

# Soils as important modulators of tropical vegetation structure and function

*Jon Lloyd is currently Chair of Earth System Science at the University of Leeds (UK) and with a long standing interest in the vegetation of unhygienic places. His main area of research is currently in the area of Functional Plant Geography, especially the extent to which we can explain the distribution of the different vegetation types at local, regional and global scales solely on the basis of basic plant eco-physiological principles.*



Image source: Dan L. PermanEcoLibrary.org

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R.N. Robertson Building (no. 46)  
Research School of Biology

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Although the influence of precipitation amount and seasonality on tropical vegetation structure and productivity is well established, little attention has been paid to the role of soils. Unlike temperate ecosystems, nitrogen is often in relative abundance in the tropics, and drawing on results obtained from three continents over the last decade it is argued that both equilibrium vegetation structure and stand level productivity/dynamics are strongly influenced by soil physical and chemical properties with important roles identified for both cations and phosphorus. These effects can be just as important as are variations in climate and the physiological basis of the observed edaphic effects. These soil effects can be just as important as variations in climate with both above- and below-ground physiological responses implicated.