

林业科学

不同演替阶段沙地植物群落物种多样性研究

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摘要:

本文采用空间换时间的研究方法,对毛乌素沙地南缘流动沙地、半固定沙地、半固定沙地与固定沙地过渡带和固定沙地内的植物群落物种多样性进行了研究。结果表明:不同演替阶段沙地内植物群落多样性呈不断增加的变化趋势,各演替阶段均有不同的植物群落和优势物种。豆科和藜科植物作为流动沙地的先锋物种,表现出较强的适应能力;禾本科和菊科植物由流动沙地到固定沙地,其种类变化较大,表明其在沙地恢复中发挥着巨大的作用;萝藦科植物可作为区分流动沙地和其它沙地类型的指示性植物;马齿苋科和紫薇科植物仅在固定沙地中出现,已成为判断固定沙地的标志性植物。除沙地恢复过程中人为播种的柠条和沙蒿外,流动沙地阶段的优势物种是沙米,半固定阶段是沙生冰草,半固定沙地与固定沙地过渡地带是老瓜头和地梢瓜,而固定沙地则为花棒和地梢瓜。因此,在沙漠化治理中应根据不同的沙地类型选择不同的植物种类。

关键词: 沙地 演替阶段 植被群落 物种多样性

Study on species diversity of plant community in sands of the different successional stages

Abstract:

Species diversity of plant community in the sands of four different succession phases, which were the shifting sand, semi-fixed sand, transition zone between shifting sand and fixed sand and fixed sand, at southern edge of Mu Us Sandland, were investigated by the method of space for time. The result showed that species diversity of plant community in sands of the different succession phases was increasing trend. The plants of Leguminosae and Chenopodiaceae, as dominant plant species in the shifting sand, demonstrated a strong ability for adaption. Gramineae and Compositae by the shifting sand to the fixed sandy land, the species of which changed greatly, that indicated they were playing a great role in the recovery of the sands. Asclepiadaceae plants could serve as a indicative plants to distinguish between the types of shifting sand and other sand; Portulacaceae and Bibngoniaceae plants, which appeared only in the fixed sandy land, has become a landmark to determine the fixed sand plants. In addition to artificially plant Caragana spp. and Artemisia spp. in the recovery process of sands, the dominant species was Agriophyllum squarrosum in the shifting sand, in the semi-fixed sands was Agrophron desertorum, semi-fixed sandy land and fixed sandy transition zone was Cynanchum komarovii and Cynancgum thesioides, and fixed sandy land was Hedysarum scoparium and Cynancgum thesioides. Therefore, in desertification control, should choose a different plant species based on different types of sandy.

Keywords: Sandy Succession stages Plant community Species diversity

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