The Plant Doctor's LANDSCAPE TIPS

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NATURAL FALL NEEDLE DROP: SHOULD WE PANIC?

INTRODUCTION:

Every fall season, drastic changes occur in our landscapes. Generally, most people recognize that their deciduous plants, such as dogwood, maple and oak trees are characterized by a leaf color change, followed by leaf shedding. But what happens when our evergreens turn yellow and appear to by dying? We PANIC! Aren't evergreens supposed to be ever green? Evergreens typically are comprised of broadleaf plants, such as rhododendrons and azaleas, or of narrow-leaf evergreens, such as spruces and pines. Conifers comprise the largest groups of "evergreens," which, in reality, are not always "evergreen." The conifers include some of the following plants used quite commonly in our landscapes: Picea (spruce), Pinus (Pines), Metasequoia (Dawn Redwood), Sequoia (Redwood), Juniperus (junipers), Taxus (Yews), Abies (firs), Larix (Tamarack or Larch), Tsuga (Hemlock), Cedrus (Cedar), Thuja (Arborvitae) and Taxodium (Baldcypress), etc. Every fall, all conifers typically exhibit a natural needle drop phase of their life cycle that may cause many people to panic with fear for their trees.

SYMPTOMS:

Natural needle drop in conifers typically occurs every September through October in the Northern States. Natural needle drop is characterized by the yellowing of the inner (older or previous years) foliage, followed by shedding (Photo 1 and 2). The yellowing of the inner foliage may be quite spectacular and cause some plant owners to fear for the health of their plants. With typical natural needle loss on most conifers, however, the newest foliage remains green and attached. Perhaps white pine exhibits the most significant changes because this species of conifer only retains the current year's and possibly the previous year's needles; hence, white pines may appear sparse by late fall and winter. By comparison, spruces may retain four to five years of needles and the natural needle loss may not appear to impact these trees to any appreciable extent. Some conifers are fully deciduous and do not retain any foliage over the winter season; these include Larch (Photo 3) and Dawn Redwood.

Natural needle drop may be confused with a number of diseases and insects that attack conifers. For example, there are some wooly aphids that may cause needles to turn yellow and drop from trees. The fungi that cause diseases typically attack in the spring and cause needle loss, or "needlecast" (Photo 4), as the diseases are generally called, during the spring through summer. A defining characteristic differentiating needlecast diseases from natural needle drop is that with natural needle drop, needle yellowing and drop occurs throughout the tree. Needlecast diseases tend to occur primarily in the lower quarter or third of the tree where humidity and moisture favor fungal (mold) disease development.

MANAGEMENT:

Natural needle drop requires no management procedures. On occasion, there may be a need to make certain that no diseases or pests are present and contributing to tree health issues. It is not unusual for trees affected by various diseases and pests to also exhibit natural needle drop. Careful examination of the tree, combined with logical thought processes respectful of the symptoms of natural needle loss, should help alleviate any fears from natural needle drop.

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Photo 1. White pine often exhibits the most spectacular symptoms of natural fall needle drop. In this particular case, please note that only the inner (older) needles of the tree (inset) are turning yellow. After the needles drop in the fall, white pines may appear sparse with foliage.

Photo 2. A closeup of natural needle discoloration in spruce demonstrates that the newest, most-recent foliage is green and healthy. *(Photo by Sue Shock)*

Photo 3. The foliage on these larch trees are turning yellow, then brown, as they begin their natural shedding during their deciduous phase in the fall. Larch is considered to be a deciduous conifer.

Photo 4. These older needles (yellow and brown) on these spruce branches are infected with Rhizosphaera needlecast, a fungal disease. This disease occurs primarily in the lower branches and may readily be distinguished from natural fall needle drop, which occurs from the base to the top of trees.