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MORPHOLOGICAL DIVERSITY OF EPIDERMAL HAIRS IN THE GENUS *Ipomoea* (CONVOLVULACEAE)

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Morphological features of plants have played an important role in plant classification from history of Botany. Almost all of the identification in floras are based on morphological characters. Apart from these macro features, micro features such as trichomes and stomata have provided valuable information in taxonomical studies, especially for solving ambiguities or strengthening an existing classification.

Ipomoea is a genus belonging to the family Convolvulaceae, commonly known as Morning glory family. Genus *Ipomoea* is divided into 7 sections without giving clear morphological basis for the division.

A comparative analysis of trichomes among species of *Ipomoea* was carried out, with the aim of investigating the morphological diversity of trichomes in the genus *Ipomoea*, to construct a key for the species according to the variation of trichomes and to evaluate the sub divisions, i.e. the 7 sections within the genus on the basis of trichome diversity.

Field collections were carried out in all parts of the country, especially in the recorded locations except the north and the east. Most of the species were duplicated from different locations. Fresh vegetative and reproductive parts were studied under light microscope. Transverse sections of fresh plant parts as well as free hand sections and epidermal peels were taken to observe under microscope. Clearing was done using Clorox solution to remove the chlorophylls of the sections. Semi permanent slides were prepared using 25% Glycerin. The type of trichomes and the density were recorded.

Trichomes were observed in almost every *Ipomoea* species in their vegetative parts as well as in reproductive parts. The type of trichome and density varied from species to species. A total of 26 different types of trichomes were recorded in the genus. Sessile glandular trichomes occurred in all the species. Mostly only glandular trichomes were present in *I. pescaprae*, *I. aquatica*, *I. horsfalliae*, *I. quamoclit*, *I. hederifolia*, *I. mauritiana*, *I. alba* and *I. littoralis* while various other combinations of glandular and non glandular trichomes occurred in others.

These trichomes did not show a variation among the seven sections of *Ipomoea* recognized by D. F. Austin during the revision of the Flora. The identification key constructed on trichomes will provide additional characters for identifying species. *I. turpethum* which was considered as a cultivated species in 1800's was found to occurr widely in the wild. Further *I. coptica*, *I. jucunda*, *I. staphylina* and *I. wightii* may be probably extinct since they are listed in IUCN Red Data Book as highly threatened species.

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