D-26 Morphological diversity of trichomes in the genus *Thunbergia* Family Acanthaceae

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Trichomes have long been of considerable importance in comparative systematic investigation of angiosperms.

Acanthaceae is a family that has a wide range of diagnostically useful trichomes. The genus *Thunbergia* was selected initially to investigate the range in structure and distribution of trichomes and a dichotomous key was prepared to identify species.

Both vegetative and reproductive parts of the 5 species of *Thunbergia* represented in Sri Lanka, namely *T.alata*, *T.grandiflora*, *T.fragrans*, *T.erecta* and *T.mysorensis* were used in this study.

Observations were made from free hand sections, epidermal peels whole mounts and wax embedded material stained with Delafields' Haematoxylin.

Basically the genus *Thunbergia* has multicellular unicellular, uniseriate hairs which are glandular or non-glandular.

Dichotomous key for identifying the species of *Thunbergia*:

1. Panduriform glandular hairs present ..... *T.alata, T.fragrans T.mysorenis, T.erecta.....(2)*

   Absent ..... *T.grandiflora*

2. Shaggy hairs present in the antherlobes ..... *T.alata, T.mysorenisis..... (3)*

   Absent ..... *T.fragrans, T.erecta.....(4)*

3. Glandular hairs present in floral parts ..... *T.alata*
   Absent ..... *T.mysorensis*

4. Plate like glandular hairs found in floral parts ..... *T.erecta*
   Absent ..... *T.fragrans*

Unicellular, smooth-walled hairs of various length and small, short-stalked glandular hairs with ellipsoidal heads of 2 or more cells are present in all the 5 species of the Genus *Thunbergia*. The corolla is frequently covered with glandular hairs and papillae. Shaggy hairs are occasionally present on the anther lobes. Various types of finger hairs are found together with glandular hairs in the vegetative parts, bracts and sepals.