



NEW DISEASE REPORT

First record of *Eutypella parasitica* on *Acer* in Switzerland

V. Dubach | V. Queloz | L. Beenken

Swiss Federal Institute for Forest, Snow and Landscape Research WSL, Birmensdorf, Switzerland

Correspondence

V. Dubach, Swiss Federal Institute for Forest, Snow and Landscape Research WSL, Swiss Forest Protection, Zürcherstrasse 111, 8903 Birmensdorf, Switzerland.

Email: vivanne.dubach@wsl.ch

KEYWORDS

Acer platanoides, Acer pseudoplatanus, Eutypella canker, fungal plant disease

Eutypella parasitica is an ascomycete, native to Canada and the USA, which causes perennial cankers and wood decay on *Acer platanoides*, *A. rubrum* and *A. saccharum* (Davidson & Lorenz, 1938; Kliejunas & Kuntz, 1974). *Eutypella parasitica* was first discovered in Europe in Slovenia in May 2005. Subsequently, it was found in Austria (2006), Croatia (2007), Germany (2013), Hungary (2015), Czech Republic (2015), Poland (2015) and Italy (2016) (European and Mediterranean Plant Protection Organization, 2021).

In February 2021, a *Eutypella* canker was detected on a multi-trunked *A. pseudoplatanus* in a private garden (Uster, Canton Zurich, 460 m above sea level; Figure 1). The canker was located around 5 m

above ground. A second canker, which had been partially removed during arboricultural care, was observed at the same height on another trunk of the same tree. Morphological examination revealed no ripe sexual fruiting bodies but genetic analyses of the ITS region confirmed the diagnosis. The tree was removed and incinerated. The forests closest to the site (located between 600 to 1400 m away) were surveyed but no further *Eutypella* cankers were found.

In the course of the investigations, we came across a previous report made in October 2014 on *A. pseudoplatanus* (Walenstadtberg, Canton St. Gallen, 980 m above sea level) by Prof. Dr. Ottmar Holdenrieder. The tree was living with a canker just above the base of the trunk



FIGURE 1 Canker caused by *Eutypella parasitica* on *Acer pseudoplatanus* observed in Uster, Switzerland in February 2021

This is an open access article under the terms of the [Creative Commons Attribution](https://creativecommons.org/licenses/by/4.0/) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2022 The Authors. *New Disease Reports* published by British Society for Plant Pathology and John Wiley & Sons.



FIGURE 2 Symptoms caused by *Eutypella parasitica* on *Acer pseudoplatanus* observed in Walenstadtberg, Switzerland in October 2014

(Figure 2). Ascospores were abundant. Although a herbarium record was filed, no scientific report was made. In September 2021, the area around the site in Walenstadtberg was searched. In the vicinity, at a distance of 23 and 200 m from the first record respectively, an infected *A. pseudoplatanus* (21 cm DBH) and *A. platanoides* (15 cm DBH) were found (Figure 3). *Eutypella* was genetically confirmed as no mature sexual fruiting bodies were present. Infected trees were removed in the winter of 2021/22 and sent for incineration. The forest was surveyed within a radius of 145 m around the two new findings but no other cankers were detected.

The fungus *Eutypella* was isolated from the fruiting bodies and infected wood sampled from necrotic tissues around the canker collected in Walenstadtberg, and cultivated on malt agar (2% DiaMalt, 1.5% agar, 0.01% streptomycin). After two weeks incubation at 20°C, mycelia grew as described by Davidson & Lorenz (1938). DNA was extracted and molecular identification was done by amplifying and sequencing the ITS region of rDNA using primer pair ITS1/ITS4 (White *et al.*, 1990). All sequences had 99–100 % identity with the ITS sequence of the type specimen of *E. parasitica* in GenBank (Accession No. NR165995). Sequences of the following three samples were submitted to GenBank (ETH Zurich fungal herbarium accession number in brackets): Walenstadtberg, Oct 2014, on *A. pseudoplatanus*, (O. Holdenrieder/141010.1), OM328082; Uster, Feb 2021, on *A. pseudoplatanus* (WSS_13983), OM328083; and Walenstadtberg, Sep 2021, on *A. platanoides* (WSS_SG202110-2-2), OM328084.



FIGURE 3 Symptoms caused by *Eutypella parasitica* on *Acer platanoides* observed in Walenstadtberg, Switzerland in September 2021

ACKNOWLEDGEMENTS

We would like to thank Prof. Dr. Ottmar Holdenrieder, the Phytopathology Laboratory of the WSL and the forestry staff involved.

REFERENCES

- Davidson, R.W. & Lorenz, R.C. (1938) Species of *Eutypella* and *Schizoxylon* associated with cankers of maple. *Phytopathology*, 28, 733–745.
- European and Mediterranean Plant Protection Organization (2021) *Eutypella parasitica* (ETPLPA). Available at: <https://gd.eppo.int/taxon/ETPLPA> [Accessed 20 January 2022].
- Kliejunas, J.T. & Kuntz, J.E. (1974) *Eutypella* canker, characteristics and control. *The Forestry Chronicle*, 50(3), 106–108. <https://doi.org/10.5558/tfc50106-3>
- White, T.J., Bruns, T.D., Lee, S. & Taylor, S. (1990) Amplification and direct sequencing of fungal ribosomal RNA genes for phylogenetics. In: Innis, M.A., Gelfand, D.H., Sninsky, J.J. & White, T.J. (Eds.) *PCR - Protocols and Applications - A Laboratory Manual*, New York, NY: Academic Press, pp. 315–322. <https://doi.org/10.1016/B978-0-12-372180-8.50042-1>

How to cite this article: Dubach, V., Queloz, V. & Beenken, L. (2022) First record of *Eutypella parasitica* on *Acer* in Switzerland. *New Disease Reports*, 45, e12074. <https://doi.org/10.1002/ndr.212074>