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RELATIONSHIP BETWEEN THE LEAF AREA AND TAXONOMIC IMPORTANCE OF FOLIAR STOMATA

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ABSTRACT

The stomata are apertures in the epidermis, each bounded by two guard cells. Their main function is to allow gases such as carbon dioxide, water vapours and oxygen to move rapidly into and out of the leaf. In green leaves they occur either on both surfaces (amphistomatic leaf) or on one only, either the upper (epistomatic leaf) or more commonly the lower i.e., hypostomatic leaf. Four types of stomata are recognized such as anomocytic, paracytic, diacytic, and anisocytic from the materials under study such as *Manihot esculenta* Crantz, *Colocasia esculenta* (L.) Schott, *Maranta arundinacea* L., *Annona squamosa* L., *Artocarpus heterophyllus* Lam., *Passiflora edulis* Sims., *Curcuma longa* L., *Mangifera indica* L. and *Garcinia cambogia* (Gaertn.) Desr. Among all of the stomatal types paracytic type is dominated. The guard cell of *Colocasia esculenta* is kidney or bean shaped. But in other monocotyledonous plants under the present study *Curcuma longa* and *Maranta arundinacea* are with dumbbell shaped guard cell. The aim of the present study is to correlate between foliar characters and stomata in leaf.

KEYWORDS: Stomata, Anisocytic, Paracytic, Diacytic, and Foliar Characters