RESEARCH LABORATORY TECHNICAL REPORT



Spanish and Ball Moss

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Epiphytes are plants that grow upon another plant, and can sometimes be referred to as air plants. While epiphytes such as Spanish moss (*Tillandsia usneoides*) and ball moss (*T. recurvata*) grow on live plants, they are not considered parasites. In fact, Spanish and ball moss perform photosynthesis to make sugars and capture leached minerals from the colonized plant and surrounding air.

Distribution and Importance

Spanish moss is iconic on southern live oak trees (*Quercus virginiana*) and baldcypress (*Taxodium distichum*) in the southeastern United States, but can be found growing on numerous types of trees in humid areas (Figure 1). Spanish moss is native to the southeastern United States, and not Spain, ranging from as far north as coastal Virginia, south to Florida and West to Texas. Like Spanish moss, ball moss can be found growing on numerous tree species. Ball moss is native in the lower southeastern U.S. along the gulf coast from Florida to Texas with coastal Georgia being the northernmost distribution. Spanish and ball moss have expanded outside of their native range due to plant movement in the nursery trade.

Both Spanish and ball moss provide habitat for numerous arthropods such as mites and barklice and are often used by various birds and squirrels for building nests. Historically, these plants were used as insulation, packing material, or cushions, and moss picker was considered an occupation in many southern states. Today, both plants are commonly used in floral arrangements or as air plants for house or office decorations.

Biology

Neither Spanish nor ball moss are true mosses. They are in the bromeliad family, which includes other

Figure 1: Spanish moss growing on a swamp chestnut oak (Quercus michauxii)



Figure 2: Close-up of Spanish moss



vascular plants such as pineapples. Spanish moss has long, thin, gray to green leaves that grow together in a weeping, chain-like form (Figure 2). Similar to Spanish moss, ball moss has slender, green to gray leaves that can congregate and form mounding "balls" on the surface where they anchor (Figure 3).

Figure 3: Close-up photo of a typical form of ball moss



Propagation can be vegetative or by seed, and leaves and seeds can be distributed by animals or wind. The leaves can form roots that grow in bark crevices or on a structure as an anchoring point, but do not tap into the vascular tissue of plants.

Spanish and ball moss grow in areas with high humidity, and perform better in high light conditions. Denser populations of Spanish and ball moss can be found on declining trees, but these air plants are not the cause of decline. However, they can shade out leaves and speed decline if trees have low vigor. In addition, dense populations of either air plant can hide structural defects (e.g., branch decay) or add weight to existing tree defects (e.g., over-extended branches) increasing the likelihood of branch failure.

Management

In most cases mitigation tactics are not required for Spanish and ball moss. However, when they are growing on declining trees or shading out lower canopy foliage, intervention may be warranted. Physical removal can reduce the population, but this can be time-consuming and require climbing arborists or the use of a bucket truck. Over time, product applications can suppress Spanish or ball moss by causing them to desiccate and fall out of the trees. Consult your Bartlett Tree Experts Arborist Representative to discuss options for your landscape.



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