

Placobdella costata an Ectoparasite for *Mauremys caspica* in North of Iran

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Short Communication

The *Mauremys caspica* (Gmelin, 1774) belongs to the Geoemydidae family, is a medium-sized freshwater turtle that is widespread throughout the Middle East. In Iran, the species is widely distributed in Golestan, Mazandaran, Guilan, Ardebil, East and West Azarbaijan, Kurdistan, Kermanshah, Lorestan, Ilam, Khuzestan and Fars provinces. Despite the species is still common in many parts of its range, landscape alteration, parasites, pollution and intensification of water management in Turkey, Syria, Iraq and Iran are increasingly threatening the survival of many populations.

The *Mauremys caspica* (Gmelin, 1774) belongs to the Geoemydidae family, is a medium-sized freshwater turtle that is widespread throughout the Middle East [1]. In Iran, the species is widely distributed in Golestan, Mazandaran, Guilan, Ardebil, East and West Azarbaijan, Kurdistan, Kermanshah, Lorestan, Ilam, Khuzestan and Fars provinces [2]. Despite the species is still common in many parts of its range, landscape alteration, parasites, pollution and intensification of water management in Turkey, Syria, Iraq and Iran are increasingly threatening the survival of many populations [1]. The order Hirudinida was traditionally divided into two suborders, the Rhynchobdellida, in which leeches have a protrusible proboscis, and the Arhynchobdellida, in which leeches lack a proboscis. The Rhynchobdellida included three families: Ozobranchidae, Glossiphoniidae, and Piscicolidae [3]. Leeches can cause bacterial and fungal infections and anemia in captive hosts, being also vectors for hemoparasites [4]. Whereas most leeches of the genus *Placobdella* (Hirudinida: Glossiphoniidae) have mainly been recorded on fish, amphibians, crocodiles and turtles, *Placobdella costata* primarily feeds on the blood of freshwater turtles [5,6], but may facultatively feed on the blood of birds and mammals [7]. According to [8], *P. costata* is the only Palaearctic leech that feeds on reptilian blood, and mainly on *E. orbicularis*; in some parts of its distribution area (Asia) it attacks *M. caspica*. Currently, *P. costata* is a widely distributed leech in the European Mediterranean area. It occurs from the Iberian Peninsula to the Balkan Peninsula and the Black Sea coast [6]. It is also ranges from Morocco to Iran and the northern Caucasus [9]. Whereas other species of *Placobdella* leeches have been observed feeding from the blood sinuses of the plastron and carapace bones of turtles [10], *P. costata* are usually attached to the neck and groin regions, where the skin is thin and unarmoured, or in the middle part of the plastron [6,11]. Life cycle of *P. costata* has not been studied completely, some information was reported by [12] and [13]. In temperate climates, it reproduces in the summer. In addition, individuals with developing embryos or young were found only outside the hosts [13].

We found five specimens of *P. costata* on three *M. caspica* in Golestan (Agghala city) and Mazandaran (Noor and Babolsar cities) provinces (Figure 1). Specimens were identified based on identification key for family Glossiphoniidae [14]. The biggest specimen has 26 mm of length and smallest 7 mm. Specimens were connected to the end part of limbs and under tail close to cloaca that have thinner skin. The body of *P. costata* is flat and long. The dorsal surface is convex and ventral surface is somewhat concave. The eyes are situated on segment III. The colour of the body is olive-green and brownish (Figure 2). The dorsal surface has

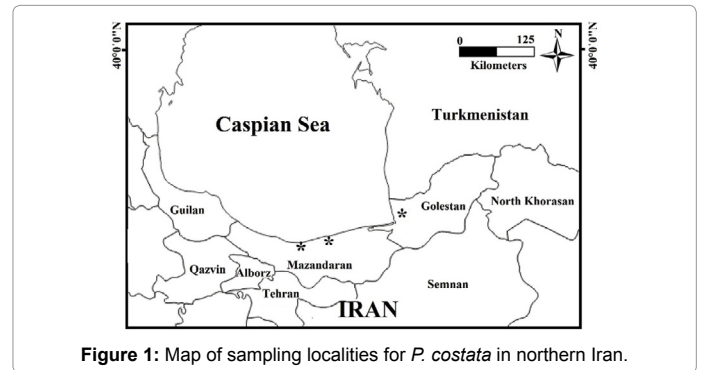


Figure 1: Map of sampling localities for *P. costata* in northern Iran.



Figure 2: Dorsal surface of *P. costata*, separated from *M. caspica*, Noor, Iran.

numerous papillae in six longitudinal rows of yellow spots. The mouth pore is located near the anterior rim of the oral sucker. Anyway, we found and report the presence of *P. costata* on *M. caspica* in this area.

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