

LABORATORY OBSERVATIONS OF *SIREX NOCTILIO*: PURSUING AN EFFECTIVE BEHAVIORAL BIOASSAY

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ABSTRACT

Behavior and chemical ecology studies were initiated on the European woodwasp *Sirex noctilio*. Males caged together exhibited increased excitement when brought from a cool room to a warm room with full spectrum lighting and were observed to walk and fly with their genitalia everted. The everted structures, called the latimeres, are composed of the harpe (distal) and gonostipes (proximal). The harpe has a spongy surface used to grasp the female during copulation.

It was hypothesized that in *S. noctilio* males, the everted genitalia may emit a sex pheromone or lekking pheromone. These structures were snipped from male *S. noctilio* and extracted in hexane. Headspace of excited males was also collected using SPME fibers. Both snip extracts and SPME samples, when examined using GC-MS, yielded similar chemical peaks. Further chemical and behavioral analysis is underway.