



# Citizen Science in National Parks

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Ocean and Coastal Resources Program  
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Marine Protected Areas  
Federal Advisory Committee



Acadia

National Park  
Maine



1880s: Harvard students surveyed Mt Desert Island

Recent: Re-surveys by citizen scientists show loss of 20% of plant species

Current: phenology citizen science identifies species that don't track climate change and may need management action

➤ Student leader Charles Eliot died young. His work inspired his father to form a group that helped create Acadia National Park

Rock Creek

Park  
District of Columbia



## Citizen Science in Parks Inspires Learning and Stewardship

“We read about the BioBlitz in the newspaper, and I knew that Joshua would like it. He likes everything that’s outside. He’s at home out here.”

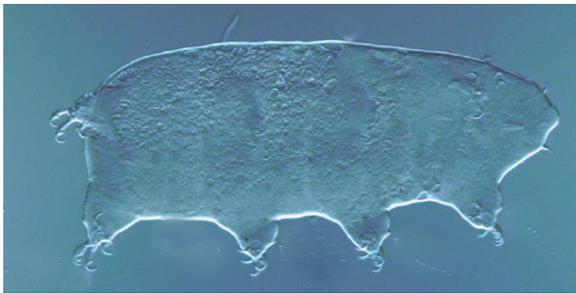
## Citizen Science in Parks Informs Managers

Conditions of resources

Vulnerabilities to resources

Biodiversity in a park

New species (to park, to science)



*Archechiniscus biscaynei*  
New to science, 2010  
tardigrade  
(commonly known as a  
water bear)



# Glacier

National Park  
Montana



Over 1,300 visitors help monitor loons (MT species of special concern) and other fauna and flora

Data from citizen scientists can be as accurate as those from professionals

Park managers use data to plan non-native fish suppression to avoid disturbing loons.



Nez Perce

National Historical Park  
ID, MT, OR, WA



Upper Columbia Basin I&M Network collaborates with park staff and teachers to involve high school students in monitoring density of Camas lilies and invasive plants.

Results are relevant to...

... studies of soil moisture

... plans to dam irrigation ditches and restore flooding

... studies of effect of traditional harvesting



# Let's Go Everywhere!

Where will you Find Your Park in 2016?  
Watch our video now...



Citizen Science Professional Development

Citizen Science Professional Development  
Building toolboxes to build programs. This is our community. Let's get busy!

27 Members 54 Hoots [Accept Invitation]

Most recent first

Hannah Webber  
Week 6 assignment (Due March 30)  
(Image from RBM Handbook on Developing Results Chains) What is the link between the activities (the what where when and how) you are planning ...

Erickson Smith  
Week 5 Homework - Team PeFa (Acadia NP)  
Knowledge foundational common loon life history and natural history knowledge ...

John Duwe  
Week 5 Assignment - Mazama Newts (Crater Lake)  
For our mountain hemlock phenology/snow-melt timing CS project, we will be working with 4-12 graders in our citizen scientists. Our students will hav...

Gulf Islands National Seashore NPS  
GUIS Week 5 Assignment  
Phenology Trail There are a few things that we would want our citizen scientists to come away with having completed our phenology trail. One of...

Tiffany Beachy  
Smokies Participant Outcomes  
Great Smoky Mountains National Park and Tremont

Hannah Webber  
Week 5 assignment (due 3/23/16)

## Building Capacity

On-line training course

NPS community of practice

BioBlitz “how-to” publication

(<https://irma.nps.gov/App/Reference/Profile/2221051>)

National Park Service  
U.S. Department of the Interior

Natural Resource Stewardship and Science

2016 National Park Service CENTENNIAL  
Community of Practice

Home Existing Efforts Resource Library 2016 BioBlitz Connect with the Community

Welcome to the NPS Citizen Science Community of Practice site!

Science is a critical means to advancing our understanding of parks and natural areas. The National Park Service (NPS) has created an impressive database of scientific study, however there is still much more that can be done to provide us with a greater understanding of our nation's resources. In fact, it is estimated that 90%+ of organisms that inhabit national parks remain undocumented. Therefore, the NPS has invested in citizen science. By engaging citizens in this work (collection and monitoring) we not only gain additional knowledge about resources, but we are also actively engaging a network of community stewards in learning more about the places that they love most.

Next Generation of Stewards is "A Call to Action" intended to prepare us for the 100th Anniversary of the NPS.

