

# A Tale of 10 Insects – The Back Story of Some Insect-related Oddities of the Yard and Garden



Whitney Cranshaw  
Colorado State University



High Plains Landscape Workshop 2020

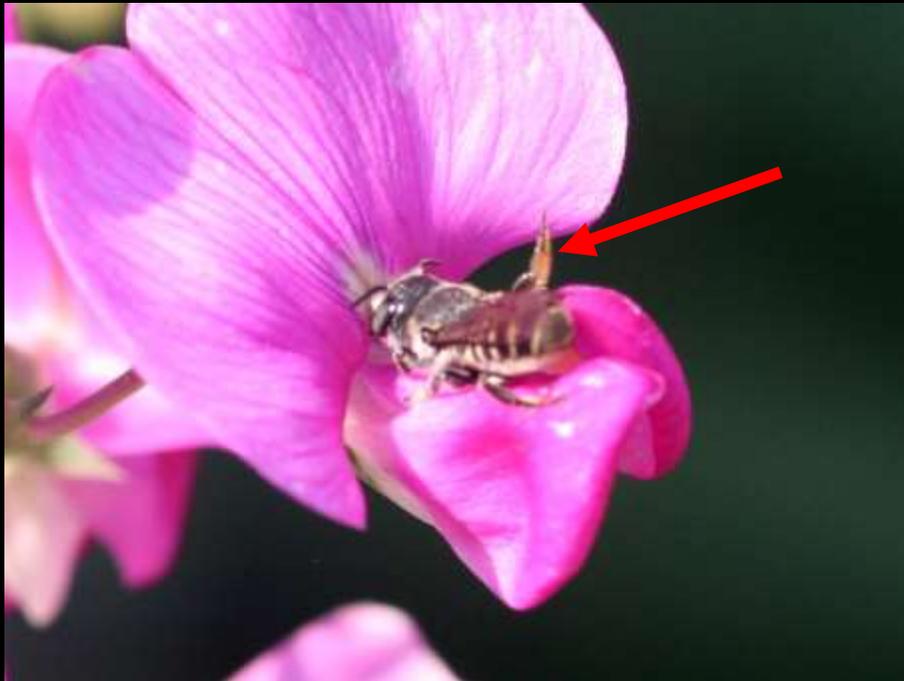
# Family Megachilidae

Leafcutter, mason, carder  
bees



# Many kinds of plants are dependent on pollination by leafcutter bees

Note how the anthers become exposed as the bee pushes the flower while nectaring







One kind of leafcutter bee is used commercially to produce alfalfa grown for its seed



Photograph courtesy of Sami Waters

All members of the family **Megachilidae** (leafcutter, mason, carder bees) carry pollen on the underside of the abdomen





**Leafcutter bee  
collecting pollen**



**Leafcutter Bees**  
*Megachile* spp.

Nest cells in pith of rose cane



Photograph courtesy of David Shetlar, Ohio State University

## Step 1. Find/establish a suitable nest site



Nest boxes provided for cavity nesting bees

Nest cells with pollen in stem of weed



Nest cells in rotten wood



Leafcutter bees use above ground cavities they either discover or excavate

**Soft, rotting wood is often excavated for nest sites**



**Leafcutter bee excavation  
in rotten garden timber**





Photographs courtesy of David Shetlar



**Step 2. Collect leaf fragments for nest cell building**



**Leafcutter bees cut fragments from the edges of leaves that are suitable for nest building**



Rose, lilac, Virginia creeper and redbud are among the plants most favored by leafcutter bees for nest materials



# Leafcutter bees carry the leaf fragments back to the nest





## Cut leaves are used for nest construction

All leaf fragments are oriented with the smooth side inwards



# Step 3. Build nest cells out of the leaf fragments



# For nest cell construction:



3-4 rectangular pieces, crimped for the base

Oval pieces along the sides of the cell

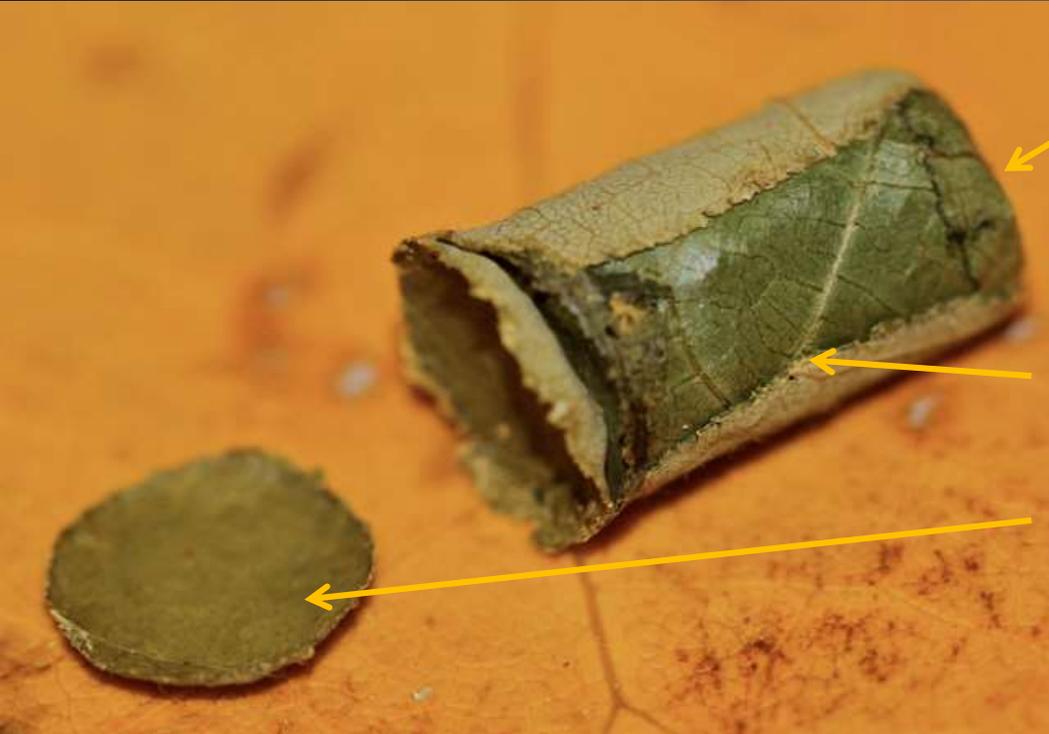


**Step 4. Collect pollen/nectar to supply a nest cell**



Pollen/nectar stores of two leafcutter bee nest cells

# For nest cell construction:



3-4 rectangular pieces,  
crimped for the base

Oval pieces along the sides of  
the cell

Nearly perfect circles used to  
cap the cell



**When the  
nest cell is  
finished,  
repeat**





**The young bees develop within the nest cell. They will remain dormant, emerging as an adult bee the following year.**



Availability of nest sites **may limit** the ability of many native bees to thrive at a site



Providing nest sites can be useful in some areas



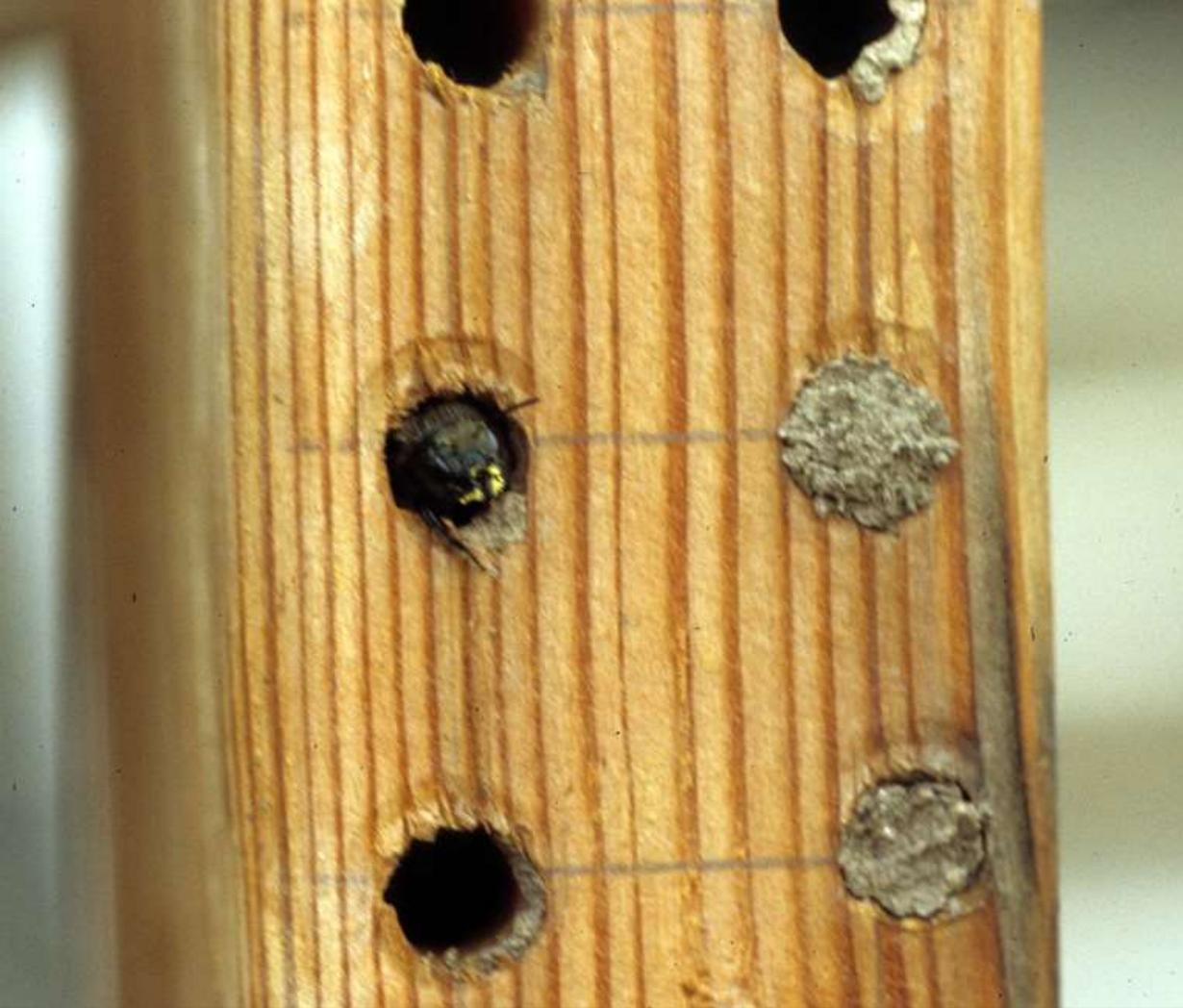
**A variety of hole sizes  
can be used to attract a  
variety of species**



**From the Bee's Need Project, University of Colorado**



**Mason Bees**  
(*Osmia* species)



**Predrilled wood for nesting by mason bees**

**Nest cells produced by mason bees in hollowed plant stems**



Drilled wood (ca. 5/8-in) can be used as a nest site for mason bees.

This one has paper straw inserts.





## **Carder Bees**

*Anthidium spp.*



**Nests are made in existing cavities.**

**The nest tunnels are lined with  
plant hairs.**



Plant hairs are shaved and returned to line and cushion the nest cells



Photograph from the **Bees' Needs** Blog (University of Colorado)

**Male wool carder bees aggressively patrol and defend territories**





Photograph courtesy of Jim Kalisch,  
The University of Nebraska

**Male wool carder bees will attack, grab and puncture insects – including honey bees – that trespass into their territories**

**A leaf chewing  
oddity:  
Semicircular  
cuts to leaves  
of green ash (or  
rose, lilac,  
Virginia  
creeper.....)**

**Leafcutter  
Bees**



**A leaf chewing  
oddity: Angular  
cuts to the  
edges of leaves  
(lilac, peony,  
privet, rose,  
euonymus, etc.)**



**Leaf  
Notching**

**Cause: Root weevils**



**Root weevils  
feed along the  
edge of  
leaves.**



**Feeding is  
done at night.**



**They hide at  
the base of  
the plant in  
the day.**



# The Pigeon Tremex woodwasp and its nemesis, the Giant Ichneumon Wasp



Photograph by Mark McMillan

# Pigeon Tremex

*Tremex columba*

A wood boring wasp that develops in dying/near-dead hardwoods (maples, elms, ash)



Female



Pigeon tremex is a type of insect known as a **horntail**

Females have a spike on the end of the abdomen which houses the **ovipositor**

Male



Photographs courtesy of **David Shetlar**, The University of Ohio



**Female wasps insert their eggs into dying trees of low moisture content**

**When laying eggs they also introduce a white rot fungus, which develops within the tree**

Sometimes dead females can be found still stuck in the tree



Photograph courtesy of **David Shetlar**,  
The Ohio State University



Photograph by **Mark Overland**

Larva in  
wood



Adults emerge from perfectly round  
exit holes in early-mid summer



**The most spectacular natural enemy of the pigeon tremex is the giant ichneumon wasp**

# Giant Ichneumon Wasp

*Megarhyssa macrurus*



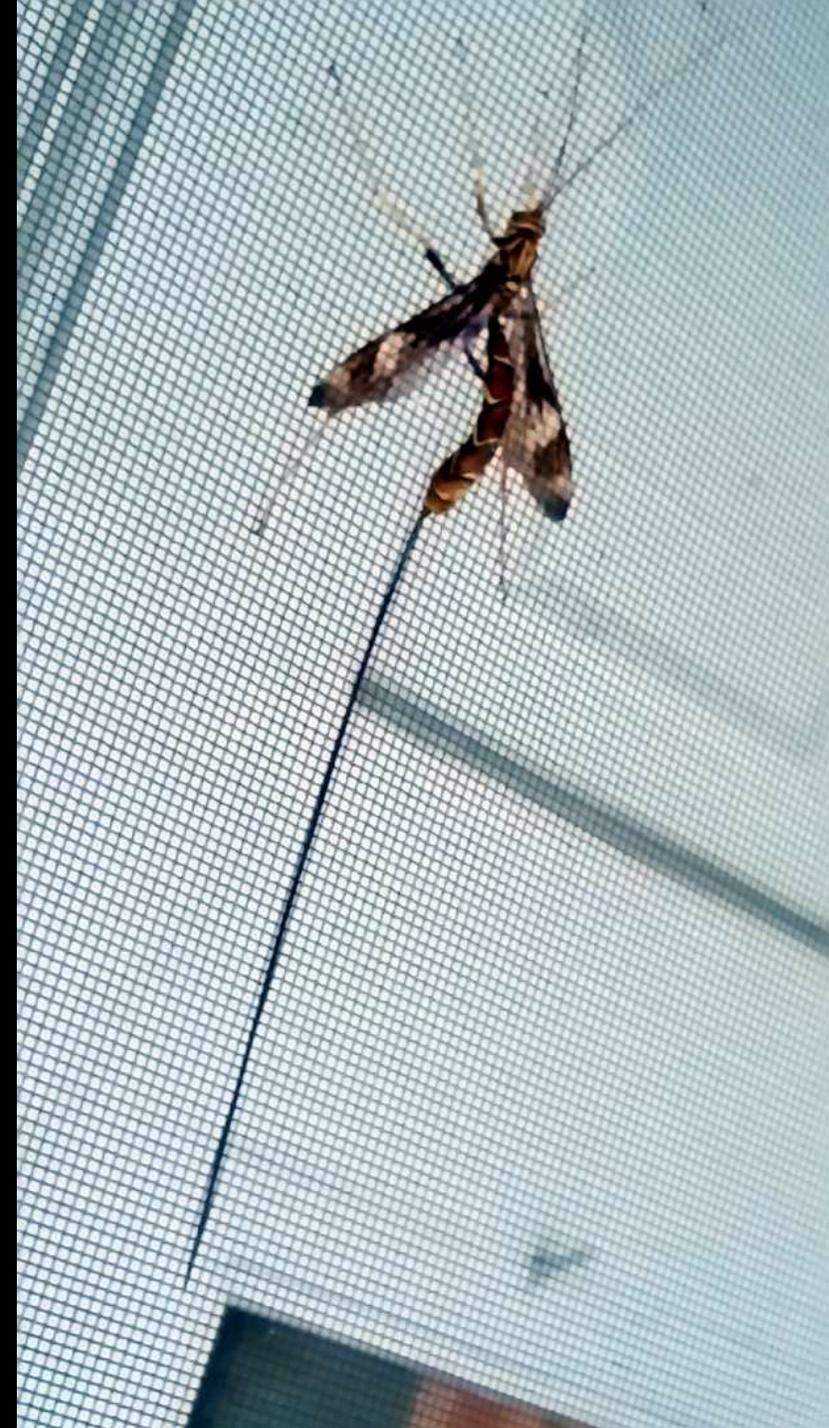
Parasitoid of the pigeon tremex larva





A photo from a Denver MG,  
Linda Coyle, I got last year

A photo from an Arapahoe  
County MG, Mark Overland,  
received this year

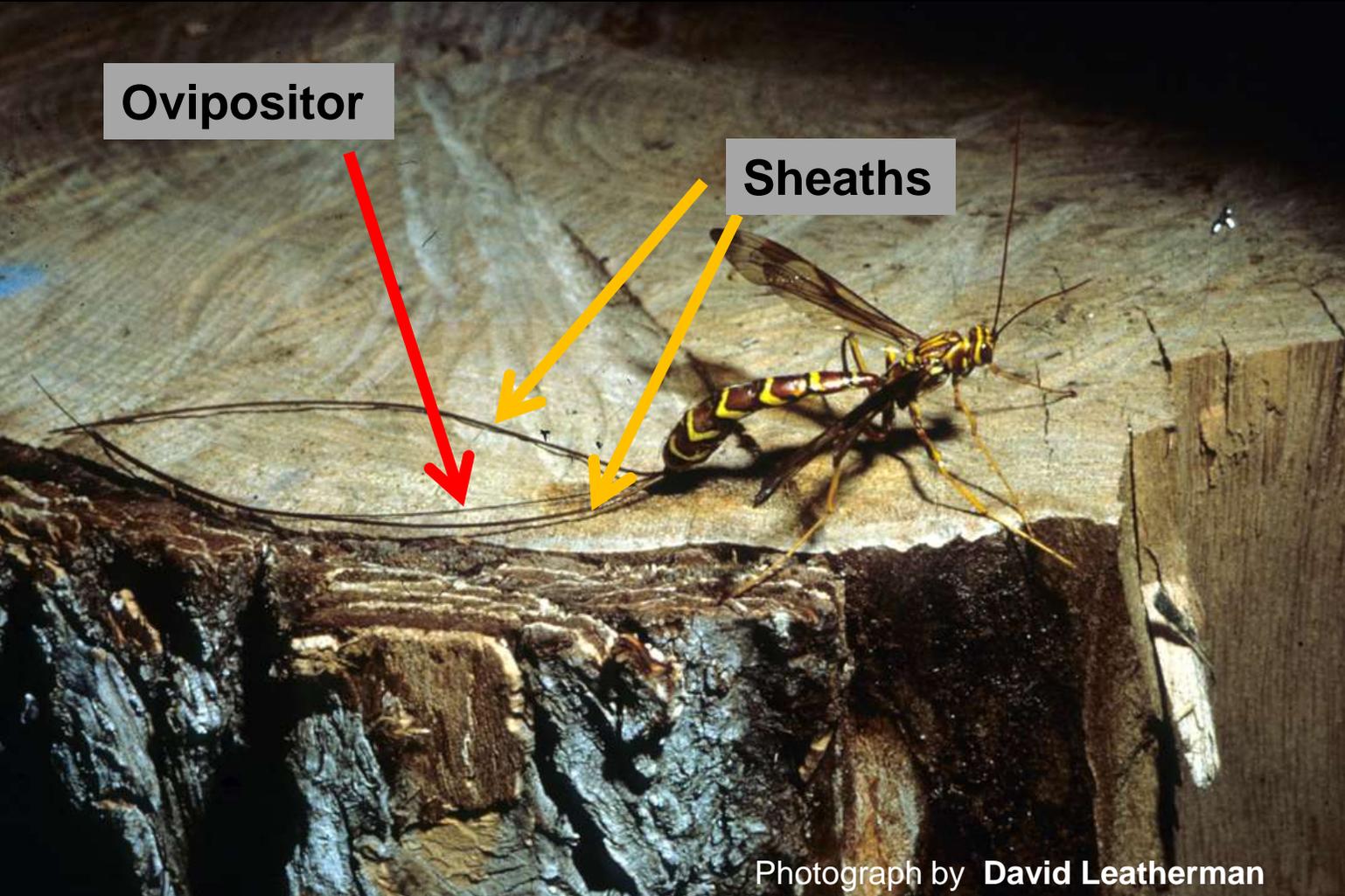


**The female giant ichneumon wasp can detect the presence of a developing pigeon tremex larva – and drills to it with her ovipositor**



Photographs by **Mark McMillan**

Video clip by **Michael Sundberg**



# Pigeon Tremex Horntail and the Giant Ichneumon Wasp

Fact Sheet No. 5.604

Insect Series | Home and Garden

by W. Cranshaw\*

Two large and bizarre looking insects are commonly associated with dying branches and trunks of several commonly grown hardwood trees. One of these is an insect that develops as a borer within the tree – the **pigeon tremex horntail** (*Tremex columba*). The other is the most common natural enemy of this insect, the **giant ichneumon wasp** (*Megarhyssa macrurus*).

Pigeon Tremex Horntail



Figure 1: Pigeon tremex.



## Quick Facts

- The pigeon tremex is a type of non-stinging wasp, known as a horntail.
- The giant ichneumon wasp is the most common natural enemy of the pigeon tremex.
- Pigeon tremex are not considered serious pests.

# Hornworms and Hummingbird Moths

Lepidoptera: Sphingidae



**Hornworms are large caterpillars.  
Most have a “horn” on the end of the  
body.**



Two species can be damaging pests of tomatoes – the tomato hornworm and the tobacco hornworm



The “horn” is a flexible appendage.  
Of no known function – *except perhaps to scare a gardener!*



**Bill playing with a  
hornworm**



**Bill – Still playing  
with hornworms and  
doing just fine**





Adult (Sphinx Moth)



Egg

# Tobacco Hornworm

*Manduca sexta*



Pupa



Larva (Hornworm)

Adult (Sphinx Moth)



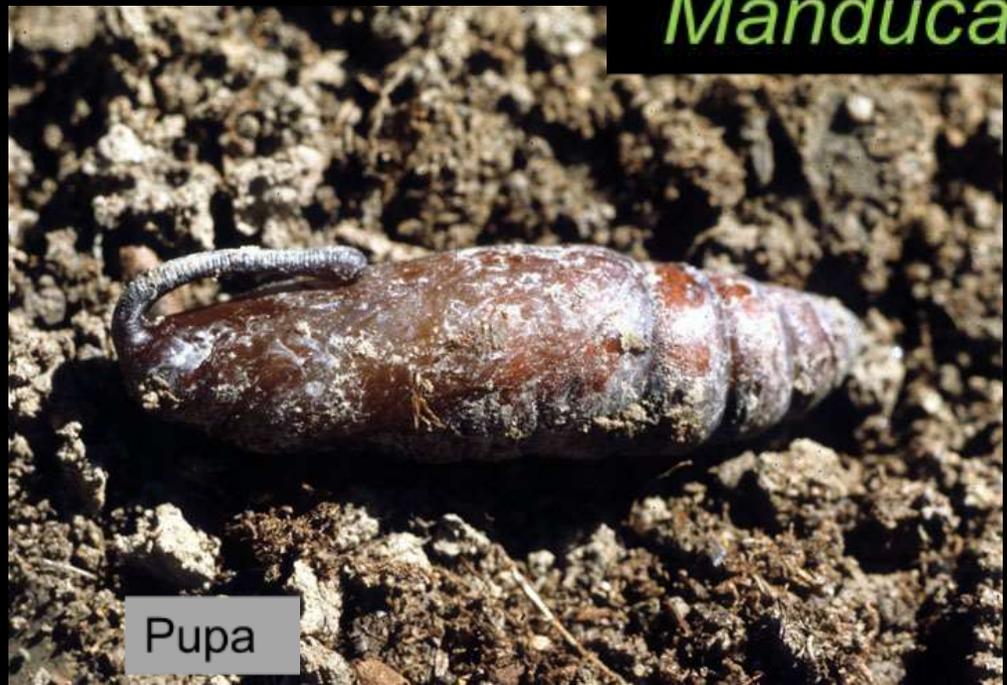
Egg and newly hatched larva



# Tomato Hornworm

*Manduca quinquemaculata*

Pupa



Larva (Hornworm)



Hornworms scatter the placement of their eggs on leaves of their host plant











The full-grown caterpillars burrow into loose soil, form a small chamber, and pupate





==



**Hornworms turn into.....Sphinx moths**



==





**Most sphinx  
moths fly only at  
night**





A small number of sphinx moth species will fly during the day, at least sometimes



**Sphinx moths that fly during the day are called “Hummingbird Moths”**



# Conflict?

**You like this....**

**..but not this.**



About two dozen kinds of hornworms occur in the region

Most hornworms are not “pest” insects



Ash sphinx



Elm sphinx



Great poplar sphinx



Whitelined sphinx



**Most sphinx moths fly only at night – and thus are not “hummingbird moths”**

**This includes the two species that damage garden crops**





**Moths of the tomato hornworm and tobacco hornworm do not fly during the day**

**The whitelined sphinx is a day-flying sphinx moth, a “hummingbird moth”**



# Whitelined sphinx

*Hyles lineata*

The most common hummingbird moth of the western US – and common throughout North America



# Whitelined sphinx

*Hyles lineata*



Larvae feed on purslane, evening primrose, grape and many other plants but almost never produce noticeable damage to crops of



**Hummingbird clearwing sphinx**  
*Hemaris thysbe*

“Bumble Bee” Clearwing  
Sphinx Moths



**Snowberry clearwing**  
*Hemeris diffinis*





**Some plants most often visited by hummingbird moths include:**

**Four o'clocks**

**Evening primrose**

**Larkspur**

**Gentian**

**Nasturtium**

**Catmint**

**Datura**

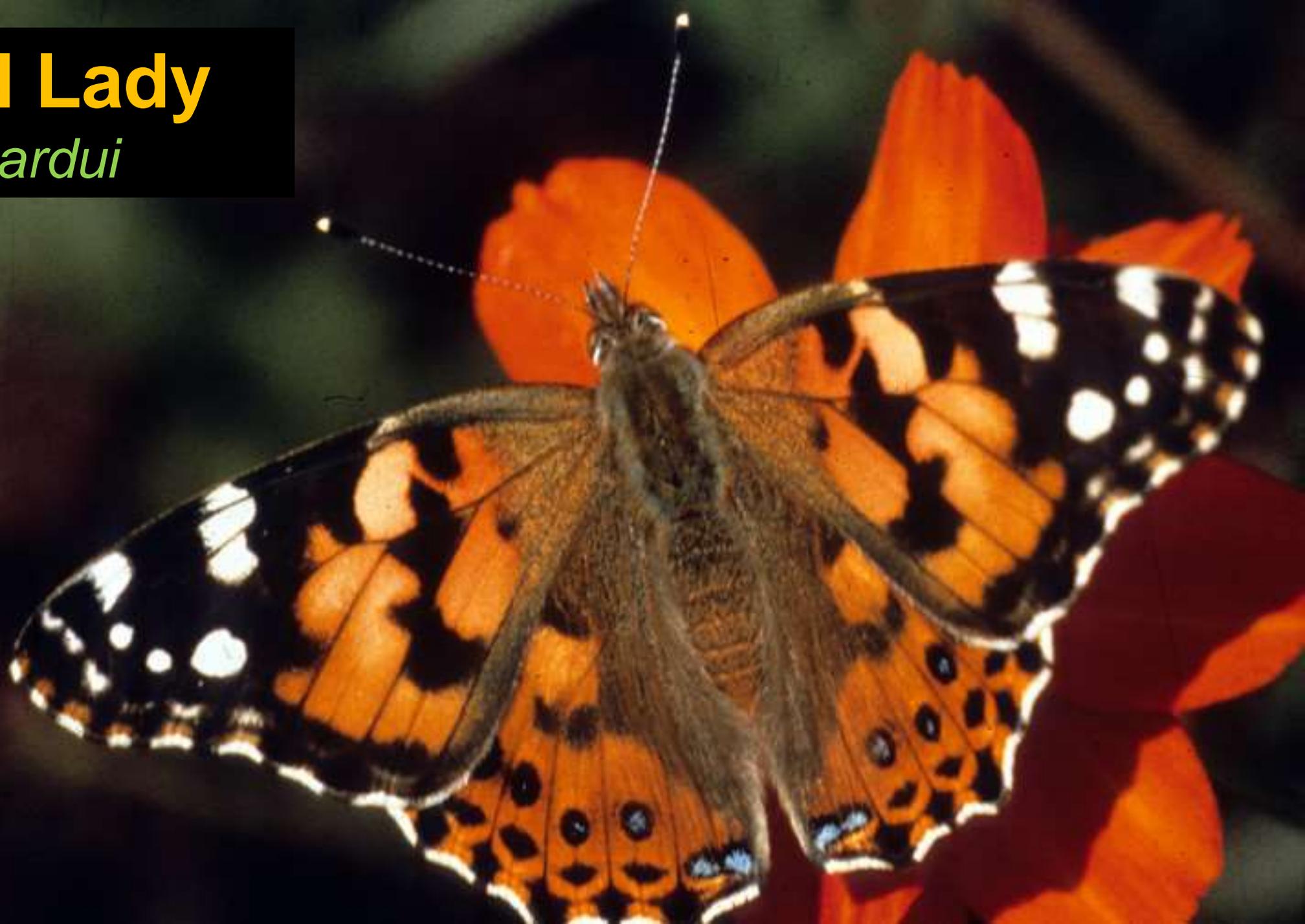
**Wild bergamot**

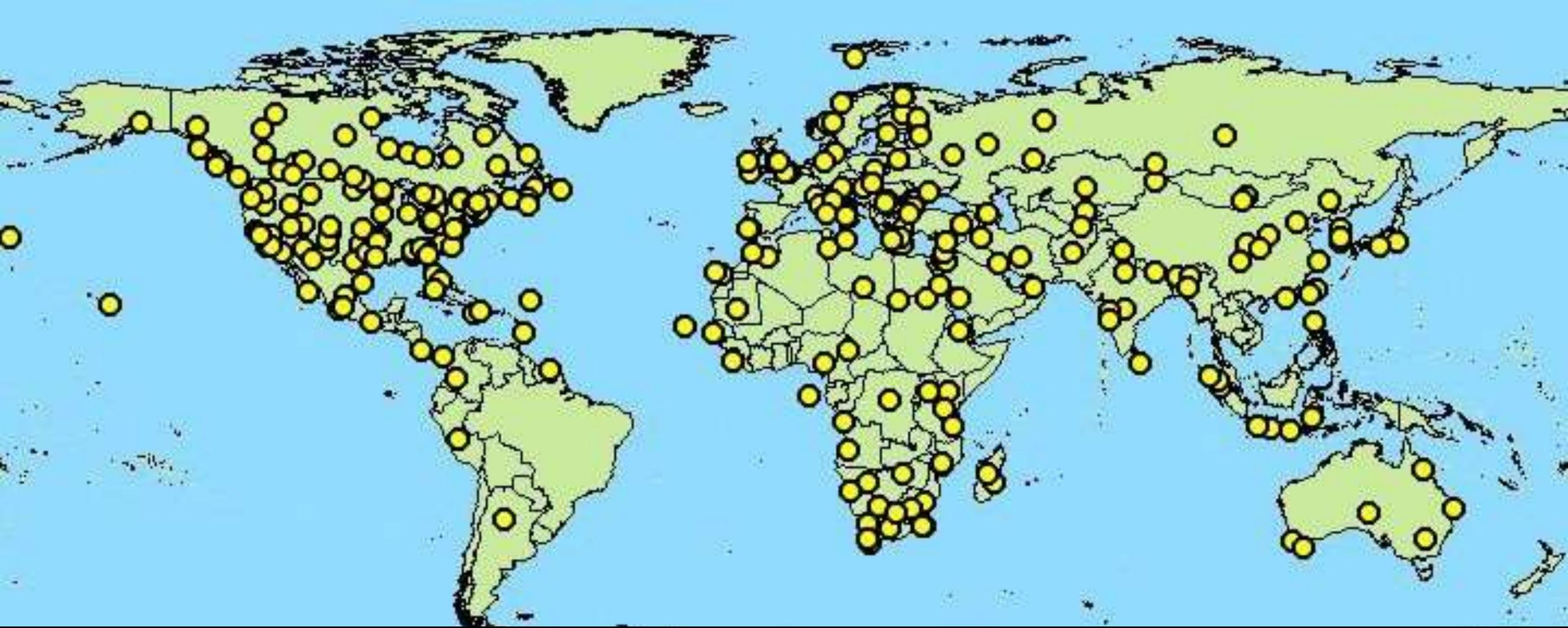
**Many *Agastache* spp.**

**Honeysuckle...**

# Painted Lady

*Vanessa cardui*





**The Painted Lady is the** most widely distributed butterfly on the planet



Monarch

Painted lady butterflies are often mistaken for Monarchs

Monarchs are present locally, but never abundant



Painted Lady



All photographs courtesy of Jim Kalisch, University of Nebraska



**The primary overwintering areas of the painted lady in North America are the deserty areas of the SW United States and NW Mexico**

Source: iNaturalist (<http://www.inaturalist.org>)

## *Mass Migration of Painted Lady Butterflies Entrances Californians*



Spring populations in Colorado depend on winter moisture conditions in the overwintering areas



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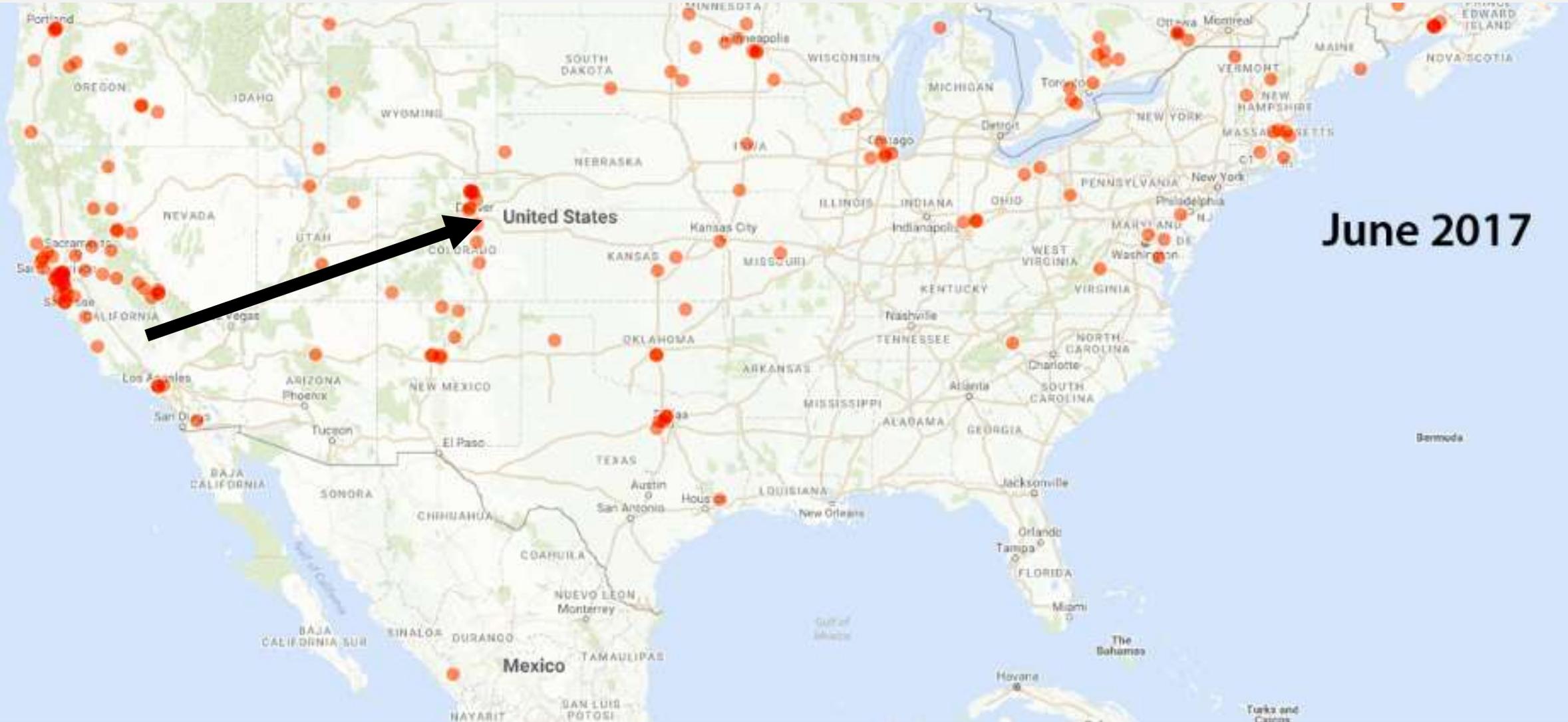
## **Why Millions Of Painted Lady Butterflies Are Migrating Through California**

March 18, 2019

By [Jeremy Hobson](#) and [Savannah Maher](#)



# Migrations into Colorado usually occur sometime in late May, early June



Source: iNaturalist (<http://www.inaturalist.org>)

The Painted Lady migrates annually into Colorado from overwintering areas in southern California and the Baja peninsula of Mexico



# By midsummer painted lady butterflies can be found occurs the United States and southern Canada



Source: iNaturalist (<http://www.inaturalist.org>)



Eggs are laid on a wide variety of plants.  
Thistles and mallows are particularly common  
hosts.

Caterpillars of the Painted Lady are sometimes called “thistle caterpillars”



They produce a loose shelter tying the leaves with silk



Photograph by Jim Kalisch, University of Nebraska

Full-grown larva



When full-grown the caterpillars settle and attached themselves to a solid surface by the hind end.



Full-grown larva, settled

They then pupate, producing a chrysalis



Pupa, of chrysalis form

Ultimately an new adult emerges

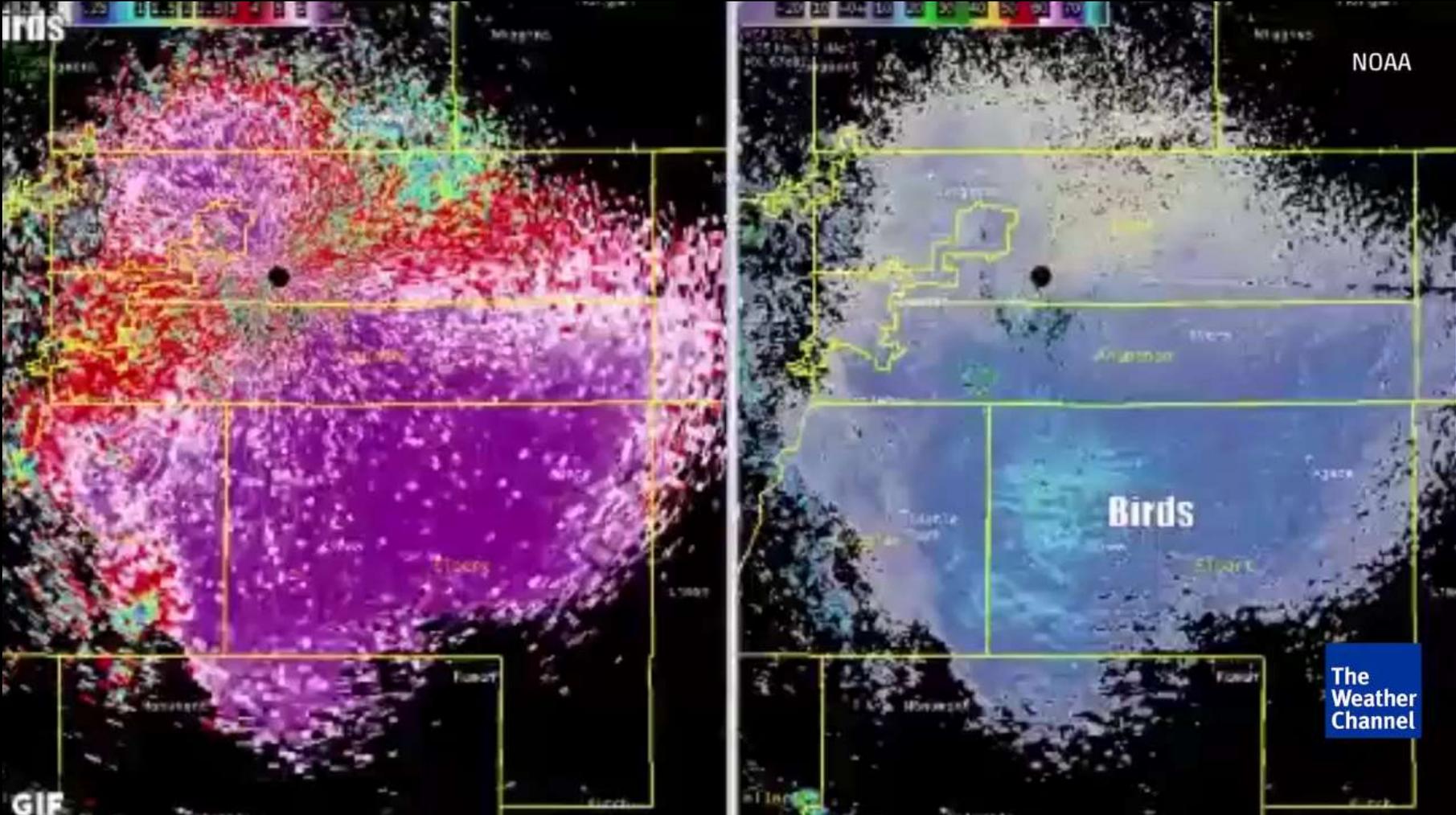
The cycle repeats



# 70-Mile-Wide Butterfly Migration Detected on Radar in Colorado Summer 2017

A reverse migration occurs in late summer

The Weather Channel



# Mantids



Adult female



Adult male



Nymph



Egg case (ootheca)

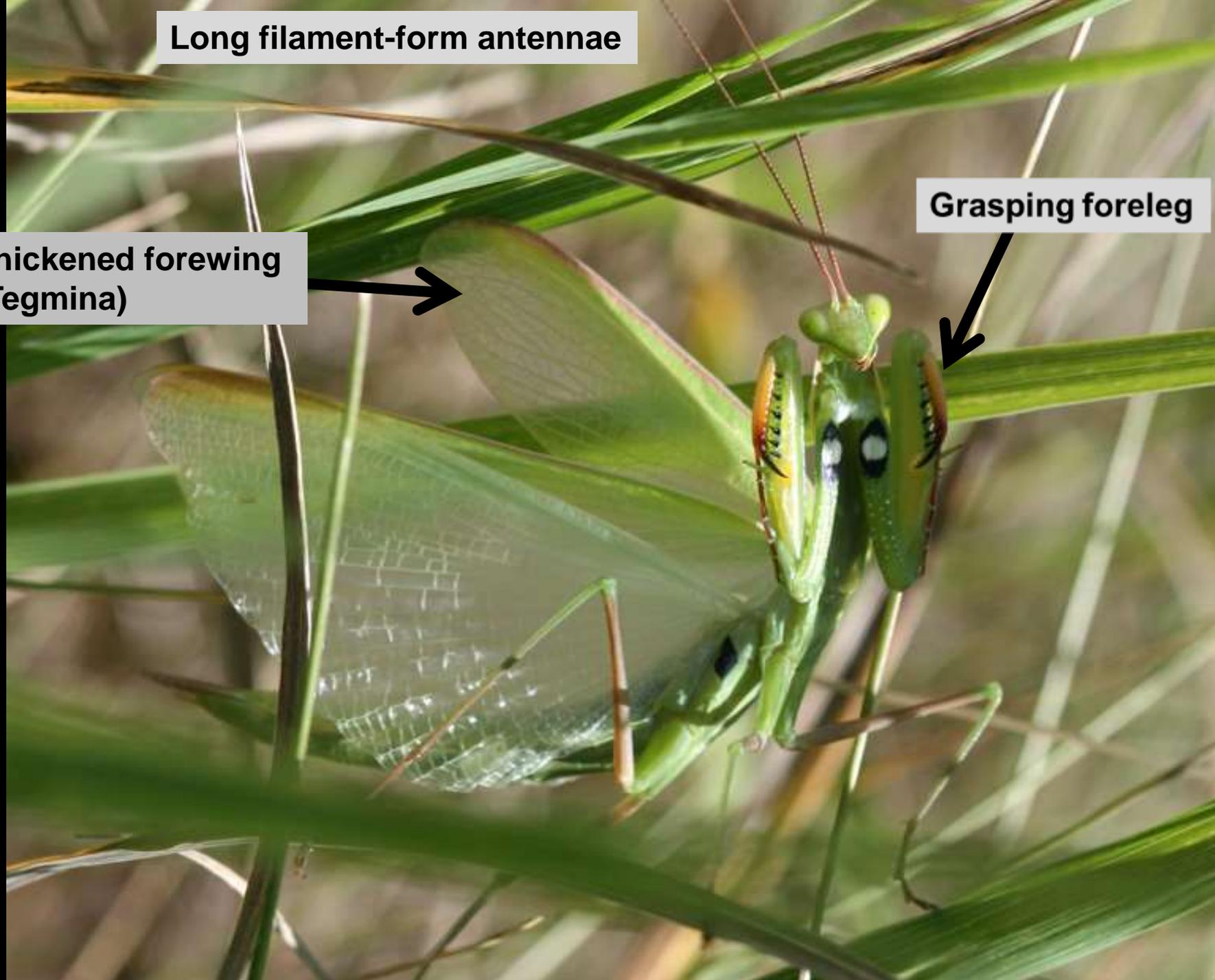
**All mantids are  
predators, feeding  
on other insects**



Long filament-form antennae

Grasping foreleg

Thickened forewing  
(Tegmina)



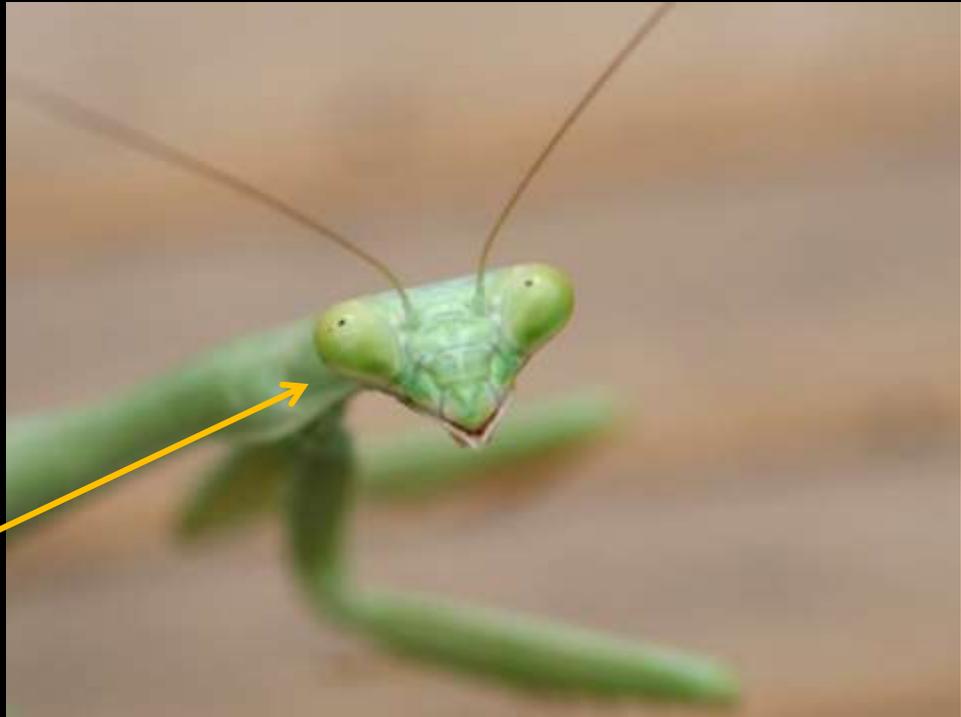


Raptorial front legs

Prothorax elongated

Tegmina-type wings

Head can pivot + wide spaced eyes = well developed binocular vision





Mantids lay  
their eggs in the  
form of egg  
masses  
(oothecae)

Eggs are laid in  
late summer



European Mantid



Chinese Mantid



## Mantid Egg Cases (ootheca or oothecae)

Carolina mantid



# European mantid egg cases



**Mantid eggs hatch in spring**

**There is one generation produced annually**



# European Mantid

*Mantis religiosa*



The most  
common  
species one  
will find locally



# European mantid mating pair





Adult female



Adult male

UGA1246025

## European mantid life stages



Nymph

UGA1246023



Egg case (ootheca)



A bull's-eye under the "armpit" is a distinguishing feature of the European mantid



UGA1235081

## Chinese Mantid

*Tenodera sinensis*

A species commonly sold for  
introduction into gardens

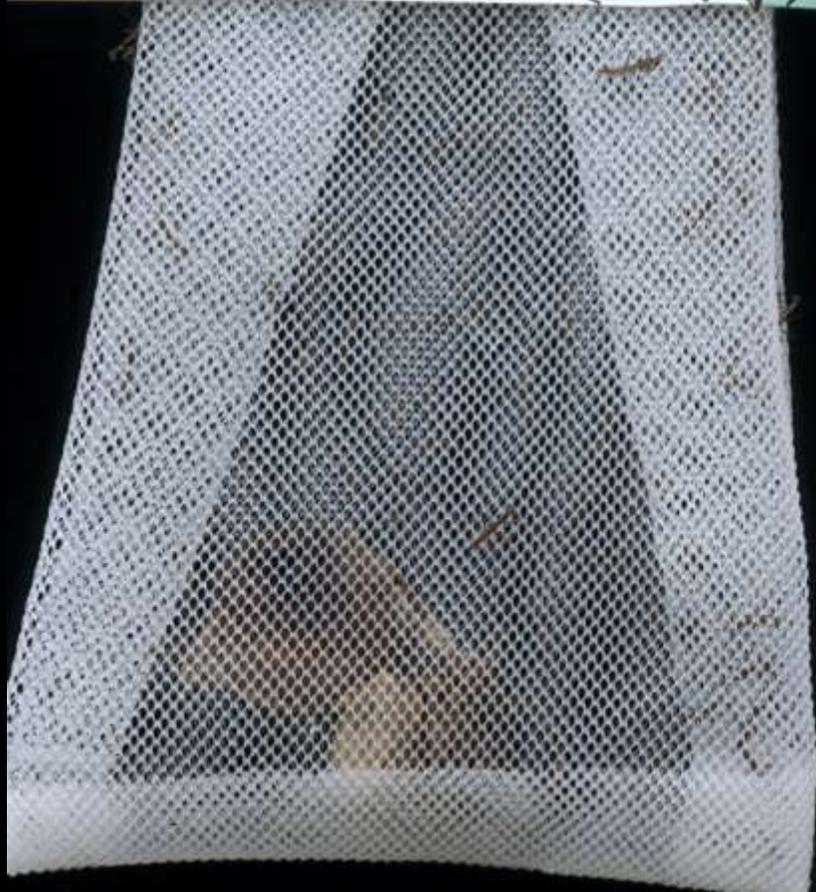


Praying Mantis  
Eggs



ORND2100  
\$6.99  
MANTIDS

APPROXIMATELY 400 PRAYING MANTIS EGGS



Egg cases (oothecae) of the Chinese mantid are sold by nurseries and garden catalogs



PRAYING MANTIS EGGS approx. 300

1. Hang on plant in sunny spot.

2. These eggs should start hatching about two weeks after the daytime temperature tops 75. Be careful not to hatch them in your house as 300 baby mantis are very hard to catch.

3. There are many types of insects the mantis will eat, depending mostly on their size. However, they do not bother lady bugs when small. They will eat aphids, scale, mites, mosquito, etc. When larger they will eat locusts, flies and other large insects.

**NATURAL PEST CONTROLS**  
8664 Little Creek Dr. Orangevale, CA 956  
(916) 726-0855

Praying mantis adult is omnivorous eating many insects with their grasping forelegs.



C.D. of Ag. no. 642





I hope not!!

# THE GENTLE GIANT

**KIND to humans . . .  
DEADLY to garden pests!**



No need for dangerous chemical sprays when you make a valuable ally of the helpful Praying Mantis! Maintain the balance of nature by "planting" its fertile eggs in your own garden—they hatch at the proper time and remain until all harmful aphids, lice and many other pests that plague your precious foliage, fruit and flowers are devoured. Each hardy egg cluster contains hundreds of eggs which hatch and thrive on insects, then lay their own eggs for next season's life cycle. Comes with full instructions for storage and use.

**A006148Y . . . Praying Mantis Egg Cluster**  
**\$1.95 each; 3 for \$4.99; 6 for \$8.49; 12 for \$14.79**

A Chinese mantid is a classy insect that livens a garden – even if they do not feed on a whole lot of insects that are garden pests, nor survive Colorado’s winters



# Agile Ground Mantid

*Litaneutria minor*

One of five native  
mantids of Colorado –  
and the only one you  
may find around here



On the issue  
of females  
eating the  
male – it  
happens



European mantid mating pair, 2:30 PM, Mon. Sept. 29, 2008.



European mantid male as lunch, 4:00 PM, Mon. Sept. 29, 2008.



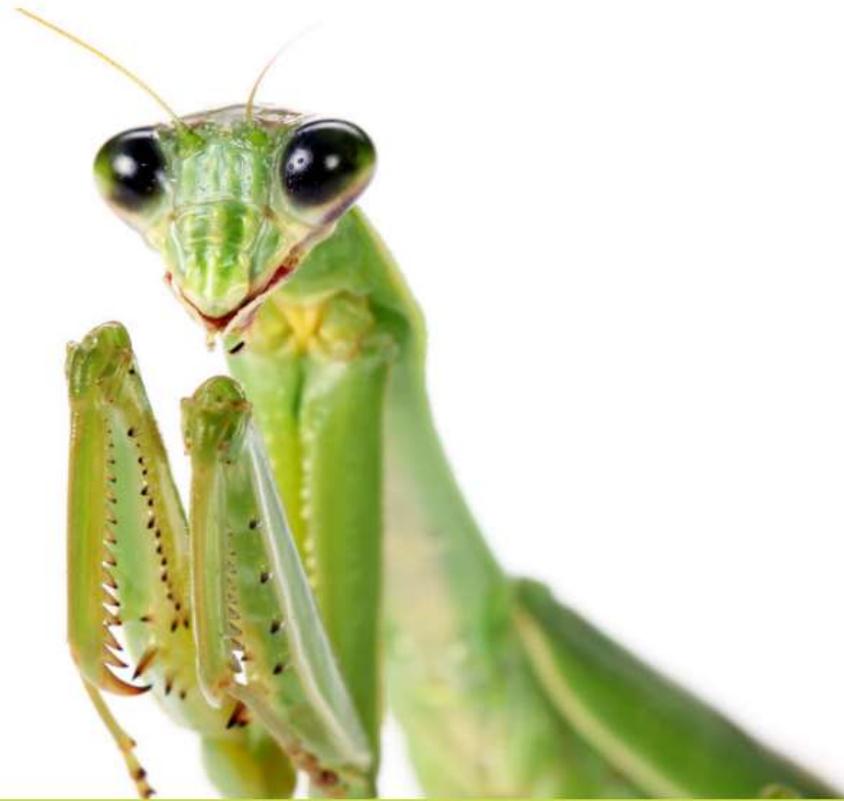
# Being The Victim Of Sexual Cannibalism Is A Good Investment For Male Mantises

**7.9K**  
SHARES

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PLANTS AND ANIMALS

MANTIS SEX CAN BE A DEADLY AFFAIR. JIANG HONGYAN/SHUTTERSTOCK

Though [sexual cannibalism](#) has been observed throughout the animal kingdom, the practice does not have many immediately obvious benefits – especially for males, who invariably provide the meat in this deadly post-coitus snack. However, a new study appearing in the [Proceedings of the Royal Society B](#) reveals that by being eaten by their mates, male praying mantises actually “invest” in their young, making the ultimate sacrifice in order to ensure their bodies become recycled in the form of offering.





# Two odd natural enemies of grasshoppers

## Grasshopper Nematode/Grasshopper Fungus



# Grasshopper Nematode

*Mermis nigriscens*





During cool, wet periods the adult nematodes will emerge from the soil and climb onto plants

Video courtesy of  
**Genevieve  
Villamizar**





Eggs are laid on leaves

Grasshoppers eating these leaves  
consume the eggs



Photograph courtesy of John Capinera



Photographs courtesy of John Capinera

The nematodes grow in the grasshopper, ultimately killing it



### Weird Worms: Horsehair Worm and the Grasshopper Nematode

Fact Sheet No. 5.610

Insect Series | Home and Garden

by W. Cranshaw\*

Two unusual, very long 'worms' that are occasionally encountered are horsehair worms and the nematode parasite of grasshoppers, *Mermis nigrescens*. Both are harmless to humans but may attract attention and cause concern.

#### The Grasshopper Nematode (*Mermis nigrescens*)

A roundworm of the phylum Nematoda, *Mermis nigrescens*, develops as an internal parasite of grasshoppers (and perhaps earwigs). It is extremely large, 5 to 20 cm, far larger than the nearly microscopic entomopathogenic nematodes often used to control various soil insect pests (see fact sheet 5.573, *Insect Parasitic Nematodes*). The overall body color is very pale brown. The head area of females is reddish-brown.

The adult nematodes are sometimes seen as they crawl on plants, usually following rainy periods in late spring. During this time

living nematode in the soil, living many years. Mating occurs at this time and ultimately the egg-bearing females emerge to lay eggs on foliage to repeat the cycle.

Moist conditions are favorable to the development of this nematode and highest populations develop in relatively wet, grassy areas.

#### Horsehair Worms

Horsehair worms share the very elongated worm-like body of many other 'worms' (e.g., certain nematodes, annelids), but they have some unique physical features that cause them to be classified in the phylum Nematomorpha.

Horsehair worms may be extremely long, with the common species (*Gordius robustus*) found in Colorado typically measuring around 30 to 40 cm in length. Their color ranges from light to very dark brown and all are nearly uniform in body appearance,



#### Quick Facts

- Horsehair worms and the grasshopper nematode parasite, *Mermis nigrescens*, are both harmless to humans.
- Moist conditions are favorable to the development of *Mermis nigrescens* and highest populations develop in relatively wet, grassy areas.
- With very few exceptions, horsehair worms will only be found in water.
- The common name 'horsehair worm' is derived from its occasional occurrence in livestock water troughs.



# The Grasshopper Fungus/ "Summit Disease"

*Entomophthora grylli*



Source: iNaturalist (<http://www.inaturalist.org>)



*Entomophthora grylli* is a fungus that can produce a lethal infection in some grasshoppers



Source: iNaturalist (<http://www.inaturalist.org>)



An effect of infection is that the dying grasshopper climbs

Ultimately it will die near the top of a plant

Later, when moist conditions allow, spores of the fungus will emerge and spread

Because of the effects of infection on grasshopper behavior, this is sometimes called “summit disease”



# Fly Fungus

*Entomophthora muscae*



A disease of certain garden flies that produces outbreaks during cool, wet periods of the year



This fly died stuck to a window of my greenhouse



A shower of the spores released from the body of the infected fly



## Fly Fungus

**Scientific Name:** *Entomophthora muscae*  
(=*Entomophthora schizophorae*)

**Subphylum:** Entomophthoromycotina

**Class:** Zygomycetes

**Order:** Entomophthorales

**Family:** Entomophthoraceae

**Identification and Descriptive Features:** The fly fungus, *Entomophthora muscae*, is a parasite of several different kinds of flies. Infected insects typically die stuck to plants, sticks and other surfaces above ground. The abdomen of the killed fly typically becomes somewhat distended and the wings and legs stick out. A fine covering of whitish spores may cover much of the body. Outbreaks tend to occur in spring following wet weather.

**Distribution in Colorado:** Statewide

**Life History and Habits:** Infections begin when a conidia



**Figure 1.** Anthomyiid fly killed by the fly fungus and stuck to a leaf.





# Army cutworm

*Euxoa auxiliaris*

The predominant cutworm of the High Plains/Rocky Mountain region

.....and the common “Miller Moth” of the west





**Army cutworm larva – the most common spring feeding cutworm of the region**



Army cutworm develops on all manner of plants during spring, including alfalfa, winter wheat (and its weeds), gardens, and lawns







**Army cutworm feeding in a winter wheat field. Primary feeding occurs on broadleaf weeds.**

When full-grown the army cutworm caterpillar moves into the soil and pupates



**Pupae are present  
from March through  
late May**



Pupa

**Later the adults emerge – the Colorado 'Miller Moth'**



# Miller Moth

Term applied to any species of moth that is locally abundant

Term refers to the scales on moth wings that dislodge – like flour on the smock of a miller

Army cutworm  
moths have  
variable wing  
patterning



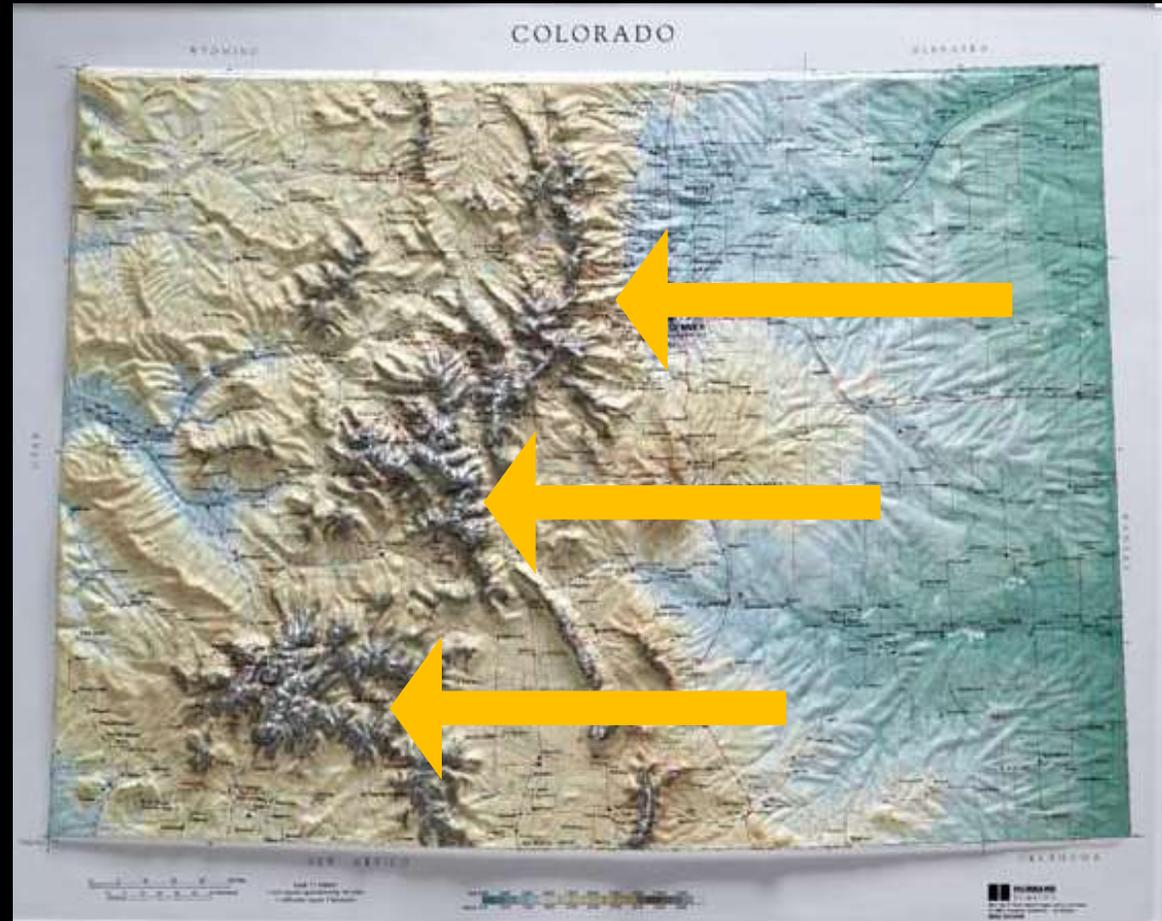
# Next Task.....



*Follow the flowers and stay cool*

# The Annual Migration

Move from the Plains  
to the mountains in  
May-June



Swallows at the intersections?



***Its Miller Time!***



During the day time miller moths  
army cutworm moths hide in tight  
dark crevices

Often these leads them to enter  
into homes and vehicles



Within a home army  
cutworm moths do not  
feed on anything nor  
do they lay any eggs

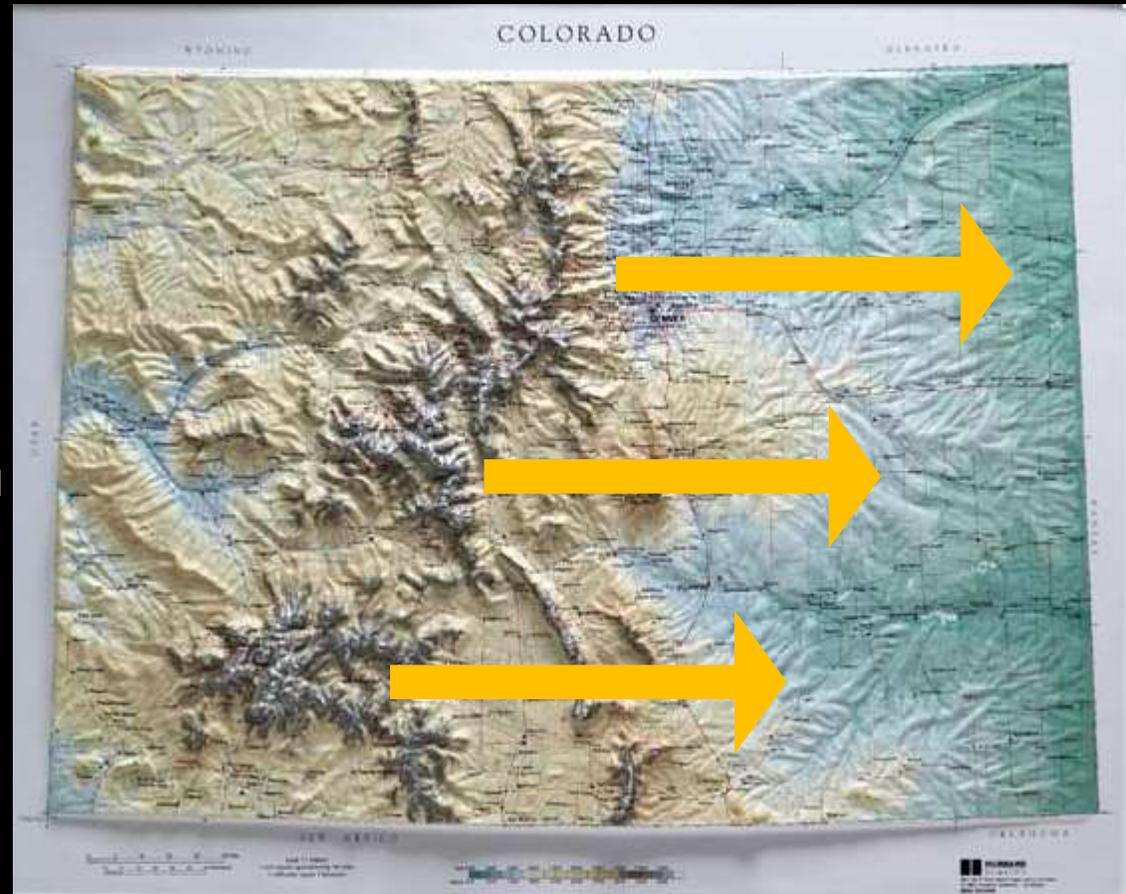
They can be a  
significant nuisance



# The Annual Migration

Move from the Plains to the mountains in May-June

Return to the Plains in September and early October



This is when they lay eggs in fields and gardens

# Plants Commonly Used as Miller Moth Nectar Sources

- Lilac, Chokecherry and other *Prunus*
- Spirea
- Euonymus
- Cotoneaster
- Russian olive



# Questions and Answers about Miller Moths

by Whitney Cranshaw and Frank Peairs

Colorado State University Extension Entomologists



## **2017 Situation with Nuisance Problems involving Army Cutworm (a.k.a. "Miller Moth")**

The 2017 spring flight of army cutworm moths migrating across eastern Colorado to the mountains has been very light and peaked in the latter half of June. In most places numbers of moths were so few that they were barely noticed, if at all.

This is the second year in a row of where numbers of this insect were well below historical levels. Indeed, the years 2016-2017 are the lowest years of "miller moth" nuisance problems in at least 30 years.



**LADY BEETLE**

# There is a Colorado State University Fact Sheet on the Lady Beetles found in the State

Colorado State University  
Extension

## Lady Beetles

Fact Sheet No. 5.594

Insect Series | Home and Garden



by W.S. Cranshaw\*

Lady beetles, also known as “ladybugs” or “ladybird beetles,” are familiar insects. Some 70 species are native to Colorado and about 10 to 12 additional species have established during the past century.

Overwhelmingly, habits of lady beetles are highly beneficial to human interests. Both the adult lady beetles and the grub-stage larvae have chewing mouthparts and are voracious predators of other insects. Although each type of lady beetle has preferences for what they will eat (e.g., aphids, scales, spider mites, mealybugs, etc.), they tend to have fairly broad tastes and feed on almost any small

scales (*Coccidophilus*, *Scymnus*) usually are uniformly black or dark brown. A few lady beetle species are even striped.

Lady beetles, as all beetles, develop in a pattern known as ‘complete metamorphosis.’ This involves **eggs**, mobile feeding-stage **larvae** that molt four times as they develop, transition-stage **pupae** that undergo changes to the final form, and ultimately the familiar **adults**.

Most lady beetle eggs typically are spindle-shaped and yellowish or orange-red in color. They are laid in clusters on leaves or other surfaces near aphids and

### Quick Facts

- About 80 different species of lady beetles (a.k.a., “ladybugs” and “ladybirds”) are present in Colorado.
- Adults and larvae feed on a variety of pest insects and mites, notably aphids and scales.
- Lady beetles can be invited into a garden by providing plants that adults use as nectar/pollen sources, sustaining levels of

**Most lady beetle adults  
are brightly colored**





Photograph courtesy Jim Kalisch, University of Nebraska





**Upper left:** *Coccidophilus*,  
a scale predator

**Lower left:** *Olla* sp., a grey  
colored lady beetle of  
forests

**Below:** *Chilocorus* sp., a  
predator of various scales





The “bad  
apple” of  
the lady  
beetle clan





Adult



Eggs

# Mexican bean beetle

- a plant feeding lady beetle



Pupa



Larva

Adults



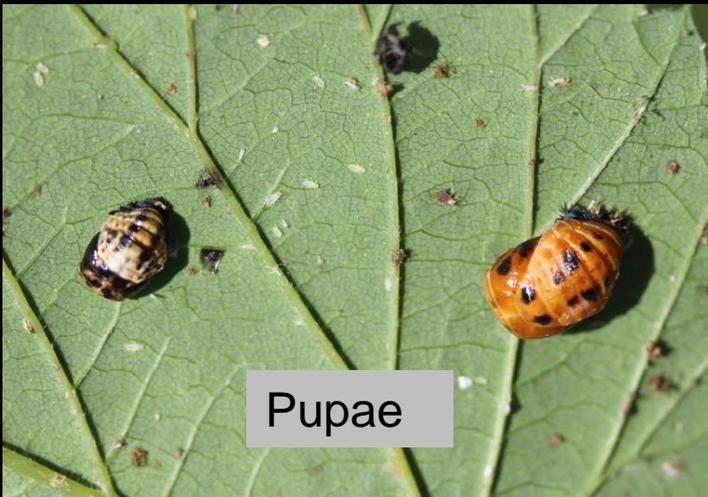
Eggs



Larvae



Pupae



# Lady Beetle Life Stages



Lady beetles with egg masses



**Lady beetles will lay their eggs on plants near where prey are available for their young**





Eggs hatch a week or two after being laid



Lady beetle larvae  
at egg hatch



Lady beetle larvae  
are the primary  
predatory stage



**All too often gardeners do not recognize lady beetle larvae. Don't let that happen to you!**





Lady beetle prepupae (stage just before they molt to a pupa)





**Lady beetle  
pupae**





**Stages of a newly molted convergent lady beetle**







**European earwig**  
*Forficula auricularia*

**Filament antennae,  
chewing mouthparts**

**Prominent cerci  
("pincers")**

**Short wing  
covers (elytra)**





Earwig unfolding wings. Despite the presence of a large hind wing, this species does not fly.



**The cerci (aka 'forceps'), are fairly weakly muscled. They are used during mating (by males) and can help to manipulate prey.**



**European  
earwig - male**



**European  
earwig - female**





**Female**

**Male**

Photograph courtesy of Jim Kalisch, University of Nebraska

# Earwigs have simple metamorphosis



Newly hatched nymphs

Mass of eggs

Mother tending eggs and young



**Mother earwig with 2nd instar nymphs**



Earwigs are *omnivores*

Small soft-bodied insects and insect eggs make up an important part of their diet.



Earwigs feed at night







**Flower petals and soft plant parts are also eaten by earwigs**

**Earwigs feed at night**



# Thigmotaxis – “a predilection for pressure”



# Earwigs – Increasing as garden problems?



# Mulches and Nuisance Invaders



- **European earwig**
- **Springtails**
- **Millipedes**



- **Sowbugs/Pillbugs**
- **Field crickets**
- **Some spiders**

# Recommendations for insecticides are included in the European Earwig Fact Sheet

Colorado State University

Extension

## European Earwigs

Fact Sheet No. 5.533

Insect Series | Home and Garden



by W.S. Cranshaw\*

The European earwig is an insect migrant from Europe that was established in the eastern United States around 1907. This insect rapidly spread across the United States and has occurred in Colorado since the 1950s.

The European earwig is about 5/8 inch long and brown with a reddish head. Young earwigs are similar in appearance to adults but smaller. A distinctive feature is the pair of prominent forceps at the rear of the body. Those of the male are more strongly curved than those of the female.

This is the only earwig found throughout most of Colorado. In the extreme southern

of debris. Peak problems with earwigs in Colorado tend to occur from mid-July through mid-September.

Earwigs are active at night and feed on a wide variety of materials. They occasionally cause injury to leafy plants such as lettuce and some flower blossoms. They often are associated with injuries caused by other insects. For example, leaves curled by aphids and holes in fruit are favorite hiding places for earwigs.

Earwigs mainly are a nuisance pest. Their reputation is made worse by the widespread fear that many people have regarding these insects. Several tales exist concerning alleged

### Quick Facts

- The common earwigs found in Colorado are an introduced insect that arrived in the state during the 1950s.
- Occasionally, earwigs damage soft parts of plants. However, the main food of earwigs is insects, including plant pests such as aphids.
- Earwigs like to hide in dark, tight-fitting areas during the

# Basic Earwig Trap Design for Bait Tests



# Baiting Evaluations

- Rolled corrugated cardboard or crumpled newspaper can be used in trap design
- Addition of either wheat bran or wheat germ ***greatly increase capture of earwigs in traps***
- Vegetable oil in a sunken cup is highly effective for earwig capture

# Canola oil in a small cup





**One night's  
capture!**