

DISEASE NOTE

FIRST REPORT OF *MICROSPHAEROPSIS OLIVACEA* CAUSING BROWN SPINE ROT ON *ALHAGI MAURORUM* IN IRAN**P. Razaghi and D. Zafari**

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Camelthorn (*Alhagi maurorum*) is an importunate weed in cultivated fields and fallow lands in Iran. A disease at high severity level (69%) was observed on *A. maurorum* grown in arid area in Kermanshah province in September 2015. The disease was characterized by irregular brown lesions on the spines and profuse black pycnidia on aerially plant tissues. A *Microsphaeropsis* sp. was isolated from the lesions. The fungus was grown on oat meal agar (OA) at 24°C for seven days. Colonies of single-spore isolates were greenish brown with white aerial hyphae, had semi-immersed pycnidia in agar. Microscopic examination revealed that conidia were solitary, initially hyaline, becoming pale brown, 1-2-guttulate, ellipsoidal to subcylindrical with obtuse ends, straight to slightly curved, 0(-1) septate, (5-)-6-7(-10.5) × 4-4.5 µm. The rDNA ITS was sequenced (GenBank accession No. KX171366) and found identical (99%) to sequences of *Microsphaeropsis olivacea* isolates. Pathogenicity of the isolates was confirmed by inoculating the healthy pinpricked spines with spore suspension (10⁶ conidia/ml) or spraying with sterile distilled water as a control. Typical symptoms were produced on the inoculated spines after ten days. The pathogen was re-isolated from the infected spines while the controls remained symptomless. *M. olivacea* has been previously reported from *Pirus laricio*, and *Sarothamnus* sp. in Europe (Chen *et al.*, 2015). To our knowledge, this is the first record of *M. olivacea* as a causal agent of *A. maurorum* in Iran and worldwide, and may have a potential for biocontrol of the weed.

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FIRST REPORT OF *PAPAYA RINGSPOT VIRUS* ON SNOW PEA IN CHINA**L. Zhu, Z.P. Xu, C.Y. Fei and D.H. Xi**

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Papaya ringspot virus (PRSV), a species of the genus *Potyvirus*, family *Potyviridae*, is a major limiting factor for papaya and cucurbits cultivation in tropical and subtropical regions worldwide (Purcifull *et al.*, 1984). PRSV mainly infects plants in the families *Caricaceae*, *Cucurbitaceae* and *Chenopodiaceae*, while few isolates have been reported on other hosts (Tripathi *et al.*, 2008). During a survey conducted in the summer of 2015, snow peas (*Pisum sativum* var. *saccharatum*) showing yellow ringspot symptoms were observed in some plantations in the Sichuan province (a main snow pea production area in China). The characteristic ringspot symptoms were also observed on cucurbit plants near the fields of snow pea. Leaf samples (4) were collected from symptomatic snow pea plants and tested by Western blotting with commercial antisera (Agdia, Elkhart, IN) against PRSV. PRSV was detected in all samples tested. Total RNA was extracted from each sample using Plant Total RNA Isolation Kit (FOREGENE, China). RT-PCR was performed using a pair of PRSV coat protein (CP)-specific primers: PRSV-F (5'-TAACACACTGATGGTTTTAATC-3') and PRSV-R (5'-ATTGCGCATACCCAGGAGAGAG-3'). Expected amplicons of the complete CP (861 bp) were obtained, purified, cloned into the pMD19-T vector (TaKaRa), and sequenced. The sequences were identical and designated as PRSV-SC. Nucleotide BLAST analysis revealed that PRSV-SC (GenBank Accession No. KX185713) shared 96% sequence identity to the CP of PRSV-W isolate CI (AY027810). Phylogenetic analyses of CP gene of PRSV-SC using MEGA6 software revealed that its sequence clustered into the PRSV type W clade, which is separated from the PRSV-P cluster. To our knowledge, PRSV has been described in pumpkin, luffa, watermelon, winter melon, zucchini, muskmelon and *Siraitia grosvenorii*, and this is the first report of PRSV infecting snow pea in China. Recently, we showed that PRSV could also infect bitter melon in China (Zhu *et al.*, 2016). Taken all together, these data suggested that PRSV presumably has a wider range of natural hosts than previously known. This apparent expansion of the natural host range is worthy of further attention.

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