

MICHIGAN BASIN GEOLOGICAL SOCIETY

FIELD EXCURSION SPRING 2020

A GEOLOGICAL EXCURSION BY RAFT ON THE COLORADO RIVER THROUGH THE *GRAND CANYON* - LEE'S FERRY TO WHITMORE WASH PAGE, ARIZONA

- DATE:** May 2020, actual dates and length of trip (9-10 days total) to be determined in late 2018. Anticipate starting the trip at the start of the 3rd week in May.
- FEE:** Estimated at \$3,200 each (rafting trip only) for MBGS Members. Each participant will be responsible for round trip air travel (to Page, AZ and return from Las Vegas, NV), lodging, possibly surface travel and food outside of rafting trip.
- LEADERS:** ***Dr. Katherine McCarville, Pd.D.***, Professor of Geosciences, Upper Iowa University, Fayette, IA
- REGISTRATION:** A preliminary signup list is now being assembled for those interested in this trip. Email Mark Wollensak at wollensak@voyager.net to get your name on the prelim list. A non-refundable (but transferrable) down payment of \$500 will be required at the time our river expedition outfitter sets the firm dates for the trip (late 2018). There is a maximum of 30 participants.
- OUTFITTER:** **Hatch River Expeditions, Flagstaff, AZ**
www.hatchriverexpeditions.com/grand-canyon-motorized-rafting-expeditions
A 7 day Grand Canyon rafting trip through Hatch includes: 188 miles of rafting from Lee's Ferry to Whitmore Wash, pre-trip stay at Cliff Dwellers Lodge included, Helicopter ride & return flight to Las Vegas or Marble Canyon included. Meals, beverages, camping gear and dry bags are provided by Hatch while on the river.
- TRIP BACKGROUND:** The Michigan Basin Geological Society (MBGS) is returning to raft the Colorado River through the Grand Canyon in May of 2020. This is a repeat of the 2005 trip taken except this trip will be led by a highly experienced Dr. Kata McCarville, Upper Iowa University. Many repeat stops are anticipated to be visited such as Lava Canyon, Redwall Cavern, Nankoweap Grainery and Havasu Canyon. New stops are also anticipated. The Grand Canyon is the first on the list of the Seven Natural Wonders of the World.
- GEOLOGICAL BACKGROUND:** The geology of the Grand Canyon area includes one of the most complete and studied sequences of rock on Earth. The nearly 40 major sedimentary rock layers exposed in the Grand Canyon and in the Grand Canyon National Park area range in age from about 200 million to nearly 2 billion years old. Most were deposited in warm, shallow seas and near ancient, long-gone sea shores in western North America. Both marine and terrestrial sediments are represented, including fossilized sand dunes from an extinct desert. There are at least 14 known unconformities in the geologic record found in the Grand Canyon. *Wikipedia*

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PHYSICAL REQUIREMENTS: We anticipate this trip will be challenging for some to adjust to the environmental conditions, including heat, cold, elevation, weather, water and sand. If you have factors that could make a trip more difficult including age, weight, lack of conditioning, and heart or other diseases, consider talking to a doctor before committing.

Here are some minimum requirements you must be able to meet to safely enjoy your journey:

- Able to fit into a Type 5 Life Jacket (max chest size 58");
- Ability to hold onto the raft while going through whitewater. Ropes are provided throughout the raft for hand holds;
- Capable of climbing onto and off of the raft. There will be about a 2 foot step up/down from the raft to the beaches. Please note that some surfaces may be wet and slippery;
- Comfortable walking on uneven, rocky terrain. Trails in Grand Canyon are not regularly maintained. Each day will have up to two hikes. Some hikes will start upstream from where we get picked up at a later time downstream. In these instances, the hike must be completed within the time allotted and returning to the starting point is not possible. Some hikes may be through a stream against moving water. One hike anticipated is approximately 3 miles on rough terrain and within narrow rock canyons. Also sand beaches are the norm for camp sites so make sure you are comfortable walking across the sand inclines;
- Able to carry your own personal gear to and from camp. The maximum weight for personal gear is 25 pounds.

Recommended Pre-Trip Conditioning Activities:

- Find and hike local trails that have elevation gain and loss;
- Use the incline feature on machines at your local gym (or take the stairs wherever you go);
- Walk and hike on uneven terrain to prepare for rocky trails;
- Purchase hiking shoes or cross training shoes and hiking sandals and break in ahead of time to avoid blisters; and
- Get in the habit of drinking water throughout the day – it's good for you every day, but mandatory on the river!

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Biography: Dr. McCarville (Kata) has roots in the midwest but grew up in California. She studied geology at UCLA as an undergraduate, and worked as a uranium miner in Wyoming after graduation. She took a masters degree in geology Colorado School of Mines, working on uranium deposits in the Red Desert basin of Wyoming, and then worked for a number of years in computing and networking at universities and for engineering consulting firms. As a Bush Foundation Leadership Fellow, she did her doctoral work in avian paleontology of Fossil Lake, Oregon, at the South Dakota School of Mines. Her work resulted in an innovative interpretation for the locality.

Kata got started with Grand Canyon geology while working with John Warme on a number of projects. She has led or co-led numerous Grand Canyon geology rafting trips (including the 2005 MBGS trip), and organized and led many other geology field trips. Born at the confluence of the Missouri and Mississippi Rivers, she is a river rat. She's spent time on and along the Colorado, Green, Platte, Snake, Mississippi, and many of Iowa's rivers.

Kata is a member of the faculty at Upper Iowa University in Fayette, Iowa, where she coordinates the Environmental Science degree program. She teaches a wide variety of courses in geosciences and geography, and chairs the Department of STEM. Her interests span the earth and environmental sciences and often cross disciplinary boundaries. Her current research centers on the role of disturbance in prairie ecosystems, and the origins of the Iowan Erosion Surface. She enjoys mentoring students, and has supervised student projects in trumpeter swan restoration, wildland fire education, fish species in Grand Canyon, squirrel nest-tree selection preference, assessment of a local shooting range for lead contamination, and GIS-based studies of the distribution of algific talus slopes that serve as refugia for Pleistocene species, among others.

An advocate for diversity in STEM, Kata serves as UIU Campus Director for the Louis Stokes Alliance for Minority Participation in STEM disciplines, and as Co-Principal Investigator on an NSF-funded project called STEM-Pros: Growing More STEM Professionals in the Heartland.

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PROPOSED ITINERARY:

- Day 1: Travel by plane to Page, Arizona (or arrive previous day). Hatch will pickup participants at the Page, AZ airport (or hotel) for transportation to Cliff Dwellers Lodge. We anticipate sightseeing in afternoon which may include Glen Canyon Dam, Navajo Bridge, Marble Canyon, Horseshoe Bend and the Navajo Sandstone. A group dinner in evening at the Cliff Dwellers Lodge. A speaker is being arranged following the dinner.
- Day 2: Depart Lodge to Lee's Ferry. Load raft and begin rafting trip on Colorado River in the Grand Canyon. Day 1 on River.
- Day 3-8: Days 2 -7 on River. Stops and/or hikes may include Redwall Cavern, Nankoweap Grainery, Carbon Creek/Lava Canyon, Phantom Ranch, Elves Chasm, Havasu Canyon and Lava Falls. Camping will be on sand bars along the river suitable to accommodate 2 rafts of participants. Anticipate one party night "Margarita Night" on the river.
- Day 8: Day 7 on River. Arrive at Whitmore Wash for helicopter ride out of canyon to Whitmore Landing. Fly out of Whitmore Landing International Airport for Las Vegas or Marble Canyon. Lodge in Las Vegas or Marble Canyon/Page.
- Day 9: Depart for Home.

