DOI 10.21685/2500-0578-2023-4-5

A BRIEF STUDY ON THE GEOGRAPHIC DISTRIBUTION OF *MICROPSECTRA RADIALIS* GOETGHEBUER, 1931 (DIPTERA, CHIRONOMIDAE)

R.P. Gorbunov

"Belogorye" State Reserve, Borisovka village, Belgorod Region, Russia
xobglor@gmail.com

Abstract. *Micropsectr a radialis* is an univoltine cold-water species of chironomids, typical for high-mountain lakes in Western Europe. Studies show its presence in lakes in Asia region and in small rivers with groundwater discharge in the middle zone of European Russia. There was a record on Baffin Island in the Nearctic region. Thus, this species has a discontinuous range and may be distributed more widely. The purpose of the study was to determine climatic factors that limit the distribution of this species and the expected areas of its inhabitance. In order to research *M. radialis* distribution we collected literature data on its findings and made range model, based on 20 bioclimatic parameters and 119 locations using the Maxent program. There are two key bioclimatic parameters regulate the model: the average temperature of the coldest quarter and the average annual monthly temperature range. The first parameter directly affects the model, while the second one has very low direct contribution. Nevertheless, excluding the second parameter significantly reduces the accuracy of the model. The first parameter probably reflects the bioclimatic conditions of Western Europe with most of the findings, while the second parameter allows including a few finds from Asia. According to the model, supposed habitats of the species in the Nearctic are Newfoundland, the Great Lakes, the mountains of British Columbia, and southern Alaska.

Keywords: *Micropsectra radialis,* Chironomidae, distribution area, range, distribution modelling, Maxent

For citation: Gorbunov R.P. A brief study on the geographic distribution of *Micropsectra radialis* Goetghebuer, 1931 (Diptera, Chironomidae). Russian Journal of Ecosystem Ecology. 2023;8(4). (In Russ.). Available from: https://doi.org/ 10.21685/2500-0578-2023-4-5