Genetic variability of *Exacum trinervium* complex in Sri Lanka

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Exacum walkeri, *E. trinervium*, *E. axillare* and *E. trinervium* complex including four sub species; *E. trinervium*, subsp. *trinervium*, subsp. *ritigalensis*, subsp. *pallidum* and subsp. *macranthum* are medicinal and ornamental plants endemic to Sri Lanka. Taxonomic relationship of these species has been studied based on morphometric, cytological and crossability data. However, this relationship is still a controversy because of different opinions raised from several researches regarding the taxonomy of *Exacum trinervium* complex. The molecular data have provided more reliable evidences in resolving taxonomic relationship in some plant species. Therefore, in this study the genetic variability of Sri Lankan *Exacum trinervium* complex species was studied to obtain more refine taxonomic relationship among them. Genetic variability of fifteen individuals from *Exacum trinervium* complex was studied based on Random Amplified Polymorphic DNA (RAPD) data. Similar banding patterns were observed among subsp. *trinervium* and subsp. *ritigalensis* while banding pattern of subsp. *pallidum* was different from subsp. *trinervium* and subsp. *ritigalensis*. The obtained RAPD results combined with the morphological data indicated that subsp. *trinervium* and subsp. *ritigalensis* can be considered as one subspecies rather than two. More molecular based studies combined with morphological, anatomical and cytological studies are necessary to clarify this relationship further.

Key words: *Exacum trinervium complex, RAPD, Taxonomy*