A REVISED CHECKLIST OF THE EPIPELAGIC AND SHORE FISHES OF THE CHAGOS ARCHIPELAGO, CENTRAL INDIAN OCEAN

by

Richard Winterbottom and R. Charles Anderson
ABSTRACT


A recent (Feb.-Mar., 1996) trip to the Chagos Archipelago, central Indian Ocean, by one of us (RCA) resulted in 51 new records of fishes for the islands. In addition, another 29 new records were discovered either in the collections of the National Museum of Natural History at the Smithsonian Institution, or were gleaned from the literature. In total, 80 new records for Chagos are reported here. The checklist by Winterbottom et al. (1989) recorded 703 species from Chagos, that total is raised to 773 species. Eighty-nine changes in nomenclature from that used in the 1989 list are documented. Three geographic localities (Indo-Pacific, Indo-west Pacific and marginally on the Pacific plate, and Indo-west Pacific) account for just over 80% of the fish fauna. The five most speciose families (numbers of species in parentheses) are the Gobiidae (98), Labridae (63), Serranidae (50), Muraenidae (41) and Pomacentridae (38), and these together account for 38% of the total fish fauna.

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INTRODUCTION

The Chagos Archipelago is an isolated group of atolls and reefs in the central Indian Ocean. The group forms the southern end of the Laccadive - Maldives - Chagos atoll chain, and is centred at about 6°S, 72°E. There are five atolls, ten reefs and submerged shoals, and about 50 islands.

The senior author took part in a scientific expedition to the Chagos Archipelago in 1979, during which a major collection of fishes was amassed for the Royal Ontario Museum (ROM). That collection was worked up, together with other material from Chagos and with previously published records. Two major publications resulted: a review of the gobioid fishes (Winterbottom and Emery, 1986), and an annotated checklist (referred to hereafter as "1989 checklist") of the fishes then known from Chagos (Winterbottom, Emery and Holm, 1989). The 1989 checklist contained records of a total of 703 fish species.

The junior author participated in a scientific expedition to Chagos in early 1996. Numerous new records were documented for the archipelago during that expedition (primarily by R. C. Anderson, but also by other expedition members, notably M. Spalding). Since the 1989 checklist was submitted for publication in 1985 (and in addition to an "Errata and Addenda" sheet) there have been several other new records published in the literature, and many changes in taxonomy and known distribution. It was therefore felt that a revised list was desirable.

MATERIALS AND METHODS

The following symbols are used: * = new record for the Chagos Archipelago; L = literature record (citation given where it is a new record for Chagos); P = underwater colour slide(s); S = sight record(s); all others except where stated otherwise = voucher specimen(s) available at ROM. Where photographic records exist but are not published here it means that the slides are good enough for identification, but not for publication. If no other information is given, details are as in the 1989 checklist. Family names and sequence follow the 1989 checklist, except for the Anthiidae (here included in the Serranidae), the separation of the Caesioninae and Lutjaninae in the Lutjanidae, and the breakdown of the Balistidae into the Balistinae and the Monacanthinae.

The junior author spent one month in Chagos during February/March, 1996 aboard an 18 m motor sailing vessel. In view of the substantial collections made by Winterbottom and Emery, it was decided not to spend much time collecting specimens. Only one rotenone collection was made, between Île Montpatre and Île Gabrielle, Peros Banhos Atoll. The junior author concentrated on searching for species of fishes not previously recorded from Chagos while snorkeling and diving (to a maximum depth of 34 m). A few specimens were collected by hand, and whenever possible new records were photographed. All specimens collected have been deposited at the ROM. The only habitat not sampled by Winterbottom and Emery was the seagrass beds (only well developed at Diego Garcia). Unfortunately, it proved impossible for the junior author to visit these beds. However, they were visited by M. Spalding, who generously shared his observations with us. In addition, many of the Chagos specimens at the USNM are from Diego Garcia, and seagrass species appear to be relatively well represented.

Geographic ranges are included for all species for which information was available, and have been updated as appropriate. Geographic categories are as used in the 1989 list: Indo-Pacific (western/central Indian Ocean to the central portion of the Pacific plate - may include the eastern Pacific and/or Red Sea); Indo-west Pacific and marginally on the Pacific plate (plate record included; may include the Caroline Islands, Marshall Islands, Kiribati [Gilbert Islands], and Samoa, as well as Belau [Palau], Yap, and the Marianas on the Philippine plate); Indo-west Pacific (western/central Indian Ocean to the Andesite line); western Indian Ocean (south of the tip of India westwards); Indian Ocean (including the west side of the Malay Peninsula, the Andaman Islands, Cocos [Keeling] Islands, Christmas Island and western Australia); central Indian Ocean (Chagos Archipelago, Maldives/Laccadive Islands, Sri Lanka); Indian Ocean and western edge of the tropical Pacific (eastward to the Gulf of Thailand); central and eastern Indian Ocean; cosmopolitan (tropical and temperate seas worldwide); circumtropical (tropical seas worldwide); Indo-Pacific and western Atlantic (including the Caribbean); endemic to the Chagos Archipelago; and unassigned. Citations for original descriptions for those species listed in the 1989 checklist are given in that publication.

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ORECTOLOBIDAE
*Nebrius ferrugineus* (Lesson, 1830: 95; New Ireland; Waigeo). Indo-Pacific.

RHINCODONTIDAE
*Rhincodon typus* Smith, 1828: 2; Cape Town. L. Compagno's (1984a) record was overlooked in 1989 checklist. Cosmopolitan.

LAMNIDAE
*Isurus oxyrinchus* Rafinesque, 1810: 12; Mediterranean. L. Compagno's (1984a) record was overlooked in 1989 checklist. Cosmopolitan.

ODONTASPIDAE
*Isurus oxyrinchus* Rafinesque, 1810: 12; Mediterranean. L. Compagno's (1984a) record was overlooked in 1989 checklist. Cosmopolitan.

ALOPIIDAE

CARCHARHINIDAE
*Carcharhinus albimarginatus* (Rüppell, 1837: 64; Red Sea). Indo-Pacific. Compagno (1984b) mentions the possibility that this species occurs in the Caribbean, but we concur with Randall (in litt.) that this is highly unlikely.

*Carcharhinus amblyrhynchos* (Bleeker, 1856: 467; Java Sea). Listed as *C. wheeleri* in 1989 checklist; but this species is now (Randall, 1995) considered a synonym of *C. amblyrhynchos*. Indo-Pacific.


*Negaprion acutidens* (Rüppell, 1837: 65; Jiddah, Red Sea). Record based on sighting and sketch of a 2.2-2.5 m individual on outer reef at Diego Garcia by M. Spalding. Indo-Pacific.


*Triaenodon obesus* (Rüppell, 1837: 64; Jiddah, Red Sea). P. An individual about 1 m TL (Fig.1) photographed under a coral bommie in 9 m on outside of Île du Passe, Salomon Atoll; Wheeler's (1953) record was overlooked in 1989 checklist. Indo-Pacific.

Sphyraena sp. S. (unconfirmed, members of 1979 Chagos Expedition). Estimated to be about 5 m, hence probably *S. mokarran* if size estimate is accurate. Range unassigned.

MYLIOBATIDAE

DASYATIDAE
*Dasyatis pulcher* (Müller and Henle, 1841: 200; South Africa). Western Indian Ocean.


*Urogymnus africanus* (Bloch and Schneider, 1801: 367; Guinea). Listed as *U. asperrimus* in 1989 checklist; name change follows B. Sérèt as quoted in Randall and Figure 1. *Triaenodon obesus*, photographed off Île du Passe, Salomon Atoll by R.C. Anderson.
Anderson (1993). Indo-west Pacific and marginally on Pacific plate (Carolines), and eastern Atlantic.

**ALBULIDAE**


**MORINGUIDAE**

*Moringua ferruginea* Bliss, 1883: 57; Mauritius. Indo-Pacific.

*Moringua javanica* (Kaup, 1865: 105; Java). Indo-west Pacific and marginally on Pacific plate (Kiribati).

*Moringua microchir* Bleeker, 1853: 124; Ambon. Indo-west Pacific.

**CHLOPSIDAE**


*Kaupichthys atronasus* Schultz, 1953: 65; Marshalls. Indo-west Pacific and marginally on Pacific plate (Marshalls).


*Kaupichthys* sp. These specimens remain unidentified. Range unassigned.

*Powellichthys* sp. This specimen remains unidentified. Range unassigned.

**MURAENIDAE**

*Anarchias allardicei* Jordan and Starks in Jordan and Seale, 1906: 204; Samoa. Indo-Pacific.


*Echidna leucotaenia* Schultz, 1943: 22; Phoenix Islands. Indo-Pacific.

*Echidna nebulosa* (Ahl, 1789: 7; East Indies). Indo-Pacific.

*Echidna polyzona* (Richardson, 1845: 112; no type locality). Indo-Pacific.

*Echidna unicolor* Schultz, 1953: 106; Marshalls. Indo-Pacific.


*Enchelycore schismatorhynchus* (Bleeker, 1853: 301; Sumatera). Indo-Pacific.

*Enchelynassa canina* (Quoy and Gaimard, 1824: 247; Waigeo and Rawak). Indo-Pacific.

*Gymnomuraena zebra* (Shaw and Nodder, 1797: pl. 322; Pacific). Indo-Pacific.

*Gymnothorax breedeni* McCosker and Randall, 1977: 162, Comoro Islands. S. P. Photographed (Fig. 2) on several occasions at Salomon and Peros Banhos Atolls, on outer reef slopes in about 8-12 m in areas of broken coral offering shelter for fairy basslets (*Pseudanthias* spp) and fusilier damselfish (*Lepidozygus tapeinosoma*). Indo-Pacific.


*Gymnothorax chilospilus* (Bleeker, 1865: 52; Benkulen, Sumatera). Indo-Pacific.


*Gymnothorax fimbriatus* (Bennett, 1831: 168; Mauritius). Indo-Pacific.

*Gymnothorax flavimarginatus* (Rüppell, 1830: 119; Red Sea). Indo-Pacific.

*Gymnothorax fuscomaculatus* (Schultz, 1953: 147; Marshalls). Indo-Pacific.


*Gymnothorax margaritophorus* (Bleeker, 1865: 53; Ambon). Indo-Pacific.

*Gymnothorax melatremus* Schultz, 1953: 120; Marshalls. Indo-Pacific.

*Gymnothorax melatremus* Schultz, 1953: 120; Marshalls. Indo-Pacific.

*Gymnothorax meleagris* (Shaw and Nodder, 1795: Pl. 220; Pacific). Specimens at USNM (#'s 312543, 313857). Also photographed (Fig. 3) at Salomon and Peros Banhos Atolls in 7-10 m. Indo-Pacific.


*Gymnothorax rupepelliae* McClelland, 1845: 213; Bengal, India). Indo-Pacific.

*Gymnothorax undulatus* (Lacepède, 1803: 629; no type locality). Indo-Pacific.

*Gymnothorax zonipeltis* Seale, 1906: 7; Tahiti. Indo-Pacific.

*Gymnothorax* sp 1. This and the following three species remain unidentified, but are under study by E. Bohlke, ANSP. Range unassigned.
Figure 3. *Gymnothorax meleagris*, photographed off Île Fouquet, Peros Banhos Atoll by R.C. Anderson

*Gymnothorax* sp 2. Range unassigned.
*Gymnothorax* sp 3. Range unassigned.
*Gymnothorax* sp 4. Range unassigned.

*Scuticaria tigrinus* (Lesson, 1829: 399; East Indies). One specimen from Diego Garcia at USNM (# 312867). Indo-Pacific.

*Siderea grisea* (Lacepede, 1803: 629; Madagascar). This and the next species were placed in *Gymnothorax* in the 1989 checklist. The name change reflects current usage (e.g. Randall, 1995). Western Indian Ocean.

*Siderea picta* (Ahl, 1789: 8; East Indies). Indo-Pacific.

*Uropterygius concolor* Rüppell, 1838: 83; Red Sea. Indo-Pacific.

*Uropterygius fuscoguttatus* Schultz, 1953: 156; Marshalls. Indo-Pacific.


*Uropterygius polyspilus* (Regan, 1909: 438; Tahiti). Indo-Pacific.


*Uropterygius* sp 1. The single specimen (ROM 38925) remains unidentified. Range unassigned.

**CONGRIDAE**

*Conger cinereus* Rüppell, 1830: 115; Red Sea. Indo-Pacific.

*Gorgasia maculata* Klauserwitz and Eibl-Eibesfeldt, 1959: 147; Nicobar Islands. Indian Ocean east to Cocos (Keeling) Islands.

**Heteroconger hassi** (Klauserwitz and Eibl-Eibesfeldt, 1959:148; Maldives). Indo-west Pacific and margin-ally on the Pacific plate (Marianas).

**OPHICHTHIDAE**

*Brachysomophis crocodilinus* (Bennett, 1833: 32; Mauritius). Indo-Pacific.


*Callochelys marmoratus* (Bleeker, 1853: 37; Sumatera). Indo-Pacific.

*Lammnostoma orientalis* (McClelland, 1844: 213; Coromandel Coast). L. Indo-Pacific.

*Leiuraus semicinctus* (Lay and Bennett, 1839: 66; Hawaii). Indo-Pacific.

*Muraenichthys laticaudata* (Ogilby, 1897: 247; Fiji). Indo-Pacific.


*Myrichthys maculosus* (Cuvier, 1816: 232; no type locality). Indo-Pacific.

*Ophisurus serpens* (Linnaeus, 1758: 244; Atlantic). Eastern Atlantic to Indo-west Pacific.


**CLUPEIDAE**

*Spratelloides delicatulus* (Bennett, 1831: 168; Mauritius). Indo-west Pacific.

*Spratelloides gracilis* (Temminck and Schlegel, 1846: 238; Japan). Two specimens (ROM 70243 and 70244) from stomachs of little tunas (*Euthynnus affinis*) caught by trolling, one inside Salomon Atoll, the other outside Peros Banhos Atoll; R. C. Anderson, Feb 1996. Also schools seen inside Salomon Atoll. Indo-Pacific.

**SYNODONTIDAE**


*Saurida undosquamis* (Richardson, 1844-48: 138; Australia). L. Indo-west Pacific.

*Synodus binotatus* Schultz, 1953: 35; Marshalls. Indo-Pacific.


*Synodus jaculum* Russell and Cressey, 1979: 566; Great
Barrier Reef. Indo-Pacific.


**CHANIDAE**


**GOBIESOCIDAE**

*Aspasmodes* sp. This small specimen (7 mm SL) remains unidentified. Range unassigned.


**ANTENNARIIDAE**

*Antennarius coccineus* (Cuvier in Lesson, 1830: 143; Mauritius). Indo-Pacific.


**OPHIDIIDAE**

*Brotula multibarbata* Temminck and Schlegel, 1846: 251; Japan. Indo-Pacific.

**BYTHITIDAE**

*Brosmophyciops pautzkei* Schultz, 1960: 386; Marshalls. Indo-Pacific.

**DIEMATICHTHYIDAE**


**HMIRAMPHIDAE**

*Hyporhamphus affinis* (Gunther, 1889: 36; between Fiji and Vanuatu). L. Indo-Pacific.

**ANGERINIDAE**

*Atherinomorus lacunosus* (Forster, in Bloch and Schneider, 1801: 112; New Caledonia). Indo-Pacific.

**BERICYCIDAE**

*Beryx decadactylus* Cuvier in Cuvier and Valenciennes, 1829: 222; no type locality. L. Cosmopolitan.

*Beryx splendens* Lowe, 1834: 142; Madeira. L. Cosmopolitan.

**HOLOCENTRIDAE**


Sargocentron caudimaculatum (Rüppell, 1838: 97; Red Sea). Indo-Pacific.
Sargocentron diadema (Lacepède, 1802: 335; South Seas). Indo-Pacific.
Sargocentron inaequalis Randall and Heemstra, 1985: 8 (Chagos Archipelago). Western Indian Ocean.
Sargocentron macrospquamis Golani, 1984: 40; Amirante Islands. Western Indian Ocean.
Sargocentron microstoma (Günther, 1859: 34; Ambon). Indo-Pacific.
Sargocentron punctatissimum (Cuvier and Valenciennes, 1829: 215; Caroline Islands). Indo-Pacific.
Sargocentron spiniferum (Forsskal, 1775: 49; Jiddah, Red Sea). Indo-Pacific.
Sargocentron tiereoides (Bleeker, 1853: 334; Ambon). Indo-Pacific.
Sargocentron violaceum (Bleeker, 1853: 335; Ambon). Indo-Pacific.

AULOSTOMIDAE
Aulostomus chinensis (Linnaeus, 1766: 515; India). Indo-Pacific.

FISTULARIIDAE
Fistularia commersonii Rüppell, 1838: 142; Red Sea. Indo-Pacific.

SOLEOSTOMIDAE
The record of Solenostomus paradoxus based on the distribution map given in Orr and Fritzsche (1993 - which clearly shows the symbol for this species over the Chagos Archipelago) is incorrect (Orr, pers. comm.). The intended record is for the Maldives at 5°N rather than Chagos at 5°S.

SYNGNATHIDAE
Corythoichthys brachysoma (Bleeker, 1855: 327; Batu). Indo-Pacific.
Corythoichthys sculptus (Günther, 1870: 185; Fiji). Indo-Pacific.

Corythoichthys schultzi Herald, 1953: 271; Marshalls. Indo-west Pacific and marginally on Pacific plate (Tonga).

Doryrhamphus excisus Kaup, 1856: 54; no type locality. Indo-Pacific.
Doryrhamphus multiannulatus (Regan, 1903: 413; Mauritius). Western Indian Ocean.

Halicampus mataafae (Jordan and Seale, 1906: 213; Samoa). Indo-west Pacific and marginally on the Pacific plate (Marshalls, Samoa).

SCORPAENIDAE
*Dendrochirus zebra* (Cuvier in Cuvier and Valenciennes, 1829: 367; Mauritius and Moluccas). Listed in "Errata and Addenda" of 1989 checklist, based on three specimens from Diego Garcia Atoll (ROM 52465). Indo-west Pacific and marginally on Pacific plate (Samoa).
Parascorpaena aurita (Rüppell, 1838: 106; Red Sea). Indo-west Pacific.

Pontinus sp. An unidentified species based on a literature record. Range unassigned.
Pterois antennata (Bloch, 1787: 21; Ambon). Indo-Pacific.
Pterois miles (Bennett, 1828: 30; Sri Lanka). Indian Ocean and western edge of tropical Pacific.
Scorpaenodes albainensis (Evermann and Seale, 1907: 102; Philippines). Indo-west Pacific.
Scorpaenodes guamensis (Quoy and Gaimard, 1824: 326; Guam). Indo-Pacific.
Scorpaenodes kelloggi (Jenkins, 1903: 492; Hawaii). Indo-Pacific.

Scorpaenodes scaber (Ramsey and Ogilby, 1885: 577; Shark Reef, Australia). Range unassigned due to confusion with *S. guamensis*.

Scorpaenopsis gibbosa (Bloch and Schneider, 1801: 192; America). Western Indian Ocean.
Scorpaenopsis oxycephala Bleeker, 1849: 7; Java. Indo-west Pacific and marginally on Pacific plate.

Scorpaenopsis sp 1. An undescribed species to be described by Eschmeyer and Rama Rao. Range unassigned.
Scorpaenopsis sp 2. An undescribed species to be described by Eschmeyer and Rama Rao. Range unassigned.

Sebastapistes cyanostigma (Bleeker, 1856: 385; Indonesia). Indo-west Pacific and marginally on Pacific plate (Marshalls).
Sebastapistes mauritiana (Cuvier in Cuvier and Valenciennes, 1829: 322; Mauritius). Listed as *S. strongia* in 1989 checklist; subsequently reidentified by RW. Indo-Pacific.

Synanceia verrucosa Bloch and Schneider, 1801: 195; India. Indo-Pacific.

*Taenianotus triacanthus* Lacepède, 1802: 303; no type locality. Indo-Pacific.

CARACANTHIDAE
Caracanthus madagascariensis (Guichenot, 1869: 195; Madagascar). Western Indian Ocean.
Caracanthus unipinnus (Gray, 1831: 20; Pacific Seas). Indo-Pacific.

PLATYCEPHALIDAE

Rogadius serratus (Cuvier in Cuvier and Valenciennes, 1829: 259; Sri Lanka). Indo-west Pacific.
Thysanophrys arenicola Schultz, 1966: 60; Marshalls. Indo-west Pacific and marginally on Pacific plate (Marshalls).

DACTYLOPTERIDAE

Dactyloptena orientalis (Cuvier in Cuvier and Valenciennes, 1829: 134; Mauritius). L. Indo-Pacific.

SERRANIDAE

This family includes the Anthiidae of the 1989 checklist following current concepts. It has been broken down by subfamilies and tribes (sensu Baldwin and Johnson, 1993) for convenience. Cephalopholis sonnerati (Valenciennes in Cuvier and Valenciennes, 1828: 299; Pondicherry, India) was recorded from Chagos in an anonymous publication (Anonymous, 1995), and is not included in the checklist despite its probable occurrence there.

Anthilinae

Luconichthys addisi (Smith, 1955: 348; Aldabra). Record by Heemstra and Randall (1986: 513) was overlooked in 1989 checklist. Western Indian Ocean.


*Pseudanthias cooperi (Regan, 1902: 273; Maldives). P. Based on a photograph by R. C. Anderson in 30 m off Île du Passe, Salomon Atoll. Indo-Pacific.

Pseudanthias evansi (Smith, 1954: 1; Shimoni, Kenya). Listed as Mirolabrichthys evansi in 1989 checklist. The generic change for this and the next two species follows current usage (e.g. Randall and Anderson, 1993). Indian Ocean.

Pseudanthias pulcherrimus Heemstra and Randall, 1986: 512; Mauritius. Listed as Anthias sp. in 1989 checklist. Western Indian Ocean.


Epinephelinae

Diplopironia

Belonoperca chabanaudi Fowler and Bean, 1930: 182; Sulawesi. Indo-west Pacific and marginally on Pacific plate (Marshalls, Samoa).

Epinephelini

Aethaloperca roga (Forsskål, 1775: 38; Jiddah, Red Sea). Indo-west Pacific and marginally on Pacific plate.

Anyperodon leucogrammicus (Valenciennes in Cuvier and Valenciennes, 1828: 347; Moluccas and Seychelles). Indo-Pacific.

Cephalopholis argus Bloch and Schneider, 1801: 311; East Indies. Indo-Pacific.


Cephalopholis miniata (Forsskål, 1775: 41; Jiddah, Red Sea). Indo-Pacific.


Cephalopholis sexmaculata (Rüppell, 1830: 107; Red Sea). Indo-Pacific.


Cephalopholis urodeta (Forster in Bloch and Schneider, 1801: 333; Marquesas). Listed as Cephalopholis nigripinnis in 1989 checklist; change follows Heemstra and Randall (1993). Included is the fish identified as "Cephalopholis sp" in 1989 checklist (Pl. IV C), reidentified for us by J. E. Randall. Indo-Pacific.

Epinephelus caeruleopunctatus (Bloch, 1790: 94; no type locality). Indo-west Pacific and marginally on Pacific plate (Kiribati).

Epinephelus chlororostigma (Valenciennes in Cuvier and Valenciennes, 1828: 352; Seychelles). L. Indo-west Pacific and marginally on Pacific plate (Carolines).

Epinephelus fasciatus (Forsskål, 1775: 40; Rās Muhammad, Red Sea). Indo-Pacific.

Epinephelus flavocaudreus (Lacepède, 1802: 331; Mauritius). L. Indian Ocean.

*Epinephelus fuscoguttatus (Forsskål, 1775: 41; Red Sea). L. The range map of Heemstra and Randall, 1993: 156, shows a record from the Chagos Archipelago, although this locality is not specifically mentioned in the text. Specimens were seen at Peros Banhos and Diego Garcia by M. Spalding. Indo-Pacific.


Epinephelus longispinis (Kner, 1864: 27; Madras). L. Indo-west Pacific.


Epinephelus merra Bloch, 1793: 17; Japan. Indo-Pacific.

Epinephelus miliaris (Valenciennes in Cuvier and Valenciennes, 1830: 520; New Guinea). A specimen (ROM 42623) collected by Ryther in 1980 was not mentioned (Kiribati).
Epinephelus morrhua (Valenciennes in Cuvier and Valenciennes, 1833: 434; Mauritius). L. Indo-Pacific.

Epinephelus multinotatus (Peters, 1876: 435; Mauritius/Seychelles). L. Indian Ocean.


Epinephelus retouti Bleeker, 1868: 339; Réunion. L. Indo-West Pacific.


*Priacanthus hamrur* (Forsskål, 1775: 45; Red Sea). Three adults seen on outer reef slope of Île Poule, Pérros Banhos Atoll (Fig. 4). Indo-Pacific.

**APOGONIDAE**

The names used for pinkish to red species of *Apogon* (*A. coccineus*, *A. doryssa*, *A. erythrinus* and *A. talboti*) are very tentative identifications awaiting resolution of the taxonomic problems by D. W. Greenfield.

*Apogon abrogramma* Fraser and Lachner, 1985: 5; Seychelles. Indo-West Pacific.

*Apogon angustatus* (Smith and Radcliffe in Radcliffe, 1911: 253; Malanipa, Philippines). Indo-Pacific.


*Apogon coccineus* Rüppell, 1838: 88; Red Sea. Indo-Pacific.


*Apogon doryssa* (Jordan and Seale, 1906: 245; Samoa). Material of this species was included with, and figured as (Fig. 158) *A. coccineus* in the 1989 checklist. Indo-Pacific.

*Apogon erythrinus* Snyder, 1904: 526; Hawaii. Greenfield (pers.comm.) suspects that this species might be a Hawaiian endemic. Indo-West Pacific (?).


*Apogon fraenatus* Valenciennes, 1832: 57; New Guinea and Guam. Indo-Pacific.

*Apogon francisae* Allen, Kuiter and Randall, 1994: 33; Flores. Listed as *Apogon* sp. 1 in the 1989 checklist. This designation was placed in the synonymy of *A. fukuii* by Hayashi (1990). However, Hayashi clearly had some doubts as to the conspecificity of the two taxa, for his identification label reads "*Apogon cf fukuii*". In fact we find that the single specimen differs from *A. fukuii* in all the ways listed by Allen et al. (1994) in the


**PSEUDOCHROMIDAE**


**PLESIOPIDAE**

*Calloplesiops altivelis* (Steindachner, 1903: 17; Sumatera). Indo-West Pacific and marginally on Pacific Plate (Marianas).

**KUHILIIDAE**

*Kuhlia mugil* (Bloch and Schneider, 1801: 541; Tahiti). Indo-Pacific.

**PRIACANTHIDAE**


*Priacanthus hamrur* (Forsskål, 1775: 45; Red Sea). Three adults seen on outer reef slope of Île Poule, Pérros Banhos Atoll (Fig. 4). Indo-Pacific.

**GRAMMISTINI**


Grammistis sexlineatus (Thunberg, 1792: 142; Japan). Indo-Pacific.

**PSEUDOGRAMMA polycanthum** (Bleeker, 1856: 375; Ternate). Indo-Pacific.
description of their new species except that we can discern no weak serrations at the angle of the preopercular ridge. Central Indian Ocean to western Pacific and marginally on Pacific plate (Belau).


**Apogon semiornatus** Peters, 1876: 436; Mauritius. Indo-west Pacific.

**Apogon talboti** Smith, 1961: 386; Zanzibar. Indo-west Pacific.

**Apogonichthys perdix** Bleeker, 1854: 321; Flores. Indo-Pacific.

**Archamia fucata** (Cantor, 1849: 986; "Sea of Pinang"). Indo-west Pacific and marginally on Pacific plate (Marshalls).

**Cheilodipterus artus** Smith, 1961: 409; Mahé. Listed as *C. lachneri* in 1989 checklist. Range was assigned as Indian Ocean, but *C. artus* has an Indo-Pacific distribution (excluding the Red Sea) east to the Tuamotu Archipelago (Gon, 1993).

**Cheilodipterus macrodon** (Lacepède, 1802: 252; Mauritius). Indo-Pacific.

**Cheilodipterus quinquelineatus** Cuvier in Cuvier and Valenciennes, 1828: 167; Society Islands. Indo-Pacific.

**Foa brachygramma** (Jenkins, 1902: 447; Hawaii). Specimen from Diego Garcia at USNM (# 279789). The faded British Museum specimens reported as "Foa sp" in 1989 checklist are this species. Indo-Pacific.

**Fowleria abocellata** Goren and Karplus, 1980: 232; Gulf of Elat. Indo-west Pacific.

**Fowleria aurita** (Valenciennes in Cuvier and Valenciennes, 1831: 443; Mauritius). Indo-Pacific.

**Fowleria variegata** (Valenciennes, 1832: 55; Mauritius). Indo-west Pacific and marginally on Pacific plate (Carolines).

**Gymnapogon** sp. The four Chagos specimens remain unidentified. Range unassigned.

**Neamia octospina** Smith and Radcliffe in Radcliffe, 1912: 441; Philippines. Indo-west Pacific.

**Pseudamia gelatinosa** Smith, 1955: 690; Aldabra Islands. Indo-Pacific.

**Pseudamiops gracilicauda** (Lachner, 1953: 497; Marshalls). Indo-west Pacific.

**Pseudamiops sp 1.** This small species, with only a single anal spine, remains unidentified. Range unassigned.

**Pseudamiops sp 2.** These specimens could be *P. gracilicauda* or *P. pellucidus*, or the latter may be a junior synonym of the former. Included under *P. gracilicauda* in 1989 checklist. Range unassigned.

LACTARIIDAE
Lactarius lactarius (Bloch and Schneider, 1801: 31; Tranquebar). L. Doubtful record, range unassigned.

RACHYCENTRIDAE
Rachycentron canadum (Linnaeus, 1766: 491; Carolina). L. Cosmopolitan.

ECHENIIDEA

CARANGIDAE
*Carangoides fulvoguttatus* (Forsskål, 1775: 56; Red Sea). P. Several photographed at Three Brothers on Great Chagos Bank by R. C. Anderson; also reported by Anonymous (1995). Indo-west Pacific and marginally on Pacific plate (Belau).

Caranx ignobilis (Forsskål, 1775: 55; Jiddah, Red Sea). Indo-Pacific.


Caranx melanopterus Cuvier in Cuvier and Valenciennes, 1833: 116; Waigiou. Indo-Pacific.

Caranx sexfasciatus Quoy and Gaimard, 1825: 358; Waigiou. Indo-Pacific.

Elagatis bipinnulata Quoy and Gaimard, 1825: 363; Waigiou. Cosmopolitan.

Gnathanodon speciosus (Forsskål, 1775: 54; Jiddah, Red Sea). Indo-Pacific.

Naucrates ductor (Linnaeus, 1758: 295; "in Pelago"). L. Circumtropical.


Caranx melampygus Cuvier in Cuvier and Valenciennes, 1833: 207; Greek Islands. Cosmopolitan.

Scomberoides rutilus (Cuvier and Valenciennes, 1830: 544; Seychelles. Indo-Pacific.

Carangus lapidus Cuvier and Valenciennes, 1830: 545; Marshall Islands. Indo-Pacific.

*Scomberoides pictus* (Bleeker, 1853: 113; Ambon). Several schools seen and photographed inside Peros Banhos Atoll and at Three Brothers on Great Chagos Bank by R. C. Anderson. Indo-west Pacific and marginally on Pacific Plate (Ponape).

Pterocaesio tile (Cuvier in Cuvier and Valenciennes, 1830: 428; Caroline Islands). Indo-Pacific.

**LUTJANIDAE**

We follow Johnson (1993) in regarding the fusiliers (Caesioninae) as the sister group of the Lutjaninae, and have accordingly broken down the Lutjanidae to reflect this. The following species, recorded from Chagos on the range maps given in Allen (1984), are not represented by specimens from that locality (Allen, pers. comm.): *Lutjanus erythropterus*, *L. fulviflamma*, *L. lutjanus*, *L. malabaricus* and *L. rivulatus*. They are therefore omitted from our list. Also, the new record for *L. ehrenbergi* (Allen, 1985) is not represented by specimens (Allen, pers. comm.), and the record of *Pristipomoides sieboldii* (Bleeker, 1857), based on Anonymous (1995), is not included in our list.

**Caesioninae**

Caesio caerulea Lacepède, 1801: 85; Moluccas. Indo-Pacific.

Caesio lunaris Cuvier in Cuvier and Valenciennes, 1830: 441; New Ireland. Indo-west Pacific.

Caesio teres Seale, 1906: 44; Solomon Islands. Indo-Pacific.

Caesio xanthonota Bleeker, 1853: 466; Jakarta. Indo-west Pacific.

Pterocaesio chrysozonus (Cuvier in Cuvier and Valenciennes, 1830: 440; East Indies). Indo-west Pacific.

Pterocaesio lativittata Carpenter, 1987: 40; Cocos-Keeling Islands. The specimens listed as *Pterocaesio* sp. in 1989 checklist were designated as paratypes. Indo-west Pacific.


Aprion virescens Valenciennes in Cuvier and Valenciennes, 1830: 544; Seychelles. Indo-Pacific.

**Lutjaninae**

Aphareus furca (Lacepède, 1802: 429; Indo-Pacific).


Etelis carboculus Cuvier in Cuvier and Valenciennes, 1828: 127; Seychelles. L. Indo-Pacific.

Etelis carboculus Cuvier in Cuvier and Valenciennes, 1828: 127; Seychelles. L. Indo-Pacific.


**MENIDAE**

Mene maculata (Bloch and Schneider, 1801: 95; Tranquebar). L. Indo-Pacific.

**BRAMIDAE**

Brama dussuieri Cuvier in Cuvier and Valenciennes, 1831: 294; Indian Ocean. L. Circumtropical.

**CORYPHAENIDAE**

Coryphaena equiselis Linnaeus, 1758: 261; "in Pelago". Cosmopolitan.
Lutjanus bohar (Forsskål, 1775: 46; Red Sea). Indo-Pacific.
Lutjanus fulvus (Bloch and Schneider, 1801: 318; Tahiti). Indo-Pacific.
Lutjanus gibbus (Forsskål, 1775: 46; Red Sea). Indo-Pacific.
Lutjanus kasmira (Forsskål, 1775: 46; Red Sea). Indo-Pacific.
Lutjanus monostigma (Cuvier in Cuvier and Valenciennes, 1828: 446; Seychelles). Indo-Pacific.
Lutjanus sebae (Cuvier, 1816: 275; Java). L. Indo-west Pacific.
*Macolor macularis* Fowler, 1931: 181; Philippines. P. A juvenile about 15 cm TL (Fig. 5) was photographed in 10 m on the outer reef edge of Salomon Atoll near Île du Passe. Indo-west Pacific.
Macolor niger (Forsskål, 1775: 47; Jiddah, Red Sea). Indo-Pacific.
Paracaesio xanthura (Bleeker, 1869: 78; Madagascar). L. Record based on probability, not specimens (Allen pers. comm.). Indo-Pacific.
Pristipomoides filamentosus (Valenciennes in Cuvier and Valenciennes, 1830: 508; Réunion). L. Indo-Pacific.
Pristipomoides multidens (Day, 1870: 680; Andaman Islands). L. Indo-west Pacific and marginally on Pacific plate (Samoa).
Pristipomoides zonatus (Valenciennes in Cuvier and Valenciennes; 1830: 509; Mauritius). L. Listed as *Tropidinius zonatus* in 1989 checklist; change follows Allen (1985). This record based on probability, not specimens (Allen pers. comm.). Indo-west Pacific.

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**Figure 5.** *Macolor macularis* (juvenile), photographed off Île du Passe, Salomon Atoll by R.C. Anderson.

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NEMIPTERIDAE

*Scolopsis bilineatus* (Bloch, 1793: 3; Japan). L. Occurrence based on range map in Russell (1990), although Chagos is not mentioned in the text. Central Indian Ocean and western Pacific.
*Scolopsis frenatus* (Cuvier in Cuvier and Valenciennes, 1830: 343; Seychelles, Mauritius). P. Photographed at Salomon and Peros Banhos Atolls by R. C. Anderson; specimens at USNM (#'s 228680, 228804, 228909). Western Indian Ocean.

GERREIDAE

*Gerres acinaces* Bleeker, 1854: 194; Java. Indo-west Pacific.
*Gerres oblongus* Cuvier in Cuvier and Valenciennes, 1830: 479; Sri Lanka. Indo-west Pacific.
*Gerres oyena* (Forsskål, 1775: 35; Jiddah, Red Sea). Indo-Pacific.

HAEMULIDAE


LETHRINIDAE

*Gnathodentex aureolinesatus* (Lacepède, 1802: 42; no type locality). Indo-Pacific.
*Lethrinus harak* (Forsskål, 1775: 52; Arabia). S, P. Several photographed on seagrass beds in lagoon of Diego Garcia by M. Spalding. Indo-west Pacific and marginally on Pacific plate (Samoa).
*Lethrinus lentjan* (Lacepède, 1802: 281; Java). L. Based on distribution map in Carpenter and Allen (1989), although Chagos is not mentioned as a locality in the text. Indo-west Pacific and marginally on Pacific plate (Tonga).
*Lethrinus mahsena* (Forsskål, 1775: 52; Red Sea). Western Indian Ocean.
*Lethrinus nebulosus* (Forsskål, 1775: 52; Red Sea). L. Indo-west Pacific and marginally on Pacific plate.
Lethrinus obsoletus (Forsskal, 1775: 52; Arabia). L. Based on distribution map in Carpenter and Allen (1989) and specimens at USNM (#s 304282, 304301, 304307, 329687). Indo-west Pacific and marginally on Pacific plate (Samoa).


L. variegatus Ehrenberg in Cuvier and Valenciennes, 1830: 287; Massawa. P. Indo-west Pacific.

L. xanthochilus Klunzinger, 1870: 753; Red Sea. L; specimens at USNM (#s 304312, 304316). Indo-Pacific.


Otolithes ruber (Bloch and Schneider, 1801: 75; Tranquebar, India). L. Indo-west Pacific.

Mullididae


Parapriacanthus ransonneti Steindachner, 1870: 623; Japan. Indo-west Pacific and marginally on Pacific plate (Marshalls).

Pempheris schwenkii Bleeker, 1855: 314; Batu. Indo-Pacific.

Pempheris vanicolensis Cuvier in Cuvier and Valenciennes, 1831: 305; Vanicolo. Indo-Pacific.

Kypodidae

Kypnos cinerascens (Forsskal, 1775: 53; Arabia). Indo-Pacific.

*Kypnos vaigiensis (Quoy and Gaimard, 1825: 386; Waigeo). P. A mixed school of this and the preceding species photographed on the inside of Île Monpatre, Peros Banhos Atoll by R. C. Anderson. A second mixed school was seen by M. Spalding in a shallow embayment on the west side of Île Diamant, Peros Banhos Atoll. Indo-Pacific.

Drepanidae

Drepane punctata (Linnaeus, 1758: 273; Asia). L. Indo-west Pacific.

Epiphipidae

Platax orbicularis (Forsskal, 1775: 59; Jiddah, Red Sea). Indo-Pacific.

Chaetodontidae

Chaetodon auriga Forsskal, 1775: 60; Jiddah, Red Sea. Indo-Pacific.

*Chaetodon bennetti Cuvier, 1831: 84; Sumatera. Several photographed on seagrass beds in lagoon at Diego Garcia by M. Spalding. Indo-Pacific.

*Chaetodon citrinellus Cuvier in Cuvier and Valenciennes, 1831: 27; Guam and Tahiti. A pair photographed (Fig. 6) in about 4 m on outer reef slope of Île Poule, Peros Banhos Atoll. Indo-Pacific.

Chaetodon falcular Bloch, 1793: 102, no type locality. Western Indian Ocean.

Figure 6. Chaetodon citrinellus photographed at Peros Banhos Atoll by R.C. Anderson.
Chaetodon guttatissimus Bennett, 1832: 183; Sri Lanka. Indo-west Pacific.

Chaetodon kleinii Bloch, 1790: 7; East Indies. Indo-Pacific.


Chaetodon lunula (Lacepède, 1802: 507; Indian Ocean). Indo-Pacific.

Chaetodon madagaskariensis Ahl, 1923: 163; Madagascar. Western Indian Ocean.

Chaetodon melannotus Bloch and Schneider, 1801: 224; Bay of Bengal. P. Indo-Pacific.

Chaetodon meyeri Bloch and Schneider, 1801: 223; Moluccas. Indo-west Pacific and marginally on Pacific plate (Mauritius). Indo-Pacific.

Chaetodon mitratus Günther, 1860: 16; probably Mauritius. Indian Ocean.

*Chaetodon oxycephalus* Bleeker, 1853: 603; Ternate. P. A pair (about 25 cm TL) photographed in 10-15 m on a rich coral slope on side of Petite Île de la Passe, Peros Banhos Atoll by R. C. Anderson. Central Indian Ocean and western Pacific.


*Chaetodon trifasciatus* Quoy and Gaimard, 1825: 379; Guam. Indo-Pacific.

*Chaetodon unimaculatus* Bloch, 1787: 75; East Indies. Indo-West Pacific.

*Chaetodon vagabundus* Linnaeus, 1758: 276; "Indiis". Indo-Pacific.

*Chaetodon xanthocephalus* Bennett, 1832: 182; Sri Lanka. Western Indian Ocean.

*Chaetodon zanzibarensis* Playfair, 1867: 33; Zanzibar. Western Indian Ocean.

*Forcipiger flavissimus* Jordan & McGregor, 1898: 1671; Clarion Is. Indo-Pacific.

*Hemitaurichthys zoster* (Bennett, 1831: 61; Mauritius). Western Indian Ocean.

*Heniochus acuminatus* (Linnaeus, 1758: 272; "Indiis"). Specimens at USNM (#'s 280033 and 280052); several seen on outer reef on northwest side of Diego Garcia by M. Spalding. Indo-Pacific.

*Heniochus monoceros* Cuvier in Cuvier and Valenciennes, 1831: 100; Mauritius. Indo-Pacific.

*Heniochus singularis* Smith and Radcliffe, 1911: 321; Luzon. One seen on reef slope at Eagle Island, Great Chagos Bank, by M. Spalding. Central Indian Ocean, western Pacific and marginally on Pacific plate (Caroline Islands).

**POMACANTHIDAE**

*Apolemichthys trimaculatus* (Cuvier in Cuvier and Valenciennes, 1831: 196; Moluccas). Indo-west Pacific and marginally on Pacific plate (Marshalls).


*Centropyge bispinosus* (Günther, 1860: 48; Ambon). Indo-Pacific.

*Centropyge multispinis* (Playfair, 1867: 37; Zanzibar). Indo-west Pacific.

*Pomacanthus imperator* (Bloch, 1787: 51; Japan). Indo-Pacific.

*Pygopistes diacanthus* (Boddaert, 1776: 9; Ambon). Indo-Pacific.

**POMACENTRIDAE**

*Abudedefduf septemfasciatus* (Cuvier in Cuvier and Valenciennes, 1830: 463; Mauritius). Indo-Pacific.


*Abudedefduf vaigiensis* (Quoy and Gaimard, 1825: 391; Waigiu). Indo-west Pacific.

*Amphiprion clarkii* (Bleeker, 1847: 26; Java). Listed and illustrated as *Amphiprion clarkii* sp. in 1989 checklist. Indo-west Pacific and marginally on Pacific plate (Marshalls, Samoa).


*Chromis dimidiata* (Kunzinger, 1871: 529; Red Sea). Western Indian Ocean.

*Chromis lepidolepis* Bleeker, 1877: 389; Timor. Indo-Pacific.


*Chromis opercularis* (Günther, 1867: 84; Zanzibar). Western Indian Ocean.

*Chromis pembae* Welander and Schultz, 1951: 107; Pemba, Mozambique. Western Indian Ocean.

*Chromis ternatensis* (Playfair, 1867: 37; Ternate). Indo-west Pacific and marginally on Pacific plate (Marshalls, Kiribati).


*Centropyge bispinosus* (Günther, 1860: 48; Ambon). Indo-Pacific.

*Centropyge multispinis* (Playfair, 1867: 37; Zanzibar). Indo-west Pacific.

*Pomacanthus imperator* (Bloch, 1787: 51; Japan). Indo-Pacific.

*Pygopistes diacanthus* (Boddaert, 1776: 9; Ambon). Indo-Pacific.

**POMACANTHIDAE**

*Abudedefduf septemfasciatus* (Cuvier in Cuvier and Valenciennes, 1830: 463; Mauritius). Indo-Pacific.


*Abudedefduf vaigiensis* (Quoy and Gaimard, 1825: 391; Waigiu). Indo-west Pacific.

*Amphiprion clarkii* (Bleeker, 1847: 26; Java). Listed and illustrated as *Amphiprion clarkii* sp. in 1989 checklist. Indo-west Pacific and marginally on Pacific plate (Marshalls, Samoa).


*Chromis dimidiata* (Kunzinger, 1871: 529; Red Sea). Western Indian Ocean.

*Chromis lepidolepis* Bleeker, 1877: 389; Timor. Indo-Pacific.


*Chromis opercularis* (Günther, 1867: 84; Zanzibar). Western Indian Ocean.

*Chromis pembae* Smith, 1960: 323; Pemba, Mozambique. Western Indian Ocean.

*Chromis ternatensis* (Bleeker, 1856: 377; Ternate). Indo-west Pacific and marginally on Pacific plate (Marshalls, Kiribati).


*Chromis xutha* Randall, 1988: 54; Maldives. Listed as *C. atripes* in 1989 checklist. Some of the Chagos material
forms part of the type series of *C. xutha*. Western Indian Ocean.

*Chrysiptera biocellata* (Quoy and Gaimard, 1824: 389; Guam). Listed as *Chrysiptera* sp. 2 in 1989 checklist. Indo-west Pacific and marginally on Pacific plate (Marshall, Samoa).

*Chrysiptera glauca* (Cuvier in Cuvier and Valenciennes, 1830: 475; Guam). Indo-Pacific.

*Chrysiptera brownriggi* (Bennett, 1828: 8; Sri Lanka). Listed as *Chrysiptera leucopoma* (Lesson, 1830) in 1989 checklist; Bennett’s name was recognized as valid by Pethiyagoda and Russell (1994). Included in this species are specimens identified as *C. xanthozona* in 1989 checklist. Indo-Pacific.

*Chrysiptera unimaculata* (Cuvier, 1830: 478; Timor). Listed as *Chrysiptera* sp. 1 in 1989 checklist. Indo-west Pacific and marginally on Pacific plate (Marshall).

*Chrysiptera* sp 3. This juvenile remains unidentified. Range unassigned.

*Dascyllus aruanus* (Linnaeus, 1758: 275; "Indies"). Indo-Pacific.

*Dascyllus carneus* Fischer, 1885: 71; Mozambique. Indian Ocean and western edge of tropical Pacific.


*Dascyllus papillosus* (Bleeker, 1856: 376; Java). Indo-Pacific.


*Dascyllus imparipennis* (Vaillant and Sauvage, 1875: 279; Hawaii). Indo-Pacific.

*Dascyllus johnstonianus* Fowler and Ball, 1924: 271; Johnston Island. Indo-Pacific.


*Lepidozygus tapeinosoma* (Bleeker, 1856: 376; Ternate). Indo-Pacific.

*Plectroglyphodon daddii* (Liénard, 1839: 35; Mauritius). Indo-Pacific.

*Plectroglyphodon imparipennis* (Vaillant and Sauvage, 1875: 279; Hawaii). Indo-Pacific.

*Plectroglyphodon johnstonianus* Fowler and Ball, 1924: 271; Johnston Island. Indo-Pacific.

*Plectroglyphodon lacrymatus* (Quoy and Gaimard, 1825: 388; Guam). Indo-Pacific.


*Plectroglyphodon phoensis* (Schultz, 1943: 190; Phoenix Islands). Indo-Pacific.

*Pomacentrus caeruleus* Quoy and Gaimard, 1825: 397; Mauritius. Listed as *P. coelestis* in 1989 checklist. Indo-Pacific.


*Pomacentrus* sp. 2. This species remains unidentified. Range unassigned.

*Steegastes albiglactatus* (Schlegel and Müller, 1839-44: 21; Sulawesi). These specimens were confused with *S. nigricans* in 1989 checklist. Indo-Pacific.

*Steegastes fasciolatus* (Ogilby, 1889: 64; Lord Howe Island). Indo-Pacific.

*Steegastes nigricans* (Lacepède, 1802: 332; no type locality). Indo-Pacific.

**Cirrhitidae**

*Amblycirrhis bimacula* (Jenkins, 1903: 489; Hawaii). Indo-Pacific.

*Cirrhitichthys oxycalclalus* (Bleeker, 1855: 408; Ambon). Indo-Pacific.

*Cirrhitus pinnulatus* (Bloch and Schneider, 1801: 264; Tahiti). Indo-Pacific.

*Oxyrrhites typus* Bleeker, 1857: 40; Ambon. Indo-Pacific.

*Paracirrhitus arcatus* (Cuvier in Cuvier and Valenciennes, 1829: 74; Mauritius). Indo-Pacific.

*Paracirrhitus forsteri* (Bloch and Schneider, 1801: 191; Marquesas Islands). Indo-Pacific.

**Mugilidae**

*Crenimugil crenilabris* (Forsskål, 1775: 73; Red Sea). Indo-Pacific.

*Liza macrolepis* (Smith, 1846: none; South Africa). Indo-Pacific.


*Moolgara seheli* (Forsskål, 1775: 73; Red Sea). L. This record remains unconfirmed, listed as *Valamugil seheli* in 1989 checklist; generic change advised by H. Senou (in litt.) Range unassigned.

**Sphyraenidae**

*Sphyraena barracuda* (Walbaum, 1792: 94; West Indies). Cosmopolitan.

*Sphyraena forsteri* Cuvier in Cuvier and Valenciennes, 1829: 353; Tahiti. Indo-Pacific.

*Sphyraena nigripinnis* Temminck and Schlegel, 1842: 34; Japan. P. Indo-Pacific.

**Polynemidae**

*Polydactylus karu* (Bleeker, 1853: 600; East Indies). Four specimens in USNM (# 203674) from lagoon at Diego Garcia. Indo-west Pacific.


**Labridae**

*Anampses caeruleopunctatus* Rüppell, 1829: 42; Tor, Red Sea. Indo-Pacific.

*Anampses meleagrides* Valenciennes in Cuvier and Valenciennes, 1839: 12; Mauritius. Indo-West Pacific and marginally on Pacific plate (Caroline).

*Anampses twistii* Bleeker, 1856: 56; Ambon. Indo-Pacific.

*Bodianus anthioides* (Bennett, 1832: 167; Mauritius). Indo-Pacific.

*Bodianus axillaris* (Bennett, 1831: 166; Mauritius). Indo-Pacific.

*Bodianus diana* (Bennett, 1832: 167; Mauritius). Indo-Pacific.

*Bodianus bilunulatus* (Bennett, 1831: 166; Mauritius). Indo-Pacific.

*Bodianus diana* (Bennett, 1832: 167; Mauritius). Indo-Pacific.

*Cheilinus chlorourus* (Bloch, 1791: 24; Japan). L. speci-

*Cheilinus fasciatus* (Bloch, 1791: 18; Japan). Indo-west Pacific.

*Cheilinus oxycephalus* Bleeker, 1853: 349; Ambon. Indo-Pacific.


*Chelidon inermis* (Forsskål, 1775: 34; Al Munkh, Red Sea). Indo-Pacific.


*Coris africana* Smith, 1957: 119; Seychelles. Listed as *C. gaimard africana* in 1989 checklist; recognition at the specific level follows recent usage (e.g. Randall and Anderson, 1993). Indian Ocean.

*Coris aygula* Lacepède 1801: 96; Mauritius. L. Indo-Pacific.

*Coris batuensis* (Bleeker, 1856: 240; "Batoe" Island). Listed as *C. variegata* in the 1989 checklist; change follows recent usage (e.g. Randall and Anderson, 1993). Indo-west Pacific and marginally on Pacific plate (Marshalls).

*Coris frerei* (Playfair and Günther, 1867: 101; Zanzibar). Listed as *C. formosa* in 1989 checklist; change follows recent usage (e.g. Randall and Anderson, 1993). Indian Ocean and western edge of tropical Pacific.

*Cymolutes praetextatus* (Quoy and Gaimard, 1834: 712; Mauritius). Listed as *C. lecule* in 1989 checklist; change follows recent usage (e.g. Randall and Anderson, 1993). Indo-west Pacific and marginally on Pacific plate (Marshalls).


*Gomphosus caeruleus* Lacepède 1802: 100; Mauritius. Indian Ocean.

*Halichoeres cosmetus* Randall and Smith, 1982: 15; Maldives. Western Indian Ocean.

*Halichoeres hortulanus* (Lacepède, 1801: 449; Mauritius). Indo-Pacific.

*Halichoeres iridis* Randall and Smith, 1982: 17; Mauritius. Western Indian Ocean.


*Halichoeres nebulosus* (Valenciennes in Cuvier and Valenciennes, 1839: 461; Bombay). Indo-west Pacific.

*Halichoeres scapularis* (Bennett, 1831: 167; Mauritius). Indo-west Pacific.

*Halichoeres trispilus* Randall and Smith, 1982: 18; Maldives. P. A 15 cm TL specimen (Fig. 7) photographed in a cave at 22 m on southern reef slope of Nelson’s Island. Western Indian Ocean.

*Hemigymnus fasciatus* (Bloch, 1792: 6; Japan). Indo-Pacific.


Figure 7. *Halichoeres trispilus*, photographed off Nelson’s Island, Great Chagos Bank by R.C. Anderson.

*Hologymnosus annulatus* (Lacepède, 1801: 455; Mauritius). Indo-Pacific.

*Hologymnus doliatus* (Lacepède, 1801: 429; Indian Ocean). P. Several juveniles (Fig. 8) and an initial phase fish seen on outer reef at Peros Banhos Atoll and at Three Brothers, Great Chagos Bank by R. C. Anderson. Indo-Pacific.

*Labrichthys unilineatus* (Guichenot, 1847: 284; Guam). Indo-west Pacific and marginally on Pacific plate (Marshalls, Samoa).

*Labroides bicolor* Fowler and Bean, 1928: 224; Philippines. Indo-Pacific.

*Labroides dimidiatus* (Valenciennes in Cuvier and Valenciennes, 1839: 139; Mauritius). Indo-Pacific.


*Macropharyngodon bipartitus* Smith, 1957: 104; Pinda. Western Indian Ocean.

*Novaculichthys macrolepidotus* (Bloch, 1791: 135; no type locality). Based on 11 specimens (USNM # 277536) from Diego Garcia. Indo-west Pacific and marginally on Pacific plate (Marianas).

*Novaculichthys taeiourus* (Lacepède, 1801: 448; Madagascar). Indo-Pacific.

Figure 8. *Hologymnosus doliatus*, photographed off Île Manoel, Peros Banhos Atoll by R.C. Anderson.
Figure 9. Xyrichtys sp, photographed off Île Diamant, Peros Banhos Atoll by R.C. Anderson

Oxycheilinus arenatus (Valenciennes in Cuvier and Valenciennes, 1839: 101; Réunion). This and the following species were listed under Cheilinus in 1989 checklist; changes follow Westneat (1993). Indo-west Pacific.

Oxycheilinus digrammus (Lacepède, 1801: 448; Pacific Ocean). Indo-west Pacific.

Paracheilinus mccoskeri Randall and Harmelin-Vivien, 1977: 332; Comoro Islands. Indian Ocean.

Pseudocheilinus evanidus Jenkins, 1901: 64; Hawaii. Indo-Pacific.

Pseudocheilinus hexataenia (Bleeker, 1857: 84; Ambon). Indo-Pacific.

Pseudocheilinus octotaenia Jenkins, 1901: 64; Hawaii. Indo-Pacific.

Pseudocoris heteroptera (Bleeker, 1857: 78; Ambon). Western Indian Ocean.

Pseudocoris yamashiroi (Schmidt, 1930: 85; Japan). Indo-west Pacific.

Pseudodax moluccanus (Valenciennes in Cuvier and Valenciennes, 1840: 305; Moluccas). Indo-Pacific.

Stethojulis albovittata (Bonnaterre, 1788: 108; no type locality). Indian Ocean.

Stethojulis strigiventer (Bennett, 1832: 184; Mauritius). Indo-west Pacific and marginally on Pacific plate (Marshalls).

Thalassoma amblycephalum (Bleeker, 1856: 83, Malang, south-east Java). Indo-Pacific.


Thalassoma hebraicum (Lacepède, 1801: 454; Pacific Ocean). Western Indian Ocean.

Thalassoma lunare (Linnaeus, 1758: 283; "Indies"). Indo-Pacific.

Thalassoma purpureum (Forsskål, 1775: 27; Jiddah, Red Sea). Indo-Pacific.

Thalassoma quinquevittatum (Lay and Bennett, 1839: 66; Loo-Choo Islands). Indo-Pacific.

Thalassoma trilobatum (Lacepède, 1801: 454; Indo-Pacific Ocean). Indo-Pacific.

Wetmorella nigropinnata (Seale, 1901: 86; Guam). Indo-Pacific.

Xyrichtys aneitensis ( Günther, 1862: 183; southwest Pacific). Listed as Xyrichtys (sic) sp. in 1989 checklist. Indo-Pacific.

Xyrichtys pavo Valenciennes in Cuvier and Valenciennes, 1840: 61; Mauritius). Indo-Pacific.

Xyrichtys pentadactylus (Linnaeus, 1758: 261; India). L. Indo-west Pacific.

*Xyrichtys* sp. P. An unidentified species (Fig. 9) was photographed at two localities in the lagoon at Peros Banhos Atoll. It is pale, with slight counter-shading and a slightly darker snout. There is a single, black, three-quarter eye diameter spot edged with light blue ventrally, about one scale removed from the rear part of the spiny section of the dorsal fin. An elongate, black oval with diffuse edges and about 30% SL covering a maximum of two scales vertically is situated almost exactly halfway between the black spot and the end of the peduncle, its ventral border lying along the midlateral line. Iris mottled reddish. No other markings on fins or body. In the opinion of Dr J. E. Randall (in litt.), this species appears to be undescribed. Range unsign.

**SCARIDAE**


Cetoscarus bicolor (Ruppell, 1829: 82; Jiddah, Red Sea). Indo-Pacific.

Chlorurus capistratoides (Bleeker, 1849; Jakarta). L; P. Listed in 1989 checklist as Scarus atrilunula. Several initial phase (Fig. 10) and terminal phase fish were photographed at Three Brothers and at Nelson’s Island, Great Chagos Bank. Recognition of this genus follows Bellwood (1994); this and the next two species were placed in Scarus in the 1989 checklist. Indian Ocean and western edge of tropical Pacific.

Chlorurus enneacanthus (Lacepède, 1802: 2; Mauritius). Western Indian Ocean.

Chlorurus strongylocephalus (Bleeker, 1854: 439; Batavia). We follow Randall and Anderson (1993) in recognizing this species as distinct from C. gibbon, the name under which it was listed in 1989 checklist. Indian Ocean and western edge of tropical Pacific.
**Figure 10. Chlorurus capistratoides** (initial phase), photographed off North Brother Island, Great Chagos Bank by R.C. Anderson.

*Hipposcarus harid* (Forsskål, 1775: 30; Red Sea). Western Indian Ocean.

*Leptoscarus vaigiensis* (Quoy and Gaimard, 1824: 288; Waigeo). L. Indo-Pacific.

*Scarus falcipinnis* (Playfair, 1867: 865; Seychelles). Western Indian Ocean.

*Scarus festivus* Valenciennes in Cuvier and Valenciennes, 1840: 282; no type locality. P. Observed in small groups of both phases; photographed twice at Middle Brother, Great Chagos Bank, by R. C. Anderson. Indo-Pacific.

*Scarus frenatus* Lacepède, 1802: 3; Mauritius. Indo-Pacific.


*Scarus niger* Forsskål, 1775: 28; Red Sea. Indo-Pacific.

*Scarus prasiognathus* Valenciennes in Cuvier and Valenciennes, 1840: 272; New Ireland. P. Observed in small groups of both phases; photographed twice at Middle Brother, Great Chagos Bank, by R. C. Anderson. This appears to be the first documentation of the co-occurrence of this species and *S. falcipinnis*. Central Indian Ocean to western Pacific and marginally on Pacific plate (Belau).


*Scarus sordidus* Forsskål, 1775: 30; Red Sea. Indo-Pacific.

*Scarus scaber* Valenciennes in Cuvier and Valenciennes, 1840: 239; Mauritius. Western Indian Ocean.

*Scarus sordidus* Forsskål, 1775: 30; Red Sea. Indo-Pacific.

*Scarus tricolor* Bleeker, 1847: 164; Java. Indo-Pacific.

*Scarus viridifucatus* Smith, 1956: 12; Shimoni, Kenya. P. A terminal phase individual, about 30 cm TL, was photographed in 9 m on the outer reef edge at Middle Brother, Great Chagos Bank, by R. C. Anderson. Western Indian Ocean.

*Scarus sp.* This 206 mm SL specimen remains unidentified. Range unassigned.

**PINGUIPEDIDAE**


*Parapercis millepunctata* ( Günther, 1860: 261; Sri Lanka). Listed as *P. cephalopunctata* in 1989 checklist; change follows current usage (e.g. Randall and Anderson, 1993). Indo-Pacific.

*Parapercis sp.* Based on a colour photograph in Kyushin et al. (1977), but the provenance of the specimen is questionable. Range unassigned.

**TRICHONOTIDAE**

*Trichonotus sp.* Many individuals of a species of *Trichonotus* were seen and photographed on a sand slope on the inside of Petit Île Mapou, Peros Banhos Atoll. We have been unable to identify the species. One photographed specimen has a row of half-pupil diameter light brown spots along the dorsum; another fish has a row of pupil-sized turquoise spots along the dorsum. Both appear to have a black patch on the first few rays and interradial membranes of the dorsal fin. Range unassigned.

**CREEDITIDAE**

*Chalixodytes chameleontoculis* Smith, 1956: 890; Seychelles. Indian Ocean.


**BLENNIIDAE**

*Aspidontus dussumieri* (Valenciennes in Cuvier and Valenciennes, 1836: 282; Réunion). One specimen (ROM 70246) collected from floating sargassum weed in lagoon at Peros Banhos Atoll by R. C. Anderson. Indo-Pacific.


*Blenniella gibbifrons* (Quoy and Gaimard, 1824: 253; Hawaii). This and the next species were listed in *Istiblennius* in 1989 checklist; changes follow Springer and Williams (1994). Indo-Pacific.

*Blenniella periophthalmus* (Valenciennes in Cuvier and Valenciennes, 1836: 311; Santa Cruz). Indo-west Pacific.

*Cirripectes castaneus* Valenciennes in Cuvier and Valenciennes, 1836: 324; Mauritius. Western Indian Ocean.

*Cirripectes gilberti* Williams, 1988: 41; Sumatera. The Chagos specimens listed as *Cirripectes* sp in 1989 checklist were designated paratypes. Indian Ocean.

*Cirripectes perustus* Smith, 1959: 238; Malindi. Indo-west Pacific and marginally on Pacific plate (Kiribati).

*Cirripectes polyzona* (Bleeker, 1868: 278; Jakarta). Indo-Pacific.
Cirripectes quagga (Fowler and Ball, 1924: 273; Wake Island). Indo-Pacific.

Ecsenius midas (Stark, 1969: 1; Amirante Islands). Indo-west Pacific.

Ecsenius nalolo Smith, 1959: 245; Pinda. Western Indian Ocean.

Enchelyurus kraussi (Kunzinger, 1871: 497; Kosier, Red Sea). Indo-west Pacific and marginally on Pacific plate (Marianas).

Entomacrodus striatus (Quoy and Gaimard, in Cuvier and Valenciennes, 1836: 309; Mauritius). Indo-Pacific.


Exallias brevis (Kner, 1868: 334; Samoa). Indo-Pacific.

Glyptoparus delicatulus Smith, 1959: 249; Malindi. Indo-Pacific.

Istiblennius edentulus (Bloch and Schneider, 1801: 172; Society Islands). Indo-Pacific.

Meiacanthus smithi Klausewitz, 1962: 17; Maldives.

Omobranchus elongatus (Peters, 1855: 249; Mozambique). Indo-west Pacific.

Parenchelyurus hepburni (Snyder, 1908: 110; Japan).

Petroscirtes mitratus Rüppell, 1830: 111; Red Sea. Indo-west Pacific and marginally on Pacific plate (Kiribati).

Petroscirtes xestus Jordan and Seale, 1906: 433; Samoa.

*Plagiotremus phenax* Smith-Vaniz, 1976: 131; Sri Lanka. P. Several individuals observed in lagoons of Salomon and Peros Banhos by R. C. Anderson (Fig. 11). The presence of this species is not expected, since the blenny it mimics, Meiacanthus smithi, was recorded in 1989 checklist. Central and eastern Indian Ocean.

Plagiotremus rhihocheilos (Bleeker, 1852: 273; Wahai, Seram). Indo-Pacific.

Figure 11. Plagiotremus phenax, photographed between Île Jacobin and Île du Sel, Salomon Atoll by R.C. Anderson.

Plagiotremus tapeinosoma (Bleeker, 1857: 64; Ambon). Indo-Pacific.

TRIPTYERIGIDAE

Enneapterygius abeli (Klausewitz, 1960: 11; Red Sea). Western Indian Ocean.

Enneapterygius sp. This new species is presently undescribed. Range unassigned.


AMMODYTIDAE


CALLIONYMIDAE

Callionymus delicatulus Smith, 1963: 557; Seychelles.

ELEOTRIDAE

Calumia godeffroyi (Günther, 1877: 188; Society Islands). Indo-Pacific.

GOBIIDAE

Amblyeleotris steinitzi (Klausewitz, 1974: 70; Gulf of Aqaba). Indo-west Pacific and marginally on Pacific plate (Marshalls).

*Amblyeleotris wheeleri* (Polunin and Lubbock, 1977: 88; Aldabra). P. Several individuals photographed at Salomon and Peros Banhos Atolls (Fig. 12). Indo-west Pacific and marginally on Pacific plate (Marshall Islands).

Amblygobius hectori (Smith, 1956: 726; Seychelles). Indo-west Pacific.

Figure 12. Amblyeleotris wheeleri, photographed off Île Poule, Peros Banhos Atoll by R.C. Anderson.

Figure 18.
Amblygobius semicinctus (Bennett, 1833: 32; Mauritius). Indian Ocean.

Amblygobius tekomi (Smith, 1959: 204; Tekomi Island, Mozambique). A 51.4 mm SL specimen photographed in the Comores in 1988 has the cheek bar that was one of two possible characters used by Winterbottom and Emery (1986) to separate this species from A. nocturnus (Herre, 1945). The validity of A. tekomi clearly needs further attention. Indo-Pacific (?).

Asterropteryx DFH sp 7. This species remains undescribed. Indo-west Pacific and marginally on Pacific plate (Carolines, Samoa).

Asterropteryx ensiferus (Bleeker, 1874: 375; Buru, East Indies). Indo-Pacific.

Asterropteryx semipunctatus Ruppell, 1830: 138; Massawa, Asterropteryx ensiferus (Bleeker, 1874: 375; Buru, East Indies). Indo-Pacific.

Amblygobius tekomaji (Smith, 1959: 204; Tekomi Island, Mozambique). A 51.4 mm SL specimen photographed in the Comores in 1988 has the cheek bar that was one of two possible characters used by Winterbottom and Emery (1986) to separate this species from A. nocturnus (Herre, 1945). The validity of A. tekomi clearly needs further attention. Indo-Pacific (?).


Bryaninops ridens Smith, 1959: 216; Pinda. Indo-west Pacific and marginally on Pacific plate (Marshalls).


Cabillus lacertipes Smith, 1959: 207; Pinda. Indo-west Pacific.

Cabillus tongarevae (Fowler, 1927: 27; Tongareva Island). Indo-Pacific.


Callogobius flavobrunneus (Smith, 1958: 145; Pinda). Indian Ocean.

Callogobius maculipinnis (Fowler, 1918: 69; Philippines). Indo-west Pacific and marginally on Pacific plate (Marshalls).

Callogobius sclateri (Steindachner, 1880: 157; Society Islands). Indo-Pacific.

Callogobius sp 1. This and the next two species remain unidentified. The extra Callogobius species relative to the number reported by Winterbottom and Emery (1986) is the result of the subsequent splitting of lots by Lachner and McKinney, who were identifying members of this genus for us. Range unassigned.

Callogobius sp 2. Range unassigned.

Callogobius sp 3. Range unassigned.

Cryptocentrus cryptocentrus (Valenciennes in Cuvier and Valenciennes, 1837: 111; Massawa, Red Sea). Western Indian Ocean.

Ctenogobius crocineus Smith, 1959: 191; Seychelles. Indo-west Pacific.


Eviota infusata (Smith, 1956: 826; Seychelles). Indo-Pacific.


Eviota nigripinna Lachner and Karrera, 1980: 37; Agalega Island. Western Indian Ocean.

Eviota prasina (Klunzinger, 1871: 481; Koseir, Red Sea). Indo-west Pacific and marginally on Pacific plate (Be-lau).

Eviota sebreei Jordan and Seale, 1906: 390; Samoa. Indo-west Pacific and marginally on Pacific plate (Marshalls, Samoa).

Eviota sigillata Jewett and Lachner, 1983: 799; St Brandon’s Shoals. Indo-west Pacific and marginally on Pacific plate (Carolines).


Eviota sp A. This species remains undescribed. Range unassigned.

Eviota sp B. This species remains undescribed. Range unassigned.

Eviota sp C. This species remains undescribed. Range unassigned.

Exyrias belissimus (Smith, 1959: 202; Pinda). Indo-west Pacific and marginally on Pacific plate (Samoa).

Feia nympha Smith, 1959: 206; Pinda. Indo-Pacific.

Fusigobius DFH sp 8. This species remains undescribed. Range unassigned. We do not follow Randall (1995), who synonymized this genus with Coryphopterus, because he was not able to demonstrate monophyly for either genus, nor for the two combined. One of us (RW) believes that nomenclatural stability is best served by retaining the status quo unless monophyletic groups can be established.

*Fusigobius inframaculatus* (Randall, 1994: 331; Jana Island, Arabian Gulf). P. One individual (Fig. 13) photographed in a cave at about 22 m on outer reef slope of Middle Brother, Great Chagos Bank. Indo-west Pacific.

*Fusigobius neophytus* (Günther, 1877: 174; Ponape, Apia and Society Islands). Indo-Pacific.

*Gnatholepis anjerensis* (Bleeker, 1850: 251; Anjer). Listed as *G. cauerensis* in Winterbottom and Emery (1986); identification changed to conform with information provided by Randall and Goren (1993). Indo-Pacific.

*Gobiodon* DFH sp 3. This species remains unidentified. Range unassigned.


*Gobiodon micropus* Günther, 1861: 89; "China Sea". The stated type locality is apparently in error (Harold and Winterbottom, unpubl.data) - a not uncommon situation with specimens collected by Belcher. Western Indian Ocean.

*Gobiodon rivulatus* (Rüppell, 1830: 136; Red Sea). Harold and Winterbottom (unpubl.) have examined Rüppell’s types, and they are clearly conspecific with the Chagos material, thus allaying concerns raised by Randall and Goren (1993) concerning the colour pattern description given by Rüppell. Indo-west Pacific.

*Gobiodon unicolor* (Castelnau, 1873: 95; Queensland). Indo-west Pacific.

*Gobiodon cf. unicolor*. These four specimens (ROM 37247, 37248) remain of uncertain identification. They are recognized as a species separate from *G. unicolor* because the presence/absence of an interopercle/isthmus groove seems to be a reliable character (see Discussion in Winterbottom and Emery, 1986 under the latter species account). Range unassigned.

*Hetereleotris aporus* (Hoese and Winterbottom, 1979: 2; KwaZulu-Natal). Western Indian Ocean.


*Kelloggella quindecimguttata* (Fowler, 1946: 207; Ryukyu Islands). Indo-west Pacific.


*Oplopomus oplopomus* (Valenciennes, in Cuvier and Valenciennes, 1837: 66; Red Sea). P. Photographed in lagoon off Île du Coin, Peros Banhos Atoll (Fig. 14). Indo-Pacific.

*Paragobiodon echinocephalus* (Rüppell, 1830: 136; Red Sea). Chagos specimens are at BM(NH). Indo-Pacific.

*Paragobiodon lacunicolus* (Kendall and Goldsborough; 1911: 318; Tuamotus). Indo-Pacific.

*Paragobiodon modestus* (Regan, 1908: 242; Chagos Archipelago). Indo-west Pacific and marginally on Pacific plate (Marshalls).

*Paragobiodon xanthosomus* (Bleeker, 1852: 703; Ceram). Chagos specimens at BM(NH). Indo-west Pacific and marginally on Pacific plate (Samoa).

Pacific plate (Marshalls).


Pleurosicya occidentalis Larson, 1990: 40; St Brandon's Shoals. Listed as P. HKL sp 3 in Winterbottom and Emery (1986). Western Indian Ocean.


Priolepis cinctus (Regan, 1908: 240; Chagos Archipelago). Indo-west Pacific and marginally on Pacific plate (Kiribati).

Priolepis compita Winterbottom, 1975: 748; Chagos Archipelago. Indo-Pacific.

Priolepis inhaca (Smith, 1949: 103; Inhaca). Indo-Pacific.

Priolepis sp A. This specimen remains unidentified. Range unassigned.

Silhouettea insinuans Smith, 1959: 214; Seychelles. Western Indian Ocean.


Trimma dalerocheila Winterbottom, 1984: 697; Chagos Archipelago. The dark spot on the upper base of the pectoral fin illustrated by Winterbottom (1984) is white in living specimens. Western Indian Ocean.

Trimma emeryi Winterbottom, 1985: 752; Chagos Archipelago. Indo-west Pacific and marginally on Pacific plate (Carolines, Samoa).


Trimma fraena Winterbottom, 1984: 699; Chagos Archipelago. Western Indian Ocean.

Trimma griffithsi Winterbottom, 1984: 701; Chagos Archipelago. Indo-west Pacific.

Trimma haima Winterbottom, 1984: 702; Chagos Archipelago. Western Indian Ocean.

Trimma hoesei Winterbottom, 1984: 704; Chagos Archipelago. Indo-west Pacific.

Trimma naudei Smith, 1956: 828; Seychelles. Indo-west Pacific.

Trimma sheppardi Winterbottom, 1984: 709; Chagos Archipelago. Indo-west Pacific.

Trimma taylori Lobel, 1979: 2; Hawaii. Indo-Pacific.


Trimma winchi Winterbottom, 1984: 712; Chagos Archipelago. Indo-west Pacific.


Trimmatom officius Winterbottom and Emery, 1981: 146; Chagos Archipelago. Endemic to the Chagos Archipelago.


Valenciennia puellaris (Tomiyama in Tomiyama and Abe, 1956: 1136; Japan). Indo-west Pacific and marginally on Pacific plate (Carolines, Samoa).


Valenciennia strigata (Broussonet, 1782: 1; Tahiti). Indo-Pacific.


**KRAEMERIIDAE**

Kraemeria samoensis Steindachner, 1906: 41; Samoa. Indo-Pacific.

**MICRODESMIDAE**

*Gunnellichthys monostigma* Smith, 1958: 126; Pinda. P. Many seen (Fig. 15) in 5-10 m on sandy slopes in lagoon at Grande Île Mapou and Petite Île Mapou, Peros Banhos Atoll. Indo-Pacific.

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**Fig. 15** *Gunnellichthys monostigma*, photographed off Grande Île Mapou, Peros Banhos Atoll By R.C. Anderson.
Nemateleotris magnifica Fowler, 1938: 131; Sulawesi. Indo-Pacific.

Paragunellichthys fehlmanni Dawson, 1969: 373; Chagos Archipelago. Endemic to Chagos.

Ptereleotris eides (Jordan and Hubbs, 1925: 303; Japan). Indo-Pacific.

Ptereleotris heteroptera (Bleeker, 1855: 422; Bandjarmasin, Borneo). Indo-Pacific.


Ptereleotris monoptera Randall and Hoese, 1985: 24; Taiwan. The specimens listed as *Ptereleotris* n. sp. in Winterbottom and Emery (1986) were designated as paratypes. Indo-Pacific.

*Ptereleotris zebra* (Fowler, 1938: 134; Luzon). Many seen (some photographed) on outside of Ile Takamaka, Salomon Atoll, and outside Ile Diamant, Peros Banhos, in about 3-8 m, by R. C. Anderson. Indo-Pacific.

**XENISTHMIDAE**

Xenisthmus africanus Smith, 1958: 153; Pinda. Indian Ocean (?).

Xenisthmus polyzonatus (Klunzinger, 1871: 482; Al Ghardaqah, Red Sea). Indo-west Pacific and marginally on Pacific plate (Samoa).

**ACANTHURIDAE**


*Acanthurus dussumieri* Valenciennes in Cuvier and Valenciennes, 1835: 201; Mauritius. P. One adult photographed near Middle Brother, Great Chagos Bank, by R. C. Anderson. Indo-Pacific.

Acanthurus guttatus Bloch and Schneider, 1801: 215; Tahiti. Indo-Pacific.

*Acanthurus leucocheilus* Herre, 1927: 419; Philippines. Several individuals about 25-30 cm TL (Fig. 16) were seen in about 13 m at north end of North Brother, Great Chagos Bank. Indo-Pacific.

Acanthurus leucosternon Bennett, 1832: 183; Sri Lanka. Indian Ocean.

Acanthurus lineatus (Linnaeus, 1758: 274; "Indies"). Indo-Pacific.


Acanthurus nigricauda Duncker and Mohr, 1929: 75; South Seas. Indo-Pacific.

Acanthurus nigrofuscus (Forsskål, 1775: 64; Jiddah, Red Sea). Indo-Pacific.

Acanthurus tennentii Günther, 1861: 337; Sri Lanka. Western Indian Ocean.

Acanthurus thompsoni (Fowler, 1923: 386; Hawaii). Indo-Pacific.

Acanthurus triostegus (Linnaeus, 1758: 274; "Indies").

Zebrasoma scopas (Cuvier, 1829: 224; Banda, Indonesia). Indo-Pacific.

**ZANCLIDAE**

Zanclus cornutus (Linnaeus, 1758: 273; "Indies"). Indo-Pacific.

**SIGANIDAE**

Siganus argenteus (Quoy and Gaimard, 1825: 368; Guam and Mariana Islands). Specimen from Diego Garcia reported by Woodland (1990), also photographed at Peros Banhos Atoll and Three Brothers by R. C. Anderson. Indo-Pacific.

*Siganus canaliculatus* (Park, 1797: 33; Sumatera). Specimen from lagoon at Diego Garcia in USNM (# 235308). Indo-west Pacific.

**GEMPYLIDAE**


**TRICHIURIDAE**

*Tentoriceps cristatus* (Klunzinger, 1884: 120; Red Sea). Based on the range map given in Nakamura and Parin (1993). Indo-west Pacific.

**SCOMBRIDAE**

Although there is an obscure literature report (Yabe et al., 1958) of juvenile *Auxis thazard* (Lacepède, 1800) from Chagos, the locality has not been confirmed in the most recent revision of the genus (Collette and Aarland, 1996), and the species is not included in our checklist.

*Acanthocybium solandri* (Cuvier in Cuvier and Valenciennes, 1831: 192, no type locality). P. Several caught by trolling, one (99 cm TL) from Great Chagos Bank, photographed by R. C. Anderson. Cosmopolitan.

Euthynnus affinis (Cantor, 1849: 1088; "Sea of Penang"). Indo-Pacific.


Katsuwonus pelamis (Linnaeus, 1758: 297; "in Pelago in tertropicos"). L. This species has become the target of a major seasonal purse seine fishery in Chagos waters. Cosmopolitan.

Scomberomorus commerson (Lacepède, 1800:598; no locality). L. Indo-west Pacific.

Thunnus alalunga (Bonnaterre, 1788: 139; Mediterranean).

L. Cosmopolitan.

*Thunnus albacares* (Bonnaterre, 1788: 140; Jamaica). S. This species has become the target of a major seasonal purse seine fishery in Chagos waters. Cosmopolitan.

*Thunnus obesus* (Lowe, 1839: 78; Madeira). L. Cosmopolitan.

**XIPHIDAE**


**ISTIOPHORIDAE**

Istiophorus platypterus (Shaw and Nodder, 1791: Pl. 88; Indian and Pacific Oceans). L. Indo-Pacific.

*Makaira indica* (Cuvier in Cuvier and Valenciennes, 1831: 286; Sumatera). L. Indo-Pacific.


*Tetrapterus audax* (Philippi, 1887: 567; Chile). L. Indo-Pacific.

**NOMEIDAE**


**BOTHIDAE**

Arnoglossus intermedius (Bleeker, 1866: 47; Sulawesi). L. Indo-west Pacific.

Bothus mансus (Broussonet, 1782: none; Pacific Ocean). Indo-Pacific.

Bothus pantherinus (Rüppell, 1830: 121; Mahila, Red Sea). Indo-Pacific.

**SOLEIDAE**


**SAMARIDAE**


**BALISTIDAE**

This family has now been broken down into its two constituent subfamilies, the Balistinae and the Monacanthinae.

Balistinae

Abalistes stellaris (Bloch and Schneider, 1801: 476; Indian Ocean). L. Indo-west Pacific.

Balistapus undulatus (Park, 1797: 37; Sumatera). Indo-Pacific.

Balistoides conspicillum (Bloch and Schneider, 1801: 474; Indian Ocean). Indo-Pacific.


Melichthys indicus Randall and Klausewitz, 1973: 64; Thailand. The colour morph of this species mentioned and figured in Winterbottom et al. (1989: 68 and Fig. 431)
is a problem. It could be the Indian ocean form of *M. vidua* or a new species close to *vidua* (J. E. Randall, pers.comm.). It could also be a hybrid between *M. indicus* and *M. vidua*. It lacks the shallow diagonal cheek groove of *M. indicus*, and has a dark-margined pale dorsal and anal fin (both consistent with *M. vidua*). However, as in *M. indicus*, the caudal fin is entirely black, not white grading to pink as in *M. vidua*. If this specimen is a hybrid, it implies the presence of *M. vidua* at Chagos where it has not yet been found, unless recruitment is from some non-Chagos locality. Indian Ocean.


*Odonus niger* (Rüppell, 1836: 53; Red Sea). Indo-Pacific.

*Pseudobalistes flavimarginatus* (Rüppell, 1829: 33; Red Sea). V, P. A 23 mm SL specimen (ROM 70247) was collected by hand from floating sargassum weed and another about 50 cm TL was photographed in 12 m on the inner side of Grand Île Mapou, Peros Banhos Atoll, by R. C. Anderson. Indo-Pacific.

*Xanthichthys caeruleolineatus* Randall, Matsuura and Zama, 1978: 701; Tuamotu Archipelago. P. Adult (Fig. 18) photographed in about 17 m on outer reef
slop of Middle Brother Island. Indo-Pacific.

**Monacanthinae**


*Cantherhines dumerili* (Hollard, 1854: 361; Mauritius). Indo-Pacific.

*Cantherhines pardalis* (Rüppell, 1837: 57; Red Sea). The specimen identified as *C. fronticinctus* in 1989 checklist has been reidentified as this species. Indo-Pacific.

*Oxymonacanthus longirostris* (Bloch and Schneider, 1801: 464; East Indies). Indo-west Pacific and marginally on Pacific plate (Samoa).


*Pervagor janthinosoma* (Bleeker, 1854: 504; Ambon). Indo-west Pacific and marginally on Pacific plate (Marianas, Samoa).

*Thamnaconus modestoides* (Barnard, 1927: 78; Algoa Bay). Indo-west Pacific.

**OSTRACIIDAE**

*Ostracion cubicus* Linnaeus, 1758: 332; India. Indo-Pacific.

*Ostracion meleagris* Shaw and Nodder, 1796: Pl. 253; "southern Ocean". Indo-Pacific.

**TRIODONTIDAE**

*Triodon macropterus* Lesson, 1829: Pl. 4; Mauritius. L. Indo-west Pacific.

**TETRAODONTIDAE**

*Arothron meleagris* (Lacepède, 1798: 476; "seas of Asia"). Indo-Pacific.

*Arothron nigropunctatus* (Bloch and Schneider, 1801: 507; Tranquebar, India). Indo-west Pacific and marginally on Pacific plate (Samoa).

*Arothron stellatus* (Bloch and Schneider, 1801: 503; Mauritius). Listed as *A. aerostaticus* in 1989 checklist; change due to reidentification. Indo-Pacific.

*Canthigaster bennetti* (Bleeker, 1854: 504; Ambon). Indo-Pacific.

*Canthigaster janthinoptera* (Bleeker, 1855: 429; Ambon). Indo-Pacific.

*Canthigaster natalensis* (Günther, 1870: 303; Natal). Western Indian Ocean.

*Canthigaster smithae* Allen and Randall, 1977: 498; Mauritius. Several individuals and pairs seen (Fig. 19) between 11-25 m on outer reef slopes of Salomon Atoll and on the Great Chagos Bank (Three Brothers and Nelson Islands). Western Indian Ocean.


*Canthigaster valentini* (Bleeker, 1853: 130; Ambon). Indo-Pacific.

**DIODONTIDAE**

*Diodon hystrix* Linnaeus, 1758: 335; India. Cosmopolitan.

**DISCUSSION**

The 1989 checklist recorded 703 species from the Chagos Archipelago. This number dropped somewhat due to synonymization or misidentification of some species. We have added 80 new records to the fauna, 51 from observations and photographs by R. C. Anderson in 1996, supplemented by examination of Chagos specimens that are part of the computerized collection records at the USNM (there are numerous lots from Chagos at the USNM that are not on the computer data base), and from recent literature. The total known epipelagic and shore fish fauna now stands at 773 species. It is likely that there are many more species yet to be found at Chagos. For example, Randall and Anderson (1993) recorded 899 species from the Maldives, but the total recorded from that archipelago is now over 1,000 species (Anderson, pers.obs.). In addition to the new records, further research since the submission of the 1989 checklist in 1985 has resulted in 89 changes of nomenclature to that used in that checklist.

The geographic distributions (omitting those species for which a range was not assigned) are given in Table 1.
Thirty nine species (of the total number of species) had no range assigned to them. The Chagos fish fauna is overwhelmingly Indo-Pacific (sensu lato) in its biogeographic affinities (over 80% of the species), with only 12% of the fauna confined to the Indian Ocean. There are only three endemic species: the anemonefish *Amphiprion chagosensis*, the goby *Trimmatom officicis* and the microdesmid *Paragunnellichthys fehlmanni*. Although it is possible that one or other of the latter two may be found elsewhere, it is also probable that at least the razorfish, *Xyrichtys* sp, (and perhaps others) will be found to be endemic to the archipelago. 

The coral reef fish fauna is very similar in general composition to that of the Maldives, (Randall & Anderson, 1993) especially to that of the southern Maldives (RCA, pers. obs.), a region which does show some differences in its fish fauna from that of the north and centre of the Maldives (Anderson, 1992). The main difference between Chagos and the southern Maldives compared to the central/northern Maldives is in the higher proportion of western Indian Ocean species in the former regions. Since Chagos and, to a lesser extent, the southern Maldives (but not areas to the north) are under the influence of the eastward flowing Equatorial Counter Current for much of the year, this is not unexpected.

The relative contribution to the fauna of the various families remains similar to that delineated in the 1989 checklist. The ten most speciose families (given as n, n% of the total fauna, followed by the same calculations for the 1989 checklist): Gobiidae (98; 12.6; 91, 13.0); Labridae (63, 8.1; 59, 8.4); Serranidae (50, 6.5; 46, 6.5); Muraenidae (41, 5.3; 38, 5.4); Pomacentridae (38, 4.9; 42, 5.8); Apogonidae (33, 4.3; 30, 4.3); Acanthuridae (29, 3.7; 24, 3.4); Lutjanidae (29, 3.7; 29, 4.1); Blenniidae (25, 3.2; 22, 3.1) and Chaetodontidae (25, 3.2; 19, 2.7). Changes in rank from the 1989 checklist involve reversal of the positions for the Serranidae + Muraenidae and the Pomacentridae, and the Lutjanidae and Acanthuridae. Three families were tied for ninth in the 1989 list. The Blenniidae remain in this position, with the Chaetodontidae taking over tenth position, with the Balistidae falling to eleventh, and the Holocentridae tied for twelfth with the Scaridae (previously fourteenth). The Gobiidae is the most speciose family in the Maldives, the total number of species represent 9.3% of the total fish fauna (Randall and Goren, 1993; Randall and Anderson, 1993).

**ACKNOWLEDGEMENTS**

We would like to thank J. T. Williams (Smithsonian Institution, USNM) for sending RW the computer printout of their Chagos holdings and for arranging the loan of the requested material, and Ms M. Rouse (ROM) for processing the loan. G. R. Allen, E. B. Böhke, J. W. Orr, and J. E. Randall generously commented on specific questions we had regarding Chagos fishes. Thanks to the organizers and the leader (C. R. C. Sheppard) of the Friends of the Chagos 1996 Chagos Expedition for enabling RCA to visit the islands, and to Mike and Gitta Pilling and the crew of the MY *Inga-Viola* for their wholehearted support. We gratefully acknowledge the members of the 1996 expedition, in particular M. Spalding, for supplying information on sightings, specimens and photographs of fishes. Financial support for this paper came in part from NSERC OGP0001769 to RW. This is contribution # 62 of the ROM’s Centre for Biodiversity and Conservation Biology.

<table>
<thead>
<tr>
<th>Geographic distribution category</th>
<th>Species</th>
<th>%</th>
<th>% (1989 list)</th>
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<tr>
<td>Indo-Pacific (IP)</td>
<td>416</td>
<td>56.6</td>
<td>50.4</td>
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<tr>
<td>Indo-west Pacific (IWP)</td>
<td>88</td>
<td>11.9</td>
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<tr>
<td>IWP + marginal Pacific plate (MPP)</td>
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<td>Western Indian Ocean (WIO)</td>
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<td>7.3</td>
<td>6</td>
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<td>Cosmopolitan</td>
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<td>2.6</td>
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<tr>
<td>Indian Ocean (IO)</td>
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<tr>
<td>Circumtropical</td>
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<tr>
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<tr>
<td>Endemic</td>
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<tr>
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<tr>
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<tr>
<td>Unassigned</td>
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<td>4.9</td>
<td>13.9</td>
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STYLE OF THE HOUSE

Hyphens: Certain substantive compounds are hyphenated: gill-raker, soft-ray, type-species, type-locality, type-series, type-specimen. Other words often used together are not hyphenated unless they are used in adjectival expressions before a noun: anal fin / anal-fin rays; lateral line / lateral-line scales; gill arch / gill-arch filaments, etc.

Word usage: Although the following word pairs are often used interchangeably, we believe that consistent use of the first word as a noun and the second as an adjective will improve the precision of our writing: mucus / mucous; maxilla / maxillary; opercle / opercular; operculum / opercular. The operculum (= gill cover) comprises (usually) four separate bones: opercle, subopercle, preopercle and interopercle. The words preoperculum, suboperculum and interoperculum are unnecessary substitutes and not to be used for preopercle, subopercle and interopercle. The plural of operculum is opercula.

Decimal comma versus decimal point: Contrary to most journals published in South Africa and some European countries, we will not use a comma in place of a decimal point. Most computers do not read a comma as a decimal point. In addition, it is common in ichthyological papers to give sequences of measurements that include decimal numbers, with each measurement separated by a comma. If the comma is used to separate items in a series, as well as being used to indicate a decimal number, it will cause considerable confusion.

Fin formulae: Fin formulae will be designated as follows: D XII,10-12 indicates on continuous fin with 12 spines and 10-12 soft (segmented) rays; DX/L,10-12 indicates a fin divided to the base in front of the last spine; and D X+L,12 indicates two separate dorsal fins, the first with 10 spines and the second with 1 spine and 12 soft rays. If it is necessary to differentiate branched and unbranched soft-rays, lower-case Roman numerals will be used for unbranched rays and Arabic numerals for branched rays, e.g. D iii,8. Principal caudal-fin rays are defined as those that touch the hypural bones. The number of principal caudal rays is usually the number of branched rays plus two. If the principal caudal rays are in two separate groups, the number of rays in the dorsal group is given first: thus, "principal caudal rays 8+7" means that there are 15 principal caudal rays, with 8 rays in the dorsal group and 7 in the ventral group.

Abbreviations: Abbreviations normally end with a full stop: et al., e.g., etc., n.b., (note: these commonly used abbreviations of Latin words are not italicized). Dr (Doctor) and Mr (Mister) and compass directions (north, west, northwest, etc.) are abbreviated using capital letters without full stops: N, W, NW. We recommend the following abbreviations for ichthyological terms: SL - standard length, TL - total length, FL - fork length, GR - gill-rakers, LL - lateral line.

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