

Mapping Forest Risk Associated with the Hemlock Woolly Adelgid

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Abstract

The hemlock woolly adelgid, *Adelges tsugae*, is native to Asia and was first introduced to North America in British Columbia in the 1920s and was later discovered in the Shenandoah Mountains of Virginia in the 1950s. It has gradually been expanding its range, largely to the North. Adelgids feed by sucking sap from hemlock twigs and when they reach very high densities they can cause dieback and mortality of their hosts. In the eastern U.S., the adelgids' principal host is Eastern hemlock, *Tsuga canadensis*. The range of this species is largely limited to moist, cool sites; it is most abundant in the New England states. The adelgid has only recently invaded southern New England and is now poised to expand its range into northern New England. Thus, the hemlock woolly adelgid is likely to cause considerable damage in the future as it expands into areas with large quantities of hemlock.