flour	1 C partridgeberries
3 t b.p.	½ - 1 C chopped nuts
½ t salt	

- Mix margarine, sugar, egg.
- Add dry ingredients.
- Mix in bananas, rind, milk, and berries;
- Bake in a 9½" loaf pan at 350° for 75 min.

Partridgeberry Cake (from Sue Meades, original recipe from Nell Corbett Meades)

2 C flour, sifted	1 t vanilla
1 C brown sugar	1/3 t lemon extract
2½ t baking powder	2 eggs
½ t salt	2 C partridgeberries
3 t butter, melted	cinnamon sugar
¾ C milk	

- Sift dry ingredients into mixing bowl.
- Add butter, milk, eggs, and flavourings; beat well. Stir in berries.
- Bake in greased 9" square pan. at 350° for 40 minutes.

Blueberry Sour Cream Cake (from Judith Quigley)

½ C butter	½ C sour cream
½ C granulated sugar	1¼ - 1½ C blueberries
2 eggs	¼ - ½ C brown sugar
1 t vanilla	
1¼ C flour	<u>topping:</u>
1 t baking powder	½ t cinnamon
¼ t baking soda	½ C chopped walnuts

- Preheat oven to 350° F. Grease 8" square pan.
- Cream butter and sugar; beat in egg and vanilla.
- Sift flour, b.p., and b.s., in separate bowl.
- Add dry ingredients to butter-sugar mixture.
- Add sour cream, beat till well blended.
- Stir in blueberries and walnuts, pour into pan. Sprinkle with brown sugar and cinnamon.
- Bake at 350° F for 45 minutes.

Blueberry Lemon Pie (from Margit Davis)Filling:

4 C blueberries
 2/3 C Sugar
 8 T instant tapioca
 grated rind and juice of 1 lemon
 1/3 t cinnamon
 2 T butter

Pastry:

2½ C flour
 2 T sugar
 ½ t salt
 grated rind of 1 lemon
 1 cup unsalted butter, cold
 juice of 1 lemon plus enough water to make ½ C.

- Combine ingredients for filling except butter in large bowl; let stand in room temperature while pastry is prepared.
- Combine flour, sugar, salt, and lemon rind. Cut in cold butter until mixture resembles crumbs.
- If using a food processor, add enough of the lemon-water mixture until the mass just begins to come together. Remove the dough and wrap into a flat round: chill for 20 minutes.
- Divide into two pieces: roll for bottom and top crust.
- Bake at 375° about 45-60 minutes (until golden).

Blueberry-Raspberry Pie (from Sue Meades, original from Canadian Living)Filling:

1½ C raspberries
 2 C blueberries
 2/3 C sugar

3 T flour
 ½ t grated lemon rind
 2 T lemon juice
 2 T butter

- Preheat over 425° F.
- Prepare your favourite pie crust (for a 2-crust pie), line bottom pie pan.
- Toss berries, sugar, flour, and lemon rind.
- Pour into pie shell. Sprinkle with lemon. Dot with butter.
- Cover with top crust, seal edges, brush top with 1 T light cream and sprinkle with 1 T sugar.
- Bake 15 min at 425° F, then 30 min. at 350 F.

Partridgeberry-Apple Jam (from Sue Meades, originally from Certo)

4 C partridgeberries
 2-3 apples, (1½ C)
 4 C sugar

½ bottle certo
 3 C water

- Mash fruit, measure. Pour into large saucepan. Chuckleypears can be substituted.
- To partridgeberries and apple, add water, bring to a boil, simmer 10 minutes.
- Add sugar, mix well and boil hard for 1 minute stirring constantly.
- Remove from heat, stir in pectin.
- Skim foam with metal spoon for 5 minutes to prevent floating fruit.
- Ladle hot jam into canning jars to within 1/8" of top.
- Tighten lid, invert for 5 seconds to kill impurities. Place upright to cool.

Blueberry Orange Muffins (from Canadian Living, 10/92)

1 $\frac{3}{4}$ C flour	2 eggs
$\frac{2}{3}$ C packed brown sugar	3 T butter, melted
1 T baking powder	1 t vanilla
1 T grated orange rind	1 C blueberries
1 C milk	

- Preheat oven to 400° F.
- In bowl, stir together flour, sugar, baking powder, and orange rind.
- Stir in blueberries.
- Whisk milk, eggs, butter, and vanilla in separate bowl; stir into flour mixture just until blended.
- Spoon into lightly greased muffin tins, filling $\frac{3}{4}$ full.
- Bake at 400° F for 20-25 minutes or until golden and firm to the touch.
- Makes 12 muffins.

Cranberry (or Partridgeberry) Coconut Muffins (from Canadian Living, 10/92.)

2 C flour	$\frac{1}{4}$ t salt
$\frac{3}{4}$ C granulated sugar	1 $\frac{1}{4}$ C buttermilk
$\frac{3}{4}$ C sweetened shredded coconut	2 eggs
1 T baking powder	$\frac{1}{4}$ C vegetable oil
1 t baking soda	1 t vanilla
$\frac{1}{4}$ t cinnamon	1 C partridgeberries or chopped bog cranberries.

- Preheat oven to 400° F.
- In bowl, stir together flour, sugar, $\frac{1}{2}$ C coconut, b.p., b.s., cinnamon, and salt.
- In separate bowl, whisk together buttermilk, eggs, oil, and vanilla.
- Stir wet mixture into flour mixture along with berries just until blended.
- Spoon into lightly greased muffin tins, filling $\frac{3}{4}$ full.
- Sprinkle with remaining coconut.
- Bake at 400° for 20 minutes or until golden and firm to the touch.
- Makes 18 muffins.

Red Berry Tea (from Di Dabinett)

4 C partridgeberries, raspberries, or marshberries	1 shake ginger and allspice
12 C water	3 lemons
2 cinnamon sticks	6 oranges
	2 C sugar

- Boil berries, water, and spices for 20 minutes, strain.
- Add juice of 3 lemons and 6 oranges, and 2 C sugar.
- Serve warm.
- Can add rum to taste, if desired.

Fresh Berry Flan (from Ken and Kathy Knowles)Shortbread Crust:

¾ C butter
 1/3 C icing sugar
 1½ C flour

- Preheat oven 350° F.
- Blend to make a soft dough, press into a 10" quiche or fluted flan pan. Prick well.
- Bake at 350° for 15-20 minutes.

Custard Layer:

4 egg yolks	1½ C milk
½ C sugar	1 t grated lemon rind
¼ C flour	1 t vanilla

- Mix yolks, sugar, and flour in a heavy saucepan.
- Blend in milk, cook over ~~medium-low~~ heat, stirring constantly until the mixture thickens and comes to a boil.
- Remove from heat. Add flavourings.
- Cool slightly, spread in baked shell.

Berries and Glaze:

2 C berries (partridge-, blue-, or raspberries)	1/3 C orange juice
1 T cornstarch	½ C red currant or grape (for blueberry) jelly

- Spread berries evenly over custard.
- Cook glaze ingredients over medium heat until thick and clear.
- Spoon over berries.
- Chill and serve.

Blueberry Pie (from Janet Crellin via the Brigus Blueberry Festival)

4 C wild blueberries	1 C water
1 C sugar	1 T butter
3 T cornstarch	1 baked 9" pie crust
pinch salt (optional)	

- Mix sugar, cornstarch, and salt in saucepan.
- Add water and 1 C blueberries.
- Cook and stir over medium heat until thickened.
- Stir in butter until melted, cool.
- Add remaining blueberries to sauce.
- Pour into pastry, chill.
- Garnish with fresh whipped cream.

The Cruciferae - Mustard Family

The mustard family is an important plant family from man's point of view. This is the family which brings us our cole crops such as cabbage, turnip, broccoli, cauliflower, radish, kohlrabi, kale (need I go on). Most of these vegetables are members of the genus *Brassica*, and hence, the mustard family is often called the Brassicaceae.

However, the old name, Cruciferae, tells us a little about the family as a whole. The name originates from crucifix, the cross, a reference to the flowers of the family which have four petals in the form of a cross.

As a group, the Cruciferae consists of herbaceous plants (many which as annuals) which have rather pungent watery sap. Plants characteristically have four sepals, four petals, and generally six stamens, two which are short and four which are long. The sepals are deciduous and fall soon after flowering. The flowers are hypogynous i.e. the sepals and petals are attached below the ovary. The seed capsules of crucifers are called siliques or silicles; siliques are long and thin while silicles while also thin, are more rounded in shape such as in *Lunaria*. Both types of seed capsule consist of two chambers, which are separated by a thin tissue layer. When ripe, the chambers split along this thin layer to release the seeds. The leaves are generally alternate and the flowers are arranged in terminal racemes or corymbs. White and yellow are the most common floral colours.

There are many members of this large family growing in Newfoundland. About half of them are "exotics" (a nice word for "weed") which originated in Europe. These common exotics include winter-cress, field penny-cress, shepherd's-purse and sweet rockets. In total, there are about 26 species from 17 genera of "exotic" crucifers on the island.

However, our native flora is far from depauperate in crucifers. There are 31 native species (including Labrador) from 12 genera. The largest genera is *Draba*, with a total of 10 species, most which are restricted to limestone regions of the Northern Peninsula. Other native genera include *Lesquerella* (1 species), *Subularia* (1 species), *Hutchinsia* (1 species), *Cochlearia* (3 species), *Cakile* (1 species), *Braya* (4 species), *Erysimum* (1 species), *Rorippa* (2 species), *Barbarea* (1 species), *Cardamine* (4 species) and finally *Arabis* (yes, our common rock-cress) (3 species).

As a rule, our native crucifers have rather insignificant flowers on small plants, but *Draba* and *Arabis* can be relatively showy, especially in a wildflower "alpine" garden. The best way to obtain plants is by gathering seeds, since they are produced in abundance and germinate readily.

MEMORIAL UNIVERSITY BOTANICAL GARDEN: FALL EVENTS

NEWFOUNDLAND ORCHID SOCIETY SHOW & ILLUSTRATED TALK

Orchid Show: Sat. & Sun., October 17 & 18

Illustrated Talk: Saturday, October 17, 8 p.m.

"Orchid Growing & Breeding at Marcel Lecoufle Orchids: What the 90's Have in Store."

Presented by Ms. Isabelle Bert of Marcel Lecoufle Orchids, Paris, France.

Admission Free. All welcome.

MEMORIAL UNIVERSITY BOTANICAL GARDEN: FALL EVENTS, continued...

NATURE WALKS

Birdwatching: Sundays, 8 a.m.
October 25

Wildflower Walks: Sunday, 11 a.m.
October 18

GUIDED TOURS

An introduction to the Botanical Garden
Every Sunday, 3 p.m.

WATERCOLOUR PAINTING WORKSHOP

Monday, October 19, 10 - 4 p.m.
Instructor: Valerie Baines, A.R.M.S., F.S.D.A.. Fee: \$25.
(Registration to commence Oct. 1). Sponsored by the Friends of the Garden.

DRIED FLOWER WORKSHOP

Saturday, Oct. 24, 1:30 - 4:30
Instructors: Pam Bruce, Leila Clase, Betty Hall
Fee: \$30. (Registration to commence Oct. 1)
Sponsored by the Friends of the Garden

WREATH-MAKING WORKSHOP

Saturday, October 31, 1:30 - 4:30
Instructor: Audrey Owens
Fee: T.B.A. (Registration to commence Oct. 1)

**15th ANNUAL EXHIBITION OF GARDEN & NATURE
PHOTOGRAPHS AND ILLUSTRATIONS**

Deadline for submissions: Sunday, November 1
Date of exhibition: Weds.-Sun., 10 a.m. - 5:30p.m., November 14-29

For more information on upcoming events please contact Anne Marie Madden at 737-8590, or drop by the Garden during opening hours (Wednesday - Sunday, 10 - 5:30).