# FRESHWATER PEARL MUSSEL IN KOSTOMUKSHSKY STRICT NATURE RESERVE AND ADJACENT AREAS

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The freshwater pearl mussel *Margaritifera margaritifera* has been registered from several places in the Kamennaya River within the Kostomukshsky reserve and in the Liva River in Kostomukshsky District. The population is in fairly good condition.

*Key words:* Freshwater pearl mussel, Kostomuksha, northwest Russia.

## INTRODUCTION

There are several species registered from the territory of Kostomukshsky strict nature reserve that are listed in Red Data Books of various levels: there grow 15 species of plants and 3 species of fungi, and 39 species of vertebrates and 10 species of invertebrates reside there or were noted on migration. Among these, the European freshwater pearl mussel (*Margaritifera margaritifera*) has the highest protection status, being listed in the IUCN Red Data Book as an endangered species.

In 1995, the pearl mussel was noticed for the first time in the River Kamennaya, which originates from the lake of the same name. In the next year 1996 two new inhabited sites were found (Kashevarov and Nikitin, 1998; Nikitin and Kashevarov, 1998). Both sites are situated downstream from rapids and have sandy bottom. The depth is 1–2 m. The distance between them is around 5 km. Mussel population density in one of the sites is 1–2 specimens per sq. m, and in the other site 0.1–0.2 specimens only.

## MATERIALS AND METHODS

In July 2009, a repeated inspection of one of the inhabitancies on the Kamennaya River together with Finnish specialists P. Oulasvirta and J. Heikkilä was arranged (Fig. 1). Diving equipment, including scuba and waterscope, was used for the inspection.

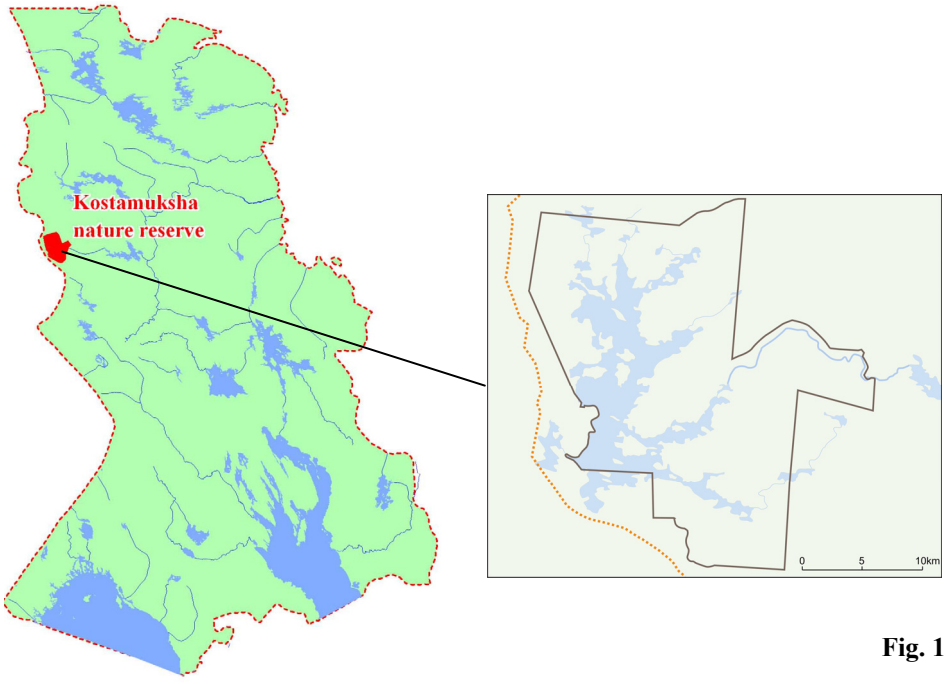


**Fig. 1.** Kostomuksha nature reverse

## RESULTS

In 2009, dwelling of the species was confirmed in a pool downstream of Saarikoski, where more than 100 specimens of the mollusc of various sizes were found. The survey results are reported in more detail in the paper by Oulasvirta in this volume. Let us just note that the water level in the Kamennaya River during the survey was unusually high for that season (Fig. 2).

**Fig. 2**

One should add that in 2000, shell valves of the pearl mussel (in all appearance, recently eaten by an animal) were found on the shore of a small lake connected to the River Kamennaya by a 1 km long stream. This point is 2 and 5 km away from the sites found earlier.

Also, during the summer of 2009 an earlier suggestion was confirmed about the possibility of the pearl mussel dwelling in another watercourse in Kostomukshsky District: in the system of the Liva River, which empties into Lake Upper Kuito. Several specimens were found in a shallow place in the upper reaches of the river (oral communication and a photo by the Kostomukshsky reserve guard A. Astakhov). Previously, a numerous population of another bivalve (*Anodonta anatina*) was registered from lower reaches of the Liva River (R. Tollojoki).

## CONCLUSIONS

Thus, dwelling of the freshwater pearl mussel in reservoirs of Kostomuksha has been confirmed, but is not yet reflected in the Red Data Book of Republic of Karelia (Ivanter and Kuznetsov, 2007). One may assume the pearl mussel population in Kostomukshsky reserve is in good condition, and that the species inhabits suitable places throughout the Kamennaya River downstream of Saarikoski rapid and in some of its tributaries. Thus, studies of the freshwater pearl mussel in reservoirs of the Kostomuksha area should be continued, the newly found places of its habitation should be carefully examined, and measures for their protection should be taken.

## References

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