



**XI ENCONTRO BRASILEIRO DE ECOLOGIA QUÍMICA
XI BRAZILIAN MEETING ON CHEMICAL ECOLOGY**

October 23-26, 2019

Maceió, Brazil

**NATAL ORIGIN, HOST PLANT USE, MATING AND DEATH: REFLECTIONS OF
“YOU ARE WHAT YOU EAT” IN MIGRANT LEPIDOPTERA.**

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ABSTRACT: Many traditional techniques, such as mark-recapture or telemetry, are not particularly effective tools for studying the migration of insects. In the first part of my presentation I will discuss our ongoing research looking at the use of stable isotopes to study different aspects of migration of two noctuid pest species, the western bean cutworm, *Striacosta albicost*, and the true armyworm, *Mythimna (Pseudaletia) unipuncta*. We are using isotopes of H, C, N to address questions relating to natal origin, origin of mates, larval host plants and habitat type, as well as the relative contribution of larval and adult food sources on lipid resources. Many insects effectively sequester secondary plant compounds for their own defence. However, little attention has been given to the impact these compounds might have on when chemicals or their metabolites are released when the insects die and are decomposed. The overwintering colonies in Mexico, when many adults containing cardenoloids and alkaloids monarchs die and decompose, offer an excellent opportunity to determine if there are any effects on the local soil community. I will present our preliminary result of our project, showing that both total biomass of microarthropods and species diversity of oribatid mites are significantly different. I will also discuss the objectives of experiments we are setting up to determine if these, and other potential changes as a result of compounds released following butterfly decomposition, provide chemical cues that migrating monarchs might use to locate the overwintering sites.