Current status of Delice River (Kizilirmak) for invasive fish species *Gambusia holbrooki* and *Pseudorasbora parva*

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Delice River is the one of our long stream is decharging to Kızılırmak River. It has been appeared with the small tributaries from the South-east of Yozgat province. the improtant tributaries of Delice River are Kanak, Karasu, Koyunluyusufözü, Killiközü, Budaközü and etc. In particular, with the merging of Kanak and Karasu Streams in the district of Sefaatli, it takes the name of Delice River.

Delice River shows flow characteristics between Çankırı, Yozgat, Kırşehir and Kırıkkale provinces. Its surface area is approximately 78.189 km², its annual water volume is 6 billion m³, and its average flow rate is 30,352 m^3/sec.

In this study, 22 stations were determined on the Delice River and its tributaries via Field observation. Seasonally, fish samples were taken from these stations between March 2019 and February 2020. For the fish catching back type electrofisher device and various meshes were used.

It is identified that 2 invasive species belonging to 2 families which are Poeciliidae and Cyprinidae. *Gambusia holbrooki* is used in mosquito control. It is considered like the rapidly spreading and invasive species in Turkey's inland waters. *G. holbrooki* individuals had been caught in only one station with a low population in next to Kızılırmak and Delice River joint point. *G. holbrooki* entered the Delice River lately and there is no information about routes of the entry. Although, There is only one record from Kızılırmak River, not any record from Delice River. It is very important to be the first record from Delice River. It is thought that it has not spread over a wide area in the Delice River yet, but it may have negative effects on other species due to the species' invasiveness and rapid spread.

Pseudorasbora parva individuals, had been caught in 5 stations which were far form each other with low population. It has been observed that it can be found in areas with different physicochemical parameters indicates its high environmental tolerance and adaptability. It has been understood that *P. parva* individuals generally live in the same habitats with Cyprinidae species. It has been observed that the individuals have not yet spread in the majority of the stations in the Delice River and their population density is very low compared to other species. In addition, *P. parva* records has been reported by researchers from Kızılırmak River and Gelingüllü Dam Lake.

It is thought that invasive species do not pose a significant threat in Delice River yet, but when compared with the other water systems, they will cause habitat shrinkage for other species if they spread in this water system. However, in fact it has been prooved that Delice River has good conditions to these invasive individuals for growing new

populations. In the near future, it can be tought that they can easily spread in Delice River and its tributaries.

Key Words: Invasive, Fish, Delice River