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MORPHOLOGICAL AND PHYLOGENETIC IDENTIFICATION OF THE *ANTHEMIS TROTZKIANA* CLAUS

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Anthemis trotzkiana Claus (Asteraceae) is rare species, subshrub, growing on the chalk cliffs and limestones and endemic to the Volga region and Western Kazakhstan. We are interested in studying this species, since this species of genus *Anthemis* L. was included in flora red books (The Red Book of the USSR, 1978 y., The Red Book of the Kazakh SSR, 1981 y., The Red Book of the RSFSR, 1988 y., The Red Book of Kazakhstan, 2014 y.). Descirption of this species is extremely limited, population structure of the species, anatomical and morphological features and genetic diversity were unstudied. Herbarium specimens of the species were collected in the Aktobe region, three kilometers from the cretaceous slopes of Akshatau. Rare specimens were found on Cretaceous deposits, the rhizome of the plant is almost horizontal, branched, with numerous subordinate roots. Above the rhizome leaves many furrows, cylindrical chalky-horny stems, averahe height is 27,06±9,9 cm.,roots are hard, arboreal, stems are unbranched, leaves twice pinnat-dissected, leaflets are mainly located on the lower part of the stem,color of leaves is dense-white, peduncle long with single baskets, in one plant 4-5 medium-sized baskets.In the baskets, the marginal flowers are reed with yellow corolla,in the middle, tubular flowers areandrogyne, with a crown. Seedlings are light, a short crest in the form of a crenellated crown, the data us obtained fully corresponded to the description of the species.

DNA analysis on phylogeny of *Anthemis trotzkiana* was conducted based on ITS (internal transcribed spacers) marker. DNA sequencing was conducted using DNA analyzer 3130 from the Applied Biosystems. Alignment of Antemis sequences was performed using nucleotide sequences available at the NCBI and MEGA 6 package. The phylogenetic tree constructed based on Neighbor Joining method. The results suggested that *A.trotzkiana* along with *A. marschalliana, A. futiculosa,* and *A. calcarea* form a single cluster within Tanacetum clade, while other Athemis species formed a separate Anthemis clade. Obtained results provide an important insights for evolutionary processes within Anthemis genus.

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