Short communication

Range extension and translocation for Hemiculter leucisculus (Basilewsky, 1855) (Cyprinidae) in western and northwestern Iran

By H. R. Esmaeili and A. Gholamifard

Department of Biology, College of Sciences, Shiraz University, Shiraz, Iran

The sawbellies, genus Hemiculter Bleeker, 1859, belong to the hemicultrine group (middle-sized cyprinids). Eight species of this genus occur in Asia (Coad, 2010), representing one of the six valid genera of the subfamily Cultrinae that are known only from East Asia, including China, the far-eastern region of Russia, the northern Korean peninsula, and northern Vietnam (Dai and Yang, 2003; Nelson, 2006).

Basic information on the general biology, taxonomy and morphology of the species is readily available from the pertinent literature (e.g. Dai and Yang, 2003; Coad, 2010). Hemiculter leucisculus (Basilewsky, 1855), commonly called sawbelly, or /C212 tizeh kuli /C213 in Persian (= sharp or spiny fish, /C212 kuli /C213 being any small fish), is the only sawbelly that was accidentally introduced into Iran. The native range of this species is from maritime Russia south through China to Korea and Vietnam. The first report of this species in Iran (Holc ˇík and Razavi, 1992) was from the Anzali Mordab, where it is apparently not uncommon (Coad, 2010). This species has been recorded from the lower Safidrood (Safid River), Anzali Talab (Anzali wetland), and the middle Aras River (Abbasi et al., 1999; Kiabi et al., 1999; Abdoli, 2000) as well as from the international wetlands of Alma-Gol, Adjı-Gol and Ala-Gol (Patimar, 2008; Patimar et al., 2008) and probably the entire Caspian Sea basin (Coad, 2010). The report of this species from the Tedzhen River of Turkmenistan may eventually lead to H. leucisculus being found throughout the entire Tedzhen (= Hari) River basin of Iran (Coad, 2010).

We report here on a significant range extension and the presence in two new drainage basins (three localities). The present records are more than 370 km southwest of the nearest previous records from the Caspian Sea basin. The first and second captures in the rivers Zarrinehrood (= Zarrineh River, 36°12'03.3"N, 46°25'38.3"E; altitude 1436 m) and Adinan (a branch of the Zarrineh River, 36°12'13.7"N, 46°25'44.9"E; altitude 1446 m Divandarreh-Saqez Road, Kurdestan Province) were on 27 September 2007 and 27 June 2009 (Fig. 1). The Zarrinehrood drains into Lake Orumiyeh (= Urmia), an endorheic basin. A third location capture was on 26 June 2009 in Zarivar (Zaribar) Lake (35°32'N, 46°08'E, 1285 m above sea level, two km west of Marivan, Kurdestan province. This lake is part of the Tigris River basin system with spring water sources in the bottom of the lake. Morphometric (in mm) and meristic characters of 10 specimens (two Adinan River specimens were fixed in alcohol) collected from four locations

Fig. 1. Map showing the present (Zarivar Lake and Zarrineh River) and previous (Anzali wetland) introductory sites of Hemiculter leucisculus to Iranian aquatic habitats

U.S. Copyright Clearance Centre Code Statement: 0175–8659/2011/2706–1394$15.00/0
(previous and present records) are given in Table 1. Total lengths of specimens were in the range of 95–164 mm. Meristic counts of the preserved specimens agree well with those available in Coad (2010).

We also collected 29 goldfish *Carassius gibelio* specimens from the new locations. All specimens are deposited in the Collection of the Biology Department of Shiraz University (ZM-CBSU). *H. leucisculus* may have been introduced along with this exotic carp. Establishment of *H. leucisculus* in these new locations and the impacts of exotic fishes on the native fauna should be carefully studied. Ecological dangers from introductions and translocations interfering with native fauna through competition, genetic changes, and introduction of parasites and diseases, highlights the awareness and necessity for actions that must be taken before deliberately introducing any exotic fishes.

**Acknowledgement**

We wish to thank A. Teimori for his valuable help with the fish collections and Shiraz University for the financial support.

**References**


**Author’s address:** H. R. Esmaeili, Department of Biology, College of Sciences, Shiraz University, Shiraz, 71454, Iran. E-mails: esmaeili@susc.ac.ir, hresmaeili@yahoo.com