Volunteer Experience - a day in the field with Grand Canyon Trust and SEGA

"I've never been this close to a research project before. I'm impressed by the rigor and the discipline that the scientists are bringing to this effort." These are the words of volunteer Dave Schaller who spent his career working for the US Environmental Protection Agency. The 70-year old veteran of the June 2016 Grand Canyon Trust — SEGA volunteer group, Dave spent most of his EPA career in Denver on the policy side in that agency, originally working on cleaning up waste sites then later moving to sustainable development and climate change. But now that he's retired and back in Tucson he says he's still hoping to influence the future and decisions that people make "whether it's in their neighborhood or on a landscape scale as we're doing here with the Grand Canyon Trust and SEGA".

Dave was the most senior of 9 people who volunteered with the Grand Canyon Trust's program to help out at SEGA sites this June. The group came from a broad spectrum of backgrounds - ranging from Dave's veteran professional experience in environmental protection, to a lawyer from South Carolina, a pair of freelance writers for social media, a retired member of the air force and a high school senior. They're part of the emerging trend for more and more Americans to spend at least some of their vacation time volunteering for projects they feel are worthwhile – at the same time learning new skills and getting to see and experience places they'd otherwise never come across.

Sometimes called volunteer tourism or "voluntourism," such activity is one of the fastest growing trends in travel today, with more than 1.6 million volunteers annually estimated to be taking this alternative to a more typical sightseeing and sunning trip. But while doubts have been raised in some quarters about how useful 'voluntourism' can be, there's no doubting the hard working effectiveness of the participants on the SEGA –GCT trips. This June the volunteers measured phenology (growth stage) data on 4,700 seedling for the major southwestern white pine experiment being led by NAU PIs Kristen Waring and Amy Whipple. They also helped NAU graduate student Mike Remke to plant ponderosa pine saplings, as part of a major experiment looking at the role of soil mycorrhizae in helping plants to adapt to transplantation and cope with climate change (read more on Mike's blog post about that project at: http://bowkerlab.blogspot.com/2016/06/plant-soil-feedbacks-ponderosa-pine-and.html). And they installed bee boxes equipped with temperature sensors for an intriguing study by NAU graduate student Lindsie McCabe, investigating how changing the elevation (and hence temperature regime) which the larvae of solitary bees experience affects their development and growth.

Social media writer Paul Bindel is a return volunteer. "I volunteered with the Grand Canyon Trust before doing a lot of plant and botany work. It was something I really connected with. I didn't realize that this world existed. It was almost a group crossword puzzle to watch these botanists figure out plants and identify plants. I was really keen on coming back to the Colorado Plateau and renewing a connection to its plants, which is why I chose SEGA - because I knew that it was plant related." Like several people in the June volunteer group Paul doesn't have any contact with the natural environment in his daily working life, which is one big attraction of an experience like this for many volunteers. Paul led tourist groups for a while when he lived in Flagstaff but says that the GCT-SEGA volunteer experience is totally different, especially staying at the remote and rustic Mangum Camp in the middle of the North Kaibab Forest. "You get to be in a place and experience it at different times of day, enjoying it and sometimes suffering through it. I like the challenge, it makes me feel alive."

Paul had persuaded his friend Matt Pizzuti to come along on this trip too. Working in online marketing, communications and freelance writing in Portland, Oregon, Matt says that learning about the SEGA

research has helped him look at the landscape and climate change in a whole new way. "This forest is going to move to a new place – and there's going to be a huge transition period." But he's always looking for reasons to be optimistic "I'm getting the sense of when it comes to climate change that the activist community and the scientific community are giving up on the idea of stopping it and shifting to the idea of how are we going to adapt? What are we going to do? And this (SEGA) project is all about that. It seems like a smarter way to go than just fight for a lost cause."

Liz Blair from Belfast, Maine recently quit her job as product manager at a healthcare IT company. She too has volunteered with the Grand Canyon Trust before. "I remember being so enlivened by the experience and feeling so enthusiastic. It reinvigorated my passion for the environment and it prompted me to change my minor to sustainable business practices". She continues "I think what resonates with me most is how tangible these experiences are — we actually see our results happening and it feels like its having an impact. Today we constructed a bee monitoring system of sorts, to see how bees do in different temperatures. And then we were observing and measuring pines to see how they're doing in different soils and temperatures. And it seems meaningful because, in my mind, the environment can't speak for itself."

The youngest member of the group at 17, Ashley Howard, a senior at Flagstaff High School became enthused about environmental science by her high school teacher Mr. Taylor. Raised in northern Arizona going hunting, fishing and camping she says that she's noticed the environment changing, slowly but surely. "I took this trip specifically because – well ... who can say that the Grand Canyon is their backyard? This is my home and I'm interested to see what's going to happen with these trees at different elevations. The pine is going to go up in elevation – following the cold. So what's going to happen when it leaves – it's obviously a key selected species – so what's going to happen to the balance of the habitat? The animals? Everything is going to change and we don't know what to expect." Ashley has enjoyed interacting with the older people in the group too. "It opens my eyes – and I think having younger people with them opens their eyes. It's nice because you don't normally see the older and the younger generations mixing – it's usually a division between generations. Here we're all coming together to work."

Wrapping up for the group Dave Schaller reflects "I think the act of volunteering is a statement. I think we have to make that commitment. I was in the Peace Corp and I still find myself drawn to the idea of volunteering now. I think American youth need to have some option to volunteer too. It's service, it's all about service." And despite a tiring day out in the hot sun, he adds "My only thought after today is I wish it had all started 25 years ago. I wish we had been doing this, that we'd had the foresight instead of being in climate denial mode to have tackled these issues. People who are afraid of the world - their world gets smaller, their mind gets smaller and then they make bad decisions. So I think we have to take a look at the challenges and then say ... what *can* we do about it? Because we have to keep going - it would be an insult to everyone who came before us to not go forward."

And if you think you might be interested in becoming a Grand Canyon Trust – SEGA volunteer yourself – newbie Matt Pizzuti has this advice "Just do it. What's the worst that could happen?" At that, there is general laughter from the group assembled on the porch, as they watch the sun dip below the forested ridge to the west and looking forward a tasty meal assembled by GCT Volunteer Coordinators Emily and Montana. What could be a better way to spend a few days?

To learn more about volunteering with GCT visit: http://www.grandcanyontrust.org/volunteer