



First record of *Cobitis linea* (Heckel, 1849) in Huweza marsh, Southern Iraq

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Abstract

Five specimens of cobitides individuals were collected from Huweza marsh, southern Iraq during July and August 2007. Morphometric and merestic characteristics were measured. Dorsal fin unbranched rays 2, branched rays 6 - 7, anal fin unbranched rays 2, branched rays 5 - 6, caudal fin branched rays 16. A long the mid-flank there was dark brown and obvious spots. The samples were classified as *Cobitis linea*, our record is the first to this species in Huweza marsh.

Key word: Iraq, Loaches, Huweza marsh. First record

1- Introduction:

This family of loaches, sometimes called sting-loaches, is recorded in Eurasia and Morocco and has about 26 genera with about 177 species (Berra, 2001; Nelson, 2006). The body form is fusiform to rounded or elongate; the mouth is subterminal and has 3-6 pairs of barbels; the mental lobes of the lower lip have two parts: the anterior which is usually short and sometimes divided into lobules, and the posterior which is flap-like and longer and

sometimes divided into two or more barbel-like extensions; there is one row of pharyngeal teeth; and there is an erectile spine in a groove below the eye (Bianco and Nalbant, 1980; Coad, 1998).

The origin of loaches may well lie at the end of the Eocene or in the early Oligocene in South China (Tang *et al.* 2008), spreading along a northern route through Europe and Siberia during the Oligocene-Miocene-Pliocene period and then later southwards into Southwest Asia (Sawada, 1982; Menon,

1992; Tang *et al.*2008). An early Oligocene route also existed between the Anatolian landmass and Central Asia (Tang *et al.*2008) and cobitids may have invaded the Euro-Mediterranean zoogeographic subregion at least five times independently based on cytochrome b data (Coad, 2009).

These fishes are found in Europe, North Africa and Asia, Coad (1998) and Froese and Pauly (2009) were showed that endemic to River Kor, Gulf Coast in Iran. Coad (2009) had showed that five species belonged to cobitidae family occurred in Iranian waters, and one species in Iraq (Coad, 2010), while Al-Daham (1977) had showed this family occurred in the north Iraq, and consist three genera. No one had study this species in inland freshwater habitats, therefore this preliminary study on this species.

2-Materials and Methods

Samples were collected from Huweza marsh, Southern Iraq at Umm al Naaj (fig.1) at N: 31° 38' 30", E: 47° 35' 21". Five specimens (three in July and two in August 2007) were collected by electrofishing gear. Morphometric and meristic characteris were measured, lengths of different parts were taken by using digital vernier, branched and unbranched rays of the fins were counted using dissecting microscope.

Two specimens were sent to Dr. B. W. Coad, National Museum of Natural Sciences, Ottawa, Ontario, to confirm identification of this species by the first researcher.

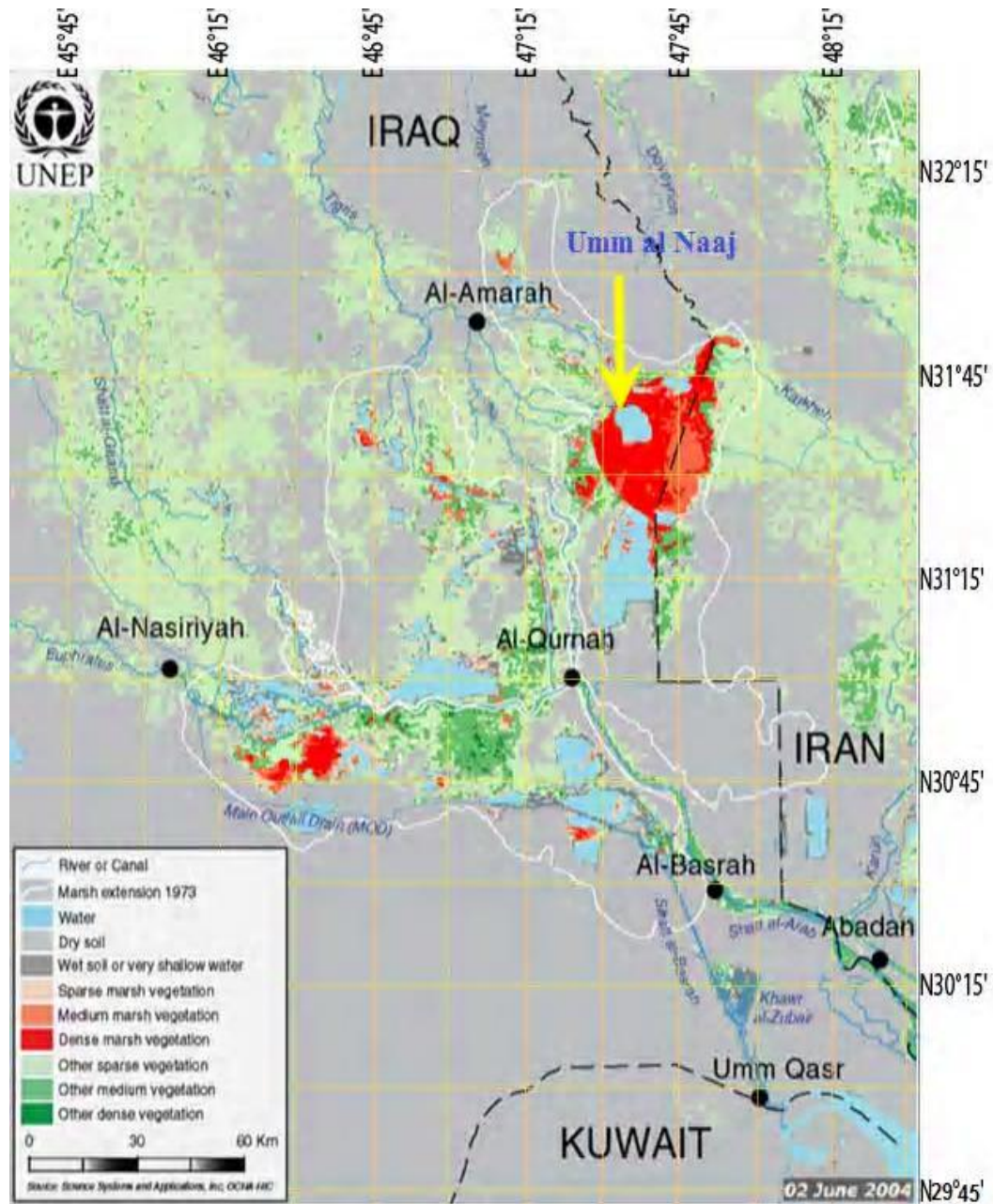


Figure (1). Location of study area in Huweza marsh (Umm al Naaj) Southern Iraq.



Plate (1). Specimen of *Cobitis linea* (Heckel, 1849) collected from Huweza marsh during July 2007 .

Table (1): Ratio of standard length to the calculate values as percentage.

Morphometric characters	Standard length (mm) / Morphometric measurement	
	Range	Mean \pm S.E.
Body depth	7.431 – 8.795	7.946 \pm 0.5422
Head length	4.323 – 4.618	4.476 \pm 0.1196
Basal dorsal fin length	9.651 – 13.008	11.148 \pm 1.3712
Basal anal fin length	9.578 – 13.294	10.526 \pm 1.6499
Length from pectoral fin base to anal fin base	1.762 - 1.939	1.829 \pm 0.0825
Length from dorsal fin base to anal fin base	3.116 – 4.003	3.381 \pm 0.3672
Length from pelvic fin base to anal fin base	3.818 – 4.416	\pm 0.2608 4.067
Length from pectoral fin base to pelvic fin base	3.294 – 3.693	\pm 0.18313.459

Table (2): Ratio of head length to various regions of head.

Morphometric characters	Head length (mm) / Various regions of head	
	Range	Mean \pm S.E.
Mouth width	6.334 – 8.292	7.737 \pm 0.8037
Mouth height	5.565 – 5.728	5.636 \pm 0.0748
Eye diameter	7.580 – 7.933	7.808 \pm 0.1928
Pre orbital length	2.501 – 2.849	2661 \pm 0.1239
Post orbital length	1.816 – 1.902	1.868 \pm 0.0346

3-Discussion

The study of the morphometric and merestic characteristics were revealed that this species identified as *Cobitis linea*, the merestic characteristics agree with (Coad, 2009) who showed that branched rays of dorsal, anal, pectoral and pelvic fins were 6, 5, 8 and 6 rays respectively. The genus of *Cobitis* is characterized by an elongate and compressed body, a usually bifid, erectile spine below the eye (sometimes hidden under the skin), three pairs of short barbells (Coad, 2009)

This species is distinguished by the dark brown lateral spots being reduced or absent, males have two Canestrini's scales at the upper bases of the unbranched and first branched pectoral fin rays, and the laterocaudal branch of the suborbital spine is reduced or absent (although the spine itself is detectable by touch in even the smallest fish (Coad, 2009).

From the data obtained the maximum standard length of *C. linea* was (46.09

mm, Berra (2001) had showed that max. SL male of this species was 65 mm.

Nelson (1994) was listed number of genera were 18 and number of species were 110 belong to Cobitidae family, Al-Daham (1977) illustrated that this family is distributed in the north of Iraq with 10 species of three genera (*Cobitis*, *Noemacheilus* and *Turcinomacheilus*). Two species belonged to first genus, *C. taenia* and *C. aurata*, while Coad (2010) list only one species (*C. taenia*) in Iraq. Therefore they did not mention to occurrence of *C. linea* in north of Iraq. Occurrences of this species in Huweza marsh is first recorded, and may be entered from the Iranian boulder freshwater, Coad (1998) showed this species was endemic in Iran.

Acknowledgment

This work done by help of Dr. Hussain Mohe, Baghdad university/ Science College for Girls, Mr.Ghasoan Alwaely

Moenv, Staff Fisheries Dept. Basrah University, Nature Iraq. Many thanks for all.

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تسجيل أول لتواجد أسماك اللخ الشوكي *Cobitis linea* (Heckel, 1849) في هور الحويزة ، جنوب العراق

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الخلاصة

جمعت خمسة نماذج من أسماك عائلة اللخ Cobitidae من هور الحويزة جنوب العراق وخلال تموز وأب 2007، اخذت عدد من القياسات المظهرية والعددية. تحتوي الزعنفة الظهرية على شعاعين غير مركب و6 - 7 أشعة مركبة والزعنفة المخرجية على شعاعين غير مركب و5 - 6 أشعة مركبة والزعنفة الذنبية 16 شعاع مركب، توجد على طول منتصف جانب الجسم بقع بنية سوداء واضحة. صنفت النماذج من النوع اللخ الشوكي. *Cobitis linea* والذي يسجل تواجده لأول مرة في هذا الهور.

مفتاح تعريفي: العراق، سمك اللخ، هور الحويزة، تسجيل جديد