

DISEASE NOTE

FIRST REPORT OF *COCHLIOBOLUS SPICIFER* CAUSING LEAF SPOT DISEASE OF *TRIANTHEMA PORTULACASTRUM*

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Trianthema portulacastrum Simmons (Horse purslane) weeds showing symptoms of light brown to blackish leaf spot were observed during survey conducted in between 2011-13 in Haryana, India. A fungus was consistently isolated from leaf lesions on potato dextrose agar (PDA) upon incubation 25°C for 7 days. The pathogen identity was verified by the International Mycological Institute (IMI), CABI Bioscience UK (IMI Number 503552) based on its morphological and by ITS rDNA sequence analysis. The sequence obtained from this sample showed 100% identity to sequences of *Cochliobolus spicifer* Nelson and its anamorphic state *Bipolaris spicifer* Bainier (Cunha *et al.*, 2012). The best matches included strains from reference culture collections e.g. JN192387 (CBS 274.52). Reproduction of symptoms in inoculated healthy leaves fulfilled Koch's postulates and confirmed pathogenicity. *C. spicifer* has been isolated from a wide variety of plants e.g. *Arachis*, *Capsicum*, *Gossypium*, *Musa*, *Piper*, *Solanum*, *Triticum*, *Vicia* and *Vigna* and reported from Europe, Africa, the Middle East, Asia, Australasia and South America. A total of nine fungal pathogens have been reported on *T. portulacastrum* weed from various parts of the globe (Aneja *et al.*, 2014). Literature search reveals that the leaf spot disease caused by *C. spicifer* on *T. portulacastrum* has not yet been reported worldwide.

Aneja K.R., Kumar V., Sharma C., 2014. Leaf-spot disease of *Trianthema portulacastrum* – a new record from world. *Journal of Innovative Biology* 1: 112-116.

da Cunha K.C., Sutton D.A., Fothergill A.W., Cano J., Gené J., Madrid H., De Hoog S., Crous P.W., Guarro J., 2012. Diversity of *Bipolaris* species in clinical samples in the United States and their antifungal susceptibility profiles. *Journal of Clinical Microbiology* 50: 4061-4066.

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***THIELAVIOPSIS PARADOXA* CAUSING NECK BENDING DISEASE OF DATE PALM IN IRAN**

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In April 2014, severe neck bending symptoms were observed on date palm (*Phoenix dactylifera* L.) in Tabas region of Southern Khorasan, Iran. Symptoms included inclination of the area of the uppermost portion of the trunk and internal brown discoloration of the petiole bases. A fungus with the characteristics of *Thielaviopsis paradoxa* (Teleomorph: *Ceratocystis paradoxa*) was consistently isolated on potato dextrose agar (PDA) from the symptomatic tissues. The fungus produced two types conidia, including cylindrical, hyaline to pale brown which formed endogenously in chains, 5-7.5×7.5-15 µm, and oval, thick-walled, black chlamydospores in chains from the tips of short lateral hyphae that were 7.5-15×10-25 µm.

The ITS region of rDNA was amplified using primer pair ITS1F/ITS4 and the PCR product was sequenced. Comparison of the sequence (GenBank accession No. KM519456) revealed 99% similarity to *C. paradoxa* (DQ318203). Date palm seedlings (cv. Kabkab) and banana fruits were inoculated with PDA plugs taken from 5-day-old single-spore isolates. Disease symptoms developed on both hosts, on banana fruits within 5-7 days and on date palm seedlings after 12 days and re-isolation from affected tissues yielded *T. paradoxa*. The control seedlings and fruits showed no symptoms. *T. paradoxa* has been reported as the causal agent of neck bending disease on date palm in Iraq and Qatar (Abbas and Abdulla, 2003) and trunk rot of Canary Island date palm and date palm from Italy (Polizzi *et al.*, 2006). This is the first report of the disease as well as the first confirmed record of the fungus *T. paradoxa* in Iran.

Abbas E.H., Abdulla A.S., 2003. First report of neck bending disease on date palm in Qatar. *Plant Pathology* 52: 790.

Polizzi G., Castello I., Vitale A., Catara V., Tamburino V., 2006. First report of *Thielaviopsis* trunk rot of date palm in Italy. *Plant Disease* 90: 972.

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