

**TAXONOMIC AND NOMENCLATURAL STATUS OF  
*PERCA ARGENTEA* LINNAEUS, 1758, *PERCA VAILA* OSBECK, 1770, AND  
*PERCA INDICA* GRONOW IN GRAY, 1854  
(OSTEICHTHYES, TERAPONTIDAE AND MORONIDAE)**

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**ABSTRACT.** — *Perca argentea* Linnaeus, 1758 and *Perca vaila* Osbeck, 1770 were cited in a number of early compilations of fishes, either as valid taxa or as synonyms, but disappeared from the literature after 1804. They are demonstrated here to represent senior synonyms of the *Terapon theraps* (Cuvier, 1829) and *Dicentrarchus punctatus* (Bloch, 1792), respectively. *Perca argentea* and *P. vaila* are here invalidated under Article 23.9.1 of the International Code of Zoological Nomenclature. *Perca indica* [Gronow] Gray is shown to be a junior synonym of *Terapon theraps*.

**KEY WORDS.** — reversal of precedence, nomen oblitum, nomen protectum, Terapontidae, *Dicentrarchus*

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## INTRODUCTION

*Perca* Linnaeus, 1758 has served as a catch-all genus for 268 nominal species and subspecies of fishes (Eschmeyer, 2012). Since Linnaeus, the genus has been used to accommodate many freshwater and marine species that were later demonstrated to belong to several different percoid, as well as non-percoid, families (Table 1). Of the 71 species originally described in the genus *Perca* by various authors and presently regarded as valid species, only two remain in this genus. The others have been reallocated to other genera and families, beginning with Cuvier & Valenciennes (1828), and most recently by Parenti (2003). However, there are still nominal species of *Perca* of uncertain systematic status, including ones based on personal communications of an ichthyologist (Eschmeyer 2012). Data is presented here to provide for the positive identification of *Perca argentea* Linnaeus 1758, *P. vaila* Osbeck 1770, and *P. indica* Gronow in Gray, 1854.

## TAXONOMY

### *Perca argentea* Linnaeus

*Perca argentea* Linnaeus (1758: 294), one of 29 species described in the genus *Perca* by Linnaeus (1758), was briefly diagnosed as having the dorsal fins joined, caudal fin forked, nostrils tubular, D. XII,10. A. III,8. P. 12. V. I,5. C. 17. No type locality was given.

Between the 10<sup>th</sup> (1758) and the 12<sup>th</sup> (1766) editions of *Systema Naturae*, Linnaeus published the second volume of the *Museum Adolphi Frederici* (Linnaeus, 1764) containing the description of two new species and additional details for a number of species previously named and described in the 1758 edition. The second volume of *Museum Adolphi Frederici* was already prepared along with the first, but financial difficulties delayed the publication (Fernholm & Wheeler, 1983), and consequently Linnaeus (1758) has references to and diagnoses of species that were described more fully only in Linnaeus (1764). In Linnaeus (1764) nine species were listed in the genus *Perca*, among them *Perca argentea* Linnaeus (1764: 86), already formally described in Linnaeus (1758: 294). Linnaeus (1764)

provided the following morphological details in addition to the 1758 diagnosis: “preopercle finely serrate, opercle with a strong spine; teeth in jaws pointed; six branchiostegal rays; body shape very similar to that of *Cyprinus auratus*; dorsal profile rounded anteriorly; a black blotch on the spinous portion of dorsal fin.” Four species of *Perca* in the 1758 edition of *Systema Naturae*, *argentea*, *scriba*, *mediterranea*, and *vittata*, were described without locality. Linnaeus (1764) added “Habitat in America” for all four of these; none are valid localities for these species. *Perca scriba* (now *Serranus scriba*) and *P. mediterranea* (now *Symphodus mediterraneus*) are from the eastern Atlantic and Mediterranean (Tortonese, 1973); *P. vittata* (valid as *Plectorhinchus vittatus*) is from the Indo-Pacific (Randall & Johnson, 2000). As indicated below, the locality given by Linnaeus for of *P. argentea* is also erroneous.

After its description, *P. argentea* was listed in several encyclopedic compilations of world fishes between the end of eighteenth century and the beginning of the nineteenth. A brief summary of the most important entries follows. All

Table 1. Distribution of available nominal species described in the genus *Perca* according their present family allocation as listed by the *Catalog of Fishes* (Eschmeyer, 2012), including results of the present work.

Family	nominal species
1. Serranidae	55
2. Percidae	33
3. Moronidae	14
4. Haemulidae	13
5. Sciaenidae	13
6. Lutjanidae	6
7. Percichthyidae	6
8. Pomacentridae	6
9. Holocentridae	6
10. Sebastidae	4
11. Sparidae	4
12. Centrolophidae	3
13. Centropomidae	1
14. Cichlidae	4
15. Labridae	3
16. Apogonidae	2
17. Caproidae	2
18. Kuhlidae	1
19. Kyphosidae	2
20. Latidae	2
21. Pomatomidae	1
22. Terapontidae	2
23. Anabantidae	1
24. Arripidae	1
25. Centrarchidae	1
26. Cirrhitidae	1
27. Congiopodidae	1
28. Nemipteridae	1
29. Pinguipedidae	1
30. Polyprionidae	1
31. Scaridae	1
32. Scorpaenidae	1
33. Stromateidae	1
34. Tetrarogidae	1
Unplaced	13

cited “America” as type locality if such information was given.

A full account of *P. argentea* appeared first in Müller (1774: 243).

Bonnaterre (1788: 135) described *P. argentea* as “La ciliée” and gave a detailed account based on *Museum Adolphi Frederici*.

Gmelin (1789: 1322) listed *P. argentea* and cited Linnaeus (1764). He provided only a short description, including fin-ray counts, the shape of nostrils, and the presence of a black spot on the spinous portion of the dorsal fin.

Walbaum (1792: 336) reproduced the complete description of *P. argentea* given by Linnaeus (1764), and added to the diagnosis the presence of two longitudinal dark stripes. He did not mention the locality and regarded it as the same specimen described and figured by Seba (1759: 77, pl. XXVII, Fig. 13), of which Walbaum reported only the diagnosis (silvery; two longitudinal stripes; caudal fin forked). The specimen considered to be identical to *P. argentea* was described by Seba as follows (translated from the Latin): dorsal profile convex, jaws equal; scales on body thin, silvery, adherent, slightly rough; body completely silvery except for the presence of two longitudinal pale, barely visible, reddish stripes; dorsal fin notched with 11 spines and 10–11 soft rays, anal fin with 3 spines and 8–9 soft rays, ventral fin with one spine and 5 soft rays, pectorals pale and oblong; preopercle, opercle, and lacrimal serrate; total length about two inches.

Bloch & Schneider (1801: 92) listed *P. argentea* among doubtful species of the genus *Perca*; they reported Linnaeus’ short description (1766). However, Linnaeus’ species name appears a second time under *Holocentrus*, as *H. argenteus* on p. 321.

Lacepède (1802: 205) and Sonnini (1802: 169) reported *P. argentea* in *Lutjanus*.

Shaw (1803: 438) listed the species as *Sparus argenteus*, and included a short diagnosis. He cited as the source of his information Linnaeus (1764) and Gmelin (1789).

No mention of *P. argentea* was given by Cuvier & Valenciennes (1828, 1829), and they did not include *Perca argentea* Cuvier et al. (1827: 6). Incidentally, Cuvier had erroneously identified the aforementioned specimen figured by Seba (1759: 77, pl. 27, Fig. 13) as *Holocentrus marginatus* Bloch [an incorrect subsequent spelling of *Epinephelus marginalis* Bloch, 1793]. This conclusion was repeated by Cuvier & Valenciennes (1828: 301), where he misprinted the figure number as 3 instead of 13. Parenti & Desoutter (2007) recently identified this specimen as *Terapon theraps* (Cuvier, 1829).

Günther (1859) did not include a species account for *Perca argentea*, but mentioned the name in passing in his brief

description of *Therapon cinereus*, based on a specimen from India.

Jordan & Evermann (1896–1900) did not list *P. argentea* in their comprehensive, four-volume *Fishes of North and Middle America*.

Although *P. argentea* clearly belongs to the speciose assemblage of lower percoid fishes, its precise identity was never resolved, and it was not included in Fernholm & Wheeler's (1983) catalogue of the Linnaean types in NRM. Based on the species accounts given in the *Museum Adolphi Frederici* and in the 12<sup>th</sup> edition of *Systema Naturae*, specifically the black-striped silvery body with a black blotch on the spinous portion of the dorsal fin, *P. argentea* is most likely a member of the Therapontidae, an Indo-Pacific family of perciform fishes found in coastal marine and brackish habitats, with some species occurring in freshwater. Using the key to species in the revision of the Therapontidae (Vari, 1978), and based on the colour pattern and the presence of a strong opercular spine, we conclude that *P. argentea* represents a species of the genus *Therapon*. In particular, as explained below, it is considered a senior synonym of *Therapon theraps* (Cuvier, 1829). Although the black blotch on the spinous dorsal fin is not diagnostic for *T. theraps*, the species is also characterised by the presence of two dark longitudinal stripes on body, which, however, are less evident in young specimens and may be barely visible in preserved specimens (Fig. 1). Interestingly, *Therapon cinereus* Cuvier, 1829, which was described as having the body silvery without apparent stripes, but with a black spot on spinous dorsal, has been regarded as a synonym of *T. theraps* (Vari, 1978).

No type material was known for *P. argentea* until Eschmeyer (1998). Type material, if extant, should be present in the collection of King Adolf Fredrik now present in the Swedish Museum of Natural History, where it was transferred in 1801. Collection registers maintained at the NRM can be used to trace specimens to Adolf Fredrik's collection, but not all of the species in Linnaeus (1754, 1764) are present in those records. Nonetheless, specimens judged by conservation condition and of very old date, apparently 18<sup>th</sup> century, and compatible with descriptions in Seba (1759),



Fig. 1. *Therapon theraps*, 74 mm SL, Bahrain. (Photograph by: John E. Randall).

a major source of the King's exotic specimens, and/or with Linnaeus's descriptions of reptiles and fishes in Linnaeus (1749, 1754, 1758, 1764), are present in the collections of NRM and the Museum of Evolution in Uppsala. In NRM, there are two old specimens labelled as *Perca argentea*, without further information, and which both are referable to *Therapon*. One of them (NRM 4295) has been catalogued, on undocumented grounds, as holotype of *P. argentea* (Figs. 2, 3). Although dark stripes are no longer visible, the specimen is well preserved. Its accession history is incomplete, but the condition is similar to that of other old specimens in the Adolf Fredrik collection, and it is definitely an 18<sup>th</sup> century specimen. It also represents a species that should be present in the Adolf Fredrik collection, and is compatible with the description provided by Linnaeus (1764). The specimen is absent from the catalogue of the museum of the Royal Swedish Academy of Sciences (presently the Swedish Museum of Natural History) prepared in 1800 by its curator Conrad Quensel, so it is certain that it was not present at NRM up till 1800. After the King's collection had been acquired, Quensel's successor, Olof Swartz, made an inventory of the Academy's collection completed in 1809, with 338 fish specimens, annotating specimens from the King's collection. There is no entry in Swartz's catalogue that can be identified as *Perca argentea*. The oldest label attached to NRM 4295 was made by Swartz's successor, Johan Wilhelm Dalman within his active period 1824–1828 and reads *Perca Holocentrus*. This name could refer to *Perca holocentrus* Euphrasén (1795), a replacement name for *Holocentrus jago* Bloch, but based on a West Indies specimen. No specimens from Euphrasén's West Indies collection are known to exist in the NRM collection, and it is uncertain from where Dalman may have obtained the name. A much younger label from the curatorship of Fredrik Adam Smitt in the late 1900s identifies the specimen as *Therapon argenteus* C.V. and coming from the old collection; this name probably based on Günther's (1859: 283) description of what is now *Mesopristes argenteus* (Cuvier, 1829), which is not the same species as *Perca argentea* Linnaeus. The absence of the species from Quensel's inventory suggests strongly that NRM 4295 was not present in the Academy's old, and relatively small collection. The absence from the 1809 inventory is not conclusive. Swartz was instructed to specially mark specimens from the King's collection (Fernholm & Wheeler, 1983), but he most likely would not have done so with specimens lacking labels. Dalman lists 22 objects as being without labels, although he may have meant undetermined. In between 1809 and 1828, the



Fig. 2. The holotype (unique): NRM 4295-1 of *Perca argentea* Linnaeus. (Photograph by: Sven Kullander).

Academy acquired also a large private collection containing exotic fishes (Fernholm & Wheeler, 1983), but it was kept separate from the King's collection and Dalman does not list from that collection any specimens that could represent a *Terapon*. Based on circumstantial evidence, NRM 4295 is therefore considered to represent type material of *Perca argentea*. As explained by Fernholm & Wheeler (1983), very few specimens are missing from the Adolf Fredrik collection, but the documentation of specimens can range from a complete set of labels dating back to the original repository at Drottningholm, to estimated age and accordance with Linnaeus's description and/or figure (e.g., Mediannikov et al., 2012).

Specimens of *T. theraps* can be easily distinguished from the other two species of the genus, *T. puta* Cuvier, 1829 and *T. jarbua* (Forsskål, 1775) by having fewer lateral-line scales (46–56 vs more than 70). The newly recognised holotype of *P. argentea* (NRM 4295) has 56 lateral-line scales.

The status of *Perca argentea* Linnaeus as a senior synonym of the long-accepted name *T. theraps* Cuvier, is mandated by Article 23.9 (“reversal of precedence”) of the International Code of Zoological Nomenclature (1999: 27). The two conditions that require the younger synonym to be recognised as the valid name are fulfilled: to our knowledge, *Perca argentea* has not been used as a valid name since 1899 (Art. 23.9.1.1), and *Terapon theraps* (occasionally as *Therapon theraps*) has been used as valid name in at least 25 publications by at least 10 authors in a time span of 10 years within the last 50 years (Art. 23.9.1.2). The following list of 25 publications have cited the name *Terapon theraps*: Menasveta (1981); Ahmad (1983); Talwar & Kacker (1984); Bianchi (1985); Heemstra (1986); Kailola (1987); Vasanth & Reddy (1987); Ahmad & Lal Dhar (1987); Allen & Steene (1988); Russell & Houston (1989); Paxton et al. (1989); Kuitert (1992); Ali et al., (1993); Fouda & Hermosa (1993); Senta et al. (1993); Blaber et al. (1994); Goren & Dor (1994); Randall (1995); Randall et al. (1997); Johnson (1999); Ni & Kwok (1999); Vari (1978, 2000); Sadovy & Cornish (2000); and Hutchins (2001). Therefore, the validity of *Terapon theraps* Cuvier is maintained.



Fig. 3. The holotype (unique) NRM 4295-1 of *Perca argentea* Linnaeus. Detail of the head region showing the strong opercular spine. (Photograph by: Sven Kullander).

### *Perca vaila* Osbeck

The name *Perca vaila* Osbeck (1770) is regarded as invalid in the *Catalog of Fishes* (Eschmeyer, 1998: 1735) on the basis of earlier synonymisations (Walbaum, 1792; Bloch & Schneider, 1801; Bloch, 1792) as *Dicentrarchus labrax*, *D. punctata*, and *Sciaena diacantha*, respectively. The name is available from Osbeck (1770: 102), which contains descriptions of 12 new species of fishes, five of which were assigned to *Perca* (*P. aculeata*, *P. dubia*, *P. obscura*, *P. ringens*, and *P. vaila*). *Perca vaila* was described by a relatively large number of characters (see below) that lead us to conclude that it represents an older name for the species presently known as *Dicentrarchus punctatus* (Bloch, 1792). The original description states that it is based on species 6 of genus 127 listed in the ninth edition of *Systema Naturae* (Linnaeus, 1756) [Osbeck misprinted the generic number; in the ninth edition *Perca* is number 122, whereas it is 127 in the sixth edition (1748)]. The name *vaila* is taken from Spanish and corresponds to the fish that Swedish sailors call *Laxoren*, as recognised by Artedi (1738: 41, *species 7, Perca radiis dorsalis secundae tredecim...Labrax Graecorum*). Osbeck's description, in Latin, may be translated as follows: “Dorsal fins: the first with 9 spines, the second with 14 soft rays. Pectorals 15. Ventrals 6. Anal 14, of which the first 3 are spinous. Caudal fin forked with 20 rays. Body compressed (the general aspect of a salmon) with many small dots on the upper half and a little below the lateral line. Back dark. Belly white. One foot in length, but often less. Head small. Gape large, roundish. Tongue dark white, rough. Iris white. Three opercular leaflets at both sides, the middle one [read *preopercle*] finely serrate. Ventral and pectoral fins white, the other fins dark. To these some *Oniscus* specimens adhere.”

To our knowledge, only three subsequent books listed the name *Perca vaila*. In his *Genera Piscium*, Walbaum (1792: 329) placed *P. vaila* in the synonymy of *P. labrax*, with a complete description, together with the correct reference. Bloch & Schneider (1801: 85) included it in the synonymy of *Sciaena punctata*. Bloch (1792) regarded it as a variety of *Perca diacantha* (= *Sciaena diacantha* Bloch, 1792: 58) and listed *P. labrax* as a distinct species. The status of *S. punctata*, *S. diacantha*, and *P. labrax* was extensively reviewed by Cuvier & Valenciennes (1828: 56), who regarded all three names as synonyms of *Labrax lupus*. He was followed in this decision by Günther (1859: 63). The generic name *Labrax* is preoccupied by *Labrax* Pallas, 1810 in the Hexagrammidae, and *Dicentrarchus* Gill, 1860 is therefore the valid generic name (Daget & Smith, 1986: 299). According to Tortonese (1973: 357), *Dicentrarchus* contains two species, *D. labrax* (Linnaeus, 1758) and *D. punctatus* (Bloch, 1792), distinguished by the form of vomerine tooth path (crescent-shaped vs anchor-shaped, respectively), modal number of scales in the lateral line (70 vs 60, respectively), number of soft rays in the second dorsal fin (12–13 vs 11–14) and colour pattern (adults never spotted, young with some dark spots vs adults with many small black spots on back and sides). Both species inhabit the Eastern Atlantic and the Mediterranean Sea. Based on the

original description, *Perca vaila* Osbeck clearly represents an older name for *Dicentrarchus punctatus*. However, to our knowledge *Perca vaila* has not been used as a valid name since 1899 (Article 23.9.1.1), and *D. punctatus* has been used as valid in 25 or more publications by more 10 authors in the last 50 years (Article 23.9.1.2). Article 23.9.2 of the International Code of Zoological Nomenclature thus requires us to declare *Perca vaila* as a nomen oblitum, and *Sciaena punctata* as a nomen conservandum for the same species. The relevant conditions are met by the following 25 publications that cited the name *D. punctatus*: Tortonese (1973); Ben-Tuvia (1978); Drake et al. (1982); Oliver & Paperna (1984); Daget & Smith (1986); Bauchot (1987); Smith (1990); Drake & Arias (1991); Economidis (1991); Sola et al. (1993); Goren & Dor (1994); Poll & Gosse (1994); Pérez-Bote et al., (1995); Coad (1996); Allegrucci et al. (1997, 1999); Arruda (1997); Gonçalves et al. (1997); Kottelat (1997); Reshetnikov et al. (1997); Azeroual et al. (2000); Bilecenoglu et al. (2002); Bonhomme et al. (2002); El-Mor et al. (2002); Roe et al. (2002).

#### *Perca indica* Gronow

*Perca indica* Gronow (in Gray, 1854: 114) was described from India, but apparently was never reported in checklists of the area. The original diagnosis may be translated as follows: “*Perca* having body and caudal fin with stripes; two approached dorsal fins; head scaleless, smooth; opercle scaled, spiniferous; caudal fin lunate. Habitat: India. Description: general aspect similar to the common perch; five inches of length; head scaleless, but with scales below the eye and on the opercle; upper margin of the preopercle uniformly serrate; opercle armed with a long strong spine; dorsal profile elevated anteriorly to the origin of the dorsal fin, after which it starts to decline. Two dorsal fins, very close to one another, so that they can certainly be said to be joined. Anterior fin more elevated, comb-like, armed with 11 spines; posterior lower, smooth, almost rectangular, with 11 rays. Pectoral fins short, lanceolate, inserted slightly below the midline, and formed by 14 rays. Ventral fins subthoracic, inserted slightly posterior to the pectorals, of which they are a little longer, formed by 6 rays, the first spinous. Anal fin placed under the soft dorsal and composed of 11 rays, the first 3 spinous, strong, roughly equal. Caudal fin forked. Scales rather large, ctenoid. Colour yellowish, brownish on the back; a dark stripe running straight from midline on head to caudal fin. Spinous portion of the dorsal fin marked with a black blotch. Five longitudinal, almost parallel, black, and quite large lines on caudal fin.” Based on this detailed description *Perca indica* is identified here as a new junior synonym of *Terapon theraps* (Cuvier in Cuvier & Valenciennes, 1829).

#### DISCUSSION

Nearly all of the orphaned nominal species listed in the *Catalog of Fishes* have been ignored in later literature (Eschmeyer, 2012). Reasons for this include poor original

descriptions, the absence of type material, and oversight as a consequence of publication in obscure journals. Most of these old names have been proposed in the eighteenth and nineteenth centuries, and there is a good possibility that many of them represent senior synonyms of well-known species. The application of the Principle of Priority of the International Code of Zoological Nomenclature (International Commission on Zoological Nomenclature, 1999) could lead to replacement of names as long as they are in current usage. In such instances, when such a senior synonym is discovered that has not been used since 1899, and the corresponding junior name has been extensively used in modern time, the Code now allows for “reversal of precedence” to be applied in order to maintain the name in current use under its Article 23.9, which specifies the conditions and procedure. This article makes it mandatory whenever a senior synonym is discovered that has not been used after 1899 and which is in prevailing usage under a set of criteria specified in article 23.9.1.2. Article 23.1 has been used for numerous species of fishes (e.g., Bauchot & Desoutter, 1985; Randall & Parenti, 1999; Parenti, 2002a, 2002b, 2003; Parenti & Pietsch 2003; Imamura & Nagao, 2011; Pietsch et al., 2012). While researching the identity of unidentified species of *Perca*, we found two more cases with the names *Perca argentea* Linnaeus (1758) and *Perca vaila* Osbeck, 1770, which are the subject of the present paper.

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#### LITERATURE CITED

- Ahmad, J., 1983. Studies on digenetic trematodes of the family Lecithasteridae from marine fishes from Bombay coast, Arabian Sea. *Rivista di Parassitologia*, **44**: 125–130.
- Ahmad, J. & R. Lal Dhar, 1987. Studies on digenetic trematodes of marine fishes from the Puri coast of the Bay of Bengal. Part 53. Families Monorchiidae and Opecoelidae. *Pakistan Journal of Zoology*, **19**: 167–184.
- Ali, T. S., A. R. M. Mohamed & N. A. Hussain, 1993. Trophic interrelationships of the demersal fish assemblage in the northwest Arabian Gulf, Iraq. *Asian Fisheries Science*, **6**: 255–264.

- Allegrucci, G., C. Fortunato & V. Sbordoni, 1997. Genetic structure and allozyme variation of sea bass (*Dicentrarchus labrax* and *D. punctatus*) in the Mediterranean Sea. *Marine Biology*, **128**: 347–358.
- Allegrucci, G., A. Caccone, V. Sbordoni, H. Enghoff, M. Fischer, G. Osche & D. Sperlich, 1999. Cytochrome beta sequence divergence in the European sea bass (*Dicentrarchus labrax*) and phylogenetic relationships among some Perciformes species. *Journal of Zoological Systematics and Evolutionary Research*, **37**: 149–156.
- Allen, G. R. & R. C. Steene, 1988. *Fishes of Christmas Island, Indian Ocean*. Christmas Island Natural History Association, Christmas Island. 197 pp.
- Arruda, L. M., 1997. Checklist of the marine fishes of the Azores. *Arquivos do Museo Bocage, Nova Série*, **3**: 13–164.
- Artedi, P., 1738. *Genera Piscium. In Quibus Systema Totum Ichthyologiae Proponitur Cum Classibus, Ordinibus, Generum Characteribus, Specierum Differentiis, Observationibus Plurimis. Redactis Speciebus 242 ad Genera 52. Ichthyologia Pars 3*. Conradus Wishoff, Lugduni Batavorum, Leiden. 84 pp.
- Azeroual, A., A. J. Crivelli, A. Yahyaoui & M. Dakki, 2000. L'ichtyofaune des eaux continentales du Maroc. *Cybium*, **24**: 17–22.
- Bauchot, M.-L., 1987. Poissons osseux. In: Fischer, W., M.-L. Bauchot & M. Schneider (eds.), *Fiches FAO d'Identification pour les Besoins de la Pêche. Méditerranée et Mer Noire. Zone de pêche 37. Vol. II*. Commission des Communautés Européennes and FAO, Rome. Pp. 891–1421.
- Bauchot, M.-L. & M. Desoutter, 1985. *Chromis viridis* (Cuvier, 1830), the correct name for the Indo-Pacific damselfish previously known as *C. caerulea* (Cuvier, 1830) (Pisces, Pomacentridae). *Cybium*, **9**: 411–413.
- Ben-Tuvia, A., 1978. Immigration of fishes through the Suez Canal. *Fishery Bulletin*, **76**: 249–255.
- Bianchi, G., 1985. *FAO Species Identification Sheets for Fishery Purposes. Field Guide to the Commercial Marine and Brackish-Water Species of Tanzania*. FAO, Rome. 199 pp.
- Bilecenoglu, M., E. Taskavak, S. Mater & M. Kaya, 2002. Checklist of the marine fishes of Turkey. *Zootaxa*, **113**: 1–194.
- Blaber, S. J. M., D. T. Brewer & A. N. Harris, 1994. Distribution, biomass and community structure of demersal fishes of the Gulf of Carpentaria, Australia. *Australian Journal of Marine and Freshwater Research*, **45**: 375–396.
- Bloch, M. E., 1792. *Naturgeschichte der ausländischen Fische*. Berlin, **6**: i–xii + 1–126, pls. 289–323.
- Bloch, M. E., 1793 *Naturgeschichte der ausländischen Fische*, Berlin, **7**: i–xiv + 1–144, pls. 325–360.
- Bloch, M. E. & J. G. Schneider, 1801. *M. E. Blochii, Systema Ichthyologiae Iconibus cx Illustratum. Post Obitum Auctoris Opus Inchoatum Absolvit, Correxit, Interpolavit Jo. Gottlob Schneider, Saxo*. Sanderiano, Berlin. 584 pp.
- Bonhomme, F., M. Naciri, L. Bahri-Sfar & C. Lemaire, 2002. Comparative analysis of genetic structure of two closely related sympatric marine fish species *Dicentrarchus labrax* and *Dicentrarchus punctatus*. *Comptes Rendus de Biologie*, **325**: 213–220.
- Bonnaterre, P. J., 1788. *Tableau Encyclopédique Et Méthodique Des Trois Règnes De La Nature: Ichthyologie*. Panckoucke, Paris. 256 pp.
- Coad, B. W., 1996. Exotic and transplanted fishes in southwest Asia. *Publicaciones Especiales Instituto Español de Oceanografía*, **21**: 81–106.
- Cuvier, G., A. G. Desmarest, J. G. Saint-Hilaire, J. V. Auduin, J. A. Boisduval, J. B. A. Guillemain, A. Valenciennes, A. E. J. P. J. F. d'Audebard Bon de Ferussac, R. P. Lesson, M. E. Guérin & E. Eudes-Deslongchamps, 1827. *Planches de Seba. Locuplentissimi Rerum Naturalium Thesauri Accurata Descriptio. Accompañées D'un Text Explicatif Mis Au Courant De La Science Et Rédigé Par M. Le B. On Cuvier Et Une Réunion De Savants*. F. G. Levrault, Paris, 8 pp (folio).
- Cuvier, G. & A. Valenciennes, 1828. *Histoire Naturelle Des Poissons. Tome second. Livre Troisième. Des poissons de La Famille Des Perches, Ou Des Percoïdes*. Levrault, Paris. xxi + 490 pp.
- Cuvier, G. & A. Valenciennes, 1829. *Histoire Naturelle Des Poissons. Tome Troisième. Suite Du Livre Troisième. Des Percoïdes A Dorsale Unique A Sept Rayons Branchiaux Et A Dents En Velours Ou En Cardes*. Levrault, Paris. xxviii + 500 pp.
- Daget, J. & C. L. Smith, 1986. Serranidae. In: Daget, J., J.-P. Gosse & D. F. E. Thys van den Audenaerde (eds.), *Check-List of the Freshwater Fishes of Africa. Vol. 2*. Orstom, Paris. Pp. 299–303.
- Drake, P. & A. M. Arias, 1991. Composition and seasonal fluctuations of the ichthyoplankton community in a shallow tidal channel of Cadiz Bay (S.W. Spain). *Journal of Fish Biology*, **39**: 245–263.
- Drake, P., A. M. Arias & R. B. Rodriguez, 1982. Study of growth and food habits of mottled sea bass, *Dicentrarchus punctatus* Bloch, 1792 (Osteichthyes, Serranidae), in the esteros (salt-marsh fish ponds) of Cadiz. *Investigaciones Pesqueras*, **46**: 335–347.
- Economidis, P. S., 1991. *Check List of the Freshwater Fishes of Greece. Recent Status of Threats and Protection*. Hellenic Society of the Protection of Nature, Athens. 48 pp.
- El-Mor, M., S. El-Etreby, S. Mohammad & M. Sapota, 2002. A study on trash catch of the bottom trawl along Port-Said coast, Egypt. *Oceanological Studies*, **31**: 45–55.
- Eschmeyer, W. N., 1998. *Catalog of Fishes. Volume 1–3*. California Academy of Sciences.
- Eschmeyer, W. N., 2012. *Catalog of Fishes (Electronic Version)*. California Academy of Sciences. <http://research.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. (Accessed 7 Jun.2012).
- Euphrasén, B. A., 1795. *Beskrifning Öfver Svenska Vestindiska Ön St. Barhelemi, Samt Öarne St. Eustache Och St. Christopher*. Anders Zetterberg, Stockholm. 207 pp.
- Fernholm, B. & A. Wheeler, 1983. Linnaean fish specimens in the Swedish Museum of Natural History, Stockholm. *Zoological Journal of the Linnean Society*, **78**: 199–286.
- Forsskål, P. S., 1775. *Descriptiones Animalium Avium, Amphibiorum, Piscium, Insectorum, Vermium; Quae in Itinere Orientali Observavit Petrus Forskål. Post Mortem Auctoris Edidit Carsten Niebuhr*. Ex Officina Mölleri, Haunia, Denmark. 218 pp.
- Fouda, M. M. & G. V. Hermosa, Jr., 1993. *A Checklist of Oman Fishes*. Sultan Qaboos University Press, Sultanate of Oman. 42 pp.

- Gmelin, J. F., 1789. *Caroli a Linné ... Systema Naturae per regna tria naturae, secundum classes, ordines, genera, species; cum characteribus, differentiis, synonymis, locis. Editio decimo tertia, aucta, reformata. Volume 1 (part 3)*. Georg Emanuel Berg, Leipzig. Pp. 1033–1516.
- Gonçalves, J. M. S., L. Bentes, P. G. Lino, J. Ribeiro, A. V. M. Canário & K. Erzini, 1997. Weight-length relationships for selected fish species of the small-scale demersal fisheries of the south and south-west coast of Portugal. *Fishery Research*, **30**: 253–256.
- Goren, M. & M. Dor, 1994. *An Updated Checklist of the Fishes of the Red Sea*. The Israel Academy of Sciences and Humanities, Tel Aviv, Israel. xii + 120 pp.
- Gray, J. E., 1854. *Catalogue of Fish Collected and Described by Laurence Theodore Gronow, Now in the British Museum*. Order of the Trustees, London. vii + 196 pp.
- Günther, A., 1859. *Catalogue of the Fishes in the British Museum. Catalogue of the Acanthopterygian Fishes in the Collection of the British Museum. Gasterosteidae, Berycidae, Percidae, Aphredoderidae, Pristipomatidae, Mullidae, Sparidae. Volume 1*. British Museum, London. xxxi + 524 pp.
- Heemstra, P. C., 1986. Teraponidae. In: Smith, M. M. & P. C. Heemstra (eds), *Smiths' Sea Fishes*. Springer-Verlag, Berlin. Pp. 543–544.
- Hutchins, J. B., 2001. Checklist of the fishes of Western Australia. *Records of Western Australian Museum, Supplement*, **63**: 9–50.
- Imamura, H. & T. Nagao, 2011. *Silurus imberbis* Gmelin 1789, a senior synonym of the platycephalid *Inegocia japonica* (Cuvier 1829), with a proposal to suppress the name. *Ichthyological Research*, **58**: 166–169.
- International Commission on Zoological Nomenclature, 1999. *International Code of Zoological Nomenclature. 4<sup>th</sup> Edition*. International Trust for Zoological Nomenclature, London. xxix + 306 pp.
- Johnson, J. W., 1999. Annotated checklist of the fishes of Moreton Bay, Queensland, Australia. *Memoires of the Queensland Museum*, **43**: 709–762.
- Jordan, D. S. & B. W. Evermann, 1896–1900. The fishes of North and Middle America: A descriptive catalogue of the species of fish-like vertebrates found in the waters of North America, north of the Isthmus of Panama. Parts I–IV. *Bulletin of the U. S. National Museum*, **47**: 1–3313.
- Kailola, P. J., 1987. The fishes of Papua New Guinea: A revised and annotated checklist. Volume II. Scorpaenidae to Callionymidae. *Papua New Guinea Department of Fisheries and Marine Resources, Research Bulletin*, **41**: 195–418.
- Kottelat, M., 1997. European freshwater fishes. *Biologia*, **52**(Supplement 5): 1–272.
- Kuiter, R. H., 1992. *Tropical Reef-Fishes of the Western Pacific Indonesia and Adjacent Waters*. Gramedia Pustaka Utama, Jakarta. 314 pp.
- Lacepède, B. G. E., 1802. *Histoire Naturelle Des Poissons. Volume 4*. Plassan, Paris. xlv + 728 pp.
- Linnaeus, C., 1748. *Systema Naturae Sistens Regna Tria Naturae, In Classes Et Ordines, Genera Et Species Redacta Tabulisque Aeneis Illustrata. Editio Sexta, Emendata Et Aucta*. Kiesewetter, Stockholm. iii + 224 + 18 pp.
- Linnaeus, C., 1749. *Museum Adolpho-Fridericianum. Amoenitates Academicae*, **1**: 277–327.
- Linnaeus, C., 1754. Hans Maj:ts Adolf Frideriks vår allernådigste konungs naturalie samling innehållande sällsynte och främmande djur, som bevaras på kongl. lust-slottet Ulriksdahl\* beskrefne och afritade samt på nådig befällning utgifne af Carl Linnaeus. Stockholm. i–xxx, 96 + 7 pp.
- Linnaeus, C., 1756. *Systema Naturae, Sistens Regna Tria Naturae, In Classes Et Ordines Genera Et Species Redacta, Tabulisque Aeneis Illustrata. Accedunt Vocabula Gallica. Editio Multo Auctior & Emendatior*. Theodorum Haak, Leiden. vi + 27 + 273 pp.
- Linnaeus, C., 1758. *Systema Naturae Per Regna Tria Naturae, Secundum Classes, Ordines, Genera, Species, Cum Characteribus, Differentiis, Synonymis, Locis. Tomus I. Editio Decima, Reformata*. Laurentii Salvii, Holmiae (Stockholm). ii + 824 pp.
- Linnaeus, C., 1764. *Museum S. R. M. Adolphi Friderici Regis Suecorum, Gothorum, Vandalorumque, In Quo Animalia Rariora Imprimis Et Exotica... Aves, Amphibia, Pisces, Tomus Secundi Prodromus*. Laurentii Salvii, Holmiae (Stockholm). 133 pp.
- Linnaeus, C., 1766. *Systema Naturae Sive Regna Tria Naturae, Secundum Classes, Ordines, Genera, Species, Cum Characteribus, Differentiis, Synonymis, Locis. Editio Duodecima*. Laurentii Salvii, Holmiae (Stockholm). 532 pp.
- Mediannikov, O., S. Trape & J. F. Trape, 2012. A molecular study of the genus *Agama* (Squamata: Agamidae) in West Africa, with description of two new species and a review of the taxonomy, geographic distribution, and ecology of currently recognized species. *Russian Journal of Herpetology*, **19**: 115–142.
- Menasveta, P., 1981. Lethal temperature of Marine Fishes of the Gulf of Thailand. *Journal of Fish Biology*, **18**: 603–607.
- Müller, P. L. S., 1774. *Des Ritters Carl Von Linné' Königlich Schwedischen Leibarztes K. K. Vollständiges Natursystem Nach Der Zwölften Lateinischen Ausgabe, Und Nach Anleitung Des Holländischen Houttynischen Werks, Mit Einer Ausführlichen Erklärung Ausgefertigt. Volume 4*. G. N. Raspe, Nürnberg. xiv + 400 + xvii pp.
- Ni, I.-H. & K.-Y. Kwok, 1999. Marine fish fauna in Hong Kong waters. *Zoological Studies*, **38**: 130–152.
- Oliver, G. & I. Paperna, 1984. Diplectanidae Bychowsky, 1957 (Monogenea, Monopisthocotylea), parasites of Perciformes from eastern Mediterranean Sea, the Red Sea and the Indian Ocean. *Bulletin du Museum national d'Histoire naturelle (France). 4e serie. Section A. Zoologie, biologie, et ecologie animales, Paris*, **6**: 49–65.
- Osbeck, P., 1770. *Fragmenta ichthyologiae hispanicae. Nova Acta Physico-Medica Academiae Caesareae Leopoldino-Carolinae*, **4**: 99–104.
- Parenti, P., 2002a. *Muraena compressa* Walbaum, 1792, an invalid senior synonym of the snake mackerel *Gempylus serpens* Cuvier, 1829. *Caribbean Journal of Sciences*, **38**: 267–268.
- Parenti, P., 2002b. On the species of the genus *Balistes* described by Johann Julius Walbaum (1792). *Cybium*, **26**: 309–316.
- Parenti, P., 2003. On the status of the species classified in the genus *Perca* by Johann Julius Walbaum. *Zoological Studies*, **42**: 491–505.
- Parenti, P. & T. W. Pietsch, 2003. *Ostracion knorrii* Walbaum, 1792, a senior synonym of the striated frogfish *Antennarius striatus* (Shaw and Nodder, 1794) invalidated by "Reversal of Precedence". *Copeia*, **2003**: 187–189.

- Parenti, P. & M. Desoutter-Meniger, 2007. Notes on the status of the names of fishes presented in the “Planches de Seba” (1827–1831) published by Guérin-Méneville. *Zoosystema*, **29**: 393–403.
- Paxton, J. R., D. F. Hoese, G. R. Allen & J. E. Hanley, 1989. *Pisces. Petromyzontidae to Carangidae. Zoological Catalogue of Australia. Volume 7*. Australian Government Publishing Service, Canberra, Australia. 665 pp.
- Pérez-Bote, J. L., M. Blasm & E. Da Silva, 1995. Edad y crecimiento de la baila *Dicentrarchus punctatus* (Bloch, 1792) (Teleostei, Serranidae) en aguas del Golfo de Cadiz. *Zoologica Baetica*, **6**: 111–119.
- Pietsch T. W., J. W. Orr & W. N. Eschmeyer, 2012. *Mustelus felis* Ayres, 1854, a senior synonym of the Leopard Shark, *Triakis semifasciata* Girard, 1855 (Carchariniiformes: Triakidae), invalidated by “reversal of precedence”. *Copeia*, **2012**: 98–99.
- Poll, M. & J.-P. Gosse, 1994. Genera des poissons d’eau douce de l’Afrique. *Mémoires de la Classe des Sciences de l’Académie royale de Belgique*, **9**: 1–324.
- Randall, J. E., 1995. *Coastal Fishes of Oman*. University of Hawaii Press, Honolulu, Hawaii. 439 pp.
- Randall, J. E., H. Ida, K. Kato, R. L. Pyle & J. L. Earle, 1997. Annotated checklist of inshore fishes of the Ogasawara Islands. *Natural Sciences Museum Monographies*, **11**: 1–74.
- Randall, J. E. & J. W. Johnson, 2000. *Perca lineate* and *P.vittata* established as valid species of *Plectorhinchus* (Perciformes: Haemulidae). *Memoirs of the Queensland Museum*, **45**: 477–482.
- Randall, J. E. & P. Parenti, 1999. Rejection of nine old labrid fish names in order to conserve well-established taxa. *Revue française d’Aquariologie*, **26**: 29–32.
- Reshetnikov, Yu. S., N. G. Bogutskaya, D. E. Vasil’eva, E. A. Dorofeyeva, A. M. Naseka, O. A. Popova, K. A. Savvaitova, V. G. Sideleva & L. I. Sokolov, 1997. An annotated check-list of the freshwater fishes of Russia. *Journal of Ichthyology*, **37**: 687–736.
- Roe, K. J., P. M. Harris & R. L. Mayden, 2002. Phylogenetic relationships of the genera of North American sunfishes and basses (Percoidei: Centrarchidae) as evidenced by the mitochondrial cytochrome *b* gene. *Copeia*, **2002**: 897–905.
- Russell, B. C. & W. Houston, 1989. Offshore fishes of the Arafura Sea. *Beagle*, **6**: 69–84.
- Sadovy, Y. & A. S. Cornish, 2000. *Reef Fishes of Hong Kong*. Hong Kong University Press, Hong Kong. xi + 321 pp.
- Seba, A., 1759. *Locupletissimi Rerum Naturalium Thesauri Accurata Descriptio Et Iconibus Artificiosissimus Expressio Per Universam Physices Historiam (Folio). Volume 3*. Janssonius Waesberge, Amsterdam. Pp. 57–109.
- Senta, T., M. Kimura & T. Kanbara, 1993. Predation of fishes on open-ocean species of sea-skaters (*Halobates* spp.). *Japanese Journal of Ichthyology*, **40**: 193–198.
- Shaw, G., 1803. *General Zoology, or Systematic Natural History. Volume 4*. George Kearsley, London. 632 pp.
- Smith, C. L., 1990. Moronidae. In: Quéro, J.-C., J.-C. Hureau, C. Karrer, A. Post & L. Saldanha (eds), *Check-List of the Fishes of the Eastern Tropical Atlantic. Volume 2*. Unesco, Paris. Pp. 692–694.
- Sola, L., S. Bressanello, A. R. Rossi, V. Iaselli, D. Crosetti & S. Cataudella, 1993. A karyotype analysis of the genus *Dicentrarchus* by different staining techniques. *Journal of Fish Biology*, **43**: 329–337.
- Sonnini, C. S., 1802. *Histoire Naturelle Générale Et Particulière Des Poissons; Ouvrage Faisant Suite À L’histoire Naturelle, Générale Et Particulière, Composée Par Leclerc Du Buffon, Et Mise Dans Un Nouvelle Ordre Par C. S. Sonnini, Avec Des Notes Et Des Additions. Volume 3*. F. Dufart, Paris. 415 pp.
- Talwar, P. K. & R. K. Kacker, 1984. *Commercial Sea Fishes of India*. Zoological Survey of India, Calcutta, India. 997 pp.
- Tortonese, E., 1973. Serranidae. In: Hureau, J.-C., & T. Monod (eds), *Check-List of the Fishes of the North-Eastern Atlantic and of the Mediterranean. Volume 1*. Unesco, Paris. Pp. 355–362.
- Vari, R. P., 1978. The terapon perches (Percoidei, Teraponidae). A cladistic analysis and taxonomic revision. *Bulletin of the American Museum of Natural History*, **159**: 175–340.
- Vari, R. P., 2000. Terapontidae (grunters). In: Randall, J. E. & K. K. P. Lim (eds.), *A Checklist of the Fishes of the South China Sea. Raffles Bulletin of Zoology, Supplement*, **8**: 569–667.
- Vasanth, V. & P. S. R. Reddy, 1987. On the osteology of therapon perches (Pisces: Theraponidae), *Therapon puta*, *T. jarbua*, *T. theraps* and *Pelates quadrilineatus*. *Indian Journal of Fisheries*, **34**: 1–19.
- Walbaum, J. J., 1792. *Petri Artedi Sueci Genera Piscium. In Quibus Systema Totum Ichthyologiae Proponitur Cum Classibus, Ordinibus, Generum Characteribus, Specierum Differentiis, Observationibus Plurimis, Pars III*. Ant. Ferdin. Rose, Greifswald, Germany. 723 pp.