

**D-02 Morphological, anatomical and palynological study of the genus *Sida*
(Malvaceae) in Sri Lanka**

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Species of the genus *Sida* have been used for medicinal purposes in many countries since ancient times. Five species of the genus *Sida* (*S. humilis*, *S. spinosa*, *S. acuta*, *S. rhombifolia*, *S. cordifolia*) and a variety of *S. rhombifolia* (*S. rhombifolia* var. β *retusa*) found in Sri Lanka were selected to make a systematic survey of the genus.

Habit of the plant, leaf, flower and pollen grain characters of the above species and the variety were studied. Anatomical characters of the leaf were observed and the thickness of the upper epidermis, lower epidermis, palisade parenchyma, spongy parenchyma and the mid rib were measured. Palynological studies were carried out, measuring the diameter of pollen grains of each species.

Among the species, distinct variations in morphological characters such as: habit of the plant, leaf shape, leaf apex, flower colour and number of carpels in the ovary were

observed. Anatomically all the species were similar except *S.humilis* which lacked raised stomata. *S.humilis* is a prostrate herb common in open areas, while others are shade loving plants. All the species studied had spherical pollen grains with spiny exines while the diameter varied significantly ($p > 0.05$).

It was concluded that the morphological characters could be used in the systematic studies of the genus *Sida*, while anatomical characters would give little information. Although Trimen(1974) had considered *S.rhombifolia* var. β *retusa* as a variety, according to this study it shows much variation in the morphological characters and a significant variation in the pollen grain diameter, with *S.rhombifolia*.