Natural Community Surveys of Potential Landscape Units



Prepared by: Joshua G. Cohen

Michigan Natural Features Inventory P.O. Box 30444 Lansing, MI 48909-7944

For: Michigan Department of Natural Resources and Environment Wildlife Division Forest Management Division

September 30, 2010

Report Number 2010-17







Suggested Citation: Cohen, J.G. 2010. Natural Community Surveys of Potential Landscape Units. Michigan Natural Features Inventory, Report Number 2010-17, Lansing, MI. 20 pp.

Copyright 2010 Michigan State University Board of Trustees. Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, marital status, or family status.

Cover photo: Northern bald overlooking wetland complex along the Carp River within the Porcupine Mountians Potential Landscape Unit (Photo by Joshua Cohen).

IX.1

Lost Lake Bedrock

Surveys focused on dry-mesic northern forest and granitic features within the forested matrix. Documented highquality dry-mesic northern forest, granite cliff, northern hardwood swamp, and additional granite bedrock glade to the south of the existing element occurrence.



Dry-mesic northern forest (Photo by Joshua Cohen).



Northern hardwood swamp (Photo by Joshua Cohen).

IX.2

Bass Lake MNF

Surveys focused on granitic features and surrounding wetlands on state forest lands in southern portion of Potential Landscape Unit. Documented high-quality granite bedrock glade, granite cliff, northern wet meadow, and submergent marsh. Site is notable in that natural processes (i.e., fire, beaver flooding, and windthrow) have driven the patterning of natural communities with little anthropogenic disturbance.



Granite bedrock glade (Photo by Joshua Cohen).



Submergent marsh (Photo by Joshua Cohen).

Craig Lake MNF

Surveys focused on state lands within the southeastern portion of the Potential Landscape Unit and in the immediate vicinity. Documented high-quality mesic northern forest, northern wet meadow, rich conifer swamp, and granite cliff.







Granite Cliff (Photo by Joshua Cohen).

Pesheke Highlands

Surveys focused on dry-mesic northern forest and granitic features within the forested matrix. Documented highquality dry-mesic northern forest, granite bedrock glade, bog, northern shrub thicket, submergent marsh, and northern wet meadow. The juxtaposition of high-quality bedrock features adjacent to high-quality wetlands was notable.



Bog surrounded by granite bedrock glade (Photo by Joshua Cohen).

IX.3 and IX.5

Baraga Plains (IX.3)

Survey focused on pine barrens landscape. Updated known pine barrens element occurrence.

Honker's Plain (IX.3)

Survey focused on non-forested wetlands within a large outwash plain. Documented high-quality intermittent wetland, bog, and poor fen.



Pine barrens, Baraga Plains (Photo by Brad Slaughter).



Poor Fen, Honker's Plain (Photo by Brad Slaughter).

IX.6

Pike Lake MNF

Surveys focused on forested wetlands. Potential for restorable rich conifer swamp, however, no high-quality element occurrences were documented during the course of the survey.

Porcupine Mountains (IX.6)

Surveys focused on volcanic features and wetlands associated with the Lake of the Clouds and the Big Carp River. Documented high-quality volcanic cliff, volcanic bedrock glade, northern wet meadow, northern shrub thicket, emergent marsh, submergent marsh, dry-mesic northern forest, and rich conifer swamp.



Northern shrub thicket, Porcupine Mountains (IX.6) (Photos by Joshua Cohen).



Emergent marsh, Porcupine Mountains (IX.6)

Natural Community Surveys of Potential Landscape Units, Page 3



Volcanic cliff (above and below in the background) and northern wet meadow (below), Porcupine Mountians (IX.6) (Photos by Joshua Cohen).



Sturgeon River MNF (IX.6)

Surveys focused on documenting high-quality old-growth mesic northern forest. Documented several areas of high-quality mesic northern forest.



Mesic northern forest, Sturgeon River MNF (IX.6) (Photos by Joshua Cohen).

IX.7

Bete Gris

Conducted brief survey in peatland associated with Point Isabelle. Documented high-quality muskeg.



Volcanic bedrock glade, east of Estivant Pines.



Muskeg, Bete Gris (Photos by Joshua Cohen).

Estivant Pines

Conducted surveys on state forest lands just east of Estivant Pines Potential Landscape Unit. The surveys were focused on dry-mesic northern forest and volcanic features. Documented high-quality dry-mesic northern forest and volcanic bedrock glade. Surveys suggest that current Potential Landscape Unit boundaries should be expanded to encompass state lands to east.

Keweenaw Point

Conducted surveys in southwestern portion of Potential Landscape Unit that were focused on boreal forest, shoreline systems, and volcanic features. Documented high-quality boreal forest, northern bald, volcanic bedrock glade, volcanic cliff, and volcanic lakeshore cliff. Also documented northern bald just north of southwestern portion of existing Potential Landscape Unit boundary.



Volcanic lakeshore cliff, Keweenaw Point (Photos by Joshua Cohen).

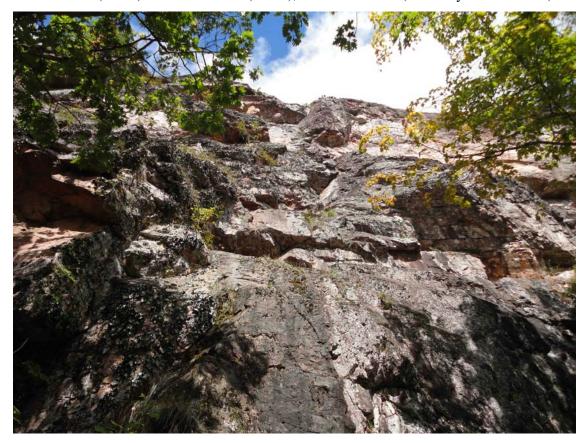


Volcanic bedrock glade, Keweenaw Point (Photos by Joshua Cohen).

Boreal forest, Keweenaw Point



Northern bald (above) and volcanic cliff (below), Keweenaw Point (Photos by Joshua Cohen).



IX.8

Black River Gorge

Survey focused on forest along Black River as well as primary communities along the Black River. Documented several large blocks of high-quality mesic northern forest on bluffs, ravines, and plateaus above the Black River. Documented high-quality volcanic cliff on either side of the Black River. Surveyed areas along the river that included horizontal bedrock exposure along the shore of the Black River. These areas could potentially be classified as a new natural community type, volcanic bedrock rivershore.



Mesic northern forest (Photo by Joshua Cohen).



Volcanic cliff (Photo by Joshua Cohen)

Porcupine Mountains (IX.8)

Surveys focused on Lake Superior shoreline, inland volcanic features, and bedrock communities associated with the Presque Isle River and the Big Carp River. Documented high-quality volcanic cliff, volcanic bedrock glade, volcanic bedrock lakeshore, sandstone bedrock lakeshore, sandstone cobble shore, volcanic cobble shore, sand and gravel beach, and sandstone cliff. Documented high-quality sandstone cliff on either side of the Presque Isle River and Big Carp River. Sandstone cliffs include areas with sandstone, conglomerate, and sandstone and conglomerate. Surveyed areas that included horizontal bedrock exposure along the shores of the Presque Isle River and Big Carp River. These areas could potentially be classified as a new natural community type, sandstone bedrock rivershore. In addition, surveyed several miles of shoreline and areas along the rivers characterized by clay seepage bluffs, a community type recognized in Wisconsin but yet to be classified in Michigan.



Sandstone cobble shore (Photo by Joshua Cohen).



Volcanic bedrock glade (Photo by Joshua Cohen)



Sandstone bedrock lakeshore (above) and volcanic bedrock lakeshore (below), Porcupine Mountains (IX.8) (Photos by Joshua Cohen).



Sleeping Misery Forest

Conducted surveys focused on mesic northern forest on state forest land. Documented high-quality northern shrub thicket and additional high-quality mesic northern forest to be incorporated into existing mesic northern forest element occurrence.



Mesic northern forest (Photo by Joshua Cohen)



Northern shrub thicket (Photo by Joshua Cohen)

VIII.1

Bois Blanc Island

Conducted surveys focused on boreal forest, shoreline systems, and nearshore wetlands. Documented high-quality boreal forest, limestone cobble shore, rich conifer swamp, and northern wet meadow.



Boreal forest (Photo by Joshua Cohen)



Rich conifer swamp (Photo by Joshua Cohen)

Cedar River DMNF

Conducted surveys focused on dry-mesic northern forest and surrounding wetlands. Potential for restoration of drymesic northern forest, however, no high-quality dry-mesic northern forests were documented. Documented highquality northern shrub thicket with glossy buckthorn encroaching along the wetland margin.



Northern shrub thicket, Cedar River DMNF (Photo by Joshua Cohen).



Limestone cobble shore, Fourth Lake Complex (Photo by Joshua Cohen).

Fourth lake Complex

Conducted surveys focused on boreal forest, shoreline systems, and nearshore wetlands. Documented high-quality boreal forest, limestone cobble shore, and northern shrub thicket.

Maxton Complex

Conducted surveys focused on boreal forest, shoreline systems, and nearshore wetlands. Documented high-quality boreal forest, limestone cobble shore, limestone bedrock lakeshore, limestone bedrock glade, northern wet meadow, northern shrub thicket, and poor fen.



Poor fen, Maxton Complex (Photo by Joshua Cohen).



Limestone bedrock glade, Maxton Complex (Photo by Joshua Cohen).

Northern fen, Saint Ignace Complex

(Photo by Brad Slaughter).

Saint Ignace Complex

Conducted surveys focused on interior wetlands. Documented high-quality northern fen.

VIII.2

Tahquamenon Falls State Park

Conducted surveys to evaluate peatlands and surrounding forested systems. Documented high-quality poor fen, patterned fen, northern shrub thicket, northern wet meadow, poor conifer swamp, muskeg, dry northern forest, and dry-mesic northern forest.



Dry-mesic northern forest (Photo by Joshua Cohen).



Northern shrub thicket (Photo by Joshua Cohen).

Lake Superior Highlands

Conducted surveys to evaluate communities associated with Tahquamenon River. Documented high-quality sandstone cliff, hardwood-conifer swamp, and northern shrub thicket. Also documented sandstone bedrock rivershore along the Tahquamenon River. These areas could potentially be classified as a new natural community type, sandstone bedrock rivershore. In addition, surveyed high-quality northern fen just south of the existing Potential Landscape Unit. Additional high-quality northern fen and rich conifer swamp likely appear in the vicinity of the documented fen. Surveys suggest that current Potential Landscape Unit boundaries should be expanded to encompass high-quality wetlands to the south of the existing polygon.



Poor fen (above) and northern wet meadow (below), Tahquamenon Falls State Park (Photos by Joshua Cohen).



Natural Community Surveys of Potential Landscape Units, Page 13



Sandstone cliff (above) (Lake Superior Highlands) and northern fen (below), (just south of Lake Superior Highlands) (Photos by Joshua Cohen).



Natural Community Surveys of Potential Landscape Units, Page 14

Little Two-Hearted Lakes

Survey focused on peatlands and surrounding forest along dune ridges. Documented high-quality bog, muskeg, poor conifer swamp, and dry-mesic northern forest.



Floating bog mat surrounded by muskeg (Photo by Joshua Cohen).



Dry-mesic northern forest (Photo by Joshua Cohen).



Poor conifer swamp (Photo by Joshua Cohen).

Natural Community Surveys of Potential Landscape Units, Page 15

Swamp Lakes

Survey focused on peatlands and surrounding forest along dune ridges. Documented high-quality muskeg.



Muskeg, Swamp Lakes (Photo by Joshua Cohen).



Poor fen, Creighton River Wetland Complex (Photo by Joshua Cohen).

Creighton River Wetland Complex

Survey focused on peatlands and surrounding forest along dune ridges on state forest lands east of Creighton River Wetland Complex. Documented high-quality poor fen, northern wet meadow, and northern shrub thicket. Surveys suggest that current Potential Landscape Unit boundaries should be expanded to encompass high-quality wetlands to the east of the existing polygon.

Northwest Hiawatha Hardwoods

Surveys focused on mesic forest and interdigitating swamp forest on state forest lands. Documented complex of high-quality mesic northern forest and hardwood-conifer swamp.



Mesic northern forest, (Photo by Joshua Cohen).

Hardwood-conifer swamp, (Photo by Joshua Cohen).

Pictured Rocks Mesic Forest

Surveys focused on bedrock shoreline systems. Documented high-quality sandstone lakeshore cliff, sandstone bedrock lakeshore, sand and gravel beach, mesic northern forest, and sandstone cliff.



Sandstone lakeshore cliff (above) and sandstone bedrock lakeshore (below), Pictured Rocks Mesic Forest (Photos by Joshua Cohen).



Natural Community Surveys of Potential Landscape Units, Page 17

VIII.3

Chandler Brook Complex

Conducted surveys to evaluate peatlands and surrounding forested systems. Documented high-quality poor conifer swamp, muskeg, and dry-mesic northern forest.



Dry-mesic northern forest (Photo by Brad Slaughter).

Poor conifer swamp(Photo by Brad Slaughter).

Hanson Lake

Conducted surveys to evaluate peatlands. Documented high-quality muskeg, bog, and poor fen.



Poor fen (Photo by Brad Slaughter).



Muskeg (Photo by Brad Slaughter).

North Lake Complex

Conducted surveys to evaluate peatlands. Documented high-quality muskeg and northern fen.

Sawmill Creek Complex

Conducted surveys to evaluate minerotrophic peatlands. Documented high-quality poor fen and northern fen. In addition, portions of the peatland contain patterned fen.



Muskeg, North Lake Complex (Photo by Brad Slaughter).

Northern fen, Sawmill Creek Complex (Photo by Brad Slaughter).

VII.2

Wolf Creek Complex

Conducted surveys to evaluate non-forested wetlands just south of Wolf Creek Complex. Documented high-quality bog and intermittent wetland. Surveys suggest that current Potential Landscape Unit boundaries could be expanded to encompass high-quality wetlands to the south of the existing polygon.



Intermittent wetland, south of Wolf Creek Complex (Photo by Brad Slaughter).



Limestone bedrock lakeshore, Fisherman's Island (Photo by Joshua Cohen).

VII.6

Fisherman's Island

Conducted survey to evaluate bedrock lakeshore systems. Documented high-quality limestone bedrock lakeshore.

Wilderness SP Complex

Conducted surveys to evaluate interior wetlands and shoreline areas. Documented high-quality boreal forest, northern fen, poor fen, rich conifer swamp, muskeg, limestone cobble shore, emergent marsh, and Great Lakes barrens.



Boreal forest (above) and northern fen (below) from Wilderness SP Complex (Photos by Joshua Cohen).



Natural Community Surveys of Potential Landscape Units, Page 20