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FIRST RECORDS OF THE NORTH AMERICAN CATFISH *ICTALURUS MELAS* (RAFINESQUE, 1820) (PISCES, ICTALURIDAE) IN SPANISH WATERS.

Benigno ELVIRA. *Unidad de Zoología Aplicada, Departamento de Ecología, C.R.I.D.A. 06, Instituto Nacional de Investigaciones Agrarias, Apdo. 8.111, Madrid (Spain).*

Abstract. — *Ictalurus melas* (Rafinesque, 1820) is reported for the first time in Spain, from the Ebro and Cinca Rivers (Ebro basin) and from Bañolas Lake (Ter basin). Previous Spanish records of *Ictalurus nebulosus* (LeSueur, 1819) are doubtful, since they were not presented with adequate descriptions to permit critical identification.

Resumen. — Se cita por primera vez en España *Ictalurus melas* (Rafinesque, 1820), especie aclimatada procedente de Norteamérica, en los ríos Ebro y Cinca (cuena del Ebro) y en el Lago de Bañolas (cuena del Ter). Las citas españolas de *Ictalurus nebulosus* (LeSueur, 1819) son consideradas dudosas, ya que no han sido acompañadas de una descripción detallada que permita identificar con certeza la especie a que pertenecen.

Résumé. — La présence d'*Ictalurus melas* (Rafinesque, 1820), espèce originaire d'Amérique du Nord, est signalée pour la première fois en Espagne, dans les rivières Cinca et Ebre (bassin de l'Ebre) et le lac de Bañolas (bassin du Ter). Les citations espagnoles antérieures d'*Ictalurus nebulosus* (LeSueur, 1819) sont considérées comme douteuses car elles n'ont jamais été accompagnées de descriptions détaillées qui permettent de vérifier la détermination correcte de l'espèce.

The first record of the family Ictaluridae (reported as Ameiuridae) in Spain is that of De Buen (1930), who records *Ameiurus nebulosus* as an introduced species but gives no information on acclimatization success. In fact, some years earlier (1910-1913) Mr. F.A. Darder, Director of the Barcelona Zoo, had tried to acclimatize several European and North American fish species in Bañolas Lake (Gerona), one of which was a catfish. However, this species is not listed in Lozano-Rey's (1935, 1952) papers on freshwater fishes of Spain. The I.F.I.E. (1952) reports one specimen of *A. nebulosus* from Bañolas Lake, collected on the 16 may 1950, and eight specimens from an aquarium in Barcelona. Several authors later reported this

TABLE 1. — Morphometric (in mm) and meristic data of specimens studied. No. 1: Palamós, May 1978; Zoology Department collection, Universidad Autónoma de Barcelona. Nos. 2 and 3: Port de la Selva; No. 2, November 1980; No. 3, 2/12/1977. Both from the collection of University College, Gerona.

<i>Specimens</i>	1	2	3
Total length	145	171	174
Standard length	121	142	143
Head length	27	32	30
Maximum depth	50	64	63
Least depth caudal peduncle	14	17	17
Ocular diameter (Longit.)	6	8	8
Preorbital length	15	18	16
Interorbital width	5	6	6
Pectoral fin length (right)	11	15	15
Pectoral fin length (left)	8	11	12
Dorsal fin rays	69	65	69
Anal fin rays	57	54	55
Pectoral fin rays (right)	7	7	6
Pectoral fin rays (left)	6	6	6
Lateral line scales (longitudinal series)	97	99	102

Table I. — Lengths and meristic features of *Ictalurus melas* specimens studied. 1. 16 December 1949 from aquarium, Barcelona. 2. 16 August 1950, from aquarium, Barcelona. 3. 16 May 1950, Bañola Lake, Bañolas (Gerona). 4. 7 August 1976, Cinca River, Fraga (Huesca). 5. 15 September 1977, Ebro River, Mequinenza Reservoir, Mequinenza (Zaragoza).

	1				2			3	4						5	
Total length (mm)	103	105	109	109	107	108	113	80	—	—	—	—	—	—	—	240
Standard length (mm)	88,4	88,4	89,0	90,6	88,3	90,2	92,2	67,7	104	115	135	190	192	205	207	
1st dorsal fin rays	1/6	1/6	1/5	1/6	1/6	1/6	1/6	1/6	1/7	1/6	1/5	1/6	1/7	1/6	1/6	
Pectoral fin rays	1/7	1/8	—	1/8	1/8	1/8	1/8	1/8	1/7	1/7	1/7	1/7	1/8	1/8	1/9	
Pelvic fin rays	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
Anal fin rays	19	21	20	20	21	21	21	21	19	20	19	20	19	21	20	
Caudal fin rays	18	19	19	18	18	18	20	18	18	19	18	19	18	18	18	

species in Catalonia: Llatjos (1952) in the Ter River, Nadal (1964) in the Ter, Oñar and tributary rivers (Gerona), San Miguel (1975) in several places in Barcelona and Gerona, and Demestre *et al.* (1977) as *Ictalurus nebulosus* in the Ebro Delta (Tarragona).

Table I shows the sizes and some meristic features of the specimens studied. I have also examined two specimens from the Seine River, Montereau (France), 23 June 1967, kindly provided by Prof. J. Daget of the Muséum national d'Histoire naturelle (Paris). For identification the characters given by Scott & Crossman (1979) were employed, notably: nature of the posterior edge of the pectoral fin spine, number of anal fin rays, and color of fin membranes. All specimens were identified as *Ictalurus melas*. They are characterized by the absence or extremely weakly barbs on the posterior surface of the pectoral fin spine, 19-21 anal rays (18 and 19 in the French specimens), and dark or black membranes between the fin rays.

Discussion. — At least two species of American catfish (family Ictaluridae) have been introduced and successfully acclimatized in Europe: the Black Bullhead *Ictalurus melas* and the Brown Bullhead *I. nebulosus*. An interesting survey on their occurrence in European waters was recently carried out by Wheeler (1978) who concludes that *I. melas* is the most wide-

spread species of North American catfish in Europe, while *I. nebulosus* has a smaller distribution than the one suggested by some authors (Maitland 1977). Until now every catfish caught in Spain was referred to *I. nebulosus*, but none of the published records included critical characters for its determination. Thus, the specimens listed by the I.F.I.E. (1952) certainly belong to *I. melas* (Table I) (only 3 of the 4 specimens regarded by the I.F.I.E. (1952) from an aquarium in Barcelona, 16 August 1950, are kept in the I.N.I.A. collections, and have been examined). The correct identity of fishes reported by earlier Spanish authors could not be reviewed. Owing to the absence of adequate descriptions and the general confusion which until recently prevailed in Europe about the identification of both species, the occurrence of *I. nebulosus* in Spanish waters is considered possible but cannot be confirmed.

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Abstract. — A new record of *Branchiostegus sawakinensis* Amirthalingam, 1969, extends the distribution of this species to the Gulf of Aqaba in the Northern Red Sea.

Résumé. — La description d'un exemplaire de *Branchiostegus sawakinensis* Amirthalingam, 1969, étend la distribution de l'espèce jusqu'au Nord de la Mer Rouge, dans le Golfe d'Aqaba.

It has recently become increasingly apparent that study of the deep water ichthyofauna of the Gulf of Aqaba, in view of its unique oceanographic and structural characteristics, will reveal previously unknown species (Ben Tuvia, 1982; Fricke & Kacher, 1983).

On May 13, 1982, several species of fishes were caught by handline by the staff of Coral World Underwater Observatory, Eilat, in deep water near Eilat harbor. Several of these species proved to be new records for the region (Diamant and Porter, 1983; Diamant, M.S.). Among them was a single specimen of *Branchiostegus sawakinensis* Amirthalingam, 1969, which was caught at a depth of 70 m.

Branchiostegus sawakinensis was originally described from Sawakin, Red Sea. The species is also known from South African waters and ranges to the Philippines (Dooley, 1978, Dolley & Rau, 1982). There have been no reports of the species from sites further north of Sudan in the Red Sea. It appears from the records of Amirthalingam (1969), Clark and Ben Tuvia (1973) and Dooley (1978) that the species inhabits relatively deep waters, below 45 m, and down to 50 fathoms.

The present specimen, TL 235, is deposited at the Zoological Museum of the Hebrew University of Jerusalem, HUJF 11160. Its measurements and meristic counts (Table I) fit those recorded by Amirthalingam (1969), Clark and Ben Tuvia (1973) and Dooley (1978).

NOTE ON THE OCCURRENCE OF FRECKLED TILEFISH *BRANCHIOSTEGUS SAWAKINENSIS* AMIRTHALINGAM, 1969 (BRANCHIOSTEGIDAE) IN THE NORTHERN RED SEA.

C. PORTER, *Israel Oceanographic & Limnological Research Ltd., Mariculture Laboratory P.O.B. 1212, Eilat, Israel.* A. DIAMANT, *Hebrew University of Jerusalem, H. Steinitz Marine Biology Laboratory, P.O.B. 469, Eilat 88103, Israel.*

Color (fresh) : reddish on dorsal side, flanks silverish becoming white ventrally. Basal portions of all dorsal fin membranes are black. Two parallel yellow bands pass along caudal fin. A dark blotch is present on the pectoral axil. A black ridge, beginning at the occiput between the eyes, extends to the origin of the dorsal fin. Rows of black spots decorate the flanks below the lateral line and posterior to the pectoral fin. Although fading slightly, the black markings persist in the alcohol preserved specimen.