

Scientists Everywhere: Citizen Science & Academic Libraries

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Health & Life Sciences Librarian

The Universities at Shady Grove

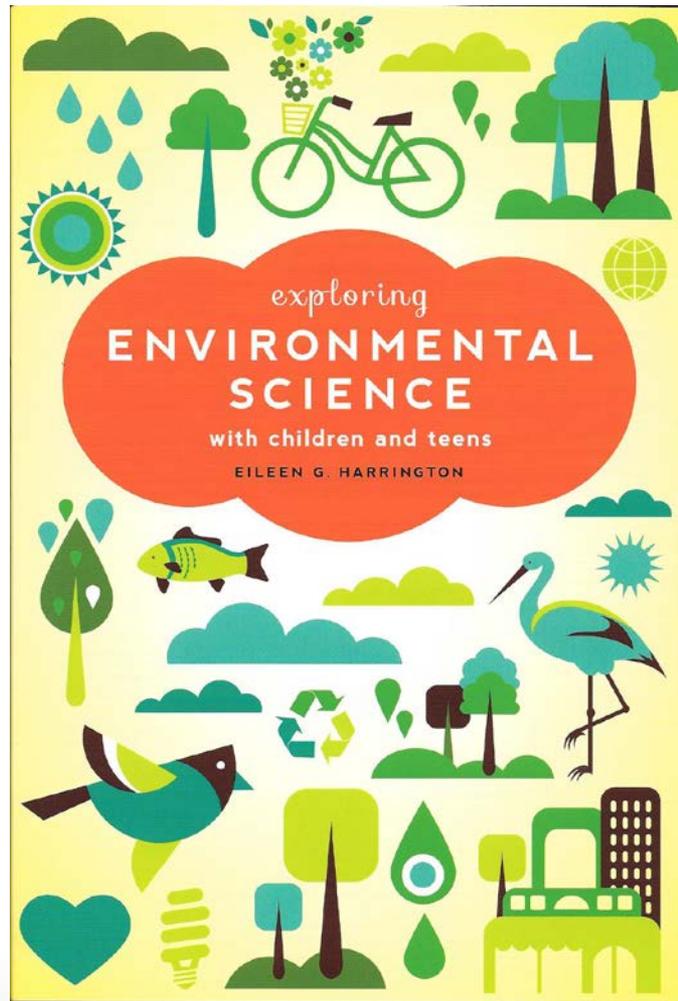


What kind of frog/toad is this?

- Green frog (*Rana clamitans*)
- American bullfrog (*Lithobates catesbeianus*)
- Western toad (*Anaxyrus boreas*)



Background



- ALA Editions, 2014
- Previous position at California Academy of Sciences

Why Citizen Science?



https://commons.wikimedia.org/wiki/File:Crab_Cangrexo_66eue.jpg



Harrington, 2001



http://apod.nasa.gov/apod/image/1302/m51dust_hubble_960.jpg

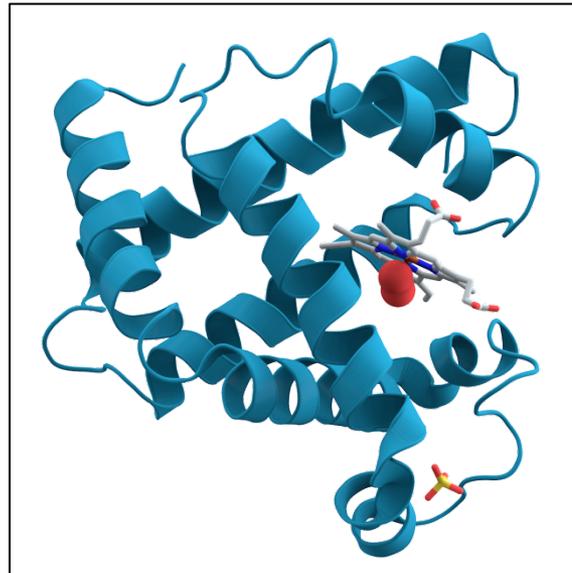
Why Citizen Science?



<https://flic.kr/p/em1wwy>



<https://flic.kr/p/cnVydW>



<https://commons.wikimedia.org/wiki/File:Myoglobin.png>

Challenges of Citizen Science: Data Quality?

- Simple protocols
- Training
- Incorporate quality control
- Law of Large Numbers
- Peer reviewed publications



https://commons.wikimedia.org/wiki/File:Collecting_mussel_data_%285514834987%29.jpg

Other Challenges



<https://commons.wikimedia.org/wiki/File:Bahnsteiguhr.jpg>



<https://flic.kr/p/bHb1y8>



<https://flic.kr/p/8pMJAF>



Creating Your Own

- Citizen Science Toolkit--Cornell Lab of Ornithology

<http://www.birds.cornell.edu/citscitoolkit/toolkit>

- CitSci.org—Natural Resources Ecology Lab at Colorado State University

<http://www.citsci.org/>

- Citizen Science Association

<http://citizenscienceassociation.org/>



Tapping Into Already Existing Projects

- Citizen Science Central

<http://www.birds.cornell.edu/citscitoolkit/projects>

- SciStarter

<http://scistarter.com/>

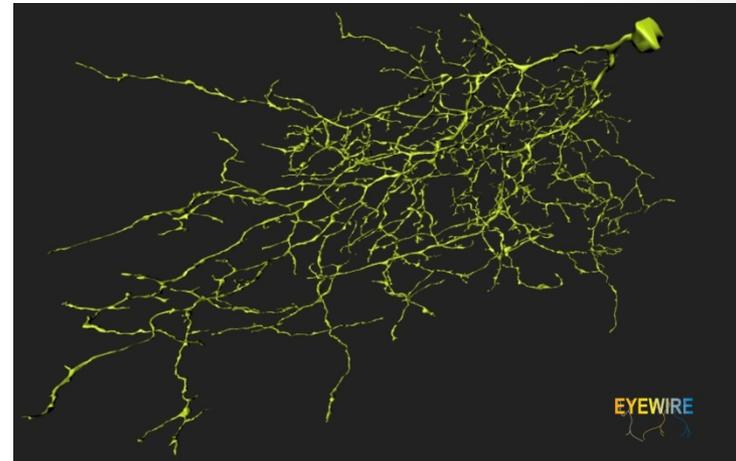
- Citizen Science Alliance (Zooniverse)

<http://www.citizensciencealliance.org/>

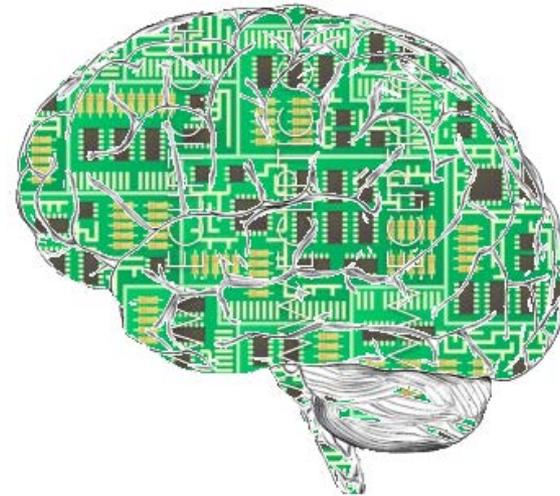
EyeWire

- Online game to help map connectome
- Human retinal neurons
- 160,000 participants, 145 countries
- Sebastian Seung's Computational Neuroscience Lab at Princeton

<http://blog.eyewire.org/about>



"EyeWriters complete J Cell 2" by AmyLeeRobinson
https://commons.wikimedia.org/wiki/File:EyeWriters_complete_J_Cell_2.jpg#/media/File:EyeWriters_complete_J_Cell_2.jpg



<https://upload.wikimedia.org/wikipedia/commons/1/17/ArtificialFictionBrain.png>

Project BudBurst

- Monitoring shifting phenophase of plants
- One time or full season observations
- Data available on website
- Over 15,000 observations in all 50 states
- National Ecological Observatory Network (NEON) & Chicago Botanic Garden

<http://budburst.org/>



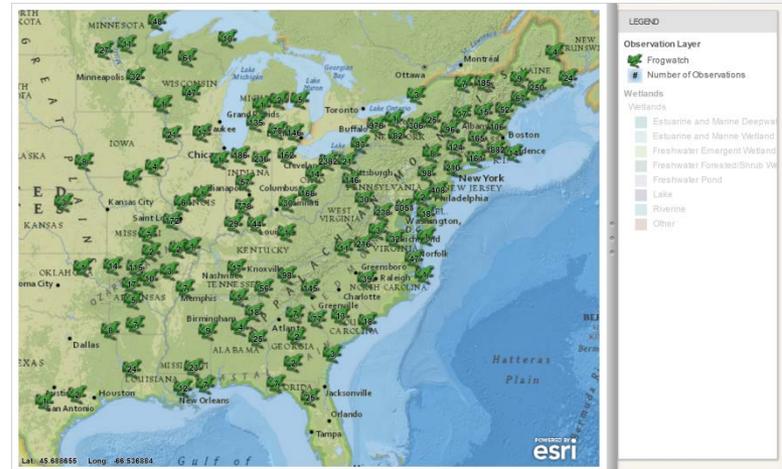
https://commons.wikimedia.org/wiki/File:Dogwood_from_below_2.jpg



https://commons.wikimedia.org/wiki/File:Northern_Swamp_Dogwood_berries.jpg

Avenues for Collaboration

- Data management services
- Visualization labs/GIS labs & Services
- Equipment Loans
- Scholarly communications & open access



<http://frogwatch.fieldscope.org/v3/maps>



https://commons.wikimedia.org/wiki/File:DARPA_Big_Data.jpg



<https://commons.wikimedia.org/wiki/Binoculars#/media/File:Fernglas%28alt%29.JPG>

Avenues for Collaboration

- Outreach & education
- Makerspaces
- Exhibit Spaces
- Classrooms/Meeting rooms



https://commons.wikimedia.org/wiki/File:Donnonkn_Fab_lab_en_Bermeo.jpg



Harrington, 2015



https://commons.wikimedia.org/wiki/File:Joan_Brossa_Vel%C3%B2drom_Cam%C3%AD_obrint_interrogaci%C3%B3.JPG

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