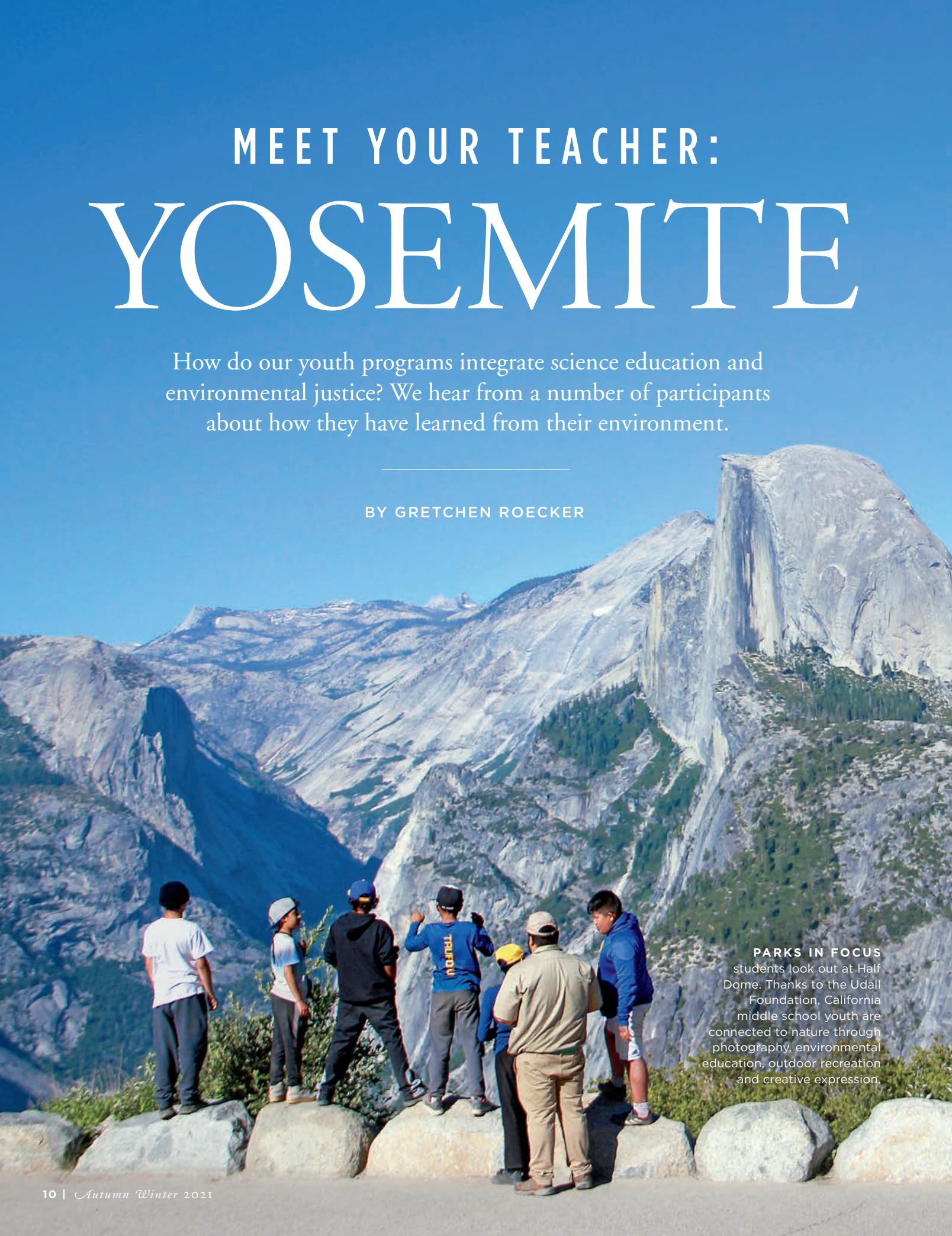


MEET YOUR TEACHER: YOSEMITE

How do our youth programs integrate science education and environmental justice? We hear from a number of participants about how they have learned from their environment.

BY GRETCHEN ROECKER

A group of seven people, including six youth and one adult, are standing on a rocky ledge overlooking a vast mountain landscape. The youth are dressed in casual outdoor attire, including t-shirts, hoodies, and hats. One youth in the center is wearing a blue t-shirt with the word "Yosemite" printed on the back. The adult is wearing a tan park ranger uniform. They are all looking towards the right side of the frame, where the iconic Half Dome mountain peak is visible. The background shows a deep valley with green forests and other rugged mountain peaks under a clear blue sky.

PARKS IN FOCUS
students look out at Half Dome. Thanks to the Udall Foundation, California middle school youth are connected to nature through photography, environmental education, outdoor recreation and creative expression.

In July 2021, Selena, a rising California high school senior and lifelong nature-lover, set off on her first backpacking trip. Her companions: 11 fellow participants in the Adventure Risk Challenge (ARC) Yosemite summer course, four instructors, and acres of mountains and forests. As a competitive runner, Selena was up for the physical demands of the trek from Tamarack Creek to Tenaya Lake. But she was anxious. She'd never hiked or camped before, and now she had to sleep outside and navigate trails with people she'd just met.

Before long, Selena's stress gave way to an appreciation for her surroundings, for teamwork and for experiential education. She saw waterfalls for the first time ("mind-blowing!"), learned to "Leave No Trace," and practiced patience and collaboration. And Selena, a budding biologist, got to delve into a subject she adores: science. With a field guide in hand, she examined ecosystems up close and identified plants and animals along the trail.

The backdrop to Selena's trip was a hot summer after a dry winter. Much of California was facing extreme drought, and wildfires had already scorched hundreds of acres across the state. Like anyone spending time in Yosemite, Selena and her peers witnessed impacts of climate change firsthand: dying trees, hazy skies, dwindling alpine snow.

In the world of public lands, we often talk about shaping the next generation of nature stewards and the importance of ensuring those stewards represent the diversity of the nation. Amid a cascade of environmental crises, that concept feels ever more pressing. The youth programs our donors support reflect the complexity and urgency of the moment.

Participants study ecology in a rapidly changing landscape; they explore environmental justice in conversations about park history and access. And at their core, Conservancy-funded programs encourage students — from kindergarten Junior Rangers to ARC's high schoolers — to be curious, creative scholars of the natural world.

In an 18-month stretch where education of all kinds has been disrupted, at best, ARC and other programs have been able to keep students engaged in nature-based learning. For Selena, being able to connect the pages of her field guide to the living Yosemite Wilderness in real time was a vastly different experience from being in a

“We invite our students to look deeply, notice details and focus on the environment around them.”

Mel Hoffman

ARC PROGRAM DIRECTOR



ARC PARTICIPANTS Angel Escoto, Emily Zaragosa, and Selena Lopez learn to read a topographical map with Jesus Alejandra atop El Capitan. PHOTOS: © COURTESY OF UDALL FOUNDATION

classroom or lab. She could look at a scientific sketch of a sequoia one moment and gaze up at a giant tree's towering crown the next.

Science has always been a pillar of ARC's model, along with literacy and leadership training. Over time, the program's focus has shifted from lecture- and research-based activities to place-based learning, rooted in observation.

“We invite our students to look deeply, notice details and focus on the environment around them,” says ARC Program Director Mel Hoffman.



On an ARC course, students such as Selena learn to slow down and take in their surroundings. They identify species and document their findings, analyze data to assess tree and water health, and read about and debate environmental issues. ARC’s literacy component is anchored in environmental learning, too: Students use a plant, animal or habitat they’ve observed during the course as the basis for metaphorical poems.

Encouraging students to think deeply about their surroundings sparks dialogue on environmental justice, too, Hoffman says. Many ARC participants are from immigrant families living below the poverty line — and often not represented in popular portrayals of “outdoorsy” people. Through “community conversations,” students talk about who belongs in the outdoors and who has the

ability to consider being an “outdoors person” as part of their identity.

They also explore the park’s complex and sometimes cruel human history. ARC leaders incorporate Indigenous land acknowledgements at the beginning of expeditions. Selena’s cohort visited Wahhoga, the site of the Valley’s last Native village and a future cultural center.

Like ARC, Parks in Focus, a Udall Foundation program long supported by Conservancy donors, takes advantage of Yosemite as an outdoor educational hub. The crux of the program is a five-day camping trip, during which the middle school participants use digital cameras to learn about the environment.

“Photography is a starting point,” says Bret Muter, Udall Foundation’s deputy director of education



AS THE SUN SETS
on Tuolumne Meadows, Parks in Focus students find the best light at golden hour. Participants hone their photography skills in iconic settings throughout the park, and enjoy a photography walk with staff from the Ansel Adams Gallery.

PHOTO: © COURTESY OF UDALL FOUNDATION.

“Parks in Focus emphasizes talking about public lands as places for all.”

Bret Muter
UDALL FOUNDATION

programs. “It allows us to integrate other elements of learning.”

Parks in Focus lessons start with basic photography concepts, such as how to select a subject or take a macro image. Then, students use their new camera skills as a tool for scientific curiosity. They might go on a scavenger hunt to photograph different plants and animals. As they zoom in on bark patterns, they can wonder at a tree trunk’s layers. Focusing on a butterfly as it floats over milkweed becomes an opportunity to learn about pollination.

The kids may learn about the relationship between snowpack and water; get a basic introduction to how climate change is affecting the park; and explore human stories, including those of displaced Indigenous communities, as an essential part of understanding Yosemite’s past, present and future.

Not everyone who participates in and learns from Parks in Focus is an adolescent. Eric Ruiz went to the Boys & Girls Clubs of the Peninsula — a long time partner of Parks in Focus — when he was growing up; now, he’s the enrichment manager at the clubs’ East Palo Alto location, a role that includes chaperoning Parks in Focus trips for students from historically marginalized Bay Area communities. So far, he’s been to Yosemite 11 times with Parks

in Focus. During the past decade, Ruiz says, Parks in Focus has helped him fall in love with the park and with nature. He’s seen the program have that same effect on students.

“Normally, when our students hear about Yosemite, they never knew this park existed ...” even though they live just a few hours away, Ruiz says. By partnering with the Boys & Girls Clubs, Parks in Focus gives his students an experience they may not otherwise have.

“Parks in Focus emphasizes talking about public lands as places for all,” Muter says. For him, a deep commitment to showing students that Yosemite is for them, as a place to recreate and learn, is rooted in something a student said on a Parks in Focus trip years ago: Kids like us don’t go to places like this.

Parks in Focus and other donor-funded programs help ensure young people who are typically underrepresented in places such as Yosemite not only get to go to the park, but also get to explore biology and geology, build outdoor skills they can use on their next hike or camping trip, and maybe even set their sights on careers in conservation, science or nature photography.

Youth program alumni might gain a penchant for birding or botany, a



THANKS TO GENEROUS SUPPORT from Yosemite Conservancy, participants keep their digital cameras as an incentive to continue their photographic explorations. Images all taken by young photographers, from L-R, clockwise: A fawn stands in the shallows of a river and a big tree from a unique perspective, taken by Monica, age 12; a purple sky lupine taken with a macro lens, by Sophia, age 11, Boys and Girls Clubs of the Peninsula; a ladybug on small white flowers, by Emely, age 10. PHOTOS: © COURTESY OF UDALL FOUNDATION.

“The future of our planet requires that young people take an active interest in the choices we’re making that affect it.”

Mel Hoffman
ARC PROGRAM DIRECTOR

new interest in analyzing hydrological data, or a deeper understanding of how past and present injustices affect people’s relationships to land. Results from ARC’s post-trip surveys show that 90% of students say nature and the environment are important to them.

Ruiz, who teaches a popular photography program at the Boys & Girls Clubs, says former Parks in Focus participants often tell him they’re going on hikes, checking out local parks and continuing to explore nature with their cameras. At least one declared a goal to become a Yosemite ranger one day.

And, as Selena can attest, ARC and other programs not only emphasize environmental education, but also instill skills — perseverance, collaboration, curiosity, leadership — that are needed by the next generation of stewards.

“The future of our planet requires that young people take an active interest in the choices we’re making that affect it,” ARC’s Hoffman says, adding that a connection to place is an essential foundation for environmental awareness.

By supporting youth programs, you help create the foundations on which Selena and many others are building. ■



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