



Coastal Plant Care

Spring Pest and Disease Report

As Spring nears and our plants awaken from their well-deserved rest, so do the insect pests and disease pathogens that infect our plant material. These threats vary from year to year. For example, Gypsy moth infestations will vary depending on the amount of a fungal parasite (*Entomophaga maimaiga*) that kills the moth and assists in keeping populations in check. Other pests are seeing increased populations due to the extended growing seasons and mild winters of recent years.

Every growing season is different. Varying rainfall frequency, temperatures, late frosts, and winter conditions often dictate how severe pest and disease populations will be during a growing season. In addition, landscapes with greater species diversity may also host varying beneficial insects and fungi that can naturally combat harmful pests and diseases. Unfortunately, many of our developed communities consist of very limited species with often poor nursery stock. These landscapes are particularly prone to devastating pest and disease outbreaks.

Plant care programs designed to preventatively or therapeutically treat pest and disease begin with the basics. A happy plant is a strong plant and strong plants can defend themselves quite well from external stresses. Ensuring you have a soil rich in organic matter, nutrients, periodic moisture, and free of compaction is the foundation of any successful plant care program. Promoting an environment rich in insect, wildlife, and fungal diversity can dramatically reduce the instance of harmful pest and disease. The easiest way to achieve this is to diversify the species in your garden. Species diversification will promote varying plant heights, widths, fruit, flower, color, and fragrance which will naturally attract a wider range of beneficial biota and fungi.

Plant damage from pest and disease will vary depending on the type and severity of outbreak. Wood boring insects in our area are particularly harmful and preventative treatment is your only good option. Outbreaks of scale feeding insects on Oaks, Maples, and a wide range of shrubs and shade trees, can be effectively treated through therapeutic treatment and beneficial insect releases. In most cases, preventatively treating your susceptible plants to fungal foliar disease is necessary to prevent excessive plant damage.

Keep in mind, stressed plants are more prone to catastrophic outcomes than healthy plants. In cases where your garden has suffered from repeated fungal foliar diseases such as powdery mildew or Anthracnose, it is critical you sanitize your garden by raking, bagging, and disposing of the infected foliage from your property in the Fall. The goal of any good Integrated Pest Management (IPM) program is never eradication but rather, achieving non-harmful levels of pest and disease. This naturally limits the number treatments necessary, reduces plant damage, and still promotes biologic diversity. Let's take a look at some notable pests and diseases in our area:

- 1) **Scale Insects.** There are over 15 types of Scales in our area wreaking havoc on nearly all woody trees and shrubs. Most notable are Obscure scale, Euonymus scale, Lecanium scale, Gloomy scale, and Japanese Maple scale. Species most effected are Oaks, Maples, Crape Myrtles, Euonymus, Cherry, Azalea, Cryptomeria, Hemlock, Holly,



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Juniper, Hickory, Walnut, Willow, Magnolia, Pines, Spruce, Peach, and a wide range of shrubs. Detection is often difficult for the untrained eye. Scales infest the twigs and stem of plants, feed on nutrients in the vascular tissue, and camouflage themselves quite well. The insect feeding creates a sticky residue called Honeydew. This Honeydew then collects dirt and debris and creates Sooty Mold. You may note black staining on leaves of trees and shrubs, roofs of cars parked beneath trees, or staining of concrete or brick beneath infested trees. Left untreated, this insect will multiply its populations and cause decline or death of the plant. Treatment during the dormant season coupled with a treatment when the insects are feeding in the Summer months is recommended.

- 2) **Wood Borers.** As with Scale insects, there are numerous types of wood borers in our area. Despite their name, they rarely bore into the internal portions of a tree or shrub's trunk. They cause damage and death by boring into the bark layer of plants and feeding on the nutrient rich vascular tissue beneath the bark. This subsequently interrupts the plants ability to uptake water and nutrients and damage is usually rapid. In addition, many of these borers contain disease pathogens in their mouthparts, thereby infecting the tree with disease. This is the case with the infamous Dutch Elm Disease which has killed nearly all untreated native Elm trees. The Elm Bark Beetle that bores into the Elm tree vectors the pathogen that causes Dutch Elm Disease. Stressed trees near construction sites, shopping centers, or in large communities are particularly prone to wood boring insects. Species most effected are nearly all deciduous and coniferous shade trees, and a wide range of woody shrubs. Most species of wood borers are non-native and found their way into our area via wooden shipping crates and pallets from Asia, Europe, and Africa. Preventative treatment is recommended.

- 3) **Fungal foliar disease.** Leaf diseases such as Powdery Mildew, which is common on Crape Myrtle, Peony, Dogwood, and many other shrubs and flowers, explode during periods of cool, moist climates. Therefore, should we experience a cool wet Spring, expect these leaf diseases to be prevalent. Anthracnose, Diplodia, Fireblight, Black Spot, Shot Hole, Needlecast, Leaf Spot, Rust, Apple Scab, and various leaf galls are common in our area. Severity of damage will vary depending on which disease and the existing condition of the host plant. In addition to early Spring fungicide treatments, increasing air flow in your garden through pruning and proper plant spacing will assist in disease control.

- 4) **Root diseases.** Diseases such as Phytophthora Root Rot and Armillaria are problematic in our landscapes. Show me a garden with an automatic irrigation system and I will show you root disease. These diseases infect a plant's roots and limit water and nutrient uptake. They are common in soils that are frequently wet and/or poorly drained. Incorporating compost, mulch, or dehydrated manure has been proven to mitigate the effects of these diseases by helping buffer soil moisture among other things. Depending on the severity of root disease, treatment may be required. As previously stated, the first line of defense is to limit watering of garden beds to 1-2 good

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soaks per week. Frequent, low volume watering that turf may enjoy will pre-dispose your garden plants to root disease. If you have a zoned irrigation system, make sure to zone your turf and garden separately.

Being an arborist and horticulturalist is analogous to being a veterinarian. You must understand a wide range of plant material, the care requirements needed for each, and the ability to diagnose and treat a wide range of species specific pests and diseases. I encourage everyone to expand their plant knowledge as it is truly a joy to understand the natural ebb and flow of your garden. I wish everyone a successful start to the growing season. Happy gardening!

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