

## Using of Some Plant Populations as Indicators of Desertification in Azerbaijan

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**Aim of the study:** Data about spread of *Salsola dendroides* population as an indicator of desertification in Shirvan region of Azerbaijan have been determined in results of carried out researches. Desertification – one is the biggest problems of humanity today. Aridity, salinization, removal by wind and etc. cause formation of the local biotypes of the xerophytes which adapt to disastrous factors are unfavourable in the modern desert cenoses. The quantity of the local biotypes was studied by new formula in pattern sites arranged in Shirvan regions. 10 population of *Salsola dendroides* Pall. species in desert and semi-deserts of Shirvan regions of the Azerbaijan Republic were assessed. The main association and their floristic composition were defined and classification on ecological groups of *Salsoleta dendroides* phytocenose were developed for the first time.

**Materials and Methods:** Research had been carried out in flat part of Shirvan territory (desert and semi-deserts of Hajigabul, Kurdamir, Aghsu, Gobustan, Goychay, Yevlakh, Ujar districts of Shirvan regions) of the Azerbaijan Republic in 2012-2014 years. The main object of the research are degraded, steppe, useless, deserted natural ecosystems and agrolandscapes. As scientific-research works conducted by us are multiprofile, morphologic, systematic, floristic, geobotanical, bioecological, industrial, mathematical, monitoring, agrotechnical, phenological, expeditionary, semiportable, stationary, vegetation resources, comparison and other methods were used. During implementation of the researches use the methodology and works of L.G. Ramenski [1937], B.V. Sochava [1950], Brown-Blanquet [1964], I.H. Beydeman [1954], P.D. Yaroshenko [1967; 1969], A.R. Shennikov [1951], B.Q. Shakuri [2004], G.Sh. Mammadov [2007] have been used. Under studying of degradation process of the soil-vegetation cover used the methods of the geographic comparison.

**Results:** Representatives of ephemers sinusation has been defined by homogeneous development cycle. Ephemers develop strongly after winter silence related with rainfall in March. One of very important features of ephemers is that their vegetations are constant. Ephemers are divided into two groups in *S. dendroides* phytocenosis: the first spring species - their development cycle starts March-April, finishes at the second half of June; last spring species - finishes in the second half of July. The first spring species: *Chamamelum praecox*, *Hemaria hirsuta*, *Adonis aestivalis*, *Phleum paniculatum*, *Holosteum umbellatum*, *Erodium ciconium* etc; Last spring plant: *Lolium rigidum*, *Lepidium perfoliatum*, *lemonium spicata*, *Helianthemum salicifolium*, *Alussum desertorum*, *Anisantha rubens*, *Senecio vernalis*, *Filago spathulata*, *Bromus japonicus*, *Rostraria cristata* etc. Ephemers and ephemerooids developing in the spring create the physiognomy of the *Salsoleta dendroides* desert. High temperature and drought changes the spring aspect at the beginning of May. Ephemers and *S. dendroides* stay as a dominant plant, other semi-bushes and annual saltwort give yellowish color. In the autumn, related with fruit period, aspect of the *S. dendroides* deserts changes sharply. *Salsoleta dendroides* phytocenoses looks beautiful and bright colors of the fruits. Desertification process in the territory has been studied on the scientific bases and the main indications causing desertification, their development parameters, modern condition, factors have been identified and the ways of their prevention have been defined. Direction of spreading, intensity and areals of the ecological modifications intensifying desertification process have been determined. Analysis of the population parameters have been shown that all investigated cenopopulations restored. Parameter of CP 1 and 2 restoration index was higher in 2014 than in 2012 - 2013.

**Keywords:** *Salsola dendroides*, plant population, indicator, desertification.