

Genetic diversity and relationships within populations of *Dendrocalamus giganteus* Wall. ex Munro and *Ochlandra stridula* Moon ex Thwaites in Sri Lanka using RAPD

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Abstract: The selection of useful species or varieties of bamboos for planting requires an understanding of the heterogeneity within populations. Random Amplified Polymorphic DNA (RAPD) was used to study the genetic diversity within a population of *Dendrocalamus giganteus* and *Ochlandra stridula* in Sri Lanka. *D. giganteus*, introduced as a single plant to Sri Lanka in 1856, showed a relatively low genetic diversity of 0.092 ± 0.027 . Although seeding in this species is rare, seed-raised plants showed the highest genetic distances and contributed significantly to the genetic diversity. The species is mainly propagated vegetatively and the presence of groups of individuals with no polymorphism indicated clones. *O. stridula*, an endemic annually flowering species, showed a relatively higher mean genetic distance of 0.446 ± 0.210 .

Key words: *Dendrocalamus giganteus*, *Ochlandra stridula*, RAPD, genetic distance.