

气候变化对黄土高原达乌里胡枝子种群分布格局的影响

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摘要

2000—2009年,采用野外样带调查与多点定位监测结合的方法,研究了区域气候变化对达乌里胡枝子种群分布和生长的影响.结果表明:受气温的影响,达乌里胡枝子种群的适宜生长范围由西北向东南呈明显的地带性分布,种群分布的适宜温度在7.4℃~10℃,平均密度为13.9株·m⁻²,生殖枝数量平均为每丛11.4枝,生长稳定;受降水梯度的影响,达乌里胡枝子种群的水平分布已由典型草原地带的建群种或优势种扩展为森林草原地带的伴生种,并从伴生种上升为优势种.在荒漠草原地带的沟谷半阳坡及沙丘附近也常以偶见种出现,并从年降雨300~500 mm的适宜区,已逐渐扩大到降雨量较低的270 mm和较高的600 mm区域;达乌里胡枝子种群分布的海拔高度由1100~1700 m扩展到600~1950 m的范围.在全球气候变暖背景下,达乌里胡枝子种群生态幅在逐渐扩大.

关键词: 黄土高原 达乌里胡枝子 分布密度 气候梯度

Abstract:

Field survey and position monitoring were conducted from 2000 to 2009 to study the effects of climate change on the distribution and growth of *Lespedeza davurica* community on Loess Plateau. As affected by air temperature, the appropriate growth region of *L. davurica* community on the Plateau had an obvious zonal distribution from northwest to southeast. For the distribution of *L. davurica* community, the suitable air temperature was 7.4℃-10℃, average population density was 13.9 plants·m⁻², and reproductive branch was averagely 11.4 per cluster. As affected by precipitation gradient, the horizontal distribution of *L. davurica* community changed from a constructive or predominant species in typical grassland region into a companion species in forest steppe region, and then, the community gradually became dominant species. The *L. davurica* community appeared as an occasional species on the half sunny slope of gullies and valleys and the sand dunes in desert steppe region, and extended gradually from its optimal region with yearly precipitation 300-500 mm to the region with yearly precipitation 270-600 mm. Also, the *L. davurica* community extended from its optimal altitude 1100-1700 m to 600-1950 m. Under the background of global climate change, the eco-breadth of *L. davurica* community expanded gradually.

Key words: Loess Plateau *Lespedeza davurica* distributed density climate gradient

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