

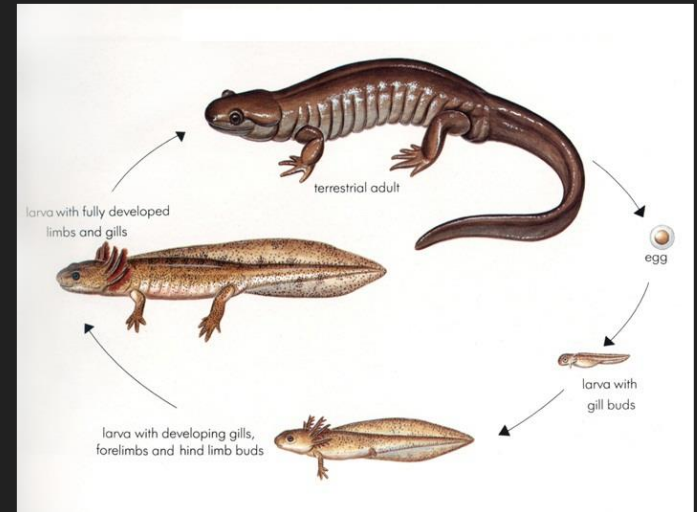
A photograph of a stream in a forest. The stream is filled with dark, wet rocks and has a large, weathered log lying across it. The water is dark and reflects the surrounding greenery. The background is filled with dense foliage and trees.

# Microhabitat preference of Stream Salamanders

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# Introduction

- stream salamanders are an indicator species
- whether or not a stream is suitable (healthy enough)
- the skin of a salamander is very permeable
- stream importance
- life cycle
- diet/predators



# Objective

- To understand habitat preferences of stream salamanders and water quality characteristics.



Griffin Swamp Stream

Shadow/Vernay Stream



Bailey Brook

# Data Collection and Methods

- Testing different variables (in transects) in the salamander's habitat:
  - Measuring out transects at each stream, 10 meters apart
  - salamander presence/absence (species)
  - macroinvertebrates presence/absence (species)
  - rock presence/absence and size (pebble, cobble, or boulder)
  - measuring water quality (pH and temperature)
  - stream width (meters)
  - stream depth (meters)



# Sampling sites



# Species found

Adult Northern two-lined salamander (*Eurycea bislineata*)



Juvenile Northern two-lined Salamander



<http://www.fcps.edu>



Eastern redbacked salamander

# Macroinvertebrates found



Slug Species

[bugguide.net](http://bugguide.net)



Mayfly Larvae (*Ephemeroptera*)

[www.warrenphotographic.co.uk](http://www.warrenphotographic.co.uk)



Dragonfly Nymph (*Anisoptera*)

Water Scorpion (*Ranatra*)

[www.whatsthatabug.com](http://www.whatsthatabug.com)

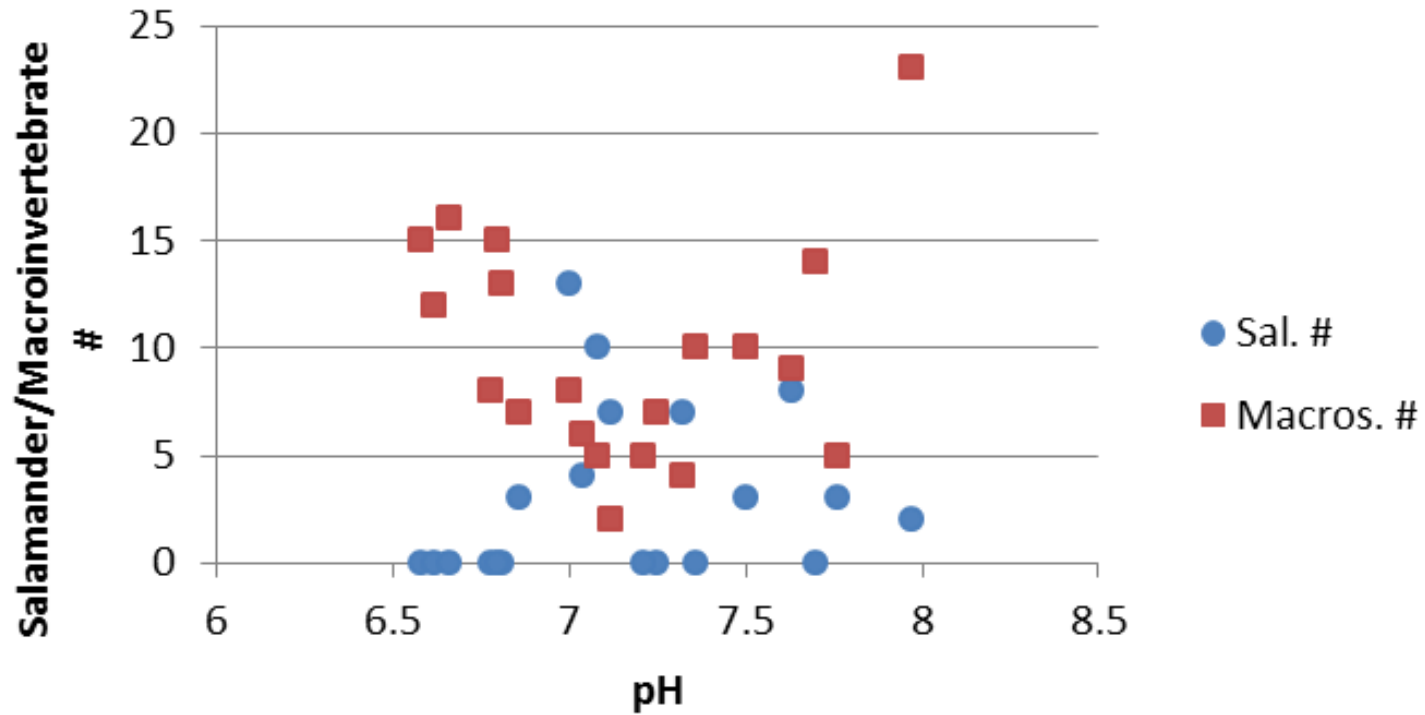


[www.troutnut.com](http://www.troutnut.com)

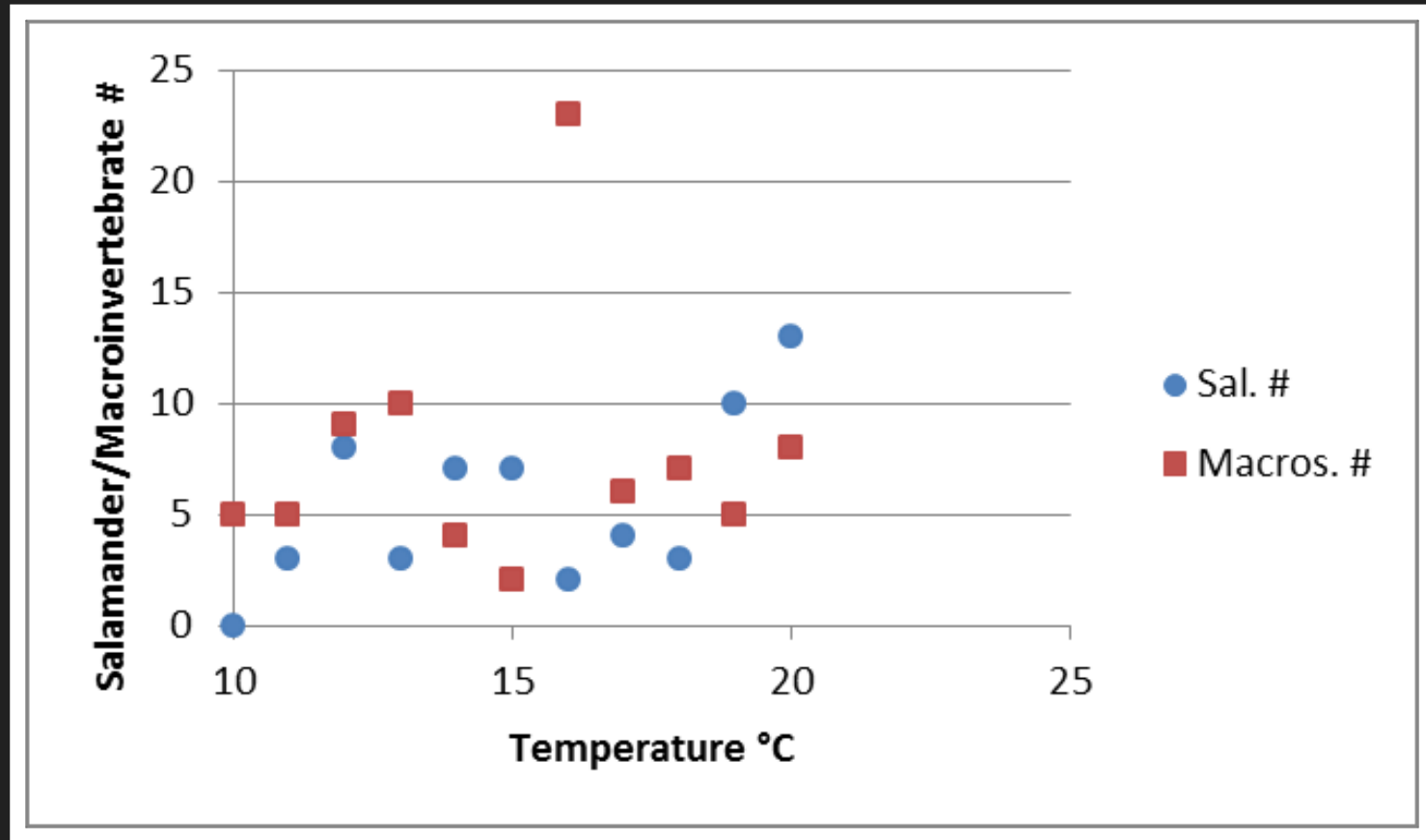


Backswimmer  
Beetle  
(*Notonectidae*)

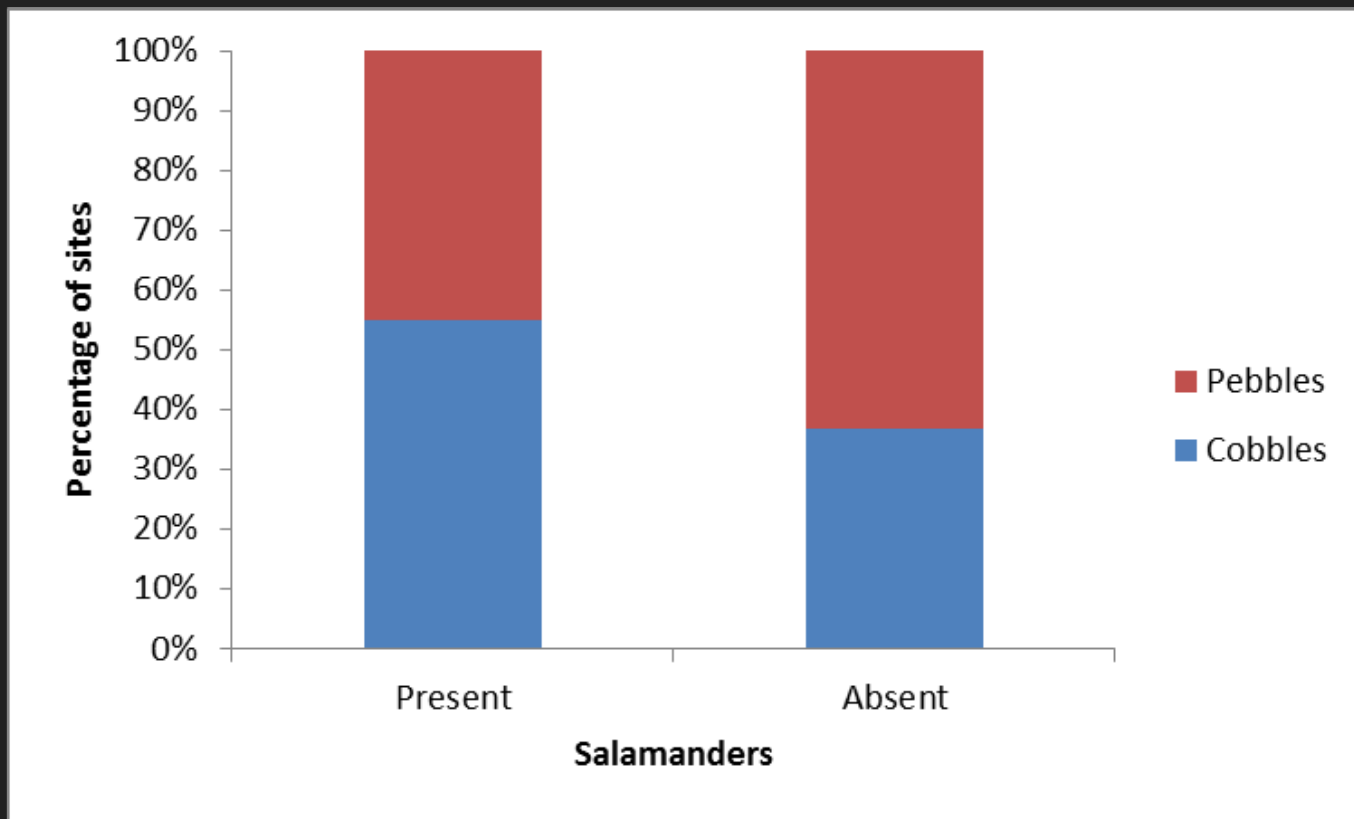
# Salamanders in relation to pH



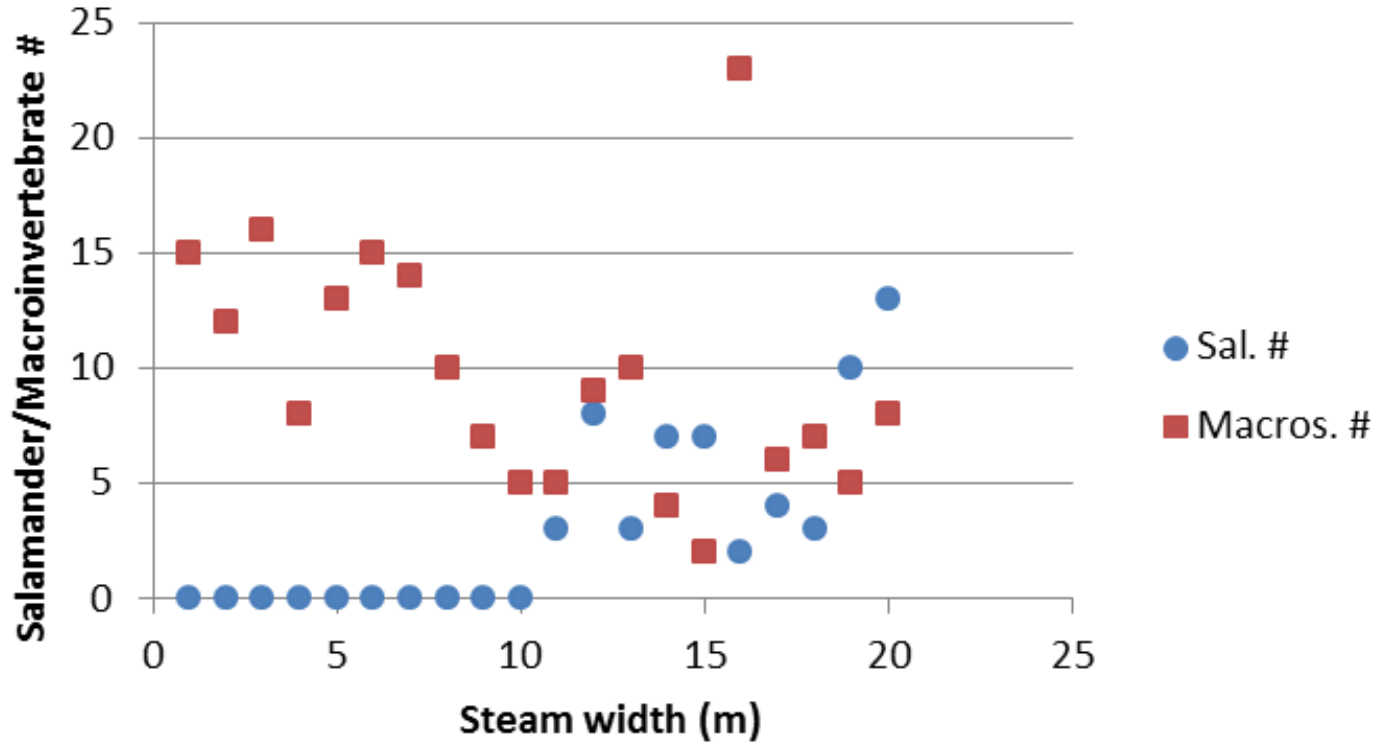
# Salamanders/macros. in relation to stream temperature



# Salamander presence with rock type



# Salamanders/macros. in relation to stream width



# Discussion

- no salamanders were present at Stream 1

- as pH stayed re

- as temperature

- slightly preferred



# Future Research

- test for conductivity
- test more streams
- add other amphibians into study
- look at disturbance regimes
- test iron levels in the streams

[biokids.umich.edu](http://biokids.umich.edu)



Marbled salamander



Northern Dusky salamander

[paherps.com](http://paherps.com)

# Acknowledgments

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