

Office of Research, Impact and Postgraduate Studies

presents a **Postgraduate Seminar** titled

The Susceptibility of the Cascadu (*Hoplosternum littorale*) to Parasitic Disease in Trinidad

by **Ms Janelle St. Aime**

While cascadu (*Hoplosternum littorale*) is a popular food fish within the Trinidad and Tobago, the prevalence and incidence of disease on *H. littorale* is not well known. The health of many organisms are tied to their environmental conditions as well as their physiology. With *H. littorale*, most of this knowledge is based on the findings coming out of South America, and in particular Brazil, given that this species is heavily farmed. Even so, there is a paucity of information related to the types of disease agents and disease presentation for *H. littorale*. This may be due to the fact that this species is an armored catfish, making it more resistant to infection and infestation. However, parasitic organisms from Phyla Platyhelminthes (cestodes and trematodes) and Nematoda, as well as those within Protozoa (e.g. dinoflagellates) have been associated with *H. littorale*.

Within Trinidad and Tobago, even less is known about parasitic diseases. There is only one study on the topic, that focused on both hematological and gastrointestinal samples obtained from 20 individuals each from both a farmed and wild population. This study observed nematodes (15%), trematodes (30%), protozoa (30%) and fungi (30%), with wild populations being the most infected. However, the incidence and prevalence of such parasitic disease agents among farmed and wild populations throughout Trinidad and Tobago is still unknown.

This study focuses on a spatio-temporal investigation of parasitic diseases associated with *H. littorale*, with a focus on external (scales, eyes, gills) and gastrointestinal (mouth, stomach, intestines) infection sites. Two main types of disease agents, digeneans (e.g. *Magnivitellinum corvitellinum*) and dinoflagellates (*Piscinoodinium spp.*) have been found. Here we present the range of disease agents found thus far within 286 samples, with a preliminary overview of their distribution between farmed and wild populations. Additionally, correlations with age, gender, size, and season of *H. littorale* will be discussed.



Ms JANELLE ST. AIME has been engaged in the practice of veterinary medicine for the past nine years, graduating from the University of the West Indies, School of Veterinary Medicine in 2015. A wildlife enthusiast, encouraging the preservation of our natural fauna, her passion is the field of exotic animals and other wildlife in Trinidad and Tobago and the Caribbean at large.

Among her various ventures, she has volunteered her time at the Emperor Valley Zoo, as well as with the Wildlife Orphanage and Rehabilitation Centre, where protecting and treating injured and recovering animals are conducted. Her research aims to promote and determine avenues for non-domestic animal species and the human population to co-exist in a mutually safe, sustainable manner.

Janelle is also the Director of a house-call veterinary business for the last nine years, with experience in avian medicine for both exotic and commercial species such as poultry as well as livestock. She is currently pursuing her Doctor of Philosophy at The University of Trinidad and Tobago in the area of Marine Science to research *Hoplosternum littorale* commonly known as cascadu.

Friday 22nd November, 2024 at 10:30 a.m.

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