



BRIEF COMMUNICATION

First records of the North American catfish *Ameiurus melas* in Portugal

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The North American catfish *Ameiurus melas* is recorded for the first time in Portugal. Its presence in the Tagus River Basin is probably due to natural spread of individuals from Spanish populations, while episodic translocation could explain its occurrence in the previously non-invaded Guadiana and Sado River basins.

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The freshwater fish fauna of the Iberian Peninsula is composed mainly of small to medium sized species endemic to the region. During the last decades, many of these autochthonous species have been showing a decline both in their ranges and abundances, while many exotic species continue to spread (Almaça, 1995a; Elvira & Almodóvar, 2001). There are records of 27 alien fish species with successfully reproducing populations that have been introduced into Iberian fresh waters (Almaça, 1995b; Elvira & Almodóvar, 2001; Caiola & de Sostoa, 2002). The presence of species of the North American catfish genus *Ameiurus* has been reported in Europe since the nineteenth century. Although the identity of the wild European populations has been doubtful, Wheeler (1978) concluded that the black bullhead *Ameiurus melas* (Rafinesque) is the most widespread of the introduced ameiriid species in Europe. According to Elvira (1984), *A. melas* is the species present in Spanish rivers, where the first confirmed record dates back to 1950. The first observations of *A. melas* in Portuguese inland waters is reported in the present paper.

TABLE I. Lengths and meristic traits of *A. melas* specimens studied from Tagus River ($n=31$) and from Guadiana River ($n=1$). L_T , total length (mm); L_S , standard length (mm); D, dorsal fin rays (hard rays/soft rays); P, pectoral fin rays (hard rays/soft rays); V, ventral fin rays; A, anal fin rays; C, caudal fin rays. Means \pm s.d., range in parentheses

	L_T	L_S	D	P	V	A	C
Tagus River	113.1 \pm 3.4 (107.6–123.0)	95.4 \pm 3.4 (88.9–104.2)	1/6 —	1/7 —	8 —	20 \pm 0.7 (19–21)	18 —
Guadiana River	289.0	246.0	1/5	1/7	8	19	18

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FIG. 1. *Ameiurus melas* specimen collected in the Guadiana River (MB/05-1809).

A total of 31 specimens were collected by angling with bait from a small reservoir at Ribeira de Santo Estevão (Tagus River Basin, 38°52' N; 08°43' W) in August 2000, after reports of their presence by fishermen. Another specimen was also collected by a fisherman with gillnets in February 2001 in the Guadiana River (near Mértola, 37°39' N; 07°41' W). Specimens were deposited in the Museu Bocage's collection, Lisbon, Portugal (MB/05-1808 and MB/05-1809).

Species identification follows characters given by Scott & Crossman (1973), namely number of anal fin rays, colour of fin membranes and nature of pectoral fin spine. Specimens studied have dark fin membranes and weakly barbed pectoral fin spines. Total and standard lengths (L_T and L_S) and meristic traits are listed in Table I. Meristics are strikingly similar to those of Spanish specimens (Elvira, 1984). The characters examined herein confirm the identification of these fish as *A. melas* (Fig. 1).

Ameiurus melas is a species with limnophilic habits which has been expanding the area of its distribution in Spain where it is locally abundant (Elvira, 1995, 1998). In the recent past there were several reports of catfish catches by Portuguese fishermen, although the identity of the species caught have not previously been established, nor was it recognized as an alien species to Portugal. The most probable explanation for the occurrence of *A. melas* in the Portuguese Tagus Basin is the natural spread of individuals from Spanish populations, since the species has been recorded close to the border with Portugal (Doadrio, 2001). Translocations as a source of new populations, however, cannot be excluded. Episodic translocations could explain the occurrence of *A. melas* in the Guadiana River, since it is the first time *A. melas* is reported for this basin. There are also reports of its presence in other Portuguese localities in the Tagus, Guadiana and Sado River basins (J. Bochechas, pers. comm.). It was not possible to examine specimens from the Sado River Basin, although reports suggest that this species is also *A. melas*, which could have reached this basin through translocation.

These data indicate that *A. melas* is currently widespread in the main southern Portuguese river basins, further expanding its range in Iberia to previously non-invaded rivers. The high fertility and parental care of the offspring, voracious and versatile feeding habits, and ability to withstand high water temperatures (Burgess, 1989) makes it a potential threat to autochthonous fish species, both by means of competition for resources, as well as by predation upon small fishes. The presence of this species in Portuguese rivers should now be considered in future management and conservation schemes. It is therefore necessary to undertake urgent surveys to ascertain the current distribution and the ecological impacts this presently wide ranging exotic species may have on the already threatened fish communities of the Iberian Peninsula.

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