Evaluation of *Anatolicthtyes* (Pisces: Aphaniidae) populations on the basis of global climate change: The example of the Lakes Region (Türkiye)

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**Abstract**

Approximately half of the inland fish in Türkiye consists of endemic species. Considering the species diversity, the Lakes Region and Konya Closed Basin are the richest regions in terms of endemic fish with 55 species. Among these species, species belonging to the genus *Anatolicthyes* constitute an important place. Species belonging to the Aphaniidae, extant as well as fossil, are widel distributed along the late-period Tethys Sea coast lines. Among the mentioned genera, *Anatolichthys* is the genus that includes the 13 species; *Anatolichthys villwocki, A. transgrediens, A. iconii, A. anatoliae, A. fontinalis, A. sureyanus, A. splendens, A. saldae, A. marassantensis, A. maeandricus, A. irregularis, A. danfordii* and *A. meridionalis*. 11 of the species are distributed in the Lakes Region (A.splendens became EX.). In this respect, Anatolia is a center in the distribution of the genus Anatolichthys.

In the study, the population status of habitats and taxa were evaluated in terms of global climate change, based on our habitat observations, fish sampling and population studies of the last 20 years in the Lakes Region.

The Mediterranean Basin, including the Lakes Region, is shown as one of the regions that will be most affected by global climate change. As a result; In our study, it was determined that the majority of *Anatolicthyes* populations and habitats changed negatively. Drought and related habitat loss/destruction, pollution, the effect of predator/invasive species, water loss due to agricultural irrigation constitute the main threats to the species. While *A.fontinalis, A.sureyanus, A.saldae, A.maeandricus* and *A.transgrediens* species are the most affected species, it is predicted that the population and habitats of other species will be under great threat in the near future.

**Keywords:** Anatolia, aquatic ecosystem, drought, endemic, killifish