EPI Yellowstone's Wildlife and Winter Ecology Programs provide five- to nine-day immersive field science courses for middle and high school students in the Greater Yellowstone Ecosystem. Our students are empowered by hands-on, authentic research and conservation service engagement with our partners in Yellowstone National Park, the Custer-Gallatin National Forest, and on private land.

EPI Yellowstone's programs critically supplement public, private, rural, and Indigenous schools' science programs, and concentrate on building participants' Environmental Literacy—including Social and Emotional Skills—inspiring thoughtful ecological engagement long after the course.

2021 HIGHLIGHTS

FIELD RESEARCH

Bison Populations in Yellowstone National Park
EPI Yellowstone students are the primary collectors of data for the long-term Yellowstone National Park (YNP) study, Home on the Range. The Park's Bison Management Team uses EPI student data to evaluate how bison are affecting the health of the ecosystem’s grasslands, and how they impact populations of other ungulates: elk, pronghorn, mule deer, and bighorn sheep.

EPI participants track animals in YNP using radio telemetry, classify herds according to age and sex, collect fecal samples, and record habitat information. During the 2021 season, EPI participants contributed 611 hours to Home on the Range, classified 23 ungulate groups, and collected 10 fecal samples.

Amphibian Surveys in Custer-Gallatin National Forest
Scientists and the public lack a clear understanding of the effects of changing climate on water systems and aquatic wildlife in the Greater Yellowstone Ecosystem (GYE). Without this data, policies addressing land and water use and effective stewardship will be uninformed.

Biologists at the Custer-Gallatin National Forest have engaged EPI Yellowstone students for three years to help determine baseline populations of the four species of amphibians present in the region. EPI Yellowstone Wildlife Ecology students are fundamental to the collection of this data on these indicator species—data that directly informs climate mitigation and land use policies in the GYE for these sensitive areas adjacent to our nation’s first national park.

FIELD PROGRAM AT-A-GLANCE

LOCAL PARTICIPANTS: 60
VISITING PARTICIPANTS: 98
HOURS OF RESEARCH & CONSERVATION SERVICE: 1,953

CONSERVATION SERVICE

Pronghorn Habitat Connectivity
Pronghorn evolved for tens of thousands of years on a landscape that did not contain fences. Despite being the fastest land animal in North America, they are unable to jump modern cattle fencing, which impedes their movement and foraging. EPI students worked with the National Parks Conservation Association to remove or retrofit fencing on US Forest Service land to allow pronghorn passage to their winter range outside Yellowstone National Park.

Invasive Plant Removal
Invasive, non-native plants displace native plant species, including those unique to the Greater Yellowstone Ecosystem’s (GYE) geothermal habitats. Invasive weeds can also change the nature of vegetation communities, affect fire frequency and distribution, and the foraging activity and abundance of local wildlife. On the human side, invasive weeds can poison livestock and reduce yields from agriculture.

In 2021, EPI students worked with partners in the Custer-Gallatin National Forest and on private lands at B-Bar Ranch to remove invasive species and prevent their spread. Our students contributed 415 hours to removing weeds in on public and private lands in the GYE. Our students work on both public and private lands because weed management requires the involvement of everyone—weeds don’t respect property or political boundaries.
PROGRAM IMPACTS

EPI Yellowstone Wildlife and Winter Ecology field courses give middle and high school students the opportunity to grow both academically and personally. Participants are given the tools and a supportive environment in which to build perspective on conservation issues challenging the uniquely intact ecosystem of Greater Yellowstone.

Students learn to build an inclusive group culture by working as a team to ask questions, make observations, collect and analyze data, and share conclusions. On our five- to nine-day courses, each participant completes more than 20 hours of service learning, including hands-on research, habitat improvement, and academic coursework—which on average, results in a 10% or more growth in Environmental Literacy.

STUDENT STORIES

"I learned how to voice my opinion and have a voice even though I'm not 18 yet. I learned how to spread awareness in my family and school and community."
- Jayna, Corvallis, MT

"I loved the experience and my leaders. I learned more than I can even explain. I never really appreciated nature, but now I see animals and habitats differently."
- Mesiah, Browning, MT

NOTABLE

Credit Recovery Courses for Indigenous Students
For the 11th year, EPI partnered with the Wolf Point School District to provide credit recovery courses for 10 high school students living on the Fort Peck Reservation. With adapted programming to ensure student safety, ten Wolf Point students attended a five-day immersive field science program in early July, obtaining critical science credits needed to graduate high school.

Bitterroot Wildlife Internship Program
For the 8th year, EPI partnered with MPG Ranch to deliver the Bitterroot Wildlife Internships, a transformative program providing EPI alumni in Montana, Wyoming, and Idaho with an extended, immersive research and conservation service experience. In the summer of 2021, eleven interns spent four weeks on the 15,000 acre ranch, working on conservation projects and collecting data with their mentors for their independent research projects. Interns presented their final research projects to family, friends, and EPI staff at the summer-end symposium.

COVID-19

Montana’s COVID case rates continued to rise in early 2021, and our use of indoor lodging during winter programs necessitated a cancellation of courses from January through April. We used our CDC COVID-19 adapted protocols for our summer courses, including wearing masks in vehicles, busy park locations, and indoor spaces. Tent occupancy varied depending on the vaccination status of each course. While the ongoing pandemic led to a smaller-than-typical summer season, with fewer courses and smaller course size, we were still able to have a measurable impact on conservation/research projects, and are pleased to report we had no cases of COVID-19 in the field.

FUNDERS

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Sandy and Kevin Phillips
State of MT GEAR Up
The William & Margaret Wallace Foundation
The William H. and Mattie Watts Harris Foundation

PARTNERS

B Bar Ranch
Custer-Gallatin National Forest (Gardiner Ranger District)
National Parks Conservation Association
Yellowstone Bear Management Team
Yellowstone Bison Management Team
Yellowstone Wolf Team