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AMERICA'S LARGEST CLASSROOM

EXPANDING THE ROLE OF
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AMERICA'S LARGEST CLASSROOM EXPANDING THE ROLE OF EDUCATION IN OUR PARKS

A legacy of learning at Whiskeytown Environmental School: *Fieldnotes from an interview with Ellen Petrick*

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Ellen Petrick is a supervisory park ranger at Whiskeytown National Recreation Area. She has also worked at Yellowstone National Park, Black Canyon of the Gunnison National Park, and Curecanti National Recreation Area—primarily with youth programs. **Ana Houseal** is an associate professor at the University of Wyoming's Science and Mathematics Teaching Center, where she spends a good portion of her time working with practicing K–12 teachers to understand and implement the Next Generation Science Standards. She prefers to spend the rest of her time in natural areas, especially national parks, thinking about and working to connect people to science in nature.

Petrick and Houseal met in the early 2000s in Yellowstone National Park, where Houseal completed the field work for her doctoral dissertation looking at the effects of a three-part citizen science project (using a Student-Teacher-Scientist model) within Yellowstone's long-running residential environmental education program, Expedition: Yellowstone! The project, embedded in science conducted at Mammoth Hot Springs, yielded evidence of significant positive outcomes for teachers and students.

AH: *In terms of thinking about the NPS being America's largest classroom, tell me some of the ways, in your experience, the NPS collaborates with schools and formal educators?*

EP: Collaboration takes many different forms. Probably the most common is the school field trip to the park. Parks typically offer a wide range of field trip options that are relevant to their primary interpretive themes and state educational standards. So, at the Black Canyon, we offered geology and wildlife lessons, whereas, at Whiskeytown, we offer human history, emphasizing the historical significance of the Gold Rush era. The programs are not only relevant to the park's primary interpretive themes, they also help teachers put state educational standards into a specific context that inspires young learners. And if the primary purpose of the visit is academic, accredited schools can apply for an academic entrance fee waiver.

In terms of entry into the parks, every fourth grader and their family now qualifies for free entrance into the parks through the Every Kid Outdoors program [also discussed in the Newton article in this issue]. The pass provides free entrance, for the entire school year and the following summer, for the fourth grade student and everyone in their ve-



Petrick working with kids on art projects at Black Canyon of the Gunnison National Park. | NPS

hicle. By visiting the Every Kid Outdoors website, parents and educators can download a free pass for their students.

Other partnerships extend into the community. Many parks have staff who provide community-based programs such as classroom visits, after-school programs, and summer camps. I have been involved in science fair judging, and lots of career fairs. There is also distance learning, and teacher training. Professional development for teachers includes workshops, and courses for graduate credit. The servicewide Teacher-Ranger-Teacher program, a summer partnership with CSU Denver [Colorado State University's Denver Center], brings teachers to parks to work on mutually beneficial projects—that are interesting to the teacher and beneficial to the park—while earning graduate credit.

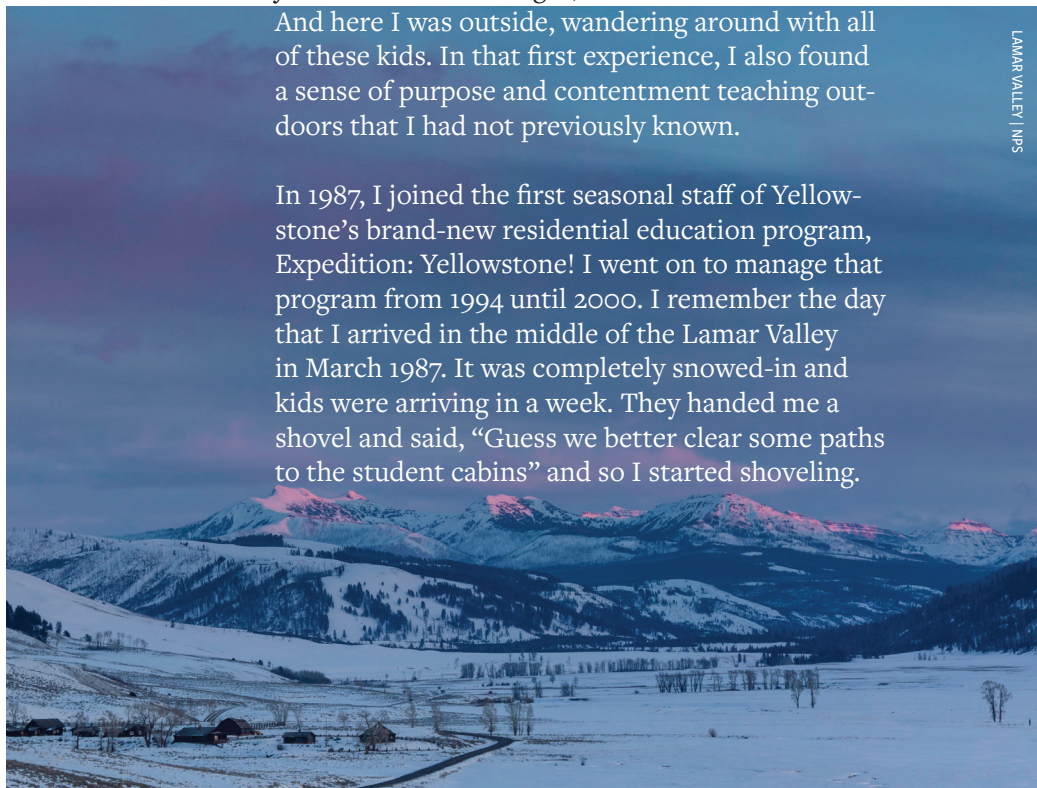
Finally, there are residential programs for schools. These are immersive, multi-day, overnight camp experiences. While not all parks do all of these things, many of them do most of them.

AH: Can you tell me about your history and experience with residential environmental education programs?

EP: My first experience with residential EE was as a graduate teaching fellow at Montclair State University's New Jersey School of Conservation (NJSOC). The NJSOC is the oldest university-operated environmental education center in the US. It is a beautiful place in northwestern New Jersey. The 240-acre campus in Stokes State Forest serves 9,000 students and a thousand teachers each year. The camp can host 200 students at a time, and has been doing so since 1949. It has provided a multi-generational experience for many people living in that region. When I first arrived there, I had never done anything like that. I was a biology major, and I realized pretty quickly that I had found my dream job—long days spent outside, wandering through the forest, lakes, and streams with a group of about 10 happy kids in tow.

I felt like “Doc” in John Steinbeck’s novel, *Cannery Row*. Doc was a marine biologist; he was really wise about the natural world and human nature. He helped out this kid who had a difficult home life. He let the boy tag along on specimen collecting trips to the tidal flats. Doc was this character who was liked by everyone. He tipped his hat to dogs as he drove by, and dogs looked up and smiled. I just loved that. I thought, that is what I want to do! And here I was outside, wandering around with all of these kids. In that first experience, I also found a sense of purpose and contentment teaching outdoors that I had not previously known.

In 1987, I joined the first seasonal staff of Yellowstone’s brand-new residential education program, Expedition: Yellowstone! I went on to manage that program from 1994 until 2000. I remember the day that I arrived in the middle of the Lamar Valley in March 1987. It was completely snowed-in and kids were arriving in a week. They handed me a shovel and said, “Guess we better clear some paths to the student cabins” and so I started shoveling.



LAMAR VALLEY | NPS

The cabins, at that time were unheated, originally condemned guest cabins that had been transported out there from the Fishing Bridge area. Since there was no heat, the snow drifted under the doors into the middle of the floors inside the cabins. But, sure enough, a week later we had kids out there. Today, there is a beautiful facility in the Lamar Valley, and the program has expanded to the YCC [Youth Conservation Corps] camp at Mammoth Hot Springs, where there are plans to complete a new youth campus with beds for 140 students—more than doubling the current overnight capacity.

I also helped establish the Klamath Outdoor Science School in southern Oregon, when I was living in Klamath Falls. Now, I am in northern California, and the big draw to come out here was a long-standing environmental education school called the Whiskeytown Environmental School located within Whiskeytown National Recreation Area. It was in operation for almost 50 years on the original site. Unfortunately, the school is closed right now, and has been since the Carr Fire of 2018. I have been working with the Shasta County Office of Education and other partners to help get it reopened.

One of our primary interpretive themes at Whiskeytown is interpreting the legacy of learning that

generations have experienced here over the past five decades.

AH: *Whiskeytown sounds like a great place to connect people who are interested in understanding how learning occurs in residential environmental education settings, and how these experiences play out within a community over time. Can you describe a typical day?*

EP: Sure! In a typical Whiskeytown Environmental School experience, kids show up and get off the bus, and even though they are only 12 miles west of Redding, from their excitement, you would think they had just set foot in another country. They are amazed and have heard about this place from parents, siblings, and friends, so the experience has become a rite of passage, long anticipated. For the next five days, their world is the camp. They sleep in these tiny, old cabins, which have a legacy in the community. When people come up to us, they say, “I remember the number of my cabin, I was in Cabin 11!” They remember this place for the rest of their lives! Cabin groups are named for national parks; there is a Yellowstone, Yosemite, and a lot of lesser known parks as well, such as Lassen and Channel Islands. This becomes their group identity, so when they gather at the outdoor amphitheater for songs and campfires, they sit on benches inscribed with the same park name. On the final



Benches inscribed with names of national parks in the amphitheater at Whiskeytown Environmental School. | NPS



evening, they perform skits based on what they have learned about that park, so there is an emphasis on national parks throughout.

Since it is a residential program, they eat meals with their teachers, counselors, and friends. They get to know each other in new ways. Every day is spent outside, hiking a large network of trails. And there are creeks and water all through the area. They spend time wading in the creeks and exploring those environments with field staff. While it is

a joint program with the NPS, most of the staff are hired by the Shasta County Office of Education. The field naturalists, who work for the county, facilitate science learning and help the students connect with the natural phenomena all around them.

It is a nature-based, immersive, science-focused environmental education program. Anytime I show up on campus at Whiskeytown Environmental School when kids are in residence, I can hear laughter and song throughout the camp. This is a place where they bond over campfires, jokes, and songs. They learn a lot, and grow a lot.

AH: *One of the ideas I hear you mentioning is this collaboration among the community and with the park in terms of who is participating and providing programming.*

EP: Yes, there is no way we could do it without that strong partnership. It really leverages everybody's resources to provide the strongest program possible for the kids.

AH: *What you're describing sounds like a legacy of environmental learning, which is uniquely supported by the community. You also talked about the many ways that students get to know each other, their teachers, and the environment. This leads me to ask: What can*



Whiskeytown Environmental School Cabins, 2018—
before the Carr Fire. | NPS

residential programs do for kids and adults that day programs cannot? And what might be some reciprocal benefits for the NPS?

EP: I am going to start with the students. For students, who are in fifth or sixth grade, attending a residential program is often their very first experience away from home for an extended period of time, and the potential for growth is huge. Growth generally falls into three main areas. Because, like Expedition Yellowstone!, Whiskeytown Environmental School is primarily science-focused, one of those areas is ecosystem learning. The other two areas are relationship-building and personal change.

Science learning includes content knowledge based on the area, as well as concepts, processes that are occurring around them that they may not have noticed before, but when they are living it, they start to understand these things better. The program is very student-centered and based on the Next Generation Science Standards, so there is an emphasis on facilitating scientific discourse and letting kids practice. They are spending time talking with their peers, learning to engage in scientific argument, and defending these arguments with evidence. So they aren't just learning facts, they are also learning how to think like scientists.

Relationship-building occurs among peers, with teachers, program staff, and the park itself. A big thing I have noticed is that outside the confines and pressures of the classroom, there is an equalizing effect. It can be disorienting and disruptive at first. They are in a new environment with a different teacher and success on the trail and in camp requires a different skill set than success in the classroom. So it gives students a chance to shine in ways that may not have been possible for them previously. In the big picture, what begins to emerge, is greater acceptance of differences, new friendships, and community-building that endures beyond the camp experience.

Personal growth and change can lead to big benefits for individual students. Some of these areas are predictable, including gains in independence, self-confidence, and self-esteem. But there are other things that are less obvious. For example, a child discovers he is able to eat something he did

not think he liked. An unpopular child becomes well-liked. Another child who is often distracted in the classroom becomes fully present and engaged. A few discover how happy it makes them just to be outside. Others are challenged physically and find they are able to do what they thought they could not. We often hear from parents how huge these changes can be, so they should not be underestimated.

Of course students experience learning, relationship-building, and personal growth in their daily lives, but in the residential setting, they learn these things more quickly and intensely. I think it happens because of the overarching qualities of detachment and continuity. Detachment refers to

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the physical and psychological isolation made possible by the characteristics of the site and through program design. The area has a remote, isolated, wilderness feel to it. While in residence, the camp is their world. Continuity refers to the continuous, uninterrupted quality of the camp experience. Participants live together 24 hours a day, uninterrupted by external distractions and pressures for five days. This enhances learning, disrupts old routines and patterns, and makes room for new ones. It opens students' eyes to new ways of being and experiencing the world. Many discover an enduring fascination and love for science. Some decide they want to become field instructors, scientists, or rangers. All leave appreciating Whiskeytown, their peers, and themselves a little bit more.

AH: *Great! Let's shift the focus to teachers. What are some of the impacts on teachers?*



Scenes from Whiskeytown National Recreation Area: (left) Whiskeytown Lake; (right) hiker in sunlight.

EP: Teachers are part of the experience as participants in their own right. For one, they get to observe others teach their students. Teachers never get enough opportunities to observe other educators. In this environment, they get a chance to be less involved in the direct instruction at camp and observe their students and maybe learn some new approaches and techniques from the field staff. At Whiskeytown, teachers are especially eager to see Next Generation Science Standards in action. They see how engaged and excited their kids are and that inspires their own excitement. So, the fact that our programs align with their curriculum is a benefit, and teachers gain confidence in their own ability to approach science teaching in a new way. They get to know their students better, including discovering strengths they may not have been aware of. Teachers return to the classroom renewed and inspired, with a wealth of material to draw from and build on throughout the year.

Sustaining or increasing land stewards requires recruitment. There just is no better way to efficiently inspire large numbers of children, representing a true cross-section of the regional constituency, in enduring ways, than through the residential environmental school experience.

AH: *How about parks? Why are residential education programs important for parks, especially in this era of budget cuts and decreases in programs writ large?*

EP: There are never enough resources to do everything you might want to do, and residential programs represent a large commitment. If you think about it, an experience that lasts five days, including meals and overnights—it's a huge investment. But, sustaining or increasing land stewards requires recruitment. There just is no better way to efficiently inspire large numbers of children, representing a true cross-section of the regional constituency, in enduring ways, than through the residential environmental school experience. The park could, and does, invest in other kinds of education. But no other program comes close in terms of the depth, and breadth of impact. Someone once described it to me this way: If you want to improve your mood, go outside. For a major attitude adjustment, go for a hike. But if you want to change lives, go backpacking. The same can be true about a week at camp.

Whiskeytown Environmental School occupies a relatively small corner of the recreation area, but it exerts a big impact on the health of Shasta County, and ultimately the park itself. Campers fall in love with this place and continue to visit it throughout their lives. They introduce their own children to the experiences they were first exposed to here, so Whiskeytown becomes part of their identity



ANA HOUSEAL

Houseal and Petrick in Norris Geyser Basin, Yellowstone National Park, scouting for spring Expedition: Yellowstone! Hikes.

as members of this community. It's something to protect and care for. That depth of relationship ultimately holds significant payoffs for parks.

This experience is so healthy for young people. It releases students, for a time, from the tiresome obsession with self. The birds singing in the willows, the salmon moving up the creek, the frogs croaking in the pond, the butterflies floating over the meadow, the bats swooping just beyond the campfire—all coax students up and out of themselves, into a

sort of liberated reality that makes it safe to move, if only for a little while, out to the margins of their lives, to open their arms and call for something bigger. Further, Whiskeytown provides a respite for the whole community. It is a place for residents to refresh and renew for the rest of their lives—after having experienced these things first as children at the Whiskeytown Environmental School.

AH: *Thank you, Ellen. I so appreciate your thoughts and insights!*

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