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## THE DETECTION AND PREVALENCE OF MICROSPORIDIA IN SHRIMP FROM THE SATILLA RIVER ESTUARY

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and Jessica Reichmuth

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# The Detection and Prevalence of Microsporidia in Shrimp from the Satilla River Estuary

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## ABSTRACT

Microsporidia are spore-forming obligate intracellular parasitic fungi that infect eukaryotic organisms. They are ubiquitous in nature and infections occur worldwide in terrestrial and aquatic hosts. Some species of Microsporidia have been shown to infect the hepatopancreas of shrimp, which may affect their ability to obtain nutrients, stunt their growth, and increase their susceptibility to additional diseases. Microsporidiosis in shrimp has been shown to negatively impact the commercial shrimp industry, resulting in great economic loss, specifically to the state of Georgia since this fishery is the largest and most lucrative. This study was conducted to evaluate the prevalence of Microsporidia in shrimp from the Satilla River Estuary in Georgia because of the man-made cuts that have altered water quality conditions, which could affect shrimp health specifically. Shrimp were caught at four collection sites using 6.1m (20ft) otter trawls and cast nets and were transported on ice back to the lab where they were frozen until dissection. Using bright-field light microscopy and a previously established staining technique, microsporidian spores were detected in hepatopancreas' extracts in greater than 30 percent of the shrimp analyzed.

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