

## Internal Transcribed Spacer Sequences of Three *Exacum* Species

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The *Exacums* are members of the family Gentianaceae. These annual species are grown as flowering pot plants in the Western hemisphere for its beautiful and profuse blue or white flowers. There are eight *Exacum* species found wild in Sri Lanka: *E. axillare*, *E. macranthum*, *E. pallidum*, *E. trinervium*, *E. walkerii*, *E. pedunculatum*, *E. petiolare* and *E. sessile* (Klackenberg, 1983) of which four are designated as threatened species. This study was conducted to determine phylogenetic relationships of two of the endemic Sri Lankan *Exacum* species: *E. trinervium* and *E. macranthum* which show potential for the floricultural industry with the non-endemic, commercial species *E. affine* and to compare their sequences of the Internal Transcribed Spacer (ITS) region as a possible DNA typing technique.

DNA was isolated from younger leaves of the plants and purified using the protocol modified from Keb-Llanes *et al.* (2002). The ITS region was amplified by Polymerase Chain Reaction (PCR) using two primers designed specifically for the ITS region and its sequences were determined.

The amplified ITS region was estimated to be around 600 bp. The sequences for the ITS region of the three species are reported for the first time in Sri Lanka. Multiple alignments of the three sequences were performed using the ClustalW software. ITS sequences of the two Sri Lankan species appeared to be much similar to each other than they were to *E. affine*.

Accordingly, the two endemic species *E. macranthum* and *E. trinervium* clustered together in the phylogenetic tree while *E. affine* separated itself from them.