



First report of powdery mildew caused by *Golovinomyces bolayi* on *Lactuca serriola* in Mexico

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During the Spring of 2019, symptoms of powdery mildew were observed on 20% of prickly lettuce plants (*Lactuca serriola*) in agricultural fields in Ahome, Sinaloa, Mexico. White fungal colonies were present on both sides of infected leaves. Hyphal appressoria were indistinct to nipple-shaped. Conidiophores were solitary, cylindrical, and 120–220 µm long. Foot-cells were straight or curved at the base, cylindrical, measuring 55–90 × 10–13 µm, followed by 1–3 shorter cells and formed conidia in chains. Conidia were ellipsoid-ovoid, doliiform-subcylindrical, measuring 27–34 × 15–19 µm. Chasmothecia were not observed. This morphology was similar to that described for *Golovinomyces bolayi* by Braun et al. (2019). A voucher specimen (accession No. FAVF217) was deposited in the Herbarium of the Faculty of Agriculture of El Fuerte Valley at the Autonomous University of Sinaloa (Sinaloa, Mexico). Genomic DNA was extracted, and the internal transcribed spacer (ITS) region and part of the 28S gene were amplified using the primers ITS5/ITS4 and NL1/TW14, respectively. The ITS and 28S sequences were deposited in GenBank under accession numbers MW558106 and MW561668. Phylogenetic analyses using Maximum Parsimony confirmed the results of the morphological analysis, and the sequence from isolate FAVF217 clustered with sequences deposited in GenBank for other collections of *G.*

bolayi. Pathogenicity was confirmed by gently dusting conidia from infected leaves onto leaves of 20 healthy prickly lettuce plants. Ten non-inoculated plants served as controls. All plants were maintained in a greenhouse with temperatures between 25 and 35 °C. Fourteen days after inoculation, all inoculated plants developed mycelial patches, whereas the control plants remained healthy. *Golovinomyces bolayi* has been recorded on *L. serriola* in Asia, Australia, Europe and America (Braun et al. 2019; Farr and Rossman 2021), however, this is the first report of this powdery mildew on *L. serriola* in Mexico.

Data availability The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

Declarations

Conflict of interest All authors declare no conflict of interest.

Research involving humans and animals No human or animal was involved in this research by the authors.

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