



G O L D E N A C R E
H O M E & G A R D E N

SINCE 1967

Garden bugs and disease.



Bugs and diseases.

- Every garden will experience bugs and disease.
- No such thing as a beneficial disease.
- Can spread to indoor plants.
- Good bugs and bad bugs often live together.
- Bug infestations can lead to disease and vice versa.
- Correct identification is key.
- The best treatment is prevention.
 - Cleanliness.
 - Health.
 - Following best practices.



Disease.





Disease overview.

- Never good for the garden.
- Fungal is the most common type.
- Bacterial is also prevalent.
- Physiological disease also occurs.
- Correct diagnosis is key.
- Rarely, if ever, one and done treatment.
- Untreated can kill plants and continue spread.

Fungal disease.

- Most common disease in a garden.
- Spread via spores.
- Spread by wind, bug, animal, bird, human contact.
- Loves overcrowding and wet areas.
- Thrives in warm, damp, shade.
- Some plants are naturally susceptible.



Common fungal diseases.

- Powdery mildew.
- Black knot.
- Black spot.
- Rust.
- Root rot.
- Botrytis blight





Treating fungal disease.

- Pruning, especially black knot.
- Avoid dense, wet, mulches.
- Treat early, often before signs.
- Most fungicides are preventative.
- Be aware of existing problems.
- Treat before symptoms develop.
- Be careful when watering.
- Some plants cannot be saved.



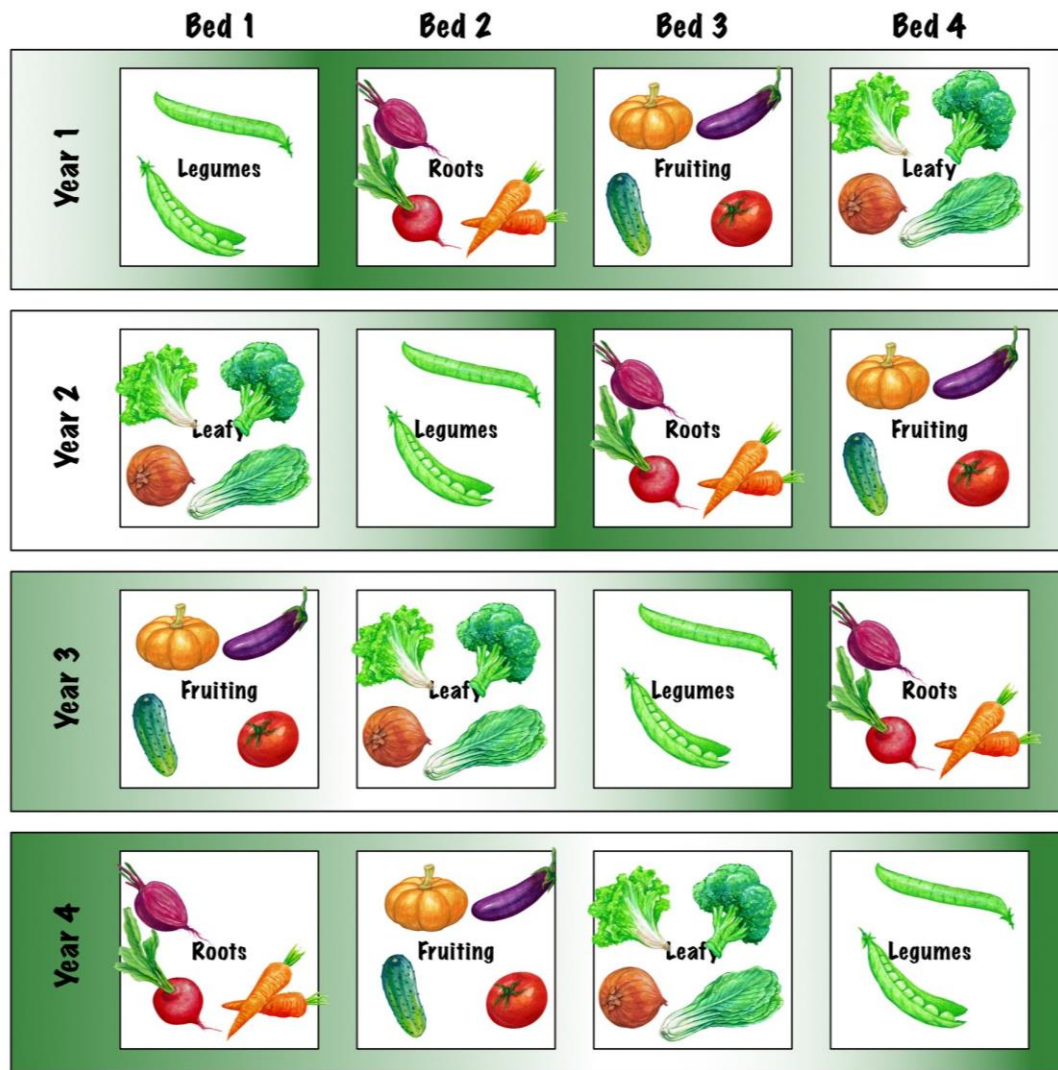
Bacterial disease.

- Less common disease in a garden.
- Spread by contact and in infected tools, amendments, propagating materials and other plants.
- Frequently overwinters.
- Thrives in warm, damp, shade.
- Some plants are naturally susceptible however lots of plants are naturally resistant.
- No actual treatment.

Common bacterial diseases.

- Fire blight.
- Canker.
- Wilt.
- Gall.
- Soft rot.
- Scab.





Treating bacterial diseases.

-
- No actual treatment.
 - Prevention is key.
 - Utilizing resistant strains.
 - Crop rotation.
 - Pruning can help.
 - Promote overall health.
 - Keep leaves, stems, fruits dry as possible.
 - Work on plants when cool and dry.

Physiological disease/disorder.



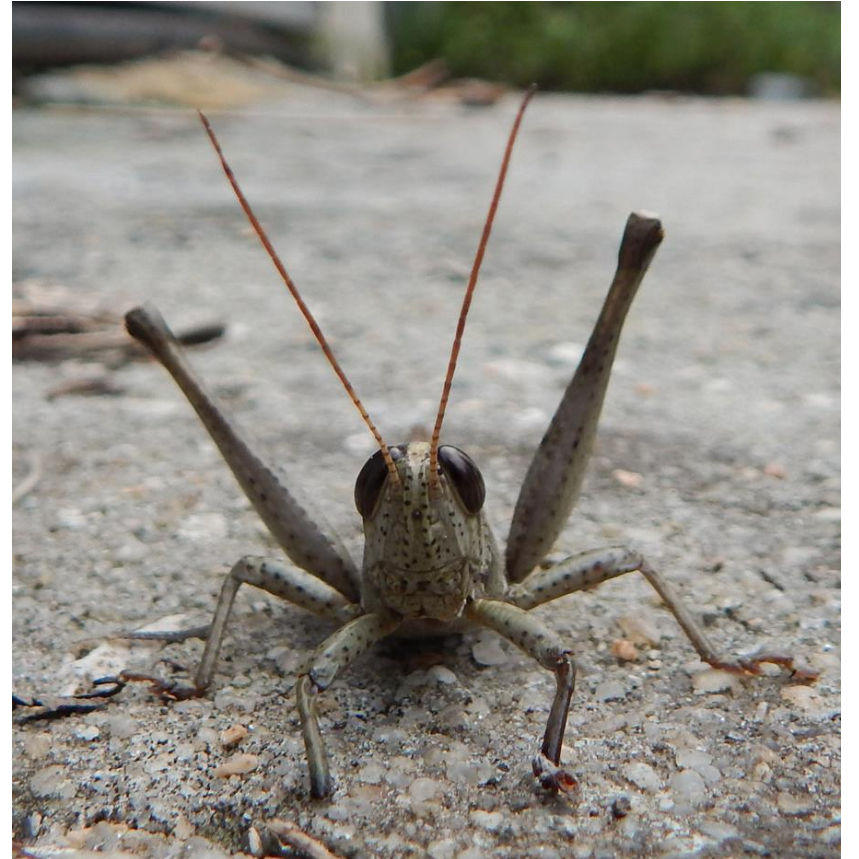
- Physiological disease/disorder refers to plants that are being affected by physical conditions. This may be light exposure, moisture content, nutrient deficiency. Once recognized it is the easiest to treat as it simply requires adding nutrients, changing the location or conditions. Keeping plants healthy is the number one way to control this issue.



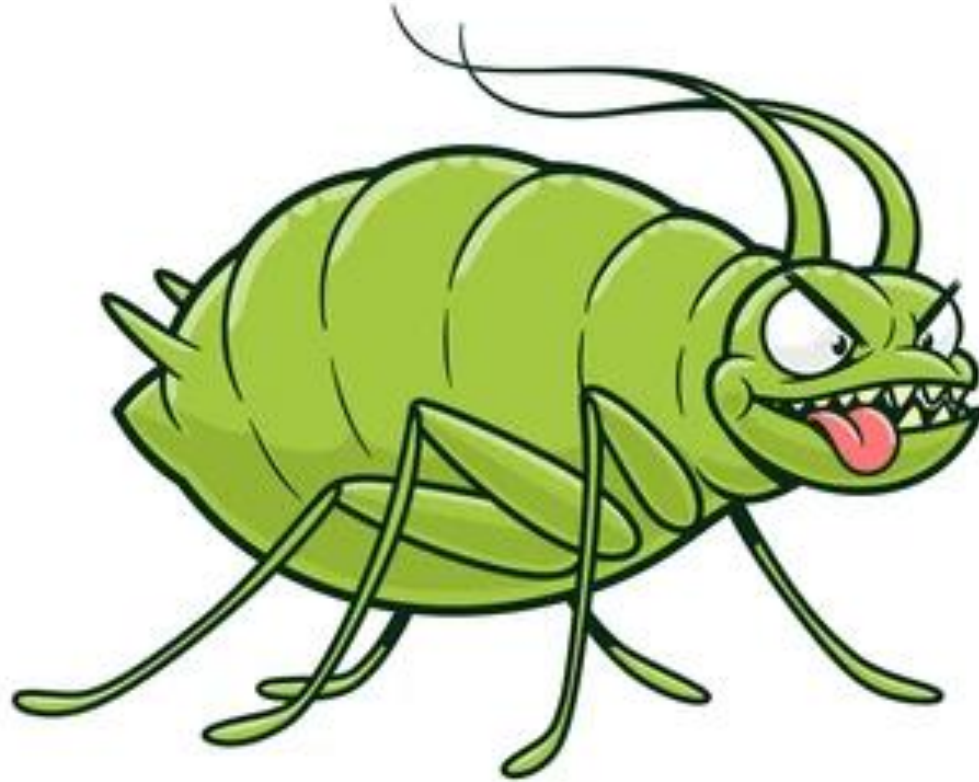
The Good, the Bad and the Bugly.

Bugs overview.

- Bugs, both good and bad are inevitable.
- Great indicators of health.
- No need to panic, better to react accordingly.
- Observing is key.
- Certain bugs can indicate other issues.
- **Most** are easily treatable.
- Hand removal is possible.
- Chemical sprays and biological options are available.
- Biological treatment is by far the best option.



Bad bugs.





Aphids.

Tiny black, green, yellow or even “wooly” sap sucking bugs. They feed on plant juices and sugars. Causing yellow, curled, stunted or misshaped leaves. They leave behind a sugary waste which can attract ants and/or wasps. They can weaken plants making them susceptible to other pathogens.





Spider mites.

A type of arachnid. Live primarily on the underside of leaves. Feeding on the chlorophyll their damage will result in many tiny white spots or a stippled appearance. They end up weakening plants and can cause death or allow other pathogens in.





Slug/Snail

A voracious herbivore. Preferring tender leaves slugs cause full on physical damage. Preferring damp, shady locations they can defoliate plants overnight. Weakening plants both structurally and through leaving open wounds. They can also attract skunks and raccoons into the garden. They adore large, leafy green vegetables.





Scale insects

A very tenacious and well armoured pest that sucks sap out of branches causing severe dieback and overall weakness. Developing a solid shell makes them resistant to predators, elements and most pesticides. Often appear slowly then explode in population size.





Lily beetle

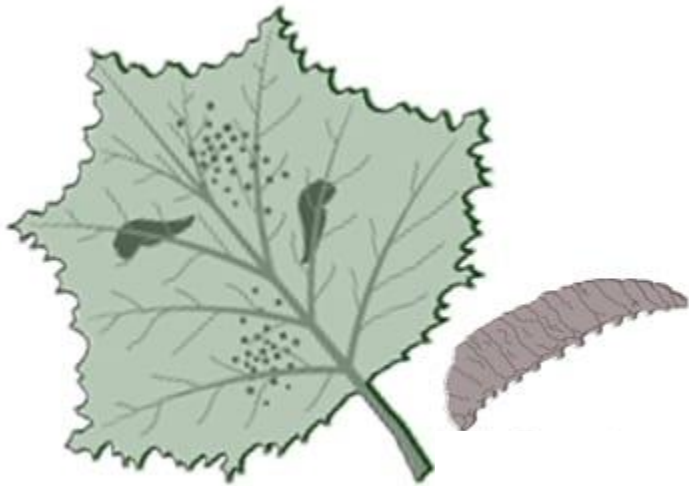
Often initially mistaken as a ladybird beetle this critter could not be further apart. Incredibly voracious they can often wipe out lilies. Causing devastating physical damage Fortunately the bright red makes them easy to spot and they can be physically picked off or sprayed with trounce.





Leaf miner.

Few bugs are more vilified, and rightfully so, than the leaf miner. The adult lays eggs in the leaf. As they hatch, they eat out the inside and emerge as a larvae falling to the ground. They burrow into the earth, cocoon, emerge again as adults and fly into the tree to lay more eggs. This ability to hide between leaf membrane and underground renders most sprays ineffective.



Good bugs.



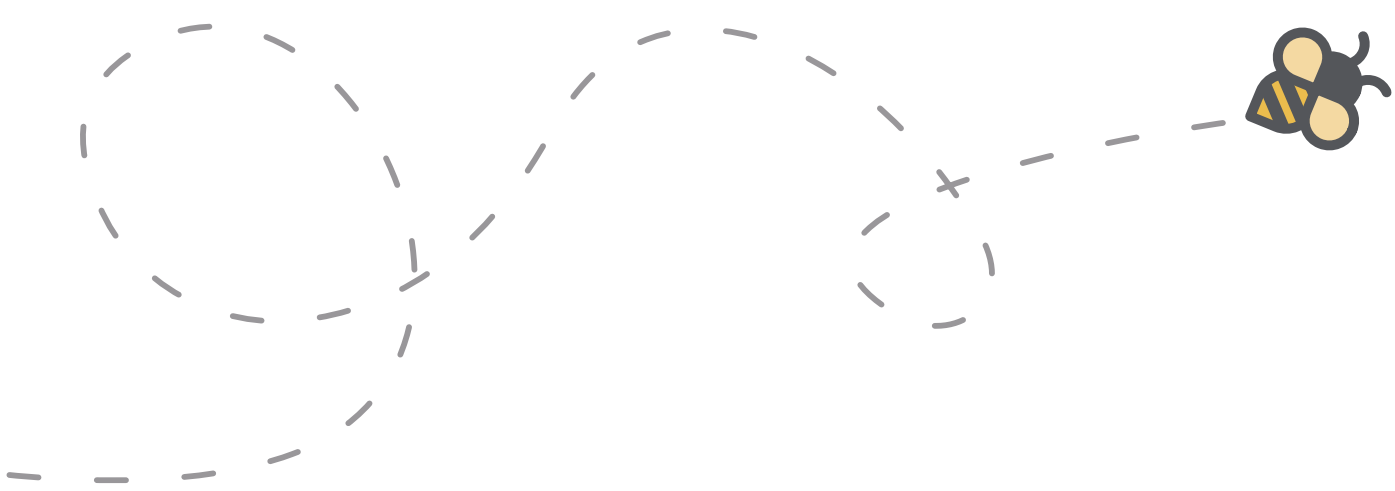
goldenacre.ca





Ladybird beetle.

By far the best PR of any bug and for good reason. A true gardeners friend. Voracious and predatory the love chomping on aphids, mites, scales, mealy bugs and more. They like to hibernate so give them space to settle in for the winter. In the spring when they wake up, they can consume 50+ aphids everyday. Their late-stage larvae can consume 5 to 10 times that amount in a day.



Spiders.

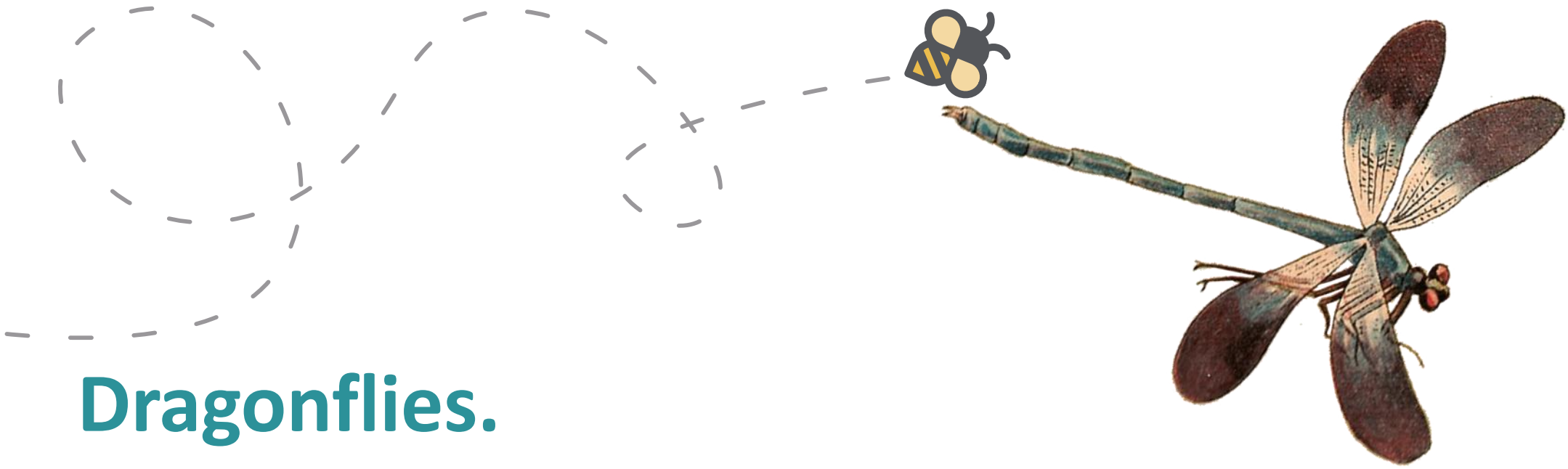
By far the worst PR of any bug and for not very good reasons. A true gardeners friend. Not only do these beauties eat bugs they also catch bugs in their webs. A true predator if you have no viable food source you probably won't see too many. If you are seeing a startling amount the problem isn't the spiders it is what they are eating. Examine their webs for reference.



Centipedes.

Also not very good PR... The centipede is lightning fast and feasts on a whole array of bugs. Occasionally sometimes our other friends. Tending towards more soft bodied bugs like most predators they prefer prey that doesn't fight back. They will also take down slugs and snails.

Fun fact, some tropical species are big enough to eat frogs, mice and other small critters.



Dragonflies.

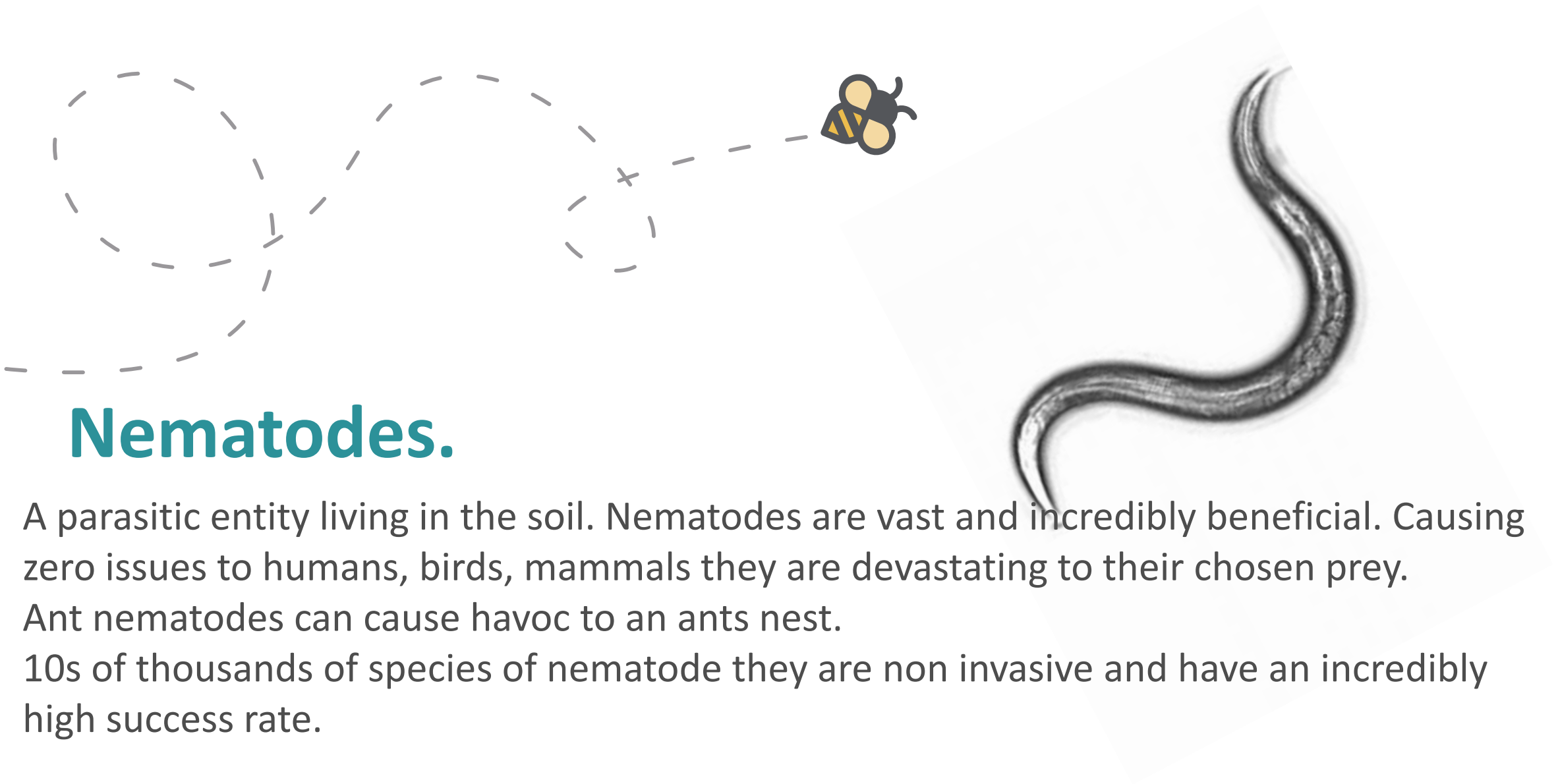
Not necessarily a predator of garden pests they are probably the most efficient skyborne predator. Hunting down mosquitoes, midges, flies, wasps and more these beauties are a welcome addition to any garden.



Ground beetle.

Shiny, black(ish) large beetles are truly a gardeners friend. Capable hunters they scour all night for mites, snails, slugs, aphids and more. Not known for speed they are known for determination, appetite and capacity to travel.

They are also referred to as a dirty pollinator, not a traditional pollinator they merely pass pollen along as they lumber around looking for snacks.



Nematodes.

A parasitic entity living in the soil. Nematodes are vast and incredibly beneficial. Causing zero issues to humans, birds, mammals they are devastating to their chosen prey.

Ant nematodes can cause havoc to an ants nest.

10s of thousands of species of nematode they are non invasive and have an incredibly high success rate.



Chemical sprays.

- Be aware of other bugs.
- Use accordingly.
- Follow directions.
- Make sure the spray is safe for the plant.
- Make sure it is being used in a timely manner.
- Wash hands after use.
- Use PPE.
- Be aware of time to harvest.

THANK YOU!

