

Eight European countries fight against the Asian longhorned beetle

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Asian longhorned beetles in Europe normally have white markings. The Marly infestation was unusual in that most of the beetles had yellow markings, which had not been seen before in Europe. Credit: Doris Hölling (WSL)

Asian longhorned beetles (ALBs), which are harmful to many broadleaf trees, have been spotted in eight European countries to date. The city of Winterthur (Switzerland) is the first place in Europe to eradicate a large beetle infestation in just four years; elsewhere, this has so far only been achieved in over ten years. According to an ALB specialist from the Swiss Federal Institute for Forest, Snow and Landscape Research (WSL) writing in the *Wald und Holz* journal, the recipe for success requires systematic action against the beetles, well-coordinated control measures and active information of the public.

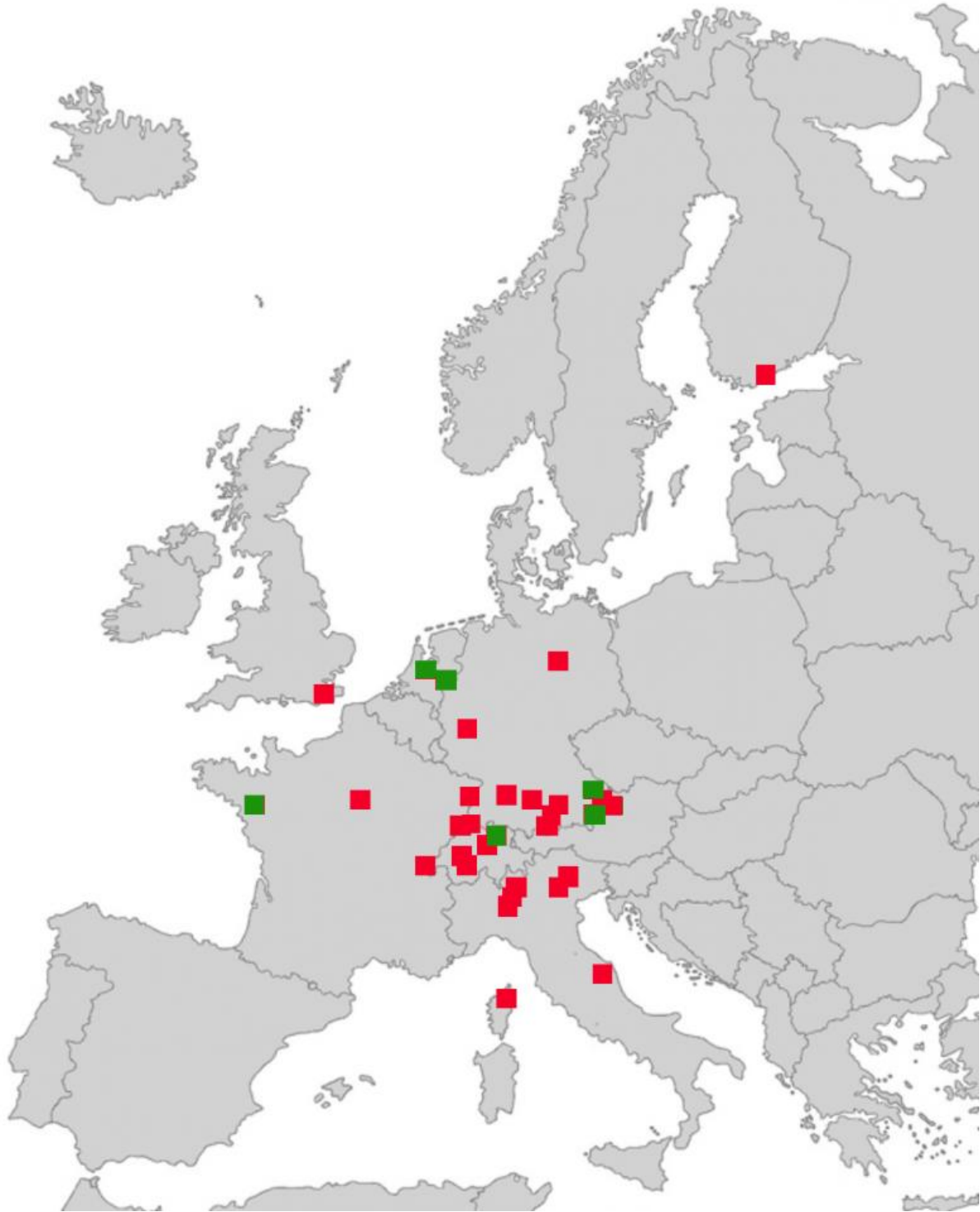
The Asian longhorned beetle (*Anoplophora glabripennis*) is one of the ten most dangerous quarantine pests in the world. Over 30 ALB infestations have been reported in eight European countries to date; six of these infestations have now been eradicated. In most cases, it took more than 10 years to wipe out the beetle population in large outdoor infestations.

Winterthur (Switzerland) has recently shown that it is possible, however, to eradicate even large outdoor infestations within the statutory minimum period of four years. This requires decisive action right at the start of an outbreak, because only the best and most experienced people on the ground can isolate the infested area in the first year.

The outdoor infestation in Winterthur could only be eradicated quickly because measures to combat and control the beetles were introduced and meticulously and properly coordinated shortly after the infestation was detected in 2012. The federal government, the Canton of Zurich, the WSL and the city of Winterthur worked closely together for over four years. The federal government relieved the city and canton of their monitoring duties in December 2016.

Success factors

Determining the boundaries of an infestation in the year of its discovery is key to quickly eradicating an outdoor infestation as large as that in Winterthur. This requires as many well-trained ALB-certified tree surgeons and sniffer-dog teams as possible. Inexperienced teams cannot effectively combat the beetles on their own. Of course, qualified personnel are more expensive but saving money here would only lead to far higher subsequent costs overall due to monitoring. Additional experts serve as a further source of support.



Map showing the outdoor infestations in Europe reported to date. Red: Infested areas that are still being monitored. Green: Areas where the infestation has already been successfully eradicated. Credit: Doris Hölling

Another factor for success is ensuring that all parties involved work competently and transparently, and communicate openly, efficiently and promptly with each other, local residents and the media. Any attempts to combat this beetle will fail without the understanding and cooperation of the affected residents over a number of years. This dangerous quarantine pest can only be eradicated if we work with, not against each other!

Experts from WSL supported the other partners from beginning to end, from identifying beetles, larvae, pupae, eggs and signs of infestation (incl. genetic analyses) to documenting the entire infestation (outdoor report sheet, database, collecting photos). WSL also trained experts on site, produced visuals and provided sample material for the sniffer dogs.

WSL is providing the same support for the other outdoor infestations in Switzerland that are still being monitored. Most of these infested areas were also isolated in the year they were discovered – most recently 2013 in Brünisried (Canton of Freiburg). At that point, the boundaries of the infestation no longer needed to be corrected during annual monitoring as no more longhorned beetles were found. Through WSL specialists' close-knit network with colleagues abroad, all parties involved in Switzerland could always benefit from the most up-to-date advice.

Focus on information

Together with the [federal government](#), WSL published an ALB leaflet and an identification guide (available in Switzerland's three official languages), which were successfully used in operations, training and the provision of information to the public. Furthermore, in 2016 training was provided to stakeholders in the green industry to teach them how to identify further outbreaks as early as possible. WSL also educated inspectors from the Swiss Federal Plant Protection Service, who deal

with cross-border goods transportation and package-wood controls.

As a result of the Winterthur infestation, the Canton of Zurich is imposing restrictions on the use of granite from Asia in public tenders with a view to preventing future ALB outbreaks. Stone importers are now taking preventive action, too. All these efforts have led to the eradication of individual infestations and greatly restricted ALB entry routes into Europe.

However, the danger is not yet averted. Like other countries, Switzerland is potentially still home to undiscovered infestations, so stay vigilant! The sooner an outdoor infestation is spotted, the smaller it is, which makes it much easier to control.

Provided by Swiss Federal Institute for Forest, Snow and Landscape Research WSL

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