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Flora on the heath forest sandy soil of Terengganu and Sarawak
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Abstract
The composition and structure of a forest ecosystem are strongly attributed to changes in topography and soil factors. Heath forest can be regarded as a national landscape that must be safeguarded and protected from the current rapid development. Once the heath forest canopy is lost, the soils of heath forests quickly degrade to bleached sand, making this form of forest particularly vulnerable. Heath forest grows on podzolised siliceous sand (spodosols) drained by unique blackwater streams. The soil has an unstable soil structure and profile that is described as ashy grey, acidic, and has a heavily leached surface layer which leads to nutrient leaching. Hence, only certain plants can adapt and thrive to such extreme conditions. However, information on flora diversity and biomass in heath forests is still poorly explored and insufficient in comparison to other forest types, especially the relationship between plant diversity and habitat heterogeneity. Melaleuca cajuputi is the major species in Terengganu, whereas Casuarina nobilis and Calophyllum incrassatum are the dominant species in Sarawak's heath forest. Allelopathy can be produced uniquely by most heath forest plants via secondary metabolites chemical mixtures or phytotoxins. Carnivorous syndrome features can be observed in the vegetation of heath forests. Nepenthes sp., Drosera sp., Utricularia sp., Hanguana malayana, Lepironia articulata, Eriocaulon sexangulare, Dapsilanthus disjunctus and Eleocharis ochrostachys are amongst the species typically found with special plant mechanisms. However, this ecosystem is necessitating prompt conservation intervention. Identification of flora on sandy soils is an initiative to discover potential seedlings for heath forest restoration. © 2023 Nova Science Publishers, Inc.

Author Keywords
Allelopathy; Carnivorous; Harsh condition; Plant mechanisms; Sandy soil

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Elsevier

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Publisher: Nova Science Publishers, Inc.

ISBN: 9798886975321; 9798886974867
Language of Original Document: English
Abbreviated Source Title: Adv. and Disadv. of Sandy Soils
2-s2.0-85147919616
Document Type: Book Chapter
Publication Stage: Final
Source: Scopus