

Wisdom Tutorial Boreal Forest Plants

Opening Circle: Center and ground, honor the directions, smudge.
Check in and set intention.

The **boreal forest** is a cool acidic forest of evergreens, soft woods stretching across North America, Europe and Russia. Other names for this forest are spruce-fir forest, the Canadian zone, north woods, and in Russian, *taiga*. Boreal forest soils are sandy, gray, gravelly and acidic. Climax species in Vermont are red spruce and balsam fir.

PLANTS TO KNOW AND LOVE

Bunchberry or Dwarf Cornel, *Cornus canadensis*, Dogwood Family (Cornaceae) Wisdom Book pg 3
<https://gobotany.newenglandwild.org/species/chamaepericlymenum/canadense/>
Edible fruit – seed and pulp are inseparable.

Creeping Snowberry, *Gaultheria hispidula*, Heath Family (Ericaceae) pg 7
<https://gobotany.newenglandwild.org/species/gaultheria/hispidula/>
Woody stemmed; bristles on leaves, stem and fruit.

Wintergreen, *Gaultheria procumbens*, Heath Family (Ericaceae) pg 32
<https://gobotany.newenglandwild.org/species/gaultheria/procumbens/>
Woody stemmed. Fruit is a delicious nibble.

Pink Lady's Slipper, *Cypripedium acaule*, Orchid Family (Orchidaceae) KEY with Newcomb's
<https://gobotany.newenglandwild.org/species/cypripedium/acaule/> pg 22-23
Seeds have no endosperm and rely on fungi for food.

Goldthread, *Coptis trifolia*, (formerly *C. groenlandica*), Buttercup Family (Ranunculaceae) key
<https://gobotany.newenglandwild.org/species/coptis/trifolia/> pg 11-12
Flowers have five to seven white showy sepals with tiny club-like petals.

Trailing Arbutus, *Epigaea repens*, Heath Family (Ericaceae)
<https://gobotany.newenglandwild.org/species/epigaea/repens/>
<http://vnps.org/wildflowers-of-the-year/2001-trailing-arbutus-epigaea-repens/>
'Epi' means upon, 'gaea' refers to earth, 'repens' means creeping.

Indian Pipe, *Monotropa Uniflora*, Heath Family (Ericaceae)
Also known as Ghost Plant, Corpse Plant, Ice Plant **KEY**
<https://gobotany.newenglandwild.org/species/monotropa/uniflora/>
"The Indian pipe is a flowering plant, but it isn't green, so how does it get its food? Even today, you see misinformation about that. People thought that it lived on decaying leaves and called it a saprophyte. Today we know that it has short, stubby roots that contain fungi. And the fungi extend in a web-like way through dead rotting leaves and connect up to the roots of conifers. The conifers provide sugar, which the fungi carry to the Indian pipe plant. So it's really a parasite, but on fungi." ~from http://botany.org/Parasitic_Plants/Monotropa_uniflora.php

Partridgeberry, *Mitchella repens*, Madder Family (Rubiaceae) pg 22

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Key out ~ 4 or 5 petals? Check lots of plants to determine the predominate number of petals.

<https://gobotany.newenglandwild.org/species/mitchella/repens/>

Sprawling, woody-stemmed; flowers are in pairs which ripen into one fruit with two dimples.

Clintonia or Bluebead Lily, Clintonia borealis, Lily Family (Liliaceae) pg 5

<https://gobotany.newenglandwild.org/genus/clintonia/>

Young leaves taste like cucumber; dark blue fruit is inedible.

Red spruce, Picea rubens, Pine Family (Pinaceae) pg 50

<https://gobotany.newenglandwild.org/species/picea/rubens/>

Stiff sharp needles; resin used as chewing gum, smudge and skin sores.

Balsam Fir, Abies balsamea, Pine Family (Pinaceae) pg 49

<https://gobotany.newenglandwild.org/species/abies/balsamea/>

Cones are upright; firs are furry!

Hobblebush, Viburnum lantanoides also V. alnifolium, Adoxa Family (Adoxaceae) (formerly Caprifoliaceae) pg 47, KEY

<https://gobotany.newenglandwild.org/species/viburnum/lantanoides/>

Large naked buds.

PLANT MEDITATION Pick a plant, dowse or ask a plant to pick you. Meditate with your plant. **pg 60**

VOCABULARY

BERBERINE: Berberine is a potent yellow bitter alkaloid which is an antibacterial, anti-septic and stimulant. It is liver-cleansing and laxative. Large doses of berberine can be harmful. **Bloodroot (Sanguinaria canadensis), goldthread (Coptis trifolia) and common barberry (Berberis vulgaris)** contain berberine. Berberine has also been used for dye.

METHYL SALICYLATE: Also known as oil of wintergreen, used in analgesic (pain-relieving) oils and balms. Found in **wintergreen, creeping snowberry, yellow birch and cherry birch.**

SAPROPHYTE: Plant, fungus, or microorganism that lives on dead or decaying organic matter.

PARASITE: An organism that lives in or on an organism of another species, obtaining nutrients from that host. **Indian Pipe**

SEPALS: Lower or outermost part of a flower, often green or can be colorful, supporting the petals. This term is also used when there is only one whorl as in the marsh marigold flower. Sepals form the calyx.

PLANT FAMILY Heath Family, Ericaceae Botany in a Day pg 132 and on

This family has a great number of shrubs, with some herbaceous plants and trees as well. Heath Family plants grow in acidic soil in Boreal-type forests and around ponds. The flowers are often red, pink or white and bell-shaped with five flower parts – 5 united sepals and 5 petals. Flowers mature into berries, capsules or drupes (a fruit with a large single seed).

Vaccinium – **Blueberry, cranberry**

Gaultheria - **Wintergreen, Creeping snowberry**

Monotropa – **Indian pipe, pinesap**

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Epigaea – **Trailing arbutus**

CLOSING CIRCLE What did you get from our time today with the plant-people?