Biodiversity patterns across space and time
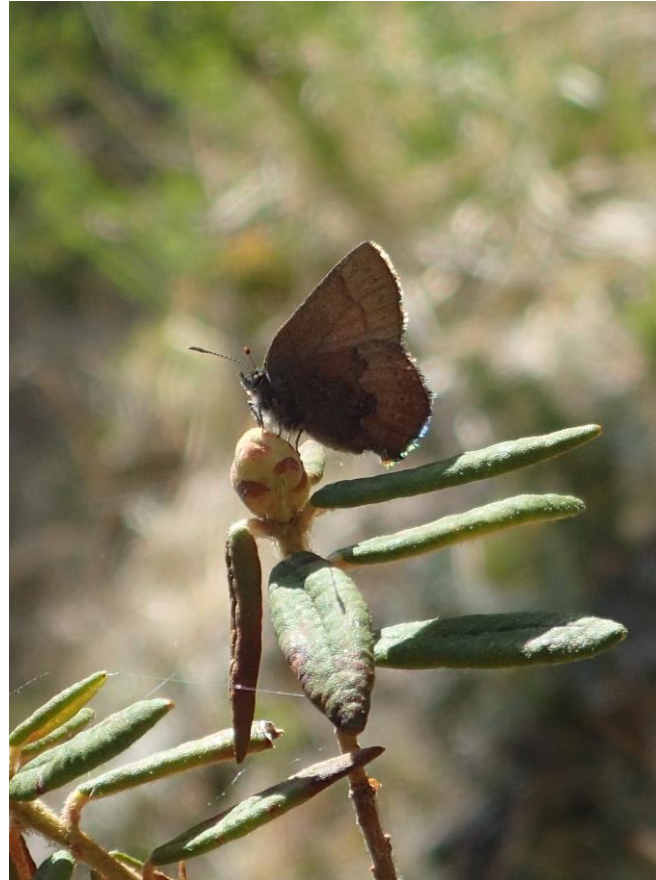

Federico Riva, PhD

McGill, BIOL 310   February 11th, 2022
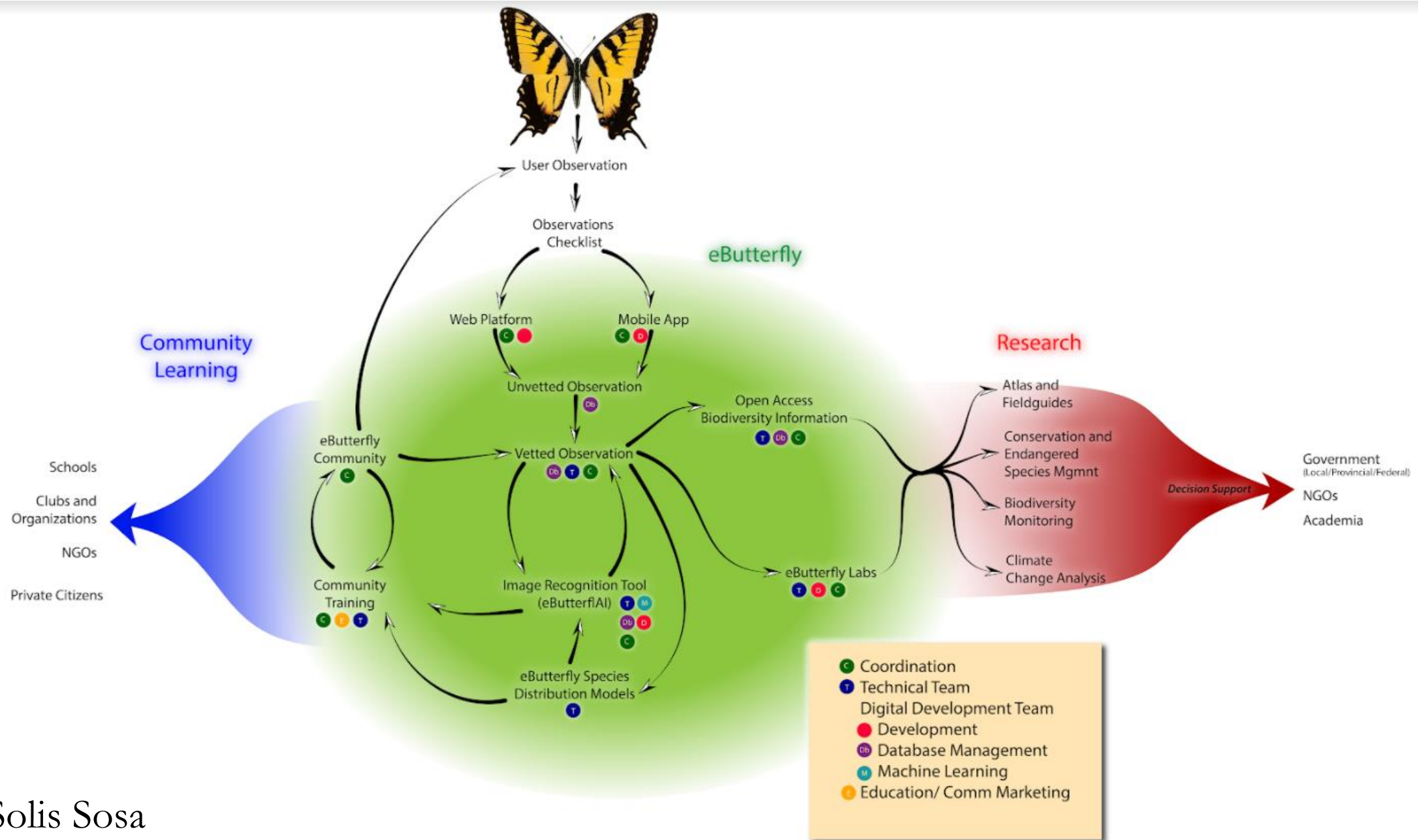
federicoriva@cunet.carleton.ca   https://github.com/FedericoRiva   @riva_ecology

eButterfly

- https://www.e-butterfly.org/
- Community science as a frontier in biodiversity conservation
- All data analyzed today are collected by volunteers
- **<u>Contribute – it is easy!</u>**
- Just need to register,
- Lots of cool stuff in the pipeline
    - AI algorithm helps in identifying butterflies from pictures
    - Models of butterfly distributions used to inform which species you might see at a site

User Observation

Observations Checklist

eButterfly

Web Platform

Mobile App

Unvetted Observation

Open Access Biodiversity Information

Research

Community Learning

eButterfly Community

Vetted Observation

Atlas and Fieldguides

Conservation and Endangered Species Mgmnt

Biodiversity Monitoring

Climate Change Analysis

Schools

Clubs and Organizations

NGOs

Private Citizens

Community Training

Image Recognition Tool (eButterflAI)

eButterfly Labs

eButterfly Species Distribution Models

Decision Support

Government (Local/Provincial/Federal)

NGOs

Academia

C Coordination
T Technical Team
Digital Development Team
● Development
Db Database Management
M Machine Learning
E Education/ Comm Marketing

Rodrigo Solis Sosa
Human Network and Data Coordinator @ eButterfly

Steps for the last section of the tutorial (trends in frequency)

- Pick a species for your analysis (default: monarch butterfy, *Danaus plexippus*)
- Visit https://www.e-butterfly.org/ebapp/en/observations/explore?view=species&subview=grid and search for your species
- Where is this species found? Is it a large area, or perhaps only a small section of North America? Warm or cool?