

A new record of *Erysiphales* for mycobiota of Iran

M. Pirnia[✉]

Department of Plant Protection, Faculty of
Agriculture, University of Zabol, Zabol, Iran

The powdery mildews belong to *Ascomycota* (*Erysiphales*) and are easily recognized by their conspicuous epiphytic mycelium. Anamorph state of most teleomorphic genera with exclusively external mycelium belong to the genus *Oidium*. *Oidium* states show a great deal of variation in morphology. Conidia are produced either in chains (Euoidium-type of the genus *Oidium*) or solitarily (Pseudoidium-type of the genus *Oidium*) which are hyaline, one-celled, uninucleate, vacuolate and thin-walled (Braun 1987). The length/width ratio and shape of conidia and foot-cells are usable for taxonomic purposes. The conidia of most *Oidium* species vary from cylindrical, ellipsoid, ovoid to doliform and their surface is usually smooth. Khodaparast et al. (2000, 2001) and Pirnia et al. (2005–2007) have reported new species of powdery mildews in Iran. Ershad (2009) listed many taxa of *Erysiphales*. Khodaparast & Abbasi (2009) published a check-list of species, host range and geographical distribution of powdery mildew fungi in Iran.

One specimen obtained from Tehran was microscopically examined. Microscopic slides were prepared from conidiophores and conidia in 25% Lactic acid. Characters of mycelium (epiphyllous, hypophyllous or amphigenous; colour; density) conidia (single or in chains; shape, size, surface), conidiophores (size, shape and size of the foot-cells; number, size and arrangement of the following cells) and appressoria (shape) were used to identify species. Drawings were made using a drawing-tube attached to an Olympus BH2 microscope.

Anamorphic stage of *Erysiphe syringae-japonicae* on *Jasminum* is described and illustrated. The specimen is deposited in the fungal collection of Iranian Research Institute of Plant Protection (IRAN).

***Erysiphe syringae-japonicae* (U. Braun) U. Braun & S. Takam., Schlechtendalia, 4: 14 (2000).**

Mycelium hypophyllous, white, hyphae 3-7 µm wide; conidiophores erect, (52-) 67-100 (-120) µm long, foot-cells cylindrical to curved, 27-77 × 5-7 µm, usually followed by 1-2 shorter cells; conidia formed singly, ellipsoidal to cylindrical, 22-38 × 12-15 µm (Fig. 1).

Specimen examined: IRAN, Tehran Province, Tehran, on *Jasminum* sp. (*Oleaceae*), 1 June 2010, M. Pirnia (IRAN 16216 F).

The species is characterized by having short conidiophores and solitary conidia. In some conidiophores foot-cells were curved to sinuous in basal part.

Numerous records of powdery mildews have been reported on various plant genera in *Oleaceae*. Only *Oidium jasmini* was already been reported on *Jasminum* from India and there is no report of other powdery mildews on *Jasminum* (Braun 1987). *E. syringae-japonicae* was originally found in East Asia on *Syringa* spp., which was described only based on teleomorphic stage (Braun 1987). This is the first report of anamorphic stage of this species on *Jasminum*.

REFERENCES

- Braun U. 1987. A monograph of the *Erysiphales* (powdery mildews). Beihefte zur Nova Hedwigia 89: 1-700.
- Khodaparast SA, Hedjaroude GA, Ershad D, Zad J, Termeh F. 2000. A Study on the identification of *Erysiphaceae* in Guilan province, Iran (I). Rostaniha 1: 53-63.
- Khodaparast SA, Hedjaroude GA, Ershad D, Zad J, Termeh F, Moosavi M. 2001. A Study on the identification of *Erysiphaceae* in Guilan province, Iran (II). Rostaniha 2: 45-52.
- Khodaparast SA, Abbasi M. 2009. Species, host range and geographical distribution of powdery mildew fungi (*Ascomycota: Erysiphales*) in Iran. Mycotaxon 108: 213-216.
- Pirnia M, Khodaparast SA, Abbasi M. 2005. On the taxonomy of the causal of powdery mildew on *Pistacia* in Iran. Rostaniha 6: 164-167
- Pirnia M, Khodaparast SA, Abbasi M. 2006. Morphology of penicillate cells in the genus *Phyllactinia* (*Erysiphaceae*) based on Iranian specimens. Rostaniha 7: 177-192.
- Pirnia M, Khodaparast SA, Abbasi M, Tavanaei GH. 2007. Study on the genus *Phyllactinia* (*Erysiphaceae*) in Iran. Iranian Journal of Plant Pathology 43: 445-464.

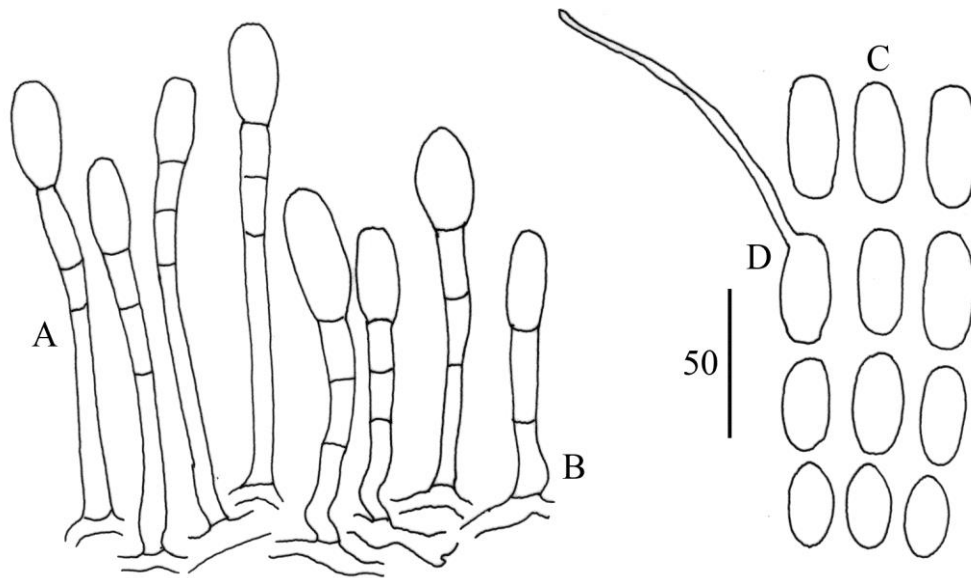


Fig. 1. *Erysiphe syringae-japonicae* on *Jasminum* sp. (A) Conidiophores. (B) Curved foot-cell. (C) Conidia. (D) Germinated conidium. Specimen examined: on *Jasminum* sp. (*Oleaceae*), Tehran, June 1, 2010. M. Pirnia (IRAN 16216 F).