Existing Models and Inspiring New Networks-of-Networks: *Dispatches from a network-of-networks*

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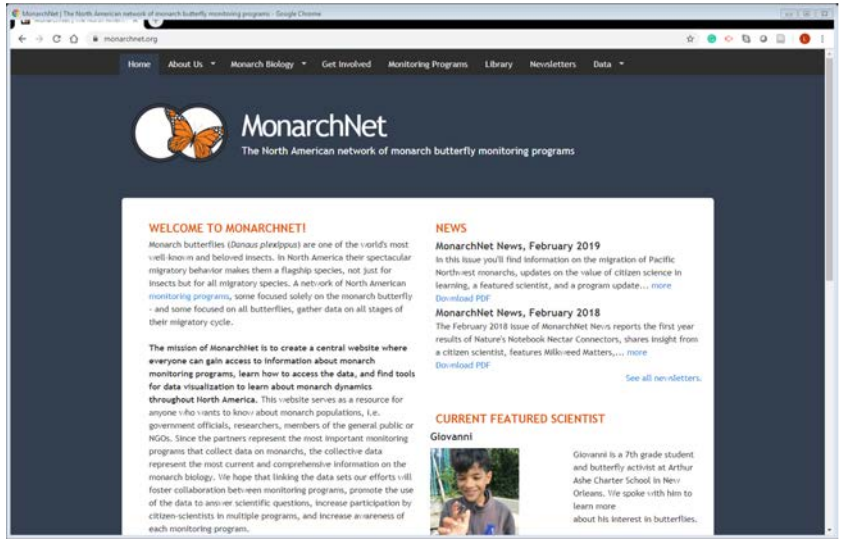
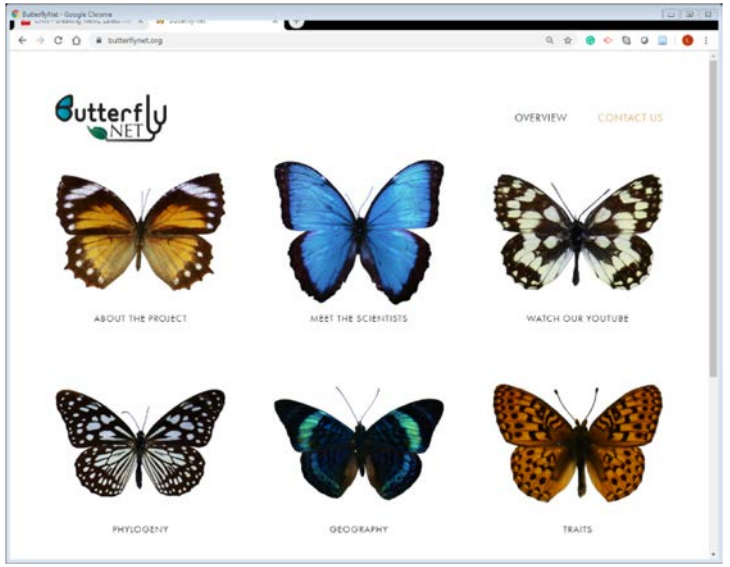
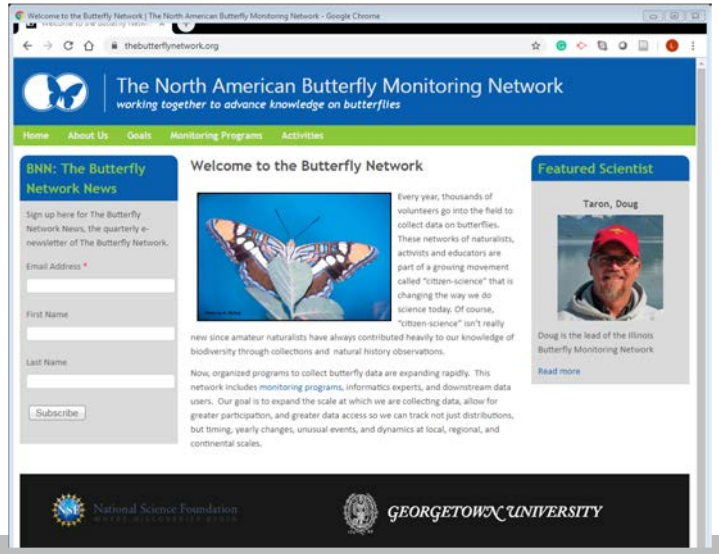
About Me

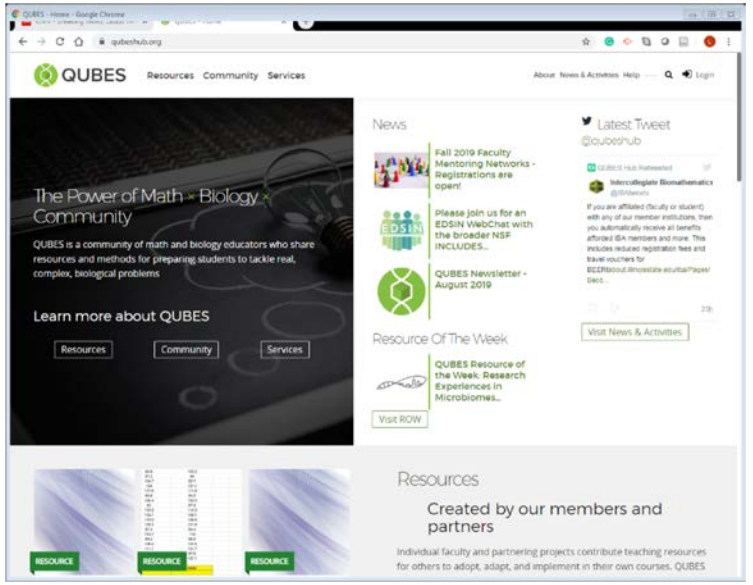
- Background
  - I study the impacts of global change on biodiversity with a focus on butterflies
- Why am I here?
  - Lead a network of butterfly monitoring networks
  - Work in several collaborative networks focused on building infrastructure for the community (web outreach, teaching, research tools)
  - Part of many collaborative research networks
    - Workshops in synthesis centers
    - Research collaborations

My current networks

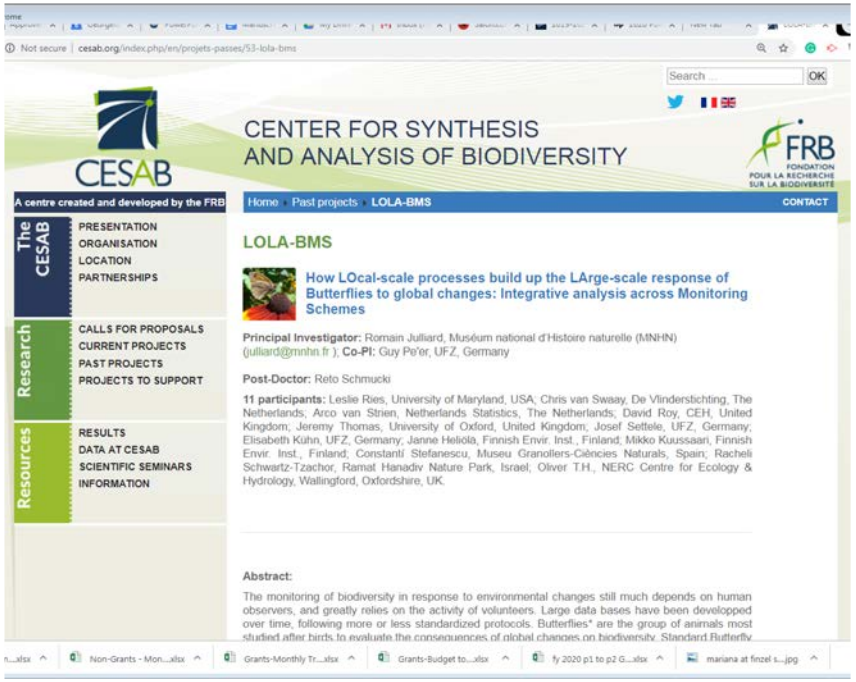








International collaborations



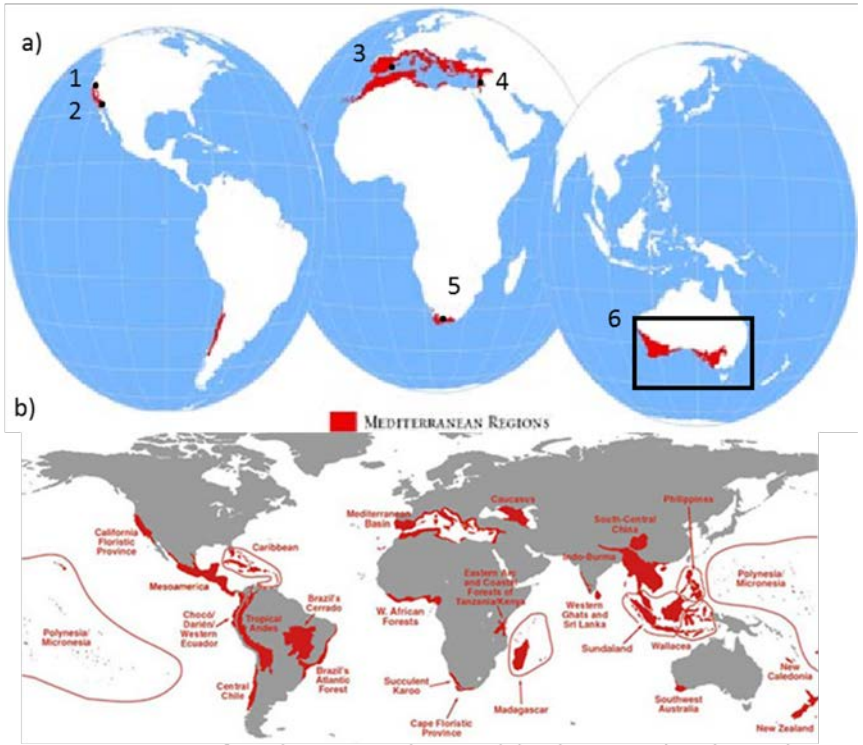


Figure 1. A map of Mediterranean biomes (a). This map also shows the location of several programs to monitor butterflies. These include the Shapiro Butterfly Monitoring Program(BMP) (1: launched 1972), the Orange County BMP (2: 2011), the Catalan BMP (3: 1996), the Israeli BMP (4: 2009), the South African (5: current atlas program, planning BMP), and Australia (6: current atlas program). All Mediterranean biomes are included in Conservation International Global Hotspots for Biodiversity (b)

Network of Network Characteristics

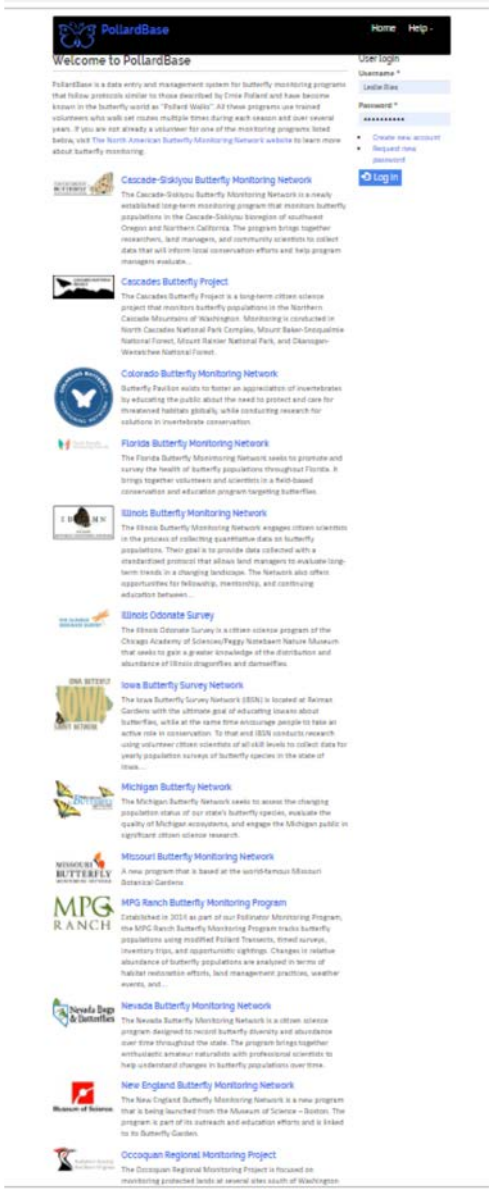
- International engagement integral to success of activities
- Aligned mission and goals among the participating networks
- Leveraged resources across networks for mutual benefit
- Professional skills and global research perspectives developed
- Protocols, activities, products developed that reduce barriers to international collaboration

Lessons learned:

Engagement is integral to success of activities

The North American Butterfly Monitoring Network

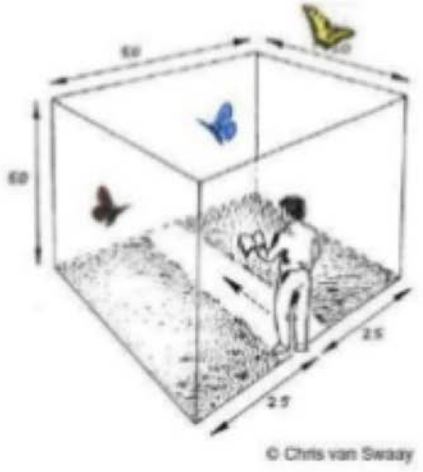
- One of my key goals was to support data management activities for citizen science butterfly monitoring networks (because I wanted to be able to use their data!)
  - Could only support one system
  - Needed a lot of buy in to make a single system work
  - Expanded our goals to cover a broader suite of activities



Lessons learned:

Engagement is integral to success of activities

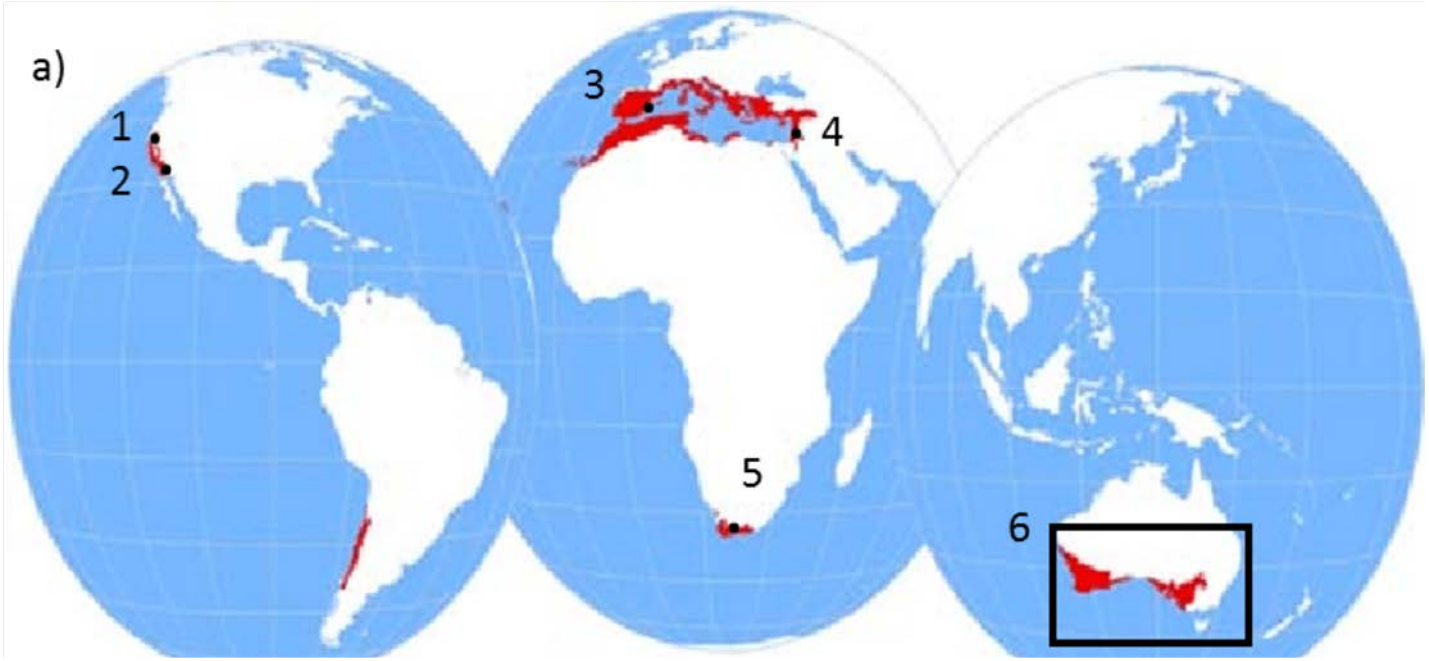
- Cross-boundary synthesis of network data requires buy in from all data producers
- Cultural barriers (including from institutions and different disciplines) can be formidable



Lessons learned:

Engagement is integral to success of activities

Personal research goal: models of how species respond to global change that are generalizable (across systems)



Lessons learned:

Aligned missions and goals among networks

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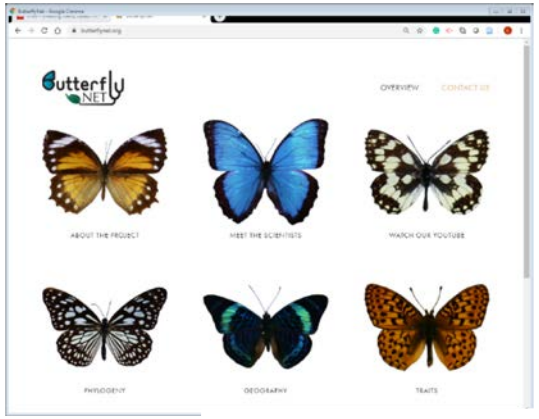
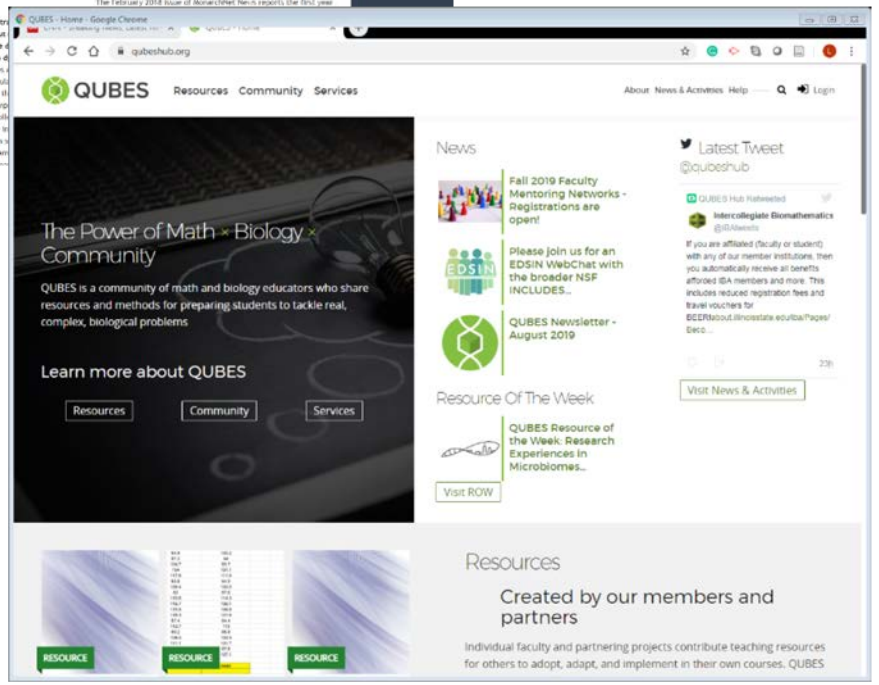
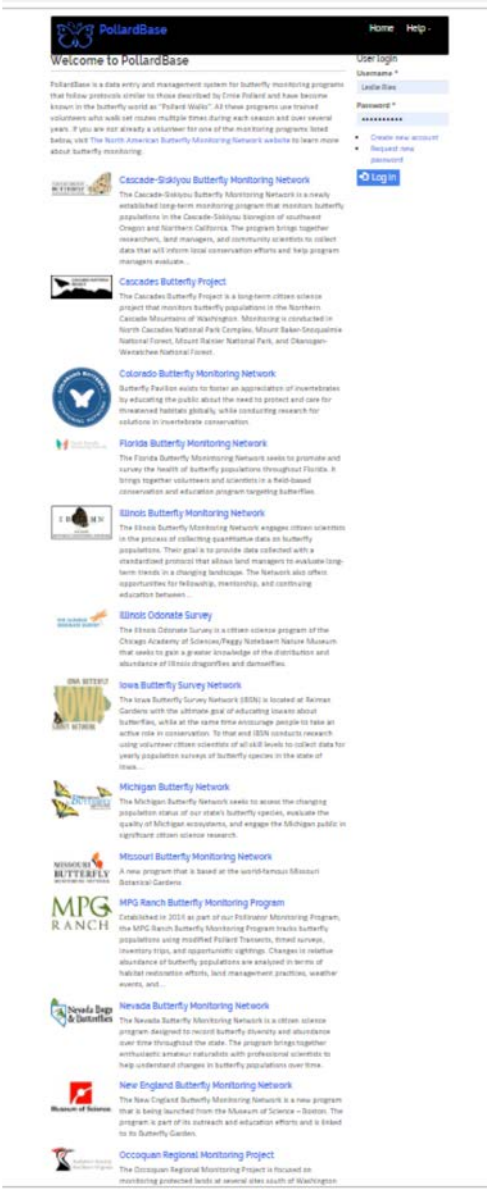




Lessons learned:

Leverage resources across networks for mutual benefit

- The main benefit for all groups is a data entry and management system that allowed them to shift their focus from data management to:
  - Recruitment
  - Training
- Biennial meetings allow for continued interactions and to articulate shared interests
- Support for new members through mentorship and lessons learned
  - Goals to expand those services are still on hold but are always in our sites

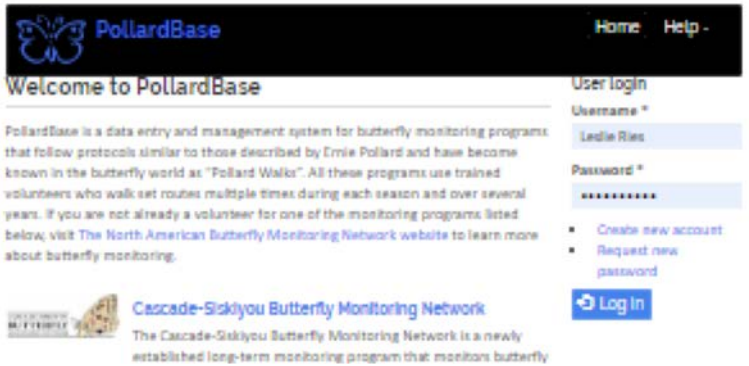


Lessons learned: *Sustained engagement requires some kind of value-add for network members (unless you are meeting a critical need)*

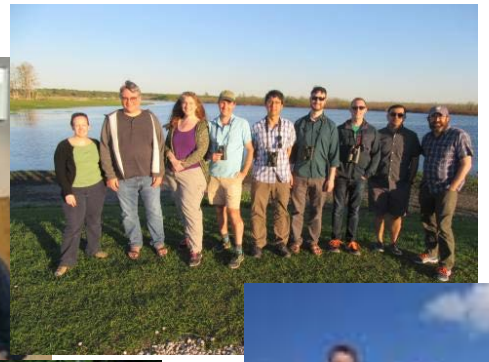
Q: What constitutes added v

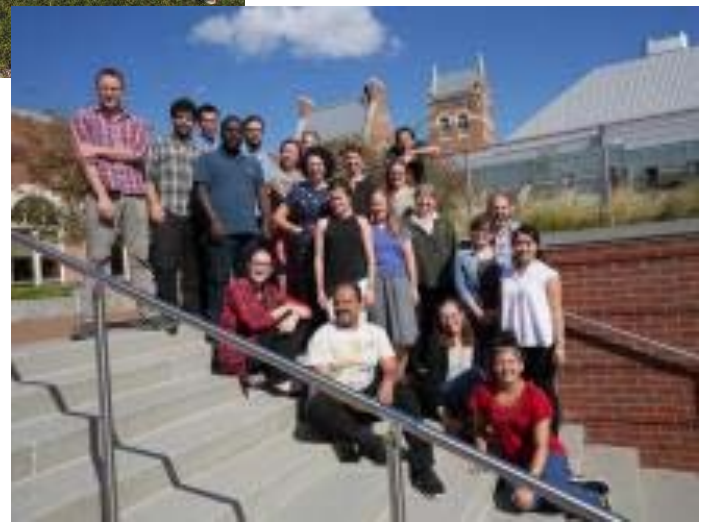
A: Lots of things, including:

- Prestige
- Research updates
- Research opportunities
- Networking/friendship



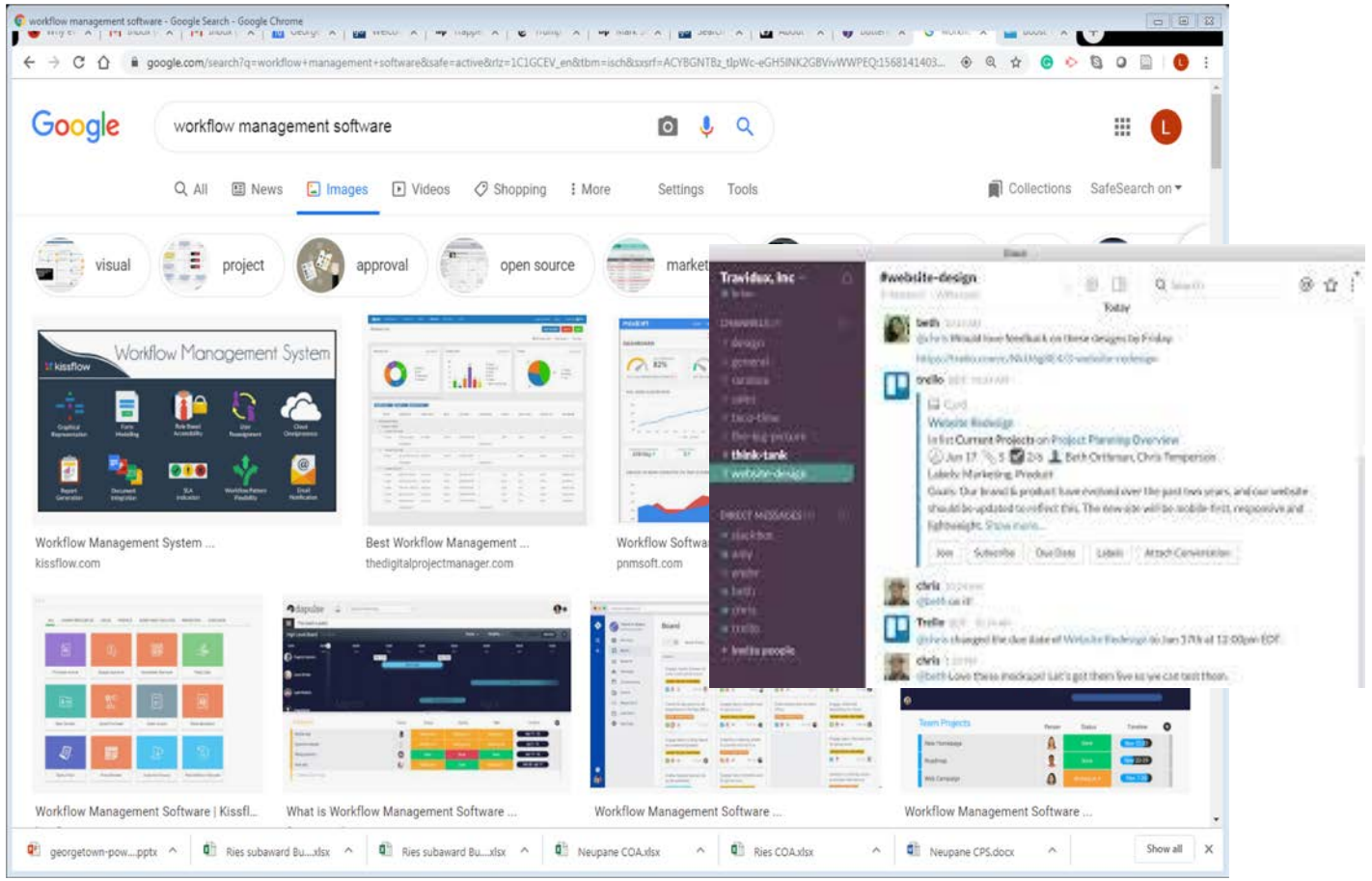
Lessons learned: *Face-to-face interactions among network members is best way to build a cohesive group.*





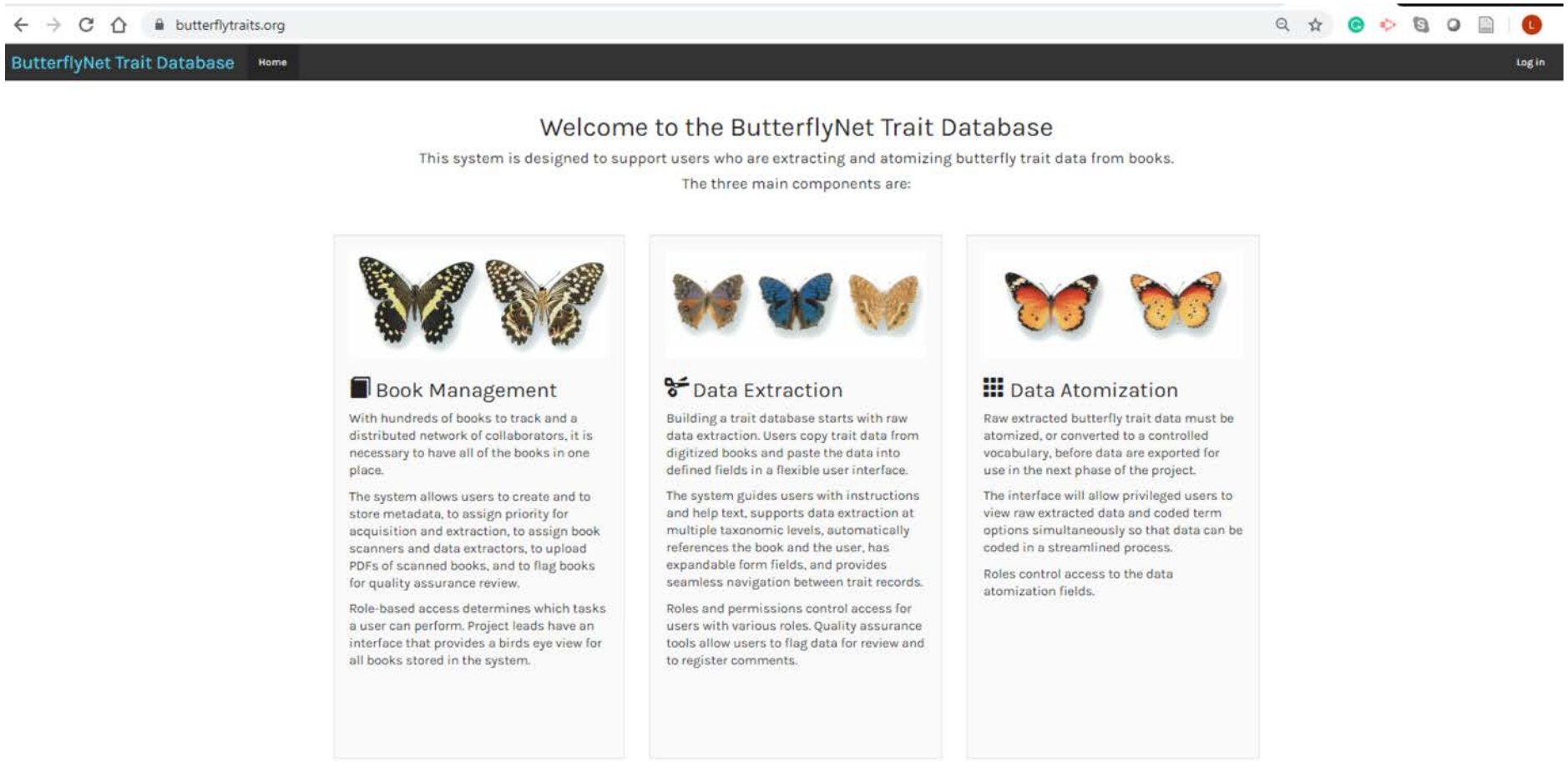
Lessons learned:

Protocols, activities and products that reduce barriers to participation



- There are great systems out there, but people involved in multiple collaborations can suffer from "platform" overload
- Without widespread buy-in, may be best to stick to email and google docs.

Although, in some cases, a shared platform is essential to success. And you get what you pay for!!!



Lessons learned:
Professional skills and global perspectives

- True collaborations are needed when no one person or team has the skills or expertise to meet the goals of the project
- You must be prepared to hear other's perspectives, even if they conflict with your own
  - –that is actually the point!!!
- Creating and maintaining networks of collaborators is a skill in and of itself
  - – and that may be the skill you are bringing to the group!!

Lessons learned: *Without a dedicated (and competent) manager/admin, everything becomes much harder*

- Many academic researchers seem reluctant to build admin costs into their budgets (at least in my field)
- There is a lack of respect for effective leadership in this field
- A lot of the work running a network requires time and activities that are not rewarded for tenure track professors (so at least give yourself summer salary OR hire someone to manage your network, ideally someone with experience, or at least skills towards management!)