



# Integrating Undergraduate Education, Stakeholder-driven Research, and Service through Ongoing Partnerships

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<sup>3</sup>National Park Service





Our program

Advantages and lessons learned

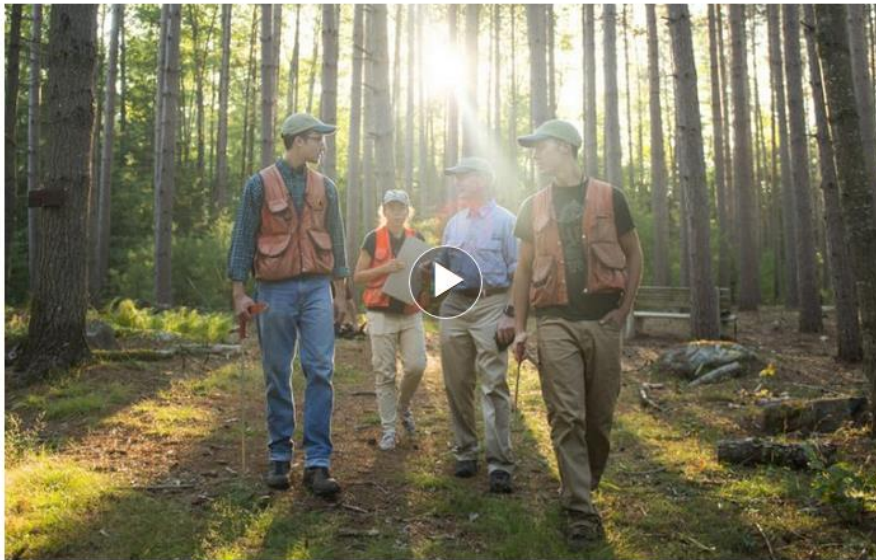
Challenges

# Who we are:



# Who we are:

## Featured videos



### Forestry and environmental sciences at UMaine

Research

A synopsis of the research, education and overall impact forestry and environmental science at the University of Maine have on the state and beyond.



Research UMaine Marine Sciences



Students: Penobscot float trip



Students: In the weeds

# Who we are:



# Two of our core classes consist of partnerships with NPS

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EES 217: Field Research Experience in Ecology and Environmental Sciences

EES 489: Critical Issues in Ecology and Environmental Science Policy

# Two of our core classes consist of partnerships with NPS

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EES 217: Field Research Experience in Ecology and Environmental Sciences

- Required, sophomores and juniors

EES 489: Critical Issues in Ecology and Environmental Science Policy

# Two of our core classes consist of partnerships with NPS

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EES 217: Field Research Experience in Ecology and Environmental Sciences

- Required, sophomores and juniors

EES 489: Critical Issues in Ecology and Environmental Science Policy

- Required, senior capstone



# EES 217 (field course)

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- 2-3 days in Acadia National Park, 0-2 cr.
- Course goals:
  - Getting their hands dirty in the field
  - Experience with research
  - Cohort-building
- Inspired by the Canon Scholars Program



# EES 217 (field course)

- Inspired by the Canon Scholars Program



Sarah Nelson



# Follow-up writing assignments:


- Technical summary for permit report
- Blog post  
([www.ees217.wordpress.com](http://www.ees217.wordpress.com))
- Social media post

 University of Maine Ecology and Environmental Sciences  
added 2 new photos.  
November 8, 2017 · 🌐

Dirt cheap or ecologically valuable? The costs of construction for organic soil

In the first of our blog posts from EES 217 students, the soils group describes how they estimated how the amount of stored carbon changed due to developments at Schoodic.

Read more on the blog: <https://ees217.wordpress.com/.../dirt-cheap-or-ecologically-.../>



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Google Earth



# EES 489 (capstone)

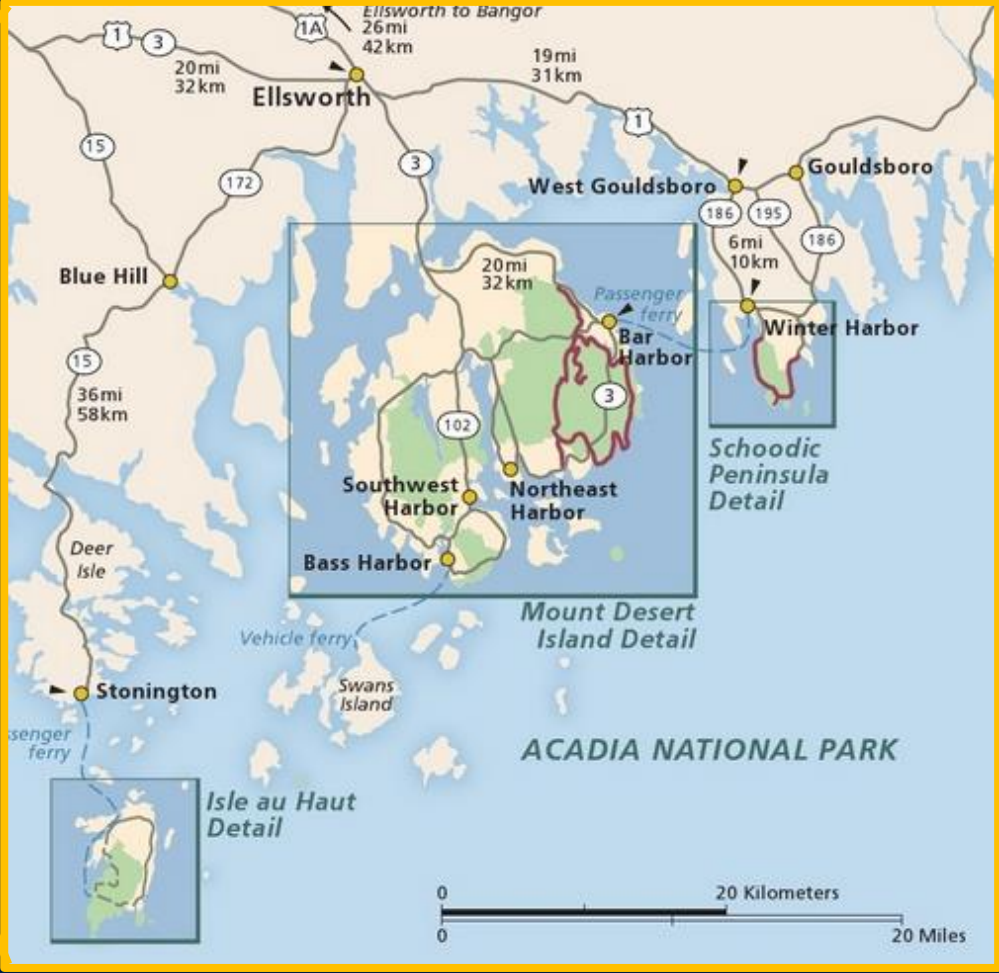
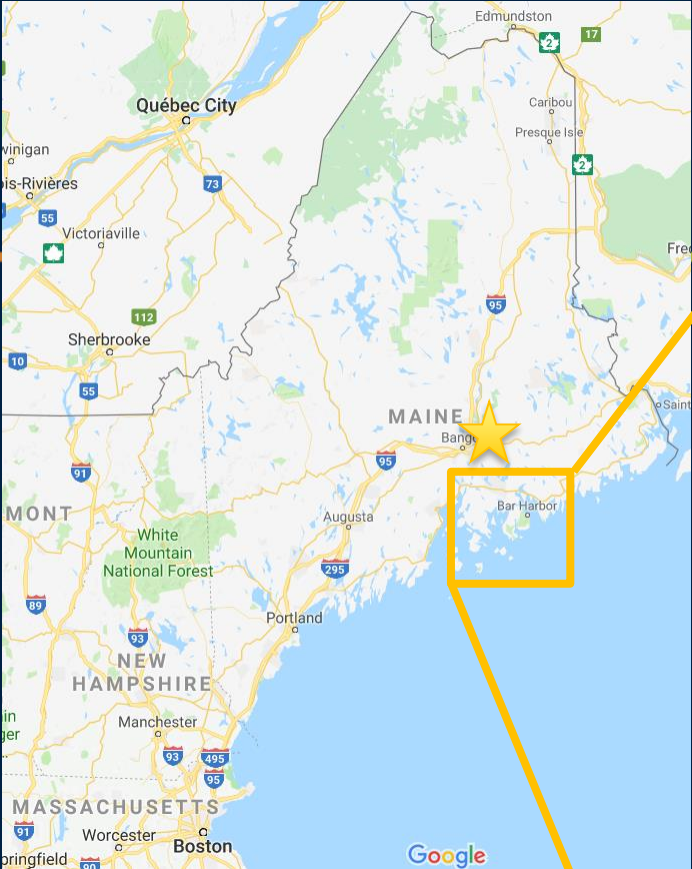


- Semester long, 4 cr.
- Students work individually and in teams to conduct literature reviews
- Interview stakeholders, e.g., NPS and state employees
- Culminates in a written research report and presentation to stakeholders

# Advantages

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# A national park in our backyard!





# Advantages

BDN BANGOR

Motor  
City

28°F A Few Clouds

March 16, 2018

[Latest News](#) | [Poll Questions](#) | [School Walkouts](#) | [Down East Prison](#) | [The Cat](#)

Sharing [f](#) [t](#) [e](#) [m](#)

## Stephen King meets Bangor's other major celebrity



Courtesy Bangor Police Department | BDN

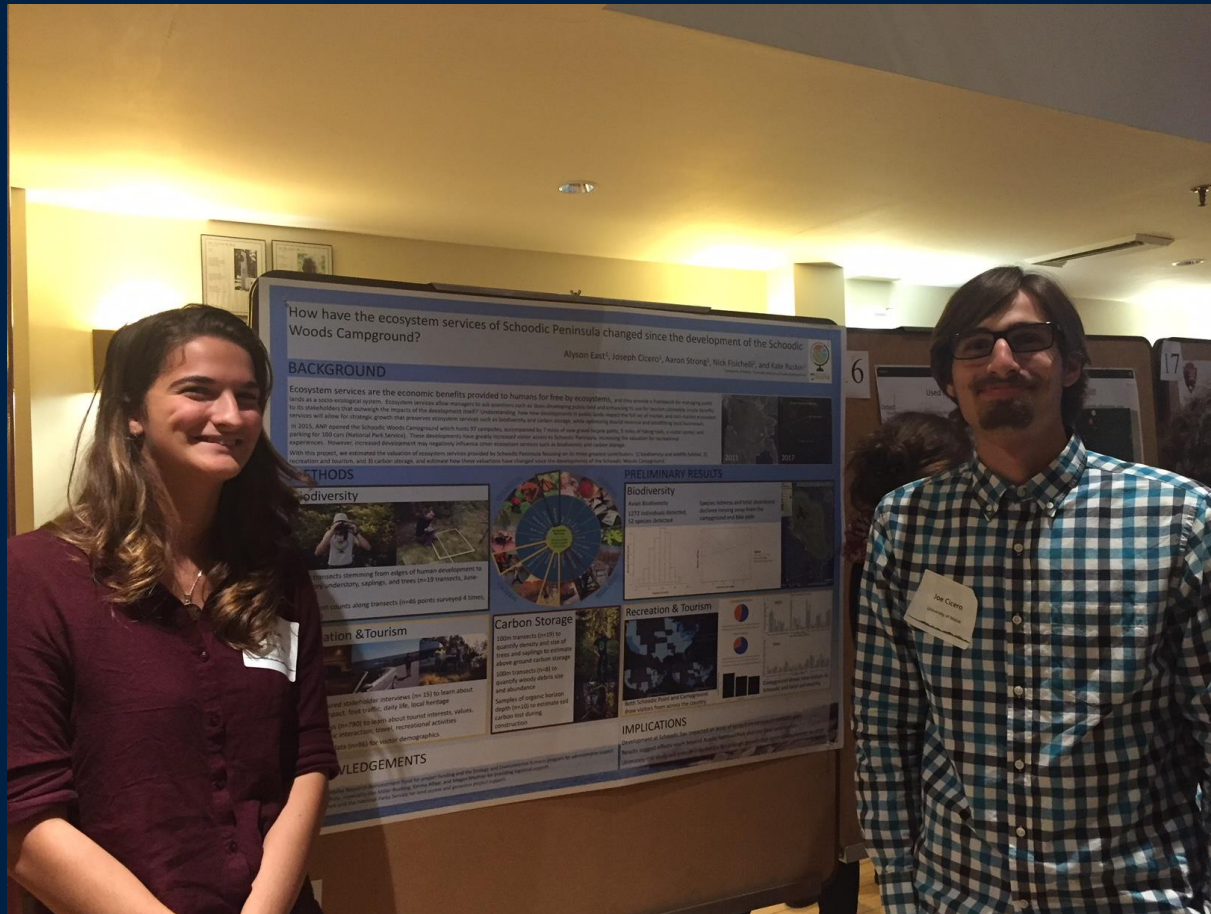
The Master of Horror meets the Duck of Justice.

By [Alex Acquisto](#), BDN Staff • September 8, 2017 9:00 am

Updated: September 8, 2017 9:04 pm

The King of Horror and the Duck of Justice are now chummy, and the proof is on the [Bangor Police Department's Facebook page](#).

# Advantages



# Advantages

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Stakeholder-driven research questions

# Advantages

## Stakeholder-driven research questions



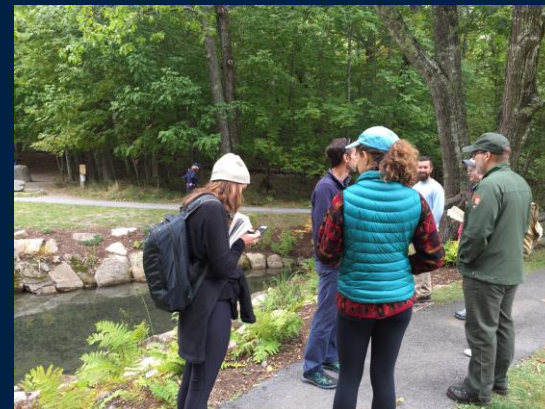
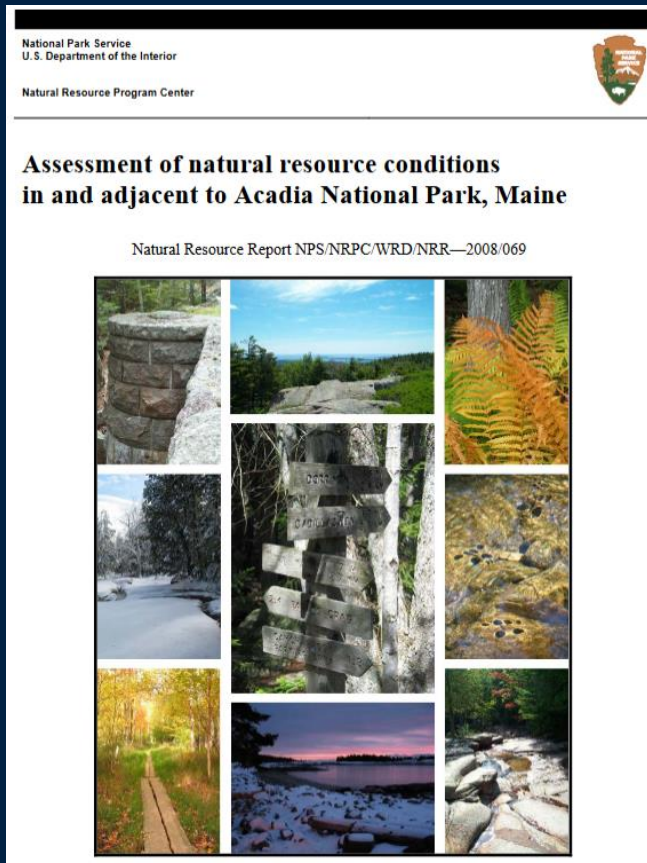
# Advantages

## Stakeholder-driven research questions



# Advantages

## Stakeholder-driven research questions



# Advantages

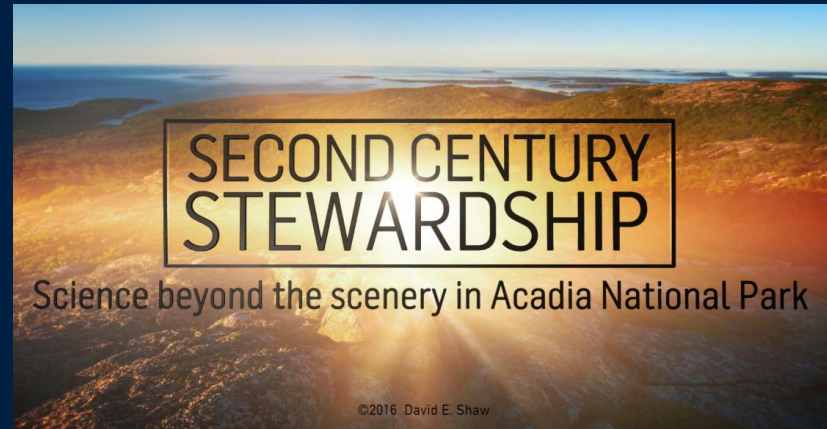
## Interdisciplinary research questions



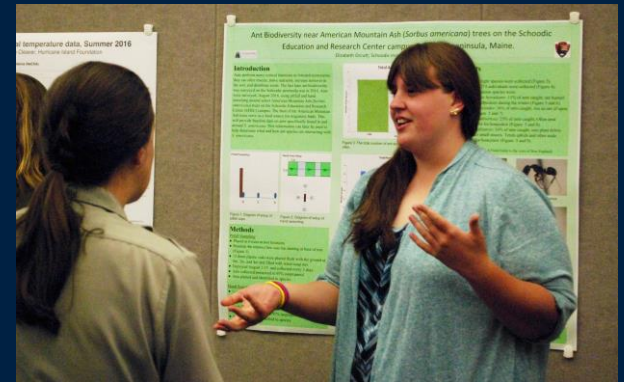
# Acadia National Park hosts a strong research program



Abe Miller-Rushing,  
Science Coordinator



Schoodic Institute at Acadia NP



Acadia Science  
Symposium



# Schoodic Institute at Acadia National Park

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Nick Fisichelli,  
Forest Ecology  
Director



Schoodic Institute at Acadia NP

# Support to integrate classes with active, funded research projects



Aaron  
Strong,  
Assistant  
Professor



<https://umaine.edu/news/blog/2017/10/20/undergraduate-students-spend-summer-schoodic-interdisciplinary-ecosystems-research>

# Challenges

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# Financial support

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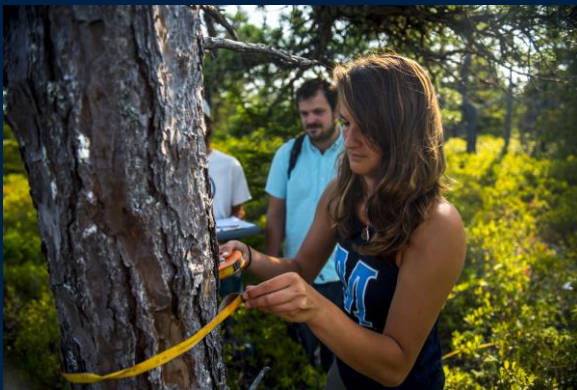
# Financial support

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## Undergraduate technicians:

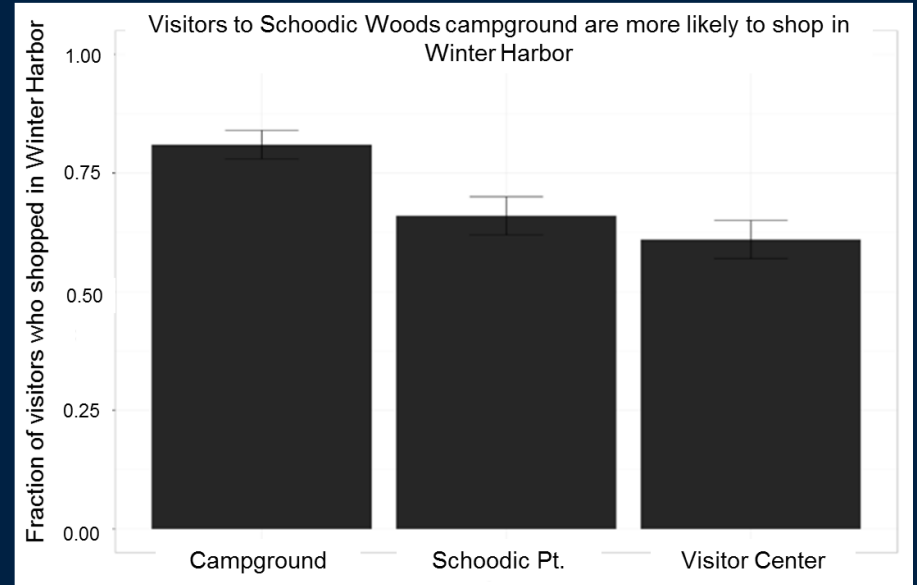
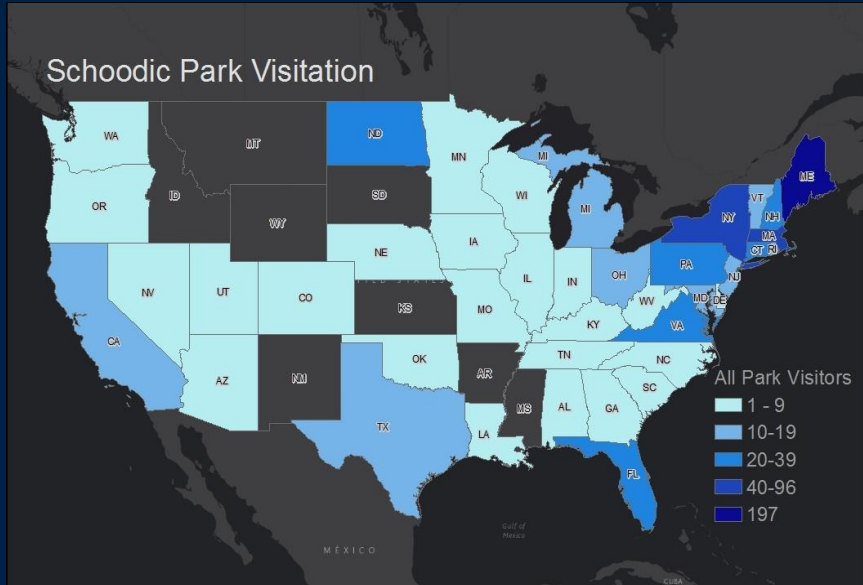
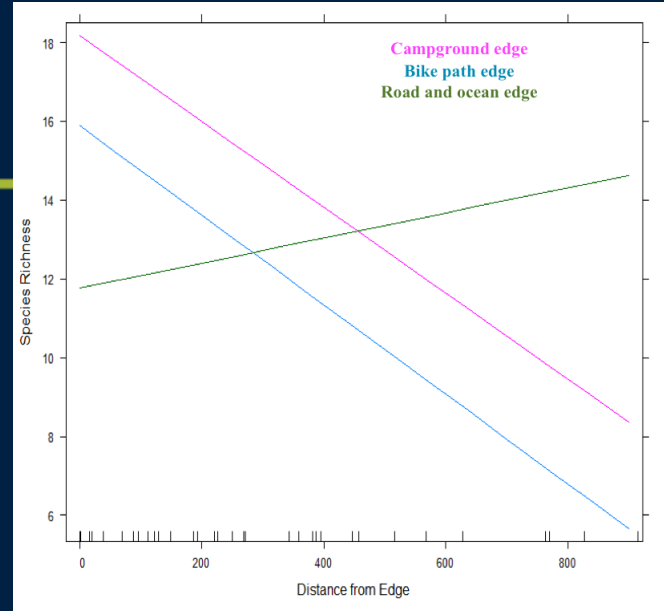
- 4 bird surveys of 46 locations
- 19 100m vegetation transects
- 735 visitor surveys
- 15 stakeholder interviews



## EES 217 students:

- 2 vegetation transects
- 65 visitor surveys
- 4 woody debris transects
- 10 soil samples

# Bird biodiversity



# Challenges



# Thank you to:

All of you!

The students of EES 217 and EES 489 for making these courses successful

The University of Maine Ecology and Environmental Sciences program for administrative and financial support, especially Sarah Nelson for creating EES 217 and Julie Eubanks for handling all administration.

The University of Maine Research Reinvestment Fund for project funding.

The Schoodic Institute, especially Nick Fisichelli for contributions to both the research and class, as well as Emma Albee and Megan Moshier for providing logistical support.

Acadia National Park and the National Park Service, especially Abe Miller-Rushing, for land access and project support.

Schoodic Ecosystem Services technicians and volunteers: Joe Cicero, Aly East, Matt Brewer, Julia Vieira, Emily Tomak, Abby Novak.



Questions?

