## Rare species of Anthemideae Cass. (Asteraceae) of the Caucasus

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ABSTRACT: Eleven rare species of Asteraceae trib. Anthemideae Cass. have been found to occur in the Caucasus, some of them threatened or almost extinct. They belong to Otanthus, Anacyclus, Artemisia and Tanacetum, and are given short distributional notes.

KEYWORDS: Asteraceae trib. Anthemideae, Caucasus, rare species.

On the basis of study of ample herbarium material (LE, ERE, ERCB, TBI, TGM, BAK, MHA, MW, B, E), personal collections and observations during many years, the species composition of the tribe Anthemideae in the Caucasus has been specified. This tribus is represented by 9 genera in the Caucasian flora: Anthemis L., Achillea L., Otanthus Hoffmgg. et Link, Anacyclus L., Matricaria L., Leucanthemum Mill., Tripleurospermum Sch. Bip., Tanacetum L. and Artemisia L. Each of the genera Leucanthemum, Anacyclus and Otanthus has only one representative in the Caucasus. The remaining genera have 3-29 species (KHANDZHYAN 1986, 1988, 1989, 1990a, 1990b, GABRIELYAN and KHANDZHYAN 1986).

During taxonomic investigation, 11 rare species have been revealed, among which some are getting extinct, particularly *Otanthus maritimus* (L.) Hoffmgg. et Link and *Anacyclus ciliatus* Trautv. They occur in specific habitats in the Caucasus. *Otanthus maritimus* has a wide distribution in the Mediterranean region, while in the Caucasus it only

grows on seaside sands of Abkhazia (SOSNOVSKY 1952). Anacyclus ciliatus is an endemic of East Transcaucasia where it grows on the dry loamy slopes along the middle and upper stream of the Kura river (KHANDZHYAN 1986).

In the genus Artemisia there are two rare species: A. araxina Takht. and A. daghestanica Krasch. The endemic A. araxina occurs on dry stony slopes of the Darelighis floristic region of Armenia and the Nakhichevan Autonomous Republic, while A. daghestanica is endemic to Daghestan. The latter species grows on the southern mountain steppe slopes at the altitude of 1000 - 1900 m.

Genus Tanacetum involves the greatest number of rare species, viz. T. akinfievii (Alex.) Tzvel., T. kotschyi (Boiss.) Grierson, T. marionii (Albov) Khandzhyan, T. peucedanifolium (Sosn. ex Mand.) Khandzhyan, T. tenuissimum Trautv., T. uniflorum (Fisch. et C. A. Mey.) Sch. Bip., T. zangezuricum Khandzhyan. T. akinfievii, which is included in the "Red Data Book of USSR" (BORODIN 1985), is an endemic of Daghestan where it grows on limestone rocks at 1000-2000 m. T. kotschyi and T. zangezuricum are highly decorative alpine species. T. kotschyi with single large white capitulum and palmatisect leaves occurs in the highlands of Eastern Turkey, Iran, South and East Transcaucasia and further to the Shakhdag encountered Caucasus (Daghestan) where is it mountain. T. zangezuricum is endemic to Armenia and grows on rocky Its presence in Daghestan slopes of the Zangezur mountain ridge. Daghestan with links of floristic ancient underlines grows endemic to Abkhazia, T. marionii is Transcaucasia. limestone rocks and stony slopes at the heigth of 1500-2500 Т. peucedanifolium grows in the basin of the upper Kuban river and at the sources of the Inguri river. It occurs on the pebbly river sediments and forest glades of the middle mountain belt. T. tenuissimum occurs on dry stony slopes of the lower mountain belt. The species is known from some sites in Nakhichevan. T. uniflorum with its large yellow capitulum occurs on stony and rubbly slopes of the lower mountain belt of Darelighis floristic region of Armenia as well as in adjacent regions of the Nakhichevan Autonomous Republic.

Thus 11 rare species of Anthemideae tribus grow in Caucasus. They have strictly defined high-altitude localites specific habitats. Many of them are peculiar endemics. Some of them clearly wittness the ancient floristic links of the Caucasus with the Mediterranean region as well as those between Daghestan and South Transcaucasia.

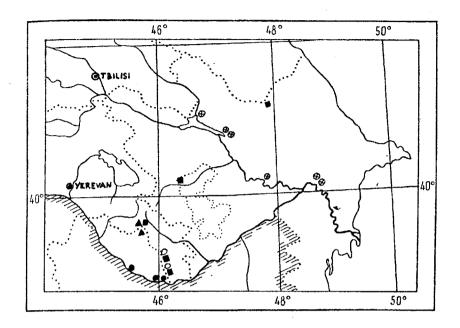


Fig 1. Distribution in Caucasus of Anacyclus ciliatus ( $\Rightarrow$ ), Artemisia araxina ( $\triangle$ ), Tanacetum zangezuricum ( $^{\sim}$ ), T. kotschyi ( $\blacksquare$ ) and T. tenuissimum ( $\bullet$ ).

## Summary

On the basis of study of ample herbarium material (LE, ERE, ERCB, TBI, TGM, BAK, MHA, MW, B, E), personal collections and observations for many years the species composition of the tribe Anthemideae in the Caucasus has been specified. During taxonomic investigation 11 rare species have been revealed some of them being threatened or almost extinct. The following species were studied: Otanthus maritimus (L.) Hoffmgg. et Link, Anacyclus ciliatus Trautv., Artemisia araxina Takht., A. daghestanica Krasch., Tanacetum akinfievii

(Boiss.) Grierson, T. marionii (Albov) (Alex.) Tzvel., T. kotschyi ex Mand.) Khandzhyan, Khandzhyan, T. peucedanifolium (Sosn. tenuissimum Trautv., T. uniflorum (Fisch. et C. A. Mey.) Sch. Bip. and T. zangezuricum Khandzhyan.

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