**Introduction**

* Write to a specific person - who is my target audience?
  + I want my thesis to be easily digestible by most of the general public. Because amphibians are facing danger due to anthropogenic disruptions including longleaf pine deforestation, it is important for all people to be aware of these issues. While this paper would benefit researchers and wildlife managers, I would like it to be easy enough to understand that anyone who has been outside and seen a frog in the Southeast can fully digest it.
* What do I want this paper to accomplish?
  + I hope that after reading my paper or hearing my speech, audience members walk away with a refreshed perspective on the status of *Rana capito* and actively consider how they can contribute to the conservation of not only these frogs, but wildlife in general. I want wildlife professionals to become more interested in captive-rearing programs and consider starting their own endeavors based on our model.
* **Conceptual**, systematic, or methods paper
  + Conceptual can be read by a broader audience

Amphibians are not only an important part of our natural ecosytems across the Southeast, but they also serve as bioindicators for the health of these dwindling landscapes. It is concerning when population numbers decline, as this reflects a decline in their habitat, but it is far more concerning when huge populations seem to vanish entirely. The Gopher frog, *Rana capito*, is one example of an amphibian that has faced population loss and fragmentation primarily due to the loss of longleaf pine ecosystems.

Tasks for next week:

One you like bc it is organized around a concept or idea, or how they introduce an issue in the introduction.

* Interesting to a wide audience, easy to understand, good structure
* Explores how biofilms function as complex microbial communities that cooperate and thrive in structured environments. These communities form on surfaces, protected by a self-produced matrix, and exhibit behaviors like communication, resource sharing, and resistance to threats. The study highlights biofilms' significance in natural ecosystems, human health, and industry, emphasizing their adaptability and resilience.
* <https://journals.asm.org/doi/full/10.1128/jb.182.10.2675-2679.2000> \*
* Used analogies to help a broader audience outside of the scientific community understand what they were saying; compared biofilm to a city

One that deals with your specific system. Importance reference about gopher frogs or amphibian aquaculture etc. Biology/natural history of organisms you are working on - captive breeding or frogs (any frogs).

* The article examines how prolonged captivity can increase behavioral variance among individuals in a population, which may affect the success of captive breeding and reintroduction programs. Variability in behavior, such as differences in foraging, predator avoidance, or social interactions, arises due to selective pressures in captivity that differ from the wild. This can lead to individuals less suited for survival in natural environments. The study highlights the importance of minimizing these behavioral changes by designing programs that replicate wild conditions and prioritize genetic and behavioral diversity to improve reintroduction success.

1. <https://www.sciencedirect.com/science/article/pii/S0006320703000958?casa_token=yDjwKUueQCwAAAAA:QVGTZ8em6spwiJ5XXnEDupfg_emv-o-qHSTnWoKrGxxDxY6JxLuJM0wk6mlHvRYqssah0fGdEeU>

One because you really like the way they explain the methods. Does not have to deal with your methods, but you like how they explain theirs. Experimental, report, etc.

* <https://onlinelibrary.wiley.com/doi/epdf/10.1002/%28SICI%291098-2361%281997%2916%3A6%3C461%3A%3AAID-ZOO1%3E3.0.CO%3B2-8?saml_referrer>
* Step-by-step approach with shorter, easy to digest sections
* Also included behavioral stats, so I thought it provided a cool framework to integrate different factors

Third task: download weather data

**Objectives**

This thesis aims to summarize the fifteen years of Gopher frog captive rearing data from the UGA gopher frog rearing program and to analyze how stocking densities and weather patterns affect interannual rearing success and the potential for outbreaks of disease or abnormalities. I will estimate random variation in rearing success related to clutch identity. This thesis will formalize the existing rearing protocol for dissemination and use by other amphibian captive-rearing programs. I aim to model the effects of temperature, humidity, rainfall, and stocking densities, on mass at metamorphosis, the time it takes to metamorphize, and disease and abnormalities. I expect development to be slower in cooler, rainier years because of the effects of temperature and light on algal production in aquaculture tanks. I also expect higher mortality in very hot years associated with reduced dissolved oxygen and stress-related outbreaks of disease or abnormalities. Years with moderate temperatures and humidity will likely produce frogs of the greatest mass. It is anticipated that disease outbreaks to be more numerous in tanks with higher stocking densities, and for masses to be higher in tanks with lower stocking densities.

* Dissolved O2 goes down, days to metamorphosis goes down
* Cold and cloudy goes down
* High temp dissolved o2 slows development, low temp temp itself slows development, intermediate years have best results
* Disease not carefully noted in earlier years? Time bias?
  + May remove this objective later on, but keep for now