

USGS-NPS Vegetation Mapping Program

Isle Royale National Park

Basalt/Diabase Cobble-Gravel Great Lakes Shore Sparse Vegetation

COMMON NAME	Basalt/Diabase Cobble-Gravel Great Lakes Shore Sparse Vegetation
SYNONYM	Great Lakes Basalt/Diabase Cobble-Gravel Lakeshore
PHYSIOGNOMIC CLASS	Sparse Vegetation (VII)
PHYSIOGNOMIC SUBCLASS	Boulder, gravel, cobble, or talus sparse vegetation (VII.B)
PHYSIOGNOMIC GROUP	Sparsely vegetated rock flats (VII.B.2)
PHYSIOGNOMIC SUBGROUP	Natural/Semi-natural (VII.B.2.N)
FORMATION	Cobble/gravel beaches and shores (VII.B.2.N.b)
ALLIANCE	COBBLE/GRAVEL SHORE SPARSELY VEGETATED ALLIANCE

CLASSIFICATION CONFIDENCE LEVEL 2

USFWS WETLAND SYSTEM TERRESTRIAL

RANGE

Isle Royale National Park

This community is uncommon, mostly occurring at the southwest end of the park in gently curving, exposed bays of Lake Superior, in areas underlain by sandstone and conglomerate bedrock; it also occurs occasionally on shores underlain by basalt at the central and northeast portion of the park.

Globally

This associations is found in Michigan and Ontario.

ENVIRONMENTAL DESCRIPTION

Isle Royale National Park

This community occupies cobble or gravel shores of Lake Superior. These shores occur in coves and gently curving bays between rocky points. These are exposed shores that are regularly disturbed by wave action and winter ice movements, at elevations from lake level to about 608 feet. Most of the shore has little or no vegetation, probably due to regular disturbance by waves washing the shore. There is a shrub zone that occurs on the highest beach ridge, which is usually nearly level. This high beach ridge is formed by the most severe storm waves, so the disturbance is irregular and infrequent. There may be little or no soil; the plants are rooted in the cobble or gravel.

Globally

This community occupies cobble or gravel shores of Lake Superior. These shores occur in coves and gently curving bays between rocky points. These are exposed, mostly non-vegetated shores that are regularly disturbed by wave action and winter ice movements. There may be a shrub zone that occurs on the highest beach ridge, which is usually nearly level. There may be little or no soil; the plants are rooted in the cobble or gravel (C. Reschke personal communication 1999).

MOST ABUNDANT SPECIES

Isle Royale National Park

<u>Stratum</u>	<u>Species</u>
Short shrub	<i>Rubus idaeus</i> , <i>Cornus sericea</i> , <i>Alnus viridis</i>
Forb	<i>Lathyrus palustris</i> , <i>Oenothera biennis</i>
Graminoid	<i>Elymus trachycaulus</i>

Globally

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CHARACTERISTIC SPECIES

Isle Royale National Park

Lathyrus palustris, *Oenothera biennis*, *Elymus trachycaulus*

Globally

Lathyrus palustris, *Oenothera biennis*, *Elymus trachycaulus*

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VEGETATION DESCRIPTION

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This cobble-gravel lakeshore is a sparsely vegetated community on cobble or gravel beaches. This community occurs as a mosaic of sparse grassland with over 25% cover, and sparsely vegetated areas with less than 25% cover. Cover of herbs varies from 10 to 40%; the most abundant herbs are grasses, mostly *Elymus trachycaulus* (average 29%). The most common forbs are *Lathyrus palustris*, *Oenothera biennis*, *Calamagrostis canadensis*, and *Equisetum hyemale*. The most abundant shrubs are *Rosa acicularis*, *Rubus idaeus*, *Diervilla lonicera*, *Physocarpus opulifolius*, *Ribes oxycanthoides*, *Alnus incana*, *Cornus canadensis*, and *Sorbus decora*. There may be scattered trees (0 to 5% cover) including *Picea glauca*, *Abies balsamea*, *Thuja occidentalis*, and *Betula papyrifera*.

Globally

At Isle Royale National Park in Michigan, this cobble-gravel lakeshore is a sparsely vegetated community on cobble or gravel beaches. This community occurs as a mosaic of sparse grassland with over 25% cover, and sparsely vegetated areas with less than 25% cover. Cover of herbs varies from 10 to 40%; the most abundant herbs are grasses, mostly *Elymus trachycaulus* (average 30%). The most common forbs are *Lathyrus palustris*, *Oenothera biennis*, *Calamagrostis canadensis*, and *Equisetum hyemale*. The most abundant shrubs are *Rosa acicularis*, *Rubus idaeus*, *Diervilla lonicera*, *Physocarpus opulifolius*, *Ribes oxycanthoides*, *Alnus incana*, *Cornus canadensis*, and *Sorbus decora*. There may be scattered trees (0 to 5% cover) including *Picea glauca*, *Abies balsamea*, *Thuja occidentalis*, and *Betula papyrifera* (C. Reschke personal communication 1999).

OTHER NOTEWORTHY SPECIES

Isle Royale National Park

Information not available.

CONSERVATION RANK G?

DATABASE CODE CEGL005250

MAP UNITS 39, 33

COMMENTS

Globally

These are exposed shores that are regularly disturbed by wave action and winter ice movements from the lake. Most of the shore has little or no vegetation, probably due to regular disturbance by waves washing the shore. The high beach ridge is formed by the most severe storm waves, so the disturbance is irregular and infrequent (C. Reschke personal communication 1999).

REFERENCES