Structure and dynamics of *Allantospermum borneense* Form. (Simaroubaceae) in 52-ha plots at Lambir Hills National Park, Miri, Sarawak.

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Question 1: Do trees in rain forest associate with a particular habitat?
Question 2: Do species-habitat association, if they exist, contribute to the equilibrium species coexistence in the tropical rain forest?

The 52-hectare plot in Lambir Hills National Park, Sarawak, Malaysia, is the most diverse plot in the CTFS network and is among the most diverse tropical forests in the world. Following the 1992, 1997 and 2002 recensuses, I estimated there to be c.1200 tree species coexist in the plot. *Allantospermum borneense* (Simaroubaceae) is one of the top five abundant species in the plot. The structure and dynamics (spatial distribution, mortality and recruitment rates) of *Allantospermum borneense* were studied and analysed for all trees 1.0 cm diameter using torus-translation to clarify the wide distribution that contributed to the high population and regeneration of this species in the plot. The torus-translation test showed that *Allantospermum borneense* had a significant positive association with at least one habitat. The observed positive-species-association reduced the number of counterpart competitors, thereby contributing to the coexistence of *Allantospermum borneense* in the plot according to the expectations of equilibrium hypotheses.

Annual growth and mortality for *Allantospermum borneense* were estimated for trees m 1.0 cm in diameter and compared among habitats, life histories and species-aggregation patterns. Diameter growth per tree (mm y\(^{-1}\)) was calculated as the diameter increment in millimetres divided by the inter-census interval in years. Diameter growth rate is relatively small in all diameter classes. Extreme growth rate outliers were excluded. Annual mortality rate (% y\(^{-1}\)) were calculated as \[ M = 100 \times \log\left(\frac{N_0}{S}\right)/T, \] where \(N_0\) is the initial number of living trees, \(S\) is the number of surviving trees, and \(T\) is the mean interval in years between recensuses. The low mortality and high recruitment rates and the ability of the species to coppice are among the factors for the species to maintain its wide distribution and high population.