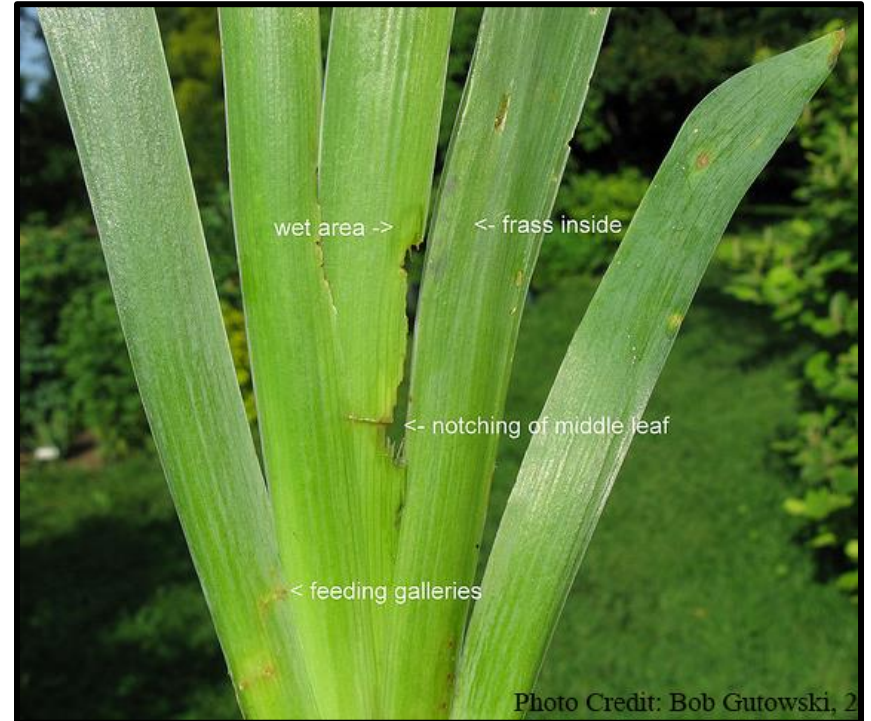


## Unwanted Garden Guests – Iris Borers

### *Prologue*

The first noticeable signs of this unwanted guest occurs while you are celebrating the return of spring and the sighting of young iris leaves in your garden.



### *☞ The Life and Times of an Iris Borer ☛*

It's Spring. Around April 1.

The 1/4" long infant caterpillars emerge from their eggs and join a throng of others wandering aimlessly seeking a trail to the peak of a young iris leaf. Along the way, they will do what all infants

do – seek food by exploring all available options with their mouths.

Nibbling as they go, the young caterpillars eventually find a young iris leaf to climb and then munch out a pinprick-sized entry hole.

Once safely inside, the wandering around continues until they eventually begin a downward path toward the big foodstorage dining hall known as the iris rhizome.

Here surviving caterpillars eat their fill while growing to a length of 2 inches. It is now time to exit into the surrounding soil where they will transform into shiny, chestnut-brown pupae and wait out the 2-3 weeks needed to attain adulthood.

It is now late August to early September. The mature moth makes the 2” climb to the surface of the soil, where it joins other emerging iris borer moths in a general free for all of nocturnal flying and mating. The flights are short and low.

The females are carrying next year’s generation (aka infestation team) in the form of up to 1000 eggs each – this being the only means of ensuring continuation of the species. No other form of the iris borer survives.

It is up to the females to locate the safest locations to deposit eggs, following a strategy designed to provide the optimum egg survival rate for hatching next April.

**The pressure is on and the deadline is the first killing frost!**

The strategy:

- Deposit rows of eggs, 100 or less (usually 3-67 ) at a time, while making multiple flights to safe sites, from Sept to first killing frost.
- Deposit the rows of eggs only in the crinkles, crevices, and rolled edges of dead iris leaves – still attached or found on the ground in the area.

***This is end of the story of how iris gardeners end up hosting iris borers.***



***And, this is the beginning of what can be done to protect and treat our iris gardens –***

Primary Damage
Leaves (see picture) Spring: -Wet areas (sap bleeding from chewing wounds) -Fras (sticky excrement attracting bacteria and fungi) -Notching of middle leaf (external chewing) -Ragged marginal leaf injury, including within the leaf-protecting sheaf -Feeding galleries, narrow water-soaked slits (damage caused by internal and external chewing) Mid-summer: -Leaves wilt, become discolored, and appear partly dead (depletion of plant tissue) Later: -Leaves turn brown and die Rhizome: -Depletion of plant nutrient storage -Rhizome can be devoured completely, causing collapse and killing the plant

Secondary Damage
Rot: Open wounds and the accumulation of wet, slimy excrement provide support for bacterial and fungi invasion leading to iris rot turning the rhizome into a stenchy glop.

Prevention	Treatment Options		
Garden Cleanup	Mechanical	Organic	Pesticides
<p><b>All Eggs Must be Destroyed!</b> Remove all eggs sites: dead leaves and plant debris, on the plant and in the area, after first killing frost and before April 1.</p> <p><u>Best Timing</u> Spring, before new iris leaves emerge.</p> <p><u>Best Practices</u> <b>All Eggs Must be Destroyed!</b> 1) Physically remove and destroy all dead plant material in the area down to the soil. <b>Do not compost!</b> 2) Controlled burn within the garden <b>Be sure to check local burning ordinances.</b> <b>All Eggs Must be Destroyed!</b></p>	<p><u>April – June (while larvae still contained in leaf)</u> At first sighting of damage -Pinch the leaves in any areas showing damage to squash the larvae. -Or, remove the damaged leaf.</p> <p><u>July (before exit from rhizome)</u> At first signs of suspected rhizome damage -Dig up the plant. -Remove and destroy any heavily damaged rhizomes. -Lightly damaged rhizomes can be treated by inserting a piece of wire and forcing it into the cavern housing the larva.  -Search nearby soil for pupae. These shiny, chestnut-brown pods will be found about 2" below the soil line, seldom any deeper than a lateral move from the rhizome into the nearby soil. <b>Remove and destroy!</b></p> <p>Healthy rhizomes can be replanted. <u>Before replanting</u> -Dip rhizomes in solution of 1 part bleach:9 parts water to kill any bacteria or fungi, -Make certain that nearby irises are not infested - dig, inspect, and check soil.</p>	<p><u>June &amp; July</u> Soil drench of Nematodes – Heterorhabditis Steinernema</p> <p>not always effective but reduces population</p>	<p><b>Always check labels and follow instructions.</b> <b>The monograph for each approved pesticide can be found on the EPA website.</b></p> <p><u>April</u> Applied to iris leaves and surrounding soil</p> <p>Acephate Azadirachtin Dylox Endosulfan Gardona Malathion Methyl Nonal Ketone Pyrethrins Permethrin Pyrenone Seven Spinosad</p>