

# **An analysis and evaluation of the Peacock Eel (*Macrognathus siamensis*) gastrointestinal contents from its invaded Florida range.** *by Suzanne Carlucci*

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As the rate of biological invasions increases in Florida, it is only through coordinated efforts to understand the potential implications of each invasion that we may effectively conserve our beautiful native ecosystems. Over the past two decades Asia's Peacock Eel (*Macrognathus siamensis*) has gradually moved into Everglades National Park through connected urban canals, likely introduced to the canals via pet trade. As of 2017, this species has now invaded the entirety of ENP, stretching from Tamiami Canal to Rookery Branch and Florida Bay. Despite their increasing presence in this UNESCO World Heritage site, we know very little about this species' interactions with Florida's native species. With this study we aim to shed some light on their possible relationships with other species by examining their gastrointestinal contents (GIC) throughout the spatial extent of their invaded range. Peacock Eels are invertivorous in their native habitat. We hypothesize that they may pose a threat to endangered invertebrates, such as the endemic Miami Cave Crayfish (*Procambarus milleri*), or could cause bottom up trophic perturbations if they are highly predatory. However, we currently have little evidence of interactions with native species in their GIC, or much in their GIC at all. The most prominent identifiable items were pollutants (e.g. myar). Although more work is required, these results suggest this species is unlikely to become an invasive pest in the near future. Future works should focus on their non-consumptive effects, such alterations to nutrient cycling by perturbing anoxic soils and Peacock Eels as prey for natives.