

## **Marine Fishes**

### **Cryptic Reef Fishes**



#### **Apogonidae**

*Apogon maculiferus*

#### **Bleniidae**

*Cirripectes obscurus*

*Enchelyurus brunneolus*

*Entomacrodus marmoratus*

*Entomacrodus strasburgi*

*Istiblennius zebra*

*Plagiotremus ewaensis*

*Plagiotremus goslinei*

#### **Callionymidae**

*Callionymus caeruleonotatus*

*Callionymus comptus*

*Callionymus decorates*

*Draculo pogognathus*

*Synchiropus hawaiiensis*

*Synchiropus kinmeiensis*

#### **Gobiidae**

*Cabillus caudimacula*

*Eviota rubra*

*Eviota susanae*

*Oxyurichthys heisei*

*Oxyurichthys lonchotus*

*Pleurosicya larsonae*

*Psilogobius mainlandi*

## **Tripterygiidae**

*Enneapterygius atriceps*

## **Antennariidae**

*Antennarius commerson*



## **Caracanthidae**

*Caracanthus typicus*

## **Scorpaenidae**

*Pterois sphex*

*Scorpaena pele*

*Scorpaenopsis altirostris*

*Scorpaenopsis brevifrons*

*Scorpaenopsis cacopsis*

*Scorpaenopsis pluralis*

## **Synodontidae**

*Synodus falcatus*

*Synodus janus*

### **SPECIES STATUS:**

IUCN Red List – Not considered

All Endemic except *Antennarius*

**SPECIES INFORMATION:** These are mostly small (less than 18 centimeters or seven inches) site-attached reef fishes. Decorated dragonets (*Callionymus decoratus*) reach 28 centimeters (eleven inches) in length as does Commerson's frogfish (*Antennarius*), and some of the scorpionfishes are also large. 'Upāpalu (*Apogon*) is a zooplanktivore. The blennies mostly feed on algae except for the *Plagiotremus* species which feed on mucus and skin tissue of other fishes. The callionymids (dragonets) and gobies are carnivorous on small invertebrates. The Hawaiian triplefin (*Enneapterygius*) is omnivorous. Commerson's frogfish (*Antennarius*) is a sit-and-wait predator using a modified dorsal fin spine as a fishing lure. The scorpionfishes (Scorpaenidae) and lizardfishes (Synodontidae) are ambush predators of fishes and invertebrates. 'Upāpalu (*Apogon*) males brood young in their mouths until hatching. Male blennies and gobies of most species guard demersal eggs until hatching. Mainland's goby (*Psilogobius*) lives in commensal burrows with an alpheid shrimp and *Oxyurichthys lonchotus* may do the same. Hawaiian orbicular velvetfish (*Caracanthus*) may be a protogynous hermaphrodite. The species common names and Hawaiian names are: *Apogon maculiferus* (spotted cardinalfish, 'upāpalu), *Cirrepecetes obscurus* (gargantuan blenny, pao'o), *Enchelyurus brunneolus* (no common name), *Entomacrodus marmoratus* (marbled blenny, pao'o), *Entomacrodus strasburgi* (Strasburg's blenny), *Istiblennius zebra* (zebra

blenny, pao' o), *Plagiotremus ewaensis* (Ewa blenny), *Plagiotremus goslinei* (scale-eating blenny), *Callionymus caeruleonotatus* (bluespotted dragonet), *Callionymus comptus* (ornamented dragonet), *Callionymus decoratus* (longtail dragonet), *Draculo pogognathus* (no common name), *Synchiropus hawaiiensis* (no common name), *Synchiropus kinmeiensis* (no common name), *Cabillus caudimacula* (no common name), *Eviota rubra* (no common name), *Eviota susanae* (no common name), *Oxyurichthys heisei* (ribbon goby), *Oxyurichthys lonchotus* (no common name), *Pleurosicya larsonae* (no common name), *Psilogobius mainlandi* (Mainland's goby), *Enneapterygius atriceps* (Hawaiian Triplefin), *Antennarius commerson* (Commerson's frogfish), *Caracanthus typicus* (Hawaiian orbicular velvetfish), *Pterois sphex* (Hawaiian turkeyfish, nohu pinao), *Scorpaena pele* (no common name), *Scorpaenopsis altirostris* (no common name), *Scorpaenopsis brevifrons* (shortnose scorpionfish), *Scorpaenopsis cacopsis* (titan scorpionfish, nohu), *Scorpaenopsis pluralis* (no common name), *Synodus falcatus* (no common name), and *Synodus janus* (no common name). *Synchiropus hawaiiensis* and *Synchiropus kinmeiensis* may be the same species. Bruce Mundy (National Marine Fisheries Service (NMFS)) reports that Jack Randall (Bishop Museum) will publish a manuscript reporting that *S. janus* is a junior synonym of *S. falcatus* so these are probably just a single species.

**DISTRIBUTION:** *Enchelyurus* occurs from O'ahu to Lisianski. *Entomacrodus strasburgi* occurs from Moloka'i to O'ahu. Zebra blennies occur from Hawai'i Island to Lisianski. The scale-eating blenny occurs from the island of Hawai'i to Pearl and Hermes Atoll. Bluespotted dragonets occur in the main islands only. Ornamented dragonet, Mainland's goby, and *Scorpaena pele* have been found from Maui to O'ahu. The longtail dragonet is found from Maui to Pearl and Hermes Atoll. *Draculo* has been found from Moloka'i to Kaua'i. *Synchiropus hawaiiensis* has been found from Maui to Moloka'i. *Synchiropus kinmeiensis* has been collected from Maro Reef through Kure Atoll and the Emperor Seamounts. *Cabillus*, the two *Eviota* species, and *Pleurosicya* have only been found off O'ahu. The ribbon goby is found off Lāna'i and Moloka'i. *Oxyurichthys lonchotus* has been collected from Hawai'i Island to O'ahu. Hawaiian orbicular velvetfish have been found from O'ahu through Midway Atoll. *Scorpaenopsis altirostris* is found from the island of Hawai'i to Moloka'i. *Scorpaenopsis pluralis* is known only from the holotype from near Laysan. *Synodus falcatus* has been found from Moloka'i through Laysan Island. *Synodus janus* is only known from the holotype collected off the island of Hawai'i. All the other species occur throughout the Hawaiian Islands.

**ABUNDANCE:** The shallow water species are surveyed for in surveys of coral reef fishes in the Main and Northwestern Hawaiian Islands (NMWHI), both by NMFS and the Division of Aquatic Resources and data are available online. Nohu pinao (Hawaiian turkeyfish) and titan scorpionfish may have declined from historic levels and a few hundred pounds of titan scorpionfish are reported in State commercial catch data each year.

**LOCATION AND CONDITION OF KEY HABITAT:** All species except bluespotted dragonet, the two *Synchiropus* species, ribbon goby, *Synodus falcatus*, *Scorpaena pele*, and *Scorpaenopsis altirostris* can be found in shallow water depths. *Callionymus caeruleonotatus* is found in depths over 45 meters (150 feet), *Oxyurichthys heisei*, the *Synchiropus* species and *Scorpaenopsis altirostris* and *Scorpaenopsis pluralis* occur over 90 meters (300 feet) deep, *S. falcatus* has only been found in depths greater than 30 meters (100 feet), and *Scorpaena pele* has been found deeper than 150 meters (500 feet). 'Upāpalu (spotted cardinalfish) occurs in caves during the day and feeds nocturnally over a wider area. The gargantuan blenny lives on rocky shores exposed to wave action. Zebra blennies and the *Entomacrodus* species live in shallow, rocky surge zones and can even leap from pool to pool. *Enchelyurus* occupies dead coral heads. Most callionymids, *Cabillus*,

*Oxyurichthys lonchotus*, and the lizardfishes occur in sandy or muddy habitats. The two *Eviota* species have been found around Kāneʻohe Bay, *E. rubra* from deeper spur and groove and *E. susanae* from shallow waters inside the bay. The Hawaiian orbicular velvetfish occurs among the branches of live coral. The scorpionfishes are often found hidden or under ledges. The rest are found throughout coral reef habitats.

**THREATS:**

- Only a few of these species are prized by aquarists. These are gargantuan blenny, zebra blenny, Commerson’s frogfish, Hawaiian orbicular velvetfish, and nohu pinao (Hawaiian turkeyfish);
- Titan scorpionfish are fished commercially and recreationally;
- Many species have restricted ranges within the State (see above).

**CONSERVATION ACTIONS:** The goals of conservation actions are to not only protect current populations, but to also establish further populations to reduce the risk of extinction. Commercial licenses are required for aquarium collectors. In addition to common statewide and island conservation actions, specific actions include:

- Maintain healthy populations with appropriate fishing regulations and education.

**MONITORING:**

- Continue to survey for populations and distribution in known and likely habitats.

**RESEARCH PRIORITIES:**

- Improve understanding of factors affecting the species population size;
- Support aquaculture research to develop captive breeding for species used in the aquarium trade.

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