PARTHENIUM WEED (PARTHENIUM HYSTEROPHORUS L.) IN VIETNAM

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ABSTRACT

Originating in a region within North, Central or South America, parthenium weed (\textit{Parthenium hysterophorus} L.), an invasive herbaceous Asteraceae weed of tropical and subtropical environments, is responsible for significant losses to rangeland and crop production and has serious effects upon human and animal health. The weed also causes serious impacts upon plant community biodiversity and the cost of its management is often very high. In Vietnam, parthenium weed has been present in the Hanoi and surrounding regions from about 1922 (Arenes \textit{et al.} 1922).

Infestations of parthenium weed were surveyed along roadsides, in fallow land, from the north to the south of Vietnam and in more detail around the capital city, Hanoi Capital, and several protected areas (including Ba Be, Cat Ba, Xuan Son, Tam Dao, Cuc Phuong National Parks and Huong Son Protection Forest) in the north of Vietnam, to create a distribution map of the weed in Vietnam. Parthenium weed was present in many provinces in the north such as Cao Bang, Bac Kan, Son La, Thai Nguyen, Phu Tho, Vinh Phuc, Bac Ninh, Hanoi Capital, Hung Yen, Hai Duong, Hai Phong, Ha Nam, Nam Dinh, Hoa Binh and Ninh Binh. No parthenium weed was present from Ho Chi Minh City to Mekong Delta, southern region of Vietnam. However, parthenium weed was possibly present in the rest of the North and the Central region of Vietnam as well.

Several biological characteristics of the weed such as plant density and coverage, and height and seed production were measured at Cuc Phuong National Park (Ninh Binh Province) and at the Huong Son Protection Forest region (Hanoi Capital). From the measurements taken on biological characteristics of the weed, the study also indicated that the parthenium weed populations present in the two locations were similar but different to the Clermont population found in Australia. Without any valid molecular or biological comparisons between the populations in Vietnam and Australia, it would not be possible to call them as valid biotypes. Any differences in morphological or reproduction attributes between the populations in Vietnam and Australia could possibly be due to location effects. One way to eliminate this problem is to grow the two populations under identical conditions (in a glasshouse in quarantine) and compare various biological attributes. Alternatively, suitable molecular studies would also useful. Both have not yet been done.

Keywords: parthenium weed, \textit{Parthenium hysterophorus}, Cuc Phuong National Park, Huong Son Protection Forest, distribution.
REFERENCES