

MARINE LIFE PROFILE: MILLETSEED BUTTERFLYFISH

Hawaiian name:	lau wiliwili
Scientific name:	<i>Chaetodon miliaris</i>
Distribution:	Hawai‘i only
Size:	to 6.5 inches (16.5 cm) in length
Diet:	zooplankton & selected reef invertebrates



The milletseed butterflyfish, *Chaetodon miliaris*, is one of the most recognized butterflyfishes in Hawaiian waters. Its English name refers to the small, seed-sized black spots that are distributed in vertical rows on its lemon yellow body. It is also known as the lemon butterflyfish in some dive guides. The Hawaiian name, lau wiliwili, refers to the resemblance of the fish's body shape to the leaf of the wiliwili tree, and to the yellow color of the wiliwili leaf when it drops from the tree. Like many butterflyfishes, the milletseed butterflyfish has a black mask through the eye and a black spot near the tail.

This species is a Hawaiian endemic, it is found only in the Hawaiian Islands and is the most common species of butterflyfish in Hawaiian waters. It feeds primarily on zooplankton above the reef, but sometimes cleans other fishes and is also opportunistic, feeding on nests of damselfish eggs if they are unprotected. Familiar to snorkelers and divers, it is seen in schools above shallow reef slopes, as well as to depths of 830 feet (250 meters). The milletseed butterflyfish reaches lengths of 6.5 inches (16.5 cm).

Butterflyfishes are perhaps the most familiar of reef fishes. To many people, these colorful fish are synonymous with coral reefs -- active and brilliantly colored. Most butterflyfishes are found in tropical, shallow waters, around coral reefs at depths of less than 60 feet (18 m). But, some newly-discovered species are restricted to deeper reef habitats, to 600 feet (180 m) or more. Roughly 116 species are currently known; 22 occur in Hawai‘i. Aquarium exhibits feature more than a dozen species from Hawai‘i and the Western Pacific, including both common and rare varieties.

Flittering movements and conspicuous color patterns reminiscent of butterflies may have earned this group their name. Researchers propose several possible functions for the dramatic colors and patterns of primarily yellow, black and white. For many butterflyfishes, especially closely-related species sharing similar habitat, species recognition may be important when identifying a mate. Some species live in pairs and defend a territory -- their "poster coloration" may make them more conspicuous to intruders. For others, the coloration may confer some degree of protection from predators. The black mask at the head conceals the eye and the black marking near the tail may be a "false eyespot". Predators that mistakenly strike at the tail, rather than the head, may lose their prey. Butterflyfishes are principally day active, and seek shelter close to the reef at night. Many species assume a nocturnal color pattern that is duller than their day-time colors; others, possibly pair-bonded or territorial species, have a dramatic black/white contrast markings at night.

Ichthyologists classify butterflyfishes in the Family Chaetodontidae, named for their tooth design. All have comb-like teeth and are primarily carnivores, but diet varies from species to species. Reef-associated species, like the raccoon butterflyfish, have a broad diet and prey on different kinds of soft-bodied invertebrates. Corallivores have a specialized diet of coral polyps or mucus, and these species often maintain territories. A few butterflyfishes are planktivores, feeding above the reef and plucking individual planktonic animals from the water column.

Classification:

Kingdom Animalia

Phylum Chordata, Subphylum Vertebrata

Class Osteichthyes

Order Perciformes

Family Chaetodontidae

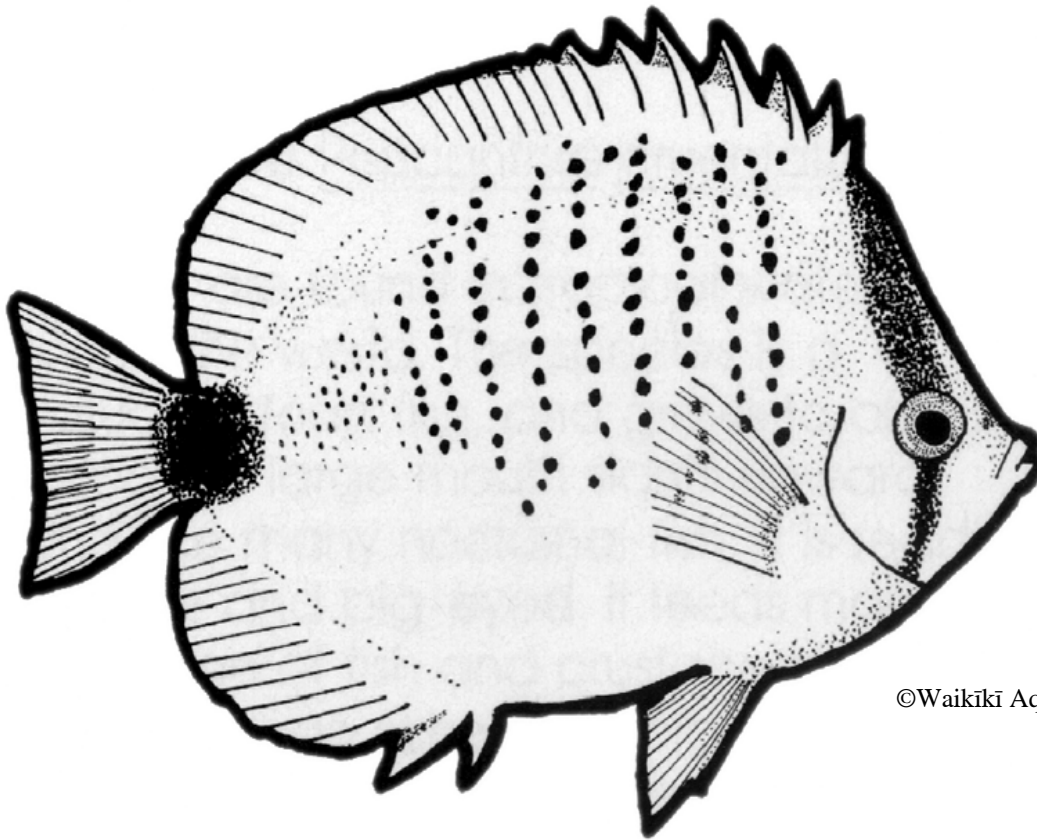
Genus Chaetodon

Species miliaris

MILLETSEED BUTTERFLYFISH

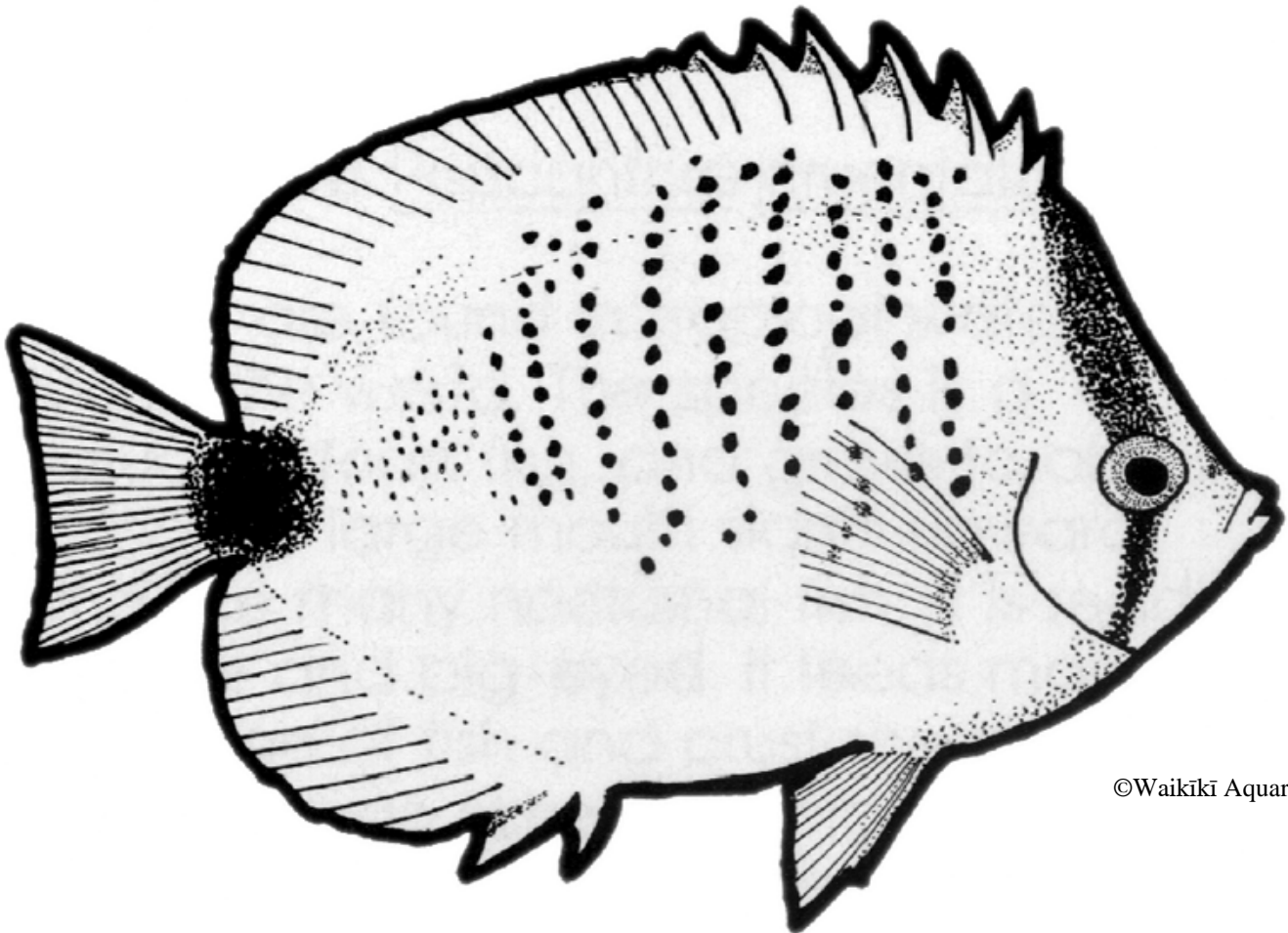
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