



The Marine Ichthyofauna of Egypt

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ARTICLE INFO

Article History:

Received: July, 2017

Accepted: July, 2017

Available online: July, 2017

Keywords:

Marine fish

Check list

Egypt

Red Sea

Mediterranean Sea

ABSTRACT

This work is the result of a compilation of the Egyptian ichthyofauna, aiming to provide a basis for monitoring and assessing potential biodiversity changes in the area. The main sources used were peer-reviewed papers and grey literature (i.e. unpublished reports, theses, conference proceedings, etc), FishBase and the Global Biodiversity Information Facility. Overall, 956 fish species (71 Elasmobranchii, 2 Holocephali and 883 Actinopteri) have been recorded to date from the Egyptian marine waters. Of those, 592 species are present only in the Red Sea, 263 species are present only in the Mediterranean Sea, and the remaining 101 species are reported from both seas. In addition to those 956 fishes, 52 species have been reported based on photos, but these records require further documentation with samples. Finally, for 64 species, which are listed in FishBase as belonging to the ichthyofauna of Egypt, no publication or museum sample report verifying their presence in Egypt could be traced. Thus, their presence remains questionable until further evidence becomes available.

INTRODUCTION

Egypt is a transcontinental country, located approximately between latitudes 22° and 32°N, and longitudes 25° and 35°E. Its 2450 km coastline extends along both the Mediterranean and the Red Seas. The Mediterranean coasts of the country (approximately 1050 km) extend from the city of Rafah (31.704444° N, 033.969444° E; North Sinai Governorate) in the east, to El-Sallum (31.776667° N, 025.693055° E; Egyptian Libyan border) in the west. The Red Sea coastline (approximately 1400 km) extends from Taba (29.488455° N, 34.900846° E; Egyptian-Israeli borders) in the east, to the borders with Sudan (22.001290° N, 36.883281° E) in the south.

Both the Mediterranean and the Red Seas are oligotrophic (Bas, 2009; Ismael, 2015) characterised by high salinities. In the Mediterranean, salinity exhibits an eastward increase, from approximately 37.5‰ in the west to 39.5‰ in the east (Skiriris, 2014), whereas in the Red Sea salinity increases northwards, from approximately 36.5‰ in the south to 40.5‰ in the north (Alraddadi, 2013). Mean annual temperature in the Red Sea ranges from 22 to 32°C (Rasul *et al.*, 2015) whereas in the Mediterranean temperature increases from west to east, ranges from 15 to 26°C (EEA, 2006). The marine ichthyofauna of the Mediterranean comprises >700 species (Froese and Pauly, 2016), whereas that of the Red Sea includes >1350 species (Golani and Bogorodsky, 2010; Rasul *et al.*, 2015). The opening of the Suez Canal, however, combined with climate change induced a temperature rise in the Mediterranean Sea that could be as high as approximately 1°C/decade (Skiriris *et al.*, 2012). This has allowed the introduction and establishment of biota of Indo-Pacific origin and, therefore, significant changes to the biodiversity of the eastern Mediterranean (Golani, 2010; Zenetos *et al.*, 2012; Goren, 2014). Currently, many Lessepsian species populations are established in Egyptian Mediterranean waters and have become commercially important (Halim and Rizkalla, 2011).

With respect to the marine ichthyofauna of Egypt, available studies carried out along the Egyptian Mediterranean and Red Sea coasts are sporadic and fragmentary. However, studies conducted to assess the marine biological diversity status of Egyptian Mediterranean sea ichthyofauna are even fewer (Elsayed, 1994a, 1994b; Akel and Allam, 2016). The aim of this work was to compile a check list of marine fish species recorded to date from Egypt. The objective of the list was to provide a scientific basis and relevant information to assist in the monitoring and assessment of potential changes to biodiversity in this unique area, given that Egyptian ichthyofauna undergoes constant changes due to invasive species. Nevertheless, in order to achieve the goal of monitoring and change assessment, a continuous monitoring programme and constant update of this check list is a prerequisite.

Mediterranean and Red Sea Ichthyofauna of Egypt

In order to compile a check list of marine fish species in Egypt, a preliminary list based on both peer-reviewed papers and grey literature (i.e. unpublished reports, theses, conference presentations) was created. This initial list was further enriched by the list of species for Egypt archived in FishBase (Froese and Pauly, 2016; http://fishbase.se/Country/CountryChecklist.php?showAll=yes&what=list&trpp=50&c_code=818&cpresence=Reported&sortBy=alpha2&vhabitat=all2).

The presence of each species was validated by cross-checking with at least one published reference in the Mediterranean Sea and/or the Red Sea. For species lacking such information, records from museum samples, as provided in FishBase (Froese and Pauly, 2016) and in the Global Biodiversity Information Facility (GBIF, 2016; www.gbif.org), were also used as valid records. Some species only had records based on photographs/human observation, whereas for others no actual evidence of their presence in Egypt was available. Hence, the species were allocated to three different lists: (a) species with documented presence in Egypt (i.e. from literature and museum samples); (b) species listed in FishBase as present in Egypt (Froese and Pauly, 2016) and/or GBIF (2016), based on photographs/human observation; and (c) species, whose presence in Egypt is unsubstantiated (based on general books) and thus need further verification.

Overall, the marine ichthyofauna of Egypt comprises 956 fish species (71 Elasmobranchii, 2 Holocephali and 883 Actinopteri), corresponding to 39 Orders (nine Elasmobranchii, one Holocephali and 29 Actinopteri) and 164 families (21 Elasmobranchii, one Holocephali and 143 Actinopteri). In total, 11 Orders and 55 families were present only in the Mediterranean Sea, seven Orders and 45 families were

recorded solely in the Red Sea, and the remaining 21 Orders and 65 families were found in both seas (Tables 1 and 2).

Table (1): Number of marine fish species reported from Egypt.

	<i>Elasmobranchii</i>			<i>Holocephali</i>			<i>Actinopteri</i>		
	Orders	Families	Species	Orders	Families	Species	Orders	Families	Species
Mediterranean Sea	4	11	39	1	1	2	6	43	222
Red Sea	1	3	21				6	42	571
Both seas	4	7	11				17	58	90
Total	9	21	71	1	1	2	29	143	883

Table (2): Checklist of the marine ichthyofauna of Egypt. The presence of each species in the Mediterranean Sea (MED) and/or the Red Sea (RS) is also provided.

Species	MED	RS
<i>Elasmobranchii</i>		
Carcharhiniformes		
Carcharhinidae		
<i>Carcharhinus albimarginatus</i> (Rüppell, 1837)		+
<i>Carcharhinus amblyrhynchos</i> (Bleeker, 1856)		+
<i>Carcharhinus brevipinna</i> (Müller & Henle, 1839)	+	+
<i>Carcharhinus falciformis</i> (Müller & Henle, 1839)		+
<i>Carcharhinus limbatus</i> (Müller & Henle, 1839)	+	+
<i>Carcharhinus longimanus</i> (Poey, 1861)		+
<i>Carcharhinus melanopterus</i> (Quoy & Gaimard, 1824)	+	+
<i>Carcharhinus plumbeus</i> (Nardo, 1827)	+	+
<i>Carcharhinus sorrah</i> (Müller & Henle, 1839)		+
<i>Carcharias taurus</i> Rafinesque, 1810		+
<i>Galeocerdo cuvier</i> (Péron & Lesueur, 1822)		+
<i>Loxodon macrorhinus</i> Müller & Henle, 1839		+
<i>Negaprion acutidens</i> (Rüppell, 1837)		+
<i>Rhizoprionodon acutus</i> (Rüppell, 1837)		+
<i>Triaenodon obesus</i> (Rüppell, 1837)		+
Hemigaleidae		
<i>Hemipristis elongata</i> (Klunzinger, 1871)		+
Scyliorhinidae		
<i>Galeus melastomus</i> Rafinesque, 1810	+	
<i>Scyliorhinus canicula</i> (Linnaeus, 1758)	+	
<i>Scyliorhinus stellaris</i> (Linnaeus, 1758)	+	
Sphyrnidae		
<i>Sphyrna lewini</i> (Griffith & Smith, 1834)		+
<i>Sphyrna mokarran</i> (Rüppell, 1837)	+	+
<i>Sphyrna zygaena</i> (Linnaeus, 1758)	+	
Triakidae		
<i>Galeorhinus galeus</i> (Linnaeus, 1758)	+	
<i>Iago omanensis</i> (Norman, 1939)		+
<i>Mustelus asterias</i> Cloquet, 1819	+	
<i>Mustelus mosis</i> Hemprich & Ehrenberg, 1899		+
<i>Mustelus mustelus</i> (Linnaeus, 1758)	+	
<i>Mustelus punctulatus</i> Risso, 1827	+	
Hexanchiformes		
Hexanchidae		
<i>Hexanchus griseus</i> (Bonnaterre, 1788)	+	
Lamniformes		

Lamnidae

<i>Carcharodon carcharias</i> (Linnaeus, 1758)	+	
<i>Isurus oxyrinchus</i> Rafinesque, 1810	+	
<i>Lamna nasus</i> (Bonnaterre, 1788)	+	

Myliobatiformes**Dasyatidae**

<i>Dasyatis pastinaca</i> (Linnaeus, 1758)	+	+
<i>Dasyatis tortonesei</i> Capapé, 1975	+	
<i>Taeniura grabata</i> (Geoffroy Saint-Hilaire, 1817)	+	
<i>Taeniura lymma</i> (Forsskål, 1775)		+

Gymnuridae

<i>Gymnura altavela</i> (Linnaeus, 1758)	+	
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Myliobatidae

<i>Aetomylaeus bovinus</i> (Geoffroy Saint-Hilaire, 1817)	+	
<i>Himantura uarnak</i> (Gmelin, 1789)	+	+
<i>Mobula mobular</i> (Bonnaterre, 1788)	+	
<i>Myliobatis aquila</i> (Linnaeus, 1758)	+	+
<i>Rhinoptera marginata</i> (Geoffroy Saint-Hilaire, 1817)	+	

Orectolobiformes**Ginglymostomatidae**

<i>Nebrius ferrugineus</i> (Lesson, 1831)		+
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Rhincodontidae

<i>Rhincodon typus</i> Smith, 1828		+
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Stegostomatidae

<i>Stegostoma fasciatum</i> (Hermann, 1783)		+
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Rajiformes**Rajidae**

<i>Dipturus oxyrinchus</i> (Linnaeus, 1758)	+	
<i>Leucoraja circularis</i> (Couch, 1838)	+	
<i>Raja asterias</i> Delaroche, 1809	+	
<i>Raja clavata</i> Linnaeus, 1758	+	
<i>Raja miraletus</i> Linnaeus, 1758	+	
<i>Raja montagui</i> Fowler, 1910	+	
<i>Raja radula</i> Delaroche, 1809	+	
<i>Rostroraja alba</i> (Lacepède, 1803)	+	

Rhinobatidae

<i>Glaucostegus halavi</i> (Forsskål, 1775)		+
<i>Rhinobatos cemiculus</i> Geoffroy Saint-Hilaire, 1817	+	+
<i>Rhinobatos rhinobatos</i> (Linnaeus, 1758)	+	+

Squaliformes**Centrophoridae**

<i>Centrophorus granulosus</i> (Bloch & Schneider, 1801)	+	
<i>Centrophorus uyato</i> (Rafinesque, 1810)	+	

Echinorhinidae

<i>Echinorhinus brucus</i> (Bonnaterre, 1788)	+	
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Etmopteridae

<i>Etmopterus spinax</i> (Linnaeus, 1758)	+	
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Oxynotidae

<i>Oxynotus centrina</i> (Linnaeus, 1758)	+	
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Squalidae

<i>Squalus acanthias</i> Linnaeus, 1758		+
<i>Squalus blainville</i> (Risso, 1827)		+

Squatiniformes**Squatinae**

<i>Squatina aculeata</i> Cuvier, 1829		+
<i>Squatina oculata</i> Bonaparte, 1840		+
<i>Squatina squatina</i> (Linnaeus, 1758)		+

Torpediniformes**Torpedinidae**

<i>Tetronarce tokionis</i> (Tanaka, 1908)		+
<i>Torpedo marmorata</i> Risso, 1810		+
<i>Torpedo nobiliana</i> Bonaparte, 1835		+
<i>Torpedo panthera</i> Olfers, 1831		+
<i>Torpedo torpedo</i> (Linnaeus, 1758)		+

Holocephali**Chimaeriformes****Chimaeridae**

<i>Chimaera monstrosa</i> Linnaeus, 1758		+
<i>Hydrolagus mirabilis</i> (Collett, 1904)		+

Actinopteri**Albuliformes****Albulidae**

<i>Albula glossodonta</i> (Forsskål, 1775)		+
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Anguilliformes**Anguillidae**

<i>Anguilla anguilla</i> (Linnaeus, 1758)		+
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Chlopsidae

<i>Kaupichthys atronasmus</i> Schultz, 1953		+
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Congridae

<i>Ariosoma balearicum</i> (Delaroche, 1809)		+
<i>Conger cinereus</i> Rüppell, 1830		+
<i>Conger conger</i> (Linnaeus, 1758)		+
<i>Gnathophis mystax</i> (Delaroche, 1809)		+
<i>Gorgasia preclara</i> Böhlke & Randall, 1981		+
<i>Gorgasia sillneri</i> Klausewitz, 1962		+
<i>Uroconger lepturus</i> (Richardson, 1845)		+

Muraenesocidae

<i>Congresox talabonoides</i> (Bleeker, 1853)		+
<i>Muraenesox cinereus</i> (Forsskål, 1775)		+

Muraenidae

<i>Echidna nebulosa</i> (Ahl, 1789)		+
<i>Echidna polyzona</i> (Richardson, 1845)		+
<i>Gymnomuraena zebra</i> (Shaw, 1797)		+
<i>Gymnothorax angusticauda</i> (Weber & de Beaufort, 1916)		+
<i>Gymnothorax buroensis</i> (Bleeker, 1857)		+
<i>Gymnothorax flavimarginatus</i> (Rüppell, 1830)		+

<i>Gymnothorax griseus</i> (Lacepède, 1803)		+
<i>Gymnothorax hepaticus</i> (Rüppell, 1830)		+
<i>Gymnothorax javanicus</i> (Bleeker, 1859)		+
<i>Gymnothorax johnsoni</i> (Smith, 1962)		+
<i>Gymnothorax meleagris</i> (Shaw, 1795)		+
<i>Gymnothorax pictus</i> (Ahl, 1789)		+
<i>Gymnothorax pindae</i> Smith, 1962		+
<i>Gymnothorax punctatofasciatus</i> Bleeker, 1863		+
<i>Gymnothorax randalli</i> Smith & Böhlke, 1997		+
<i>Gymnothorax rueppelliae</i> (McClelland, 1844)		+
<i>Gymnothorax undulatus</i> (Lacepède, 1803)		+
<i>Gymnothorax unicolor</i> (Delaroche, 1809)	+	
<i>Muraena helena</i> Linnaeus, 1758	+	
<i>Strophidon sathete</i> (Hamilton, 1822)		+
<i>Uropterygius genie</i> Randall & Golani, 1995		+
<i>Uropterygius golanii</i> McCosker & Smith, 1997		+
<i>Uropterygius polypsilus</i> (Regan, 1909)		+
Nemichthyidae		
<i>Avocettina infans</i> (Günther, 1878)		+
Nettastomatidae		
<i>Nettastoma melanurum</i> Rafinesque, 1810		+
Ophichthidae		
<i>Callechelys catostoma</i> (Schneider, 1801)		+
<i>Callechelys marmorata</i> (Bleeker, 1854)		+
<i>Cirrhimuraena playfairii</i> (Günther, 1870)		+
<i>Dalophis imberbis</i> (Delaroche, 1809)	+	
<i>Echelus myrus</i> (Linnaeus, 1758)	+	
<i>Lamnostoma orientalis</i> (McClelland, 1844)		+
<i>Muraenichthys schultzei</i> Bleeker, 1857		+
<i>Myrichthys maculosus</i> (Cuvier, 1816)		+
<i>Neenchelys microtretus</i> Bamber, 1915		+
<i>Ophichthus rufus</i> (Rafinesque, 1810)	+	
<i>Ophisurus serpens</i> (Linnaeus, 1758)	+	
<i>Phyllophichthus xenodontus</i> Gosline, 1951		+
<i>Yirkkala tenuis</i> (Günther, 1870)		+
Atheriniformes		
Atherinidae		
<i>Atherina boyeri</i> Risso, 1810		+
<i>Atherina hepsetus</i> Linnaeus, 1758		+
<i>Atherinomorus forskalii</i> (Rüppell, 1838)		+
<i>Atherinomorus lacunosus</i> (Forster, 1801)		+
<i>Hypoatherina barnesi</i> Schultz, 1953		+
<i>Hypotherina temminckii</i> (Bleeker, 1854)		+
Aulopiformes		
Aulopidae		
<i>Aulopus filamentosus</i> (Bloch, 1792)		+
Chlorophthalmidae		
<i>Chlorophthalmus agassizi</i> Bonaparte, 1840		+
Paralepididae		
<i>Arctozenus risso</i> (Bonaparte, 1840)		+
<i>Sudis hyalina</i> Rafinesque, 1810		+

Synodontidae

<i>Harpadon nehereus</i> (Hamilton, 1822)	+	+
<i>Saurida gracilis</i> (Quoy & Gaimard, 1824)		+
<i>Saurida lessepsenianus</i> Russell, Golani & Tikochinski, 2015	+	+
<i>Saurida tumbil</i> (Bloch, 1795)		+
<i>Synodus hoshinonis</i> Tanaka, 1917		+
<i>Synodus saurus</i> (Linnaeus, 1758)	+	
<i>Synodus synodus</i> (Linnaeus, 1758)	+	
<i>Synodus variegatus</i> (Lacepède, 1803)		+

Batrachoidiformes**Batrachoididae**

<i>Barchatus cirrhosus</i> (Klunzinger, 1871)		+
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Beloniformes**Belonidae**

<i>Ablennes hians</i> (Valenciennes, 1846)		+
<i>Belone belone</i> (Linnaeus, 1761)	+	
<i>Platybelone argalus platyura</i> (Bennett, 1832)		+
<i>Tylosurus acus imperialis</i> (Rafinesque, 1810)	+	+
<i>Tylosurus acus melanotus</i> (Bleeker, 1850)		+
<i>Tylosurus choram</i> (Rüppell, 1837)	+	+
<i>Tylosurus crocodilus crocodilus</i> (Péron & Lesueur, 1821)		+

Exocoetidae

<i>Exocoetus volitans</i> Linnaeus, 1758	+	
<i>Hirundichthys rondeletii</i> (Valenciennes, 1847)	+	
<i>Parexocoetus mento</i> (Valenciennes, 1847)	+	+

Hemiramphidae

<i>Hemiramphus far</i> (Forsskål, 1775)	+	+
<i>Hyporhamphus affinis</i> (Günther, 1866)	+	
<i>Hyporhamphus picarti</i> (Valenciennes, 1847)	+	

Beryciformes**Anomalopidae**

<i>Photoblepharon steinitzi</i> Abe & Haneda, 1973		+
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Holocentridae

<i>Myripristis murdjan</i> (Forsskål, 1775)		+
<i>Neoniphon sammara</i> (Forsskål, 1775)		+
<i>Sargocentron caudimaculatum</i> (Rüppell, 1838)		+
<i>Sargocentron diadema</i> (Lacepède, 1802)		+
<i>Sargocentron macrosquamis</i> Golani, 1984		+
<i>Sargocentron punctatissimum</i> (Cuvier, 1829)		+
<i>Sargocentron rubrum</i> (Forsskål, 1775)	+	+
<i>Sargocentron spiniferum</i> (Forsskål, 1775)		+

Trachichthyidae

<i>Hoplostethus mediterraneus</i> Cuvier, 1829	+	+
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Clupeiformes**Chirocentridae**

<i>Chirocentrus dorab</i> (Forsskål, 1775)		+
<i>Chirocentrus nudus</i> Swainson, 1839		+

Clupeidae

<i>Alosa fallax</i> (Lacepède, 1803)	+	
<i>Amblygaster sirm</i> (Walbaum, 1792)		+
<i>Herklotsichthys quadrimaculatus</i> (Rüppell, 1837)		+

<i>Herklotsichthys punctatus</i> (Rüppell, 1837)	+	+
<i>Hilsa kelee</i> (Cuvier, 1829)		+
<i>Sardina pilchardus</i> (Walbaum, 1792)	+	
<i>Sardinella albella</i> (Valenciennes, 1847)		+
<i>Sardinella aurita</i> Valenciennes, 1847	+	
<i>Sardinella jussieu</i> (Lacepède, 1803)		+
<i>Sardinella longiceps</i> Valenciennes, 1847		+
<i>Sardinella maderensis</i> (Lowe, 1838)	+	
<i>Spratelloides delicatulus</i> (Bennett, 1832)	+	+
<i>Spratelloides gracilis</i> (Temminck & Schlegel, 1846)		+
Dussumeriidae		
<i>Dussumieria elopsoides</i> Bleeker, 1849	+	+
<i>Etrumeus golanii</i> DiBattista, Randall & Bowen, 2012	+	+
Engraulidae		
<i>Encrasicholina heteroloba</i> (Rüppell, 1837)		+
<i>Encrasicholina gloria</i> Hata & Motomura, 2016		+
<i>Encrasicholina punctifer</i> Fowler, 1938		+
<i>Engraulis encrasicolus</i> (Linnaeus, 1758)	+	+
<i>Stolephorus indicus</i> (van Hasselt, 1823)		+
<i>Thryssa baelama</i> (Forsskål, 1775)		+
<i>Thryssa setirostris</i> (Broussonet, 1782)		+
Elopiformes		
Elopidae		
<i>Elops machnata</i> (Forsskål, 1775)		+
Megalopidae		
<i>Megalops cyprinoides</i> (Broussonet, 1782)		+
Gadiformes		
Bregmacerotidae		
<i>Bregmaceros nectabanus</i> Whitley, 1941	+	
Gadidae		
<i>Gadiculus argenteus</i> Guichenot, 1850	+	
<i>Micromesistius poutassou</i> (Risso, 1827)	+	
<i>Trisopterus capelanus</i> (Lacepède, 1800)	+	
Macrouridae		
<i>Nezumia aequalis</i> (Günther, 1878)	+	
Merlucciidae		
<i>Merluccius merluccius</i> (Linnaeus, 1758)	+	
Moridae		
<i>Gadella maraldi</i> (Risso, 1810)	+	
Phycidae		
<i>Phycis blennoides</i> (Brünnich, 1768)	+	
<i>Phycis phycis</i> (Linnaeus, 1766)	+	
Gasterosteiformes		
Pegasidae		
<i>Eurypegasus draconis</i> (Linnaeus, 1766)		+
Gobiesociformes		
Gobiesocidae		
<i>Lepadichthys erythraeus</i> Briggs & Link, 1963		+

Gonorynchiformes

Chanidae

Chanos chanos (Forsskål, 1775) +**Lampriformes****Regalecidae***Regalecus glesne* Ascanius, 1772 +**Trachipteridae***Zu cristatus* (Bonelli, 1819) +**Lophiiformes****Antennariidae***Antennarius striatus* (Shaw, 1794) +*Antennatus coccineus* (Lesson, 1831) +*Antennatus nummifer* (Cuvier, 1817) +**Lophiidae***Lophius budegassa* Spinola, 1807 +**Mugiliformes****Mugilidae***Chelon labrosus* (Risso, 1827) +*Chelon macrolepis* (Smith, 1846) +*Crenimugil crenilabis* (Forsskål, 1775) +*Liza aurata* (Risso, 1810) + +*Liza carinata* (Valenciennes, 1836) + +*Liza ramada* (Risso, 1827) + +*Liza saliens* (Risso, 1810) +*Moolgarda seheli* (Forsskål, 1775) + +*Mugil cephalus* Linnaeus, 1758 +*Oedalechilus labeo* (Cuvier, 1829) +**Myctophiformes****Myctophidae***Ceratoscopelus maderensis* (Lowe, 1839) +*Diaphus metopoclampus* (Cocco, 1829) +*Hygophum benoiti* (Cocco, 1838) +*Hygophum hygomii* (Lütken, 1892) +*Lampanyctus crocodilus* (Risso, 1810) +*Lampanyctus pusillus* (Johnson, 1890) +**Notacanthiformes****Notacanthidae***Notacanthus bonaparte* Risso, 1840 +**Ophidiiformes****Bythitidae***Microbrotula bentleyi* Anderson, 2005 +**Ophidiidae***Brotula multibarbata* Temminck & Schlegel, 1846 +*Ophidion barbatum* Linnaeus, 1758 +**Osmeriformes****Argentiniidae***Argentina sphyraena* Linnaeus, 1758 +**Microstomatidae***Microstoma microstoma* (Risso, 1810) +

Perciformes**Acanthuridae**

<i>Acanthurus mata</i> (Cuvier, 1829)	+
<i>Acanthurus nigrofuscus</i> (Forsskål, 1775)	+
<i>Acanthurus sohal</i> (Forsskål, 1775)	+
<i>Ctenochaetus striatus</i> (Quoy & Gaimard, 1825)	+
<i>Naso hexacanthus</i> (Bleeker, 1855)	+
<i>Naso lituratus</i> (Forster, 1801)	+
<i>Naso unicornis</i> (Forsskål, 1775)	+
<i>Zebrasoma desjardini</i> (Bennett, 1836)	+
<i>Zebrasoma velifer</i> (Bloch, 1795)	+
<i>Zebrasoma xanthurum</i> (Blyth, 1852)	+

Apogonidae

<i>Apogon campbelli</i> Smith, 1949	+
<i>Apogon coccineus</i> Rüppell, 1838	+
<i>Apogon erythrosoma</i> Gon & Randall, 2003	+
<i>Apogon imberbis</i> (Linnaeus, 1758)	+
<i>Apogon talboti</i> Smith, 1961	+
<i>Apogonichthyoides heptastigma</i> (Cuvier, 1828)	+
<i>Apogonichthyoides pharaonis</i> (Bellotti, 1874)	+
<i>Apogonichthyoides pseudotaeniatus</i> (Gon, 1986)	+
<i>Apogonichthyoides taeniatus</i> (Cuvier, 1828)	+
<i>Apogonichthyoides timorensis</i> (Bleeker, 1854)	+
<i>Apogonichthyoides uninotatus</i> (Smith & Radcliffe, 1912)	+
<i>Apogonichthys perdix</i> Bleeker, 1854	+
<i>Cercamia eremia</i> (Allen, 1987)	+
<i>Cheilodipterus arabicus</i> (Gmelin, 1789)	+
<i>Cheilodipterus lachneri</i> Klausewitz, 1959	+
<i>Cheilodipterus macrodon</i> (Lacepède, 1802)	+
<i>Cheilodipterus novemstriatus</i> (Rüppell, 1838)	+
<i>Cheilodipterus pygmaios</i> Gon, 1993	+
<i>Cheilodipterus quinquelineatus</i> Cuvier, 1828	+
<i>Fowleria aurita</i> (Valenciennes, 1831)	+
<i>Fowleria isostigma</i> (Jordan & Seale, 1906)	+
<i>Fowleria marmorata</i> (Alleyne & MacLeay, 1877)	+
<i>Fowleria vaiulae</i> (Jordan & Seale, 1906)	+
<i>Fowleria variegata</i> (Valenciennes, 1832)	+
<i>Jaydia queketti</i> (Gilchrist, 1903)	+
<i>Jaydia smithi</i> Kotthaus, 1970	+
<i>Lepidamia multitaeniata</i> (Cuvier, 1828)	+
<i>Neamia octospina</i> Smith & Radcliffe, 1912	+
<i>Nectamia annularis</i> (Rüppell, 1829)	+
<i>Nectamia fusca</i> (Quoy & Gaimard, 1825)	+
<i>Nectamia zebrinus</i> (Fraser, Randall & Lachner, 1999)	+
<i>Ostorhinchus cookii</i> (Macleay, 1881)	+
<i>Ostorhinchus fasciatus</i> (White, 1790)	+
<i>Ostorhinchus nigrofasciatus</i> (Lachner, 1953)	+
<i>Ostorhinchus pselion</i> (Randall, Fraser & Lachner, 1990)	+
<i>Pristiapogon exostigma</i> (Jordan & Starks, 1906)	+
<i>Pristiapogon fraenatus</i> (Valenciennes, 1832)	+
<i>Pristiapogon kallopterus</i> (Bleeker, 1856)	+
<i>Pseudamiops springeri</i> Gon, Bogorodsky & Mal, 2013	+
<i>Rhabdamia spilota</i> Allen & Kuitert, 1994	+
<i>Siphamia tubifer</i> Weber, 1909	+
<i>Taeniamia bilineata</i> (Gon & Randall, 1995)	+
<i>Taeniamia fucata</i> (Cantor, 1849)	+
<i>Taeniamia lineolata</i> (Cuvier, 1828)	+

Blenniidae

<i>Adelotremus leptus</i> Smith-Vaniz & Rose, 2012	+
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<i>Alloblennius jugularis</i> (Klunzinger, 1871)		+
<i>Alticus kirkii</i> (Günther, 1868)		+
<i>Blenniella periophthalmus</i> (Valenciennes, 1836)		+
<i>Blennius ocellaris</i> Linnaeus, 1758	+	
<i>Cirripectes castaneus</i> (Valenciennes, 1836)		+
<i>Ecsenius aroni</i> Springer, 1971		+
<i>Ecsenius dentex</i> Springer, 1988		+
<i>Ecsenius frontalis</i> (Valenciennes, 1836)		+
<i>Ecsenius gravieri</i> (Pellegrin, 1906)		+
<i>Ecsenius midas</i> Starck, 1969		+
<i>Enchelyurus kraussii</i> (Klunzinger, 1871)		+
<i>Entomacrodus solus</i> Williams & Bogorodsky, 2010		+
<i>Istiblennius edentulus</i> (Forster & Schneider, 1801)		+
<i>Istiblennius rivulatus</i> (Rüppell, 1830)		+
<i>Istiblennius unicolor</i> (Rüppell, 1838)		+
<i>Meiacanthus nigrolineatus</i> Smith-Vaniz, 1969		+
<i>Parablennius cyclops</i> (Rüppell, 1830)		+
<i>Parablennius incognitus</i> (Bath, 1968)	+	
<i>Parablennius tentacularis</i> (Brünnich, 1768)	+	
<i>Parablennius gattorugine</i> (Linnaeus, 1758)	+	
<i>Petroscirtes mitratus</i> Rüppell, 1830		+
<i>Plagiotremus rhinorhynchus</i> (Bleeker, 1852)		+
<i>Plagiotremus tapeinosoma</i> (Bleeker, 1857)		+
<i>Salaria pavo</i> (Risso, 1810)	+	
<i>Salaria basilisca</i> (Valenciennes, 1836)	+	
<i>Salarias fasciatus</i> (Bloch, 1786)		+
<i>Scartella cristata</i> (Linnaeus, 1758)	+	
Caesionidae		
<i>Caesio lunaris</i> Cuvier, 1830		+
<i>Caesio caerulea</i> Lacepède, 1801		+
<i>Caesio striata</i> Rüppell, 1830		+
<i>Caesio suevica</i> Klunzinger, 1884		+
<i>Caesio varilineata</i> Carpenter, 1987		+
<i>Pterocaesio chrysozona</i> (Cuvier, 1830)		+
<i>Pterocaesio pisang</i> (Bleeker, 1853)		+
Callanthiidae		
<i>Callanthias ruber</i> (Rafinesque, 1810)	+	
Callionymidae		
<i>Callionymus filamentosus</i> Valenciennes, 1837	+	+
<i>Callionymus gardineri</i> Regan, 1908		+
<i>Callionymus lyra</i> Linnaeus, 1758	+	
<i>Callionymus maculatus</i> Rafinesque, 1810	+	
<i>Callionymus oxycephalus</i> Fricke, 1980		+
<i>Diplogrammus gruvelli</i> Smith, 1963		+
<i>Diplogrammus infulatus</i> Smith, 1963		+
<i>Diplogrammus randalli</i> Fricke, 1983		+
<i>Synchiropus sechellensis</i> Regan, 1908	+	+
Caproidae		
<i>Antigonia rubescens</i> (Günther, 1860)		+
<i>Capros aper</i> (Linnaeus, 1758)	+	
Carangidae		
<i>Alectis alexandrina</i> (Geoffroy Saint-Hilaire, 1817)	+	
<i>Alectis ciliaris</i> (Bloch, 1787)		+
<i>Alectis indica</i> (Rüppell, 1830)		+
<i>Alepes djedaba</i> (Forsskål, 1775)	+	+
<i>Atule mate</i> (Cuvier, 1833)		+

<i>Carangoides armatus</i> (Rüppell, 1830)		+
<i>Carangoides bajad</i> (Forsskål, 1775)		+
<i>Carangoides chrysophrys</i> (Cuvier, 1833)		+
<i>Carangoides coeruleopinnatus</i> (Rüppell, 1830)		+
<i>Carangoides gymnostethus</i> (Cuvier, 1833)		+
<i>Carangoides orthogrammus</i> (Jordan & Gilbert, 1882)		+
<i>Carangoides fulvoguttatus</i> (Forsskål, 1775)		+
<i>Carangoides malabaricus</i> (Bloch & Schneider, 1801)		+
<i>Carangoides plagiotaenia</i> Bleeker, 1857		+
<i>Caranx crysos</i> (Mitchill, 1815)	+	
<i>Caranx heberi</i> (Bennett, 1830)		+
<i>Caranx ignobilis</i> (Forsskål, 1775)		+
<i>Caranx melampygus</i> Cuvier, 1833		+
<i>Caranx rhonchus</i> Geoffroy Saint-Hilaire, 1817	+	
<i>Caranx sexfasciatus</i> Quoy & Gaimard, 1825		+
<i>Decapterus macarellus</i> (Cuvier, 1833)		+
<i>Decapterus macrosoma</i> Bleeker, 1851		+
<i>Decapterus russelli</i> (Rüppell, 1830)		+
<i>Elagatis bipinnulata</i> (Quoy & Gaimard, 1825)		+
<i>Gnathanodon speciosus</i> (Forsskål, 1775)		+
<i>Lichia amia</i> (Linnaeus, 1758)	+	
<i>Megalaspis cordyla</i> (Linnaeus, 1758)		+
<i>Naucrates ductor</i> (Linnaeus, 1758)	+	
<i>Pseudocaranx dentex</i> (Bloch & Schneider, 1801)	+	
<i>Scomberoides commersonianus</i> Lacepède, 1801		+
<i>Scomberoides lysan</i> (Forsskål, 1775)		+
<i>Selar crumenophthalmus</i> (Bloch, 1793)		+
<i>Seriola dumerili</i> (Risso, 1810)	+	
<i>Seriola fasciata</i> (Bloch, 1793)	+	
<i>Seriolina nigrofasciata</i> (Rüppell, 1829)	+	+
<i>Trachinotus baillonii</i> Lacepède, 1801		+
<i>Trachinotus blochii</i> (Lacepède, 1801)		+
<i>Trachinotus ovatus</i> (Linnaeus, 1758)	+	
<i>Trachurus indicus</i> Nekrasov, 1966		+
<i>Trachurus mediterraneus</i> (Steindachner, 1868)	+	
<i>Trachurus picturatus</i> (Bowdich, 1825)	+	
<i>Trachurus trachurus</i> (Linnaeus, 1758)	+	
<i>Ulua mentalis</i> (Cuvier, 1833)		+
<i>Uraspis helvola</i> (Forster, 1801)		+

Centracanthidae

<i>Centracanthus cirrus</i> Rafinesque, 1810		+
<i>Spicara flexuosa</i> Rafinesque, 1810		+
<i>Spicara maena</i> (Linnaeus, 1758)		+
<i>Spicara smaris</i> (Linnaeus, 1758)		+

Centrolophidae

<i>Centrolophus niger</i> (Gmelin, 1789)		+
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Cepolidae

<i>Cepola macrophthalma</i> (Linnaeus, 1758)		+
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Chaetodontidae

<i>Chaetodon auriga</i> Forsskål, 1775		+
<i>Chaetodon austriacus</i> Rüppell, 1836		+
<i>Chaetodon fasciatus</i> Forsskål, 1775		+
<i>Chaetodon larvatus</i> Cuvier, 1831		+
<i>Chaetodon lineolatus</i> Cuvier, 1831		+
<i>Chaetodon melannotus</i> Bloch & Schneider, 1801		+
<i>Chaetodon paucifasciatus</i> Ahl, 1923		+
<i>Chaetodon semilarvatus</i> Cuvier, 1831		+

<i>Chaetodon trifascialis</i> Quoy & Gaimard, 1825			+
<i>Heniochus acuminatus</i> (Linnaeus, 1758)			+
<i>Heniochus intermedius</i> Steindachner, 1893			+
Cichlidae			
<i>Oreochromis aureus</i> (Steindachner, 1864)			+
<i>Tilapia zillii</i> (Gervais, 1848)			+
Cirrhitidae			
<i>Cirrhitus pinnulatus</i> (Forster, 1801)			+
<i>Paracirrhites forsteri</i> (Schneider, 1801)			+
Coryphaenidae			
<i>Coryphaena hippurus</i> Linnaeus, 1758			+
Creediidae			
<i>Linnichthys marisrubri</i> Fricke & Golani, 2012			+
Drepaneidae			
<i>Drepane punctata</i> (Linnaeus, 1758)			+
Echineidae			
<i>Echeneis naucrates</i> Linnaeus, 1758		+	+
<i>Remora remora</i> (Linnaeus, 1758)		+	+
Ephippidae			
<i>Platax orbicularis</i> (Forsskål, 1775)			+
<i>Platax teira</i> (Forsskål, 1775)			+
Epigonidae			
<i>Epigonus telescopus</i> (Risso, 1810)			+
Gerreidae			
<i>Gerres filamentosus</i> Cuvier, 1829			+
<i>Gerres longirostris</i> (Lacepède, 1801)			+
<i>Gerres oyena</i> (Forsskål, 1775)			+
Gobiidae			
<i>Amblyeleotris steinitzi</i> (Klausewitz, 1974)			+
<i>Amblyeleotris sungami</i> (Klausewitz, 1969)			+
<i>Amblygobius albimaculatus</i> (Rüppell, 1830)			+
<i>Amblygobius magnusi</i> (Klausewitz, 1968)			+
<i>Aulopareia unicolor</i> (Valenciennes, 1837)		+	
<i>Bathygobius cyclopterus</i> (Cuvier & Valenciennes 1837)		+	
<i>Bryaninops natans</i> Larson, 1985			+
<i>Bryaninops ridens</i> Smith, 1959			+
<i>Bryaninops tigris</i> Larson, 1985			+
<i>Bryaninops yongei</i> (Davis & Cohen, 1969)			+
<i>Coryogalops anomolus</i> Smith, 1958			+
<i>Coryogalops nanus</i> Kovačić & Bogorodsky, 2016			+
<i>Coryogalops ocheticus</i> (Norman, 1927)		+	+
<i>Cryptocentrus caeruleopunctatus</i> (Rüppell, 1830)			+
<i>Cryptocentrus cryptocentrus</i> (Valenciennes, 1837)			+
<i>Ctenogobiops crocineus</i> Smith, 1959			+
<i>Ctenogobiops maculosus</i> (Fourmanoir, 1955)			+
<i>Favonigobius melanobranchus</i> (Fowler, 1934)		+	
<i>Gnatholepis anjerensis</i> (Bleeker, 1851)			+
<i>Gnatholepis caudimaculata</i> Larson & Buckle, 2012			+
<i>Gobiodon ater</i> Herler, Bogorodsky & Suzuki, 2013			+
<i>Gobiodon bilineatus</i> Herler, Bogorodsky & Suzuki, 2013			+
<i>Gobiodon citrinus</i> (Rüppell, 1838)			+

<i>Gobiodon fuscoruber</i> Herler, Bogorodsky & Suzuki, 2013		+
<i>Gobiodon irregularis</i> Herler, Bogorodsky & Suzuki, 2013		+
<i>Gobius cobitis</i> Pallas, 1814	+	
<i>Gobius niger</i> Linnaeus, 1758	+	
<i>Gobius paganellus</i> Linnaeus, 1758	+	
<i>Heteroleotris diademata</i> (Rüppell, 1830)		+
<i>Heteroleotris psammophila</i> Kovačić & Bogorodsky, 2014		+
<i>Heteroleotris vulgaris</i> (Klunzinger, 1871)		+
<i>Istigobius decoratus</i> (Herre, 1927)		+
<i>Istigobius ornatus</i> (Rüppell, 1830)	+	+
<i>Lobulogobius bentuviai</i> Goren, 1984		+
<i>Luposicya lupus</i> Smith, 1959		+
<i>Macrodontogobius wilburi</i> Herre, 1936		+
<i>Oxyurichthys papuensis</i> (Valenciennes, 1837)	+	
<i>Oxyurichthys petersii</i> (Klunzinger, 1871)	+	+
<i>Pleurosicya mossambica</i> Smith, 1959		+
<i>Pleurosicya plicata</i> Larson, 1990		+
<i>Pleurosicya prognatha</i> Goren, 1984		+
<i>Pleurosicya sinaia</i> Goren, 1984		+
<i>Pseudaphya ferreri</i> (de Buen & Fage, 1908)	+	
<i>Psilogobius randalli</i> (Goren & Karplus, 1983)		+
<i>Silhouettea aegyptia</i> (Chabanaud, 1933)	+	+
<i>Tomiyamichthys dorsostigma</i> Bogorodsky, Kovačić & Randall, 2011		+
<i>Trimma avidori</i> (Goren, 1978)		+
<i>Trimma barralli</i> Winterbottom, 1995		+
<i>Trimma filamentosus</i> Winterbottom, 1995		+
<i>Trimma fishelsoni</i> Goren, 1985		+
<i>Trimma flavicaudatum</i> (Goren, 1982)		+
<i>Trimma mendelssohni</i> (Goren, 1978)		+
<i>Trimma sheppardi</i> Winterbottom, 1984		+
<i>Trimma taylori</i> Lobel, 1979		+
<i>Vanderhorstia ornatissima</i> Smith, 1959		+
Haemulidae		
<i>Diagramma pictum</i> (Thunberg, 1792)		+
<i>Plectorhinchus flavomaculatus</i> (Cuvier, 1830)		+
<i>Plectorhinchus gaterinus</i> (Forsskål, 1775)		+
<i>Plectorhinchus gibbosus</i> (Lacepède, 1802)		+
<i>Plectorhinchus mediterraneus</i> (Guichenot, 1850)	+	
<i>Plectorhinchus schotaf</i> (Forsskål, 1775)		+
<i>Plectorhinchus sordidus</i> (Klunzinger, 1870)		+
<i>Plectorhinchus umbrinus</i> (Klunzinger, 1870)		+
<i>Pomadasys argenteus</i> (Forsskål, 1775)		+
<i>Pomadasys furcatus</i> (Bloch & Schneider, 1801)		+
<i>Pomadasys incisus</i> (Bowdich, 1825)	+	+
<i>Pomadasys kaakan</i> (Cuvier, 1830)		+
<i>Pomadasys maculatus</i> (Bloch, 1793)		+
<i>Pomadasys multimaculatus</i> (Playfair, 1867)		+
<i>Pomadasys olivaceus</i> (Day, 1875)	+	
<i>Pomadasys striatus</i> (Gilchrist & Thompson, 1908)		+
<i>Pomadasys stridens</i> (Forsskål, 1775)	+	+
Istiophoridae		
<i>Istiophorus platypterus</i> (Shaw, 1792)		+
<i>Tetrapturus belone</i> Rafinesque, 1810	+	
Kuhliidae		
<i>Kuhlia mugil</i> (Forster, 1801)		+
Kyphosidae		
<i>Kyphosus bigibbus</i> (Lacepède, 1801)		+

<i>Kyphosus cinerascens</i> (Forsskål, 1775)		+
<i>Kyphosus vaigiensis</i> (Quoy & Gaimard, 1825)		+
Labridae		
<i>Acantholabrus palloni</i> (Risso, 1810)		+
<i>Anampses caeruleopunctatus</i> Rüppell, 1829		+
<i>Anampses twistii</i> Bleeker, 1856		+
<i>Coris aygula</i> Lacepède, 1801		+
<i>Coris caudimacula</i> (Quoy & Gaimard, 1834)		+
<i>Coris cuvieri</i> (Bennett, 1831)		+
<i>Coris julis</i> (Linnaeus, 1758)	+	
<i>Coris variegata</i> (Rüppell, 1835)		+
<i>Bodianus axillaris</i> (Bennett, 1832)		+
<i>Bodianus diana</i> (Lacepède, 1801)		+
<i>Cheilinus abudjubbe</i> Rüppell, 1835		+
<i>Cheilinus fasciatus</i> (Bloch, 1791)		+
<i>Cheilinus lunulatus</i> (Forsskål, 1775)		+
<i>Cheilinus trilobatus</i> Lacepède, 1801		+
<i>Cheilinus undulatus</i> Rüppell, 1835		+
<i>Cheilio inermis</i> (Forsskål, 1775)		+
<i>Ctenolabrus rupestris</i> (Linnaeus, 1758)	+	
<i>Epibulus insidiator</i> (Pallas, 1770)		+
<i>Gomphosus caeruleus</i> Lacepède, 1801		+
<i>Halichoeres hortulanus</i> (Lacepède, 1801)		+
<i>Halichoeres marginatus</i> Rüppell, 1835		+
<i>Halichoeres nebulosus</i> (Valenciennes, 1839)		+
<i>Halichoeres scapularis</i> (Bennett, 1832)		+
<i>Hemigymnus fasciatus</i> (Bloch, 1792)		+
<i>Hologymnosus annulatus</i> (Lacepède, 1801)		+
<i>Iniistius bimaculatus</i> (Rüppell, 1829)		+
<i>Iniistius pavo</i> (Valenciennes, 1840)		+
<i>Iniistius pentadactylus</i> (Linnaeus, 1758)		+
<i>Labroides dimidiatus</i> (Valenciennes, 1839)		+
<i>Labrus merula</i> Linnaeus, 1758	+	
<i>Labrus mixtus</i> Linnaeus, 1758	+	
<i>Labrus viridis</i> Linnaeus, 1758	+	
<i>Larabicus quadrilineatus</i> (Rüppell, 1835)		+
<i>Macropharyngodon marisrubri</i> Randall, 1978		+
<i>Oxycheilinus arenatus</i> (Valenciennes, 1840)		+
<i>Oxycheilinus digramma</i> (Lacepède, 1801)		+
<i>Oxycheilinus mentalis</i> (Rüppell, 1828)		+
<i>Pseudocheilinus evanidus</i> Jordan & Evermann, 1903		+
<i>Pseudocheilinus hexataenia</i> (Bleeker, 1857)		+
<i>Pseudodax moluccanus</i> (Valenciennes, 1840)		+
<i>Pteragogus clarkae</i> Randall, 2013		+
<i>Pteragogus cryptus</i> Randall, 1981		+
<i>Pteragogus trispilus</i> Randall, 2013	+	+
<i>Stethojulis interrupta</i> (Bleeker, 1851)		+
<i>Suezichthys caudavittatus</i> (Steindachner, 1898)		+
<i>Symphodus cinereus</i> (Bonnaterre, 1788)	+	
<i>Symphodus dodderleini</i> Jordan, 1890	+	
<i>Symphodus mediterraneus</i> (Linnaeus, 1758)	+	
<i>Symphodus melanocercus</i> (Risso, 1810)	+	
<i>Symphodus ocellatus</i> (Linnaeus, 1758)	+	
<i>Symphodus roissali</i> (Risso, 1810)	+	+
<i>Symphodus rostratus</i> (Bloch, 1791)	+	
<i>Symphodus tinca</i> (Linnaeus, 1758)	+	
<i>Thalassoma lunare</i> (Linnaeus, 1758)		+
<i>Thalassoma pavo</i> (Linnaeus, 1758)	+	
<i>Thalassoma purpureum</i> (Forsskål, 1775)		+
<i>Thalassoma rueppellii</i> (Klunzinger, 1871)		+

<i>Wetmorella nigropinnata</i> (Seale, 1901)		+
<i>Xyrichtys novacula</i> (Linnaeus, 1758)	+	
Lactariidae		
<i>Lactarius lactarius</i> (Bloch & Schneider, 1801)		+
Leiognathidae		
<i>Aurigequula fasciata</i> (Lacepède, 1803)		+
<i>Equulites klunzingeri</i> (Steindachner, 1898)	+	+
<i>Equulites leuciscus</i> (Günther, 1860)		+
<i>Equulites lineolatus</i> (Valenciennes, 1835)		+
<i>Gazza minuta</i> (Bloch, 1795)		+
<i>Leiognathus berbis</i> (Valenciennes, 1835)		+
<i>Leiognathus equulus</i> (Forsskål, 1775)		+
<i>Photopectoralis bindus</i> (Valenciennes, 1835)		+
<i>Secutor insidiator</i> (Bloch, 1787)		+
<i>Secutor ruconius</i> (Hamilton, 1822)		+
Lethrinidae		
<i>Gymnocranius grandoculis</i> (Valenciennes, 1830)		+
<i>Lethrinus borbonicus</i> Valenciennes, 1830		+
<i>Lethrinus harak</i> (Forsskål, 1775)		+
<i>Lethrinus lentjan</i> (Lacepède, 1802)		+
<i>Lethrinus mahsena</i> (Forsskål, 1775)		+
<i>Lethrinus microdon</i> Valenciennes, 1830		+
<i>Lethrinus nebulosus</i> (Forsskål, 1775)		+
<i>Lethrinus obsoletus</i> (Forsskål, 1775)		+
<i>Lethrinus variegatus</i> Valenciennes, 1830		+
<i>Lethrinus xanthochilus</i> Klunzinger, 1870		+
<i>Monotaxis grandoculis</i> (Forsskål, 1775)		+
Lobotidae		
<i>Lobotes surinamensis</i> (Bloch, 1790)	+	+
Lutjanidae		
<i>Aprion virescens</i> Valenciennes, 1830		+
<i>Lutjanus argentimaculatus</i> (Forsskål, 1775)		+
<i>Lutjanus bengalensis</i> (Bloch, 1790)		+
<i>Lutjanus bohar</i> (Forsskål, 1775)		+
<i>Lutjanus coeruleolineatus</i> (Rüppell, 1838)		+
<i>Lutjanus ehrenbergii</i> (Peters, 1869)		+
<i>Lutjanus erythropterus</i> Bloch, 1790		+
<i>Lutjanus fulviflamma</i> (Forsskål, 1775)		+
<i>Lutjanus fulvus</i> (Forster, 1801)		+
<i>Lutjanus gibbus</i> (Forsskål, 1775)		+
<i>Lutjanus kasmira</i> (Forsskål, 1775)		+
<i>Lutjanus lutjanus</i> Bloch, 1790		+
<i>Lutjanus malabaricus</i> (Bloch & Schneider, 1801)		+
<i>Lutjanus monostigma</i> (Cuvier, 1828)		+
<i>Lutjanus quinquelineatus</i> (Bloch, 1790)		+
<i>Lutjanus rivulatus</i> (Cuvier, 1828)		+
<i>Lutjanus sanguineus</i> (Cuvier, 1828)		+
<i>Lutjanus sebae</i> (Cuvier, 1816)		+
<i>Macolor niger</i> (Forsskål, 1775)		+
<i>Pinjalo pinjalo</i> (Bleeker, 1850)		+
<i>Pristipomoides multidentis</i> (Day, 1871)		+
<i>Pristipomoides sieboldii</i> (Bleeker, 1855)		+
Malacanthidae		
<i>Malacanthus brevirostris</i> Guichenot, 1848		+

Menidae

Mene maculata(Bloch & Schneider, 1801) +

Microdesmidae

Gunnellichthys monostigma Smith, 1958 +

Monodactylidae

Monodactylus argenteus(Linnaeus, 1758) +

*Monodactylus falciformis*Lacepède, 1801 +

Moronidae

Dicentrarchus labrax (Linnaeus, 1758) +

Dicentrarchus punctatus (Bloch, 1792) +

Mullidae

Mulloidichthys flavolineatus (Lacepède, 1801) +

Mulloidichthys vanicolensis (Valenciennes, 1831) +

Mullus barbatus barbatus Linnaeus, 1758 + +

Mullus surmuletus Linnaeus, 1758 + +

Parupeneus cyclostomus (Lacepède, 1801) +

Parupeneus forsskali (Fourmanoir & Guézé, 1976) + +

Parupeneus heptacanthus (Lacepède, 1802) +

Parupeneus macronemus (Lacepède, 1801) +

Parupeneus rubescens(Lacepède, 1801) +

Upeneus asymmetricus Lachner, 1954 + +

Upeneus guttatus (Day, 1868) +

Upeneus moluccensis (Bleeker, 1855) + +

Upeneus niebuhri Guézé, 1976 +

Upeneus pori Ben-Tuvia & Golani, 1989 + +

*Upeneus sulphureus*Cuvier, 1829 +

Upeneus vittatus (Forsskål, 1775) + +

Nemipteridae

Nemipterus bipunctatus (Valenciennes, 1830) +

Nemipterus japonicus (Bloch, 1791) + +

Nemipterus peronii(Valenciennes, 1830) +

Nemipterus randalli Russell, 1986 + +

Nemipterus zysron (Bleeker, 1856) +

*Scolopsis bimaculata*Rüppell, 1828 +

Scolopsis ghanam (Forsskål, 1775) +

Scolopsis taeniata(Cuvier, 1830) +

Scolopsis vosmeri(Bloch, 1792) +

Nomeidae

Cubiceps gracilis (Lowe, 1843) +

Pempheridae

Parapriacanthus guentheri Steindachner, 1870 +

Parapriacanthus sharm Randall & Bogorodsky, 2016 +

Pempheris adusta Bleeker, 1877 +

Pempheris mangula Cuvier, 1829 + +

Pempheris tominagai Koeda, Yoshino & Tachihara, 2014 +

Pinguipedidae

Parapercis hexophtalma (Cuvier, 1829) +

Parapercis nebulosa(Quoy & Gaimard, 1825) +

Plesiopidae

Plesiops coeruleolineatus Rüppell, 1835 +

Plesiops mystaxus Mooi, 1995 +

Polynemidae

<i>Polydactylus plebeius</i> (Broussonet, 1782)		+
<i>Polydactylus sextarius</i> (Bloch & Schneider, 1801)		+

Polyprionidae

<i>Polyprion americanus</i> (Bloch & Schneider, 1801)	+	
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Pomacanthidae

<i>Centropyge multispinis</i> (Playfair, 1867)		+
<i>Chromis chromis</i> (Linnaeus, 1758)	+	
<i>Chromis dimidiata</i> (Klunzinger, 1871)		+
<i>Chromis flavaxilla</i> Randall, 1994		+
<i>Chromis viridis</i> (Cuvier, 1830)		+
<i>Genicanthus caudovittatus</i> (Günther, 1860)		+
<i>Pomacanthus asfur</i> (Forsskål, 1775)		+
<i>Pomacanthus imperator</i> (Bloch, 1787)		+
<i>Pygoplites diacanthus</i> (Boddaert, 1772)		+

Pomacentridae

<i>Abudefduf sexfasciatus</i> (Lacepède, 1801)	+	+
<i>Abudefduf sordidus</i> (Forsskål, 1775)		+
<i>Abudefduf vaigiensis</i> (Quoy & Gaimard, 1825)		+
<i>Amblyglyphidodon flavilatus</i> Allen & Randall, 1980		+
<i>Amblyglyphidodon leucogaster</i> (Bleeker, 1847)		+
<i>Amphiprion bicinctus</i> Rüppell, 1830		+
<i>Chrysiptera unimaculata</i> (Cuvier, 1830)		+
<i>Dascyllus aruanus</i> (Linnaeus, 1758)		+
<i>Dascyllus marginatus</i> (Rüppell, 1829)		+
<i>Dascyllus trimaculatus</i> (Rüppell, 1829)		+
<i>Neoglyphidodon melas</i> (Cuvier, 1830)		+
<i>Neopomacentrus miryae</i> Dor & Allen, 1977		+
<i>Plectroglyphidodon lacrymatus</i> (Quoy & Gaimard, 1825)		+
<i>Pomacentrus sulfureus</i> Klunzinger, 1871		+
<i>Pomacentrus trichourus</i> Günther, 1867		+
<i>Stegastes nigricans</i> (Lacepède, 1802)		+

Pomatomidae

<i>Pomatomus saltatrix</i> (Linnaeus, 1766)	+	
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Priacanthidae

<i>Priacanthus hamrur</i> (Forsskål, 1775)		+
<i>Priacanthus sagittarius</i> Starnes, 1988	+	+
<i>Priacanthus tayenus</i> Richardson, 1846		+

Pseudochromidae

<i>Pseudochromis flavivertex</i> Rüppell, 1835		+
<i>Pseudochromis fridmani</i> Klauswitz, 1968		+
<i>Haliophis guttatus</i> (Forsskål, 1775)		+

Rachycentridae

<i>Rachycentron canadum</i> (Linnaeus, 1766)		+
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Scaridae

<i>Bolbometopon muricatum</i> (Valenciennes, 1840)		+
<i>Calotomus viridescens</i> (Rüppell, 1835)		+
<i>Cetoscarus bicolor</i> (Rüppell, 1829)		+
<i>Chlorurus genazonatus</i> (Randall & Bruce, 1983)		+
<i>Chlorurus gibbus</i> (Rüppell, 1829)		+
<i>Chlorurus sordidus</i> (Forsskål, 1775)		+
<i>Hipposcarus harid</i> (Forsskål, 1775)		+

<i>Leptoscarus vaigiensis</i> (Quoy & Gaimard, 1824)		+
<i>Scarus collana</i> Rüppell, 1835		+
<i>Scarus ghobban</i> Forsskål, 1775		+
<i>Scarus frenatus</i> Lacepède, 1802		+
<i>Scarus ferrugineus</i> Forsskål, 1775		+
<i>Scarus fuscopurpureus</i> (Klunzinger, 1871)		+
<i>Scarus niger</i> Forsskål, 1775		+
<i>Scarus psittacus</i> Forsskål, 1775		+
<i>Scarus rubroviolaceus</i> Bleeker, 1847		+
<i>Sparisoma cretense</i> (Linnaeus, 1758)	+	

Sciaenidae

<i>Argyrosomus regius</i> (Asso, 1801)	+	+
<i>Sciaena umbra</i> Linnaeus, 1758	+	
<i>Umbrina cirrosa</i> (Linnaeus, 1758)	+	

Scombridae

<i>Auxis rochei</i> (Risso, 1810)	+	+
<i>Auxis thazard</i> (Lacepède, 1800)	+	+
<i>Euthynnus affinis</i> (Cantor, 1849)		+
<i>Euthynnus alletteratus</i> (Rafinesque, 1810)	+	
<i>Grammatorcynus bilineatus</i> (Rüppell, 1836)		+
<i>Gymnosarda unicolor</i> (Rüppell, 1836)		+
<i>Katsuwonus pelamis</i> (Linnaeus, 1758)	+	+
<i>Orcynopsis unicolor</i> (Geoffroy Saint-Hilaire, 1817)	+	
<i>Rastrelliger kanagurta</i> (Cuvier, 1816)	+	+
<i>Sarda sarda</i> (Bloch, 1793)	+	
<i>Sarda orientalis</i> (Temminck & Schlegel, 1844)		+
<i>Scomber colias</i> Gmelin, 1789	+	
<i>Scomber australasicus</i> Cuvier, 1832		+
<i>Scomber scombrus</i> Linnaeus, 1758	+	
<i>Scomberomorus commerson</i> (Lacepède, 1800)	+	+
<i>Scomberomorus guttatus</i> (Bloch & Schneider, 1801)		+
<i>Scomberomorus tritor</i> (Cuvier, 1832)	+	
<i>Thunnus alalunga</i> (Bonnaterre, 1788)	+	+
<i>Thunnus thynnus</i> (Linnaeus, 1758)	+	

Serranidae

<i>Aethaloperca roгаа</i> (Forsskål, 1775)		+
<i>Anthias anthias</i> (Linnaeus, 1758)	+	
<i>Anyperodon leucogrammicus</i> (Valenciennes, 1828)		+
<i>Cephalopholis argus</i> Schneider, 1801		+
<i>Cephalopholis hemistiktos</i> (Rüppell, 1830)		+
<i>Cephalopholis miniata</i> (Forsskål, 1775)		+
<i>Cephalopholis oligosticta</i> Randall & Ben-Tuvia, 1983		+
<i>Cephalopholis sexmaculata</i> (Rüppell, 1830)		+
<i>Epinephelus aeneus</i> (Geoffroy Saint-Hilaire, 1817)	+	+
<i>Epinephelus areolatus</i> (Forsskål, 1775)		+
<i>Epinephelus caninus</i> (Valenciennes, 1843)	+	
<i>Epinephelus chlorostigma</i> (Valenciennes, 1828)		+
<i>Epinephelus costae</i> (Steindachner, 1878)	+	
<i>Epinephelus epistictus</i> (Temminck & Schlegel, 1842)		+
<i>Epinephelus fasciatus</i> (Forsskål, 1775)	+	+
<i>Epinephelus fuscoguttatus</i> (Forsskål, 1775)		+
<i>Epinephelus latifasciatus</i> (Temminck & Schlegel, 1842)		+
<i>Epinephelus malabaricus</i> (Bloch & Schneider, 1801)	+	+
<i>Epinephelus marginatus</i> (Lowe, 1834)	+	
<i>Epinephelus morrhua</i> (Valenciennes, 1833)		+
<i>Epinephelus polyphkadion</i> (Bleeker, 1849)		+
<i>Epinephelus stoliczkae</i> (Day, 1875)		+
<i>Epinephelus summana</i> (Forsskål, 1775)		+

<i>Epinephelus tauvina</i> (Forsskål, 1775)		+
<i>Grammistes sexlineatus</i> (Thunberg, 1792)		+
<i>Hyporthodus haifensis</i> (Ben-Tuvia, 1953)	+	
<i>Liopropoma mitratum</i> Lubbock & Randall, 1978		+
<i>Mycteroperca rubra</i> (Bloch, 1793)	+	
<i>Plectropomus areolatus</i> (Rüppell, 1830)		+
<i>Plectropomus maculatus</i> (Bloch, 1790)		+
<i>Pseudanthias squamipinnis</i> (Peters, 1855)		+
<i>Pseudanthias taeniatus</i> (Klunzinger, 1884)		+
<i>Pseudogramma megamyctera</i> Randall & Baldwin, 1997		+
<i>Serranus cabrilla</i> (Linnaeus, 1758)	+	+
<i>Serranus hepatus</i> (Linnaeus, 1758)	+	
<i>Serranus scriba</i> (Linnaeus, 1758)	+	
<i>Variola louti</i> (Forsskål, 1775)		+

Siganidae

<i>Siganus argenteus</i> (Quoy & Gaimard, 1825)		+
<i>Siganus luridus</i> (Rüppell, 1829)	+	+
<i>Siganus rivulatus</i> Forsskål & Niebuhr, 1775	+	+
<i>Siganus stellatus</i> (Forsskål, 1775)		+

Sillaginidae

<i>Sillago suezensis</i> Golani, Fricke & Tikochinski, 2013	+	+
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Sparidae

<i>Acanthopagrus berda</i> (Forsskål, 1775)		+
<i>Acanthopagrus bifasciatus</i> (Forsskål, 1775)		+
<i>Argyrops filamentosus</i> (Valenciennes, 1830)		+
<i>Argyrops megalommatus</i> (Klunzinger, 1870)		+
<i>Argyrops spinifer</i> (Forsskål, 1775)		+
<i>Boops boops</i> (Linnaeus, 1758)	+	
<i>Cheimerius nufar</i> (Valenciennes, 1830)		+
<i>Crenidens crenidens</i> (Forsskål, 1775)	+	+
<i>Dentex dentex</i> (Linnaeus, 1758)	+	
<i>Dentex gibbosus</i> (Rafinesque, 1810)	+	
<i>Dentex macrophthalmus</i> (Bloch, 1791)	+	
<i>Dentex maroccanus</i> Valenciennes, 1830	+	
<i>Diplodus annularis</i> (Linnaeus, 1758)	+	
<i>Diplodus bellottii</i> (Steindachner, 1882)	+	
<i>Diplodus cervinus</i> (Lowe, 1838)	+	
<i>Diplodus noct</i> (Valenciennes, 1830)		+
<i>Diplodus puntazzo</i> (Walbaum, 1792)	+	
<i>Diplodus sargus sargus</i> (Linnaeus, 1758)	+	+
<i>Diplodus vulgaris</i> (Geoffroy Saint-Hilaire, 1817)	+	
<i>Lithognathus mormyrus</i> (Linnaeus, 1758)	+	+
<i>Oblada melanura</i> (Linnaeus, 1758)	+	
<i>Pagellus acarne</i> (Risso, 1827)	+	
<i>Pagellus bogaraveo</i> (Brünnich, 1768)	+	
<i>Pagellus erythrinus</i> (Linnaeus, 1758)	+	
<i>Pagrus auriga</i> Valenciennes, 1843	+	
<i>Pagrus caeruleostictus</i> (Valenciennes, 1830)	+	
<i>Pagrus pagrus</i> (Linnaeus, 1758)	+	
<i>Polysteganus coeruleopunctatus</i> (Klunzinger, 1870)		+
<i>Rhabdosargus haffara</i> (Forsskål, 1775)	+	+
<i>Rhabdosargus sarba</i> (Forsskål, 1775)		+
<i>Sarpa salpa</i> (Linnaeus, 1758)	+	
<i>Sparus aurata</i> Linnaeus, 1758	+	
<i>Spondyliosoma cantharus</i> (Linnaeus, 1758)	+	

Sphyraenidae

<i>Sphyraena barracuda</i> (Edwards, 1771)		+
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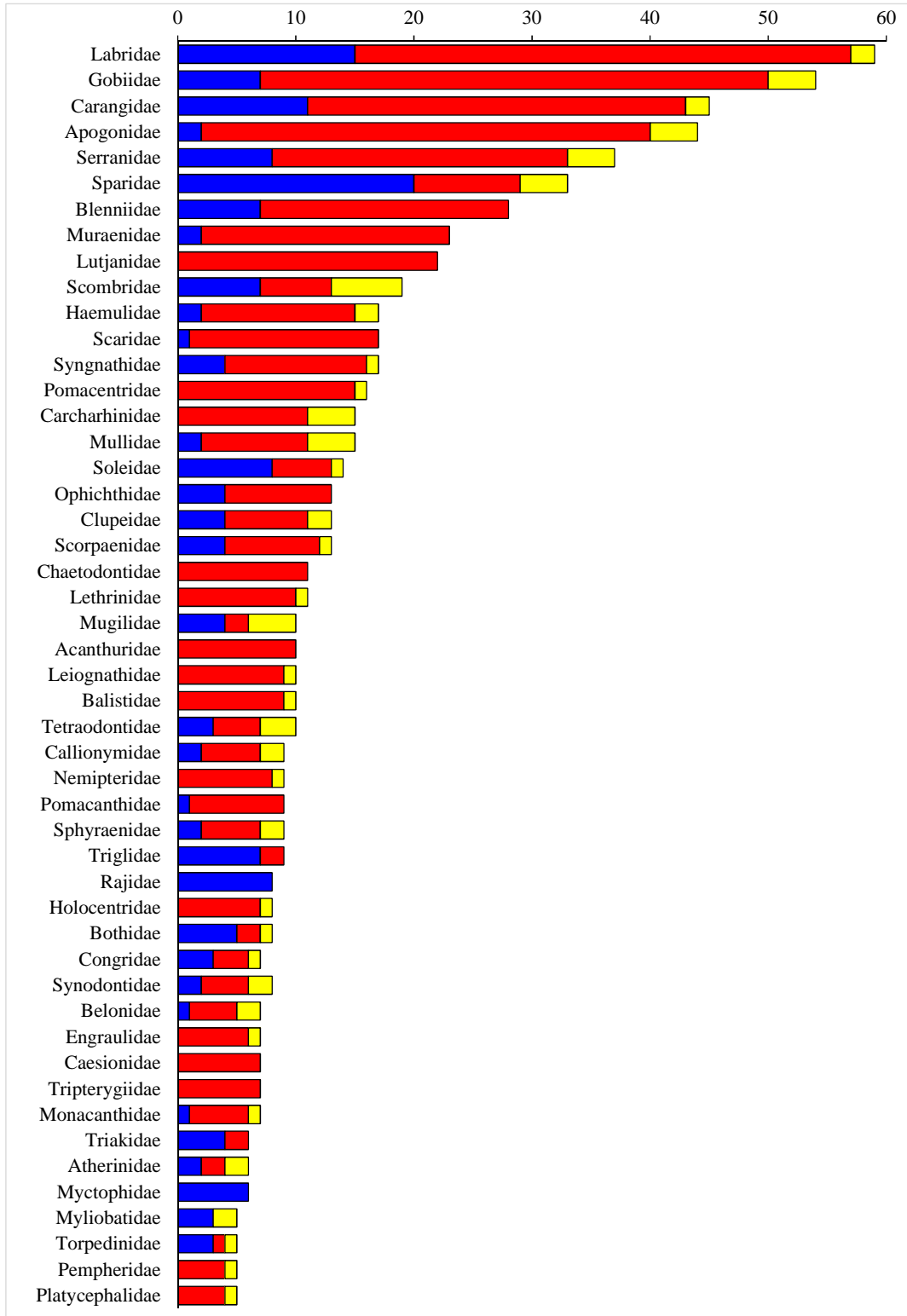
<i>Sphyræna chrysotaenia</i> Klunzinger, 1884	+	+
<i>Sphyræna flavicauda</i> Rüppell, 1838	+	+
<i>Sphyræna forsteri</i> Cuvier, 1829		+
<i>Sphyræna iburiensis</i> Doiuchi & Nakabo, 2005		+
<i>Sphyræna jello</i> Cuvier, 1829		+
<i>Sphyræna obtusata</i> Cuvier, 1829		+
<i>Sphyræna sphyræna</i> (Linnaeus, 1758)	+	
<i>Sphyræna viridensis</i> Cuvier, 1829	+	
Stromateidae		
<i>Stromateus fiatola</i> Linnaeus, 1758	+	
Terapontidae		
<i>Pelates quadrilineatus</i> (Bloch, 1790)	+	+
<i>Terapon jarbua</i> (Forsskål, 1775)		+
<i>Terapon puta</i> Cuvier, 1829	+	+
<i>Terapon theraps</i> Cuvier, 1829		+
Trachinidae		
<i>Echiichthys vipera</i> (Cuvier, 1829)	+	
<i>Trachinus araneus</i> Cuvier, 1829	+	
<i>Trachinus draco</i> Linnaeus, 1758	+	
<i>Trachinus radiatus</i> Cuvier, 1829	+	
Trichiuridae		
<i>Lepidopus caudatus</i> (Euphrasen, 1788)	+	
<i>Tentoriceps cristatus</i> (Klunzinger, 1884)		+
<i>Trichiurus auriga</i> Klunzinger, 1884		+
<i>Trichiurus lepturus</i> Linnaeus, 1758	+	+
Tripterygiidae		
<i>Enneapterygius abeli</i> (Klausewitz, 1960)		+
<i>Enneapterygius altipinnis</i> Jordan & Seale, 1906		+
<i>Enneapterygius clarkae</i> Holleman, 1982		+
<i>Enneapterygius destai</i> Clark, 1980		+
<i>Enneapterygius obscurus</i> Clark, 1980		+
<i>Enneapterygius qirmiz</i> Holleman & Bogorodsky, 2012		+
<i>Helcogramma steinitzi</i> Clark, 1980		+
Uranoscopidae		
<i>Uranoscopus scaber</i> Linnaeus, 1758	+	
Xiphiidae		
<i>Xiphias gladius</i> Linnaeus, 1758	+	
Pleuronectiformes		
Bothidae		
<i>Arnoglossus kessleri</i> Schmidt, 1915	+	
<i>Arnoglossus laterna</i> (Walbaum, 1792)	+	
<i>Arnoglossus rueppelli</i> (Cocco, 1844)	+	
<i>Arnoglossus thori</i> Kyle, 1913	+	
<i>Bothus myriaster</i> (Temminck & Schlegel, 1846)		+
<i>Bothus pantherinus</i> (Rüppell, 1830)	+	+
<i>Bothus podas</i> (Delaroche, 1809)	+	
<i>Engyproson grandisquama</i> (Temminck & Schlegel, 1846)		+
Chitaridae		
<i>Citharus linguatula</i> (Linnaeus, 1758)	+	
Cynoglossidae		
<i>Cynoglossus pottii</i> Steindachner, 1902		+

<i>Cynoglossus sinusarabici</i> (Chabanaud, 1931)	+	+
<i>Symphurus nigrescens</i> Rafinesque, 1810	+	
Paralichthyidae		
<i>Pseudorhombus arsius</i> (Hamilton, 1822)		+
<i>Pseudorhombus elevatus</i> Ogilby, 1912		+
Psettodidae		
<i>Psettodes erumei</i> (Bloch & Schneider, 1801)		+
Scophthalmidae		
<i>Lepidorhombus boscii</i> (Risso, 1810)	+	
<i>Lepidorhombus whiffiagonis</i> (Walbaum, 1792)	+	
<i>Psetta maxima</i> (Linnaeus, 1758)	+	
<i>Scophthalmus rhombus</i> (Linnaeus, 1758)	+	
Soleidae		
<i>Aseraggodes macronasus</i> Randall & Bogorodsky, 2013		+
<i>Brachirus orientalis</i> (Bloch & Schneider, 1801)		+
<i>Buglossidium luteum</i> (Risso, 1810)	+	
<i>Microchirus boscanion</i> (Chabanaud, 1926)	+	
<i>Microchirus ocellatus</i> (Linnaeus, 1758)	+	
<i>Microchirus variegatus</i> (Donovan, 1808)	+	
<i>Pardachirus marmoratus</i> (Lacepède, 1802)		+
<i>Pegusa impar</i> (Bennett, 1831)	+	
<i>Pegusa nasuta</i> (Pallas, 1814)	+	
<i>Solea aegyptiaca</i> Chabanaud, 1927	+	+
<i>Solea elongata</i> Day, 1877		+
<i>Solea solea</i> (Linnaeus, 1758)	+	
<i>Synapturichthys kleinii</i> (Risso, 1827)	+	
<i>Zebrias quagga</i> (Kaup, 1858)		+
Scorpaeniformes		
Apistidae		
<i>Apistus carinatus</i> (Bloch & Schneider, 1801)		+
Dactylopteridae		
<i>Dactyloptena orientalis</i> (Cuvier, 1829)		+
<i>Dactylopterus volitans</i> (Linnaeus, 1758)	+	
Peristediidae		
<i>Peristedion cataphractum</i> (Linnaeus, 1758)	+	
Platycephalidae		
<i>Cociella crocodilus</i> (Cuvier, 1829)		+
<i>Papilloculiceps longiceps</i> (Cuvier, 1829)		+
<i>Platycephalus indicus</i> (Linnaeus, 1758)	+	+
<i>Sorsogona prionota</i> (Sauvage, 1873)		+
<i>Rogadius asper</i> (Cuvier, 1829)		+
Scorpaenidae		
<i>Dendrochirus brachypterus</i> (Cuvier, 1829)		+
<i>Pterois miles</i> (Bennett, 1828)		+
<i>Pterois radiata</i> Cuvier, 1829		+
<i>Scorpaena elongata</i> Cadenat, 1943	+	
<i>Scorpaena notata</i> Rafinesque, 1810	+	
<i>Scorpaena porcus</i> Linnaeus, 1758	+	
<i>Scorpaena scrofa</i> Linnaeus, 1758	+	
<i>Scorpaenodes albaiensis</i> (Evermann & Seale, 1907)		+
<i>Scorpaenodes guamensis</i> (Quoy & Gaimard, 1824)		+
<i>Scorpaenodes hirsutus</i> (Smith, 1957)		+

<i>Scorpaenopsis diabolus</i> (Cuvier, 1829)		+
<i>Sebastapistes cyanostigma</i> (Bleeker, 1856)		+
<i>Sebastapistes strongia</i> (Cuvier, 1829)	+	+
Sebastidae		
<i>Helicolenus dactylopterus</i> (Delaroche, 1809)		+
Synanceiidae		
<i>Choridactylus multibarbus</i> Richardson, 1848		+
<i>Inimicus filamentosus</i> (Cuvier, 1829)		+
<i>Minous monodactylus</i> (Bloch & Schneider, 1801)		+
<i>Synanceia verrucosa</i> Bloch & Schneider, 1801		+
Triglidae		
<i>Chelidonichthys cuculus</i> (Linnaeus, 1758)		+
<i>Chelidonichthys lucerna</i> (Linnaeus, 1758)		+
<i>Chelidonichthys obscurus</i> (Walbaum, 1792)		+
<i>Eutrigla gurnardus</i> (Linnaeus, 1758)		+
<i>Lepidotrigla bispinosa</i> Steindachner, 1898		+
<i>Lepidotrigla cavillone</i> (Lacepède, 1801)		+
<i>Pterygotrigla spirai</i> Golani & Baranes, 1997		+
<i>Trigla lyra</i> Linnaeus, 1758		+
<i>Trigloporus lastoviza</i> (Bonnaterre, 1788)		+
Siluriformes		
Ariidae		
<i>Netuma thalassina</i> (Rüppell, 1837)		+
Plotosidae		
<i>Plotosus lineatus</i> (Thunberg, 1787)		+
Stomiiformes		
Gonostomatidae		
<i>Cyclothone braueri</i> Jespersen & Tåning, 1926		+
Phosichthyidae		
<i>Ichthyococcus ovatus</i> (Cocco, 1838)		+
<i>Vinciguerria attenuate</i> (Cocco, 1838)		+
<i>Vinciguerria poweriae</i> (Cocco, 1838)		+
Sternoptychidae		
<i>Argyropelecus hemigymnus</i> Cocco, 1829		+
<i>Maurolicus mucronatus</i> Klunzinger, 1871		+
Stomiidae		
<i>Chauliodus sloani</i> Bloch & Schneider, 1801		+
Syngnathiformes		
Centriscidae		
<i>Macroramphosus scolopax</i> (Linnaeus, 1758)		+
Fistulariidae		
<i>Fistularia commersonii</i> Rüppell, 1838		+
Syngnathidae		
<i>Corythoichthys flavofasciatus</i> (Rüppell, 1838)		+
<i>Corythoichthys schultzi</i> Herald, 1953		+
<i>Dunckerocampus dactyliophorus</i> (Bleeker, 1853)		+
<i>Halicampus dunckeri</i> (Chabanaud, 1929)		+
<i>Halicampus mataafae</i> (Jordan & Seale, 1906)		+
<i>Hippichthys spicifer</i> (Rüppell, 1838)		+

<i>Hippocampus debelius</i> Gomon & Kuiter, 2009		+
<i>Hippocampus guttulatus</i> Cuvier, 1829	+	
<i>Hippocampus hippocampus</i> (Linnaeus, 1758)	+	+
<i>Kyonemichthys rumengani</i> Gomon, 2007		+
<i>Micrognathus andersonii</i> (Bleeker, 1858)		+
<i>Phoxocampus belcheri</i> (Kaup, 1856)		+
<i>Syngnathus abaster</i> Risso, 1827	+	
<i>Syngnathus acus</i> Linnaeus, 1758	+	
<i>Syngnathus macrophthalmus</i> Duncker, 1915		+
<i>Syngnathus typhle</i> Linnaeus, 1758	+	
<i>Trachyrhamphus bicoarctatus</i> (Bleeker, 1857)		+
Tetraodontiformes		
Balistidae		
<i>Abalistes stellatus</i> (Anonymous, 1798)		+
<i>Balistapus undulatus</i> (Park, 1797)		+
<i>Balistes capriscus</i> Gmelin, 1789	+	+
<i>Balistoides viridescens</i> (Bloch & Schneider, 1801)		+
<i>Odonus niger</i> (Rüppell, 1836)		+
<i>Pseudobalistes flavimarginatus</i> (Rüppell, 1829)		+
<i>Pseudobalistes fuscus</i> (Bloch & Schneider, 1801)		+
<i>Rhinecanthus assasi</i> (Forsskål, 1775)		+
<i>Sufflamen albicaudatum</i> (Rüppell, 1829)		+
<i>Sufflamen fraenatum</i> (Latreille, 1804)		+
Diodontidae		
<i>Cyclichthys spilostylus</i> (Leis & Randall, 1982)		+
<i>Diodon hystrix</i> Linnaeus, 1758		+
<i>Diodon liturosus</i> Shaw, 1804		+
Molidae		
<i>Mola mola</i> (Linnaeus, 1758)	+	+
<i>Ranzania laevis</i> (Pennant, 1776)	+	+
Monacanthidae		
<i>Aluterus monoceros</i> (Linnaeus, 1758)		+
<i>Aluterus scriptus</i> (Osbeck, 1765)		+
<i>Cantherhines dumerilii</i> (Hollard, 1854)		+
<i>Cantherhines pardalis</i> (Rüppell, 1837)		+
<i>Paraluteres arqat</i> Clark & Gohar, 1953		+
<i>Stephanolepis diaspros</i> Fraser-Brunner, 1940	+	+
<i>Stephanolepis hispidus</i> (Linnaeus, 1766)	+	
Ostraciidae		
<i>Ostracion cubicus</i> Linnaeus, 1758		+
<i>Ostracion cyanurus</i> Rüppell, 1828		+
<i>Lactoria cornuta</i> (Linnaeus, 1758)		+
<i>Tetrosomus gibbosus</i> (Linnaeus, 1758)		+
Tetraodontidae		
<i>Arothron diadematus</i> (Rüppell, 1829)		+
<i>Arothron hispidus</i> (Linnaeus, 1758)		+
<i>Arothron stellatus</i> (Anonymous, 1798)		+
<i>Canthigaster margaritata</i> (Rüppell, 1829)		+
<i>Lagocephalus lagocephalus</i> (Linnaeus, 1758)	+	
<i>Lagocephalus sceleratus</i> (Gmelin, 1789)	+	+
<i>Lagocephalus spadiceus</i> (Richardson, 1845)	+	+
<i>Lagocephalus suezensis</i> Clark & Gohar, 1953	+	+
<i>Sphoeroides pachygaster</i> (Müller & Troschel, 1848)	+	
<i>Torquigener flavimaculosus</i> Hardy & Randall, 1983	+	+
Zeiformes		
Zeidae		
<i>Zeus faber</i> Linnaeus, 1758	+	

Of the 956 species, more than half (592 species; 62.1 %) are present only in the Red Sea, approximately one third (263 species; 27.4 %) are present only in the Mediterranean Sea, whereas 101 species (10.5 %) occur in both seas. The number of species per family ranged from one species in 68 families, to 59 species for Labridae, whereas in 49 families the number of species was higher than five (Table 2 & Fig. 1).



(Fig. 1): List of families with more than 5 species reported from Egyptian marine waters. Blue colour indicates species reported only from the Mediterranean, red colour indicates species existing only in the Red Sea, and yellow denotes species present in both seas.

In addition to the aforementioned species, 52 species (5 Elasmobranchii and 47 Actinopteri) that have been recorded in Egypt by photographs and/or human observation are listed in Table (3). Out of these 52 species, five are worth noting, due to the fact that their presence is verified in one sea (Mediterranean or Red Sea), whilst they have been recorded by human observation in the other one. These species are: (a) *Taeniura lymma* (Forsskål) whose presence in the Red Sea is verified on the basis of specimens (GBIF, 2016), but in the Mediterranean coasts of Egypt it has been recorded by human observation (GBIF, 2016) and *Lethrinus borbonicus* (Technical report 2014); and (b) *Muraena helena* Linnaeus, *Oblada melanura* (Linnaeus) and *Sphyrna viridensis* Cuvier that have been recorded from the Mediterranean (Elsayed, 1994a; Allam *et al.*, 1999; GBIF, 2016) but in the Red Sea they have so far been reported by human observation (GBIF, 2016) (Tables 2 and 3). Despite the fact that citizen scientists, such as scuba divers/snorkel users and underwater photographers, are key data providers for biodiversity issues (Zenetos *et al.*, 2013; Karachle *et al.*, 2016; Cerrano *et al.*, 2017), the use of photographs alone for actually accepting the presence of a species in a certain area is highly arguable. In this review, such species are presented separately and are excluded from the aforementioned analyses. Nevertheless, they could be considered as part of the Egyptian marine ichthyofauna, as in the vast majority of cases verified records of those species from neighbouring areas exist (e.g. Israel, Jordan, Saudi Arabia) but no final conclusions can be drawn until their presence is confirmed by samples.

Table (3): Alphabetical list of species present in Egyptian waters evidenced by photographs and/or human observation, that their presence should be verified by actual specimens.

Species	Mediterranean Sea	Red Sea
<i>Elasmobranchii</i>		
<i>Alopias pelagicus</i> Nakamura, 1935		+
<i>Alopias vulpinus</i> (Bonnaterre, 1788)	+	+
<i>Mobula thurstoni</i> (Lloyd, 1908)		+
<i>Rhina ancylostoma</i> Bloch & Schneider, 1801		+
<i>Taeniura lymma</i> (Forsskål, 1775)	+	present
<i>Actinopteri</i>		
<i>Acanthurus gahhm</i> (Forsskål, 1775)		+
<i>Amanses scopas</i> (Cuvier, 1829)		+
<i>Anampses meleagrides</i> Valenciennes, 1840		+
<i>Antennarius maculatus</i> (Desjardins, 1840)		+
<i>Antennarius pictus</i> (Shaw, 1794)		+
<i>Apolemichthys xanhotis</i> (Fraser-Brunner, 1950)		+
<i>Arothron immaculatus</i> (Bloch & Schneider, 1801)		+
<i>Aspidontus dussumieri</i> (Valenciennes, 1836)		+
<i>Aspidontus taeniatus</i> Quoy & Gaimard, 1834		+
<i>Bodianus anthioides</i> (Bennett, 1832)		+
<i>Chromis pembae</i> Smith, 1960		+
<i>Chromis weberi</i> Fowler & Bean, 1928		+
<i>Cirrhilabrus rubriventralis</i> Springer & Randall, 1974		+
<i>Cirrhitichthys oxycephalus</i> (Bleeker, 1855)		+
<i>Corythoichthys nigripictus</i> Herald, 1953		+
<i>Diploprion drachi</i> Roux-Estève, 1955		+
<i>Exallias brevis</i> (Kner, 1868)		+
<i>Forcipiger flavissimus</i> Jordan & McGregor, 1898		+

<i>Halicampus macrorhynchus</i> Bamber, 1915		+
<i>Hemigymnus melapterus</i> (Bloch, 1791)		+
<i>Lethrinus borbonicus</i> Valenciennes, 1830	present	+
<i>Liopropoma susumi</i> (Jordan & Seale, 1906)		+
<i>Malacanthus latovittatus</i> (Lacepède, 1801)		+
<i>Muraena helena</i> Linnaeus, 1758	present	+
<i>Naso brevirostris</i> (Cuvier, 1829)		+
<i>Naso elegans</i> (Rüppell, 1829)		+
<i>Novaculichthys taeniourus</i> (Lacepède, 1801)		+
<i>Oblada melanura</i> (Linnaeus, 1758)	present	+
<i>Oedalechilus labiosus</i> (Valenciennes, 1836)		+
<i>Ostorhinchus fleurieu</i> Lacepède, 1802		+
<i>Oxycirrhites typus</i> Bleeker, 1857		+
<i>Paracheilinus octotaenia</i> Fourmanoir, 1955		+
<i>Pectinochromis lubbocki</i> (Edwards & Randall, 1983)		+
<i>Pervagor randalli</i> Hutchins, 1986		+
<i>Plectorhinchus albovittatus</i> (Rüppell, 1838)		+
<i>Plectropomus pessuliferus</i> (Fowler, 1904)		+
<i>Pseudochromis pesi</i> Lubbock, 1975		+
<i>Ptereleotris evides</i> (Jordan & Hubbs, 1925)		+
<i>Sargocentron marisrubri</i> Randall, Golani & Diamant, 1989		+
<i>Scorpaenodes parvipinnis</i> (Garrett, 1864)		+
<i>Scorpaenopsis barbata</i> (Rüppell, 1838)		+
<i>Scorpaenopsis oxycephala</i> (Bleeker, 1849)		+
<i>Sphyaena qenie</i> Klunzinger, 1870		+
<i>Sphyaena viridensis</i> Cuvier, 1829	present	+
<i>Suezichthys russelli</i> Randall, 1981		+
<i>Trichonotus nikii</i> Clark & von Schmidt, 1966		+
<i>Zoramia leptacantha</i> (Bleeker, 1856)		+

Finally, the list of marine Egyptian ichthyofauna derived from FishBase includes 64 species (6 Elasmobranchii and 58 Actinopteri) that requires further investigation (Table 4). Their inclusion in the FishBase list is most probably based on the general description of geographical distribution, namely, “present in the Red Sea/Mediterranean”. As their actual presence could not be verified by publications or photographs, these species cannot currently be considered present in Egyptian waters; further scientific evidence is needed.

Table (4): Alphabetical list of species included in FishBase as ‘present’ in Egyptian waters, but whose presence could not be verified and requires further investigation.

Elasmobranchii

- Carcharhinus altimus* (Springer, 1950)
- Dasyatis centroura* (Mitchill, 1815)
- Heptranchias perlo* (Bonnaterre, 1788)
- Odontaspis ferox* (Risso, 1810)
- Prionace glauca* (Linnaeus, 1758)
- Rhynchobatus djiddensis* (Forsskål, 1775)

Actinopteri

- Alticus saliens* (Forster, 1788)
- Aphareus furca* (Lacepède, 1801)
- Benthoosema glaciale* (Reinhardt, 1837)
- Callionymus delicatulus* Smith, 1963
- Carangoides ferdau* (Forsskål, 1775)
- Carapus acus* (Brünnich, 1768)
- Choeroichthys brachysoma* (Bleeker, 1855)

Chromis pelloura Randall & Allen, 1982
Coryphaena equiselis Linnaeus, 1758
Cosmocampus banneri (Herald & Randall, 1972)
Cosmocampus maxweberi (Whitley, 1933)
Cyclothone pygmaea Jespersen & Tåning, 1926
Cynoglossus dollfusi (Chabanaud, 1931)
Diaphus holti Tåning, 1918
Diaphus rafinesquii (Cocco, 1838)
Electrona risso (Cocco, 1829)
Engyprosopon macrolepis (Regan, 1908)
Epinephelus coioides (Hamilton, 1822)
Epinephelus tukula Morgans, 1959
Equulites elongatus (Günther, 1874)
Evermannella balbo (Risso, 1820)
Forcipiger longirostris (Broussonet, 1782)
Gerres oblongus Cuvier, 1830
Gobius bucchichi Steindachner, 1870
Gonichthys cocco (Cocco, 1829)
Gonostoma denudatum Rafinesque, 1810
Gouania willdenowi (Risso, 1810)
Gymnocaesio gymnoptera (Bleeker, 1856)
Hymenocephalus italicus Giglioli, 1884
Istiophorus albicans (Latreille, 1804)
Lampris guttatus (Brünnich, 1788)
Lethrinus olivaceus Valenciennes, 1830
Lobianchia dofleini (Zugmayer, 1911)
Lutjanus russellii (Bleeker, 1849)
Myctophum punctatum Rafinesque, 1810
Myripristis hexagona (Lacepède, 1802)
Nectamia savayensis (Günther, 1872)
Nerophis ophidion (Linnaeus, 1758)
Novaculoides macrolepidotus (Bloch, 1791)
Ostorhinchus angustatus (Smith & Radcliffe, 1911)
Ostorhinchus taeniophorus (Regan, 1908)
Parascolopsis eriomma (Jordan & Richardson, 1909)
Parascolopsis townsendi Boulenger, 1901
Pempheris oualensis Cuvier, 1831
Plectorhinchus obscurus (Günther, 1872)
Pomacanthus semicirculatus (Cuvier, 1831)
Pomatoschistus marmoratus (Risso, 1810)
Pristipomoides filamentosus (Valenciennes, 1830)
Ptereleotris arabica Randall & Hoese, 1985
Rhinecanthus rectangulus (Bloch & Schneider, 1801)
Stegastes punctatus (Quoy & Gaimard, 1825)
Symbolophorus veranyi (Moreau, 1888)
Syngnathoides biaculeatus (Bloch, 1785)
Syngnathus phlegon Risso, 1827
Trachyrincus scabrus (Rafinesque, 1810)
Upeneus heemstra Uiblein & Gouws, 2014
Uraspis uraspis (Günther, 1860)
Xiphasia matsubarai Okada & Suzuki, 1952

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ARABIC SUMMARY

الأسماك البحرية في مصر

السيد هارون خميس عاقل^١ – باراسيكيفي ك كاراشل^٢

- ١- قسم بيولوجيا المصايد – شعبة المصايد – فرع المعهد القومي لعلوم البحار والمصايد بالأسكندرية – مصر
- ٢- المركز اليوناني للبحوث البحرية، اليونان.

هذا البحث هو نتاج تجميع الأسماك البحرية في المياه المصرية بغرض أيجاد قاعدة بيانات لأستكشاف وتقييم تغيرات التنوع البيولوجي في المياه البحرية المصرية. لقد تم الأستعانة بالأبحاث المحكمة المنشورة والتي قيد النشر وأبحاث المؤتمرات وقواعد البيانات *FishBase* و *GBI* و *WoRMS*. هذا البحث يشتمل على ٩٥٦ نوعاً من الأسماك (٧١ نوعاً من الأسماك الغضروفية و نوعين من الأسماك الهلوسيفالي و ٨٨٣ نوعاً من الأسماك العظمية) التي تم تسجيلها حتى الآن من المياه البحرية المصرية. من هذه الأنواع وجد ٥٩٢ نوعاً تعيش في البحر الأحمر فقط و ٢٦٣ نوعاً موجودة في البحر المتوسط فقط. أما باقي الأعداد وهو ١٠١ نوعاً فقد تم رصدها في كل من البحرين الأحمر والمتوسط معاً. بالإضافة إلى ٩٥٦ نوعاً المذكورين أنفاً فقد تم رصد عدد ٥٢ نوعاً من الأسماك في تقارير صور تم التقاطها لها بواسطة غطاسين محترفين أو هواة تصوير تحت الماء أو في تقارير تحتاج المزيد من التحقق والتدقيق. أخيراً تم رصد ٦٤ نوعاً من الأسماك تنتمي إلى المياه البحرية المصرية في موقع *FishBase* ولكن بدون أبحاث منشورة أو عينات محفوظة موثقة في المتاحف العلمية لتأكيد تواجد هذه الأنواع في المياه المصرية البحرية وعلى ذلك يظل وجود هذه الأنواع في المياه المصرية محل تساؤل حتى نحصل على الدليل الكافي.