BIOLOGY 1100

VANCOUVER COMMUNITY COLLEGE

Instructor: Maria Morlin

November 2020– hybrid course

Camosun Bog Field Trip - Virtual Version – presented by
Maria and Andrea

If you can at some point in the future, do visit the bog…it’s very cool

Outline

- Assignment to complete
- Camosun Bog field trip by UBC Geography department
- Photographs by Andrea – use these photos for your drawings and habitat descriptions.

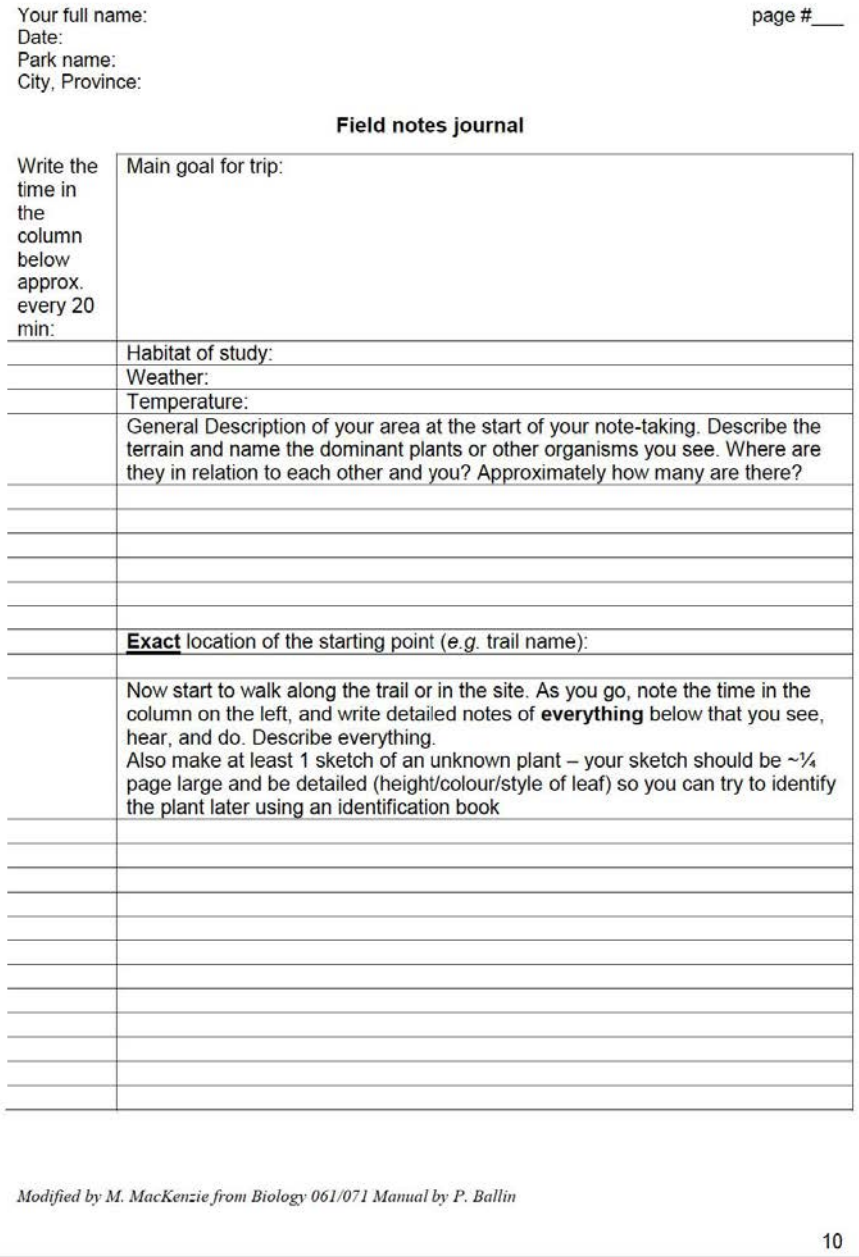
The assignment involves taking field notes with observations and descriptions, answering a few questions about the bog, drawing and describing four species.

The assignment is also here:

https://mariabiocourses.files.wordpress.com/2020/11/camosun-field-trip-assignment.pdf

Use this virtual trip by UBC as a guide and complete the sections (it's free).

http://fieldpress.ca/fields/camosun-bog-metrovan-public-version/



Your full name:
Date:
Park name:
City, Province:

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Field notes journal

Write the time in the column below approx. every 20 min:	Main goal for trip:
	Habitat of study:
	Weather:
	Temperature:
	General Description of your area at the start of your note-taking. Describe the terrain and name the dominant plants or other organisms you see. Where are they in relation to each other and you? Approximately how many are there?
	Exact location of the starting point (*e.g.* trail name):
	Now start to walk along the trail or in the site. As you go, note the time in the column on the left, and write detailed notes of **everything** below that you see, hear, and do. Describe everything. Also make at least 1 sketch of an unknown plant – your sketch should be ~¼ page large and be detailed (height/colour/style of leaf) so you can try to identify the plant later using an identification book

Modified by M. MacKenzie from Biology 061/071 Manual by P. Ballin

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Your full name:
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Time:	Notes continued:

Name:____________________________

Pacific Spirit Park: Camosun Bog and Forest

DUE DATE:_____________________ **Your score (out of 40): _______**

We will meet at 16th Ave and Camosun St, in front of Queen Elizabeth School. You can take bus #25 or #33 to this spot, or take the #99 to Sasamat and walk from there. From our meeting point, we will walk to Camosun Bog; the entrance is near 19th Ave and Camosun St.

Part 1: Camosun Bog(16 marks)
1. Describe the role of *Sphagnum* moss in the bog ecosystem.

2. Describe the abiotic factors in a bog that make it challenging for plants to live in this habitat.

3. Identify 4 species of bog plants and fill out the table for each one. *Do not copy your sketches from the informational signs – draw what you can actually see! The plants may look quite different from the signs, depending on the season.*

Table 1. Identification and adaptations of plants at Camosun Bog

a. Common name: Scientific name:
Adaptations for living in a bog:
Sketch, with distinguishing features labelled or described:

b. Common name: Scientific name:
Adaptations for living in a bog:
Sketch, with distinguishing features labelled or described:

c. Common name: Scientific name:
Adaptations for living in a bog:
Sketch, with distinguishing features labelled or described:

d. Common name: Scientific name:
Adaptations for living in a bog:
Sketch, with distinguishing features labelled or described:

Photos by Andrea – Camosun Bog trip October 2020

Marvelous Sphagnum Moss

The Bog's Building Block

The soft red and green textures that you see carpeting this bog's surface are mostly a collection of 13 species of tiny sphagnum plants. The living parts of each sphagnum plant, at the surface, remain attached to dead parts below the surface that last for hundreds of years.

Dead sphagnum (peat) accumulates to 4.5 metres deep in sections of the bog, building the bog's soil. Sphagnum is the foundation of a bog plant community as it forms the soil and growing conditions in which bog plants grow.

Feel the cool moist air surrounding you near the sphagnum moss. Sphagnum absorbs and holds moisture that is slowly released into the bog and atmosphere.

dead sphagnum builds the bog's soil in which the bog plants grow...

The water that it releases into the bog is acidic - acting like a pickling solution, inhibiting bacteria growth, slowing decomposition and reducing nutrient availability.

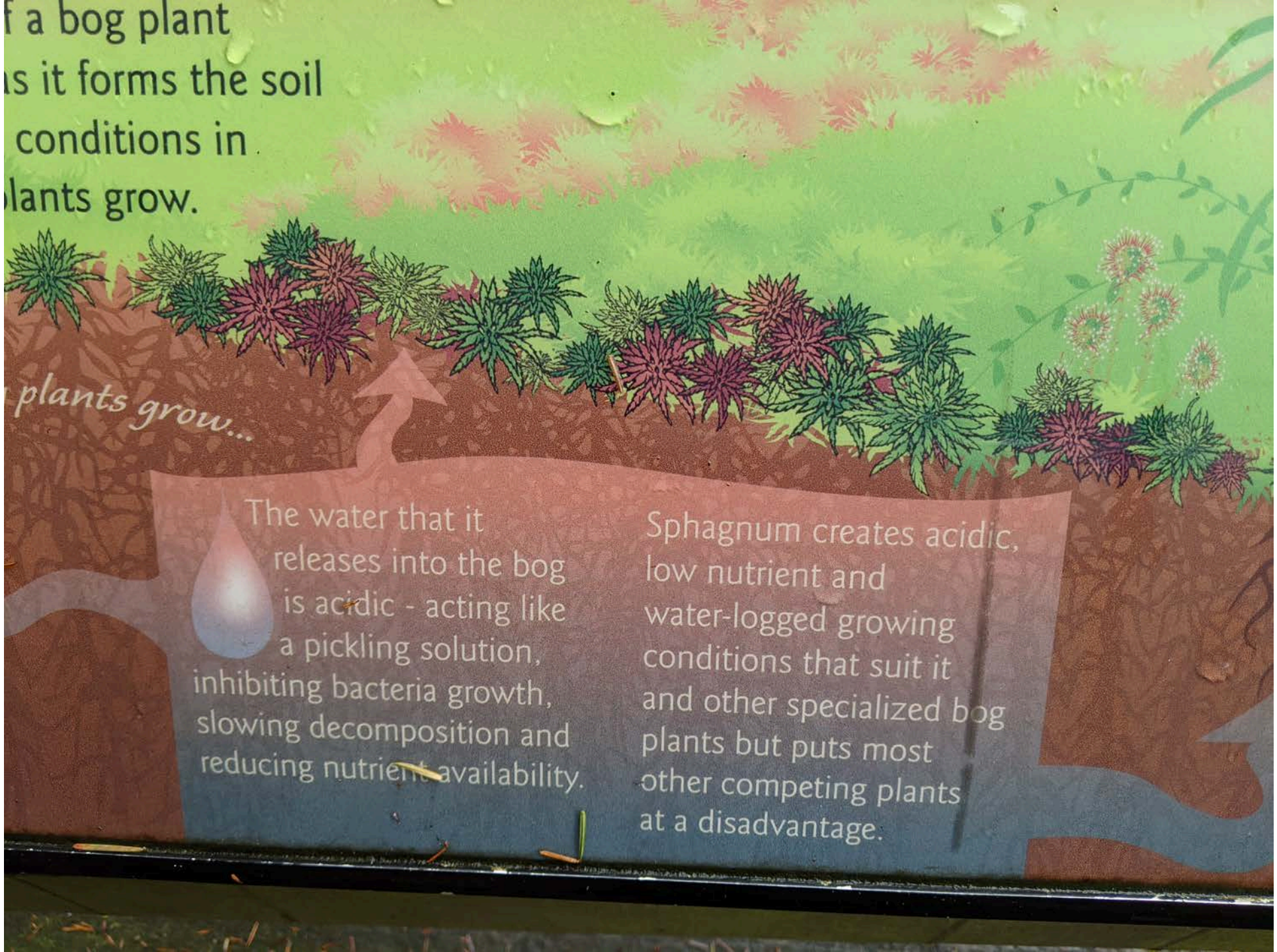
Sphagnum creates acidic, low nutrient and water-logged growing conditions that suit it and other specialized bog plants but puts most other competing plants at a disadvantage.

The Marvels of Sphagnum

- Because sphagnum is very water absorbent, acidic and antiseptic, it has had many uses: soil conditioner, disinfectant bandages, feminine hygiene products, baby diapers, bedding, shoe insoles and acne treatment. Many uses were discovered long ago by the Musqueam people.
- Sphagnum has hollow cells giving it the unique ability to absorb up to 30 times its dry weight in water. Used as wound dressing in wartime, it was reported that 1 ounce (0.03 litre) of sphagnum dressing absorbs up to 16 ounces (0.5 litre) of blood.
- Sphagnum turns white when dry and turns green with rain.
- In European bogs, acidic sphagnum peat has preserved human bodies called 'bog mummies' for 2,000 years.

Tollund Man found preserved for over 2,400 years in peat, in a Danish bog. Now displayed at Silkeborg Museum in Denmark.

Photo courtesy of Silkeborg Museum, Denmark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Deer Fern –
Blechnam spicant

What is a Bog?

A Delicate Balance of In

Like all bogs, Camosun Bog/məqʷe:m is a type of wetland filled with sphagnum moss, specialized bog plants, acidic water, and sunlight. It started forming when water trapped at the earth's surface became stagnant and filled with sphagnum moss. Sphagnum moss formed bog soil (peat) and created bog conditions: acidic, soft, spongy, moist, and low in nutrients.

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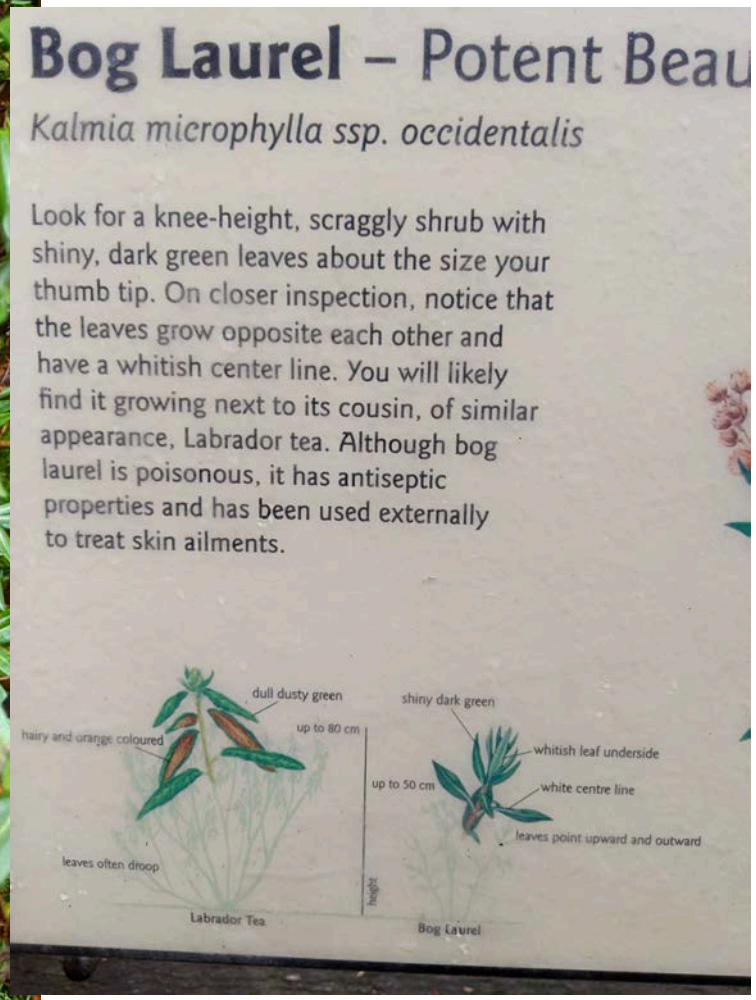
Salal – *Gaultheria shallon*


Bog Laurel – Potent Beau
Kalmia microphylla ssp. occidentalis
Look for a knee-height, scraggly shrub with shiny, dark green leaves about the size your thumb tip. On closer inspection, notice that the leaves grow opposite each other and have a whitish center line. You will likely find it growing next to its cousin, of similar appearance, Labrador tea. Although bog laurel is poisonous, it has antiseptic properties and has been used externally to treat skin ailments.
dull dusty green
up to 80 cm
hairy and orange coloured
leaves often droop
Labrador Tea
shiny dark green
whitish leaf underside
up to 50 cm
white centre line
leaves point upward and outward
height
Bog Laurel


Beauty
Pink saucer-shaped flowers grow in clusters at branch tip.
10 flower stamens, each tucked into a pouch in a petal, pop out when an insect lands, dusting it with pollen.


Fragrant Labrador Tea
Ledum groenlandicum
If you are standing close to Labrador tea on a warm day, you may smell the resinous aroma emitted from its leaves. That aroma is similar to the flavour of the tea made from its leaves. Look for a scraggly shrub with small, narrow, dull green leaves, each the size of a paper clip.
To be sure you have found Labrador tea, look under its leaves and notice the hairy undersides, usually orange-coloured, and leaf edges that curl under. Boiled as a tea, the leaves are said to have medicinal value, but excessive consumption can lead to poisoning.
In the spring, its clusters of small white flowers provide pollen and nectar for many insects including valuable honey bees.
Aromatic leaves make a pleasant simmering potpourri and are used by aboriginals in steam pits and sweat lodges.
Leaves are used by the Musqueam and others as a beverage and medicine for colds and sore throats.
The leave's hairy undersides, small waxy surface and curled down edges are all adaptations for helping the plant retain water. Although the bog is waterlogged, most water is acidic and not usable by bog plants.
You will likely find Labrador tea growing close to its poisionous cousin of similar appearance, bog laurel (Kalmia).
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hairy and orange coloured
up to 80 cm
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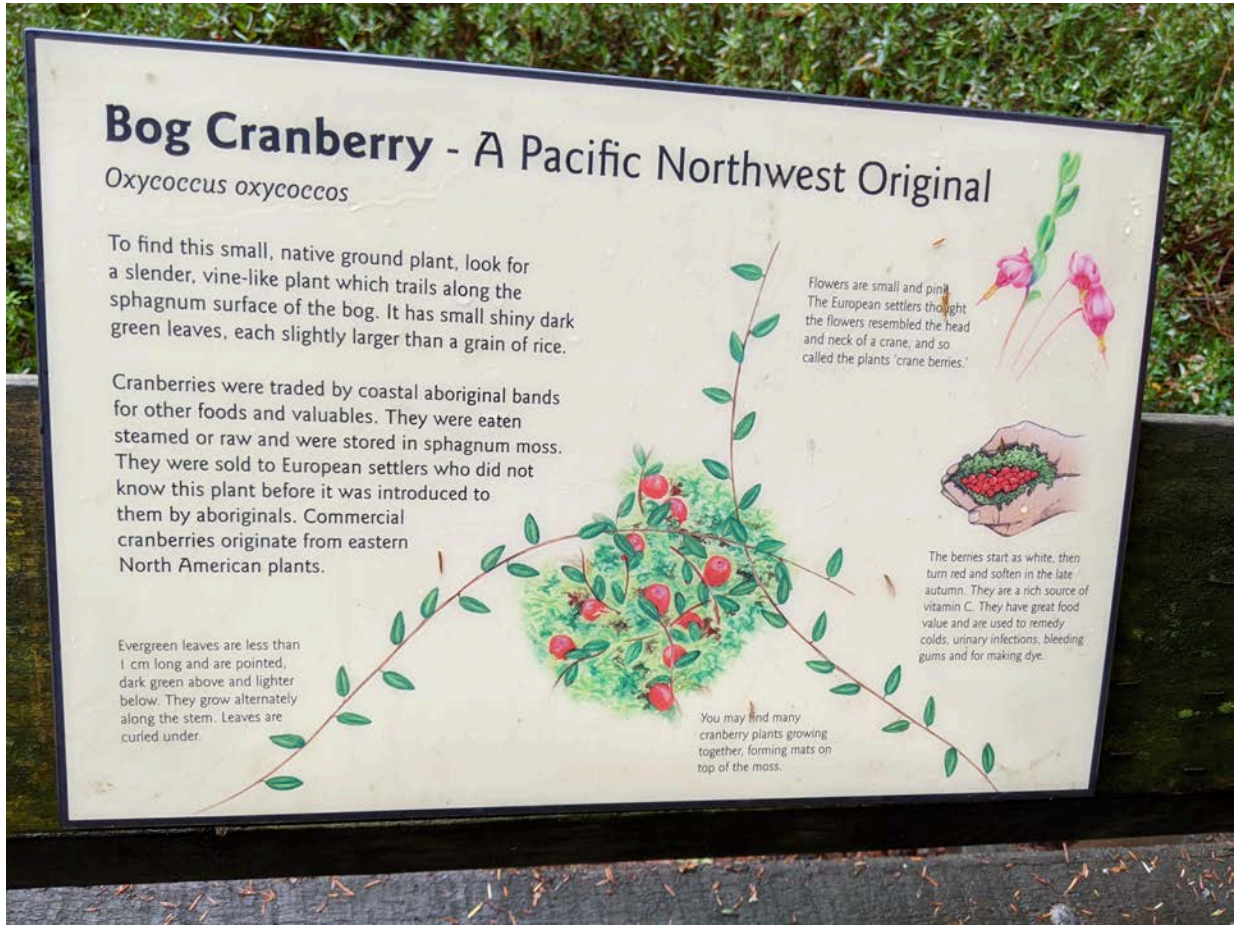
Bog Laurel

From: centralcoastbiodiversity.com



Thanks, Andrea, for providing the photos!