



**MAY & JUNE 2008**



**HOMEOWNER PLANT DISEASE CLINIC REPORT**

Holly Thornton, Homeowner IPM Specialist

Since I was in Honduras for half of the month of May, I decided to combine homeowner reports for May and June. Therefore, this month I will include samples submitted to the diagnostic clinic in Athens from late April to mid-June and hopefully get back on track for the July report. In addition, I will discuss bacterial spot of peppers and tomatoes as the disease of the month.

**May-June 2008 Homeowner Samples**

County	Plant	Common Name of Disease (Pathogen)	Type of Sample – DDDI or Physical
Baldwin	Centipede	No disease found	Physical
Bartow	Magnolia	Environmental	DDDI
Bartow	Arborvitae	Likely Drought stress	DDDI
Bartow	Magnolia	Environmental	DDDI
Bartow	Red Tip Photinia	Unknown – possible root rot or environmental	DDDI
Bartow	Aucuba	No disease on foliage	DDDI
Bartow	Tomato	Possible herbicide damage	Both
Bartow	Rhododendron	Possible <i>Phytophthora</i> sp. root rot	DDDI
Bibb	Centipede	Minor Take-all root rot ( <i>G. graminis</i> var. <i>graminis</i> )	Physical
Bibb	Oak	<i>Hypoxyylon</i> canker	DDDI
Bibb	Oak	Insect related damage	DDDI
Bryan	Centipede	No disease found	Physical
Butts	Bermuda	Unknown – dead material	DDDI
Butts	Hybrid bermuda	Unknown – dead material	DDDI
Camden	Centipede	Take-all root rot ( <i>G. graminis</i> var. <i>graminis</i> )	Both
Camden	Peas & pole beans	Possible environmental/cultural	DDDI

County	Plant	Common Name of Disease (Pathogen)	Type of Sample – DDDI or Physical
Candler	Corn plant	Immature fungal leaf spot	Both
Carroll	Burford Holly	Unable to determine	DDDI
Charlton	Tomatoes	Unable to determine	DDDI
Chatham	Oleander	Unknown – site or root problem	Physical
Clarke	Tomato	Unknown – possible overwatering	Physical
Cobb	Mushroom	Unknown – too deteriorated	Physical
Cobb	Rose	Canker ( <i>Coniothyrium</i> sp.)	Physical
Cobb	Bermuda	Take-all root rot ( <i>G. graminis</i> var. <i>graminis</i> )	Physical
Coffee	Amaryllis	Possible fungal leaf spot – Red blotch	DDDI
Coffee	Apple	Unknown	DDDI
Colquitt	Dogwood	Fungal leaf spot ( <i>Macrophoma</i> sp.)	Physical
Columbia	Centipede	Minor Large patch ( <i>Rhizoctonia</i> sp.)	Physical
Coweta	Hosta	Burn – chemical or sun	Physical
Coweta	St. Augustine	Take-all root rot ( <i>G. graminis</i> var. <i>graminis</i> )	Physical
Crawford	Tomato	Unknown	DDDI
DeKalb	Zoysia	Cultural issues – compacted soils	Physical
DeKalb	Juniper	No disease found – likely environmental/cultural	Physical
DeKalb	Zoysia	Largely cultural issues (thatch & compaction)	Physical
Dooly	Bradford Pear	Fire blight ( <i>Erwinia amylovora</i> )	Physical
Dooly	Tomato	Early blight ( <i>Alternaria solani</i> )	Physical
Douglas	Mushroom in potted corn plant	<i>Leucocoprinus</i> sp.	Physical
Douglas	Cherry	Insect related damage	Physical
Effingham	Centipede	Possible Fairy ring	Physical
Effingham	Centipede	No live material submitted	Physical
Elbert	Zoysia	Cultural (thatch & compacted soils) & ETRI fungi in roots	Physical
Evans	Dogwood trees	No disease found	Physical
Fayette	Shrub	Likely environmental damage	DDDI
Fayette	Magnolia	Fungal leaf spot	DDDI
Fayette	Pieris	Possible fungal leaf spot	DDDI
Fayette	Magnolia	Insects & cold damage	DDDI
Fayette	Magnolia	Environmental stress & insect damage	DDDI

County	Plant	Common Name of Disease (Pathogen)	Type of Sample – DDDI or Physical
Fayette	Liriope	Cultural – urine	DDDI
Fayette	Juniper	Unable to determine	DDDI
Floyd	Boxwood	Possible Boxwood decline	DDDI
Forsyth	Bermuda grass	Cultural problems (thatch & compacted soils)	Physical
Forsyth	Hybrid Bermuda grass	Cultural issues & ETRI fungi in roots	Physical
Franklin	Blackberry	Cane and leaf rust ( <i>Kuehneola</i> sp.)	Physical
Fulton	Rhododendron	Unknown	DDDI
Fulton	Zoysia	Take-all root rot ( <i>G. graminis</i> var. <i>graminis</i> ); Rust; cultural (mowing height)	Physical
Gilmer	Spirea	No disease found	Both
Grady	Pepper	Possible bacterial leaf spot	DDDI
Gwinnett	Tall Fescue	No disease – some sort of chemical spill or burn	DDDI
Gwinnett	Rose	Burn and fungal leaf spots	DDDI
Gwinnett	Tall Fescue	No disease – largely cultural problems (thatch & compaction)	Physical
Gwinnett	Acer palmatum	Cultural/environmental/chemical	DDDI
Gwinnett	Fescue	Cultural – very dry & compacted soils	Physical
Gwinnett	Tomatoes	Viral	DDDI
Hall	Concord grape	Possible chemical injury	Physical
Harris	Squash	Possible over-watering	DDDI
Henry	Kousa Dogwood	Nutritional issues	DDDI
Henry	Unknown	Spider mites	Both
Henry	Bunch grapes	Unknown	DDDI
Henry	Bunch grapes	Possible <i>Phomopsis</i> cane & leaf spot	DDDI
Henry	Centipede	<i>Pythium</i> root rot	Physical
Henry	Tomato	Possible herbicide damage	DDDI
Henry	Unknown	Unknown	DDDI
Irwin	Junipers & Centipede	Unknown – nutritional, burn, or disease	DDDI
Jackson	Various	Site problem	Physical
Jackson	Bermuda grass	No live material submitted	Physical
Jackson	Magnolia	Environmental	DDDI
Jackson	Aucuba	Unknown – possible insect damage	DDDI
Jefferson	Centipede	No disease found	Physical
Jefferson	St. Augustine	Take-all root rot ( <i>G. graminis</i> var. <i>graminis</i> )	Physical

County	Plant	Common Name of Disease (Pathogen)	Type of Sample – DDDI or Physical
		<i>graminis</i> )	
Jenkins	Centipede	Possible Take all root rot	DDDI
Jones	Mushroom	Slime mold ( <i>Fuligo septica</i> )	DDDI
Macon	Cryptomeria	Severe scale infestation	Both
Madison	Maple	Possible Anthracnose	DDDI
Monroe	Catalpa	Likely fungal leaf spot	DDDI
Monroe	Bell pepper	Possible fungal leaf spot	DDDI
Monroe	Vinca	Possible sting nematode damage	DDDI
Monroe	Tomato	Possible TSWV	DDDI
Morgan	Elm	Compounded stresses	DDDI
Morgan	Willow Oak	Unknown	DDDI
Morgan	Weeping Willow	Compounded stresses	Physical
Morgan	Rose	Canker ( <i>Coniothyrium</i> sp.)	Physical
Newton	Tomato, Cabbage, Parsley	Burn – likely cold damage	Physical
Newton	Yaupon Holly	No disease found	Physical
Oglethorpe	Watermelon	Drought stress	Physical
Paulding	Yoshino Cherry tree	Shot hole	DDDI
Peach	Japanese Maple	Anthracnose	DDDI
Pickens	Pear	Unknown	DDDI
Pierce	Bradford Pear	Fire blight ( <i>Erwinia amylovora</i> )	Physical
Pierce	St. Augustine	Take-all root rot ( <i>G. graminis</i> var. <i>graminis</i> )	Physical
Rabun	Tall fescue	No disease – likely dog urine	DDDI
Rabun	Ilex crenata	No disease found – likely environmental	DDDI
Rabun	Dwarf Hinoki Cypress	No disease found	Both
Randolph	Boxwood	Unknown – chemical burn or root rot	DDDI
Richmond	St. Augustine	Take-all root rot ( <i>G. graminis</i> var. <i>graminis</i> ), cultural problems (dry, compacted soils); possible Fairy ring	Physical
Richmond	St. Augustine	Take-all root rot ( <i>G. graminis</i> var. <i>graminis</i> )	Physical
Schley	Centipede	Likely Take all root rot	DDDI
Sumter	Camellia	Algal leaf spot ( <i>Cephaleuros virescens</i> ) and scale infestation	Physical
Thomas	Knockout rose	Unable to determine	DDDI
Troup	Centipede	Cultural issues – dry & thatch	Physical

County	Plant	Common Name of Disease (Pathogen)	Type of Sample – DDDI or Physical
Washington	Blackberry	Orange Cane Blotch ( <i>Cephaleuros virescens</i> )	Physical
Wayne	Ligustrum	Cold or insect damage	DDDI
Wayne	Camellia	Canker – possible disease	DDDI
Wayne	Maple	Possible herbicide damage	DDDI
Ware	Centipede	Take-all root rot ( <i>G. graminis</i> var. <i>graminis</i> )	Physical
Ware	Centipede	Take-all root rot ( <i>G. graminis</i> var. <i>graminis</i> )	Physical
Ware	Oxalis	Rust	Both
Ware	Centipede	Take-all root rot ( <i>G. graminis</i> var. <i>graminis</i> )	Physical
Ware	Centipede	No disease found	Physical
Whitfield	Gardenia	Likely cultural – lack of water	DDDI
Whitfield	Japanese Maple	Fungal leaf spot ( <i>Phyllosticta</i> sp.)	Both
Whitfield	Tomato	Possible disease	DDDI
Whitfield	Fescue mix	Unable to determine	DDDI
Worth	Centipede	Cultural problems (thatch) & ETRI fungi	Both
Worth	Leyland Cypress	Scale infestation	Both
Worth	Centipede	No disease found – likely cultural	Both
Worth	Potatoes	Unknown	DDDI
<b>Total samples (mid-April to mid-June) = 126</b>			
<b>DDDI = 63</b>			<b>Physical = 51</b>
			<b>Both = 12</b>

---

## BACTERIAL SPOT ON PEPPER & TOMATO

Bacterial spot on pepper and tomato is a very common problem in homeowner gardens in Georgia. Bacterial spot is more prevalent during wet weather, and although it is fairly dry right now, homeowners are able to water their gardens and many of them likely use overhead irrigation, which provides a suitable environment for bacteria to infect and spread.

Bacterial spot is caused by *Xanthomonas campestris* pv. *vesicatoria*. Bacteria are microscopic organisms that cannot be seen by the naked eye. This can make it hard to accurately identify this disease and the symptoms are often times mistaken for various fungal leaf spots. One way you can rule out fungi as causal organisms is to examine the centers of the leaf spots for fungal spores and reproductive structures (perithecia, pycnidia, etc.).

Symptoms of this disease include:



Angular, water soaked leaf spots on pepper and tomato leaves



Small, blister-like spots on the fruit; warty in appearance





UGA5077044

Bacterial spots on tomato – light centers, dark borders, scabby appearance



UGA5260029

Bacterial spots on tomato leaves – sometimes with a yellow halo

The leaves of both peppers and tomatoes will be water-soaked at first. The spots are often times surrounded by a yellow halo or they may have light centers and dark borders. The leaves may become deformed and/or necrotic (similar to TSWV symptoms) – see below.



Infected leaves may drop prematurely. This can expose the fruits to sunscald and other fruit rots. On the fruit, the spots look circular to irregular and become scabby or warty as they age.

The bacterial spot pathogen survives in infected plant debris and in seeds. Therefore, it is extremely important to remove and discard infected plant material from the garden immediately after the pathogen is detected. In addition, saving seeds from one season to the next can be risky. The bacterium is spread from leaf to fruit and plant to plant mainly by splashing water. This is why overhead irrigation should be avoided. Bacteria enter the leaves through natural openings such as stomata or wounds. Thus, it is important not to work in the garden when the leaves are wet and to avoid injuring the plants.

In terms of disease management of this pathogen, prevention is the best way to keep your tomatoes and peppers free from disease. Be sure to purchase certified disease free seed. Homeowners can also treat the seeds with a Clorox treatment (2 parts Clorox: 8 parts water). It is important to rinse the seeds with water after the treatment and dry them. This will reduce the germination of the seeds though, so it is really a catch 22. Crop rotation is also important. I know most homeowners have a small plot of land reserved for their gardens but try to move the tomatoes and peppers as much as possible and rotate with crops not in the same family. As a last resort, preventative copper sprays can be helpful in avoiding bacterial infections. Coverage is very important (contact pesticide) and the copper is only effective if applied before infection occurs. Therefore, if the homeowner has had problems with bacterial spot in the past, adequate coverage before and during rainy periods will likely be necessary to prevent disease infections.

Good luck!





HONDURAS, MAY 2008

#### REFERENCES:

- Images [www.invasive.org](http://www.invasive.org)
  - 5362922 – Howard F. Schwartz, Colorado State University, Bugwood.org
  - 5362699 – Howard F. Schwartz, Colorado State University, Bugwood.org
  - UGA5077044 – David Langston, UGA, Bugwood.org
  - UGA5260029 – Division of Plant Industry Archive, Florida Department of Agriculture and Consumer Services, Bugwood.org
  - UGA5260027 – Division of Plant Industry Archive, Florida Department of Agriculture and Consumer Services, Bugwood.org
- Agrios 2005. 5<sup>th</sup> edition.