

A close-up photograph of a purple flower with a black bee on a yellow stamen. The bee is positioned at the bottom center, facing the stamen. The flower's petals are a vibrant purple, and the stamen is a bright yellow. The background is a soft, out-of-focus green.

# INSECTS

Will Peterman

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Unattributed photographs are my own.

All of the insects pictured except Periodic Cicadas and Cochineal are native to Washington state.

# Cochineal



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# Cochineal



# Not Cochineal



# Cochineal



order Hemiptera (a bug)  
related to aphids

# Not Cochineal



order Coleoptera (a beetle)  
eats aphids

# Cousins?



# Cousins?





# 300-350 million years



# Cicada



Kim Fleming (bugguide.net)

Order Hemiptera (a bug)

# Cicada



Lynette Schimming (bugguide.net)

Order Hemiptera (a bug)

# Cicada (winged adult)



Order Hemiptera (a bug)

# Cicada (nymph)



Order Hemiptera (a bug)

# Not Cochineal



order Coleoptera (a beetle)  
eats aphids

# Not Cochineal



order Coleoptera (a beetle)  
eats aphids

# Not Cochineal

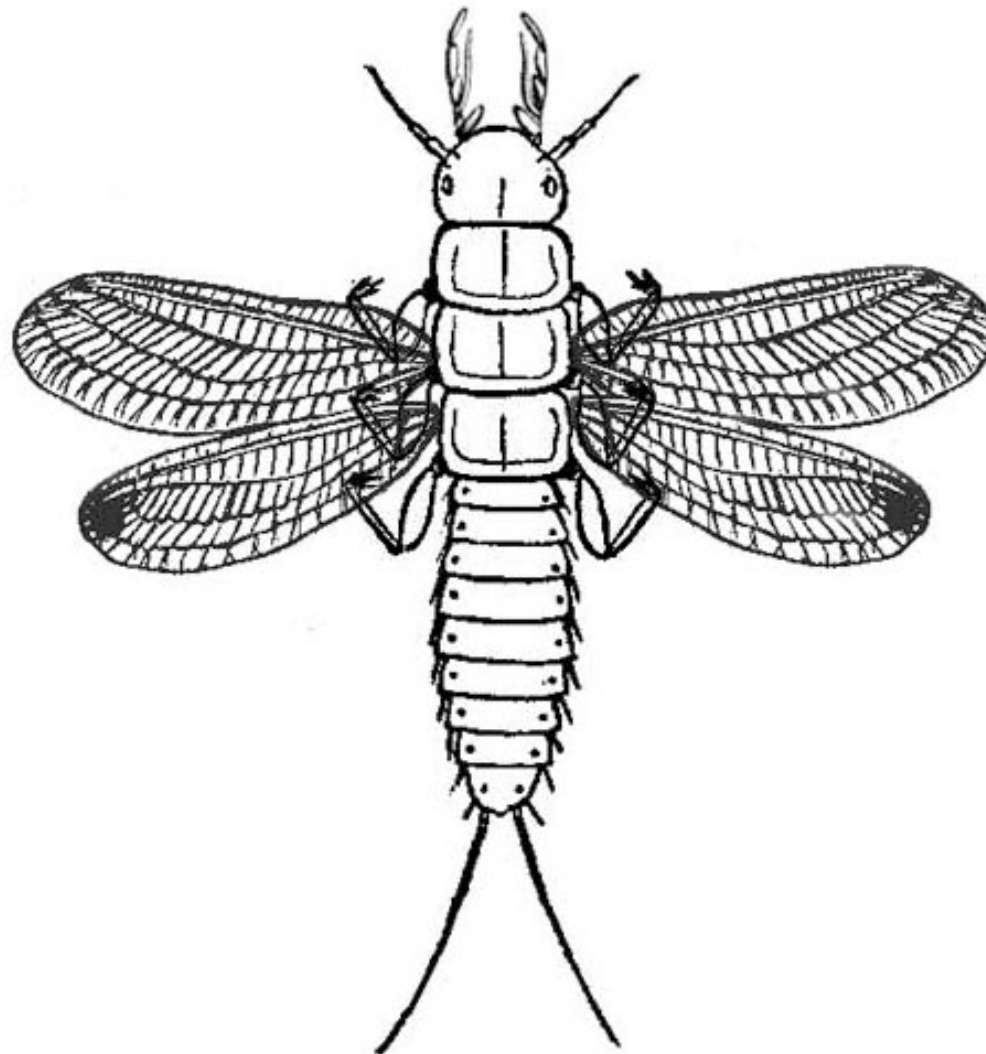


order Coleoptera (a beetle)  
eats aphids



# An insect

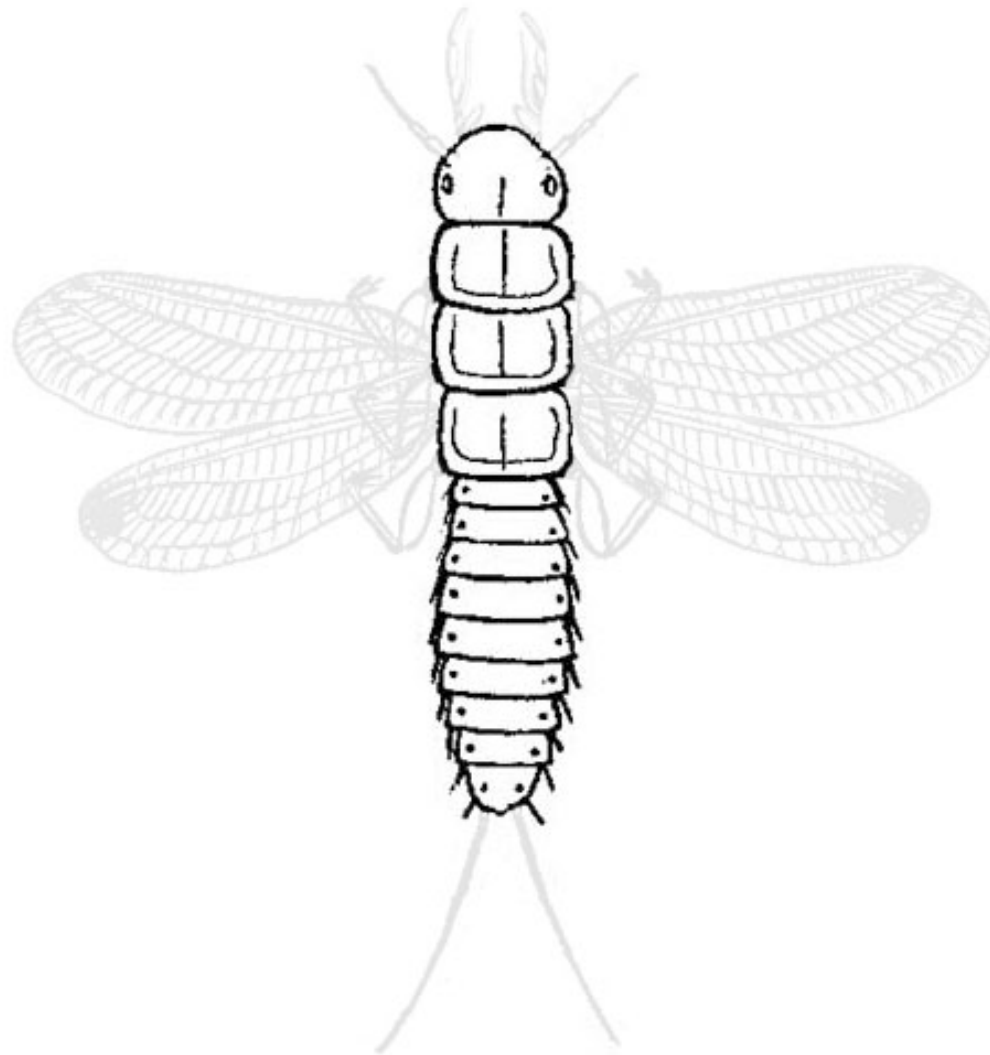
(a play in three acts)



(Insect composite from drawings in "Our Common Insects", by Alpheus Spring (1873), via Project Gutenberg)

# An insect

(a play in three acts)



# An insect

(a play in three acts)

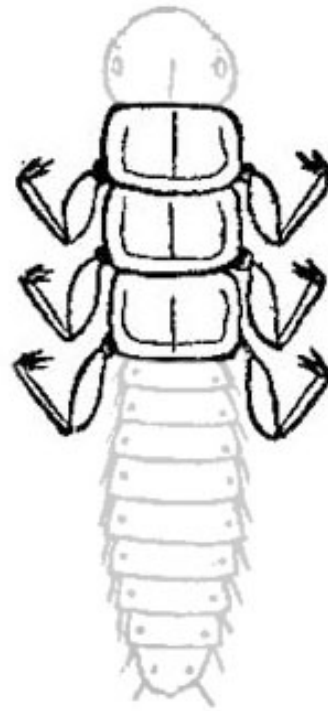
Thorax



# An insect

(a play in three acts)

Thorax

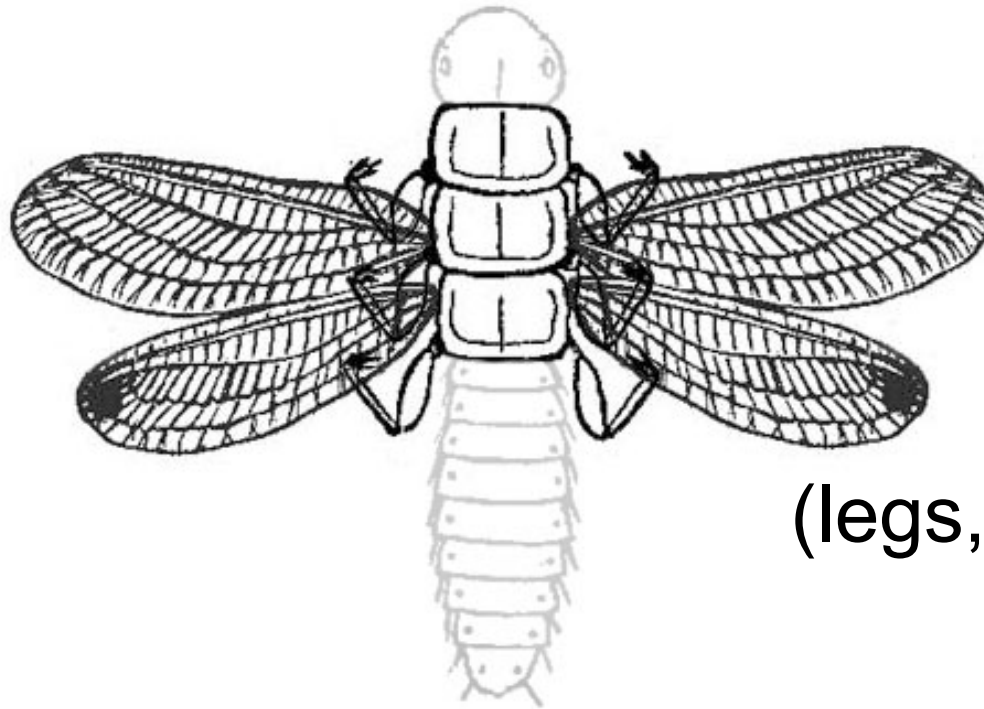


(legs)

# An insect

(a play in three acts)

Thorax



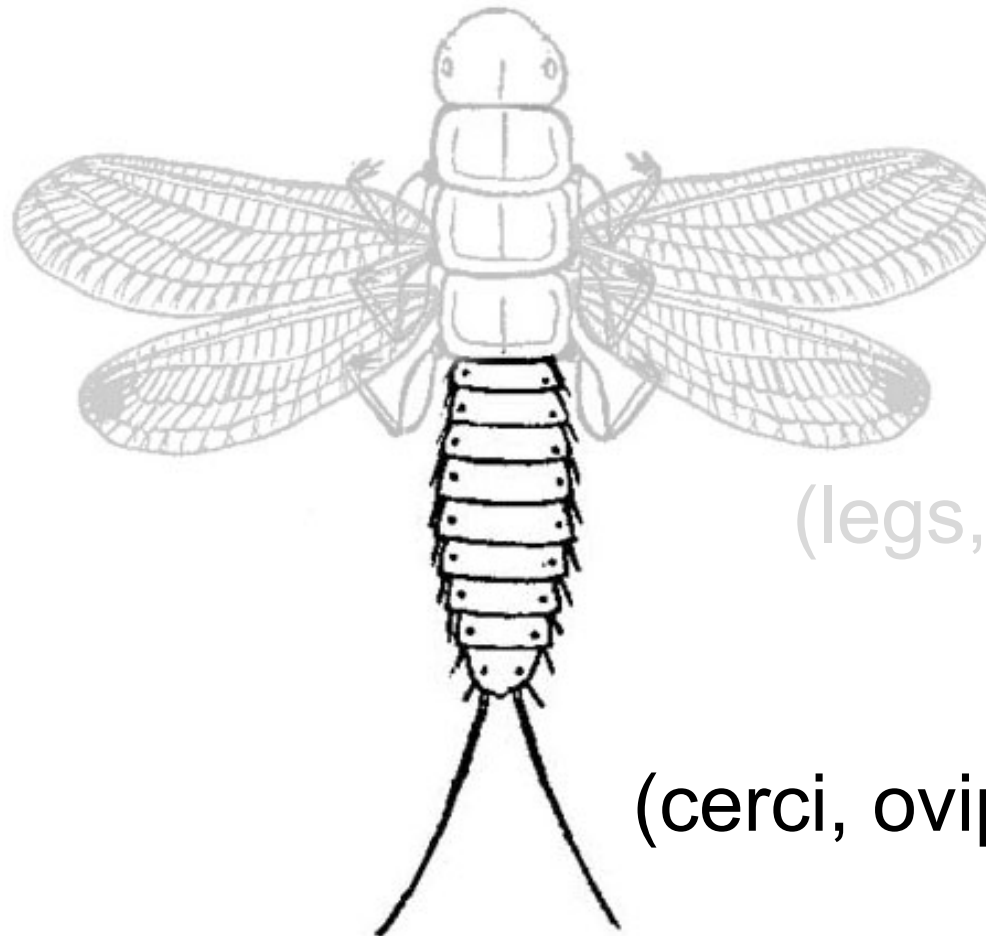
(legs, wings)

# An insect

(a play in three acts)

Thorax

Abdomen



(legs, wings)

(cerci, ovipositor)

# An insect

(a play in three acts)

Head

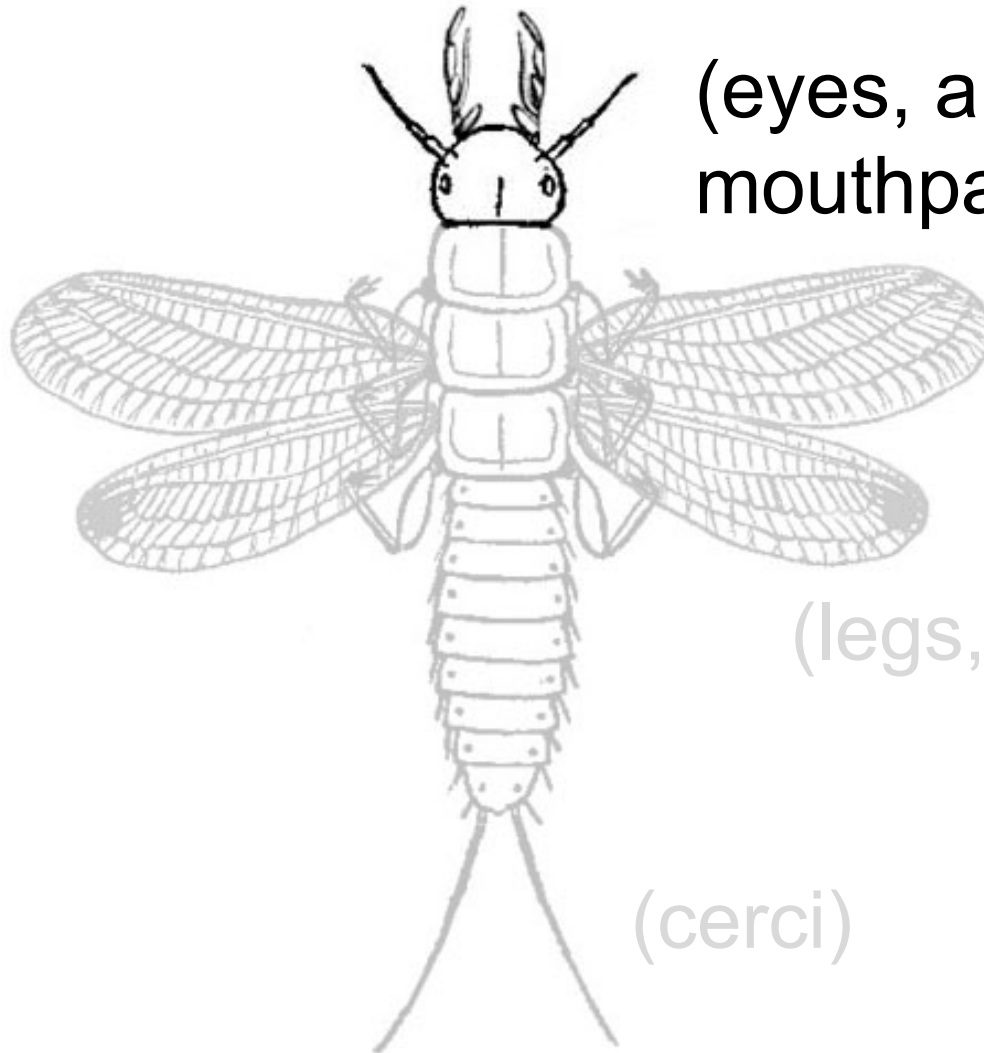
(eyes, antennae,  
mouthparts)

Thorax

Abdomen

(legs, wings)

(cerci)



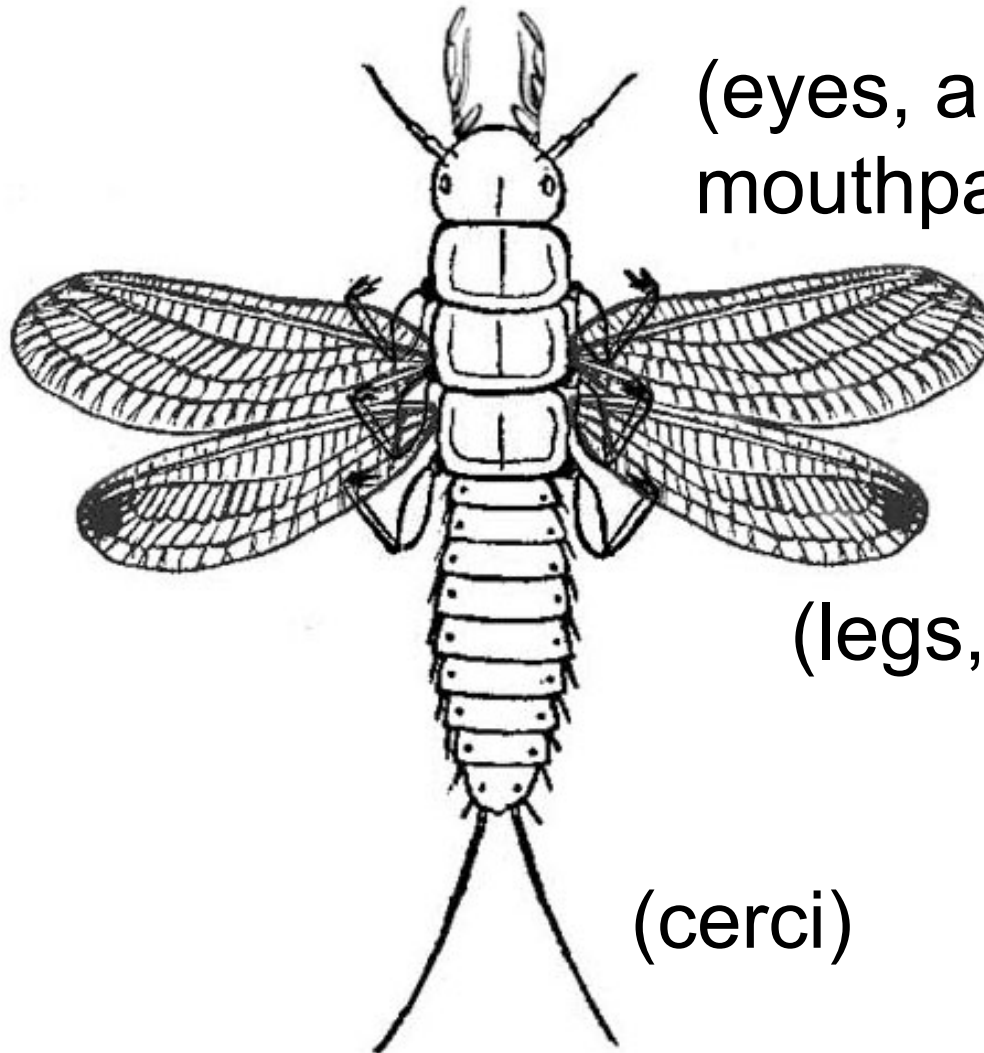
# An insect

(a play in three acts)

Head

(eyes, antennae,  
mouthparts)

Thorax



Abdomen

(legs, wings)

(cerci)



# Order Ephemeroptera

(mayflies)



(straight wing, incomplete metamorphosis)

# Order Ephemeroptera

(mayflies)



(straight wing, incomplete metamorphosis)

# Order Odonata

(dragonflies, damselflies... )



(straight wing, incomplete metamorphosis)

# Order Odonata

(dragonflies, damselflies...)



(straight wing, incomplete metamorphosis)

# Order Orthoptera (“straight wing”)

(grasshoppers, katydids... )



(folded wing, incomplete metamorphosis)

# Order Orthoptera (“straight wing”) (grasshoppers, katydids... )



(folded wing, incomplete metamorphosis)

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(grasshoppers, katydids... )



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# Order Orthoptera (“straight wing”)

(grasshoppers, katydids... )

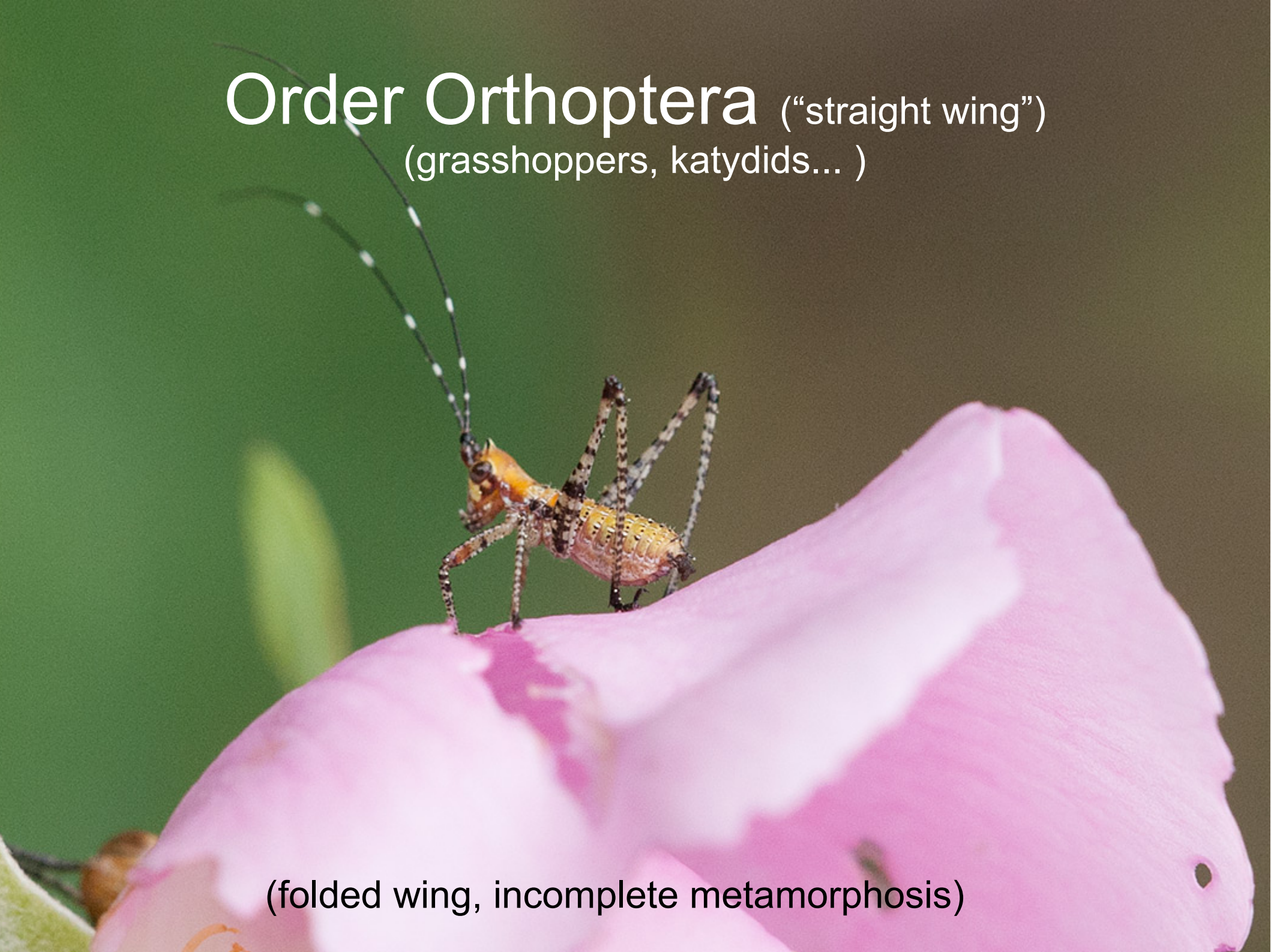


(folded wing, incomplete metamorphosis)



# Order Orthoptera (“straight wing”)

(grasshoppers, katydids... )



(folded wing, incomplete metamorphosis)

# Order Dermaptera (“skin wing”) (earwigs)



(folded wing, incomplete metamorphosis)

# Order Dermaptera (“skin wing”) (earwigs)



(folded wing, incomplete metamorphosis)

# Order Hemiptera (“half wing”) (bugs)



(folded wing, incomplete metamorphosis)

# Order Hemiptera (“half wing”) (bugs)



(folded wing, incomplete metamorphosis)

# Order Coleoptera (“sheath wing”) (beetles)



(folded wing, complete metamorphosis)

# Order Coleoptera (“sheath wing”) (beetles)



(folded wing, complete metamorphosis)

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# Order Coleoptera (“sheath wing”) (beetles)



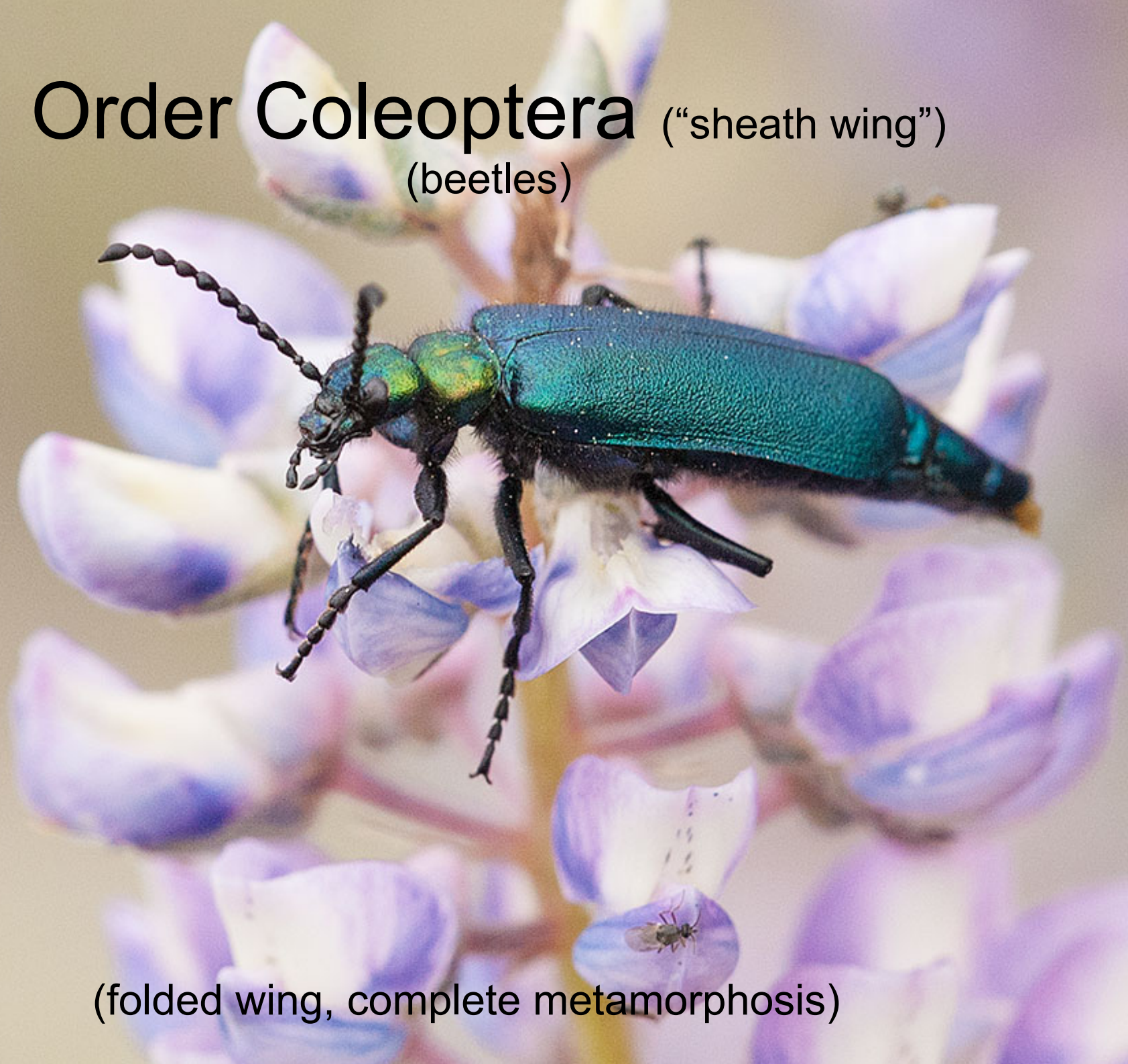
(folded wing, complete metamorphosis)

# Order Coleoptera (“sheath wing”) (beetles)



(folded wing, complete metamorphosis)

# Order Coleoptera (“sheath wing”) (beetles)



(folded wing, complete metamorphosis)

# Order Diptera (“two wing”) (flies)



(folded wing, complete metamorphosis)

# Order Diptera (“two wing”) (flies)



(folded wing, complete metamorphosis)



# Order Diptera (“two wing”) (flies)



(folded wing, complete metamorphosis)

# Order Diptera (“two wing”) (flies)



(folded wing, complete metamorphosis)

# Order Diptera (“two wing”) (flies)



(folded wing, complete metamorphosis)

# Order Diptera (“two wing”) (flies)



(folded wing, complete metamorphosis)



Order Diptera (“two wing”)  
(flies)

(folded wing, complete metamorphosis)

# Order Lepidoptera (“scale wing”)

(moths, including butterflies)



(folded wing, complete metamorphosis)

# Order Lepidoptera (“scale wing”)

(moths, including butterflies)



(folded wing, complete metamorphosis)

# Order Lepidoptera (“scale wing”) (moths, including butterflies)



(folded wing, complete metamorphosis)



# Order Hymenoptera (“membrane wing”)

(sawflies, wasps, ants, and bees)



(folded wing, complete metamorphosis)

# Order Hymenoptera (“membrane wing”)

(sawflies, wasps, ants, and bees)



(folded wing, complete metamorphosis)

# Order Hymenoptera (“membrane wing”)

(sawflies, wasps, ants, and bees)




(folded wing, complete metamorphosis)

# Order Hymenoptera (“membrane wing”)

(sawflies, wasps, ants, and bees)



(folded wing, complete metamorphosis)

A close-up photograph of an ant colony's nest. The nest is a dark, tunnel-like structure in the soil. Numerous ants, with dark bodies and reddish-brown heads, are seen moving through the tunnels. They are surrounded by many pale, translucent, oval-shaped larvae of various sizes. Some larvae are clustered together, while others are scattered. The lighting is bright, highlighting the textures of the soil and the bodies of the insects.

# Order Hymenoptera (“membrane wing”)

(sawflies, wasps, ants, and bees)

(folded wing, complete metamorphosis)

# Order Hymenoptera (“membrane wing”)

(sawflies, wasps, ants, and bees)



(folded wing, complete metamorphosis)

# Order Hymenoptera (“membrane wing”)

(sawflies, wasps, ants, and bees)



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(sawflies, wasps, ants, and bees)



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# Order Hymenoptera (“membrane wing”)

(sawflies, wasps, ants, and bees)



(folded wing, complete metamorphosis)

# Order Hymenoptera (“membrane wing”)

(sawflies, wasps, ants, and bees)

Mining bee (*Andrena*)



# Order Hymenoptera (“membrane wing”) (sawflies, wasps, ants, and bees)



Sweat bee (*Agapostemon*)

# Order Hymenoptera (“membrane wing”)

(sawflies, wasps, ants, and bees)



Bumble bee (*Bombus*)

# Order Hymenoptera (“membrane wing”)

(sawflies, wasps, ants, and bees)



Small carpenter bee (*Ceratina*)

# Order Hymenoptera (“membrane wing”) (sawflies, wasps, ants, and bees)



Mason bee (*Osmia*)











**Order Diptera**  
(robber fly)





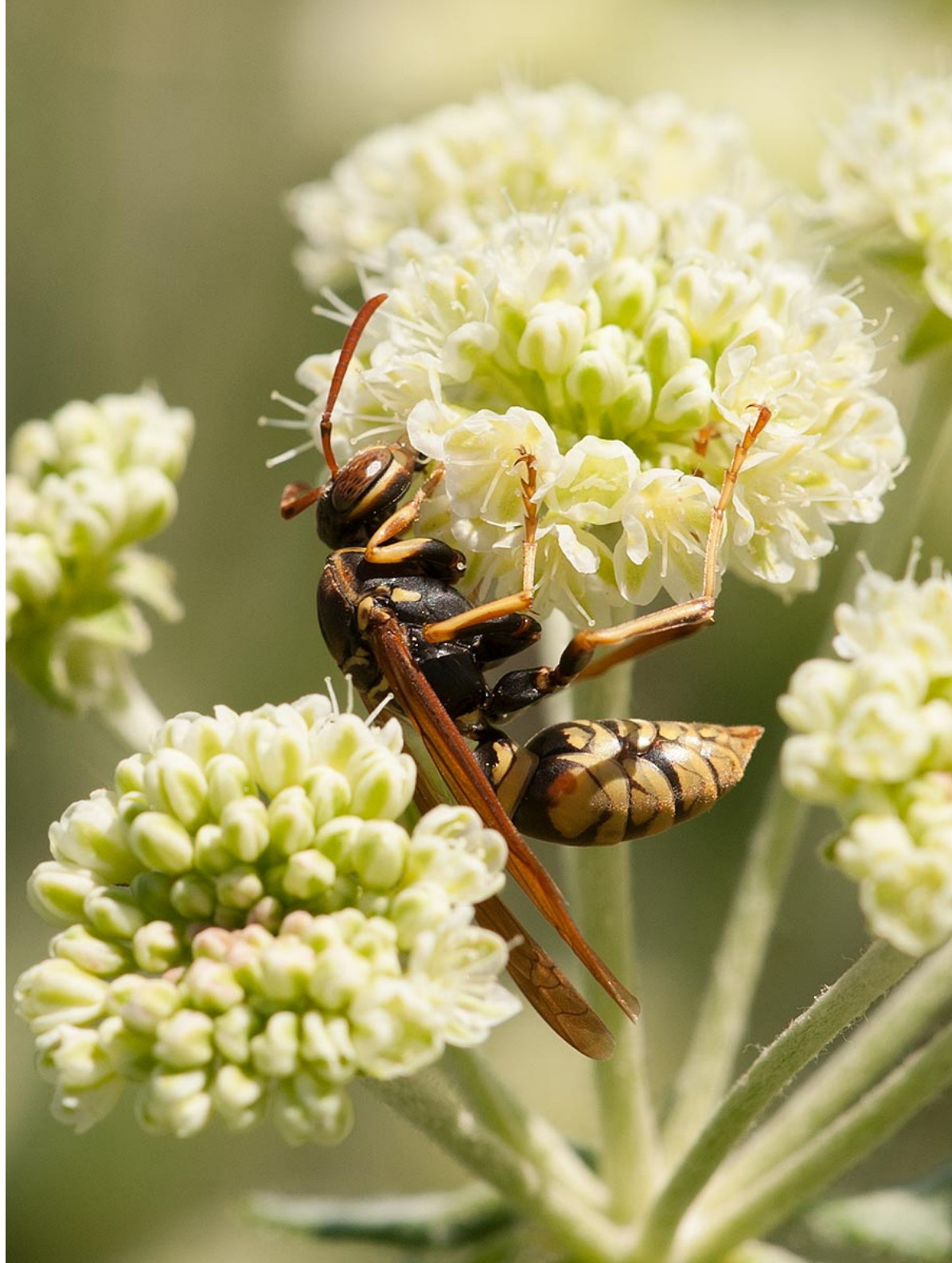
Order Hymenoptera  
(longhorn bee)





Order Coleoptera  
(reticulated beetle)







Order Hymenoptera  
(paper wasp)





Order Coleoptera  
(longhorn beetle)





Order Hemiptera  
(assassin bug)





**Order Diptera**  
(hover fly)







Order Hemiptera  
(stink bug)





Order Lepidoptera  
(sphinx moth)





Order Scorpiones  
(northern scorpion)