

DI 09 The vulnerability of the invasive plant, *Lantana camara* L. in Sri Lanka for pathogenic diseases

Eranthi K.L.G.N., Kumari W.G.S.M., Dissanayake N.P., Jayatissa L.P.

Department of Botany, Faculty of Science

Lantana camara L. (Verbenaceae) is a perennial woody shrub, native to the tropical and sub-tropical zones of the Americas, has become a serious invasive plant in many countries including Sri Lanka. Global efforts made to find effective biocontrol agents for *L. camara* has achieved only a limited success. Two pest species, *Ophiomyia lantanae* and *Orthezia insignis* infecting *L. camara* have already been introduced to Sri Lanka as biocontrol agents. However, this plant is still performing well as an invasive plant in Sri Lanka, and continuing to invade many natural ecosystems successfully. The objective of this study was to investigate the vulnerability of *L. camara* for pathogenic diseases and to assess the potential of those as biocontrol agents in Sri Lanka. *L. camara* plants (72 sampling sites: lowland wet zone, upcountry wet zone, dry zone, intermediate zone and arid zone) were observed for the presence of disease symptoms during five-month period in the year 2011. *L. camara* has invaded all the climatic zones and the disease symptoms included chlorosis with brownish (rust) spots and occasional necrotic lesions on leaves. Responsible pathogen was isolated and identified as *Mycovellosiella lantanae*. Plant vigor under diseased and healthy conditions was compared by measuring the mean leaf width and no difference in the reduction in leaf size in diseased and healthy plants. Further, the calculated disease incidence in many climatic zones is about 50%. It can be concluded that *L. camara* in Sri Lanka is substantially vulnerable to *M. lantanae*. Further research should be conducted to find ways of increasing the susceptibility of *L. camara* to this 'native disease' in order to use as a potential biocontrol agent.

Keywords: biological control, *L. camara*, invasive plants, *Mycovellosiella lantanae*