



**SOUTHERN
ROCKIES**
Landscape Conservation Cooperative

Adventure Scientists: Providing data collected at any scale, from any environment

NINA P. HADLEY
Adventure Scientists



ADVENTURE SCIENTISTS

DATA. YOU NEED IT. WE GET IT.

Nina P. Hadley
Director of Project Creation



A NEW GLOBAL NETWORK FOR DATA COLLECTION



One day, data collection will no longer be a limitation to tackling the world's environmental challenges.

THE PROBLEM

Data collection requires funding, time and skills that are frequently unavailable. From deforestation to antibiotic resistance, many of the environmental issues we face could be addressed if these data gaps were filled.

THE SOLUTION

We have built a global network of volunteers and a platform that empowers them to collect otherwise unattainable data on any scale, from anywhere.

DATA

YOU NEED IT
WE GET IT



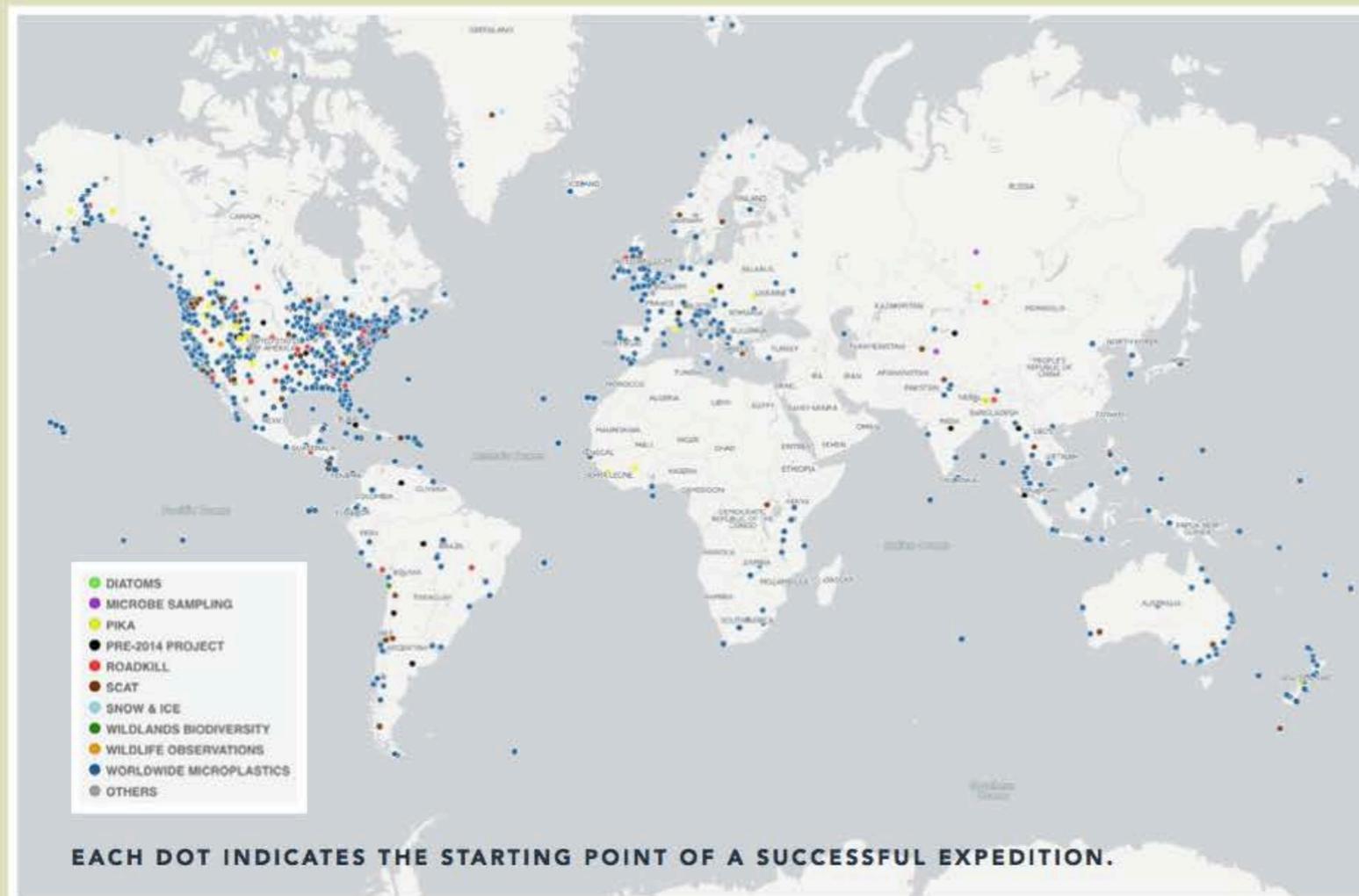
ADVENTURE SCIENTISTS

SUPPORT DATA-DRIVEN DECISION MAKING
AT ANY SCALE. ANYWHERE.



OUR REACH

Our network of volunteers extends around the globe.



- We've collected plant samples from **21,260 ft. above sea level.**
- We've collected microplastics samples from **567 feet** below the ocean surface.
- We've surveyed over **2,823 locations** for our microplastics project.
- In 2016 alone, our volunteers spent **27,820 days** on expeditions in all **7 continents** and all **5 oceans.**

OUR IMPACT

We have helped garner additional protections for wildlife, accelerated habitat restoration and influenced greater sustainability in product manufacturing.



● BULLSEYE

Our goal is to supply end-users (typically governments or corporations) with data that enables conservation outcomes to happen through informed decision making. All of our energy goes to hitting this bullseye.

● MIDDLE RING

Our volunteers make behavioral changes after participating in our projects. They become informed advocates for the issues they have worked on and are more likely to pursue careers in conservation after their service.

● OUTER RING

We have reached >120,000,000 people through popular and social media highlighting conservation issues to the masses.

DATA QUALITY

We prioritize the quality of the data we collect and use rigorous scientific methods collaboratively built with our project partners. We implement a Quality Assurance Project Plan (QAPP) in support of best practices in field research for all projects.

DATA QUALITY – 9 STEPS

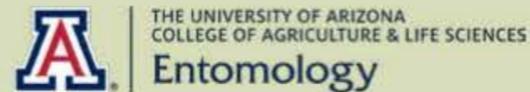
1. Project Choice
2. QAPP
3. Volunteer Screening
4. Volunteer Trainings
5. Volunteer Communications
6. Volunteer Testing
7. Protocol/App integration
8. GoPro Deployment
9. Data Monitoring

PROJECT INVESTMENTS

We vet each project for three key factors:

1. There must be a conservation issue in which a lack of access to data has previously limited the ability to unlock a solution.
2. There must a tangible change that will happen as a result of our work.
3. There must be a clear need for the outdoor adventurer skill set.

A FEW OF OUR PARTNERS:
(click logos for project details)





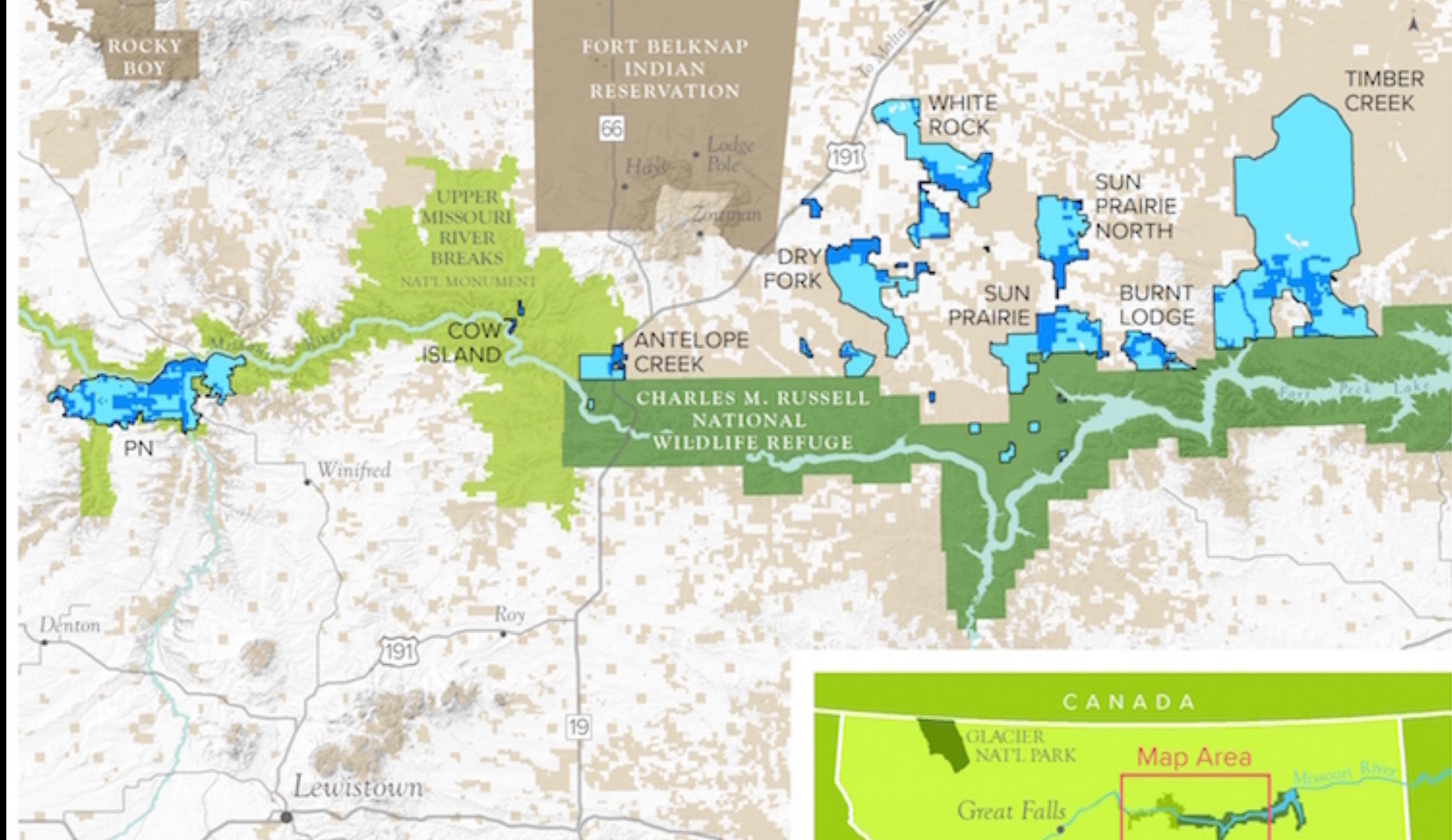
Our adventurer volunteers collect data in all environments, year-round.

MICROPLASTICS

1000 volunteers | 2700 samples | 3 years







AMERICAN PRAIRIE RESERVE | Current Habitat Map

20 Miles

- APR Deeded/Leased
- Indian Reservation
- National Monument
- National Wildlife Refuge
- BLM & State Public Land

This map is intended for general reference only. Land ownership has been generalized/simplified. APR leased land represents grazing leases on multiple jurisdictions of public land. Data Sources: Montana State Library, Natural Earth.



Updated May 2016

ADVENTURE

DATA

WILDLIFE



83 VOLUNTEERS FROM

9

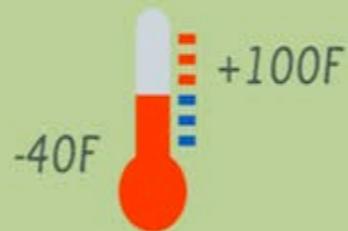
COUNTRIES

AND

27

US STATES

HIKED IN TEMPS



SURVEYED

5,375

MILES IN THREE YEARS

RECORDED

19,264

WILDLIFE OBSERVATIONS

Checked

1,293

CAMERA STATIONS

MONITORED

29

SPECIES

Top Five Species Observed



- Mule deer
- Sharp-tailed grouse
- Jackrabbit
- Pronghorn
- Coyote



PROTECTING POLLINATORS



IMAPCT: We are establishing the first large-scale backcountry dataset that identifies butterfly abundance, diversity, and distribution as well as host plant phases. Managers will use these data to inform actions such as prescribed burning, protection of threatened species, and forest planning.

SCOPE: In 2017 hikers and trail runners began surveying 100 backcountry sites across AZ, UT, CA, MT, NV, UT and WA for butterflies and nectar plants.

PROJECT PARTNERS:



ANTIBIOTIC RESISTANCE THROUGH SCAT



IMPACT: We furthered our partner's efforts to isolate the genes responsible for antibiotic resistance in hopes of one day being able to turn them off in a clinical setting.

SCOPE: In 2016, adventurers collected scat from over 100 sites from Alaska to Afghanistan, which will be analyzed by Dr. Michael Gilmore and his team at Harvard Medical School, in order to find a common ancestor of the Enterococcus bacteria.

PROJECT PARTNER:
Harvard Medical School



ILLEGAL TIMBER HARVEST



IMPACT: By creating genetic libraries of commercially viable tree species, in the near future you will be able to "zap" a table and know instantly what species it is, where it came from and whether it was legally or illegally harvested.

SCOPE: We will begin in 2017 with Big Leaf Maple (*Acer macrophyllum*), which ranges from California to Alaska.

PROJECT PARTNER:
World Resources Institute



WORLD
RESOURCES
INSTITUTE

OIL AND GAS: PRIORITIZING REMEDIATION SITES



IMPACT: We will complete inventories of orphaned and idle oil and gas wells across USFS lands in order to prioritize their remediation and restoration.

SCOPE: Inactive wells can leak pollutants, including oil, natural gas, heavy metals and naturally radioactive substances. These pollutants may contaminate groundwater, surface water, or in the case of methane, be released into the atmosphere. These risks increase with nearby fracking operations, which can disturb abandoned wells.

PROJECT PARTNER:
US Forest Service



Our Development Process

1 You fill out a project inquiry form

2 We explore your idea together - ask lots of questions about scale, scope, additional partners and theory of change. We will emerge from this step with a preliminary project design and budget.

5 Sign final contract/initial deposit due

4 We will deliver a final project proposal

3 Project review with Science Advisory Board to maximize impact

6 Project Management phases begin

7 Project Launch!



The world is a better place!





Projects that involve a collection of a sample or the placement of sensors are the best fit for our model.

- **How can we help YOU?**



nina@adventurescientists.org

www.adventurescientists.org

Volunteers collect water quality data at high-mountain lakes in the Sierra Mountain Range.