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STRUCTURE AND PRODUCTIVITY OF *VACCINIUM VITIS-IDAEA* (ERICACEAE) POPULATIONS IN THE LIGHT-CONIFEROUS FORESTS OF THE IKAT RANGE (NORTHERN CISBAIKALIA)

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SUMMARY

Dwarf clonal shrub *Vaccinium vitis-idaea* L. is a widespread and dominant species of the boreal forests. It has an important ecological role as food source for human, many animal and birds species. Berries and leaves are used in medicine as anti-inflammatory, antibacterial, choleretic, and diuretic agent. The aim of this study was to determine ecological features, ontogenetic structure and productivity of *V. vitis-idaea* populations in the light-coniferous forests of the Ikat range. The demographic structure of populations was studied by traditional methods. Some demographic indicators such as indices of recovery, senescent, substitution were applied. Population status was estimated according to «delta–omega» classification proposed by L. Zhivotovsky. Data analysis was carried out using standard indicators in MS Excel.

V. vitis-idaea is a dominant component of ground layer vegetation of *Laricetum ledoso-vacciniosum*, *Laricetum vacciniosum*, *Pinetum vaccinioso-hylocomiosum*, *Pinetum vacciniosum* forest types of the Ikat range. All studied populations were normal and full-fledged. Ontogenetic spectrums of populations are left-sided with maximum to virginal plants (34–46 %). According to the age (Δ) and efficiency (ω) coefficients estimation most of the populations were young (Δ = 0.24–0.32; ω = 0.45–0.51) and one – transitional (Δ = 0.38; ω= 0.49). Indices of recovery (0.6–0.8) and substitution (1.0–2.2) were high, while senescence index (0.1–0.2) was low. The quantity of the pre-generative and young generative age groups depends on the soil moisture (r = 0.57–0.82); mature generative and post-generative age groups depend on soil salinity (r = 0.54–0.62).

The density of *V. vitis-idaea* populations of the Ikat range varied from 280 individuals per 1 m^2 in *Pinetum vacciniosum* to 778 individuals per 1 m^2 in *Laricetum ledoso-vacciniosum* forests. The most productive populations formed in the Chilir river basin (273–289 g per 1 m^2). The ecological conditions of the studied phytocoenoses affect the morphometric parameters of *V. vitis-idaea* plants. The significant effect on the height of plants, the width and area of leaves have such parameters as soil moisture, soil salinity, soil acidity and illumination. The length of leaves depends more on soil salinity and illumination. The change in humidity, salt regime, soil acidity and illumination (by one point of the D. Tsyganov

ecological scale) can lead to a change in the coenopopulation density by 1.2–2.3 times, plant height 1.4–1.8 times, leaf area 1.6–1.9 times.

Key words: *Vaccinium vitis-idaea*, population structure, morphometric parameters, aboveground phytomass, Ikat range.