===== **ASSESSMENT OF ECOSYSTEMS AND THEIR COMPONENTS** =====

CURRENT STATE, GROWING CONDITIONS AND RESTORATION OF RAVINE PLANT COMMUNITIES IN THE LAKE ELTON BIOSPHERE RESERVE (VOLGOGRAD REGION)

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In this paper, we have summarized the available data on the habitats of the lost ravine forests of the Elton Region, the current state of their derivatives, the polydominant shrub communities, as well as the soil and vegetation conditions surrounding their growth. We have also examined the negative factors affecting these communities. It was discovered that significant altitudinal differences, along with a developed river and gully system provides a variety of natural conditions for the growth of ravine trees and shrubs communities in the lake depressions in general and at the northern shore of Lake Elton in particular. As expected, destruction of ravine forests leads to the disappearance of these communities. By now, the total area of polydominant shrub communities is extremely small and continues to decrease rapidly, while climate conditions of the last decades leave no room for hope that their natural seed regeneration and spatial distribution will intensify sometime soon. This problem becomes more urgent the more the area covered by polydominant communities decreases, the more the negative impact of grazing and frequent fires grows, and the longer the issue of their economic and ecological value and possibilities for their protection remain unresolved. Nevertheless, a vast number of habitats that are potentially suitable for the natural plantations of such type allows us to expect their successful restoration; while a vast number of habitats that are occupied by communities directly sourcing from ravine forests makes it possible to reintroduce them to the nature later.

We identified the most significant factors that determine the current state of the polydominant communities; e.g. issues with seed regeneration of cenosis-forming species, cattle grazing and wild fires. We found out that in the overwhelming majority of cases the groundwater level in the gullies of the Elton Lake Depression is high and has low salinity, which makes these gullies suitable for the formation of polydominant shrub communities. We also discovered that there is a certain potential for these communities to persist and develop; however, it is only true to their current habitats, since their seeds are unable to spread to other potentially suitable habitats.

With such a significant number of habitats potentially available for ravine trees and shrubs in most of the Elton gullies, we believe that there is a possibility to restore polydominant tree stands, and a positive prospect for experiments to re-establish lost ravine forests to the larger gullies where they were present before. We offer recommendations for the restoration of polydominant communities and the reintroduction of such lost species of ravine forests as poplar and willow.

Keyword: Caspian Depression, Volga-Ural Interfluve, Elton Lake, polydominant tree and

shrub communities, systems of ravines and gullies, ravine forests, forest restoration.