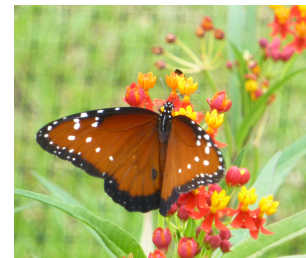


Wormsloe Butterfly Gardens

September 13, 2013 report by Ania Majewska
(PhD student at Odum School of Ecology)

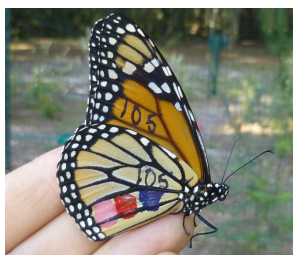


Tasks accomplished so far:

- 1155 plants placed in the ground
- mulched and found effective weed management strategy
- placed sprinkler system
- certified as pollinator gardens

We continue to:

- survey species of Lepidoptera
 - collect data on number of Monarch eggs and larvae on Milkweed
 - rear Monarch and Queen larvae pupae in lab
 - release marked adults
 - disease sampling - *Ophryocystis elektroscirrha* (OE)
- To do list:**
- finish gardens (need 375 plants, replace any failed plants)

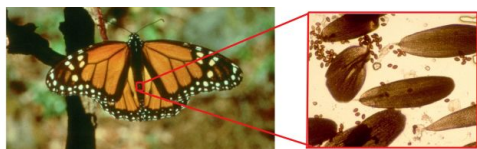


12 Species of Lepidoptera observed and identified:

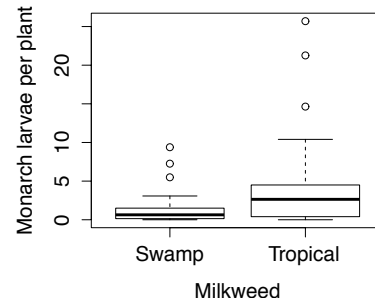
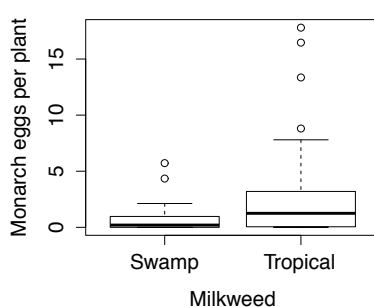
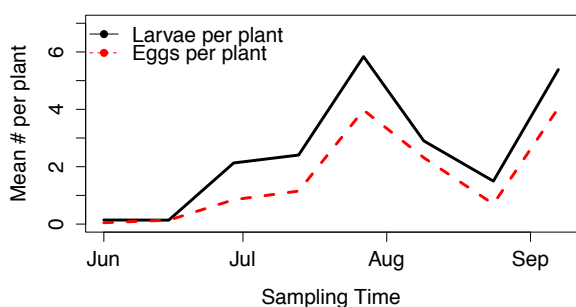
Monarch (*Danaus plexippus*)
Queen (*Danaus gilippus*)
Gulf Fritillary (*Agraulis vanillae*)
Palamedes Swallowtail (*Papilio palamedes*)
Black Swallowtail (*Papilio polyxenes*)
Spicebush Swallowtail (*Papilio troilus*)
Clouded Sulphur (*Colias philodice*)
Tiny Yellow (*Pyrisitia lisa*)
Long-tailed skipper (*Urbanus proteus*)
Hackberry Emperor (*Asterocampa celtis*)
Buckeye (*Junonia coenia*)
Tersa Sphinx (*Xylophanes tersa*)



RESULTS:



Disease: OE has not been detected in Queens (15 individuals checked) while Monarchs show high prevalence (81 out of 88 individuals infected, or 92%).



Significantly more Monarch eggs and larvae on exotic Tropical Milkweed compared to native Swamp Milkweed ($F_{1,94} = 10.78$, $p\text{-value} = 0.00144$, $F_{1,94} = 10.38$, $p\text{-value} = 0.00175$, respectively). We found no significant differences in egg or larvae number per plant between blocks, plots, management treatment (high versus low weeding and preening).

DEVELOPING BIGGER QUESTIONS:

Are butterfly gardens effective tools for butterfly conservation or are they ecological traps?

- Is diversity and abundance of adult butterflies indicative of recruitment (i.e. new members added to population)?
- Does management (low vs. high) and plant type (native vs. exotic) of gardens affect abundance and recruitment?
- Does enemy (predation and disease) pressure differ among plots?

