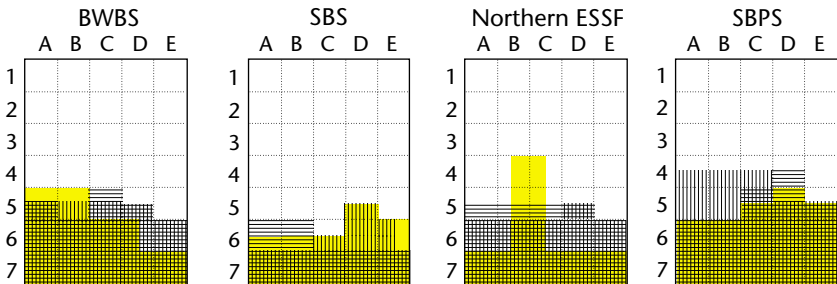





Mosses, Liverworts, and Lichens

Aulacomnium palustre – glow moss



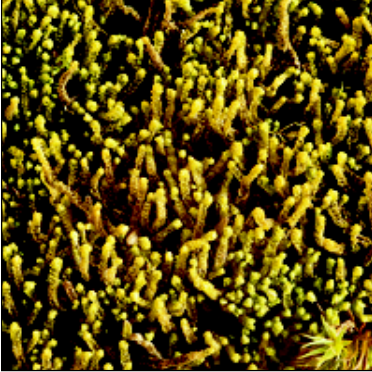
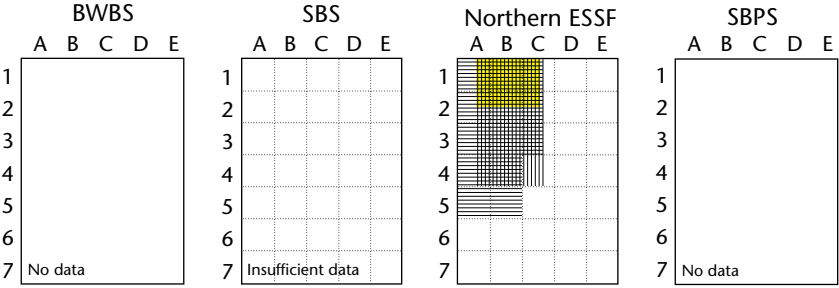
BWBS, SBS, ESSF **SBPS**
 Subzone x or d x or d 
 Subzone m mc 
 Subzone w or v mk 




Indicator Values and Species Notes

- shade-intolerant.
- may indicate a frost-prone site; on mesic sites it indicates cold air ponding.
- persists in pioneer seral stage.



***Barbilophozia floerkei* – mountain leafy liverwort**

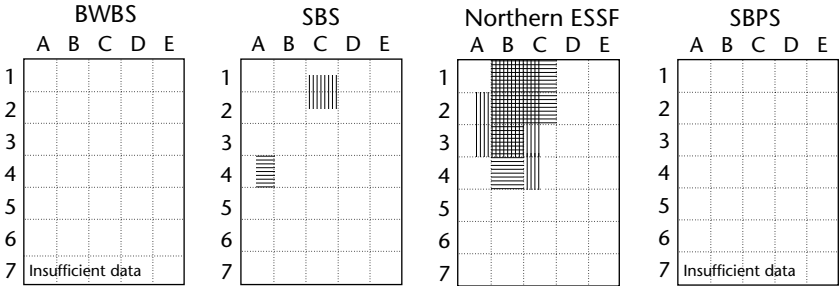





BWBS, SBS, ESSF SBPS
 Subzone x or d x or d 
 Subzone m mc 
 Subzone w or v mk 

Indicator Values and Species Notes

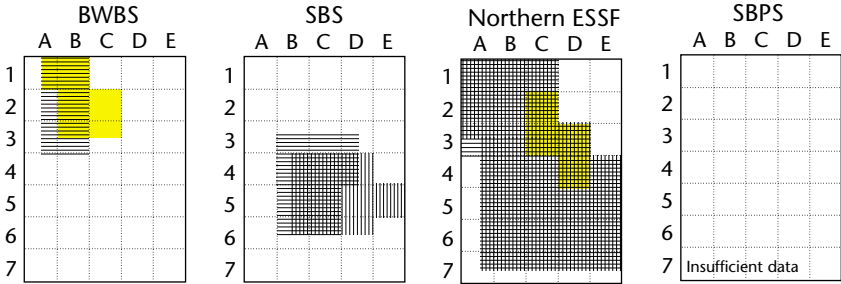
- shade-tolerant.
- considered a subalpine species.

***Barbilophozia hatcheri* – Hatcher’s fan wort**



BWBS, SBS, ESSF SBPS
 Subzone x or d x or d 
 Subzone m mc 
 Subzone w or v mk 

Barbilophozia lycopodioides – common leafy liverwort



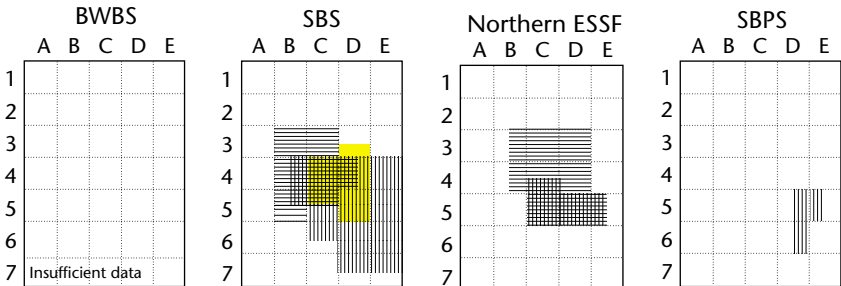
BWBS, SBS, ESSF **SBPS**
 Subzone x or d x or d █
 Subzone m mc █
 Subzone w or v mk █

Indicator Values and Species Notes

- shade-tolerant.
- decreases in abundance in pioneer seral stage.



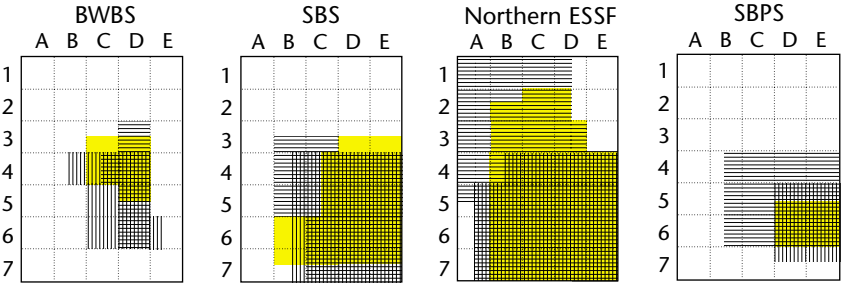
Brachythecium hylotapetum – woody ragged moss






BWBS, SBS, ESSF **SBPS**
 Subzone x or d x or d █
 Subzone m mc █
 Subzone w or v mk █



Brachythecium spp. – ragged mosses

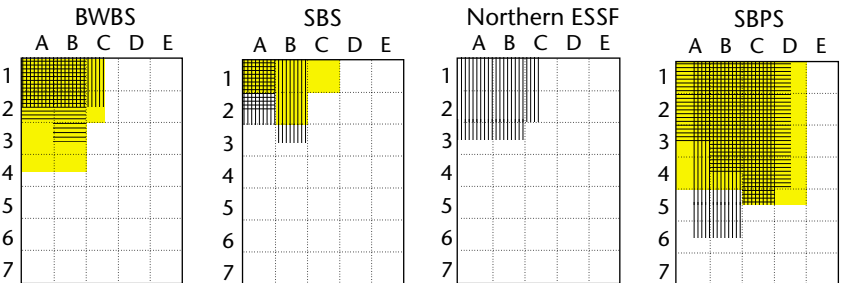





BWBS, SBS, ESSF SBPS
 Subzone x or d x or d 
 Subzone m mc 
 Subzone w or v mk 

Indicator Values and Species Notes

- photo is of *B. hylotapeum*.

Cladina arbuscula – green reindeer lichen

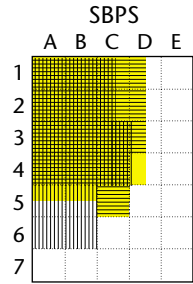
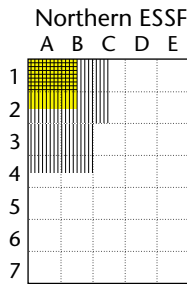
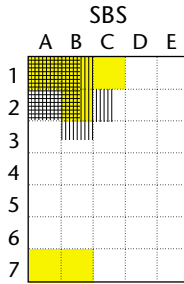
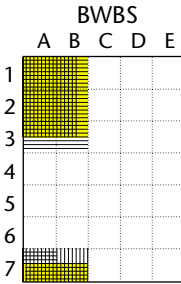


BWBS, SBS, ESSF SBPS
 Subzone x or d x or d 
 Subzone m mc 
 Subzone w or v mk 

Indicator Values and Species Notes

- was *C. mitis*.
- in old-growth stands replaced by mosses, except on drier sites.
- decreases in abundance in pioneer and young seral forests.

Cladina rangiferina – grey reindeer lichen



BWBS, SBS, ESSF

Subzone x or d

Subzone m

Subzone w or v

SBPS

x or d

mc

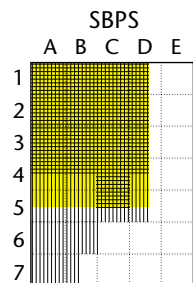
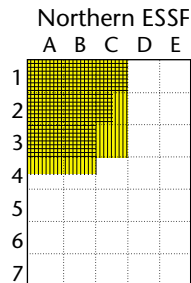
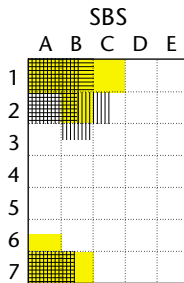
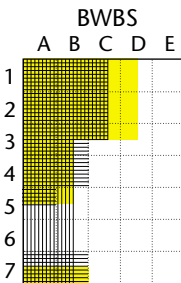
mk

Indicator Values and Species Notes

- shade-intolerant.
- associated with thin mor humus forms.
- sparse in areas with heavy snowpacks.
- decreases in abundance in old-growth stands where it is replaced by mosses, except on drier sites.



Cladina spp. – reindeer lichens



BWBS, SBS, ESSF

Subzone x or d

Subzone m

Subzone w or v

SBPS

x or d

mc

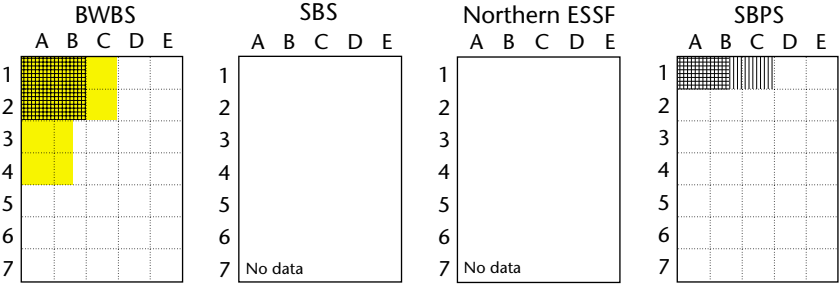
mk

Indicator Values and Species Notes

- moderately shade-tolerant to shade-intolerant.
- associated with mor humus forms.
- in old-growth stands replaced by mosses, except on drier sites.
- photo is of *C. rangiferina*.



Cladonia gracilis – black foot cladonia

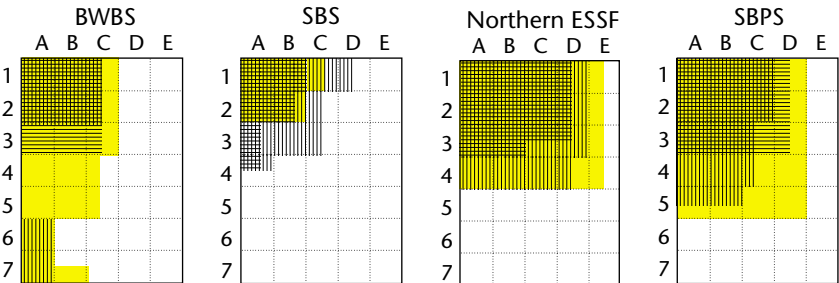


BWBS, SBS, ESSF SBPS
 Subzone x or d x or d █
 Subzone m mc █
 Subzone w or v mk █

Indicator Values and Species Notes

- shade-intolerant.
- associated with thin mor humus forms.
- increases in abundance in young seral stage after fire.

Cladonia spp. – pixie-cup lichens

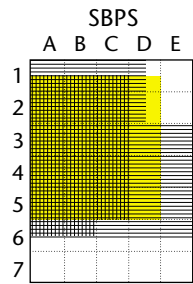
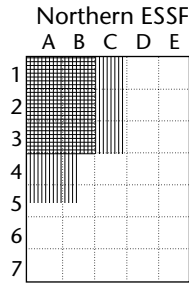
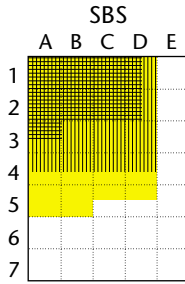
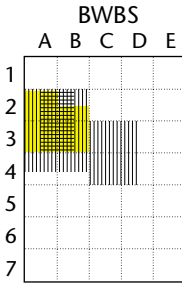


BWBS, SBS, ESSF SBPS
 Subzone x or d x or d █
 Subzone m mc █
 Subzone w or v mk █

Indicator Values and Species Notes

- often increases in abundance in pioneer seral stage.
- occurs on most grid locations on rotting wood.
- photo is of *C. gracilis*.

Dicranum polysetum – wavy-leaved moss

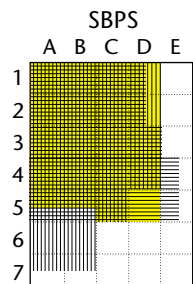
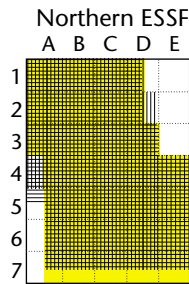
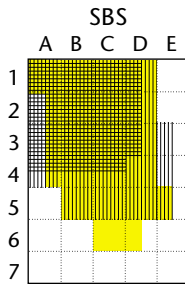
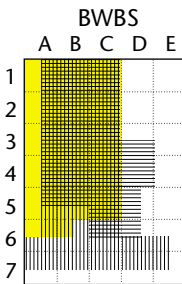


BWBS, SBS, ESSF
 Subzone x or d ■
 Subzone m ▨
 Subzone w or v ▩

SBPS
 x or d ■
 mc ▨
 mk ▩



Dicranum spp. – broom mosses



BWBS, SBS, ESSF
 Subzone x or d ■
 Subzone m ▨
 Subzone w or v ▩

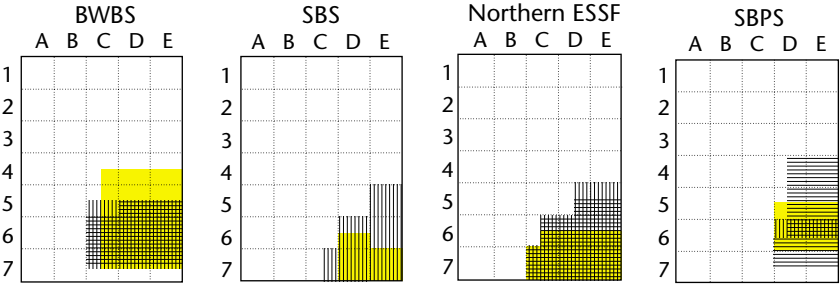
SBPS
 x or d ■
 mc ▨
 mk ▩






Indicator Values and Species Notes

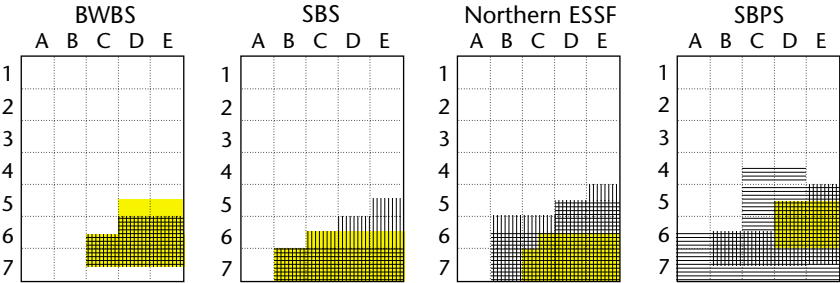
- photo is of *D. polysetum*.




***Drepanocladus uncinatus* – sickle moss**



BWBS, SBS, ESSF SBPS
 Subzone x or d x or d 
 Subzone m mc 
 Subzone w or v mk 

***Drepanocladus* spp. – hook mosses**

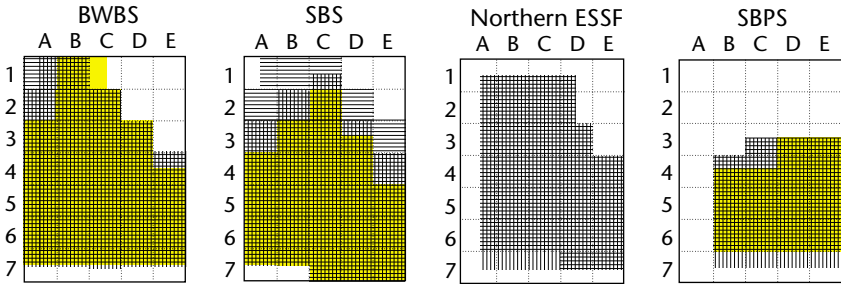





BWBS, SBS, ESSF SBPS
 Subzone x or d x or d 
 Subzone m mc 
 Subzone w or v mk 

Indicator Values and Species Notes

- photo is of *D. uncinatus*.

Hylocomium splendens – step moss



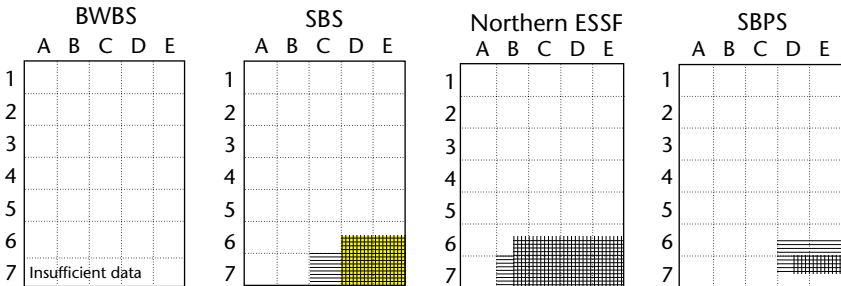
BWBS, SBS, ESSF **SBPS**
 Subzone x or d x or d 
 Subzone m mc 
 Subzone w or v mk 




Indicator Values and Species Notes

- shade-tolerant.
- decreases in abundance in pioneer seral stage.



Marchantia polymorpha – green-tongue liverwort



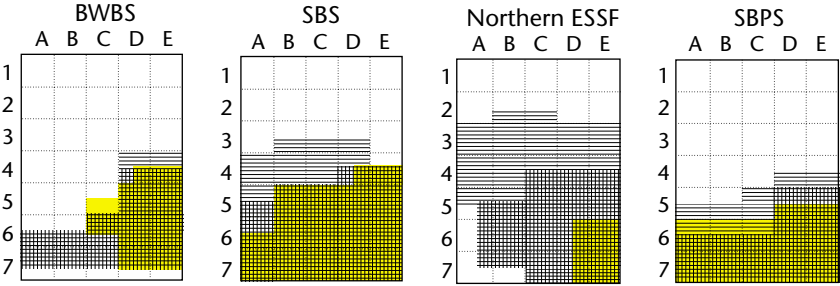
BWBS, SBS, ESSF **SBPS**
 Subzone x or d x or d 
 Subzone m mc 
 Subzone w or v mk 




Indicator Values and Species Notes

- shade-intolerant.
- persists and may increase in pioneer seral stage after heavy disturbance or burning.
- most commonly found in microdepressions.



Mnium spp. – leafy mosses

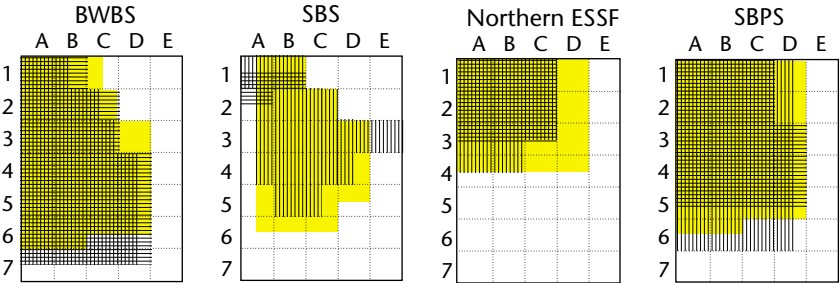





BWBS, SBS, ESSF SBPS
 Subzone x or d x or d 
 Subzone m mc 
 Subzone w or v mk 

Indicator Values and Species Notes

- includes *Plagiommium* spp. and *Rhizomnium* spp. as well.

Peltigera aphthosa – freckle pelt lichen

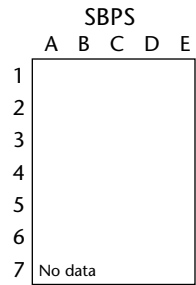
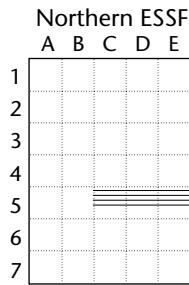
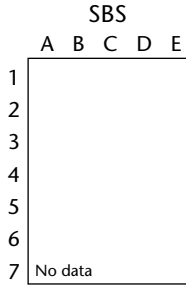
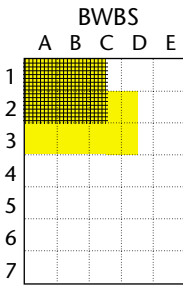


BWBS, SBS, ESSF SBPS
 Subzone x or d x or d 
 Subzone m mc 
 Subzone w or v mk 

Indicator Values and Species Notes

- shade-tolerant to shade-intolerant.
- persists in deciduous and mixedwood, young and mature seral forests.

Peltigera canina – dog pelt lichen



BWBS, SBS, ESSF

Subzone x or d

Subzone m

Subzone w or v

SBPS

x or d

mc

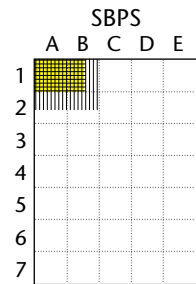
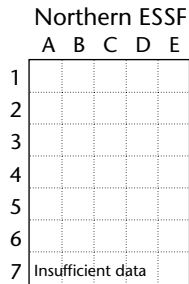
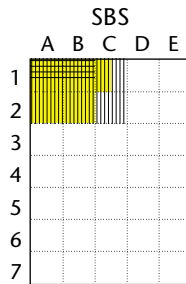
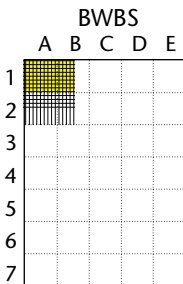
mk

Indicator Values and Species Notes

- shade-tolerant to shade-intolerant.
- persists in deciduous, young and mature seral forests.



Peltigera malacea – apple pelt lichen



BWBS, SBS, ESSF

Subzone x or d

Subzone m

Subzone w or v

SBPS

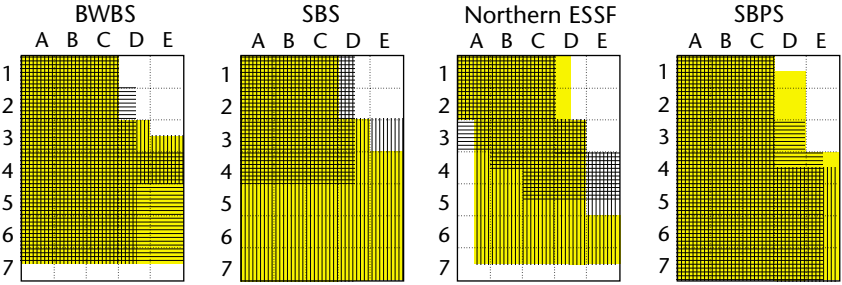
x or d




mc

mk



***Peltigera* spp. – pelt lichens**

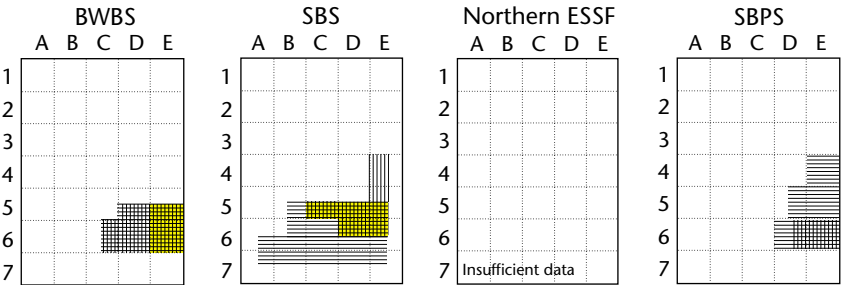





BWBS, SBS, ESSF SBPS
 Subzone x or d x or d 
 Subzone m mc 
 Subzone w or v mk 

Indicator Values and Species Notes

- photo is of *P. aphthosa*.

***Plagiomnium medium* – common leafy moss**

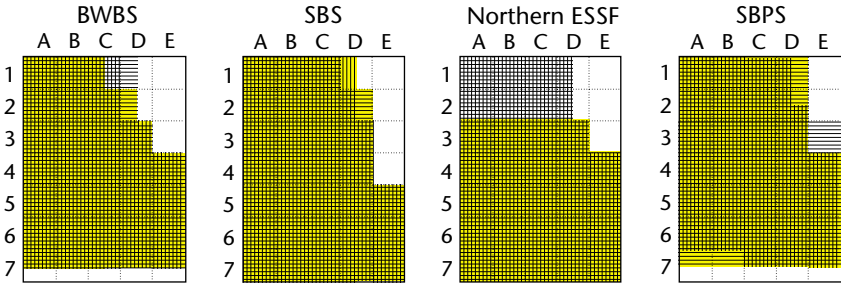


BWBS, SBS, ESSF SBPS
 Subzone x or d x or d 
 Subzone m mc 
 Subzone w or v mk 

Indicator Values and Species Notes

- was *Mnium medium*.

***Pleurozium schreberi* – red-stemmed feathermoss**



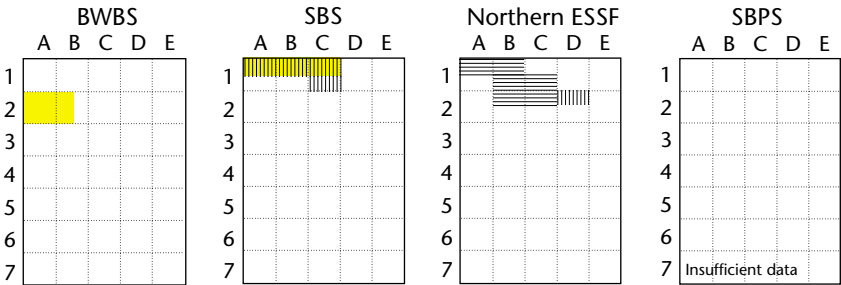
BWBS, SBS, ESSF **SBPS**
 Subzone x or d x or d
 Subzone m mc
 Subzone w or v mk

Indicator Values and Species Notes

- shade-tolerant to shade-intolerant.
- decreases in abundance in pioneer and young seral stages.



***Pohlia nutans* – copper-wire moss**



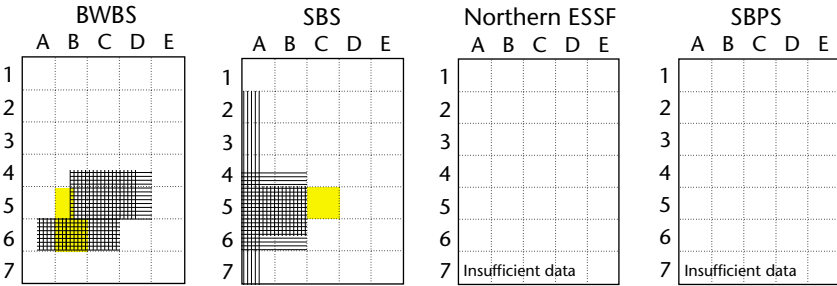
BWBS, SBS, ESSF **SBPS**
 Subzone x or d x or d
 Subzone m mc
 Subzone w or v mk




Indicator Values and Species Notes

- most abundant on soil after disturbance.
- persists in deciduous, mature seral forests.



Polytrichum commune – common haircap moss

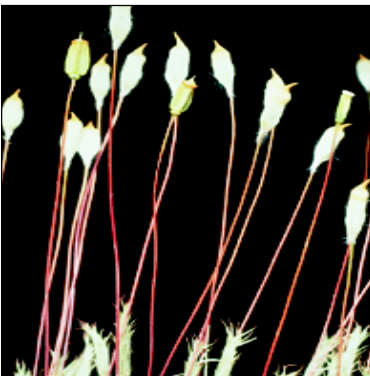
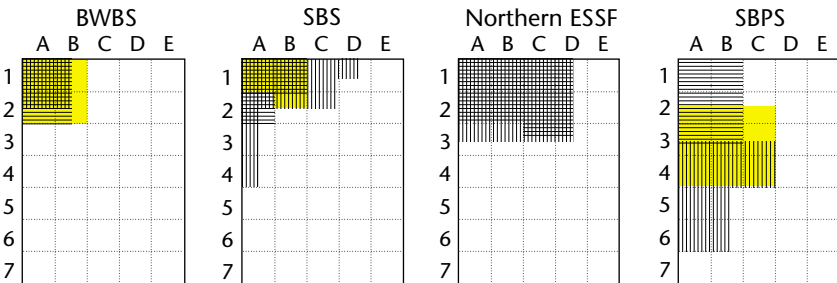





BWBS, SBS, ESSE SBPS
 Subzone x or d x or d 
 Subzone m mc 
 Subzone w or v mk 

Indicator Values and Species Notes

- increases in abundance after disturbance, especially where mineral soil has been exposed.
- persists in deciduous, young and mature seral forests.

Polytrichum juniperinum – juniper haircap moss

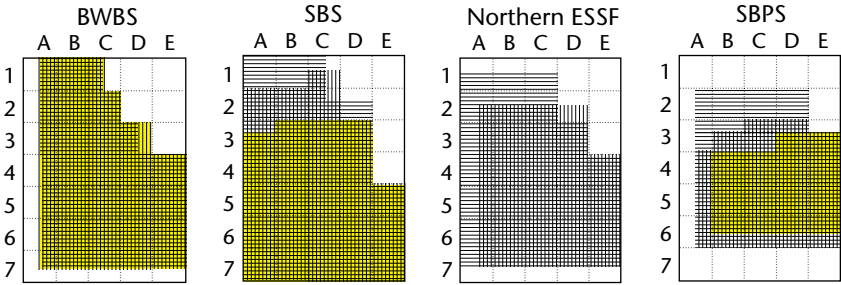





BWBS, SBS, ESSE SBPS
 Subzone x or d x or d 
 Subzone m mc 
 Subzone w or v mk 

Indicator Values and Species Notes

- may indicate a frost-prone site.
- common on exposed mineral soil.
- characteristic of fire-disturbed sites.
- shade-tolerant to shade-intolerant.
- increases in abundance and edatopic range in heavily disturbed pioneer seral stage.
- persists in deciduous, young and mature seral forests.

***Ptilium crista-castrensis* – knight’s plume**



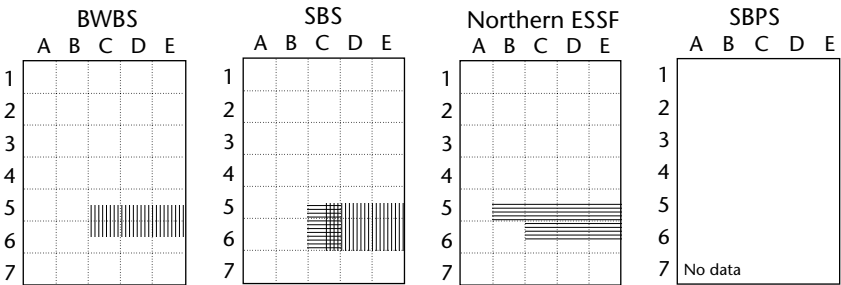
BWBS, SBS, ESSF **SBPS**
 Subzone x or d x or d 
 Subzone m mc 
 Subzone w or v mk 






Indicator Values and Species Notes

- shade-tolerant.
- decreases in abundance in pioneer seral stage.
- persists in mixedwood and deciduous, young and mature forests.

***Rhizomnium glabrescens* – large leafy moss**



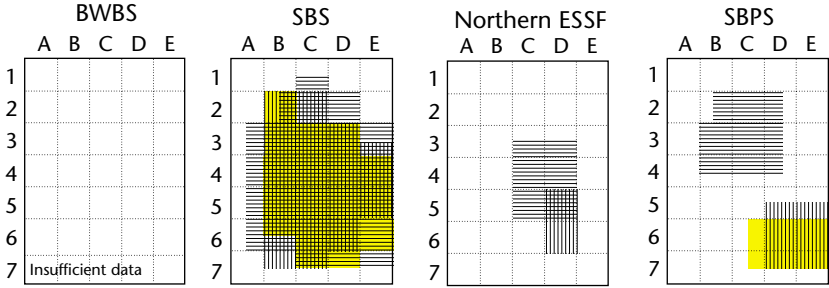
BWBS, SBS, ESSF **SBPS**
 Subzone x or d x or d 
 Subzone m mc 
 Subzone w or v mk 






Indicator Values and Species Notes

- very shade-tolerant.
- decreases in abundance in pioneer seral stage.

***Rhytidiadelphus triquetrus* – electrified cat’s-tail moss**

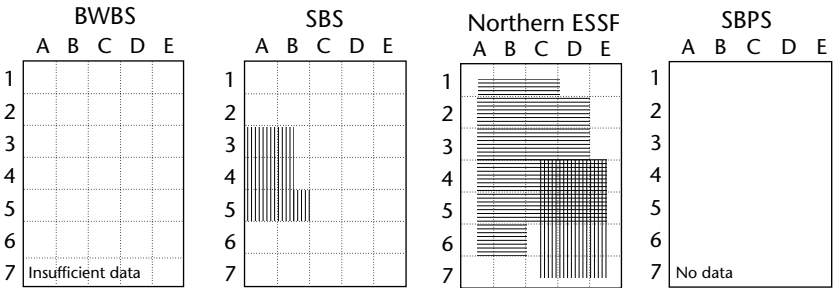





BWBS, SBS, ESSF SBPS
 Subzone x or d x or d 
 Subzone m mc 
 Subzone w or v mk 

Indicator Values and Species Notes

- shade-tolerant to shade-intolerant.
- decreases in abundance in pioneer seral stage.
- persists in deciduous, mature seral forests.

***Rhytidiopsis robusta* – pipecleaner moss**

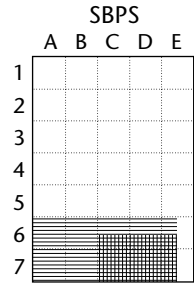
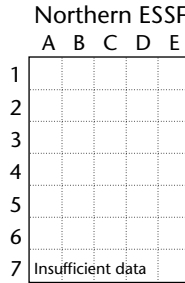
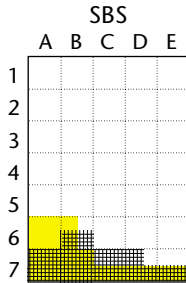
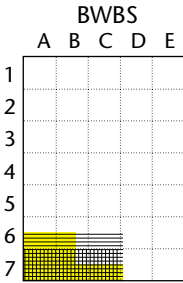


BWBS, SBS, ESSF SBPS
 Subzone x or d x or d 
 Subzone m mc 
 Subzone w or v mk 

Indicator Values and Species Notes

- moderately to very shade-tolerant.

Sphagnum capillifolium – common red sphagnum



BWBS, SBS, ESSF

Subzone x or d

Subzone m

Subzone w or v

SBPS

x or d

mc

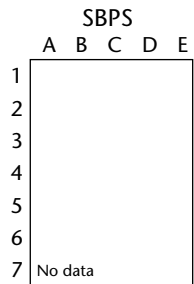
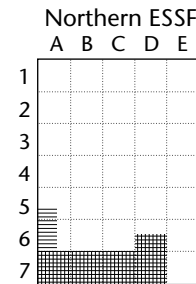
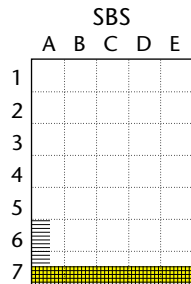
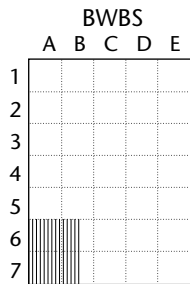
mk

Indicator Values and Species Notes

- associated with a high watertable.



Sphagnum girgensohnii – common green sphagnum



BWBS, SBS, ESSF

Subzone x or d

Subzone m

Subzone w or v

SBPS

x or d

mc

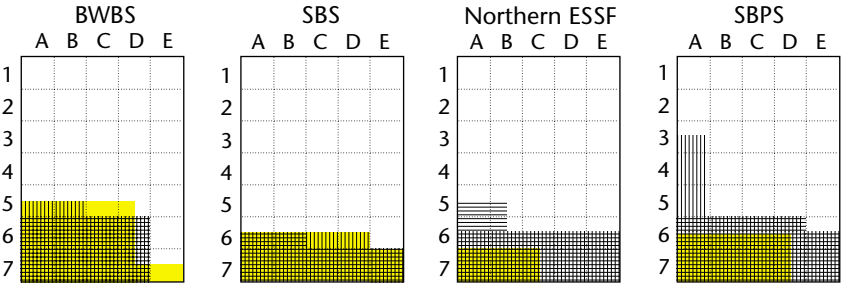
mk




Indicator Values and Species Notes

- shade-tolerant.



Sphagnum spp. – peat mosses

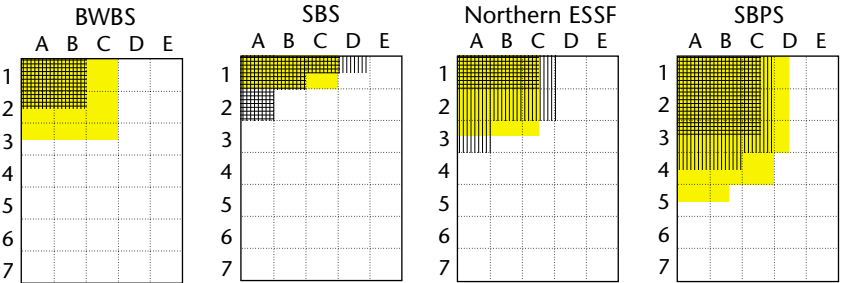





BWBS, SBS, ESSF SBPS
 Subzone x or d x or d 
 Subzone m mc 
 Subzone w or v mk 

Indicator Values and Species Notes

- moderately shade-tolerant to shade-intolerant.
- on moisture regime 5 and drier it often indicates black spruce sites with cold (fine-textured) soils.
- photo is of *S. girgensohnii*.

Stereocaulon spp. – coral lichens

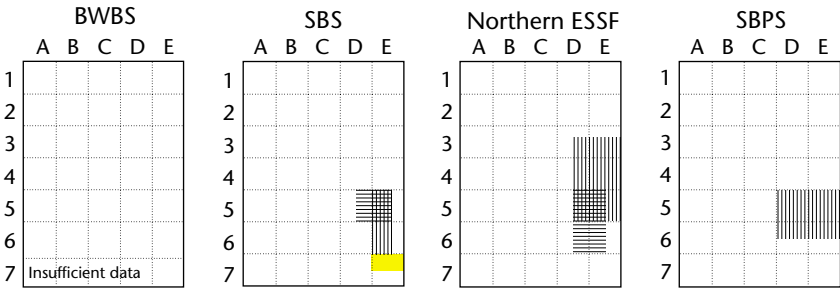


BWBS, SBS, ESSF SBPS
 Subzone x or d x or d 
 Subzone m mc 
 Subzone w or v mk 

Indicator Values and Species Notes

- shade-intolerant.

Timmia austriaca – false-polytrichum



BWBS, SBS, ESSF

Subzone x or d

Subzone m

Subzone w or v

SBPS

x or d

mc

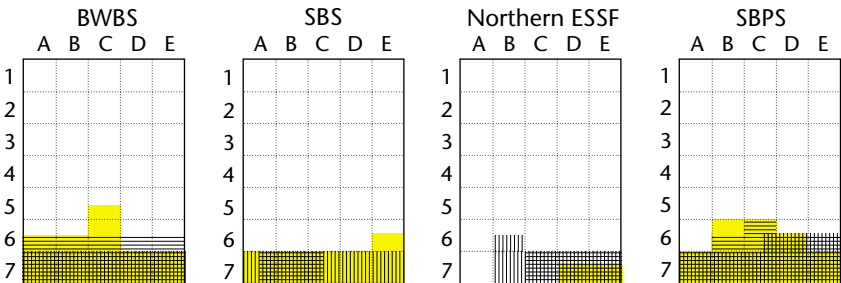
mk

Indicator Values and Species Notes

- shade-tolerant to shade-intolerant.
- persists in pioneer seral stage.



Tomentypnum nitens – golden fuzzy fen moss



BWBS, SBS, ESSF

Subzone x or d

Subzone m

Subzone w or v

SBPS

x or d

mc

mk

Indicator Values and Species Notes

- commonly found on calcium-rich sites.



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