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Potential of *Crotalaria retusa* L. in Wildlife Gardening

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Abstract

Environmental degradation has led to the global issue of shortage of pollinators and other insects. In this context, wildlife gardening has become a trend among people to attract more pollinators which include insects and other animals in to the gardens. Undoubtedly, Sri Lanka's floristic wealthcan be tapped in introducing native plants to wildlife gardens, which can tolerate biological and environmental stresses that often characterise landscape sites. *Crotalaria retusa* is an attractive native shrub with striking yellow coloured flowers. It attracts butterflies in large numbers as it contains chemical precursors for the biosynthesis of male pheromones. Hence, the present study was conducted with the objective of identifying the germination ability of seeds under different seed treatments and investigation of wildlife potential of *C. retusa* in view of promoting this plant in the landscape industry as a wildlife attracting plant. Seeds were collected from Jaffna and two seed treatments (seeds scarified with a sand paper and soaked in water for 12 hours) and a control were laid out in a Completely Randomised Design with eight replicates. Twenty five seeds were placed per petridish and germination percentages were recorded daily up to two weeks and the average germination percentages were calculated. Insect visitation for this plant was observed in 3 field grown plots (16 plants/plot) in view of promoting this plant in wildlife gardening. Number of different insect species visited was recorded by walking five cycles around each plot per hr for five days. Scarified seeds recorded a significantly higher germination percentage (84%) More than 750 individuals belonging to 12 insect species were observed during the flower visitation study. Insect species were identified using the field guides /Invertebrate Systematic and Diversity Facility at the Department of Zoology, University of Peradeniya. Endangered species were identified by the National Red Data List. *Catopsilia pomona* (common emigrant), *Castalius rosimon* (common pierrot), *Tirumala limniace* (blue tiger), *Danaus chrysippus* (plain tiger), *Danaus genutia* (common tiger) and *Euploea core* (common Indian crow) were the butterfly species and *Arctia caja* (tiger moth), *Megachile lanata* (woolly wall bee), *Coccinellidae* (lady bug beetle), *Anisoptera* (dragon fly), 'kalanduruwa' and *Meloidae* (blister beetle) were the other insects observed visiting the plant.Two visitation peaks were recorded in the morning and evening, from 8.00-9.00 am and from 5.00-6.00 pm. Therefore, this plant has a potential to be used in wildlife gardening and the above visitation peaks can be recommended to witness more insects in particular butterflies.

Keywords: *Crotalaria retusa*, Butterflies, Insects, Native plants, Wildlife gardening