

Botany 2018 Field Trip Descriptions

Sunday, July 22

Whitewater State Park - hiking through an excellent example of the unglaciated Driftless Area

8:00 am – 2:00 pm

Whitewater State Park is set in the heart of Minnesota's bluff country. The group will explore the rugged topography and natural features of this 3,200-acre park. Steep forested bluffs that rise 250-300 feet above the narrow valleys are covered by maple-basswood forest and oak forest. The steep slopes also support dolomite and sandstone cliffs, as well as examples of glob-



ally significant dry bedrock bluff prairie, Driftless Area white pine forest, and an algalic talus slope and northern hardwood-conifer forest complex. Cold water streams are flanked by alluvial terrace forest and small groundwater seepage meadows. Scenic vistas are worth the hike to bluff-top overlooks. Along the way we will see historic CCC/WPA-era structures. Time permitting, the tour may stop at the nearby Elba fire tower where wooden

stairs lead from the base of a 280-foot bluff to a 110-foot lookout tower <http://nhlr.org/lookouts/us/mn/elba-fire-tower/> where one can see for miles in all directions and get a great feel for the blufflands landscape.

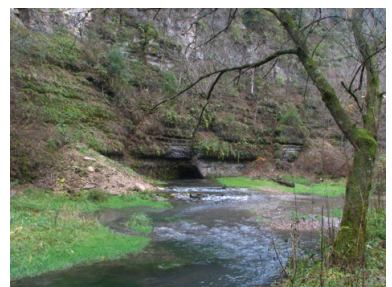
Hiking in Whitewater State Park is mostly along hiking trails- hiking varies from easy on the valley bottoms to moderate or rather strenuous on steep bluff slopes (depending on the route). July in southeastern Minnesota can be warm (typical daytime highs in the 80's). Hiking boots or solid hiking shoes, a hat, and long pants are recommended. Participants should bring a quart of water, more if it is hot. Rain gear would be advised if rain is in the forecast. Binoculars would be useful for looking at plants on inaccessible cliff ledges or on the opposite side of a stream that may be deeper than one wants to wade through (this site is also a good birding spot). Box lunches and water will be provided.

Trip Leader: Michael Lee, Minnesota Biological Survey

Microhabitat Extremes at Forestville/Mystery Cave State Park

8:00 am – 2:00 pm

Forestville/Mystery Cave State Park is a biodiverse blufflands/driftless destination with a wide array of attractions and natural resource features. One can visit a historic townsite, hike or horseback ride on miles of trails, fish in several coldwater streams, tour Mystery Cave, and explore unique geology and



plant communities. Our 4-hour hike will follow Canfield Creek to a complex of springs, which provide most of the baseline flow for the coldwater system. Along the way, we will visit numerous aspect-driven plant communities. Terrace forests cover much of the valley floor. Seepage communities occur along slopes where layers of shale force groundwater to the surface. Algific habitats and boreal remnants persist on north-facing slopes and cliffs. Mesic oak forests give way to dry oak woodlands on south and west slopes. Small prairie openings persist on the driest southwest aspects. Springs, sinkholes, caves, and other karst features are abundant, along with other geologic features such as rock slumps. Fossils are common in the exposed Ordovician bedrock. Bring binoculars for a chance to see Louisiana waterthrush along the streambanks. The trip will culminate on a dramatic ridgeline where mere feet separate dry bluff prairie from a north-facing algific talus slope with disjunct populations of balsam fir, Canada yew, and black currant.

Hiking will vary from easy to moderate along much of Canfield Creek. The hike will also include a couple moderately strenuous climbs up the bluff (200 feet of elevation). Be prepared to be on and off the trail on uneven ground. Hiking boots, long pants, and hats are recommended. Insect spray, sunscreen, binoculars, water bottle and rain gear (weather dependent) are advised.

Box lunches and water will be provided.

Trip Leader: Welby Smith, Minnesota Department of Natural Resources

Minnesota Landscape Arboretum & Paisley Park

8:00 – 5:00 pm

The Minnesota Landscape Arboretum features 1,137 acres of natural areas, specialty gardens, demonstration areas, and more than 5,000 plant species and varieties. The Arboretum is one of the premier horticultural field laboratories and public display areas in the country. In 2012, the Arboretum was granted full status into the Center for Plant Conservation as a public or private garden representing the Upper Midwest. The Natural habitats and native plants abound at the Minnesota Landscape Arboretum. Discover the bog at Green Heron Pond, an "off the beaten track" nature experience featuring a half-mile trail and boardwalk. Stand in the Prairie and hear the sounds of swishing grass and birdsong. Visit Spring Peeper Meadow, a wetland restoration project that is now home to almost two dozen species of sedge, grass and wildflowers. Find native plants of the deciduous woodlands in the Wildflower Garden. We will have lunch at the garden cafeteria.

After lunch we will head four miles east to the Paisley Park. The Park is Prince's extraordinary private estate and production complex. You will have the unprecedented opportunity to experience first-hand what it was like for Prince to create, produce and perform inside this private sanctuary and remarkable production complex. The tour is around 70 minutes and we will head back to Rochester and arrive back at the conference center around 5 pm.

Minnesota Landscape Arboretum <http://www.arboretum.umn.edu/>

Paisley Park <https://officialpaisleypark.com/>



Minnesota Landscape
ARBORETUM

Water will be provided. Entry and tour for both the Arboretum and the Paisley Park included. Lunch at the Arboretum not included.

Trip Leader: Peter Moe, Director, University of Minnesota Landscape Arboretum

New Bell Museum, MIN herbarium, and Surly Brewing Company **1:00 pm – 7:00 pm**

Trip sponsored by ASPT

We will start from the Mayo Civic Center and head north towards the St. Paul campus of University of Minnesota. Upon arrival on the St. Paul campus we will visit the Bell Museum and the University of Minnesota Herbarium. The trip will stop by the Surly Brewery, a popular gathering spot near campus on the way back.



Moving to its new building summer 2018, the Bell Museum features a digital planetarium, high-tech exhibits, dioramas, outdoor learning experiences, and sustainable building design including a green roof and photovoltaic glass railings. Highlights in the main exhibits include world renowned wildlife dioramas by Walter Breckenridge, Francis Lee Jaques, and John Jarosz. The state-of-the-art planetarium features a dome constructed using the latest "seamless" technology, making it the first of its kind in the world. In our unique Touch & See Lab, visitors get hands-on access to natural history specimens—from 10,000 year-old fossils and living plants and animals to our honey bee hives.



In addition, the new museum building has outdoor learning features including pollinator gardens, native wildflowers, grasses, shrubs and trees, a pond filled by rainwater collected from the museum's roof, and large boulders representing Minnesota's major rocks types (basalt, limestone, sandstone)

encourage visitors to climb and observe. In addition to touring the building trip leader will discuss public programing and outreach activities at the Bell. Participants will also have the opportunity to sample ice cream made from the campus dairy farm, including a custom flavor inspired by Bell Museum to celebrate grand opening of the new museum building.

The University of Minnesota Herbarium (MIN) is located in the Biological Sciences Center 0.9 miles from the museum and houses close to a million specimens. The record of historic flora of the Upper Midwest (including the Dakotas, Wisconsin, and southwestern Ontario) is among the best in the United States. Other significant historical collections include circumbo-real and arctic flora, historic Pacific Island flora, early Amazonian flora, and early California plants. Our herbarium collections continue to expand with new specimens, particularly from the Minnesota Biological Survey (Minnesota Department of Natural Resources) and a tropical rain forest research program in Papua New Guinea from curator George Weiblen. Website <https://www.bellmuseum.umn.edu/new-building>

Ice cream and brewery purchases not included. The trip will finish at the Surly Brewery just off the campus.

Trip Leaders: Daniel Stanton and Holy Menninger