My 21st Century Expedition: Following the Route of Schoolcraft 1820, 1832 to the Source of the Mississippi River

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21st Century Expedition

following the route of
Sauk Lake
Schoolcraft 1830, 1832

Sault, Ste. Marie
Michigan

TO

Lake Itasca
Minnesota

ON
MAY 4-22

two thousand and ten

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“There is always a portion of the community who take a pleasure in remembering individuals; who have either ventured their lives, or exerted their energies, to promote knowledge or advance discovery. These investigations of the physical geography of the west, and the phenomena or resources of the country, form the elements of classes of fact which will retain their value when the incidents of the explorations are forgotten, and its actors themselves have passed to their final account.”

- Henry Rowe Schoolcraft

Summary Narrative of an Exploratory Expedition to the Sources of the Mississippi River
Patterson, Cass, and Schoolcraft Expeditions
to the Source of the Mississippi River
Introduction

“We must go beyond textbooks, go out into the bypaths and untrodden depths of the wilderness and travel and explore and tell the world the glories of our journey.”  - John Hope Franklin

A year ago, I had a cloudy idea and books—towers of books. They were tilting my desk because I decided that I wanted an adventure after I graduated from college; I would follow the route of the Cass Expedition of 1820 and the Schoolcraft Expeditions of 1831 and 1832 through Michigan, Wisconsin, and Minnesota in my own “modern expedition” ending at the source of the Mississippi River. For my honors thesis? Well, yes. But mostly for adventure.

Post-expedition, my towers of books grew into mountains, and my maps and notes were planting a flag at the summit. My adventures were neatly assembled on the lines of a journal, but staring at all the words, I felt like the journey was just beginning rather than ending.

It took me a long time to figure out how I wanted to get all of this chaos down on paper. I wondered if it was laziness, but ended up deciding it was life. Sometimes you can’t make a decision because all of the pieces aren’t there for you to use to decide. So, I took a lot of notes in the name of progress, and wearily avoided the white, empty screen.

After much thinking and reading, I realized that I was feeling uncertain for wanting to write my personal journey. I thought—writing about myself is not academic, it’s not sterile or objective, it’s indulgent! Yet my favorite and best writing is in my journal, where all of this selfless obedience is effortlessly ignored, and I don’t think about what an audience will think of me because I don’t expect one.

One afternoon, alone in my Maryland apartment, I was reading a memoir. About eighty pages in, I had to stop and get out my journal. I sat for an hour, writing in astonishment at how relatable the author’s life was to mine. I felt strangely empowered; Her thoughts somehow validated mine, simply because they were somewhere else in the world—in another mind. I wondered if perhaps someone would relate to the story I wanted to tell.

And so—when it comes to my thesis, a project of my invention—I decided to show my new, unabashed love of nature, my youthful romance of the world, unashamed. Because that’s who I was on this expedition—a 23-year-old, three days out of college, on my own, with a library in my passenger seat, and a yellow line on my left (though all too often on my right).
I thought that instead of phrasing a thesis “question,” I should phrase a thesis “intention.” And that was much easier, because I knew what my intention was from the beginning—to have an adventure and write a story of journey. To create an modern expedition journal that combines many topics I have passionate connotations about: adventures and exploration in unknown wilderness, the history of science in all its ignorance and genius, an attempt to go back in time while keeping one eye on the present, a stab at organizing the world.

This won’t be like the objective expedition journals prepared by the explorers of the 19th century. I’m not planning to submit it to a government authority, nor to map new lands, discover nation-making resources, or solve life-threatening ethnological disputes. My intention is to tell my tale—to make friends with the blank, white screen, and feel comfortable clicking away its paleness with my own story. To assemble the words that I love—the words that make a world that exists nowhere else. And, hopefully, to lead you along my trail, where you can find paths I never traveled as a result of your own associations. Where you can relate to my journey, just as I related to the journeys of the scientists traveling this route nearly 200 years ago. Because we’re all simply human, we’re all trying to make this world our home, and sometimes it takes a bit of exploration to realize we’re all very much the same.

Happy travels,

Lorah Patterson
Key Members of the Cass Expedition of 1820:

Lewis Cass, 1782-1866
Commander

James Duane Doty, 1799-1865
Secretary, Official Journalist

Henry Rowe Schoolcraft, 1793-1864
Mineralogist, Geologist

Charles Christopher Trowbridge, 1800-1883
Observer, Douglass’ Assistant

David Bates Douglass, 1790-1849
Botanist, Topographer
Key Members of the Schoolcraft Expeditions of 1831, 1832:

**Henry Rowe Schoolcraft, 1793-1864**
Commander, Ethnologist, Geologist

**Douglass Houghton, 1809-1845**
Botanist, Geologist, Physician, Surgeon

**Lt. James Allen, 1806-1846**
Led Military Escort, Topographer

**Rev. William Boutwell, 1803-1890**
Missionary
February-April, 2010

Expedition Planning

“Twenty years from now you will be more disappointed by the things that you didn’t do than by the ones you did do. So throw off the bowlines. Sail away from the safe harbor. Catch the trade winds in your sails. Explore. Dream. Discover.” -Mark Twain

I hadn’t anticipated journaling this early, but expedition planning was detailed in the expedition member’s journals, so it seems appropriate. Throughout my planning process, I discovered that getting ready for an expedition is time-consuming;¹ I had to do a great deal of research to determine where the historical expeditions went, how I could get there on modern roads, and what I could do and see. Luckily, I had many modern advantages.

I was sitting at my computer, absorbed in my first Minnesota geography lesson (I had no idea there were that many lakes), when I paused to stare at the screen; it was the first of predictably many crazy clashes between past and present that will occur on this journey. Displayed before me was a GoogleMap of Minnesota. I placed one finger on Lake Itasca and thought, “The source of the Mississippi is right there, guys!” Though portages, rapids, murders, and expedition after expedition lay between history’s explorers and the true source, I discovered it (for my first time) in a few keystrokes from the comfort of my chair.

I sat there wondering if Cass and Schoolcraft felt as overwhelmed starting their expeditions as I do? They had no complete idea of what they were headed into, or—perhaps more ominously—who they would meet. My side of history is a little different; I can plan exactly where I’m going, but private properties, fences, and laws prevent me from stopping wherever I may desire. Yet, adventure is the theme that spans history, and as the satellite image of Lake Itasca shined on the screen, I couldn’t help but wonder if this was also the same excitement the expedition members felt staring into the unknown horizon 190 years ago.

The land was much different in 1820; Michigan wasn’t even a state. Its future boundaries were located in Michigan Territory, which expanded into present-day Wisconsin and

¹ Or as Schoolcraft puts it: “There is always some labour, the difficulty of accomplishing which, has not been duly estimated, or some ontoward circumstance, wholly unforeseen, springs up to increase the number of obstacles to be surmounted, and to retard the period of departure.” Yes… in my case sorting through very verbose expedition reports. (Schoolcraft, Narrative Journal, 66)
northeastern Minnesota. The territory was governed by the “stout and jovial politician” Lewis Cass, and much of its resources and beauty lie hidden behind miles and miles of unmapped wilderness.

United States exploration—let alone U.S. scientific exploration—wasn’t fully established in the 1820’s. It was just over a decade past Thomas Jefferson’s presidency, the Louisiana Purchase, and the historic expeditions of Lewis and Clark and Zebulon Pike. Jefferson was the sole will and force behind the explorations during his presidency, and the men leading them were not purposely trained in exploration. As the years passed and more settlers moved west, the government began to see the need for trained, professional explorers. In 1816, the War Department created a Topographical Bureau under the Engineer Department. The Topographical Bureau was quite small, however, and mainly performed surveys in populated areas, and stored and collected maps. It was still difficult to find men capable of exploring the country accurately and professionally, so it was deemed more important to establish communication and transportation in areas with prospering populations than to learn of land even further from home. Congress passed the General Survey Act in 1824 to make internal improvements to roads and canals, but most of the expeditions that occurred further west were carried out independently by fur trading companies wanting new sources for pelts. In fact, the government sponsored few expeditions until the late 1830’s, and the Corps of Topographical Engineers didn’t fully become the large, independent department that facilitated those expeditions until 1838.

Governor Cass and Secretary of War John C. Calhoun, however, were committed to exploration in the 1820’s and 30’s. Though internal improvements were still a higher priority, they pushed for explorations into the west, and Calhoun began issuing expeditions to increase

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3 Lewis Cass became the governor of Michigan Territory in 1813 following his service in the War of 1812. He remained governor until 1831.
5 In 1831, the Corps of Topographical Engineers became an independent department. But it wasn’t until 1838, when John J. Albert was appointed chief, that the Corps expanded and carried out many more explorations than it had at its origins in 1816. (Schubert, *Vanguard of Expansion*, viii).
6 The majority of the information discussed in this paragraph can be found in: Schubert, Frank N. *Vanguard of Expansion: Army Engineers in the Trans-Mississippi West 1819-1879.* (History Division Office of Administrative Services, 1970) vii, viii.
7 Schubert, *Vanguard of Expansion*, 5.
knowledge of the country, establish defenses in the frontier, and develop the fur trade.\(^8\) In 1819, Cass wrote to Calhoun, explaining, “It has occurred to me, that a tour through the country, with a view to examine the production of its animal, vegetable, and mineral kingdoms, to explore its facilities for water communication, to delineate its natural objects, and to ascertain its present and future probable value, would not be uninteresting in itself, nor useless to the Government.”\(^9\) Cass suggested that an exploration to the southern shore of Lake Superior and its path to the Mississippi River would be a valuable place to gain this knowledge.

At the time, Congress was hesitant to give money to explorations due to an uncertainty of whether or not public funds should be spent on such pursuits.\(^10\) In order to sway the vote and the money, expeditions had to be multipurpose and exceptionally inexpensive. So, in addition to the goals stated above, Cass declared that the expedition to Lake Superior would also map the area traversed, find the true source of the Mississippi River, examine the Indian tribes of Michigan territory, terminate Indian land titles at places of strategic value for the U.S., inspect the British fur trade, and make it clear to the Indians that the Americans—not the British—were in power after the War of 1812. When Cass estimated that the ambitious expedition would cost under $1,500, Calhoun gave his approval.\(^11\)

The expedition party was made up of soldiers, French voyageurs, Native Americans from the Ottawa, Shawnee, and Chippewa tribes, interpreters, and gentlemen scientists and authorities\(^12\). Calhoun appointed David Bates Douglass to the roles of topographer and botanist, writing, “the astronomical and topographical observations will of course be made by you, and the departments of zoology and botany will require as much of your attention as you may be able to bestow upon them.”\(^13\) Cass appointed James Duane Doty, a 21-year-old clerk to the Supreme

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The expedition was approved on January 14, 1820.

\(^12\) The total number of people on the expedition varies in each account: Schoolcraft’s *Narrative Journal (78)* records that there were 37 persons, Trowbridge’s journal (Brown, 135) records 43 persons, and Doty’s journal (Jackman, 17) records 38 persons. Yet, inconsistent numbers aside, according to Schoolcraft it was unquestionably a “formidable number of mouths to feed in the ‘waste howling wilderness.’” (Schoolcraft, *Personal Memoirs,* 49.)

Court of Michigan Territory and a member of the Territorial Council,\textsuperscript{14} to be the secretary and the official journalist.\textsuperscript{15} Cass also appointed 21-year-old Charles Christopher Trowbridge to take observations and study dialects on the expedition.\textsuperscript{16,17}

Calhoun chose Henry Rowe Schoolcraft for the position of mineralogist and geologist, telling Cass that Schoolcraft was “a gentleman of science and observation, and particularly skilled in mineralogy… I have directed him to report to you for duty, under the belief that he will be highly useful to you, as well as serviceable to the Government and to the promotion of science.”\textsuperscript{18} The Cass Expedition commenced from Detroit on May 24, 1820, and indeed, Schoolcraft\textsuperscript{19} was useful in both of the capacities Calhoun predicted.

Out of all of the expedition members, Schoolcraft had the most success in promoting the discoveries of the expedition through his many publications.\textsuperscript{20} In 1821, he published \textit{Narrative Journal of Travels from Detroit northwest through the great chain of American lakes to the sources of the Mississippi River in the year 1820}. Schoolcraft said that, “no exploration had before been made which so completely revealed the features and physical geography of so large a portion of the public domain,” and that the public was eager to hear of the results.\textsuperscript{21} One of the most exciting results discussed in this publication was the alleged discovery of source of the Mississippi—Cassina Lake (today known as Cass Lake). Despite finding two streams continuing out of one end of the lake, Cass raised a flag and declared it the source (perhaps he was a bit eager for the expedition he found quite exhausting to be over).

In the introduction of the \textit{Narrative Journal}, Schoolcraft admits that after the Cass expedition, the sources of the Mississippi River “continued to be the subject of dispute between

\begin{itemize}
  \item Doty would later become one of the founders of Wisconsin, a territorial governor, and a representative for the state in Congress. (Wisconsin Historical Society)
  \item Brown, “With Cass in the Northwest in 1820,” 131.
  \item Ibid, 132.
  \item Other gentlemen in the party and their duties on the expedition include: Alexander Wolcott, physician; Lt. Aeneas Mackay, commander of the soldiers; Robert A. Forsyth, secretary; Alexander Ralston Chase, commissary; James Riley, interpreter. See Jackman, \textit{American Voyageur}, 17-18 for complete list of voyageurs, soldiers, and Native Americans.
  \item Brown, “With Cass in the Northwest in 1820,” 130.
  \item Schoolcraft published four main works about the expedition of 1820 and the related expeditions of 1831 and 1832. (See references for Schoolcraft’s works published in 1821, 1834, 1851, and 1855).
\end{itemize}
geographical writers.” Years later Schoolcraft still had hunches that Cass Lake was not the true source. Native Americans and traders rumored that the streams exiting Cass Lake wound some 40 to 60 miles further to Lac La Biche. However, little was known about this lake, leaving “a veil of obscurity… cast about the actual source of the Mississippi, which there was no further attempt to remove for ten or eleven years.”

In the mean time, Schoolcraft became Indian Agent for the tribes of Lake Superior at Sault Ste. Marie. In 1830, he was directed to travel from Sault Ste. Marie to northwestern Lake Superior in an effort to solve conflicts between the long-feuding Sioux and Chippewa tribes. The orders came too late in the season, however, and explorations were held off until 1831. This delay allowed enough time to expand the objectives of the expedition, and a small group of troops and a botanist and physician (Douglass Houghton) were hired. The party of the Schoolcraft expedition of 1831 left in late June. Schoolcraft held many councils with the tribes, and says, “the pauses afforded by these assemblages, and by the necessary delays of overland transportation, furnished opportunities for preserving notes on the manner of living, among those bands, and their population, traditions and resources, as well as the geographical features and the natural history of the country.” But when the party reached the Upper Mississippi region, the drought of summer had rendered the waters too low for exploration to the river’s source.

Thus, in 1832, Schoolcraft desired to resume his explorations to the evasive source of the great river. Cass was now the Secretary of War, and approved the expedition to continue the effort to “effect a permanent peace” between the Sioux and Chippewa, examine the fur trade, vaccinate the Indian tribes for smallpox, and search for the source of the Mississippi. The expedition commenced from Detroit on June 7, 1832.

Houghton resumed his positions from the 1831 expedition, continuing the tasks of physician, surgeon, geologist, and botanist. His primary task, however, was to administer the

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23 Schoolcraft, *Summary Narrative,* 11.

24 Schoolcraft, Henry R. *Narrative of an Expedition through the Upper Mississippi to Itasca Lake, the actual source of this river; embracing an exploratory trip through the St. Croix and Burntwood (or Broule) Rivers; in 1832.* (New York: Harper & Brothers, 1834), 13.

25 The disputes between the two tribes, according to Schoolcraft, “not only weaken and harass each other, but embarrass the trade, interrupt the execution of the intercourse laws, and involve the lives and property of the frontier inhabitants. Additional weight was given to these considerations, by the unquiet state of the Indians on the Upper Mississippi, which broke out in open hostilities during the year (*Narrative of an Expedition,* 15).”
Indian vaccinations. Schoolcraft explains, “Congress, during the session, passed an act for vaccinating the Indians. This constituted a separate duty, and enabled me to take along a physician and surgeon. I offered the situation to Dr. Douglass Houghton, of Fredonia, who, in the discharge of it, was prepared to take cognizance of the subjects of botany, geology, and mineralogy.”

Other members of the 1832 expedition included Lt. James Allen, who led the military escort and was the main topographer and draughtsman, and George Johnston, interpreter and baggage-master. Schoolcraft, a religious man, also offered to take Reverend William T. Boutwell as a missionary to “observe the conditions and prospects of the Indian tribes in the north-west, as presenting a field for the [American Board of Missions’] operations.” Schoolcraft himself assumed the position of ethnologist, and observed Native American history, languages, and culture on the expedition. The party of approximately 30 persons was finally successful in reaching the true source of the Mississippi (which Schoolcraft named Lake Itasca) on July 13, 1832.

For any expedition to be successful, however, intelligent preparations for months trekking through the wilderness must be made from the start. It took weeks for the necessary supplies to be gathered or constructed, and for all of the expedition members to reach Detroit for the departure. Before commencing, the members of Schoolcraft’s expeditions agreed to the prohibition of alcohol on the journey, and “they were promised, instead of it, abundance of good wholesome food at all times.” Schoolcraft also forbade travel on Sundays in order to observe the Sabbath. But there’d be no traveling at all if he couldn’t have boats made in time.

At the beginning of the 1832 expedition, the military escort traveled in a large Mackinack boat and the expedition party traveled in smaller canoes. The Chippewa Indians made the canoes using bark from the northern birch *Betula papyraceae* on a cedar framework, sewn

27 Ibid, 406.
28 Ibid, 406.
29 Schoolcraft explained: “observation having convinced me, during frequent expeditions into the wilderness, that not only is there no situation, unless administered from the medicine-chest, where men are advantaged by its use, but in nearly every instance of fatigue or exhaustion their powers are enfeebled by it, while, in a moral or intellectual sense, they are rendered incapable, neglectful, or disobedient (Personal Memoirs, 409).”
30 They traveled in various sizes of canoes throughout the entire expedition.
together with roots from a spruce, and gummed to fill the seams with the pitch of a pine. The canoes could travel a snail-dominating four miles per hour propelled by the paddling of the voyageurs and Indians. On my expedition, my mode of transportation will be 2003 Pontiac Sunfire (made by a factory worker from steel and glass, welded and bolted together, the seams filled with molded rubber). My little blue car will surely result in a much smoother, quicker, less exhausting, and temperature-controlled ride. Plus, I’m bringing along Sally Jr.—my GPS.

I assumed the position of commander (a commander of one) and botanist. At the time of the Cass and Schoolcraft expeditions many members would have held more than one position. In fact, the botanists of most historical expeditions almost always had higher priorities, just as Botanists Douglass and Houghton did. The botanist may have been a naturalist—charged to document flora and fauna. Or he may have been an ethnologist, meteorologist, geologist, zoologist, or topographer—seemingly any or all! But if any part of his job description included botanist, one of his tasks would have been to collect plants, press them, document details about their appearance and habitat, and bring them home. This, in a slightly modified form, was my task as well.

Unfortunately for me, the permit process is a lengthy one, and I doubt “to replicate a historical journey” would grant me the privilege to uproot plants from state parks. So, when I write I “collected” a plant on my expedition, it actually means I crouched down on my hands and knees, begged my camera’s macro feature to focus, and took as many pictures as I could stand before getting eaten alive by mosquitoes.

In preparation for my duties as commander and botanist, I assembled an entire binder full of maps and notes, detailing the routes I would travel each day and what I would do. Similarly to how Schoolcraft combined observations and discoveries made during the 1820, 1831, and 1832 expeditions in his Summary Narrative, I am also combining portions of the three expeditions into the route I will travel. In the preface of Summary Narrative, Schoolcraft explains, “By connecting the incidents of discovery, and of the facts brought to light during a period of twelve years, unity is preserved in the prosecution of an object of considerable importance in the

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31 Schoolcraft, Summary Narrative, 47.
32 Daughter of Sally Sr., who alarmingly went missing the night before my expedition commenced, leading to widespread panic and a midnight run to Meijer. Thankfully, she was found days later, but Sally Jr. had already replaced her as topographer.
progress of our geography and natural history.”\textsuperscript{33} I agreed with his method, not only because the
routes and goals of the three expeditions were similar, but also because there isn’t a complete
record to the source of the Mississippi for any one expedition. In fact, in Schoolcraft’s 1832
expedition narrative,\textsuperscript{34} his notes detailing travels through present-day Michigan in 1832 weren’t
included, and he merely gave a “brief sketch” in which he referred the reader to his 1820
account. Houghton’s first of eight journals—the one detailing the journey from Sault Ste. Marie
to Fond du Lac—is completely missing. In addition, the lack of information supplied by the
multi-tasking botanists left me desperate for anything I could find on plants.

Luckily for me, science at the time of the expeditions was not nearly as specialized as it is
today. In the early 1800’s, scientists had to be familiar with all of its many branches, including
botany.\textsuperscript{35} Often members of the military escort accompanying expeditions were even well
acquainted with the sciences.\textsuperscript{36} So, I was delighted to discover botanical observations in many of
the expedition member’s journals, including those of Schoolcraft, Allen, Doty, and Trowbridge.
Therefore, by combining the three expeditions, I was able to get the most out of these scattered
botanical observations.

As I planned my expedition, I left plenty of time for flexibility, and made very few
reservations. I bought atlases, trail books, a compass, and hiking boots. Then I graduated from
college, packed my camping gear, clothes, and books, and was ready to start my adventure into
the great unknown.

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\textsuperscript{33} Schoolcraft, Henry R. \textit{Summary Narrative}, vii.
\textsuperscript{34} Schoolcraft, Henry R. \textit{Narrative of an Expedition through the Upper Mississippi to Itasca Lake, the actual source of
this river; embracing an exploratory trip through the St. Croix and Burntwood (or Broule) Rivers; in 1832}. New York: Harper & Brothers, 1834.
\textsuperscript{36} Rodgers, in his biography \textit{John Torrey}, writes, “Many prominent officers of the Army were themselves much
interested in the science, taking great pride in the natural history collections of their expeditions (62).”
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Kalamazoo to Sault Ste. Marie
Patterson Expedition Day 1
May 4, 2010

Expedition Day One

“To plunge into the wilderness is truly to take one’s life in his hand.”  
-Henry R. Schoolcraft

I still can’t really believe I’m on my thesis expedition… and then I realize I’m in a really small tent with hiking boots, a backpack, lantern, heater, and books strewn about. Sometimes I feel lonely, sometimes I wonder what I got myself into, sometimes I cannot fathom what type of thesis product will come out of this, but I keep reminding myself to take it one step at a time. If I look too far, I imagine muddy tents, parallel parking, staring at trees having no idea of their species, and bugs—lots of bugs.

Though, I suppose that’s better than anticipating hostile conflicts with Native Americans, hauling ninety-pound loads bare-footed over a portage named after knives, and trudging into unknown territory without a map—all things the historical expedition members had to look forward to. James Doty, secretary to Cass and official journalist on the 1820 expedition, must have felt this dread, writing, “The feelings of us all may be justly appreciated on thus leaving our friends, and the civilized world too, on a voyage of such length, danger, and difficulty, and it will not be thought strange that our spirits were considerably depressed.”¹ Yet Schoolcraft differed from Doty’s assessment of the morale, writing that as the Cass expedition departed, “there was much enthusiasm manifested, by all classes, as if a new world was about to be discovered.”² It seems that Doty’s mind lingered on the shore, whereas Schoolcraft’s had already surpassed the canoes. And so, the expedition set off with the speed of a boat race between the Indians and voyageurs.³

² Schoolcraft, Henry R. Summary Narrative of an Exploratory Expedition to the Sources of the Mississippi River, in 1820: Resumed and Completed by the Discovery of its Origin in Itasca Lake, in 1832. (Philadelphia: Lippincott, Grambo, and Co., 1855), 47.
³ The Detroit Gazette (Friday May 26, 1820) describes the scene: “The departure of the expedition afforded a pleasing, and, to the strangers in the place, a novel spectacle. The canoes were propelled against a strong wind and current with astonishing rapidity, the voyageurs regulating the strokes of their paddles by one of their animated row-songs, and the Indians encouraging each other by shouts of exultation. On leaving the shore considerable exertion was made by the voyageurs and Indians in order to take the lead, and a handsome boat race was witnessed, in which the Indians displayed their superior skill, and soon left the other canoes far behind.” (Michigan Pioneer Collections, 8).
This morning, I shared Schoolcraft’s state-of-mind as I topped off my car and drove away from home, the sun shining brightly. I was doing exactly what I wanted—graduating and having an adventure. Standing on the edge of my adult life, I imagined this trip setting the theme.

Driving wasn’t bad; I listened to my iPod and watched the changing scenery. Less than five hours later, I made it to the Mackinac Bridge. There was construction on the bridge, undoubtedly in preparation for the influx of tourists to come, but I happily stared out at the bright, blue water… until I got to the tollbooth.

I followed a car into a lane, but noticed he had his reverse lights on—there was no attendant. We both backed out, and I went behind several cars in another lane. Only there was no attendant there either. So, the truck and trailer in front of me began reversing. I laid on my horn because there was a car behind me and I couldn’t reverse. They paused, and then mercilessly started reversing again! I watched their black metal trailer meet the front of my car with an audible crunch.

I was instantly in problem-solving mode. The car behind me had finally gotten the message to move out of the way, and I pulled up beside the truck and trailer, climbing out to assess the damage. The woman in the passenger seat had her window down and was quite surprised when I informed her that they had just hit my car. My hood had a three-inch scrape and my headlight was scratched, but it was still drivable, and that’s all that mattered.

My confidence was slightly shaken as I finally made it to a toll lane that was willing to take my money and entered the Upper Peninsula. But I gathered myself and reasoned that anything that goes wrong on this trip is just another chance to prove myself stronger.

Trials of travel have always been present, and the historical expeditions had much to overcome upon their departure. Doty writes in his journal, “The canoes which were to convey us had been bargained for with the Indians of Sagina[\w], but as they did not arrive two others were obtained. The wind for two weeks has been from the East very strong which has also been an impediment to our departure. The Governor’s ill health has also retarded our movements, and on the whole circumstances may be considered rather unfavourable.”4

When they finally made way from Detroit, they paddled up Lake Huron, and even explored Mackinac Island for five days. But I chose to start my expedition at their second major destination—the Soo (that’s my new Yooper lingo for Sault Ste. Marie…and “Yooper” is my

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new Yooper lingo for someone from the Upper Peninsula). I’ve spent my fair share of time at Mackinac, and I’ve spent my whole life in the Lower Peninsula, but the U.P. is a mystery to me. I think it’s natural to be more observant in new places, plus it’s just more of an adventure, so to the Soo I drove.

I headed straight to Soo Locks Campground, wanting plenty of time to settle into my very first campsite. I went into the office to pay for a tent site, and when I told the owner the site was for one, she gave me this wide-eyed look and called me a “brave little girl.” I honestly didn’t know if I felt worried, flattered, or annoyed… possibly all three.

So I focused on the flattery—yes, here I was! A brave girl, camping alone! A brave girl… camping…alone… two whole hands to set up a tent… in the wind. I quickly discovered that trying to get an enormous plastic tarp neatly folded under a tent in the wind was kind of like telling a freefalling skydiver to hold still for a minute. But, after some frustration, I got it together and I staked it down.

I sat at the picnic table—my very own table for the night. I saw a few ships passing through the canal and read in the sun. It was the same sun that I had driven away with that morning. At least I can always count on the sun.
Sault Ste. Marie to Munising

Patterson Expedition Days 1 – 5
May 5, 2010

Expedition Day Two:

Well… I can count on the sun until it rains.

I think waking up with a pool of water in the middle of my tent should automatically qualify me for honors credit. Basically camping in the rain—I’ve discovered—means getting no sleep. All I could hear were loud drips on the fabric, and all I could think about was what a mess this would be to clean. Finally, at 6am, when I discovered the shallow pool, I decided to get out of there.

I stuffed the muddy mess into my trunk, and trudged to the showers. It didn’t quite make sense to take a shower since it was still pouring outside, but the hot water and routine were excellent ways to regain some control and comfort. I checked out of the campground, feeling happy. A new woman at the register said, “Oh, you must be that brave girl who’s camping alone.” But I felt like a well-seasoned camper already, so her comments only made me smile.

I first drove to see the Johnston house. John Johnston emigrated from Ireland to Sault Ste. Marie in 1793, and the portion of the house that remains today was built partially for Schoolcraft after he married Johnston’s daughter Jane.¹ During the Cass expedition, Schoolcraft describes that, “It required but little observation in the morning to explore the village of St. Mary’s. It consisted of fifteen or twenty buildings of all sorts,” and that, “the principal buildings and outhouses were those of Mr. John Johnston and the group formerly occupied by the Northwest Company.”² Johnston served meals for the explorers in 1820, and Schoolcraft found his future father-in-law hospitable and polite. I didn’t get as polite of a reception as I walked to the house; there was road construction right in front of it and I couldn’t even get close. I snapped a hilarious picture—bulldozers and all—and continued on.

My next stop on Water Street was Fort Brady—the first American post in the Upper Peninsula. The fort was built in 1822 as a direct result of the treaty negotiated by Cass with the Chippewa during the 1820 expedition. Schoolcraft explains: “The commanding position of the

² Schoolcraft, Henry R. *Summary Narrative of an Exploratory Expedition to the Sources of the Mississippi River, in 1820: Resumed and Completed by the Discovery of its Origin in Itasca Lake, in 1832.* (Philadelphia: Lippincott, Grambo, and Co., 1855), 76-77.
Sault de St. Marie, on the outlet of Lake Superior, and at the head of ship navigation, had early pointed it out to the French as an advantageous site for a military and a trading post.” Since all of the trade in the northwest passed through this point, Schoolcraft said that it, “could not fail to excite attention at a period when such laudable exertions...are call[ing] into action the hidden resources of the country.”³ All that remained of the fort today was some interpretive signs and a log reproduction of a fort wall, but I knew of the drama that had once ensued on this land.

The treaty negotiation (in addition to smoking a peace pipe and presenting gifts) included a heated discussion reminding the Chippewa that they had conceded the rights to the land to the French, and that the Americans had now succeeded the French in those rights. Yet, the Indians did not agree easily, and returned to their tents to raise a British flag. Schoolcraft writes, “A conflict seemed inevitable. Governor Cass instantly ordered the expedition under arms.” Cass then went alone and unarmed to the Chippewa camp and pulled down the British flag saying that, “they were forbid the use of any [flag] but our own, and should they again attempt it, the United States would set strong foot upon their rock and crush them.” He returned to the expedition camp, British flag in toe, and the Chippewa sent the women and children across the river. “Thus prepared for battle,” Schoolcraft writes, “we momently expected to hear the war-whoop.” But after an hour of indecision, the crisis passed. Mrs. Johnston (who was the daughter of an Indian chief⁴) counseled peace and the chief signed the treaty.⁵

Though the Cass expedition was valuable in creating the first American fort at the Soo, this fort also impeded the first steps of an essential endeavor for the Upper Peninsula—the construction of the Soo Locks. Prior to the Cass expedition, the potential value of a lock system to avoid the 21-foot falls of St. Mary’s had been known. In fact, in 1797, the Northwest Fur Company built a nine-foot lock on the Canadian side of Sault Ste. Marie (which was destroyed in the War of 1812⁶). But it wasn’t until Michigan became a state in 1837 that the idea of an American locks system was presented to Congress. When the first contractor arrived to start the work in 1839, however, the military at Fort Brady interceded under orders to prevent construction on military grounds.

⁴ Mrs. Johnston’s father was Chief Waubojeeg, leader of the Chippewa.
⁵ The facts in this paragraph came from Schoolcraft, *Summary Narrative*, 78-81.
Pressure for a canal system continued to mount, and by the 1840’s it was at its peak.
Mineral wealth was discovered in the U.P., and the only way to get the copper and iron from the
west to industries in the east was through Sault Ste. Marie, and then onto the Great Lakes-Erie
channel system.7 By 1849, 96% of U.S. copper was mined in the U.P., and the rapids were a large
impediment to Michigan’s economy.8 Finally, in 1852, President Fillmore signed the bill to
create 750,000 acres of public land in exchange for a canal through the St. Mary’s rapids.

St. Mary’s Falls Ship Canal was opened on June 18, 1855, and ships were quick to take
advantage of the profitable new route. During its first year of use, 14,500 tons passed the locks,
and by 1875, the number jumped to 1.5 million tons. Today, after many reconstructions, the Soo
Locks are the largest locks system in the United States, and over 90 million tons are transported
through them each year.9

With this in mind, I drove down Portage Avenue to see the historic Soo Locks. During
the time of the Cass and Schoolcraft expeditions, the Soo Locks weren’t lifting and lowering
ships with their industrial power; the area was still a zone of rocky rapids and falls that only the
most daring paddler could navigate. Schoolcraft explains that skillfully guided canoes could go
down the rapids, but only empty canoes could be drawn up, and that “these falls are a complete
check to ship navigation.”10

Also at the time, Portage Avenue wasn’t a paved, tourist-laden street; it was an actual
portage route that ships and their loads would have to be carried on to avoid the rapids.
Surprisingly, even huge ships were portaged around the rapids. The Boston Mining Company’s
50-ton schooner Algonquin was one of the fifteen vessels totaling 3,000 tons that was hauled
over the portage before the locks were completed. Achille Cadotte portaged the Algonquin in
1839, and “went to work as though he were moving a house.” He used rollers, a horse, and a
capstan to pull the mammoth schooner out of the water and haul it over what is now Water
Street. The whole process took three and a half months.11

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http://www.soolockstraintours.com/LocksInfo.htm
10 Schoolcraft, Summary Narrative, 81.
The Cass and Schoolcraft expeditions didn’t have anything close to a 50-ton schooner to haul, but they had enough trouble getting their canoes across the rapids. Trowbridge describes the falls as “extremely rapid dangerous on the American side of the river” and said that it was a “work of considerable labor, as the difficulty and danger of ascent is so great, that only about one third of an ordinary load can be carried at a time.” During Schoolcraft’s time at the Soo in 1820, he witnessed eleven fur-laden barges and canoes pass the rapids. “Hazardous as it is,” he says, “the pursuit does not fail to attract adventurers, who appear to be fascinated with the wild freedom of life in the wilderness.”

To Schoolcraft, the rapids “resembled a bank of rolling foam, and with their drapery of trees on either shore, and the mountains of Lake Superior in the distance, and the moving canoes of fishing Indians in the foreground, present a most animated and picturesque view.” As I stood on a metal platform looking out at the locks, it was still rainy and overcast, but I decided that the gray sky complimented all the metal. I tried to imagine the rapids, but there were a lot of barriers, fences, and enormous ships in my way. I decided that I prefer hiking to real waterfalls. The weather suddenly improved as I drove west out of Sault Ste. Marie and headed towards Lakeshore Drive. I chose to drive this route because it ran along the coast of Lake Superior, and since the expeditions traveled in canoes, I figured this was closest to their actual path. Plus, I read that it was very scenic and I kept my eyes open for turnouts.

So began the part of road trips that I love. The part where I drive short distances to see beautiful, new sights. The part where I feel like I’m getting everything I can get out of life for that day. The part where I feel like an explorer. I could see the blue water shining behind the trees.

The expedition members loved this part of their journey too, since they were entering Lake Superior for the first time. Schoolcraft writes that the entrance presented “a scene of beauty and magnificence which is rarely surpassed.” He adds, “The most enchanting views were presented in every direction, and we fully realized the justice of the remark made by Carver ‘that the entrance into Lake Superior affords one of the most pleasing prospects in the world.’”

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13 Schoolcraft, *Summary Narrative*, 82.
14 Ibid, 82.
My first look at Lake Superior was equally as awe-inspiring. I drove to the Big Pines turnout, and saw a path that wove into the shade of the gorgeous trees. I walked into the forest, and burst with excitement when the path ended at the most beautiful beach I had ever seen. The clouds were enormous, the waves were soft and steady, a line of rounded rocks broke up the golden sand, and pine trees stood tall next to the beach like the black and white etchings in the expedition reports.

The whole stretch of beach for as far as I could see was completely empty. For the first time, I could imagine how it must have felt to land, nearly 200 years ago, at such a desolate area. I walked for an hour along that beach, loving every minute. I collected plants and sorted through rocks. I watched the waves, and became enamored with the sky. It was effortless to be lost in observations of nature, and I felt the excitement of being the first to report the details of an unexplored area.

Standing on a beautiful, isolated beach was only made sweeter by the fact that I had gotten myself there. I walked back through the pines to my car, and took a picture of the sign for if I ever want to go back—if I ever need reminding that I’m able to explore, that I decide who I am, and that sometimes I need to feel an overwhelming wonder with the world to feel pride in myself.

And the beauty didn’t stop there. I wound my car through forests highlighted by white birch. Simple slabs of pavement on the side of the road revealed scene after scene of the most picturesque nature. Pointy-topped trees of varying shades of green edged the vivid blue sky. Seagulls sat on boulders in the water, and streams trickled past marsh marigolds and into the lake.

The Shallows turnout was so unique. I walked so far from shore, but I was still only on damp sand. The thin water made the smallest ripples, curling the sand into waves. Boulders were spaced in an almost eerie way. The sky was a clash of rainclouds and fluffy white, and the whole scene looked affected in its beauty.

It was hard to leave.

But I smiled, and I did. I passed Tahquamenon Falls State Park, but continued north. I wanted to stop in Shelldrake—a site where the expeditions had camped, but was now a ghost town—but I couldn’t find it along the road. So I kept driving north, and wandered out to the tip of Whitefish Point.
Today the point is known as the “Graveyard of the Great Lakes” because of the large number of shipwrecks that occurred when ships failed to see the outcrop. The Cass expedition, however, saw the point clearly—perhaps a little too clearly for some. They were detained at the point by a strong wind, and Schoolcraft quickly grew tired of the “bleak sandy waste” where “there is not a prominent object to catch the eye.”16 Passing ships caught my eye though, as I sat on a bench and looked out at the horizon. I remembered that Schoolcraft mentioned patches of iron-sand, and smiled when I discovered that the black sand was still there. I was happy that, despite metal locks and blockading bulldozers, some things were very much the same.

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Johnston House

Soo Locks

Fort Brady

Top: Lake Superior at Big Pines Turnout
Bottom: The Shallows

Black sand on Whitefish Point
Species: *Betula papyrifera*

Common Name: Paper Birch

Location: Big Pines Turnout along Lakeshore Drive, shore of Lake Superior, Chippewa County, Michigan

Date: May 5, 2010

Collector: Lorah Patterson
May 6, 2010

Expedition Day Three:

“Equipped with his five senses, man explores the universe around him and calls the adventure science.”  - Edwin Powell Hubble

My first mission of the day was to research hiking trails in Tahquamenon Falls State Park. While canoeing along the coast of Lake Superior, the Cass and Schoolcraft expeditions only passed the mouth of the Tahquamenon River on their way towards Whitefish Point. I knew, however, that going further inland would be an excellent opportunity see two of the Upper Peninsula’s most spectacular waterfalls and be my first chance to thoroughly collect plants.

At the time of the Cass and Schoolcraft expeditions, the botany of the region they explored was mostly unknown.1 In fact, little was known about the botany in the whole of the western United States. A mere 16 years after the expedition of Lewis and Clark, few Americans had collected plants west of the Mississippi River. Small areas had been explored for plants, but the knowledge of their explorations was not proliferated. It wouldn’t be until the 1890’s that the frontier was settled, and the big picture of United States vegetation—though lacking in details—was documented.

Captain David Bates Douglass was given the task of heightening botanical knowledge as botanist for the Cass expedition. Douglass was born in New Jersey in 1790. He graduated from Yale in 1813, and became a Second Lieutenant of Engineers after training at West Point.2 He was serving as Chair of Mathematics and Engineering at West Point and working on government engineering assignments when he was appointed to the Cass expedition. Douglass was not only the botanist, but also the topographer.3 He kept a detailed journal during the expedition, in which he often discussed plants.

Douglass Houghton was appointed as surgeon, geologist, and botanist for the Schoolcraft expeditions of 1831 and 1832. Born in New Jersey in 1809, Houghton graduated from

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Rensselaer Polytechnic Institute in 1829, and soon became an assistant professor of chemistry and an avid naturalist.\textsuperscript{4} He traveled to Michigan for the first time in 1830 when he was asked to give a series of science lectures in Detroit, and would later launch the first geological survey of the state. He gained some geological experience on the Schoolcraft expeditions while observing the environment of the region. Schoolcraft writes that Houghton, “was a good botanist and geologist—objects of interest to me at all times; but especially so now, for I should have considered it inexcusable to conduct an expedition into Indian country without collecting data over and above the public duties, to understand its natural history.”\textsuperscript{5} Houghton collected botanical specimens on the 1831 and 1832 expeditions.

Douglass and Houghton, as botanists of the early nineteenth century, followed the traditional idea of science to “seek, find, collect, and share with others.”\textsuperscript{6} During most early historical expeditions, botanists collected with the sole purpose of identifying and describing the species. Plants were gathered randomly at stops along the route, and the specific locations were rarely noted. There was no intensive collecting beyond the immediate route, and no observation of plant distributions. Therefore, the collections made were often poorly representative of the area as a whole.

My collecting style was much the same as the early nineteenth century botanist: I never left the trails, I didn’t have the equipment to mark coordinates, nor did I thoroughly document every plant in an area. I couldn’t determine geographic distributions from this cursory method of collecting, nor did I have the desire since the distributions are well known. I collected simply for the experience of searching for and identifying plants.

As I drove into Tahquamenon Falls State Park, I was hoping my first extensive collecting experience would be fruitful since it was so early in the spring. I parked at the Lower Falls, and walked a few yards onto the trail. A big map said that the Upper Falls were only a four-mile hike from the Lower Falls. I was thrilled to be in a thick forest for the first time, and a rush came over me—I no longer wanted to simply \textit{drive} to the Upper Falls. I went back to my car to get food for the day, and it was only then that I realized that hiking four miles to the Upper Falls would mean hiking four miles back! But I decided I was up for it.

\begin{itemize}
\item \textsuperscript{5} Lehto, Steve. \textit{Michigan’s Columbus, the Life of Douglass Houghton}. (Royal Oak, Michigan: Momentum Books, 2009), 16.
\item \textsuperscript{6} McKelvey, \textit{Botanical Exploration of the Trans-Mississippi West}, ix.
\end{itemize}
I first hiked a short distance on boardwalk trails to the Lower Falls. I collected marsh marigolds (*Caltha palustris*), and was feeling quite energized with trees surrounding me and sights ahead. The boardwalk led me really close to the Lower Falls. The water, as I had read many times before, is brown due to the tannins from leaves. Since it is soft water, the churning caused it to be very foamy and bubbly. I tried not to let my picture-taking fury keep me from pausing and enjoying the moment.

I continued on the boardwalk until I got to a wooden sign that said, “Upper Falls, 8 miles roundtrip, moderate difficulty.” I was nervous at first—hyper-vigilant, I’d say—because I didn’t want to get lost. I soon learned that every so often, a blue dot would be painted on a tree, or bridges and wooden stairs would ensure me I was in the right place. These constant signs of civilization (though greatly appreciated) reminded me that I was nowhere near the uncharted wilderness that the historical explorers experienced. Yet, the fact that I saw less than ten people during my entire time in the park allowed me to humor that my experience was somewhat similar.

As I continued to hike, the trail was a tangle of roots. I often had to watch the ground, but that was actually convenient because I could also look for flowers. As I hiked towards the Tahquamenon River, I crouched down to collect a purple flower with a nectar spur. The *Viola conspersa*, or dog violet, is a common plant in disturbed areas like trailsides,7 and I continued to collect this plant throughout my entire expedition.

I hiked on, and couldn’t help but observe everything. I took pictures of the river flowing silently beside me, strained my eyes to find hints of colorful flowers in the green, and smiled at the way the trees framed the trail. I collected field horsetail (*Equisetum arvense*), more marsh marigold (*Caltha palustris*), fly honeysuckle (*Lonicera Canadensis*), and yellow trout lily (*Erythronium americanum*). It seemed like I had been hiking forever and was confident that the Upper Falls were just around the corner. So, I was more than astonished when I came across a measly two-mile marker! Collecting plants, I discovered, was a time-consuming process.

A letter from Douglass describes the plant collecting of the Cass expedition: “I must beg leave to observe in the first place that the collection of plants was made by a person, who, besides not being a professed botanist, was almost constantly engaged with other objects of

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research. The formation of an Herbarium, requiring much leisure and frequent attention, could scarcely be expected..."8 I was beginning to understand where Douglass was coming from; if botanical collecting had been their complete focus, they wouldn’t have gotten anywhere!

In fact, the primary purpose of most historical U.S. expeditions was not botanical collecting. Botanists often accompanied expeditions that had central goals related to military, commerce, or settlement of a region.9 Plant collecting, therefore, was rarely a priority, and collectors were often left with little time to gather specimens.

There were also many additional conditions working against collectors, and gathering specimens was far from a frolic in the woods. Many expedition botanists were not yet professionals in the field. Over lengthy expeditions, they may have gained valuable experience, but many simply started as young, energetic men, with an interest in natural history and the right connections.

And they had to be energetic because after a day of trekking with the expedition, their job was far from finished. In order to preserve the plants, they would have to be dried—an onerous task with no escape from the weather. The botanist would arrange the plant in a plant press, which squeezed the specimen between sheets of paper to absorb its moisture. The botanist would also examine the collections each night, changing the paper when needed, and checking for mildew. In addition to preservation, the botanist kept botanical notes that, optimally, included descriptions of the plant, its habitat, and the exact location it was collected. However, this sometimes did not come together for the overworked collectors.

After the expedition, the botanist would often ship the plant specimens to descriptive botanists in cities such as Philadelphia or New York. These professional botanists (including John Torrey and Asa Gray) would utilize the collector’s field notes and specimens to identify, name, and describe the plants. They would mount the specimens for placement in a herbarium, and would often publish their findings in a catalogue of plants in order to spread the new knowledge to other botanists.

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8 Torrey, John. “Notice of the plants collected by Professor D. B. Douglass, of West Point, in the expedition under Governor Cass, during the summer of 1820, around the Great Lakes and the upper waters of the Mississippi; the arrangement and description, with illustrative remarks, being furnished by Dr. John Torrey.” American Journal of Science and Arts Vol 4 (1822): 57.
9 McKelvey, Botanical Exploration of the Trans-Mississippi West, xiii.
Though the descriptive botanists worked in the comfort of civilization, their job was still affected by the will of nature. A complete herbarium specimen includes fruit, foliage, flowers, and underground structures, yet the botanist had no say as to when the expeditions left and it was not always during the optimal season for these structures to be present. This often resulted in incomplete specimens, which made it more difficult for the descriptive botanists to accurately classify the plants, and classification was frequently put on hold until more plants could be gathered.

But, as I was experiencing, gathering plants takes time. “Collectors of anything need time for their task and are famous for their unwillingness to hurry!” Susan McKelvey explains in *Botanical Exploration of the Trans-Mississippi West 1790-1850*. “The primary object of expeditions whether by land or by sea was to get somewhere, and as quickly as possible.”

With this objective in mind, I started walking faster, and the trail headed away from the river. I was trucking it, huffing and puffing up zillions of stairs leading me into the woods. All of a sudden, I caught something out of the corner of my eye, and breathlessly exclaimed, “Dutchman’s Breeches!” I had never seen the little plant before in real life—only on my botany flash cards—and there it was! Dissected leaves and all! “Oh no,” I thought, “I am officially strange.” If I had fellow expedition members, they would have surely nicknamed me. I would have been cursed with something along the lines of “Seaweed Saunders” of the Harriman expedition, or “Mister Florist” of the Nicollet expedition. I laughed, happy to find a new plant, and thankful that no one heard my bizarre proclamation.

On this elevation above the river, I also collected the pink, two-sepaled Carolina spring beauty (*Claytonia caroliniana*) and many downy yellow violets (*Viola pubescens*). The last mile of the trail was constantly changing elevation, but I made it to the Upper Falls, and collected the blue forget-me-not (*Myosotis scorpioides*) before descending 200 stairs to see different views of the impressive falls.

Next, I decided to hike further on the Big Pines trail, which added about a mile and a half to my total. The highlight of the trail—a big, white pine—was 175-years-old! Yet, that meant that the tree didn’t even exist during the Cass or Schoolcraft expeditions. I couldn’t gape for long, and the hike back to the Lower Falls was all business. I did, however, move my eyes from my feet enough to notice the trees. The forest had a lot of hemlock, and signs near the Upper

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10 McKelvey, *Botanical Exploration of the Trans-Mississippi West*, xxviii.
Falls labeled sugar maples and beech trees (many of which had fallen due to beech bark disease). The trail was often covered in pine needles, and the birch trees continued.

I counted each mile marker, becoming increasingly exhausted. When I reached the Lower Falls again, I literally laid down on the benches in front of them. Hiking back took me half the time it did to get out! After a long, restful stare at the falls, I walked back to my car and drove about an hour to the town of Grand Marais on the east side of Pictured Rocks National Lakeshore.

The expedition members paddled past Two-Hearted River before reaching Grand Marais, which is French for “great marsh.” In 1820, Douglass noted that the area is, “filled with swampy growth and dead pines as far as the eye can reach.” By 1832, however, the environment in the area had changed. The expedition members spent the Sabbath resting at Grand Marais, and Allen describes the area as “a beautiful little bay” that had “once been a marsh, which, within the recollection of some old voyageurs, now present, has been washed away to its present state.” Schoolcraft says that the inlet had enlarged or “washed away” due to the strong northwest storms, and declares that the environmental change is “striking proof of lake action.”

When I arrived, I found striking proof of human action. My impression of the area was that it was a cute town—a sure tourist destination. I set up camp at Woodland Park, and noticed that my efficiency had greatly improved. I knew which equipment to get out in which order, and wandered the numerous empty sites, gathering leftover firewood. I had an amazing Lake Superior view, and sat warm and toasty in front of my campfire, feeling satisfied and roasting s’mores with the waves roaring in the background. I was tired after my long day of hiking, and feeling grateful that there was no plant pressing to be done as my specimens were already well preserved in my camera.

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**Patterson Expedition**  
*To the source of the Mississippi River, 2010*

**Species:** *Dicentra cucullaria*  
**Common Name:** Dutchman’s breeches  
**Location:** Tahquamenon Falls State Park, Michigan, River trail, woods higher from shore  
**Date:** May 6, 2010  
**Collector:** Lorah Patterson
May 7, 2010

Expedition Day Four:

“We can never have enough of nature. We must be refreshed by the sight of inexhaustible vigor, vast and titanic features, the sea coast with its wrecks, the wilderness with its living and its decaying trees, the thunder-cloud, and the rain.” -Henry David Thoreau

When I woke up there was frost on my car. A man at the campground looked sympathetically at my tiny tent and me, and I kept having to ensure people that I had a space heater. I knew it was early in the season for camping, and I was the only tent-camper at every campground for the first three-quarters of my expedition.

Nevertheless, I sat in my tent planning my hikes and then drove a short distance to Grand Sable Dunes. I collected some large-flowered trillium (*Trillium grandiflorum*), which were plentiful around the paper birch-packed forest leading up to the dunes. Then I walked on a narrow path through a field full of grasses and forget-me-nots. The hike was less than a mile, and as I climbed from forest to sand, the view out to Lake Superior was beautiful… beautiful and steep.

The Grand Sable Dunes border the shoreline for nine miles, so the expedition members had ample time for observation as they continued paddling through Lake Superior. Doty could “scarcely believe it possible that such a quantity of sand could by any means have been collected and raised to such a height.”\(^1\) Douglass describes the steep-sloped hills rising 200-300 feet as “a curiosity,” noting that the dunes “are for the most part perfectly naked of vegetation in front and at top.”\(^2\) According to Schoolcraft, the inclines and bareness create “a novel and interesting appearance from the lake.” Yet the views also “present a great uniformity, and leave upon the mind a strong impression of bleakness and desolation. Even the few bushes and trees which are occasionally seen serve to increase this effect by their impoverished growth.”\(^3\) To Schoolcraft,


\(^3\) Schoolcraft, Henry R. *Narrative Journal of Travels from Detroit northwest through the great chain of American lakes to the sources of the Mississippi River in the year 1820.* (Albany, New York: E. & E. Hosford, 1821), 146.
the dunes were of greater geological interest than botanical. But I collected a few plants enduring the harsh conditions of the sandy slopes, and continued on my way.

Next, I hiked to Sable Falls. Seeing waterfalls in the morning is always a great way to start the day. The falls flowed through a sandy forest and put me in a calm mood, but I was happy to get back to my warm car. I drove for 12 miles on Adams Trail—a gravel road—since sections of the highway through Pictured Rocks National Lakeshore were closed. The warm drive and my hike in the sand had made me really sleepy, but I still decided to hike the Chapel Loop of Pictured Rocks National Lakeshore.

The hike was a 9.7 mile loop past Chapel Falls and Chapel Rock, but I mostly wanted to see the view from the five miles of hike that bordered the rocky coastline. I was nervous to start such a long hike after doing the same yesterday, and especially because I was tired. But I didn’t have another plan, and it was the only way to see the rocky coast since boats don’t run this early in the year. I drove on a five-mile long dirt road to the trailhead and passed a few houses. One had a scarecrow in the form of two rangers hats and a pipe meant to look like a gun. I figured it was more “scarebear” than scarecrow, which made me question starting this hike even more.

I made it to the trailhead and saw five other cars there—more than I had seen at any other park so far—which comforted me somewhat as I began to hike. The plants appeared to be the same as those at Tahquamenon, so I kept my camera in my bag. Yesterday’s hike was more observation-oriented, but today I was trying it the expedition’s way. My objective was to get to a certain point, so traveling fast was my priority. I took one picture of Chapel Falls, and then continued into the monotonous forest. Luckily, the trail was easier than the one at Tahquamenon; there were no roots and less climbing. I hiked the 3.3 miles to Chapel Rock in about 55 minutes. The rock had a tree growing right on top of it in the strangest way, but signs warning of erosion prevented me from going out on it.

From Chapel Rock, I turned west, and my morale improved dramatically as I got my first full view of the rocky coast. The trail was really close to the edge of the cliffs; I would see massive rocks ahead of me, and then I would be on top of those same rocks looking back at the rocks I had just hiked from. Lake Superior was bright blue and waves crashed with a low-
pitched, powerful sound against the rock walls. The slam was so forceful and booming that I couldn’t imagine canoeing down there like the historical expeditions had done.

In fact, the night before the 1820 expedition arrived at Pictured Rocks, the expedition members were bombarded with a tremendous storm. Doty writes, “from the continued flashes of lightning the Lake appeared on fire.” Three tents, including Cass’, were blown down in the torrent, and waves wetted much of the baggage. Trowbridge records that it was “the most violent thunder storm I ever knew.” They delayed their departure until the waves subsided at 11o’clock the next day, but—just like me—any lack of sleep was quickly forgotten at first sight of the Pictured Rocks.

Each expedition member’s journal is filled with praises of the incredible scenery of the Pictured Rocks: Allen calls them “the most beautiful and picturesque part of the whole southern coast of Lake Superior;” Doty says that his excitement exceeded that of when he viewed Niagara Falls; Schoolcraft declares that, “We almost held our breath in passing the coast; and when, at night, we compared our observations around the camp-fire, there was no one who could recall such a scene of simple novelty and grandeur in any other part of the world.”

The influence of religion and romanticism on scientific observation in these early expeditions was clearly demonstrated in the reports of Pictured Rocks; More than one expedition member contemplated the significance of humanity while staring at the immense landforms. Douglass declares that the rock walls look more like huge castle walls than works of nature, and says, “our feelings scarcely could find utterance in words when we found ourselves at the foot, and when we attempted to raise our eyes to the dizzy height which frowned directly over our heads. We almost shrunk from the view as with a vivid consciousness of human insignificance.”

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4 I agree with Doty’s 1820 description of the booming: “From the deep caverns underneath a roar like that of cannon is continually reverberated, occasioned by the waves rolling in.” (Papers of James Duane Doty, 186.) Douglass says, “The deep hollow rumbling of the waves in these dark recesses was wonderful and added not a little to the sublimity of the place.” (Jackman, American Voyageur, 49.) But the waves could be a major problem for boats, and Schoolcraft says, “there are very few places where a landing can be effected.” (Narrative Journal, 154.)

5 Doty, Papers of James Duane Doty, 185.


He writes that Cass exclaimed, “Great God! What is man that thou art mindful of him or the son of man that thou visitest him?” And Trowbridge, too, declared that, “the insignificance of man is portrayed in the most striking manner.” The romanticism of the scene didn’t escape Schoolcraft, and even inspired him to write a bit of poetry.

As they continued paddling, the awe-inspiring rocks sprawled for 12 miles along the coast, and—poetry aside—it was a geological paradise for Schoolcraft. He writes, “The day was fine as we passed these geological ruins, and we sat silently gazing on the changing panorama,” and continues with many pages of geological descriptions. Trowbridge explains that, “they are called the pictured rocks from the circumstance of their being variegated with the veins of different kinds of ore running through, and colouring the surface.” And, although the lofty declarations of beauty given in the expedition reports tend to catch my attention, the geological facts were more valuable to the public at the time the reports were published. People were more interested in finding unexploited mineral resources on American territory than dreaming of scenes that, due to their distance from civilization, they were unlikely ever to visit. In fact, the colorful descriptions did little to attract public attention to the sights of the Upper Peninsula, and visitors to Pictured Rocks from outside of Michigan were few before World War II ended. Yet, the expedition members clearly could not contain their enthusiasm at the colossal sight of Pictured Rocks, so readers had to do a bit of digging to find the objective observations in the reports.

The expedition members each described the towering walls, caverns, waterfalls, and arches of the scenic landscape, and the attractive “Doric Rock” escaped very few of the accounts.

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11 See Schoolcraft, *Narrative Journal*, 152 for the short poem he wrote during the expedition. It is also interesting to note that Pictured Rocks was featured in sections of Henry Wadsworth Longfellow’s “Song of Hiawatha” written in 1855, in which many of the facts were obtained through Schoolcraft’s research of the Anishnabeg people.
15 Ibid
16 Though the public was interested in finding resources, they may not have been as eager to hear of scientific progress; Osborn, in his book *Schoolcraft Longfellow Hiawatha*, writes: “None of the sciences were taught in American colleges and other institutions of learning in this country [around 1820]. In fact the general trend of public opinion was decidedly against the study of geology, or the investigation of any question which might lead to the discovery of supposed inconsistencies in the Mosaic account of creation (341-42).”
They said that it was the largest arch and resembled the mantle of a fireplace sitting on four natural pillars. Doric Rock collapsed in 1906, but there are still plenty of amazing arches to see. My favorite outcropping of rock was a long, flat portion that looked like it was painted in shades of black, white, and brown. At the end of the flat portion, there was a mammoth arch. Seagulls circled along the immense walls, and waves filled and emptied sea caves dotting the bottom. As I was leaving the scene, I passed a dad and his daughter hiking in the opposite direction with huge backpacks. We each unloaded some of our enthusiasm on each other, and I followed their footprints as I continued hiking the trail along the coast.

I had my watch on this hike, and it helped me deal with the length because I no longer felt like I was hiking endlessly. I gave myself goals, and decided I’d get to the Mosquito Falls turn away from the coast and back into the forest after 75 minutes of hiking. I hiked determinedly until I arrived at a gorgeous part where what could have been a normal, flat sand beach was actually made of crumbly flat rock. I was about to pass it when I saw a sign for the Mosquito Falls turn. I glanced at my watch, and exactly 75 minutes had passed! I celebrated by taking the rope ladder down to the rocky beach and resting for a few minutes before turning away from the enduringly beautiful coast.

I hiked through the Mosquito River Campground—a primitive campground in the middle of the woods. I passed metal poles with hooks on the end meant to keep food bags from bears. That was a reminder, and whenever I heard a noise that could have been an animal I stepped loudly or did something so it would know I was there. There were multiple paths running through the campground, and I had to get out my compass. I felt like a pro-hiker as I took the trail headed east, and eventually arrived at a sign that said, “Parking, 0.3 miles.” I rejoiced!

I drove to Munising and checked into a motel in anticipation of the oncoming snow. I fell asleep, exhausted at 8pm on a bed with a bear carved into the headboard.
Patterson Expedition
To the source of the Mississippi River, 2010

Species: *Trillium grandiflorum*

Common Name: Large-flowered trillium

Location: Forest leading to Grand Sable Dunes, Alger County, Michigan

Date: May 7, 2010

Collector: Lorah Patterson
Munising to Ontonagon
Patterson Expedition Days 5 – 9
May 8, 2010

Expedition Day Five:

Today when I woke up it was snowing! Only about an inch stuck to the ground. My expedition is about two months ahead of the historical expeditions, so they never had to deal with snow. I was glad that I had a warm motel room to wake up in. Yet, I decided to brave the weather and go on a short 1.2 mile hike to Miners Falls.

Miners Falls are on Miners River—a river that the expedition members passed as they continued paddling along the Pictured Rocks. Allen says that the surface of the Pictured Rocks “is only broken in one or two places by small streams and their little valleys, the largest of which is Miners river.”¹ Douglass sketched the “fine scenery” when the expedition landed for a short time on its banks. None of the expeditions traveled to Miners Falls since they are located further inland, but I enjoyed hiking through gorgeous trees covered in a layer of snow to see the amazing falls tucked into the green.

Next, I drove to Miners Castle. The towering rock formation was named in 1771 during Alexander Henry’s exploration for minerals in the area. No minerals were found, but the name remained.² Today, the formation is a popular tourist spot, but I was alone in the giant parking lot on this snowy afternoon. I walked out to one overlook and it was so windy—like painfully windy, like “why am I on the edge of a cliff?” windy! But from this overlook, I saw that I could go on the actual formation, and I had to do it.

Once I got out on the rock, I looked down and the waves were enormous. It was a nice visual of why the expedition had to wait for that storm to pass before they paddled out to Pictured Rocks; no canoe could have stayed upright in those waves. The forces of nature were surrounding me: whipping winds, crashing waves, mammoth rocks, and snow pelting down from the trees. On first thought, the enormous rocks look permanent, but these forces of nature created major modifications in the shoreline since the historical expeditions and caused one of Miners Castle’s turrets to collapse in 2006. I stood in awe of the enormous waves for quite a while, and it definitely made an impression on me. Yet, even though Miners Castle is the best-known

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feature of Pictured Rocks National Lakeshore today, none of the expedition members mention the rocky tower in their reports.

Next, I drove to Munising Falls, and took a quick picture before I returned to the warmth of my motel and relaxed for the night. The expeditions spent the night camping on Grand Island. When the Cass expedition arrived on the island they were greeted by a village of Chippewa Indians, who, in Schoolcraft’s opinion, “manifested the most friendly disposition towards the party, and towards the United States.” The Chippewa danced and played music for the expedition members, and Schoolcraft learned more about the conflict between the Chippewa and Sioux tribes. I’m pretty sure I just spent the evening watching TV.

May 9, 2010

Expedition Day Six:

“I learned that the richness in life is found in adventure. It develops self-reliance and independence. Life then teems with excitement. There is stagnation only in security.”

-William Orville Douglas

This day has made me very strong. It definitely didn’t go according to plan, but neither did many of the expedition member’s days. Though it started fine enough; I packed up and went to the grocery store for band-aids for my blisters, lotion for my dry skin, and fresh food. Then I wanted to go to Laughing Whitefish River.

The expedition members only passed the outlet of this river, and Trowbridge writes that “from every appearance at the mouth, this river is well named, for there were many lodges left standing and the ground was covered with the bones of the fish caught.”¹ The expeditions continued paddling on Lake Superior past the mouth of the Chocolate River (now Choclay River) and Dead River, and then made some geological observations on Marquette’s Presque Isle. But since my expedition is more land-based I decided to see the highlights of Laughing Whitefish River.

The directions to Laughing Whitefish Falls were quite confusing, and I anticipated that the drive would be tough. I was delighted to find, however, that the falls were in my GPS, so I arrived at the right road easier than expected. The only problem was that it was a dirt road—a horrible dirt road. There were huge puddles of water covering its entire width, and I didn’t want to get stuck or drive into a deep pool. I got out of my car and poked a stick into the muddy water to check its depth. Luckily, the bottom of the puddle seemed quite firm and shallow, so I held my breath and floored my car across. I made it, but the seemingly short 0.2 mile drive on the dirt road left me surging with adrenaline.

I hiked less than a mile to the falls, which were incredible and trailed thinly over fractured rocks. No one else was there (as usual), so I climbed through the fence to get a great

picture. I’ve read the falls are greatest and have the most water flow in the spring, so I felt like I was here at the right time.

Next, I wanted to go to Laughing Whitefish Lake Preserve, but when I got back to my car, I had a choice to make. I could turn left and go on a long highway detour to approach the preserve from the north, or I could turn right and continue on the horrible dirt road and approach the preserve from the south. I stopped my car at that intersection for quite a while, but reasoned that if I approached from the north, I’d still have to drive on part of the dirt road anyways. So, I gathered my courage, and turned right.

Big mistake.

Enormous mistake.

My poor, poor car.

Now that it’s all over and the stress has subsided, it’s a fun story to tell—a true adventure. But it was only a few hours ago, so I also kind of get a lump in my throat just thinking about it.

I started driving, swerving to get to the edges of puddles and avoid huge bumps as much as I possibly could. I was pretty terrified and talking to myself quite a bit. I knew I had two miles until I would turn onto another road, and I had hopes that it would be in better condition. So I continued. I had to drive far off the “road” to avoid a huge uprooted tree trunk, cross a stream flowing across a narrow strip of dirt connecting two marshes, and floor it through continuous puddles—one over two cars long! My mouth was completely dry, and when I made it the two miles and turned onto the next road, it was unbelievably worse.

Worse because I had to get out of the car and move an entire tree off the road before the whole path turned into a creek. Trickles of water flowed down the path, and huge rocks painfully smacked the bottom of my car. I didn’t know how much damage I was doing to my car, and I basically calmed myself by knowing I wasn’t going to die… my car might just become stuck in the middle of nowhere… with me in it.

The road kept getting more rocky and wet and I began to get angry; I had been driving in complete stress for so long that I was finished with fear. Trees were scraping my doors, rocks continued to bottom out my car, and I was bouncing around on my seat, gripping the wheel with pruned fingers.
At that point, an entire river bisected the road. It was about seven feet wide, and flowing fast. I got out of my car and realized that it was impassable. I’d have to turn around and relive this whole nightmare in reverse.

But there was little time to agonize. I was in the middle of nowhere, completely alone, and it was entirely up to me to solve my problems and get myself out. I had no choice but to face my reality and get back into my car. I angrily gassed and braked into the trees as I struggled to turn my car around on the narrow path. This time, I was driving uphill and against the flow of water. Amazingly, I felt better—I knew what was ahead and I could see an end. Turning back on the first dirt road was actually a relief; the huge puddles that had scared me before were nothing compared to the rocks. I went into a zone, approaching the driving systematically, not emotionally.

When I finally hit pavement, all I could do was stare straight ahead in shock. I seriously felt like I could do anything I was dreading doing in my life—nothing would be as terrifying as that drive.\(^2\) I got out of my car on the side of the smooth, paved road to assess the damage. My car was covered in mud and scratches, but I decided it was fine and drove slowly, listening for any weird noises. I found a car wash in Marquette, and loved washing away all the mud with fruity-smelling soap that let me forget my adrenaline-packed morning.

It was only 1:00, but I had no other plans but to set up camp. I drove to Ishpeming, and the campground looked nice. But when I drove to the office, a sign said the park was closed until later in the month. So that plan was out, and I decided to go forward with tomorrow’s agenda. I drove Presque Isle State Park in Marquette in order to hike to Granite Point. When I turned onto the road to the trailhead, it was dirt. I felt like if my car hit one more bump today, it (or I) would fall apart. So, I parked further away and walked the dirt road to the trailhead.

Granite Point was interesting—pink rocks took the place of sand and were broken into pieces along the shore of Lake Superior. The Cass expedition camped on the point, and Schoolcraft actually coined the name “Granite Point” in 1820 after first observing the bluff of rock. Schoolcraft says, “The entire width of the point may be estimated at half a mile.”\(^3\) I, too, noticed that it was small, and I imagined that this had to have been the exact place the expedition members observed. The 1832 expedition also visited Granite Point, and Allen says that the

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\(^2\) Fascinatingly, I’d still rank it #2 on my list of terrifying drives.

\(^3\) Schoolcraft, Henry R. *Narrative Journal of Travels from Detroit northwest through the great chain of American lakes to the sources of the Mississippi River in the year 1820.* (Albany, New York: E. & E. Hosford, 1821), 159.
granite was “heaved up in a very irregular and confused mass, presenting numerous irregular fissures, and overlayed with red sandstone for ten or fifteen feet above the surface of the lake.”

As I stood on the piles of crumbled rocks, I could see Little Presque Isle a short distance into the water. It appeared to be quite shallow, and I probably could have walked across with waders, but I instead headed into the forest along the coast to collect some plants.

Douglass notes that the forest growth near their camp was white and yellow pine, spruce, hemlock, fir, maple, and mountain ash. He also found gooseberry, honeysuckle, and “for the first time an abundance of roses.” I hiked along the eastern shore and saw hemlock and fir, and further along pine and birch came into the mix. Douglass spotted the roses on June 23rd, but since I was in the same location nearly two months earlier, there were no flowers and the groundcover was primarily green leafy plants. There were quite a lot of people here, and quite a lot of dogs—much different than any other park I had encountered so far. I walked about three miles, seeing coves carved out of the pink stone and fallen trees jutting out over the beaches.

I then found a motel in Marquette. I anticipated feeling disappointment that I couldn’t camp because staying in a motel kind of takes me out of the expedition experience. But tonight, as I turned up the heat and sat on the couch, I simply felt very happy to be alive, my car intact.

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5 Schoolcraft also says that the area was covered with yellow pine, but gives the Latin name *Pinus resinosa*. So, it is more likely that they were observing red pine. (Schoolcraft, *Narrative Journal*, 159; Jackman, *American Voyageur*, 51.)
Laughing Whitefish Falls

Granite Point with Little Presque Isle in the distance
Species: *Pinus resinosa*
Common Name: Red pine
Location: Granite Point, Marquette, Michigan
Date: May 9, 2010
Collector: Lorah Patterson
May 10, 2010

Expedition Day Seven:

Today started slow because I had already done the hike I planned to do today. I suppose since Schoolcraft didn’t travel on the Sabbath, I would consider this my day off… like him… except it was Monday. But I’m commander here!

The expeditions continued, passing the outlets of the Big Garlic, Yellow Dog, and Salmon-Trout Rivers. The 1820 expedition took interest in an Indian grave that they observed near the “the picturesque cluster of Huron Islands” off the Huron River. They also noticed a plant called *kinni-kinick*, which was used by the Indians as a substitute for tobacco. They then canoed past Point Abbaye, and entered Keweenaw Bay.

I couldn’t find a feasible way to see the Huron Islands this early in the year; it would have required driving on dirt, back country roads and possibly commissioning a boat. I may have been able to spot them from Point Abbaye, but the end of the point could only be reached by a long drive along a narrow, winding dirt road. The directions I found online informed me to turn right onto the road with a “no outlet” sign, then ‘just keep on truckin’.” I decided I could skip another view of Lake Superior.

I decided to go to the Michigan Iron Industry Museum even though it wasn’t completely relevant to the expeditions. I learned that in 1840, when Houghton was exploring for copper during Michigan’s first Geological Survey, he missed finding any iron. There was also some information about the Soo Locks. I even walked down a dark, cold hallway that had been made to look like a mine. Then, I checked out the shops downtown in Marquette. The benefits of a 21st century expedition were becoming more and more apparent.

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2 Schoolcraft could not find a description of this plant, so he described it himself as “a creeping evergreen with an ovate leaf, of a deep green colour, and velvet-like appearance, and is common to sandy soils.” (Ibid, 161.)
May 11, 2010

Expedition Day Eight:

So where am I now? Of course I’m getting myself into another adventure! And this one involves vault toilets, an empty state park, a chance of rain, and no cell phone service. I am at McClain State Park on the Keweenaw Peninsula. I really wanted to camp tonight, and found a gorgeous site—now I know how to pick them. It’s grassy (soft), far from the lake (less wind), not under any trees (no dripping on my tent all night if it rains, but I’m planning on willing it not to rain), and not at the bottom of a hill (where the rain (that is not going to fall) would gather). It’s a little eerie because no one is around. The campground is long and narrow, and the two RV’s I saw are far away from me.

Well, today started off fun. I read the expedition member’s observations as they portaged across the Keweenaw Peninsula, and was excited to see it for myself. The expeditions preferred the portage to paddling around the point of the peninsula because it saved them from having to travel over 100 extra miles. But the portage (and even getting to the portage) was still a great challenge.

When the 1820 expedition entered Keweenaw Bay on the east side of the peninsula, they had to paddle 12 miles across it to reach the mouth of the Portage River. The journey across was quite difficult because of the wind, and only three of the five canoes were able to make it on the first night.¹ The others finished the crossing in the morning, and as they paddled up Portage River they soon came to Portage Lake. Schoolcraft writes that the lake “exhibited a rank growth of aquatic plants, and terminated, after following a very narrow channel, in a quagmire.”² It was in this quagmire that the two-mile overland portage connecting Portage Lake to Lake Superior began.

¹ Trowbridge’s canoe was one of the two canoes that couldn’t make it across the bay on the first night. The next morning, his canoe set out on their second attempt to cross, and Trowbridge writes that, “We succeeded however after buffeting the waves for 5 hours, during a part of which time we gained hardly an inch, in mak[ing] the mouth of the River… During our passage we kept one man constantly at work to throw out the water.” (Brown, With Cass in the Northwest 1820, 238.)

² Schoolcraft, Henry R. Summary Narrative of an Exploratory Expedition to the Sources of the Mississippi River, in 1820: Resumed and Completed by the Discovery of its Origin in Itasca Lake, in 1832. (Philadelphia: Lippincott, Grambo, and Co., 1855), 89.
Each man carried their own baggage across the portage, and Schoolcraft writes that “this was an awkward business for most of us.” Holding his one piece—a heavy trunk—Schoolcraft quickly ran out of breath. But Governor Cass laughed, joking that he was doing more work since he was carrying two pieces—his pair of canoe slippers.  

But hauling the canoes and baggage over the portage (for everyone except the Governor) was grueling work. Trowbridge writes that, “Our men were obliged to get out and wade in the mud up to their breasts, and it was only by dint of the most obstinate perseverance that we at last succeeded with our largest canoe.” Douglass says that he “shouldered my bedding, pistols and mineral specimens” as he “floundered though a deep swamp of hemlock and tamarack almost to our knees in mud at times.” The portage wound nearly a mile through the swamp, and finished on what Trowbridge describes as “fine high country.”

They stopped for the day on this elevation, and it revealed a limitless view of Lake Superior. It took all of that evening and half of the next day to haul all the baggage up the elevation, and winds further delayed their departure. But Schoolcraft was amongst the scientists who made the most of the delay, saying that it “gave us an opportunity to ramble about, and examine the shore.” Schoolcraft found a boulder with two pounds of imbedded native copper, and said that the Chippewa, Ottowa, and Shawnee Indians attached to the expedition became excited by the finds and “as soon as they were made acquainted with the objects sought, they became successful explorers.”

Douglass also explored the area to “botanize.” He writes that he “found abundance of the purple sarrascenia [Sarracenia purpurea, or pitcher plant] and a moccasin flower of a pale rose colour and white.” By moccasin flower, he was referring to a lady’s slipper orchid, and found three species of these distinct plants on Keweenaw Peninsula: Cypripedium spectabile, C. album, and C. canadense. He also collected the buckbean Menyanthes trifoliata, the grass pink orchid

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3 A “piece,” Schoolcraft says, is a “back load.”
4 Schoolcraft, *Summary Narrative*, 90.
7 Schoolcraft, *Summary Narrative*, 90.
**Calopogon pulchellus**, and the green-flowered orchid *Cymbidium pulchellum* (now *C. chloranthum*).  

In 1832, Houghton also had success collecting plants along the portage. He traveled in Schoolcraft’s canoe across the peninsula, while the larger Mackinaw boats accompanying the expedition were forced to take the longer journey around Keweenaw Point. He collected the seaside arrowgrass *Triglochin maritimum*, the American golden saxifrage *Chrysosplenium americanum*, and (like Douglass) the buckbean *Menyanthes trifoliate* in the marshes along the way.  

I was excited to see what I would find on the peninsula, and began the day driving two hours and 100 miles from Marquette. My first stop was on Portage Entry road—where the Portage River begins at Keweenaw Bay on the east side of the peninsula. I had to walk through someone’s driveway to see the concrete-bordered outlet into Lake Superior, but this (with obvious modifications) was the exact place that the expeditions entered into the peninsula. The modifications, first made in 1859, created a channel through Portage River to Portage Lake that allowed larger ships to reach the towns of Houghton and Hancock. The channel was dug just four years after the opening of the Soo Canal due to the prevalence of larger ships in the area.  

After snapping a few pictures, I trudged back through the stranger’s yard to my car. I continued driving to the town of Houghton. Yes—named after *that* Houghton! Houghton’s actions on Schoolcraft’s expeditions weren’t the main reason that a town was named after the botanist and geologist, but they did aid him in his future successful endeavors. In the years following the expedition, Houghton helped discover and develop the mineral wealth of the Upper Peninsula, launching Michigan’s first geological survey and rousing the copper boom.  

However, I was more interested in the plants than copper history (and all the mining museums were closed anyway), so I decided to stop at Nara Nature Park. I read that they had marsh trails. I knew it wasn’t the exact place the expedition members portaged almost knee deep in mud across the peninsula, but it was close.  

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10 Osborn, in his book *Schoolcraft Hiawatha Longfellow*, writes that Houghton “gained experience under Schoolcraft that not only stimulated his natural love for adventurous exploration but also instructed him in those methods of travel and sustenance in the wilderness of which he made such effective use during the progress of the Geological Survey of Michigan (342).”
First, I explored the forest trails. I walked along a river that flows into Portage Lake, and the woods were not very majestic when compared to Tahquamenon or Pictured Rocks—they still looked quite snow-battered. I collected many tree species (including eastern white pine, yellow birch, sour cherry, and paper birch) and spotted yellow trout lilies and wood anemones. Then I crossed the highway and headed out onto the marsh trail. I collected speckled alder trees (*Alnus rugosa*), peachleaf willows (*Salix amygdaloides*), cattails, paper birches, and more yellow trout lilies. I didn’t see any tamaracks like Douglass did, and only a couple of hemlocks,11 but I was further east of the true portage.

Next, I drove a short distance into the main street of Houghton. I drove across the blue bridge connecting Houghton and Hancock, and headed to McClain State Park. The park is on the Hancock side of the peninsula, and I came here for two reasons: there’s no other camping around, and it’s on the west side of the peninsula so I can see where what is now Portage Canal connects with Lake Superior.

At the time of the expeditions, what is now the Portage Canal was the two miles of swamp and highlands that they trudged over on foot. The channel was dug between 1868 and 1873 so that the ships would no longer have to go the extra 100 miles around the point of the peninsula. I walked down to where the canal flows into Lake Superior, and stood on the dreariest beach I’ve ever seen. I’m sure it was so dreary because of the black sand, gray sky, and metal barriers that shaped the canal. But I’m also sure the expedition members would have given a lot to continue paddling through its dreariness rather than lift their boats through the muddy swamp!

Keweenaw Peninsula

Entry into Portage River

Hills of the Keweenaw and the Houghton/Hancock bridge

Exit through Portage Canal to Lake Superior

Marsh like that of the portage (Nara Nature Park)
Species: *Erythronium americanum*
Common Name: Yellow trout lily
Location: Nara Nature Park, Houghton, Michigan, wooded trail by Pilgrim River and in the marsh
Date: May 11, 2010
Collector: Lorah Patterson
May 12, 2010

Expedition Day Nine:

“There is pleasure in the pathless woods, there is rapture in the lonely shore, there is society where none intrudes, by the deep sea, and the music in its roar; I love not Man the less, but Nature more.”  - Lord Byron

I am sitting nearly 2,000 feet in the air on a tower on the summit of the Porcupine Mountains. This day has been like that—a series of highs and lows, the highs being unfathomably glorious, the lows leaving me feeling out of control.

This view is spectacular. I can see a pale blue Lake Superior far in the distance and hills of greenish-yellow trees dotted with dark green pines. I am utterly alone—not a noise but the wind.

Well, the wind and the mosquitoes.

This morning I woke up on the ground. My air mattress had a hole in it. But it didn’t rain last night, so I was happy. It was 6am, and a few drops were beginning to fall, so I rolled out of my sleeping bag and packed up camp. I put everything away with expert precision, and felt quite rustic washing my face with a jug of water in the woods. I started to drive out of the campground, but I wasn’t quite ready to go. So I drove to the opposite side of the park where there was a beach, picnic tables, and a playground, and carried a box of Captain Crunch out to the swings.

I watched the sunrise over Lake Superior, the cold air blowing my hair. I think it will end up being one of my favorite moments of the trip. I felt like the world was my playground, and it was truly a simple, spontaneous moment. I felt like I had a right to be youthful, with my cartoon cereal and my swinging. I was doing exactly what I wanted to do. And as I was thinking all that, I was also thinking about how I didn’t want to stop swinging. How I didn’t want to drag my feet in the sand, turn away from the sunrise, and walk back to my car.

I realized that I’ve felt that way many times on this expedition. I never want to turn from waterfalls or empty beaches or favorite drives. But I do… in the knowledge that I’m going somewhere else to find more great things. The sunrise warmed my face, the chains froze my
hands, and I stood up, walked away, and looked back at a memory I’ll have forever. Memories are better than pictures. And that place is all mine.

On the drive, I decided to explore more closely the environment along the canal. I crossed over to the Houghton side of the peninsula and drove to the west side of the canal. I saw hills that Douglass mentioned in his journal: “… we wind among the ridge of hills which stretch along the length of this point, and form a succession of scenery much more elevated, abrupt and picturesque than any we have before passed.”¹ But now all the hills are scattered with houses, and I wouldn’t quite define them as picturesque. At one point there was a clearing and I could see cattails beyond a thin forest. So, perhaps the houses and trees impeded my views of the swampy ground the expedition members traversed. Nevertheless, it was clear that so much had changed—most namely the solid road I was driving on, a feature the expedition members surely would have envied.

Next, I drove to the town of Ontonagon. During the Cass expedition, the expedition members explored the Ontonagon River to see the giant copper mass known as the Ontonagon boulder. The party could only travel by canoe for three hours before the river narrowed, causing them to divide. Governor Cass remained with the group that wanted to lighten the canoes and continue on the water, and Schoolcraft, Douglass, and Doty traveled on foot with the second group, following the Native American guides to the boulder.

Schoolcraft describes the journey as “one of no ordinary toil.”² Douglass writes that they were “almost continually in a state of abrupt ascent or descent” and that the “day was excessively hot.”³ Doty wrote that he “had never underwent as great fatigue.”⁴ After three hours of hiking, the two parties joined, and Cass was too exhausted to continue. After three more miles, however, most of the party arrived at the Ontonagon boulder.

After such a grueling hike, the expedition members were perhaps expecting the boulder to be glowing in its magnificence. However, this was not the case. Douglass writes that he was

³ Jackman, 57-58.
“greatly disappointed with its appearance,”⁵ and that, “Instead of a large rock of pure copper which had been represented to us both by the voyagers and in the books, we found a mere stone of some ten or eleven cubic feet, probably less than one-third copper.”⁶ Doty shared in Douglass’ disappointment and even questioned if it was the correct boulder. Schoolcraft had a slightly cheerier outlook, saying, “It has been greatly overrated by former travelers… but is nevertheless, a remarkable mass of copper.”

Alexander Henry—the first white man to travel to the boulder in 1771—claimed that it weighed five tons,⁷ but Schoolcraft predicted that the weight of the metallic copper in the boulder was less than 2,200 pounds.⁸ Doty writes, “What this mass might have been I cannot say, but at present it in no respect equals the account heretofore given of it.”⁹ Douglass says that, “the marks of the chisel are in every part,”¹⁰ which the expedition members believed was partially at fault for its diminished weight. Nevertheless, the party chiseled out a few chunks themselves before leaving, and Doty declared that, “any man in his senses having crossed this once will hardly venture again.”¹¹

Schoolcraft apparently felt this way too because his 1832 expedition passed the mouth of the Ontonagon River, but did not travel to the boulder. Allen and Houghton wanted to explore for copper, but Allen says that they “were induced to abandon the project of an excursion to the ‘rock’ at this time, as it would have had the effect of detaining the whole party, at least, two days.”¹²

Today, the boulder has been removed from its original site, and I did not plan to replicate the arduous hike without even the hope of gleaming copper. Instead, I wanted to see a replica of the infamous boulder in the local museum. Unfortunately, it was closed, and when I returned for

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⁵ Jackman, 58.
⁶ Jackman, 58.
¹⁰ Jackman, 59.
¹¹ Wisconsin Historical Society.
¹² Houghton and Allen did, however, take a trip to the boulder on their return journey home. See Allen, Lt. James. Schoolcraft and Allen, (Washington, DC: Gales and Seaton, 1834), 22, 66-68.
a second time—despite the marked hours saying it’d be open—it was still closed. I assumed that was the end of my quest to see the famous rock. But three months later, I finally got my chance to see the boulder—the real boulder.

It just so happens that I was working at the Smithsonian National Museum of Natural History—owner of the boulder for over 100 years. Luckily, Leslie Hale—Rock and Ore collection manager—was more than happy to show me the specimen. So I flitted to the east wing of the natural history museum, camera in hand.

The boulder was taken off exhibit in 1997, and I was surprised to find out that it now sits in quite an unusual place. It weighs approximately 4,000 pounds (no one is sure of the weight because none of the museum scales can measure something that immense) and the floors of the east wing cannot bare that much weight. So, it now sits behind velvet ropes in a random corner of a corridor in the central rotunda. This isn’t the typical place for specimens to be stored, but it is the only place near the rock collections where the floors can bare the boulder’s weight. The boulder is covered with a brown blanket and a waterproof tarp, on which a sign (with increasingly snobbish wording, according to Leslie) warns people not to mess with it. Leslie said that caterers often get ready for events in this space, and she’s seen people stacking folding chairs on the boulder! It has definitely come a long way from Ontonagon River!

Houghton gave the first authentic indication of where the Ontonagon boulder could be found on the river in his 1841 report on the minerals of the region. Houghton stated that the boulder was separated from its original vein of copper, writing, “while this mass of native copper can not fail to excite much interest, from its great size and purity, it must be borne in mind that it is a perfectly isolated mass…”13 Despite this fact, the report inspired prospectors to travel to the wilderness in search of mineral wealth.14

Julius Eldred, however, was more interested in the boulder itself, and traveled to the south fork of the Ontonagon River to collect it in 1843. Its value at the time was only $600, and Eldred wasn’t interested in selling.15 Instead, he wanted to exhibit it as a curiosity. Eldred purchased the boulder from the Chippewa Indians for $150, and constructed a railroad track to

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13 Moore, 1026.
14 Ibid, 1026.
15 Ibid, 1026.
carry it the four and a half miles to the lake. He managed to get the boulder to Sault Ste. Marie when the Secretary of War ordered General Cunningham to confiscate the boulder and compensate Eldred for his expenses. But Eldred argued that the compensation was too small, and the government allowed him to continue transporting the massive rock to Detroit.

In 1843, Eldred charged 25 cents to view the specimen on exhibit in Detroit, greatly raising the public’s knowledge of the artifact. But that same year, the government demanded that it be moved to Washington, DC, and the War Department gained possession of it until approximately 1855, paying Eldred $5,664.98. It was later moved to the Smithsonian, and was displayed in the Castle before any of the other museums were built.

In 1991, the Keweenaw Bay Indian community requested to have the boulder returned to them under the Native American Graves Protection and Repatriation Act, stating that it was a sacred object. The tribe claimed that by making offerings to its Manitou, or spirit, their health would improve, and that it was needed in spiritual ceremonies. After all the evidence was presented, courts determined that the boulder did not fit the legal definition of a sacred object, and that the museum had the right of possession. Normally, Leslie says, the Smithsonian doesn’t fight Native American groups if they want an artifact. This time, however, it was hard for the Native Americans to prove that they used the boulder in spiritual ceremonies since it clearly couldn’t have been moved, and earlier treaties with Native Americans (Treaty of Fond du Lac, 1826 and Treaty of La Pointe, 1842) had given the U.S. rights to acquire copper from the region.

So, the boulder—with its eventful past—remained at the Smithsonian and was now directly in front of me. My first impression of the rock under the tarp was that it was smaller than I expected. Seriously! Even after Schoolcraft, Doty, and Douglass wrote that its size was disappointing, and I was prepared to see something smaller. But I was not disappointed like they were. In fact, I was surprisingly giddy as Leslie uncovered the boulder and I realized that I was right next to history.

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16 Ibid, 1026-27.
17 Moore, 1029.
19 Ibid
The boulder was mostly black, with some sections of shiny copper. Leslie said that the black stuff was a patina. She rubbed her thumb on a thinner part of the patina and said that if her and I sat there for hours rubbing it, eventually we would reveal shiny copper. The sections of shiny copper currently showing through were due to visitors touching it when it was on exhibit. But even before it was exhibited, people had their affect on the boulder. Leslie pointed out a large cut that was made by an axe. In another location, the word “Hi” was carved into a corner and surrounded by the chisel marks of someone trying to hack out a block. But at least the boulder still exists; When the War Department owned it, they could have turned it into cannons or cannon balls. Even when the Smithsonian owned it, it was under threat during the world wars. Fortunately, the large public outcry saved the historic artifact.

Even today, Leslie says that the boulder is the most famous out of the 350,000 specimens she manages in the rock and ore collection. Surprisingly, at least one person a month requests to see it—mostly Native Americans, Michiganders, or copper mining enthusiasts. I glanced at the door to the rock exhibit—literally steps away from where the boulder sits outside of the public’s sight—and said that it was a shame that they couldn’t just move it a few feet. Leslie agreed. But for now, due to its weight and the repatriation controversy, it remains under the tarp, where bits of the flaking ceiling fall onto it and signs order people away.

But back to my expedition—my ninth day was still underway, and after an unsuccessful attempt to see the boulder replica, I was excited to get to Porcupine Mountains State Park (or in Yooper terms—the Porkies). While detained by headwinds in Ontonagon in 1820, Schoolcraft wrote that, “the Porcupine Mountains at the distance thirty miles west, appear to rise out of the lake, and imprint their lofty and rugged outlines upon the distant clouds.”20 In 1832, Allen says that even before Ontonagon, the Porkies appeared “like a long high point.” But on approaching them Allen says that the point was an illusion “produced by the lowness of the land between us and them.”21 They only paddled past the mountains and the mouths of the many rivers flowing through the mountains,22 but I went into the park.

I first decided to drive to Summit Point, which was one of my lows for the day; I felt really lonely driving further from civilization. I find the strangest things comforting on this

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22 Including the Carp and Presque Isle Rivers
trip—things I would have never imagined as being comforting: another car parked at a trailhead, a clearing in the trees out to the water, another car’s tire tracks in a dirt road, footprints. I wondered if the expedition members felt isolated. Their wilderness was so much larger, and their travel woes were much more difficult to escape from. Then again, they had people with them, sharing a common goal, and undoubtedly sharing much more.

The hike to the summit was only a half-mile, but it raised my spirits. Douglass estimated that the mountains rose 1,000 feet, but the summit was actually 1,958 ft, and the view was incredible. Then the drive to the Lake of the Clouds made me forget any sadness completely. As I was driving, I spotted a dark shape on the road. I could barely believe my luck! It was a black bear! When it noticed me, it walked off the road and into the woods. I could see its huge nose as it peered at me through the trees and then disappeared. I smiled, joyous in my close encounter, and locked my doors as I continued to drive.

Mere minutes later, I saw a smaller shape on the side of the road. Raccoon? Beaver? When I got closer, its spikes shot up. Porcupine! In the Porcupine Mountains, of course! He didn’t seem to care about me as much as the bear though, and I watched him slowly mosey over a log and into the trees.

I now loved the Porkies, and climbed up to another amazing scene—the Lake of the Clouds. I collected some plants\(^\text{23}\) and climbed out on a huge slab of rock overlooking the lake. The Carp River\(^\text{24}\) meandered around the green and into the lake, and the tree-covered mountains were more spectacular than any camera could capture. I was alone here as well, and gazed out in awe for as long as I could.


\(^\text{24}\) The expeditions also saw the Carp River. Allen describes it as “quite a small stream, barely admitting boats in its rocky mouth, and drains a part of the Porcupine mountains that rise a few miles back (Allen, 24).”
Me and the Ontonagon Boulder at the Smithsonian

Lake of the Clouds

The view at the summit of Porcupine Mountains
May 13, 2010

Expedition Day Ten:

“Everybody needs beauty as well as bread, places to play in and pray in, where nature may heal and cheer and give strength to body and soul alike.” -John Muir

This morning I took a rainy drive through the Porkies to its west end—the location of the Presque Isle River. The river receives its name from the fact that, during high water, a landmass near its mouth turns into an island. Schoolcraft says that there “are some picturesque and sublime views, worthy the pencil”¹ near the river, so I was looking forward to exploring it. I put on my poncho and rain boots and headed into the woods to see its waterfalls.

I had to hike only a short way before I got to a wet wooden boardwalk that bordered the river. The first falls I saw—Nawadaha Falls—were loud and rushing. There were two fishermen right below them. I thought that they were a bit crazy, but I also thought that they chose an incredibly scenic place to fish.

I then hiked south to see the Manido Falls, and instantly knew that they were my favorite. The rocks the falls flowed over were so geometric, and the rain made the rocks and bark a bit darker, causing the green of the trees to seem even more vivid. The rain also brought out all the scents of the dense forest, and everything smelled indescribably strong. I was alone with the sound of the roaring falls and the smell of damp pines. I was singing to myself along the dripping, red boardwalk, loving every single thing.

I turned around and hiked north towards the river’s mouth. I passed the fishermen again and arrived at a portion of the river that had more rapids than falls. In some places, perfect circles were eroded into the rocks, and foam from the soft water collected in the circles and swirled around like a hot tub. I crossed a cable bridge over the river to another vibrant section of forest—the moss on the trees was bluish and contrasted against the sodden, red bark. I saw where the river emptied into Lake Superior, and then turned around and climbed out of the woods.

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¹ Schoolcraft, Henry R. *Summary Narrative of an Exploratory Expedition to the Sources of the Mississippi River, in 1820: Resumed and Completed by the Discovery of its Origin in Itasca Lake, in 1832.* (Philadelphia: Lippincott, Grambo, and Co., 1855), 103.
It was at this mouth of the river that Allen began his explorations of the area, writing that he went up the river a mile to see two waterfalls. Allen says that the falls were “exceedingly picturesque.” He writes that the river “seems to issue out of the mountain, from which, after running a few feet, it is pitched from a shelving sandstone rock into a deep abyss.” He took notice of the geometric rocks that I saw (describing them as “successive broken ledges” of rock) and the dense vegetation (writing, “the sides of [the river] are so thickly covered with a vegetation of large and small trees and bushes, that I could not without difficulty find a point on the acclivity below the greater fall.”).

But Allen could not stay long, and continued paddling along the coast of Lake Superior for six miles before arriving at Black River. This, too, was my next destination. I, however, had to take a roundabout route out of the park and through the town of Bessemer to the Black River Scenic Byway—a conveniently placed stretch of road leading me to five of the Black River’s seven waterfalls. As I headed up the long road and away from civilization, I got that now familiar twinge of panic. I realized again that when I don’t know the distance to my destination, traveling could seem a bit threatening. But I soon came across a trailhead, and the panic was lost to the sound of roaring falls.

I hiked only 1/8 of a mile to Gorge Falls, and later decided that they were my favorite falls on the Black River. I felt like I was in a rainforest because the rocks were so red and wet, and the water poured over the surface from a backdrop of dense green. Of course, the temperatures and vegetation suggested otherwise, but I still decided it was a Michigan jungle. I walked to the Potowatomi Falls next, and collected corn lily (Clintonia borealis) and star flower (Trientalis borealis) near the river. Then I drove closer to the mouth of the river and hiked to Rainbow Falls. I had to descend a lot of stairs to see those falls, and I actually loved the view of the black rocks downstream of the falls more than the falls themselves. My last stop was Great Conglomerate Falls—a ¾ of a mile hike from the road through a forest coated in bright green.

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2 Allen writes that the falls he saw were a half a mile from each other, so I believe he was referring to Manido Falls and Manabehzo Falls. I did not hike to the latter.
Allen describes the Black River as, “a small stream that drains the south side of the Porcupine Mountains.” Schoolcraft wrote that it was “in a district sheltered from the lake winds, and suited to agriculture. Its borders bear at the same time indications of mineral wealth.” But he didn’t make any specific geological observations due to his eagerness to arrive at their camp eight miles beyond the river, get out of the canoe he had been cramped in for over 50 miles, and stretch his legs: Schoolcraft writes, “We were, in fact, as much pleased to get ashore, after the day’s confinement, as so many boys let loose from the confinement of school.”

Even though my car was pretty much an overflowing mess by this point, I did not feel confined after my long day and had a wonderful time hiking to so many waterfalls. All the cold and wet, however, made me ready for some rest. The expeditions woke up after their night of camping and passed the Montreal River and the Bad River before arriving at the Apostle Islands. But I headed straight across the Michigan-Wisconsin border—a border that didn’t exist at the time of the expeditions—towards Bayfield, Wisconsin. I arrived at rainy Bayfield, and fell asleep in a warm motel room, the fog obscuring my view of the Apostle Islands.

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6 The Montreal River is on the northern state border of Michigan and Wisconsin.
7 Schoolcraft calls the Bad River (of northern Wisconsin) the Muskeego or Mauvais River (Schoolcraft, *Summary Narrative*, 104).
8 Allen noted that, “the heavy fogs of the lake are great annoyances to the voyageur; they are frequently so thick and heavy as to obscure all objects at a distance of 20 or 30 yards, and in such cases compel the traveler to hug closely all the sinuosities of the shore, which are so numerous, deep, and irregular, as to make the distance more than twice what it would be to cross from point to point.” (Allen, 29). The next morning, I was surprised that the Apostle Islands were so close since I hadn’t been able to see them at all the night before, so I could understand Allen’s frustration.
Presque Isle River

Hiking to Black River

Gorge Falls of Black River
May 14, 2010

Expedition Day Eleven:

What is an expedition journal without a little adventure? It can’t all be muffins that taste like creamsicles. It has to have a bit of fearing for your camera’s life, and maybe a smaller bit of fearing for your own life. Your shoes definitely have to be trashed, and you should find yourself on the edge of a cliff at least once.

Today I decided to hike to the sea caves. I really wanted to kayak to the sea caves, but the first rentals begin in a week. First, I needed to get some breakfast though, and I ate yogurt and an orange muffin on a beach next to the highway. Then I drove to the sea caves trailhead.

It was still cloudy, but not rainy, and the forecast was clear. I saw mud on the first part of the trail and changed into my hiking shoes, which I presumed would be more waterproof than my mesh running shoes. Backpack set, I started the hike.

And it was wet.

And it was muddy.

And it was pretty gross.

But I decided to not care, and kept going… until I came across something that stopped me short. There was the trail, as usual, meandering down a ravine. But then it disappeared under a wide, flowing brown creek. I immediately had a flashback to when the man at the motel desk told me that they hadn’t seen this much rain in Bayfield since last November. This, perhaps, was the result.

I stood at the end of the trail and analyzed the situation. There were some rocks cutting across the creek, and it definitely wasn’t too deep to walk across. My only real concern was my backpack full of cameras and my journal. If any of that got wet, if one foot went down in the wrong place, every record of my expedition would be gone.

I was experiencing a threat that haunted many an expedition botanist—the loss of their collections. Botanists often could not ship their collections to cities for weeks or months into the expedition, and had to carry their collections through the untamed wilderness. Some had horses or mules to do the carrying, others shouldered the burden themselves, and still others—like Houghton and Douglass—riskily added the fragile plants to their baggage in the canoes. There were seemingly endless chances for the collections of expedition botanists to be damaged,
ranging from being dropped in water or wetted in a storm to having the animal that carried them fall over a cliff or get stuck in quicksand.\(^1\) As Susan McKelvey writes in *Botanical Exploration of the Trans-Mississippi West*, “the technique of making specimens was not difficult to learn; what was difficult for the man in the field was to put each step… into successful practice—and to get safely home in good condition what he had acquired.”\(^2\)

Indeed, Douglass lost some of his collection during the Cass Expedition; He writes, “a part of the collection was injured by an accident on the Ouisconsin, in which my canoe was very nearly filled with water before it could be got ashore. The consequence of which was that nearly all the plants in one case were completely spoiled before I was able to dry them.”\(^3\) Houghton, too, lost some of his plants. In a letter to Botanist John Torrey, Houghton writes, “You are undoubtedly well aware of the numerous difficulties which are presented in preserving and securing plants during a long and tedious canoe trip. With the utmost care, I was unable to preserve many of my duplicate specimens, and others were entirely lost, or much injured.”\(^4,5\)

As I stood in front of the wide, flowing creek, I was determined to not lose my collections (in other words, my brand new camera). I glanced down it to see if I could lessen my chances of a soggy camera by crossing at a spot where it narrowed. Instead, I spotted a fallen tree. I hiked off the trail and into the woods and stared at the tree, my heart beating quickly.

Hiking alone is scary, and sometimes I let my thoughts or my moods carry me away and it’s even scarier. I suppose I’m feeling fear of what’s to come on the trail. I find myself repeatedly feeling a twinge of panic, and then reeling myself back in. I am completely relying on myself, and I have to think about everything—where to walk, what will happen if I go a different way, where I can grab onto trees, what each noise is. It’s not tiring—it’s just different.

\(^1\) Yes, this really did happen! John Bigelow—the botanist on Whipple’s Pacific Railroad Survey of the 35\(^{th}\) Parallel—was simply riding along when he and his mule got stuck in quicksand. Luckily, neither mule, botanist, or valuable cacti specimens were damaged.


\(^5\) Torrey confirms this in a letter to Schoolcraft, where he writes, “Dr. Houghton sent me some of the more interesting pants which he brought with him last year, but he said the best part of your collections were destroyed by getting wet.” (Schoolcraft, Henry R. *Personal Memoirs of a Residence of 30 Years with the Indian tribes on the American frontiers*. (Philadelphia: Lippincott, Grambo and Co., 1851), 425.)
But, despite the fear, I always have gumption—gumption to see what I want to see and to make myself get there. Sometimes I end up not thinking and doing things impulsively, and this adventurous gumption is to blame (and often to thank) for putting myself in some precarious situations.

So, I sat down on the fallen tree over the creek. I could easily imagine myself losing my balance walking across, so I decided to scoot. Only one problem… trees have branches, which would force me to put both of my legs on one side of the tree—a much less secure position. But by the point I realized this, I was already in the middle of the tree and moving forward. There was a smaller tree beneath the one I was scooting across, and I put my right foot on it as I lifted my left leg to the other side of the trunk. I don’t remember exactly how it happened. I think I was desperate to have the situation over with and the end was in sight, and I slipped.

I crashed into the lower log, my foot plunging into the creek, my thigh stopping my fall. I sat straddling the lower log for a split second before I pulled myself up. I slid on my stomach up the remainder of the log and the muddy hill on the other side of the creek, grabbing at roots until I was on my feet at the top.

My heart was racing, but my dominant thought was to find the trail again. I angrily pushed through branches and found the path. My bag wasn’t wet and nothing was damaged except for a stinging thigh. I was so grateful for not falling in all the way, but I was also annoyed that I went too fast and wasn’t calm. My map showed that the trail would cross a dirt road that led to the highway and back to my car, and I was so shaken that getting to the dirt road was my only goal.

My feet were soaked, so walking through mud and puddles was no longer an issue. I went up and down ravines, nervous still, but also laughing about how there were boards placed over the smallest trickles, yet not over that entire creek. When I got to the dirt road, I saw a sign that said “Sea Caves: 1.1 miles.” That motivated me, and I decided I could do it.

There were a few more water crossings, but nothing I couldn’t walk over without a little strategy. I wondered if the sea caves would ever come, and huge birds were squealing Hitchcock style in the trees. And then I saw a sign that said “DANGER” and had a picture of a little man falling over a cliff—I was instantly relieved; the sea caves weren’t far.

They were pretty cool—brown and green chasms cut deep into the ground, water crashing and booming below. I found myself feeling a bit spoiled by Pictured Rocks, but looking
down into an immensely deep cave was still quite amazing. I got as close to the edge as I sanely dared, taking my cue from large trees, and then headed back.

Right as I was leaving a guy and a girl about my age were arriving. Once again, I was astounded by the huge smile they inspired. I noticed that the sun had come out, and I hiked back brimming with confidence. I stood at the dirt road, knowing I could walk the highway back to my car and avoid another creek crossing, but my newfound confidence urged me to the challenge. So I sat on the tree, took my time, thought through every grip and movement, and made it. I looked back at the log afterwards and thought, “That wasn’t so bad!” It’s funny how quickly safety is again taken advantage of at the end of a trial.

I made it to my car and dropped off my precious backpack before I waded into Lake Superior to wash my pants and shoes. I had the beach to myself, Eagle Island in the distance, and it was splendid. I could also see the red rock of the sea caves, and envied the expedition member’s ability to paddle right to them. But then I realized my feet were prickling—the lake was freezing cold—and my envy diminished.

I sat in the sun in front of the sea caves trailhead for a while, then drove to my campsite at Apostle Islands Campground. I hid from the mosquitoes in my car, and read about places to come.
May 15, 2010

Expedition Day Twelve:

This morning I packed up camp and drove to the Main Street of Bayfield. I sat in my car reading as I waited for my time to go to the docks for my Apostle Islands boat tour. I didn’t feel tired yesterday, but today I was exhausted. My arms were sore and I discovered a fist-sized bruise and red scrapes on the back of my thigh from the incident at the creek yesterday. I was also exhausted of having to think about everything you need to think about when traveling: time management, maps, locations, money, packing up the car, how I’m running out of x and y, what to wear to the day’s activities, where I’ll be that night. It was hot in my car, the sun beating in, as I sat waiting.

When I boarded the boat, it was pretty full. Everyone sat on the upper deck at first, but very few remained when the boat started moving and the wind started blowing. I stayed up there though, happily looking out at the wooded islands that Schoolcraft described as “a very beautiful and picturesque group.”¹ In 1820, Douglass worked to map the islands, at task he found to be “extremely laborious from their number.”² I agreed that the islands were too numerous to count. Schoolcraft believed that they were named by after the 12 Apostles³ by Carver, but Schoolcraft noted that he saw nearly 30 islands as he canoed by.⁴ There are actually 22 islands, and as I circled them in my tour boat, I noticed that some were long; others were round. Some had yellowish vegetation, and others were a dense, dark green.⁵ Some were open to campers and hikers; others were left to the birds and the flowers. The guide said that one of the islands held the greatest concentration of black bears in North America. One had a brownstone quarry, some had lighthouses, and most had been clear-cut at one point or another. All but one—Madeline

³ Schoolcraft suggested that they could, instead, be called the “Federation Group” if each State in the Union sponsored one of them (*Summary Narrative*, 105).
⁵ Allen describes the Apostle Islands and their vegetation: “They are beautifully situated with respect to each other, are all high, and covered with a luxuriant growth of vegetation, and form the most interesting feature of this part of the lake.” (Allen, *Schoolcraft and Allen*, 28.)
Island\textsuperscript{6}—are protected as a part of the National Lakeshore. But my favorite sights were the sea caves on Devil’s Island. These were different than the mainland sea caves I hiked to yesterday; they were intricate and mysterious, red rock set against the odd greenish water.

When I made it back to my car after the tour was over, I soaked up the heat of the interior and drove to Solon Springs, Wisconsin. The historical expeditions continued past Cranberry River and were delayed at Sandy River. A storm set in before the expedition members had time to set up their tents. Schoolcraft writes, “There seemed but one option at our command, namely, that between sitting and standing. We chose the latter, and looked at each other, it may be, foolishly, while this rain tempest poured.”\textsuperscript{7}

There would be no camping for me on this night either; the campground I wanted to camp at was closed, and the second campground I found was already full of regulars. Fortunately, I found a cheap little cabin, and set up for the night. I scattered the table with stacks of expedition books, my laptop, sunglasses, camera, water bottle, hiking backpack, and my worse for wear fleece jacket. It made me smile. That was the table of an explorer—a modern explorer, that is.

\textsuperscript{6} The expedition members spent three days on Madeline Island, which they called “La Pointe.”
\textsuperscript{7} Schoolcraft, \textit{Summary Narrative}, 105.
End of Lake Superior to Big Sandy Lake
Patterson Expedition Days 13 – 14
May 16, 2010

Expedition Day Thirteen:

Today has been action-packed. I woke up at 6am to finish reading about what the expedition members saw at today’s destinations, and was ready to go by 9. My little cabin was a great refuge. When trains passed, the whole place shook, but it was a great place to revive my spirits.

I first drove to the trailhead of the St. Croix-Brule Historic Portage, which connects Upper St. Croix Lake and the Bois Brule River. This portage was one of the most historic routes connecting Lake Superior and the Mississippi River.¹ The Chippewa began traveling the route in the late 1500’s, French explorers and trappers used the path in 1680, the English hiked across in 1766, and the Americans—Schoolcraft, to be precise—put their footprints into the much-trampled ground in 1832.²

The Cass expedition of 1820 passed the mouth of the Bois Brule River, but did not explore the area. Schoolcraft was aware of the important connection at the time, describing the Bois Brule as, “a stream which forms the connecting link with the Mississippi River through the St. Croix.”³ But it wasn’t until 1832 that the Schoolcraft expedition ventured on a side trip to explore the St. Croix and Bois Brule (also known as Burntwood) Rivers, and hauled their canoe loads over the historic portage.⁴

Schoolcraft figured that “the distance which the canoes and packages require to be carried is…nearly two miles.” While carrying from the Upper St. Croix Lake, Schoolcraft wrote that the portage ran over a sandy pine ridge, and that he saw a deep tamarack valley on the left and a small lake with no outlet on the right. Allen describes the ridge as having “high conical peaks, and regular hills” and that the pines “may be seen rising one above another, as far as the

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¹ The Mississippi River is connected to the St. Croix River, which flows into Upper St. Croix Lake, at which point begins the historic portage to the Bois Brule River, which then flows northerly into Lake Superior.
⁴ The Schoolcraft expedition traveled this portage as they headed east around August 4, 1832 (accounts vary). They had already discovered the source of the Mississippi and were on their way home. For my expedition, however, it would require unnecessary backtracking to follow their same order of events since I headed home on a different route entirely. So, as commander, I switched the order.
eye can discern.”⁵ Houghton said that the view “commands a fine prospect” and collected the sweet-bush *Comptonia asplenifolia* scattered among the “scanty growth of deciduous underbrush.”⁶ When they arrived at the Bois Brule, Allen describes the river as “very small, about eight feet broad, fiver or six inches deep, of very clear and cold water, running swiftly over a sandy bottom.” They dammed the stream in order to raise the water level, and the men walked the floating canoes, camped, and then continued hauling until noon of the following day when the water became high enough to paddle. It took two days of travel on the Brule for Schoolcraft’s canoe reached its outlet into Lake Superior.⁷ Allen found less fortune on the rapids, and spent much effort repairing and trading leaky canoes. It took him five days to travel the 94-mile river, and he described it as a scene of “trouble, difficulty, and danger, nearly all the way.”⁸

Today the portage is a historic site and a marked four-mile roundtrip trail, and I decided I could easily have my own version of the historic experience. Right from the start, I collected a plant I had never seen before; it was magenta, the oddest shape, sometimes in pairs, sometimes alone. I later learned that it was called fringed polygala (*Polygala paucifolia*). As I continued, I collected dog violets (*Viola conspersa*), yellow barren strawberry (*Walsteinia fragarioides*), and some low sweet blueberry (*Vaccinium angustifolium*) that were covering a whole section of the forest floor.

I was so consumed with flower hunting that I had to remind myself to look for the recent clear cutting that I had read was a half-mile into the portage. I could see a clearing through the dense trees, and it was definitely a change from Schoolcraft’s day. Yet, the hike was still picturesque. At one point, I was just walking along when all of a sudden two huge birds took off from a nearby tree. They were bald eagles! Later, I watched in awe as one circled and soared above my head. As I continued, I took notice of the trees: balsam fir, white spruce, red pine, some birch, and a few maples.

Towards the end of the first leg I finally arrived at mud and marsh. Luckily, I only had to traverse 75 yards of it before I reached the Bois Brule River. I found the river to look much the

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⁷ Schoolcraft, *Narrative of an Expedition,* 141-43.

same as Allen recorded—it had a sandy bottom and was quite shallow. I also finally collected the
tamaracks that the explorers had noticed, and as I squished my way through the mud, I could
hardly imagine having to haul heavy loads through miles of it.

Then, I turned around and walked the portage in reverse. Every so often there were rocks
with nameplates marking the different explorers who had traveled on the portage. I missed the
Schoolcraft rock on the way out, but I made sure to find it on my way back. When I did, it said,
“Henry Schoolcraft 1820,” which was actually wrong since he only traveled this portage on the
1832 expedition. I arrived back at the trailhead, and continued on my way—I still had another
portage to hike today.

I headed to Jay Cooke State Park in Minnesota—the location of the Grand Portage. The
St. Croix-Brule Portage was an extra exploration that the expedition members traveled on their
way back to Lake Superior as they headed home in 1832. The Grand Portage, however, was a
necessary route that both the 1820 and 1832 expeditions took as they headed west towards the
Mississippi. The difficult, marshy, seven-mile portage was necessary to avoid the rapids and
waterfalls of the St. Louis River. It connected the explorers to the Savanna Portage, Big Sandy
Lake, and the Upper Mississippi River. Prehistoric Indians first used the portage thousands of
years ago. French traders used the portage from the late 17th century until 1760, and British
traders followed its path from 1765 to 1820. American traders began using the portage in 1820,
and stopped traveling the route when the fur trade ended and the railroad was built around 1870.9

When I arrived at the park, the man at the desk of the visitor’s center said that a lot of the
original Grand Portage trail is now covered by water due to the dams at of the hydroelectric
plants in the area. I had passed one of these plants while driving through the park, and it
confirmed my suspicions that there have been substantial changes in the land since Cass and
Schoolcraft’s day. As I gazed out at a portion of the St. Louis River, it was as reflective as glass.
The deep green of the trees and clear blue of the sky were mirrored on the completely still water;
it took me a moment to realize it was a reservoir. But the power plants are a blessing and a curse;
The construction of the Thompson Plant—the largest of the four plants in the area—led to the

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9 Minnesota Department of Natural Resources. *The Grand Portage of the St. Louis River*, n.d. (Brochure)
creation of the state park… the park that now features big, industrial towers that loom over the dams, a busy highway, and family-friendly amenities.

Nevertheless, I was interested in the reliving the portage, so I headed towards the Grand Portage trail. I felt like the trail wasn’t nearly as historically accurate as the St. Croix-Brule Portage. The area had been altered so much by all of the dams that it was more of a portage learning experience than the actual ground they walked on. But I definitely learned a lot.

The historic Grand Portage began at the first turn in the St. Louis River, west of Fond du Lac, Minnesota. From there, men and women would carry their loads of typically 75 to 90 pounds through a series of nineteen pauses, which were traditionally about a half of a mile apart. At each pause, they would drop their loads and return to the start of that pause to collect another. They would do this until all of the baggage and canoes had made it to the pause, and then repeat the process to the next pause. All who traveled the portage knew of the pauses, and they were consistent stopping places. Some even had names: the third pause was named “Roche Galet” due to the sandstone that the river runs over, the seventh pause was named “Maple Pause” because of a sugar bush nearby, and the twelfth pause was named “The Grave” due to a death of a Frenchman’s wife at the location around 1820. In good conditions, portaging could take as little as three days. In poor conditions, the grueling haul could last over a week.

The 1820 expedition traveled through five pauses on the first day, and, despite rainy weather, traveled ten pauses on the second day. Douglass noted that the forest was mostly elm, birch, and hemlock. It was early June, and he also says that, “A variety of plants [were] in flower but from the fatigues of the walk and in the hope of meeting the same further on, I am obliged to omit such collections at this end of the portage.” They continued two more days on the portage.

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11 Schoolcraft says that the St. Louis River is filled with aquatic plants: wild rice, water grasses, rushes, and liliaceous plants. (*Narrative Journal,* 201).
12 Allen notes that they carried the loads using a leather strap known as a “portage collar,” which was “composed of a broad piece that is applied to the forehead, and two long tags, which attach to the piece to be carried.” He continues describing how the two “pieces” to be carried ranged from 160 to 200 pounds and were balanced against the “lumbar vertebrae” and the “back of the head.” Thank goodness I only had a backpack. (Allen, *Schoolcraft and Allen,* 32-3.)
13 Minnesota Department of Natural Resources. *The Grand Portage of the St. Louis River,* n.d. (Brochure)
14 Schoolcraft describes the scene of the portage: “Dark forests, swampy grounds, rocky precipices, and the distant roaring of the river, as it leapt from rock to rock, would have sufficiently impressed the mind with the presence of the wilderness, without heavy rains, miry paths, and the train of wild and picturesque Indians, who constituted a part of our carriers (*Summary Narrative,* 111).”
and Douglass makes no further notes of plants. On the last day, they were all relieved to have the strenuous portage behind them, and Doty says, “By 4 o’clock we had everything across the portage, for all which we were blessing our stars over a piece of ham and a good dish of chocolate.”

Today, the first four of the nineteen pauses are in Jay Cooke State Park, but the trail that leads to them—though close—is not the exact historic path. Houghton notes that on his first day of portaging in 1832, the party traversed the first three pauses and he “found a few plants.” As I began the portage, I collected some white trout lily (*Erythronium albidum*) and large-flowered trillium (*Trilium grandiflorum*). I also noted more dog violets and downy yellow violets. As I continued, I crossed the highway, and the forest looked ugly and worn. The trail became prettier when it started following a stream, but then I got too winded to pay attention to anything but breathing! The trail was going uphill—a long, steady uphill for over a mile. It was grueling! But at the end I saw a sign that said: “The Fourth Pause: This pause was at the top of the Big Hill. Although it was only a short distance from the Rouche Galet or Third Pause, the voyageurs became tired from climbing it and rested on its summit.” Even though the hill I climbed wasn’t the exact same hill of the historic portage, it didn’t matter. I could relate! And I didn’t even have a 90-pound pack!

Then the forest got gorgeous. As Houghton continued on the second day of travels past this same fourth pause, he notes that the soil improved and he saw groves of sugar maples. Amazingly, at this same point north of the St. Louis River, I noticed lots of sugar maples (*Acer saccharum*). I also saw some paper birch, but there wasn’t a pine in sight. When I walked south towards the river, the pine returned. Houghton also noted that the maples were a rarity along the portage, and that he mostly saw pine and birch. He collected *Houstonia longifolia* on the rocky banks and *Ranunculus septentrionalis* in damp woods, though I don’t know how he found the time or the will to do anything but endure.

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16 Mason, Philip P. *Schoolcraft’s Expedition to Lake Itasca*, 244.


18 Ibid, 64.
The expedition was able to finish twelve pauses on the second day, beginning at four in the morning, and stopping at eight at night. Then they woke up early again and finished the last four pauses. Allen writes, “No idea can be formed of the difficulty of this portage without witnessing it. The men, with heavy loads, are sometimes forced to wade through a swamp of half a mile, full of roots and bushes, and over their knees in mire at every step. Where the road is dry, it is generally over a hill, or across a gulley, the steep banks of which are worse to pass than the swamps. When we stopped at night, my men, and even the Canadians, were literally fagged out.”

But all they could look forward to, upon finishing the Grand Portage and traversing three miles of rapids, was yet another portage given the cheery name “Portage aux Couteaux”—Knife Portage. Allen says that the mile and a half long portage was named “from the knife-like effect of the slates on the shoes and moccasins of the voyageurs.”

Luckily, after my full day of hiking portages, I was simply able to get cleaned up and relax at my campsite. The campground in Jay Cooke State Park was actually busy, and I sat in my tent listening to the drama of the family at the next site over. They had so much energy—they were cooking a complete dinner and having a fire! I had no energy to make a fire and I ate a Lunchable in my car. Portages, I learned, are very exhausting.

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Ibid, 35.
Brule-St. Croix Portage

My campsite at Jay Cooke State Park

Grand Portage
Patterson Expedition
To the source of the Mississippi River, 2010

Species: Polygala paucifolia
Common Name: Fringed polygala
Location: Brule-St. Croix Portage, woods near trail, Douglas County, Wisconsin
Date: May 16, 2010
Collector: Lorah Patterson
Grand Rapids, Pokegama Dam, and Schoolcraft State Park
Patterson Expedition Days 14 – 15
May 17, 2010

Expedition Day Fourteen:

What a day… I’m a bit relieved it’s ending soon.

This morning I woke up at 6am in a good mood. I packed up my campsite and washed up. I looked hideous, but I didn’t care. Let me explain… I braided my hair because I figured there was less chance for bugs to get stuck in it. I put dirty sweatpants that were stained with paint over the top of another pair of sweatpants in an effort to keep out the ticks. Then I tucked my pants into my socks and slathered myself in sunscreen and bug spray. Clearly, it was lovely.

So, all beautified, I left Jay Cooke State Park and drove an hour and a half to Savanna Portage State Park and headed straight for Savanna Portage trail. Yes… another portage. It may have been an ominous task for the expedition members, but I was excited. I’m always excited when I see signs or exhibits about anything directly related to the expeditions. It’s fun to learn things by doing them, not just reading about them. I figure that was one of my goals on this trip—to learn on location. So, I was happy to see a big Savanna Portage sign, and I took a photo while being swarmed by mosquitoes.

I discovered that I’d be hiking the portage in the opposite direction as the expeditions—from the West Savanna River to the East Savanna River. So, I began and the trail was very muddy. I noticed some of the same plants from yesterday’s hikes—downy yellow violet, dog violet, pines, maples, and birch. So, the plants were a bit boring. Douglass, however, seemed to have found quite a few of interest along the portage and rivers, including three species of from the genus of bush honeysuckle (Diervilla),

1. the round-leaf wintergreen *Pyrola rotundifolia*, and the blue giant hyssop *Agastache foeniculum*,

2. Houghton collected the blunt broom sedge *Carex tribuloides* and the mannagrass *Glyceria borealis* in the marshes of the portage, and the bog birch *Betula pumila* at the sources of the Savanna River while resting on the Sabbath.

3. He notes that, “the country appeared to be almost wholly an undergrowth of aspen, basswood, and occasionally tamarack.” At the end of the portage—the West Savanna River (which was the

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1. *Diervilla humilis*, *D. canadensis*, and *D. lutea*


beginning of the portage for me)—Houghton says that there were a series of pine ridges with intermediate marshes.4

Collecting and observing plants could not have been easy for Houghton, and his experience of the portage was not at all a leisurely one. When the 1832 expedition arrived at the six-mile, 13-pause portage, Houghton writes that they had to walk “near half a mile through mud and water nearly knee deep.” At one particularly muddy pause, the voyageurs and their load sank hip deep! Boutwell says, “Our men are covered with mud from head to foot. Some have lost one leg of their pantaloons, others both…”5 As the misery continued Houghton says, “the portage passed two pauses through a tamarack swamp of the worst kind” where the voyageurs had to drag their loads in canoes to avoid sinking beyond their waists in the mud. They finally reached dry land and camped in the “hordes of musquitoes.” They heard a gun shot—it was Allen at the start of the portage. Allen arrived at the camp the next morning, completely wet from the mud of the portage and the storms of the previous night. They rested for the Sabbath, and then continued hiking through the dreary portage for the next two days.6

As I continued to hike, the only overwhelmingly muddy part of the portage had a boardwalk path. This was exactly like the marsh that I had imagined the explorers trudging through—dry grasses, deep mud, pools of muddy water, and an occasional shrub. Looking down into the squishy ground from the boardwalk made me feel quite sorry for them all. They really had no escape from bugs, weather, or dirt. On my trip, I have needed to escape from all of these things multiple times.

Today was a prime example of me needing a break from the constant dirtiness. After hiking only a mile on the trail, I had enough. I was hot and the ticks were out in force. I was not a happy camper… literally. The hike was five miles out and five miles back, and I hadn’t planned on hiking the whole thing anyways, so I decided to turn around.

Perhaps sharing in this misery was Cass. On the 1820 expedition, he decided to lighten the load that the main expedition had to carry across the portage by organizing a sub-expedition to Sandy Lake—the next destination—overland. So, Schoolcraft, Trowbridge, Doty, and others

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5 Boutwell also describes the savanna as a “tract of low, marshy ground, overgrown with rushes, flags, and small clumps of bushes, the very nestling place of mosquitos.” Boutwell, Rev. W. T. “Exploring Tour.” *Minnesota Historical Society.* (1852): 50-51.
6 Ibid, 245-246.
avoided the Savanna Portage entirely, and got to sleep in a house for the first time since leaving Detroit while the main expedition party was trudging their (albeit lighter) loads through the mud.

Sandy Lake, which is now called Big Sandy Lake, was my next destination, too. At first, I drove through a residential area and trudged through someone’s yard to get a picture of the lake. But, upon further exploration, I discovered a turnout off of the highway where there were signs about its history. My GPS said that it is now called Big Sandy Lake Reservoir. I read a sign that said that a dam had been built in 1895 when a string of six dams were being built at several of the lakes of the Upper Mississippi to regulate water levels and allow for steamboat transportation in the summer. The dam, however, may have caused more problems than solutions; Native American’s wild rice crop was affected, and the dams did little to improve transportation. The sign said that, “It was not until a series of locks and dams were built on the Upper Mississippi between the Falls of St. Anthony and St. Louis from 1917 to 1940, that navigation improved and river transportation blossomed.”

Being able to boat through the area was crucial as Sandy Lake is at a key transportation intersection between the Mississippi River and Lake Superior. In 1794, the Northwest Fur Company took advantage of this fact and built its first trading post on the lake. In 1830, it abandoned the old post for another at the outlet of Sandy Lake into the Mississippi. It remained at this post until the company shut down in 1847. It was at these posts that the Cass and Schoolcraft expeditions found some respite from the wilderness.

When Cass’ sub-party arrived at Sandy Lake, the main party was still toiling through the portage. When the whole group finally made it to Sandy Lake, Trowbridge writes that they landed on the opposite side of the fort. They fired guns—a signal of distress—for two hours, but

7 They instead took provisions for a five-day hike through ponds, marshes, swamps, and an eventual dry sandy area. They traveled near the Kettle River, which is, according to Schoolcraft, “one of the most remote sources of the Millie Lac [Lake].” They then traveled through the Rum River, and Buffalo Creek—a tributary of Sandy Lake. (Schoolcraft, Summary Narrative, 112-116).
9 As Cass’ sub-expedition approached Sandy Lake, Schoolcraft said that they “passed over several sandy ridges, bearing the white and yellow pine; the surface and its depressions bearing the wild cherry, poplar, hazel, ledum latifolia, and the other usual growth and shrubs of the latitude (Summary Narrative, 115).” When Douglass arrived with the main party a few days later, he “botanized,” collecting the fringed loostrife Lysimachia ciliata. He also notes that he “found but few flowers that I had not already. The forest growth is white and yellow pine, fir, cruciform spruce- called by the voyageurs white spruce- common spruce, tamarack, birch of 2 kinds, poplar of two kinds, maple of two kinds, mountain ash and some elm- with occasionally an undergrowth of alders, hazel, willow, and thorn (Jackman, American Voyageur, 73).”
“the Indians who were at the fort became alarmed at so much noise, and refused to come for
us.” Finally, two clerks from the fur company came to lead them to the fort, and they forgot
their struggles over a big dinner of boiled duck and buffalo meat. The rejoined parties
reorganized their baggage and rested for a day at Sandy Lake. They then assembled another sub-
expedition consisting of Cass, Douglass, Schoolcraft, nineteen voyageurs and Indians, and others
to search for the source of the Mississippi. Schoolcraft’s expedition in 1832 also rested at the
post for a couple days, repairing canoes, changing Indian guides, and making arrangements to
ascend the Mississippi.11

Before I headed off in search of the sources, I decided that, like the expeditions, I truly
wanted a break from the woods. There was no fur trading post for me to lodge at, so I went to the
relatively big city of Grand Rapids, Minnesota—an hour away. As I drove, I saw the Mississippi
River for the first time! I checked into a motel, cleaned up, organized my bags, and washed my
laundry. It felt good to have a fresh start, and I decided to venture to the Pokegama Dam.

The expeditions paddled up the Mississippi,12 passed the mouths of the Swan and Prairie
Rivers, and made it over the Kakabika Rapids before reaching—what was then—Pokegama
Falls.13 According to Schoolcraft, the falls “form a complete interruption of navigation.” As the
Indians portaged the baggage 250 yards around them, Schoolcraft took notes and made sketches.
He says though “there is no perceptible cascade or abrupt fall” that the “river rushes with the
utmost velocity down a highly inclined rocky bed.”14

Schoolcraft notes a growth of yellow pine and dwarf huckleberry (Vaccinium dumosum,
now Gaylussacia dumosa) amongst the shrubs.15 But all I observed was a nice, shady park—
Pokegama Recreation Area—and a campground. The park had some garden trees and it was fun
to see a pear tree—definitely different from the plants I was used to observing! I stood next to a

10 Brown, Ralph H, editor. “With Cass in the Northwest in 1820.” Minnesota Historical Society 23 (September
1942): 250.
11 Allen, Allen and Schoolcraft, 37.
12 Schoolcraft describes the scene: “Its banks are alluvial and of a fertile aspect, bearing a forest of oaks, maples,
elms, ash, and pines, with a dense undergrowth of shrubbery. I observed a species of polyganum in the water’s edge,
and wherever we attempted to land it was miry and the borders wet and damp (Summary Narrative, 124).”
13 Houghton calls them the “Falls of Peckagama,” Schoolcraft writes “Pakagama Falls,” Allen says “Falls of
Pacagama,” and Douglass records them as the “Falls of Packagomong.” The actual name—Pokegama—according to
Upham in the book Minnesota Geographic Names is derived from an Ojibway name “translated by Gilfillan as ‘the
water which juts off from another water,’ and ‘the lake with bays branching out’ (256).”
14 Schoolcraft, Summary Narrative, 127-128.
15 Ibid, 127.
group of fishermen and a family barbeque, looking out at Pokegama Dam. Construction of the
dam began in 1882, and finished in 1885.\textsuperscript{16} The dam’s reservoir distributes the water from two
upper reservoirs on the Mississippi. I relaxed in the manicured, mowed, and fenced-off park. It
was hard to imagine Native Americans portaging around rapids from my freshly painted bench.

\footnotesize{\textsuperscript{16} U.S. Army Corps of Engineers. “Pokegama Lake and Dam.” \textit{Pokegama Lake and Dam},
Savanna Portage

The Savanna Portage

Between the watersheds of Lake Superior and the Upper Mississippi River, early fur traders used the six-mile Savanna Portage, shown as a dotted line on the map.

Big Sandy Lake
May 18, 2010

Expedition Day Fifteen:

This morning I drove to the Forest History Center in Grand Rapids. I arrived right when it opened, and stood by the ticket counter until a woman came out of an office with a cup of coffee and looked a bit shocked to see me! It was a nice museum though, and I spend a long time reading all of the exhibits.

Today, a mere one-third of the 54 million total acres of land in Minnesota are forested. Commercial lumbering in Minnesota began in the 1840’s, moved northward in the 1870’s, peaked in 1905, and the pines were severely diminished by the 1920’s. In the early years, lumberjacks used oxen, horses and sleds, and rivers to transport the mammoth logs. By the 1890’s, railroads were the main method of transport. Yet, by the 1920’s, there wasn’t enough lumber-quality timber to justify maintaining the railroads, and roads were constructed to access more remote tree stands. The deforested and burned areas created by the lumber industry led to successional forests filled with balsam poplar, aspen, and jack pine—trees that are unfit for lumber, but ideal for paper.

The timber harvest continues in Minnesota today, and 40% of the trees go to paper mills. I drove past a huge mill in Grand Rapids—Blandin Paper Company—which cuts down spruce, balsam, and aspen trees within a 50 mile radius of Grand Rapids to use for its paper. The exhibits explained that there are “complex environmental guides and rules to harvesting today,” and gave visitors a chance to visualize this by leafing through a tremendously thick rulebook.

At the time of the Cass and Schoolcraft expeditions, the area they traversed was still covered in old growth forest, and it wasn’t until the government surveys of the area were complete in the mid-nineteenth century that deforestation began. Towns that I had already passed—Marquette, Ontonagon, Duluth, and others—became mill towns by the 1890’s. And the forest would never be the same as in Schoolcraft’s day.

In the museum, I gazed in curiosity at this huge, metal tool that they use to cut down trees. It was wrapped around a tree, and the juxtaposition of mechanical and natural caught my attention. On all of my hikes, I am so consumed with being out in nature, that it was strange to see something so mechanical wrapped around my peaceful scene.
It made me eager to return to it, and headed off to my next destination—Schoolcraft State Park. The expeditions were still heading up the Mississippi River, which flows through Schoolcraft State Park. I drove onto Schoolcraft Lane—a dusty dirt road—and into the completely empty park. A sign read: “From Schoolcraft’s narratives and those of his fellow travelers, it is surmised Schoolcraft camped in the area now defined as Schoolcraft State Park in July 1832.” So, of course, I had to check it out.

I walked some of the trails, and they were all pretty short. I saw more dog violets and trilliums that I see almost everywhere on my expedition. Schoolcraft writes that, “at the place of our encampment we found a very delicious species of red raspberry, growing upon a small bush of the size of a strawberry vine. The forests of this fork of the Mississippi abound in almost every variety of the pine family.”¹ One of the most striking features that I also noticed were the huge red and white pines. I got out my new Minnesota tree book that I bought at the Forest History Center, and walked around the park examining the pines and gazing out at the Mississippi River. There were dense grasses surrounding the narrow river, and they were similar to those Schoolcraft observed: “We wound about, by a most tortuous channel, through savannas where coarse species of grass, flags, reeds, and wild rice struggled for the mastery.”²

From here, the grass-bordered river flows through a series of lakes before reaching its source. The expeditions floated past Leech Lake River (which leads into Leech Lake) and through Lake Winnibigoshish³ before arriving at Cass Lake. I headed straight for the latter and pulled into a highway rest stop to look out at the view. Cass falsely declared this lake the source of Mississippi in 1820, and Schoolcraft went along with the idea, but he, along with other expedition members, weren’t fully convinced.⁴ Schoolcraft writes, “This may be considered the true source of the Mississippi River, although the greatest body of water is said to come down the Leech Lake Branch.” He also noticed two small streams flowing into the lake, and writes,

¹ The sign in Schoolcraft State Park gave this quote from Schoolcraft’s *Narrative Journal*, page 243. He also refers to the raspberry in his *Summary Narrative*, page 129. It assumingly describes the surroundings Schoolcraft had as he camped in the park. However, the quote corresponds to July 19, 1820—not July of 1832, when the sign informs visitors he camped here. Douglass, too, mentions the raspberry on July 19, 1820, writing, “Found here a very fine flavoured kind of raspberry growing on a plant not more than 4 inches high of which I endeavoured to preserve the seed (Jackman, *American Voyageur*, 83).” He probably camped in this immediate area on both expeditions.
³ The expeditions called this lake “Lake Winnipeg” or “Winnipek.”
⁴Trowbridge and Douglass say nothing special about the lake in their journals, and Doty didn’t even write an entry on the day of its discovery. Schoolcraft refers to it as the “principal source of the Mississippi” though (*Narrative Journal*, 262).
“What the descent of the river La Beesh, the principal inlet of Cassina lake, may be, we cannot determine, as we have not explored that stream…” The Indians told him that the streams led to another lake a 6-day canoe trip away. Nevertheless, Schoolcraft dubbed the questionable lake a new name, writing, “Having reached the ultimate geographical point visited by the expedition, I thought it due to the energy and enlightened zeal of the gentleman who had led us, to mark the event by naming this body of water in my journal Cassina, or Cass Lake.”

Due to low water on the Mississippi, the impossibility of ascending the river with their large canoes, and the state of their provisions, the Cass expedition reached a consensus to rejoin the main expedition party at Sandy Lake and head toward the Falls of St. Anthony, to the inlet of the Wisconsin and Fox Rivers, and back home via the Great Lakes. Schoolcraft’s 1831 expedition experienced a similar problem, and low waters prevented any exploration of the Upper Mississippi. The 1832 expedition, however, avoided this problem by leaving nearly a month earlier. They left many of the men at Cass Lake, picked up lighter canoes, and continued upriver through Andrusia Lake and Lac Travers (now Lake Bemidji).

I drove to Bemidji State Park with an aim to see the lake and do the bog walk. I parked and walked on a gravel road to where the bog walk began. I examined the trees and thought it was interesting how they had chicken wire around the pine seedlings to keep the deer from eating them. The historical explorers wouldn’t have seen nearly as many white-tailed deer in northern Minnesota as we do today. They were a rare sight until the mid-1800’s, when logging and fires led to the perfect deer habitat—aspen forests and clear-cut areas. Deer populations boomed through the latter half of the nineteenth century. Today, the large populations graze on seedlings, resulting in low forest diversity and a forest of chicken wire.

As I hiked closer to the bog, I saw a lot of maples, birch, and oak in the area of the chicken wire. There were some jack pine, some aspen, and the same trillium and violets as always. I was looking forward to seeing some new plants in the bog. A sign said that it was a

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5 Schoolcraft, Narrative Journal, 262.
7 Cass Lake was originally called Upper Red Cedar Lake, as it was 250 miles above Red Cedar Lake.
8 Schoolcraft, Summary Narrative, 133.
9 Ibid, 133.
10 This segment of the expedition was equally as unsuccessful in natural history collecting: Trowbridge writes, “Mr. Schoolcraft collected nothing in the mineralogical way and Capt. Douglass was equally unsuccessful in botany.” (Brown, Ralph H, editor. “With Cass in the Northwest in 1820.” Minnesota Historical Society 23 (1942): 333-34.)
tamarack-black spruce bog, and I collected both species. The tamarack was a really interesting shade of green, and the needles had a rubbery feel. I searched the whole bog for wildflowers twice, but I couldn’t find many. There were two large signs about wildflowers, and I was optimistic, but I guess I was there too early in the year. I did see lots of marsh marigold, Labrador tea (*Rhododendron groenlandicum*), and bog rosemary (*Andromeda polifolia*). I also saw lots of pitcher plants (*Sarracenia purpurea*).11

When I got back to my car, I drove closer to Lake Bemidji. I took a picture of it, but the gravely sand and wooden chairs looked too relaxing to ignore, so I walked in the shallow waves and enjoyed the beach. Allen describes the lake: “The western shore is much indented with bays, but the east and southeast is beautifully regular and plain, with a sandy bank, and a beach of pure white sand.”12 But the expedition did not stay and relax.

As they continued up the Mississippi past Lake Bemidji, Schoolcraft notes that the river changed its course from north to south.13 The expedition paddled through Lake Irving, and then reached the primary forks of the Mississippi. Schoolcraft says that “Ozawindib [their Chippewa guide] hesitated not a moment which branch to ascend, but shooting his canoe out of the stronger current of the Itascan fork, entered the other. His wisdom in this movement was soon apparent.”14 It was the fork that would lead them to the true source of the Mississippi River.

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11 The pitcher plant was actually one of the earliest plants collected in North America. European botanists collected the carnivorous plant because apothecaries wanted strange novelty plants that they could declare as useful cures for various ailments. (Crosswhite, Frank Samuel. *Botanical Exploration in North America to 1810.* (Madison: University of Wisconsin, 1965), 2.)

12 Allen, *Schoolcraft and Allen,* 43.

13 Schoolcraft thought this unexpected turn was “why the actual source of this celebrated river had so long eluded scrutiny (*Summary Narrative,* 233).”

Lt. Allen’s map of the headwaters of the Mississippi, 1832

Lake Itasca and the headwaters

Cass Lake

Lake Bemidji
Today was the day! I made it to Lake Itasca! I think Schoolcraft best described the moment when he reached and named the lake on July 13, 1832: “The desire of reaching the actual source of a stream so celebrated as the Mississippi... was perhaps predominant; and we followed our guide down the sides of the last elevation, with the expectation of momentarily reaching the goal of our journey. What had long been sought, at last appeared suddenly. On turning out of a thicket, into a small weedy opening, the cheering sight of a transparent body of water burst upon our view. It was Itasca Lake—the source of the Mississippi.”

When I arrived at the famed lake, the scene was very different (but nevertheless exciting!). I first drove on paved roads through Itasca State Park and followed the signs clearly directing me to its biggest tourist stop. I walked over an enormous parking lot, through an entire pavilion of interpretive signs, and out to a concrete sidewalk meandering next to the narrowing river. I only stopped to read one sign because I was too eager for my grand finale! But the sign only made me more excited, as I had been to each and every place it mentioned Schoolcraft went before reaching Itasca. I must have had the hugest smile on my face, and I practically wanted to skip down the trail.

And then I was right in front of the headwaters—the origin that had eluded explorers for so long. I didn’t quite know what to do with myself. There were people everywhere, tons of kids walking across the headwaters, and every seat, rock, and stump taken. It was quite a small area, but there were 15 boys playing baseball... let’s just say it was far from Schoolcraft’s first encounter! I asked a woman to take my picture in front of the historic sign declaring that, “Here 1,475 ft above the ocean the mighty Mississippi begins to flow on its winding way 2,552 miles to the Gulf of Mexico.” If it was a triumphant moment for me, Schoolcraft must have been even more excited.

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1 Schoolcraft, Henry R. *Narrative of an Expedition through the Upper Mississippi to Itasca Lake, the actual source of this river: embracing an exploratory trip through the St. Croix and Burntwood (or Broule) Rivers; in 1832.* (New York: Harper & Brothers, 1834), 56.
The expedition sub-party² portaged, following their Chippewa guide Ozawindib,³ over elevations with small forest growth⁴ for over six miles before reaching the source. Four hours into the hike, they ascended their last elevation and “got the first glimpse of the glittering nymph we had been pursuing.”⁵ Schoolcraft says, “At a depression of perhaps a hundred feet below, cradled among the hills, the lake spread out its elongated volume, presenting a scene of no common picturesqueness and rural beauty.”⁶ While observing the lake, Allen says that, “there can be no doubt but that this is the true source and fountain of the longest and largest branch of the Mississippi.”⁷

People, perhaps, needed this assurance because discovering the true source was a long time coming, and plenty of explorers professed to have found it over the years. In 1798, David Thompson, and English surveyor, declared Turtle Lake as the source. In 1806, Zebulon Pike was sent from St. Louis to explore the Mississippi and its headwaters. After a trial journey where he suffered from severe cold, hunger, and exposure, he declared Leech Lake the main source of the Mississippi and Red Cedar Lake the upper source, having not explored any further. Then came Cass’ expedition in 1820, declaring Cass Lake the source. Three years later, Italian explorer Giacomo Beltrami declared Lake Julia the source, despite not even looking to see if the Mississippi flowed into the lake! His discovery was widely accepted in Europe, but explorers in America pressed on, and Schoolcraft finally found the true source in 1832.⁸

But some explorers hadn’t forgotten the pattern of false discovery, and debates continued long after Lake Itasca had been drawn into maps. In 1836, French explorer Joseph Nicollet

² It was a sub-party of 16, including Schoolcraft, Ozawindib (their Chippewa guide), Allen, Houghton, Boutwell, Johnston, and others.
³ Though Schoolcraft is credited for the discovery of the source of the Mississippi, Ozawindib (or Yellowhead) guided him there, and must be given the majority of the credit.
⁴ Schoolcraft says that, “by far the most common species being the scrubby Pinus banksianus [jack pine], exhibiting its parasitic moss (Summary Narrative, 241).” Allen writes that, “the soil was almost pure sand, and the pine was stunted and mostly of the scrub species, (Pinus banksianus,) which, hung as it was with lichens, and no other growth, not even a bush or scrub, mixed with it… (Allen and Schoolcraft, 44).”
⁵ Summary Narrative, 241.
⁶ Ibid, 241-42.
⁷ He elaborates: “All our information that we had been able to collect on the way, from traders and Indians, pointed to it as such; and our principal Indian guide, Yellow Head, who has proved to us his close intelligence of the country, represents the same.” Allen, Lt. James. Schoolcraft and Allen- expedition to northwest Indians: letter from the Secretary of War: transmitting a map and report of Lieut. Allen and H.B. [i.e. R.] Schoolcraft’s visit to the northwest Indians in 1832. (Washington, DC: Gales and Seaton, 1834), 44.
claimed that Nicollet Creek was “the infant Mississippi.” And in 1881, American William Glazier renamed Lake Itasca “Glazier Lake” and proclaimed himself its discoverer. Finally, in 1888, the Minnesota Historical Society commissioned Jacob Brower to investigate Schoolcraft’s discovery, and abiding by the confirmed definition of the source of a river, he declared that Itasca was the true source.

But technically, Schoolcraft was far from the first to see the lake. There is no record of the Spanish, French, or English visiting Lake Itasca before 1803. But Native Americans had spoken of the lake many times and even had a hunting ground in the area. In 1856, William Morrison, an employee of a fur trading company, wrote a letter to his brother about his visit to Lake Itasca (then Elk Lake) in 1803. This letter is the earliest authentic account of a non-Native American visiting the lake, but it came too late; Schoolcraft had already claimed fame for the discovery.

As Schoolcraft was making the historic discovery, he paddled across “one of the most tranquil and pure sheets of water of which it is possible to conceive” to the sole island in the lake—what was soon named Schoolcraft Island. They hoisted an American flag on the island, pitched a tent, and while the cook started making dinner, Schoolcraft examined crustaceans and Houghton identified plants. It was then Schoolcraft’s task to give the lake a new name.

Ozawindib said that the Chippewa name for the lake was Omushkos; The French name was Lac La Biche. Both meant Elk Lake due to the 3-pronged shape of the lake resembling an elk’s head and antlers. But while paddling through Lake Superior before discovering the lake, Schoolcraft created a new name—Lake Itasca—with the help of Boutwell. The name came from combining the last and first letters in the Latin expression *veritas caput*, meaning “truth” and “head.”

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9 True source of the Mississippi River: “The ultimate limit of the drainage basin constituting the watershed of the Mississippi River, farthest from the Gulf of Mexico by the main channel of the river.” (Brower, *The Mississippi River and its Source*, 7)


11 Schoolcraft says they “found the elm, lynn, soft maple, and wild cherry, mingled with the fir species (Summary Narrative, 242).” Allen says that the island is “a little rocky in boulders, and grown over with pine, spruce, wild cherry, and elm (Allen and Schoolcraft, 44).”


13 A sign in Itasca State Park said that later in life, Schoolcraft—now a well-known ethnologist with great knowledge of the Chippewa culture—became dissatisfied with the Latin origins of the name. He created his own poem where Itasca is the name of an Indian maiden who formed the Mississippi with her tears.
Despite the anticipation of discovering the historic location, the expedition members wasted little time before leaving Lake Itasca. They made hasty observations of the shoreline, and only hours after their arrival they embarked towards Red Cedar Lake. But I was far from finished exploring the park. Having seen the headwaters, I decided that this was a good opportunity to kayak to Schoolcraft Island. I drove to Itasca Sports, and ten minutes later was sitting in a kayak in the very choppy water. It was very windy— the waters were not tranquil as when Schoolcraft paddled into the lake—but I was determined to kayak into the middle and reach the island. I was happy to finally get my chance to paddle like the expedition members had done this entire time. I loved it! Kayaking in Lake Itasca! I made it to the island and decided to paddle all the way around it. As I rounded the corner, I saw a sign that said, “Schoolcraft camped here July 13, 1832.” I imagined the expedition members pulling up their canoes, climbing onto the tiny island, and tugging up their supplies, and I was thrilled to be there!

I kayaked into the east arm of the lake, and then around to the west arm. By that point, I had been kayaking for well over an hour, so I decided to head back. And it was a good thing I did because going back was much harder! I could see a little yellow speck in the distance where the other kayaks were shelved on shore, and it took a lot of strength before that speck got any bigger!

It was late afternoon, so I decided to go back to the headwaters hoping it would be less busy. The headwaters were empty now, and I decided that since I was wet anyways it would now be the perfect opportunity to walk across the Mississippi River. It was fun and slippery! The water was flowing swiftly over the rocks, and I stood in the middle and took in the moment. I reached the other shore, and turned around to cross the stones again rather than use the bridge. I walked back to my car tired, wet, and happy—it was a marvelous day at Itasca.

I drove to my campsite and set up my tent in minutes. I made a campfire, and the flame was terrifyingly tall! But it did help to scare off some of the mosquitoes. I made s’mores and fell asleep looking forward to my last real day of adventure.
Patterson Expedition
To the source of the Mississippi River, 2010

Species: *Sarracenia purpurea*
Common Name: Pitcher plant
Location: Bemidji State Park, Bemidji, Minnesota, bog walk
Date: May 18, 2010
Collector: Lorah Patterson
Cass Expedition route to the incorrect source of the Mississippi—Cassina Lake

Cass Lake

Mississippi River at Schoolcraft State Park

Pokegama Dam
Schoolcraft Island on Lake Itasca

The headwaters of the Mississippi and Schoolcraft’s map of Lake Itasca

Itasca Lake, the source of the Mississippi River, 3,160 miles from the Gulf.

a. Mississippi River  b. Route of expedition to the Lake  c. Schoolcraft's Island.
May 20, 2010

Expedition Day Seventeen:

“Come to the woods, for here is rest. For there is no repose like that of the deep green woods. Sleep in forgetfulness of all ills. Nature’s peace will flow into you as sunshine flows into trees.”

- John Muir

Today I rented a bike. I peddled north on the bike path, and when I reached the headwaters the path turned into a road called the Wilderness Drive. I wanted to bike the entire route and stop for some sightseeing along the way.

My first stop was the half-mile Landmark Interpretive Trail, and I was very enthused to find some new flowers! In particular, the striped coral root orchid (*Corallorhiza striata*) and wild strawberry (*Fragaria virginiana*). After hiking the trail, and biking some more, I was hot and thirsty. I later learned that this had been the hottest day of the year for the area, and wondered where I could get more water because I had quite a ride ahead. I never actually knew how many miles I was riding, but I was definitely pushing myself up the hills. The rolling hills (I had learned while hiking the Interpretive Trail) were formed by a glacier covering the area thousands of years ago, and I did not appreciate it! Nevertheless, I turned east, but stopped to see the largest white pine in the park. The tree was so thick, and I thought about how if there’s anything I’ve learned on this expedition, it was how to identify red and white pine!

My favorite part of the bike ride was next; the pines were towering around me. I was thinking about how it was so much nicer to be biking this rather than driving it. Biking let me feel the wind, hear the trees creaking, and see the birds and the bugs. It let me look straight up at the tips of the trees forming a roof over my head. It let me smell so many indescribably natural smells. It was perfect. Even triumphing over the hills—my heart pumping, my legs burning—was perfect. And I’d always get a smile when I’d see little yellow signs with a bike on a downhill triangle.

I stopped at the Big Red Pine, which is apparently tied for second place as the biggest in the nation. It is over 300 years old, and 800 feet tall! I continued on, and filled up my water bottle at the visitor’s center, gaining a new appreciation for an unlimited water supply as I ravenously drank from the fountain. Then I continued to Preacher’s Grove—where a preachers
convention camped in the 1920’s. It was filled with pines that started growing in 1710. So those
trees were already 122 years old when the Schoolcraft expedition arrived at Itasca. I continued,
and frowned when I made it back to Itasca Sports—I didn’t want to give up my bike. But I had
ridden the whole loop, which I later learned was 16 miles.

Next, I drove to the giant fire tower and collected early meadow rue (Thalictrum
dioicum) before I climbed the shaky metal structure for a view of the park. I then decided to hike
the Bohall trail, which would take me into the heart of the 2,000 acre wilderness sanctuary at
Itasca. I noticed that I am becoming a better hiker; I instantly recognized sounds like swaying
trees, birds scampering in the brush, and squirrels, whereas before I might have wondered if it
was a bear! I’ve also learned to ignore bugs and better judge distances. I saw more new flowers
as I wove through the tall pines, including roundlobe hepatica (Hepatica americana), wild oats
(Uvularia sessilifolia), spotted geranium (Geranium maculatum), and—the last flower I collected
on the expedition—Trientalis borealis, or star flower.

Houghton collected porcupine grass (Stipa spartea), roundleaf orchid (Orchis
rotundifolia), sleepy silene (Silene antirrhina), and Gmelin’s buttercup (Ranunculus gmelinii) in
the proximity of Lake Itasca. He also discovered a new species that was later named after him—
Houghton’s sedge, or Carex houghtoniana.¹ He continued collecting as the expedition returned
home to Detroit, gathering 246 plants total. When the expedition was over, he sent his collection
to Botanist John Torrey in New York for identification.

Sometimes expedition botanists would identify plants themselves, but more often,
prominent botanists like Torrey would classify the specimens collected in the field. In fact, as
Torrey was a leading taxonomic botanist in America, most of the botanical specimens from
expeditions were sent to him.² As a pioneer in the field, Torrey worked to name new species and
arrange them into families based on solely on the need for botanical order. In a world that had
not yet been versed in Darwin’s theory of evolution or Mendel’s work on hybridization, there
was no attempt to organize the species based on their natural connections. Torrey’s main vision
was for consistency in plant classification and, as biographer Andrew Rodgers writes, “a

¹ Rittenhouse, Janice L. and Edward G. Voss. “Douglass Houghton’s Botanical Collections in Michigan, Wisconsin,
1942), Foreword.
universal method of plant study with adequate centers were plants could be assembled for scientists from all parts of the world.”

Torrey also received Douglass’ specimens from the 1820 expedition while Douglass was busy writing a chapter on the “vegetable productions” of the areas traversed on the expedition. Torrey assembled a plant catalogue, and published it in *The American Journal of Science and Arts.* Upon completing the catalogue, Torrey wrote to Douglass that, “many of the species are very rare, others are from entirely new localities, and the whole are valuable in increasing our knowledge of botanical geography.” The perfoliate bellwort *Uvularia perfoliata* was of particular interest to Douglass. He says that the plant is “efficacious in the cure of Rattle-snake bite—Of this I have been witness…” This, and the many other plants listed in the catalogue, added significant new knowledge of the botany of the Great Lakes.

Torrey was eager to receive the plant specimens from the 1832 expedition in order to add the new knowledge to his book on the general flora of the United States. In a letter to Schoolcraft, he writes: “I am anxious to make some inquiries of you concerning your expedition…though your principal object was more important, perhaps, than natural science, I hope the latter was not entirely neglected. I know that part of it is the same as that explored while you attended Gov. Cass, many years ago; but much of the ground, if I am rightly informed, is new. Now, my dear sir, if you or Mr. Houghton have made any collections in botany, I should esteem it a peculiar favor to have the examination of the specimens.”

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3 Rodgers, John Torrey, 33.
4 I do not believe that this was ever published because I have not been able to find it anywhere. There was an… incident… between Schoolcraft and Douglass as to who would publish the scientific results of the expedition. Schoolcraft says that they had originally agreed on a joint publication, but when Douglass became too busy with his career at West Point, Schoolcraft went ahead with his own publication. This move resulted in nasty reviews of Schoolcraft’s book made by an anonymous group called the ‘Trio’ in the Albany Daily Advertiser. So, perhaps, Douglass’ report was lost amidst this controversy. (See Jackman, *American Voyageur,* xix, xx; and Schoolcraft, *Personal Memoirs,* 69-72).
5 Torrey, John. “Notice of the plants collected by Professor D. B. Douglass, of West Point, in the expedition under Governor Cass, during the summer of 1820, around the Great Lakes and the upper waters of the Mississippi; the arrangement and description, with illustrative remarks, being furnished by Dr. John Torrey.” *American Journal of Science and Arts* Vol 4 (1822): 56-69.
6 Rodgers, John Torrey, 65.
7 Today, according to the USDA, this plant no longer grows in the region traversed by the expedition.
8 Torrey, *Notice of the plants collected,* 57.
9 Rodgers, John Torrey, 66.
When Torrey received the specimens from Houghton, he even took “all [the] very rare and doubtful plants” with him on his travels “for examination and comparison with celebrated herbaria of Europe.” Houghton published a representative list of the species collected on the 1831 and 1832 expeditions, writing that, “a more detailed account will be published at some future day.” Unfortunately, this never occurred.

The Cass and Schoolcraft expeditions, it seems, were at the forefront of a long string of botanical explorations that swelled in the 1850’s. After the Nicollet expedition (also to the Upper Mississippi region starting in 1836), Botanists Torrey and Asa Gray published *Flora of North America* (1841) and interest in American botany became widespread. Frederick Brendel, in his article “Historical Sketch of the Science of Botany in North America from 1635 to 1840,” writes, “Botany was now wide awake amongst the American public, and the government bore its rich share of it, spending large sums for scientific purposes, by attaching scientific men to the nearly unbroken series of expeditions and surveys which were now undertaken.”

And there were still many scientific discoveries to make at the newly deemed Mississippi headwaters. Schoolcraft explains, “We have known this river, computing from the era of Marquette’s discovery to the present day (July 13, 1832), but one hundred and fifty-nine years—a short period, indeed! How rich a portion of the geology of the globe lies buried in the flora and fauna… of its valley, we have hardly begun to inquire.” But after a full day of hiking and biking, I was done making discoveries and drove to my celebratory cabin. The cabin was very homey, but I was mostly interested in the fact that it had a shower (priority 1) and a bed (priority 2). And I saw to both of these priorities instantly, and literally fell asleep at 6:30pm.

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11 In another letter to Schoolcraft, Torrey writes, “Your kind offer to place in my hands the botanical rarities which, from time to time, you may acquire, in your interesting journeys, I fully appreciate. It will give me great pleasure to examine the collections made by Dr. Houghton during your last expedition (Schoolcraft, *Personal Memoirs*, 402).”
13 Schoolcraft, Henry R. *Narrative of an Expedition through the Upper Mississippi to Itasca Lake, the actual source of this river; embracing an exploratory trip through the St. Croix and Burntwood (or Broule) Rivers; in 1832.* (New York: Harper & Brothers, 1834), 160-165.
16 Schoolcraft, *Summary Narrative*, 245.
Patterson Expedition
To the source of the Mississippi River, 2010

Species: *Corallorhiza striata*
Common Name: Striped coral root
Location: Itasca State Park, Minnesota, Interpretive trail
Date: May 20, 2010
Collector: Lorah Patterson
I am home now. The drive took two days… two eventful days, of course.

Cass returned to Detroit after 115 days and about 4,000 miles of travel on his expedition. One of the major outcomes was the signing of the treaty with the Indians at Sault Ste. Marie that led to the first U.S. military post in the U.P. In a letter to Secretary of War Calhoun, Schoolcraft writes that the expedition had now afforded protection “to a very extensive line of frontier settlements, by stretching our cordon of military posts, through the territories of the most remote and hostile tribes…”¹ The expedition also created new maps and notes on Indian ethnology, and made scientific contributions through fifteen scientific papers.² Schoolcraft wrote a geological report for the American Journal of Science and published his first narrative in 1821.

The 1832 expedition traveled home to Detroit via the St. Croix and Brule Rivers and back through the Great Lakes. Cass, as Secretary of War, was happy with the expedition’s outcome. Allen was the first to construct a map of the true headwaters of the Mississippi,³ Houghton had vaccinated over 2,000 Chippewa and took a census leading to continued vaccination efforts, and, while the feuds between the Sioux and Chippewa had calmed, Schoolcraft continued his ethnological education knowing better than to expect a undeviating peace. After the expedition’s success, Congress approved legislature providing $5,000 for further geological surveys of the western United States, and was becoming increasingly supportive of exploratory expeditions.⁴

Schoolcraft set to work on producing his expedition narrative upon his return, and I set to work on producing this thesis. I uploaded all 1,500 pictures I took onto my computer. Just looking at them and thinking about how I’ll explain them made me realize that this project was an incredible experience. And I can’t believe I was actually in all those gorgeous scenes!

³ Allen made this map, and others on the expedition, using solely a compass. He had tried to get proper equipment to make maps at Fort Brady at the start of the expedition, but when he could not, he certainly made the most of his meager equipment.
⁴ Schubert, Frank N. Vanguard of Expansion: Army Engineers in the Trans-Mississippi West 1819-1879. (History Division Office of Administrative Services, 1970), 9, 10.
Many times on my expedition I looked around me in awe of the trees, the sun setting
glow to their bark, the waves booming against the rock, clouds adding layers to the sky, leaves
filling the spaces with green. And each time I laughed out loud in wonder, I felt so happy—
happy hiking dripping boardwalks and bridges to see waterfalls in the rain; happy at the sight of
bears and porcupines and bald eagles; happy counting off the miles, tilting my head to the pines
above, touching Lake Superior, walking across the Mississippi, seeing a new flower, reading
about explorers, and learning to explore on my own. I was incredibly happy on my 21st century
expedition.

And my happiness continued, as I was lucky enough to see the other side of plant
collecting while working at the U.S. National Herbarium in the Smithsonian. One time, I was
walking down a long row of cabinets in the herbarium, browsing through photos on my cell
phone. I smiled at a photo of a trail in the woods, and at the same time looked up to see the path
in front of me. The clean, gray metal cabinets stood on both of my sides and were taller than I
could reach. The air-conditioned air was cold, my feet fell on hard tile, and fluorescent lighting
was taking place of the sun; it was much different than the trail. But in both scenes, I was
surrounded by plants.

As I reached the end of the row of cabinets, I walked back to my desk, which sits
between rows of books—many being the products of expeditions into the wilderness. I smiled as
I read the biographies of expedition botanists, many of whom, I learned, graduated from college,
got on an expedition, and then wrote about it at the Smithsonian. It was an interesting (and
unintentional) coincidence... though I was getting quite used to those.

At the beginning of my expedition I had expected to find many differences: buildings,
houses, cars, roads, maps, technology, deforestation, cities, new place names, population, etc.
But I hadn’t anticipated the extraordinary amount of similarities. Writing transitions between
history and my story were unbelievably easy. Connections would pop out at me, and I almost
couldn’t believe that they were there. Though I put myself in the same places—we all stood in
front of the Johnston house, had long journeys to see the Ontonagon Boulder, found mud and
exhaustion at the Savanna Portage, observed picturesque waterfalls on Presque Isle River—our
experiences became even more strongly connected by astonishing similarities in human nature.
We all felt an unyielding enthusiasm at Pictured Rocks and Lake Itasca, monotony on long days
of hiking, fear of loosing all we’d collected, a need to reorganize and escape from the outdoors at
Sandy Lake, conflict between wanting to look at everything and wanting to move forward, exaggerated expectations of the Ontonagon Boulder, the thrill of exploring and reporting our discoveries—I shared these emotions with men that lived 200 years ago.

I sometimes even forgot that they lived 200 years ago. Reading their expedition journals for such a long time and trying so hard to see the world through their eyes made them come alive to me. I felt sympathetic for them as they portaged, and laughed with them when they joked. I dealt with mosquitoes, sodden tents, and damaged vehicles with them. I researched their histories and their lives after the expeditions. I learned of their writing styles, their annoyances, and their delights. I walked their paths, I read their observations, and I merged them with my own.

With a purpose to learn of the world and explore the unknown, I say mission accomplished. With a bonus of perfect happiness in the trees, I say I’m ready for more. With leaves outside my window, I say the world is my home to explore.
# Botany of the Patterson Expedition

Plants collected by Lorah Patterson

## Plant Catalogue:

<table>
<thead>
<tr>
<th>Herbarium Specimen #</th>
<th>Family, Species</th>
<th>Common Name</th>
<th>Date Collected</th>
<th>Location Collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Betulaceae, <em>Betula papyrifera</em></td>
<td>Paper, White, or Canoe Birch</td>
<td>5-5-10</td>
<td>Big Pines Turnout- Lakeshore Drive, MI Photo taken off the shore of Lk Superior, Chippewa Co.</td>
</tr>
<tr>
<td>2</td>
<td>Pinaceae, <em>Pinus resinosa</em></td>
<td>Red Pine</td>
<td>5-5-10</td>
<td>Big Pines Turnout- Lakeshore Drive, MI Photo taken off the shore of Lk Superior, Chippewa Co.</td>
</tr>
<tr>
<td>3</td>
<td>Ranunculaceae, <em>Caltha palustris</em></td>
<td>Marsh Marigold</td>
<td>5-5-10</td>
<td>Lakeshore Drive, MI Growing near a sandy stream flowing into Lk Superior, Chippewa Co.</td>
</tr>
<tr>
<td>4</td>
<td>Ranunculaceae, <em>Caltha palustris</em></td>
<td>Marsh Marigold</td>
<td>5-6-10</td>
<td>Tahquamenon Falls State Park, MI Further along the boardwalk before arriving at the Lower Falls</td>
</tr>
<tr>
<td>5</td>
<td>Violaceae, <em>Viola conspersa</em></td>
<td>Dog Violet</td>
<td>5-6-10</td>
<td>Tahquamenon Falls State Park, MI Along the Tahquamenon River, first mile of the 4 mile hike from Lower to Upper Falls.</td>
</tr>
<tr>
<td>6</td>
<td>Equisetaceae, <em>Equisetum arvense</em></td>
<td>Field Horsetail</td>
<td>5-6-10</td>
<td>Tahquamenon Falls State Park, MI Along the Tahquamenon River, first mile of the 4 mile hike from Lower to Upper Falls.</td>
</tr>
<tr>
<td>7</td>
<td>Caprifoliaceae, <em>Lonicera canadensis</em></td>
<td>Fly Honeysuckle</td>
<td>5-6-10</td>
<td>Tahquamenon Falls State Park, MI Along the Tahquamenon River, second mile of the 4 mile hike from Lower to Upper Falls.</td>
</tr>
<tr>
<td>8</td>
<td>Liliaceae, <em>Erythronium americanum</em></td>
<td>Yellow Trout Beauty</td>
<td>5-6-10</td>
<td>Tahquamenon Falls State Park, MI On an elevation near the Tahquamenon River.</td>
</tr>
<tr>
<td>9</td>
<td>Fumariacea, <em>Dicentra cucullaria</em></td>
<td>Dutchman’s Breeches</td>
<td>5-6-10</td>
<td>Tahquamenon Falls State Park, MI On an elevation near the Tahquamenon River.</td>
</tr>
<tr>
<td>10</td>
<td>Portulacaceae, <em>Claytonia caroliniana</em></td>
<td>Carolina Spring Beauty</td>
<td>5-6-10</td>
<td>Tahquamenon Falls State Park, MI On an elevation near the Tahquamenon River.</td>
</tr>
<tr>
<td>11</td>
<td>Violaceae, <em>Viola pubescens</em></td>
<td>Downy Yellow Violet</td>
<td>5-6-10</td>
<td>Tahquamenon Falls State Park, MI On an elevation near the Tahquamenon River.</td>
</tr>
<tr>
<td>12</td>
<td>Boraginaceae, <em>Myosotis scorpioides</em></td>
<td>Forget-me-not</td>
<td>5-6-10</td>
<td>Tahquamenon Falls State Park, MI On a hill close to the Upper Falls, near the trail</td>
</tr>
<tr>
<td>No.</td>
<td>Family</td>
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<td>Common Name</td>
<td>Dates</td>
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<tr>
<td>13</td>
<td>Liliaceae, <em>Trillium</em> grandiflorum</td>
<td>Large-flowered Trillium</td>
<td>5-7-10</td>
<td>Forest before Grand Sable Dunes, Alger County</td>
</tr>
<tr>
<td>14</td>
<td>Boraginaceae, <em>Myosotis sylvatica</em></td>
<td>Garden Forget-me-not</td>
<td>5-7-10</td>
<td>Field before Grand Sable Dunes</td>
</tr>
<tr>
<td>15</td>
<td>Boraginaceae, <em>Myosotis scorpioides</em></td>
<td>Forget-me-not</td>
<td>5-7-10</td>
<td>Field before Grand Sable Dunes</td>
</tr>
<tr>
<td>16</td>
<td>Rosaceae, <em>Prunus pumila</em></td>
<td>Sand cherry</td>
<td>5-7-10</td>
<td>Grand Sable Dunes</td>
</tr>
<tr>
<td>17</td>
<td>Pinaceae, <em>Pinus resinosa</em></td>
<td>Red Pine</td>
<td>5-9-10</td>
<td>Granite Point, Marquette</td>
</tr>
<tr>
<td>18</td>
<td>Pinaceae, <em>Abies balsamea</em></td>
<td>Balsam fir</td>
<td>5-9-10</td>
<td>Granite Point</td>
</tr>
<tr>
<td>19</td>
<td>Pinaceae, <em>Pinus strobus</em></td>
<td>Eastern white pine</td>
<td>5-11-10</td>
<td>Nara Nature Park, wooded trail by the river</td>
</tr>
<tr>
<td>20</td>
<td>Betulaceae, <em>Betula alleghaniensis</em></td>
<td>Yellow birch</td>
<td>5-11-10</td>
<td>Nara Nature Park, wooded trail by the river</td>
</tr>
<tr>
<td>21</td>
<td>Liliaceae, <em>Erythronium americanum</em></td>
<td>Yellow trout lily</td>
<td>5-11-10</td>
<td>On the trail by the river, but later found on the marsh of Nara Nature Park</td>
</tr>
<tr>
<td>22</td>
<td>Rosaceae, <em>Prunus cerasus</em></td>
<td>Sour cherry</td>
<td>5-11-10</td>
<td>Nara Nature Park, trail by the river</td>
</tr>
<tr>
<td>23</td>
<td>Betulaceae, <em>Betula papyrifera</em></td>
<td>Paper birch</td>
<td>5-11-10</td>
<td>Nara Nature Park, wooded trail by the river</td>
</tr>
<tr>
<td>24</td>
<td>Ranunculaceae, <em>Anemone quinquemontana</em></td>
<td>Wood anemone</td>
<td>5-11-10</td>
<td>Nara Nature Park, wooded trail by the river</td>
</tr>
<tr>
<td>25</td>
<td>Betulaceae, <em>Alnus rugosa</em></td>
<td>Speckled alder</td>
<td>5-11-10</td>
<td>Nara Nature Park, on the marsh trail</td>
</tr>
<tr>
<td>26</td>
<td>Salicaceae, <em>Salix amygdaloides</em></td>
<td>Peachleaf willow</td>
<td>5-11-10</td>
<td>Nara Nature Park, on the marsh trail</td>
</tr>
<tr>
<td>27</td>
<td>Caprifoliaceae, <em>Viburnum lentago</em></td>
<td>Nannyberry</td>
<td>5-11-10</td>
<td>Nara Nature Park, on the marsh trail</td>
</tr>
<tr>
<td>28</td>
<td>Betulaceae, <em>Betula papyrifera</em></td>
<td>Paper birch</td>
<td>5-11-10</td>
<td>Nara Nature Park, on the marsh trail</td>
</tr>
<tr>
<td>29</td>
<td>Typhaceae, <em>Typha latifolia</em></td>
<td>Common cattail</td>
<td>5-11-10</td>
<td>Nara Nature Park, on the marsh trail</td>
</tr>
<tr>
<td>30</td>
<td>Aceraceae, <em>Acer saccharum</em></td>
<td>Sugar maple</td>
<td>5-12-10</td>
<td>Porkies, near the Lake of the Clouds overlook, Ontonagon, MI</td>
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<tr>
<td>31</td>
<td>Pinaceae, <em>Tsuga canadensis</em></td>
<td>Eastern hemlock</td>
<td>5-12-10</td>
<td>Porkies, near the Lake of the Clouds overlook</td>
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<tr>
<td>32</td>
<td>Pinaceae, <em>Pinus nigra</em></td>
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<td>Porkies, near the Lake of the Clouds overlook</td>
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<tr>
<td>33</td>
<td>Cupressaceae, <em>Thuja occidentalis</em></td>
<td>Eastern white cedar</td>
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<td>Porkies, near the Lake of the Clouds overlook</td>
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<tr>
<td>34</td>
<td>Pinaceae, <em>Pinus ponderosa</em></td>
<td>Ponderosa Pine</td>
<td>5-12-10</td>
<td>Porkies, near the Lake of the Clouds overlook</td>
</tr>
<tr>
<td>35</td>
<td>Liliaceae, <em>Clintonia borealis</em></td>
<td>Corn lily, bluebead lily</td>
<td>5-13-10</td>
<td>Black River, Gogebic County</td>
</tr>
<tr>
<td>36</td>
<td>Primulaceae, <em>Trientalis borealis</em></td>
<td>Star flower</td>
<td>5-13-10</td>
<td>Black River, Gogebic County</td>
</tr>
<tr>
<td>37</td>
<td>Violaceae, <em>Viola conspersa</em></td>
<td>Dog violet</td>
<td>5-16-10</td>
<td>Brule-St Croix Portage, Douglas County</td>
</tr>
<tr>
<td>38</td>
<td>Polygalaceae, <em>Polygala paucifolia</em></td>
<td>Fringed polygala</td>
<td>5-16-10</td>
<td>Brule-St Croix Portage, Douglas County</td>
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<td>39</td>
<td>Ranunculaceae, Anemone quinquefolia</td>
<td>Wood anemone</td>
<td>5-16-10</td>
<td>Brule-St Croix Portage, Douglas County</td>
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<tr>
<td>40</td>
<td>Ericaceae, Vaccinium angustifolium</td>
<td>Low sweet blueberry</td>
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<td>41</td>
<td>Rosaceae, Walsteinia fragarioides</td>
<td>Barren strawberry</td>
<td>5-16-10</td>
<td>Brule-St Croix Portage</td>
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<td>5-16-10</td>
<td>Brule-St Croix Portage</td>
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<td>43</td>
<td>Pinaceae, Abies balsamea</td>
<td>Balsam Fir</td>
<td>5-16-10</td>
<td>Brule-St Croix Portage</td>
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<td>Pinaceae, Picea glauca</td>
<td>White spruce</td>
<td>5-16-10</td>
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<td>45</td>
<td>Pinaceae, Pinus resinosa</td>
<td>Red pine</td>
<td>5-16-10</td>
<td>Brule-St Croix Portage</td>
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<td>46</td>
<td>Ranunculaceae, Anemone quinquefolia</td>
<td>Wood anemone</td>
<td>5-16-10</td>
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<td>47</td>
<td>Rosaceae, Prunus serotina</td>
<td>Black cherry</td>
<td>5-16-10</td>
<td>Brule-St Croix Portage</td>
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<td>48</td>
<td>Violaceae, Viola pubescens</td>
<td>Downy yellow violet</td>
<td>5-16-10</td>
<td>Jay Cooke State Park, Grand Portage trail, Thomson Township, Minnesota</td>
</tr>
<tr>
<td>49</td>
<td>Liliaceae, Erythronium albidum</td>
<td>White trout lily</td>
<td>5-16-10</td>
<td>Jay Cooke State Park, Grand Portage trail</td>
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<tr>
<td>50</td>
<td>Liliaceae, Trillium grandiflorum</td>
<td>Large-flowered trillium</td>
<td>5-16-10</td>
<td>Jay Cooke State Park, Grand Portage trail</td>
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<tr>
<td>51</td>
<td>Betulaceae, Betula papyrifera</td>
<td>Paper birch</td>
<td>5-16-10</td>
<td>Jay Cooke State Park, Grand Portage trail</td>
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<tr>
<td>52</td>
<td>Aceraceae, Acer saccharum</td>
<td>Sugar maple</td>
<td>5-16-10</td>
<td>Jay Cooke State Park, Grand Portage trail</td>
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<td>53</td>
<td>Pinaceae, Pinus resinosa</td>
<td>Red pine</td>
<td>5-18-10</td>
<td>Schoolcraft State Park, Deer River MN</td>
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<td>54</td>
<td>Pinaceae, Larix laricina</td>
<td>Tamarack</td>
<td>5-18-10</td>
<td>Bemidji State Park, bog walk</td>
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<tr>
<td>55</td>
<td>Ranunculaceae, Caltha palustris</td>
<td>Marsh marigold</td>
<td>5-18-10</td>
<td>Bemidji State Park, bog walk</td>
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<td>56</td>
<td>Ericaceae, Rhododendron groenlandicum</td>
<td>Labrador Tea</td>
<td>5-18-10</td>
<td>Bemidji State Park, bog walk</td>
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<td>57</td>
<td>Sarraceniaceae, Sarracenia purpurea</td>
<td>Pitcher plant</td>
<td>5-18-10</td>
<td>Bemidji State Park, bog walk</td>
</tr>
<tr>
<td>58</td>
<td>Pinaceae, Picea mariana</td>
<td>Black spruce</td>
<td>5-18-10</td>
<td>Bemidji State Park, bog walk</td>
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<tr>
<td>59</td>
<td>Typhaceae, Typha latifolia</td>
<td>Common cattail</td>
<td>5-18-10</td>
<td>Bemidji State Park, bog walk</td>
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<tr>
<td>60</td>
<td>Ericaceae, Andromeda polifolia</td>
<td>Bog rosemary</td>
<td>5-18-10</td>
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<tr>
<td>61</td>
<td>Salicaceae, Populus tremuloides</td>
<td>Quaking aspen</td>
<td>5-18-10</td>
<td>Itasca State Park, in the woods on the way back from the bog</td>
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<td>62</td>
<td>Cupressaceae, Juniperus virginiana</td>
<td>Eastern redcedar</td>
<td>5-19-10</td>
<td>Itasca State Park, near the headwaters</td>
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<td>63</td>
<td>Liliaceae, Uvularia grandiflora</td>
<td>Large-flowered bellwort</td>
<td>5-20-10</td>
<td>Itasca State Park, Interpretive trail</td>
</tr>
<tr>
<td>64</td>
<td>Violaceae, Viola pubescens</td>
<td>Downy yellow violet</td>
<td>5-20-10</td>
<td>Itasca State Park, Interpretive trail</td>
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<tr>
<td>65</td>
<td>Orchidaceae, Corallorhiza striata</td>
<td>Striped coral root</td>
<td>5-20-10</td>
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</tr>
<tr>
<td>66</td>
<td>Rosaceae, Fragaria virginiana</td>
<td>Wild strawberry</td>
<td>5-20-10</td>
<td>Itasca State Park, Interpretive trail</td>
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<tr>
<td>67</td>
<td>Pinaceae, Pinus strobus</td>
<td>White pine</td>
<td>5-20-10</td>
<td>Itasca State Park</td>
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<td>Ranunculaceae, <em>Thalictrum dioicum</em></td>
<td>Early meadow rue</td>
<td>5-20-10</td>
<td>Itasca State Park, near the fire tower</td>
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<td>Aceraceae, <em>Acer rubrum</em></td>
<td>Red maple</td>
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<td>Itasca State Park, near the fire tower</td>
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<td>Ranunculaceae, <em>Hepatica americana</em></td>
<td>Roundlobe hepatica</td>
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<td>Itasca State Park, Bohall trail</td>
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<td>71</td>
<td>Liliaceae, <em>Uvularia sessilifolia</em></td>
<td>Wild oats</td>
<td>5-20-10</td>
<td>Itasca State Park, Bohall trail</td>
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<td>72</td>
<td>Rosaceae, <em>Fragaria virginiana</em></td>
<td>Wild strawberry</td>
<td>5-20-10</td>
<td>Itasca State Park, Bohall trail</td>
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<td>73</td>
<td>Liliaceae, <em>Uvularia grandiflora</em></td>
<td>Large-flowered bellwort</td>
<td>5-20-10</td>
<td>Itasca State Park, Bohall trail</td>
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<td>74</td>
<td>Geraniaceae, <em>Geranium maculatum</em></td>
<td>Spotted geranium</td>
<td>5-20-10</td>
<td>Itasca State Park, Bohall trail</td>
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<td>75</td>
<td>Primulaceae, <em>Trientalis borealis</em></td>
<td>Star flower</td>
<td>5-21-10</td>
<td>Itasca State Park, Red Pines trail</td>
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