Development of synthetic training aids for the detection of Anoplophora glabripennis

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Motivation

- Anoplophora glabripennis (ALB) is an invasive pest causing damage on living trees in North America and Europe

- ALB must be fight and eradicated

- Sniffer dogs are a promising tool to screen large areas fast and reliable

To improve sniffer dogs' training we determined the ALB-specific Volatiles to offer a clear odour. We further developed a filter to store the Volatiles on and at the same time offer them to the dogs.
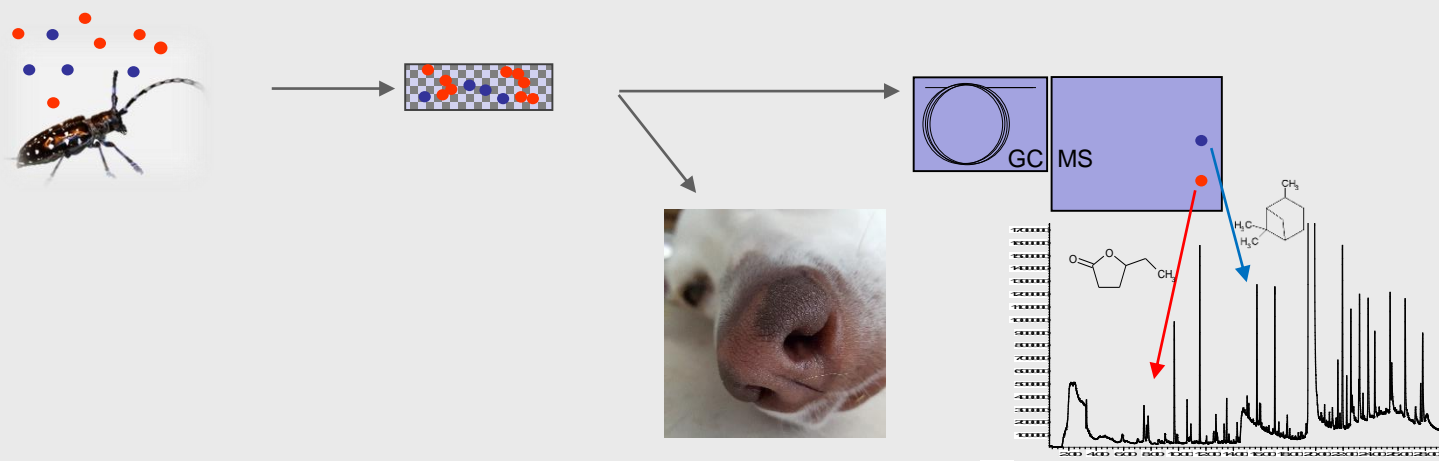
Results

- All together 5 specific Volatiles were identified

- Verification with two groups of independently trained sniffer dogs (4-5 dogs each)

- Filter was also tested by the dog handlers → successful training over at least 6 month

Sniffer dog training is possible for ALB without using real biologic material. The handling with the biological material is strictly forbidden.

Conclusion

- All together 5 specific Volatiles were identified

- Synthetic training aids worked for at least 6 month

- Odour differences between native beetles and ALB

Synthetic training aids offer the chance to train dogs with a well known mixture of scents and evaporation rate. It´s less subject to biological changes than alive material. And the handling is not regulated.