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Flora of the Yellowstone Region Mobile Application

It has long been the practice of Yellowstone Science to review or feature books that contribute to our readers’ understanding of the science being performed in Yellowstone, or the natural and cultural resources we protect. As technology changes, so do our available sources of information. With that in mind, we present our first review of a mobile application (app).

Bozeman-based High Country Apps has released Flora of the Yellowstone Region, an interactive app for smartphones and tablets. Flora of the Yellowstone Region covers 300 wildflowers, trees, shrubs, and grasses commonly found in Yellowstone National Park and the surrounding national forests of Idaho, Montana, and Wyoming.

Though there are other Yellowstone-focused apps available, Flora of the Yellowstone Region is not designed for trip planning or general park information—it is designed as a digital field guide. The guide presents photos and illustrations of the plants, easily understood descriptions, distinctive field marks, preferred habitats, and supplemental information on each plant’s ecology and cultural use. We selected three reviewers to explore the app and report back to us, one interpretive ranger, one resource specialist, and one guide from a partner organization.

Reviewers found that the app was easy to use and deemed it appropriate for professional guides as well as novice nature enthusiasts. They liked the search key which allowed the user to select flower color, leaf type, and other characteristics to quickly identify unknown plants. For example, you may be on a hike, look down and see a plant, but not know its name. It could be tall and thorny, sticky with black berries, or perhaps sweet-smelling with square stems. Using the app, you can select what you do know, and all plants matching your description will be displayed. You can also search by environmental parameters such as elevation, habitat, and time of year.

On the technical side, the entire app is stored directly on the mobile device, so it can be used with or without call service or data connection. This is a particularly useful feature in areas with poor or intermittent wireless access—like Yellowstone trails. The app is available for a variety of platforms and operating systems, including Apple and Android devices, and Kindle Fire.

Working with local plant experts, the designers have developed similar region-specific flora apps for Glacier National Park, the Colorado Rockies, and the Wasatch Range. For additional reviews and information on price and offerings, go to http://www.highcountryapps.com/.

-An All Girls Expedition

Founded in 1999, Project Exploration is a nonprofit science education/youth development organization whose mission is to ensure that communities traditionally overlooked by science—especially minority youth and girls—have personal experiences with science and scientists. Project Exploration’s All Girls Expedition is a two-week session for high-school girls from Chicago public schools. It has been run in partnership with the Young Women’s Leadership Charter School, and more than 20 girls have participated in Yellowstone since 2009. The expedition begins in Chicago with intensive class work in which the participants learn practical geology, biology, evaluation, and field skills. Then the team spends a week working in the field alongside scientists.

The nine participants in the 2011 All Girls Expedition arrived in Yellowstone with program coordinator Elsa Rodriguez and Heather King, a PhD candidate in the Department of Organismal Biology and Anatomy at the University of Chicago. On July 20, the group contributed to the work being done by Yellowstone’s geology program in the ongoing mapping the Mammoth Hot Spring Terraces. The girls received an introduction to the geology
of Yellowstone National Park and the surrounding landscape from park staff. Yellowstone geologist Cheryl Jaworowski and student technicians Laura Bueter and Emma Reinhart explained the significance and goals of the Mammoth Hot Springs mapping project, as well as how to orient and read maps. The girls were instructed in a technique to visually estimate the area covered by flowing thermal water and colorful microbial mats at Canary Springs. Along with the two student technicians, each of the girls estimated the flow area of the Mammoth Terraces by using a geologic map as a base and drawing their estimates with a pencil.

The estimates derived from the Project Exploration students’ maps ranged from 10,260 to 49,242 square meters, with most between 14,000 and 20,000 square meters, while those of the two Yellowstone geology technicians were 4,873 and 21,473 square meters. This project helped the Yellowstone geology program to assess the usefulness and accuracy of this technique. Even with these variations in area, it can provide a map of hydrothermal activity that complements the photographs and observations of National Park Service interpretive rangers.

Kyra West completes her classroom preparations before heading out to Yellowstone for field work.

—The 2011 All Girls Expedition team: Constance Robinson, Jackie Rueda, Xhaidt Torres, Kennedy Ward, Kyra West, Morgan West, Robbie Lewis, Shelby Green, and Ana Lopez.

Geology technicians converted each student’s illustrations into digital shapes, then produced maps of their estimations of the thermal waters of the Trail/Canary springs area.