

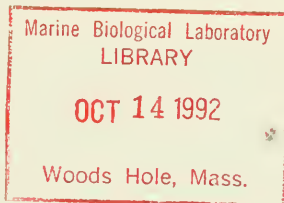
NOAA Technical Report NMFS SSRF-781



An Annotated Checklist of the Fishes of Samoa

Richard C. Wass

May 1984



U.S. DEPARTMENT OF COMMERCE
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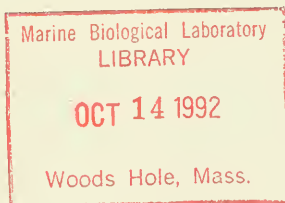
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Malcolm Baldrige, Secretary

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John V. Byrne, Administrator

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An Annotated Checklist of the Fishes of Samoa

RICHARD C. WASS¹

ABSTRACT

All fishes currently known from the Samoa Islands are listed by their scientific and Samoan names. Species entries are annotated to include the initial Samoan distributional record, synonyms used in earlier publications dealing with Samoan fishes, and comments relating to taxonomy, ecology, and distribution. New species records resulting from recent collections by the author and others are included. Brief diagnoses are provided for undescribed and unidentified species. The list totals 991 species representing 113 families; 284 of the species are previously unrecorded from Samoa and 38 of the entries are unconfirmed records derived mostly from 19th century publications.

INTRODUCTION

The need to update and consolidate existing lists and records of Samoan fishes as a basis for biological study and resource management became evident while the author was engaged in extensive collection efforts during 1974-79. The present list of all known inshore and pelagic surface species is an attempt to meet this need.

GEOGRAPHY AND PHYSIOGRAPHY

The Samoa Islands consist of a chain of 10 islands located at lat. 14° S and ranging from long. 168° to 173° W. From east to west the islands are generally of increasing size and more recent geological origin. Rose Island, at the easternmost end of the chain, is a low coral atoll. The islands to the west are high and of basaltic composition. They are divided politically into Western Samoa, comprised principally of the two largest and westernmost islands of Savai'i and Upolu, and American Samoa comprised of Tutuila, Aunu'u, Ofu, Olosega, Ta'u, and Rose Islands.²

The collections upon which the present paper is based were made primarily around Tutuila at the midpoint of the Samoan archipelago. Fishes were also collected at Rose and Upolu where effort was concentrated in habitats not well developed around Tutuila.

The southern coast of Tutuila is bordered by a more or less continuous fringing reef flat which is partially exposed at low tide. Four prominent bays indent the coastline. Pago Pago Bay is the largest and is bordered by the most populous and developed area of the island. Port facilities, cannery and domestic wastes, and shoreline runoff contribute toward a considerable decline in water quality within the bay (U.S. Army Corps of Engineers³). Pala Lagoon is a shallow, mangrove-fringed bay with limited circulation. Its waters are turbid and polluted with human and agricultural wastes (Helfrich et al. 1975). Larsen and Fagatele Bays are deep and exposed to wind and swell. Their water quality

is high and their marine habitats are relatively pristine. A submarine ridge 2-3 km offshore and shoaling to 15 m parallels much of the southern coast. Reef flats are a less conspicuous feature of the northern coast of Tutuila and are limited primarily to the inner margins of bays and coves. Steeply sloping basaltic terrain characterizes the exposed shoreline and the bottom drops rapidly to depths of 30 m or more.

The fish fauna of Tutuila is characteristic of the entire archipelago though physiographic differences do result in minor variation. Upolu has greater freshwater runoff, more extensive mangrove estuaries, wider reef flats, and deep sandy lagoons inside the reef. Rose Atoll has no basaltic substrate or freshwater runoff.

LITERATURE REVIEW

Samoan fishes have been collected and studied since 1840 when Hombron and Jacquinot (1853) described *Diagramma gibbosus* from Apia, Western Samoa. The Museum Godeffroy Catalogs (Schmeltz 1865-79) and Günther's (1873-1910) *Fische der Südsee* include many early references to Samoan fishes. Other significant 19th century studies are summarized by Jordan and Seale (1906) who noted that 164 fishes were recorded from Samoa by 1902.

Their *Fishes of Samoa* lists 475 species for the archipelago and is the first comprehensive survey of Samoan ichthyofauna. It is based on a collection of fishes made in 1902 by David S. Jordan and Vernon L. Kellogg under the sponsorship of the U.S. Bureau of Fisheries. Steindachner (1906), Fowler and Silvester (1922), Fowler (1925, 1932, 1940), Jordan (1927), and Seale (1935) recorded additional fishes from Samoa.

A second extensive listing of Samoan fishes is found in *Fishes of the Phoenix and Samoan Islands* by Leonard P. Schultz (1943). While most of Jordan and Kellogg's fishes were collected around Upolu, the 270 species that Schultz collected were taken from Tutuila, Ta'u, and Rose. He listed 171 additional species deposited at the U.S. National Museum by earlier collectors including the Wilkes Exploring Expedition and Jordan and Kellogg for a total of 441. Schultz included keys for the identification of Samoan fishes though most are superseded by the more recent and comprehensive keys in his *Fishes of the Marshall and Marianas Islands* (Schultz et al. 1953, 1960, 1966).

A complete listing of the taxonomic literature pertaining to Samoan fishes through 1945 is given by Fowler (1928, 1931a, 1934, 1949). Additional fishes have subsequently been recorded from Samoa in species descriptions and generic revisions, but tax-

¹Office of Marine Resources, American Samoa Government, Pago Pago, American Samoa 96799.

²Swains Island, located at lat. 11° S and long. 171° W, is also governed by American Samoa. Geographically, however, it belongs with the Tokelau Islands so its fishes will not be considered herein.

³U.S. Army Corps of Engineers, 1979. Baseline water quality survey in American Samoa, American Samoa water resources study, 117 p. Report prepared by M & E Pacific, Inc. U.S. Army Corps of Engineers, Fort Shafter, Honolulu, HI 96858.

onomic lists are lacking excepting that of Helfrich et al. (1975) which records the fishes of Pala Lagoon, and a list of freshwater fishes from Tutuila by the U.S. Army Corps of Engineers.⁴

COLLECTION AND IDENTIFICATION OF FISHES

Collections were made in a wide range of marine, brackish, and freshwater habitats during the present study. Smaller fishes were taken primarily with an ichthyocide (rotenone) while large ones were usually speared. Specimens were also obtained through the use of nets and hook-and-line as well as by purchase from local markets and donation from fishermen. Because the efforts of Jordan, Kellogg, Schultz, and other early collectors were confined largely to tidepools, streams, and shallow inshore areas, collecting efforts for the present study were concentrated in deeper water at depths of 10 to 75 m using scuba and to 500 m with hook-and-line.

Care was taken to obtain accurate and current identification for each species. The assistance of individuals specializing in the taxonomy of certain families or genera was sought at every opportunity. Taxonomic specialists were also asked to review species lists, update synonymies, and provide additional species records for Samoa. Their participation is an essential part of this study because the taxonomy of Indo-Pacific fishes is fragmentary and under constant revision as evidenced by the number of recent species descriptions and generic revisions cited at the end of this paper.

The list recorded herein is still preliminary and subject to nomenclatural change resulting from future taxonomic research. It is also incomplete in that numerous species are identified only to genus and because many fishes, particularly those inhabiting deeper water and restricted habitats, probably remain uncollected.

Most of the specimens upon which this study is based are housed in the Jean P. Haydon Museum of American Samoa. Undescribed and rare species, as well as those of questionable identity, were donated to the taxonomists who assisted with their identification. Subsequently, these and other specimens have been deposited within the collections of larger museums where they are accessible for wider study.

Several species recorded from Samoa by earlier authors were not collected or observed during the present study. The records of Jordan and Seale (1906) and Schultz (1943) were confirmed through examination of specimens deposited at the U.S. National Museum. The records of Seale (1935) were verified at the California Academy of Sciences. Samoan specimens were also examined at the B. P. Bishop Museum. Unfortunately, it was not possible to examine the specimens upon which the unconfirmed records of Schmeltz (1865-79), Kner and Steindachner (1866), Kner (1868), Steindachner (1870, 1901, 1906), Günther (1871-1910), and Pöhl (1884) are based. Correspondence with taxonomic specialists has resulted in the synonymy and invalidation of many of these records and most of those remaining probably deserve a similar fate.

SAMOAN NAMES

Existing lists of Samoan fish names are incomplete and out-

dated. Jordan and Seale's (1906) list is the most widely used but many of their names were deemed incorrect or were not recognized by the committee formed by the author to obtain Samoan names. Jordan and Seale's volume includes a "Glossary of the Principle Words Composing Native Names of Samoan Fishes" by W. E. Safford which is still very useful, however. The best reference for Samoan names is that of Demandt (1913). He included an alphabetical listing of Samoan names and their application plus a phylogenetic listing of the scientific names and corresponding Samoan names for different size categories. Krämer (1903) also listed Samoan names.

The Samoan fish names listed herein were obtained primarily from a committee of four older fishermen from Tutuila, Ta'u, and Savai'i who are known for their fishing expertise. The group was chaired by a younger fisherman who also acted as translator. Fishes were identified from original and published photographs in conjunction with an examination of preserved specimens.

Comments on size, habitat, distribution, color, and behavior were provided by the author. A short discussion generally resulted in agreement on the proper name or names. Names listed by Demandt (1913), Jordan and Seale (1906), and others were also discussed and are included if not rejected by the committee.

There is seldom a one-to-one relationship between fish species and Samoan names. Except for distinctive and common species, a single Samoan name generally applies to a group of related species with similar shapes and color patterns. Names which apply to smaller species groups or to individual species may vary between islands or even from village to village. The more general names applicable to larger species complexes and families, however, tend to be uniform. Many species possess two or more names related to size or color pattern. Again, the names are often shared with closely related species of similar size and color. All names are included in the present list with comments relative to geographic usage and their application to color variations and size ranges.

FORMAT

Species composing the checklist are listed under their respective families which are arranged in approximate phylogenetic order according to the system of Greenwood et al. (1966). The common English name for the family is listed in association with its scientific name. Samoan names which apply to the family as a whole and taxonomic comments and assistance are included and acknowledged under the family heading.

Genera and species are listed alphabetically within their respective families and in association with the species author and date of description. An asterisk (*) in the left margin indicates the present author's inability to confirm the validity of the published record. Samoan names are listed in boldface type immediately following the scientific name. If previously recorded from Samoa, the species name is followed by a reference to the first record including the name listed in the publication even if it was a misidentification. Synonyms used by Jordan and Seale (1906) and Schultz (1943) are noted for easy reference to these important studies. Additional synonyms are also listed for some entries but the reader is referred to Jordan and Seale (1906), Fowler (1928, 1931a, 1934, 1949), and the recent literature listed in the Literature Cited of this report for comprehensive synonymies.

Recent taxonomic opinions and changes are also noted under the species headings. Many have not been published but are included in an attempt to make the list as current as possible. For species with color patterns that vary with age and sex, synonyms

⁴U.S. Army Corps of Engineers. 1981. American Samoa stream inventory, island of Tutuila, American Samoa water resources study, 122 p. U.S. Army Corps of Engineers, Fort Shafter, Honolulu, HI 96858.

are linked with color if appropriate. Comments relative to the ecology and distribution of a species may also be included.

Though every effort was made, species identification was not always possible because the species may be undescribed, because types have been damaged or lost, or simply because additional study of related material is necessary. In these cases the fishes are listed as sp. or spp. under the proper genus. Collection data including number collected, range of standard lengths, and depth of capture are noted. A short diagnosis of key characteristics, including life colors, is given to facilitate subsequent identification.

Museum catalog numbers are listed for most of the unidentified and for some of the uncommon species. The following abbreviations are used:

- AMS—The Australian Museum, Sydney, Australia
ANSP—Academy of Natural Sciences, Philadelphia, Penn.
BPBM—Bernice P. Bishop Museum, Honolulu, Hawaii
CAS—California Academy of Sciences, San Francisco, Calif.
GMBL—Grice Marine Biological Laboratory, Charleston, S.C.
MU—Macquarie University, North Ryde, Australia
NMB—Naturhistorisches Museum, Braunschweig, Federal Republic of Germany
WAM—Western Australian Museum, Perth, Australia
USNM—U.S. National Museum, Washington, D.C.

SUMMARY OF CONTENTS

The checklist includes 566 species collected and identified by the author, 225 species collected by the author and identified by a recognized authority for the species complex, 27 species recorded from Samoa in the literature with the identifications confirmed by the author through examination of museum specimens, 36 species recorded from Samoa in the literature and validated through personal communication with knowledgeable taxonomists, 11 species recorded from Samoa in the literature since 1957, and 7 species recently collected and identified by recognized authorities. An additional 38 unconfirmed records from the older literature are also listed with their uncertainty denoted by an asterisk. They are listed by the name currently accepted as valid for the name under which they were originally recorded.

Including the 78 species identified only to family or genus, the list totals 991 species; 113 families are represented and 284 species are listed which have not been previously recorded from Samoa. Of the total, 890 are considered shallow-water or reef-inhabiting species (generally found at depths < 60 m); 56 are considered deeper bottom fishes (associated with the bottom at depths of 60-500 m); and 45 are considered pelagic surface species (frequenting the offshore waters above the thermocline at depths < 200 m). None of the listed species are true deepwater fishes.

About 40 fishes are presently known only from Samoa and most are undescribed. The majority of these will probably be found in neighboring archipelagos as more extensive collections are made. Excepting the relatively isolated Hawaiian fauna in which about 29% of the species are endemic (Randall 1976), most of the marine fishes of Oceania are rather widely distributed and species composing the Samoan fauna are no exception.

LIST OF FISHES

Hexanchidae (Bulldog Sharks)

Hexanchus griseus (Bonnaterre, 1788).

This deepwater species is occasionally caught by handline fishermen.

Orectolobidae (Nurse Sharks)

Nebrius ferrugineus (Lesson, 1830). **Moemoeao.**

Ginglymostoma mulleri—Schmeltz, 1877.

Stegostoma fasciatum (Hermann, 1783). **Ta'aneva, moemoeao.**

Lamnidae (Mackerel Sharks)

Isurus oxyrinchus Rafinesque, 1810. **Aso-polota.**

Alopiidae (Thresher Sharks)

Thresher sharks are occasionally caught in Samoan waters by tuna longline vessels though no specimens were available for examination.

Carcharhinidae (Requiem Sharks)

The general name for sharks in Samoa is **malie**. J. A. F. Garrick provided comments regarding the taxonomy of this family.

Carcharhinus albigarginatus (Rüppell, 1837). **Aso.**

Carcharhinus amblyrhynchus (Bleeker, 1856). **Malie-aloalo.**

Garrick has found that *menisorrah*, as used by Schultz (in Schultz et al. 1953) and subsequent authors, is a misidentification.

Carcharhinus falciformis (Bibron in Müller and Henle, 1841).

Carcharhinus galapagensis (Snodgrass and Heller, 1905).

Carcharhinus leucas (Valenciennes in Müller and Henle, 1841).

Carcharhinus limbatus (Valenciennes in Müller and Henle, 1841).

Eulamia limbatus—Steindachner, 1906.

Carcharhinus longimanus (Poey, 1861). **Apoapo.**

Carcharhinus melanopterus (Quoy and Gaimard, 1824). **Apeape, malie-alamata.**

Carcharias melanopterus—Jordan and Evermann, 1905.

Galeocerdo cuvier (Peron and LeSueur in LeSueur, 1822). **Naiufi.**

Negaprion acutidens (Rüppell, 1837).

Prionace glauca (Linnaeus, 1758). **Aso-polota.**

This record is based on an observation by Patrick Bryan and Roger Pflum of a shark caught near the surface on a handline about 12 km offshore.

Triaenodon obesus (Rüppell, 1837). **Malu.**

Triaenodon obesus—Randall, 1977.

Sphyrnidae (Hammerhead Sharks)

Sphyrna lewini Griffith and Smith in Cuvier, Griffith, and Smith, 1834. **Mata'italiga.**

The young of this species are commonly captured by gillnet in Pago Pago Bay.

Sphyrna zygaena* (Linnaeus, 1758). **Mata'italiga.

Sphyrna zygaena—Jordan and Seale, 1906.

The two specimens upon which this record is based were not cataloged and could not be found within the collection of the U.S. National Museum. This species may occur in Samoa but Jordan and Seale probably confused it with *lewini* which is certainly the more abundant of the two.

Squalidae (Dogfish Sharks)

Bottom handline fishermen have reported catches of spiny dogfish (*Squalus*) at depths of 100 m or more though no specimens were available for examination. Likewise, *Isistius brasiliensis* was not seen by the author though its presence offshore is indicated by characteristic feeding scars ("plugs" of flesh removed) on tunas and other pelagic fishes.

Rhynchobatidae (Narrow-Snouted Shovelnose Rays)

Rhynchobatus djiddensis (Forsskål, 1775).

This record is based on photographs taken by Stanley N. Swerdloff in Fagatale Bay at a depth of 30 m.

Dasyatididae (Sting Rays)

The Samoan name for rays is *fai*.

Dasyatis kuhlii (Müller and Henle, 1841). *Fai-tala, fai-malie*.

Trygon kuhlii—Günther, 1910.

Himantura fai Jordan and Seale, 1906.

Himantura fai—Jordan and Seale, 1906.

This species is synonymized under *Dasyatis gerrardi* by some authors.

Mobulidae (Mantas)

Some Samoans refer to mantas as *fai-malie*. No specimens were obtained.

Myliobatidae (Eagle Rays)

Aetobatis narinari (Euphrasen, 1790). *Fai-pe'a, fai-manu*.

Aetobatis narinari—Günther, 1910.

Elopidae (Ladyfishes)

Elops hawaiiensis Regan, 1909.

Elops saurus—Jordan and Seale, 1906.

Megalopidae (Tarpons)

Megalops cyprinoides (Broussonet, 1782). *Ana'anālagi, fa*.

Megalops cyprinoides—Jordan and Seale, 1906.

Albulidae (Bonefishes)

Albula sp. *Ava*.

Albula conorhynchus—Schmeltz, 1877.

Recent authors have treated this genus as monotypic and have identified all specimens as *vulpes*. Based on his biochemical studies, James B. Shaklee believes there may be as many as six species in the genus. Further research is necessary before Samoan specimens can be identified with assurance.

Anguillidae (Freshwater Eels)

Members of this family, which are usually found in fresh or brackish water, are known as **tuna** in Samoa.

Anguilla australis Richardson, 1841.

Anguilla sidat—Schmeltz, 1869.

As *A. australis* and *A. sidat*, Jordan and Seale, 1906 and as *Muraena australis*, Schultz, 1943.

Anguilla celebensis Kaup, 1856.

Anguilla megastoma—Jordan and Seale, 1906.

As *Muraena celebensis*, Schultz, 1943.

Anguilla mauritiana Bennett, 1831.

Anguilla marmorata—Schmeltz, 1866.

As *Muraena mauritiana*, Schultz, 1943.

Moringuidae (Worm Eels)

Worm eels are called *fāfā* in Samoa. Peter H. J. Castle considers "the nomenclature of the Indo-Pacific species of *Moringua* to be in a state of complete flux" and is unable to identify Samoan specimens at present. He concludes that moringuids are sexually dimorphic and that there may be distinctive vertebral numbers for males and females in some species. Samoan eels were collected which key (Schultz's key to the genus *Moringua*, in Schultz et al. 1953) to each of the species listed below. However, counts of lateral line pores (which correlate with vertebral numbers) in combination with measurements of relative head length and body depth reveal only three groupings for Samoan moringuids. The following list should be considered in the light of these comments.

Moringua abbreviata (Bleeker, 1863).

Moringua abbreviata—Schultz, 1943.

Moringua bicolor Kaup, 1856

Moringua bicolor—Schultz, 1943.

Castle believes that *bicolor* may be the male of *javanica*.

Moringua javanica (Kaup, 1856).

Moringua javanica—Günther, 1910.

Moringua macrocephala (Bleeker, 1863).

Moringua macrocephala—Schultz, 1943.

Moringua macrochir Bleeker, 1853.

Moringua macrochir—Schultz, 1943.

Moringua microchir Bleeker, 1853.

Moringua macrocephala—Jordan and Seale, 1906.

Xencongridae (False Morays)

John E. McCosker assisted with the identifications of *Kaupichthys*. This genus seems to be unusually well represented in Samoa though its presence was not recorded until 1943.

Kaupichthys atronasus Schultz in Schultz et al., 1953.

Kaupichthys brachyichirus Schultz in Schultz et al., 1953.

Kaupichthys hyoproroides (Strömman, 1896).

Kaupichthys diodontus—Schultz, 1943.

Kaupichthys sp.

Two specimens collected at Fagasa Bay at 13 m. Pectoral long, about five eye diameters in length; distance from snout to anus about 3.5 in total length. Body of larger specimen gray brown, smaller specimen pale; both overlaid with tiny brown specks. (CAS 40907.)

Kaupichthys sp.

Two specimens, 104 and 110 mm TL; collected at Upolu Island at 6 m. Pectoral short, its length about five times in eye diameter; eye large, its diameter about six in head; mouth short with rictus under hind margin of eye; posterior nasal flap lack-

ing; caudal well developed and truncate. McCosker has also seen specimens from Yap. (CAS 44281.)

Muraenidae (Morays)

The general name for moray eels in Samoa is **pusi**. Small individuals are sometimes termed to'e, large ones are called **maoa'e**, and very large specimens are referred to as **atapanoa**. Small brown eels may also be labeled **u'aulu** and small pale eels may be called **apeape**. John E. McCosker assisted with the identifications of *Gymnothorax* and *Uropterygius*. He also provided confirmation of published synonymies and revealed several that are unpublished. James E. Böhlke is considering the retention of the generic name *Gymnothorax* for only those species with serrated tooth margins. The species listed below under *Gymnothorax* without serrated teeth would then possess the generic name *Lycodontis*.

Anarchias allardicei Jordan and Starks, 1906.

Anarchias allardicei—Jordan and Seale, 1906.

As *Uropterygius allardicei*, Schultz, 1943.

Anarchias leucurus (Snyder, 1904).

Uropterygius leucurus—Schultz, 1943.

Randall and McCosker (1975) discussed the confusion between this species and *seychellensis*. The present identification is, therefore, provisional.

Anarchias spp.

Anarchias needs revision. Samoan specimens belonging to possibly three additional species have been collected. One form is tan with pale rectangular specks over most of the body; another is a uniform fawn color with the dorsal originating only slightly behind the anus and the third is pale with irregular brown bars and saddles on the body and brown bars on the lower lip. (CAS 47044-47047.)

Echidna delicatula (Kaup, 1856).

Echidna delicatula and *E. trossula*—Jordan and Seale, 1906.

Echidna leucotaenia Schultz, 1943. **Mutupu'u**.

Echidna leucotaenia—Schultz, 1943.

Echidna nebulosa (Ahl, 1789). **Ai'aiuga**.

Echidna nebulosa—Fowler, 1900.

Echidna polyzona (Richardson, 1844).

Poecilophus polyzonus—Schmeltz, 1865.

Echidna unicolor Schultz in Schultz et al., 1953.

Echidna xanthospila (Bleeker, 1859).

Echidna xanthospila—Steindachner, 1906.

McCosker questions the validity of this species.

Echidna zebra (Shaw, 1797). **To'etapu**.

Echidna zebra—Schmeltz, 1866.

Enchelycore bayeri (Schultz in Schultz et al., 1953.)

Auvaelotoa-uli.

Gymnothorax schismatorhynchus (part)—Schultz, 1943.

Enchelycore schismatorhynchus (Bleeker, 1853). **Auvaelotoa**.

Gymnothorax schismatorhynchus (part)—Schultz, 1943.

Enchelynassa canina (Quoy and Gaimard, 1824) **Auvaelotoa-sina**.

Enchelynassa bleekeri—Jordan and Snyder, 1904.

As *E. canina* and *Rhinamuraena eritina*, Jordan and Seale, 1906.

Gymnothorax buroensis (Bleeker, 1857).

Gymnothorax buroensis—Jordan and Seale, 1906.

Gymnothorax chilospilus (Bleeker, 1865).

Gymnothorax detactus—Jordan and Seale, 1906.

Gymnothorax elegans Bliss, 1883.

(CAS 44192.)

Gymnothorax enigmaticus McCosker and Randall, 1982.

Gymnothorax reticulatus—Schmeltz, 1866.

As *G. ruppelli*, Schultz, 1943. McCosker and Randall (1982) noted that this species is listed as *ruppelli* by most authors.

Gymnothorax fimbriatus (Bennett, 1831). **Pusi-pulepule**, **papata-pulepule**.

Gymnothorax stellatus—Jordan and Seale, 1906.

Gymnothorax flavimarginatus (Rüppell, 1828). **Tafi-laotalo**, **pusi-gatala**.

Gymnothorax favagineus—Schmeltz, 1869.

As *G. flavomarginatus*, Jordan and Seale, 1906.

Gymnothorax fuscocomaculatus (Schultz in Schultz et al., 1953).

Gymnothorax gracilicaudus (Jenkins, 1903).

Gymnothorax gracilicauda—Schultz, 1943.

Gymnothorax hepaticus (Rüppell, 1828).

Muraena hepatica—Schmeltz, 1879.

Gymnothorax javanicus (Bleeker, 1859). **Pusi-gatala**, **maoa'e**.

Gymnothorax javanicus—Jordan and Seale, 1906.

Gymnothorax margaritophorus Bleeker, 1864. **Pusi-a'au**.

Gymnothorax talofa—Jordan and Seale, 1906.

Gymnothorax melatremus Schultz in Schultz et al., 1953.

Gymnothorax meleagris (Shaw and Nodder, 1795). **Puali'i**, **'ai'aii**.

Gymnothorax meleagris—Jordan and Seale, 1906.

As *G. leucostictus*, Schultz, 1943.

Gymnothorax monostigmus (Regan, 1909).

Gymnothorax monostigma—Schultz, 1943.

Gymnothorax pictus (Ahl, 1789). **Onea**.

Echidna variegata—Schmeltz, 1866.

As *Gymnothorax favaginea*, *G. litus*, *G. pictus*, and *G. polyphthalmus*, Jordan and Seale, 1906.

Gymnothorax pindae Smith, 1962.

This species is incorrectly identified as *moluccensis* by some recent authors.

**Gymnothorax reevesii* (Richardson, 1844).

Thyrsoides reevesii—Schultz, 1865.

Gymnothorax richardsoni (Bleeker, 1852).

Muraena richardsoni—Steindachner, 1906.

As *Gymnothorax lineatus*, Jordan and Seale, 1906.

Gymnothorax rupeelliae (McClelland, 1845). **Papata-lusitusi**.

Gymnothorax petelli—Jordan and Evermann, 1905.

As *G. petelli*, Jordan and Seale, 1906 and Schultz, 1943.

Randall (1973) examined the lectotype of this species and found it to be the species most recent authors have identified as *petelli*.

Gymnothorax thyrsoides (Richardson, 1844).

Thyrsoides arenata—Schmeltz, 1865.

Gymnothorax undulatus (Lacepède, 1803). **Pusi-pulepule**.

Thyrsoides cancellata—Schmeltz, 1865.

Gymnothorax zonipectus Seale, 1906. **Pulenini'i**.

**Muraena pardalis* Schlegel, 1846.

Muraena pardalis—Günther, 1910.

Rhinomuraena quaesita Garman, 1888.

Rhinechidna eritomia—Jordan, 1927.

Strophidon brummeri (Bleeker, 1859). **Asulu**.

Muraena taenioides—Günther, 1871.

As *Gymnothorax taenioides*, Jordan and Seale, 1906.

Uropterygius bennetti (Günther, 1870).

McCosker has determined that *seatei* is a junior synonym.

Uropterygius concolor Rüppell, 1837.

Uropterygius concolor—Jordan and Seale, 1906.

Uropterygius fuscoguttatus Schultz in Schultz et al., 1953.

Uropterygius marmoratus (Lacepède, 1803).
Uropterygius marmoratus—Jordan and Seale, 1906.
Uropterygius micropterus (Bleeker, 1852). **Pusi-sulalulu.**
Uropterygius macrocephalus—Jordan and Seale, 1906.
Uropterygius necturus (Jordan and Gilbert, 1882).
Anarchias knighti—Jordan and Seale, 1906.
As *Uropterygius reidi*, Schultz, 1943. McCosker has found that *knighti* is a junior synonym.
Uropterygius polyspilus (Regan, 1909).
Uropterygius polyspilus—Schultz, 1943.
Uropterygius supraforatus (Regan, 1909). **Pusi-le 'a.**
U. dentatus is a junior synonym.
Uropterygius tigrinus (Lesson, 1829). **Pusi-solasulu.**
Gymnomuraena tigrina—Schmeltz, 1869.
As *Scuticaria tigrina*, Jordan and Seale, 1906.
Uropterygius xanthopterus Bleeker, 1859.
Uropterygius xanthopterus—Schultz, 1943.

Congridae (Conger and Garden Eels)

Ariosoma scheelei (Strömman, 1896).
(CAS 44193.)
Conger cinereus Rüppell, 1828. **I'au'i, pusi-solasulu.**
Leptocephalus marginatus—Jordan and Evermann, 1905.
As *Congrellus guttulatus* and *Leptocephalus marginatus*, Jordan and Seale, 1906 and as *Conger noordzeike*, Schultz, 1943.
Conger sp.
One specimen, 839 mm TL; caught at 440 m. Pectoral: 19; 36 lateral line pores anterior to anus. Dorsal origin slightly anterior to pectoral tip; pupil centered over rectus. Measurements expressed in thousandths of TL: head 168, tip of snout to origin of dorsal 232, tip of snout to anus 393, snout 42, diameter of eye 23, length of pectoral 62. David G. Smith examined the specimen but was unable to identify it. (ANSP 146127.)
Gorgasia naeocepeae (Böhlke, 1951).
(BPBM 17457.)
Heteroconger hassi (Klausewitz and Eibl-Eibesfeldt, 1959).
(BPBM 17456.)

Ophichthidae (Snake Eels)

Again, John E. McCosker provided identifications and unpublished synonymies for several of the species listed below.

**Bascanichthys filaria* (Günther, 1872).
Ophichthys filaria—Günther, 1910.
**Brachysomophis crocodilinus* (Bennett, 1833).
Ophichthys crocodilinus—Günther, 1910.
Brachysomophis sauropsis Schultz, 1943. **Ati 'ati, i 'au'i.**
Brachysomophis sauropsis—Schultz, 1943.
Callechelys marmorata (Bleeker, 1853).
Callechelys marmoratus—Schultz, 1943.
Ichthyapus vulturis (Weber and deBeaufort, 1916).
Glenoglossa wassi McCosker, 1982.
Glenoglossa wassi—McCosker, 1982.
(CAS 47048, 47049.)
**Lamnostoma polyopthalma* (Bleeker, 1853).
Ophichthys punctulatus—Günther, 1910.
Leuranus semicinctus (Lay and Bennett, 1839). **Gatauli.**
Sphagebranchia longipinnis—Schmeltz, 1866.
As *Dalophis longipinnis* and *Leuranus semicinctus*, Jordan and Seale, 1906.

Muraenichthys gymnotus Bleeker, 1864.
Muraenichthys fowleri—Schultz, 1943.
Muraenichthys laticaudata (Ogilby, 1897).
Muraenichthys laticaudata—Schultz, 1943.
Muraenichthys macropterus Bleeker, 1857.
Muraenichthys macropterus—Seale, 1935.
Muraenichthys macrostomus Bleeker, 1864.
Muraenichthys schultzei Bleeker, 1857.
Muraenichthys schultzei—Helfrich et al. 1975.
Muraenichthys sibogae Weber and deBeaufort, 1916.
Muraenichthys cookei—Helfrich et al. 1975.
Myrichthys colubrinus (Boddaert, 1781). **Gatanea.**
Leirurus colubrinus—Schmeltz, 1866.
As *Chelvestes colubrinus* and *C. fasciatus*, Jordan and Seale, 1906.
Myrichthys maculosus (Cuvier, 1817).
Myrichthys maculosus—Schultz, 1943.
Myrophis uropterus (Temminck and Schlegel, 1842).
(CAS 38565.)
Ophichthus melanochir Bleeker, 1864.
Collected from Aunu'u Island by John E. Randall. (BPBM 16794.)
Phyllophichthus xenodontus Gosline 1951.
**Pisodonophis cancrivorus* (Richardson, 1844).
Ophichthys cancrivorus—Günther, 1910.
Schismorhynchus labialis (Seale, 1917).
Schultzidia johnstonensis (Schultz and Woods, 1949).
Yirrkala sp.
McCosker plans to describe the single Samoan specimen of this striped species as new. (CAS 46677.)

Clupeidae (Herrings)

Members of this family are known generally as **pelupelu**. Peter J. Whitehead provided synonymies and confirmed identifications. He indicates that the four species listed with an asterisk may all be valid records.

**Dussumieria acuta* Valenciennes in Cuvier and Valenciennes, 1847.
Dussumieria acuta—Seale, 1935.
Seale's specimens of *acuta* were never cataloged so the author was unable to confirm this record.
Herklotsichthys quadrimaculatus (Rüppell, 1837).
Herklotsichthys punctata—Fowler, 1932.
Whitehead writes that his student, Thosaporn Wongratana, has found *punctatus* to be restricted to the Red Sea and that the widespread species hitherto called by this name (Whitehead 1972) is *quadrimaculatus*.
**Sardinella albella* (Valenciennes in Cuvier and Valenciennes, 1847).
Clupea zunasi—Schmeltz, 1879.
**Sardinella fimbriata* (Valenciennes in Cuvier and Valenciennes, 1847).
Spratella fimbriata—Schmeltz, 1865.
**Sardinella gibbosa* (Bleeker, 1849).
Clupea gibbosa—Günther, 1909.
Sardinella melanura (Cuvier in Cuvier and Valenciennes, 1829).
Salala, pu'a.
Clupeonia commersoni—Schmeltz, 1865.
As *Harengula commersoni*, Jordan and Seale, 1906.

- Sardinella sirm* (Walbaum, 1792).
Sardinella sirm—Jordan and Seale, 1906.
Spratelloides delicatulus (Bennett, 1831). **Poi, nefu.**
Spratelloides alburnus—Schmeltz, 1874.
As *Stolephorus delicatulus*, Jordan and Seale, 1906.
Spratelloides gracilis (Schlegel, 1846). **Poi, nefu.**
Spratelloides atrofasciatus—Schultz, 1943.

Engraulidae (Anchovies)

Anchovies are called **nefu** or **file** in Samoa. Peter J. Whitehead has provided identifications and synonymies.

- Stolephorus buccaneeri* Strasburg, 1960.
Stolephorus buccaneeri—Whitehead, 1972.
Stolephorus devisi (Whitley, 1940).
This is the most common anchovy in Pago Pago Bay. It is sometimes confused with *heterolobus* from which it is distinguished by a lower gill raker count and longer head.
Stolephorus indicus (Van Hasselt, 1823).
Anchovia apiensis—Jordan and Seale, 1906.
Thissina baelma (Forsskål, 1775).
Anchovia evermanni—Jordan and Seale, 1906.

Synodontidae (Lizardfishes)

Samoaans refer to lizardfishes as **ta'oto**. Roger F. Cressey has confirmed Samoan distributions for the three species of *Synodus* listed below.

- Saurida gracilis* (Quoy and Gaimard, 1824).
Saurida gracilis—Jordan and Seale, 1906.
Synodus binotatus Schultz in Schultz et al., 1953.
Synodus englemani Schultz in Schultz et al., 1953.
Synodus variegatus (Lacepède, 1803).
Synodus varius—Schmeltz, 1869.
As *S. varius*, Jordan and Seale, 1906.

Chanidae (Milkfishes)

- Chanos chanos* (Forsskål, 1775). **Avali'i, ava.**
Chanos chanos—Jordan and Seale, 1906.

Plotosidae (Eel Catfishes)

- Plotosus anguillar* (Bloch, 1794). **Apoa.**
Plotosus anguillar—Jordan and Seale, 1906.

Gobiesocidae (Clingfishes)

- Conidens samoensis* (Steindachner, 1906). **Ta'uli.**
Crepidogaster samoensis—Steindachner, 1906.
As *Aspasmagaster samoensis*, Schultz, 1943.

Antennariidae (Frogfishes)

Members of this family are known by the same general names as the scorpaenids in Samoa. Individuals < 8 cm TL are called **la'otale**; larger fish are **nofu**. Theodore W. Pietsch confirmed the identifications and provided most of the synonymies.

- Abantennarius analis* Gosline, 1957.

- Antennarius coccineus* (Lesson, 1831).
Antennarius coccineus—Schultz, 1964.
Antennarius commersonii (Shaw, 1804).
Antennarius commersonii—Günther, 1877.
Antennarius drombus Jordan and Evermann, 1903.
Antennarius drombus—Jordan and Seale, 1906.
Antennarius nummifer Cuvier, 1817.
Antennarius nummifer—Günther, 1876.
Antennarius rosaceus (Smith and Radcliffe, 1912).
The single Samoan specimen was collected from Larsen Bay at 60 m.
Antennatus tuberosus (Cuvier, 1816).

Ophidiidae (Brotulas and Cusk Eels)

- Brotula multibarata* Temminck and Schlegel, 1846. **Tafuti.**
Brotula townsendi Fowler, 1900. **Tafuti.**
Ophidion sp.
One of the three Samoan specimens was collected in Faga'alu Bay at 33 m. C. Richard Robins has informed the author that this material represents an undescribed species currently known only from these specimens. (BPBM 18719.)

Bythitidae

Daniel M. Cohen assisted with the identifications and diagnoses for members of this family.

- Bromphophysops pautzkei* Schultz in Schultz et al., 1960.
Dinematichthys sp. **Tapotopoto.**
Dinematichthys iluocoeteoides (part)—Jordan and Seale, 1906.
As *D. iluocoeteoides* (part), Schultz, 1943.
Several specimens collected; 27-93 mm SL. Dorsal 73-87 (8 of 9 specimens with 77 or more rays); anal 59-73 (8 of 9 with 61 or more rays). Eye diameter 2-3 times in interorbital distance and 8-10 times in head length. Bleeker's type of *iluocoeteoides* apparently is no longer extant and there is considerable confusion as to which species the name applies (Cohen and Nielsen 1978). Though only one has been described, there appear to be numerous species in the genus. (BPBM 24123, USNM 222480.)
Dinematichthys sp. **Tapotopoto.**
Dinematichthys iluocoeteoides (part)—Jordan and Seale, 1906.
As *D. iluocoeteoides* (part), Schultz, 1943.
Several specimens; 53-60 mm SL. Dorsal 73-75; anal 58-61. Eye diameter 4-6 times in interorbital distance and 16-23 times in head length. Cohen suspects that two species may be represented by these specimens. One group (USNM 222481) is pale (in preservative) with no obvious papillae on the snout and tip of lower jaw and with scales on the opercles. The other (USNM 222483) is darker brown with papillae more or less developed on the snout and tip of lower jaw and without scales on the opercles (but present farther forward).
Microbrotula randalli Cohen and Wourms, 1976.
Microbrotula randalli—Cohen and Wourms, 1976.

Carapidae (Pearlfishes)

- Carapus homei* (Richardson, 1846). **I'au.**
Fierasfer homei—Schmeltz, 1866.
As *Fierasfer homei*, Jordan and Seale, 1906.
This species was found within the body cavities of the sea cucumbers *Stichopus chloronatus* and *Bohadschia argus*.

Carapus parvipinnis (Kaup, 1856).
Fierasfer parvipinnis—Schmeltz, 1874.
Encheliophus gracilis (Bleeker, 1856).
Jordanicus gracilis—Günther, 1909.
As *Jordanicus gracilis*, Schultz, 1943.
Samoa specimens were taken from the body cavities of *Bohadschia argus*.
Onuxodon margariitiferae (Rendahl, 1921).
Samoa specimens were collected from the jewelbox clam *Spondylus* sp.

Exocoetidae (Flyingfishes)

The Samoan name for flyingfishes is *mālolo*. Only four species were collected by the author. However, N.V. Parin, who has been engaged in revisional studies of the family for the past 20 yr, has kindly listed the following as occurring in the vicinity of Samoa.

Cheilopogon atrisignis (Jenkins, 1904).
Cheilopogon nigricans (Bennett, 1840).
Parin considers *nigricans* as a species group of which at least two species are represented in the vicinity of Samoa.
Cheilopogon spilonopterus (Bleeker, 1866).
Cypselurus quindecimradiatus—Jordan and Seale, 1906.
As *Cypselurus spilonopterus*, Schultz, 1943.
Cheilopogon spilopterus (Valenciennes in Cuvier and Valenciennes, 1846).
Cheilopogon suttoni (Whitley and Colefax, 1938).
Cheilopogon unicolor (Valenciennes in Cuvier and Valenciennes, 1846).
Cypselurus unicolor—Jordan and Seale, 1906.
Cypselurus angusticeps Nichols and Breder, 1935.
Cypselurus poecilopterus (Valenciennes in Cuvier and Valenciennes, 1846).
Cypselurus poecilopterus—Jordan and Seale, 1906.
As *Cypsilurus poecilopterus*, Schultz, 1943.
Exocoetus monocirrus Richardson, 1846.
Exocoetus obtusirostris Günther, 1866.
Exocoetus volitans Linnaeus, 1758.
Exocoetus evolans—Günther, 1909.
Hirundichthys albimaculatus (Fowler, 1934).
Danichthys gilberti—Schultz, 1943.
Hirundichthys speculiger (Valenciennes in Cuvier and Valenciennes, 1846).
Exocoetus speculiger—Günther, 1909.
Parexocoetus brachypterus (Richardson, 1846).
Prognichthys sealei Abe, 1955.

Hemiramphidae (Halfbeaks)

The Samoan name for halfbeaks is *i'usila*. Bruce B. Collette provided synonymies and confirmed existing records. He states that *Oxyporhamphus micropterus* (Valenciennes in Cuvier and Valenciennes, 1846) is also likely to occur in Samoan waters.

Euleptorhamphus viridis (Van Hasselt, 1824).
Hemiramphus archipelagicus Collette and Parin, 1978.
Hemiramphus archipelagicus—Collette and Parin, 1978.
Hemiramphus far (Forsskål, 1775).
Hemiramphus far—Steindachner, 1906.
Hemiramphus lutkei Valenciennes in Cuvier and Valenciennes, 1846.

Hemiramphus lutkei—Parin, Collette and Shcherbachev, 1980.
Hyporhamphus acutus acutus (Günther, 1871).
Odontorhamphus cancellori—Schultz, 1943.
Hyporhamphus affinis (Günther, 1866).
Most of the published records of this species are misidentifications of *Hyporhamphus dussumieri*. Collette has seen only one specimen (USNM 152263) from Samoa.
Hyporhamphus balinensis (Bleeker, 1859).
Hemiramphus pacificus—Jordan and Seale, 1906.
As *Hemiramphus pacificus*, Schultz, 1943.
Hyporhamphus dussumieri (Valenciennes in Cuvier and Valenciennes, 1846).
Hyporhamphus samoensis—Steindachner, 1906.
As *Hemiramphus affinis*, Jordan and Seale, 1906 and Schultz, 1943.
Zenarchopterus dispar (Valenciennes in Cuvier and Valenciennes, 1846).
Zenarchopterus vaisiganis—Jordan and Seale, 1906.

Belonidae (Needlefishes)

Needlefishes with a total length of less than about 40 cm are called *ise*. Larger ones are known as *a'u*. Again, Bruce B. Collette provided synonymies.

Ablennes hians (Valenciennes in Cuvier and Valenciennes, 1846).
Platybelone argalus platyura (Bennett, 1832).
Belone platyura—Jordan and Evermann, 1905.
As *Belone platyura*, Jordan and Seale, 1906 and Schultz, 1943.
Strongylura incisa (Valenciennes in Cuvier and Valenciennes, 1846).
Tylosurus leiuroides—Jordan and Seale, 1906.
As *Tylosurus incisa*, Schultz, 1943.
Tylosurus crocodilus crocodilus (Peron and LeSueur, 1821).
Belone crocodilus—Schmeltz, 1866.
As *Tylosurus giganteus*, Jordan and Seale, 1906, and as *T. incisa*, Schultz, 1943.

Poeciliidae (Mollies)

Poecilia mexicana Steindachner, 1866. **Fō-vai**.
This species was introduced into the freshwaters of American Samoa many years ago by the Department of Public Health to control mosquitos.
**Poecilia reticulata* Peters, 1859.
Lebistes reticulatus—Fowler, 1932.

Atherinidae (Silversides)

The Samoan name for members of this family is *salī*. Walter Ivantsoff is credited with the synonymies.

Atherinomorus lacunosus (Schneider, 1801).
Atherina pinguis—Schmeltz, 1866.
As *Hepsetia pinguis*, Schultz, 1943.
Atherion elymus Jordan and Starks, 1901.
Hypoatherina ovalaua (Herre, 1935).
Allanetta ovalaua—Helfrich et al., 1975.
Hypoatherina temminckii (Bleeker, 1835). **Salī, uisila**.
Atherina uisila—Jordan and Seale, 1906.
As *Atherina uisila*, Schultz, 1943.

Isonidae (Surf-Fishes)

Iso sp.

Thirty-one specimens; 18-27 mm SL; collected at Fagasa and Sailele. Dorsal V-VI + I, 14-16; anal I, 21-22; pectoral 12-13. Teeth present but not externally on maxilla. Silvery lateral band continuous and terminating on anterior portion of caudal peduncle just behind axil of dorsal fin. This species occurs at the surface amidst turbulence and bubbles near wave-washed rocks. It will probably be described as new by Walter Ivantsoff. (MU 1-181.)

Anomalopidae (Lantern-Eyes)

Anomalops katoptron Bleeker, 1856.

This species is occasionally caught by headline fishermen at depths >300 m. Its identity was confirmed by John E. McCosker. (CAS 44373.)

Holocentridae (Squirrelfishes)

Squirrelfishes are known as *malau* in Samoa. Matsuura and Shimizu (1982) have recently found that *Sargocentron* must replace the generic name *Adioryx* as used by most recent authors. John E. Randall provided several of the identifications and assisted with the synonymies.

Flammeo argenteus (Valenciennes in Cuvier and Valenciennes, 1831).

Holocentrum laeve—Günther, 1875.

As *Holocentrum laevis*, Jordan and Seale, 1906 and Schultz, 1943.

Flammeo aurolineatus (Liénard, 1839). **Malau-va'a.**

Randall writes that *scythrops* is a common synonym.

Flammeo opercularis (Valenciennes in Cuvier and Valenciennes, 1831). **Malau-loa.**

Holocentrum operculare—Günther, 1875.

As *Holocentrus opercularis*, Jordan and Seale, 1906 and Schultz, 1943.

Flammeo sammara (Forsskål, 1775). **Malau-tui, malau-pe'a-pe'a.**

Holocentrum sammara—Schmeltz, 1865.

As *Holocentrus sammara*, Jordan and Seale, 1906 and Schultz, 1943.

Myripristis adustus Bleeker, 1853. **Malau-tuavefa, malau-'uo.**

Myripristis adustus—Schmeltz, 1866.

Myripristis amaenus (Castelnau, 1873).

Myripristis argyromus—Schultz, 1943.

Myripristis berndti Jordan and Evermann, 1903. **Malau-ugatele, malau-va'ava'a.**

Myripristis murdjan—Jordan and Evermann, 1905.

As *M. intermedius* (part) and *M. murdjan* (part), Jordan and Seale, 1906 and as *M. berndti* and *M. murdjan* (part), Schultz, 1943.

Myripristis chryseres Jordan and Evermann, 1903.

Randall confirmed the identification of this species which generally frequents depths > 30 m.

Myripristis hexagonus (Lacepède, 1802).

Myripristis hexagonus—Schmeltz, 1865.

Myripristis kuntee Cuvier in Cuvier and Valenciennes, 1831.

Malau-pu'u.

Myripristis multiradiatus—Jordan and Seale, 1906.

As *M. multiradiatus*, Schultz, 1943.

Myripristis murdjan (Forsskål, 1775).

Myripristis parvidens—Greenfield, 1974.

Randall and Guézé (1981) have just completed an examination of this species complex.

Myripristis pralinus Cuvier in Cuvier and Valenciennes, 1829.

Malau-va'ava'a, malau-mamo.

Myripristis prasinus and *M. sanguineus*—Jordan and Seale, 1906.

As *M. sanguineus*, Schultz, 1943.

Myripristis randalli Greenfield, 1974.

David W. Greenfield confirmed the identification. This species was previously known only from the Austral Islands and Pitcairn Island.

Myripristis violaceus Bleeker, 1851. **Malau-tuauli.**

Myripristis microphthalmus—Jordan and Seale, 1906.

As *M. microphthalmus*, Schultz, 1943.

Myripristis vittatus Cuvier in Cuvier and Valenciennes, 1831.

Greenfield also identified this species.

Myripristis woodsii Greenfield, 1974.

Myripristis intermedius (part) and *M. murdjan* (part)—Jordan and Seale, 1906.

As *M. murdjan* (part), Schultz, 1943.

Ostichthys delta Randall, Shimizu and Yamakawa, 1982.

Ostichthys delta—Randall, Shimizu and Yamakawa, 1982. (BPBM 28107.)

Ostichthys kaianus (Günther, 1880).

This identification was confirmed by John E. Randall. (BPBM 28906.)

Plectrypops lima (Valenciennes in Cuvier and Valenciennes, 1831.) **Malau-mutu.**

Myripristis humilis—Kner and Steindachner, 1866.

As *Holotrachys lima*, Jordan and Seale, 1906 and Schultz, 1943.

Sargocentron caudimaculatum (Rüppell, 1835). **Malau-i'usina, tāmālau-mūmū, tamenom-mūmū.**

Holocentrum caudimaculatum—Schmeltz, 1865.

As *Holocentrus caudimaculatus*, Jordan and Seale, 1906 and Schultz, 1943.

Sargocentron diadema (Lacepède, 1801). **Malau-tui, malau-talapu'u, malau-tusitusi, malau-pāuli.**

Holocentrum diadema—Schmeltz, 1865.

As *Holocentrus diadema*, Jordan and Seale, 1906 and Schultz, 1943.

Sargocentron ensiferum (Jordan and Evermann, 1903).

This species is handlined from deep water.

Sargocentron lacteoguttatum (Cuvier in Cuvier and Valenciennes, 1829). **Malau-faiumu.**

Holocentrum punctatissimus—Schmeltz, 1865.

As *Holocentrus punctatissimus*, Jordan and Seale, 1906 and as *H. lacteoguttatus*, Schultz, 1943.

Sargocentron melanospilos (Bleeker, 1858).

A specimen was handlined from 90 m. The identity was confirmed by Randall who reports that *cornutum*, the name often applied to this species, has an Indo-Malayan distribution. (BPBM 27764.)

Sargocentron microstoma (Günther, 1859). **Malau-tianiu.**

Holocentrum microstoma—Schmeltz, 1874.

As *Holocentrus microstomus*, Jordan and Seale, 1906 and Schultz, 1943.

Sargocentron rubrum (Forsskål, 1775).

Holocentrum rubrum—Günther, 1874.

As *Holocentrus prasinus*, Jordan and Seale, 1906 and as *H. ruber*, Schultz, 1943.

Sargocentron spiniferum (Forsskål, 1775). **Tāmala** (< 30 cm TL), **mu-malau** (> 30 cm TL), **malau-toa**.
Holocentrum spiniferum—Schmeltz, 1865.
As *Holocentrus binotatus* and *H. spinifer*, Jordan and Seale, 1906 and Schultz, 1943.
Sargocentron tiere (Cuvier in Cuvier and Valenciennes, 1829).
Holocentrum erythraeum—Schmeltz, 1874.
As *Holocentrus erythraeus* and *H. tiere*, Jordan and Seale, 1906 and as *H. erythraeus*, Schultz, 1943.
Sargocentron tiereoides (Bleeker, 1853).
Sargocentron violaceum (Bleeker, 1853). **Malau-tifa**, **malau-uli**.
Holocentrum violaceum—Schmeltz, 1869.
As *Holocentrus violaceus*, Jordan and Seale, 1906 and Schultz, 1943.

Lampridae (Moonfish Family)

Lampris guttatus (Brunnich, 1788). **Koko**.

This is a pelagic species commonly caught by tuna longline vessels.

Aulostomidae (Trumpetfishes)

Aulostomus chinensis (Linnaeus, 1766). **Taoto-ena** (brown phase), **taoto-sama** (yellow phase), **'au'aulauti**, **taotito**.
Aulostomus chinense—Schmeltz, 1865.
As *A. valentini*, Jordan and Seale, 1906.

Fistulariidae (Cornetfishes)

Fistularia commersonii Rüppell, 1838. **Taoto-ama**, **taotao**.
Fistularia tabaccaria—Schmeltz, 1865.
As *F. petimba*, Jordan and Seale, 1906 and Schultz, 1943.

Macrorhamphosidae (Snipefishes)

Macrorhamphosus scolopax (Linnaeus, 1758).
Centricus brevispinus—Kner and Steindachner, 1866.
As *Macrorhamphosus brevispinus*, Jordan and Seale, 1906.
A Samoan specimen taken from a fish stomach was identified by Alwyne Wheeler. Additional synonyms are *gracilis* and *velitaris*.

Syngnathidae (Pipefishes and Seahorses)

C. E. Dawson has confirmed the identifications and Samoan records and assisted with the synonymies.

Choeroichthys cinctus Dawson, 1976.
Choeroichthys sculptus (Günther, 1870).
Choeroichthys sculptus—Schultz, 1943.
Corythoichthys amplexus Dawson and Randall, 1975.
Corythoichthys amplexus—Dawson, 1977a.
Corythoichthys flavofasciatus (Rüppell, 1838).
Corythoichthys sealei—Jordan and Seale, 1906.
As *Corythoichthys conspiciatus*, Schultz, 1943.
Corythoichthys intestinalis (Ramsey, 1881).
Corythoichthys waitei—Jordan and Seale, 1906.
As *Corythoichthys fasciatus*, Schultz, 1943.
Cosmocampus maxweberi (Whitley, 1933).
(BPBM 17483.)
Doryrhamphus excisus (Kaup, 1856).
Doryrhamphus melanopieura—Schultz, 1943.

Dunkercampus dactylophorus (Bleeker, 1853).
Festucalex wassi Dawson, 1977.

Festucalex wassi—Dawson, 1977b.
Hippichthys spicifer (Rüppell, 1838).
Syngnathus spicifer—Seale, 1935.
**Hippocampus kuda* Bleeker, 1852.
Hippocampus guttulatus var. *kuda*—Schmeltz, 1874.
Micrognathus brevirostris (Rüppell, 1840).
Micrognathus mataafoe (Jordan and Seale, 1906).
Corythoichthys mataafoe—Jordan and Seale, 1906.
Microphis retzii (Bleeker, 1856).
Microphis caudatus and *M. torrentius*—Jordan and Seale, 1906.
This species is usually found in brackish or freshwater.
Oostethus brachyurus brachyurus (Bleeker, 1853).
Microphis brachyurus—Jordan and Seale, 1906.
As *Doryichthys brachyurus*, Schultz, 1943.
Adults are usually found in fresh or brackish water.
Phoxocampus diacanthus (Schultz, 1943).
Ichthyocampus diacanthus—Schultz, 1943.
Syngnathoides biaculeatus (Bloch, 1785).
Gasterotokeus biaculeatus—Jordan and Seale, 1906.

Scorpaenidae (Scorpionfishes)

Scorpionfishes < 8 cm TL are called **la'otale**. Those > 8 cm TL are referred to as **nofu** or **i'atala**. William N. Eschmeyer has confirmed the identifications of the new Samoan records and provided synonymies.

Dendrochirus biocellatus (Fowler, 1938).
Dendrochirus sausaule Jordan and Seale, 1906. **Sausau-lele**.
Pterois zebra—Schmeltz, 1866.
As *Dendrochirus brachypterus*, Schultz, 1943.
Pontinus macrocephalus (Sauvage, 1882).
This species is occasionally caught by fishermen at depths around 200 m.
Pterois antennata (Bloch, 1787). **Sausau-lele**.
Pterois radiata Cuvier in Cuvier and Valenciennes, 1829. **Sausau-lele**.
Pterois cincta—Schmeltz, 1866.
Pterois volitans (Linnaeus, 1758). **Sausau-lele**.
Pterois volitans—Schmeltz, 1866.
Scorpaena albobrunnea Günther, 1874.
Scorpaenopsis albobrunnea—Schultz, 1943.
**Scorpaena asperella* Bennett, 1829.
Scorpaenopsis asperella—Schultz, 1943.
Scorpaena ballieui Sauvage, 1875.
Scorpaena nuchalis—Schultz, 1943.
Scorpaena laotale (Jordan and Seale, 1906).
Sebastapistes laotale—Jordan and Seale, 1906.
**Scorpaena oglinus* (Smith, 1947).
Scorpaena haplodactylus—Schmeltz, 1866.
The only Samoan record for this species is the original.
Scorpaenodes brocki (Schultz in Schultz et al., 1966).
Scorpaenodes guamensis (Quoy and Gaimard, 1824).
Scorpaena guamensis—Günther, 1874.
As *Sebastopsis guamensis* and *S. scabra*, Jordan and Seale, 1906.
Scorpaenodes hirsutus (Smith, 1957).
Scorpaenodes parvipinnis (Garrett, 1864).

Scorpaenopsis diabolus Cuvier in Cuvier and Valenciennes, 1829.
Scorpaenopsis gibbosa—Jordan and Seale, 1906.
As *S. gibbosus* (part), Schultz, 1943.

Scorpaenopsis fowleri (Pietschmann, 1934).
Scorpaenopsis fowleri—Eschmeyer and Randall, 1975.
Scorpaenopsis macrochir Ogilby, 1910.
Scorpaenopsis gibbosus (part)—Schultz, 1943.

Scorpaenopsis novae-guineae (Cuvier in Cuvier and Valenciennes, 1829).

Scorpaenopsis novae-guineae—Jordan and Seale, 1906.
Scorpaenopsis sp.
One specimen, 35 mm SL. Dorsal XII,9; anal III,5; pectoral 18; about 40 vertical scale rows. Suborbital ridge with three spines. A dark blotch on soft anal. (CAS 44530.)

Synanceia verrucosa Bloch and Schneider, 1801.
Synanceia verrucosa—Schmeltz, 1866.

As *Synanceia verrucosa*, Jordan and Seale, 1906 and Schultz, 1943.

Taenianotus triacanthus Lacepède, 1802.
Taenianotus triacantus—Schmeltz, 1865.

Caracanthidae (Dwarf Rockfishes)

Caracanthus maculatus (Gray, 1831). **Tapua.**
Caracanthus maculatus—Jordan and Seale, 1906.
Caracanthus unipinna (Gray, 1831). **Tapua.**
Caracanthus unipinna—Schultz, 1943.

Platycephalidae (Flatheads)

The flatheads, which are called **tofo** in Samoa, were identified by Leslie W. Knapp who plans to revise the family.

Platycephalus chiltonae (Schultz in Schultz et al., 1966).
Platycephalus maylayanus Bleeker, 1853.

Platycephalus variolosus—Günther, 1876.
As *P. variolosus*, Jordan and Seale, 1906. Knapp also places *Thysanophrys papillolabium* in synonymy.
Platycephalus oligolepis Regan, 1908.

Platycephalus sp.
Five specimens, 90-98 mm SL. Dorsal VIII + 11; anal 12; lateral line pores 51-52. Snout in SL 8.9-9.6. This species is similar to *chiltonae* but has a shorter snout. (BPBM 18722.)

Wakiyus welanderi Schultz in Schultz et al., 1966.
A single individual was collected at Larsen Bay on sandy bottom at 40 m.

Dactylopteridae (Flying Gurnards)

Dactyloptera orientalis (Cuvier in Cuvier and Valenciennes, 1829).

Centropomidae (Perchlets)

Ambassis miops Günther, 1871. **Lafa.**
Ambassis lafa—Jordan and Seale, 1906.
As *A. lafa*, Schultz, 1943.
This species is usually found in freshwater.

Ambassis safga (Forsskål, 1775). **Lafa.**
Ambassis commersonii—Schmeltz, 1869.
As *A. vaivasaensis*, Jordan and Seale, 1906 and Schultz, 1943.
This species is recorded only from Western Samoa where its preferred habitat (bays, estuaries, and freshwater streams) is extensive.

Percichthyidae (Temperate Basses)

Neoscombrops pacificus Mochizuki, 1979.
(BPBM 27767.)

Serranidae (Groupers and Sea Basses)

Groupers <30 cm TL are generally known as **gatala**. Those 30-90 cm TL are called '**ata'ata** and very large individuals may be termed **vaolo**. John E. Randall assisted with the identifications.

Anthias dispar (Herre, 1955). **Segasega-moana.**
Anthias dispar—Randall and Lubbock, 1981.
Anthias lori Lubbock and Randall in Fourmanoir and Laboute, 1976.

Anthias lori—Randall and Lubbock, 1981.
Anthias pascualis (Jordan and Tanaka, 1927). **Segasega-moana.**
Anthias pascualis—Randall and Lubbock, 1981.

Anthias pleurotaenia Bleeker, 1857.
Anthias sp.

Two specimens, 75 and 84 mm SL; collected at 47-50 m. Dorsal X,16-17; anal III,7; pectoral 17-18; lateral line pores 46-48. Four scale rows between lateral line and spinous mid-dorsal; third dorsal spine elongate. These and the following unidentified *Anthias* are deposited in the California Academy of Sciences. (CAS 44374-44377.)

Anthias sp. (Subgenus *Pseudanthias*).
One specimen, 67 mm SL. Dorsal X,16; anal III,7; pectoral 19; gill rakers 11 + 1 + 24 = 36; lateral line pores 51. Prominent serrations on preopercle.

Anthias sp. (Subgenus *Pseudanthias*).
One specimen, 24 mm SL. Dorsal X,16; anal III,7; pectoral 19; gill rakers 8 + 1 + 24 = 33; lateral line pores 47. Prominent spines at angle of preoperculum and angle of operculum.

Anyperodon leucogrammicus (Valenciennes in Cuvier and Valenciennes, 1828). **Gatala-aleva.**
Anyperodon leucogrammicus—Jordan and Seale, 1906.

Cephalopholis argus Bloch and Schneider, 1801. **Gatala-uli, loi.**
Serranus myriaster—Schmeltz, 1865.
Randall has found that *guttatus* is an older name for this species but he and Ben-Tuvia have petitioned the International Commission to retain *argus*.

Cephalopholis igarashiensis Katayama, 1957. **Gatala-sama.**
This species is occasionally handlined from deep water.

Cephalopholis indelibilis (Fowler, 1904). **Gatala-sega.**
Randall has recently determined this to be an older name for a species he (1964a) had identified as *obtusaurus*. (BPBM 27768.)
Cephalopholis leopardus (Lacepède, 1801). **Gatala-sina, mata'ele.**
Epinephelus leopardus—Steindachner, 1906.

**Cephalopholis miniatus* (Forsskål, 1775).
Serranus miniatus—Günther, 1873.
Samoa records may be misidentifications as the species has been confused in the past with *sexmaculatus* which is herein recorded from Samoa for the first time.

Cephalopholis sexmaculatus (Rüppell, 1828). **Gatala-mumu.**
Cephalopholis sonnerati (Valenciennes in Cuvier and Valenciennes, 1828). **Velo, mata'ele.**

Epinephelus sonnerati—Boulenger, 1895.
Cephalopholis urodelus (Bloch and Schneider, 1801). **Mata'ele.**
Serranus urodelus—Schmeltz, 1866.

Cephalopholis sp.
Seven specimens, 48-126 mm SL. Dorsal IX,15; anal III,9; pec-

toral 18; vertical scale rows above lateral line 98-104. Head, body, and fins reddish orange; posterior edge of caudal pale with pale coloration broader dorsally and ventrally; four red spots on lower lip, two bordering the symphysis and the others midway between the symphysis and corners of mouth. This species is common in Samoa and Randall indicates it is widespread in Oceania and the western Pacific. (BPBM 17495.)

Epinephelus dictyophorus (Bleeker, 1856). **Ata'ata-uli.**

The single specimen collected was caught at a depth of about 100 m. (BPBM 22720.)

Epinephelus fario (Thunberg, 1792). **Gatala-pule'ena.**

Epinephelus corallicola—Jordan and Seale, 1906.

As *E. corallicola*, Schultz, 1943.

Epinephelus fasciatus (Forsskål, 1775). **Fausi.**

Epinephelus fuscoguttatus (Forsskål, 1775). **Gatala-aloalo.**

Epinephelus fuscoguttatus (part)—Jordan and Seale, 1906.

Randall (1964a) indicated *horridus* as a probable junior synonym of *fuscoguttatus* but Schultz (*in* Schultz et al. 1966) distinguished between the two species on the basis of pectoral ray and gill raker count. Samoan specimens agree with Schultz's diagnosis of *horridus*.

Epinephelus hexagonatus (Bloch and Schneider, 1801). **Gatala-a'au.**

Serranus hexagonatus—Schmeltz, 1869.

As *Epinephelus stellans*, Jordan and Seale, 1906.

Epinephelus maculatus (Bloch, 1790). **Gatala-puleuli.**

Epinephelus maculatus—Jordan and Seale, 1906.

Epinephelus medurensis is a junior synonym.

Epinephelus melanostigma Schultz *in* Schultz et al., 1953. **Gatala-pulelasi, gatala-tane.**

Epinephelus merra—Bloch, 1793. **Gatala-aloalo, gatala-pulepule.**

Serranus merra—Schmeltz, 1866.

Epinephelus microdon (Bleeker, 1856). **Gatala-nifoli'i, gatala-aloalo.**

Epinephelus fuscoguttatus (part)—Jordan and Seale, 1906.

Randall (1964a) discussed the confusion between this species and *fuscoguttatus*.

Epinephelus morrhua Valenciennes *in* Cuvier and Valenciennes, 1833. **Ata'ata-tusitisi.**

This species is common at depths of 100 m or more.

Epinephelus socialis (Günther, 1873).

Serranus socialis—Günther, 1873.

Epinephelus tauvina (Forsskål, 1775). **Gatala-tane.**

Serranus tauvina—Schmeltz, 1865.

Epinephelus elongatus Schultz is a recent synonym.

Epinephelus sp. **Gatala-pulesama.**

One specimen, 190 mm SL; taken by handline at 200 m. Dorsal XI,16; anal III,8; gill rakers 8 + 1 + 14 = 23. Head and body light brown; yellow spots on head and nape; five broad but indistinct darker bars on sides and peduncle. (BPBM 24129.)

Gracila albonigata (Fowler and Bean, 1930).

Liopropoma susumi (Jordan and Seale, 1906). **Susumi.**

Choristium susumi—Jordan and Seale, 1906.

Liopropoma sp.

John E. Randall and Leighton Taylor are describing this red-and-white striped species. (BPBM 18723.)

Plectranthias fourmanoiri Randall, 1980. **Fō-tala.**

Plectranthias fourmanoiri—Randall, 1980a.

Plectranthias kamii Randall, 1980.

This species is occasionally handlined from deep water. (BPBM 22721.)

Plectranthias nanus Randall, 1980. **Fō-tala.**

Plectranthias nanus—Randall, 1980a.

Plectranthias yamakawai Yoshino, 1972.

This identification was confirmed by John E. Randall. (BPBM 28902.)

Plectropomus leopardus (Lacepède, 1802). **Ata'ata-utu.**

Paracanthistius maculatus—Jordan and Seale, 1906.

As *Paracanthistius maculatus*, Schultz, 1943.

Plectropomus melanoleucus (Lacepède, 1802).

The author has collected and observed this distinctive species only in Pago Pago Bay.

Plectropomus truncatus Fowler and Bean, 1930. **Ata'ata-utu.** (BPBM 22718.)

Promicrops lanceolatus (Bloch, 1790). **Ata'ata-uli, vaolo.**

Individuals weighing more than 100 kg have been observed.

Saloptia powelli Smith, 1963.

This species was observed on only one occasion. It was handlined from an offshore bank at a depth of about 140 m. (BPBM 27858.)

Variola louti (Forsskål, 1775). **Papa-tuauli** (juveniles), **velo** (sub-adults), **papa** (adults).

Epinephelus louti—Boulenger, 1895.

As *Variola flavimarginata*, Jordan and Seale, 1906.

Grammistidae (Soapfishes)

Belonoperca chabanaudi Fowler and Bean, 1930. **Apoua.**

Randall et al. (1980) have shown this species to be a grammistid rather than a serranid as previously classified.

Grammistes sexlineatus (Thunberg, 1792). **Taili, tusiloa.**

Grammistes orientalis—Schmeltz, 1869.

Grammistops ocellatus Schultz *in* Schultz et al., 1953. **Anaoso.**

Pogonoperca punctata (Valenciennes *in* Cuvier and Valenciennes, 1830). **Gutunofu.**

The single Samoan specimen was handlined from deep water.

Pseudochromidae (Basslets)

Members of this family are generally called **tiva**. None were known from Samoa prior to 1943. All are small and found subtidally.

Chlidichthys sp.

Three specimens, 24-46 mm SL; collected at 43 and 66 m. Dorsal 11,25; anal 11,15; pectoral 17; pelvic 1,4; scales 62-63. Body dusky rose or orange; nape, snout, and lips bright rose. (BPBM 24118.)

Pseudochromis jamesi Schultz, 1943.

Pseudochromis jamesi—Schultz, 1943.

The bright reddish orange coloration of mature males is not mentioned by Schultz in his species description.

Pseudochromis porphyreus Lubbock and Goldman, 1974.

Pseudochromis porphyreus—Lubbock and Goldman, 1974.

Pseudoplesiops rosae Schultz, 1943.

Pseudoplesiops rosae—Schultz, 1943.

Pseudoplesiops sp.

Three specimens, 25-27 mm SL; collected at 43 m. Dorsal 28-29; anal 18; pectoral 16-17; pelvic 1,3; scales 33-36. No lateral line. Head and body greenish yellow; underside of head rosy; alternate dorsal and anal rays dusky at base. (BPBM 24121.)

Plesiopidae (Prettyfins)

Prettyfins are generally termed **aneanea** or **tafuti**.

Plesiops coeruleolineatus Rüppell, 1835.

Pharopteryx melas—Jordan and Seale, 1906.

Plesiops corallicola Bleeker, 1853.

Plesiops nigricans—Schmeltz, 1866.

As *Pharopteryx nigricans*, Jordan and Seale, 1906 and as *Plesiops nigricans*, Schultz, 1943.

Plesiops sp.

Two specimens, 22 and 26 mm SL. Dorsal IX,9; anal III,7; pectoral ii,13-14,ii-iii=18; pelvic I,4; scales 23; gill rakers 5+1+7=13. Lower pectoral rays with only two branches; pelvics extend beyond axil of anal in larger individuals. Head and body pale with brown bars; medial fins with dark brown bars and pale edges. (BPBM 17524, 20012, 24110.)

Pseudogrammitidae (Reef Basslets)

Pseudogramma bilinearis (Schultz, 1943). *Ateate*.

Aporops bilinearis—Schultz, 1943.

Pseudogramma polyacantha (Bleeker, 1856).

Gnathypops samoensis—Fowler and Silvester, 1922.

Pseudogramma sp.

One specimen, 80 mm SL; collected at 33 m. Dorsal VII,22; anal III,18; pectoral 14; pelvic I,5; scales 49; lateral line pores 22; gill rakers 5+1+11=17. No spine on rear margin of proopercle. Body brown with yellow-brown blotches; fins reddish. (BPBM 24128.)

Teraponidae (Terapon Perches)

Terapon jarbua (Forsskål, 1775). *Ava'ava*.

Terapon servus—Schmeltz, 1866.

Kuhliidae (Mountain Basses)

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

Dules malo—Schmeltz, 1866.

Kuhlia mugil (Bloch and Schneider, 1801). **Safole**.

Kuhlia taeniura—Jordan and Evermann, 1905.

As *K. taeniura*, Jordan and Seale, 1906 and Schultz, 1943.

Kuhlia rupestris (Lacépède, 1802). **Sesele** (<15 cm TL), **inato** (>15 cm TL).

Dules rupestris—Schmeltz, 1866.

This species is often found in freshwater.

Kuhlia salelea Schultz, 1943. **Salele**.

Kuhlia marginata—Evermann and Seale, 1923.

This species is often found in freshwater.

Priacanthidae (Big-Eyes)

All species of *Priacanthus* are known as **matapula** in Samoa. Wayne C. Starnes, who is revising the genus, made or confirmed the identifications.

Priacanthus blochii Bleeker, 1853.

This species is fairly common in Pago Pago Bay. (BPBM 17485.)

Priacanthus cruentatus (Lacépède, 1801).

Priacanthus cruentatus—Jordan and Seale, 1906.

Priacanthus hamrur (Forsskål, 1775).

A specimen was handlined from 60 m. (BPBM 27765.)

Priacanthus sp.

One specimen, 192 mm SL; handlined from 100 m. Dorsal X,14; anal III,15; lateral line pores 55+5 (left side) and 56+6 (right side) = 60-62; gill rakers 5+1+15=21. Caudal slightly rounded. Central portion of pelvics and distal portions of soft dorsal and anal yellow; black spot at base of pelvics; membrane between dorsal spines I and III dusky. Starnes plans to describe this species which has a wide Indopacific distribution. (USNM 236936.)

Pristigeyus multifasciata Yoshino and Iwai, 1973.

A specimen was handlined from 160 m. (BPBM 27766.)

Apogonidae (Cardinalfishes)

The general name by which cardinalfishes are known in Samoa is **fō**. Many of the species groups in this family are poorly understood and will likely undergo changes in nomenclature when subjected to comprehensive review. At present, Lachner (*in* Schultz et al. 1953) is probably the best source for species names and descriptions and, unless otherwise noted, is followed in this checklist.

Apogon angustatus (Smith and Radcliffe, 1911). **Fō-tusiloloa**.

**Apogon asaetae* Seale, 1935.

Apogon asaetae—Seale, 1935.

Thomas H. Fraser writes that the types are in poor condition and their identity is uncertain.

Apogon bandanensis Bleeker, 1854.

Apogon bandanensis—Steindachner, 1901.

Apogon coccineus Rüppell, 1838. **Fō-si'umū**.

Apogon erythrina—Jordan and Evermann, 1905.

As *Amia erythrina*, Jordan and Seale, 1906 and as *Apogon doryssa* (part), Schultz, 1943.

Apogon dammermani Weber and deBeaufort, 1929. **Fō-malau**.

Amia crassiceps and *A. fusca*—Jordan and Seale, 1906.

As *Apogon crassiceps* (part), Schultz, 1943.

Apogon edekataenia Bleeker, 1852.

Apogon edekataenia—Fraser, 1972.

Apogon exostigma (Jordan and Starks, 1906). **Fō-loloa**.

Amia exostigma—Jordan and Seale, 1906.

As *Apogon frenatus* (part), Schultz, 1943.

Apogon fragilis Smith, 1961.

This species was collected from the saltwater pond enclosed by runways at the Pago Pago International Airport.

Apogon fraenatus Valenciennes *in* Cuvier and Valenciennes, 1832. **Fō-loloa**.

Apogon frenatus (part)—Schultz, 1943.

Apogon guamensis Valenciennes *in* Cuvier and Valenciennes, 1832.

Amia savayensis (part)—Jordan and Seale, 1906.

As *Apogon bandanensis* (part), Schultz, 1943.

Apogon nubilis is a junior synonym.

Apogon hypselonotus Bleeker, 1855. **Fō-si'umū**.

Amia doryssa—Jordan and Seale, 1906.

As *Apogon doryssa* (part), Schultz, 1943.

Apogon kallopterus Bleeker, 1856. **Fō-aialo**.

Amia snyderi—Jordan and Seale, 1906.

As *Apogon frenatus* (part), Schultz, 1943.

Apogon lateralis Valenciennes *in* Cuvier and Valenciennes, 1832.

Amia lateralis—Jordan and Seale, 1906.

As *Apogon ceramensis*, Schultz, 1943.

Apogon leptacanthus Bleeker, 1856.
Apogon leptacanthus—Schmeltz, 1866.
 As *Mionorus graeffei*, Jordan and Seale, 1906 and as *Apogon graeffei*, Schultz, 1943.

Apogon nigrofasciatus Lachner in Schultz et al., 1953. **Fō-tuau'i.**
Amia aroubiensis—Jordan and Seale, 1906.
 As *Apogon aroubiensis*, Schultz, 1943.

Apogon novemfasciatus Cuvier in Cuvier and Valenciennes, 1828.
Apogon novemfasciatus—Schmeltz, 1865.
 As *Amia novemfasciata* (part), Jordan and Seale, 1906.

Apogon robustus (Smith and Radcliffe, 1911).
Amia novemfasciata (part)—Jordan and Seale, 1906.
 As *Apogon novemfasciata* (part), Schultz, 1943.

Apogon savayensis Günther, 1871. **Fō-tala.**
Apogon savayensis—Günther, 1871.
 As *Amia savayensis* (part), Jordan and Seale, 1906 and as *Apogon bandanensis* (part), Schultz, 1943.

Apogon trimaculatus Cuvier in Cuvier and Valenciennes, 1828.
Amia koilomatodon—Jordan and Seale, 1906.

Apogon sp. **Fō-talamemea.**
 Lachner (in Schultz et al. 1953) referred to this species as *novae-guineae*. He has since determined it to be undescribed, however, and plans to describe it with John E. Randall.

Apogon sp.
 Two specimens, both 25 mm SL; collected at 37 m. Dorsal VII + 1,9; anal II,8; pectoral 14; lateral line pores 22. Head, body, and fins with rosy brown and pale mottling. (USNM 220060.)

Archamia biguttata Lachner, 1951.
Archamia fucata (Cantor, 1850). **Fō-manifi.**
Apogon bleekeri—Schmeltz, 1866.
 As *Archamia lineolata*, Jordan and Seale, 1906 and Schultz, 1943.

Cheilodipterus macrodon (Lacepède, 1802). **Fō-taoto, tunganini** (Sava'i'i).
Chilodipterus octovittatus—Schmeltz, 1866.
 As *Paramia macrodon*, Jordan and Seale, 1906 and as *Cheilodipterus lineatus*, Schultz, 1943.

Cheilodipterus quinquelineatus Cuvier in Cuvier and Valenciennes, 1828. **Fō-tusiloloa.**
Paramia quinquelineata—Jordan and Seale, 1906.
 As *Paramia quinquelineata*, Schultz, 1943.

Foa fo Jordan and Seale, 1906.
Foa fo—Jordan and Seale, 1906.
 As *Apogon brachygramma* (part), Schultz, 1943.

* *Foa vaiulae* Jordan and Seale, 1906.
Foa vaiulae—Jordan and Seale, 1906.
 As *Apogon brachygramma* (part), Schultz, 1943.
 Schultz (1943) placed this species in synonymy with *fo*.

* *Fowleria aurita* (Valenciennes in Cuvier and Valenciennes, 1831).
Apogon auritus (part)—Schultz, 1943.
 Considerable difference of opinion exists regarding the taxonomy of this genus. Schultz (1943) placed *marmoratus* and *variegatus* in the synonymy of *auritus* but retained *isostigma* as a valid species. Smith (1961) recognized only *auritus*. All four forms are given specific status by Lachner (in Schultz et al. 1953). The present author was readily able to identify *isostigma*, *marmorata*, and *variegata* from recently collected material. Samoan specimens at the U.S. National Museum labeled *aurita* were examined but their faded condition made identification impossible.

Fowleria isostigma (Jordan and Seale, 1906). **Fō-gatala.**
Apogonichthys isostigma—Jordan and Seale, 1906.
 As *Apogon isostigma*, Schultz, 1943.

Fowleria marmorata (Alleyne and Macleay, 1876). **Fō-mūmū.**
Apogonichthys marmoratus—Jordan and Seale, 1906.
 As *Apogon auritus* (part), Schultz, 1943.

Fowleria variegata (Valenciennes in Cuvier and Valenciennes, 1832).
Apogonichthys variegatus—Jordan and Seale, 1906.
 As *Apogon auritus* (part), Schultz, 1943.

Gymnapogon urosplotus Lachner in Schultz et al., 1953.
Pseudamia polystigma (Bleeker, 1859).
Pseudamia sp.
 Two specimens, 46 and 47 mm SL; collected at Larsen Bay at 70 m. Dorsal VI + 1,8; anal II,8; pectoral 16; gill rakers 8 developed + 9 or 10 undeveloped; lateral line scales 5 + 18 = 23; a ventral row of 19 notched scales from below pectoral base to caudal peduncle. Scales cycloid and well developed; no flap on anterior nostrils; a few serrations on angle of preoperculum. Color in alcohol: body pale yellow, almost entirely overlaid with yellow-brown pigment; brown spots on preoperculum, lips, and chin; caudal dusky; all other fins pale. (BPBM 24116.)

Pseudamiops gracilicauda (Lachner in Schultz et al., 1953).
Rhabdamia sp.
 Several specimens, largest is 33 mm SL; collected at depths of 20-33 m. Dorsal VI + 1,9; anal II,12-14; pectoral 10; gill rakers 14. One weak suborbital spine at angle and 2-5 weak preopercular spines. Translucent with pale orange spots on head. Color in alcohol: pale yellow with dusky specks on preoperculum, lips, and chin. (BPBM 18724, USNM 220059.)

Malacanthidae (Tilefishes)

These fishes are generally known as **mo'o** or **mo'otai**.

Malacanthus brevirostris Guichenot, 1848.
Malacanthus latovittatus (Lacepède, 1801). **Mo'o-moana.**
Oceanops latovittata—Jordan and Seale, 1906.

Echeneididae (Remoras)

Remoras are called **talitaliuli** in Samoa.

Echeneis naucrates Linnaeus, 1758.
Echeneis naucrates—Fowler, 1900.
 As *Leptecheneis naucrates*, Jordan and Seale, 1906.

Phtheiroichthys lineatus (Menzies, 1791).
 This fish was associated with a hawksbill turtle, *Eretmochelys imbricata*, when collected.

Remora remora (Linnaeus, 1758).
Echeneis remora—Schmeltz, 1865.
Remoropsis pallidus (Schlegel, 1850).
 A specimen was taken from the gills of a black marlin, *Makaira indica*.

Rhombochirus osteochir (Cuvier in Cuvier and Valenciennes, 1829).
 This specimen was associated with a blue marlin, *Makaira nigricans*.

Carangidae (Jacks)

Many of the jacks are not known by specific Samoan names.

Size classes, however, are labeled as follows: **lupo** (<8 cm TL), **lupoā** (8-20 cm TL), **malauli** (20-50 cm TL), **ulua** (50-80 cm TL), and **sapo'anae** (>80 cm TL). Frank Williams assisted with the identifications and synonymies of most *Carangoides* and *Uraspis*. *Decapterus* and some *Carangoides* were identified by William F. Smith-Vaniz who also furnished or confirmed most of the remaining synonymies.

Alectis ciliaris (Bloch, 1787). **Noasami** (juvenile), **to'uto'u** (sub-adult).

Alectis ciliaris—Jordan and Seale, 1906.

Atule mate (Cuvier in Cuvier and Valenciennes, 1833).

Decapterus lundini—Jordan and Seale, 1906.

As *Caranx lundini*, Schultz, 1943.

Carangoides caeruleopinnatus (Rüppell, 1830). **Lalafutu, filu.**

Carangoides dinema (Bleeker, 1851).

A specimen was handlined from 80 m.

Carangoides ferdau (Forsskål, 1775).

Carangoides ferdau—Jordan and Evermann, 1905.

As *Caranx ferdau* and *C. gilberti*, Jordan and Seale, 1906 and as *C. ferdau*, Schultz, 1943.

Carangoides hedlandensis (Whitley, 1934).

Caranx plumbeus—Jordan and Seale, 1906.

As *Caranx armatus*, Schultz, 1943. This species has been referred to as *ciliaris* which is a nomen dubium (Williams et al. 1980).

Carangoides orthogrammus Jordan and Gilbert, 1881.

Junior synonyms are *jordani*, *nitidus*, and the subspecies *gymnostethoides evermanni*. (ANSP 144898.)

Carangoides plagiotaenia (Bleeker, 1857).

Williams lists this as the "probable" identity for the Samoan specimen he examined. Junior synonyms include *vomerinus*, *compressus*, and *brevicarinatus*.

Caranx ignobilis (Forsskål, 1775). **Sapo'anae.**

Caranx ignobilis (part) and *C. marginatus*—Jordan and Seale, 1906.

Caranx lugubris Poey, 1861. **Tafauli.**

Caranx adscensionis—Schultz, 1943.

Caranx melampygus Cuvier in Cuvier and Valenciennes, 1833.

Malauli-apamoana, atugaloloa.

Caranx melampygus—Schmeltz, 1879.

Caranx papuensis Alleyne and Macleay, 1877. **Malauli-sinasama.**

Caranx ignobilis (part)—Jordan and Seale, 1906.

Caranx sexfasciatus Quoy and Gaimard, 1825. **Malauli-matalapo'a.**

Caranx hippos—Günther, 1876.

As *C. forsteri*, Jordan and Seale, 1906.

Decapterus macarellus (Cuvier in Cuvier and Valenciennes, 1833).

Atuleau, namuauli.

Decapterus macrosoma Bleeker, 1851. **Atuleau, namuauli.**

Most recent authors have misapplied the name *lajang* to this species according to Smith-Vaniz.

Elegatis bipinnulatus (Quoy and Gaimard, 1825). **Sāmani.**

Gnathanodon speciosus (Forsskål, 1775). **Lupovai** (juveniles).

Caranx speciosus—Jordan and Seale, 1906.

As *Caranx speciosus*, Schultz, 1943.

Megalaspis cordyla (Linnaeus, 1758). **Atualo.**

Caranx rotteri—Günther, 1876.

Scomberoides lysan (Forsskål, 1775). **Lai.**

Chorinemus toloa—Schmeltz, 1866.

As *Scomberoides sancti-petri*, Jordan and Seale, 1906 and Schultz, 1943.

Selar crumenophthalmus (Bloch, 1793). **Nato** (<10 cm TL), **atule** (10-20 cm TL), **taupapa** (>20 cm TL).

Caranx crumenophthalmus—Schmeltz, 1865.

As *Trachurops crumenophthalma*, Jordan and Seale, 1906 and as *T. crumenophthalmus*, Schultz, 1943.

Seriola dumerili (Risso, 1810).

Seriola rivoliana Valenciennes in Cuvier and Valenciennes, 1833. **Tafala, palu-kata, tavai.**

This identification was confirmed by Smith-Vaniz. (ANSP 145118.)

Trachinotus baillonii (Lacepède, 1802). **Lalafutu, lai.**

Tachinotus baillonii—Günther, 1876.

Trachinotus blochii (Lacepède, 1802). **Alalafutu, lalafutu.**

Trachinotus ovatus—Schmeltz, 1866.

As *Trachinotus ovatus*, Jordan and Seale, 1906 and Schultz, 1943.

Uraspis secunda (Poey, 1860). **Malauli-gutupa'e, lufi.**

Coryphaenidae (Dolphins)

Coryphaena hippurus Linnaeus, 1758. **Masimasi.**

Coryphaena hippurus—Schultz, 1943.

Leiognathidae (Ponyfishes)

Ponyfishes are known as **muu** in Samoa.

Gazza minuta (Bloch, 1795).

Gazza equuliformis—Borodin, 1932.

**Leiognathus equula* (Forsskål, 1775).

Equula edentula—Steindachner, 1906.

This species is recorded only from Upolu.

Leiognathus fasciatus (Lacepède, 1803).

Equula filigera—Schmeltz, 1865.

Bramidae (Pomfrets)

Taractichthys longipinnis (Lowe, 1843). **Manifi-moana.**

This is a pelagic species commonly caught by tuna longline vessels and occasionally by local handline fishermen in deep water.

Caesionidae (Fusiliers)

Members of this family, known as **atule-toto** or **ulisega**, occupy the midwater habitat and seldom take a baited hook. They are, thus, difficult to collect except by a diver with a spear which explains why only two species were previously recorded from Samoa. Gerald R. Allen confirmed the identifications.

Caesio caeruleaureus Lacepède, 1801.

Caesio caeruleaureus—Jordan and Seale, 1906.

Caesio xanthonotus Bleeker, 1853.

Caesio erythrogaster—Schmeltz, 1869.

Pterocaesio chrysozona (Cuvier in Cuvier and Valenciennes, 1830).

Pterocaesio kohleri Schultz in Schultz et al., 1953.

Pterocaesio tile (Cuvier in Cuvier and Valenciennes, 1830).

Lutjanidae (Snappers)

The general name for shallow water snappers in Samoa is **mū**.

Large, deepwater species are known as **palu**. Sixteen of the 17 new records for this family were taken by local handline fishermen in relatively deep water (>100 m).

Aphareus furcatus (Lacépède, 1801). **Palu-aloalo**.

Aphareus rutilans Cuvier in Cuvier and Valenciennes, 1830.

Palu-gutusiliva, palu-sina, palu-makomako.

Aprion virescens Valenciennes in Cuvier and Valenciennes, 1830. **Asoama, utu**.

Aprion virescens—Schultz, 1943.

Etelis carbunculus Cuvier in Cuvier and Valenciennes, 1828.

Palu-malau.

Anderson (1981) concluded that *marshi* is a synonym.

Etelis coruscans Valenciennes, 1862. **Palu-foa, palu-malau, palu-utu**.

Etelis radiosus Anderson, 1981.

This recently described species is caught less frequently in Samoa than the other two members of the genus. Its appearance is similar to *coruscans* though the caudal fin lobes are shorter and the gill rakers more numerous.

Lutjanus argentimaculatus (Forsskål, 1775). **Mū-tāiva**.

Mesopriion gembra—Schmeltz, 1869.

As *Lutianus argentimaculatus* and *L. lineatus*, Jordan and Seale, 1906 and as *L. argentimaculatus*, Schultz, 1943.

**Lutjanus biguttatus* (Valenciennes in Cuvier and Valenciennes, 1830).

Mesopriion bleekeri—Schmeltz, 1869.

Lutjanus bohar (Forsskål, 1775). **Mū, mū-a'a** (dark phase), **mū-mea** (red phase).

Lutianus bohar—Jordan and Seale, 1906.

As *Lutianus bohar*, Schultz, 1943.

**Lutjanus fulviflamma* (Forsskål, 1775).

Mesopriion fulviflamma—Schmeltz, 1874.

Lutjanus fulvus (Bloch and Schneider, 1801). **Tamala, tāiva**.

Genyroroge marginata—Schmeltz, 1865.

As *Lutianus marginatus*, Jordan and Seale, 1906 and as *L. vaiensis*, Schultz, 1943.

Lutjanus gibbus (Forsskål, 1775). **Mala'i**.

Genyroroge bottonensis—Schmeltz, 1869.

As *Lutianus gibbus*, Jordan and Seale, 1906 and Schultz, 1943.

Lutjanus kasmira (Forsskål, 1775). **Savane**.

Diachope octolineata—Schmeltz, 1865.

As *Lutianus kasmira*, Jordan and Seale, 1906 and Schultz, 1943.

Lutjanus monostigma (Cuvier in Cuvier and Valenciennes, 1828). **Tāiva, feloitega**.

Lutianus monostigma—Jordan and Seale, 1906.

As *Lutianus monostigma*, Schultz, 1943.

Lutjanus rivulatus (Cuvier in Cuvier and Valenciennes, 1828).

Mū-mafalaugutu.

Genyroroge rivulata—Schmeltz, 1877.

As *Lutianus rivulatus*, Jordan and Seale, 1906 and Schultz, 1943.

Lutjanus rufolineatus (Valenciennes in Cuvier and Valenciennes, 1830). **Savane-ulasama**.

Lutjanus sanguineus Cuvier in Cuvier and Valenciennes, 1828. **Mala'i-pa'epa'e**.

Macolor niger (Forsskål, 1775). **Matala'oa**.

Mesopriion macolor—Günther, 1873.

As *Lutianus niger*, Jordan and Seale, 1906.

Paracaesio kusakarii Abe, 1960. **Palu-tuauili, mū-sina**.

This species was identified by William D. Anderson, Jr. (GMBL 76-418.)

Paracaesio sordidus Abe and Shinohara, 1962.

(GMBL 81-64.)

Paracaesio xanthurus Bleeker, 1875. **Palu-tuasama, palu-tua-vela**. (GMBL 77-258.)

Paracaesio sp. **Palu-mutu**.

One specimen, 440 mm SL; handlined from relatively deep water. Dorsal X,10; anal III,8; pectoral 16; gill rakers 10+1+17=28; lateral line pores 48. No scales on maxillary. Body pale with four triangular-shaped, olive-colored saddles on back, lateral line also olive-colored; head pale, darker dorsally; dorsal fin and ventral portion of caudal pale yellow, remaining fins pale with a dusky tinge. P. Fourmanoir believes this to be an undescribed species. He has also seen specimens from Fiji and Vanuatu (New Hebrides). (GMBL 81-65.)

Pristipomoides amoenus (Snyder, 1911). **Palu-tusimoana, palu-ula, palu-sega**. Harry T. Kami identified the specimen.

Pristipomoides auricilla (Jordan, Evermann and Tanaka, 1927).

Palu-i'usama, palu-ave.

Pristipomoides filamentosus (Valenciennes in Cuvier and Valenciennes, 1830). **Palu-ena'ena, palu-sina, palu-pa'epa'e**.

Pristipomoides flavipinnis Shinohara, 1963. **Palu-sina, palu-pa'epa'e**.

Pristipomoides multidens (Day, 1870). **Palu-sina-ugatele, palu-sina, palu-pa'epa'e**.

A specimen was identified by Harry T. Kami.

Pristipomoides zonatus (Valenciennes in Cuvier and Valenciennes, 1830). **Palu-sega, palu-ula**.

Nemipteridae (Monocle Breams)

**Pentapodus caninus* (Cuvier in Cuvier and Valenciennes, 1830). *Heterognathodon xanthopleura*—Schmeltz, 1865.

Pentapodus sp. **Tivao-sugale**.

Barry C. Russell believes Samoan specimens represent a new species. (BPBM 24120, WAM P26987-001.)

**Scolopsis cancellatus* (Cuvier in Cuvier and Valenciennes, 1830). *Scolopsis cancellatus*—Schmeltz, 1869.

As *S. lineata*, Jordan and Seale, 1906. Jordan and Seale based their record of this species on Günther's (1874) record.

Scolopsis trilineatus Kner, 1868. **Tivao**.

Scolopsis trilineatus—Kner, 1868.

Gerreidae (Mojaras)

The general name for members of this family is **matu**. The three species which were not collected during the present study are recorded only from Western Samoa where their preferred habitat (shallow brackish or freshwater) is much more extensive.

**Gerres kapas* Bleeker, 1851.

Gerres kapas—Fowler, 1929.

**Gerres macrosoma* Bleeker, 1854.

Gerres macrosoma—Steindachner, 1906.

As *Xystaema macrosoma*, Jordan and Seale, 1906. Jordan and Seale based their Samoan record on that of Kner (1868).

Gerres oblongus Cuvier in Cuvier and Valenciennes, 1830.

Matu-foa.

Gerres macrosoma—Kner, 1868.

As *Xystaema gigas*, Jordan and Seale, 1906.

Gerres oyena (Forsskål, 1775).

Gerres argyreus—Schmeltz, 1865.

**Gerres setifer* (Buchanan-Hamilton, 1822).
Gerres lucidus—Borodin, 1932.

Haemulidae (Grunts and Sweetlips)

Plectorhynchus nigrus (Cuvier in Cuvier and Valenciennes, 1830).

Misimisi.

Diagramma gibbosus—Hombron and Jacquinot, 1853.

As *Euelaticthys crassispinus*, Jordan and Seale, 1906 and as *Plectorhynchus nigrus*, Schultz, 1943.

Plectorhynchus orientalis (Bloch, 1793). **Mutumutu, ava'ava-moana.**

Diagramma lessonii—Schmeltz, 1866.

As *Plectorhynchus diagrammus*, Schultz, 1943.

Plectorhynchus punctatissimus (Playfair, 1867). **I'amai-moana.**

Plectorhynchus chaetodonoides—Jordan and Seale, 1906.

Juveniles are sometimes referred to as *picus* according to R. J. McKay.

Lethrinidae (Emperors)

Juvenile emperors < 15 cm TL are referred to as **mata'ele'ele**. Those 15-30 cm TL are **ulamalos**, and individuals > 30 cm TL are called **filoa**. Torao Sato, who has recently (1978) revised *Lethrinus*, assisted with the identification of members of this genus.

Gnathodentex aureolineatus (Lacepède, 1803). **Mumu, tolai.**

Pentapus aurolineatus—Günther, 1874.

As *Gnathodentex aurolineatus*, Jordan and Seale, 1906.

Gymnocranius lethrinoides (Bleeker, 1849). **Filoa-mū.**

Gymnocranius rivulatus (Rüppell, 1835). **Filoa-gutupu'u.**

This species was identified by P. Fourmanoir who states that *robinsoni* is a junior synonym. It is caught in deep water.

Lethrinus amboinensis Bleeker, 1854. **Filoa-gutumūmū.**

Lethrinus amboinensis—Schultz, 1943.

Lethrinus elongatus Valenciennes in Cuvier and Valenciennes, 1830. **Filoa-va'a, filoa-āva.**

Lethrinus miniatus—Günther, 1874.

As *Lethrinella miniata*, Jordan and Seale, 1906 and as *Lethrinus miniatus*, Schultz, 1943. John E. Randall has recently discovered that *miniatus* is the senior synonym for the species currently known as *chrysostomus*.

Lethrinus harak (Forsskål, 1775). **Filoa-va.**

Lethrinus harak and *L. bonhamensis*—Jordan and Seale, 1906.

Lethrinus kallopterus Bleeker, 1856. **Filoa-apanūmū.**

Lethrinus amboinensis—Jordan and Seale, 1906.

Lethrinus mahsena (Forsskål, 1775). **Filoa-ulumato.**

Lethrinus mahsena—Jordan and Seale, 1906.

Lethrinus nebulosus (Forsskål, 1775). **Ulus'a'o, mulogo.**

Lethrinus nebulosus—Schmeltz, 1879.

Lethrinus fraenatus is a junior synonym.

Lethrinus ramak (Forsskål, 1775). **Lauloa.**

Lethrinus ramak—Günther, 1874.

Lethrinus rubrioperculatus Sato, 1978. **Filoa-pa'o'omūmū, filoa-ulutele.**

Lethrinus moensii—Günther, 1874.

Though only recently described, this species is common in Samoa.

Monotaxis grandoculis (Forsskål, 1775). **Mū-matavaivai, matāmu** (< 15 cm TL), **matamatāmu** (> 15 cm TL), **loalia.**

Sphaerodon grandoculis—Günther, 1874.
Wattias mossambicus (Smith, 1957). **Filoa-mutumutu.**

Mullidae (Goatfishes)

Mulloides flavolineatus (Lacepède, 1801). **I'asina** (< 8 cm TL), **vete, afulu, afolu.**

Mulloides samoensis—Günther, 1874.

As *Mulloides samoensis*, Jordan and Seale, 1906 and as *Mulloidichthys samoensis*, Schultz, 1943.

Mulloides vanicolensis (Valenciennes in Cuvier and Valenciennes, 1831). **I'asina** (< 8 cm TL), **vete, afulu, afolu.**

Mulloides vanicolensis—Schmeltz, 1866.

As *Mulloides auriflamma*, Jordan and Seale, 1906 and as *Mulloidichthys auriflamma*, Schultz, 1943.

Parupeneus barberinoides (Bleeker, 1852). **Tulausaena, ta'uleia.**

Upeneus atrocingulatus—Steindachner, 1870.

As *Pseudupeneus atrocingulatus*, Jordan and Seale, 1906.

Parupeneus barberinus (Lacepède, 1801). **Tusia.**

Upeneus barberinus—Günther, 1874.

As *Pseudupeneus barberinus*, Jordan and Seale, 1906.

Parupeneus bifasciatus (Lacepède, 1801). **Matūlau-moana.**

Upeneus bifasciatus—Günther, 1874.

As *Pseudupeneus bifasciatus*, Jordan and Seale, 1906.

Parupeneus chryserydros (Lacepède, 1801). **Moana.**

Upeneus cyclostoma—Schmeltz, 1866.

As *Pseudupeneus chryserydros* and *P. cyclostomus*, Jordan and Seale, 1906.

Parupeneus indicus (Shaw, 1803). **Ta'uleia.**

Upeneus indicus—Günther, 1874.

As *Pseudupeneus indicus*, Jordan and Seale, 1906 and as *Parupeneus malabaricus*, Schultz, 1943.

Parupeneus pleurospilus (Bleeker, 1853). **Moana-ula, vete-mū.**

This species generally occurs at depths beyond 25 m.

Parupeneus pleurostigma (Bennett, 1830). **Matūlau-īlamutu.**

Parupeneus porphyreus (Jenkins, 1903).

Parupeneus porphyreus—Helfrich et al., 1975.

Paul Guézé writes that two different species carry this name. One is considered a Hawaiian endemic by John E. Randall; the other has an Indo-Pacific distribution. The latter is not a common species in Samoa. It was observed by the author only in the vicinity of the fuel dock in Pago Pago Bay.

Parupeneus trifasciatus (Lacepède, 1801). **Matūlau, moana.**

Upeneus trifasciatus—Schmeltz, 1866.

As *Pseudupeneus moana*, Jordan and Seale, 1906.

Upeneus taeniopterus Cuvier in Cuvier and Valenciennes, 1829.

Ula'oa.

Paul Guézé has found *arge* to be a synonym.

Upeneus vittatus Lacepède, 1801. **Ula'oa.**

Upeneoides vittatus—Schmeltz, 1865.

Monodactylidae (Silver Baffishes)

Monodactylus argenteus (Linnaeus, 1758). **Vavale, valevale.**

Psetus argenteus—Schmeltz, 1869.

Pempheridae (Sweepers)

Pempheris mangula Cuvier in Cuvier and Valenciennes, 1829.

Manifi.

Pempheris mangula—Fowler, 1931b.

Pempheris oualensis Cuvier in Cuvier and Valenciennes, 1831.

Manifi.

Pempheris mangula—Günther, 1875.

As *P. otaitensis*, Schultz, 1943.

Kyphosidae (Rudderfishes)

**Kyphosus bigibbus* (Lacepède, 1802).

Pimnelepterus fuscus—Kner, 1868.

The only Samoan record of this species is Kner's from "Savay."

Kyphosus cinerascens (Forsskål, 1775). Nanue, **matā-mutu** (Manu'a Islands), **mutumutu**.

Kyphosus vaigiensis—Jordan and Seale, 1906.

Kyphosus vaigiensis (Quoy and Gaimard, 1825).

Pimnelepterus vaigiensis—Schmeltz, 1874.

Ephippidae (Spadefishes)

**Drepane punctata* (Linnaeus, 1758).

Drepane punctata—Schmeltz, 1869.

Platax orbicularis (Forsskål, 1775). **Pe'ape'a** (< 10 cm TL), **pe'ape'a-uli** (> 10 cm TL).

Platax orbicularis—Schmeltz, 1866.

Chaetodontidae (Butterflyfishes)

The general name for butterflyfishes in Samoa is **tifitifi**.

Chaetodon auriga Forsskål, 1775. **Si'u**, **i'usamasama**.

Chaetodon setifer—Schmeltz, 1869.

As *C. setifer*, Jordan and Seale, 1906.

Chaetodon bennetti Cuvier in Cuvier and Valenciennes, 1831.

Tifitifi-lega.

Chaetodon citrinellus Cuvier in Cuvier and Valenciennes, 1831.

Tifitifi-moamanu (Am. Samoa), **tifitifi-muamai** (W. Samoa).

Chaetodon citrinellus—Schmeltz, 1865.

Fowler's (1928) Samoan record of *miliaris* probably belongs to this species as *miliaris* is known only from Hawaii.

Chaetodon ephippium Cuvier in Cuvier and Valenciennes, 1831.

Tifitifi-tuauli.

Chaetodon ephippium—Schmeltz, 1869.

Chaetodon flavirostris Günther, 1874.

A single specimen was speared at Rose Island and identified by John E. Randall. (BPBM 27779.)

Chaetodon kleinii Bloch, 1790.

Chaetodon kleinii—Fowler and Bean, 1929.

Chaetodon lineolatus Cuvier in Cuvier and Valenciennes, 1831.

Tifitifi-lau'i'a.

Chaetodon lineolatus—Günther, 1874.

Chaetodon lunula (Lacepède, 1802). **Tifitifi-laumea**.

Chaetodon lunula—Schmeltz, 1866.

Chaetodon melanotus Bloch and Schneider, 1801. **Tifitifi-pa'ipa'i** (Am. Samoa), **tifitifi-laumoli** (W. Samoa).

Chaetodon dorsalis—Schmeltz, 1865.

Chaetodon mertenii Cuvier in Cuvier and Valenciennes, 1831.

Tifitifi-sega'ula.

Chaetodon mertenii—Jordan and Seale, 1906.

Chaetodon ornatissimus Cuvier in Cuvier and Valenciennes,

1831. **Tifitifi-'ava'ava**.

Chaetodon ornatissimus—Schmeltz, 1866.

Chaetodon pelewensis Kner, 1867. **Tifitifi-tusiloloa**.

Chaetodon pelewensis—Schmeltz, 1869.

Chaetodon quadrimaculatus Gray, 1831. **Tifitifi-segasega**.

Chaetodon quadrimaculatus—Günther, 1874.

Chaetodon rafflesii Bennett, 1830. **Tifitifi-pule**.

Chaetodon rafflesii—Jordan and Seale, 1906.

Chaetodon reticulatus Cuvier in Cuvier and Valenciennes, 1831.

Tifitifi-maono.

Chaetodon reticulatus—Schmeltz, 1866.

Chaetodon semeion Bleeker, 1855. **Tifitifi-si'o**.

Chaetodon semeion—Schmeltz, 1866.

Chaetodon trifascialis (Quoy and Gaimard, 1825). **Tifitifi-sae'u**.

Chaetodon strigangulus—Schmeltz, 1869.

As *Megaprotodon trifascialis*, Jordan and Seale, 1906 and as *M. strigangulus*, Schultz, 1943.

Chaetodon trifasciatus Mungo Park, 1797. **Tifitifi-manifi**.

Chaetodon trifasciatus—Jordan and Seale, 1906.

Chaetodon ulietensis Cuvier in Cuvier and Valenciennes, 1831.

Tifitifi-gutu'uli.

Chaetodon falcula—Schmeltz, 1869.

As *C. falcula*, Schultz, 1943.

Chaetodon unimaculatus Bloch, 1787. **Tifitifi-pulesama**.

Chaetodon unimaculatus—Schmeltz, 1865.

Chaetodon vagabundus Linnaeus, 1758. **Tifitifi-matapua'a**.

Chaetodon vagabundus—Schmeltz, 1866.

Forcipiger flavissimus Jordan and McGregor, 1898. **Gutumanu**.

Forcipiger longirostris (part)—Jordan and Seale, 1906.

Forcipiger longirostris (Broussonet, 1782). **Gutumanu**.

Forcipiger longirostris—Jordan and Evermann, 1905.

Both normal and dark color phases have been collected.

Hemitaurichthys polylepis (Bleeker, 1857). **Alosina**.

Hemitaurichthys thompsoni Fowler, 1923.

This uncommon species was observed along the edge of the drop-off at Steps Point and on the outer edge of Nafanua Bank.

Heniochus acuminatus (Linnaeus, 1758). **Laulaufau-laumea**.

Heniochus macrolepidotus—Schmeltz, 1866.

Heniochus chrysostomus Cuvier in Cuvier and Valenciennes, 1831. **Laulaufau-laumea**.

Heniochus chrysostoma—Schmeltz, 1874.

As *H. permutatus*, Jordan and Seale, 1906 and Schultz, 1943.

Heniochus monoceros Cuvier in Cuvier and Valenciennes, 1831.

Laulaufau-laumea.

Heniochus monoceros—Schmeltz, 1866.

Heniochus singularis Smith and Radcliffe, 1911.

Heniochus varius (Cuvier in Cuvier and Valenciennes, 1829).

Laulaufau-laumea.

Heniochus varius—Jordan and Seale, 1906.

Pomacanthidae (Angelfishes)

Members of this family are referred to as **tu'u'u** in Samoa which is the same general name used for damselfishes.

Centropyge aurantius Randall and Wass, 1974.

Centropyge aurantius—Randall and Wass, 1974.

Centropyge bicolor (Bloch, 1787). **Tu'u'u-matamali**.

Holacanthus bicolor—Schmeltz, 1866.

Centropyge bispinosus (Günther, 1860). **Tu'u'u-alomu**.

Holacanthus bispinosus—Jordan and Evermann, 1905.

As *Holacanthus bispinosus*, Jordan and Seale, 1906.

Centropyge flavicauda Fraser-Brunner, 1933. **Tu'u'u-uluvela.**
Centropyge flavissimus (Cuvier in Cuvier and Valenciennes, 1831).
Tu'u'u-sama, tu'u'u-lega.
Holacanthus cyanotus—Schmeltz, 1866.
 As *Holacanthus flavissimus*, Jordan and Seale, 1906.
Centropyge heraldi Woods and Schultz in Schultz et al., 1953.
Tu'u'u-atugauli.
 Samoan specimens do not show the normal color pattern. The distal half of the soft dorsal is abruptly black instead of uniformly yellow.
Centropyge loricultus (Günther, 1874). **Tu'u'u-tusuli.**
Centropyge multifasciatus (Smith and Radcliffe, 1911).
Tu'u'u-manini.
Centropyge multifasciatus—Smith-Vaniz and Randall, 1974.
Holacanthus trimaculatus Cuvier in Cuvier and Valenciennes, 1831.
Pomacanthus imperator (Bloch, 1787). **Tu'u'u-vaolo** (juvenile, Am. Samoa), **tu'u'u-nuanua** (juvenile, W. Samoa), **tu'u'u-moana** (adult).
Holacanthus nicobariensis—Schmeltz, 1866.
 As *Holacanthus nicobariensis*, Jordan and Seale, 1906.
 Fowler and Bean's (1929) record of *Pomacanthus semicirculatus* probably belongs to this species.
Pypoglyptis diacanthus (Boddaert, 1772). **Tu'u'u-moana.**
Holacanthus diacanthus—Schmeltz, 1866.

Cichlidae (Tilapia)

Tilapia mossambica (Peters, 1852).

This is a fresh and brackish water species native to east Africa. It was introduced several years ago and is plentiful in the swampy areas on Aunu'u Island.

Pomacentridae (Damselfishes)

The general name for damselfishes is **tu'u'u**.

Abudefduf septemfasciatus (Cuvier in Cuvier and Valenciennes, 1830). **Mutu.**

Abudefduf septemfasciatus—Steindachner, 1906.

Abudefduf sexfasciatus (Lacepède, 1801). **Mamo.**

Glyphidodon coelestinus—Schmeltz, 1874.

As *Abudefduf coelestinus*, Jordan and Seale, 1906.

Abudefduf sordidus (Forsskål, 1775). **Mutu.**

Glyphidodon sordidus—Günther, 1881.

Abudefduf vaigiensis (Quoy and Gaimard, 1825). **Mamo.**

Glyphidodon coelestinus var. *vaigiensis*—Schmeltz, 1866.

As *Abudefduf saxatilis*, Jordan and Seale, 1906 and Schultz, 1943.

Amblyglyphidodon curacao (Bloch, 1787).

Amblyglyphidodon curacao—Allen, 1975.

This species was not observed by the author.

Amblyglyphidodon leucogaster (Bleeker, 1847). **Tu'u'u-mamo.**

Chromis analis—Jordan and Seale, 1906.

As *Abudefduf curacao*, Schultz, 1943.

Amphiprion chrysopterus Cuvier in Cuvier and Valenciennes, 1830. **Tu'u'u-lumane.**

Amphiprion chrysopterus—Allen, 1975.

Amphiprion melanopus Bleeker, 1852. **Tu'u'u-lumane.**

Amphiprion ephippium var. *melanopus*—Günther, 1881.

Allen (1978) considered *rubrocinctus* to be a color variation of this species.

Amphiprion perideraion Bleeker, 1855. **Tu'u'u-lumane.**

Chromis acares Randall and Swerdloff, 1973. **Tu'u'u-fō.**

Chromis acares—Randall and Swerdloff, 1973.

Chromis agilis Smith, 1960.

Chromis amboinensis (Bleeker, 1873). **Tu'u'u-palevai.**

Chromis amboinensis—Allen, 1975.

Chromis atripectoralis Welander and Schultz, 1951.

Tu'u'u-segasega.

Chromis caeruleus—Seale, 1935.

Chromis caerulea (Cuvier in Cuvier and Valenciennes, 1830).

l'alanumoana, tu'u'u-segasega.

Heliaestes lepidurus—Schmeltz, 1866.

Chromis iomelas Jordan and Seale, 1906. **Tu'u'u-i-usina.**

Chromis iomelas—Jordan and Seale, 1906.

As *C. dimidiatus*, Schultz, 1943.

Chromis margaritifer Fowler, 1946. **Tu'u'u-i-usina.**

Chromis ternatensis (Bleeker, 1856).

Chromis ternatensis—Steindachner, 1906.

Chromis vanderbilti (Fowler, 1941). **Tu'u'u-fō.**

Chromis webberi Fowler and Bean, 1928.

Chromis xanthurus (Bleeker, 1854). **Tu'u'u-i-usina.**

Chromis sp. "A".

This species is recorded from Samoa by Allen (1975) who labeled it *Chromis* sp. "A".

Chrysiptera biocellata (Quoy and Gaimard, 1825).

Tu'u'u-ulavapua.

Glyphidodon antjerius—Schmeltz, 1866.

As *Abudefduf antjerius* and *A. zonatus*, Jordan and Seale, 1906 and as *A. biocellatus* and *A. zonatus*, Schultz, 1943.

Chrysiptera caeruleolineata (Allen, 1973).

Glyphidodontops caeruleolineatus—Allen, 1975.

Chrysiptera cyanea (Quoy and Gaimard, 1825). **Tu'u'u-mo'o, vaiuli-sama.**

Glyphidodon azureus and *G. unioellatus*—Schmeltz, 1866.

As *Abudefduf taupou* and *A. unioellatus*, Jordan and Seale, 1906 and as *A. taupou*, Schultz, 1943.

Chrysiptera glauca (Cuvier in Cuvier and Valenciennes, 1830).

Glyphidodon modestus—Schmeltz, 1866.

As *Abudefduf glaucus*, Jordan and Seale, 1906 and Schultz, 1943.

Chrysiptera leucopoma (Lesson 1830). **Tu'u'u-tulisegasega** (blue and yellow phase), **tu'u'u-alamu** (brown phase).

Glyphidodon leucopoma—Günther, 1881.

As *Abudefduf amabilis* and *A. leucopomus*, Jordan and Seale, 1906 and Schultz, 1943.

Chrysiptera tricineta (Allen and Randall, 1974).

Glyphidodontops tricinetus—Allen and Randall, 1974.

Dascyllus aruanus (Linnaeus, 1758). **Mamo.**

Dascyllus aruanus—Schmeltz, 1866.

Dascyllus reticulatus (Richardson, 1846). **Tu'u'u-koko.**

Dascyllus trimaculatus (Rüppell, 1828). **Tu'u'u-pulelua.**

Dascyllus trimaculatus—Jordan and Seale, 1906.

Lepidozygus tapeinosoma (Bleeker, 1856).

Neopomacentrus metallicus (Jordan and Seale, 1906).

Tu'u'u-segi, pipi.

Abudefduf metallicus—Jordan and Seale, 1906.

As *Abudefduf filamentosus*, Schultz, 1943.

Plectroglyphidodon dickii (Liénard, 1839). **Tu'u'u-i-usina.**

Glyphidodon unifasciatus—Schmeltz, 1866.

As *Abudefduf dicki*, Jordan and Seale, 1906 and as *A. dickii*, Schultz, 1943.

Plectroglyphidodon imparipennis (Vaillant and Sauvage, 1875).

Abudefduf imparipennis—Schultz, 1943.

This species was collected only at Rose Island.

Plectroglyphidodon johnstonianus Fowler and Ball, 1924.

Tu'u'u-i'uuli.

Plectroglyphidodon lacrymatus (Quoy and Gaimard, 1825).

Tu'u'u-lau, i'usamasama.

Glyphidodon lacrymatus—Schmeltz, 1866.

As *Abudefduf lacrymatus*, Jordan and Seale, 1906 and Schultz, 1943.

Plectroglyphidodon leucozona (Bleeker, 1859). **Tu'u'u-si'ugutusina.**

Abudefduf behnii—Jordan and Seale, 1906.

As *Abudefduf behnii*, Schultz, 1943.

Plectroglyphidodon phoenixensis (Schultz, 1943). **Tu'u'u-popouli.**

Abudefduf phoenixensis—Schultz, 1943.

Pomacentrus brachialis Cuvier in Cuvier and Valenciennes, 1830.

Tu'u'u-faga.

Pomacentrus melanopterus—Jordan and Seale, 1906 and Schultz, 1943.

Pomacentrus coelestis Jordan and Starks, 1901. **Tu'u'u-segasega.**

Pomacentrus pavo (Bloch, 1787). **Tu'u'u-segasega, teatea.**

Pomacentrus pavo—Schmeltz, 1869.

Pomacentrus vaiuli Jordan and Seale, 1906. **Tu'u'u-vaiuli.**

Pomacentrus vaiuli—Jordan and Seale, 1906.

Pomachromis richardsoni (Snyder, 1909). **Tu'u'u-malaumataputa.**

Pomachromis richardsoni—Allen, 1975.

Stegastes albifasciatus (Schlegel and Müller, 1839-44). **Tu'u'u-pa, ulavapua.**

Pomacentrus albifasciatus—Schmeltz, 1877.

As *Pomacentrus albifasciatus* and *P. eclipcticus*, Jordan and Seale, 1906 and as *P. albifasciatus*, Schultz, 1943.

Stegastes facioliatus (Ogilby, 1889). **Tu'u'u-palea.**

Pomacentrus inornatus—Jordan and Seale, 1906.

As *Pomacentrus inornatus*, Schultz, 1943. *Pomacentrus jenkinsi* is a common synonym.

Stegastes lividus (Bloch and Schneider, 1801). **Tu'u'u-moi.**

Glyphisodon cyanospilus—Schmeltz, 1865.

As *Pomacentrus lividus*, Jordan and Seale, 1906 and Schultz, 1943.

Stegastes nigricans (Lacepède, 1803). **Tu'u'u-moi.**

Pomacentrus scolopsis—Schmeltz, 1866.

As *Pomacentrus nigricans*, Jordan and Seale, 1906 and Schultz, 1943.

Cirriiidae (Hawkfishes)

Amblycirrhitus bimaculata (Jenkins, 1903). **La'o.**

Paracirrhites bimaculata—Schultz, 1943.

Amblycirrhitus unimaculata (Kamohara, 1957). **La'o.**

John E. Randall confirmed the identification of this species which was previously known only from the Ryukyu Islands and southern Taiwan (Randall 1963a). (BPBM 22723.)

Cirriichthys falco Randall, 1963. **La'o-gatala.**

Cirrhites pinnulatus (Bloch and Schneider, 1801). **Ulutu'i.**

Cirrhites punctatus—Kner, 1868.

As *Cirrhites marmoratus* and *Paracirrhites punctatus*, Jordan and Seale, 1906.

Neocirrhites armatus Castelnau, 1873.

This fish commonly occurs within coral (*Pocillopora*) heads at shallow depths along exposed portions of the Tutuila coastline.

Paracirrhites arcatus (Cuvier in Cuvier and Valenciennes, 1829).

Lausiva.

Cirrhites arcatus—Kner, 1868.

As *Amblycirrhites arcatus*, Schultz, 1943.

Paracirrhites forsteri (Bloch and Schneider, 1801). **Lausiva.**

Cirrhites forsteri—Kner, 1868.

Paracirrhites hemistictus (Günther, 1874). **Lausiva, a'a.**

Amblycirrhites hemistictus and *A. polystictus*—Schultz, 1943.

Mugilidae (Mulletts)

The general name for mullet in Samoa is 'anae and it is usually applied to fishes measuring 20-40 cm TL. Other names are **moi** (< 5 cm TL), **poi** (5-8 cm TL), **āua** (8-12 cm TL), **fua'fua** (12-15 cm TL), **popoto** or **manase** (15-20 cm TL), and **afomatua** (>40 cm TL). J. M. Thomson confirmed some of the identifications and furnished most of the synonyms.

Chaenomugil leuciscus (Günther, 1871).

Neomyxus chaptalii—Fowler and Sylvester, 1922.

Thomson writes that the type of *chaptalii* is a juvenile *Mugil cephalus* so the species generally referred to as *chaptalii* is correctly known as *leuciscus*.

Crenimugil crenilabis (Forskåål, 1775).

Mugil crenilabis—Schultz, 1943.

Liza macrolepis (Smith, 1849).

Mugil compressus—Günther, 1881.

As *Liza troscheli*, Jordan and Seale, 1906 and as *Mugil troscheli*, Schultz, 1943. Schultz (1943) also synonymized *Agonostomus dorsalis*, which was described from Samoa, with this species.

Liza subviridis (Valenciennes in Cuvier and Valenciennes, 1836).

Mugil argenteus—Schmeltz, 1869.

As *Mugil argenteus*, Jordan and Seale, 1906.

Liza vaiensis (Quoy and Gaimard, 1824). **Fuitogo** (<10 cm TL).

'afa (10-25 cm TL), and **'anaeafa** (>25 cm TL).

Mugil vaiensis—Steindachner, 1906.

As *Liza melinoptera*, Jordan and Seale, 1906 and as *Mugil vaiensis*, Schultz, 1943.

Valamugil engeli (Bleeker, 1858).

Mugil kellartii—Steindachner, 1906.

As *Mugil caldwelli*, Jordan and Seale, 1906 and as *M. engeli*, Schultz, 1943. *Mugil rechingeri*, which was described from Samoa, is also a synonym.

Valamugil shehli (Forskåål, 1775).

Mugil axillaris—Günther, 1877.

As *Liza caeruleomaculata*, Jordan and Seale, 1906 and as *Mugil shehli*, Schultz, 1943.

Sphyaenidae (Barracudas)

Barracudas are known as **sapatū** in Samoa. Donald P. de Sylva confirmed the identifications.

Sphyaena barracuda (Walbaum, 1792). **Saosao** (large individuals).

Sphyaena snodgrassi—Schultz, 1943.

Sphyaena flavicauda Rüppell, 1835.

Sphyaena obtusata—Jordan and Seale, 1906.

Sphyaena forsteri (Cuvier in Cuvier and Valenciennes, 1829).

Sphyaena forsteri—Jordan and Seale, 1906.

Sphyaena helleri Jenkins, 1901.

Sphyaena helleri—Schultz, 1943.

de Sylva believes this species may prove to be a synonym of *acutipinnis*.

Sphyaena genic Klunzinger, 1870.

Polynemidae (Threadfins)

In American Samoa these fishes are known as 'umi'umia when less than about 15 cm TL and i'ausi when larger. The name 'umi'umia is used for all sizes in Western Samoa.

Polynemus plebeius Broussonet, 1782.

Polynemus taeniatus—Schmeltz, 1866.

As *Polydactylus plebeius*, Jordan and Seale, 1906 and Schultz, 1943.

Polynemus sexfilis Valenciennes in Cuvier and Valenciennes, 1831.

Polydactylus sexfilis—Schultz, 1943.

Labridae (Wrasses)

Wrasses are generally called **sugale**. John E. Randall identified or confirmed the author's identifications for most of the new records. He also examined the unidentified specimens.

Anampses caeruleopunctatus Rüppell, 1828. **Sugale-mafalangutu**.

Anampses caeruleopunctatus—Schmeltz, 1865.

As *A. caeruleopunctatus* and *A. diadematus*, Jordan and Seale, 1906. *Anampses diadematus* refers to the terminal male color phase (Randall 1972).

Anampses melanurus Bleeker, 1857.

Anampses melanurus—Günther, 1881.

Anampses meleagrides Valenciennes in Cuvier and Valenciennes, 1839. **Sugale-tatanu** (initial color phase).

Anampses twistii Bleeker, 1856. **Sugale-tatanu**.

Bodianus anthioides (Bennett, 1831).

A single specimen was collected at Rose Atoll. (BPBM 27986.)

Bodianus axillaris (Bennett, 1831). **Sugale-vaolo**.

Bodianus diana (Lacepède, 1801).

Bodianus loxozonus (Snyder, 1908). **Sugale-a'a**.

Cheilinus arenatus (Valenciennes in Cuvier and Valenciennes, 1840).

(BPBM 24119.)

Cheilinus chlorourus (Bloch, 1791). **Lalafi-matapua'a**.

Cheilinus chlorurus—Schmeltz, 1865.

As *Thalilurus chlorurus*, Jordan and Seale, 1906.

Cheilinus digrammus (Lacepède, 1801). **Lalafi-gutu'umi**.

Chilinus radiatus—Günther, 1881.

As *Cheilinus digrammus*, Jordan and Seale, 1906 and Schultz, 1943.

Cheilinus fasciatus (Bloch, 1791). **Lalafi-pulepule**.

Cheilinus fasciatus—Schmeltz, 1866.

Cheilinus orientalis Günther, 1862.

A single specimen was collected at 70 m and identified by Martin F. Gomon. (BPBM 24117.)

Cheilinus oxycephalus Bleeker, 1853.

Cheilinus trilobatus Lacepède, 1801. **Lalafi-matamümü**.

Cheilinus trilobatus—Schmeltz, 1869.

Cheilinus undulatus Rüppell, 1835. **Lalafi** (<30 cm TL), **tagafa** (30-75 cm TL), and **malakea** (>75 cm TL).

Cheilinus undulatus—Jordan and Seale, 1906.

Cheilinus unifasciatus Streets, 1877. **Lalafi**.

Cheilinus unifasciatus—Schultz, 1943.

This species has been misidentified as *rhodochrous* by most authors. Randall has found that *rhodochrous* is an Indian Ocean species different from the Pacific *unifasciatus*.

Cheilio inermis (Forsskål, 1775). **Sugale-mo'o**.

Cheilio inermis—Jordan and Seale, 1906.

Cheoerodon jordani (Snyder, 1909).

Cirrhilabrus sp.

This is the color form mentioned by Randall and Shen (1978) which may be a geographic variant of their *melanomarginatus*. Samoan specimens have a reddish blotch laterally behind the pectoral fin, a spiny dorsal with a dark blue band marginally which slants to the dorsal axil posteriorly and a soft dorsal with a yellow-orange margin. In the largest specimen (104 mm SL), the blue dorsal band terminates at the second soft dorsal ray. The anal of this specimen is flesh colored with a dark blue blotch basally on the last four rays. The anal of smaller specimens is largely dark blue with a flesh colored base. (BPBM 17461, 24124.)

Cirrhilabrus sp.

Three specimens, 36-46 mm SL; collected at 12 m. Dorsal XI,9; anal III,9; pectoral 15; lateral line pores 15 or 16+6 or 7=21-23. Body and head dusky pink paling to yellow dorsally and to white ventrally; pectoral base dark brown and one or two dark brown specks on upper half of caudal peduncle; dorsal yellow orange, membrane between first three spines dark brown; anal pinkish orange; caudal yellow. Randall writes that the species "seems to be in the *temminckii* complex." It was observed only within the lagoon at Rose Atoll where it is abundant. (BPBM 27780.)

Cirrhilabrus sp.

Four specimens, 24-72 mm SL; collected at 50-70 m. Dorsal XI,9; anal III,9; pectoral 15; lateral line pores 17+7=24; gill rakers 18; predorsal scales 5. Caudal rounded; pelvics of largest specimen long, extending to base of 4th anal ray when depressed. Two scale rows on cheek; the largest specimen has 1 (right) and 3 (left) scales on either side in the upper row and 9 or 10 scales in the lower row which continues on up to a point directly posterior to the middle of the eye; the smaller specimens (all <33 mm) have 4 to 6 scales in the upper row and 5 to 8 scales in the lower row which is restricted to below the level of the eye. Color of largest specimen: body pink with faint purple lines along centers of scale rows; head purple with two greenish yellow lines through eye, yellow dots on lower part of head and breast, upper part of head and nape greenish yellow; distal half of dorsal red, then a thin dusky blue line and a yellow-pink base, a dusky spot at base of first two dorsal spines; anal dusky yellow with purple mottling; caudal yellow with two purple crescents; pelvics dusky. Color of smaller specimens: body and lower portion of head pink; snout and nape greenish yellow; dorsal yellow, spiny dorsal with a red band distally and a dusky spot at base of first two spines; a dusky spot on upper caudal peduncle; anal and caudal mostly yellow. (BPBM 20000, 20003, 24124.)

Coris aygula Lacepède, 1801. **Sugale-uluto'i** (terminal male).

Coris cingulum—Schmeltz, 1874.

As *C. angulata*, Schultz, 1943.

Coris gaimard (Quoy and Gaimard, 1824). **Sugale-mümü**, **sugale-tala'ula**.

Coris pulcherrima—Schmeltz, 1874.

As *Julis greenovii* and *J. pulcherrima*, Jordan and Seale, 1906

- and as *Coris gainard* and *C. greenovi*, Schultz, 1943. *Coris greenovi* has long been applied to the juvenile color phase.
- Epibulus insidiator* (Pallas, 1770). **Lapega** (Am. Samoa), **si'umutu** (W. Samoa), **lalafi-tua'au**.
Epibulus insidiator—Schmeltz, 1866.
- Gomphosus varius* Lacepède, 1801. **Gutusi'o**, **gutu'umi**, **sugale-lupe**.
Gomphosus cepedianus—Schmeltz, 1865.
As *G. varius* and *G. tricolor*, Jordan and Seale, 1906 and Schultz, 1943. *Gomphosus tricolor* has been applied to the terminal male color phase.
- Halichoeres biocellatus* Schultz in Schultz et al., 1960.
Halichoeres hartzfeldii (Bleeker, 1852). **Sugale-tatanu**.
- Halichoeres hortulanus* (Lacepède, 1801). **Sugale-a'au**, **sugale-pagota**, **ifigi**.
Halichoeres centrinquadra—Steindachner, 1906.
As *Halichoeres centriquadrus* and *H. notophthalmus*, Jordan and Seale, 1906 and as *H. centriquadrus* and *H. notophthalmus*, Schultz, 1943.
- Halichoeres margaritaceus* (Valenciennes in Cuvier and Valenciennes, 1839). **Sugale-uluvefa**.
Halichoeres pseudomaniatus—Schmeltz, 1865.
As *H. daeldalma* and *H. opercularis*, Jordan and Seale, 1906.
- Halichoeres marginatus* Rüppell, 1835. **Sugale-lalafi**.
PlatyGLOSSUS marginatus—Schmeltz, 1866.
As *PlatyGLOSSUS marginatus* and *P. notopsus*, Jordan and Seale, 1906 and as *Halichoeres marginatus* and *H. notopsus*, Schultz, 1943.
- Halichoeres melanurus* (Bleeker, 1851).
PlatyGLOSSUS kallochroma—Schmeltz, 1869.
As *PlatyGLOSSUS flos-coralis* and *P. hoevernii*, Jordan and Seale, 1906 and as *Halichoeres hoevernii* and *H. kallochroma*, Schultz, 1943. The initial phase is sometimes referred to as *hoevernii* and the terminal male as *kallochroma* (Randall 1980b).
- Halichoeres melasmapomus* Randall, 1980.
Halichoeres melasmapomus—Randall, 1980b. (BPBM 17552, 24112.)
- Halichoeres prosopoeion* (Bleeker, 1853).
Halichoeres prosopoeion—Randall, 1980b.
- Halichoeres trimaculatus* (Quoy and Gaimard, 1834). **Lape**, **sugale-pagota**.
Güntheria trimaculata—Schmeltz, 1865.
- Hemigymnus fasciatus* (Bloch, 1792). **Sugale-gutumafia**.
Hemigymnus fuliginosus—Jordan and Seale, 1906.
- Hemigymnus melapterus* (Bloch, 1791). **Sugale-laugutu**, **sugale-uli**, **sugale-afoa**, **sugale-lupe**.
Hemigymnus melanopterus—Schmeltz, 1869.
- Hologymnosus doliatus* (Lacepède, 1802). **Sugale-lape**.
- Labrichthys unilineatus* (Guichenot, 1847). **Sugale-tafuti**, **atamamala**.
Thysanochelilus ornatus—Kner, 1864.
As *Labrichthys cyanotaenia*, Jordan and Seale, 1906 and Schultz, 1943. The terminal male phase has been referred to as *cyanotaenia*.
- Labroides bicolor* Fowler and Bean, 1928. **Sugale-i'usina**.
Labroides dimidiatus (Valenciennes in Cuvier and Valenciennes, 1839). **Sugale-mo'otai**.
Labroides dimidiatus—Günther, 1881.
Mature Samoan specimens exhibit two color phases. At shallow depths they show the normal pattern with a thin dark stripe beginning at the lips and continuing through the eye to the caudal, gradually broadening posteriorly to include all but the dorsal and ventral edges of the caudal. At depths greater than about 10 m, however, the dark band becomes bright yellow under the soft dorsal through the basal portion of the caudal.
- Labroides rubrolabiatus* Randall, 1958.
Labroides rubrolabiatus—Randall and Springer, 1975.
- Labropsis australis* Randall, 1981.
Labropsis australis—Randall, 1981.
- Labropsis xanthonota* Randall, 1981.
Labropsis xanthonota—Randall, 1981.
- Macropharyngodon meleagris* (Valenciennes in Cuvier and Valenciennes, 1839). **Sugale-puletasi**.
PlatyGLOSSUS geoffroyi—Schmeltz, 1866.
As *Macropharyngodon meleagris* and *LeptoJULIS pardalis*, Jordan and Seale, 1906 and as *Macropharyngodon geoffroyi* and *LeptoJULIS pardalis*, Schultz, 1943. The initial color phase has been referred to as *pardalis*.
- Macropharyngodon negrosensis* Herre, 1932.
Macropharyngodon negrosensis—Randall, 1978.
- Novaculichthys taeniourus* (Lacepède, 1801). **Sugale-la'o** (juvenile), **sugale-tāili** (adult), **sugale-gasufi**.
Novacula vanicolensis—Schmeltz, 1866.
As *Novaculichthys kallosomus* and *N. taeniurus*, Jordan and Seale, 1906.
- Pseudocheilinus evanidus* Jordan and Evermann, 1903. **Sugale-tusitisi** (Am. Samoa), **sugale-manifi** (W. Samoa).
Pseudocheilinus hexataenia (Bleeker, 1857). **Sugale-tusitisi** (Am. Samoa), **sugale-manifi** (W. Samoa).
Pseudocheilinus psittacula—Schmeltz, 1869.
- Pseudocheilinus octotaenia* Jenkins, 1900. **Sugale-tusitisi** (Am. Samoa), **sugale-manifi** (W. Samoa).
Pseudocoris yanashiroi (Schmidt, 1930).
Pseudocoris awayae is a junior synonym according to William F. Smith-Vaniz who is revising the genus with Randall. (ANSP 145970.)
- Pseudodax moluccanus* (Valenciennes in Cuvier and Valenciennes, 1839). **Sugale-siva**.
Pseudojuloides cerasinus (Snyder, 1904).
Pseudojuloides cerasinus—Randall and Randall, 1981. (BPBM 17541.)
- Pteragogus* sp.
One specimen, 37 mm SL. Dorsal X,10; anal III,9; pectoral 13; lateral line pores 16 + 2 + 8 = 26; gill rakers 3 + 1 + 5 = 9. Head and body orange with brown speckling dorsally; brown oval spot on operculum; dusky nostrils. This species will also be described by Randall (BPBM 24126.)
- Stethojulis bandanensis* (Bleeker, 1851). **Lape-a'au**.
Stethojulis axillaris—Schmeltz, 1866.
As *S. axillaris*, Schultz, 1943. Randall and Kay (1974) have found that *axillaris* is a junior synonym of *baiteata*, a species endemic to the Hawaiian Islands with an initial color phase similar to that of *bandanensis*.
- **Stethojulis interrupta* (Bleeker, 1851).
Stethojulis interrupta—Schmeltz, 1869.
- Stethojulis strigiventer* (Bennett, 1832). **Lape-a'au**.
Stethojulis strigiventer—Günther, 1881.
As *S. renardi* and *S. strigiventer*, Schultz, 1943. Randall (1955) has found that *renardi* represents the terminal color phase.
- Stethojulis trilineata* (Bloch and Schneider, 1801). **Lape-a'au**.
Stethojulis casturi and *S. phekadopleura*—Jordan and Seale, 1906.
As *S. casturi*, *S. phekadopleura*, and *S. trilineata*, Schultz,

1943. *Stethojulis phekadopleura* has been applied to the initial color phase and *casturi* to the terminal phase (Randall and Kay, 1974).

Thalassoma amblycephalum (Bleeker, 1856). **Sugale-aloama.**

Julis melanochirus—Schmeltz, 1865.

As *Thalassoma marnae* (juvenile color phase), Schultz, 1943.

Thalassoma melanochir has been used for the adult phase.

Thalassoma fuscum (Lacepède, 1802). **Uloulo-gatala** (initial phase), **pata'ota'o** (terminal male).

Julis trilobata—Schmeltz, 1866.

As *Thalassoma fuscum* and *T. umbrostigma* (part), Jordan and Seale, 1906 and as *T. trilobata* and *T. umbrostigma* (part), Schultz, 1943. The initial color phase of this species is similar to that of *purpureum* and both have been labeled *umbrostigma*.

Thalassoma hardwickei (Bennett, 1830). **Sugale-a'au**, **lape-ele'e**. **Julis schwanfeldii**—Schmeltz, 1869.

As *Thalassoma dorsale*, Jordan and Seale, 1906 and as *T. hardwicke* and *T. schwanfeldii*, Schultz, 1943.

Thalassoma lutescens (Lay and Bennett, 1839). **Sugale-samasama.** **Julis aneitensis**—Günther, 1909.

Thalassoma purpureum (Forsskål, 1775). **Uloulo-gatala** (initial phase), **patagaloa** (terminal male).

Thalassoma purpureum, *T. cyanogaster*, and *T. umbrostigma* (part)—Jordan and Seale, 1906.

As *T. purpureum* and *T. umbrostigma* (part), Schultz, 1943.

Thalassoma quinquevittatum (Lay and Bennett, 1839). **Lape-moana.**

Julis güntheri—Schmeltz, 1866.

As *Thalassoma güntheri*, Jordan and Seale, 1906.

Wetmorella albofasciata Schultz and Marshall, 1954. **La'ofia.** (BPBM 28132.)

Wetmorella nigropinnata (Seale, 1901). **La'ofia.**

Xyrichtys aneitensis (Günther, 1862).

Sugale-tatanu (Am. Samoa), **ulumalo** (W. Samoa).

Randall believes that *niveilatus* is a junior synonym. (BPBM 17455, 22717.)

Xyrichtys celebicus (Bleeker, 1856). **Sugale-tatanu** (Am. Samoa), **ulumalo** (W. Samoa).

Scaridae (Parrotfishes)

Fuga is the general name for small to medium sized parrotfishes. Reddish brown individuals are sometimes referred to as **fugamea** and greenish blue species are called **fugausi**. Larger individuals are termed **laea** (20-50 cm TL) or **galo** (> 50 cm TL). Because of the relative uniformity amongst the meristic and other characteristics (except live coloration) of parrotfishes, the taxonomy of this family has long been confused. Initial and terminal color phases were usually assigned different names and numerous synonyms have accumulated over the years for most species. Underwater observations of courtship and reproductive behavior, color photographs of live and fresh-dead specimens, and extensive collection efforts, however, have resulted in considerable synonymy and revision beginning with the work of Schultz (1958) and continuing through the present. For many species, further study is still required. The list which follows reflects the current opinion of John E. Randall who also assisted with the identifications. Included are the results of the study by Randall and Choat (1980) of central and South Pacific *Scarus* and the review by Randall and Bruce (in press) of Western Indian Ocean parrotfishes.

Bolbometopon muricatum (Valenciennes in Cuvier and Valenciennes, 1839). **Uluto'i** (<20 cm TL), **laea-uluto'i** (20-50 cm TL), **galo uluto'i** (>50 cm TL).

Calotomus sandwicensis (Valenciennes in Cuvier and Valenciennes, 1839). **Fuga-valea.**

Callyodon molluccensis—Schmeltz, 1869.

Callyodon spinidens is a junior synonym.

Cetoscarus bicolor (Rüppell, 1829). **Fuga-sima** (juvenile), **mamanu** (initial phase, <25 cm TL), **laea-mamanu** (initial phase, >25 cm TL), **laea-usi** (terminal phase).

Chlorurus bicolor—Schultz, 1958.

Hipposcarus longiceps (Valenciennes in Cuvier and Valenciennes, 1839). **Ulapokea** (<25 cm TL), **laea-ulapokea** (>25 cm TL).

Pseudoscarus harid—Günther, 1909.

**Leptoscarus vaigiensis* (Quoy and Gaimard, 1824).

Scarichthys coruleopunctatus—Schmeltz, 1874.

Scarus atropectoralis Schultz, 1958.

This species was observed only at Rose Atoll. Randall writes that Schultz (1969) incorrectly placed the species in synonymy with *caudofasciatus*, an Indian Ocean species.

Scarus brevifilis (Günther, 1909). **Laea-sina.**

Callyodon prasiognathus—Jordan and Seale, 1906.

As *Scarus brevifilis* and *S. chlorodon*, Schultz, 1958. The initial color phase has been referred to as *brevifilis* and the terminal phase as *chlorodon*.

Scarus dimidiatus Bleeker, 1859. **Fuga-alosama.**

Callyodon fumifrons (initial phase) and *C. zonularis* (terminal male)—Jordan and Seale, 1906.

As *Scarus caudofasciatus* (terminal male) and *S. dimidiatus* (initial phase), Schultz, 1943.

Scarus festivus Valenciennes in Cuvier and Valenciennes, 1840.

Scarus lunula is a synonym.

Scarus frenatus Lacepède, 1802. **Laea-mea** (initial phase), **laea-si'umoana** (terminal phase).

Callyodon upolepis—Jordan and Seale, 1906.

Terminal males have been referred to as *frenatus* and *vermiculatus*, and *sextivittatus* has been used for the initial color phase (Randall 1963b).

Scarus frontalis Valenciennes in Cuvier and Valenciennes, 1839.

Callyodon laxa—Jordan and Seale, 1906.

As *Scarus jonesi*, Schultz, 1943.

Scarus ghobban (Forsskål, 1775). **Fuga-alovā.**

Scarus maculosus—Schmeltz, 1865.

Scarus gibbus Rüppell, 1828. **Fugausi** (<25 cm TL), **laea** (25-40 cm TL), **ulumato** (40-50 cm TL), **galo** (> 50 cm TL).

Scarus microcheilus—Schmeltz, 1865.

As *Callyodon ultramarinus*, Jordan and Seale, 1906 and as *Scarus microchrous*, Schultz, 1943.

Scarus globiceps Valenciennes in Cuvier and Valenciennes, 1840. **Scarus globiceps**—Fowler, 1900.

As *Callyodon spilonotus*, Jordan and Seale, 1906.

Scarus japonensis (Bloch, 1789). **Fuga-si'umū** (initial phase), **laea-ulusama** (terminal phase).

Callyodon abacurus and *C. pyrrhurus*—Jordan and Seale, 1906.

Scarus capistratoides is a junior synonym (Randall and Choat 1980).

Scarus niger (Forsskål, 1775). **Fuga-pala** (<25 cm TL), **laea-pala** (>25 cm TL).

Callyodon niger—Steindachner, 1906.

As *Callyodon maoricus*, Jordan and Seale, 1906 and as *Scarus nuchipunctatus*, Schultz, 1943.

Scarus oviceps Valenciennes in Cuvier and Valenciennes, 1839.

Fuga-alosina (initial phase), **laea-tuavela** (terminal phase).

Callyodon oviceps (initial phase) and *C. lazulinus* (terminal male)—Jordan and Seale, 1906.

As *Scarus oviceps* and *S. pectoralis* (terminal male), Schultz, 1943.

Scarus psitticus (Forsskål, 1775). **Fuga-matapua'a** (<15 cm TL), **fugausi-matapua'a** (15–25 cm TL), **laea-matapua'a** (>25 cm TL).

Scarus viridis—Fowler, 1900.

As *Callyodon bataviensis* (terminal male), Jordan and Seale, 1906 and as *Scarus forsteri*, Schultz, 1943.

Scarus rubroviolaceus Bleeker, 1849. **Laea-mea** (initial phase), **laea-mala** (terminal phase).

Pseudoscarus rubroviolaceus—Schmeltz, 1865.

As *Callyodon jordani* (terminal male) and *C. ruberrimus* (initial phase), Jordan and Seale, 1906.

Scarus schlegeli (Bleeker, 1861). **Fuga-matapua'a** (initial phase), **laea-tusi** (terminal phase).

Scarus venosus is used by Schultz (1958) for the initial color phase (Randall and Choat 1980).

Scarus sordidus (Forsskål, 1775). **Fuga-gutumū** (initial phase), **fugausi-tuavela** or **laea-tuavela** (terminal phase).

Pseudoscarus sambavensis—Schmeltz, 1865.

As *Callyodon cyanogrammus* (terminal male), *C. purpureus* (initial phase), and *C. bennetti* (initial phase), Jordan and Seale, 1906 and as *Scarus purpureus*, Schultz, 1943.

Scarus spinus (Kner, 1868). **Fuga-a'au**.

Pseudoscarus spinus—Schmeltz, 1869.

As *Callyodon kelloggii* (terminal male), Jordan and Seale, 1906. Randall and Choat (1980) concluded that *formosus* should be replaced by this name.

Scarus tricolor Bleeker, 1847. **Fuga-alomū** (initial phase).

Pseudoscarus cyanognathus—Schmeltz, 1879.

Opistognathidae (Jawfishes)

Previous to the collection of the specimens listed below, the easternmost record for this family in the central Pacific was New Caledonia. Both species will be described by William F. Smith-Vaniz in a forthcoming revision of Indo-Pacific jawfishes.

Opistognathus sp. "A".

Seventeen specimens, 16–26 mm SL; collected at 31, 34, and 62 m. Body dusky yellow; head lighter, a brown bar crossing preoperculum behind eye and another below eye to top of maxilla, opercular edge bright yellow; fins dusky yellow, a large black ocellus between dorsal spines I and V. Smith-Vaniz writes that this species is known only from these specimens. (ANSP 133404, 133405.)

Opistognathus sp. "B".

Three specimens, one measured 29 mm SL; collected at 40 m. Body dusky yellow with two rows of pale roundish blotches, the upper row from nape to base of caudal and irregularly connected, the lower from pectoral axil to base of caudal and not connected; head of similar coloration with a brown blotch at posteriordorsal corner of eye more or less connected across the occiput with its fellow, another brown blotch at opposite corner of eye extending across premaxilla and under tip of lower jaw; dark brown ocellus between dorsal spines III and VII. The known distribution of this species includes only Samoa and Borneo. (ANSP 133406.)

Mugiloididae (Sandperches)

Parapercis cephalopunctata (Seale, 1901). **Ta'oto**.

Parapercis tetracanthus (part)—Jordan and Seale, 1906.

As *P. tetracanthus*, Schultz, 1943.

Parapercis clathrata Ogilby, 1910. **Ta'oto**.

Percis tetracanthus—Kner and Steindachner, 1866.

As *Parapercis tetracanthus* (part), Jordan and Seale, 1906.

Parapercis sp.

This species may be *schauinslandi* which is recorded only from the Hawaiian Islands. It is common on the sandy bottom seaward of Taema Bank at 35 m where it often shelters in dead and broken helmet shells, *Cassia cornuta*. (BPBM 24127.)

Creediidae (Sand Burrowers)

Chalixodytes tauensis Schultz, 1943. **I'atolo**.

Chalixodytes tauensis—Schultz, 1943.

Crystallodytes cookei Fowler, 1923. **I'atolo**.

Crystallodytes cookei—Schultz, 1943.

Limnichthys donaldsoni Schultz in Schultz et al., 1960.

I'atolo.

Uranoscopidae (Stargazers)

Uranoscopus sulphurus Valenciennes in Cuvier and Valenciennes, 1831.

A single specimen of this rare species was collected at night on the reef flat at Nu'uuli. (BPBM 18729.)

Blenniidae (Blennies)

The general name for blennies in Samoa is **mano'o**. Bruce Carlson assisted with the identification and synonymies of species belonging to *Cirripectes*. Victor G. Springer assisted with the remaining species.

Alticus saliens (Lacepède, 1800). **Mano'o-papa**.

Alticus saliens—Jordan and Seale, 1906.

As *Rupiscartes saliens*, Schultz, 1943.

Aspidontus dussumieri (Valenciennes in Cuvier and Valenciennes, 1836).

Aspidontus dussumieri—Smith-Vaniz and Randall, 1973.

Aspidontus taeniatus Quoy and Gaimard, 1834. **Mano'o-mo'o**, **mo'otai**.

Petrosirtes azureus—Jordan and Seale, 1906.

The mimetic relationship between this species and *Labroides dimidiatus* is well known. It is of interest to note that specimens of *taeniatus* from deeper water have altered their color pattern to match that of the deeper water pattern of *L. dimidiatus* as described above.

Cirripectes fuscoguttatus Strasburg and Schultz, 1953. **Mano'o-sofe**.

Cirripectes brevis—Schultz, 1943.

Cirripectes quaggi (Fowler and Ball, 1924).

Cirripectes variolosus (part)—Schultz, 1943.

Some Samoan specimens have a bright yellow caudal peduncle.

Cirripectes sebae (Valenciennes in Cuvier and Valenciennes, 1836).

Mano'o-la'o.

Salaria sebae—Günther, 1877.

Cirripectes stigmaticus Strasburg and Schultz, 1953. **Mano'o-la'o**.

- Cirripectes variolosus* (Valenciennes in Cuvier and Valenciennes, 1836).
Salarias variolosus—Schmeltz, 1874.
 As *Alticus variolosus*, Jordan and Seale, 1906.
- Cirrisalarias bunares* Springer, 1976.
- Ecesenius bicolor* (Day, 1888). **Mano'o-i-usama**.
Ecesenius oculus Springer, 1971.
- Ecesenius opsifrontalis* Chapman and Schultz, 1952. (USNM 236063.)
- Enchelyurus ater* (Günther, 1877).
Enchelyurus ater—Jordan and Evermann, 1905.
 As *Hypleurochilus vaillanti*, Jordan and Seale, 1906.
- Entomacrodus caudofasciatus* (Regan, 1909). **Mano'o-fala**.
Entomacrodus caudofasciatus—Springer, 1967.
- Entomacrodus decussatus* (Bleeker, 1858). **Mano'o-fala**.
Salarias atkinsoni—Jordan and Seale, 1906.
 As *Salarias aneitensis*, Schultz, 1943.
- Entomacrodus epalzeocheilus* (Bleeker, 1859). **Mano'o-fala**.
Entomacrodus epalzeocheilus—Springer, 1967.
- Entomacrodus niuafoouensis* (Fowler, 1932). **Mano'o-fala**.
- Entomacrodus sealei* Bryan and Herre, 1903. **Mano'o-fala**.
- Entomacrodus incisolabiatus*—Schultz and Chapman in Schultz et al., 1960.
- Entomacrodus striatus* (Quoy and Gaimard in Cuvier and Valenciennes, 1836). **Mano'o-fala**, **mano'o-a'au**.
Alticus striatus—Jordan and Seale, 1906.
 As *Salarias marmoratus*, Schultz, 1943. *Entomacrodus plurifilis*, which was described from Samoa, is a junior synonym.
- Entomacrodus thalassinus* (Jordan and Seale, 1906).
Mano'o-fala.
Alticus thalassinus and *A. musilae*—Jordan and Seale, 1906.
 As *Salarias thalassinus*, Schultz, 1943.
- Exallias brevis* (Kner, 1868). **Mano'o-fau**, **mano'o-gatala**.
Salarias brevis—Kner, 1868.
 As *Cirripectes leopardus*, Schultz, 1943.
- Istiblennius bellus* (Günther, 1861).
 Specimens collected by Robert Snider are deposited at the B. P. Bishop Museum. (BPBM 12541.)
- **Istiblennius biseriatus* (Valenciennes in Cuvier and Valenciennes, 1836).
Salarias biseriatus—Steindachner, 1906.
- Istiblennius coronatus* (Günther, 1872). **Mano'o-a'au**.
Salarias nitidus—Günther, 1877.
 As *Alticus evermanni*, *Salarias bryani*, and *S. coronatus*, Jordan and Seale, 1906 and as *S. nitidus*, Schultz, 1943.
- Istiblennius cyanostigma* (Bleeker, 1849).
Salarias periopthalmus—Schmeltz, 1869.
 As *Alticus caudolineatus* and *A. periopthalmus*, Jordan and Seale, 1906 and as *Salarias caudolineatus* and *S. periopthalmus*, Schultz, 1943.
- **Istiblennius dussumieri* (Valenciennes in Cuvier and Valenciennes, 1836).
Salarias dussumieri—Borodin, 1932.
- Istiblennius edentulus* (Bloch and Schneider, 1801).
Salarias edentulus—Schmeltz, 1874.
 As *Salarias edentulus*, *S. garmani*, *S. rivulatus*, and *S. sindonis*, Jordan and Seale, 1906.
- **Istiblennius interruptus* (Bleeker, 1857).
Salarias interruptus—Schmeltz, 1869.
- Istiblennius lineatus* (Valenciennes in Cuvier and Valenciennes, 1836).
Salarias lineatus—Steindachner, 1906.
 As *Salarias lineatus*, Jordan and Seale, 1906 and Schultz, 1943.
Istiblennius paulus (Bryan and Herre, 1903).
Istiblennius sp.
 Springer believes that *kellersi* (Fowler, 1932) may apply to these specimens but that at least one or two older names also exist. (USNM 221475.)
- Meiacanthus atrodorsalis* (Günther, 1877). **Mano'o-si'umaga**.
Petrosirtes atrodorsalis—Steindachner, 1906.
 As *Petrosirtes atrodorsalis*, Jordan and Seale, 1906.
- Meiacanthus ditrema* Smith-Vaniz, 1976.
 This species is common in protected parts of Pago Pago Bay at 3-15 m.
- Nannosalarias nativitatus* (Regan, 1909).
Omobranchus rotundiceps (Macleay, 1881).
Petrosirtes obliquus—Jordan and Seale, 1906.
- Parenchelyurus hepburni* (Snyder, 1908).
Parenchelyurus hepburni—Springer, 1972.
- Petrosirtes mitratus* Rüppell, 1830.
Petrosirtes longifilis—Schmeltz, 1866.
 As *P. longifilis*, Jordan and Seale, 1906.
- Petrosirtes xestus* Jordan and Seale, 1906.
Petrosirtes xestus—Jordan and Seale, 1906.
- Plagiotremus rhinorhynchus* (Bleeker, 1852). **Mano'o-to'ito'i**.
Plagiotremus tapeinosoma (Bleeker, 1857). **Mano'o-to'ito'i**.
Petrosirtes tapeinosoma—Günther, 1877.
 As *Petrosirtes tapeinosoma*, Jordan and Seale, 1906.
- Praeahticus bilineatus* (Peters, 1868). **Mano'o-papa**.
Salarias biseriatus—Jordan and Seale, 1906.
 As *Salarias margaritatus*, Schultz, 1943. Springer terms this a tentative identification. This species is commonly found above the water line on lava rocks in the splash zone.
- Rhabdoblennius rhabdotrachelus* (Fowler and Ball, 1924).
Blennius rhabdotrachelus—Schultz, 1943.
- Salarias alboguttatus* Kner, 1867.
Salarias alboguttatus—Kner, 1867.
 As *Alticus alboguttatus*, Jordan and Seale, 1906.
- Salarias fasciatus* (Bloch, 1786). **Mano'o-sofe**.
Salarias semilineatus—Kner, 1867.
- Salarias guttatus* Valenciennes in Cuvier and Valenciennes, 1836.
Alticus guttatus—Jordan and Seale, 1906.
- Stanulus seychellensis* Smith, 1959.
- Xiphiasia matsubarai* Okada and Suzuki, 1952.
 Specimens were collected on the surface at night under a light while anchored at 40 m and from the stomachs of dolphins (*Coryphaena hippurus*) caught offshore. William F. Smith-Vaniz writes that Samoan specimens represent the easternmost distributional record for the species.

Tripterygiidae (Triplefins)

Triplefins are known as **mano'o-taoto** in Samoa. The systematics of the Samoan members of this family are confused and several species appear to be undescribed. Jordan and Seale (1906) listed seven species of *Enneapterygius* from Samoa including five described as new. Schultz (1943) placed four of Jordan and Seale's new species in synonymy and listed only three species for Samoa. The author collected 12 additional triplefins. Three of these were described in 1960. The others are unidentified at present.

Enneapterygius brachylepis (Schultz in Schultz et al., 1960).

Enneapterygius hemimelas (Kner and Steindachner, 1866).

Tripterygium hemimelas—Schmeltz, 1866.

As *Enneapterygius cerasinus* and *E. hemimelas*, Jordan and Seale, 1906.

Enneapterygius minutus (Günther, 1877).

Tripterygium minutus—Günther, 1877.

As *Enneapterygius minutus*, *E. pardochir*, *E. tusitalae*, and *E. tutuilae*, Jordan and Seale, 1906.

Enneapterygius sp.

Eight specimens, 32 mm maximum SL; collected at 20 m. Dorsal III + XVI + 9-10; anal II, 20-21; lateral line scales 17-18 + 22-24 = 40-42. One scale row between pored and notched rows of lateral line. About six wide dusky yellow bars on body; first dorsal dusky; caudal and pectorals yellow. (USNM 220065.)

Enneapterygius sp.

Twenty-four specimens, 28 mm maximum SL; collected at 3 m. Dorsal III + XIV-XV + 8-9; anal II, 18-20; lateral line scales 20-21 + 17-18 = 37-39. No scale rows between pored and notched rows of lateral line. Body and head pale with dusky orange spotting and bars; caudal black with orange spot at midbase; pelvics pale, other fins salmon colored. Some specimens with body dusky anteriorly and dusky orange or yellow bars posteriorly. (USNM 220066.)

Enneapterygius sp.

Two specimens, 20 mm maximum SL. Dorsal III + XII + 8-9; anal I, 17; lateral line scales 17-18 + 14-15 = 31-33. One scale row between pored and notched rows of lateral line. Body and fins reddish orange; central portion of caudal black; lower portion of head and pectoral base black; corner of jaws reddish orange. (USNM 220067.)

Enneapterygius sp.

Five specimens, 23 mm maximum SL; collected at 3 m. Dorsal III + XIII + 9; anal I, 18-19; lateral line scales 15-17 + 18 = 33-35. One scale row between pored and notched rows of lateral line. Body red with posterior third black; head and chin red, throat dusky. (USNM 220068.)

Enneapterygius sp.

Five specimens, 27 mm maximum SL; collected at 3 m. Dorsal III-IV + XI + 9-10; anal I, 15-17; lateral line scales 17-18 + 16-17 = 33-34. One scale row between pored and notched rows of lateral line. Body and head orange; dusky line from eye to tip of snout, operculum dusky; dusky pectoral base and one or two dark spots at base of caudal. Some specimens with red body; ventral two-thirds of head and pectoral base black; a white spot under eye and one or two dark spots at base of caudal. (USNM 220069.)

Enneapterygius sp.

Three specimens, 17 mm maximum SL; collected at 33 m. Dorsal III + XI-XII + 9; anal I, 16; lateral line scales 11 + 21 = 32. One scale row between pored and notched rows of lateral line. Head and body pale with orange and white spotting; posterior third of body becoming greenish yellow; black spot on second dorsal.

Enneapterygius sp.

Eighteen specimens, 26 mm maximum SL; collected at 23 m. Dorsal III + XII-XV + 9-10; anal I, 19; lateral line scales 15-17 + 16-19 = 32-36. One scale row between pored and notched rows of lateral line. Body pale or dusky orange with five red bars on sides and back; dusky red spots on snout, operculum, and pectoral base; first and second dorsal, caudal, and anal may also be dusky. (USNM 220070.)

Helcogramma capidata Rosenblatt in Schultz et al., 1960.

Helcogramma chica Rosenblatt in Schultz et al., 1960.

Helcogramma chica—Rosenblatt in Schultz et al., 1960.

Helcogramma hudsoni (Jordan and Seale, 1906).

Enneapterygius hudsoni—Jordan and Seale, 1906.

As *Enneapterygius hudsoni*, Schultz, 1943.

Helcogramma sp.

Three specimens, 29-37 mm SL; collected at 43 m. Dorsal III + XIII + 12-14; anal I, 21-22; lateral line scales 10 + 29 = 39. Four or five scales between lateral line and third spine of second dorsal; 4-6 scales between lateral line and fifth ray of anal, tip of lower jaw projecting beyond upper jaw. Body pale with about 10 orange bars on sides continuous with oblique orange bands on second and third dorsals; distinct dark spot on middle of second dorsal; a few dusky spots on cheeks, chin, snout, and base of pelvics. (USNM 220062.)

Lepidoblennius sp.

One specimen, 25 mm SL; collected at 10 m. Dorsal III + XIII + 11; anal I, 20; lateral line scales 38 (anterior 25 pored). Reddish orange bars on body. (USNM 220064.)

Callionymidae (Dragonettes)

Ronald Fricke identified the new record and provided synonymies.

Callionymus xanthosemeion Fowler, 1925.

(NMB 37010.)

Diplogrammus goramensis (Bleeker, 1858).

Dermosteira dortheae—Schultz, 1943.

Synchiropus morrisoni Schultz in Schultz et al., 1960.

Synchiropus morrisoni—Fricke, 1981.

(NMB 37009.)

Synchiropus ocellatus (Pallas, 1770). *Mano'o-lele*, *mano'o-tolo*.

Synchiropus lili—Jordan and Seale, 1906.

Gobiidae (Gobies)

Gobies are known as *mano'o* which is the same general name used for blennies. This is the best represented family in Samoa with 100 species listed herein. It is also the most poorly known as 26 species are unidentified either because they are undescribed or because their taxonomy is so confused that it is presently impossible to assign a name of assured validity. Members of the family are small and often show strong preferences for restricted habitats which account for their diversity and limited occurrence in collections. Douglass F. Hoese assisted with the identifications and provided synonymies for most of the species. Some of the names are uncertain but must suffice until genera are revised and their full complement of species is described. Diagnostic characteristics for unidentified species of *Asteropteryx*, *Cabillus*, *Fusigobius*, *Istigobius*, and *Valenciennesa* were derived from his unpublished keys. Hoese's numbering system is used for unidentified species since the numbers will be included as synonyms in his future publications. Susan J. Karnella confirmed the identifications of *Eviota* and supplied diagnostic characteristics for unidentified species. Ernest A. Lachner and she will describe some or all of the new species from Samoa in future publications. Helen K. Larson examined the *Pleurosicya* and *Tenacigobius* specimens and provided diagnostic characteristics for unidentified species. James F. McKinney identified *Callogobius*.

- Amblyeleotris fasciata* (Herre, 1953). **Mano'o-pōpō.**
Amblyeleotris guttata (Fowler, 1938). **Mano'o-pōpō.**
Amblyeleotris periophthalmia (Bleeker, 1853). **Mano'o-pōpō.**
 (AMS 1.21990-001.)
Amblyeleotris steinitzi (Klausewitz, 1974). **Mano'o-pōpō.**
Cryptocentrus steinitzi—Polunin and Lubbock, 1977.
Amblyeleotris sp. 17. **Mano'o-pōpō.**
 Collected at 36 m. Dorsal VI+1,13; anal 1,13; pectoral 19. Caudal pointed with central rays more than twice the length of outer rays. Body light tan with five major fawn-colored saddles and smaller, less distinct markings between; a pair of distinct black spots on chin; branchiostegals blue and orange; spiny dorsal pale with dark margin; anal, lower rays of caudal and pelvics with blue and orange lines. (AMS 1.21991-001.)
- Amblyeleotris* sp. 20. **Mano'o-pōpō.**
 Two specimens, 43 and 51 mm SL; collected at 36 m. Dorsal VI+1,13; anal 1,13; pectoral 20. Body pale with four pale orange bars on sides, yellow reticulations dorsally in interspaces; head with yellow reticulations, chin orange, branchiostegal membrane with dusky blue bar on edge; dorsal pale with blue and yellow lines and spots basally; anal pale, orange line margined with dusky blue distally; perimeter of caudal with orange line margined in dusky blue ventrally, becoming almost black dorsally. (AMS 1.21994-001.)
- Amblygobius nocturnus* (Herre, 1945).
 Hoese terms this identification "provisional."
Amblygobius phalaena (Valenciennes in Cuvier and Valenciennes, 1837). **Mano'o-fugafuga.**
Gobius phalaena—Günther, 1877
Asterropteryx semipunctatus Rüppell, 1830. **Mano'o-pālea.**
Asterropteryx semipunctatus—Jordan and Seale, 1906.
Asterropteryx sp. 3.
 Six specimens, 14-22 mm SL; collected at 13 m. Four to six preopercular spines, two or three above mid-preopercular pore, lowermost spine thickened and longer than others; fourth dorsal spine longest and usually prolonged. Head, body, and fins blotched with dusky orange; a dark transverse bar under eye; a small dark spot centered on caudal peduncle. (AMS 1.22000-001, 1.22004-001.)
- Asterropteryx* sp. 4.
 Seven specimens, 14-23 mm SL; collected at 20-23 m. Two to six preopercular spines, one to three above mid-preopercular pore, lowermost spine about equal to or smaller than those above; head scales largely cycloid; fourth dorsal spine longest, generally not prolonged. A small dark spot centered on caudal peduncle; a narrow dark bar under eye. (AMS 1.22004-002.)
- Asterropteryx* sp. 7.
 Six specimens, 23-28 mm SL; collected at 15-20 m. Two to six preopercular spines, one to three above mid-preopercular pore, lowermost spine about equal to or smaller than those above; head scales largely cycloid. Body and head pale with orange spotting; no bar under eye; a large dark spot on caudal peduncle. (AMS 1.21995-001.)
- Awaous ocellaris* (Broussonet, 1782). **Mano'o-apofu.**
Awaous ocellaris—Jordan and Seale, 1906.
 As *Chonophorus ocellaris*, Schultz, 1943. This species inhabits freshwater.
- Bathygobius cocosensis* (Bleeker, 1854).
Bathygobius cocosensis—Akihito and Meguro, 1980.
Bathygobius cotticeps (Steindachner, 1879). **Mano'o-apofusami.**
Bathygobius cotticeps—Schultz, 1943.
- Bathygobius cyclopterus* (Valenciennes in Cuvier and Valenciennes, 1837). **Mano'o-apofusami.**
Mapo crassiceps—Jordan and Seale, 1906.
 As *Bathygobius crassiceps*, Schultz, 1943.
Bathygobius fuscus (Rüppell, 1830). **Mano'o-apofusami.**
Mapo fuscus—Jordan and Seale, 1906.
Cabillus sp. 5.
 Five specimens, 18-26 mm SL; collected at 30-33 m. Dorsal VI+1,9; anal 1,8; pectoral 19-20; scales 26-28. Prepelvic area heavily scaled; a lateral canal tube over operculum; midline of nape with a single row of scales. Body white with four pale reddish brown saddles or bars with dusky margins; tiny orange specks on head and body. (AMS 1.21996-001.)
- Callogobius centrolepis* Weber, 1909.
Callogobius maculipinnis (Fowler, 1918).
Callogobius sclateri (Steindachner, 1880).
Gobiomorphus sclateri and *Drombus tutuilae*—Jordan and Seale, 1906.
 As *Mucogobius sclateri* and *Drombus tutuilae*, Schultz, 1943. McKinney has examined the holotype of *tutuilae*, a small and poorly preserved specimen, and considers it to be a synonym.
- Cryptocentrus leucostictus* (Günther, 1871). **Mano'o-pōpō.**
Heteroleotris phaenna—Jordan and Seale, 1906.
 As *Heteroleotris phaenna*, Schultz, 1943.
Cryptocentrus strigilliceus (Jordan and Seale, 1906).
Mars strigilliceus—Jordan and Seale, 1906.
 As *Mars strigilliceus*, Schultz, 1943.
Cryptocentrus sp. 28.
 One specimen, 36 mm SL. Dorsal VI+1,10; anal 1,10; pectoral 17; gill rakers on lower limb of first arch 9. Color in alcohol: body pale with about nine vertical bars; head with pale spotting. Hoese writes this species may be *leptocephalus*. (AMS 1.21987-004.)
- Ctenogobiops aurocingulus* (Herre, 1935). **Mano'o-pōpō.**
Ctenogobiops aurocingulus—Lubbock and Polunin, 1977.
Ctenogobiops tangaroai Lubbock and Polunin, 1977.
Ctenogobiops tangaroai—Lubbock and Polunin, 1977.
Ctenogobiops sp.
 Twenty-six specimens, 22-39 mm SL; collected at 15 m. Dorsal VI+1,11-12; anal 1,11; scales 45-48; gill rakers 11. Gill opening extends far forward to a point anterior of the vertical through the hind margin of the preopercle. This species is closely related to *tangaroai*. (AMS 1.22006-001.)
- Eviota afelei* Jordan and Seale, 1906. **Mano'o-moi.**
Eviota afelei—Jordan and Seale, 1906.
Eviota disrupta Karnella and Lachner, 1981. **Mano'o-moi.**
Eviota disrupta—Karnella and Lachner, 1981.
 (USNM 220996.)
Eviota distigma Jordan and Seale, 1906. **Mano'o-moi.**
Eviota distigma—Jordan and Seale, 1906.
Eviota herrei Jordan and Seale, 1906. **Mano'o-moi.**
Eviota herrei—Jordan and Seale, 1906.
Eviota melasma Lachner and Karnella, 1980. **Mano'o-moi.**
Eviota melasma—Lachner and Karnella, 1980.
Eviota prasites Jordan and Seale, 1906. **Mano'o-moi, mano'o-lele.**
Eviota prasites—Jordan and Seale, 1906.
Eviota pseudostigma Lachner and Karnella, 1980. **Mano'o-moi.**
Eviota pseudostigma—Lachner and Karnella, 1980.
Eviota sebreei Jordan and Seale, 1906. **Mano'o-moi.**
Eviota sebreei—Jordan and Seale, 1906.
Eviota smaragdus Jordan and Seale, 1906. **Mano'o-moi.**
Eviota smaragdus—Jordan and Seale, 1906.

Eviota zonura Jordan and Seale, 1906. **Mano'o-moi.**

Eviota zonura—Jordan and Seale, 1906.

As *E. epiphanes* (part), Schultz, 1943.

Eviota sp. **Mano'o-moi.**

Three specimens, 14-17 mm SL; collected at 30 m. Dorsal VI + 1,9; anal 1,8; pectoral 18-20, rays 4-18 may be branched; pelvic 1,4 1/10-2/10. Body pale but almost always with some pigmentation on upper head and nape; anal dark. (USNM 22250-22.)

Eviota sp. **Mano'o-moi.**

Several specimens, 9-18 mm SL; collected at 17 m. Dorsal VI + 1,9; anal 1,8; pectoral 17-18, rays 11-17 may be branched; pelvic 1,4 7/10-8/10. Two vertically elongated rectangular marks laterally on head posterior to eye.

Eviota sp. **Mano'o-moi.**

Twelve specimens, collected at 20 m. Dorsal VI + 1,9-10; anal 1,9. Pectoral rays unbranched. Body pale with dusky streak at insertion of anal; basal pigmentation through dorsal fins. (USNM 222523.)

Exyris puntang (Bleeker, 1852).

Fusigobius neophytus (Günther, 1877).

Rhinogobius neophytus—Jordan and Seale, 1906.

Fusigobius sp. 2.

Two specimens, 24 and 25 mm SL; collected at 33 m. Dorsal VI + 1,8-9; anal 1,8; scales 25. Body pale with yellow spots containing tiny black specks; round dark spot above pectoral base and a dusky spot at caudal base; dusky orange bar under eye; anterior portion of first dorsal dusky; no dark spots on dorsal or dark streak on snout. (AMS I.21990-002.)

Glossogobius biocellatus (Valenciennes in Cuvier and Valenciennes, 1837).

Glossogobius vaisiganus—Jordan and Seale, 1906.

This is a freshwater species.

Gnatholepis anjerensis (Bleeker, 1850).

Gnatholepis deltoides—Jordan and Seale, 1906.

There is no type of *anjerensis* but Hoese suspects it is "close" to what Seale later described as *deltoides*. This genus needs revision.

Gnatholepis sp.

Five specimens, 25-37 mm SL; collected at 25 m. Dorsal VI + 1,11; anal 1,11. Body pale with orange lateral band extending from operculum through pectoral base to midbase of caudal, four fainter orange lines between this band and dorsals, diffuse dusky blotch above pectoral base; head with dusky bar extending through eye and orange lines on snout and operculum; dorsals and anal pale with orange line near base. (AMS I.22003-001.)

Gobiodon citrinus (Rüppell, 1838). **Mano'o-ulutu'i, moemimi.**

Pseudogobiodon citrinus—Jordan and Seale, 1906.

Gobiodon rivulatus (Rüppell, 1830). **Mano'o-ulutu'i, moemimi.**

Gobiodon ceramensis—Schmeltz, 1866.

Istigobius ornatus (Rüppell, 1830).

Gobius ornatus—Jordan and Seale, 1906.

As *Gobius ornatus*, Schultz, 1943.

Istigobius sp. 5. **Mano'o-va'a.**

Twelve specimens, 18-59 mm SL. This species is common in sandy reef areas at depths of 3-27 m and is similar in meristics and color pattern to *ornatus* which lives in mangrove areas. However, it lacks filamentous pectoral rays and has one or two laterally curved and enlarged teeth at each angle of the lower jaw. (AMS I.22005-001.)

Istigobius sp.

This species is similar to *I.* sp. 5 but differs in having a black spot between fifth and sixth dorsal spines and no spot between first two dorsal spines, and in having oval, rather than elongate spots on the midside. (AMS I.22005-002.)

Kelloggella cardinalis Jordan and Seale, 1906.

Kelloggella cardinalis—Jordan and Seale, 1906.

Macrodontogobius wilburi Herre, 1936.

Mugilogobius fontinalis (Jordan and Seale, 1906).

Vaimoa fontinalis—Jordan and Seale, 1906.

As *Vaimoa fontinalis*, Schultz, 1943. This species inhabits freshwater.

Nemateleotris decora Randall and Allen, 1973. **Mano'o-sugale.**

Nemateleotris helfrichi Randall and Allen, 1973. **Mano'o-sugale.**

Nemateleotris magnifica Fowler, 1938. **Mano'o-sugale.**

Oplopomus oplopomus (Valenciennes in Cuvier and Valenciennes, 1837). **Mano'o-lape.**

This species is abundant in the saltwater ponds enclosed by runways at Pago Pago International Airport.

Oxyurichthys tentacularis (Valenciennes in Cuvier and Valenciennes, 1837).

Pselaphias ophthalmoneum—Jordan and Seale, 1906.

Palutris pruinosa (Jordan and Seale, 1906).

Eviota pruinosa—Jordan and Seale, 1906.

As *Pandaka pruinosa*, Schultz, 1943. Hoese provisionally assigns this species to *Palutris*.

Paragobiodon echinocephala (Rüppell, 1828). **Mano'o-ulutu'i.**

Gobius amienensis—Kner and Steindachner, 1866.

Paragobiodon lacunicola (Kendall and Goldsborough, 1911).

Mano'o-ulutu'i.

Paragobiodon echinocephalus (part)—Jordan and Seale, 1906.

Paragobiodon xanthosoma (Bleeker, 1859). **Mano'o-ulutu'i.**

Paragobiodon xanthosomus—Jordan and Seale, 1906.

Periophthalmus koelreuteri (Pallas, 1770). **Pa'ofu, talae.**

Periophthalmus argentilineatus—Schmeltz, 1866.

As *P. barbarus*, Jordan and Seale, 1906.

Pleurosicya muscarum (Jordan and Seale, 1906).

Rhinogobius muscarum—Jordan and Seale, 1906.

As *Glossogobius biocellatus* (part), Schultz, 1943.

Pogonoculus zebra Fowler, 1938. **Tilotai.**

Priolepis semidoliatus (Valenciennes in Cuvier and Valenciennes, 1837).

Gobius semifasciatus—Kner, 1868.

As *Zonogobius semidoliatus*, Jordan and Seale, 1906 and Schultz, 1943.

Ptereleotris evides (Jordan and Hubbs, 1925). **Ma'ulu.**

Ptereleotris heteropterus (Bleeker, 1855). **Ma'ulu.**

Ptereleotris microlepis (Bleeker, 1856). **Ma'ulu.**

Quisquilius cinctus (Regan, 1908).

Pleurogobius naraharae—Schultz, 1943.

Quisquilius sp.

Two specimens, collected at 33 m. Dorsal VI + 1,11; anal 1,9. Body pale with 11 yellow brown bars extending onto dorsal and anal fins.

Redigobius pagoensis (Schultz, 1943).

Mahidolia pagoensis—Schultz, 1943.

A freshwater species.

Sicyopterus pugnans (Ogilvie-Grant, 1884).

Sicydium pugnans—Ogilvie-Grant, 1884.

A freshwater species.

Sicyopterus taeniurus (Günther, 1877). **Mano'o-vai.**

Sicydium macrosthelepis—Kner, 1868.

- As *Sicyopterus taeniurus* and *S. taaue*, Jordan and Seale, 1906. A freshwater species.
- Stenogobius genivittatus* (Valenciennes in Cuvier and Valenciennes, 1837). **Mano'o-voi.**
Gobius genivittatus—Günther, 1877.
 As *Awaoius genivittatus*, Jordan and Seale, 1906 and as *Chonophorus genivittatus*, Schultz, 1943. A freshwater species.
- Stiphodon elegans* (Steindachner, 1879). **Mano'o-voi.**
Stiphodon elegans—Schultz, 1943.
 A freshwater species.
- Tenacogobius erythroptus* (Jordan and Seale, 1906).
Chaenogobius erythroptus—Jordan and Seale, 1906.
 As *Chaenogobius erythroptus*, Schultz, 1943. According to Larson, this species has a longer gill opening than other Samoan members of the genus. It extends anteriorly to a point beneath the eye. (AMS I.20725-001.)
- Tenacogobius yongei* (Davis and Cohen, 1968).
 (AMS I.21389-001.)
- Tenacogobius* sp. 7.
 One specimen, 20 mm SL; collected from a sea fan at 25 m. The gill opening extends to a point halfway between the preopercular border and the hind edge of the eye; pelvis relatively small and inserted distinctly posterior to pectoral base. This species has a characteristic blotch on the lower half of the caudal base which varies in size and intensity but is always present. (AMS I.21388-001.)
- Tenacogobius* sp. 9.
 The gill opening of this species is restricted to the pectoral base; the maxillary extends only to a point below the anterior edge of the pupil and the largest known specimens are only 15 mm SL. (AMS I.21892-001.)
- Tomiyamichthys* sp.
 One specimen, 35 mm SL; collected at 36 m. Dorsal VI + 1,9; anal 1,9; pectoral 17. Second and third dorsal rays elongated. Body bluish tan with three large orange blotches and two rows of smaller irregular white blotches laterally; head darker with yellow spotting; yellow line with dusky margins on branchiostegals; first dorsal dusky with yellow spots, second pale with yellow spots; anal pale with a row of yellow spots basally and yellow line distally; caudal pale becoming yellow distally; yellow spots on pectoral base. (AMS I.21993-001.)
- Trimma caesiura* Jordan and Seale, 1906. **Mano'o-moi.**
Trimma caesiura—Jordan and Seale, 1906.
- Trimma eviotops* Schultz, 1943. **Mano'o-moi.**
Trimma eviotops—Schultz, 1943.
- Trimma tevegae* Cohen and Davis, 1969. **Mano'o-moi.**
 (AMS I.21988-002.)
- Trimma* sp. 2. **Mano'o-moi.**
 Eighteen specimens, 17-20 mm SL; collected at 30-40 m. Dorsal VI + 1,9; anal 1,8; pectoral 18-19; scales 26-28; predorsal scales 5-6. Interorbital distance much less than pupil width; interorbital and postorbital grooves well developed. Body dusky yellow orange with orange spots dorsally; head with reddish orange spots and bars on cheeks and chin; dorsal and caudal with orange spots. (AMS I.21992-001.)
- Trimma* sp. 4. **Mano'o-moi.**
 Eleven specimens, 12-23 mm SL; collected at 17-70 m. Dorsal VI + 1,10; anal 1,9; pectoral 18-19; scales 26-27; predorsal scales 0. Interorbital distance much less than pupil width; interorbital and postorbital grooves well developed. Body pink with yellow spots and reticulations; snout, cheeks, and underside of head reddish orange; medial fin rays orange. (AMS I.21986-002, I.21988-001.)
- I.21988-001.)
- Trimma* sp. 14. **Mano'o-moi.**
 Two specimens, both 15 mm SL; collected at 20 m. Dorsal VI + 1,8; anal 1,8; scales 25. Body orange brown with dark brown caudal peduncle; dorsals, anal, and pelvis orange brown with pale edges; caudal pale yellow. (AMS I.21998-002.)
- Trimma* sp. 17. **Mano'o-moi.**
 Seven specimens, 16-21 mm SL; collected at 30 m. Dorsal VI + 1,9; anal 1,8; pectoral 17-18; scales 26-28; predorsal scales 0-3. Interorbital distance much less than pupil width; interorbital and postorbital grooves present but not well developed. Body pale purplish gray with large yellow spots dorsally and yellow bars laterally. (AMS I.21996-002.)
- Trimma* sp. 21. **Mano'o-moi.**
 Thirteen specimens, 12-21 mm SL; collected at 20 m. Dorsal VI + 1,9; anal 1,9; pectoral 18; scales 25-26; predorsal scales usually 0 but occasionally 1 or 2. Interorbital distance much less than pupil width; interorbital and postorbital grooves present but not well developed. Body pale pink with dusky yellow cross-hatches; yellow spotting on dorsals, anal, and caudal. (AMS I.21987-001.)
- Trimma* sp. 27. **Mano'o-moi.**
 One specimen, 22 mm SL; collected at 20 m. Dorsal VI + 1,8; anal 1,8; pectoral 14; scales 27; predorsal scales 9. Interorbital distance about equal to pupil width; no interorbital or postorbital grooves. Body yellow to brown; lips reddish; underside of head and belly pale, caudal bright yellow. (AMS I.21998-001.)
- Vailima stevensoni* Jordan and Seale, 1906. **Mano'o-voi.**
Vailima stevensoni—Jordan and Seale, 1906.
 Schultz (1943) confused this species with *Stiphodon elegans*. This is a freshwater species.
- Valenciennea puellaris* (Tomiyama, 1955). **Mano'o-sina.**
Valenciennea sexguttatus (Valenciennes in Cuvier and Valenciennes, 1837). **Mano'o-sina.**
Valenciennea violifera—Jordan and Seale, 1906.
 As *V. violifera*, Schultz, 1943.
- Valenciennea strigatus* (Broussonet, 1782). **Mano'o-sina.**
Eleotris strigata—Schmeltz, 1869.
- Valenciennea* sp. **Mano'o-sina.**
 Seven specimens, 29-34 mm SL; collected at 15 m. Dorsal VI + 1,12; anal 1,12; pectoral 19; scales 67-80. No black spot on first dorsal; two faint longitudinal stripes connected by narrow crossbars on sides of body.
- Vanderhorstia anbanoro* (Fourmanoir, 1957). **Mano'o-pōpō.**
 (AMS I.21989-001.)
- Vanderhorstia ornatissima* Smith, 1959. **Mano'o-pōpō.**
Vanderhorstia ornatissima—Helfrich et al., 1975.
- Waitea stomias* Smith, 1941.
Waitea mystacina—Jordan and Seale, 1906.
- Yongeichthys nebulosus* (Forsskål, 1775). **Mano'o-gatala.**
Rhinogobius corallinus and *R. nebulosus*—Jordan and Seale, 1906.
 As *Rhinogobius corallinus* and *R. nebulosus*, Schultz, 1943.

Eleotrididae (Sleepers)

Douglass F. Hoese assisted with identifications and is credited with most of the synonymies.

Bostrychus sinensis Lacepède, 1802.

Eleotris sinensis—Herre, 1927.

Eleotris fusca (Bloch and Schneider, 1801). **Mano'o-pala, pa'ofa, pa'ofu, apofu.**

Eleotris fusca—Jordan and Seale, 1906.

Fagasa tutuilae, a larval eleotrid described by Schultz (1943), belongs to the genus *Eleotris* and probably to the species *fusca*. This species lives in fresh and brackish water.

Eleotris melanosoma Bleeker, 1852. **Mano'o-pala, pa'ofa, pa'ofu, apofu.**

Eleotris melanosoma—Schmeltz, 1866.

A fresh and brackish water species.

Hypseleotris guentheri (Bleeker, 1875). **Mano'o-fōvai, maluvai.**

Eleotris oxycephala—Schmeltz, 1866.

As *Hypseleotris cyprinoides*, Schultz, 1943.

This is a freshwater species.

Xenisthmus clara (Jordan and Seale, 1906). **Mano'o-taotao.**

Heteroleotris clara—Jordan and Seale, 1906.

As *Heteroleotris clara*, Schultz, 1943.

Xenisthmus polyzonatus (Klunzinger, 1871).

Kraemeriidae (Sand Lances)

Kraemeria samoensis Steindachner, 1906.

Kraemeria samoensis—Steindachner, 1906.

As *Vitreola sagitta*, Jordan and Seale, 1906.

Microdesmidae (Wormfishes)

Gunnellichthys monostigma Smith, 1958. **Mano'o-oi.**

Gunnellichthys pleurotaenia Bleeker, 1858. **Mano'o-oi.**

Gunnellichthys pleurotaenia—Helfrich et al., 1975.

Zanclidae (Moorish Idol Family)

Zanclus cornutus (Linnaeus, 1758). **Pe'ape'a, laulaufau.**

Zanclus cornutus—Schmeltz, 1865.

As *Z. canescens*, Jordan and Seale, 1906.

Acanthuridae (Surgeonfishes and Unicornfishes)

The general name for *Acanthurus* spp. <15 cm TL is **pone**. Larger individuals are called **palagi**. *Naso* spp. are generally termed **ume**; smaller individuals are called 'ili'ilia or **umelei**. Several of the identifications listed below were confirmed by John E. Randall.

Acanthurus achilles Shaw, 1803. **Maikolama, kolama, pone-i'umumu.**

Acanthurus achilles—Schmeltz, 1866.

As *Hepatus achilles* and *H. aterrimus*, Jordan and Seale, 1906.

Acanthurus auranticavus Randall, 1956.

This species is recorded only from the Philippine Islands and the East Indies by Randall (1956) in his review of the genus.

Acanthurus bleekeri Günther, 1861. **Palagi-si'usina.**

Acanthurus glaucopareius Cuvier in Cuvier and Valenciennes, 1829. **I'usina** (Am. Samoa), **laulama** (W. Samoa), **gaitolama.**

Acanthurus glaucopareius—Schmeltz, 1866.

As *Hepatus aliata*, Jordan and Seale, 1906.

Acanthurus guttatus Bloch and Schneider, 1801. **Maogo.**

Acanthurus guttatus—Schmeltz, 1866.

As *Hepatus guttatus*, Jordan and Seale, 1906.

Acanthurus lineatus (Linnaeus, 1758). **Alogo.**

Acanthurus striatus—Schmeltz, 1865.

As *Hepatus lineatus*, Jordan and Seale, 1906.

Acanthurus maculiceps (Ahl, 1923).

Acanthurus mata (Cuvier in Cuvier and Valenciennes, 1829).

Acronurus argenteus—Schmeltz, 1874.

As *Acanthurus umbra*, Schultz, 1943.

Acanthurus nigricauda Duncker and Mohr, 1929. **Pone-i'usina.**

Hapatus gahm—Steindachner, 1906.

As *Hepatus nigricans*, Jordan and Seale, 1906 and as *Acanthurus nigricans*, Schultz, 1943. Randall has recently concluded that *nigricans* is a Red Sea endemic and that *gahm* is a junior synonym of *nigricans*.

Acanthurus nigrofuscus (Forsskål, 1775). **Ponepone.**

Acanthurus nigros—Schmeltz, 1866.

As *Hepatus elongatus*, Jordan and Seale, 1906 and as *Acanthurus elongatus* (part), Schultz, 1943.

Acanthurus nigroris Valenciennes in Cuvier and Valenciennes, 1835. **Ponepone.**

Hepatus atramentatus—Jordan and Seale, 1906.

As *Acanthurus elongatus* (part), Schultz, 1943.

Acanthurus olivaceus Bloch and Schneider, 1801. **Pone-apasama, afinamea.**

Acanthurus olivaceus Günther, 1875.

As *Hepatus olivaceus*, Jordan and Seale, 1906.

Acanthurus pyroferus Kittlitz, 1834. **Pone-i'usama.**

Acanthurus thompsoni (Fowler, 1923). **Pone-i'usina.**

Acanthurus triostegus (Linnaeus, 1758). **Manini.**

Acanthurus triostegus—Schmeltz, 1866.

As *Hepatus triostegus*, Jordan and Seale, 1906.

Acanthurus xanthopterus Valenciennes in Cuvier and Valenciennes, 1835.

Acanthurus matoides—Schmeltz, 1866.

As *Hepatus matoides* and *H. aequilinus*, Jordan and Seale, 1906 and as *Acanthurus fuliginosus*, Schultz, 1943.

Ctenochaetus binotatus Randall, 1955.

Ctenochaetus hawaiiensis Randall, 1955.

(BPBM 17553).

Ctenochaetus striatus (Quoy and Gaimard, 18. 5). **Pone** (adults), **pala'ia** or **logoulia** (schooling juveniles).

Ctenochaetus striatus (part)—Jordan and Seale, 1906.

As *C. strigosus* (part), Schultz.

Ctenochaetus strigosus (Bennett, 1828).

Ctenochaetus strigosus (part)—Schultz, 1943.

**Naso annulatus* (Quoy and Gaimard, 1825).

Naseus annulatus—Schmeltz, 1869.

Naso brevisrostris (Valenciennes in Cuvier and Valenciennes, 1835).

Ume-ulutao.

Naso brevisrostris—Steindachner, 1906.

As *Acanthurus incipiens*, Jordan and Seale, 1906.

Naso hexacanthus (Bleeker, 1855).

Naso lituratus (Bloch and Schneider, 1801). **Ili'ilia** (<15 cm TL), **umelei** (>15 cm TL).

Naseus lituratus—Schmeltz, 1866.

As *Acanthurus lituratus* and *A. garretti*, Jordan and Seale, 1906.

Naso thynnoides (Valenciennes in Cuvier and Valenciennes, 1835).

Naso thynnoides—Pöhl, 1884.

Naso tuberosus (Lacepède, 1801). **Ume-uluto'i.**

Naso unicornis (Forsskål, 1775). **Ume-isu.**

Naseus unicornis—Schmeltz, 1874.

As *Acanthurus unicornis*, Jordan and Seale, 1906.

Naso vlamingii (Valenciennes in Cuvier and Valenciennes, 1835).

Ume-masimasi.

Paracanthurus hepatus (Linnaeus, 1766).

This fish is rare around Tutuila and was observed in only two areas. Both are on the north coast at depths of about 6 m.

Zebrasoma rostratum (Günther, 1873).

This species was observed only at Rose Atoll. (BPBM 27987.)
Zebrasoma scopas (Cuvier in Cuvier and Valenciennes, 1829).

Pitopito, pe'ape'a.

Acanthurus rhombeus—Schmeltz, 1866.

As *Zebrasoma rhombeum* and *Z. rostratum*, Jordan and Seale, 1906 and as *Z. flavescens*, Schultz, 1943.

Zebrasoma veliferum (Bloch, 1797). **Ilii.**

Acanthurus velifer—Schmeltz, 1866.

Siganidae (Rabbitfishes)

The general name for rabbitfishes in Samoa is **lō**. This name also refers to a large school of juveniles. David J. Woodland confirmed the identifications of some Samoan specimens and provided synonymies and comments on the distribution and identification of uncollected siganids with Samoan distributional records.

Siganus argenteus (Quoy and Gaimard, 1825). **Lōloa** (<5 cm TL),
'ofe'ofe (5-10 cm TL), **mālava** (>10 cm TL).

Teuthis argentea—Schmeltz, 1866.

As *Siganus rostratus*, Jordan and Seale, 1906 and Schultz, 1943.

**Siganus fuscescens* (Houttuyn, 1782).

Teuthis albopunctatus—Steindachner, 1906.

Siganus punctatus (Bloch and Schneider, 1801). **Tito, lōele'e.**

Teuthis hexagonata—Günther, 1874.

Siganus spinus (Linnaeus, 1758). **Anefe** (<5 cm TL), **pa'ulu** (>5 cm TL).

Teuthis striolata—Günther, 1874.

As *Siganus marmoratus*, Jordan and Seale, 1906.

Gempylidae (Snake Mackerels)

These species are caught by handline fishermen in deep water.

Promethichthys prometheus (Cuvier in Cuvier and Valenciennes, 1831). **Palu-kamuro, palu-tomalō.**

Ruvettus pretiosus Cocco, 1829. **Palu-talatala.**

Scombridae (Mackerels and Tunas)

Acanthocybium solandri (Cuvier in Cuvier and Valenciennes, 1831). **Paāla.**

Acanthocybium solandri—Schultz, 1943.

Auxis thazard (Lacepède, 1801). **Atualo.**

Euthynnus affinis (Cantor, 1849). **Atualo, kavalau.**

Grammatocygnus bicarinatus (Quoy and Gaimard, 1824).

Namuauili.

Gymnosarda unicolor (Rüppell, 1838). **Tagi.**

Katsuwonus pelamis (Linnaeus, 1758). **Ātu** (<40 cm TL), **faolua** (40-50 cm TL), **ga'ogo** (>50 cm TL).

Rastrelliger brachysoma (Bleeker, 1851). **Gā.**

Samoan specimens were collected by John E. Randall. (BPBM 6214.)

Rastrelliger kanagurta (Cuvier in Cuvier and Valenciennes, 1829). **Gā.**

Scomber loo—Jordan and Seale, 1906.

Thunnus alalunga (Bonnaterre, 1788). **Apakoa.**

Thunnus albacares (Bonnaterre, 1788). **Asiasi** (<about 18 kg);
to'uo (Am. Samoa), **ta'uo** (W. Samoa) (> about 18 kg).

Thunnus obesus (Lowe, 1839). **Asiasi** (< about 18 kg);
to'uo (Am. Samoa), **ta'uo** (W. Samoa) (> about 18 kg).

Xiphiidae (Swordfish Family)

Xiphius gladius Linnaeus, 1758.

Xiphius gladius—Jordan, 1927.

Istiophoridae (Billfishes)

The general name for billfishes is **sa'ulā**.

Istiophorus platypterus (Shaw and Nodder, 1792). **Sa'ulā-lele.**

Makaira indica (Cuvier in Cuvier and Valenciennes, 1831).

Sa'ulā-oso.

Makaira nigricans Lacepède, 1803. **Sa'ulā-oso.**

Tetrapturus angustirostris Tanaka, 1914.

Tetrapturus audax (Philippi, 1887).

Nomeidae (Man-of-War Fishes)

Psenes cyanophrys Valenciennes in Cuvier and Valenciennes, 1833.

A specimen was speared under a buoy anchored at 2,000 m about 3 mi off Pago Pago Bay.

Bothidae (Lefteye Flounders)

Arnoglossus sp.

One specimen, 39 mm SL; collected at 33 m. Dorsal 77; anal 65; lateral line pores, 64. Depth 2.05 in SL; interorbital 0.25 in eye diameter; first dorsal ray expanded and prolonged. (BPBM 24111.)

Bothus mancus (Broussonet, 1782). **Ali.**

Platophrys mancus—Jordan and Seale, 1906.

Bothus pantherinus (Rüppell, 1830). **Ali.**

Rhomboidichthys pantherina—Schmeltz, 1865.

Pleuronectidae (Righteye Flounders)

Samariscus triocellatus Woods in Schultz et al., 1966. **Ali.**

Soleidae (Soles)

The Samoan name for all species of flatfish is **ali**.

Aesopia heterorhinos (Bleeker, 1856).

Solea heterorhina—Schmeltz, 1865.

As *Soleichthys heterorhinos*, Jordan and Seale, 1906.

Aseraggodes melanostictus (Peters, 1876).

Aseraggodes sp.

One specimen, 48 mm SL; collected at 23 m. Dorsal 75; anal 51; scales 76. Right pelvic with three rays and shorter base than left pelvic with five rays. (BPBM 24113.)

Aseraggodes sp.

Two specimens, 26 and 27 mm SL; collected at 37 m. Dorsal 74; anal 52; scales 70. Five rays in both pelvics which are symmetrical. (BPBM 24130.)

Balistidae (Triggerfishes)

Triggerfishes are known as *sumu*.

- Balistapus undulatus* (Mungo Park, 1797). **Sumu-aimaunu**.
Balistes lineatus—Schmeltz, 1866.
As *Balistes undulatus*, Schultz, 1943.
- Balistoides conspicillum* (Bloch and Schneider, 1801). **Sumu-papa**.
Balistoides viridescens (Bloch and Schneider, 1801).
Sumu-laulau (<20 cm TL), **umu** (>20 cm TL).
Balistes viridescens—Schmeltz, 1866.
- Canthidermis maculatus* (Bloch, 1786). **Sumu-va'a**.
Balistes senticosus—Günther, 1910.
This species frequents the epipelagic zone and often occurs around drifting objects.
- Melichthys niger* (Bloch, 1786). **Sumu-uli**.
Balistes armatus—Schmeltz, 1866.
- Melichthys vidua* (Solander, 1844). **Sumu-'apa'apasina**, **sumu-si'umūmū**.
Balistes vidua—Jordan and Seale, 1906.
As *Balistes vidua*, Schultz, 1943.
- Odonus niger* (Rüppell, 1837). **Sumu-pe'a**.
Pseudobalistes flavimarginatus (Rüppell, 1828). **Sumu-laulau** (<20 cm TL), **umu** (>20 cm TL).
Balistes flavimarginatus—Schmeltz, 1874.
As *Balistes flavomarginatus*, Jordan and Seale, 1906.
- Pseudobalistes fuscus* (Bloch and Schneider, 1801).
Sumu-laulau (<20 cm TL), **umu** (>20 cm TL).
- Rhinecanthus aculeatus* (Linnaeus, 1758). **Sumu-uo'uo**.
Balistes aculeatus—Schmeltz, 1866.
As *Balistapus aculeatus*, Jordan and Seale, 1906 and as *Balistes aculeatus*, Schultz, 1943.
- Rhinecanthus rectangulus* (Bloch and Schneider, 1801). **Sumu-aloalo**.
Balistes erythropterus—Schmeltz, 1869.
As *Balistapus rectangulus*, Jordan and Seale, 1906 and as *Balistes rectangulus*, Schultz, 1943.
- Rhinecanthus* sp. **Sumu-aloalo**.
This species is similar to *cinereus* and can probably be separated from it only by color. It has a large black area ventrally on the body centered above the origin of the anal (lacking in *cinereus*) and a black crescent on the caudal (lacking in *cinereus*). John E. Randall plans to describe it. (BPBM 24458, 24459.)
- Sufflamen bursa* (Bloch and Schneider, 1801). **Sumu-pa'epa'e**.
Balistes bursa—Schmeltz, 1869.
- Sufflamen chrysoptera* (Bloch and Schneider, 1801).
Sumu-gasemoana.
Balistes niger—Schmeltz, 1874.
As *Balistes chrysopterus*, Jordan and Seale, 1906 and Schultz, 1943.
- Sufflamen fraenatus* (Latrielle, 1804). **Sumu-gase'ele'ele**.
Xanthichthys caeruleolineatus Randall, Matsuura and Zama, 1978. **Sumu-palu**.
Several juveniles of this recently described species were observed near Steps Point at depths of 40-60 m.

Monacanthidae (Filefishes)

Members of this family are known as a **pa'umalō**.

- Aluterus scriptus* (Osbeck, 1765). **Urme-aleva**, **fālala**.
Aluterus laevis—Schmeltz, 1866.

Amanes scopas (Cuvier in Cuvier and Valenciennes, 1829).

Pa'umalō, **fālala**.

Amanes scopas—Schmeltz, 1866.

Cantherhines dumerilii (Hollard, 1854). **Pa'umalō**.

Cantherhines sandwichiensis (part)—Schultz, 1943.

Cantherhines pardalis (Rüppell, 1835). **Pa'umalō**, **fālala**, **aimeo**.

Monacanthus sandwichiensis—Steindachner, 1906.

As *Cantherhines sandwichiensis*, Jordan and Seale, 1906 and as *C. sandwichiensis*, Schultz, 1943. Randall (1964b) has found that *sandwichiensis* is limited to the Hawaiian Islands.

**Monacanthus chinensis* (Osbeck, 1765).

Monacanthus chinensis—Schmeltz, 1865.

Oxymonacanthus longirostris (Bloch and Schneider, 1801).

Pa'umalō-gutuumi.

Monacanthus longirostris—Schmeltz, 1866.

Pervagor melanocephalus (Bleeker, 1853). **Pa'umalō**, **fālala**.

Monacanthus melanocephalus—Schmeltz, 1869.

As *Monacanthus melanocephalus*, Jordan and Seale, 1906 and Schultz, 1943.

Ostraciontidae (Trunkfishes)

The Samoan name for trunkfishes is **moamo**.

Lactoria cornuta (Linnaeus, 1758). **Moamo-ulutao**, **moamo-uluto'i**.

Ostracion cornutus—Schmeltz, 1866.

Ostracion cubicus Linnaeus, 1758. **Moamo-lega**.

Ostracion argus—Schmeltz, 1869.

Ostracion meleagris Shaw, 1796. **Moamo-uli** (initial phase), **moamo-sama** (terminal phase).

Ostracion meleagris—Schmeltz, 1866.

As *O. lentiginosus* (initial phase) and *O. sebae* (terminal phase), Jordan and Seale, 1906 and Schultz, 1943.

Tetraodontidae (Puffers)

Puffers are referred to as **sue**.

Arothron hispidus (Linnaeus, 1758). **Sue-vaolo**.

Crayracion laterna—Schmeltz, 1869.

As *Tetraodon hispidus*, Jordan and Seale, 1906 and Schultz, 1943.

Arothron immaculatus (Bloch and Schneider, 1801). **Sue-va'a**.

Tetraodon virgatus—Schmeltz, 1865.

As *Tetraodon immaculatus*, Jordan and Seale, 1906 and Schultz, 1943.

Arothron mappa (Lesson, 1830).

Tetraodon mappa—Schmeltz, 1874.

Arothron meleagris (Lacépède, 1798). **Sue-puleuli** (dark phase), **sue-lega** (yellow phase).

Tetraodon meleagris—Schmeltz, 1869.

Arothron nigropunctatus (Bloch and Schneider, 1801).

Sue-uli (dark phase), **sue-lega** (yellow phase).

Crayracion nigropunctatus—Schmeltz, 1866.

As *Tetraodon nigropunctatus*, Jordan and Seale, 1906 and Schultz, 1943.

Arothron stellatus (Bloch and Schneider, 1801). **Sue-gatala**, **sue-va'a**.

Crayracion lineatus—Schmeltz, 1869.

Arothron alboreticulatus may be a junior synonym.

Canthigaster amboinensis (Bleeker, 1865). Sue-lape.
Canthigaster psegma—Jordan and Evermann, 1905.
As *C. psegma*, Jordan and Seale, 1906.

Canthigaster bennetti (Bleeker, 1865). Sue-afaf.
Canthigaster bennetti—Schultz, 1943.
Canthigaster janthinoptera (Bleeker, 1865). Sue-sugale.
Canthigaster solandri (Richardson, 1844). Sue-mimi.

Tetrodon solandri—Schmeltz, 1865.
Canthigaster valentini (Bleeker, 1853). Sue-mu.

Canthigaster valentini—Jordan, 1927.
Gastrophysus scleratus (Gmelin, 1788).

A specimen was handlined from 100 m by a local fisherman. (BPBM 28185.)

Sphoeroides hypselogeneion (Bleeker, 1852). Sue-mo'o, sue-mimi.
Tetrodon hypselogeneion—Schmeltz, 1877.

As *Sphoeroides hypselogeneion*, Jordan and Seale, 1906 and Schultz, 1943.

**Sphoeroides oblongus* (Bloch, 1786).

Gastrophysus oblongus—Schmeltz, 1866.

Sphoeroides pachygaster (Müller and Troschel, 1848).

Some authors refer to this circumtropical species as *Liosaccus cutaneus*. A specimen was handlined from 250 m. (BPBM 27769.)

Triodontidae (Three-Toothed Puffers)

Triodon macropterus Lesson, 1829. Sue-moemimi.

This species is caught by handline fishermen at depths >200 m.

Diodontidae (Porcupinefishes)

Diodon eydouxi Brissout de Barneville, 1846.

Diodon eydouxi—Leis, 1978.

A specimen was captured about 100 mi north of the Manu'a Islands. This species is pelagic during its entire life history.

Diodon hystrix Linnaeus, 1758. Tauta, tautu.

Diodon hystrix—Schmeltz, 1869.

Diodon lituosus Shaw, 1804. Tauta, tautu.

Chilomycterus orbicularis—Schmeltz, 1874.

As *Diodon holocanthus*, Schultz, 1943.

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ADDENDUM

Three of the unidentified species listed above have been described or identified since the checklist went to press. *Cephalopholis* sp. on page 11 has been identified as *C. analis* (Valenciennes in Cuvier and Valenciennes, 1828) by John E. Randall; *Paracaesio* sp. on page 16 has been described as *P. stonei* Raj and Seto, 1983; and *Pteragogus* sp. on page 22 has been described as *P. cryptus* Randall, 1981.

Eight new species distribution records have also been subsequently documented for Samoa. The alphonis *Beryx decadactylus* Cuvier in Cuvier and Valenciennes, 1829 was caught by a handline fisherman at 160 m. This species also represents a new family record (Berycidae) for Samoa. Three new serranids were handlined at 180-220 m. Their identities were confirmed by John E. Randall and include *Epinephelus chlorostigma* (Valenciennes in Cuvier and Valenciennes, 1828); *Epinephelus truncatus* Katayama, 1957; and *Holanthias tapui* Randall, Maugé, and Plessis, 1979. Two labrids can be added to the list. *Cymolutes praetextatus* (Quoy and Gaimard, 1834) (BPBM 28935) was speared at 1 m and *Polyplepion russelli* (Gomon and Randall, 1975) was handlined at 100 m. The gempyid *Epinnula magistralis* Poey, 1854 was handlined from 150 m. Finally, John E. Randall has written that the recently described holocentrid *Sargocentron legros* (Allen and Cross, 1983) is represented by Samoan specimens (BPBM 17500) in the Bernice P. Bishop Museum collection which were collected at Fagatele Bay at 30 m.

Including the above additions, the list now totals 999 species representing 114 families and 294 species previously unrecorded from Samoa.

LITERATURE CITED

- AKIHITO, P., and K. MEGURO.
1980. On the six species of the genus *Bathygobius* found in Japan. [In Jpn., Engl. summ.] Jpn. J. Ichthyol. 27:215-236.
- ALLEN, G. R.
1975. Damselfishes of the south seas. T.F.H. Publications, Inc., Neptune City, N.J., 240 p.
1978. Anemonefische. Mergus Press, Melle, West Germany, 106 p.
- ALLEN, G. R., and J. E. RANDALL.
1974. Five new species and a new genus of damselfishes (Family Pomacentridae) from the South Pacific Ocean. Trop. Fish Hobbyist 22(9):36-46, 48-49.
- ANDERSON, W. D., Jr.
1981. A new species of Indo-west Pacific *Etels* (Pisces: Lutjanidae), with comments on other species of the genus. Copeia 1981:820-825.
- BORODIN, N. A.
1932. Scientific results of the yacht "Alva" world cruise, July, 1931 to March, 1932, in command of William K. Vanderbilt. Bull. Vanderbilt Mar. Mus. 1(3):65-101.
- BOULENGER, G. A.
1895. Catalog of the fishes in the British Museum. 2d ed. Vol. 1, 394 p. Br. Mus. (Nat. Hist.) Lond.
- COHEN, D. M., and J. G. NIELSEN.
1978. Guide to the identification of genera of the fish order Ophidiiformes with a tentative classification of the order. U.S. Dep. Commer., NOAA Tech. Rep. NMFS Circ. 417, 72 p.

- COHEN, D. M., and J. P. WOURMS.
1976. *Microbotula randalli*, a new viviparous ophioid fish from Samoa and New Hebrides, whose embryos bear trophotaeniae. Proc. Biol. Soc. Wash. 89:81-98.
- COLLETTE, B. B., and N. V. PARIN.
1978. Five new species of halfbeaks (Hemiramphidae) from the Indo-west Pacific. Proc. Biol. Soc. Wash. 91:731-747.
- DAWSON, C. E.
1976. Review of the Indo-Pacific pipefish genus *Choerichthys* (Pisces: Syngnathidae), with descriptions of two new species. Proc. Biol. Soc. Wash. 89:39-66.
1977a. Review of the pipefish genus *Corythoichthys* with description of three new species. Copeia 1977:295-338.
1977b. Synopsis of syngnathine pipefishes usually referred to the genus *Ichthyocampus* Kaup, with description of new genera and species. Bull. Mar. Sci. 27:595-650.
- DEMANDT, E.
1913. Die Fischerei der Samoaner. In Eine Zusammenstellung der bekanntesten methoden des Fanges der Seetiere bei den Eingebornen. Mitteilungen aus dem Museum für Völkerkunde Hamburg 3(1):1-142.
- ESCHMEYER, W. N., and J. E. RANDALL.
1975. The scorpaenid fishes of the Hawaiian Islands, including new species and new records (Pisces: Scorpaenidae). Proc. Calif. Acad. Sci. 40:265-333.
- EVERMANN, B. W., and A. SEALE.
1923. Notes on fishes from Apia, Samoa. Copeia 119:70-71.
- FOWLER, H. W.
1900. Contributions to the ichthyology of the tropical Pacific. Proc. Acad. Nat. Sci. Phila. 1900:493-528.
1925. Fishes of Guam, Hawaii, Samoa, and Tahiti. Bernice P. Bishop Mus. Bull. 22:1-38.
1928. The fishes of Oceania. Mem. Bernice P. Bishop Mus. 10, 540 p.
1929. Notes on percoid and related fishes. Proc. Acad. Nat. Sci. Phila. 81:633-657.
1931a. The fishes of Oceania—Supplement 1. Mem. Bernice P. Bishop Mus. 11:313-381.
1931b. The fishes of the families of Pseudochromidae, Lobotidae, Pempheridae, Prinaacanthidae, Lutjanidae, Pomadasyidae, and Teraponidae, collected by the United States Bureau of Fisheries steamer "Albatross," chiefly in the Philippine seas and adjacent waters. Bull. U.S. Natl. Mus. 100(11):1-388.
1932. Fishes obtained at Samoa in 1929. Bernice P. Bishop Mus. Occas. Pap. 9(18), 16 p.
1934. The fishes of Oceania—Supplement 2. Mem. Bernice P. Bishop Mus. 11:385-466.
1940. The fishes obtained by the Wilkes Expedition, 1838-1842. Proc. Am. Philos. Soc. 82:733-800.
1949. The fishes of Oceania—Supplement 3. Mem. Bernice P. Bishop Mus. 12:37-186.
- FOWLER, H. W., and B. A. BEAN.
1929. The fishes of the series Capriniformes, Ehippiiformes, and Squamipennines, collected by the United States Bureau of Fisheries steamer "Albatross," chiefly in Philippine seas and adjacent waters. Bull. U.S. Natl. Mus. 100(8):1-352.
- FOWLER, H. W., and C. F. SILVESTER.
1922. A collection of fishes from Samoa. Carnegie Inst. Wash. Publ. 312:109-126.
- FRAZER, T. H.
1972. Comparative osteology of the shallow water cardinal fishes (Perciformes: Apogonidae) with reference to the systematics and evolution of the family. Ichthyol. Bull. J.L.B. Smith Inst. Ichthyol. 34:1-105.
- FRICKE, R.
1981. Revision of the Genus *Synchiropus* (Teleostei: Callionymidae). Theses Zoologicae 1, 194 p.
1974. A revision of the squirrelfish genus *Myrpristis* Cuvier (Pisces: Holocentridae). Nat. Hist. Mus. Los Ang. Cty. Sci. Bull. 19, 54 p.
- GREENWOOD, P. H., D. E. ROSEN, S. H. WEITZMAN, and G. S. MYERS.
1966. Phyletic studies of teleostean fishes, with a provisional classification of living forms. Bull. Am. Mus. Nat. Hist. 131:339-455.
- GUNTHER, A.
1871. Report on several collections of fishes recently obtained for the British Museum. Proc. Zool. Soc. Lond. 1871:652-675.
1873. Andrew Garrett's fische der Südsee. J. Mus. Godeffroy 1(1):1-24.
1874. Andrew Garrett's fische der Südsee. J. Mus. Godeffroy 2,3(5-6):25-96.
1875. Andrew Garrett's fische der Südsee. J. Mus. Godeffroy 4:96-128.
1876. Andrew Garrett's fische der Südsee. J. Mus. Godeffroy 5(11):129-169.
1877. Andrew Garrett's fische der Südsee. J. Mus. Godeffroy 6(11):169-216.
1881. Andrew Garrett's fische der Südsee. J. Mus. Godeffroy 7(15):217-256.
1909. Andrew Garrett's fische der Südsee. J. Mus. Godeffroy 8(16):261-388.
1910. Andrew Garrett's fische der Südsee. J. Mus. Godeffroy 9:389-519.
- HELFRICH, P., J. L. BALL, Jr., P. BIENFANG, M. FOSTER, B. GALLAGHER, E. GUINTEHER, G. KRASNICK, J. MACIOLEK, and J. MARAGOS.
1975. An assessment of the expected impact of a dredging project proposed for Pala Lagoon, American Samoa. Univ. Hawaii Sea Grant Tech. Rep., UNHI-SEAGRANT-TR-76-02, 76 p.
- HERRE, A. W.
1927. Gobies of the Philippines and the China Sea. Philip. Bur. Sci. Monogr. 2, 352 p.
- HOMBROUN, H., and V. JACQUINOT.
1853. Voyage au Pôle Sud et dans l'Océanie, sur l'Astrolabe et la Zélépendent 1837-40. Zool. 3(2):29-56.
- JORDAN, D. S.
1927. Shore fishes of Samoa. Pan-Pac. Inst. J. 2(4):3-11.
1905. The aquatic resources of the Hawaii Is.: Pt. 1, the shore fishes. Bull. U.S. Fish Comm. 23, 574 p.
1904. D. S., and A. SEALE.
1906. The fishes of Samoa. Description of the species found in the archipelago, with a provisional check-list of the fishes of Oceania. Bull. U.S. Bur. Fish. 25:173-488.
1904. D. S., and J. O. SNYDER.
1904. Notes on collections of fishes from Oahu and Laysan Island, Hawaii, with descriptions of four new species. Proc. U.S. Natl. Mus. 27:939-948.
- KARNELLA, S. J., and E. A. LACHNER.
1981. Three new species of the *Eviota* *epiphanes* group having vertical trunk bars. (Pisces: Gobiidae). Proc. Biol. Soc. Wash. 94:264-275.
- KNER, R.
1867. Neue Fische aus dem Museum der Herren J. Cäs. Godeffroy & Sohn in Hamburg. Akad. Wiss. Wien, Sitz. 56:709-728.
1868. Folge neuer Fische aus dem Museum der Herren Joh. Cäs. Godeffroy & Sohn in Hamburg. Akad. Wiss. Wien, Sitz. 58(Part 1):293-356.
KNER, R., and F. STEINDACHNER.
1866. Neue Fische aus dem Museum der Herren Joh. C. Godeffroy & Sohn in Hamburg. Akad. Wiss. Wien, Sitz. 54(Part 1):336-395.
- KRAMER, A.
1903. Die Samoa-Inseln, II. Band: Ethnographie. E. Schweizerbart'sch Verlagbuchhandlung (E. Nägele), Stuttgart, 445 p.
- LACHNER, E. A., and S. J. KARNELLA.
1980. Fishes of the Indo-Pacific genus *Eviota* with descriptions of eight new species (Teleostei: Gobiidae). Smithsonian Contrib. Zool. 315, 127 p.
- LEIS, J. M.
1978. Systematics and zoogeography of the porcupinefishes (*Diodon*, Diodontidae, Tetraodontiformes), with comments on egg and larval development. Fish. Bull., U.S. 76:535-567.
- LUBBOCK, R., and B. GOLDMAN.
1974. A new magenta *Pseudochromis* (Teleostei: Pseudochromidae) from the Pacific. J. Fish Biol. 6:107-110.
- LUBBOCK, R., and N. V. C. POLUNIN.
1977. Notes on the Indo-west Pacific genus *Ctenogobius* (Teleostei: Gobiidae), with descriptions of three new species. Revue Suisse Zool. 84:505-514
- McCOSKER, J. E.
1982. A new genus and two new species of remarkable Pacific worm eels (Ophichthidae, subfamily Myrophinae). Proc. Calif. Acad. Sci. 43:59-66.
McCOSKER, J. E., and J. E. RANDALL.
1982. Synonymies of Indian Ocean eels, with the description of *Gymnothorax enigmaticus*, a moray previously known as *G. ruppeli*. Proc. Calif. Acad. Sci. 43:17-24.
McCOSKER, J. E., and R. H. ROSENBLATT.
1975. The moray eels (Pisces: Muraenidae) of the Galapagos Islands, with new records and synonymies of extralimital species. Proc. Calif. Acad. Sci., Ser. 4, 40:417-427.
- MATSUURA, K., and T. SHIMIZU.
1982. The squirrelfish genus *Adioryx*, a junior synonym of *Sargocentron*. [In. Engl.] Jpn. J. Ichthyol. 29:93-94.
- OGILVIE-GRANT, W. R.
1884. A revision of the fishes of the genera *Sicydium* and *Lentipes*, with descriptions of five new species. Proc. Zool. Soc. Lond. 1884:153-172.
- PARIN, N. V., B. B. COLLETTE and Y.N. SHCHERBACHV.
1980. Preliminary review of the marine halfbeaks (Hemiramphidae, Belontiiformes) of the tropical Indo-west Pacific. Trans. P. P. Shirshov Inst. Ocean. 97:7-173.
- PÖHL, J.
1884. Museum Godeffroy, Catalog No. 9.

- POLUNIN, N. V. C., and R. LUBBOCK.
1977. Prawn-associated gobies (Teleostei: Gobiidae) from the Seychelles, Western Indian Ocean: systematics and ecology. *J. Zool. (Lond.)* 183:63-101.
- RANDALL, J. E.
1955. *Stethojulis renardi*, the adult male of the labrid fish *Stethojulis strigiventris*. *Copeia* 1955:237.
1956. A revision of the surgeon fish genus *Acanthurus*. *Pac. Sci.* 10:159-235.
1963a. Review of the hawkfishes (Family Cirrhitidae). *Proc. U.S. Natl. Mus.* 114(3472):389-451.
1963b. Notes on the systematics of parrotfishes (Scaridae), with emphasis on sexual dichromatism. *Copeia* 1963:225-237.
1964a. Notes on the groupers of Tahiti, with a description of a new serranid fish genus. *Pac. Sci.* 18:281-296.
1964b. A revision of the filefish genera *Amanses* and *Cantherhines*. *Copeia* 1964:331-361.
1972. A revision of the labrid fish genus *Anampses*. *Micronesica* 8:151-195.
1973. Tahitian fish names and a preliminary checklist of the fishes of the Society Islands. Bernice P. Bishop Mus. *Oceas. Pap.* 24(11):167-214.
1976. The endemic shore fishes of the Hawaiian Islands, Lord Howe Island and Easter Island. *Colloq. Commerson* 1973, O.R.S.T.O.M. Travaux et Documents 47:49-73.
1977. Contribution to the biology of the whitetip reef shark (*Triaenodon obesus*). *Pac. Sci.* 31:143-164.
1978. A revision of the Indo-Pacific labrid fish genus *Macropharyngodon*, with descriptions of five new species. *Bull. Mar. Sci.* 28:742-770.
1980a. Revision of the fish genus *Plectranthus* (Serranidae: Anthiinae) with descriptions of 13 new species. *Micronesica* 16:101-187.
1980b. Two new Indo-Pacific labrid fishes of the genus *Halichoeres*, with notes on other species of the genus. *Pac. Sci.* 34:415-432.
1981. Revision of the labrid fish genus *Labropis* with descriptions of five new species. *Micronesica* 17:125-155.
- RANDALL, J. E., and R. W. BRUCE.
In press. The parrotfishes of the subfamily Scarinae of the western Indian Ocean, with description of four new species. *Ichthyol. Bull. J.L.B. Smith Inst. Ichthyol.*
- RANDALL, J. E., and J. H. CHOAT.
1980. Two new parrotfishes of the genus *Scarus* from the Central and South Pacific, with further examples of sexual dichromatism. *Zool. J. Linn. Soc.* 70:383-419.
- RANDALL, J. E., and P. GUÉZÉ.
1981. The holocentrid fishes of the genus *Myripristis* of the Red Sea, with clarification of the *murdjan* and *hexagonus* complexes. *Nat. Hist. Mus. Los Ang. Cty., Sci. Contrib.* 334, 16 p.
- RANDALL, J. E., and J. C. KAY.
1974. *Stethojulis avellaris*, a junior synonym of the Hawaiian labrid fish *Stethojulis baillata*, with a key to the species of the genus. *Pac. Sci.* 28:101-106.
- RANDALL, J. E. and R. LUBBOCK.
1981. A revision of the serranid fishes of the subgenus *Mirolabrichthys* (Anthiinae:Anthiinae), with descriptions of five new species. *Nat. Hist. Mus. Los Ang. Cty., Sci. Contrib.* 333, 27 p.
- RANDALL, J. E., and J. E. McCOSKER.
1975. The eels of Easter Island with a description of a new moray. *Nat. Hist. Mus. Los Ang. Cty., Sci. Contrib.* 264, 32 p.
- RANDALL, J. E., and H. A. RANDALL.
1981. A revision of the labrid fish genus *Pseudojuloides*, with descriptions of five new species. *Pac. Sci.* 35:51-74.
- RANDALL, J. E., and S.-C. SHEN.
1978. A review of the labrid fishes of the genus *Cirrhitilabrus* from Taiwan, with description of a new species. *Bull. Inst. Zool., Acad. Sin. (Taipei)* 17:13-24.
- RANDALL, J. E., T. SHIMIZU, and T. YAMAKAWA.
1982. A revision of the holocentrid fish genus *Ostichthys*, with descriptions of four new species and a related new genus. [In Engl.] *Jpn. J. Ichthyol.* 29:1-26.
- RANDALL, J. E., M. M. SMITH, and K. AIDA.
1980. Notes on the classification and distribution of the Indo-Pacific soapfish, *Belonoperca chabanaudi* (Perciformes: Grammistidae). *J.L.B. Smith Inst. Ichthyol., Spec. Publ.* 21, 8 p.
- RANDALL, J. E., and V. G. SPRINGER.
1975. *Labroides pectoralis*, a new species of labrid fish from the tropical western Pacific. *Uo* 25:4-11, 22.
- RANDALL, J. E., and S. N. SWERDLOFF.
1973. A review of the damselfish genus *Chromis* from the Hawaiian Islands, with descriptions of three new species. *Pac. Sci.* 27:327-349.
- RANDALL, J. E., and R. C. WASS.
1974. Two new pomacanthid fishes of the genus *Centropyge* from Oceania. *Jpn. J. Ichthyol.* 21:137-144.
- SATO, T.
1978. A synopsis of the sparoid fish genus *Lethrinus*, with the description of a new species. *Univ. Mus., Univ. Tokyo Bull.* 15, 70 p.
- SCHMELTZ, J. D. E., Jr.
1865. *Museum Godeffroy, Catalog No. 2.*
1866. *Museum Godeffroy, Catalog No. 3.*
1869. *Museum Godeffroy, Catalog IV, nebst einer, Beilage, Hamburg, 29 p.*
1874. *Museum Godeffroy, Catalog No. 5.*
1877. *Museum Godeffroy, Catalog No. 6.*
1879. *Museum Godeffroy, Catalog No. 7.*
- SCHULTZ, L. P.
1943. Fishes of the Phoenix and Samoan Islands collected in 1939 during the expedition of the U.S.S. "Bushnell." *Bull. U.S. Natl. Mus.* 180:1-316.
1958. Review of the parrotfishes family Scaridae. *Bull. U.S. Natl. Mus.* 214, 143 p.
1964. Three new species of frogfishes from the Indian and Pacific Oceans with notes on other species (Family Antennariidae). *Proc. U.S. Natl. Mus.* 116:171-182.
1969. The taxonomic status of the controversial genera and species of parrotfishes with a descriptive list (Family Scaridae). *Smithson. Contrib. Zool.* 17, 49 p.
- SCHULTZ, L. P., W. M. CHAPMAN, E. A. LACHNER, and L. P. WOODS.
1960. Fishes of the Marshall and Marianas Islands. *Bull. U.S. Natl. Mus.* 202(2), 438 p.
- SCHULTZ, L. P., E. S. HERALD, E. A. LACHNER, A. D. WELANDER, and L. P. WOODS.
1953. Fishes of the Marshall and Marianas Islands. *Bull. U.S. Natl. Mus.* 202(1), 685 p.
- SCHULTZ, L. P., L. P. WOODS, and E. A. LACHNER.
1966. Fishes of the Marshall and Marianas Islands. *Bull. U.S. Natl. Mus.* 202(3), 176 p.
- SEALE, A.
1925. The Templeton Crocker expedition to Western Polynesia and Melanesian Islands, 1933. *Proc. Calif. Acad. Sci., Ser. 4*, 21:337-378.
- SMITH, J. L. B.
1961. Fishes of the family Apogonidae of the western Indian Ocean and the Red Sea. *Ichthyol. Bull. J.L.B. Smith Inst. Ichthyol.* 22:373-418.
- SMITH-VANIZ, W. F., and J. E. RANDALL.
1973. *Blennechis filamentosus* Valenciennes, the prejuvenile of *Aspidontus taeniatus* Quoy and Gaimard (Pisces: Blenniidae). *Notulae Naturae, Acad. Nat. Sci. Phila.* 448:4-11.
1974. Two new species of angelfishes (*Centropyge*) from the Cocos-Keeling Islands. *Proc. Acad. Nat. Sci. Phila.* 126:105-113.
- SPRINGER, V. G.
1967. Revision of the circumtropical shorefish genus *Entomacrodus* (Blenniidae: Salarinae). *Proc. U.S. Natl. Mus.* 122(3582), 150 p.
1972. Synopsis of the tribe Omobranchini with descriptions of three new genera and two new species (Pisces: Blenniidae). *Smithson. Contrib. Zool.* 130, 31 p.
- STEINDACHNER, F.
1870. *Ichthyologische Notizen. (X.) Akad. Wiss. Wien, Sitz.* 6(Part 1): 623-642.
1901. *Fische aus dem Stillen Ocean, Ergebnisse einer Reise nach dem Pacific (Schaunsland 1896-1897).* *Akad. Wiss. Wien, Denks.* 70:316-318, 483-521.
1906. *Zur Fischfauna der Samoa-Inseln.* *Akad. Wiss. Wien, Sitz.* 115(Part 1):1369-1425.
- WHITEHEAD, P. J. P.
1972. A synopsis of the clupeoid fishes of India. *J. Mar. Biol. Assoc. India* 14:160-256.
- WILLIAMS, F., P. C. HEEMSTRA, and A. SHAMEEM.
1980. Notes on Indo-Pacific carangid fishes of the genus *Carangoides* Bleeker. II. The *Carangoides armatus* group. *Bull. Mar. Sci.* 30:13-20.

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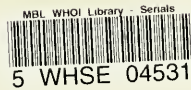
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