

COPPERBAND BUTTERFLYFISH



The copperband butterflyfish (*Chelmon rostratus*) will typically behave itself in the reef aquarium. Some individuals will go astray, however, nipping at large polyped stony corals and some encrusting soft corals.

With some effort, you can successfully keep the notoriously difficult *Chelmon* species.

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The copperband butterflyfish (*Chelmon rostratus*), also known as the beaked coralfish, has long presented a bit of a conundrum to marine aquarists. When I first became involved in the hobby (in the early 1970s), this fish was considered a delicate, difficult fish to keep recommended only for the most astute and experienced fishkeepers. Most of the trouble was related to getting newly imported individuals to eat the foods that were available in those days.

In North America, the blight of *C. rostratus* changed in the mid-1980s with the sudden popularity of the reef aquarium. Before this, aquarists from Europe, who were already keeping reef tanks, talked about keeping *Chelmon* species in their coral aquariums. Not only were they having success in the long-term care of this lovely fish, but they reported that this butterflyfish posed a limited threat to most ornamental invertebrates.

While the captive track record with the copperband butterflyfish has certainly improved, the species still presents some husbandry challenges. This article will review what we know about the care and biology of *C. rostratus*, as well as other species in the genus.

UNNATURAL SELECTION

One of the biggest keys to success in keeping a *Chelmon* butterflyfish in your home aquarium is selecting the right specimen. If you get a healthy individual to start with, your chances of keeping a copperband long-term exponentially increase. This may seem like a no-brainer with any fish, but it is particularly true for those species that present feeding challenges, such as *C. rostratus* and its kin.

In the past, many of the *Chelmon* species came from the Philippines and Indonesia. Some of these were collected with chemicals



The eyespot on the rear of the dorsal fin of the copperband butterflyfish, as well as the bar through the eye, apparently serves to direct the attack of predators toward the tail rather than the head, which increases its chance of surviving.

(e.g., cyanide), which impacted their health. They were also subjected to poor conditions before they were ever shipped to wholesalers in other countries. These individuals were handicapped from the get-go with a reduced likelihood of survivability.

On the other hand, individuals collected and shipped from Australia were always of better quality, primarily because they were handled and held with greater care than those from Asia.

Today it is possible to get better specimens from the Philippines and Indonesia, thanks to improved collecting and holding techniques instigated by nongovernment organizations, such as the Marine Aquarium Council. The latter group trains collectors to effectively use nets only (no chemicals), and it encourages collectors to take greater care when holding and transporting the fish they export. The fish cost a little more, but you're getting a much healthier animal that is more likely to thrive in captivity.

When selecting a copperband to take home, do not purchase emaciated individuals, no matter where they're from. A sunken belly — and even worse, a pinched-in back — indicate an individual that is not likely to recover. Smaller individuals (about 3 inches in length) may be better able to adapt to aquarium living than larger conspecifics. The idea is that smaller individuals are more likely to acclimate

to a new food than an older conspecific. That said, be aware of the higher metabolic needs of juvenile fish than those of adults. As a result, you need to feed a young fish frequently or ensure that there is an adequate natural food source present in the aquarium. If there is no natural fodder (e.g., *Aiptasia* to dine on), feed young fish two or three times a day.

PLAYING WELL WITH OTHERS

In the wild, the copperband butterflyfish usually occurs singly or in pairs. In captivity, this fish will display aggression toward conspecifics or others in the genus. Therefore, it is prudent to house one *C. rostratus* per aquarium unless you can acquire a male-female pair. This may be a tall order, as they don't appear to be sexually dimorphic.

Aggressive behavior is expressed in an interesting way in adult *Chelmon* species — these fishes engage in ramming behavior. Conspecifics frequently butt foreheads and attempt to push their rival backward until one fish relents and swims off.

Some hobbyists have kept small groups in larger tanks (300 gallons or more). If kept in groups, they form dominance hierarchies — the individuals rank in the pecking order by size (the largest fish is at the top of the pecking order, followed by the next largest, etc.). If one of the more subordinate

individuals stops eating or is incessantly picked on, remove it from the aquarium. *Chelmon rostratus* is not likely to behave aggressively toward unrelated fish species. It simply minds its own business, spending the day searching the rockwork for morsels of food.

REEF-SAFE?

So what about a reef aquarium? Are copperband butterflyfish reef-safe? The answer to this question is no — at least not always. The amount of risk involved is in part a function of what types of corals (and other invertebrates) you intend to keep with your *Chelmon*. Also, individuals can vary in their proclivity to nip at corals. There is some anecdotal evidence that larger *Chelmon* individuals tend to be a greater threat to invertebrate neighbors than smaller conspecifics.

When it comes to stony corals, the types most likely to receive unwanted attention are the large polyped stony varieties, such as *Acanthastrea*, *Lobophyllia*, *Scolymia* and *Trachyphyllia*. *Chelmon rostratus* rarely bothers small polyped stony corals, corallimorpharians or larger sea anemones, but it will occasionally nip at zoanthids. Most soft corals, too, are ignored, with the possible exception of *Anthelia*, *Clavularia* and *Xenia* (these "softies" may be picked on by some individuals). That said, all the *Chelmon* species are a potential risk to many cnidarians, so be aware of the risk.

Other invertebrates likely to be targeted by the members of this genus include any type of fanworm (an important food in the wild) and tridacnid clams (they often pick on the bumps and skin flaps on the mantle to the point of killing them).

CHELMON AND AIPTASIA

There is a big upside to adding a *Chelmon* species to your reef aquarium: This fish likes to nip at and eat *Aiptasia* anemones. Reefkeepers despise these brown actinians because they are prolific (especially in heavily fed reef tanks), and they sting more desirable cnidarians. There are nonbiological techniques to rid a tank of *Aiptasia*, but these can have problematic side effects and are labor-intensive. By adding a *Chelmon*, you may be able to get rid of

Keep *Chelmonops* species in slightly cooler water than is normally recommended for tropical marine species (between 66 to 76 degrees Fahrenheit).

these undesirable anemones, as well as provide a more natural food source thus facilitating the acclimation process of this beautiful butterflyfish.

The copperband may not eat all the *Aiptasia*, but when these anemones are nipped, they retract into rock interstices. In many cases, if you remove the *Chelmon*, some of the anemones suddenly reappear, though they may be bleached because of a lack of light. The potential *Chelmon* buyer should be aware that individuals can vary in their taste for *Aiptasia*. I have found that most *C. rostratus* do nip at them, but occasionally you come across an individual that simply ignores them. Biologist and aquarist Charles Delbeek suggests adding *Aiptasia*-covered rocks to a quarantine tank containing a *C. rostratus*. In this way, you may be able to train a new copperband to hunt down these noxious cnidarians in your reef tank. [Any tank you are introducing *Aiptasia* into should have its own dedicated plumbing and maintenance equipment so as not to introduce *Aiptasia* into setups free of it. — Eds.]

OTHER CHELMON SPECIES

There are two other butterflyfishes that share the *Chelmon* genus with our friend *C. rostratus*. One of these is the margined butterflyfish (*C. marginalis*), aka the margined coralfish. The margined butterflyfish is exported from Australia (it is only known from northwestern Australia, along parts of northern Australia and the northern Great Barrier Reef), and it is very similar to the copperband. Juvenile margined and copperband butterflyfish are almost indistinguishable (the young *C. rostratus* has a wider mid-body bar). As the margined butterflyfish matures, it loses the black ocellus at the base of the dorsal fin — this chromatic difference separates it from the adult *C. rostratus*. The margined butterflyfish is a moderately hardy aquarium species, though it may take a few days to settle into its new home and begin to feed. It should be

offered a variety of finely chopped seafood, frozen preparations and frozen mysid shrimp. Like *C. rostratus*, it can be kept in some reef tanks.

The third species in the genus is Müller's butterflyfish (*C. muelleri*), aka the beaked coralfish. It is not as colorful as the other *Chelmon* species, sporting brownish-orange bands on a silvery-white background. Like others in the genus, a prominent protuberance develops on its forehead as it grows. This structure is employed when these fish engage in head-to-head combat. Müller's butterflyfish also has a shorter snout than its two congeners. While not the most colorful in the genus, Müller's butterflyfish usually ships well, acclimates quickly if placed in a well-maintained aquarium and readily

FEEDING ISSUES

Copperband butterflyfish are thought to feed heavily on tubeworm feeding appendages and small crustaceans in the wild, and it may take a while for a newly acquired individual to accept standard aquarium fare. However, many individuals will eventually accept frozen mysid shrimp or some of the frozen preparations that include a variety of different seafoods. An occasional *C. rostratus* may require live foods to induce a feeding response. Provide live rock encrusted with sessile invertebrates, or live clams or black mussels that have had their shells broken open.

Another way to convince a finicky *C. rostratus* to feed is to keep it with a more hardy butterflyfish that is already eating (e.g., *Forcipiger flavissimus*). By watching the other butterflyfish, the *C. rostratus* may begin to mimic it and start to feed. This is known as social learning. Of course, other butterflyfish species may be more of a threat to ornamental invertebrates than *C. rostratus* and may compete with it for the natural fodder on the live rock. There is also the possibility that a resident butterflyfish may bully a new *C. rostratus* if the tank is not very large (100 gallons or less).

accepts a wide range of fish foods. Offer it a varied diet, including finely chopped fresh and frozen seafood, frozen preparations and mysid shrimp. Keep only one Müller's butterflyfish per tank unless a male-female pair is obtained.

COLDWATER RELATIVES

Chelmonops species differ from the *Chelmon* species in having more dorsal spines (11 as compared to nine in most *Chelmon* spp.), shorter, stouter snouts, and darker head and body bars. There are only two species in the genus *Chelmonops*. Both are limited to cooler water around southeastern, south and western Australia. They are the truncate butterflyfish (*Chelmonops truncatus*) and the squareback butterflyfish (*C. curiosus*). Both show up in the aquarium trade but only on rare occasions. The squareback differs from the truncate because it has greatly extended dorsal and anal fins, a head profile that is not as steep, dark-centered scales between the bands and darker body bands. Both species are purported omnivores, feeding on filamentous algae, worms and crustaceans. Adults are often seen in pairs, while juveniles are solitary.

The *Chelmonops* species usually acclimate to a well-maintained aquarium that contains less belligerent fish. An occasional individual may be reluctant to feed, though it can be coaxed into eating mysid shrimp. In time, this fish should take finely chopped seafood and frozen preparations. Keep *Chelmonops* species in slightly cooler water than is normally recommended for tropical marine species (between 66 to 76 degrees Fahrenheit). *Chelmonops* species behave similarly to *Chelmon* species in reef tanks.

While the copperband butterflyfish and its relatives are not the most durable of aquarium residents, if you obtain a healthy individual and provide it with proper care, it may live a decade or more in your home aquarium. Happy fish-watching! **AFI**

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