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Statistic of psammophyte in Otindag Sandy Land

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Introduction Otindag Sandy Land located in the middle of Xinlin Gol Plateau , is the largest sandy land in dry steppe zone of China . Recently , a series of environmental problems such as activation of fixed dunes , desertification and sandstorms , has already aroused widely attention by the ecologist . psammophyte constitution , dominant population and initial plants were surveyed and analyzed in Otindag Sandy Land to understand it's psammophyte resources and to provide a foundation for vegetation recovering and ecological system protection in Otindag Sandy Land .

Materials and methods By the method of random sample , psammophyte in ZHENGLAN Banner , XIANGHUANG Banner , ZHENGXIANG BAI Banner of Otindag Sand Land was surveyed using GPS in august 2006 and 2007 , especially in serious desertification area . Shrub sample was 10m × 10m , Herbs , 1m × 1m , In addition , reference was collected and Psammophyte resource was analysed with the guiding of botany theory .

Results Although psammophyte has 424 species out 1083 of Otindag Sandy Land , they distributed widely , can be find all over of this zone , It's made a key function to the whole ecological system of Otindag Sandy Land . The first ten families are *Compositaea* , *Gramineae* , *Rosaceae* , *Leguminosae* , *Cruciferae* , *Scrophulariaceae* , *Cyperaceae* , *Ranunculaceae* , *Labiatae* , *Chenopodiaceae* , and others 51 families have 87 genera , 167 species , respectively 37 .84% and 39 .39% of total . *Compositaea* and *Gramineae* have a very high number of plant species . *Compositaea* has 31 genera and 64 species , respectively 13 .47% and 15 .09% of total . *Gramineae* has 34 genera and 51 species , respectively 14 .78% and 12 .03% . Further survey indicated that there is lot of initial and dominant palnts witch always appear on zone of succession from moving dune to half-fixed sand . Initial plants included *A griophyllum pungens* , *Corispermum candelabrum* , *Bassia dasyphylla* , *Artemisia scoparia* etc . Dominant plants included *A .intramongolica* , *Cleistogenes squarrosa* etc . And other species included *Thymus serpyllum* *Thalictrum* sp . *Potentiplla* spp . , *Saposhnikovia divaricat* etc . Also the dominant population was surveyed , main species were *A .desertorum* , *Bassia dasyphylla* , *C .candelabrum* , *Setaria verticillata* , *Lappula myosotis* in sunny slope , formed *A .desertorum* + xerophytic herbosa communities . Arbors + lochmium formed in shady slope , main species were *Caragana micropyhlla* , *Spiraea aquilegifolia* , *Salix microstachya* , *Ulmus punila* etc . There has less water in sand deposited slope and wind hollow , so it has simple vegetation , It formed *C .candelabrum* + *Setaria verticillata* dominant communities in Sand deposited slope and formed *S .verticillata* + *C .candelabrum* + *A .intramongolica* dominant communities in wind hollow . *C .candelabrum* monodominant community(63%) , other species less than 13% was formed in dune top (Chen Yufu , Dong Ming . 2002 The vegetation and soil space Patten and their relationship in Eerduosi Acta Phytocol . Sin . Journal , 26 , 501-505 .) .

Conclusion and discussion Psammophyte of Otindag Sand Land has only 39 .15% of total , but they widely deposited in the whole area , play an important role as initial , dominant plants . However its dimonant plant and population we know is not so complete , so we should make an efforts to study more .

Reference

Chen Yufu , Song Minghua , Dong Ming . (2002) . The vegetation and soil space Patten and their relationship in Eerduosi Acta Phytocol . Sin . Journal , 26 , 501-505 .