

## **SYM 8 Challenging Boundaries: The Role of SCB Chapters in Broadening Conservation Engagement**

In this symposium, we highlight researchers who have used their affiliation with local SCB Chapters to successfully breach this traditional barrier, and bring science to the public. SCB Chapters are deeply involved with their communities through organizing e.g. volunteer opportunities or citizen science projects. This symposium highlights benefits received by scientists who have successfully integrated research with their local SCB Chapter. Likewise, we will highlight the benefits that public engagement brings to local Chapters in terms of their effectiveness as 21st century conservation entities. Specifically we highlight how chapter outreach improves leadership, organizational, communication skills, and the ability of scientists to apply their research to solve real-world problems. We will end the symposium with a panel discussion on what engagement might mean for scientists and local chapters in the 21st century.

Date: Monday, July 14, 2014

Time: 10:00 AM - 12:00 PM

Location: UC 330/331

Organizer(s): Andrew Gregory & Marit Wilkerson

- 
- 10:00 AM - [Challenging Boundaries: The role of SCB Chapters in Broadening Conservation Engagement](#) (184)  
10:15 AM **Marit Wilkerson**, University of California, Davis (United States)  
Andrew Gregory, Bowling Green State University (United States)
- 10:15 AM - [SCB-Toronto goes Rouge: citizen science to inform conservation decisions for pollinators in Canada's first national urban park](#) (424)  
10:30 AM **Ilona Naujokaitis-Lewis**, University of Toronto (Canada)
- 10:30 AM - [Little chapter, big world: Exploring a bold new paradigm for conservation research and funding](#) (676)  
10:45 AM Andrew Keth, Clarion University of Pennsylvania (United States)  
**Brianna Henry**, Western PA Chapter of SCB (United States)
- 10:45 AM - [Collaboration and Engagement: Advancing Conservation in Minnesota](#) (423)  
11:00 AM **Kelly Nail**, University of Minnesota (United States)  
K. Samantha Nichols, University of Minnesota (United States)

11:00 AM - [Conservation Biology in the Urban Core: Kansas City case studies in grassroots engagement](#) (683)

11:15 AM

**Jill DeWitt**, MO Society for Conservation Biology (United States)

NO SHOW

11:15 AM - [The Montana Chapter of SCB: 20 years of science, communication, and conservation](#) (369)

11:30 AM

**Rebecca McCaffery**, University of Montana (United States)

11:30 AM - [Bees, Trees & Activities: HSU-Humboldt's approach to engaging the public with science](#) (99)

11:45 AM

**Robert Shearer**, Humboldt State University Chapter - Society for Conservation Biology (United States)

11:45 AM - **Panel Discussion:** Chapter Engagement in the 21st Century

12:00 PM

*This discussion will focus on how members have used their SCB Local Chapter affiliations to enhance their research impact and effectiveness.*

**Panelists:** Marit Wilkerson, Ilona Naujokaitis-Lewis, Brianna Henry, Kelly Nail, Jill DeWitt, Rebecca McCaffery, Robert Shearer

## Abstracts:

### Challenging Boundaries: The role of SCB Chapters in Broadening Conservation Engagement

This symposium highlights the various ways in which SCB Chapters can engage with policy-makers, practitioners, and the general public to promote science and further conservation efforts. In this introductory talk, the symposium organizers (members of the SCB Chapters Committee) will provide an overview of how conservation scientists are currently with the public across North America. We will also detail how SCB Global and the NA Section are promoting conservation in the non-academic sphere and then link that up to the role that Chapters can and are playing in engagement.

### SCB-Toronto goes Rouge: citizen science to inform conservation decisions for pollinators in Canada's first national urban park

Pollinators are exhibiting large declines, despite increasing recognition of their importance in linked social-ecological systems. Reversing declines requires multi-pronged approaches that include improved science-based understanding of causal factors contributing to changes in pollinator diversity and increased awareness within the public sphere. In collaboration with Rouge Park, Canada, the Toronto Chapter spearheaded a citizen science project that develops a bee diversity baseline for the park with research designed to assist park managers understand the influence of a decade of restoration efforts. Through the engagement of a large volunteer base, we are helping to understanding the conservation

status of bee communities, and are increasing conservation literacy among local landowners and the public. We discuss the challenges and benefits that comes with community engagement in conservation science of both local and global significance.

#### Little chapter, big world: Exploring a bold new paradigm for conservation research and funding

The Western PA Chapter SCB (WPASCB) takes a 'generational' approach to structuring research that involves the community from K-adult. We discuss the pros and cons of going 'counter' to traditional research models. We also share some of our unconventional methods for generating flexible, long-term funding streams and short-term, project-specific revenue. This novel approach may provide alternatives in moving conservation forward as traditional funding pools disappear.

#### Collaboration and Engagement: Advancing Conservation in Minnesota

In the MN Chapter, we have found great strength and resiliency though maintaining a balance of professional and student members. This diversity has allowed for multiple perspectives in chapter-organized events, as well as enhanced the networking opportunities for all of our chapter members. We will focus on our annual meeting, where we have 3 main objectives: to provide an educational experience for members about a current topic in conservation biology, to allow members to reach out to the community by sharing current research specific to MN or of interest to those in MN, and to encourage networking among members in different fields (students, academics, non-profits, and government agencies), as well as with invited speakers that are active in conservation biology research or education and outreach. Additionally, we have recently partnered with the MN Zoo and their conservation staff. We will discuss this collaboration and our 2014 meeting, which was held on the zoo campus.

#### MISSING PRESENTATION [Group discussion instead]

#### The Montana Chapter of SCB: 20 years of science, communication, and conservation

The Montana Chapter has spent 20 years working on regional conservation issues with the goal of promoting science and the application of the principles of conservation biology to Montana's local, regional, and statewide diversity. We have focused on four main activity areas: hosting regional meetings, sponsoring film and speaker events, commenting on public policy, and developing educational programs. Our flagship event is an annual research symposium that brings together scientists, students, and conservation practitioners from around the region to network and share research. This symposium includes a lecture that is open to the public, allowing room for discussion and interaction with specialist and non-specialist audiences. I will highlight the outcomes of our annual research symposia and touch on the diverse other programs that have allowed us to connect the scientific and non-scientific communities over the years.

#### Bees, Trees & Activities: HSU-Humboldt's approach to engaging the public with science

SCB-Humboldt has been actively engaging the public with conservation science since its inception in late 2012. The annual Biodiversity Conference ([humboldt.edu/biodiversity](http://humboldt.edu/biodiversity)), consisting of three days of academic lectures, hands-on displays, fire ecology demonstrations, live raptor exhibits, and lots more, is

free for all ages, televised and made available online. Our chapter has also hosted a two day Redwood Resiliency Workshop that brought California, federal, tribal and private redwood forest managers together with forest ecologists and climate scientists to discuss how to best manage redwoods in the face of a changing climate. We are also currently endorsed by Xerces Society in our preparation of online open-source curricula for a native pollinator short course, presentation, workshop and field trip. This NACCB presentation will highlight HSU-Humboldt's successes and lessons in their development of a simple model for the production of exciting, hands-on, and easily accessible events that ultimately increase conservation communication.



SCB CHAPTERS

# Chapters

Working locally to achieve conservation success

## *SYM 8 Challenging Boundaries: The Role of SCB Chapters in Broadening Conservation Engagement*





SUSTAINABLE **2ND** CENTURY

**UC DAVIS**  
JOHN MUIR INSTITUTE  
OF THE ENVIRONMENT



North Davis Elementary

George Washington Carver

Cezar Chavez

Woodland Elementary

Waggoner Elementary

Southport Elementary

Marguerite Montgomery



**OCSCB**  
ORANGE COUNTY SOCIETY FOR CONSERVATION BIOLOGY  
[www.OCSCB.org](http://www.OCSCB.org)



# Chapters

Working locally to achieve conservation success

## SYM 8 Challenging Boundaries: The Role of SCB Chapters in Broadening Conservation Engagement

Marit Wilkerson

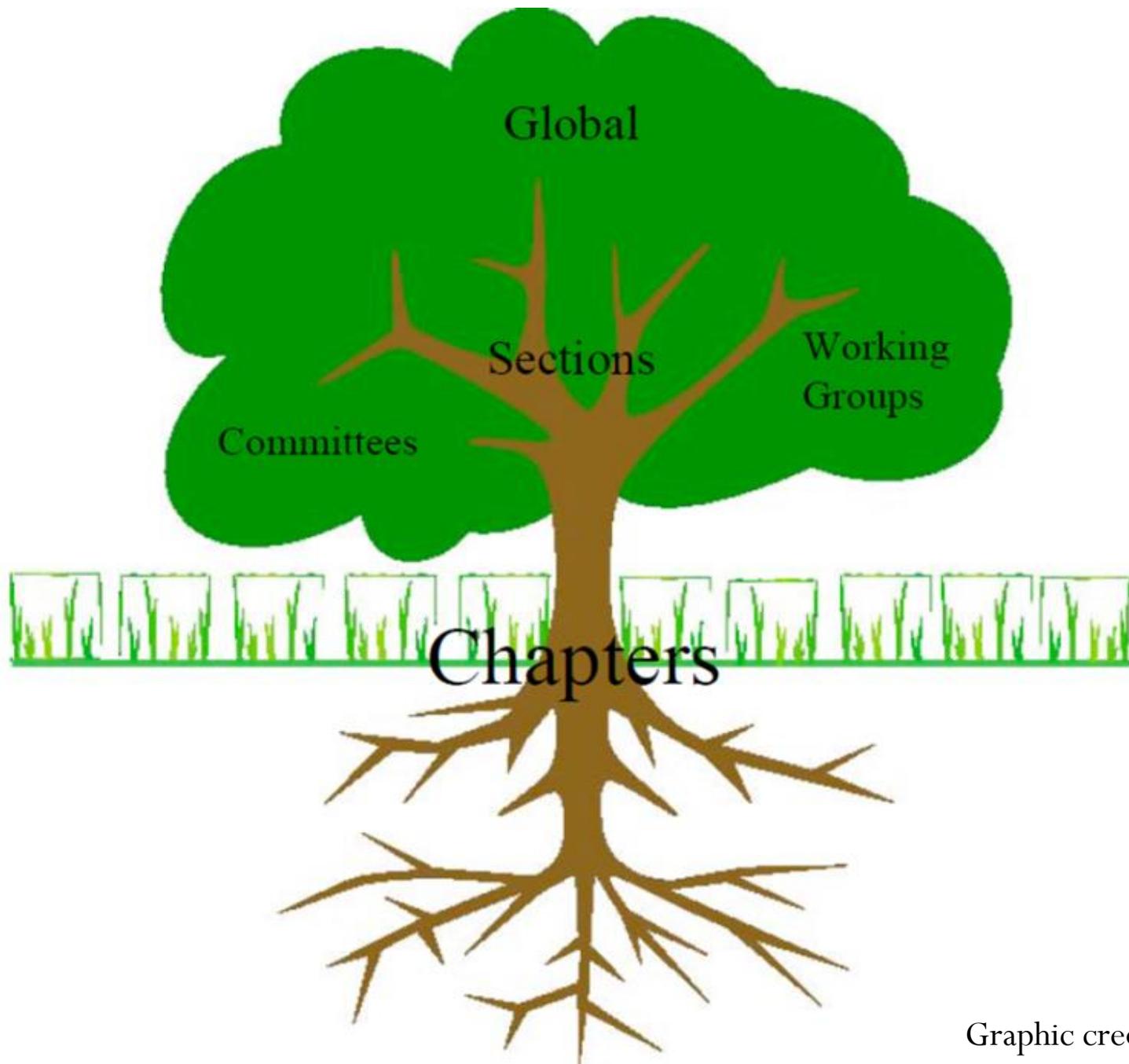
&

Andrew Gregory

**UC DAVIS**  
UNIVERSITY OF CALIFORNIA

**BGSU**  
Bowling Green State University

SCB Chapters Committee  
Conference Co-Coordinator

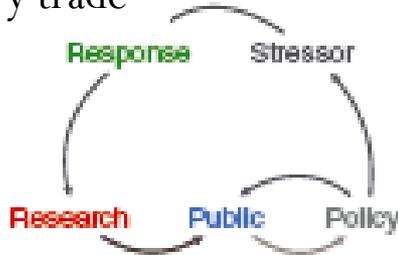


Graphic credit: F. Nagle

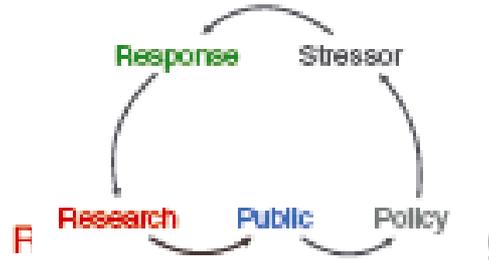


# Where does public engagement fit into conservation & research?

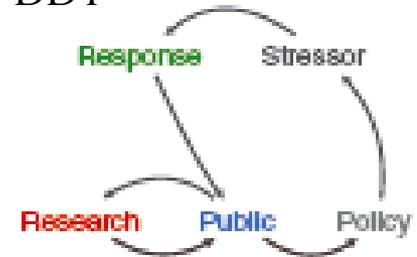
Ivory trade



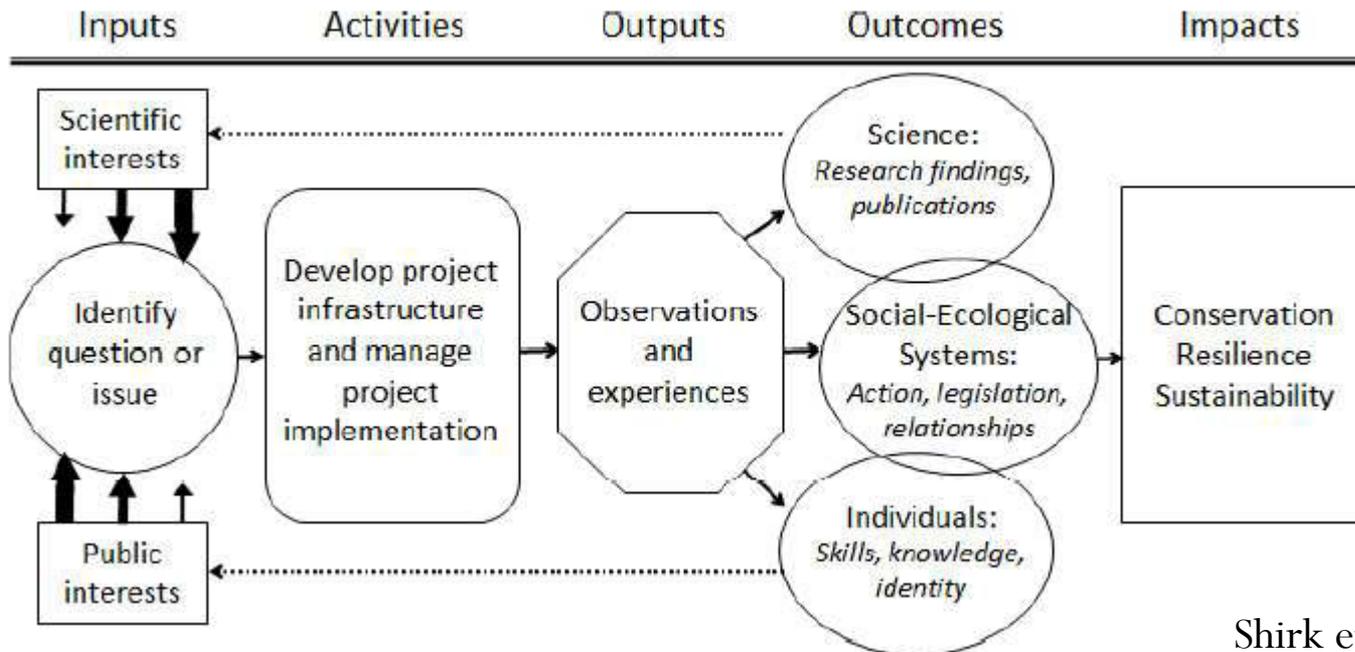
Acid rain



DDT



Phillis et al. 2013



Shirk et al. 2012



# What is public engagement?

- “Public engagement describes the myriad of ways in which the activity and benefits of higher education and research can be shared with the public. Engagement is by definition a two-way process, involving interaction and listening, with the goal of generating mutual benefit.”
  - National Co-Ordinating Centre for Public Engagement (NCCPE)

<http://www.publicengagement.ac.uk/>



# Components of engagement

- Purpose (why?)
- Audience (who?)
- Activity (what?)
- Evaluation (how?)



# Determine your reason/purpose

- Inspire
  - Stimulate, motivate, stir, instigate, enthuse
- Disseminate
  - Broadcast, publicize, spread, propagate
- Involve
  - Engage, include, engross, embrace
- Consult
  - Refer to, check, confer, discuss
- Encourage
  - Boost, embolden, move, incite, urge, support
- Collaborate
  - Work together, join forces, team up, pool resources

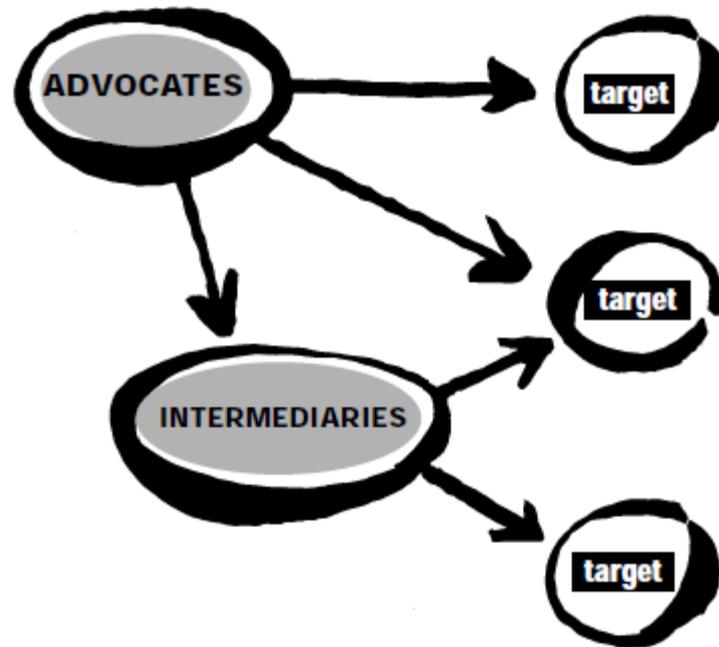


# ALWAYS determine your audience!

- Types of demographic categories: age, gender, socioeconomic status, education level, ethnicity, geographic area, interests
- Steps to identify & understand your audience:
  - Build a profile
  - Work with audience you know
  - Identify a champion/influencer
  - Consider & address barriers
    - Transport, disposable income, timing, interest, trust level, relevance, language, awareness, food



# Players within your target audience





# What activities are scientists using to engage with the public?

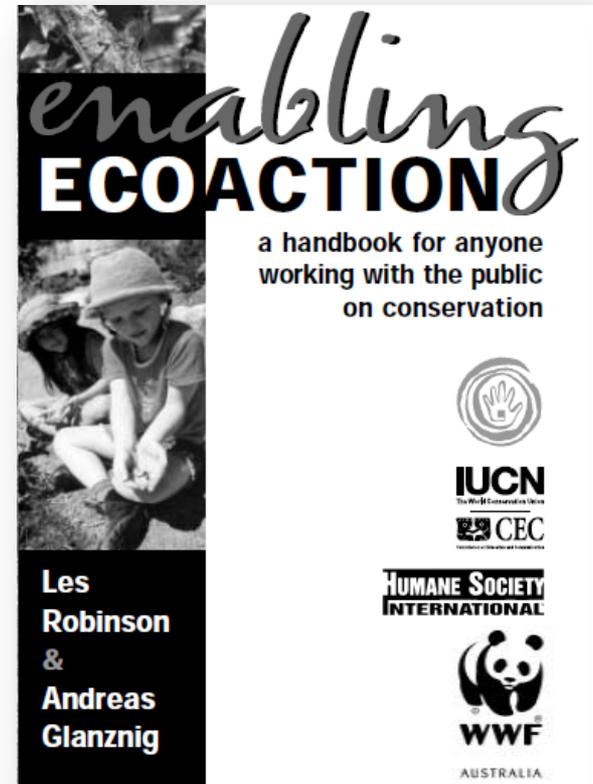
- Science communication
- Citizen science projects
- Mobilizing conservation action
- Crowdsourcing (innovative funding)
- Working partnerships
- Open-source resources & teaching material





# Checklist for effective engagement

1. Have you understood the problem and critically reflected on your proposed solution?
2. Have you research similar programs?
3. Have you identified specific target audiences? Understand their situation, practices & needs?
4. Are your behavioral objectives actionable?  
Compatible with audience's values & norms?
5. Have you planned how to collect evidence?
6. Will it be fun? Social?
7. Have you pre-tested your communications?
8. Have you thought about access?
9. Have you approached partners?
10. Will you leave something behind?





# Evaluation

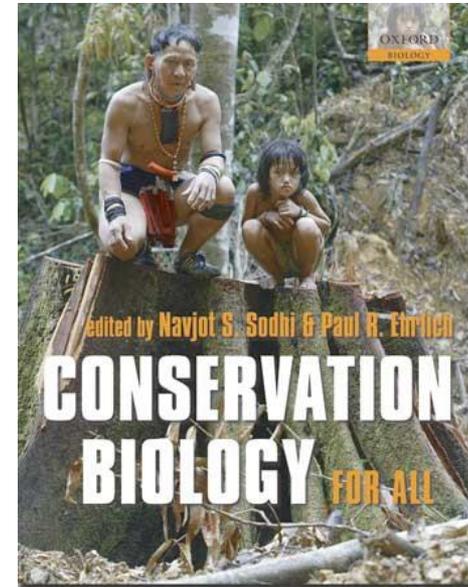
- Plan of action at the beginning of program (NOT the end)
  - Have an overarching aim (big picture)
  - Make your collective objectives SMART: S(pecific) M(easurable) A(chievable) R(elevant) and T(ime-limited)
- Have indicators
  - What specific questions (like a research question!)
  - Qualitative or quantitative?
  - Process-oriented
  - Outcome-oriented (impact assessment)
    - Counterfactuals, BACI (before-after control-impact), RCT (randomized controlled trials)



# Society for Conservation Biology

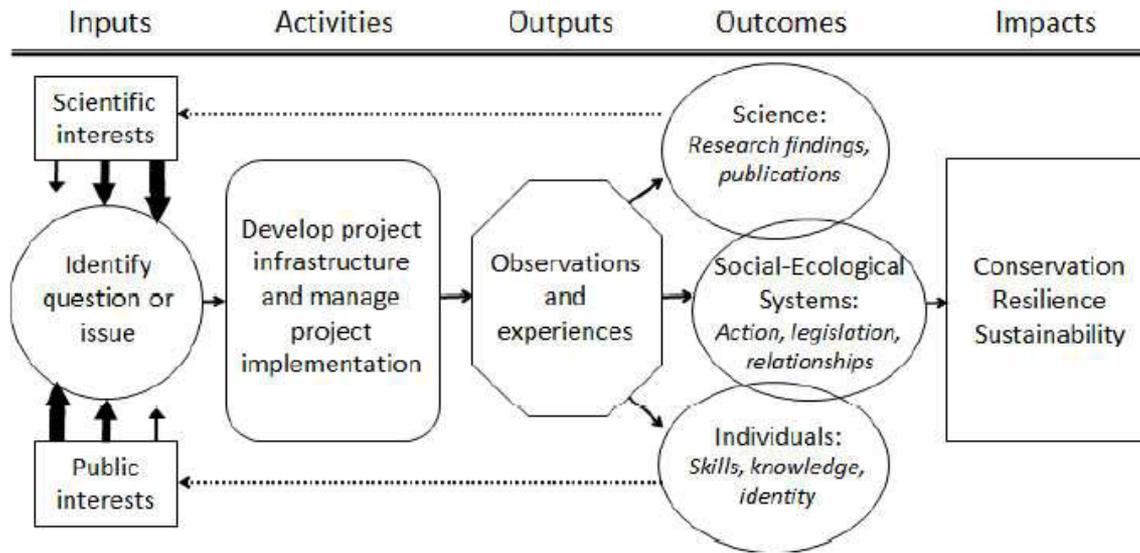
A global community of conservation professionals

- Scientific journals
- SCB News blog
- Free textbook 
- Wildlife Conservation Program
- SCB Policy Statements & policy program
- Conferences!

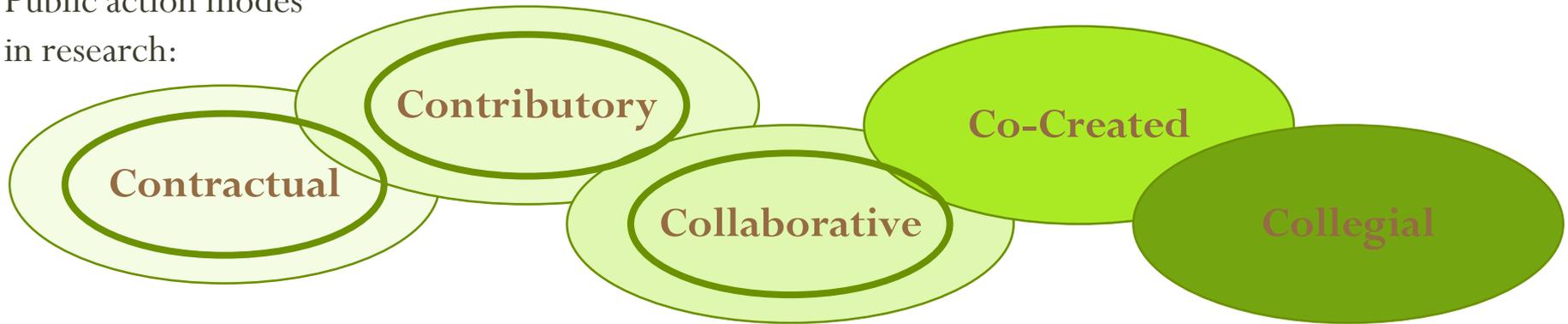




# SCB Chapters



Public action modes  
in research:





# On to the Chapter leaders!



Capacity-building for Chapters  
Workshop @ ICCB 2013  
Baltimore, Maryland

# SCB-Toronto goes Rouge: Citizen science projects as a catalyst for chapter development



Ilona Naujokaitis-Lewis & Ekaterina Hult



# Profile of the SCB-Toronto Chapter

***President*** – Ilona Naujokaitis-Lewis

*Vice-President* – Amanda Xuereb

*Secretary* – Scott McIvor

*Treasurer* – Michelle Dileo

*Volunteer Chair* – Genevieve Rowe

***Conservation Chair*** – Ekaterina Hult

*Communications Coordinator* – Jennifer Chivers

- Largely student run, university headquarters
- Target membership: broader Greater Toronto Area, although largely students
- Shifting focus to conservation science projects



Society for Conservation Biology  
**TORONTO CHAPTER**

Advancing the science & practice  
of conserving the Earth's  
biological diversity



SCBTORONTO.COM

# Problem context: pollinator declines

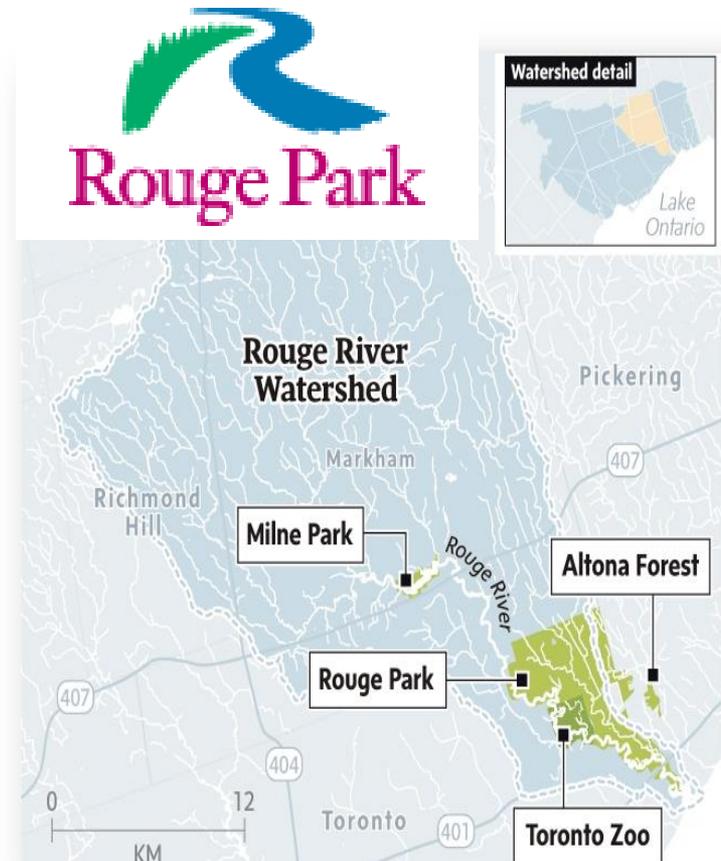
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- 2012 *SCB-TO goes Rouge* initiated
  - Citizen science for monitoring pollinator diversity
- Pollinators provide essential ecosystem services
- Pollinator declines globally
- Lack of knowledge of pollinator diversity
- Limited knowledge a challenge for land managers where goal is to manage for biodiversity



# Rouge Park, Greater Toronto Area

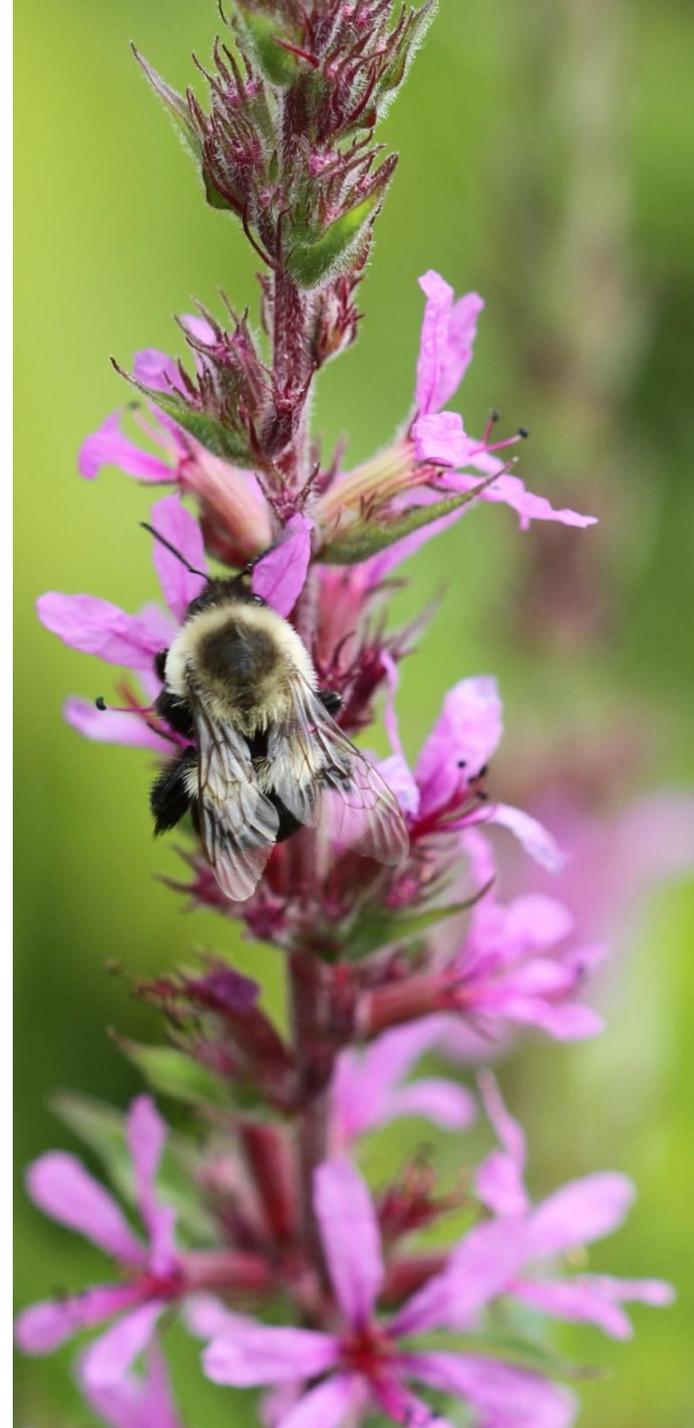
- Highly modified landscape: forests cleared by early 20<sup>th</sup> centuries
- Multiple existing land-uses within the park
  - Residential, industrial, agricultural, recreational
- Focus on forest restoration
  - Influence on pollinators?



# Project aims

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1. Science to inform management
  - Develop a pollinator (bees) diversity baseline
  - Influence of restoration efforts
2. Increase conservation literacy of pollinators
  - Through our volunteer base
  - Outreach to landowners around Rouge Park



2004A



2008A



20010A



# Project design

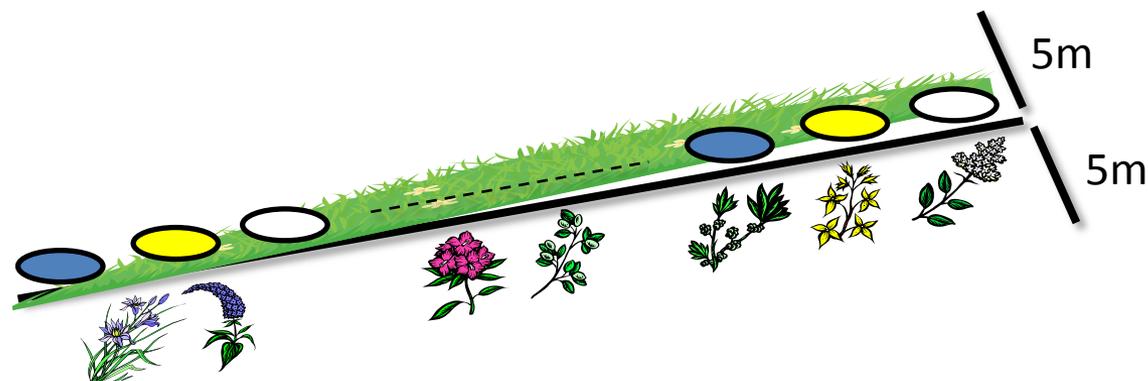
## Field Data Collection: 2 years

- 14 sites at various stages of forest restoration
- Pan-trapping along transects
- May to August: Every 10-14 days

## Lab Data Processing

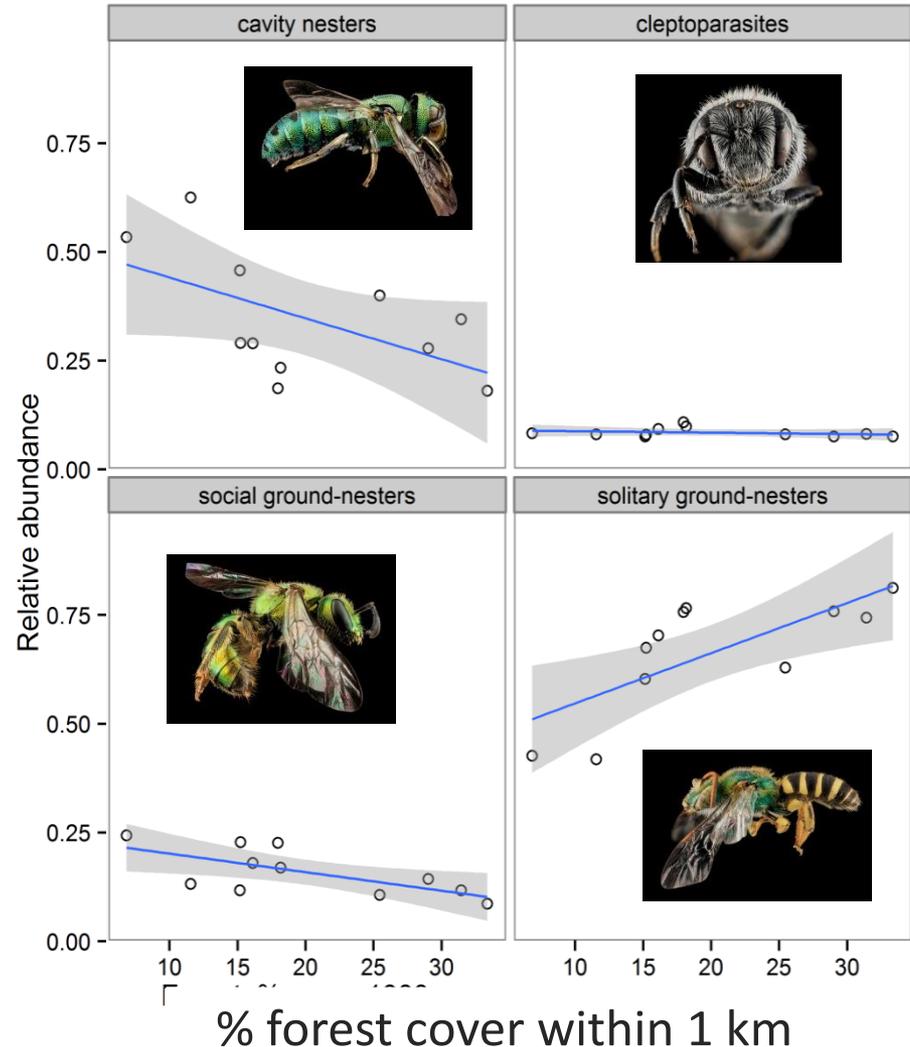
- Sorting, prepping, ID

**MAJOR** volunteer **EFFORT** for project success



# Benefits to scientists: bridging gaps

- Bridging gaps with decision-makers / land managers
  - Science to inform management and conservation problems
- Insights into management and decision-making process
  - What kinds of data do managers need? How is the data used?
- Exposes scientists to new ecological systems



# Benefits to scientists: skill development

- Research skills: study design, invertebrate ID, plant ID
- Project design, management, grant writing
- Leadership, communication, and teaching skills
- Data management and ensuring consistency in data quality



# Opportunity for volunteer engagement

- Strengthen existing connections
- Forge new partnerships
- Public participation



UNIVERSITY OF  
TORONTO



NORTH AMERICAN  
NATIVE PLANT SOCIETY



# Volunteer effort & skill development

Number of volunteers	Field	Lab
2012	46	30
2013	51	40

- Field sampling skills
- Experimental design
- Plant survey methods and identification
- Bee identification
- Pinning techniques
- Catalogue and processing of specimens



*Bombus affinis*  
rusty-patched bumble bee



*Bombus terricola* Kirby  
yellow-banded bumble bee



*Bombus impatiens*  
common eastern bumble bee

# Benefits to our Chapter - Promoting visibility

- More developed online presence
  - Regular posts and updates on our site
- Growth and strategic use of social media platforms
  - Connect with public and other conservation focused groups



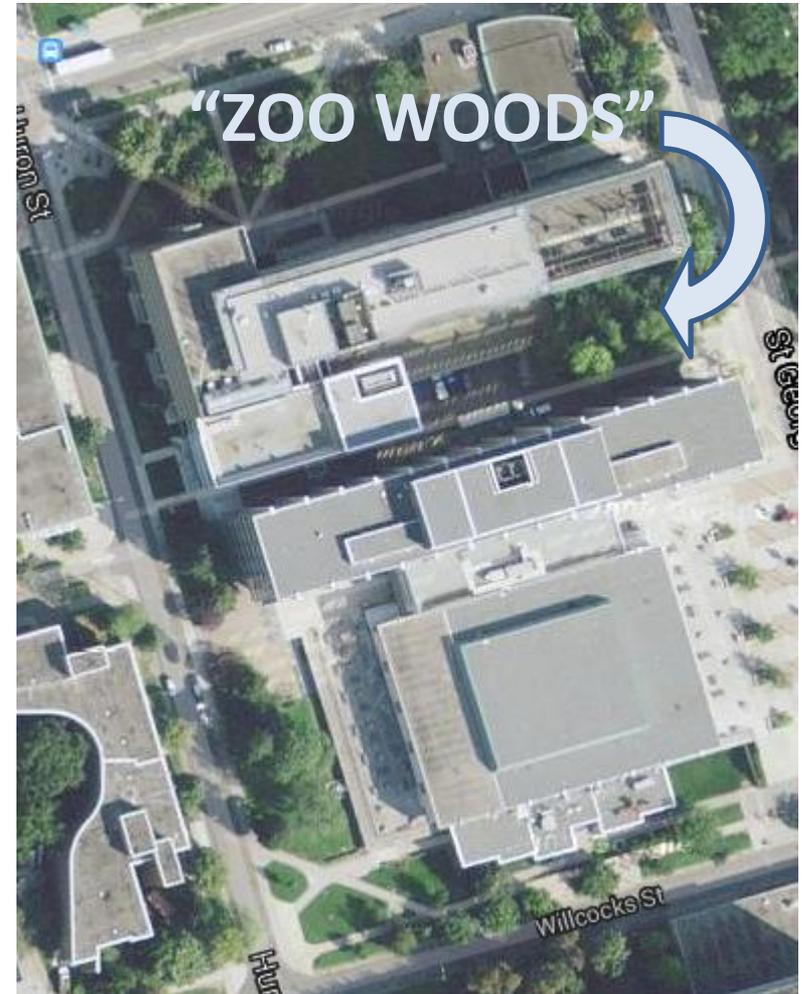
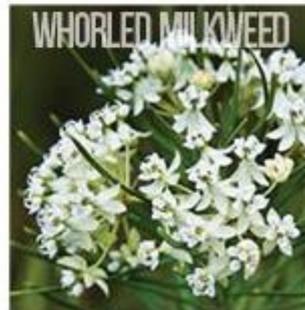
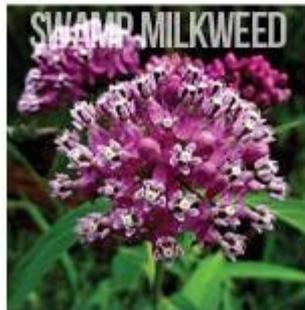
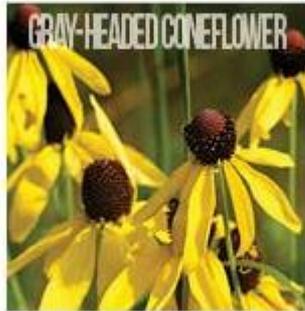
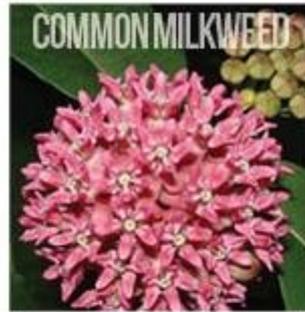
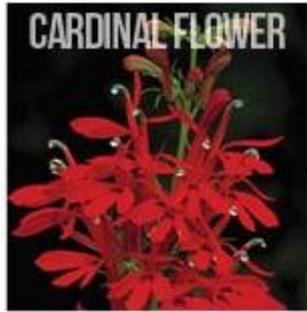
# Benefits to our Chapter - Conservation work

- Key transition in the work of our organization
- Move from social events & seminars to on the ground work
- Enabled us to engage in applied conservation research and science delivery



# Unlocking our potential

- Development of future restoration projects



# Lessons learned

## Successes

- Citizen science projects great vehicle for chapter development
- Increased profile of SCB-TO
- Learning opportunity
- Increased conservation literacy of importance of pollinators

## Challenges

- Projects of this scale are time and resource intensive
- Accessibility for the broader public
- Importance of strong executive board to maintain all chapter programs



# Summary – The evolution of SCB-TO

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Student Club

Conservation Entity





# Acknowledgements

- Rouge Park
  - Maria Papoulias, Manager
  - Vicki MacDonald, Biologist
- Packer Lab, York University
- Fortin Lab, University of Toronto
- Society for Conservation Biology



The banner features the Society for Conservation Biology Toronto Chapter logo at the top left, which includes a stylized bird and a circular emblem. To the right of the logo is the text 'Society for Conservation Biology' and 'TORONTO CHAPTER'. Below this is the tagline 'Advancing the science & practice of conserving the Earth's biological diversity'. The banner is divided into three horizontal sections: 'CONSERVATION' showing a bee on a purple flower, 'OUTREACH' showing a group of people sitting around a table outdoors, and 'RESEARCH' showing a person standing in a field of tall grass. The website 'SCBTORONTO.COM' is displayed at the bottom right.



Questions



Western Pennsylvania Chapter  
**Brianna Henry**

Little Chapter,  
Big World:

A Bold New  
Paradigm for  
Conservation  
Research and  
Funding



# Two Great Forces, One Innovative Mission

- Chapter History
- The Center for Conservation Studies, Inc.
- Collaboration
- Creating Funding
- Future Plans



Society for Conservation Biology

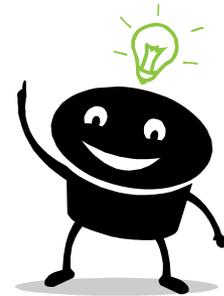


# Western PA Chapter History

## Bios Club

- Founded as a club at Clarion University
- 40+ years of conservation, outreach, and volunteerism

How do we move forward?



- Growing pains
- Bigger opportunities, recognition, representation

## SCB Chapter



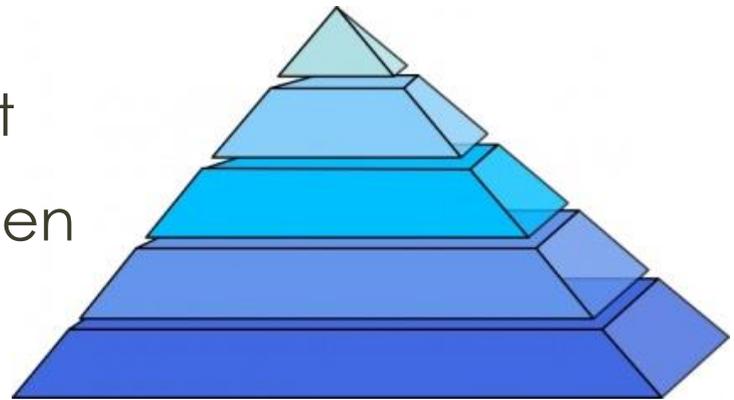
# The Center for Conservation Studies, Inc. (CCS)

- Founded in 2010
- 501c3 non-profit
- Aims to coordinate efforts of scientists and educators
- Acts as a funding source
- Built the Clarion-Limestone Amphibian Research Center (CLARC)



# A Natural Fit

- One independently started non-profit, one university supported club
- Huge overlap in participants
- Challenges:
  - Chapter on campus not historically research driven
  - Structure



# Making Money

- Working around traditional funding
- A series of steps in innovative funding:

- Short-term fundraisers, raffles, etc.



Shutterstock.com

- Picnics and events

- The Center Closet



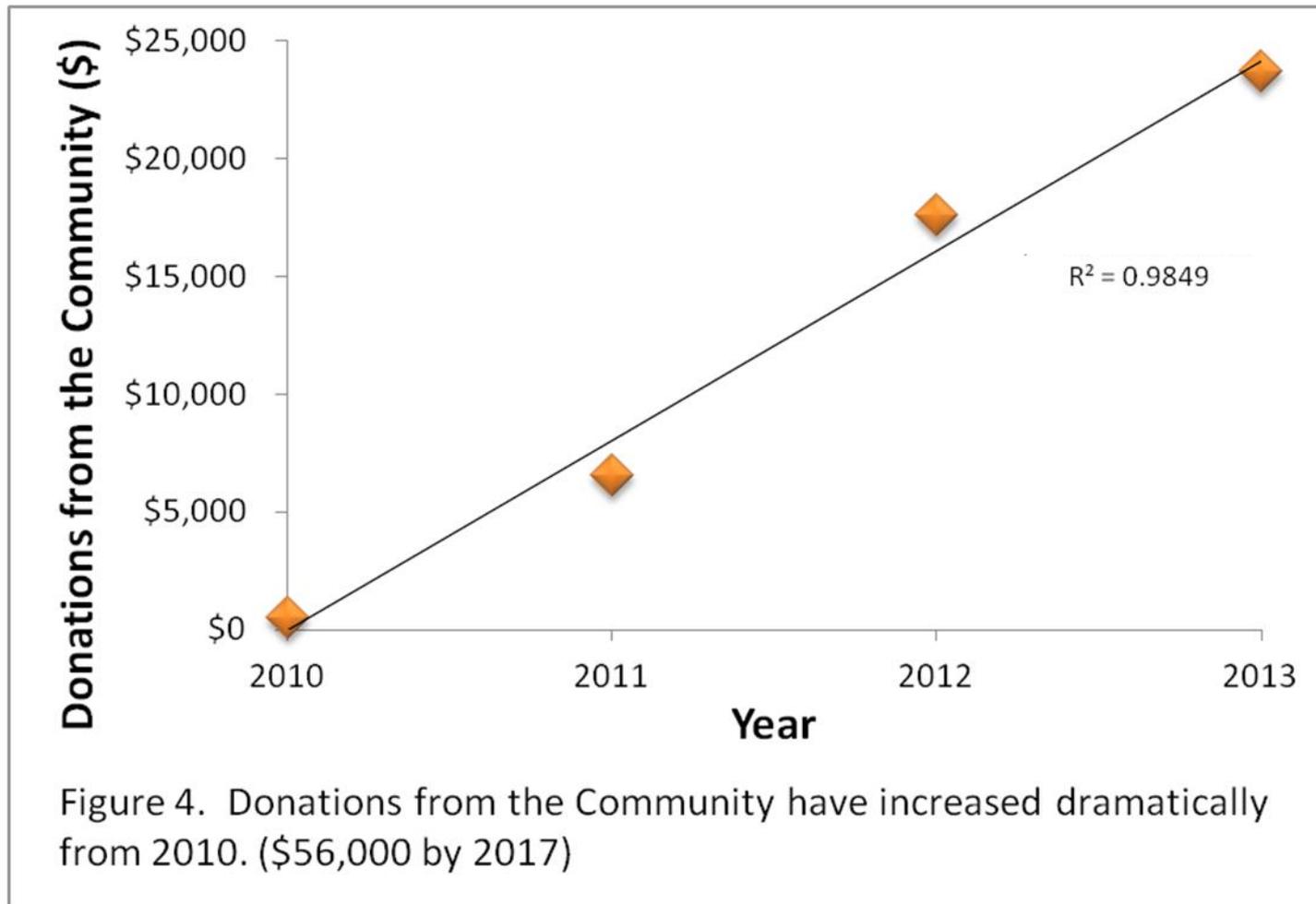
# Benefits to Non-traditional Funding

- Set your own timeline and stipulations
- Community outreach
  - Increased interest in the projects supported

**The more you know,  
the more you care!**



# Evidence in Community Donations



# Where does the money go?

- CLARC



- Funding for student research



- Outreach and education efforts

- Student internships and paid experiences



# More Students Presenting Research!

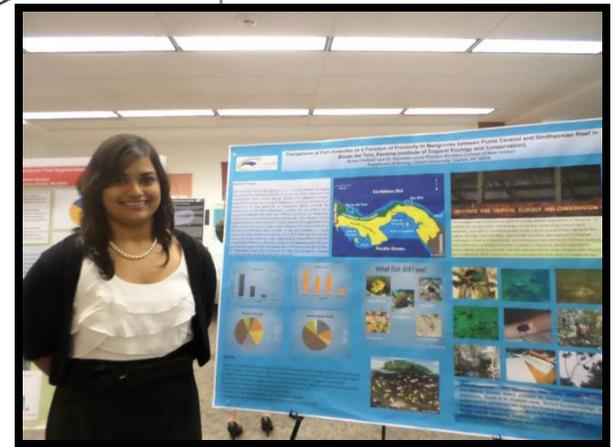
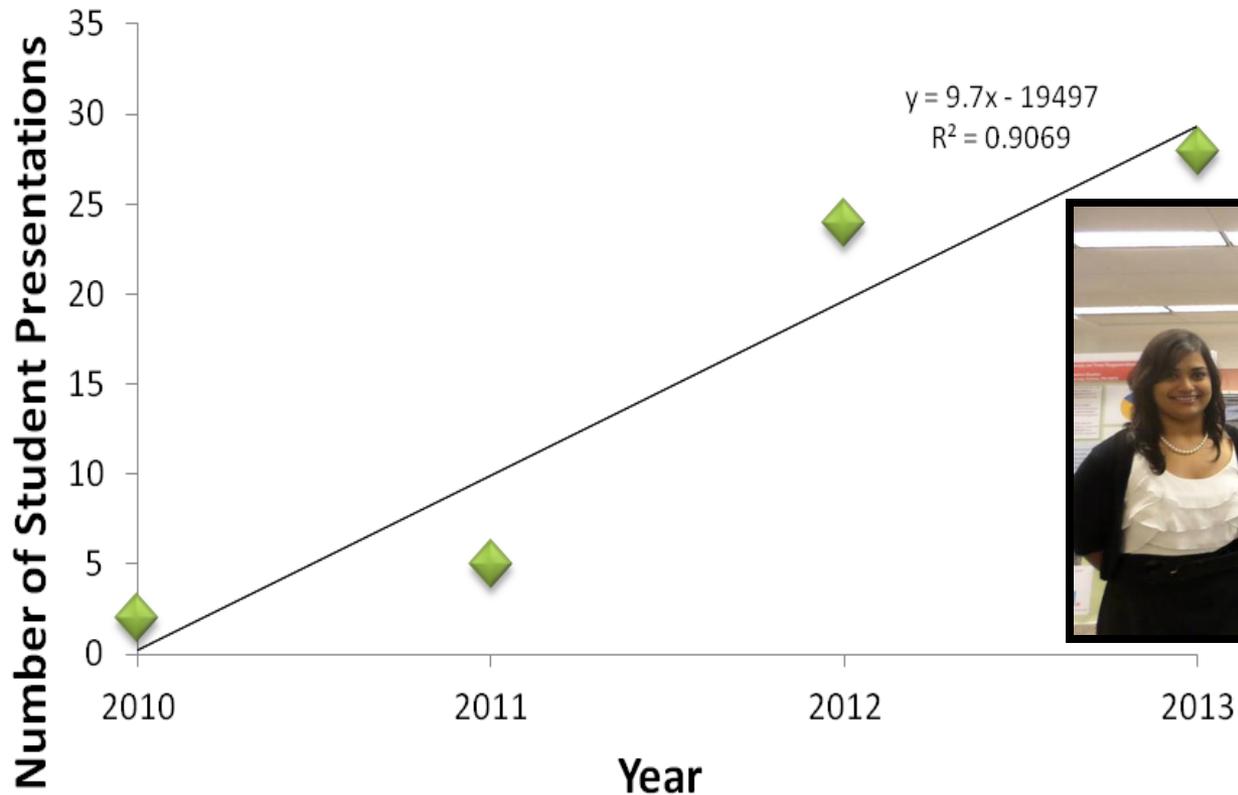
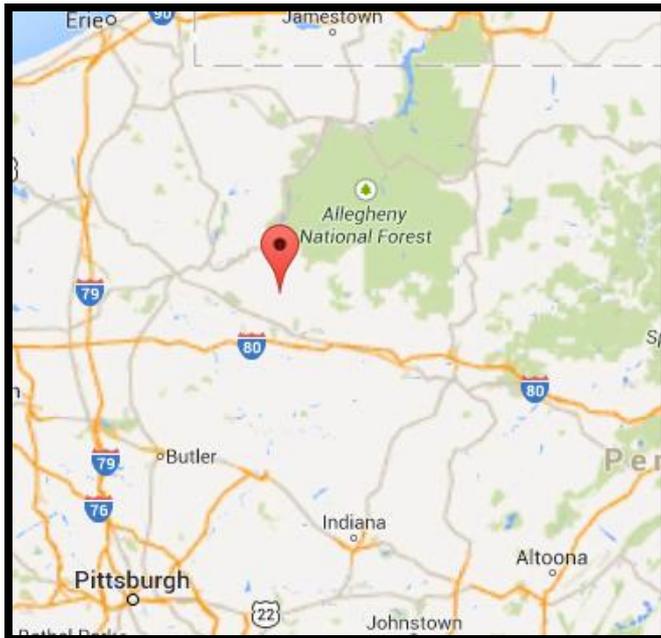


Figure 2. The number of student presentations, including both oral and poster, has increased from two in 2010 to 28 in 2013. We expect this number to increase to 39 in 2014 and 68 in 2017.



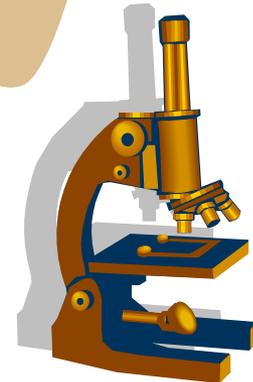
# Future Work

- Donated property
  - 70 acres + farmhouse near Marble in Clarion County, PA
  - Farmhouse to act as a field station



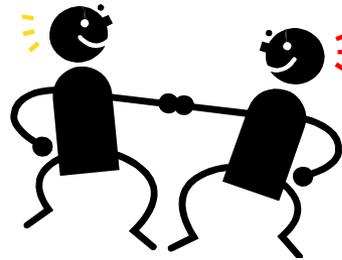
# Learning by Action

- Complete wildlife and vegetation surveys for the area
- Design and execute management plans
- Experimental studies



# Stepping Outside the Box

- Collaborations



- What can you do for **others** as well as yourself?

- Funding



Jamaica-gleaner.com

- Interaction is crucial
- Long-term, non-typical funding



# Acknowledgements



# Questions?



**Alysha Cypher**  
**[contact@conservationstudies.org](mailto:contact@conservationstudies.org)**

**Website:**  
**[Conservationstudies.org](http://Conservationstudies.org)**





# Engagement and Partnerships: Advancing Conservation in Minnesota

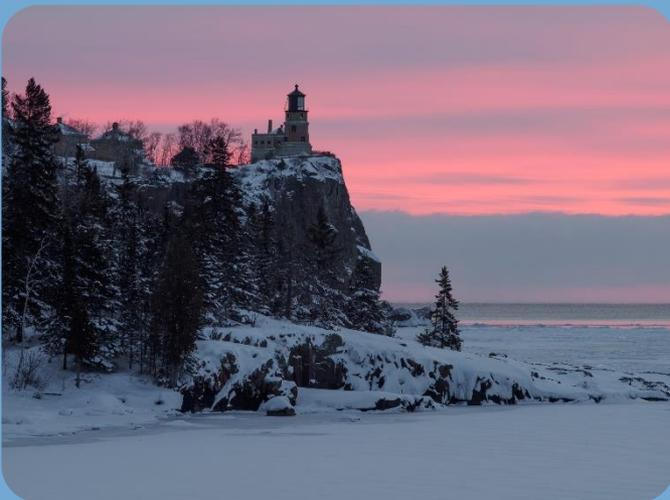
**Minnesota Chapter for the Society for Conservation Biology**

**Kelly Nail and K. Sami Nichols**

**14 July 2014 - NACCB – Missoula, MT**

# Overview

- ❖ Introduction to the Minnesota Chapter
- ❖ How do we engage?
- ❖ Successes
- ❖ Areas for improvement and future plans

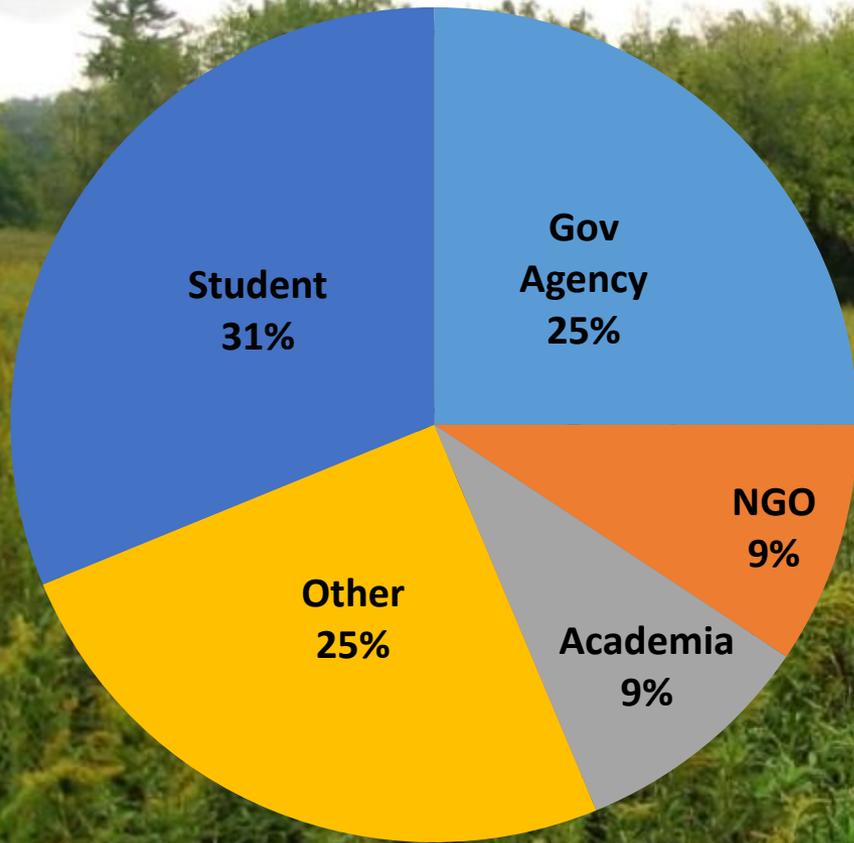


# Minnesota Chapter History

- ❖ Originally founded in 1994 by U of MN conservation biology grad students
- ❖ Dormant until 2003, when we incorporated students, researchers, and agency/NGO practitioners



# Minnesota Chapter *(f. 1994)*



*Connecting Minnesota's conservation science community*

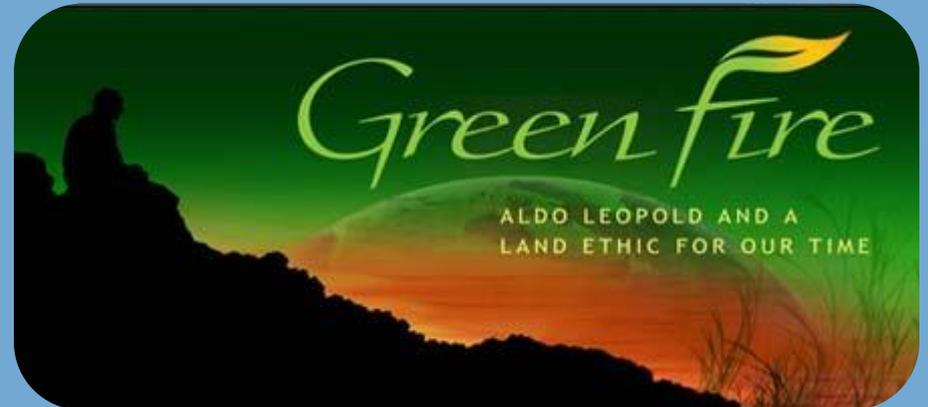
*Advancing conservation science and its impact on our conservation legacy*

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# Chapter Engagement

## AUDUBON AND THE ART OF BIRDS



[www.bellmuseum.org](http://www.bellmuseum.org)

**BELL MUSEUM**  
OF NATURAL HISTORY  
UNIVERSITY OF MINNESOTA  
Driven to Discover™

Photo from [aldoleopold.org](http://aldoleopold.org)

Website: [sites.google.com/site/minnesotascb](https://sites.google.com/site/minnesotascb)

**Minnesota Chapter  
of the Society for  
Conservation  
Biology**

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**Get Involved**

Become a member  
of MNSCB and  
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*Connecting Minnesota's conservation science community  
Advancing conservation science and its impact on our  
conservation legacy*



**Recent Announcements**

**NACCB 2014** Kelly Nail (Outgoing Chapter President) and Sami Nichols (Past Chapter President) will be speaking at this year's North American Congress for Conservation Biology. The Congress is in beautiful Missoula ...  
Posted 4 hours ago by MN Society for Conservation Biology chapter

**Give your input!** LESSARD-SAMS Outdoor Heritage Council Invites Public Input to the Outdoor Heritage Fund Call for Funding Request and Funding Priorities -- Read the draft Call for Funding Request and find out ...  
Posted Jan 27, 2014, 5:55 AM by MN Society for Conservation Biology chapter

# Newsletters



## Our Mission

The Minnesota SCB chapter seeks to bring together the diverse conservation endeavors of resource managers, educators, government and private conservation workers, and students.

Our statewide scale unites the common social, economic, political, and environmental concerns of Minnesota.

Connecting Minnesota's conservation science community

Advancing conservation science and its impact on our conservation legacy

## Call for Board Members:

Board Member nominations sought for several positions.

Nominate someone or apply yourself. Make a difference in Minnesota Conservation!

More information – page 4

## Inside this issue

- Conservation Volunteer Activities .....
- The Evolution of Technonaturalists .....
- Call for New Board Members .....
- Information Technology Volunteer Intern Wanted .....
- Membership Form .....

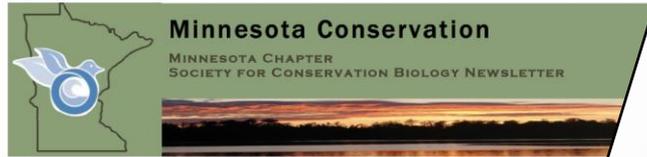
## 2014 MN SCB Chapter Annual Meeting



The 2014 MN SCB Annual Meeting was held at the Minnesota Zoo on Saturday, April 19<sup>th</sup>. The meeting was opened by Mr. Lee Ehmke, MN Zoo (MN Zoo) Director and CEO. Ehmke talked briefly about the evolution of the MN Zoo's role in conservation and the need for conservation efforts.

The first morning plenary speaker Rich Baker, Endangered Species Coordinator for the Minnesota Department of Natural Resources talked about the "Role of Endangered Species in 21<sup>st</sup> Century Conservation." Mr. Baker emphasized the importance of temporal scales in conservation planning, cautioning against the use of categories (example, "Endangered") as black and white pictures of natural conservation.

Dr. Tara Harris, MN Zoo Conservation, delivered the plenary talk. Dr. Harris emphasized the importance of using partnerships to meet the scale of conservation needs. Harris, in general, are playing a role that the MN Zoo is playing in wildlife conservation.



<https://sites.google.com/site/minnesotascb/about-us>

Fall 2014

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## Inside this issue

- Updated MN Endangered Species List ..... 2
- Malardi WMA Shallow Lake draw-down ... 3
- St. Louis County Wetland Mitigation ..... 4

## Members Visit Behind-the-Scenes at MN Zoo

By Mary A. Williams, Research Associate, University of Minnesota



On Wednesday, August 28<sup>th</sup>, members of the Minnesota Chapter of the Society for Conservation Biology got a behind-the-scenes visit with the conservation scientists at the Minnesota Zoo. The visit started with an overview of the MN Zoo's conservation programs presented by the MN Zoo's conservation scientists. Many of these programs are directed at conserving imperiled wildlife species in Minnesota.

Focusing on the prairie regions of Minnesota and the Dakotas, Dr. Erik Runquist described the MN Zoo's Prairie Butterfly Conservation Program, which was established in 2012. Dr. Runquist described how the MN Zoo is working to establish breeding populations of several imperiled prairie butterflies like the Poweshiek skipperling.

Dr. Nick McCann is partnering with stakeholders to research declines in moose



MN Zoo

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## Inside this issue

- MN SCB Members Visit the Bell Museum Audubon Exhibit ..... 2
- Member Spotlight ..... 3.5
- Green Energy gets legal boost in MN – Good or Bad for MN Conservation? ..... 4
- MN Conservation Blogs that you should check out! ..... 5
- Membership Form ..... 6



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2014 Volume 2 Issue 1

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## Climate Change Effects on Minnesota Fisheries

Fishing is an activity enjoyed by many Minnesotans. As a multi-billion dollar economic industry, it is also the bread and butter for many of our citizens. Climate change is now affecting this natural resource and the ecosystem services that it has been providing to our communities.

According to the Minneapolis Star Tribune, experts have determined that climate change threatens Minnesota's streams to popular walleye lakes such as Mille Lacs (1). This news release was in response to the 2013 release of a national study by the National Wildlife Federation (NWF) on the risks faced by freshwater fish to a warming climate (2).

In the Star Tribune report, Don Pereira, fisheries research and policy manager for the Minnesota Department of Natural Resources contributing to the decline of ciscoes, also known as tullibees or lake herring, and northern pike. Mr. Pereira cited research indicating that if carbon dioxide levels continue to rise, ciscoes



Walleye  
Photo Credit: Eric Engbretson/USFWS

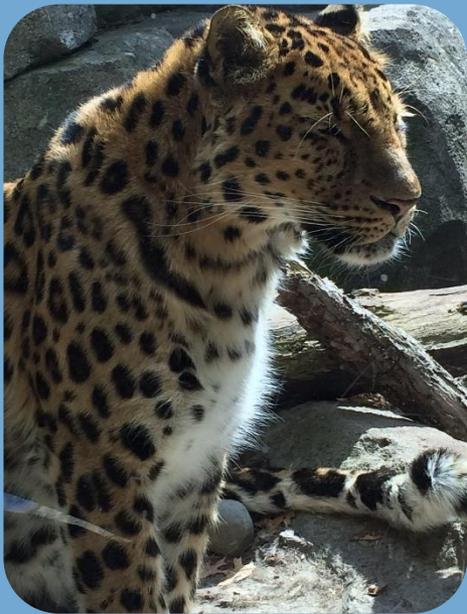
might survive in about 200 of those lakes, but only if they're kept clean. He cautioned that if climate change persists, cisco probably would not persist in Mille Lacs decades from now. Additional effects will be felt by fisheries systems around the

John Lenczewski, executive director of Trout Unlimited Minnesota, stated that for northern Minnesota trout streams, managing and protecting forests is a key component to their sustainability. Mature forests would slow spring snow melt and slow summer rainfall runoff for gradual water release into streams.

The NWF report also stated that since lakes are slower to freeze and quicker to thaw, ice fishing is also an affected fisheries resource.

Strategies proposed for stemming this effect include cutting carbon dioxide pollution, restoring forests

Fisheries continued on page 3...



# Annual Meeting

April 19<sup>th</sup>, 2014

“Endangered Species Paradigm and  
the Scale of Conservation”

Minnesota Zoo

# Minnesota Zoo Conservation Programs



Minnesota Zoo

Blue Whale  
11-555-5





## Collective impact



## Decline of wild South China tigers



## Methods



### *Study population*

- Amur, Sumatran, Malayan subspecies
- 495 recommendations from 1989-2011
  - Ages, locations, experience, management, litter survival, and inbreeding





# Successes

- Resiliency and strength through a broad member base
- Networking opportunities
- Dissemination of current MN research and topics of conservation concern



# Areas for improvement

- ❖ Recruiting and maintaining board members
- ❖ Reaching more members of the public



# Acknowledgements and Thanks

Thank you first and foremost to our past and current board members, chapter members, and annual meeting participants.



We are extremely grateful for the funding support we have to attend the NACCB.

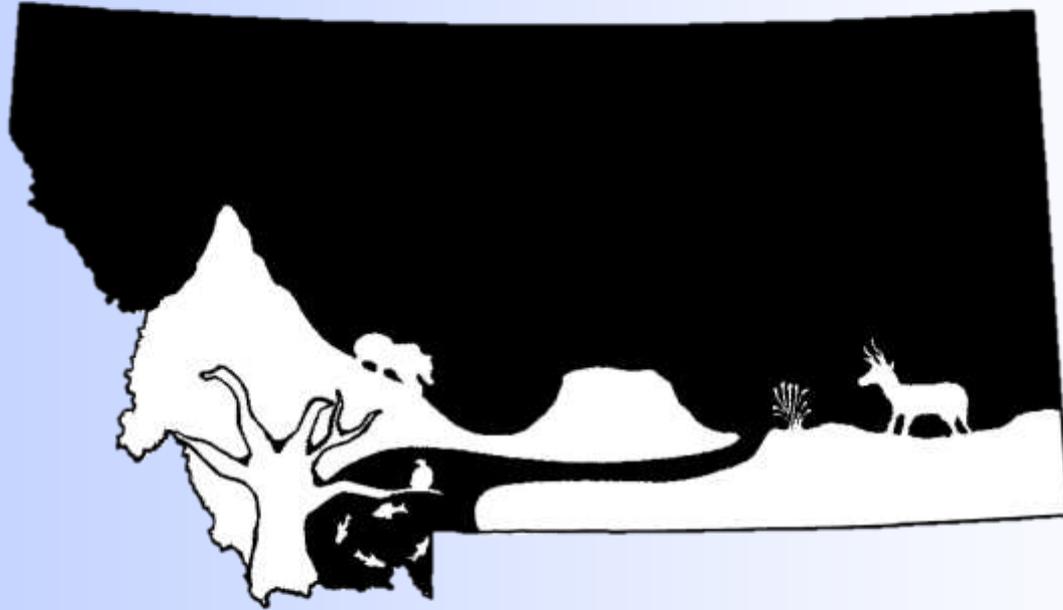
Photos are all taken by ourselves, members, or Flickr creative commons (@Michael, Michael from Minnesota, Joe D, Anita Ritenour, lisa nolan)





Questions?

# The Montana Chapter of SCB:



20 years of science, communication,  
and conservation

Founded in 1994 by students and faculty at UM

# Society for Conservation Biology

sanctions the

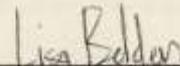
## Montana Chapter

as a local chapter on

June 11, 1994



*President, Society for Conservation Biology*



*Montana Chapter*

The Society for Conservation Biology is dedicated to developing the scientific and technical means for protecting, maintaining and restoring the life on this planet—its species, its ecological and evolutionary processes and its particular and total environment.

# Small chapter, large geographic area

Graduate student base

University focused



The University of Montana

# Mission Statement

To promote science and the application of the principles of conservation biology to Montana's local, regional, and statewide diversity



# A new chapter vision

## Science communication

- Designing an annual research symposium
- Expanding the reach of the chapter
- Providing networking opportunities for the conservation community

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- Engaging the public
  - Symposium participation
  - Film and speaker events
- Short course offerings for conservation biologists

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# Broadening chapter reach: symposia participants

British Columbia and Alberta

Idaho



# Broadening chapter reach: centers of chapter activity



# Broadening chapter reach: conservation community

- Composition of Chapter board: academic, federal, state, NGO
- Participants in chapter activities: academic, state, federal, NGO, public

# A new chapter vision

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## Education and outreach

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# Research symposia: Advertise plenary speakers to the public



# Research symposia: Media coverage

- Coverage in local papers
- Video/audio recordings of all plenaries

**Missoulian** 90° Clear Weekly Forecast

News Spc

Hot Topics Kids' m

Washington cov documentary

Home / News / Mon

## UM conservation biology symposium speaker urges accounting for pollution

Speaker: Private landowners in West hold key to saving wildlife

Recommend 39 Tweet 0

MSU researcher shares study on wolf stalking, elk populations at symposium

November 17, 2011 11:30 pm • By ROB CH

Michael Soulé used to believe America's j anymore.



Doug Smith's talk at the Museum of the Rockies

# Chapter events: Film and speaker events

- Advertising to the public
- Receptions for networking and discussion
- Off-campus locations



# Bottom line

- Broadening our reach and engaging the public has:
  - Brought diverse audiences to the same room
  - Facilitated conversation on local issues
  - Increased chapter visibility

# Bottom line

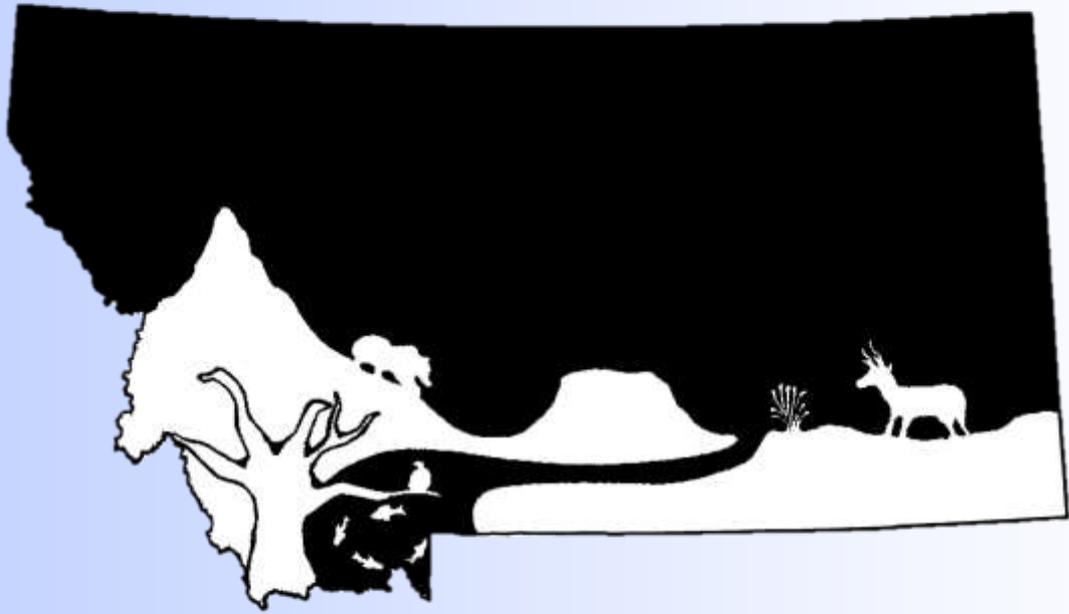
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# What has chapter engagement meant for me?

- Interaction with a larger network of conservation practitioners
- Informal opportunities to share what I do





# Bees & Trees & Activities:

SCB Humboldt's approach to  
engaging the public with science



**Bobby Shearer, President, HSU-SCB**  
**Robert@EndangeredEarth.org**



# SCB Humboldt

We are:

- Students (grad & undergrad)
- Professors (wildlife & biology)
- Practitioners (science & advocacy)

Where we live, work, & play:

Coastal dunes

Redwood rainforests

Coastal, Klamath, & Siskiyou Mtns.

Oak woodlands & meadows

Serpentine outcroppings

...Coolest place to be a naturalist!



# Basic Principles of Engagement

In every way possible, SCB-HSU events which engage the public with science shall be ...

## 1- Accessible

a - Physically

Plan ahead

b – Financially

Free or sliding scale

Sponsorships and grants

c - Mentally

All ages, all levels of scientific savvy

## 2 - Exciting

a - Engaging all senses with the stories of life

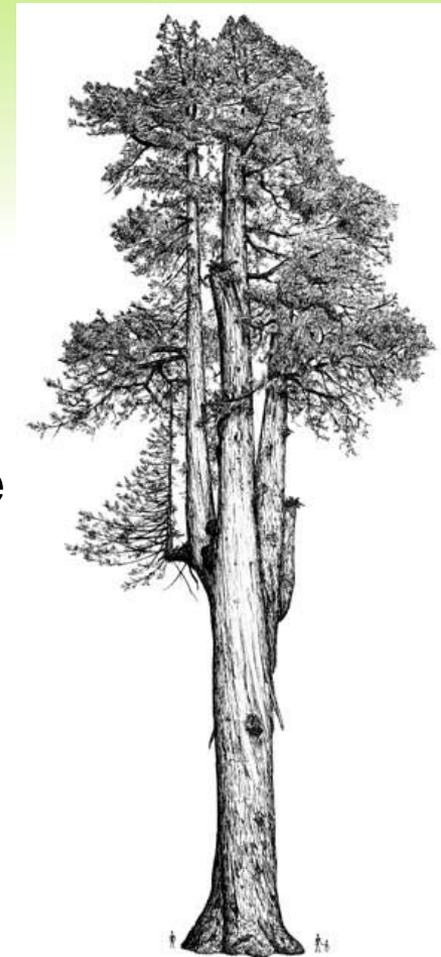
b - There's an explorer inside of all of us

## 3 - Personable

a - What's the community zeitgeist?

b - Relevance combined with understanding

c – Provide way to get involved



# Biodiversity Conference

- Presentations
  - Hands-on Exhibits
  - Interactive Demos
  - Guided Tours
  - Film Screenings
  - Panel Discussions
- 
- Free for All Ages
  - Filmed and Televised
  - 3 days every October



[www.Humboldt.edu/Biodiversity](http://www.Humboldt.edu/Biodiversity)

# Klamath Basin Water Rights & Dam Removal Forum



# Redwood Resiliency Workshop

Brings together tribal, private, state, and federal redwood forest land managers with climate scientists and forest ecologists, to discuss best practices in the face of a changing climate.



# Native Pollinator Initiative

- Open-source curricula for a presentation, half day short course, and workshop.
- Apicentric → bee biology, nesting and foraging requirements, life cycles, basic anatomy, etc.
- Easily adapted for various regions native flora and fauna, as well as for various audiences.



# "Planet Matters"

North Coast Young Democrats asked SCB-HSU (and others),  
“What are the 3 greatest environmental concerns of the region  
and some policy-based solutions???”



# Gray Wolf CESA Listing

- predator ecology teach-ins
- sign & costume making
- comment writing workshop
- rally and comments at Commission hearing

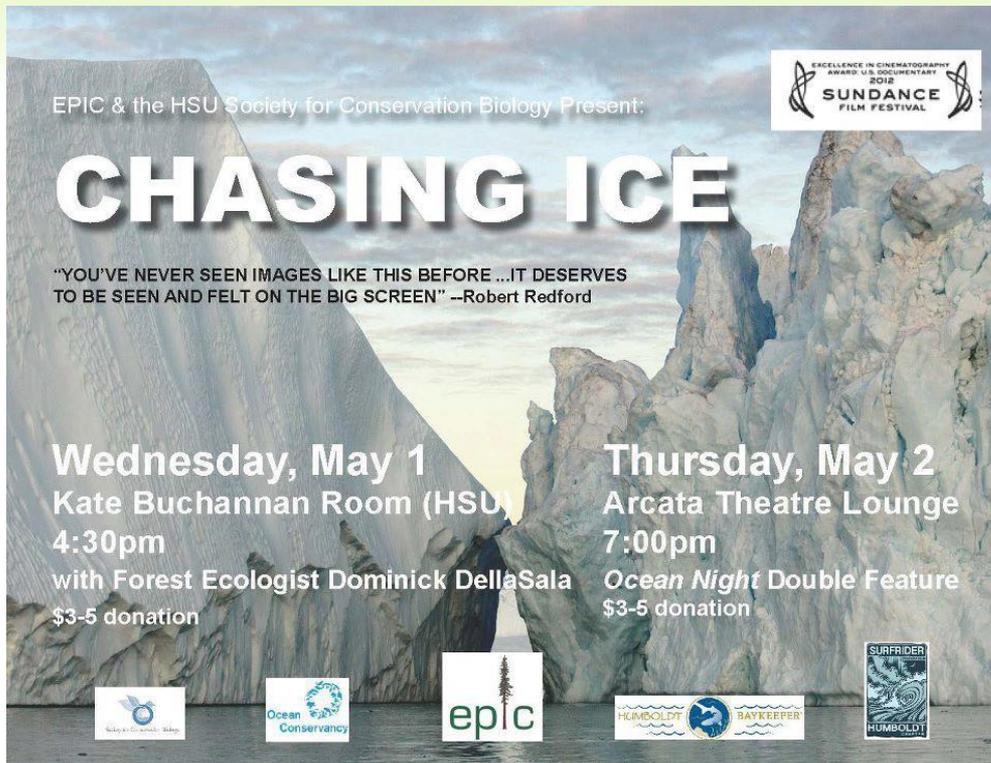


**Speak Up for the Future of California's Gray Wolves!** says "Journey," California's lone wolf



# Film Screenings / Guest Speakers

- Several / semester
- Usually partner with local organizations



EPIC & the HSU Society for Conservation Biology Present:

**CHASING ICE**

"YOU'VE NEVER SEEN IMAGES LIKE THIS BEFORE ...IT DESERVES TO BE SEEN AND FELT ON THE BIG SCREEN" --Robert Redford

**Wednesday, May 1**  
Kate Buchanan Room (HSU)  
4:30pm  
with Forest Ecologist Dominick DellaSala  
\$3-5 donation

**Thursday, May 2**  
Arcata Theatre Lounge  
7:00pm  
*Ocean Night Double Feature*  
\$3-5 donation

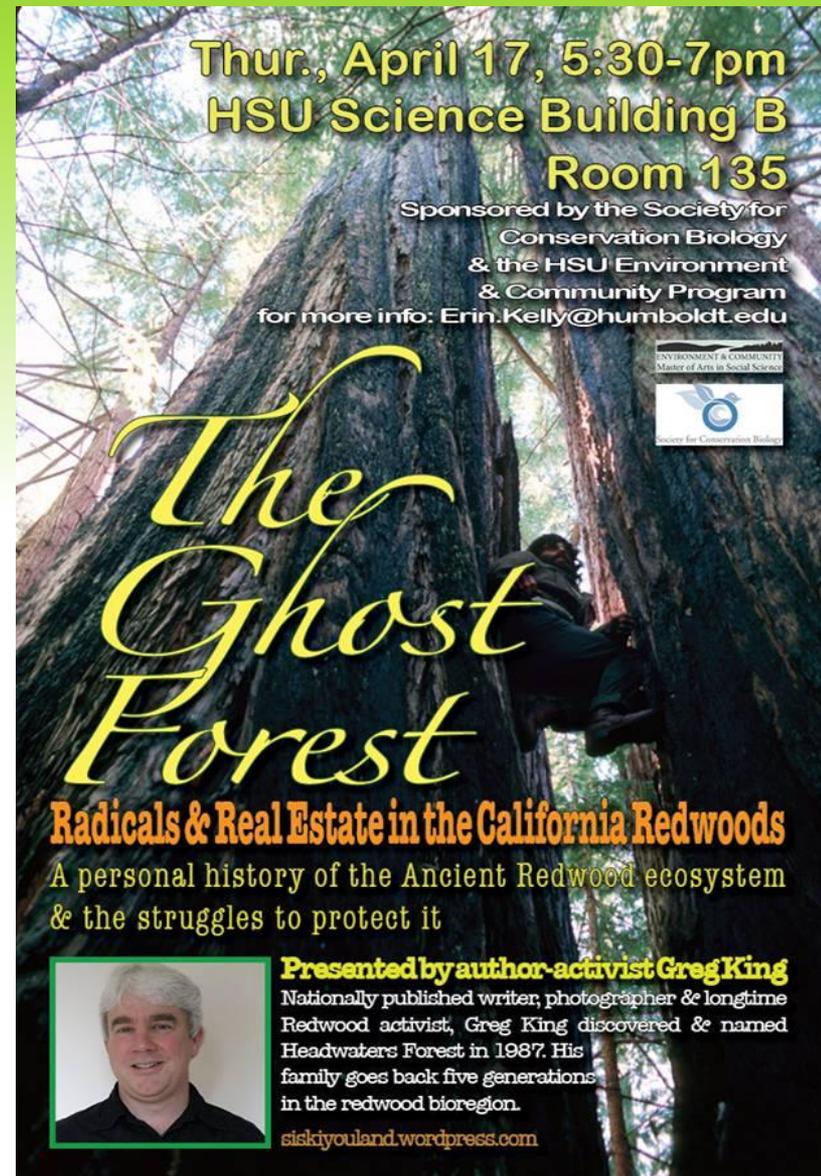
EXCELLENCE IN CINEMATOGRAPHY  
AWARDED U.S. DOCUMENTARY  
2012  
**SUNDANCE**  
FILM FESTIVAL

epic

Ocean Conservancy

HUMBOLDT BAYKEEPER

SURFRIDER HUMBOLDT



Thur., April 17, 5:30-7pm  
HSU Science Building B  
Room 135

Sponsored by the Society for  
Conservation Biology  
& the HSU Environment  
& Community Program  
for more info: [Erin.Kelly@humboldt.edu](mailto:Erin.Kelly@humboldt.edu)

ENVIRONMENT & COMMUNITY  
Master of Arts in Social Science

Society for Conservation Biology

*The  
Ghost  
Forest*

**Radicals & Real Estate in the California Redwoods**

A personal history of the Ancient Redwood ecosystem  
& the struggles to protect it

**Presented by author-activist Greg King**  
Nationally published writer, photographer & longtime  
Redwood activist, Greg King discovered & named  
Headwaters Forest in 1987. His  
family goes back five generations  
in the redwood bioregion.



[siskiyouland.wordpress.com](http://siskiyouland.wordpress.com)

- Follow the 3 basic principles:
  - Accessible
  - Exciting
  - Personable

In the end, we will conserve only what we love, we will love only what we understand, and we will understand only what we are taught.

Baba Dioum, Senegalese conservationist



**Bobby Shearer, President, HSU-SCB**

**Robert@EndangeredEarth.org**



## Topics covered in Discussion & Panel:

### Who are you connecting with? Who should SCB Chapters be connecting with?

- Active conservation practitioners
  - Might be difficult bc they don't see a direct link to SCB
  - Solutions:
    - move Chapter away from university setting or headquarters
    - nominate individuals (who are not on many other boards!)
    - move meetings off-campus
- Indigenous peoples
  - Find natural resource department reps in the local tribes (in the US)
- Internet public
  - tag individuals in facebook photos
  - find overlapping interest groups (e.g., nature photographers)
  - be consistent and frequent with posting on facebook and blogs

### How to sustain SCB Chapters and similar grassroots organizations

- Ensure many folks are leaders or have responsibilities (make them point contacts on parts of a project or an entire project)
- Give students official credit from university if possible/applicable
- Build relationships (takes time!)
- Build in longer-term leadership tenures (more than 1 year)
- Have a system that enables gradual upward movements within leadership structure and ensures that a past leader is still present (e.g., you can only be President if you've been Vice-President)
- Target/shepherd folks to develop into leaders

### How to engage different audiences

- Target young, new students
- Have outdoors & hands-on activities
- Have non-strictly-science events (e.g., poster design competitions)

### Suggestions for brand new Chapters

- Find captive audience in university classrooms (get professors to advertise briefly to classes)
- Go to other related groups (board meetings and general meetings)
- Always have a sign-up list and then send regular updates or newsletters
- Have a good, updated website
- Ensure there's a core group of motivated actors