Anoplophora chinensis Introduction in Tukwila, Washington

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Abstract

The apparent introduction of several adult Citrus longhorned beetles, Anoplophora chinensis (= malasiaca) (Forster), was recently documented at a bonsai nursery at Tukwila, Washington. In August 2001, the owner of the nursery called plant health officials with reports of what he believed to be Anoplophora glabripennis (Motschulsky), the Asian longhorned beetle that has been found in the New York and Chicago areas. Washington State Department of Agriculture (WSDA) personnel went to the site and obtained the suspect beetle along with two additional beetles that they found on bonsai Acer. The Acer were being held outdoors in a fenced-in “post-entry quarantine” (designed for disease, not insects). A fourth beetle was heard (then seen) taking flight but unfortunately escaped the nursery and flew into a nearby wooded area. The 369 Acer were subsequently examined and then destroyed. In total, eight exit holes and substantial adult feeding damage were discovered, indicating that up to five beetles escaped into the surrounding area. Examination of the spermatheca of the one female that was recovered suggested that she had been mated.

A. chinensis, like A. glabripennis, is a polyphagous pest of forest and shade trees that attacks primarily broadleaves. Unlike many cerambycids, these beetles are quite capable of attacking (and subsequently killing) live, apparently healthy trees. The host range of A. chinensis is quite broad, including maples, alders, willows, citrus, Casuarina, elms, and trees from many additional taxa. Their geographic range tends to be more tropical than that of A. glabripennis but still extends well into areas where freezing temperatures are common in winter. A. chinensis tends to attack lower on trees than does glabripennis, and its oviposition scars are, if anything, more difficult to detect. Historically, A. chinensis has entered the United States primarily in imported bonsai and/or penjing materials rather than in solid wood packing materials.

A. chinensis can likely survive well in Seattle’s climate and can potentially feed on locally dominant woodland trees, including Alnus and Acer spp. As a result, WSDA and APHIS-PPQ believe that there is a significant chance that this introduction will result in the local establishment of a population if measures are not taken to prevent it. Economic and ecological consequences of establishment would likely be dire (at least as serious as the establishment of A. glabripennis would be in that area). WSDA and PPQ convened a Science Advisory Panel to provide technical information on the pest, and WSDA established a quarantine zone around the site of the infestation. The agencies secured initial funding are currently planning a program that will include survey, preventative treatment, and public outreach components.