

NEW DATA ON ICHTHYOFAUNA OF SERBIA. V. Simić and V. Šorić. Faculty of Science, University of Kragujevac, 34000 Kragujevac, Serbia

Key words: Ichthyofauna, distribution, Serbia

UDC 597(497.11):574:591.3

It is known that the freshwater fishes of Serbia exist in three basins, namely those of the Black, Adriatic, and Aegean Seas. Both domestic and foreign investigators focused more attention on fishes of the basins of the Black and Adriatic Seas, whereas the ichthyofauna of the Aegean system of Serbia was insufficiently explored.

The basin of the Aegean Sea in Serbia includes the Lepenac and Pčinja Rivers, tributaries of the Vardar (Axios), and the Dragovištica, a tributary of the Struma River, which arises from the Božićka River (whose tributary is the Lisina) and the Ljubučka River. The longest tributary of the Dragovištica is the Brankovačka River. The Dragovištica used to take a longer route, but part of the water from its basin was diverted into Lake Vlasina.

Data on the ichthyofauna of the Aegean basin on the territory of Macedonia are presented in the works of Karaman (1924, 1926, 1937, and 1955), Georgiev (1969), Dimovski and Grupče (1972), Naumovski (1995), and Šorić (1999).

Only recently Simonović (2001) stressed that *Barbatula angorae* Steinachner, 1897 (syn. *Neomacheilus angorae*) can be expected in the Dragovištica, Lisinska, Božićka,

and Brankovička Rivers (tributaries of the Struma on the territory of Serbia). The same author (1993) registered the presence of *Scardinius graceus* Stephanidis, 1937, regarding it to have been unintentionally introduced into Lake Vlasina from the Aegean basin. In our opinion, there is a greater possibility that it entered Lake Vlasina through the above-mentioned connection, of the Dragovištica River with the lake in question.

In the course of thorough hydrobiological research on aquatic ecosystems on the territory of Serbia within framework of a project entitled Ex Situ Protection of the Biodiversity of Aquatic Ecosystems of Serbia, the ichthyofauna of the Aegean basin of Serbia was explored in greater detail. In August of 2004, six specimens of Macedonian *Vimba melanops* (Fig. 1) were caught in the Pčinja River. This species was previously known for the basin of the Marica River (Bulgaria) and that of the Vardar (Macedonia). According to data of the Fishbase website (www.Fishbase.org/), this fish can be found in Macedonia, Bulgaria, Greece, and the northwestern part of Turkey. The same source and the database of IUCN (www.redlist.org) indicate that this species is endangered and belongs to the category of vulnerable taxons (VU; Alce). In the light of its global status as an endangered species, the new sites in the waters of Serbia are of practical importance for the protection and preservation of this fish.

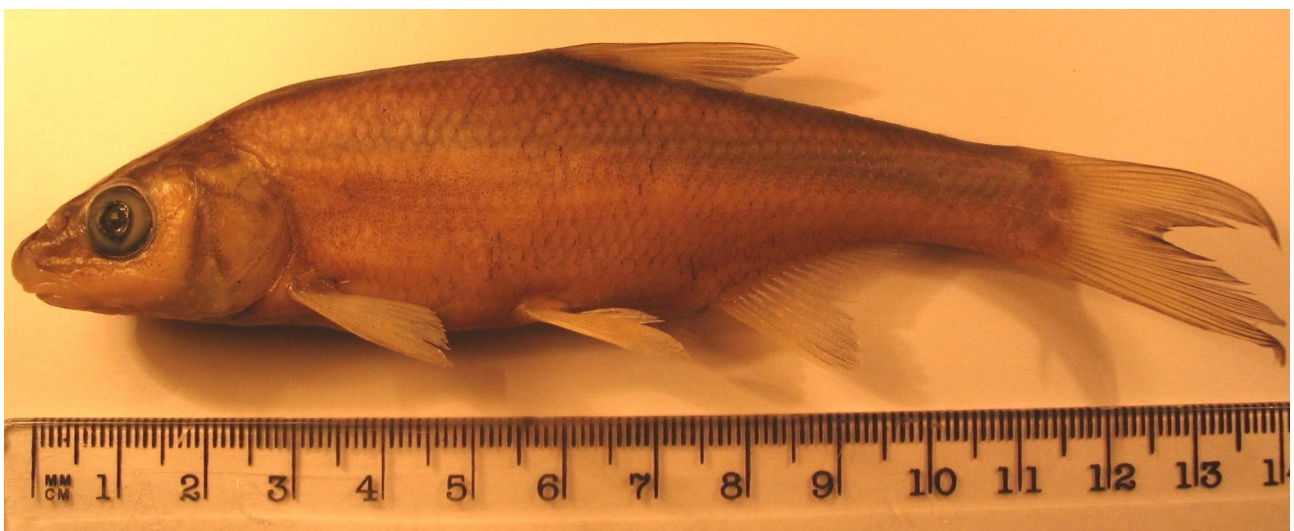


Fig. 1. *Vimba melanops* from the Pčinja River (tributary of the Vardar).



Fig. 2. *Salmo macedonicus* from the Dragovištica river (tributary of the Struma).

During the same explorations in July of 1993, the presence of mixed populations of salmon (*Salmo trutta* and *Salmo macedonicus*) (Fig. 2) was registered in the Božićka and Lisina Rivers. A year later, in September of 2004, an abundant unmixed population of the Macedonian salmon *Salmo macedonicus* was found in the Dragovištica River.

Karaman (1924) described this species as *Trutta fario macedonica* from the Kadina (Treska) River, a tributary of the Vardar. Drenski (1926) recorded its presence in a tributary of the Mesta. Mihajlova (1965) reported the presence of the given species in the Struma River (Bulgaria) and Naumovski (1995) recorded it in the Kadina River (Macedonia). Specimens from the Mesta River (Bulgaria) are available for comparison.

In any event, we believe that the salmon registered as *Salmo macedonicus* from these rivers requires more detailed and comprehensive taxonomic research.

Apart from the mentioned species, Šorić (1993) registered the presence of *Gobio uranoscopus* in the Cvetkova River (basin of the Vlasina). Later, the same author stated that this species also lives in the Djerekuša River (near the village of Merčez), where this river meets the Lukovska to form the Toplica (a tributary of the Southern Morava). It was established by this finding that the given species

prefers the stone-pebble upper course of the rivers in question. These sites for this species in the waters of Serbia must be added to the ones previously indicated by Vuković and Ivanović (1971) and Simonović (2001), who stated that it inhabits tributaries of the Danube, meaning the Morava (Velika Morava in Serbia) River.

All of the data presented above indicate that more comprehensive research needs to be devoted to the ichthyofauna of Serbia.

References: Drenski, P. (1926). *Trud. Soc. Bull. G. Sci. Nat.*, **12**, 121-150, Sofia. - Karaman, S. (1924). *Pisces Macedoniae*. Croatian Printing Company, Split. - Karaman, S. (1926). *Herald of the Serbian Scientific Society*, **2** (1-2): 261-262. - Karaman, S. (1937). *Bulletin de la societe scientifique de Skopje*, **18**: 132-133. - Karaman, S. (1955). *Acta Mus. Maced. sci. nat.*, **3**, 7/29, Skopje. - Mihajlova, L. (1965). *Bull. Inst. Zool. musee*, **19**, 55-71. - Naumovski, M. (1995). *Ribite vo Makedonia*. Kip "Žaki" d.o.o., 28, 72, Skopje. - Sidirovsk, G. (1998). *Ključ za određivanje na ribite (Osteichthyes) i zmiorkite (Cephalaspidomorpha) vo Republika Makedonia*. The Institute of Cattle Breeding, 38-44, Skopje. - Simonović, P. (2001). *The Fishes of Serbia*. NNK International, The Institute of Environment Protection, Faculty of Biology, 177-178, Belgrade. - Simonović, P., and Nikolić, V. (1995). *Arch. Biol. Sci. Belgrade*, **47**(1-2), 67-69. - Šorić, V. (1999). *Ichthyologia* 31(1), 83-87. - Vuković, T., and Ivanović, B. (1971). *Freshwater Fishes of Yugoslavia*, National Mus. BiH, Sarajevo. - <http://www.fishbase.org/summary/SpeciesSummary.php?od=9951> - <http://www.redlist.org/search/details.php?species=22978>