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Can Common Carp Removal Reduce Algal Bloom Intensity in Utah Lake?

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Big zooplankton may more efficiently **graze algae**, but **high carp levels** correlate with smaller plankton size

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My research story: From Romania to USU

I grew up in Timisoara, **Romania**, surrounded by very little nature, so **Animal Planet** served as my sanctuary. The various biologists featured on the channel inspired my desire to study ecology, which led me to research.

- Sophomore
- **Majors:** Fisheries and Wildlife
- **Minors:** Sociology and Criminal Justice
- **Certificate:** Law and Society
- Undergraduate Research Fellow, Honors Program, and Community Engaged Scholar

How carp affect Utah Lake's water quality

We were curious to find out how the size structure of **Utah Lake's zooplankton population** was responding to carp removal and how that might impact algal blooms. I used data collected by our lab to create a model examining how zooplankton size is changing in relation to carp biomass.

Can common carp removal reduce algal bloom intensity in Utah Lake?

Carp removal

decreases

Carp biomass

increases

Zooplankton size

decreases (?)

Algal bloom intensity

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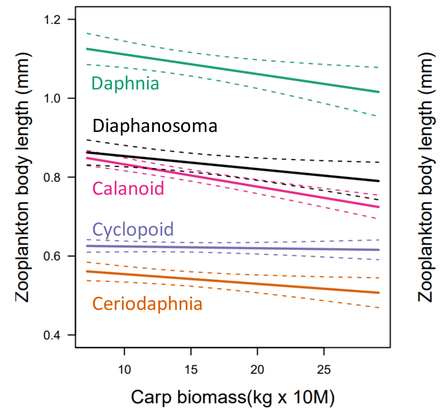
Removing carp could create a good chain reaction

- Every taxon examined decreases in size in response to higher carp biomass
- Results from regression were statistically significant for all but one taxon

Carp removal seems to be an effective strategy for increasing zooplankton body size. If larger zooplankton can more efficiently graze algae, we could **limit the impacts of harmful algal blooms.**



(a) Linear effect of carp biomass on zooplankton body size while accounting for the year and month effect.

Looking ahead

I'm excited to add on to this research project by discovering whether there's a relationship between **zooplankton size and algae grazing capabilities**. Results from this further research will allow us to predict whether carp removal has hope of reducing harmful algal bloom intensity through zooplankton size structure manipulation.