



HOMEOWNER PLANT DISEASE CLINIC REPORT

Holly Thornton, Homeowner IPM Specialist

Landscapes across the state are suffering severely from extremely hot, dry weather this summer. Total samples processed in the homeowner clinic for August is at a mere 35 compared to numbers above 100 in 2004 and 2005. Commercial samples are down as well (58 total for August). As the table below will show, disease pressure is low and the damage to most plant samples has been attributed to the poor environmental conditions and/or cultural-type issues, such as improper care. Root and crown rots are the chief diseases seen at this point and that can likely be attributed to over-watering by homeowners to compensate for the lack of rain.

The sample submission table for mid-July to mid-August can be found below. For the month of August, I have decided to focus on plant symptoms/problems caused by extreme environmental conditions and poor cultural care. I hope the report will help you distinguish between symptoms caused by plant diseases and those caused by environmental factors. ENJOY!

AUGUST 2007 Homeowner Samples

County	Plant	Common Name of Disease (Pathogen)	Type of Sample – DDDI or Physical
Bartow	Magnolia	Nutritional & Powdery mildew	DDDI
Bartow	Cactus - <i>Epiphyllum oxypetalum</i>	Environmental (cold stress & drought stress) & cultural	Both
Berrien	St. Augustine	Insufficient sample size	Physical
Berrien	Centipede	Take all root rot (<i>Gaeumannomyces graminis</i>) and Large Patch (<i>Rhizoctonia solani</i>)	Physical
Bibb	St. Augustine	Take all root rot (<i>G. graminis</i>)	DDDI
Bibb	Zoysia	No disease – cultural (stressed lawn)	Physical
Bibb	Tomato	Tomato Spotted Wilt Virus	Physical

County	Plant	Common Name of Disease (Pathogen)	Type of Sample – DDDI or Physical
		(TSWV)	
Bibb	Pear	Environmental – burn	DDDI
Bibb	Centipede/St. Augustine mix	Cultural & Take-all (<i>G. graminis</i>)	Both
Burke	Forsythia	Root knot nematode (<i>Meloidogyne</i> sp.)	Physical
Candler	Centipede	Large Patch (<i>R. solani</i>)	Physical
Carroll	Mushroom	<i>Sparassis crispa</i>	DDDI
Carroll	Pumpkin	No disease – drought related	Physical
Chatham	St. Augustine	Take all root rot (<i>G. graminis</i>)	Physical
Chatham	Ivy	Roots – <i>Pythium</i> ; leaf spot – <i>Macrophoma</i>	Physical
Chatham	Bermuda	Take all root rot (<i>G. graminis</i>)	Physical
Clayton	Various cuttings – ornamentals	Cold/drought stress	Physical
Cook	Centipede	Root rots (Large Patch & Take-all)	Physical
Coweta	Bermuda	No disease – cultural	Physical
Crawford	<i>Camellia japonica</i>	Freeze cracks (environmental) & root rot (<i>Rhizoctonia</i> & <i>Pythium</i>)	Physical
Decatur	Confederate Jasmine	Cultural – overwatering & possible <i>Rhizoctonia</i>	DDDI
DeKalb	Annual Vinca	No disease	Both
DeKalb	St. Augustine	Chinch bugs & ETRI mycelia	Both
Dougherty	St. Augustine	Take all (<i>G. graminis</i>) & heavy thatch	Physical
Dougherty	St. Augustine	Take all (<i>G. graminis</i>) & chinch bugs	Physical
Dougherty	St. Augustine	Fairy ring-like fungus	DDDI
Fayette	<i>Pinus dens-thunberg</i>	Environmental damage – symptoms similar to air pollution	Both
Fayette	St. Augustine	Unable to determine	DDDI
Fayette	Centipede	Possible Fairy ring	Physical
Fayette	St. Augustine	Take all root rot (<i>G. graminis</i>)	Physical
Fayette	Bermuda	Compounded stresses – thatch & cultural care	Physical
Fayette	Holly	Severe scale infestation	Physical
Fayette	St. Augustine	Cultural – heavy, clodded soils & chinch bugs	Physical
Gilmer	Bean	Possible Ashy stem blight	DDDI
Grady	Holly	No disease	DDDI

County	Plant	Common Name of Disease (Pathogen)	Type of Sample – DDDI or Physical
Grady	Centipede	Take all root rot (<i>G. graminis</i>)	Both
Greene	Christmas cactus	Possible fertilizer/salt injury	Both
Gwinnett	Maple	Possible Tar spot or Bull's eye spot (<i>Cristulariella</i> sp.)	DDDI
Gwinnett	<i>Cryptomeria japonica</i>	No disease	Both
Gwinnett	Blueberry	No disease – burn or drought related	DDDI
Harris	Blueberry	No disease – Nutritional	DDDI
Harris	Unknown hardwood	Insect galls	DDDI
Henry	Pumpkin	No disease – crown decline & drought stress	Both
Jackson	Pineapple Pear	Environmental – drought	DDDI
Lee	Various hardwoods	Possible herbicide damage and/or environmental	DDDI
Lee	Azalea	Unable to determine	DDDI
Lee	Centipede	Fairy ring-like fungus	DDDI
Madison	Boxwood	<i>Volutella buxi</i> & insect damage	Physical
Madison	Various woody & herbaceous ornamentals	No disease – environmental (drought) & cultural	Physical
Monroe	Plum	LSREP or insect damage	DDDI
Monroe	St. Augustine	Large Patch (<i>R. solani</i>)	Both
Monroe	Plum	Canker	DDDI
Monroe	Tomato	Possible TSWV	DDDI
Monroe	Apple	Possible white/bot rot (<i>Botryosphaeria</i> sp.)	DDDI
Monroe	Cherry	Compounded stresses – cold damage, insects, possibly buried too deep	DDDI
Morgan	Crape Myrtle	Cultural/environmental – improper care & cold damage	DDDI
Morgan	Maple	Improper planting – buried too deep	DDDI
Muscogee	Holly	No disease	Physical
Paulding	Bermuda	Take all root rot (<i>G. graminis</i>), Large Patch (<i>R. solani</i>), Rust (<i>Puccinia</i> sp.), <i>Pythium</i> , and compacted soils	Physical
Pierce	St. Augustine	Take all root rot (<i>G. graminis</i>)	Physical

County	Plant	Common Name of Disease (Pathogen)	Type of Sample – DDDI or Physical
		& cultural (heavy thatch)	
Pierce	St. Augustine	Take all root rot (<i>G. graminis</i>)	Physical
Pierce	Centipede	No disease	Physical
Randolph	Azalea	Root rots – <i>Pythium</i> & <i>Phytophthora</i>	Both
Thomas	Mushroom	<i>Clathrus</i> sp.	DDDI
Thomas	Begonia	Stem rot – <i>Fusarium</i> sp.	Physical
Walker	Oak (red)	Environmental/cultural	Both
Whitfield	Tomato	TSWV	DDDI
Whitfield	Tomato	Early blight (<i>Alternaria</i> sp.) on leaves	DDDI
Total Samples (mid-July to mid-August) = 68			

MOTHER NATURE or the Homeowner??

If (or when) you receive a diagnosis from me or another Plant Pathology Specialist and we list the problem as environmental damage, this is likely to be attributed to: cold/freezing damage or heat/drought stress. If I give a diagnosis of 'cultural', it usually refers to something the homeowner has done incorrectly, such as one or more of the following (and I usually specify if I have an idea): improper planting, over-watering, nutritional disorders (over/under-fertilization), herbicide damage, mowing incorrectly, thatch build-up, improper pruning, and mechanical damage ...Below are some examples.



Pictured above: Maple tree with bark-splitting & peeling, deterioration of the bark, and eventual tree death; any clues as to what the problem may be?

It is very likely that the symptoms were caused by improper planting. The tree was planted too deeply and possibly suffered from freeze damage, causing cracks in the bark, which can allow entrance of pathogens into the tree. These trees were planted in October 2005 and this damage was first noticed June 2006. It is likely these trees will not recover and will need to be replaced.

Images: Vicki Owen Crawford Co.



The image above was sent to me from Vicki Owen (Crawford Co.). Two crape myrtles along the street in Roberta were showing the above symptoms: bunchy, odd vegetative growth from the bark of the tree. Any guesses?

The damage above is characteristic of herbicide damage. Oftentimes, if herbicides (such as Round-Up) are applied around the tree the previous fall or winter, dormant buds affected by the non-lethal dose of herbicide will develop these small clusters of leaves the following spring. These plants will not have to be replaced and will recover. The crape myrtles also were heavily pruned which can often cause problems such as secondary attack from borers.



Japanese Maples around Athens are showing dieback symptoms (shown above), as well as browning and scorch of the older leaves. Is this a disease?

The symptoms above are not associated with a disease. This maple was actually very unthrifty from the time of planting, but the dieback is related to the Easter freeze we experienced across the state. The tree had already put out its new growth and then got knocked back when temperatures dropped into the teens. The necrosis and scorch is related to the drought this year. Homeowners (including myself) are either having a very difficult time giving their plants an adequate supply of water or are drowning them, which in turn will cause various root rot organisms to infect and damage many landscape bedding plants. This tree will likely drop/shed those branches and will put out new growth when environmental conditions become more suitable.

Image: Todd Hurt



This is an easy one...This tree was planted too deeply! Bark cracking and limb dieback are two symptoms that are indicative of improper planting. This tree will likely continue to decline until it dies. Sometimes if the damage is noticed early, the tree can be removed and replanted or the mulch can be moved back from the base of the tree and the tree may recover. The life of the tree is really dependent on the stage at which the damage was noticed.

On more established trees, removal of the soil around the tree may lessen damage or it could make it worse. The old root system is likely dead and the tree has compensated by developing a new root system above the old one. If the soil is removed, many of these roots will be damaged or removed as well, which will further stress the tree. Therefore, in cases such as these, it is probably best to leave the tree alone, but realized that the life span of the tree will be shortened and the tree may be susceptible to additional stresses and attack from pathogens or insects.

Images: James Morgan (Dougherty Co.)



This is a dogwood tree with symptoms of scorch. Is this drought related or a disease? And how would you determine the answer?

The scorch above is environmental scorch caused by drought and heat stress. The entire tree is showing this symptom and that is oftentimes a giveaway in terms of whether the problem is abiotic or biotic. The above tree will recover next year if environmental conditions are more suitable and/or if the tree was placed under irrigation. Leaf scorch caused by a disease organism, such as *Xylella fastidiosa*, also known as bacterial leaf scorch, would have the following symptoms (shown below).



Leaf symptoms: marginal leaf necrosis, with a distinct halo or band separating live and dead tissue. The discoloration will begin at the leaf margin and move inward to the midrib. The symptoms will reoccur each year and spread to the rest of the tree, causing dieback and eventual death. So, it is important to notice whether the symptoms occurred all at once or if they have slowly occurred over several years.



This oak on campus is infected with the bacterial leaf scorch pathogen, *X. fastidiosa* and looks worse every year.

The oak below is about 70 years old and has lost about 2/3 of its canopy. The remaining leaves on the tree have scorch symptoms. Lichens have colonized the trunk of the tree, indicating that the tree is no longer growing. The problem happened over a period of 2 weeks this summer. Any guesses?



The problem here is related to various compounded stresses, mainly old age and severe drought conditions in the state. You may have noticed that many older trees across the state are beginning to show symptoms such as these. This is directly related to the severe drought across the state. Given the age of this tree, it will likely continue to decline until death.



We receive a fair share of turf samples with conditions similar to the picture to the left...

Compacted, clay soils are a big problem here in Georgia and this becomes a problem in homeowner's yards annually. Core aeration once a year helps tremendously with relieving soil compaction so the grass roots can grow and obtain the necessary nutrients.

Unfortunately, we have little control over the weather that Mother Nature throws at us. If environmental conditions are unfavorable (too hot, too dry, too wet, etc.) landscape problems are likely to occur regardless of whether or not we are properly caring for our beloved plants, BUT, there are some situations that we do have control over, such as choosing the right plant for the right place, planting properly, fertilizing adequately, and watering correctly.