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COMMUNICATIONS

SYNTAXONOMY OF SOME CALCAREOUS COMMUNITIES IN THE LESSER BEND OF THE DON RIVER (VOLGOGRAD REGION)

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Cretaceous landscapes in the area of the Lesser Bend of the Don River are the largest formations of this kind in the Volgograd Region. The objective of the study was to describe the vegetation communities growing on the chalk outcrops of the region from the viewpoint of floristic classification. Numerical analysis of 68 relevés in the Ilovlinskiy and Kalachevskiy districts was carried out. To identify the community types, we processed the relevés with the TWINSPAN algorithm in the JUICE 7.0. software program. 33 out of 68 relevés united into one cluster, representing an original type of the communities characterized by high constancy of calciphytic species. These phytocenoses were described as a new association Jurineo cretacei–Artemisietum salsoloidis ass. nov. The diagnostic species of this association: *Centaurea carbonata*, *Crambe tataria*, *Gypsophila litwinowii*, *Helichrysum tanaiticum*, *Jurinea cretacea*, *Linum ucranicum*, *Onosma tanaitica*, *Scabiosa isetensis*. The association represents plant communities growing on the chalk outcrops of the Lesser Bend of the Don River. They occur in the basin of the Golubaya River (Kalachevskiy District) and in the northern slope of the Don valley east and west of the settlement of Khmelevskoy (Ilovlinskiy District). Total projective coverage of the phytocenoses is within 15–30%, on the average 20 plant species occur in the area of 100 square meters. Most often, the dominant species are *Thymus cretaceus* and *Artemisia salsoloides*. The association is characterized by a high degree of floristic similarity: the mean Czekanowski–Dice–Sørensen index is 0.63. These communities were compared to earlier identified associations of calciphytic vegetation of the **Helianthemo-Thymetea** class. Cluster analysis was based on Ward's method, using the Czekanowski–Dice–Sørensen index. Based on the cluster analysis, the association was referred to the order **Thymo cretacei–Hyssopetalia cretacei** and the union **Euphorbio cretophilae–Thymion cretacei**. The communities of the described association are of high environmental value as supporting many rare species in need of protection, including endemics and subendemics of the south-east of European Russia.

Keywords: cretaceous landscapes, calciphytic vegetation, syntaxonomy, **Helianthemo-Thymetea**, Volgograd Region, Don River

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