



First report of *Entyloma gaillardianum* on *Gaillardia* × *grandiflora* in Italy

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Starting in June 2017, six-month-old plants of blanket flower (*Gaillardia* × *grandiflora* Van Houtte) grown in a private garden located near Biella (Latitude: 45°36'00"N, Longitude: 8°03'00"E) in Northern Italy showed light green circular spots on leaves, from 0.7 to 1.5 cm in diameter, sometimes coalescent. Eventually, spots turned brown and necrotic. Microscopic examination of leaf tissue sections showed sori composed by massive double-walled hyaline to yellowish spores in the intercellular spaces of the host tissue (9.5–13.1 µm in diameter), typical of the teliospores of the genus *Entyloma*. DNA was extracted from sori by using the E.Z.N.A. Fungal DNA Mini Kit (Omega BioTek). The internal transcribed spacer (ITS) regions of rDNA of the isolate IT63 was amplified using the primers ITS1/ITS4 (Altschul et al. 1997), and sequenced at the BMR Genomics Centre (Padua, Italy). The 674 bp product of this isolate was deposited (Accession No. MH430594) and a BLASTn search showed a 100% similarity with *Entyloma gaillardianum* Vánky (AY081037). Pathogenicity was confirmed by spraying a spore suspension (1×10^5 ml⁻¹), prepared from homogenized infected leaves, on three potted plants of *G. × grandiflora*, while the same number of control plants were sprayed with sterile water. Plants were kept in green-

house (22–24 °C at 100% of relative humidity for 5 days). All inoculated plants developed typical spots after 15 days, while no symptoms developed on the control plants. This is the first report of *E. gaillardianum* on *Gaillardia* × *grandiflora* in Italy, while it was previously reported in California (Farr and Rossman 2018). Garibaldi et al. (2018) reported a leaf smut caused by *E. gaillardianum* on *G. aristata* Pursh in Italy.

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