Rastitelnye Resursy. 53(3): 380–393, 2017 **MORPHOGENESIS OF *SCUTELLARIA GRANDIFLORA* (LAMIACEAE) AND ONTOGENETIC STRUCTURE OF ITS COENOPOPULATIONS**

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SUMMARY

Individual morphogenesis and ontogenetic structure of *Scutellaria grandiflora* Sims coenopopulations were studied in West Tuva in the ravines of the Tylan-Kara Ridge and the Altai Mountains in the mouth of the Chuya River. Life forms of adult individuals in mature ontogenetic state were described. When characterizing biomorphs and studying coenopopulation structure, I.G. Serebryakov's ecological- morphological and T. A. Rabotnov's and A. A. Uranov's populational-ontogenetic approaches were used.

Morphological polyvariation manifested in succession of biomorphs was revealed: in petrophyte bunchgrass steppes of West Tuva individuals developed as dwarf subshrubs, in the north-west part of the areal in the Altai Mountains not particulating taprooted herbaceous biomorph was formed on erosion slopes of light catastrophic deposits as a result of strongly pronounced contractile root activity and covering of shoot basal parts with substrate. The structure of adult individuals of the dwarf subshrub life form is represented by a sympodial system of compound lignified branched skeletal axes whose shoots of formation are dicyclic. The shoot system of individuals of herbaceous life form is made up of dicyclic anisotropic elongated shoots.

Individuals of both biomorphs in ontogenesis undergo the same phases: primary shoot (*p–j*)→ primary branched shoot (*im*)→primary bush (*v–ss*). Senile individuals are absent, which represents a special biological feature of the species. Individuals in subsenile state die off rapidly. Duration of life of the individuals of dwarf subshrub and herbaceous life forms hardly differ.

Study of the ontogenetic structure of *S. grandiflora* in West Tuva and the Altai Mountains showed that coenopopulations were normal and incomplete self-reproduction in coenopopulations is only by seeds. Ecological density in the populations strongly varies: from 2.5 to 19.7 ind./м^2 on the average and depends on the degree of substrate mobility on steep mountain slopes. *S. grandiflora* individuals are mainly concentrated near big stones or on the substrate fixed by different plant species.

Two types of ontogenetic spectra are formed in different localities: left-size and centered. Polyconic spectra reflect a wavy character of coenopopulation development and breaks infertilization. According to «delta–omega» classification coenopopulations are young, mature and intermediate. Diversity of spectra types in coenopopulations is linked with the pattern of regeneration by seed, substrate structure and degree of its mobility.

Key words: morphogenesis, life form, coenopopulation, ontogenetic spectra, *Scutellaria grandiflora*, Lamiaceae.