Background: Acclimation to light is a driver of tropical forest dynamics and key to understanding the coexistence of dipterocarps, and how their demographic rates and traits trade-off.

Aims: We examined light niche divergence in six dipterocarp species and hypothesised that seedlings can be functionally grouped, and allocate resources to either growth or storage in response to light changes.

Methods: A pot experiment was performed to measure size-specific growth rate, wood density and total non-structural carbohydrate (NSC) concentrations of dipterocarp seedlings exposed to a simulated gap opening.

Results: Light-demanding species responded to a gap opening with increased growth and decreased wood density, whereas shade-tolerant species showed a greater relative increase in NSC concentration. Iditol – an alditol – was identified, and *Dryobalanops lanceolata* responded to a gap opening with a significantly smaller increase in alditol concentration compared to other species.

Conclusions: We group light-demanding and shade-tolerant species based on their acclimation to light and show that a generalist species is unique based on its response of NSC concentration to a gap opening. Our findings emphasise that the ecology of these species needs to be further studied in the context of their physiology to support their effective use in large-scale forest restoration efforts.