

WHITE RUST DISEASE OF *PORTULACA OLERACEA* CAUSED BY *WILSONIANA PORTULACAE*, FIRST REPORT IN ISFAHAN

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INTRODUCTION

Purslane (*Portulaca oleracea*) is a common succulent, ornamental plant mainly used in hot dry areas, rock gardens, over walls or along paved surfaces as an edging plant. Moss rose is generally easy to grow and easily propagated through cuttings or seed. It is not commonly prone to major diseases but has been found to be susceptible to white rust. The genus *Wilsoniana*, is an obligate parasitic pseudo-fungus responsible for white rusts in herbal plants, like Moss Rose, over widely different geographical areas of the world. The pathogen causes significant damage in agricultural crops, ornamental plants and common weeds.

MATERIAL AND METHODS

During summer and fall of 2013, a few plants were received from Isfahan landscape, which showed typical symptoms of white rust disease. These symptoms were observed on various parts of plant, particularly in the leaves. The symptoms began as small, irregular yellow areas (chlorotic lesions) in the lower surface of infected leaves. The stems of strong infected plants were swelled and malformed than normal, and the shoots become more erect to spindly. One or more partial-to-complete circles of white pustules commonly developed on upper leaves surface, sparsely on lower surface and on stems.

RESULTS AND DISCUSSION

Microscopic examination of the pustules revealed that the sporangiophores were hyaline, cylindrical or clavate and the sporangia were arranged in a basipetal chain, hyaline, globose or subglobose, with equal thin wall, base rounded or sub-truncate. The sporangia measured were 13.8 - 15.4 x 16.3 - 18.9 μm (av.14.6 x 16.8 μm). Based on morphological characteristics of sporangiophores and sporangia, the fungus was confirmed as *Wilsoniana portulacae* (DC.) Thines 2005. This is the first record and outbreak of white rust disease caused by *W. portulacae* on purslane cultivated in Isfahan.

Key words: *Portulaca oleracea*, purslane, *Wilsoniana portulacae*, White Rust

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