

Brief information about the project

Name of the project	IRN AP15473108 Study of population status and intraspecific phenotypic variability of rare species of medicinal plants of the genus <i>Adonis</i> L. in Northern Kazakhstan.
Relevance	The uniqueness of this project lies in the fact that for the first time a study of the phenotypic variability of rare medicinal plants of the flora of Northern Kazakhstan will be conducted. Also, in the course of the project, new knowledge will be gained about the places of natural growth, morphology, ecological and phytocenotic characteristics of populations, reproduction of rare medicinal plants.
Purpose	The study of the current state of the population and intraspecific anatomical and morphological variability of rare species of medicinal plants from the genus <i>Adonis</i> in the flora of Northern Kazakhstan and the development of measures for their conservation.
Objectives	<ol style="list-style-type: none">1. Collection and analysis of published literature on the study of species of the genus <i>Adonis</i> in Northern Kazakhstan.2. Based on the results of a review of previous studies, the degree of study and distribution of rare <i>Adonis</i> in Northern Kazakhstan at the international and national levels will be analyzed.3. 2. To study the geographical distribution of species of the genus <i>Adonis</i> in the flora of Northern Kazakhstan, based on field research, a review of literary sources and a revision of herbarium materials of the largest domestic and foreign herbarium collections.4. Data on the distribution of species of the genus <i>Adonis</i> will be obtained on the basis of their own field observations, herbarium materials from the largest domestic and foreign herbarium funds (LE, MW, TK, AA, TASH, NUR, KUZ, NS, etc.), literary sources and observations on Internet resources: https://www.plantarium.ru /, https://www.gbif.org /.5. Study of ecological and phytocenotic characteristics and population-quantitative indicators of species of the genus <i>Adonis</i> in Northern Kazakhstan.
Expected and achieved results	The implementation of this project will contribute to the sustainable development and environmental safety of the Republic of Kazakhstan, the development of international scientific relations, and increase the prestige of the country in the international arena on the problem of studying and preserving rare and endangered plants. Carrying out activities within the framework of this project will help preserve the biodiversity of rare plants of Northern Kazakhstan, reduce damage from anthropogenic impact on

	<p>the vegetation cover of the region. According to the literature, many studies of populations of rare and endangered plants are being conducted all over the world in order to preserve their numbers. Taking into account the research of other researchers, the repetition of this project with other studies of rare and endangered species of the genus Adonis in Northern Kazakhstan is excluded, since each plant community differs in biological characteristics and habitat. It should be noted that the declared project has significant differences from previously performed scientific work</p>
<p>Research team members with their identifiers (Scopus Author ID, Researcher ID, ORCID, if available) and links to relevant profiles</p>	<p>1. Kubentayev S.A., PhD - Hirsch Index by Scopus database 3, ORCID ID https://orcid.org/0000-0002-0369-0591; Researcher ID - B-4714-2018; Scopus ID: 57207908964.</p>
<p>List of publications with links to them</p>	<p>https://www.smujo.id/biodiv/article/view/14858 https://biollogy-medicine-geography-vestnik.ksu.kz/2023-112-4</p>
<p>Patents</p>	<p>-</p>