



## *Pseudocercospora* sp. new leaf spot disease on *Parthenium*

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*Parthenium hysterophorus* L. has become one of the worst weed of India, invaded of about 35 million hectare of land (Shushilkumar and Varshney 2010). It is known to cause skin allergies in men and animals besides causing losses to crop productivity and biodiversity (Shushilkumar 2014).

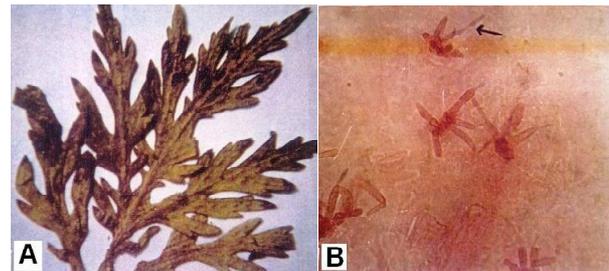
This article describes a new leaf spot disease of *Parthenium hysterophorus* L. caused by *Pseudocercospora* sp. recorded for the first time from the world.

Surveys were conducted between 2004 to 2014 in Haryana, parts of Punjab, Uttar Pradesh and Delhi in different seasons of the year *i.e.* summer, rainy and winter. A new leaf spot disease was observed on *Parthenium* from Kurukshetra (Haryana). The pathogen was frequently present during rainy season but it was absent in summers. Infected leaves with a new spot disease were collected in sterilized polythene bags and brought to the laboratory. Isolation of the pathogen was done. Diseased specimens were processed and sent to International Mycological Institute (IMI), Egham, UK for confirmation of the pathogen/ disease identification.

The symptoms were characterized as circular to irregular, light yellow spots at the centre as well as on margins (**Figure 1A**). The isolated fungus was identified as a species of *Pseudocercospora* having similarities with *Cercospora partheniphila* previously recorded on this weed from Mexico, Cuba and India (Chupp 1954). Microscopic observations of the fungus revealed that conidiophores are fasciculate and arise from stomata (1-7 conidiophores per stoma). Conidiogenous cells tretric, 38 µm long, 4-5 µm thick. Conidia are hyaline, septate, short with blunt ends, 11-16 x 3.0-3.9 µm (**Figure 1B**). Differences between these two pathogens are that in *Cercospora partheniphila*, the conidiophores are long, thin with 1-4 scars, and conidia are very long with tapering ends; whereas in *Pseudocercospora* sp. the conidiophores are short, thick and without any scar; conidia are also short, thick with blunt ends. A

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**Figure 1. A- Leaf spot of *Pseudocercospora* sp. on *Parthenium* leaf. B- Conidiophores having conidia**

survey of available literature (Bilgrami *et al.* 1991, Evans 1997, Gnanavel 2013) revealed that *Pseudocercospora* sp. has been recorded for the first time on *Parthenium* from the world.

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### SUMMARY

A leaf spot disease caused by *Pseudocercospora* sp. on *Parthenium hysterophorus* L. has been recorded for the first time from the world during the surveys conducted between 2004 to 2014.

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