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Methodology of forest insect and disease survey
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***Ostrya carpinifolia* canker in Trentino and Veneto: first investigation on the bio-ecological factors involved**

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Cankers and diebacks of European hop hornbeam (*Ostrya carpinifolia* L.) have been observed in Trentino since 2001. In 2013 and 2014, field and laboratory investigations were carried out in the provinces of Trento; Padova and Verona (northern Italy) to assess the presence and spread of the disease on *O. carpinifolia*. Environmental and dendrometric data had been collected and analyzed for a better understanding of the phenomenon, and material for the laboratory assays was collected.

From fungal isolations, confirmed by morphological and molecular analyses, *Botryosphaeria dothidea* (Moug.) Ces. & De Not resulted as the main agent involved in the disease, with also *Dothiorella parva* Abdollahz., Zare & A.J.L. Phillips isolated from some infected tissues. However, both isolated fungi were obtained also from healthy tissues, confirming their role as endofites or/and latent pathogens. In inoculation tests both species proved to have weak pathogenicity, but they showed different growth behaviour in relation to temperature. The measured annual canker growth on hornbeam also suggests a correlation to higher fall temperature.

Severe attacks and multiple infections were often observed in the field, even though the decline symptoms were seldom observed. The analysis of the disease presence in 270 surveyed points showed a strong correlation with the altitude, with a greater presence of symptoms at low ones. This has led us to investigate the role of temperature on the distribution of the disease and has subsequently showed a correlation between the manifestation of cankers and the highest average temperature during the growing season. No other correlations were shown in observed environmental and dendrological data.