



*Rana catesbeiana*, or American bullfrog, tadpoles have been shown to experience accelerated growth rates in the presence of predator cues known as kairomones. Here we investigate the role of the visual component to predator cue responses in bullfrogs.



...and a form of 'eavesdropping' communication; they benefit (bullfrog tadpoles) and harm the emitter (sticklebacks) ...  
...likely indicate a food source or the existence of a predator

Tadpoles with a visual predator cue will grow more than

dy

e

4 day  
acclimation  
period

Add 1  
stickleback to  
each tank in  
the  
appropriate  
container  
(Figure 1)

Remove  
tadpoles from  
Visible and  
Invisible tanks;  
record end tail  
and body  
lengths (cm)

Maintain 3  
weeks,  
feeding  
sticklebacks in  
separate  
'Murder Tank'

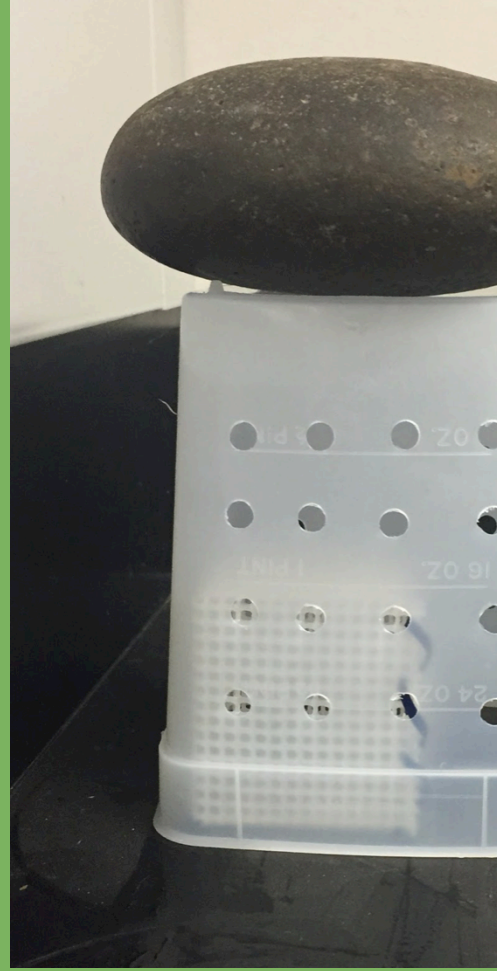
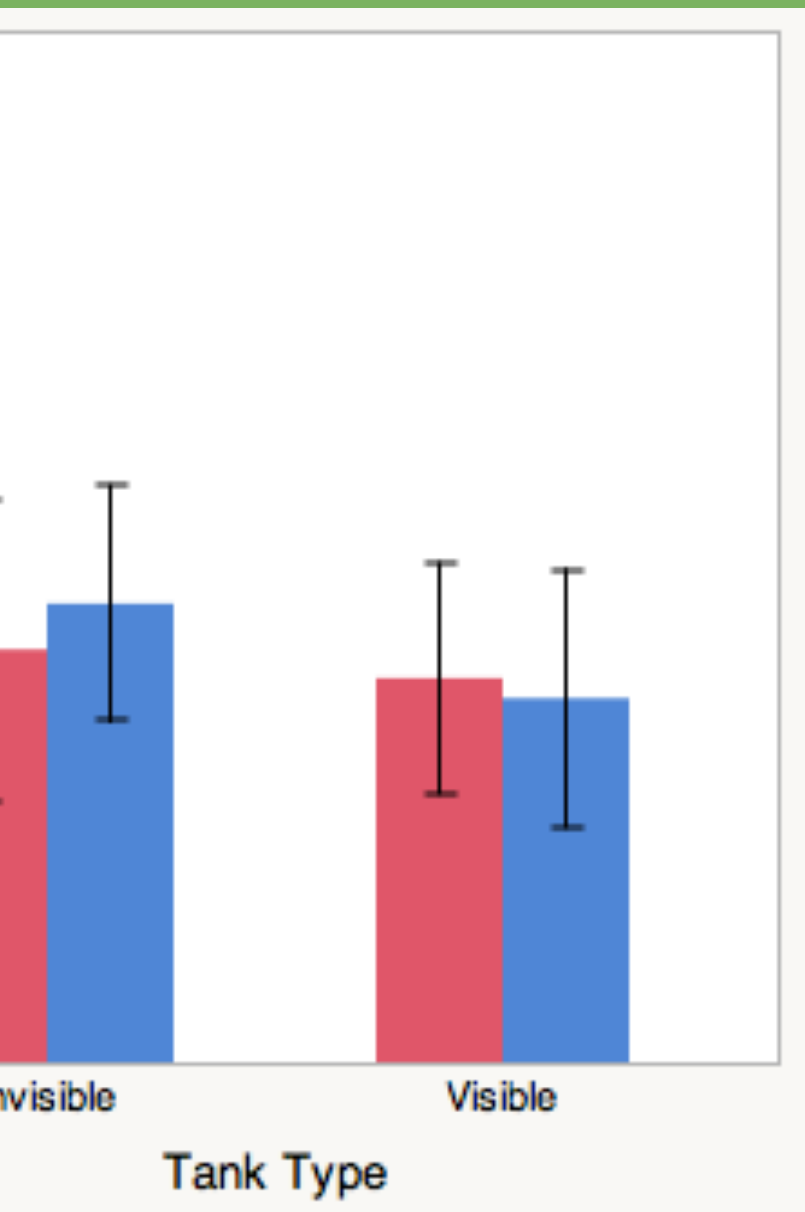


Figure 1: "I  
and 'Vis  
stickleback  
set



Average tail lengths of *R. catesbeiana* tadpoles (N=18) before (in red) and after (in blue) treatment.

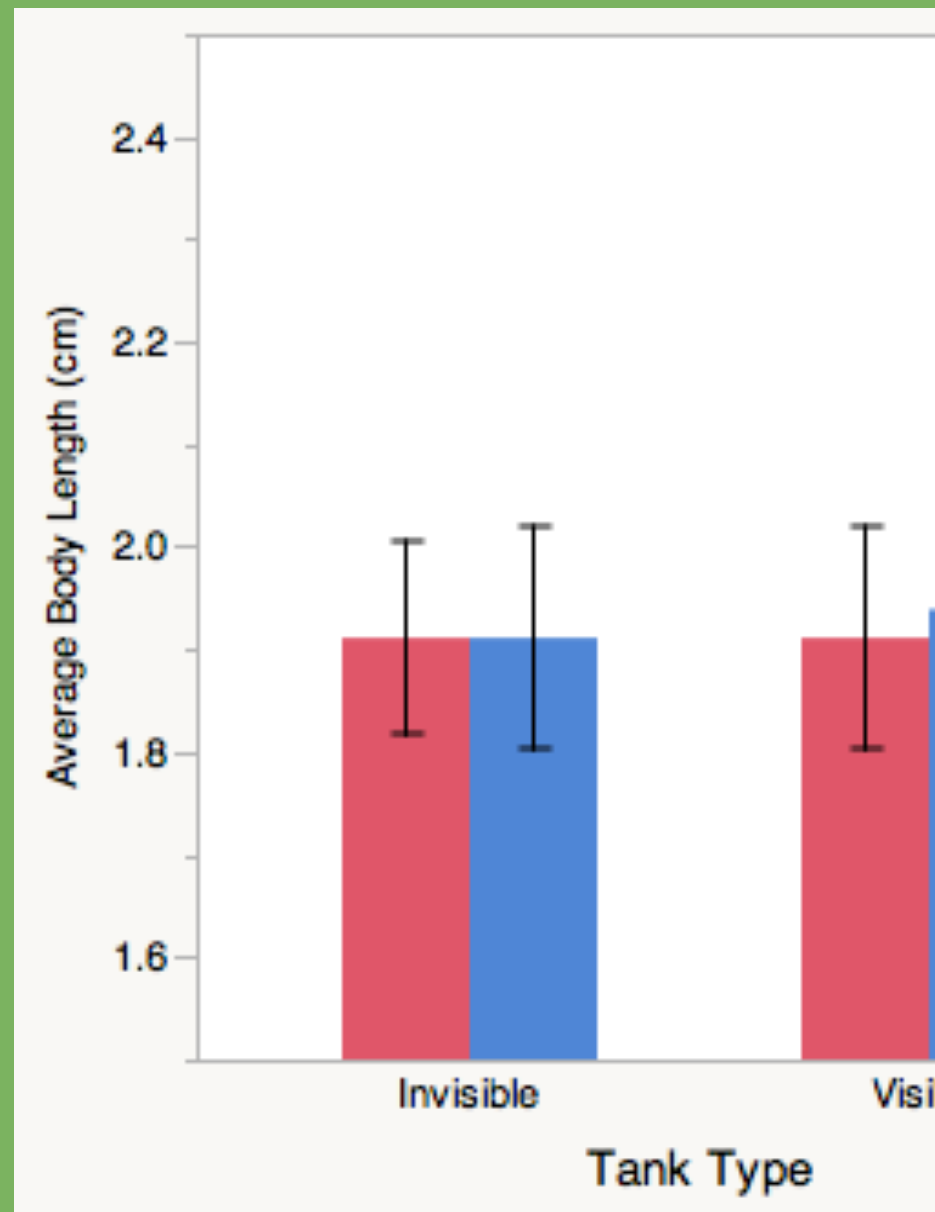


Figure 3: Average body length of *R. catesbeiana* tadpoles (N=18) before (in red) and after (in blue) treatment in each tank type.

# ence or absence of visual c duces varying prey defense

## actions:

ancement of a predator response; while upholding the 'Visible' and 'Invisible' segregat  
tanks

tial experimental flaws: run the experiment using a tadpole that matures more quickly,  
for a longer duration

variables; Measure respiration rates and tail depth of tadpoles

f litter so the water will be clear and tadpole activity levels could be measured

o that matched data pairs can be generated

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[bullfrogs/bullfrog-tadpoles/FAM\\_146550.pr](#)

[/armi/Guide\\_to\\_Tadpoles/species/rana\\_catesbeiana/rana\\_catesbeiana.html](#)

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## ments:

. Bio stockroom attendants Kristine Hayes and Greta Glover. Carey Booth and all of our Bio 342 cla