
SHORT
COMMUNICATIONS

On Distribution of the Whitefin Gudgeon (*Romanogobio albipectus*) in Some Rivers of the Volga and Don Basins

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According to published data (Naseka, 2001a, 2001b), the area of the whitefin gudgeon (*Romanogobio albipectus*) comprises basins of the Caspian Sea, the Black Sea, and the Sea of Azov. However the data on its occurrence in particular water bodies and/or regions were highly fragmentary. Only recently, due to purposeful ichthyological investigations, the whitefin gudgeon was found in some rivers of the Voronezh oblast (Gladkikh et al., 2000), in the Pra River in the Oka Nature Reserve (Ivancheva and Ivanchev, 2003), in Mordovia (Ruchin and Naseka, 2003; Ruchin, 2004), in Ulyanovskaya oblast (Mikheev and Aleev, 2004), Nizhegorodskaya oblast (Klevakin et al., 2004), and in some other regions. The present article presents the results of our field investigations in some rivers of the Volga and Don basins.

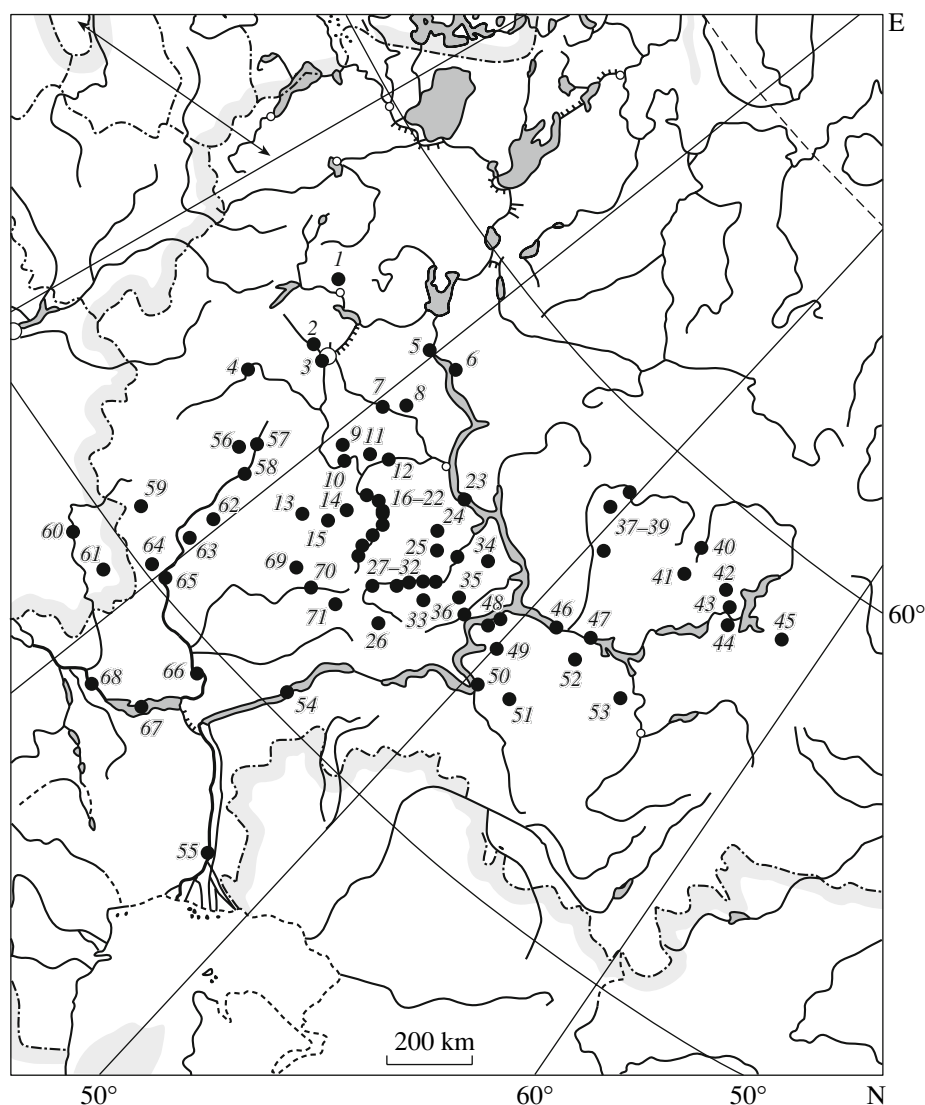
The material was collected in June–August 2001–2007 within limits of The Republic of Mordovia, Chuvashia, Nizhegorodskaya, Penzenskaya, Vladimirskaya, Ryazanskaya, Tambovskaya, Voronezhskaya, Saratovskaya, Ulyanovskaya, and Permskaya oblasts. Totally, 79 rivers were investigated. The principal part of fishing was made with a drag seine with 6-mm mesh size, and some fish were caught with fishing rods, lift nets, and small-meshed gill nets. The results were compared only for the same fishing gear. In mapping of the sites of discovery, a point in the figure corresponds to one collecting station at the river.

By our observations the whitefin gudgeon occurs in 21 rivers on the territory of all investigated regions (Figure). Usually, these are average-sized and small rivers. It may be assumed that the Moksha and Sura rivers are investigated well as in them the fish were caught all along the river from the upper to the lower reaches. In the period of investigations, the whitefin gudgeon occurred all along the Moksha River within limits of Mordovia (about 300 km) and in Ryazan oblast downstream of the Tsna River. It seems that this species is

rather common all along mainstream of this river. A similar situation takes place in the Sura where the whitefin gudgeon was caught beginning from Penzenskaya oblast to Chuvashia. This species was not previously recorded in the Penzenskaya oblast (Levin, 2001).

For the first time, the whitefin gudgeon was described from the Vyatka River and the upper reaches of the Kama (Lukash, 1933). However, for a long time, it was not noted in the basin of the Middle Kama in spite of special search. The first finding of this species in this region was made in 2001 (the Bolshaya Las'va River). Then, the whitefin gudgeon was found in the rivers Verkhnyaya Mulyanka, Obva, and Chusovaya (right-bank and left-bank tributaries to Kama). Except the Chusovaya, all other rivers are small in length and are lowland rivers. It should be noted that, in the Sviyaga and in the lower reaches of the Verkhnyaya Mulyanka, the whitefin gudgeon (*Romanogobio albipectus*) exists under conditions of strong water pollution as the river flows along the urbanized territory and receives effluents of several industrial enterprises. Presence of the whitefin gudgeon was recorded in polluted reaches of the Setun and Yauza rivers (Sokolov et al., 1994).

In the majority of rivers, the whitefin gudgeon coexists with the common gudgeon *Gobio gobio*. According to our data, it is absent only from the upper reaches of rivers (except the Pyana River), which are shallow streams, and in stagnant water bodies (usually populated by the common gudgeon). The habitats of both species of gudgeons are similar. Usually, these are stretches with a well-expressed current, and sandy and pebbly riffles. Sometimes they occur on strongly silted sand (the rivers Malaya Tsivil, Pyana), in stretched with snags (the Bolshoy Cheremshan). The width of rivers in such places is from 5 to 100 m. The assumption of greater rheophily in the whitefin gudgeon in compari-



Distribution of the whitefin gudgeon *Romanogobio albi pinnatus* in rivers of the Volga and Don basins by our (indicated with an asterisk) data and literature. The Volga Basin: (1) Tvertsa (Sorokin, 1964); (2) Moskva-Reka (Berg, 1912; Grigorash and Spanovskaya, 1962; (3) the Setun and Yauza mouth within limits of Moscow (Sokolov et al., 1994); (4) Oka below Kaluga (Korolev, 2006); (5) Volga below Yaroslavl (Berg, 1912); (6) Volga below Kostroma (Berg, 1912); (7*) Klyazma; (8*) Nerl; (9) Pra (Ivancheva and Ivanchev, 2003); (10) Oka (Ivanchev and Ivanchev, 2004); (11*) Unzha; (12*) Oka below Murom; (13*) Serp; (14*) and (15*) Tsna; (16–22*) Moksha; (23) Cheboksary Reservoir (Klevakin et al., 2004); (24*) Pyana; (25*) Alatyr; (26*) Kadada; (27–32*) Sura; (33*) Barysh; (34*) Malaya Tsvil; (35*) Seld; (36*) Sviyaga; (37–39) Vyatka, Shoshma, Kilmez (Lukash, 1933); (40) upper reaches of the Kama (Lukash, 1933); (41) Cheptsa (Zakharov, 1995); (42*) Obva; (43*) Bolshaya Lasva; (44*) Verkhnyaya Mulyanka; (45*) Chusovaya; (46) mouth and (47) lower reaches of the Kama (Berg, 1912); (48*) Staromainskii Bay and Undorskii reach of Kuybyshev Reservoir; (49*) Bolshoy Cheremshan; (50) Volga at Sok Mouth (Gavlena, 1971); (51) Sok, Kondurcha, Bolshoy Surush (Gavlena, 1971); (52) Sheshma (As'keev et al., 2006); (53) Syun (As'keev et al., 2006); (54) Volgograd Reservoir (Shashukovskii and Ermolin, 2005); (55) Lower Volga (Naseka, 2001); (56) Bystraya Sosna (Sarychev et al., 2007b); (57) Don near Donskoe settlement (Sarychev et al., 2007a); (58, 65, 66) Upper Don (from sources to Tsimlyansk Reservoir) (Fedorov, 1970); (59) Oskol (Berg, 1949); (60) Severskii Donets (Movchan and Smirnov, 1981); (61) Derkul, Aidar (Denshchik, 1994); (62) Voronezh (Fedorov, 1958); (63) Khvorostan and (64) Chernaya Kalitva (Gladkikh et al., 2000); (67) Tsimlyansk Reservoir (Naseka, 2001); (68) Lower Don (Minoranskii, 2002); (69*) Vorona; (70*) Khoper; (71) Serdoba (Berg, 1912).

son with the common gudgeon, as indicated by its more slender body form, is not confirmed by presence of this species in other habitats and its confinement to lower reaches of rivers and to reservoirs where the current rate is very low.

The abundance of the whitefin gudgeon in the investigated rivers greatly varies. In the Sura and Moksha rivers (averaged-sized rivers), the ratio of the common gudgeon and the whitefin gudgeon in catches in most habitats approached 1 : 1. In the Klyazma (an average-

sized river), by data of 2006–2007, this part of the whitefin gudgeon in this ratio was greater. A similar situation was observed in the Upper Don where this species made 37.4% and the common gudgeon 8.0% of all caught fish (Sarychev et al., 2007a). In small rivers (the Pyana, Malaya Tsivil, Serp, Unzha, Barysh, etc.), the ratio shifted towards the common gudgeon. In small and average-sized rivers of the Kama Basin at Perm and Ulyanovskaya oblast, the abundance of the whitefin gudgeon is low: in catches with a fry drag net in its habitats, it is represented as single specimens per dozens of hauls. Just for once, in the Bolshaya Lasva over 30 specimens were caught during a day of fishing. In other watercourses one-time collecting never exceeded ten specimens.

As in most of regional faunistic reviews published prior to the beginning of the 21st century and comprising the Volga and Don basins, the whitefin gudgeon was not indicated, and it may seem that it recently appeared in some rivers due to migrations. However, the potential capacity of gudgeons to migration is rather low (Movchan and Smirnov, 1981). Rather, the whitefin gudgeon was recorded only after careful determination of the collected material. This may be confirmed by collections that the first author made in 1996 in the Sura: in these collections this species was found only in 2001 as a result of a more careful examination of the material (Ruchin and Naseka, 2003).

Supplementation of our data with information from literature (Figure) shows the presence of the whitefin gudgeon in rivers of Nizhegorodskaya, Penzenskaya, Vladimirskaya, Ryzanskaya, Tambovskaya, Voronezhskaya, Lipetskaya, Saratovskaya, Ulyanovskaya, Permskaya, Kaluzhskaya, Kirovskaya, Tverskaya, Kostromskaya, Moskovskaya, Belgorodskaya, Samarskaya oblasts, Mordovia, Chuvashia, Tatarstan, and Udmurtia. With good reasons, it may be assumed that this species lives in many other rivers of the Volga and Don basins.

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