

## **Comparison of anatomical characters of flower colour morphs of *Calotropis gigantea* (L) found in Sri Lanka**

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The flowering shrub *Calotropis gigantea* (L.) R. Br. (Family Apocynaceae) which is commonly known as giant milk weed or crown flower is a very common plant in tropical, sub-tropical and Arabic countries. It is a medicinally important plant and different parts (leaf, bark, root, flower etc.) of the plant are used in folk medicines. On the basis of floral colour of *C. gigantea*, purple and white flowered forms are found in Sri Lanka. Purple form is abundant and white form is rare. Correct identification of these two forms is important for taxonomic and conservation purposes. However, in the absence of flowers, the differentiation of one form from the other is difficult. Therefore, anatomical study of leaf, stem and root of both forms was carried out using Light Microscopy (LM) along with the standard staining techniques to determine whether there are characteristics that can be used to identify the two forms. In both forms, amphistomatic irregularly distributed cyclocytic stomata were observed. Thin-walled, unbranched and unicellular trichomes were found in leaves and stems. In lamina, compact parenchyma, with no differentiation to palisade and spongy were observed. Bi-collateral vascular bundle with several parallel rows of xylem elements were observed in leaves and petioles. Simple or branched (“Y” or an “H” shaped) laticifers were observed throughout the vegetative parts. Cubic shaped crystals and druses were observed in root of both forms. All anatomical features observed were monomorphic for both forms. These results clearly point out the necessity of studying more precise characters such as molecular markers for the identification of these two forms.

**Keywords:** *Calotropis gigantea*, light microscopy, taxonomy, monomorphic characters

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