Study on the Change of Micro-Relief and Plant Community in the Hulunbuir Sandy Nature Meadow Prairie

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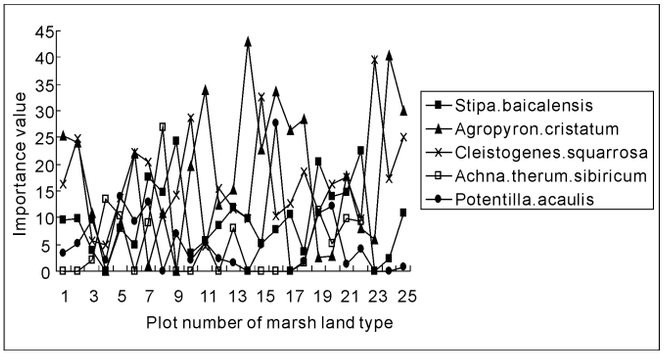
Key words : sandy grassland , micro-relief flora , dominant species , importance value

Introduction It was discovered that sandy grassland vegetation changes in close relation to landscape which could be seen especially well in a morphological depression (Zhang A , 2007) . A morphological depression in grassland is similar to an isolated island in the ocean , which provides an ideal site for studying the relationship between changing of micro-relief and grassland vegetation .

Materials and methods The study site was located in the Hulunbuir Sandy Grassland (49°11′to 49°14 .13′N , 119°34′ to 119°36′ E) , with a length along the W-E axis of 1 .6 km , a length along N-S axis of 1 km , and a relative depth of 19 m . Falling gradients of slopes facing different directions are : W slope 0. 02 , N slope 0. 04 , E slope 0. 03 , S slope 0 .03 . The dominant species were *Stipa baicalensis* , *Cleistogenes squarrosa* , *Agropyron cristatum* , *Achnatherum sibiricum* , *Potentilla acaulis* and *Poa sphondylodes* . The site was lightly degraded . Please entirely revise the following sentence : Establishes 8 types place about background prairie around the marshland to take the contrast . Research quadrat size for the height , density , coverage and the standing crop of plant community was 1 m×1 m . Each treatment was replicated three times .

Results There were 73 kinds of plants in the research type place , 44 kinds in background prairie , and 16 kinds were in 1 quadrate size . 68 kinds in marsh land , 15 kinds were appeared in 1 quadrate size . These types were non-uniformly distributed in the marsh land ; there were significantly differences among species numbers , life type and ecotype . Moreover , it appeared heterogeneity about dominant species and subdominant species in the marsh land and the background prairie , there have the same phenomenon in the different slope position and different slope approaches of micro-relief and flora . There only have 27 kinds of species in sunny slope (Inner Mongolia vegetation , 1985) .

The diagram curves of the main plant species important value change in the marsh land were made .



Conclusions There were stronger reflection ability to the habitat heterogeneity about the terrain factor in the small scale . It will appear soil wind erosion phenomenon if plants were serious disturbed .

The important value as one kind of comprehensive target can reflect the distribution characteristic of plant in small criterion of marsh land , and also point out the most suitable habitat of plants .

References

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