

5. DICHOTOMOUS KEY TO THE PLANT COMMUNITIES AT VOYAGEURS NATIONAL PARK

Version 3.6

- This is a key to the community types identified in the park. All assessments of plant communities in the field must be done on an area of 625 m² (50m diameter around point).
- The term dominance in the context of woodland communities means greater than 25% cover. In the context of forest, shrub and herbaceous communities, dominance means greater than 60% cover.
- Species listed after “*” are indicator species for that community type and are often (but not always) present.
- When the term “total tree canopy cover” is used, this refers to the absolute canopy cover. All other cover values refer to relative canopy cover e.g. if total canopy cover is 40%, >25% cover of tamarack refers to 25% of the 40% total cover. The linkages between community types and map units are presented in Table 5, page 37.

1. UPLANDS. Absence of standing water and/or peat soil. Mineral soil that is not saturated throughout the growing season.

2. Well drained soils. Canopy dominated by one or more of the following: *Pinus* spp., *Quercus* spp., *Picea* spp., *Betula* spp., *Populus tremuloides*, *P. grandidentata*. If dominated by *Populus tremuloides* or *P. grandidentata* then *P. balsamifera*, *Thuja occidentalis*, or *Fraxinus nigra* present in canopy or shrub layers at <10% cover.

* *Clintonia borealis*, *Corylus cornuta*, *Prunus virginiana*, *Viburnum rafinesquianum*.

3. Dominated by shrubs or herbaceous vegetation. Total tree canopy < 25%.

4. Dominated by herbaceous vegetation (shrub cover < 25%). **Poverty Grass Granite Barrens (5157)**

4. Dominated by shrubs (shrubs > 25% cover). **Boreal Hazelnut-Serviceberry Rocky Shrubland (5197)**

3. Forest or Woodland. Total tree canopy > 25% (or if <25%, dominated by bedrock and lichens, not shrubs).

5. Canopy dominated by evergreen trees or a mixture evergreen and deciduous trees. Percent cover of evergreen trees in canopy > 25%.

6. Canopy dominated by *Pinus banksiana* with or without *Quercus ellipsoidalis* or *Populus* spp.

7. Canopy consisting primarily of *Pinus banksiana*. *Quercus ellipsoidalis* or *Populus* spp. absent or present < 25%.

8. Woodland. Total tree canopy cover < 60% and canopy closure prevented by the presence of exposed bedrock.

9. Sparsely vegetated, total tree canopy cover < 25%. Dominated by bedrock and lichens. **Jack Pine / Lichen Rocky Barrens (2491)**

9. Total tree canopy cover 25-60%. **Boreal Pine Rocky Woodland (jack pine phase) (2483)**

8. Forest. Total tree canopy cover > 60%. Or, if <60%, then canopy closure not prevented by the presence of exposed bedrock. **Jack Pine / Balsam Fir Forest (2437)**

7. Canopy consisting of a mix of *Pinus banksiana* and *Populus* spp. or *Pinus banksiana* and *Quercus* spp. Deciduous trees comprising > 25% cover.

10. Canopy consisting of a mix of *Pinus banksiana* and *Populus* spp. each with > 25% cover. **Jack Pine - Aspen / Bush Honeysuckle Forest (2518)**. This type is uncommon

10. Canopy consisting of *Pinus banksiana* and *Quercus ellipsoidalis* each with > 25% cover. *Populus* spp. absent in canopy or present at < 25% cover. **Northern Pin Oak - Bur Oak - (Jack Pine) Rocky Woodland (jack pine-oak phase) (5246)**

6. Canopy dominated by *Pinus strobus*, *Pinus resinosa*, *Picea* spp., *Populus* spp., and/or *Betula papyrifera*.

11. Canopy dominated by *Pinus resinosa* and/or *Pinus strobus*. Or canopy a mix of *Pinus resinosa* and *Pinus strobus* with *Populus* spp. and/or *Betula papyrifera*.

12. Forest. Total tree canopy cover > 60%. Or, if <60%, then canopy closure not prevented by the presence of exposed bedrock.

13. Dominant conifer *Pinus strobus*. *Pinus resinosa* in canopy < 60%. * *Rubus pubescens*, *Clintonia borealis*.

14. < 25% hardwoods (*Populus* spp. and/or *Betula papyrifera*) in canopy. **White Pine / Mountain Maple Mesic Forest Community (2445)**
14. > 25% hardwoods (*Populus* spp. and/or *Betula papyrifera*) in canopy. **White Pine - Aspen - Birch Forest (2479)**
13. Dominant conifer *Pinus resinosa* (may contain < 25% *P. strobus* in canopy). * *Pleurozium schreberii*, *Dicranum* spp., *Picea mariana*, *Abies balsamea*.
 15. < 25% hardwoods (*Populus* spp. and/or *Betula papyrifera*) in canopy. **Red Pine / Blueberry Dry Forest Community (2443)**
 15. > 25% hardwoods (*Populus* spp. and/or *Betula papyrifera*) in canopy. **Red Pine - Aspen - Birch Forest Community (2520)**
12. Woodland. Total tree canopy cover < 60% and canopy closure prevented by the presence of exposed bedrock. *Pinus strobus* and *Pinus resinosa* common, *Picea* spp. uncommon, with or without a mixture of hardwoods, typically *Populus* spp. and/or *Betula papyrifera*.
 - 15a. < 25 hardwoods (typically *Populus* spp. and/or *Betula papyrifera*) in canopy. **Boreal Pine Rocky Woodland** (mixed pine phase) (2483)
 - 15a. > 25% hardwoods (*Populus* spp. and/or *Betula papyrifera*) in canopy. **Northern Pin Oak - Bur Oak - (Jack Pine) Rocky Woodland** (mixed pine-oak phase) (5246)
11. Canopy dominated solely by *Picea* spp. or a mixture of *Picea* spp. with *Populus* spp. and/or *Betula papyrifera*.
 16. Woodland. Total tree canopy cover < 60%, evergreen dominated, and canopy closure prevented by the presence of exposed bedrock. **Boreal Pine Rocky Woodland** (mixed pine phase) (2483). This is an uncommon variant of the mixed pine phase. Rare cases of mixed evergreen-deciduous stand of *Picea* spp. mixed with hardwoods should be placed in the **Northern Pin Oak - Bur Oak (Jack Pine) Rocky Woodland (mixed pine-oak phase; 5246)**
 16. Forest. Total tree canopy cover > 60%. Or, if < 60%, then canopy closure not prevented by the presence of exposed bedrock.
 17. Canopy dominated solely by *Picea* spp. Percent cover of *Populus* spp. and/or *Betula papyrifera* < 25%.
 18. Canopy dominated exclusively by *Picea mariana*. * *Picea mariana*, *Sphagnum* spp., *Gaultheria procumbens*, *Pleurozium schreberii*. **Black Spruce / Feathermoss Forest (2447)**
 18. Canopy dominated by *Picea glauca* (*P. mariana* may be present). * *Lycopodium obscurum*, *L. complanatum*. **Spruce - Fir / Mountain Maple Forest Community (2446)**
 17. Canopy a mixture of *Picea* spp., *Abies balsamea* and *Populus* spp. and/or *Betula papyrifera*. Percent canopy cover of these hardwoods > 25%.
 19. Canopy a mixture of *Picea glauca* and *Populus* spp. and/or *Betula papyrifera*, with occasional dominance by *Abies balsamea*. **Spruce - Fir - Aspen Forest (2475)**; rarely **Balsam Fir - Paper Birch Forest (SFA; 2474)**, a very minor type.
 19. Canopy a mixture of *Picea mariana* and *Populus* spp. and/or *Betula papyrifera*. **Black Spruce Aspen Forest (2516)** a very minor type
5. Canopy dominated by deciduous trees. Percent cover of evergreen trees in canopy < 25%.
 20. Canopy dominated by *Quercus macrocarpa*, *Q. ellipsoidalis*, *Tilia americana* or *Fraxinus pensylvanica*.
 21. Forest or woodland canopy dominated by *Q. ellipsoidalis*. Or woodland dominated by *Q. macrocarpa* with < 60% cover and canopy closure prevented by the presence of exposed bedrock. **Northern Pin Oak - Bur Oak - (Jack Pine) Rocky Woodland** (deciduous phase) (5246)
 21. Canopy dominated by *Quercus macrocarpa*, *Fraxinus pensylvanica*, and/or *Tilia americana*. Forest. Total tree canopy cover > 60% and canopy closure not prevented by the presence of exposed bedrock. **Northern Bur Oak Mesic Forest (2072)**
 20. Canopy dominated by *Populus* spp. and/or *Betula papyrifera*.
 22. Forest. Total tree canopy cover > 60%. Or, if < 60%, then canopy closure not prevented by the presence of exposed bedrock.

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23. Canopy dominated by *Populus* spp. **Aspen - Birch / Boreal Conifer Forest (2466)**, rarely **Aspen - Birch - Red Maple Forest (2467)**, a very minor type.
23. Canopy dominated by *Betula papyrifera*. *Populus* spp. < 10 %. **Paper Birch / Fir Forest (2463)**
22. Woodland. Total tree canopy cover < 60% and canopy closure prevented by the presence of exposed bedrock. * *Cladonia* spp. Canopy cover <60%. **Mixed Aspen Rocky Woodland (2487)**

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2. Poorly drained soils, canopy dominated by *Populus* spp., *Fraxinus nigra*, *Thuja occidentalis*. If dominated by *Populus* spp. then *P. balsamifera*, *Thuja occidentalis*, or *Fraxinus nigra* present in canopy or shrub layers at >10% cover.

24. Canopy dominated by *Populus tremuloides*, *P. grandidentata*, and/or *P. balsamifera*. Or a mix of *Populus* spp. and *Thuja occidentalis*.

25. *Thuja occidentalis* absent or present < 25% cover. **Trembling Aspen - Balsam Poplar Lowland Forest (5036)**

25. *Thuja occidentalis* present in the canopy or subcanopy > 25% cover. **White Cedar - Yellow Birch Forest (2450)**

24. Canopy dominated by *Fraxinus nigra* and/or *Thuja occidentalis*.

26. Canopy consists solely of *Fraxinus nigra* (*T. occidentalis* may be present in the sub-canopy).

27. Canopy of *F. nigra* with > 25% *T. occidentalis* in subcanopy. **White Cedar - Black Ash Swamp (5165)**

27. Canopy of *F. nigra* with < 25% *T. occidentalis* in the subcanopy. **Black Ash - Mixed Hardwood Swamp (2105)**

26. Canopy consists solely of *T. occidentalis* (*F. nigra* <25%) or consists of a mix of *T. occidentalis* and *F. nigra* each comprising at least 25% cover. * *Thelypteris phegopteris*, *Lonicera canadensis*, *Actaea* spp., *Streptopus roseus*.

28. Canopy dominated by *T. occidentalis* with < 25% *F. nigra*. **White Cedar - Boreal Conifer Mesic Forest (2449)**

28. Canopy mixed *T. occidentalis* and *F. nigra* with at least 25% cover of each. **White Cedar - Black Ash Swamp (5165)**

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1. WETLANDS. Presence of standing water, saturated mineral soil, or peat soil.
 29. Non-peatland wetlands, *Sphagnum* spp. absent or present < 25% cover.
 30. Permanently flooded. Standing water \geq 0.5 meters deep.
 31. Dominated by *Typha* spp., *Carex lasiocarpa*, *Equisetum fluviatile* or *Phragmites australis*.
 32. Dominated by *Typha* spp. **Midwest Cattail Deep Marsh (2233)**
 32. Dominated by *Carex lasiocarpa*, *Equisetum fluviatile*, or *Phragmites australis*.
 33. Dominated by *Carex lasiocarpa*. **Wiregrass Sedge Shore Fen (5229)**
 33. Dominated by *Equisetum fluviatile* or *Phragmites australis*.
 34. Dominated by *Phragmites australis*. **Eastern Reed Marsh (4141)**
 34. Dominated by *Equisetum fluviatile*. **Water Horsetail - Spikerush Marsh (5258)**
 31. Dominated by one or more of the following: *Potamogeton* spp., *Scirpus* spp., *Zizania palustris*, *Brasenia schreberii*, *Nymphaea odorata*.
 35. Dominated by floating water aquatics especially *Brasenia schreberii* or *Nymphaea odorata* (> 10% cover). **Northern Water Lily Aquatic Wetland (2562)**
 35. Dominated by emergent or submerged aquatics. *Potamogeton* spp., *Scirpus* spp. or *Zizania palustris*. Usually located on large, open lakes or bays.
 36. Dominated by submerged aquatics (*Ceratophyllum demersum*, *Potamogeton* spp., *Myriophyllum* spp.). Emergent and floating aquatics < 10% cover. **Midwest Pondweed Submerged Aquatic Wetland (2282)**
 36. Dominated by emergent aquatics (submerged aquatics may be present).
 37. Dominated by *Zizania palustris*. **Wild Rice Marsh (2382)**
 37. Dominated by *Scirpus* spp. **Freshwater Bulrush Marsh (2225)**
 30. Not permanently flooded. Or, if permanently flooded, then standing water \leq 0.5 meters deep.
 38. Dominated by trees (*Populus* spp., *Fraxinus nigra*, *Thuja occidentalis*.) Go to couplet 26
 38. Dominated by shrubs, graminoids, or herbs.
 39. Shrub dominated.
 40. Dominant shrub *Alnus incana*. **Speckled Alder Swamp (2381)**
 40. Dominant shrubs *Salix* spp. and/or *Cornus* spp. **Dogwood - Pussy Willow Swamp (2186)**
 39. Graminoid or herb dominated.
 41. Community dominated by *Calamagrostis canadensis*. **Canada Bluejoint Eastern Meadow (5174)**
 41. Community not dominated by *Calamagrostis canadensis*. Community dominated by *Equisetum fluviatile*, *Carex* spp. or *Typha* spp.
 42. Dominated by *Equisetum fluviatile* **Water Horsetail - Spikerush Marsh (5258)**
 42. Not dominated by *Equisetum fluviatile*. Dominated by *Carex* spp. and/or *Typha* spp.
 43. Percent cover of *Carex* spp. 50% or greater. **Northern Sedge Wet Meadow (2257)**
 43. Percent cover of *Carex* spp. < 50%. Community dominated by *Typha* spp. **Midwest Cattail Deep Marsh (2233)**

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29. Peatlands. *Sphagnum* spp. present > 25% cover.
44. Dominated by shrubs or graminoids, trees < 25% cover.
45. Dominated by graminoids.
46. Dominated by *Carex lasiocarpa*. Community restricted to water tracts of Rat Root peatland
Northern Sedge Poor Fen (2265)
46. Not dominated by *Carex lasiocarpa*. Community found outside Rat Root Peatland. Dominated by *Carex* spp. (commonly *C. lacustris*, *C. rostrata*, *C. vesicaria*, and/or *C. stricta*). **Northern Sedge Wet Meadow (2257)**
45. Dominated by shrubs.
47. Dominated by *Salix* spp. and/or *Cornus* spp. **Dogwood - Pussy Willow Swamp (2186)**
47. Dominated by *Alnus incana*, *Chamadaphne calyculata*, or *Betula glandulifera*.
48. Dominated by *Alnus incana*. **Speckled Alder Swamp (2381)**
48. Dominated by *Chamadaphne calyculata* and/or *Betula glandulifera*.
49. Minerotrophic indicators present e.g. *Salix* spp., *Betula glandulifera*, *Alnus incana*, *Equisetum fluviatile*, *Calamagrostis canadensis*, *Spirea alba*, *Campanula aparanoïdes*, *Myrica gale*. Commonly shoreline situations.
50. > 25% *Betula glandulifera* (*Chamadaphne calyculata* and *Salix* spp. may also be present)
51. Restricted to the Rat Root River Peatland, except along shoreline to Lake Kabetogama. **Bog Birch - Leatherleaf Poor Fen (2494)**
51. Found outside the Rat Root River Peatland and along Rat Root River Peatland shoreline to Lake Kabetogama. Common in shoreline situations. **Bog Birch - Willow Shore Fen (5227)**
50. < 25% *Betula glandulifera*. Community dominated by *Chamadaphne calyculata*. Other shrubs present but cover < 25%. **Leatherleaf - Sweet gale Shore Fen (5228)**
49. Minerotrophic indicators absent. Not (or rarely) shoreline situations.
52. Dominated by *Chamadaphne calyculata*. Conifers (usually *Picea mariana* and *Larix laricina*) < 10 % cover. **Leatherleaf Bog (2498)**
52. Dominated by *Chamadaphne calyculata*. Conifers (usually *Picea mariana* and *Larix laricina*) 10-25% cover. **Black Spruce / Leatherleaf Semi-treed Bog (5218)**
44. Dominated by trees, total tree canopy cover > 25%. Woodland or forest physiognomy.
53. *Larix laricina* present > 25% cover.
54. Dominated by *Larix laricina*. Other conifers absent or present < 25%.
55. Graminoid layer dominated by *Carex lasiocarpa*. Restricted to Rat Root Peatland.
Tamarack Scrub Poor Fen (5226), a very minor type
55. Graminoid layer not dominated by *Carex lasiocarpa*. Not restricted to Rat Root Peatland.
Northern Tamarack Rich Swamp (2471)
54. Dominated by mixture of *Larix laricina* and other conifers (*Picea mariana*, *Thuja occidentalis*). Other conifers present > 25% cover.
56. Dominated by mixture of *Larix laricina* and *Black Spruce*. Woodland or forest physiognomy.
Black Spruce / Labrador Tea Poor Swamp (mixed phase) (2454)
56. Dominated by mixture of *Larix laricina* and *Thuja occidentalis*. Woodland or forest physiognomy. **White Cedar - (Mixed Conifer) / Alder Rich Swamp (tamarack phase) (2456)**
53. *Larix laricina* absent or present < 25% cover. Dominated by *Picea mariana* or *Thuja occidentalis*.
57. Dominated by *Thuja occidentalis*. **White Cedar - (Mixed Conifer) / Alder Swamp (2456)**
57. Dominated by *Picea mariana*.
58. *Alnus incana* dominant in shrub layer. Other minerotrophic species present, including *Carex lacustris*, *Dryopteris carthusiana* and *Calamagrostis canadensis*. **Black Spruce / Alder Rich Swamp (2452)**
58. *Alnus incana* not dominant in shrub layer. Minerotrophic species absent.
59. Present in confined basins. * *Pleurozium schreberii*, *Vaccinium angustifolium*. **Black Spruce / Labrador Tea Poor Swamp (evergreen phase) (2454)**
59. Present within large peatlands. Restricted to the Rat Root Peatland and large peatland in Cranberry Bay. **Black Spruce Forested Bog (2485)**