

Bugs in edible gardens

the good vs the bad

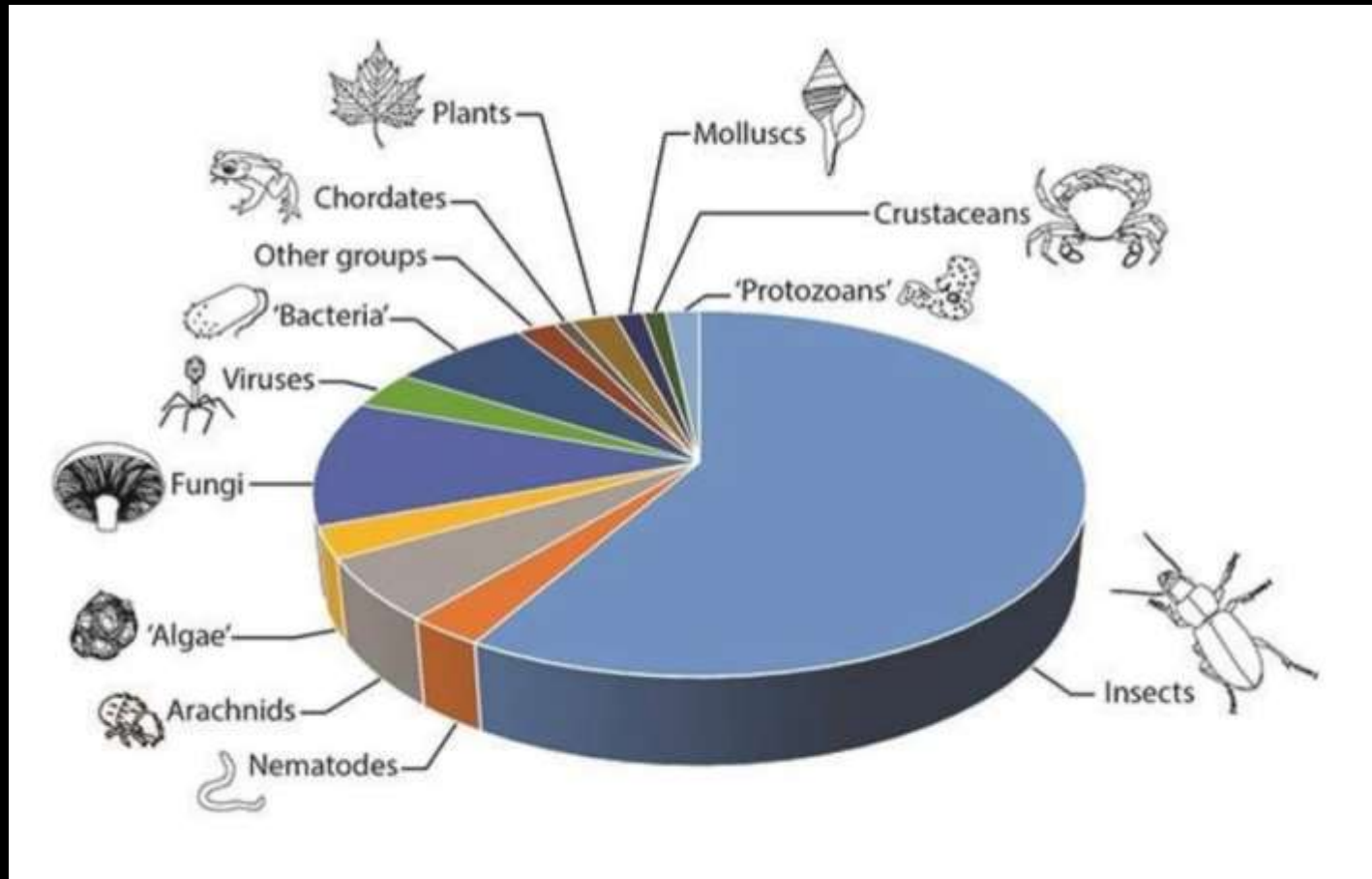


Luke Halling

bugluke@gmail.com

What is Entomology?

The study of insects



What is Entomology?

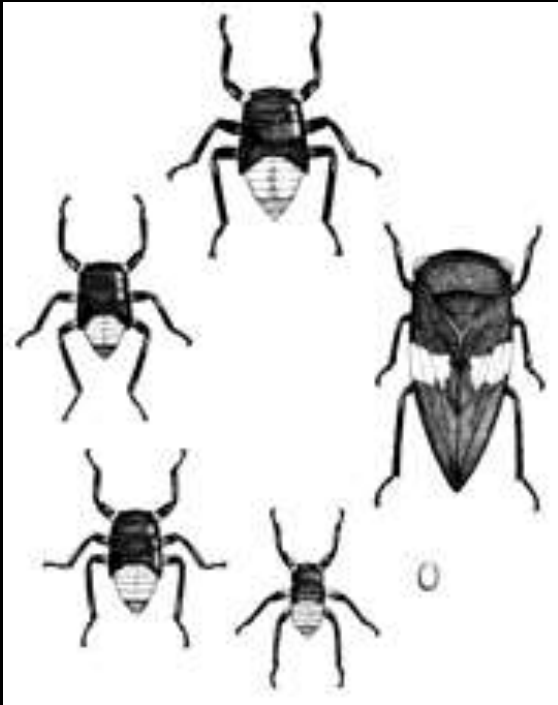
The study of insects

My 4-year old says, "daddy - those bugs are giving a piggyback ride!". Slightly embarrassed I decided she was old enough for 'the talk.' I sit her down and say, "Pumpkin - those are beetles, not bugs."

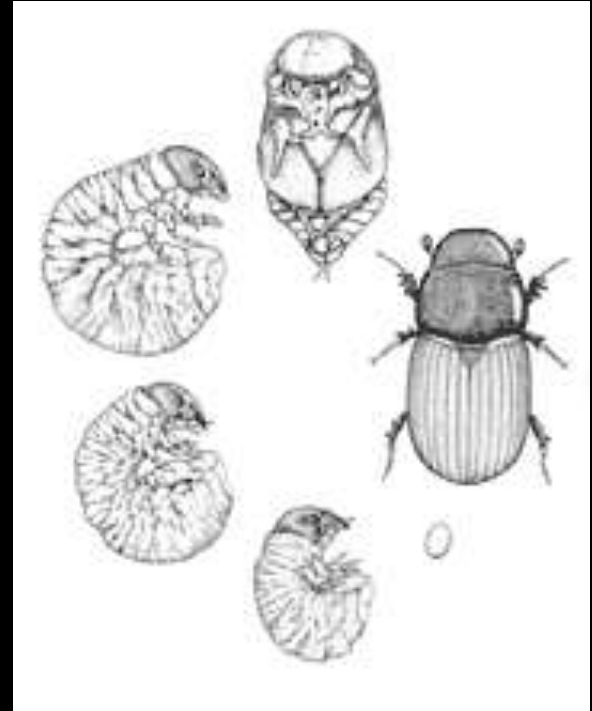
If you aren't talking to your kids about entomology, who is?



Insect life cycles



Incomplete metamorphosis



Complete metamorphosis

Common pests of food plants

Mites

Beetles

Flies

Scale and mealybugs

Aphids

Plant hoppers and true bugs

Termites

Moths and butterflies

Grasshoppers

Thrips

Mites



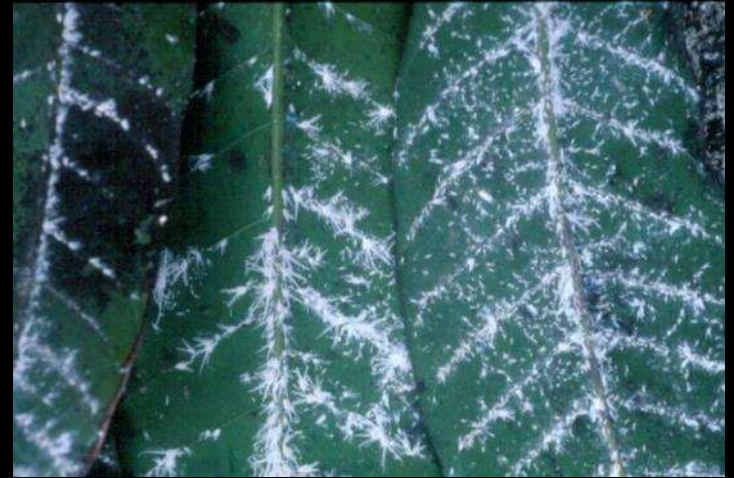
Beetles



Flies



Scale insects and mealybugs



Aphids



Plant hoppers



True bugs



Termites



Moths and butterflies



Grasshoppers



Thrips



Common predators and parasites

Mites

Beetles

Flies

True bugs

Wasps

Lacewings

Mantises

Spiders

Birds

Lizards

Fungi

Predatory Mites



Predatory beetles



Predatory and parasitic flies



Predatory true bugs



Wasps



Lacewings



Mantises



Spiders



Birds



Lizards



Fungi



Other beneficials - pollinators



Pest Management

Prevention

Resistant or tolerant plants

Soil quality and management

Crop rotation and diversity

Encouraging biological controls

Food, water and shelter

Treatments

Removal of pests and habitats

Insecticides: specific or broad spectrum

Repellents: potent, volatile compounds

Attractants: pheromones and other lures

Dessicants: soaps

Suffocation: oils

Pest Management

Expertise:

Australasian biological control: <http://www.goodbugs.org.au>

State Department of Agriculture: QDAF

Nurseries

Agriculture Co-operatives

Online information

If you can't beat 'em, eat 'em.

Many insects are edible and very nutritious



Bon appetit!