RESEARCH LABORATORY TECHNICAL REPORT

BARTLETT TREE EXPERTS
SCIENTIFIC TREE CARE SINCE 1907

Botrytis Blight

Bhawana Ghimire, PhD, Plant Diagnostician
Matthew Borden, DPM, Plant Pathologist

Botrytis blight results in rapid death of foliage, stems, and flowers of plants. The disease is caused by a fungal pathogen in the genus *Botrytis* and is also referred to as "gray mold" due to the abundant production of fuzzy gray spores on the surfaces of infected tissues. This disease is noted in a wide variety of flowering ornamental plants including euonymus, hydrangea, hellebore, oleander, pansy, peony, pistachio, redbud, rhododendron and rose.

Description and Life Cycle

Plants may be infected at any stage, but tender new growth, freshly injured tissues, and aging or senescent tissues are most susceptible. *Botrytis* favors temperatures in the range of 60 to 75°F with high relative humidity (85% or greater), which is necessary for spore germination, infection, and disease development. The disease is more prevalent in the spring and fall months.

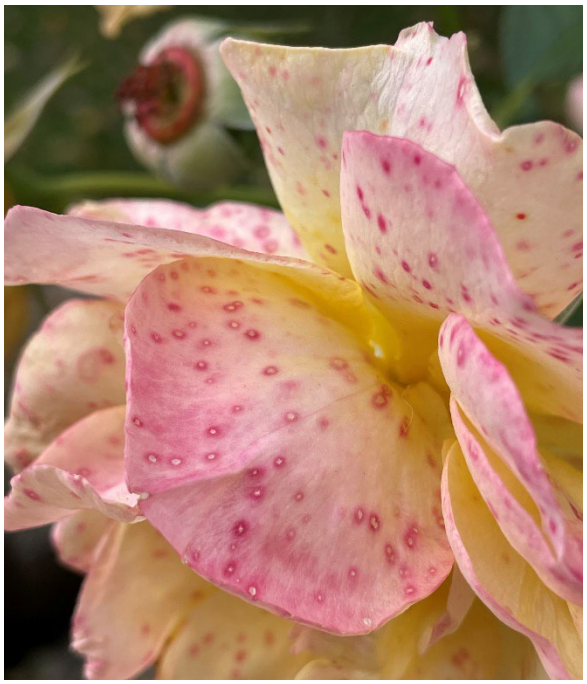
Symptoms

This disease causes buds and flowers to develop abnormally, turn brown, and drop prematurely (Figure 1). Affected parts may be covered with a gray mold (Figure 2) following damp, cool weather and these may be visible to naked eye or observed with a hand lens. Flowers may have irregular flecks (Figure 3) and brown spots; older flowers tend to rot quickly. Soft, brown spots appear on leaves and flowers following a cool damp period as the fungus degrades tissues. Excessive application of nitrogen fertilizer increases plant susceptibility to this pathogen by promoting succulent, fast growing tissues and weakening cell walls [1].

Figure 1: Heavily blighted flowers on roses

Figure 2: Grayish brown fungal growth

Figure 3: Pink spots and petal browning on roses during the initial stages of botrytis blight infection



Management

Prune out the symptomatic twigs and flower stems to reduce the amount of fungal inoculum present. Rake up and remove fallen foliage from beneath the infected plants each year. Direct overhead irrigation away from foliage or use drip irrigation when needed. Selectively prune plants to improve airflow and faster foliage drying.

Fungicide treatment at or near full bloom can be effective. Since fungicides work best as protectants, applications should be made prior to weather conditions that favor disease development where Botrytis is a serious concern.

Maintain optimal nutrients, pH and organic matter levels based on soil analysis, while avoiding excessive nitrogen fertilization—especially during the spring. Please contact your Bartlett Arborist Representative to learn more about management strategies.

Founded in 1926, The Bartlett Tree Research Laboratories is the research wing of Bartlett Tree Experts. Scientists here develop guidelines for all of the Company's services. The Lab also houses a state-of-the-art plant diagnostic clinic and provides vital technical support to Bartlett arborists and field staff for the benefit of our clients.

Reference

[1] M. Soulie et al., "Plant nitrogen supply affects the Botrytis cinerea infection process and modulates known and novel virulence factors," Molecular Plant Pathology, vol. 21, no. 11, pp. 1436–1450, Sep. 2020, DOI: 10.1111/mpp.12984.