

Insects as Pests and Helpers

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Wildcat District Horticulture

Some insects help us...



Photo Credit: University of Minnesota Extension

Other insects cause problems!



Photo Credit: Mississippi State University Extension

Consider How Insects Eat

Some take bites (chewing)...



Photo Credit: Texas A&M AgriLife Extension

others poke (piercing-sucking).



Photo Credit: Insects in the City – Texas A&M AgriLife Extension

Some sip...



and others slash and drink (rasping).

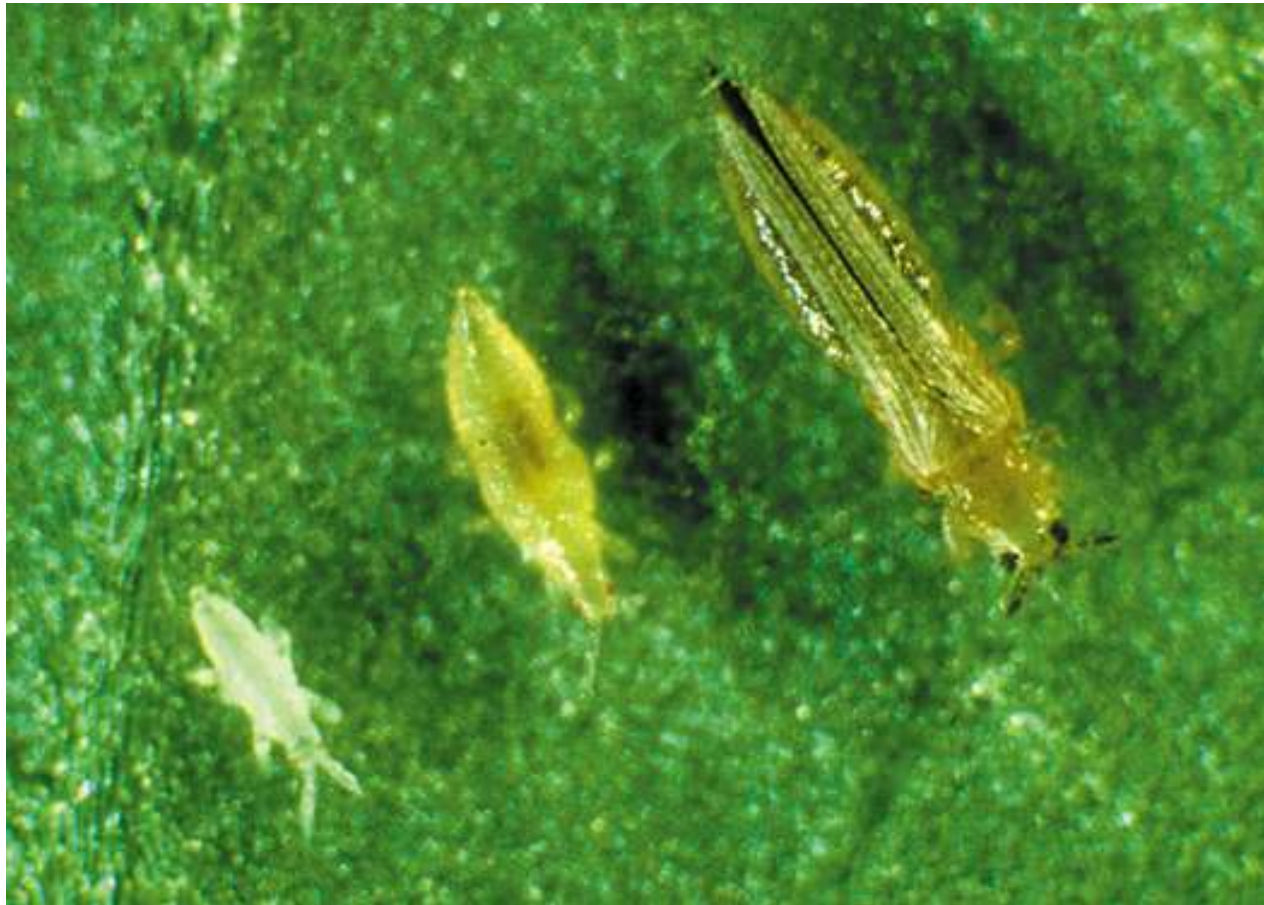


Photo Credit: Kansas State University Entomology

How Insects Defend Themselves

They hide!



Photo Credit: Blake Layton, Mississippi State University Extension Service

They emit foul odors!



Photo Credit: Bugguide.net

They bite!



Photo Credit: Pestwiki.com

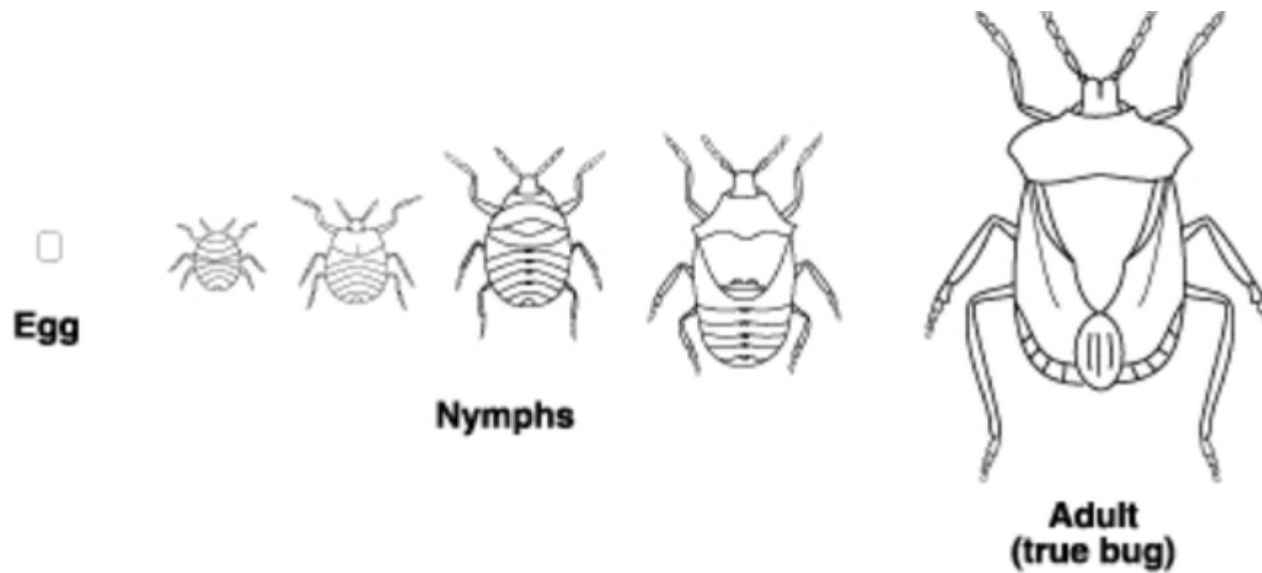
They sting!



Photo Credit: Bees – Oklahoma Cooperative Extension

Life Stages of Insects

Metamorphosis (gradual)



Credit: Wisconsin State University Extension

Wheel Bug (eggs)



Photo Credit: BugGuide.net

Wheel Bug (nymph)

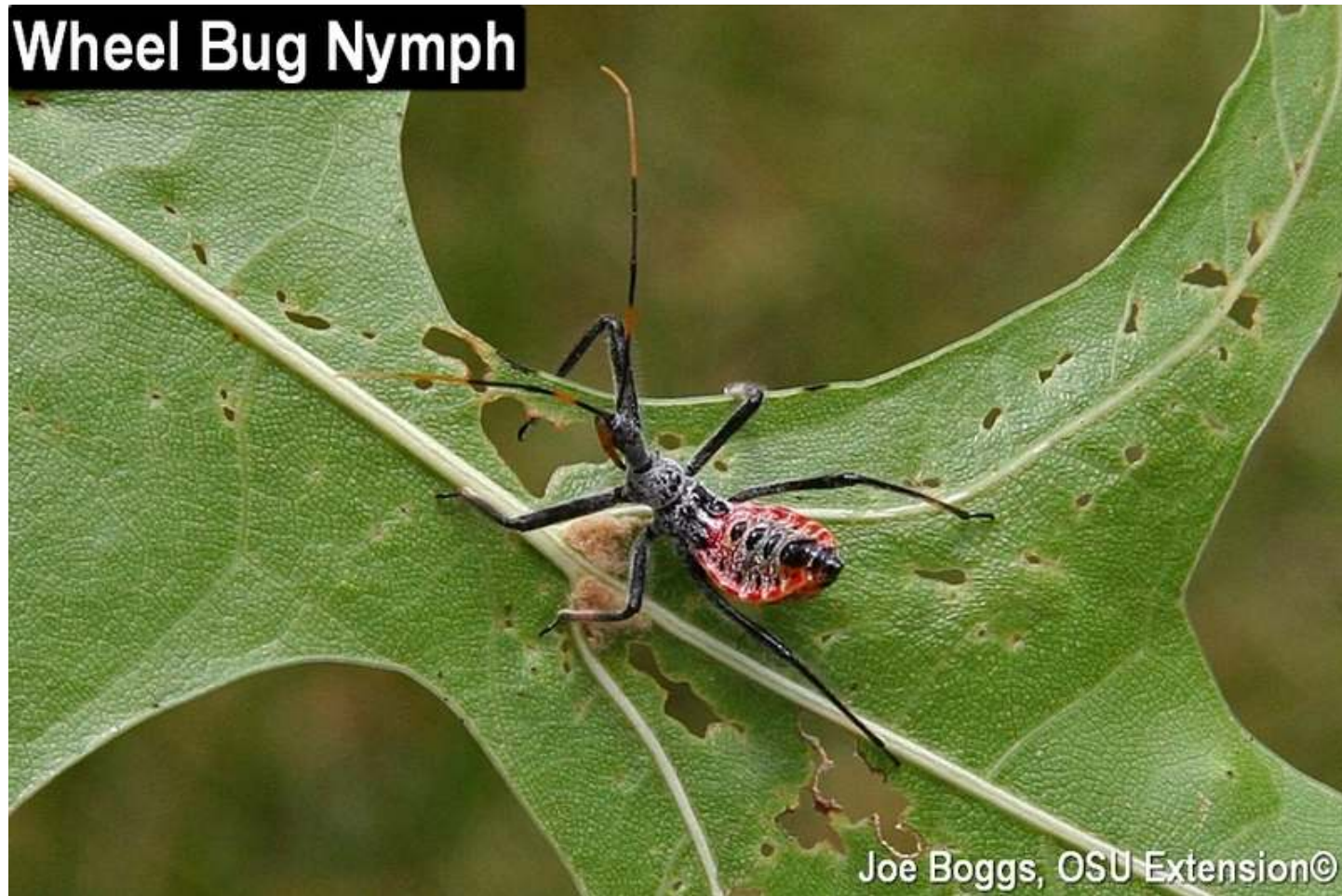


Photo Credit: Ohio State University Extension

Wheel Bug (adult)

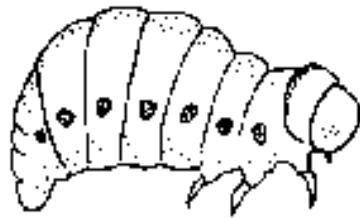


Photo Credit: Ohio State University Extension

Metamorphosis (complete)



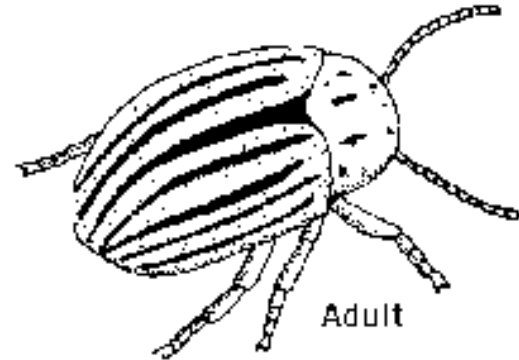
Egg



Larvae



Pupa



Adult

Credit: North Carolina Extension Service

Monarch Butterfly (egg)



Photo Credit: Iowa State University Extension

Monarch Butterfly (larvae)



Photo Credit: Kansas State University Extension Entomology

Monarch Butterfly (pupae/chrysalis)



Photo Credit: Texas A&M Aggie Horticulture

Monarch Butterfly (adult)



Insects Affecting People

Mosquitos



Photo Credit: Purdue University Extension Entomology

Bed Bugs

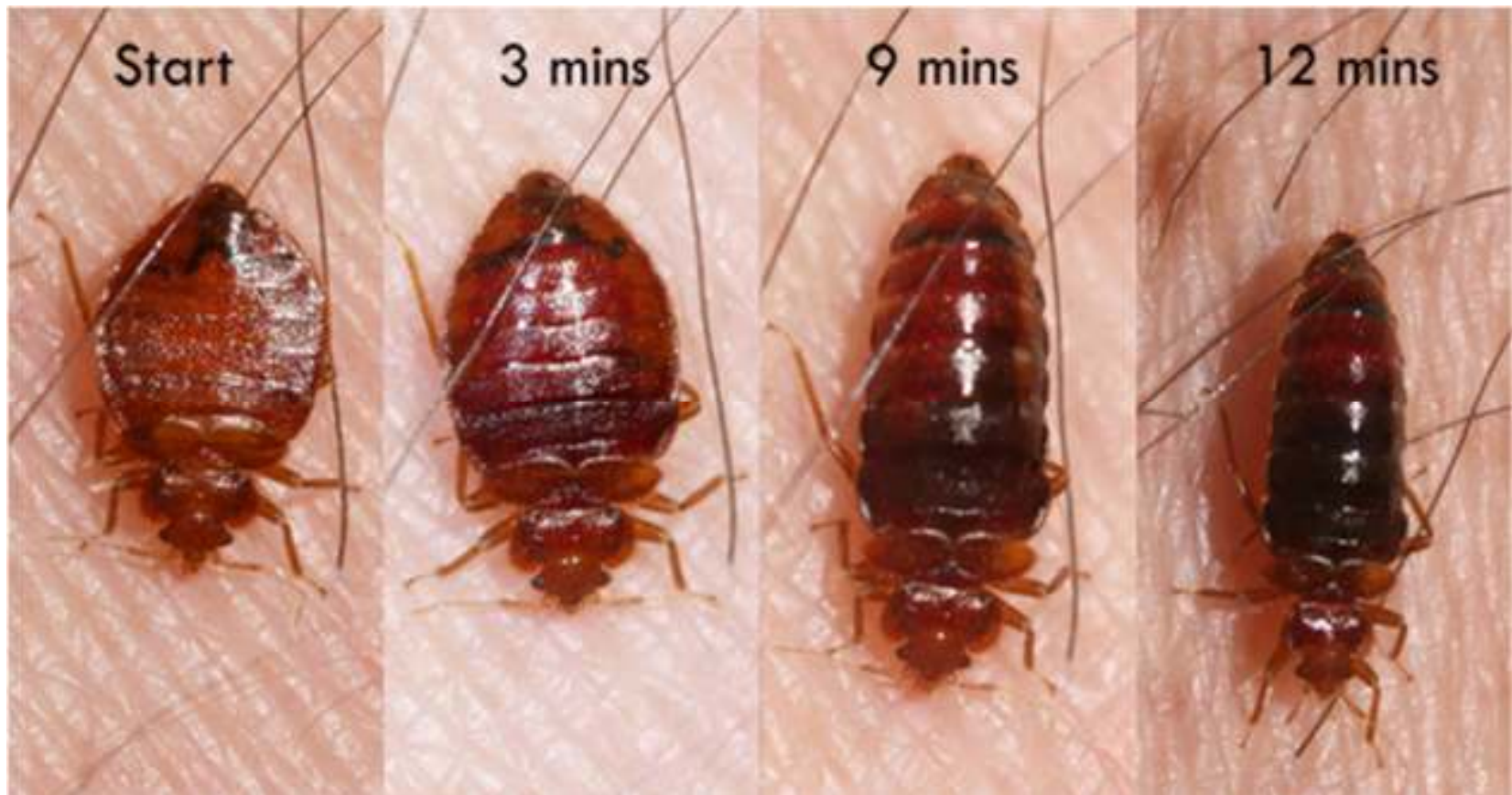


Photo Credit: Insects in the City – Texas A&M AgriLife Extension

Cockroaches



Photo Credit: Bugwood.org

Confused Flour Beetle



Photo Credit: Main Department of Agriculture

Indian Meal Moth



Photo Credit: University of Maryland Extension

Clothes Moths



Photo Credit: Clemson University Cooperative Extension

Termites



Photo Credits: Mississippi State University Extension

Insects of Gardens, Flowers and Lawns

Aphids



Photo Credit: University of Minnesota Extension

Asparagus Beetles



Cucumber Beetles



Photo Credit: Mississippi State University Extension

Chinch Bug



Photo Credit: Kansas State University Entomology

Grasshoppers



Photo Credit: Kansas State University Extension Entomology

Japanese Beetles



Potato Beetles



Photo Credit: University of Florida Extension

Stinkbugs



Photo Credit: University of Tennessee Extension

Squash Bugs



Photo Credit: Purdue University Entomology

Squash Vine Borers



Western Flower Thrips



White Grubs (June Beetles)



Photo Credits: Forestpests.org/Maine.gov

Insects Attacking Trees and Shrubs

Bagworms



Photo Credit: Texas A&M University Extension

Catalpa Worms



Emerald Ash Borers (exotic)



Photo Credit: Ohio State University Extension

Euonymus Scale



Flat-headed Borers



Photo Credit: Bugwood.org

Pine Sawflies



Walnut Caterpillars



Woolly Aphids



Yellow-necked Caterpillars



Beneficial Insects

Preying Mantis



Braconid Wasps



Photo Credits: University of Maryland Extension/David Cappaert - Bugwood

Green Lacewing



Photo Credit: Kansas State University/North Carolina State University

Lady Beetles



Photo Credit: Purdue State University

Ichneumonid Wasps



Photo Credit: North Carolina University Extension

Wheel Bugs



Photo Credit: North Carolina State University Cooperative Extension Service

Thank You Very Much!
