

# A checklist of freshwater and brackish water fishes of the Fiji Islands

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Over the past seven years (2000 –2006) there has been an increasing interest in the biodiversity of freshwater and brackishwater fishes in the Fijian archipelago. In 2000 and again in 2001, Wetlands International –Oceania, in association with the University of the South Pacific, ran a series of short courses on the diversity and taxonomy of fresh and brackish water fishes in Fiji for wetland managers. Since this time these two organizations have taken a lead role in surveying and documenting freshwater fishes from the archipelago (Jenkins, 2001; Jenkins & Boseto, 2003; Waqairatu, 2003; Jenkins, 2004; Jenkins & Boseto, 2005; Jenkins, 2005; Boseto, 2006; Jenkins, Boseto & Watson 2006, submitted). Additional freshwater food fish survey work has also been done by the Fiji Institute of Technology in 2002 and the Wildlife Conservation Society also did some freshwater biodiversity surveys from 2003 until present.

This checklist should be considered as a working document and several additional species are likely to be added with additional survey work, particularly in the estuarine and headwater areas. This checklist has been compiled from the past work of Whitley (1927), Fowler (1959), Ryan (1980, 1981), Andrews (1985), Beumer (1985), Lewis and Pring (1986), holdings in museums, that are listed in acknowledgements below, and the recent references cited above. At present we recognize 161 species from 45 families of freshwater and estuarine fishes in the Fiji Islands. Of these, 10 are non-native species and 11 species are considered endemic to the Fijian Islands. Voucher specimens are held for most species at the University of the South Pacific, Marine Studies collections with additional specimens being held at the museums listed in the acknowledgements below.

A full listing of museum and collection holdings can be found in Boseto, 2006. We are currently working on a field guide to the fresh and brackish fishes of Fiji in which most of the following species will be well illustrated with keys to their identification.

The phylogenetic sequence of the families appearing in this list checklist follows Eschmeyer 1990. Sub-families, genera and species are arranged alphabetically within each family. A question mark denotes that the species has yet to be verified, an asterisk denotes a non-native species and a hash mark denotes a species likely to be endemic to the Fiji Islands.

### **Checklist of Freshwater and brackish water fishes of Fiji**

#### CARCHARHINIDAE

*Carcharhinus leucas* (Müller & Henle, 1839)

#### MEGALOPIDAE

*Megalops cyprinoides* (Broussonet, 1782)

#### ALBULIDAE

*Albula glossodonta* (Forsskal, 1775)

#### ANGUILLIDAE

?*Anguilla australis* Richardson, 1841

*Anguilla bicolor bicolor* McClelland, 1844

*Anguilla marmorata* Quoy & Gaimard, 1824

*Anguilla megastoma* Kaup, 1856

*Anguilla obscura* Günther, 1872

#### MORINGUIDAE

*Moringua abbreviata* (Bleeker, 1863)

*Moringua macrocephalus* (Bleeker, 1863)

*Neoconger tuberculatus* (Castle, 1965)

#### MURAENIDAE

*Gymnothorax favagineus* Bloch and Schneider, 1801)

*Gymnothorax pictus* (Ahl, 1789)

*Gymnothorax polyuranodon* (Bleeker, 1853)

*Gymnothorax undulata* (Lacepède, 1803)

*Uropterygius concolor* Rüppell, 1838

#### OPHICHTHIDAE

*Lamnostoma bicolor* (Kaup, 1856)

*Lamnostoma kampeni* (Weber & de Beaufort, 1916)

*Pisodonophis cancrivorus* (Richardson, 1848)

*Yirkala gjellerupi* (Weber & de Beaufort, 1916)

*?Yirrkala lumbricoides* (Bleeker, 1853)

#### MURAENESOCIDAE

*Muraenesox cinereus* (Forsskål, 1775)

#### CLUPEIDAE

*Sardinella fijiense* (Fowler & Bean, 1923)

#### ENGRAULIDAE

*Stolephorus indicus* (van Hasselt, 1823)

*Thryssa baelama* (Forsskål, 1775)

#### CHIROCENTRIDAE

*Chirocentrus dorab* (Forsskål, 1775)

#### CHANIDAE

*Chanos chanos* (Forsskål, 1775)

#### CYPRINIDAE

*Barbonymus gonionotus* (Bleeker, 1850)\*

*Ctenopharyngodon idella* (Valenciennes, in Cuvier & Valenciennes, 1844)\*

*Rhodeus ocellatus* (Kner, 1866)\*

#### POECILIIDAE

*Gambusia affinis* (Baird & Girard, 1853)\*

*Poecilia mexicana* Steindachner, 1863\*

*Poecilia reticulata* Peters, 1859\*

*Xiphophorus hellerii* Heckel, 1848\*

#### HEMIRAMPHIDAE

*Hyporhamphus dussumieri* (Valenciennes in Cuvier and Valenciennes, 1847)

*Zenarchopterus dispar* (Valenciennes in Cuvier and Valenciennes, 1847)

#### SYNGNATHIDAE

*Hippichthys cyanospilus* (Bleeker, 1854)

*Hippichthys spicifer* (Rüppell, 1838)

*Microphis argulus* (Peters, 1855)

*Microphis brachyurus brachyurus* (Bleeker, 1853)

*Microphis brevidorsalis* (de Beaufort, 1913)

*Microphis leiaspis* (Bleeker, 1853)

*Microphis retzii* (Bleeker, 1856)

*Microphis* sp.1 #

#### SCORPAENIDAE

*Dendrochirus brachypterus* (Cuvier, in Cuvier & Valenciennes, 1829)

*Dendrochirus zebra* (Cuvier, in Cuvier & Valenciennes, 1829)

*Scorpaenopsis macrochir* Ogilby, 1910

#### TETRAROGIDAE

*Tetraroge niger* (Cuvier, in Cuvier & Valenciennes, 1829)

#### AMBASSIDAE

*Ambassis miops* Günther, 1872

#### SERRANIDAE

*Epinephelus lanceolatus* (Bloch, 1790)

*Epinephelus malabaricus* (Bloch & Schneider, 1801)

#### TERAPONIDAE

*Mesopristes kneri* (Bleeker, 1876)#

*Terapon jarbua* (Forsskål, 1775)

#### KUHLIIDAE

*Kuhlia marginata* (Cuvier, in Cuvier and Valenciennes, 1829)

*Kuhlia munda* (De Vis, 1884)

*Kuhlia rupestris* (Lacepède, 1802)

#### CENTRARCHIDAE

*Micropterus salmoides* (Lacepède, 1802)\*

#### APOGONIDAE

*Apogon amboinensis* Bleeker, 1853

*Apogon lateralalis* Valenciennes, 1832

*Sphaeramia orbicularis* (Cuvier, 1828)

#### LACTARIIDAE

*Lactarius lactarius* (Bloch & Schneider, 1801)

#### CARANGIDAE

*Caranx ignobilis* (Forsskål 1775)

*Caranx papuensis* Alleyne & Macleay, 1877

*Caranx sexfasciatus* Quoy & Gaimard, 1825

*Caranx tille* Cuvier 1833

*Scomberoides tol* (Cuvier, 1832)

#### LEIOGNATHIDAE.

*Gazza minuta* (Bloch, 1795)

*Leiognathus equulus* (Forsskål, 1775)

*Leiognathus fasciatus* (Lacepède, 1803)

*Leiognathus splendens* (Cuvier, 1829)

#### LUTJANIDAE

*Lutjanus argentimaculatus* (Forsskål, 1775)

*Lutjanus fulviflamma* (Forsskål, 1775)

*Lutjanus fulvus* (Forster, in Bloch and Schneider, 1801)

*Lutjanus gibbus* (Forsskål, 1775)

*Lutjanus johnii* (Bloch, 1792)

*Lutjanus lunulatus* (Park, 1797)

*Lutjanus rivulatus* (Cuvier, in Cuvier & Valenciennes, 1828)

*Lutjanus russellii* (Bleeker, 1849)

#### GERREIDAE

*Gerres longirostris* (Lacepède, 1801)

#### HAEMULIDAE

*Plectorhinchus gibbosus* (Hombron and Jacquinot, 1853)

#### LETHRINIDAE

*Lethrinus harak* (Forsskål, 1775)

*Lethrinus reticulatus* (Valenciennes, in Cuvier & Valenciennes, 1830)

#### POLYNEMIDAE

*Polydactylus microstoma* (Bleeker, 1851)

*Polydactylus plebeius* (Broussonet, 1782)

#### MULLIDAE

*Parupeneus indicus* (Shaw, 1803)

*Upeneus sulphureus* (Cuvier, in Cuvier & Valenciennes, 1829)

*Upeneus vittatus* (Forsskål, 1775)

#### MONODACTYLIDAE

*Monodactylus argenteus* (Linnaeus, 1758)

#### MUGILIDAE

*Cestraeus plicatilis* Valenciennes in Cuvier & Valenciennes, 1836

*Liza macrolepis* (Smith, 1846)

*Crenimugil crenilabis* (Forsskål, 1775)

*Liza melinoptera* (Valenciennes, in Cuvier & Valenciennes, 1836)

*Liza subviridis* (Valenciennes, in Cuvier & Valenciennes, 1836)

*Liza vaigiensis* (Quoy & Gaimard, 1825)

*Mugil cephalus* Linnaeus, 1758

*Valamugil buchanani* (Bleeker, 1853)

*Valamugil cunnesius* (Valenciennes, in Cuvier & Valenciennes, 1836)

*Valamugil engeli* (Bleeker, 1858)

*Valamugil seheli* (Forsskål, 1775)

#### CICHLIDAE

*Oreochromis mossambicus* (Peters, 1852)\*

*Oreochromis niloticus* (Linnaeus, 1758)\*

#### ELEOTRIDAE

*Amblyeleotris guttata* (Fowler, 1938)

*Belobranchus belobranchus* (Valenciennes, in Cuvier & Valenciennes, 1837)

*Bostrychus sinensis* Lacepède, 1801

*Bunaka gyrinoides* (Bleeker, 1853)

*Butis amboinensis* (Bleeker, 1853)

*Butis butis* (Hamilton, 1822)

*Eleotris fusca* (Forster, in Bloch and Schneider, 1801)

*Eleotris melanosoma* Bleeker, 1852

*Giurus hoedti* (Bleeker, 1854)

*Giurus margaritacea* (Valenciennes, in Cuvier & Valenciennes, 1837)

*Hypseleotris guentheri* (Bleeker, 1875)

*Ophiocara porocephala* (Valenciennes, in Cuvier & Valenciennes, 1837)

*Oxyeleotris marmorata* (Bleeker, 1852)

#### GOBIIDAE

##### GOBIINAE

*Acentrogobius caninus* (Valenciennes in Cuvier & Valenciennes, 1837)

*Acentrogobius suluensis* (Herre, 1927)

*Bathygobius fuscus* (Rüppell, 1830)

*Bathygobius hongkongensis* Lam, 1986

*Bathygobius padangensis* (Bleeker, 1851)

*Caragobius urolepis* (Bleeker, 1852)

*Ctenogobius aurocingulus* (Herre, 1935)

*Glossogobius bicirrhosus* (Weber, 1894)

*Glossogobius* sp.1 Hoese & Allen, in preparation #

*Oplopomus oplopomus* (Valenciennes, in Cuvier & Valenciennes, 1837)

*Palutrus scapulopunctatus* (de Beaufort, 1912)

*Psammogobius biocellatus* (Valenciennes, in Cuvier & Valenciennes, 1837)

*Yongeichthys nebulosus* (Forsskål, 1775)

##### GOBIONELLINAE

*Awaous guamensis* (Valenciennes, in Cuvier & Valenciennes, 1837)

*Awaous melanocephalus* (Bleeker, 1849)

*Awaous ocellaris* (Broussonet, 1782)

*Mugilogobius notospilus* (Günther, 1877)

*Oxyurichthys ophthalmonema* (Bleeker, 1856-57)

*Oxyurichthys tentacularis* (Valenciennes, in Cuvier & Valenciennes, 1837)

*Redigobius bikolanus* (Herre, 1927)

*Redigobius leveri* (Fowler, 1943)#

*Redigobius roemeri* (Weber, 1911)

*Redigobius* sp.1 Larson, in preparation #

*Schismatogobius vitiensis* Jenkins and Boseto, 2005 #

*Stenogobius* sp.1 Boseto, in preparation #

?*Stigmatogobius sadanundio* (Hamilton, 1822)

##### OXUDERCINAE

?*Periophthalmodon barbarus* (Linnaeus 1766)

*Periophthalmus argentilineatus* Valenciennes, in Cuvier & Valenciennes, 1837

*Periophthalmus kalolo* Lesson, 1831

##### SICYDIINAE

*Lentipes kaaea* Watson, Keith and Marquet, 2002

*Sicyopterus lagocephalus* (Commerson, in Lacepède, 1800)

*Sicyopus zosterophorum* (Bleeker, 1856-57)

*Sicyopus (Raogobius)* sp. Jenkins, Boseto & Watson, submitted #

*Stiphodon rutilaureus* Watson, 1996

*Stiphodon* sp. 1 Jenkins, Boseto & Watson, submitted #

*Stiphodon* sp. 2 Jenkins, Boseto & Watson, submitted #

New genus, new species Watson, Jenkins & Boseto, in prep #

#### EPHIPPIDAE

*Platax orbicularis* (Forsskål, 1775)

#### SCATOPHAGIDAE

*Scatophagus argus* (Linnaeus, 1766)

#### SIGANIDAE

*Siganus vermiculatus* (Valenciennes, in Cuvier & Valenciennes, 1835)

#### SPHYRAENIDAE

*Sphyræna obtusata* (Cuvier, in Cuvier & Valenciennes, 1829)

#### TRICHIURIDAE

*Trichiurus lepturus* Linnaeus, 1758

#### BALISTIDAE

*Rhinecanthus aculeatus* (Linnaeus, 1758)

#### TETRAODONTIDAE

*Arothron immaculatus* (Bloch & Schneider, 1801)

*Arothron reticularis* (Bloch & Schneider, 1801)

*Lagocephalus lunaris* (Bloch & Schneider, 1801)

#### DIODONTIDAE

*Diodon liturosus* Shaw, 1804

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