

研究论文

浑善达克沙地不同生境下黄柳叶片解剖结构的比较

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摘要 选取叶厚度、表皮细胞的大小、栅栏组织细胞的大小、第一层栅栏组织的细胞密集度、表皮细胞外壁与角质层的厚度、主脉厚度等抗旱指标, 对生长在不同生境条件下的黄柳及丘间低地小红柳的叶片进行了解剖学研究, 以期从叶的解剖结构上寻求其与抗逆性的关系。结果表明, 分布在不同生境的黄柳叶片与丘间低地的小红柳相比都较厚, 叶肉全栅化, 为等面叶, 上、下表皮细胞外壁加厚且均具角质层。综合方差分析和LSD多重比较, 抗旱性大小顺序依次是: 流动沙丘的黄柳>半固定沙丘的黄柳>固定沙丘的黄柳>丘间低地小红柳。

关键词 [黄柳](#); [小红柳](#); [不同生境](#); [叶片](#); [解剖结构](#); [抗旱性](#)

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Comparison of leaf anatomical structure between *Salix gordejvii* growing under contrasting habitats of *Otingdag Sandland* and *Salix microtachya* var. *bordensis* growing on the lowlands of dunes

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Abstract In order to determine the relationships between the leaf anatomical structures and drought resistance, some important attributes of leaf anatomical structure, were compared between *Salix gordejvii* growing on different sand dunes and *Salix microstachya* var. *bordensis* growing on the lowlands between dunes. The attributes compared were: thickness of leaf, size of epidermal cell, size of palisade tissue cell, cell density of the first layer of palisade tissue, thickness of epidermal cell wall and cuticle, and thickness of midrib of the plants. Analysis of variance showed that these important attributes were significantly different ($\alpha < 0.05$) between the two plants. In comparison with the leaves of *Salix microstachya* var. *bordensis*, the leaves of *Salix gordejvii*, under all the observed habitats, were thicker with total-palisade type, identical face leaf and thicken epidermal cell wall with cuticle. The results also showed that the sequence of drought resistance is in the order of *Salix gordejvii* on the drifting sand dune, *Salix gordejvii* on the semi-fixed sand dune, *Salix gordejvii* on the fixed sand dune and *Salix microstachya* var. *bordensis*.

Key words [Salix gordejvii](#); [Salix microstachya](#) var. [bordensis](#); [different environments](#); [leaf](#); [anatomical structure](#); [drought resistance](#)

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