



Special Announcement: New Species of Wasp Found in Ellisville Marsh

Encarsia ellisvillea is a newly identified species of wasp recently found in Ellisville Marsh by Ellen Russell, former Friends' board member and lead scientist monitoring marsh vegetation and water quality. This tiny insect is not quite nano-scale in size and has a parasitic relationship with its host, *Haliaspis spartinae*, a fairly common insect living on salt marsh grass. *Haliaspis spartinae* (see figure), appears as clusters of small white fibrous deposits or "scales" (hence its common name – scale), on the upper surfaces of *Spartina alterniflora* leaves. It is related to some of the more common scale insects that are considered pests of fruit and ornamental trees. Found in infestation levels in marshes that experience hydraulic stress, it often coats the plants' lower leaves, blocking sunlight and sucking nutrients, and causing the plants' eventual decline.



Figure – *Haliaspis spartinae* coating *Spartina alterniflora*

In 2010 in Ellisville Marsh, some areas of *Spartina alterniflora* had *Haliaspis spartinae* present at very high numbers. After determining that this white coating was not salt crystals (yes, she licked it!), Ellen brought the coating to an entomologist at UMASS Amherst. Dr. Benjamin Normack quickly identified it as *Haliaspis spartinae* and entered the insect into the university's collection. As luck would have it, Dr. George Japoshvili, a visiting professor with a specialty in parasitic wasps, reared out the microscopic wasp from the scale and quickly determined it was unlike any other wasp. Final documentation is still in progress, however.

Salt marsh vegetation has low plant species diversity as only about 15 plant species regularly occupy a typical salt marsh. Salt marshes, by virtue of high salinities, low oxygen in the "soils", and periodic inundations are quite hostile places for plant growth. We know, however, that below the vegetation canopy, there are many regular inhabitants and visitors that find the marsh optimal for breeding, rearing of young, living, and dying. Those are just the things we see - who would have guessed that this complex struggle between host (*Spartina alterniflora*), prey (*Haliaspis spartinae*) and parasite (*Encarsia ellisvillea*) has been going on, virtually invisible to our eyes! So, the next time you gaze at the seemingly monoculture stands of soothing green and yellows salt marsh grass, imagine what goes on within!

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