



SPECIES DELINEATION OF *Kaempferia galanga* L. AND *Kaempferia pulchra* L. IN THE PHILIPPINES USING *psbA-trnH* AND *petA-psbL-psbJ*

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ABSTRACT - There are two *Kaempferia* species commonly found in the Philippines, *K. galanga* and *K. pulchra*. The former is known as a medicinal herb while the latter is an ornamental crop and was identified in the country as an introduced species. Proper delineation of the two species is needed to avoid adulteration of *K. galanga*-based herbal products with *K. pulchra*. In this study, five local accessions of *K. galanga* and four of *K. pulchra* were subjected to molecular analysis utilizing chloroplast intergenic spacers, *psbA-trnH* and *petA-psbL-psbJ*. The derived sequences were also compared to the sequences of *K. galanga* and *K. pulchra* from Thailand and some related species as outgroups. This can feasibly evaluate the quality of *K. galanga*-based medicinal products and assess diversity of the local *Kaempferia* species. Results showed that the combined sequences of the two intergenic spacers can be used to differentiate local *K. galanga* and *K. pulchra* as observed in the generated consensus phylogenetic tree having bootstrap values of 55 and 63%, respectively. Intraspecific sequence variation was observed among *K. galanga* as Negros Occidental accessions separated from the group with bootstrap value of 68%. In addition, it was observed that local *K. galanga* is closely related to Thailand species while local *K. pulchra* is distinct to their Thailand counterpart.

Keywords: *Kaempferia galanga*, *Kaempferia pulchra*, *psbA-trnH*, *petA-psbL-psbJ*



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