

First Record of *Gambusia Holbrooki* (Eastern Mosquitofish), an Invasive Fish in the Tuzla Lake, Romania

Ana Bianca PAVEL¹,
Gabriel IORDACHE¹, Cătălina GAVRILA¹, George TIGANOV²,

¹ PhD, Researcher, National Institute for Research and Development on Marine Geology and Geo-ecology- GeoEcoMar, 23-25 Dimitrie Onciu St, 024053 Bucharest, Romania

² Eng., PhD, Marine Resources Department, "National Institute for Marine Research and Development "Grigore Antipa", Constanta, Romania

Corresponding author: gtiganov@alpha.rmri.ro

Abstract. The current study reveals the first record of *Gambusia holbrooki* (eastern mosquitofish), an invasive fish in the Tuzla Lake, Romania. The investigated area is located 150 m from the shore of the Black Sea and is adjacent to Lake Techirghiol. The formation of the lake occurred due to human factors and was favored by natural factors. During the field campaigns carried out by NIRD GeoEcoMar in Lake Tuzla, in October 2022, a series of measurements and samples collection were carried out. The individuals of *Gambusia holbrooki* were found in the samples collected with the limnological net. The main objective of this contribution is the presentation of the first occurrence of the invasive species of eastern mosquitofish in Tuzla Lake. It is recognized as "a superior invader" due to the "invasiveness" characteristics of the species. It is important to monitor this species in Tuzla Lake to observe the impact on the rest of the fish populations, considering that this lake is used as a fish farm.

Keywords: invasive fish, littoral lake, freshwater, eastern mosquitofish

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1. Introduction

Gambusia holbrooki is a native species from North America [1]. Worldwide spreading of *Gambusia* has occurred since the first introduction into Hawaii in 1905 [2]. The mosquitofish have become the most widely distributed freshwater teleost in the world [2] mainly through deliberate human introductions [3] to control the mosquitoes in rice and natural waters [2, 4] and eradicate malaria (Figure 1).