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NOTES and INFORMATION

LEAF MORPHO-ANATOMICAL RESPONSES OF *Mangifera indica* L. AND *Ficus benjamina* L. TO AIR POLLUTION IN SELECTED AREAS OF CEBU CITY, PHILIPPINES

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ABSTRACT – This study aims to determine leaf morphological and anatomical alterations of *Mangifera indica* L. and *Ficus benjamina* L. induced by air pollutants in a polluted area (Jones Avenue) and a non-polluted area (Bgy. Malubog) at Cebu City. Free hand sections were done to observe changes in leaf structure. Leaf sections were observed using a stereomicroscope and a light microscope. For anatomical analysis, the following parameters were obtained: length of the palisade cells (HPC), length of the upper epidermis cells (HEP), width of upper epidermis cells (WEP), length of lower epidermis cells (HELP), and width of lower epidermis cells (WLEP). Results showed that only *M. indica* sourced from the polluted area had observable lesions, burst cuticle and distorted stomatal complex. On the other hand, *F. benjamina* has no observable changes in leaf morpho-anatomy. Lesions are circular areas of raised tissue surrounding stomata indicating that open stomata were the entry points for phytotoxic gases. There were no significant differences in the length and width of the upper epidermis, length and width of the lower epidermis, and in the length of the palisade cells in the leaves of *M. indica* and *F. benjamina* between the polluted and non-polluted areas. *M. indica* was more sensitive to elevated concentrations of NO_2 and SO_2 in the atmosphere than *F. benjamina*.

Keywords: leaf structure, phytotoxic gases, stomata

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