

FIRST RECORDS OF *ACIPENSER BAERII* AND *HUSO HUSO* (ACTINOPTERYGII: ACIPENSERIFORMES: ACIPENSERIDAE) FROM THE TIGRIS–EUPHRATES BASIN, IRAN

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Abstract. We report herewith the first record of the Siberian sturgeon, *Acipenser baerii* Brandt, 1869, and the beluga, *Huso huso* (Linnaeus, 1758), from the Tigris–Euphrates basin. It is also the first Iranian record of *Acipenser baerii* from natural water bodies. It is possible, that the presently reported specimens were accidentally released from aquaculture facilities located in the region.

Keywords: Siberian sturgeon, beluga, exotic species, Tang-e-Hamam Reservoir

INTRODUCTION

The family Acipenseridae is found in Europe, northern Asia, and North America with 4 genera and 26 species (Eschmeyer and Fong 2011). The family is native in the Caspian Sea basin, with two genera and six native species recorded for Iran. The introduction of non-native fish species has increased considerably within recent decades, reaching 26 confirmed species belonging to nine families for Iran (Esmaeili et al. 2017), and 17 species for the whole Tigris–Euphrates basin (Coad 1996). The presently reported study provides the first records of two exotic sturgeons from the Tigris–Euphrates basin, and the first observation of *Acipenser baerii* Brandt, 1869 from natural water bodies of Iran.

MATERIAL AND METHODS

During March 2018 six individuals of *Acipenser baerii* and four *Huso huso* (Linnaeus, 1758) specimens were caught by local fishermen, using traditional fishing gillnets, in the Tang-e-Hamam Reservoir (34°33′0.39″N, 045°46′20.02″E) and from the Ghuretu Stream where it enters the reservoir (34°32′42.11″N, 45°47′33.59″E) (both about 1.5–3.5 km

away from the cage-culture farm within the reservoir) in the Tigris–Euphrates basin, Kermanshah Province, western Iran, at the border of Iraq. These species were identified according to Kottelat and Freyhof (2007).

RESULTS

The specimens of *Acipenser baerii* and *Huso huso*, collected from the Tang-e-Hamam Reservoir and the Ghuretu Stream were 42–73 cm and 41–98 cm in total length, and 3.2–6.8 kg and 4.4–8.5 kg in total weight, respectively (Fig. 1). The genus *Acipenser* Linnaeus, 1758 can be easily distinguished from the genus *Huso* Linnaeus, 1758 by a small, transverse mouth (vs. large and crescentic in *Huso*), the gill membranes being joined to the isthmus and not to each other (joined to each other and free of the isthmus in *Huso*), a rounded or elongate snout, and cylindrical barbels. Also, *Acipenser baerii* is characterized by 20–49 fan-shaped gill rakers terminated by several tubercles and 32–62 lateral scutes. The mean scute number in the examined specimens were; *A. baerii* 13 D (dorsal), 35 L (lateral), 11 V (ventral), and *H. huso* 14 D, 42 L, 10 V.

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Fig. 1. (A) *Acipenser baerii* (61 cm total length); (B) *Huso huso* (45 cm total length) caught from the Tang-e-Hamam Reservoir, the Tigris–Euphrates basin, western Iran, in March 2018

DISCUSSION

The counted scute rows in both species (*A. baerii*: 10–20 D, 32–62 L, 7–16 V; *H. huso*: 9–17 D, 37–53 L, 7–14 V) were in the range of those reported by Coad (2010) and Kottelat and Freyhof (2007). However, there are some available reports on the variability of biometric characters of sturgeons in the aquaculture industry (Ruban and Sokolov 1986, Keszka et al. 2009), which can be useful as a key data in relation with the origin of the individuals.

Over the last ten years, some native and exotic fishes have been translocated or introduced into natural water bodies in Iran. Aquaculture, sport fishing, control of malaria, ornamental fish hobby, research activities, a demonstration in national fairs, and accidental introduction are the main reasons for these introductions (Mousavi-Sabet and Eagderi 2014, Radkhah et al. 2016, Esmaeili et al. 2017). Introductions always cause risks for the native biota and pose an ecological risk if the species can integrate itself successfully into the ecosystem (Gozlan and Newton 2009), resulting in possible detrimental interactions with native species (Gozlan et al. 2010). Risks associated with accidental introduction normally including (but not limited to) hybridization with native species, impacts on aquatic ecosystems, and introduction of new diseases (especially propagation of viruses) and parasites. Sturgeons have recently been used in some fish farms and cage-culture complexes in Iran. Here, we report the presence of *Acipenser baerii* and *Huso huso*, as inadvertently introduced fishes in the Tang-e-Hamam Reservoir, which seem to have been released due rupture of the cages nets in the dam lake. These species were originally translocated to the Tigris–Euphrates basin for aquaculture purpose. The Tigris–Euphrates basin

is the largest and the most important river system between the Nile and the Indus. Coad (1991) listed 66 species in 12 families from the Tigris–Euphrates basin. Coad (1996) listed 17 exotic and translocated fish species from the Tigris–Euphrates basin. Coad (1998) listed 54 species in 28 genera for the Iranian part of the Tigris basin. Esmaeili et al. (2010) listed the freshwater fishes of Iran and stated there were 69 species in 44 genera, representing 16 families, in the Iranian part of the Tigris basin. Also, Jouladeh-Roudbar et al. (2015) provided a checklist of the freshwater fishes of Iran and listed 91 species in 54 genera, 19 families, in the Iranian part of the Tigris basin. However, the presently reported study provides first records of two exotic sturgeons from the Tigris–Euphrates basin, and the first observation of *Acipenser baerii* from natural water bodies of Iran. Further studies are recommended to assess if these species have established permanent populations in the region or not.

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