The Plant Disease Clinic and Weed Identification Laboratory
2001 Annual Report
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Acknowledgements

The Plant Disease Clinic depends on a industrious staff of both full-time and part-time employees to prepare culture media, isolate pathogens from plant tissue, measure soil pH, extract nematodes from soil and plant tissue, maintain records, answer the telephone, keep track of samples, and send out reports. In 2001, diagnoses in the Plant Disease Clinic in Blacksburg were performed by Mary Ann Hansen, Debbie Glenn, and Nina Hopkins, with valuable assistance from Shannon Hill.

Plant Clinic staff consult with many faculty and staff in various departments in order to make complete, accurate diagnoses and recommendations. We would like to thank the following people for their helpful assistance during the past year:

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The Weed Identification Clinic is operated by Dr. Scott Hagood with the assistance of Dr. Kevin Bradley and Mr. Lloyd Hipkins. Mr. Tom Wieboldt, curator of the Herbarium in the Biology Department, performs many of the plant and weed identifications.

We would also like to thank Mr. Todd Powell of TSP Software for designing and continuing to support the Plant Clinic database ("PClinic"). The database has given us the ability to keep complete records of Plant Clinic samples and to mail reports to Extension Offices electronically. Information on purchasing PClinic can be obtained from the Clinic at <clinic@vt.edu>. We are also especially grateful to Mr. Shahrooz Feizabadi for maintaining our computer system and network.

Shannon Hill painstakingly compiled the annual report. Peter Sforza formatted the annual report for the World Wide Web. It can be viewed on-line at <http://oak.ppws.vt.edu/~clinic/>.

Introduction

The annual report for the Plant Disease Clinic and the Weed Identification Clinic located on the Virginia Tech campus in Blacksburg is presented in the following pages. Results of the soil assays performed by the Nematode Assay Laboratory are not included, nor are plant specimens which were submitted to and diagnosed at the Agricultural Research and Extension Centers throughout the Commonwealth.

For those pathogens that could be identified to species or for which only one species is known to occur on the host plant in question, the species name is listed. For those diseases in which one of several species could have been involved, the epithet is listed as "sp." The Plant Disease Clinic did not routinely identify pathogenic organisms to species since species identification can sometimes be a very time-consuming process and often has little bearing on control recommendations. Most pathogens were assumed to be disease incitants if they were cultured in sufficient numbers from the plant tissue, if they were reported in the literature to be pathogens of the particular host plant, and if they were reported to cause the observed symptoms.

Viral problems were, for the most part, diagnosed by the ELISA (Enzyme-Linked Immunosorbent Serological Assay) method by Agdia, Inc. or by Agdia's immunostrip testing system. Host inoculation was also used to identify viruses in some specimens.

Nematode diseases are diagnosed by extracting nematodes from soil or plant tissue. Samples must include at least 1 pint of soil for nematode assays. Nematode assays are routinely performed on samples of plant species known to be affected by nematodes, e. g. boxwood. Nematode populations in the sample are compared to damage threshold levels in making a control recommendation. Threshold levels have been developed in research trials for many, but not all, crops grown in VA.

The phrase "Cause of Problem Unknown" is used for specimens for which no pathogen could be isolated and for which no obvious environmental or cultural condition could be associated with the problem. Trees have more specimens in this category and in the category "Insufficient Sample" than any other type of plant. Tree problems are more difficult to diagnose in a clinic setting than problems of annual plants for several reasons. First, tree problems often develop over the course of several years and current symptoms may be related to stressful conditions that occurred in previous years. Also, it is difficult for growers to supply an appropriate plant specimen for diagnosis since the causes of many tree diseases occur in the trunk or roots.

Some insect problems are also listed in this report. Insect damage is often mistaken for disease, and samples with insect damage are sometimes submitted to the Plant Disease Clinic rather than the Insect Identification Lab. We make a preliminary diagnosis of insect damage on these samples and refer them to Mr. Eric Day in the Insect Identification Lab. The final diagnosis on all samples of insect damage is performed by Mr. Day.

Reports are now mailed electronically to the Extension Office email address. Upon request, we will simultaneously send electronic reports to one or more individual Extension personnel. Since implementing electronic mailing, we have discontinued faxing reports. For the time being, we are continuing to send a copy of the original diagnostic form submitted by the agent back to the Extension office through the Extension Distribution Center. Any factsheets or additional printed information is attached to this form. Any comments or questions about reports or plant problems can be emailed to us at <clinic@vt.edu>.

For information on how to submit samples and complete the appropriate forms, please refer to the following web site for an audiovisual web presentation:

Some Highlights from 2001

The diseases, rose rosette and daylily rust, were confirmed for the first time in Virginia in 2001. Rose rosette has been present in multiflora rose, a weedy species, in West Virginia since the 1980's. Last summer and fall it was found in Virginia in nine different counties in both cultivated and multiflora roses. Symptoms include severe distortion of leaves and flowers, witches' brooming of shoots, proliferation of soft, pliable thorns on thickened stems, and reddening of leaves. The disease is thought to be caused by a virus, although the identity of the causal agent has not yet been determined. The disease is known to be transmitted by a species of eriophyid mite, which can be difficult to control.

Daylily rust, a fungal disease, was found in the United States for the first time in 2000. It entered Florida, most likely on plants received from Central America. The disease spread quickly and by 2002 was present in over 30 states, including Virginia. Many daylily cultivars are susceptible to the fungus, which causes brightly colored pustules on leaves and overall yellowing of leaves. From a distance, the disease may look like daylily leaf streak, another fungal disease of daylily; however, the orange spore pustules are diagnostic for daylily rust. Plant material with this disease has not been quarantined, but plants that are obviously infected should be destroyed and remaining plants should be treated with a fungicide as the disease can spread quickly from plant to plant. Several fungicides registered for use on daylily are effective for controlling the disease.

Some other diseases we saw on ornamental plants in 2001 include:

- miscanthus blight, a disease caused by a species of the fungus *Leptosphaeria*, which results in small, dark leaf spots and blight of miscanthus
- web blight, caused by the fungus *Rhizoctonia solani*, on a variety of herbaceous ornamental species, including herbaceous ground covers
- Impatiens necrotic spot virus on snapdragons
- bacterial blight of *Ranunculus*, caused by a species of *Pseudomonas*
- Alternaria leaf and stem spot of sunflower, caused by *Alternaria helianthi*, which results in severe blighting of sunflower leaves, stems, and flowers
- bacterial leaf spot of hydrangea and salvia, caused by *Pseudomonas cichorii*
- Armillaria root rot of hydrangea, a fungal disease causing a severe gumming and rot in the roots and crown (we also saw this disease in hemlock)
- Phyllosticta leaf spot of witchhazel, a fungal disease
- bacterial scorch of oak caused by *Xylella fastidiosa*
- Verticillium wilt of redbud, a fungal vascular wilt disease
- crown gall of dahlia, resulting in severe galling of roots and caused by the bacterium *Agrobacterium tumefaciens*
- Cercospora leaf spot of sweet gum, a fungal disease

In other crops, we saw many of the common diseases we see every year. However, in vegetables we saw several cases of *Phytophthora capsici* causing a root and crown rot on cucurbits. This disease occurred in fields that had received excessive rainfall over a short period in midsummer. We also saw several cases of genetic leafroll in tomato. Symptoms suggest a disease but are the result of a genetic trait that is present in certain varieties of tomato. This trait is linked to several desirable traits in these varieties and has, thus, been difficult to eliminate in breeding programs. One of the varieties in which we saw the problem was Mountain Pride; on other samples the variety was not identified.

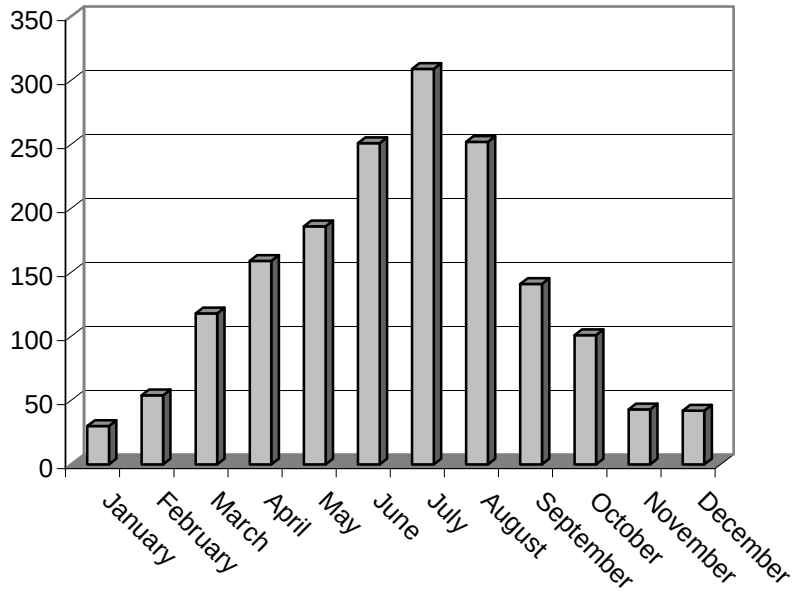
We also isolated but have not yet been able to identify a fungal pathogen from Virginia buttonweed, a weed species in Virginia. The fungus causes severe leaf blighting and death of the plants and may have potential for use as a biological control for this weed.

Plant Disease Clinic

Monthly Submission Report
Number of Samples Received by Month
2001

Month	# of Samples
January	30
February	54
March	118
April	159
May	186
June	251
July	309
August	252
September	141
October	101
November	43
December	42
Total	1686

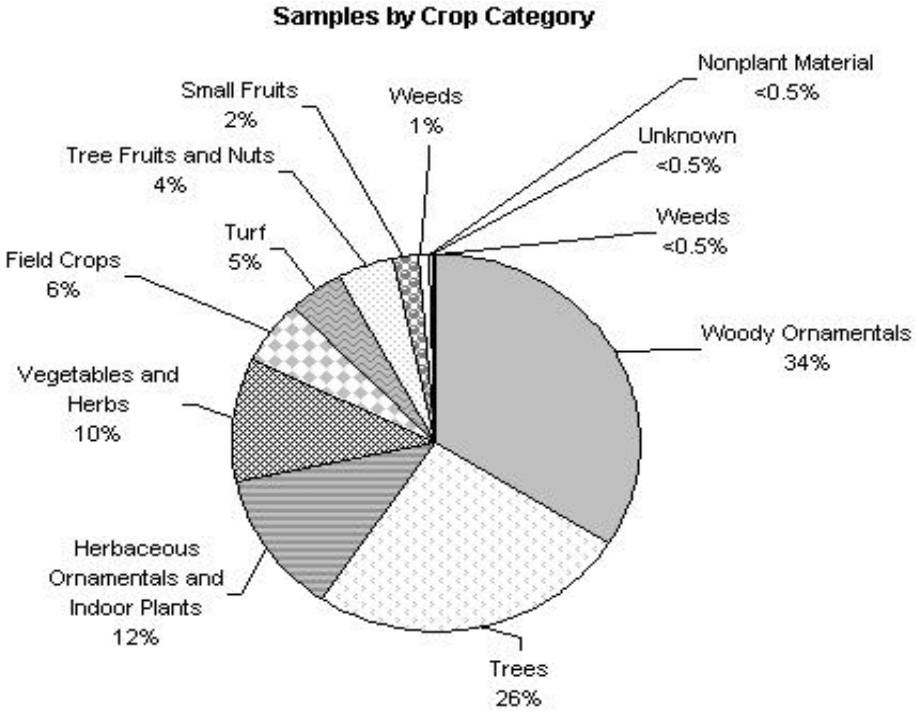
Number of Samples by Month



Plant Disease Clinic

Crop Category Report
Sample Totals by Major Crop Category
2001

Crop Category	# of Samples	% of Total
Woody Ornamentals	572	33.9%
Trees	431	25.6%
Herbaceous Ornamentals and Indoor Plants	204	12.1%
Vegetables and Herbs	176	10.4%
Field Crops	95	5.6%
Turf	76	4.5%
Tree Fruits and Nuts	71	4.2%
Small Fruits	39	2.3%
Weeds	12	0.7%
Fungi/Slime Molds/Algae	7	0.4%
Unknown	2	0.1%
Nonplant Material	1	0.1%
Total	1686	100.0%

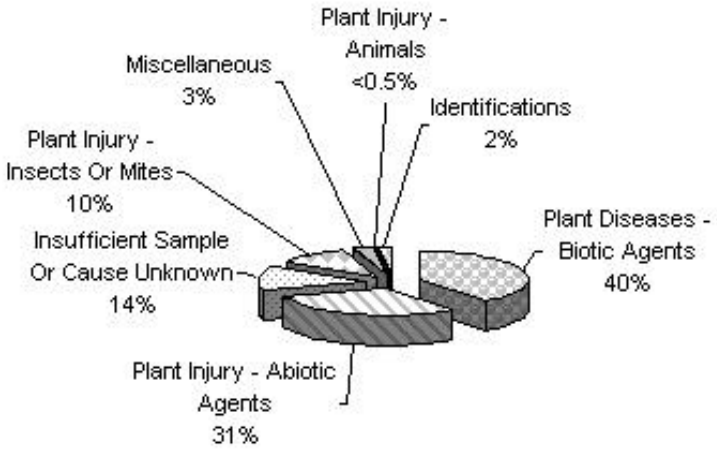


Plant Disease Clinic

Diagnostic Category Report
Distribution of Diagnoses by Major Diagnostic Category
2001

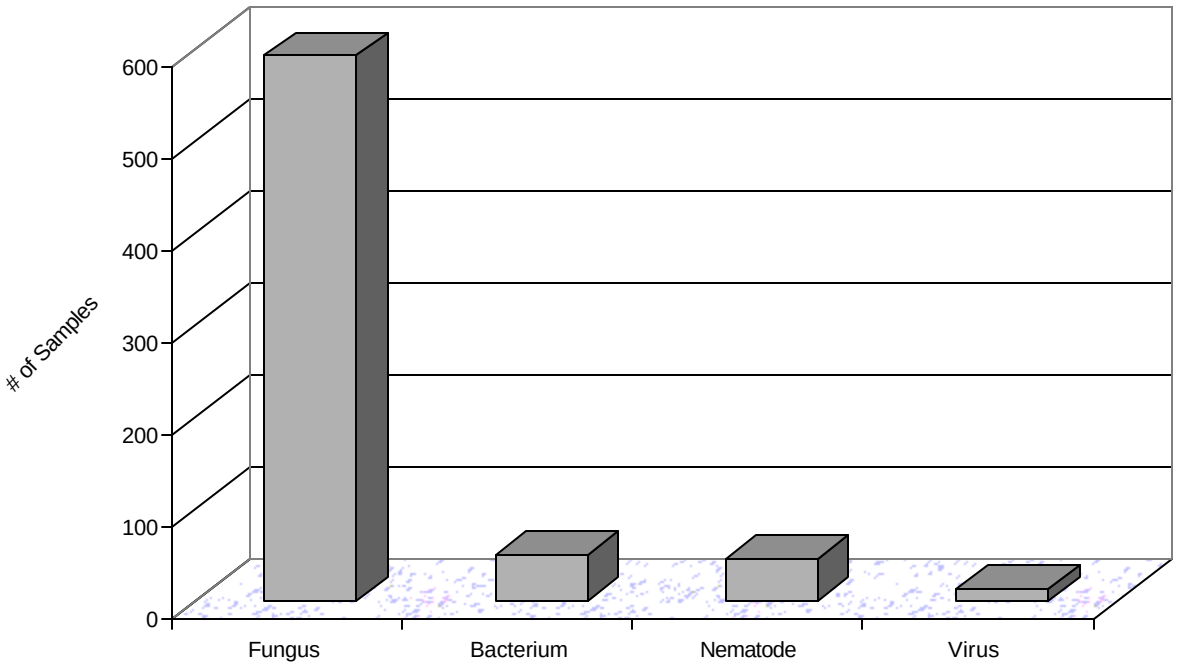
	# of Diagnoses	% of Total
Plant Diseases - Biotic Agents	704	39.4%
Bacterium (50)		
Fungus (592)		
Nematode (45)		
Virus (13)		
Plant Injury - Abiotic Agents	549	30.8%
Chemical (101)		
Environmental/cultural (430)		
Mechanical (18)		
Plant Injury - Insects or Mites	187	10.5%
Insects Or Mites (187)		
Plant Injury - Animals	6	0.3%
Birds (2)		
Mammals (4)		
Insufficient Sample or Cause Unknown	251	14.1%
Insufficient Sample or Information (206)		
Unknown (45)		
Miscellaneous	53	3.0%
Algae (5)		
Lichen (2)		
Normal Condition (11)		
Other (16)		
Physiological/genetic (19)		
Identifications	35	2.0%
Fungi (7)		
Plant (26)		
Unable to Identify (2)		
Total	1785	100.0%

2001 Samples by Diagnostic Category

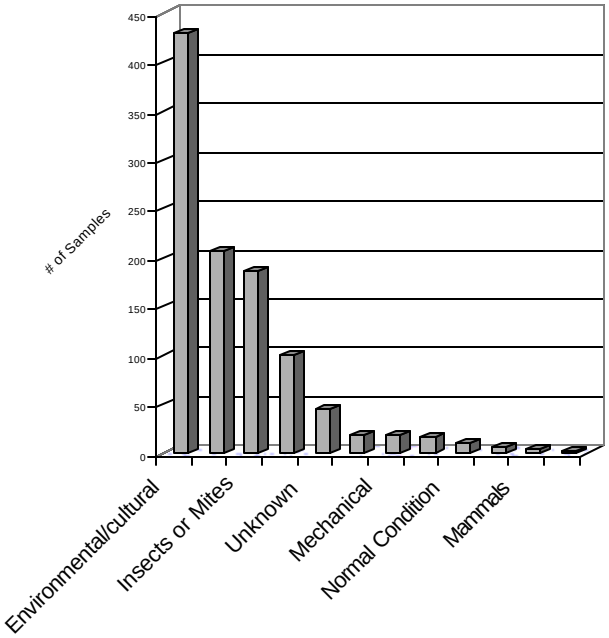


Plant Disease Clinic

Plant Pathogens, 2001



Other Agents, 2001



Electronic Assistance Type	# Inquiries
E-mail	43
Digital images	26

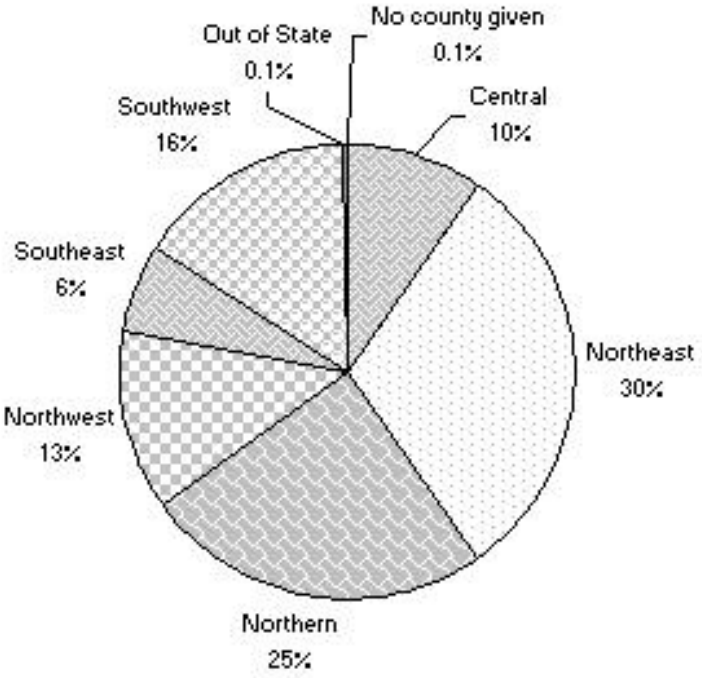
Plant Disease Clinic

Distribution of Samples by County

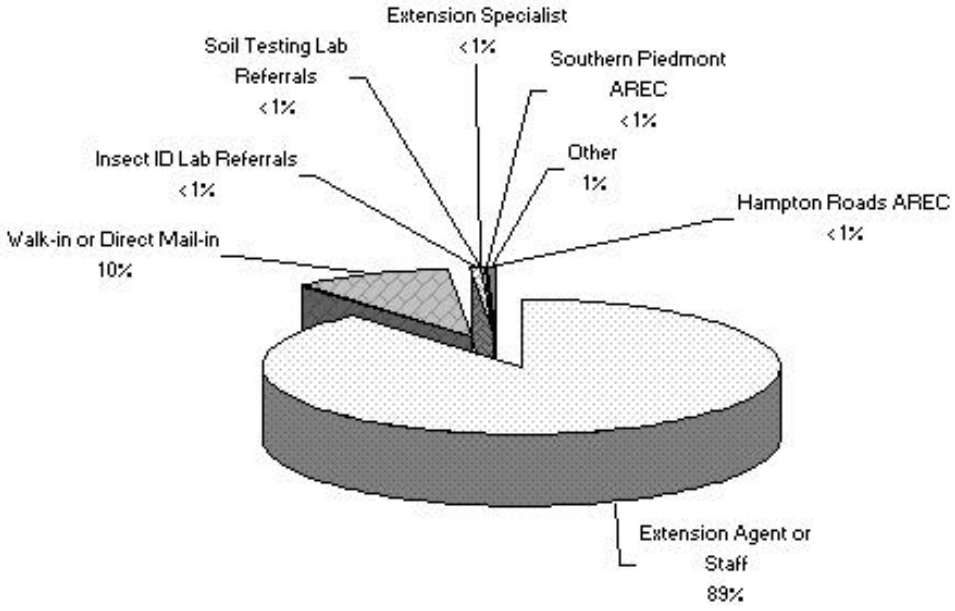
2001

County	# of Samples	County	# of Samples
Albemarle	94	Lancaster	10
Alexandria (IC)	2	Lee	11
Alleghany	2	Loudoun	41
Amelia	2	Louisa	16
Amherst	11	Lunenburg	10
Appomattox	5	Lynchburg (IC)	29
Arlington	36	Madison	5
Augusta	20	Mathews	36
Bath	8	Mecklenburg	3
Bedford	13	Middlesex	16
Bland	1	Montgomery	132
Botetourt	16	Nelson	69
Brunswick	6	New Kent	4
Buchanan	2	Newport News (IC)	3
Campbell	3	Norfolk (IC)	18
Caroline	3	Northumberland	20
Carroll	12	Nottoway	8
Charles City	5	Orange	7
Charlotte	1	Page	13
Chesapeake (IC)	18	Patrick	1
Chesterfield	53	Pittsylvania	6
Clarke	9	Portsmouth (IC)	3
Craig	4	Powhatan	10
Culpeper	9	Prince Edward	8
Cumberland	4	Prince George	37
Danville (IC)	23	Prince William	26
Dickenson	18	Pulaski	8
Dinwiddie	6	Rappahannock	9
Essex	7	Richmond	9
Fairfax	9	Roanoke	78
Fauquier	18	Rockbridge	4
Floyd	27	Rockingham	29
Fluvanna	12	Russell	1
Franklin	25	Scott	3
Frederick	23	Shenandoah	3
Giles	13	Smyth	3
Gloucester	9	Spotsylvania	11
Goochland	22	Stafford	35
Grayson	1	Suffolk (IC)	3
Greene	3	Surry	3
Greensville/Emporia	2	Sussex	4
Halifax	1	Tazewell	5
Hampton (IC)	30	Unknown	1
Hanover	102	Virginia Beach (IC)	11
Henrico	25	Warren	5
Henry	7	Washington	10
Highland	2	Westmoreland	32
Isle of Wight	3	Wise	3
James City	68	Wythe	11
King and Queen	4	York	32
King George	11	Out-of-state	2
King William	19		
		Total	**1686**

2001 Samples by District



Samples by Submitter Type, 2001



Weed Identification Lab

Monthly Submission Report
Number of Samples Received by Month
2001

Month	# of Samples
January	5
February	5
March	9
April	17
May	26
June	37
July	44
August	33
September	33
October	28
November	15
December	12
Total	**264**

Sample Totals by Crop
2001

Crop	# of Samples
Aquatic	34
Corn	8
Gardens/Vegetables	11
Landscapes	31
Non-crop	12
Orchards/Nurseries	1
Pastures/Hayfields	85
Small Grains	3
Soybeans	4
Tobacco	1
Turfgrass/Home Lawns	74
Total	**264**

Weed Identification Lab

Distribution of Samples by County

2001

County	# of Samples	County	# of Samples
Albemarle	7	Montgomery	4
Amherst	3	Newport News	1
Appomattox	1	Northumberland	6
Arlington	1	Orange	2
Augusta	5	Page	1
Bath	2	Patrick	2
Bedford	3	Pittsylvania	7
Botetourt	8	Powhatan	10
Bedford	3	Prince Edward	4
Campbell	1	Prince George	4
Carroll	4	Prince William	1
Clarke	11	Pulaski	1
Craig	2	Rappahannock	10
Culpeper	1	Roanoke	6
Cumberland	1	Rockbridge	2
Dickenson	6	Rockingham	4
Dinwiddie	2	Russell	1
Fairfax	2	Scott	3
Fauquier	2	Shenandoah	7
Fluvanna	1	Smyth	1
Franklin	4	Spotsylvania	3
Frederick	7	Stafford	1
Giles	6	Suffolk	4
Goochland	9	Tazewell	1
Greene	2	Warren	3
Greensville	1	Washington	3
Hanover	12	Westmoreland	14
Henrico	1	Wythe	4
Henry	5	York	5
Highland	2		
James City	7	**Total**	**264**
King William	3		
Lancaster	2		
Lee	2		
Lynchburg	17		
Mecklenburg	1		
Middlesex	2		

Plant Disease Clinic

Summary of Diagnoses by Plant
2001

FIELD CROPS

ALFALFA

1	Frost Injury	
2	Leptosphaerulina Leaf Spot	Leptosphaerulina briosiana
1	Sclerotinia Crown and Stem Rot	Sclerotinia trifoliorum
1	Suspect Boron Deficiency	
1	Violet Root Rot	Rhizoctonia crocorum
1	Waterlogged Soil	
7	Total for Alfalfa	

BARLEY

1	Chemical Injury	
1	Frost Injury	
1	Rhizoctonia Web Blight	Rhizoctonia solani
3	Total for Barley	

BROMEGRASS

1	Insufficient Sample	
1	Total for Bromegrass	

CLOVER

1	Suspect Air Pollution	
1	Total for Clover	

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CORN

1	Anthracnose	Colletotrichum graminicola
2	Chemical Injury	
1	Diplodia Ear Rot	Stenocarpella maydis
2	Environmental Stress	
2	Fusarium Stalk Rot	Fusarium sp.
2	Genetic Spotting	
2	Gray Leaf Spot	Cercospora zeae-maydis
2	Insufficient Sample	
2	Low pH	
3	Nitrogen Deficiency	
2	Northern Leaf Spot	Bipolaris zeicola
1	Penicillium Ear Rot	Penicillium sp.
1	Phosphorus Deficiency	
1	Pythium Root Rot	Pythium sp.
1	Soil Compaction	
1	Southern Corn Leaf Blight	Bipolaris maydis
1	Sunscald	
1	Suspect Virus	

28	Total for Corn	

COTTON

1	Thrips	

1	Total for Cotton	

FESCUE

1	Excess Thatch	
1	Insufficient Information	
1	Insufficient Sample	
1	Saprophytic Fungi	Epicoccum sp.
1	Suspect Chemical Injury	
1	Take-all	Gaeumannomyces graminis var. avenae

6	Total for Fescue	

HAY

1	Saprophytic Fungi	Cladosporium sp.

1	Total for Hay	

OATS

1	Barley Yellow Dwarf Virus	

1	Total for Oats	

Plant Disease Clinic

ORCHARD GRASS

1	Barley Yellow Dwarf Virus	
2	Drechslera Leaf Spot	Drechslera dactylidis
1	Drought	
1	Rust	Puccinia sp.

5	Total for Orchardgrass	

PEANUT

1	Aspergillus Crown and Root Rot	Aspergillus niger
1	Cylindrocladium Black Rot	Cylindrocladium parasiticum
1	Seed decay	Aspergillus sp.
1	Tomato Spotted Wilt Virus	

4	Total for Peanut	

RYE

1	Nutrient Deficiency	

1	Total for Rye	

SORGHUM

1	Chemical Injury	

1	Total for Sorghum	

SOYBEAN

1	Cause of Problem Unknown	
1	Chemical Injury	
1	Cladosporium Seed Coat Decay	Cladosporium sp.
5	Cyst Nematodes	Heterodera glycines
1	Deer Injury	
2	Essex Syndrome	Fusarium oxysporum
1	Insufficient Sample	
1	Lesion Nematodes	Pratylenchus sp.
1	Negative for Pythium	
1	Nutrient Deficiency	
3	Pythium Root Rot	Pythium sp.
6	Rhizoctonia Root Rot	Rhizoctonia solani
2	Rhizoctonia Stem Canker	Rhizoctonia solani
1	Root Knot Nematodes	Meloidogyne sp.
2	Spiral Nematodes	Helicotylenchus sp.
3	Thrips	

32	Total for Soybean	

SWITCHGRASS

1	Anthracnose	Colletotrichum graminicola
1	Total for Switchgrass	

TIMOTHY

1	Spider Mites	
1	Total for Timothy	

TOBACCO

1	Nutrient Deficiency	
1	Suspect Black Leg	Erwinia carotovora
1	Thrips	
3	Total for Tobacco	

TRITICALE

1	Environmental Stress	
1	Low pH	
1	Negative for Barley Yellow Dwarf	
1	Rust	Puccinia sp.
4	Total for Triticale	

WHEAT

1	Chemical Injury	
1	Cultural Problem	
1	Environmental Stress	
2	Frost Injury	
1	High pH	
1	Low pH	
1	Suspect Natural Senescence	
5	Wheat Spindle Streak Mosaic Virus	
13	Total for Wheat	

VEGETABLES AND HERBS

BASIL

1	Pythium Root Rot	Pythium sp.
1	Slime Mold	Diachea leucopodia
2	Total for Basil	

BAY LAUREL

1	Physiological Problem	
1	Total for Bay Laurel	

BEAN

1	Anthracnose	Colletotrichum lindemuthianum
1	Genetic Trait-Purple Bean	
1	Heat Stress	
1	Insufficient Sample	
1	Mites	
4	Rhizoctonia Root Rot	Rhizoctonia solani
1	Rhizoctonia Stem and Root Rot	Rhizoctonia solani
1	Rust	Uromyces appendiculatus
1	Suspect Thrips	
2	Thrips	
14	Total for Bean	

BROCCOLI

1	Alternaria Blight	Alternaria brassicicola
1	Total for Broccoli	

CABBAGE

1	Boron Deficiency	
1	Cultural Problem	
1	Excess Soluble Salts	
2	Low pH	
1	Phosphorus Deficiency	
6	Total for Cabbage	

CANTALOUPE

1	Anthracnose	Colletotrichum orbiculare
2	Bacterial Wilt	Erwinia tracheiphila
1	Pythium Damping-off	Pythium sp.
1	Suspect Chemical Injury	
5	Total for Cantaloupe	

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CATNIP

1	Web Blight	Rhizoctonia solani
1	Total for Catnip	

COLLARDS

1	Virus
1	Total for Collards

CUCUMBER

1	Angular Leaf Spot	Pseudomonas lachrymans
1	Anthracnose	Colletotrichum lagenarium
1	Bacterial Wilt	Erwinia tracheiphila
5	Insufficient Sample	
1	Lack of Pollination	
1	Low pH	
1	Mites	
1	Nutrient Imbalance	
12	Total for Cucumber	

EGGPLANT

1	Chemical Injury
1	Total for Eggplant

GARLIC

1	Cause of Problem Unknown
1	Total for Garlic

HERBS

1	Scales
1	Total for Herbs

LAVENDER

1	Suspect Cold Injury
1	Total for Lavender

MINT

2	Four-lined Plant Bugs
2	Total for Mint

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OREGANO

1	Slime Mold	Diachea leucopodia
1	Total for Oregano	

PEA

1	Chemical Injury	
1	Total for Pea	

PEPPER

1	Anthracnose	Colletotrichum gloeosporioides
1	Bacterial Spot	Xanthomonas vesicatoria
1	Botrytis Stem Canker	Botrytis cinerea
1	Excess Soluble Salts	
1	Fusarium Wilt	Fusarium oxysporum
1	Southern Blight	Sclerotium rolfsii
3	Suspect Chemical Injury	
9	Total for Pepper	

POTATO

1	Cause of Problem Unknown	
1	Chemical Injury	
3	Common Scab	Streptomyces scabies
2	Hollow Heart	
1	Soft Rot	Erwinia carotovora
8	Total for Potato	

PUMPKIN

1	Borers	
1	Cause of Problem Unknown	
1	Fusarium Foot Rot	Fusarium solani
2	Genetic Condition	
2	Powdery Mildew	Sphaerotheca fuliginea
1	Rhizoctonia Root Rot	Rhizoctonia solani
1	Squash Vine Borers	
1	Suspect Chemical Injury	
10	Total for Pumpkin	

RHUBARB

1	Insufficient Sample	
1	Total for Rhubarb	

Plant Disease Clinic

ROSEMARY

2	Adventitious Roots	
1	Insufficient Sample	
1	Overwatering	

4	Total for Rosemary	

SPEARMINT

1	Four-lined Plant Bugs	

1	Total for Spearmint	

SQUASH

1	Chemical Injury	
1	Excess Soluble Salts	
1	Fusarium Foot Rot	Fusarium solani
2	Phytophthora Crown and Root Rot	Phytophthora capsici
1	Powdery Mildew	Sphaerotheca fuliginea
1	Scab	Cladosporium cucumerinum

7	Total for Squash	

SWEET CORN

1	Chemical Injury	
1	Sunscald	

2	Total for Sweet Corn	

SWEET POTATO

1	Growth Cracks	
1	Scurf	Monilochaetes infuscans

2	Total for Sweet Potato	

Plant Disease Clinic

TOMATO

1	Bacterial Canker	Clavibacter michiganense
2	Bacterial Wilt	Pseudomonas solanacearum
1	Black Shoulder	Alternaria alternata
1	Buckeye Rot	Phytophthora parasitica
1	Catfacing	
2	Cause of Problem Unknown	
11	Chemical Injury	
1	Cultural Problem	
7	Early Blight	Alternaria solani
3	Environmental Stress	
1	Excess Soluble Salts	
2	Fertilizer Burn	
1	Fusarium Crown and Root Rot	Fusarium oxysporum
1	Fusarium Wilt	Fusarium oxysporum
2	Genetic Leafroll	
1	Graywall	
9	Insufficient Sample	
1	Mechanical Injury	
1	Mites	
1	Negative for Pythium and Phytophthora	
2	Nutrient Deficiency	
2	Physiological Spotting	
2	Pith Necrosis	Pseudomonas corrugata
1	Pythium Damping-off	Pythium sp.
1	Pythium Root Rot	Pythium sp.
1	Rhizoctonia Stem and Root Rot	Rhizoctonia solani
8	Septoria Leaf Spot	Septoria lycopersici
2	Stinkbugs	
2	Sunscald	
4	Suspect Chemical Injury	
1	Suspect Fertilizer Burn	
1	Suspect Nutrient Deficiency	
1	Suspect Physiological Problem	
1	Suspect Pith Necrosis	
1	Suspect Septoria Leaf Spot	Septoria lycopersici
1	Suspect Tomato Mosaic Virus	
1	Suspect Virus Disease	
1	Tomato Psyllids	

83	Total for Tomato	

TURNIP

1	Alternaria Leaf Spot	Alternaria brassicae
1	Cercosporella Leaf Spot	Cercosporella brassicae

2	Total for Turnip	

WATERMELON

1	Fusarium Wilt	Fusarium oxysporum
1	Insufficient Sample	

2	Total for Watermelon	

ZUCCHINI

1 Excess Soluble Salts
1 Squash Bugs
---
2 Total for Zucchini

Plant Disease Clinic

TREE FRUITS AND NUTS

APPLE

1	Bitter Pit	
4	Cedar-Apple Rust	Gymnosporangium juniperi-virginianae
1	Cedar-Quince Rust	Gymnosporangium clavipes
1	Chemical Injury	
1	Environmental Stress	
1	European Hornets	
5	Fire Blight	Erwinia amylovora
2	Fly Speck	Microthyriella rubi
3	Insects	
2	Insufficient Sample	
1	Mites	
1	Powdery Mildew	Podosphaera leucotricha
2	Sooty Blotch	Gloeodes pomigena
1	Suspect Cedar-Quince Rust	Gymnosporangium clavipes
1	Suspect Frost Injury	
1	Vole Injury	

28	Total for Apple	

CHERRY

2	Black Knot	Dibotryon morbosum
1	Cherry Leaf Spot	Coccomyces hiemalis
1	Environmental Stress	
4	Insufficient Sample	
1	Negative for Root Pathogens	
1	Suspect Mechanical Injury	

10	Total for Cherry	

CHESTNUT

1	Environmental Stress	
1	Insufficient Sample	

2	Total for Chestnut	

CRABAPPLE

2	Botryosphaeria Canker	Botryosphaeria sp.
3	Scab	Venturia inaequalis

5	Total for Crabapple	

MULBERRY

1	Negative for Disease	

1	Total for Mulberry	

PEACH

4	Brown Rot	Monilinia fructicola
1	Cold Injury	
4	Curculios	
1	Environmental Stress	
1	Insects	
2	Insufficient Sample	
1	Oriental Fruit Moths	
2	Scab	Cladosporium carpophilum
16	Total for Peach	

PEAR

1	Cedar-Hawthorn Rust	Gymnosporangium globosum
3	Fire Blight	Erwinia amylovora
1	Frost Injury	
1	Insects	
1	Insufficient Information	
1	Insufficient Sample	
1	Negative for Fire Blight	
1	Scorch	
1	Suspect Environmental Stress	
11	Total for Pear	

PECAN

2	Nutrient Deficiency
1	Pops
1	Suspect Chemical Injury
4	Total for Pecan

PERSIMMON

1	Suspect Environmental Stress
1	Total for Persimmon

PLUM

1	Insects
1	Lichens
2	Total for Plum

WALNUT

1	Environmental Stress
1	Total for Walnut

Plant Disease Clinic

SMALL FRUITS

BLACKBERRY

1	Gray Mold	Botrytis cinerea
1	Insects	
1	Physiological Problem	
1	Thrips	

4	Total for Blackberry	

BLUEBERRY

1	Insects	
4	Insufficient Sample	
1	Low pH	
1	Phytophthora Root Rot	Phytophthora cinnamomi
1	Suspect Hail Injury	

8	Total for Blueberry	

GRAPE

1	Anthracnose	Elsinoe ampelina
1	Bitter Rot	Greeneria uvicola
3	Black Rot	Guignardia bidwellii
1	Botryosphaeria Dieback	Botryosphaeria sp.
1	Cause of Problem Unknown	
2	Chemical Injury	
1	Crown Gall	Agrobacterium tumefaciens
1	Environmental Stress	
1	Eriophyid Mites	
1	Grape Cane Gallmakers	
2	Hail Injury	
1	Insects	
1	Suspect Chemical Injury	
1	Suspect Environmental Stress	

18	Total for Grape	

RASPBERRY

1	Anthracnose	Elsinoe veneta
1	Insect Stem Gall	Hemadas nubilipennis

2	Total for Raspberry	

Plant Disease Clinic

STRAWBERRY

1	Black Root Rot	
1	Cause of Problem Unknown	
3	Cultural Problem	
1	Environmental Stress	
1	Negative for Rhizoctonia	
3	Rhizoctonia Root Rot	Rhizoctonia solani
1	Rootworms	
1	Slime Mold	Physarum cinereum
1	Spiral Nematodes	Helicotylenchus sp.

13	Total for Strawberry	

WINEBERRY

1	Environmental Stress	

1	Total for Wineberry	

HERBACEOUS ORNAMENTALS AND INDOOR PLANTS

AGLAONEMA

1	Insufficient Sample	

1	Total for Aglaonema	

AJUGA

1	Pythium Root Rot	Pythium sp.
1	Southern Blight	Sclerotium rolfsii

2	Total for Ajuga	

ANEMONE

1	Phytophthora Root Rot	Phytophthora sp.

1	Total for Anemone	

ARTEMISIA

1	Suspect Overwatering	
1	Thrips	

2	Total for Artemisia	

BEGONIA

1	Cause of Problem Unknown	
1	Powdery Mildew	Oidium begoniae
2	Rhizoctonia Stem Rot	Rhizoctonia solani
2	Sunscorch	

6	Total for Begonia	

BELLFLOWER

1	Cause of Problem Unknown	
1	Chemical Injury	

2	Total for Bellflower	

BLUEBEARD

1	Four-lined Plant Bugs	
1	Phytophthora Stem and Root Rot	Phytophthora sp.

2	Total for Bluebeard	

CACTUS

1	Environmental Stress	

1	Total for Cactus	

Plant Disease Clinic

CALIBRACHOA

1	Phytophthora Crown Rot	Phytophthora parasitica
1	Total for Calibrachoa	

CANNA LILY

1	Insufficient Information	
1	Total for Canna Lily	

CANTERBURY BELLS

1	Suspect Environmental Stress	
1	Total for Canterbury Bells	

CARNATION

1	Fusarium Stem Rot	Fusarium sp.
1	Total for Carnation	

CHRYSANTHEMUM

1	Bacterial Leaf Spot	Pseudomonas cichorii
1	Gray Mold	Botrytis cinerea
1	Insects	
3	Total for Chrysanthemum	

CHRYSOGONUM

2	Southern Blight	Sclerotium rolfsii
2	Total for Chrysogonum	

CITRUS PLANT

1	Cold Injury	
1	Total for Citrus Plant	

CLEMATIS

2	Environmental Stress	
1	Insufficient Sample	
3	Total for Clematis	

COLUMBINE

1	Pythium Root Rot	Pythium sp.
1	Total for Columbine	

CONEFLOWER

1	Chemical Injury	
1	Foliar nematodes	Aphelenchoides ritzemabosi

2	Total for Coneflower	

CORAL BELLS

1	Pythium Root Rot	Pythium sp.

1	Total for Coral Bells	

COREOPSIS

1	Cultural Problem	
1	Environmental Stress	
1	Insufficient Sample	

3	Total for Coreopsis	

COSMOS

1	Botrytis Blight	Botrytis cinerea

1	Total for Cosmos	

CYCLAMEN

1	Cultural Problem	

1	Total for Cyclamen	

DAFFODIL

1	Genetic Problem	
1	Healthy	

2	Total for Daffodil	

DAHLIA

1	Crown Gall	Agrobacterium tumefaciens
1	Mites	
1	Thrips	

3	Total for Dahlia	

DAYLILY

2	Anthracnose	Colletotrichum dematium
5	Daylily Rust	Puccinia sp.
1	Leaf Streak	Aureobasidium microstictum
1	Mites	

9	Total for Daylily	

DELOSPERMA

1	Environmental Stress	
1	Normal Condition	

2	Total for Delosperma	

DRACAENA

1	Cultural Problem	
2	Fluoride Toxicity	

3	Total for Dracaena	

EUCALYPTUS

1	Oedema	

1	Total for Eucalyptus	

FERN

1	Cultural Problem	
1	Sporangia - Normal Condition	

2	Total for Fern	

FOXGLOVE

1	Suspect Chemical Injury	

1	Total for Foxglove	

GAILLARDIA

1	Cultural Problem	
1	Insufficient Sample	

2	Total for Gaillardia	

GARDENIA

1	Thrips	

1	Total for Gardenia	

GERANIUM

2	Bacterial Blight	Xanthomonas campestris
1	Cultural Problem	
1	Low pH	
1	Negative for Bacterial Blight	
1	Nonpathogenic Fungus	
1	Pythium Blackleg	Pythium sp.
1	Suspect Chemical Injury	

8	Total for Geranium	

GLADIOLUS

1	Bulb Mites	
3	Fusarium Yellows	Fusarium oxysporum

4	Total for Gladiolus	

GOLDFISH PLANT

1	Suspect Chemical Injury	

1	Total for Goldfish Plant	

GOURD

1	Squash Bugs	

1	Total for Gourd	

HELLEBORE

1	Black Leaf Spot	Coniothyrium hellebori
1	Insufficient Sample	
1	Pythium Root Rot	Pythium sp.

3	Total for Hellebore	

HOLLYHOCK

1	Root Knot Nematodes	Meloidogyne sp.

1	Total for Hollyhock	

HOSTA

1	Botrytis Blight	Botrytis cinerea
1	Chemical Injury	
2	Environmental Stress	
1	Scorch	
1	Soft Rot	Erwinia carotovora
2	Southern Blight	Sclerotium rolfsii

8	Total for Hosta	

HOUTTUYNIA

1	Suspect Nutrient Deficiency	

1	Total for Houttuynia	

IMPATIENS

2	Alternaria Leaf Spot	Alternaria sp.
1	Botrytis Blight	Botrytis cinerea
1	Chemical Injury	
2	Rhizoctonia Stem and Root Rot	Rhizoctonia solani
1	Root Knot Nematodes	Meloidogyne sp.
1	Slime Mold	
8	Total for Impatiens	

IRIS

1	Environmental Stress	
1	Heterosporium Leaf Spot	Heterosporium iridis
3	Soft Rot	Erwinia carotovora
5	Total for Iris	

LANTANA

1	Insects	
1	Total for Lantana	

LAVENDER

1	Cold Injury	
1	Total for Lavender	

LEMON

1	Physiological Problem	
1	Total for Lemon	

LIGULARIA

1	Leafminers	
1	Total for Ligularia	

LILY

3	Botrytis Blight	Botrytis elliptica
3	Total for Lily	

LIRIOPE

1	Anthracnose	Colletotrichum sp.
1	Mycosphaerella Leaf Spot	Mycosphaerella sp.
2	Total for Liriope	

LOBELIA

1	Cause of Problem Unknown	

1	Total for Lobelia	

MADAGASCAR PERIWINKLE

1	Nutrient Deficiency	
3	Phytophthora Blight	Phytophthora parasitica
1	Suspect Nutrient Deficiency	

5	Total for Madagascar Periwinkle	

MARIGOLD

1	Low pH	
1	Mites	
1	Pythium Root Rot	Pythium sp.

3	Total for Marigold	

MISCANTHUS

1	Anthracnose	Colletotrichum dematium
1	Miscanthus Blight	Leptosphaeria sp.

2	Total for Miscanthus	

MONDOGRASS

1	Anthracnose	Colletotrichum sp.

1	Total for Mondograss	

MYRTLE

1	Scales	

1	Total for Myrtle	

NORFOLK ISLAND PINE

1	Cultural Problem	

1	Total for Norfolk Island Pine	

PACHYSANDRA

1	Chemical Injury	
1	Insufficient Information	
1	Septoria Leaf Spot	Septoria pachysandrae
6	Volutella Blight	Volutella pachysandrae

9	Total for Pachysandra	

PANSY

1	Cause of Problem Unknown	
2	Chemical Injury	
1	Insufficient Sample	
2	Negative for Disease	
2	Negative for Root Disease	
1	Phytophthora Root Rot	Phytophthora sp.
9	Total for Pansy	

PEONY

2	Botrytis Blight	Botrytis cinerea
1	Cause of Problem Unknown	
1	Cladosporium Stem and Leaf Blotch	Cladosporium paeoniae
4	Total for Peony	

PERIWINKLE

2	Phoma Dieback	Phoma sp.
1	Phomopsis Dieback	Phomopsis livella
1	Pythium Root Rot	Pythium sp.
1	Suspect Phomopsis Dieback	Phomopsis livella
5	Total for Periwinkle	

PETUNIA

1	Botrytis Blight	Botrytis cinerea
1	Cause of Problem Unknown	
1	Phytophthora Crown Rot	Phytophthora sp.
1	Suspect Nutrient Deficiency	
4	Total for Petunia	

PHALARIS

1	Web Blight	Rhizoctonia solani
1	Total for Phalaris	

PHILODENDRON

1	Natural Leaf Senescence	
1	Total for Philodendron	

PHLOX

1	Cultural Problem	
2	Physiological Problem	
1	Suspect Chemical Injury	
4	Total for Phlox	

PIGGYBACK PLANT

1	Insufficient Sample	

1	Total for Piggyback Plant	

PITCHER PLANT

1	Suspect Chemical Injury	

1	Total for Pitcher Plant	

PLANT

1	Insufficient Sample	

1	Total for Plant	

PLANTS

1	Chemical Injury	

1	Total for Plants	

POINSETTIA

1	Cultural Problem	
2	Pythium Root Rot	Pythium sp.

3	Total for Poinsettia	

POTENTILLA

1	Foliar Nematodes	Aphelenchoides sp.

1	Total for Potentilla	

PRATIA

1	Southern Blight	Sclerotium rolfsii

1	Total for Pratia	

PRIMROSE

1	Suspect Chemical Injury	

1	Total for Primrose	

PURPLEHEART

1	Alternaria Leaf Spot	Alternaria sp.

1	Total for Purpleheart	

RANUNCULUS

1	Bacterial Blight	Pseudomonas straminea
1	Web Blight	Rhizoctonia solani

2	Total for Ranunculus	

ROCK ROSE

1	Gray Mold	Botrytis cinerea

1	Total for Rock Rose	

ROCKFOIL

1	Environmental Stress	

1	Total for Rockfoil	

RUDBECKIA

1	Thrips	

1	Total for Rudbeckia	

SALVIA

1	Bacterial Leaf Spot	Pseudomonas cichorii
1	Chemical Injury	

2	Total for Salvia	

SCHEFFLERA

2	Insufficient Sample	

2	Total for Schefflera	

SEDUM

1	Alternaria Leaf Spot	Alternaria tenuis
1	Bacterial Soft Rot	Erwinia carotovora
1	Bacterial Stem Rot	Erwinia chrysanthemi
1	Diplodia Stem Rot	Diplodia sp.
1	Insufficient Sample	
1	Pythium Root Rot	Pythium sp.
1	Root Knot Nematodes	Meloidogyne sp.
1	Web Blight	Rhizoctonia solani

8	Total for Sedum	

SNAPDRAGON

1	Impatiens Necrotic Spot Virus	

1	Total for Snapdragon	

SOLOMON'S SEAL

1	Penicillium Rot	Penicillium sp.
1	Total for Solomon's Seal	

STACHYS

1	Suspect Cyclamen Mites	
1	Total for Stachys	

SUNFLOWER

2	Alternaria Leaf and Stem Spot	Alternaria helianthi
2	Total for Sunflower	

TARRAGON

1	Insufficient Sample	
1	Total for Tarragon	

TULIP

1	Botrytis Blight	Botrytis cinerea
1	Total for Tulip	

VERBENA

1	Chemical Injury	
1	Cultural Problem	
2	Total for Verbena	

VIOLET

1	Environmental Stress	
1	Total for Violet	

YELLOW ARCHANGEL

1	Southern Blight	Sclerotium rolfsii
1	Total for Yellow Archangel	

ZEBRA GRASS

1	Mealybugs	

1	Total for Zebra Grass	

ZINNIA

1	Bacterial Leaf Spot	Xanthomonas campestris pv. zinneae
1	Environmental Stress	
1	High pH	
1	Pythium Root Rot	Pythium sp.

4	Total for Zinnia	

WOODY ORNAMENTALS

ABELIA

1	Frost Injury	
1	Total for Abelia	

ALEXANDRIAN LAUREL

1	Cause of Problem Unknown	
1	Total for Alexandrian Laurel	

AMPELOPSIS

1	Cause of Problem Unknown	
1	Total for Ampelopsis	

ARALIA

1	Cultural Problem	
1	Total for Aralia	

AUCUBA

1	Insufficient Sample	
1	Total for Aucuba	

AZALEA

1	Cause of Problem Unknown	
3	Cultural Problem	
2	Environmental Stress	
2	High pH	
1	Insufficient Information	
6	Insufficient Sample	
2	Lacebugs	
1	Leaf and Flower Gall	Exobasidium vaccinii
3	Lichens	
6	Low pH	
1	Mycosphaerella Leaf Spot	Mycosphaerella sp.
1	Negative for Disease	
2	Negative for Root Rot	
1	Nutrient Deficiency	
1	Phomopsis Dieback	Phomopsis sp.
6	Phytophthora Root Rot	Phytophthora cinnamomi
1	Powdery Mildew	Oidium sp.
1	Rootbound	
1	Suspect Environmental Stress	
42	Total for Azalea	

Plant Disease Clinic

BARBERRY

1	Insufficient Sample	
1	Phytophthora Root Rot	Phytophthora cinnamomi
2	Total for Barberry	

BEARBERRY

1	Cultural Problem	
1	Phytophthora Root Rot	Phytophthora cinnamomi
1	Rootbound	
3	Total for Bearberry	

BOXWOOD

2	Cause of Problem Unknown	
10	Cultural Problem	
4	Deep Planting	
30	English Boxwood Decline	Paecilomyces buxi
8	Environmental Stress	
1	Insects	
25	Insufficient Sample	
2	Macrophoma Leaf Spot	Macrophoma candollei
4	Mites	
1	Negative for Nematodes	
1	Negative for Phytophthora	
3	Negative for Root Disease	
4	Negative for Root Rot Fungi	
5	Phytophthora Root Rot	Phytophthora parasitica
1	Pin Nematodes	Paratylenchus sp.
1	Poor Drainage	
4	Ring Nematodes	Criconemella sp.
1	Scorch	
21	Spiral Nematodes	Rotylenchus sp.
1	Suspect Cultural Problem	
1	Suspect English Boxwood Decline	Paecilomyces buxi
1	Suspect Frost Injury	
2	Suspect Winter Injury	
2	Volutella Blight	Volutella buxi
2	Winter Injury	
137	Total for Boxwood	

BROOM

1	Winter Injury	
1	Total for Broom	

BUTTERFLY BUSH

1	Cold Injury	
2	Mites	
3	Total for Butterfly Bush	

CAMELLIA

1	Cold Injury	
2	Environmental Stess	
1	Genetic Abnormality	
2	Insufficient Sample	
1	Negative for Root Pathogens	
1	Oedema	
1	Phytophthora Root Rot	Phytophthora cinnamomi
2	Scales	
1	Suspect Chemical Injury	

12	Total for Camellia	

CANDYTUFT

1	Cold Injury	
2	Environmental Stress	

3	Total for Candytuft	

CHASTETREE

1	Suspect Hail Injury	

1	Total for Chastetree	

CHERRY

1	Insufficient Sample	

1	Total for Cherry	

CHERRYLAUREL

1	Anthracnose	Colletotrichum sp.
1	Botryosphaeria Dieback	Botryosphaeria dothidea
1	Environmental Stress	
1	Insufficient Sample	
1	Negative for Root Pathogens	
1	Phomopsis Dieback	Phomopsis sp.

6	Total for Cherrylaurel	

CHOKEBERRY

1	Pythium Root Rot	Pythium sp.

1	Total for Chokeberry	

CRAPE MYRTLE

1	Asian Ambrosia Beetles	
2	Chemical Injury	
1	Enviromental Stress	
1	Powdery Mildew	Erysiphe lagerstroemiae
2	Sooty Mold	Capnodium sp.

7	Total for Crape Myrtle	

DAPHNE

1	Environmental Stress	
1	Total for Daphne	

DOVE TREE

1	Phomopsis Dieback	Phomopsis sp.
1	Total for Dove Tree	

ENGLISH IVY

2	Anthracnose	Colletotrichum trichellum
2	Environmental Stress	
1	Insufficient Sample	
1	Phyllosticta Leaf Spot	Phyllosticta sp.
6	Total for English Ivy	

EUONYMUS

1	Fusarium Canker	Fusarium lateritium
1	Nutrient Deficiency	
1	Powdery Mildew	Microsphaera euonymi-japonici
2	Scales	
5	Total for Euonymus	

FILBERT

1	Eastern Filbert Blight	Anisogramma anomala
1	Environmental Stress	
1	Wood Decay	
3	Total for Filbert	

FORSYTHIA

1	Insufficient Sample	
1	Phomopsis Gall	Phomopsis sp.
1	Scales	
1	Sclerotinia Twig Blight	Sclerotinia sclerotiorum
4	Total for Forsythia	

FOTHERGILLA

1	Insects	
1	Total for Fothergilla	

HEMLOCK

1	Insufficient Sample	
1	Total for Hemlock	

HIBISCUS

1	Chemical Injury	

1	Total for Hibiscus	

HOLLY

3	Anthracnose	Gloeosporium sp.
33	Black Root Rot	Thielaviopsis basicola
1	Black Vine Weevils	
1	Botryosphaeria Dieback	Botryosphaeria sp.
1	Chemical Injury	
1	Cold Injury	
1	Crystalline Material	
1	Cultural Problem	
4	Environmental Stress	
1	European Hornets	
2	Insects	
25	Insufficient Sample	
1	Mealybugs	
2	Negative for Root Disease	
1	No Pathogens Found	
1	Nutrient Deficiency	
1	Physiological Leaf Spot	
3	Phytophthora Root Rot	Phytophthora cinnamomi
1	Rhizoctonia Root Rot	Rhizoctonia solani
1	Sooty Mold	
1	Suspect Root Problem	
1	Web Blight	Rhizoctonia solani
5	Winter Injury	

92	Total for Holly	

HONEYSUCKLE

1	Botrytis Blight	Botrytis cinerea

1	Total for Honeysuckle	

HYDRANGEA

1	Armillaria Root Rot	Armillaria mellea
1	Bacterial Leaf Spot	Pseudomonas cichorii
1	Insufficient Information	
1	Insufficient Sample	

4	Total for Hydrangea	

HYPERICUM

1	Rhizoctonia Root Rot	Rhizoctonia solani

1	Total for Hypericum	

INKBERRY

2	Environmental Stress	
2	Insufficient Sample	
1	Phytophthora Root Rot	Phytophthora cinnamomi
1	Rootbound	
1	Wood Decay	

7	Total for Inkberry	

JUNIPER

1	Cedar-Quince Rust	Gymnosporangium clavipes
6	Cultural Problem	
17	Environmental Stress	
1	Insects	
11	Insufficient Sample	
1	Kabatina Tip Blight	Kabatina juniperi
6	Mites	
2	Negative for Root Disease	
1	Normal Condition	
1	Pestalotiopsis Twig Blight	Pestalotiopsis sp.
7	Phomopsis Tip Blight	Phomopsis juniperovora
6	Phytophthora Root Rot	Phytophthora sp.
4	Pythium Root Rot	Pythium sp.
4	Rootbound	
2	Suspect Environmental Stress	
1	Suspect Winter Injury	
1	Winter Injury	
1	Wood Decay	

73	Total for Juniper	

LAUREL

1	Cercospora Leaf Spot	Cercospora kalmiae
2	Environmental Stress	
3	Insufficient Sample	
1	Negative for Root Disease	
2	Scorch	

9	Total for Laurel	

LILAC

2	Frost Injury	
2	Insufficient Sample	

4	Total for Lilac	

MAPLE

1	Borers	

1	Total for Maple	

MOUNTAIN LAUREL

1	Botryosphaeria Dieback	Botryosphaeria sp.
1	Insufficient Sample	
1	Low pH	

3	Total for Mountain Laurel	

NANDINA

1	Mites	

1	Total for Nandina	

OLEANDER

1	Insufficient Sample	

1	Total for Oleander	

PHOTINIA

1	Botryosphaeria Dieback	Botryosphaeria sp.
1	Chemical Injury	
2	Entomosporium Leaf Spot	Entomosporium mespili
1	Insects	
1	Suspect Chemical Injury	

6	Total for Photinia	

PIERIS

1	Botryosphaeria Dieback	Botryosphaeria sp.
1	Cultural Problem	
1	Insufficient Sample	
1	Phytophthora Root Rot	Phytophthora cinnamomi

4	Total for Pieris	

PLANTS

1	Chemical Injury	
1	Environmental Stress	
1	Insects	
2	Insufficient Sample	
1	Plant Bugs	
1	Scorch	
1	Sour Mulch	
1	Suspect Chemical Injury	

9	Total for Plants	

PRIVET

1	Cercospora Leaf Spot	Cercospora sp.
1	Chemical Injury	
2	Insufficient Sample	

4	Total for Privet	

PYRACANTHA

1	Environmental Stress	
1	Scab	Spilocaea pyracanthae

2	Total for Pyracantha	

RED CEDAR

1	Cedar-Quince Rust	Gymnosporangium clavipes
1	Insects	
2	Kabatina Tip Blight	Kabatina juniperi
1	Mites	
1	Pestalotia Blight	Pestalotia funerea

6	Total for Red Cedar	

RHODODENDRON

1	Black Vine Weevils	
1	Borers	
6	Botryosphaeria Dieback	Botryosphaeria sp.
1	Botryosphaeria Leaf Spot	Botryosphaeria sp.
3	Cause of Problem Unknown	
2	Cercospora Leaf Spot	Cercospora handelii
1	Cold Injury	
1	Cultural Problem	
2	Environmental Stress	
4	Gall Midges	
1	High pH	
2	Insects	
5	Insufficient Sample	
1	Iron Deficiency	
1	Lacebugs	
1	Leaf Miner	
1	Low pH	
6	Mycosphaerella Leaf Spot	Mycosphaerella sp.
1	Negative for Phytophthora	
5	Negative for Root Disease	
2	Pestalotia Leaf Spot	Pestalotia rhododendri
1	Phytophthora Dieback	Phytophthora citricola
3	Rootbound	
1	Suspect Insect Injury	
1	Thrips	
3	Winter Injury	

57	Total for Rhododendron	

ROSE

3	Black Spot	Diplocarpon rosae
1	Borers	
2	Common Canker	Coniothyrium fuckelii
1	Fertilizer Burn	
3	Insects	
1	Mechanical Injury	
1	Nutrient Deficiency	
1	Powdery Mildew	Sphaerotheca pannosa
1	Rose Mosaic Virus	
10	Rose Rosette	
1	Suspect Chemical Injury	
1	Suspect Crown Gall	Agrobacterium tumefaciens
1	Suspect Nutrient Deficiency	
1	Suspect Rose Rosette	

28	Total for Rose	

ROSE-OF-SHARON

1	Chemical Injury
1	Environmental Stress
1	Insufficient Sample

3	Total for Rose-of-Sharon

RUSSIAN ARBORVITAE

1	Negative for Phytophthora

1	Total for Russian Arborvitae

SERVICEBERRY

1	Cedar-Quince Rust	Gymnosporangium clavipes

1	Total for Serviceberry	

SNOWBALLBUSH

1	Chemical Injury
1	Environmental Stress
1	Insufficient Sample

3	Total for Snowball Bush

SPIREA

1	Chemical Injury

1	Total for Spirea

SWEETSHRUB

1	Cause of Problem Unknown

1	Total for Sweetshrub

VIBURNUM

1	Cause of Problem Unknown	
1	Frost Injury	
2	Insects	
1	Insufficient Sample	
1	Phoma Leaf Spot	Phoma sp.
1	Planthoppers	
1	Rhizoctonia Root Rot	Rhizoctonia solani

8	Total for Viburnum	

WAX MYRTLE

1	Botryosphaeria Dieback	Botryosphaeria sp.

1	Total for Wax Myrtle	

WISTERIA

1	Botryosphaeria Dieback	Botryosphaeria obtusa
1	Thrips	

2	Total for Wisteria	

WITCHHAZEL

1	Insect Leaf Galls	
2	Phyllosticta Leaf Blight	Phyllosticta hamamelidis

3	Total for Witchhazel	

YEW

2	Cultural Problem	
2	Environmental Stress	
1	Insects	
8	Insufficient Sample	
1	Mechanical Injury	
3	Phytophthora Root Rot	Phytophthora cinnamomi

17	Total for Yew	

YUCCA

1	Bacterial Soft Rot	Erwinia carotovora
1	Plant Bugs	

2	Total for Yucca	

Plant Disease Clinic

TREES

ARBORVITAE

1	Environmental Stress	
1	Insufficient Sample	
1	Mites	
2	Pythium Root Rot	Pythium sp.
3	Suspect Chemical Injury	
2	Winter Injury	

10	Total for Arborvitae	

ASH

1	Environmental Stress	
1	Mites	
1	Suspect Ash Yellows	

3	Total for Ash	

BEECH

1	Cultural Problem	
1	Sooty Mold	Scorias spongiosa
1	Virus	

3	Total for Beech	

BIRCH

1	Anthracnose	Discula betulina
1	Chemical Injury	
2	Insects	
1	Sooty Mold	Scorias spongiosa

5	Total for Birch	

BLACK GUM

1	Anthracnose	Discula sp.
1	Botryosphaeria Dieback	Botryosphaeria sp.
1	Insects	

3	Total for Black Gum	

CATALPA

1	Bacterial Wetwood	

1	Total for Catalpa	

CEDAR

3	Environmental Stress	

3	Total for Cedar	

CHERRY

1	Chemical Injury	
1	Graft Failure	
2	Total for Cherry	

CHOKECHERRY

1	Chemical Injury	
1	Total for Chokecherry	

CRYPTOMERIA

1	Cause of Problem Unknown	
2	Environmental Stress	
1	Insects	
1	Insufficient Sample	
1	Scales	
1	Winter Injury	
7	Total for Cryptomeria	

CYPRESS

1	Algae	
1	Bagworms	
2	Cultural Problem	
8	Environmental Stress	
1	Healthy	
1	Insects	
6	Insufficient Sample	
1	Male Cones	
2	Mechanical Injury	
1	Negative for Root Pathogens	
2	Pestalotiopsis Tip Blight	Pestalotiopsis funerea
1	Phyllosticta Tip Blight	Phyllosticta sp.
1	Phytophthora Root Rot	Phytophthora cinnamomi
1	Scales	
7	Seiridium Canker	Seiridium sp.
6	Suspect Seiridium Canker	Seiridium sp.
3	Suspect Winter Injury	
9	Winter Injury	
54	Total for Cypress	

DAWN REDWOOD

1	Gloeosporium Needle Spot	Gloeosporium sp.
1	Total for Dawn Redwood	

DOGWOOD

1	Botryosphaeria Canker	Botryosphaeria dothidea
1	Botryosphaeria Dieback	Botryosphaeria sp.
1	Canker-Cause Unknown	
2	Chemical Injury	
1	Cultural Problem	
3	Discula Anthracnose	Discula destructiva
2	Environmental Stress	
1	Frost Injury	
1	Girdling Roots	
6	Insufficient Sample	
1	Nutrient Deficiency	
1	Osmocote	
14	Powdery Mildew	Oidium sp.
1	Pythium Root Rot	Pythium sp.
1	Resin	
3	Scorch	
8	Septoria Leaf Spot	Septoria cornicola
2	Spot Anthracnose	Elsinoe corni
1	Suspect Chemical Injury	
1	Suspect Frost Injury	
1	Vole Injury	

53	Total for Dogwood	

DOUGLASFIR

1	Environmental Stress	
1	Insufficient Sample	
1	Swiss Needle Cast	Phaeocryptopus gaeumannii

3	Total for Douglasfir	

ELM

1	Aphids	
1	Cytospora Canker	Cytospora sp.
1	Dutch Elm Disease	Ophiostoma ulmi
1	Eriophyid Mites	
1	Insects	
1	Negative for Dutch Elm Disease	
1	Suspect Chemical Injury	

7	Total for Elm	

FALSECYPRESS

2	Cultural Problem	
2	Environmental Stress	

4	Total for Falsecypress	

FIR

1	Botrytis Blight	Botrytis cinerea
1	Cultural Problem	
2	Environmental Stress	
1	Insufficient Sample	
1	Mechanical Injury	
2	Mites	
1	Negative for Root Disease	
3	Phytophthora Root Rot	Phytophthora cinnamomi
1	Suspect Winter Injury	
13	Total for Fir	

FRINGE TREE

1	Suspect Algal Leaf Spot	Cephaleuros sp.
1	Total for Fringe Tree	

GOLDEN-RAIN-TREE

1	Cause of Problem Unknown	
1	Total for Golden-rain-tree	

HAWTHORN

1	Cedar-Quince Rust	Gymnosporangium clavipes
1	Entomosporium Leaf Spot	Entomosporium mespili
1	Wood Decay	
3	Total for Hawthorn	

HEMLOCK

1	Armillaria Root Rot	Armillaria mellea
3	Environmental Stress	
1	Insufficient Information	
1	Mites	
1	Suspect Environmental Stress	
3	Woolly Adelgids	
10	Total for Hemlock	

HICKORY

1	Gnomonia Leaf Spot	Gnomonia caryae
2	Leaf Stem Gall Insects	
1	Phomopsis Gall	Phomopsis sp.
4	Total for Hickory	

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HONEYLOCUST

1	Botryosphaeria Canker	Botryosphaeria dothidea
1	Wood Decay	

2	Total for Honeylocust	

HORNBEAM

1	Insufficient Sample

1	Total for Hornbeam

HORSE CHESTNUT

1	Mechanical Injury

1	Total for Horse Chestnut

JUNIPER

1	Normal Condition

1	Total for Juniper

LARCH

1	Cultural Problem

1	Total for Larch

LINDEN

1	Chemical Injury
1	Negative for Leaf Disease

2	Total for Linden

MAGNOLIA

1	Cause of Problem Unknown
1	Environmental Stress
1	Mechanical Injury
1	Nutrient Deficiency
1	Sapsucker Injury
2	Sooty Mold
1	Suspect Chemical Injury
1	Suspect Winter Injury
8	Winter Injury

17	Total for Magnolia

MAPLE

10	Anthracnose	Discula sp.
1	Bacterial Wetwood	
2	Botryosphaeria Dieback	Botryosphaeria sp.
4	Chemical Injury	
2	Cultural Problem	
1	Deep Mulch	
8	Environmental Stress	
1	European Hornet	
2	Frost Injury	
1	Ganoderma Root and Butt Rot	Ganoderma sp.
2	Insects	
1	Insufficient Information	
2	Insufficient Sample	
1	Japanese Beetles	
1	Leaf Galls	
1	Leafhoppers	
1	Mechanical Injury	
6	Negative for Verticillium Wilt	
1	Phoma on Bark	Phoma sp.
1	Phomopsis Dieback	Phomopsis sp.
3	Purple-eye Leaf Spot	Phyllosticta minima
2	Scorch	
1	Suspect Cultural Problem	
5	Verticillium Wilt	Verticillium dahliae
1	Wood Decay	
1	Zonate Leaf Spot	Cristulariella pyramidalis
62	Total for Maple	

MIMOSA

1	Suspect Mimosa Wilt	Fusarium oxysporum f. sp. pernicos
1	Total for Mimosa	

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OAK

1	Aphids	
2	Bacterial Scorch	Xylella fastidiosa
2	Bacterial Wetwood	
6	Chemical Injury	
1	Chewing Injury	
1	Discula Leaf Spot	Discula sp.
3	Environmental Stress	
2	Gall Insect	
1	Galls-Wound Response	
4	Insects	
3	Insufficient Sample	
1	Iron Chlorosis	
1	Leaf Gall Insects	
1	Leptothyrium Leaf Spot	Leptothyrium sp.
1	Mites	
1	Mycosphaerella Leaf Spot	Mycosphaerella sp.
1	Negative for Oak Wilt	
3	Oak Leaf Blister	Taphrina caerulescens
5	Oak Leaf Button Galls	
1	Smooth Patch	Aleurodiscus oakesii
2	Suspect Bacterial Scorch	
1	Suspect Bacterial Wetwood	
1	Tubakia Leaf Spot	Tubakia dryina
1	Vein Pocket Galls	
1	Wood Decay - Turkey Tail	Tremetes pubescens
3	Wool Sower Galls	

50	Total for Oak	

ORNAMENTAL CHERRY

1	Mites	

1	Total for Ornamental Cherry	

ORNAMENTAL PEAR

1	Botryosphaeria Canker	Botryosphaeria dothidea
1	Cedar-Quince Rust	Gymnosporangium clavipes
1	Chemical Injury	
1	Insufficient Information	

4	Total for Ornamental Pear	

PINE

1	Cause of Problem Unknown	
2	Cultural Problem	
2	Diplodia Tip Blight	Diplodia pinea
4	Environmental Stress	
3	Insects	
8	Insufficient Sample	
1	Mechanical Injury	
1	Nantucket Pine Tip Moths	
1	Negative for Disease	
1	Negative for Needle Cast	
1	Negative for Pinewood Nematodes	
2	Negative for Root Pathogens	
1	Ploioderma Needle Cast	Ploioderma lethale
6	Procerum Root Disease	Leptographium procerum
1	Seasonal Needle Drop	
2	Sooty Mold	Scorias spongiosa
1	Suspect Armillaria Root Rot	Armillaria mellea
1	Suspect Insect Injury	
1	Suspect Phacidiopycnis Canker	Phacidiopycnis pseudotsugae

40	Total for Pine	

POPLAR

1	Canker - Cause Unknown	
1	Chemical Injury	
1	Suspect Environmental Stress	

3	Total for Poplar	

PUSSYWILLOW

1	Botrytis Blight	Botrytis cinerea

1	Total for Pussywillow	

REDBUD

2	Eriophyid Mites	
1	Mites	
1	Negative for Verticillium	
1	Verticillium Wilt	Verticillium dahliae

5	Total for Redbud	

SERVICEBERRY

1	Environmental Stress	
1	Insufficient Sample	

2	Total for Serviceberry	

SOURWOOD

1	Cristulariella Leaf Spot	Cristulariella moricola

1	Total for Sourwood	

SPRUCE

2	Cultural Problem	
7	Environmental Stress	
1	Gall Adelgids	
2	Insects	
1	Low pH	
4	Mites	
2	Negative for Disease	
2	Pythium Root Rot	Pythium sp.
2	Rhizosphaera Needle Blight	Rhizosphaera kalkhoffii
1	Suspect Chemical Injury	
1	Suspect Nutrient Deficiency	

25	Total for Spruce	

SWEET GUM

1	Cercospora Leaf Spot	Cercospora liquidambaris
1	Suspect Chemical Injury	

2	Total for Sweet Gum	

TREE

1	Insufficient Sample	

1	Total for Tree	

TREE-OF-HEAVEN

1	Fusarium	Fusarium sp.

1	Total for Tree-of-heaven	

TREES

3	Chemical Injury	
1	Insufficient Sample	

4	Total for Trees	

TULIP TREE

1	Insufficient Sample	
1	Powdery Mildew	Erysiphe liriodendri
1	Wood Decay	

3	Total for Tulip Tree	

UMBRELLA PINE

1	Insufficient Sample	

1	Total for Umbrella Pine	

WILLOW

1	Cercospora Leaf Spot	Cercospora salicina
1	Crown Gall	Agrobacterium tumefaciens
2	Cytospora Canker	Cytospora sp.
1	Environmental Stress	
1	Sapsucker Injury	
1	White Rot	Trichaptum biformis

7	Total for Willow	

YELLOWWOOD

1	Insufficient Sample

1	Total for Yellowwood

ZELKOVA

1	Negative for Phytophthora

1	Total for Zelkova

TURF

BENTGRASS

1	Algae	
1	Anaerobiosis	
1	Anthracnose	Colletotrichum graminicola
1	Brown Patch	Rhizoctonia solani
1	Cultural Problem	
1	Dollar Spot	Sclerotinia homeocarpa
1	Excess Thatch	
1	Lance Nematodes	Hoplolaimus sp.
1	Pythium Root Rot	Pythium sp.
3	Ring Nematodes	Criconemella sp.
12	Total for Bentgrass	

BERMUDAGRASS

2	Leaf Blotch	Bipolaris cynodontis
1	Spring Dead Spot	Gaeumannomyces graminis var. graminis
3	Total for Bermudagrass	

BLUEGRASS

2	Algae	
1	Brown Patch	Rhizoctonia solani
1	Green June Beetles	
1	Negative for Disease	
1	Powdery Mildew	Erysiphe graminis
1	Red Thread	Laetisaria fuciformis
1	Rust	Puccinia graminis
8	Total for Bluegrass	

FESCUE

9	Brown Patch	Rhizoctonia solani
1	Cultural Problem	
6	Environmental Stress	
1	Fusarium Blight	Fusarium culmorum
1	Helminthosporium Blight	Drechslera dictyoides
4	Insufficient Sample	
1	Negative for Disease	
1	Powdery Mildew	Erysiphe graminis
1	Red Thread	Laetisaria fuciformis
2	Rust	Puccinia graminis
1	Slime Mold	Diachea leucopodia
1	Suspect Brown Patch	Rhizoctonia solani
29	Total for Fescue	

RYEGRASSS

2	Environmental Stress	
2	Total for Ryegrass	

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ST. AUGUSTINEGRASS

1	Gray Leaf Spot	Pyricularia grisea

1	Total for St. Augustinegrass	

TURFGRASS

2	Brown Patch	Rhizoctonia solani
1	Cause of Problem Unknown	
1	Crystalline Residue	
1	Environmental Stress	
1	Excess Thatch	
1	Helminthosporium Blight	Drechslera dictyoides
1	Insufficient Information	
5	Insufficient Sample	
1	Leptosphaerulina Leaf Blight	Leptosphaerulina australis
1	Negative for Disease	
1	Pink Snow Mold	Microdochium nivale
1	Red Thread	Laetisaria fuciformis
2	Rhizoctonia Blight	Rhizoctonia solani
1	Scleroderma	Scleroderma geaster

20	Total for Turfgrass	

ZOYSIA

1	Cause of Problem Unknown	
1	Environmental Stress	

2	Total for Zoysia	

WEEDS AND NONPLANT MATERIAL

DEAD NETTLE

1	Cultural Problem	
1	Web Blight	

2	Total for Dead Nettle	

MULCH

1	Slime Mold	Fuligo septica

1	Total for Mulch	

VIRGINIA BUTTONWEED

1	Unidentified Fungal Stem Rot	

1	Total for Virginia Buttonweed	

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Summary of Plant Identifications
2001

Higher Plants (26)

Family: Agavaceae	
Yucca filamentosa	Yucca
Family: Aquifoliaceae	
Ilex sp.	Holly
Family: Brassicaceae	
Lepidium campestre	Field Pepper Grass
Family: Cupressaceae	
Carex platyphylla	Broad-leaved sedge
Juniperus horizontalis	Creeping Juniper
Juniperus sp.	Juniper
X Cupressocyparis leylandii	Leyland Cypress
Family: Euphorbiaceae	
Euphorbia cyathophora	Fire-on-the-mountain
Euphorbia lathyris	Caper Spurge
Family: Fabaceae	
Castanea mollissima (2)	Chinese Chestnut
Family: Gramineae	
Agrostis palustris	Creeping Bentgrass
Family: Nyssaceae	
Nyssa sylvatica	Black Gum
Family: Poaceae	
Anthoxanthum odoratum (2)	Sweet Vernalgrass
Festuca rubra	Red Fescue
Zoysia matrella	Zoysia Grass
Family: Polygonaceae	
Polygonum sp.	Fleeceflower
Family: Rosaceae	
Crataegus viridis 'Winter King'	Green Hawthorn
Malus sp.	Crabapple
Family: Salicaceae	
Populus balsamifera	Balsam Poplar
Family: Ulmaceae	
Ulmus alata	Winged Elm
Ulmus sp.	Elm

Unknown (2)

Insufficient Sample

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Fungi (8)

Coprinus sp.	
Cyathus sp.	Bird's Nest Fungus
Fuligo septica	Slime Mold
Lycoperdon sp. (2)	Puffball
Phallus sp.	Stinkhorn
Pleurotus elongatipes	Mushroom
Unable to Identify	Mushroom

All Others (1)

Insufficient Sample