

## USGS-NPS Vegetation Mapping Program

### Isle Royale National Park

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#### **Chamaedaphne calyculata - Ledum groenlandicum - Kalmia polifolia Bog Dwarf-shrubland**

COMMON NAME	Leatherleaf - Labrador-tea - Bog Laurel Bog Dwarf-shrubland
SYNONYM	Leatherleaf Bog
PHYSIOGNOMIC CLASS	Dwarf-shrubland (IV)
PHYSIOGNOMIC SUBCLASS	Evergreen dwarf-shrubland (IV.A)
PHYSIOGNOMIC GROUP	Needle-leaved or microphyllous evergreen dwarf-shrubland (IV.A.1)
PHYSIOGNOMIC SUBGROUP	Natural/Semi-natural (IV.A.1.N)
FORMATION	Saturated needle-leaved or microphyllous evergreen dwarf-shrubland (IV.A.1.N.g)
ALLIANCE	CHAMAEDAPHNE CALYCVLATA SATURATED DWARF-SHRUBLAND ALLIANCE

CLASSIFICATION CONFIDENCE LEVEL 2

USFWS WETLAND SYSTEM PALUSTRINE

#### RANGE

##### **Isle Royale National Park**

This community is an uncommon community that is scattered around the park.

##### **Globally**

This association is found in northern Minnesota, northern Wisconsin, northern Michigan, Ontario, and Manitoba.

#### ENVIRONMENTAL DESCRIPTION

##### **Isle Royale National Park**

This community occupies wet depressions at elevations ranging from 600 to 760 feet.

##### **Globally**

Sites are found on raised bog landforms in large peatland complexes, basin bogs, and occasionally on shores (but still isolated from groundwater influence). Stands have a saturated hydrology with a fibric *Sphagnum* spp. peat soil and a pH usually < 4.3 (Harris *et al.* 1996, Minnesota DNR 1993).

#### MOST ABUNDANT SPECIES

##### **Isle Royale National Park**

<u>Stratum</u>	<u>Species</u>
Tree canopy	<i>Picea mariana</i> , <i>Larix laricina</i>
Short shrub	<i>Chamaedaphne calyculata</i> , <i>Ledum groenlandicum</i>
Graminoid	<i>Carex oligosperma</i>
Nonvascular	<i>Sphagnum</i> spp.

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#### CHARACTERISTIC SPECIES

##### **Isle Royale National Park**

*Chamaedaphne calyculata*, *Ledum groenlandicum*, *Sphagnum* spp.

##### **Globally**

*Chamaedaphne calyculata*, *Ledum groenlandicum*, *Sphagnum* spp.

#### VEGETATION DESCRIPTION

##### **Isle Royale National Park**

The leatherleaf bog is a peatland dominated by evergreen dwarf-shrubs. This community may have a few scattered trees, with canopy cover from 0 to 20%. The common trees are *Picea mariana* and *Larix laricina*. There may be a few tall shrubs with 0 to 5% cover, these are mainly stunted, scrub forms of *Larix laricina*, *Picea mariana*, and *Thuja occidentalis*. The short shrub layer (less than 1 m tall, including dwarf shrubs) varies from 40 to 70% cover; the most abundant shrubs are *Chamaedaphne calyculata* (25 to 50% cover), *Ledum groenlandicum* (5 to 25% cover), *Alnus incana*, *Andromeda*

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*polifolia* var. *glaucophylla*, *Kalmia polifolia*, and *Vaccinium oxycoccos* (each with 1 to 5% cover). Cover of herbs varies from 10 to 60%; the most common herbs are *Carex oligosperma*, *Carex lasiocarpa*, *Drosera rotundifolia*, and *Sarracenia purpurea*. There is a nearly continuous mat of peat mosses, with 80 to 100% cover of *Sphagnum* spp.

#### **Globally**

Vegetation is dominated by an open dwarf-shrub/scrub conifer layer with very scattered trees (<10% cover). Microtopography is high hummocks with weakly developing hollows. Ericaceous dwarf-shrubs are dominant, including *Chamaedaphne calyculata*, *Kalmia polifolia*, and *Ledum groenlandicum*, and the creeping dwarf-shrubs *Andromeda polifolia* and *Vaccinium oxycoccos*. Scrub conifers include *Larix laricina* and *Picea mariana*. They also occur as scattered trees (> 3m). The herb layer is species poor, containing *Carex oligosperma*, *Carex pauciflora*, *Eriophorum vaginatum*, and *Sarracenia purpurea*. The moss layer forms a continuous hummocky mat dominated by *Sphagnum angustifolium*, *Sphagnum fuscum*, and *Sphagnum magellanicum* (Minnesota NHP 1993, Harris *et al.* 1996). Diagnostic features of this type include the dominance of a dwarf-shrub ericaceous layer, absence of a tree layer (<10%), species-poor herbaceous layer, and almost complete lack of minerotrophic indicators, such as *Betula pumila*, *Carex aquatilis*, and *Carex stricta*. A possible subtype may occur where pools form near the bog crests, and contain maritime species such as *Scheuchzeria palustris*, *Rhynchospora alba*, *Sphagnum cuspidatum*, and *Utricularia cornata*.

#### OTHER NOTEWORTHY SPECIES

##### **Isle Royale National Park**

Information not available.

CONSERVATION RANK G5.

DATABASE CODE CEGL002498

MAP UNITS 70

#### COMMENTS

#### REFERENCES

- Harris, A. G., S. C. McMurray, P. W. C. Uhlig, J. K. Jeglum, R. F. Foster, and G. D. Racey. 1996. Field guide to the wetland ecosystem classification for northwestern Ontario. Ontario Ministry of Natural Resources, Northwest Science and Technology, Thunder Bay, Ontario. Field guide FG-01. 74 p.
- Minnesota Natural Heritage Program. 1993. Minnesota's native vegetation: A key to natural communities. Ver. 1.5. Minn. Dep. Nat. Resour., Nat. Heritage Prog. St. Paul, Minn. 110 p.