

ABSTRACT SUBMISSION GUIDELINES

ORAL presentation abstracts are due no later than **AUGUST 16th, 2019**.

POSTER abstracts are due no later than **SEPTEMBER 15th, 2019**.

There is a limited number of oral presentation slots. If your abstract is not selected for an oral presentation, we encourage you to present your work as a poster.

After submitting, you will receive a confirmation email within 24-48 hours. If you do not, please contact Jessica Meck at meckj@si.edu.

General Information

1. The abstract must be written in English.
2. Emailed abstract submissions are required.
3. All presenters must register for the symposium.
4. All accepted abstracts (oral and poster) will be published in the provided program book and on the symposium website.
5. Notification of acceptance will be made via email by September 13th, 2019.

Abstract Content

1. Abstracts should not exceed more than 350 words (excluding title and author information)
2. Title: Use **Bold FONT**, Capitalize Major Words, and align left.
3. Author Information: Full first and last name of primary author/presenter*, associated organization, address (city, state, zip), and email address. Followed by co-author(s) with their organizations and address separated by semi-colons. Do not bold or italicize any author information (refer to example).
4. The abstract should include a summary of your work (introduction, methods, results, and discussion). Do not indent.
5. Do not include figures, tables, literature cited, or acknowledgments.
6. At the bottom, please indicate if you are submitting for an oral or poster presentation.

Example abstract can be found below.

Please submit all abstracts to Jessica Meck (meckj@si.edu).

The Use of Environmental DNA for Detection of Freshwater Turtles: Lessons Learned from an Occupancy Study of the North American Wood Turtle (*Glyptemys insculpta*)

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The detection of environmental DNA (eDNA; defined as short DNA fragments released by an organism into the environment through skin, urine, feces, mucus, or dead cells) has been used to record the presence of many different types of organisms in several different aquatic environments. These include invertebrates, fish, amphibians, reptiles and mammals, both exotic and native species, in marine and freshwater environments, including rivers, streams and ponds. Although the basic technology has been around for 30 years, the new application appeared to be a silver bullet because it offered the promise of improving detection of rare, cryptic, and difficult-to-sample species while reducing sampling costs at the same time. However, the eDNA approach is subject to the same considerations that limit the interpretation of results from traditional survey techniques (e.g. detection variables, their interaction and magnitude and their relationship to occupancy), and because the technology is fairly new, most of these limitations are relatively unknown and poorly quantified. The wood turtle is a cryptic semi-aquatic species that is declining across its range and, like so many chelonian species, is in-need of a rapid and effective method for monitoring distribution and abundance. To meet this need, we used an eDNA approach to sample for wood turtle presence in northern Virginia streams. At the same time, we used repeat visual encounter surveys in an occupancy-modelling framework to validate our eDNA results and reveal the relationship of detection and occupancy for both methods. We sampled 56 streams of varying size within and beyond the known distribution of the wood turtle across northern Virginia. Wood turtle eDNA was recovered in as many as 86% of the samples from sites with confirmed presence. Our results suggest that eDNA technology holds promise for sampling aquatic chelonians in some systems, even when discharge is high and biomass is relatively low, when the approach is validated and sampling error is quantified. Results from this study will be presented, and the utility of eDNA for sampling aquatic chelonians will be discussed.

Presentation Type: Oral