

## Appendix B

### *Dichotomous Keys to the Vegetation Communities at Acadia National Park*

This is a key to vegetation community types (associations) of the National Vegetation Classification System that have been identified at Acadia National Park as a result of this mapping project. This key is a working document. Because it is based on limited samples for many types, it may not work as well for variations that did not appear in the samples.

#### Conventions:

- The layers are as defined in the plot sampling (see Methods). For example, “canopy” refers to the cover of trees over 10 cm dbh, and “subcanopy” to smaller trees over 3 m tall.
- The cutoff used for shrub versus dwarf shrub is about 1 m, but is not meant to be constrained to that exactly. Use your judgment in the field.
- Relative Dominance (RD) is the proportion of the total canopy occupied by a species. If *Picea rubens*'s cover value is 30%, in a setting in which the canopy cover totals 60%, *Picea rubens*'s relative dominance is 50%. This concept is used repeatedly in this key.
- Types that occur in the Park, but for which we have no samples, are marked with an asterisk.

#### Which Key To Use:

1. Trees forming  $\geq 20\%$  canopy, or if less (rarely), then canopy and subcanopy (everything  $> 3$  m tall) total  $\geq 30\%$  cover: forests and woodlands..... 2
1. Tree canopy  $\leq 10\%$ , or if slightly more, then canopy and subcanopy together total  $< 30\%$  (these layers usually total  $< 10\%$ ): non-forested vegetation..... 3
2. UPLAND: soils not saturated throughout season, *Sphagnum*  $< 10\%$  of ground surface. Exception: sometimes in ledgy types such as Black Spruce / Heath Rocky Woodland, the “soil” is thin peat pockets over bedrock, and usually saturated; these are treated as uplands  
..... **UPLAND FOREST AND WOODLAND KEY**
2. WETLAND: soils saturated throughout season and/or *Spahgnum* covering  $> 10\%$  of ground surface (see note *re* exceptions in other half of couplet); usually basins or streamsides  
..... **WETLAND FOREST AND WOODLAND KEY**
3. UPLAND: soils not saturated throughout season, *Sphagnum*  $< 10\%$  of ground surface. Exception: sometimes in ledgy types such as Blueberry Granite Barrens, the “soil” is thin peat pockets over bedrock, and usually saturated; these are treated as uplands  
..... **UPLAND NON-FORESTED VEGETATION KEY**
3. WETLAND: soils saturated throughout season and/or *Spahgnum* covering  $> 10\%$  of ground surface (see note regarding exceptions in other half of couplet); usually basins or streamsides  
..... **WETLAND NON-FORESTED VEGETATION KEY**

## Upland Forest and Woodland Vegetation Key

1. Conifer forests and woodlands: deciduous trees < 20-25% RD ..... 2
1. Deciduous forests and woodlands: coniferous trees < 20-25% RD ..... 17
1. Mixed forests and woodlands: both conifers and deciduous spp > 25% RD ..... 22

### Conifer forests and woodlands: general

1. Conifer forests: tree cover usually > 65%, lower layers generally more sparse than canopy; area lacks a well-developed low shrub layer of *Vaccinium angustifolium*, *Gaylussacia baccata*, *Kalmia angustifolia*, and/or *Photinia melanocarpa*; substrate various, but often mineral soil, usually not a thin organic layer over bedrock ..... 2
1. Conifer woodlands: tree cover usually < 65%, as low as 20% (but occasionally to ~80%), trees more-or-less open grown; low shrub layer of *Vaccinium angustifolium*, *Gaylussacia baccata*, *Kalmia angustifolia*, and/or *Photinia melanocarpa* prominent (>15% cover), or sometimes *Pteridium aquilinum* prominent (> 7% cover) instead; ground cover may feature fruticose lichens; substrate bedrock, with a thin layer of mostly organic soil material typically < 15 cm deep ..... 8

### Conifer forests

2. *Tsuga canadensis* the dominant conifer ..... 3
2. Other conifer species dominant ..... 4
3. Hardwoods typically including *Acer rubrum*, *Acer saccharum*, and/or *Fraxinus pennsylvanica* present, *Pinus strobus* usually very minor (type is usually mixed but some examples are heavy to hemlock and will key here) ..... **Hemlock - Hardwood Forest (CEGL006129)**
3. Hardwoods, other than *Quercus rubra* and *Betula*, absent or very sparse; *Pinus strobus* more abundant ..... **Eastern Hemlock - White Pine - Red Spruce (CEGL006324)**
4. *Thuja occidentalis* the dominant conifer ..... 5
4. Other conifer species dominant ..... 6
5. Somewhat open forest (canopy closure often < 65%), with *Thuja* generally at least twice as dominant as other conifers; *Fraxinus pennsylvanica* often present; heath shrubs lacking or very minor; seepage at soil surface ..... **Cedar Seepage Slope (CEGL006508)**
5. *Thuja* mixed with other conifers (*Pinus* and/or *Picea*), canopy closure more complete, and soils not seepy ..... 6
6. *Pinus resinosa* ≥ 40% RD ..... **Red Pine - White Pine Forest (CEGL006253)**
6. *Pinus resinosa* absent or < 40% RD ..... 7
7. *Pinus strobus* ≥ 25% RD, may be mixed with *Tsuga canadensis* or *Thuja occidentalis* (occasionally *Pinus resinosa* replaces some of the *P. strobus*) ..... **Eastern Hemlock - White Pine - Red Spruce (CEGL006324)**
7. *Picea rubens*, *P. glauca* and/or *Abies balsamea* dominant; *Pinus strobus* < 25% RD ..... **Maritime Spruce - Fir Forest (CEGL006151)**

**Conifer woodlands**

- 8. *Thuja occidentalis* the dominant tree species, usually twice as abundant as any other tree species ..... **White-cedar Woodland (CEGL006411)**
- 8. Other species dominate tree layer..... 9
- 9. Mixture of conifer species all < 50% RD; or woodlands dominated by *Pinus strobus* or *Picea rubens* (or, rarely, *Pinus resinosa*)..... 10
- 9. Pitch pine, jack pine, or black spruce woodlands:  $\geq$  60% RD of a single conifer species (other than *Pinus strobus* or *Picea rubens*)..... 11
- 10. Woodland dominated by *Picea rubens* (> 60% RD)..... **Spruce - Fir Rocky Summit (CEGL006053)**
- 10. Woodland dominated by *Pinus strobus*, *P. resinosa* (only occasionally), or mixture of conifers ..... **Spruce - Fir Rocky Summit (CEGL006053)**
- 11. *Pinus rigida* dominates..... 12
- 11. Another conifer dominates ..... 14
- 12. Pitch pine woodlands on ledge, trees often stunted..... 13
- 12. Pitch pine woodlands, or tending towards closed forest, on sandy soil, trees taller; known in Acadia NP only from Long Island..... **Pitch Pine / Blueberry spp. - Huckleberry Woodland (CEGL005046)**
- 13. Understory features *Corema conradii*, with heaths and lichens..... **Coastal Pitch Pine Outcrop Woodland (CEGL006154)**
- 13. Understory typical heath shrubs, lichens, etc., without *Corema* ..... **Pitch Pine Rocky Summit (CEGL006116)**
- 14. *Pinus banksiana* dominates ..... **Jack Pine Heath Barren (CEGL006041)**
- 14. *Picea* sp. dominates ..... 15
- 15. *Picea rubens* dominates..... 16
- 15. *Picea mariana* dominates..... **Black Spruce / Heath Rocky Woodland (CEGL006292)**
- 16. Woodlands on bedrock..... **Spruce - Fir Rocky Summit (CEGL006053)**
- 16. Woodlands on talus; trees may be more sparse..... **Red Spruce Talus Slope Woodland (CEGL006250)**

**Deciduous forests and woodlands**

- 17. Northern hardwood species (*Fagus grandifolia*, *Betula alleghaniensis*, &/or *Acer saccharum* or *A. rubrum*) dominate..... 18
- 17. Oak, birch, and/or aspen, rather than northern hardwood species, dominate ..... 19
- 18. Forest (> 65% canopy), soil more or less well developed; *Fagus grandifolia*, *Betula alleghaniensis*, &/or *Acer saccharum* or *A. rubrum* total > 50% RD; occasionally one of those replaced by *Fraxinus pennsylvanica*; conifers may be up to 25% RD, usually much < 20%; *Quercus rubra*, if present, < 30% RD ..... **Northern Hardwood Forest (CEGL006252)**
- 18. Woodland (< 60% canopy); *Betula alleghaniensis* dominant or at least co-dominant; on talus, soil very limited..... **Red Oak Talus Slope Woodland (CEGL006320)**

19. <i>Quercus rubra</i> dominant .....	20
19. <i>Betula</i> spp. (other than <i>alleghaniensis</i> ) and/or <i>Populus</i> spp. dominant .....	21
20. Woodland: Canopy < 50%; on bedrock, <u>or</u> glacial till soils.....	
.. <b>Central Appalachian High-Elevation Red Oak Woodland, Northern Variant (CEGL006134)</b>	
20. .... Forest: Canopy ≥ 60%; on soil, not bedrock	
..... <b>Successional Oak - Pine Forest (CEGL006506)</b>	
21. Canopy ≥ 60%, with subcanopy/tall shrub cover less than canopy cover, creating a forest character; <i>Populus grandidentata</i> often dominant, sometimes with <i>Quercus rubra</i> subdominant, <i>Betula</i> <i>populifolia</i> typically absent or unimportant .....	
..... <b>Early Successional Woodland/Forest (CEGL006303)</b>	
21. Canopy cover ≤ 50%, with subcanopy/tall shrub cover usually greater than canopy cover; <i>Populus</i> <i>tremuloides</i> , <i>Betula populifolia</i> , <i>B. papyrifera</i> , and/or <i>B. caerulea</i> most commonly dominant, although some examples are dominated by sapling-size <i>Betula alleghaniensis</i> .....	
..... <b>Early Successional Woodland/Forest (CEGL006303)</b>	

**Mixed forests and woodlands**

22. <i>Thuja occidentalis</i> dominant (usually a conifer type, can be mixed).....	
..... <b>Cedar Seepage Slope (CEGL006508)</b>	
22. <i>Thuja occidentalis</i> not dominant .....	23
23. <i>Tsuga canadensis</i> the dominant conifer and usually the dominant tree, growing with <i>Quercus rubra</i> and northern hardwood species .....	<b>Hemlock - Hardwood Forest (CEGL006129)</b>
23. <i>Pinus</i> , <i>Picea</i> , or <i>Abies</i> sp. the dominant conifer.....	24
24. Woodlands: trees with “woodland” form and canopy cover typically < 50%, may be up to 60%; heath shrubs > 15% (except on talus), often > 25%.....	25
24. Forests: canopy cover ≥60%, trees taller, more forest-like; heath shrubs < 15% .....	28
25. Talus woodland with <i>Picea rubens</i> the dominant conifer .....	
..... <b>Red Spruce Talus Slope Woodland (CEGL006250)</b>	
25. Woodlands not on talus .....	26
26. <i>Quercus rubra</i> the dominant deciduous species, with <i>Pinus strobus</i> or <i>Picea rubens</i> the most common canopy conifers.....	<b>White Pine - Oak Acid Bedrock Glade (CEGL005101)</b>
26. <i>Quercus rubra</i> not the most common deciduous species, most commonly it is a heterogeneous mix of <i>Acer rubrum</i> , <i>Betula</i> spp., <i>Populus</i> spp., etc .....	27
27. Mixed woodland with more than 50% of the canopy plus subcanopy coniferous .....	
..... <b>Spruce - Fir Rocky Summit (CEGL006053)</b>	
27. Mixed woodland with more than 50% of the canopy plus subcanopy deciduous.....	
..... <b>Early Successional Woodland/Forest (CEGL006303)</b>	
28. <i>Quercus rubra</i> the dominant deciduous species, with <i>Pinus strobus</i> or <i>Picea rubens</i> the most common canopy conifers.....	<b>White Pine - Oak Forest (CEGL006293)</b>
28. <i>Quercus rubra</i> not the most common deciduous species, most commonly it is <i>Acer rubrum</i> , and sometimes <i>Betula papyrifera</i> , <i>Betula alleghaniensis</i> , or (rarely) <i>Populus grandidentata</i> .....	29

29. *Pinus strobus* the most abundant canopy conifer,  $\geq 25\%$  RD ..... 30
29. *Pinus strobus* < 25% RD, typically *Picea rubens* (or, less commonly, another conifer) is more dominant ..... 31
30. Deciduous component is more northern hardwood species (*Acer saccharum*, *Betula alleghaniensis*, *Fagus grandifolia*) than early successional species (*Betula papyrifera*, *B. populifolia*, *Acer rubrum*, *Populus* spp.) ..... **Sugar Maple - White Pine Forest (CEGL005005)**
30. Deciduous component is more early successional species than northern hardwood species ..... **Successional Oak - Pine Forest (CEGL006506)**
31. *Acer rubrum*, *Betula papyrifera*, or *Populus grandidentata* the most common deciduous species, northern hardwood species very minor (totaling  $\ll 20\%$  RD); conifer component typically features *Picea rubens* mixed with varying amounts of *Abies balsamea*, *Picea glauca*, *Thuja occidentalis*, and/or *Pinus strobus* ..... **Successional Spruce - Fir Forest (CEGL006505)**
31. *Betula alleghaniensis* the most common deciduous species, usually  $\geq 20\%$  RD (occasionally *Acer rubrum* will be common but *Betula alleghaniensis*, *Acer saccharum*, *Fagus grandifolia*, and *Fraxinus pennsylvanica* combined will exceed *Acer rubrum*); conifer component typically less diverse, featuring *Picea rubens*, sometimes with *Thuja occidentalis* ..... **Red Spruce - Hardwoods Forest (CEGL006267)**

## Wetland Forest and Woodland Vegetation Key

1. Wetland forest (canopy may grade towards woodland) in drainages or on gentle slopes with mineral soil rather than peat substrate; *Sphagnum* often present on ground surface but generally < 20% cover; canopy deciduous to mixed, *Acer rubrum* and/or *Fraxinus* prominent ..... 2
1. Canopy closure and composition various; substrate is peat, with *Sphagnum* often > 25% of ground surface; not on slopes ..... 3
2. Canopy deciduous (conifers < 25% RD), *Fraxinus* spp. (*pennsylvanica* or *americana*) plus *Betula alleghaniensis* more abundant than *Acer rubrum* .....  
..... **Northern Hardwood Seepage Swamp (CEGL006220)**
2. Canopy mixed, or if occasionally with < 25% conifer RD, then conifers (usually *Picea* and *Abies*) well-represented in subcanopy and shrub layers (>15% cover); *Acer rubrum* the dominant deciduous tree, mixed with *Picea rubens*, *Abies balsamea*, and sometimes *Thuja* .....  
..... **Red Maple - Conifer Acidic Swamp (CEGL006198)**
3. Conifers make up > 75% RD of canopy and subcanopy ..... 4
3. Tree layer mixed (both conifers and deciduous > 25% RD) or deciduous ..... 7
4. *Picea mariana* and/or *Larix laricina* the dominant conifer ..... 5
4. *Thuja occidentalis* the dominant conifer ..... 6
5. ≥ 50% canopy; heath shrubs usually < 10% (up to 15%); *Larix*, *Acer rubrum*, and/or *Thuja* totalling > 30% RD (rarely less) ..... **Black Spruce Woodland Bog (CEGL006098)**
5. ≤ 40% canopy; heath shrubs > 25% ..... **Black Spruce Woodland Bog (CEGL006098)**
6. More closed-forest character, with canopy > 50% (*Thuja* may be strongly dominant or mixed with other conifers); heath shrubs ≤ 10%; *Carex trisperma* characteristically a dominant sedge .....  
..... **Northern White-cedar Wooded Fen (CEGL006507)**
6. Bog woodland character, canopy ≤ 40%, heath shrubs > 20%, *Carex trisperma* absent or very minor (*Carex stricta* dominant in the one sample) .....  
..... **Northern White-cedar Wooded Fen (CEGL006507)**
7. Canopy at least 60% *Picea mariana* and/or *Larix laricina* (slightly mixed) .....  
..... **Black Spruce Woodland Bog (CEGL006098)**
7. Canopy at least half *Acer rubrum* ..... 8
8. *Acer rubrum* dominates canopy, conifers < 25% RD .....  
..... **Red Maple Swamp Woodland (CEGL006395)**
8. *Acer rubrum* mixed with *Picea mariana* (≥ 25% RD) .....  
..... **Red Maple Swamp Woodland (mixed variant, CEGL006395)**

## Upland Non-Forested Vegetation Types Key

1. Herbaceous or dwarf shrub – herbaceous (occasionally sparse) vegetation at the immediate coast (tree islands may be present in rocky headland communities) ..... 2
1. Shrub/herb occasionally sparse) vegetation on summits and rocky upper slopes; scattered stunted *Picea rubens* and *Quercus rubra* may be present (< 15% cover overall) ..... 5
2. Dune and tidal-edge vegetation on sand, dominated by *Ammophila breviligulata*; limited extent in Acadia NP..... **Northern Beachgrass Dune (CEGL006274)**
2. Graminoids not dominant; near-shore vegetation in patches on bedrock or cobble..... 3
3. Vegetation sparse (< 25%, often < 10%)..... 4
3. Vegetation forming nearly continuous cover (or at least there is more vegetated surface than bare rock surface); *Empetrum* mats may be extensive; *Myrica pensylvanica* characteristic..... **Crowberry - Bayberry Maritime Shrubland (CEGL006510)**
4. Vegetation forming scattered patches in rock crevices; *Solidago sempervirens*, *Sedum rosea*, *Plantago maritima*, *Euphrasia randii*, etc. are typical ..... **Northern Maritime Rocky Headlands (CEGL006529)**
4. Vegetation on loose cobble near and above the high tide line; *Cakile edentula* and *Lathyrus japonicus* characteristic..... **Sea-rocket - Oysterleaf Sparse Vegetation (CEGL006106)\***
5. Vegetation sparse (< 25%, often < 10% cover), on talus ..... **Northern Lichen Talus Barrens (CEGL006534)\***
5. Vegetation with higher cover (usually) and not on talus..... 6
6. Vegetation forming patches across bare rock; mosaics of dwarf (< 0.5 m tall) *Vaccinium angustifolium* patches and somewhat taller *Gaylussacia baccata* patches, heath species dominate the shrub vegetation; shrubs > 1 m tall absent in the *Vaccinium angustifolium* patches, up to 25% cover in the taller vegetation patches; *Kalmia angustifolia*, *Sibbaldiopsis tridentata*, and *Deschampsia flexuosa* characteristic associated species..... **Blueberry Granite Barrens (CEGL005094)**
6. Vegetation more uniformly shrubby, shrubs > 1 m tall form > 25% cover, often > 50% cover; non-heath shrubs exceed heath shrubs in total shrub cover..... 7
7. Summit shrublands with shrub layer characterized by some combination of *Viburnum nudum*, *Nemopanthus mucronata*, and *Ilex verticillata*; *Betula* spp. and/or *Sorbus americana* often present, but not dominant; shrub layer (1-3 m) usually < 50% cover..... **Blueberry Granite Barrens (CEGL005094)**
7. Shrublands of upper ridges and sometimes summits with *Betula* spp. strongly dominating the shrub layer (1-3 m), that layer usually forming > 50% cover; *Picea rubens* an associate in some locations; other shrubs typical of the Blueberry Granite Barrens type may be present but at much lower abundance..... **Early Successional Woodland/Forest (CEGL006303)**

## Wetland Non-Forested Vegetation Types Key

1. Tidal marshes .....	2
1. Non-tidal marshes and wetlands.....	3
2. Brackish tidal marshes with mixed tall sedges and often with <i>Typha angustifolia</i> .....	<b>Brackish Tidal Marsh, Cattail Variant (CEGL004201)*</b>
2. Saltmarshes: vegetation varies, but <i>Spartina alterniflora</i> usually present if not a major component; dominants include <i>Carex paleacea</i> , <i>Juncus gerardi</i> , etc.....	<b>Spartina High Salt Marsh (CEGL006006)</b>
3. Saturated or only seasonally flooded wetlands and marshes, with persistent emergent vegetation ....	4
3. Open-water marshes, permanently (or, rarely semipermanently) ...flooded, vegetation not persistent over winter.....	<b>see below</b>
• Floating-leaved vegetation with <i>Nuphar lutea</i> a characteristic species .....	<b>Water Lily Aquatic Wetland (CEGL002386)*</b>
• Seasonally emergent tall rushes ( <i>Scirpus validus</i> , etc.) dominate .....	<b>Bulrush Deepwater Marsh (CEGL006275)*</b>
• Submerged vegetation dominated by <i>Vallisneria</i> and <i>Potamogeton</i> spp.....	<b>Open Water Marsh with Mixed Submergents/Emergents (CEGL006196)*</b>
• Submerged vegetation in shallow waters, rosette plants dominate, typical species <i>Eriocaulon aquaticum</i> and <i>Lobelia dortmanna</i> .....	<b>Seven-angle Pipewort - Dortmann's Cardinal-flower Herbaceous Vegetation (CEGL006346)*</b>
4. Seasonally flooded wetlands and marshes, without <i>Sphagnum</i> peat base; <i>Sphagnum</i> ground cover < 50%; <i>Alnus</i> spp., <i>Calamagrostis canadensis</i> , <i>Carex stricta</i> , <i>Juncus</i> spp. and/or <i>Scirpus</i> -types (excluding <i>Trichophorum</i> ) dominant; <i>Myrica gale</i> , if present, is less abundant than alders .....	5
4. <i>Sphagnum</i> peatlands, with dwarf shrubs or graminoids dominant; <i>Sphagnum</i> > 50% cover, or, if <i>Sphagnum</i> cover < 50% then heath shrubs (occasionally <i>Empetrum</i> ) or <i>Myrica gale</i> (sometimes with <i>Spiraea</i> spp.) are the dominant <u>shrubs</u> (regardless of whether the overall vegetation is dwarf-shrub- dominated or graminoid-dominated).....	10
5. Alder wetlands; shrubs over 1 m tall > 35% cover, usually > 50%; <i>Alnus</i> spp. dominate.....	6
5. Graminoid-dominated, shrubs over 1 m tall sparse < 25%, usually < 10% (SMG).....	7
6. Alder wetlands along streamsides or in narrow valleys .....	<b>Alluvial Alder Thicket (CEGL006062)</b>
6. Basin wetlands dominated by <i>Alnus</i> spp., often forming a zone near the perimeter of a peatland; <i>Nemophanthus</i> often present .....	<b>Northern Peatland Shrub Swamp (CEGL006158)</b>
7. <i>Typha latifolia</i> dominant .....	<b>Eastern Cattail Marsh (CEGL006153)</b>
7. Other graminoids dominant.....	8
8. <i>Carex stricta</i> or <i>Juncus militaris</i> dominant.....	9
8. <i>Carex stricta</i> or <i>Juncus militaris</i> not dominant, although may be present; <i>Calamagrostis canadensis</i> characteristic, sometimes dominant; other graminoids such as <i>Scirpus cyperinus</i> , <i>Dulichium arundinaceum</i> occur as part of the mixture and may exceed cover of <i>Calamagrostis</i> .....	<b>Seasonally Flooded Mixed Graminoid Meadow (CEGL006519)</b>

- 9. Tussocks of *Carex stricta* dominate; wetland often flooded or at least saturated to surface through season ..... **Eastern Tussock Sedge Meadow (CEGL006412)**
- 9. *Juncus militaris* dominates at least central portion; dense shrubs (e.g., *Ilex verticillata*) typical around perimeter; seasonally flooded drawdown wetlands whose ground surface may be dry by late summer ..... **Bayonet Rush Herbaceous Vegetation (CEGL006345)**
- 10. Total coverage by *Myrica gale* and *Spiraea* spp exceeds total coverage by heath shrubs; vegetation usually strongly shrub-dominated ..... **Sweetgale Mixed Shrub Swamp (CEGL006512)**
- 10. Total coverage by heath shrubs exceeds total coverage by *Myrica* and *Spiraea*; vegetation may be shrub-, herb-, or bryophyte-dominated..... 11
- 11. Fens: minerotrophic peatlands with or without drainage ..... 12
- 11. Bogs: ombrotrophic peatlands, vegetation surface raised; fen vegetation may occur around perimeter but most of peatland is raised ..... 13
- 12. Fens along streams or in peatlands with drainage into and out of the peatland ..... **see vegetation key following**
- 12. Fens in closed drainages (small outlet drainage may be present, but no inlet stream), often with transitional fen-bog vegetation ..... **see vegetation key following**
- 13. Coastal bogs with central plateau featuring *Trichophorum cespitosum* “lawn” community; Big Heath the only known example in Acadia NP ..... **see vegetation key following**
- 13. Coastal or inland bogs with vegetation dominated by dwarf heath shrubs, graminoids patchy and often sparse and *Trichophorum cespitosum* absent or infrequent..... **see vegetation key following**

**Vegetation-type Key for Bog and Fen Types**

- a. *Carex lasiocarpa* dominates, with other tall sedges such as *Carex utriculata* characteristic; heath shrubs may be present but are typically minor; fen community, usually in open fen ..... **Slender Sedge Fen (CEGL006521)**
- a. Other sedges or dwarf shrubs dominate, or vascular vegetation sparse; fens or bogs..... b
- b. Graminoid cover exceeds dwarf shrub cover ..... c
- b. Dwarf shrub cover exceeds graminoid cover ..... d
- c. *Trichophorum cespitosum* the dominant graminoid species; lawn community of coastal raised bogs, known from Acadia NP only at Big Heath..... **Maritime Peatland Sedge Lawn (CEGL006260)**
- c. Other sedges more abundant than *Trichophorum cespitosum*, *Carex oligosperma* and/or *C. exilis* characteristic; *Chamaedaphne* a characteristic shrub ..... **Few-seeded Sedge - Leatherleaf Fen (CEGL006524)**
- d. Heath shrub cover > 60% or *Gaylussacia dumosa* and *Empetrum nigrum* present; *Chamaedaphne* usually less common than other heath shrubs; ombrotrophic..... e
- d. Heath shrub cover < 50% and *Gaylussacia dumosa* and *Empetrum nigrum* absent; *Chamaedaphne* often the most common heath shrub; basically minerotrophic ..... **Leatherleaf Acidic Fen (CEGL006513)**

NOTE: the Few-seeded Sedge - Leatherleaf Fen and Leatherleaf Acidic Fen vegetation communities are very closely related and hard to tease apart in the samples and ordinations. But in Maine peatland

work and in regional reviews, there's a clear concept of how they're separated (supposedly the proportion of sedges/shrubs, with moderate to high cover of *Carex exilis* the classic feature for Few-seeded Sedge - Leatherleaf Fen).

- e. *Gaylussacia dumosa* the most abundant shrub, or at least dominates extensive patches; *Empetrum nigrum* almost always present though not necessarily at high cover; graminoid cover may be relatively high (often > 25%) ..... **Maritime Crowberry Bog (CEGL006248)**
- e. Other heath species, typically *Kalmia angustifolia* and/or *Rhododendron canadense*, more abundant than *Gaylussacia dumosa*; graminoid cover typically low (< 10%) **Northern Dwarf-shrub Bog (CEGL006225)**