

REPRODUCTIVE BIOLOGY OF *COLURIA GEOIDES* (ROSACEAE)

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The genus *Coluria* consists of 5 species that occur in Southern Siberia, China, and Mongolia. *Coluria geoides* (Pall.) Ledeb. is an herbaceous short-rhizome polycarpic plant, a hemiendemic of Southern Siberia and Northern Mongolia. This species is used as a medicinal and ornamental plant. Furthermore, it is included in regional Red Data Books. We studied the structure of seeds and fruits, seed formation and seed set in both natural conditions (Altai Republic, Altai Krai) and in the botanical garden (Novosibirsk). The techniques of optical microscopy, the reproductive biology and anthecological methods were used. All the obtained data were processed using nonparametric analysis methods. It has shown that *C. geoides* forms 1-, 2- or 3-flowered synflorescences, which represent a variant of a dichasium. Our calculations demonstrated that the species belongs to xenogamous species according to the pollen-ovule ratio (from 2356 to 3891). The flowers of *C. geoides* are protogynous that reduces a possibility of autogamy. It is shown that the sizes of seeds, fruits and their structural parts have a low or medium variability. On the contrary, the traits of seed set (the number of ovules per flower, the number of seeds per fruit, and their ratio) demonstrate a high and very high level of variability. It was revealed that the number of carpels per flower in the plants with 3-flowered inflorescences is significantly bigger than that in the flowers of the plants with 1- and 2-flowered synflorescences. Furthermore, the number of seeds per fruit and the ratio of the number of seeds per fruit and the number of ovules per flower in the plants with 3-flowered inflorescences is higher in terminal fruits than in the fruits located on axillary shoots.

Keywords: *Coluria geoides*, seed reproduction, biology of pollination

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