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**PLANT CROWN TRAITS AND PHOTOSYNTHETIC CAPABILITY OF *SYZYGIUM
CAMPANULATUM***

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ABSTRACT

The capability to ameliorate and beautify the environment is among some of the criteria for the selection for urban tree planting. The overall objective of this research was to analyze crown traits and photosynthetic capacity of *Syzygium campanulatum* planted widely in urban areas of Kuching city, Sarawak. Measurements of plant structural and physiological traits of *S. campanulatum* were carried out for six months in the year 2009. Four sites were selected for the measurements, two high traffic level sites (P) and two selected from urban parks (C). Crown traits such as leaf area density, leaf area index and crown volume were significantly different between P and C sites. Photosynthetic rates were significantly higher at P sites ($14.2 \pm 1.6 \mu\text{molm}^{-2} \text{s}^{-1}$ value of the period) than at C sites ($9.8 \pm 1.4 \mu\text{molm}^{-2} \text{s}^{-1}$, mean value) than at C sites. Plants planted in city not only have ornamental functions but also have roles in carbon dioxide sequestration and oxygen release.

Keywords: *Syzygium campanulatum*, urban areas, crown traits, photosynthetic capacity, carbon dioxide sequestration

INTRODUCTION

Trees planted in urban areas may improve the quality of urban life as they can act as biological absorbers or filters of pollutants (Akbari, 2002; Brack, 2002). These capabilities, however, are dependent on the size