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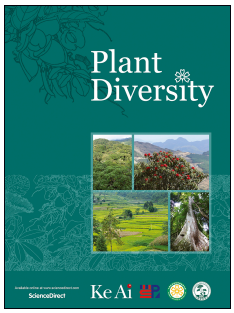

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Phylogenetic pattern of alpine plants along latitude and longitude in Hengduan Mountains Region

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Abstract：To detect the horizontal pattern of phylogenetic structure shown by alpine plants, we measured phylogenetic structure using net related index (NRI) and net nearest taxon index (NTI), and analyzed the phylogenetic structure patterns of alpine plants along longitude, latitude and environmental gradients in the Hengduan Mountains Region, the results showed that:1) The phylogenetic structure tended to cluster with increasing latitude and longitude. 2) Latitude was strongest factor for NRI, followed by longitude, while for NTI, longitude was close related than latitude, though they all not significantly relate to NTI. The phylogenetic structure tended overdispersion in south part of Hengduan Mountains Region where there were higher mean annual temperature and mean annual precipitation, while with the increasing environmental stress, the phylogenetic structure tended clustering in north part of Hengduan Mountains Region. The results highlighted that environmental filter and

geographical isolation played great effect on the latitudinal and

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