



Photo: Phil Hough - Friends of Scotchman Peaks Wilderness

George Gehrig and Preston Andrews

geogehrig@gmail.com

prestonkandrews@gmail.com

Outline of presentation

- **What it is?**
 - City Nature Challenge
- **Why it's important?**
 - Citizen Science
- **How to participate?**
 - iNaturalist
- **What comes next?**
 - Future projects



What is City Nature Challenge about?

- Started in 2016 as a competition between San Francisco and Los Angeles that has become an international event
- Run by the Community Science teams at California Academy of Sciences and Natural History Museum of Los Angeles County
- Annual 4-day global BioBlitz in late April to early May
- Collaboration-meets-friendly-competition

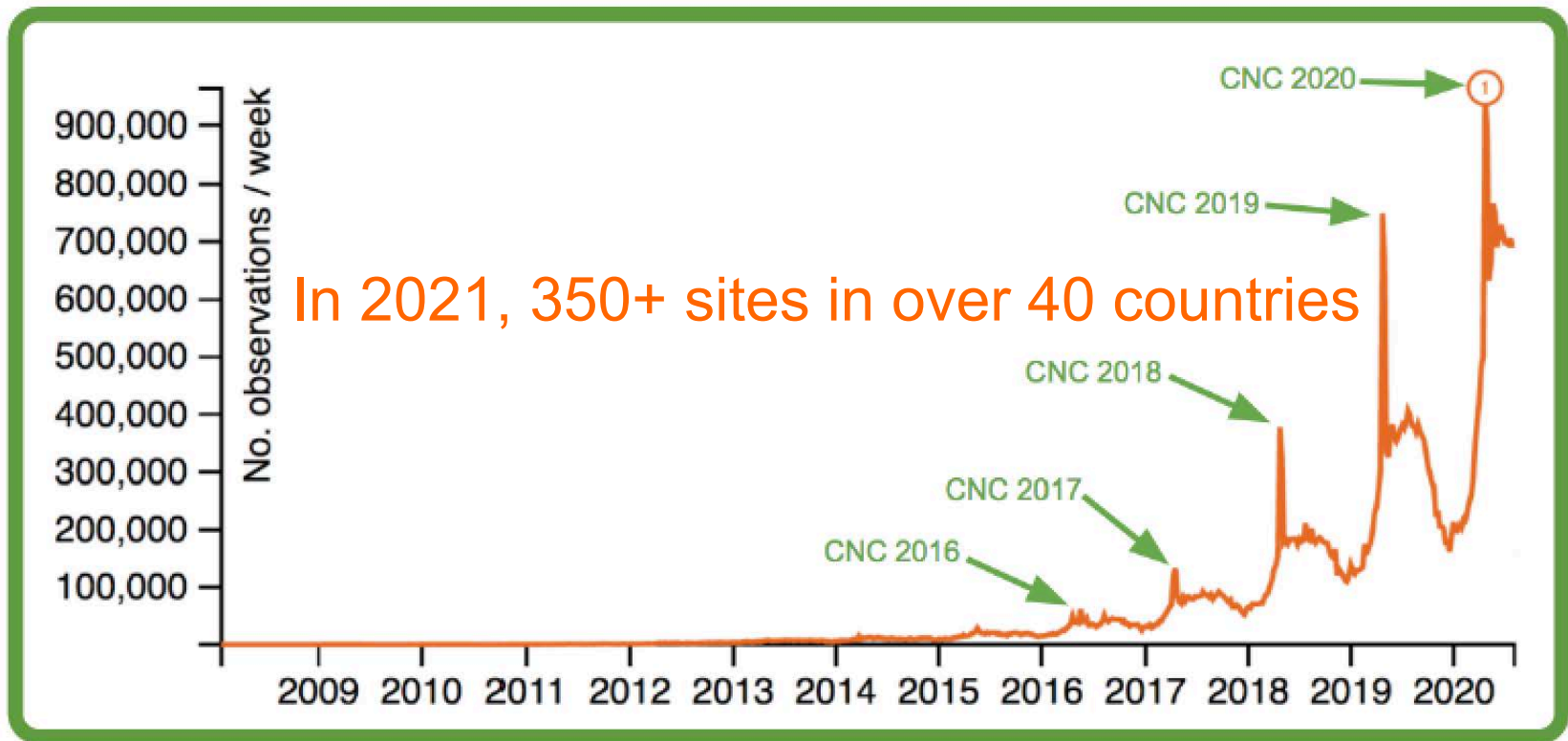
BioBlitz: Citizen-science, crowdsourcing effort to record as many species in a designated area and time period as possible

City Nature Challenge 2020 locations



- ✧ More than 41,000 participants made over 815,000 observations
- ✧ 32,000+ species with 1,300+ rare/endangered/threatened

Growth of City Nature Challenge



- Largest annual biodiversity recording event, resetting the "baseline" of observations coming into iNaturalist
- Inspires new people to observe nature, highlights the value of documenting biodiversity, and inspires people to become year-round biodiversity observers

City Nature Challenge: Goals and objectives

➤ Goals:

- Connect people to local nature
- Build community in person and online
- Collect biodiversity data available to use for science, management, and conservation
- Grow global volunteer biodiversity documentation
- Have fun through friendly competition
- Motivate people around the world to find and document wildlife

➤ Objectives:

- Make the most observations of nature
- Find the most species
- Engage the most people

CITY NATURE CHALLENGE IS ORGANIZED BY



CALIFORNIA
ACADEMY OF
SCIENCES

NATURAL
HISTORY
MUSEUM

LOS ANGELES COUNTY



<https://citynaturechallenge.org>

Alison Young: ayoung@calacademy.org

Lila Higgins: lhiggins@nhm.org

Amy Jaecker-Jones: ajaecker@nhm.org



Taxonomy of Citizen Science

➤ Order > Citizen science

➤ Family > BioBlitz

➤ Genus > City Nature Challenge (CNC)

➤ Species > City Nature Challenge (year): (name)

City Nature Challenge 2021: Bonner County, ID
(CNCBC)

City Nature Challenge 2021: Bonner County, ID

Supporting organizations:

- East Bonner County Library District
- Idaho Master Naturalists
- Kinnikinnick Native Plant Society
- Idaho Fish and Game
- Kanixsu Land Trust
- Kalispel Tribe
- Friends of Scotchman Peaks Wilderness
- Selkirk Alliance for Science
- University of Idaho Extension



Participate in the Bonner County BioBlitz!
April 30 - May 3 Take pictures of wild plants and animals.
May 4—May 9 Identification of what was found

City Nature Challenge: Bonner County (CNCBC) is a BioBlitz event taking place in Spring 2021, engaging people to document the biodiversity of Bonner County. A BioBlitz is a citizen-science, crowdsourcing effort to record as many species within a designated location and time period as possible.

 **iNaturalist**

HOW TO ADD YOUR OBSERVATIONS TO THE CITY NATURE CHALLENGE.

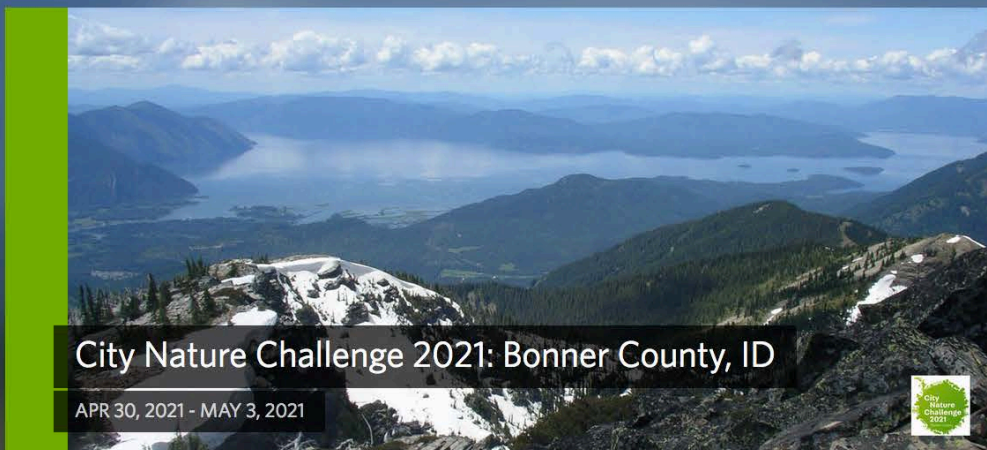
Join in the global competition to document the diversity of species in cities across the globe by exploring and documenting the diversity of wild plants and animals in your area

STEP 1: Download the iNaturalist app & create an account.	STEP 3: Upload your observations (photos) to the app & share with the iNaturalist community.
STEP 2: Take photos of WILD plants & animals to make observations. If they're not wild, mark them as captive/cultivated!	STEP 4: Learn more as your finds get identified!

VISIT: <https://www.inaturalist.org/projects/city-nature-challenge-2021-bonner-county-id>
CONTACT: imn.sandpoint@gmail.com OR Look for us on Facebook!



City Nature Challenge 2021: Bonner County, ID iNaturalist Project webpage



About

Members  2

Join us for City Nature Challenge 2021: Bonner County, ID. The City Nature Challenge is a friendly collaboration aimed at documenting global biodiversity while fostering a greater awareness and appreciation for nature. You can participate by uploading Bonner County observations to iNaturalist anytime between April

[Read More >](#)

 [Project Journal](#)

Status

This bioblitz begins in:

11 **6** **25** **7**
DAYS HOURS MIN SEC

[About this bioblitz](#)

Project Requirements

Observations in this project must meet the following criteria:

 Taxa	All taxa
 Location	Bonner County, US, ID
 Users	Any
 Projects	Any
 Quality Grade	Research Grade, Needs ID, Casual

Journal



April 18, 2021 - 4:58 PM

11 Days and Counting! Are You Ready Bonner County??
The organizers of the international 2021 City Nature Challenge bioblitz have finalized a video to promote it: <https://www.youtube.com/watch?v=yO45mO9BUJM> The video highlights cities, and most the Challenges will be in metropolitan areas. See the map of the Challenges here: <https://citynaturechallenge.org/city-list-2021/> But the City Nature Challenge: Bonner County (CNCBC), like a growing number of others, will have a county-wide boundary. Are you ready to participate? Again, its free and very easy to do. For an excellent introduction on how to do so, please watch this

City Nature Challenge 2021: Bonner County, ID

Journal information

[← Back to City Nature Challenge 2021: Bonner County, ID](#)

City Nature Challenge 2021: Bonner County, ID's Journal

April 18, 2021

Archives

11 Days and Counting! Are You Ready Bonner County??

Month

[April 2021](#)

[March 2021](#)

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https://zoom.us/rec/play/aAH0okTeANvh2LuCuv4zIckIjqW65FlvX_z6d2kclC1914kiNwbaNERj-qEisJN-5tMIYIOg1ogbmPSi.LJ8Cy54i1THAP5p0

The FAQs can be found here:

<https://www.calacademy.org/citizen-science/city-nature-challenge/FAQs>

iNaturalist: Global to local

The screenshot shows the iNaturalist website interface for a global view. The top navigation bar includes 'iNaturalist', 'Explore', 'Community', and 'More'. The main heading is 'Observations'. Below the heading, there are search fields for 'Species' and 'Location', and a 'Go' button. A summary bar displays statistics: 'The World' with 62,428,788 observations, 329,184 species, 186,391 identifiers, and 1,548,692 observers. The main map area shows a world map with a large orange/red area representing the United States. A sidebar on the right lists several species with their photos and observation dates: North American Porcupine, Stickseed, Redwood Sorrel, Venus' Looking-Glass, and White-crowned Sparrow.

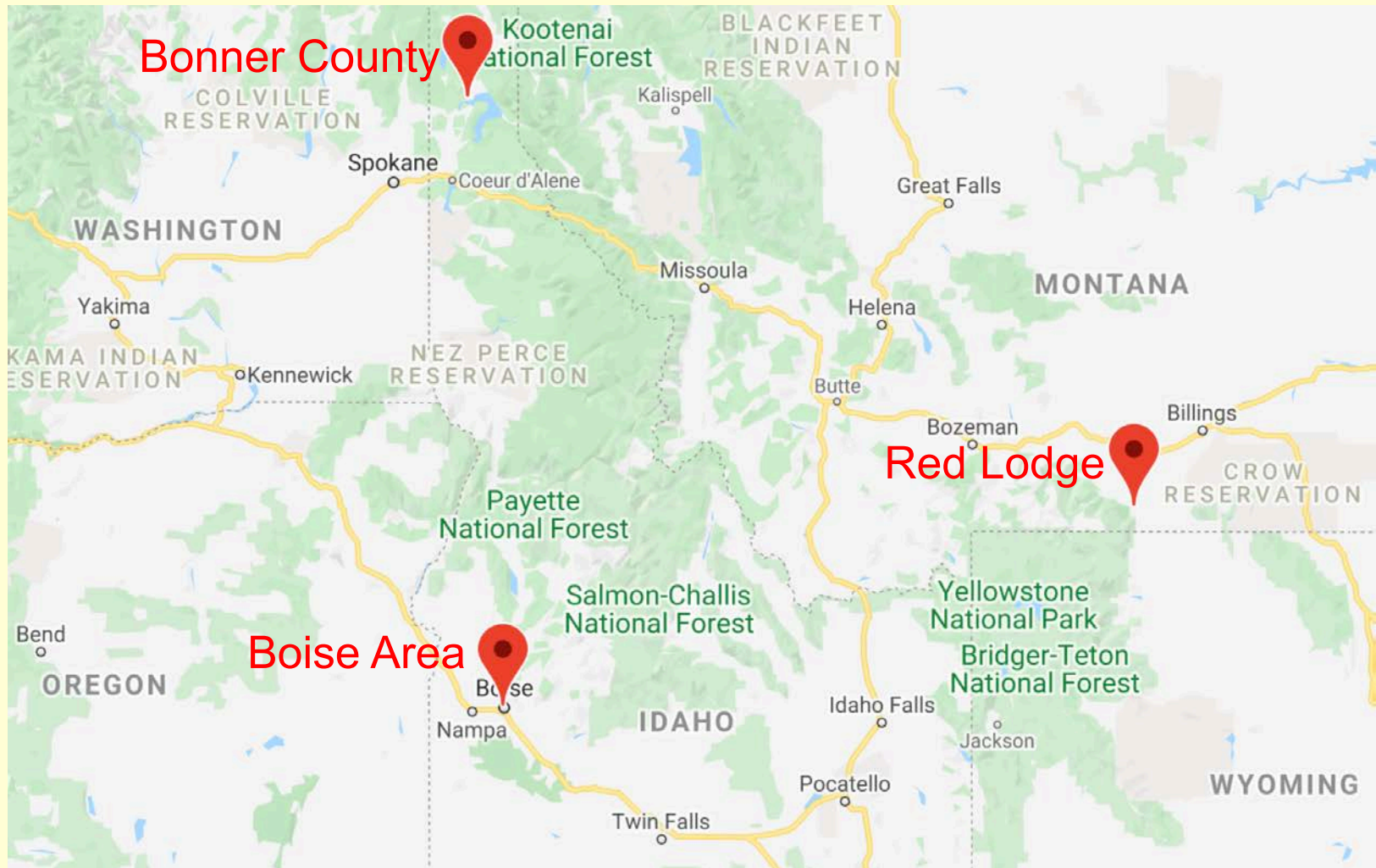
The screenshot shows the iNaturalist website interface for a regional view of Idaho. The top navigation bar is the same as the global view. The main heading is 'Observations'. The search fields are filled with 'Idaho' and 'USA'. The summary bar shows statistics for Idaho: 134,873 observations, 5,942 species, 5,158 identifiers, and 7,824 observers. The map shows a detailed view of Idaho with a large orange/red area. A sidebar on the right lists species: Osprey, Ternate Desert-Parsley, Goosefoot Violet, Longleaf Phlox, and Donkey Tail.

The screenshot shows the iNaturalist website interface for a county-level view of Bonner County, Idaho. The top navigation bar is the same. The main heading is 'Observations'. The search fields are filled with 'bonner county, id'. The summary bar shows statistics for Bonner County: 3,887 observations, 1,074 species, 901 identifiers, and 450 observers. The map shows a detailed view of Bonner County with a large orange/red area. A sidebar on the right lists species: Boeselder Maple, Long-toed Salamander, Genus Meristema, Bald Eagle, and Filmy Dome Spider.

The screenshot shows the iNaturalist website interface for a regional view of Idaho, similar to the previous regional view. The top navigation bar is the same. The main heading is 'Observations'. The search fields are filled with 'Idaho' and 'USA'. The summary bar shows statistics for Idaho: 134,873 observations, 5,942 species, 5,158 identifiers, and 7,824 observers. The map shows a detailed view of Idaho with a large orange/red area. A sidebar on the right lists species: Osprey, Ternate Desert-Parsley, Goosefoot Violet, Longleaf Phlox, and Donkey Tail. A 'Map Legend' is visible, showing 'QUALITY GRADE' (Research Grade, Needs ID, Casual) and 'GEOGRAPHY' (Open, Obscured). A 'TAXONOMIC GROUPS' legend is also visible, listing Amphibians, Birds, Ray-Finned Fishes, Mammals, Reptiles, Other Animals, Mollusks, Arachnids, Insects, Plants, Fungi, Chromista, Protozoans, and Unknown.

iNaturalist website: <https://www.inaturalist.org>

Friendly competition in the northern Rockies



City Nature Challenge 2021: Bonner County, ID Facebook page



The image shows a screenshot of a Facebook page for the "City Nature Challenge 2021: Bonner County, ID". The profile picture is a circular image of a white goat standing on a rock. The page name is "City Nature Challenge 2021: Bonner County, ID" with the category "Education". A blue button indicates the user is "Following". The navigation bar includes "Home", "Events", "Reviews", "About", and "More". There are buttons for "Liked", "Message", and a search icon. The "About" section contains two informational posts. The "Create Post" section offers options for "Photo/Video", "Check in", and "Tag Friends". A recent post from the page is visible, titled "Tuesday is for Birds", with text about bird selection from the IDFG Bonner County Observation List.

City Nature Challenge 2021: Bonner County, ID
Education

Following

Home Events Reviews About More ▾

Liked Message

About [See All](#)

- i** Join us for City Nature Challenge 2021: Bonner County, ID, part of a fun competition across the world (359 cities and 5 continents) to document the mo... [See More](#)
- i** *Make sure to indicate that you're Interested or Going, and Invite your Friends on the Facebook Event Page: <https://www.facebook.com/events/2250196018...> [See More](#)

Create Post

Photo/Video Check in Tag Friends

City Nature Challenge 2021: Bonner County, ID 1h ·

Tuesday is for Birds

Each Tuesday, Bonner County birds have been selected from the IDFG Bonner County Observation List, starting with the most threatened species. Here are some more birds that are listed as S5: Demonstrably widespread, abundant, and secure.

City Nature Challenge 2021: Bonner County, ID Facebook page

- Daily posts have been made since January based on this schedule:
 - Monday: Amphibians/Reptiles
 - Tuesday: Birds
 - Wednesday: Fish
 - Thursday: Invertebrates
 - Friday: Mammals
 - Saturday: Plants
 - Sunday: Miscellaneous
- Species were obtained from the Idaho Fish and Game's Bonner County Observation List:
<https://idfg.idaho.gov/species/taxa/list/county/bonner>
- They were then sub-sorted by State Rank, with the most threatened species listed first, followed by those more secure. Additional relevant links to additional information were also provided.
- Species Conservation Status Lists and definitions can be found here: <https://idfg.idaho.gov/species/taxa/list>

Trophies



MONDAY, MAY 10, 2021 AT 4 PM PDT

City Nature Challenge Awards Ceremony

Facebook Live

What is citizen science?

- Some prefer “community science”
- Also called crowd-sourced science, public participation in scientific research, volunteer monitoring, participatory action research
- Amateur rather than professional scientists
- In U.S., CS originated with Audubon Christmas Bird Count in 1900



Audubon Christmas Bird Count

The nation's longest-running community science bird project fuels Audubon's work throughout the year.



<https://www.lakependoreillewaterkeeper.org/>

Water Quality Monitoring Program

Become a Citizen Scientist!

Become a trained citizen scientist. Collecting water samples is a great way to enjoy time on the water & get involved in active stewardship of our local waterways!

Volunteer



<https://www.uidaho.edu/extension/idah2o>

University of Idaho
Extension



- Long-term monitoring effort to measure water quality across 13 sites on Lake Pend Oreille and Pend Oreille River
- Volunteers with boats, canoes, kayaks
- Analyze 11 different biological, chemical and physical attributes once per month May-September
- Data used by Idaho Department of Environmental Quality

Citizen science organizations in the U.S.



WELCOME TO CITIZENSCIENCE.ORG
Home of the Citizen Science Association

CITIZEN SCIENCE:
THEORY AND PRACTICE



Helping you do great science

Create projects, build datasheets, collect data, and view results in real-time.



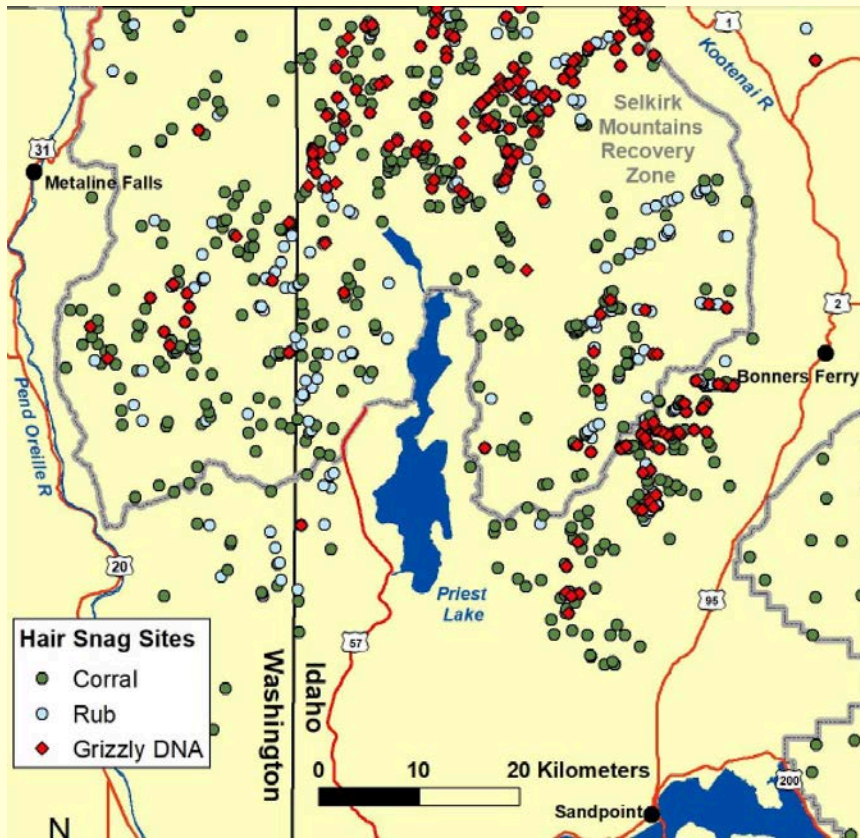
Helping federal agencies accelerate
innovation through public participation.

scistarter
Science we can do together.

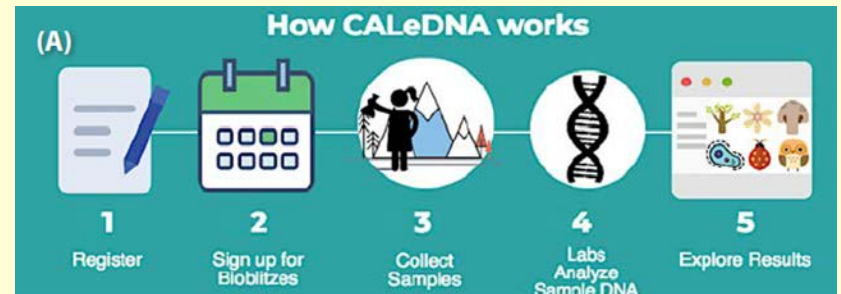
Environmental DNA (eDNA)

Biomonitoring that uses eDNA shed from organisms in soil, water or air, e.g. fur, feces, spores, pollen or leaves

Selkirk Grizzly Bear Monitoring Program

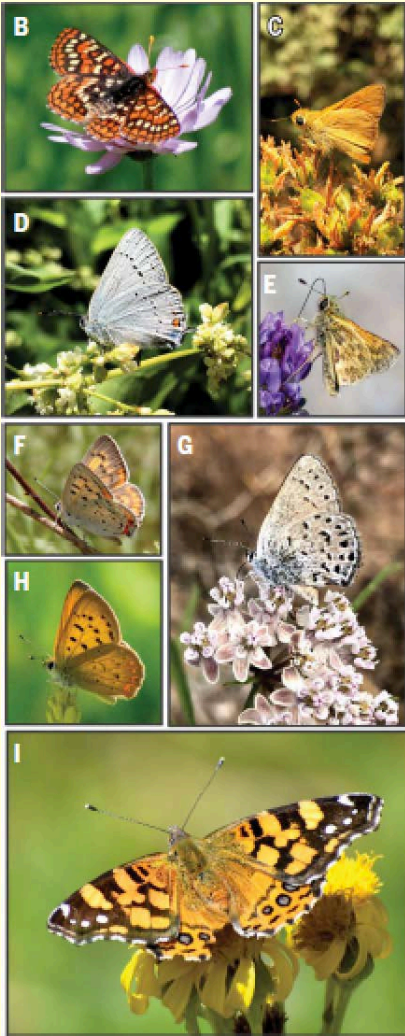


CALeDNA Program Post-wildfire biodiversity



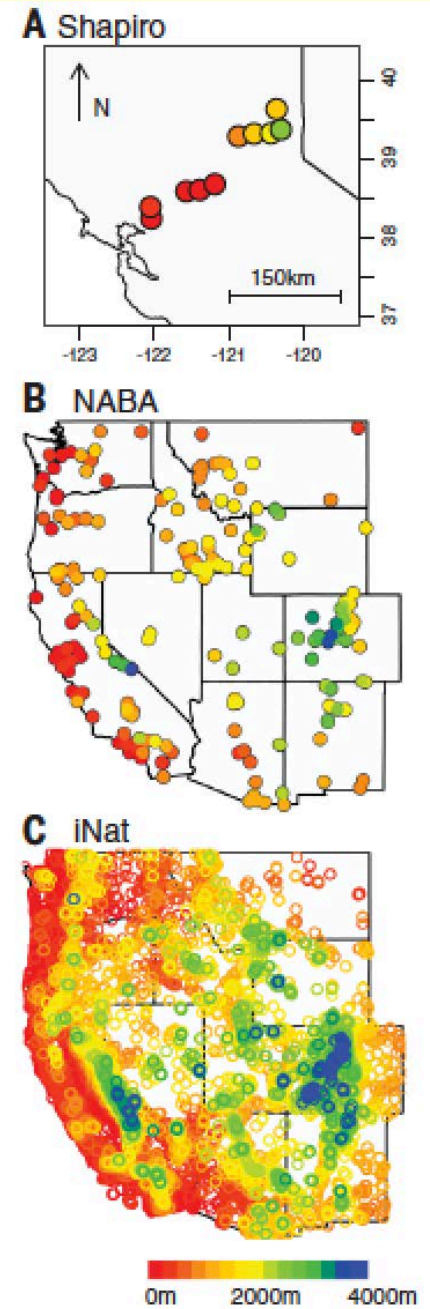
INSECT DECLINES

Fewer butterflies seen by community scientists across the warming and drying landscapes of the American West

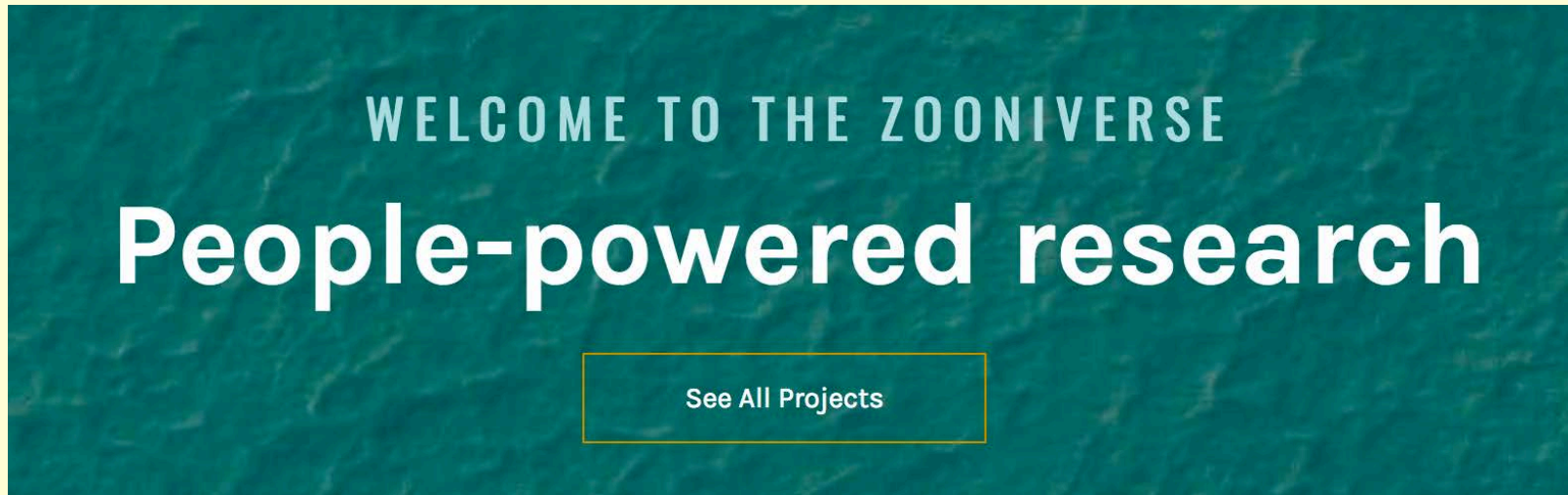


- Integrated expert and community science data
 - Long-term transect study (A)
 - North American Butterfly Association (B)
 - iNaturalist (C)
- 1.6% annual decline in number of individual butterflies over 40 years
- Associated with warming during fall months

Forster et al., Science 371, 1042–1045 (2021)



Zooniverse



World's largest platform for people-powered research made possible by volunteers — more than a million people around the world come together to assist professional researchers.

- anyone can be a researcher
- accelerate important research
- volunteers and professionals make real discoveries by working together

Other CS opportunities

The Cornell Lab of Ornithology

Donate

Create account

Sign in

Language

eBird

Submit

Explore

My eBird

Science

About

News

Help

ZEISS

Seeing beyond

Discover a new world of birding...

Learn more

Get started



eButterfly

Discover

Submit

Explore

Identify

Help

Donate

Sign In

Regístrate

English



1,035
ESPECIES

REGÍSTRATE

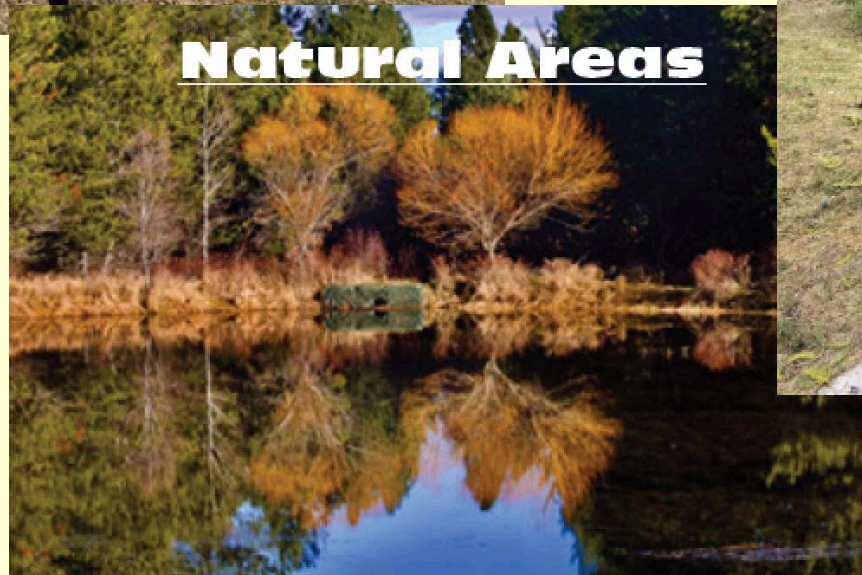
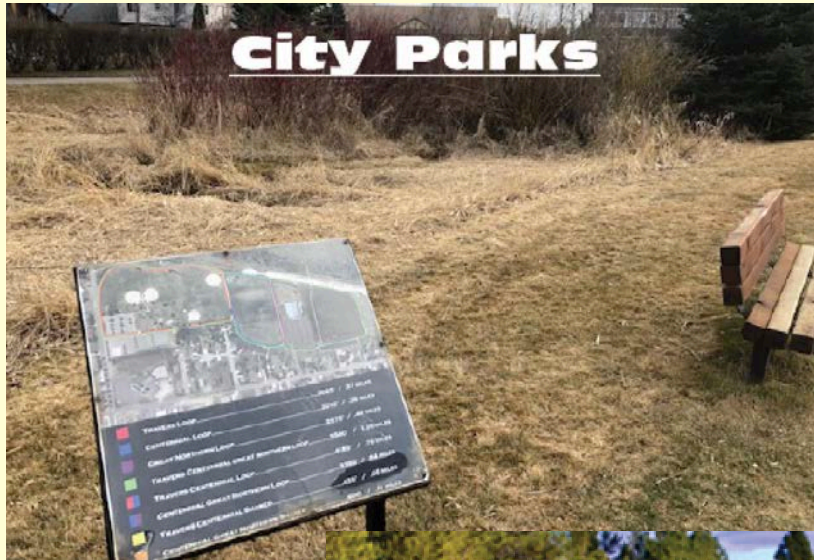
EXPLORAR ESPECIES



How to participate in City Nature Challenge 2021: Bonner County, ID

1. Download the free iNaturalist app to your device (smart phone).
2. Visit [iNaturalist.org](https://www.inaturalist.org) and set up an account (you must be at least 13 years old).
3. Sign in then take photos of wild plants or animals anywhere in the map area (Bonner County) between April 30th and May 3rd.
4. Upload your photos to iNaturalist by May 9th.
5. Learn more as your photos are identified by the iNaturalist community.

Where to participate in City Nature Challenge 2021: Bonner County, ID



iNaturalist tutorials

➤ Getting Started

<https://www.inaturalist.org/pages/getting+started>

➤ Video Tutorials

<https://www.inaturalist.org/pages/video+tutorials>

- Adding an Observation on a Mobile Device

<https://vimeo.com/162581545>

- Adding an Observation via the Web

<https://vimeo.com/167431843>

- How to Take Identifiable Photos

<https://vimeo.com/167341998>

- How to mark an observation as Captive/Cultivated

<https://vimeo.com/331151155>

➤ Education Toolkit

<https://citynaturechallenge.org/education-toolkit/>

➤ City Nature Challenge FAQs

www.calacademy.org/citizen-science/city-nature-challenge/FAQs

Additional resources

- CNC Info Session: The City Nature Challenge and iNaturalist basics – Kristin Gnowjewski, Boise
<https://zoom.us/rec/share/yIbnlZKzvBfCajvSa-44QNouu5JllzIjyH2x5t2pWz8unetlBE3LwkLZZre8dc4w.8Tjt8VKOr6LRYs3w>
- Methods of Collection - Courtney Long, Red Lodge
<https://www.youtube.com/playlist?list=PLefLi2ClwjA7nbR30gHb-wP4AekW7Pb1r>
- Seek by iNaturalist <https://vimeo.com/328588355>
- Connect with Nature Using Seek and iNaturalist!
<https://www.lhprism.org/connect-nature-using-seek-and-inaturalist-5-part-tutorial>
- (Backyard) Citizen Scientist Rebecca Ray
<https://www.youtube.com/watch?v=eov7ulEipZk>

Tips for taking good photos

1. Get closer to get small details, such as veins on a leaf or markings on a bug.
2. Shoot multiple angles and images to help identifiers make a conformation.
 - Take photos of both the flower and the leaves on a flowering plant.
3. Take photos that are sharp and in focus to help identifiers when making a conformation.



What comes next?: Future types of projects

- **Biodiversity** surveys and monitoring
- Response to **climate change** to predict how species distributions and phenology will change
- **Connectivity** (i.e. movement) data on individuals and populations ranging from genetic diversity to landscape-level interactions
- **Ecosystem services** (i.e. resources) monitoring to assess changes in ecosystem functions
- **Involvement** of community members through community science for more successful conservation management

iNaturalist Projects

Idaho Flora

Stats

Totals

25393

Observations »

1592

Species »

1164

People »

Most Observations



mhays
3338 observations



rick_williams
1072 observations



frenchlimonade
941 observations



mountainmanmiller
859 observations



pam_reschke
693 observations

Most Species



mhays
990 species



pam_reschke
258 species



rick_williams
234 species



chaetura
225 species



frenchlimonade
222 species

Add Observations to This Project

Most Observed Species



Common Sa
314 observa



Arrowleaf B
296 observa




Creeping Ma
234 observa



Golden Curr
231 observa



Great Mullei
231 observa

 **Western Redcedar Dieback Map**

Stats

Totals

381

Observations »

1

Species »

72

People »

Most Observations



jmhubert
41 observations



raduscurtescu
37 observations



michael_james_burkhow
34 observations



angelique_k
26 observations



alexis459
20 observations

Most Species



ewrunning
1 species



marissa6
1 species



deb9
1 species



mrfish33
1 species



richard_olmstead
1 species

About

Members  4

Discover the wildlife of the Idaho Panhandle

[Read More >](#)

 Project Journal



North Idaho Biodiversity

36,574

OBSERVATIONS

3,507

SPECIES

2,739

IDENTIFIERS

2,422

OBSERVERS

 Stats

Overview

Questions and discussion

**City Nature
Challenge 2021**

**City Nature
Challenge**

Participate



Questions about City Nature Challenge 2021: Bonner County, ID?

imn.sandpoint@gmail.com

KNPS's City Nature Challenge BioBlitz



- IDFG's Pend Oreille Wildlife Management Area at Trout Creek
- Saturday, May 1, at 1 pm
- Left on Trout Creek Rd just after crossing the Pack River bridge on Hwy 200
- Easy trail in the Pack River Flats Refuge