# CASE SUMMARY

**Case #2011/1299**

**Complainant:** Paul Fisher
785 Silverleaf Drive
Greenwood, IN 46143

**Applicator:** Jason Welty
Greenleaf Landscaping
788 S. Runyon Road
Greenwood, IN 46143
317-373-9060

Certified Applicator
Licensed Business

1. On July 26, 2011, I, Agent Andy Roth of the Office of Indiana State Chemist (OISC), performed an investigation at the property listed above in response to a claim of injury/damage to non-target trees and shrubs possibly resulting from exposure to Imprelis Herbicide. During my on-site investigation, I observed yews at the front of the house exhibiting chlorotic, distorted tips, as well as brown needles and premature needle drop (Figure1). A low-growing juniper in a landscape bed near the driveway showed some minor dieback from the tips. White pines in the back yard had twisted new growth, brown needles and premature needle drop (Figures 2&3). A Norway spruce in the back yard had brown, twisted new growth at the top and tip dieback in a spiraling pattern up the tree (Figure 4). White pines in the back yards of both neighbors (north and south) exhibited distorted tips and stunted needles on new growth (Figures 3&5). Finally, a willow at the head of the driveway exhibited distorted leaves and dieback from the tips (Figure 6).

2. I photographed the site documenting the symptoms I observed:

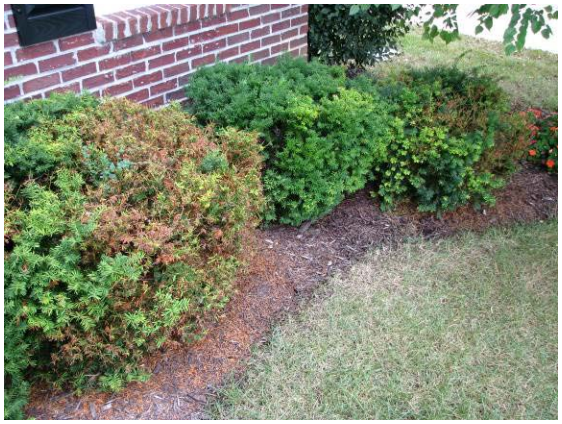

Figure 1

Figure 2

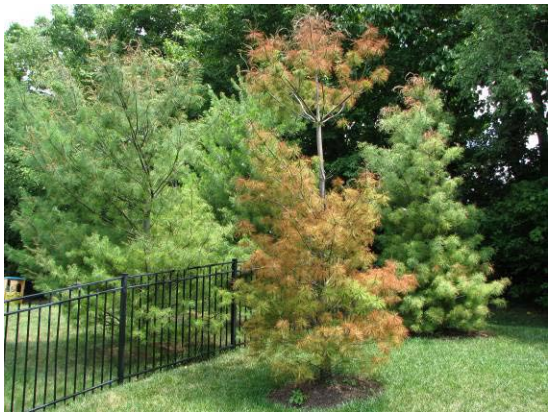

Figure 3

Figure 4

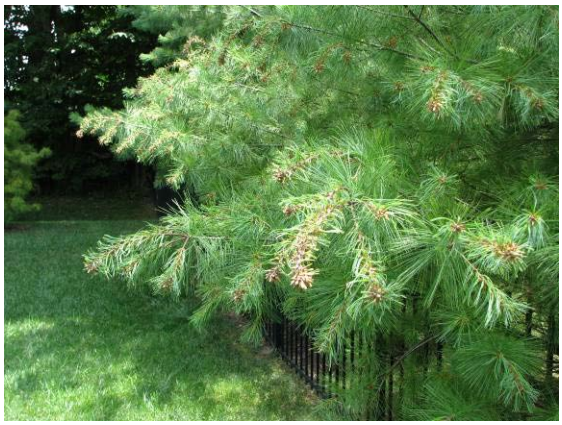

Figure 5

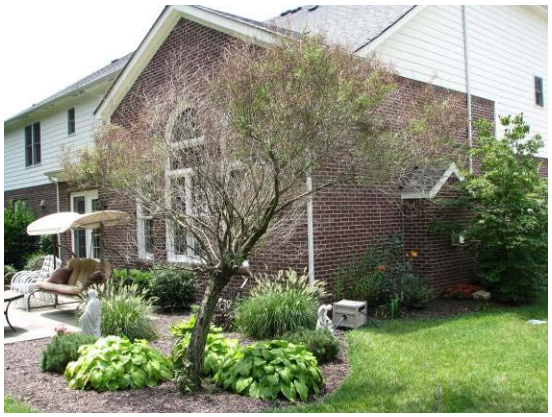

Figure 6

3. I collected a plant samples from yew, white pine, Norway spruce and the willow exhibiting symptoms and submitted them to the Plant & Pest Diagnostic Lab (PPDL) at Purdue for assessment.

4. The report from the PPDL for the sample submitted indicates, "*Willow: This sample had dead growing tips. Several fungal cankers were found on stems. This is very common on willow and shows up every year. The fungal infections will cause dieback but are not responsible for the leaf distortion noted on this sample. Extensive isolations would be required to rule out fungal disease as a potential cause of the tip dieback. Based on the photo of the whole tree I suspect that it has significant fungal canker damage lower down in the larger branches but this can't be confirmed without larger samples or a site visit. It is unclear whether herbicide injury may be involved. Juniper: The yellow color appears normal for this variety. Some Botryosphaeria dieback was noted on one stem. There was no clear evidence of herbicide injury symptoms. Yew, Spruce and White Pine: There was no evidence of significant mite or insect injury or disease on the sample submitted. The spruce showed dead growing points and scattered dead needles. The yew had dead and twisted new growth. The white pine had severely distorted and twisted new growth, an indication of herbicide injury. The yew, spruce and white pine samples (and pictures) submitted show symptoms that are associated with injury caused by synthetic auxin (growth regulator type) herbicides. Typical symptoms caused by these herbicides can include epinasty (twisting and curving) of the leaves or needles, shoot and shoot tip; leaf cupping which can be upward or downward, and in extreme cases, new leaves can be*

*irregular in size and shape (usually smaller than normal) and have abnormal leaf margins. When injury results in new shoot dieback in conifers there will be no regrowth this season, and with certain species, such as Norway spruce, the entire tree can die."*

5. According to application information collected from Greenleaf Landscaping, Jason Welty applied Imprelis Herbicide (EPA Reg. No. 352-793) to the lawn on April 29, 2011, at the rate of 0.13 oz /1,000 square feet of turf using ride-on application equipment.

Andrew R. Roth
Pesticide Investigator

Date: October 3, 2011

**Disposition:** No violation of the Indiana Pesticide Use and Application Law was documented against the pesticide applicator. Effective September 15, 2011, the Indiana registration for Imprelis Herbicide, EPA Reg. #352-793, was cancelled because it was determined by OISC that the product is "misbranded" (it bears label directions that are inadequate to prevent unreasonable adverse effects to non-target vegetation).

George N. Saxton
Compliance Officer

Final Date: October 7, 2011