The complete chloroplast genome sequence of Chengal (Neobalanocarpus heimii, Dipterocarpaceae), a durable tropical hardwood

ABSTRACT

Known for its durable timber quality, Neobalanocarpus heimii (King) Ashton is a highly sought after tree species endemic to the Malay Peninsula. Due to its scarcity and high value, the tree is classified under the IUCN Red List categories of Vulnerable. In this study, we assembled the complete chloroplast (cp) genome of N. heimii using data from high-throughput Illumina sequencing. The Chengal cp genome is 151,191 bp in size and includes two inverted repeat regions of 23,721 bp each, which is separated by a large single copy region of 83,801 bp and a small single copy region of 19,948 bp. A total of 130 genes were predicted, including 37 tRNA, 8 rRNA, and 85 protein-coding genes. Phylogenetic analysis placed N. heimii within the order Malvales.

Keyword: Malay Peninsula; Conservation; Comparative genomics; Phylogenomics; Monotypic genus