

Reexamination of the genus *Albugo* in Azerbaijan

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Species of the genus *Albugo* (Pers.) Roussel of the family Albuginaceae, are obligate biotrophic 'pseudofungi' responsible for white blister rust (WBR) on Amaranthaceae, Brassicaceae and other plants. The genus comprises about 56 species worldwide. The genus *Albugo* has been studied in Azerbaijan since mid of 20th century. In total, 28 taxa were recorded in the "Mycoflora of Azerbaijan".

Purpose: The aim of our study is to revise the species of the genus *Albugo* based on the latest taxonomical rearrangements and reveal the diversity of that in Azerbaijan considering morphology and phylogenetic relationship.

Methods: Specimens of *Albugo* were derived from the Mycological Herbarium (BAK) of the Institute of Botany, ANAS. About 15 specimens were examined. For the subsequent microscopic examination in Zeiss Stemi 305 (Jena, Germany) microscope and Zeiss Axio Imager A1 (Oberkochen, Germany) for DIC light microscopy were used. The COX2 gene region obtained from 1 newly collected specimens and 4 herbarium specimens of the genus *Albugo s.l.*, which have been kept in BAK more than 40 years, were sequenced by using COX2-F and COX2-R primers.

Results and conclusions: Based on morphology six species, *A. candida*, *A. candida var. macrospora*, *A. resedae*, *Pustula tragopogonis*, *Wilsoniana bliti*, *Wilsoniana portulacae*, were identified and redescribed as fungi from Azerbaijan. From the results of phylogenetic analyses, *Albugo candida s.str.* was newly recorded from *Tragopogon graminifolius* and *Albugo candida s.l.* on *Arabis hirsuta*, *Albugo sp.* (not *A. resedae*) on *Reseda globulosa*, and two new species of *Wilsoniana* differentiated from the hitherto known species on *Amaranthus*. The phylogenetic analyses using the herbarium specimens indicated the richness of species diversity of the genus *Albugo* and its related genera.