

Meet the Inverts:

Carpet Anemones



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A stunning blue carpet anemone - image J Clipperton

Among the various sea anemones available to marine aquarium enthusiasts, carpet anemones stand out as some of the most remarkable. These intriguing creatures can grow to considerable sizes when given proper care and are known to host several species of clownfish. In the hobby, there are four main species of carpet anemones that are commonly encountered: *Stichodactyla haddoni*, *S. gigantea*, *S. mertensii* and *S. tapetum*. They are referred to as carpet anemones due to their large, flattened bodies and the numerous relatively short, carpet-like tentacles that cover their upper surface. They may sometimes be marketed as saddled anemones, as they can occasionally fold their bodies into a shape reminiscent of a horse's saddle.

Identifying three of these species can be challenging in a store, especially when they are not in their natural environment alongside clownfish.

Stichodactyla haddoni features very small tentacles that resemble tiny beads covering its surface, often displaying multiple colors. There is only a small area around its mouth that lacks tentacles. Furthermore, the upper part of this anemone, known as the disc, is frequently folded into a saddle-like shape, which is the origin of its alternate name. They can reach sizes exceeding 50cm in diameter and possess a relatively large base. It's important to note that the tentacles of this species are almost like flypaper, adhering to your fingers strongly enough to pull or tear off a specimen if touched. Among the three species, *S. haddoni* is the one most commonly found for sale.



A stunning blue *Stichodactyla gigantea*



Stichodactyla haddoni - green specimens seem more commonly available and exhibit particularly stunning fluorescence



A selection of different colour carpet anemones in a fish store.

Stichodactyla gigantea also has short tentacles, but they are generally longer than those of *S. haddoni* and often have slightly pointed tips. Its disc is typically more deeply convoluted featuring more folds than *S. haddoni*. Generally, a larger portion of

the disc is free of tentacles, and these anemones may grow to about 40cm in size. Their tentacles are also sticky.

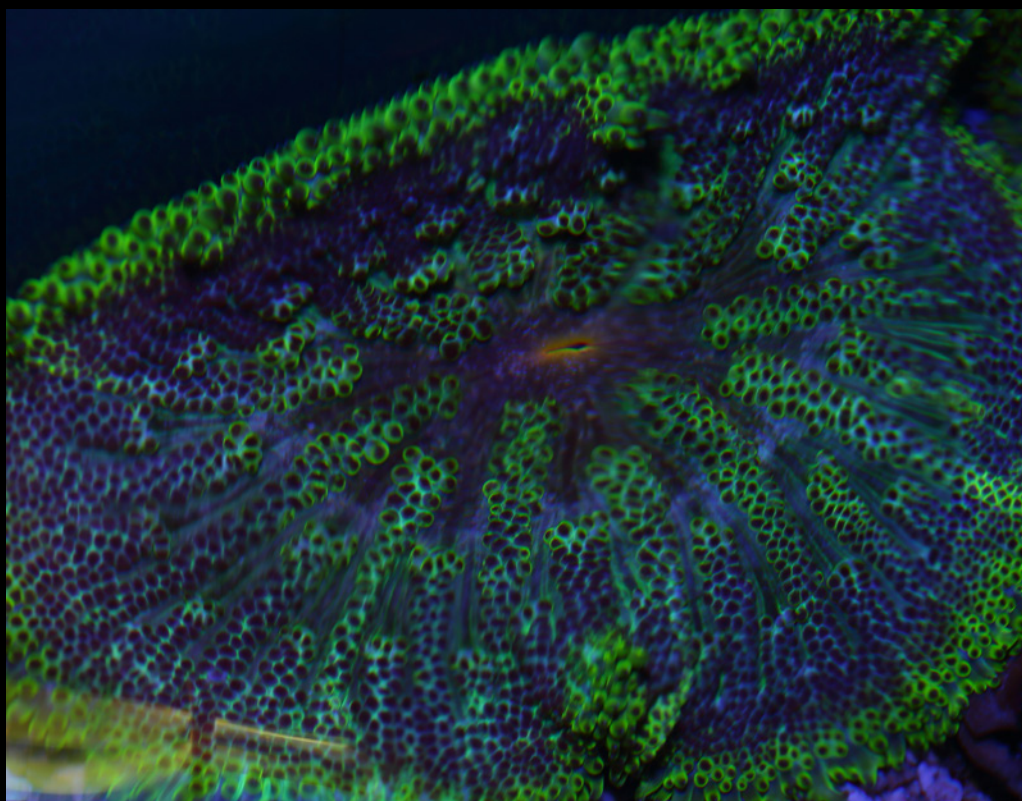
Stichodactyla mertensii features short tentacles, although some may be relatively longer compared

to other carpet anemones, and they lack the stickiness found in the tentacles of the other two species. Their base is generally much smaller than that of the other two, and the disc typically remains flat rather than folding up. Instead, these anemones lie

flat on the substrate and are the largest among the three, sometimes exceeding a metre in diameter!

Finally, *Stichodactyla tapetum*, also known as the mini or mini-maxi carpet anemone, is very similar to the other species mentioned - but in miniature! As such it is usually easier to identify. This species usually grows to just 15cm in diameter, meaning it can be kept in even modest aquaria provided requirements are met. They are generally considered to be reasonably hardy and may even form small colonies in favourable conditions. However, they still have the propensity to wander on initial introduction to an aquarium and may sting other corals if they are too close. Small fishes and shrimps may also be consumed by these anemones. They come in a stunning array of colours and are usually not too expensive.

Generally, anemones have a low survival rate in aquariums, but certain species tend to do significantly better than others. If you select a healthy specimen from the start and understand how to care for it properly, you'll greatly enhance your chances of success. Nevertheless, they can still be unpredictable at times, and if you're not ready to provide all the necessary care - it's best not to purchase one. To begin with, maintaining good water quality is crucial, meaning it should be of sufficient quality to support corals and other delicate invertebrates over the long term. Regarding lighting, you shouldn't attempt to keep a carpet anemone under anything less than what is necessary for sustaining lower-light corals... 150 PAR minimum is a general rule. Good quality, modern LED fixtures should be able to provide the ideal 200-300 PAR.



Stichodactyla tapetum - the mini-maxi carpet anemone

The next aspect to consider is feeding. Carpet anemones are carnivorous and should be treated accordingly. While you don't need to feed them daily, it's a good idea to try various types of meaty foods to discover what and how much they prefer to eat. You can use anything from a turkey baster to squirt brine shrimp into their tentacles, or even a wooden stick (or your hand) to offer a small fish. Generally, providing a good meal once or twice a week is sufficient to keep them healthy and thriving. Just be cautious of any large clumps they might expel if overfed at once (remove these once free of the anemone). Typically, they will consume anything that is meaty, such as brine shrimp, clam meat, whole shrimp, and feeder fish. While effective feeding can

lead to quite rapid growth, you should monitor the size of your carpet anemone; if it begins to shrink, it indicates that you need to increase feeding and/or provide more light. You should also consider where to place one, as carpet anemones can be very particular about their living conditions, and an unhappy anemone will not be healthy. They may also crawl around in search of a better location, which can be problematic, as they might come into contact with or cover other immobile tankmates, potentially harming them. That being said, it's crucial to understand that these three species do not all inhabit the same environments and will have their own specific preferences for living arrangements. *S. haddoni*, for instance, naturally resides in deep sand with its

base buried deeply, allowing it to retract into the sand if disturbed. It's advisable to position a specimen on a deep sand bed where it will feel comfortable. However, they can occasionally be found on hard surfaces, and you might notice one attaching itself to rocks even if it was initially placed on sand.

S. gigantea is generally found with its base secured to a solid object buried in sand, resulting in most of the base being underground. Occasionally, they can also be seen attached to hard surfaces at the top. Therefore, the most effective approach for either of these anemones is to excavate a hole in the sand, place their base inside, then refill the area around the base and position a piece of base/live rock nearby. This

method has proven successful for aquarists, as the anemone adheres its base to the bottom glass of the tank and subsequently extends its disc over the bottom and the rock. On the other hand, *S. mertensii* usually resides on hard surfaces, with its base secured in a crevice or hole, keeping its disc close to the surrounding rocks. Hence, it's advisable to arrange some rocks in a manner that allows it to do the same in a tank. Position a specimen with its base in the crevice or hole and allow it to establish its attachment there. If the lighting and current conditions are suitable, they typically remain in place (as long as those conditions remain favourable). They require some water flow, but it's important to avoid a current that hits them from one direction with enough





A carpet anemone's mouth is usually easy to identify, located right in the centre of its disc

force to constantly flip part of their disc and keep it folded. This will definitely cause them to move around the tank.

Selecting a Healthy Anemone

To ensure your success, starting with a quality specimen is essential, so here are some shopping tips for you. First, any anemone should be securely attached to something in the store, like a rock, shell, or the glass itself. If its base appears puckered and isn't clinging to anything, and the anemone is merely resting on the bottom, I would not recommend purchasing it. This doesn't mean you must take an anemone home still attached to something, but the fact that it is attached is often a sign of good health. You must ensure that a store employee is very careful when detaching an anemone from whatever it's clinging to. This can typically be done easily and safely with a credit card if the specimen is attached to a smooth surface, but it

becomes much trickier if it's stuck to a rock. Peeling it off can still be accomplished, of course, or it can remain on the rock. However, before proceeding with the removal, you should first examine the anemone closely to check for any visible injuries. They can grip a rock very well, so they often sustain tears or cuts on their bases during the collection process when someone tries to free them. Any such injuries can lead to rapid death or an infection that delays their demise. Another crucial aspect to check is the condition of the mouth. A carpet anemone's mouth is usually easy to identify, located right in the centre of its disc, and it should not be wide open. If a specimen's mouth is open for no clear reason, especially if any of the "guts" are sticking out, you should avoid purchasing it. A gaping mouth is generally a strong sign that an anemone is not in good health.



Clownfish Compatibility

Different species of carpet anemones are home to specific types of clownfish. If a clownfish of the wrong species tries to enter an anemone that doesn't suit it, it will likely be treated as prey, resulting in stings and possibly being eaten.

Interestingly, the compatibility between species is often more adaptable in aquariums than in their natural habitats. For reasons unknown, pairings that don't occur in the wild can sometimes be found in tanks, and it appears that when a suitable host anemone is absent, some clownfish may settle for alternatives.

To be more precise, *S. haddoni* accommodates *Amphiprion akindynos*, *A. chrysogaster*, *A. chrysopterus*, *A. clarkii*, *A. polymnus*, and *A. sebae* in their natural environment. *S. gigantea* is home to *A. akindynos*, *A. bicinctus*, *A. clarkii*, *A. ocellaris*, *A. percula*, *A. perideraion*, and *A. rubrocinctus*. The

rarer *S. mertensii* can host *A. akallopisos*, *A. akindynos*, *A. allardi*, *A. chrysogaster*, *A. chrysopterus*, *A. clarkii*, *A. fuscocaudatus*, *A. latifasciatus*, *A. leucokranos*, *A. ocellaris*, *A. sandaracinos*, and *A. tricinctus*.

Take note that *S. tapetum* does not host clownfish species in nature and there are no accounts (that I can find) of them doing so in captivity.

One final note

Remember that carpet anemones can be quite dangerous and may harm most creatures they encounter in the aquarium. Therefore, it's advisable to place one in the aquarium before introducing any other livestock that could be at risk if it begins to move around. Make sure to leave several centimetres of space around the area where they settle so they have room to grow. I hate to mention it, but even if you do everything correctly and keep one well-fed, a carpet anemone is very likely to consume any bottom-dwelling fish like gobies and blennies that you might consider keeping with it, along with possibly many other things as well. So, plan and stock the aquarium wisely if you intend to keep one of these anemones.



Carpet anemones can host a range of other marine life such as anemone shrimp and crabs like this *Neopetrolisthes* sp. Porcelain crab