

Gene editing could help protect billions of ash trees from deadly Emerald Ash Borer

Billions of ash trees could be rescued from a killer beetle through cross-breeding with more resistant varieties and gene editing, scientists have claimed.

Emerald Ash Borer larvae have already killed millions of trees worldwide by burrowing through their stems and sucking out the nutritious fluids.

But scientists at Queen Mary University of London and the Royal Botanic Gardens in Kew have identified genes in some ash species that produce chemicals harming the grubs, conferring resistance against the insects onslaught.

[In a study](#) published in the journal Nature Ecology and Evolution, Emerald Ash Borer eggs were hatched on the bark of 22 species ash species in Ohio, US. The trees were then monitored to see how they responded to the grubs, and which were killed.

Researchers in the UK noted that the resistant species were closely-related to non-resistant species, allowing them to identify 53 genes that may provide resistance to the beetle's snapping jaws.

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'Our findings suggest that it may be possible to increase resistance in susceptible species of ash via hybrid breeding with their resistant relatives or through gene editing,' said Dr Laura Kelly, Research Leader at the Royal Botanic Gardens, Kew.

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