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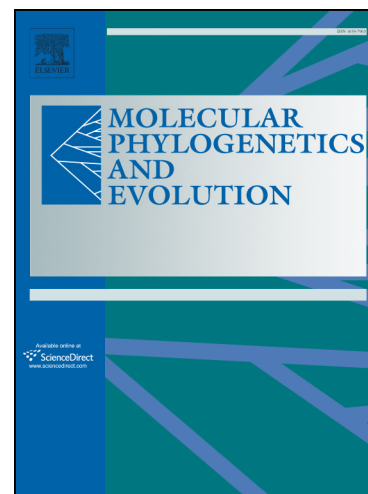
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Is Amazonia a ‘museum’ for Neotropical trees? The evolution of the Brownea clade (Detarioideae, Leguminosae)

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Highlights:

- The Brownea clade diversified gradually, following the ‘museum’ model
- The Brownea clade originated in the Eocene, and diversified throughout the Neogene
- The clade diversified mainly in Amazonia, with subsequent migrations across the Neotropics

Abstract

The flora of the Neotropics is unmatched in its diversity, however the mechanisms by which diversity has accumulated are debated and largely unclear. The Brownea clade (Leguminosae) is a characteristic component of the Neotropical flora, and the species within it are diverse in their floral morphology, attracting a wide variety of pollinators. This investigation aimed to estimate species divergence times and infer relationships within the group, in order to test whether the Brownea clade followed the ‘cradle’ or ‘museum’ model of diversification, i.e. whether species evolved rapidly over a short time period, or gradually over many millions of years. We also aimed to trace the spatio-temporal evolution of the clade by estimating ancestral biogeographical patterns in the group. We used BEAST to build a dated phylogeny of 73 Brownea clade species using three molecular markers

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