



Northeast Partners in Amphibian and Reptile Conservation (NEPARC) Annual Meeting
Wesleyan University, Middletown, Connecticut
July 23-25, 2023

CALL FOR ABSTRACTS

The Northeast Partners in Amphibian and Reptile Conservation (NEPARC) is an active, diverse, and inclusive partnership dedicated to the conservation of amphibians and reptiles and their habitats throughout northeastern North America. Annual meetings are an ideal forum to share current research and conservation initiatives, participate in working group sessions, and network with like-minded herp enthusiasts in the Northeast.

Abstracts are invited for oral and poster presentations at the annual meeting of NEPARC to be held in-person July 23 to 25, 2023, at Wesleyan University in Middletown, Connecticut.

- Presentations are invited on all topics related to reptile and amphibian conservation.
- Presentations by students (undergraduate, graduate) are strongly encouraged.
- Oral presentations will be 15-20 minutes, which includes time for questions.
- Posters will be available for viewing and comment during the meeting to facilitate the sharing of ideas and interactions among attendees and presenters.

DEADLINE for submission of oral presentation abstracts is **April 30, 2023**.

DEADLINE for submission of poster abstracts is **June 16, 2023**.

HOW TO SUBMIT ABSTRACTS: Abstracts must be submitted by email to neparc.meeting@gmail.com with the subject line 'NEPARC 2023 Abstract'. Include the abstract as an attachment formatted in Microsoft Word (no pdfs); the attachment file name must be indicated with your last name and the type of presentation you would like to give (for example: 'Oxenrider_OralPresentation' or 'Oxenrider_Poster'). See Instructions for Preparing Abstracts (below) for formatting requirements.

STUDENTS!!! Three cash awards this year: best student oral presentation, best undergraduate poster, and best graduate poster. PLEASE note on your abstract submission that you are a student (include '_Undergrad' or '_Graduate' at the end of the file name (see below)), to be eligible for an award!

If you have questions as to whether your topic is relevant to the meeting, please contact: neparc.meeting@gmail.com

Instructions for Preparing Abstracts

Please read carefully and follow all directions.

- Abstracts should informatively summarize the contents of the oral or poster presentation and give important conclusions.
- Please specify what type of presentation you prefer: Oral Presentation or Poster. In parenthesis, indicate whether you WOULD or WOULD NOT be willing to present your talk as a 5-minute "lightning talk" if too many Oral Presentations are submitted.
- Titles must be less than 20 words. Capitalize only the first letter of each word.
- Text of abstracts must be less than 250 words in length.
- Use Times New Roman (12 point) for text and include only one space after periods. Italicize all scientific names.
- List senior author first and indicate the presenting author by following their name with an asterisk. List the authors as you would like them to appear in the printed abstract volume.
- Authors' names must be followed by their affiliated department name, organization name, address (city, state and zip code), and email. Multiple authors should be separated by semicolons.

Oral Presentation (WOULD NOT present this as a “lightning talk”)

TITLE: Environmental Factors and Individual Susceptibility Shape Ranavirus Epidemics in Experimental *Lithobates sylvaticus* Populations

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Abstract:

Epidemic frequency has increased in amphibians over the last century, potentially exacerbated by global environmental changes. We tested whether mechanisms known to alter susceptibility of individuals translate into population-level outcomes by exposing *Lithobates sylvaticus* tadpole populations to ranavirus in outdoor mesocosms. We manipulated temperature and salinity in 144 populations, introduced ranavirus-infected tadpoles into 96 populations early in development (Gosner stage 25), and observed 94 epidemics with an average mortality rate greater than 95%. In 12 populations, we introduced ranavirus-infected tadpoles late in development (Gosner stage 35) and tracked tadpoles by size cohort. We hypothesized that elevated temperatures would accelerate epidemic timing, and high salinity would increase epidemic magnitude. Surprisingly, we found no differences in the frequency or magnitude of epidemics among environmental treatments when populations were exposed early in development. Epidemics at Elevated Temperatures occurred 3–4 days before epidemics at Ambient Temperatures ($p < 0.001$) and had more individuals die on a single day than Ambient populations ($p < 0.001$). Low Salinity epidemics occurred 1–2 days after High Salinity epidemics in both temperature treatments ($p = 0.014$). Epidemic timing of late exposure populations was similar, with decreased epidemic magnitude in Elevated populations, as some large tadpoles accelerated development, metamorphosing prior to succumbing to disease. Our results contribute to our understanding of how shifting global environmental conditions may alter local epidemics, potentially limiting detection of die-off events by shortening the window of mortality and creating conditions where tadpoles could metamorphose with sub-lethal infections and spread ranavirus to naïve systems.