

Distribution and Abundance of *Anoplophora glabripennis* in Stands of its Native Host in South Korea and China

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Abstract

Following up on our discovery in 2000 that *Acer mono* is a native host of *Anoplophora glabripennis*, we spent eight weeks searching for the beetle in natural forest stands in South Korea and China. We wanted to assess the distribution and abundance of beetles in closed forest stands of native hosts. We searched for beetles on *A. mono* for seven weeks in South Korea. The first author then spent four days in Jilin Province, China, searching for beetles in natural stands of *A. mono*. *Acer mono* grows naturally in forests throughout South Korea and is most frequent in mountainous riparian habitats. It grows in steep, rocky ravines where water often is present and in more level terrain along or near streambanks.

We carried out extensive searches for beetles in five national parks, two recreational forests, and other forested areas of South Korea. We examined thousands of *A. mono* trees for beetles and their oviposition pits, larval sawdust holes, and adult emergence holes. We used binoculars because beetles live high in trees. Although we observed what appeared to be beetle damage in several places, we found adult beetles in just three. Because of the prevalence of beetles, we chose two locations in Mt. Sorak National Park for intensive study: the Young-Dae recreational forest and the Oknyo-Tang rest stop. We developed detailed maps of all *A. mono* trees in the two areas.

Beetles were very difficult to find in natural habitats in South Korea. We found none in China, although our search was short, by no means extensive, and probably too late in the season to find adults. More thorough searches are needed next season. In South Korea, we generally did not find beetles in closed stands in rocky ravines containing a high density of *A. mono* trees. We typically found them in more open habitats near roads and streams. Thus, it appears that *A. glabripennis* probably is a denizen of relatively open habitats, most likely attacking trees along streambanks under natural conditions. This may facilitate its movement and location of new hosts.