

Miconia Research in Costa Rica

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Photos: primarily by Kenji Nishida

Distribution of *Miconia calvescens* in Costa Rica







***Diclidophlebia*
lucens
(Psyllidae)**

Burckhardt et al.
(2005)



<i>Diclidophlebia</i> species	Host plant	Locality
<i>D. fava</i>	<i>Miconia argentea</i>	Panama
<i>D. longitarsata</i>	<i>Miconia argentea</i>	Panama
<i>D. lucens</i>	<i>Miconia calvescens</i>	Costa Rica
<i>D. paucipunctata</i>	<i>Conostegia xalapensis</i>	Panama
<i>D. tuxtlaensis</i>	<i>Conostegia xalapensis</i>	Mexico
<i>D. heterotrichi</i>	<i>Heterotrichum cymosum</i>	Puerto Rico
<i>D. smithi</i>	<i>Miconia calvescens</i>	Brazil

Diclidophlebia lucens



Egg to adult: 1 – 2
months

Adult longevity:
15 – 30 days



Diclidophlebia lucens damage



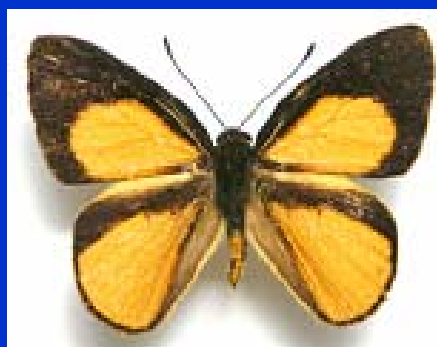
Parasitoids: none

Euselasia chrysippe (Riodinidae: Euselasiinae)

Allen (submitted, in prep.), Nishida (submitted)



Female



Males



Eggs

Euselasia chrysippe

Egg to adult: 8 weeks
Adult longevity: > 1 month
Fecundity: 175 eggs



First instar



Third instar



Fourth instar



Sixth instar in procession



Pupa



*Euselasia
chrysippe*

Parasitoids: *Encarsia porteri*
(Aphelinidae), *Calolydella* sp.
(Tachinidae)





Cryptorhynchus melastomae (Curculionidae: Cryptorhynchinae)

Reichert et al. (in prep)



Adults

Egg to adult: 6 months



Frass hole

Adult longevity: 7 months



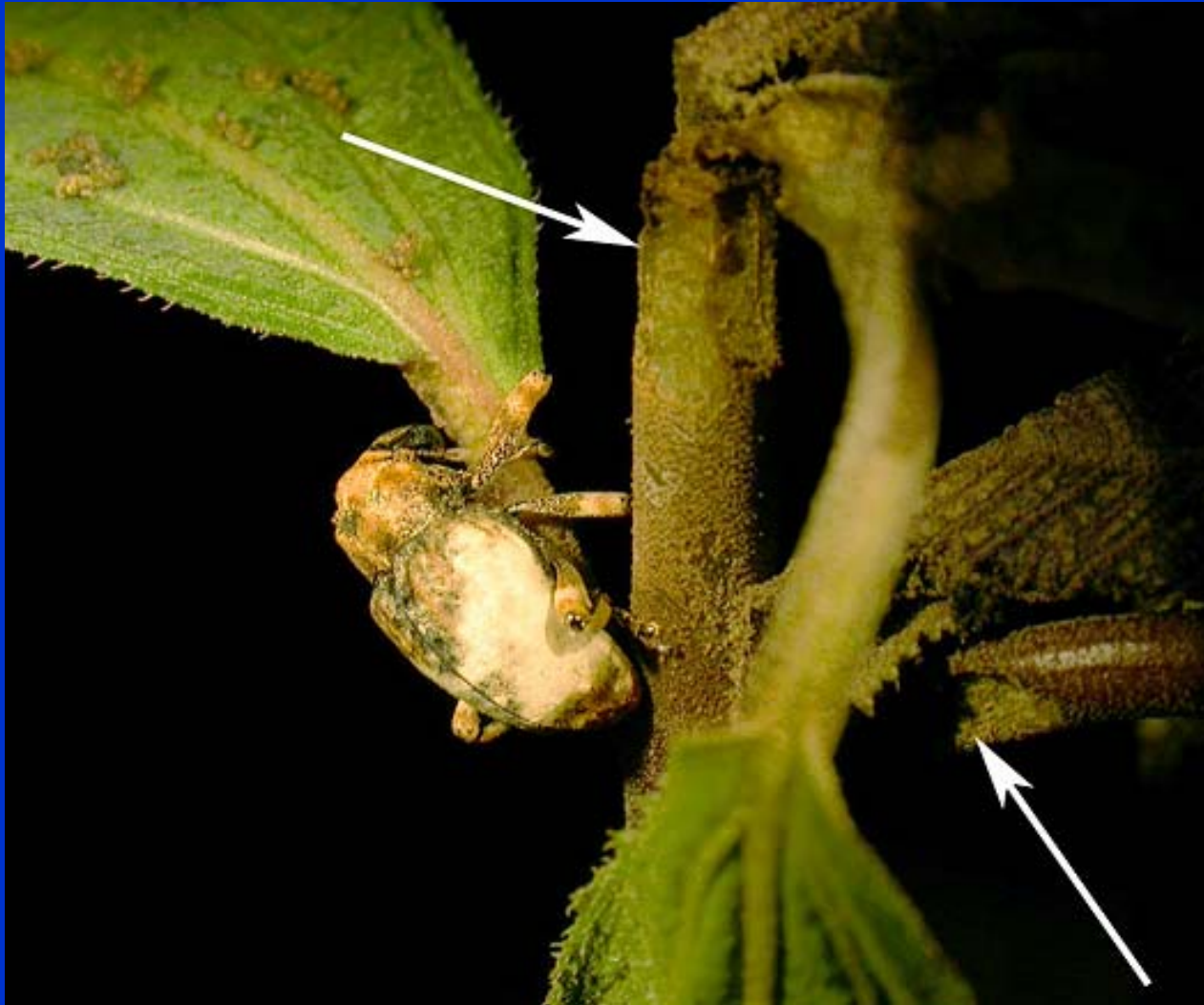
Larva

Fecundity: 60 eggs



Pupa

Cryptorhynchus melastomae



Parasitoids: *Capitonus* sp. (Braconidae)

Anthonomus monostigma (Curculionidae: Anthonomini)

Chacón et al. (in prep.)



Egg to adult: about 2 months
Adult longevity: 9 weeks

La Selva: larvae in *M. longifolia*, not in *M. affinis*
Vereh: larvae in *M. calvescens* and *M. affinis*

Anthonomus monostigma



Parasitoids: *Bracon* sp.
(Braconidae)



Salbia lotanalis (Crambidae)

Castillo et al. (in prep.)

Two Costa Rican species, *Ategumia ebulealis* and *A. matutinalis*, are already present in Hawaii



Eggs



1st instar

Salbia lotanalis



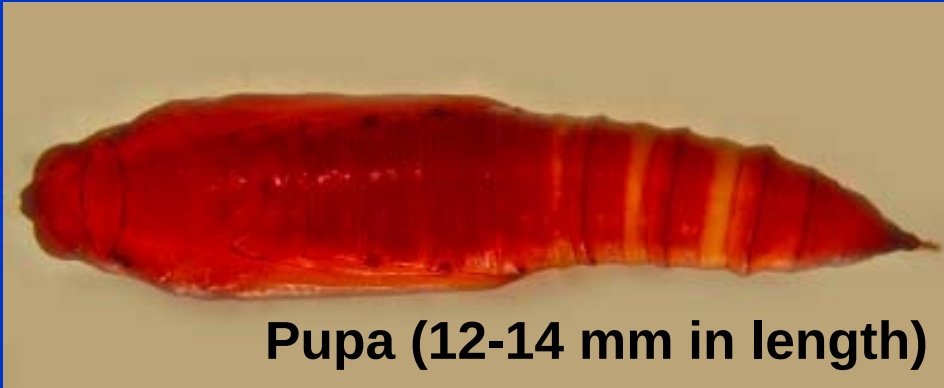
Prepupa



Pupal chamber



Salbia lotanalis



Pupa (12-14 mm in length)



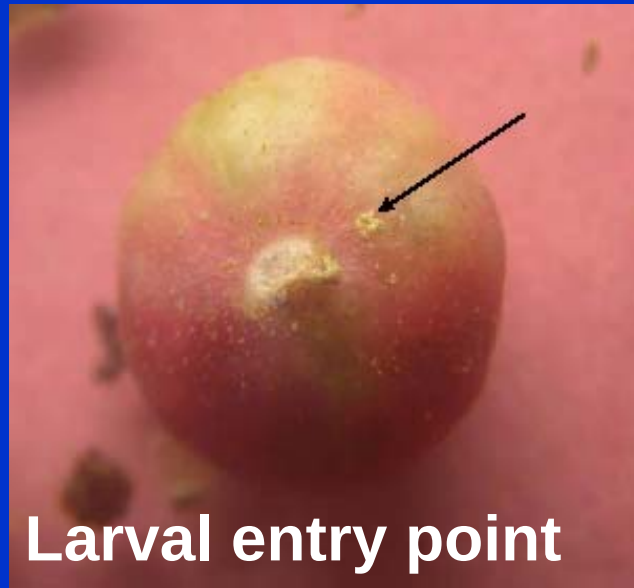
Egg to adult: 69 days
Adult longevity: 2 weeks
Fecundity: 400 eggs

Parasitoids:

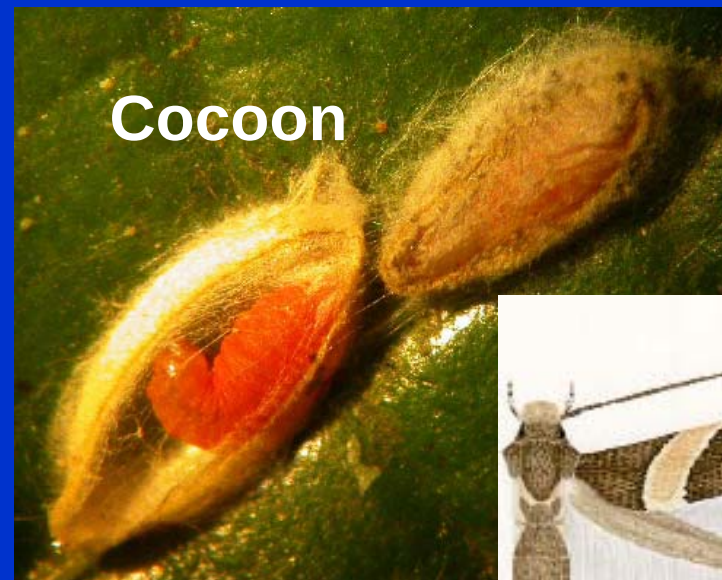
Bracon sp. (Braconidae)
Meteorus sp. (Braconidae)
Leurus caeruliventris
(Ichneumonidae)
Cryptinae (Ichneumonidae)
Brachymeria sp. (Chalcididae)
Hyphantrophaga virilis
(Tachinidae)

***Mompha* sp.
(Momphidae)**

Alfaro et al.
(in prep.)



Egg to adult: 30 – 100 days



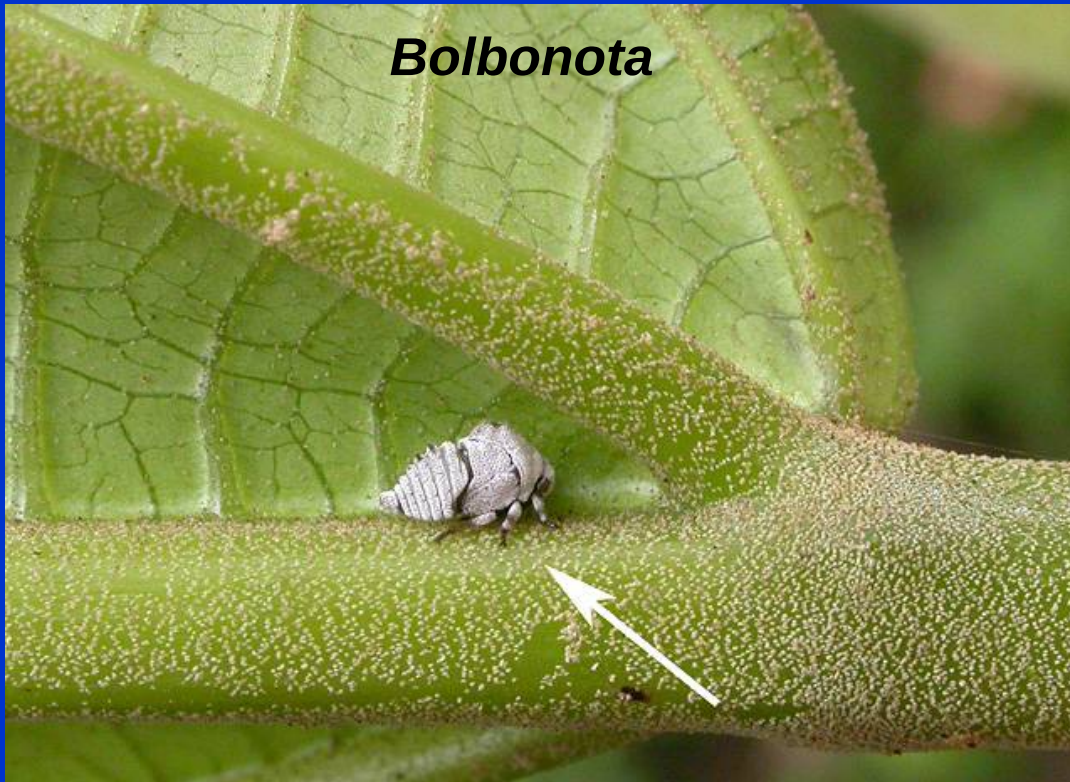
Mompha sp.



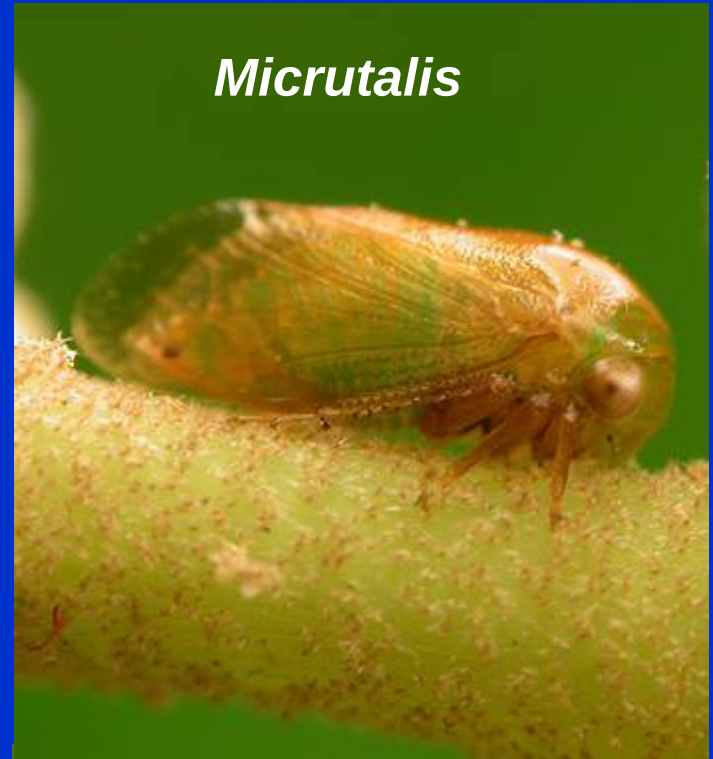
Parasitoids: *Campopleginae* (Ichneumonidae),
Bracon sp., *Chelonus* sp. (Braconidae)

Membracidae

Bolbonota



Micrutalis



Chrysomelidae

Alticini	<i>Margaridisa</i> sp.	Adult: leaves
Eumolpinae	<i>Percolaspis</i> sp.	Adult: leaves
Eumolpinae	<i>Typophorus variabilis</i>	Adult: leaves



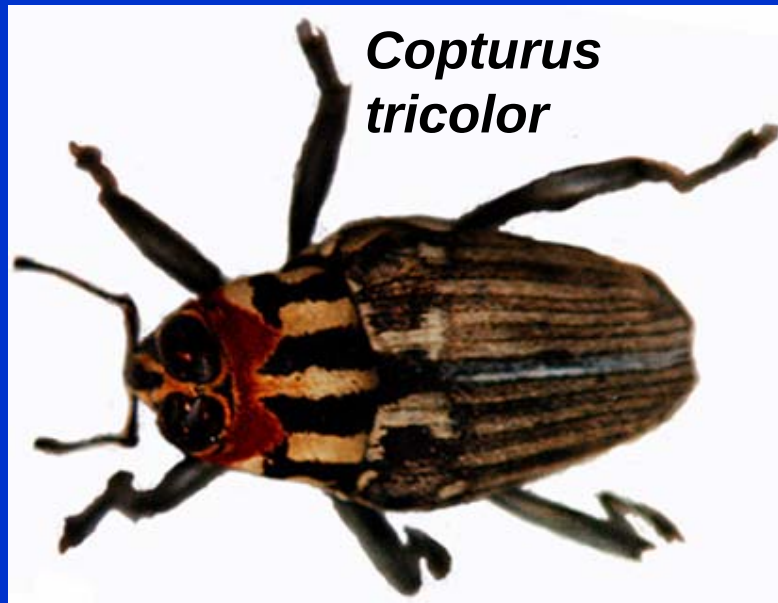
Eumolpinae damage



Percolaspis

Curculionoidea

Erirhinidae	<i>Penestes</i> sp.	Adult: leaves
Conoderinae	<i>Copturus tricolor</i>	Larva: stem borer
Curculioninae	<i>Pedetinus halticoides</i>	Larva: fruits/seeds
Entiminae	<i>Exophthalmus</i> sp	Adult: leaves





Gracillariidae



Pterophoridae

Limacodidae



Epiperola paida



Isa diana (young larva)



Natada sp.



Acharia sp.



Theritas mavors (Lycaenidae)



Erora opisena (Lycaenidae)



Anteros formosus (Riodinidae)
young larva



Naprepa houla (Notodontidae)

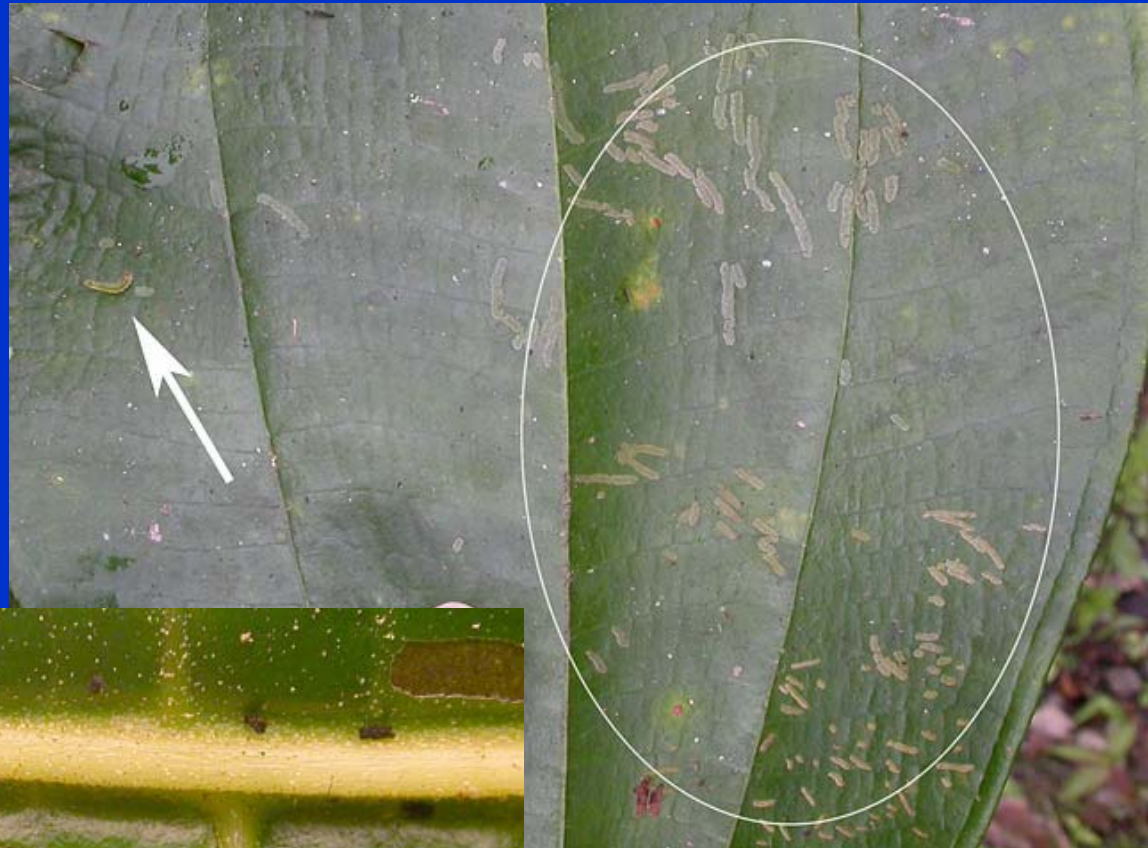


Melese sp. (Arctiidae)

Antiblemma chiva
(Noctuidae)



Atomacera
petroa
(Argidae)



***Allorhogas*
spp.
(Braconidae)**

Conostegia xalapensis
Chavarría et al. (2009)



NEMATODE
Ditylenchus sp.
(Anguinidae)



