A Natural Symbiosis: Adventurers Collect Data for Biologists

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Source: BioScience, 63(5) : 412

Published By: American Institute of Biological Sciences

URL: https://doi.org/10.1525/bio.2013.63.5.19

A Natural Symbiosis: Adventurers Collect Data for Biologists

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Exploration and science have a long history. "Early explorers were sent as much to learn about the flora and fauna as they were [to learn about] the people of the new world," says adventurer and scientist Gregg Treinish. But in recent times, that steady partnership has withered. "There have been ebbs and flows in the scientific objectives of the adventure community as a whole," says Treinish. "There have been times when scientific inquiry was paramount and times when simply achieving the summit or becoming the first was the ultimate goal."

Deciding it was high time to bring the two back together, he founded the nonprofit Adventurers and Scientists for Conservation (ASC). In just 2 years, the organization has paired over 100 scientists with more than 1000 adventurers worldwide. They are actively seeking more biologists who need help in the field.

Treinish conceived of the idea in 2010 after hiking 520 miles from Yellowstone to the Salmon–Selway Ecosystem in Idaho as part of the Connecting the Gems expedition. He collected data on habitat fragmentation during the long trek, and something clicked: Why aren't more outdoor adventurers collecting data for science? "There are thousands of people [who] want to make a difference [and] who play in the outdoors," he says. At the same time, many scientists lack the funding, time, or ability to access remote locales.

By January 2011, Treinish had founded ASC. He put together a top-notch board, including adventurers Celine Cousteau and Conrad Anker, and they soon had their first project. Mountain-climbing twins Willie and Damian Benegas collected plant life from Mount Everest—plants that grow at the highest elevations on Earth—for a US Geological Survey scientist studying microbes associated with high mountain plants.

The number of scientist–adventurer collaborations grew quickly. ASC now has projects that anyone can participate in, such as mountain bikers snapping photos of roadkill for road ecology research, Pacific Crest Trail hikers observing pikas, and kayakers collecting water samples, as well as projects tailor-made for extreme adventurers, such as the first team to row across the Arctic Ocean this past summer. That team observed whales and collected plankton for Russell Hopcroft at the University of Alaska Fairbanks and at a fraction of the cost of chartering a research vessel.

Using volunteers also allows projects that could not take place otherwise. "I'm 68 years old, and my hiking days are over," says Loren Bahls, curator of the Montana Diatom Collection. "I would not be able to gather samples from remote locations without the help of younger, fitter volunteers." Diatoms—unicellular algae—help scientists gauge an ecosystem's water quality. Since Bahls connected with ASC in early 2012, volunteers have collected 50 samples, discovered two species new to science (which were named after the volunteers), and expanded the known range for other species.

Outdoor enthusiast Darrin White took part in Bahl's diatom project. "It involved hiking above 4000 feet to a few lakes, taking water and algae samples in small bottles provided by the researcher, and then sending them off to be analyzed," he explains. He and his wife Lisa have since participated in other ASC projects.

This winter, ASC linked the US Forest Service (USFS) with volunteers to set up and monitor remote camera traps to see whether American martens, members of the weasel family, can be found at high mountain locations in Olympic National Forest, on the Olympic Peninsula, in Washington; the animals appear to be in steep decline in the coastal areas of the Pacific Northwest. "It's pretty labor-intensive work, and I can't spend all my time on it, so the idea of Gregg's group being able to organize and manage volunteers was really appealing," says USFS biologist Betsy Howell. "It's super beneficial to us… to have volunteer help with this, because we just don't have funding and staff to do this kind of work ourselves." That the volunteers are so fit and motivated is a big plus, she adds.

Treinish is pleased with the rapid growth of the organization. "We understand how difficult it is to collect data. Whether it's time, funding, or skill level… we have people outside ready and willing and able [to help]," he says. "Scientists provide the equipment and pay shipping costs, and they get the opportunity to have [volunteers] trained. They speak with athletes directly and provide protocols. We facilitate the relationship along the way."

Regarding the ASC's seeking more biologists with whom their volunteers can partner, Treinish says, "The stakes are such that we need to mobilize the army of adventurers that are out there every day."

For more information, visit *www.adventureandscience.org*.

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