

**SPARUS AXILARIS PEREZ 1820, A SENIOR SYNONYM OF THE AXILLARY SEA BREAM
PAGELLUS ACARNE (RISSO 1827) INVALIDATED BY 'REVERSAL OF PRECEDENCE'**

by

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RÉSUMÉ. - *Sparus axilaris* Perez 1820, un synonyme plus ancien du pageot blanc *Pagellus acarne* (Risso 1827), invalidé par inversion de préséance.

Au cours d'une recherche bibliographique ichthyologique nous avons découvert que *Sparus axilaris* Perez, 1820, une espèce nominale oubliée après sa description, représente un synonyme plus ancien du pageot blanc *Pagellus acarne* (Risso, 1827). Toutefois, les conditions existent pour maintenir l'usage prédominant de ce dernier, comme le signale l'article 23.9.1 du Code international de Nomenclature zoologique (1999) : *Pagellus acarne* doit être considéré *nomen protectum* tandis que *Sparus axilaris* devient *nomen oblitum*.

Key words. - Sparidae - *Pagellus acarne* - Taxonomy - *Nomen protectum* - *Nomen oblitum*.

Many species of fishes (as well as other categories of creatures) have been named and described more than once. This is especially true for widely distributed species, commercially important species, or those that change markedly through ontogeny or differ between male and female. There are some 55,760 nominal species of fishes, but there are only about 28,000 valid species (Eschmeyer, 2003). In the last decades several long-forgotten names have been rediscovered by many authors (Whitehead, 1964, 1985; Daget, 1968; Weber, 1992; Gill and Randall, 1998; Randall and Parenti, 1999; Gill and Hutchins, 2002; Parenti, 2002a, 2002b; Böhlke and Smith, 2002; Parenti and Pietsch, 2003; Campos-da-Paz, 2003). These names cause widely-used names to become junior synonyms, and, as a consequence, they introduce instability in zoological nomenclature. However, article 23.9.1 of the International Code of Zoological Nomenclature (1999) allows for the continuation of prevailing usage of a younger synonym by reversal of precedence in accordance with the purpose of the principle of priority. This implies that the older synonym, albeit invalid, is still available for use as valid name if further studies will show that, for example, the younger synonym is a species complex within which younger and senior are actually not conspecific. Here we show that the nominal species *Sparus axilaris* Perez, 1820 represents an older name for *Pagellus acarne* (Risso, 1827), a well known Mediterranean and Eastern Atlantic sea bream species. We propose that *S. axilaris* be invalidated by reversal of precedence, on the ground that decision to continue to use *P. acarne* is justified in the Code.

RESULTS AND DISCUSSION

The axillary seabream *Pagellus acarne* (Risso, 1827) is one of

the 27 species of Sparidae currently recorded from the Mediterranean, including two immigrants from the Red Sea [*Crenidens crenidens* (Forsskål, 1775), *Rhabdosargus haffara* (Forsskål, 1775)] and two from tropical Atlantic [*Diplodus bellottii* (Steindachner, 1882) and *Pagellus bellottii* Steindachner, 1882] (Whitehead *et al.*, 1986; Golani *et al.*, 2002). It is an important commercial fish distributed also in the Eastern Atlantic (Fisher *et al.*, 1987): common from Bay of Biscay to Senegal, the Azores, Madeira, the Canaries and the Cape Verde Island, it is rarely caught around the British Isles but has been recorded off Denmark. In the Mediterranean basin it is less common in Adriatic and Eastern Mediterranean and absent in Black Sea. It is a demersal species, found in inshore waters on various bottoms, mainly sand, muddy-sand, the juveniles preferring *Posidonia* beds, down to 500 m, but more common between 40 and 100 m. Benthic invertebrates and fish larvae represent its main source of food.

The axillary seabream can be diagnosed as follows: body fusiform; upper profile of head depressed above eyes; inter-orbital space flat; eye diameter shorter than snout length. Occipital scales extending forward to between the posterior margin and the middle of eye. D XII-XIII, 10-12; A III, 9-10; the last dorsal and anal ray stronger than the others. Gill rakers 13-16 lower, 9-12 upper. Lateral line scales 65-72 to caudal base. Body colour pinkish-grey; head darker, especially inter-orbital space; a dark-red spot at the upper pectoral axil overlapping the upper base; fins more or less light pinkish; sometimes paired fins with a darker margin; inside of mouth orange-red. It can reach 36 cm SL, usually 20-25 cm. *Pagellus acarne* is readily distinguished from its congeners by colour and, in particular, the presence of the axillary spot and absence of other stripes or spots.

The axillary seabream was recognized as distinct from other pagrids since Rondelet (1554: 151), who described it under the name *acarne*, taken from Plinius. Unfortunately, neither Artedi nor Linnaeus followed Rondelet in this decision, failing to mention this fish. As Mediterranean species it was included by Risso in his *Ichthyologie de Nice* (1810), but he misidentified the species as *Sparus berda* Forsskål 1775, an Indo-Pacific species. In the second edition of his natural history of Northern Mediterranean fishes, Risso (1827) realized his error and recognized the axillary seabream as distinct species, naming it *Pagrus acarne*. Cuvier (1830:193) first placed *Pagrus acarne* in the genus *Pagellus*, in which the species is currently classified (Reinboth 1961; Wheeler, 1969; Tortonese, 1973). The distinctive color pattern of the species contributed to reduce the number of redescrptions and misidentification. Thus, *Pagellus owenii* Günther, 1859 represents the sole junior synonym.

During a survey of early nineteenth century ichthyological lit-

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erature we discovered that the axillary seabream was actually described and illustrated five years before Risso by a Spanish medical doctor and surgeon, Leonardo Perez, who, noticing the distinctive axillary spot, named it *Sparus axilaris* (Perez 1820: 97, pl.). The article was published in a Spanish journal, *Periódico de la Sociedad Médico-Quirúrgica de Cadiz*, with the text in Spanish and the formal description of the new species in Latin. A complete translation is here reported. *Sparus axilaris* sp. n. [in a footnote the author explained that with these terms he indicates that the species was new to science], commonly known as *Besugo* [in a second footnote the author remembered that this is the name used in Andalusia]. *Sparus axilaris*: a black spot at the base of pectoral fin: body completely pale: caudal fin forked. P. 19 V. 1/5 A. 3/10 D. 11/12 C. 22 Br. 5. Head moderately large: eye black, iris silvery; two nostrils: opercle three-foiled, scaled; incisive teeth conical, molars teeth strong, in several rows; tongue free and naked. Body compressed, as pale as palm; all fins pale except the pectoral, bearing a black spot; lateral line close to the dorsal profile; vent median. Off Andalusia, abundant mainly off Cadiz: gregarious with other species of sea breams; feed on algae; tasty, white and wholly covered by well attached scales: for this reason has been captured for many years.

Review of the short but precise description made by Perez and examination of the original illustration (Fig. 1) leaves no doubt that *Sparus axilaris* represents an earlier name for the species presently known as *Pagellus acarne*, over which it has priority. However, to our knowledge, *S. axilaris* has never been used as a valid name since its description, and it has been ignored through time. The first person mentioning *S. axilaris* in ichthyological publications was Machado (1857), who listed it into synonymy of *Pagrus acarne* in a checklist of fishes from Cadiz adjacent areas. While article 23.1 of the International Code of Zoological Nomenclature states that "The valid name of a taxon is the oldest available name applied to it", the Code recognizes also that "the principle of priority is to be used to promote stability and it is not intended to be used to upset a long-accepted name..." (art. 23.2). For this reason the Code contains provisions that modify the automatic application of the principle of priority on occasions when its application would be destructive of stability and cause of confusion. Specifically, to allow "reversal of precedence" of the two names two conditions should be met: (1) the older name has not been used as valid since 1899 (article 23.9.1.1) and (2) the younger name has been used as valid name in at least 25 works, published by at least 10 authors during the past 50 years, and encompassing a span of not less than ten years (article 23.9.1.2). To our knowledge the combination *Sparus axilaris* has never been used as valid name to indicate the axillary sea breams and both conditions of article 23.9.1 are satisfied. Thus, *Pagellus acarne* (Risso, 1827) is here regarded as valid, qualifying it as a *nomen protectum*, while the name *Sparus axilaris* Perez, 1820 is recognized as invalid, qualify-

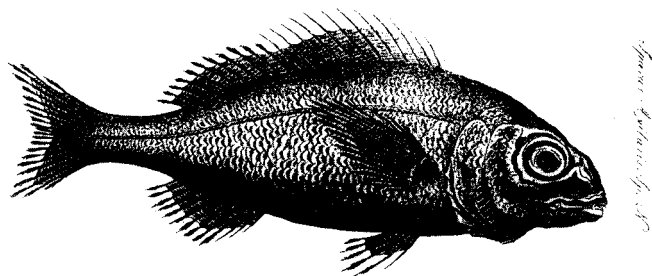


Figure 1. - Reproduction of the original illustration of *Sparus axilaris* Perez, 1820.

ing it as a *nomen oblitum*. As evidence that the conditions of article 23.9.1.2 have been met, the following list of publications is included: Wheeler, 1969; Tortonese, 1973; Nijssen and de Groot, 1974; Sola and Cautadella, 1978; Cano *et al.*, 1981; Domanevskaya, 1982; Andaloro, 1983; Domanevskaya and Patokina, 1984; Karrer, 1984; Kotlyar, 1984; Maigret and Ly, 1986; Bauchot and Hureau, 1990; Buxton and Garratt, 1990; Swaby and Potts, 1990; Robins *et al.*, 1991; Tsimenides *et al.*, 1991; Alegre *et al.*, 1992; Pipitone and Andaloro, 1995; Arruda, 1997; Goncalves *et al.*, 1997; Merella *et al.*, 1997; Fricke, 1999; Demestre *et al.*, 2000; Barreiros *et al.*, 2002; Renones *et al.*, 2002.

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