Two new species of *Peronosporaceae* (downy mildews) from Iran

**M. Darvishnia**  
Assistant Prof., Department of Plant Protection, Agriculture College, Lorestan University, Khorramabad, Iran  
(email: mdarvishnia44@yahoo.com)

**S.H. Vafaei**  
Researcher, Plant Protection College, Plant Protection Organization, Khorramabad, Lorestan, Iran

**F. Darvishnia**  
Researcher, Department of Plant Protection, Agriculture Research Center of Lorestan, Khorramabad, Iran

**N. Azadbakhht**  
Researcher, Department of Plant Protection, Agriculture Research Center of Lorestan, Khorramabad, Iran

In survey of infected samples to downy mildew of broadbean, *Chenopodium murale* and *Rumex chalpensis* using Olympus microscope (BH2) and valid keys and recently published papers, two species were identified (Choi et al. 2009, Ershad 2009, Telle & Thines 2012).

1. *Peronospora viciae f. sp. fabae* Boerema, R. Pieters & Hamers

This species causes downy mildew in broadbean (*Vicia faba* L.) (Vandergaag et al. 1993). Conidiophores are branch and bifurcate that restricts to branches and branchlets, their size was: 157 (245) × 290 (157) × 5.8 (7.2) 8.5 µm. Sporangia are colourless, semi-spherical to egg-shaped and their size was 21.5 (24) × 27 (17.5) × 23 (20) 23 µm. It is the first report of this species from Iran.

2. *Peronospora rumicis* Corda

This species is seen on leaves and sometimes on stem and branches of dock (*Rumex chalpensis* Miller) and pig weed (*Chenopodium murale* L.). Conidiophores are branched, bifurcate and thick, straight and rarely curved that restricts to branches and branchlets and terminally are terminated to two ultimate branchlets and their size was 220 (211.5) × 197 × 9.5 (10.5) 11.5 µm. Sporangia are colourless and lightly curved and slightly curved and their size was 6.5 (11.5) × 24 × 2.5 (3) 4.2 µm. It is the first report of this species from Iran.
Fig. 1. *Peronospora viciae* f. sp. *fabae*: a. Conidiophore (sporangiophore), b-c. Ultimate brachlets and Conidium, d. Conodium (sporangium) (Bar = 10 µm).

Fig. 2. *Peronospora rumicis*: a-b. Conidiophore (sporangiophore) and ultimate branchlets, c-d. Conidium (sporangium) (Bar: a-c. = 10 µm, d. = 20 µm).

References


