

Collection and phylogenetic studies were carried out on eight species and eleven varieties of some *Solanum* spp. in Thailand including *S. ferox* Linn., *S. mammosum* Linn., *S. melongena* Linn. (4 varieties), *S. nigrum* Linn., *S. sanitwongsei* Craib., *S. seaforthianum* Andr., *S. spirale* Roxb. and *S. torvum* Swartz.

Morphological characters have been studied on plant habit, presence of thorn and trichome, stem, leaf, flower, fruit, and seed. Phylogenetic studies by numerical taxonomy can classify the plants into 2 groups. Group 1 consisted of *S. nigrum* Linn., *S. seaforthianum* Andr. and *S. spirale* Roxb. while group 2 consisted of *S. ferox* Linn., *S. mammosum* Linn., *S. melongena* Linn. (4 varieties), *S. sanitwongsei* Craib. and *S. torvum* Swartz. Anatomical studies using stem, midrib and flower, and morphological studies yield similar identification.

Cytological studies can classify genus *Solanum* using chromosome number and idiogram. *S. ferox* Linn., *S. mammosum* Linn., *S. melongena* Linn. (4 varieties), *S. nigrum* Linn., *S. sanitwongsei* Craib., *S. seaforthianum* Andr. and *S. torvum* Swartz. have 24 somatic chromosomes ($2n = 24$) while *S. spirale* Roxb. has 48. Centromeric Index of chromosome can classify *Solanum*

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spp. into 2 groups. Group 1 included *S. mammosum* Linn. while group 2 included *S. ferox* Linn., *S. melongena* Linn. (4 varieties), *S. nigrum* Linn., *S. sanitwongsei* Craib., *S. seaforthianum* Andr., *S. spirale* Roxb. and *S. torvum* Swartz. Cytogenetical studies do not yield similar identification with morphological and anatomical studies.

Acrylamide gel electrophoresis at 8.5 percent and esterase system on *Solanum* spp. showed 10 distinct bands. Cluster analysis can classify *Solanum* spp. into 2 groups. Group 1 included *S. ferox* Linn. while group 2 included *S. mammosum* Linn., *S. melongena* Linn., *S. nigrum* Linn., *S. sanitwongsei* Craib., *S. seaforthianum* Andr., *S. spirale* Roxb. and *S. torvum* Swartz. *S. melongena* Linn. can be classified into 2 groups. Group 1 included cv. Greenish Purple while group 2 included cv. Dwarf, Purple Dwarf and Chao Phraya. Electrophoretic studies do not yield similar identification with morphological, anatomical and cytological studies.