

# ULTRA VIOLET VISION OF INSECTS ON *Vanda tessellata* (ROXB)HOOK.F. EX D. DON. AND THE POSSIBLE ECOLOGICAL ROLE OF POLLINATORS IN MAINTAINING THE FLORAL POLYMORPHISM OF THE SPECIES

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## ABSTRACT

*Vanda tessellata* is an epiphytic indigenous orchid in Sri Lanka, well known for its floral polymorphism. At present this species is present in dry and intermediate zone of Sri Lanka. *V. tessellata* is an important orchid as it is exploited as an ornamental plant often subjected indiscriminate collection. Few studies have investigated the plant animal interactions of this species. The wide range in colours and how colour impacts pollinator choice is least studied in this group. As propagation is through seed dispersal, understanding flower pollinator relationships is essential. Understanding impact of colour, patterns and shape of different parts of flower was investigated under ultraviolet light (UV) reflectance to determine how insect vision perceives these differences. The labelum and tepals of the flowers were selected and they were grouped according to four colour ranges (red to brown-; yellow to green; grey to purple and white or flowers of very little pigments). A total of 60 flowers were photographed using the UV range. 300-400nm. Results indicated that labellum of the flower was more visible to the insects than tepals, the main attractant in the insect vision. Yellow and white morph tepals were more visible than red colours under UV spectrum. There was no significant difference in insect vision of the colours of petals and sepals. Hence it can be concluded that despite the fact colours such as red are visible to human eye, in the case of insects, yellow and white range plays a prominent role in pollinator vision.

**KEY WORDS:** Flower Polymorphism, Insect vision, pollinators,