

Patterns of tree diversity and forest structure within intact tropical heath forest of the Universiti Brunei Darussalam's Botanical Research Centre

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As Brunei Darussalam's first botanical garden, the Universiti Brunei Darussalam Botanical Research Centre (UBD BRC) was established in a coastal heath forest site and functions as a centre for botanical research and conservation. Bornean tropical heath forests are rare, covering an estimated 0.6% of Brunei's forests, but they contain endemics and plant species of high conservation value. We quantified tree diversity and forest structure for all trees ≥ 1 cm diameter at breast height within a one-hectare area of intact coastal heath forest at the UBD BRC. We recorded 825 trees, representing 61 species in 44 genera and 34 families. We found a notable absence of Dipterocarpaceae tree species, dominance of the family Symplocaceae, and lower total species richness recorded, indicating differences compared to tree communities in Brunei's inland heath forests. Seven tree species endemic to Borneo were recorded, including one species listed as vulnerable in the IUCN Red List. Despite the absence of records of the invasive *Acacia mangium* within the one-hectare area, its dominance in disturbed and fire-affected areas within the UBD campus pose a threat to these heath forests. Effective management and protection, coupled with active research and increasing the community's awareness of the importance of heath forests, are essential roles of the UBD BRC. The intact heath forests at the UBD BRC represent some of the last remaining intact forests in Brunei. Our study highlights the importance of the UBD BRC as an in-situ conservation centre for the protection of these increasingly threatened Bornean heath forests.