Aiptasia spec.

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photo: AquaCare

Progressed contamination with fluorescing type of *Aiptasia* and coral reef tank.
The first corals are attacked by them (the lower branch of the brown *Pocillopora*)

If a Beauty becomes a Plague

"This is looking very nice!" This or similar statements every aquarist says if he saw his first Aiptasia. But this first animal will not be the least!

Without doubt these anemones of the genus *Aiptasia* are really nice animals. Not very seldom living rocks covered with *Aiptasia* are sold as anemone rocks – but only in very bad shops. The colour of this animal varies from white (dark habitats) to brown, partly with fluorescing pigments. The tentacles vary from half body length to multiple lengths. The interesting eating behaviour can be watched very good at nearly transparent animals. These animals are very robust and survive nearly all mistakes a newcomer can make with his coral tank. Actually Aiptasia are prefect beginner animals. But they have two decisive disadvantages:

1. they can proliferate explosively and covers all parts of the aquarium and
2. the are very aggressive. Their tentacles have a strong toxin and hurt other animals. Only very few animals can defend against *Aiptasia*.

Sooner of later every aquarist stands before the question: how can I fight against these animals.

Methods for Combat

Mechanical Techniques

We only can dissuade from mechanical techniques. With nearly all common techniques the animals are destroyed but the remains will breed very fast new animals. But now they are allocated in the whole tank.

Only if it is possible to remove the animal on the whole you can try it mechanically. But normally this is only possible if the Aiptasia is growing on a glass plate. With a plastic scraper or a razor blade you can push it from the surface.

Biological „Warfare"

The most simple method to arrest *Aiptasia* is to introduce *Aiptasia*-eating animals. Unfortunately only a few animals are eating them. Most of them are eating other corals, too, or they do not take them if other delicacies are served. Or the biological struggler becomes to large with the time and is not suitable for normal coral tanks. Other animals you do not get in the shops or some animals are only eating *Aiptasia* and if they have destroyed their food completely the will die. But the *Aiptasia* will come back!

The animals in the list below are not a guarantee for active and successful destruction of *Aiptasia*. Some lateral damaged can occur, e.g. some corals are eaten, too. Some animals will eat Aiptasia only if they are very hungry. But to starve is the worst way to keep fish you tank. please look at "How to feed sea water animals", too.

Scatophagus argus (Spotted Scat): eats Aiptasia, but this animals becomes to large for normal tank.

Acreichthys tomentosus (Matted Leatherjacket): not 1005 sure that it eats Aiptasia. But this fish is very robust.

Chaetodon auriga, C. kleinii, C. lunula, C. unimaculatus, Chelmon rostratus, Forcipiger longirostris **(Butterflyfish)**: some of these fishes

are sensitive and it is not easy to keep them for a long time in a coral reef tank. Trespasses to other invertebrates are possible. In the future if the problem with displacement food is solved these animals will play a better role in coral tanks.

Aeolidiella Stenphanieae ("Berghia verrucicornis"): this snail eats exclusively *Aiptasia*. Is the food consumed the snail starve to death. Rests of the Aiptasia will develop very fast new animals. To create a long-term protection you must breed in an extra tank *Aiptasia*. So it is possible to feed "*Berghia"* regularly.

Lysmata wurdemanni: this shy and short-lived animal eats *Aiptasia*, but sometimes only the small specimen. The high price in the shops and the live time of about 2 years makes this method expensive. Of course this shrimps should introduced only in tanks with peaceful fishes and shrimp predators should not be there. It should not be very complicated to breed these shrimps. If you are fan of *Lysmata* and its relatives it is a nice hobby to breed them and by the way you have an effective *Aiptasia* weapon. - *Lysmata seticaudata* battle against *Aiptasia*, too (KRAUSE 2009)

***Centropype* sp. (Angelfish)**: small angelfish do not eat big *Aiptasia* but the small specimen are eaten by some angelfish species. In tanks with following species we have not seen *Aiptasia* – in the filters *Aiptasia* was growing: *C. loriculus, C. bispinosus, C. multispinis.*

Calcium Hydroxide Method

You can destroy Aiptasia with calcium hydroxide. Before starting you must shut down all pumps that create water currents. With the calcium hydroxide powder and a little bit reverse osmosis water you can mix a pulp (some seconds in the micro wave intensify the effect) and bring it up in a syringe. With a very large canula it is possible to prick into the body of *Aiptasia* and push the pulp into this animal. *Aiptasia* will contract but it will die. You can put the calcium hydroxide pulp over the whole animal. With very large specimen one "therapy" is not enough. After some hours or day if the animal is inflated again you can repeat the procedure.

With this method you must fight regularly to have success. If *Aiptasia* is sitting directly on another animal you can use the method.

Attention! Calcium hydroxide and its aqueous solution is a very strong alkaline. Never use it on extreme big areas. Check the pH value during the procedure. Pay attention to the information on the calcium hydroxide package.

Hydrochloric Acid

To destroy *Aiptasia* with hydrochloric acid never use solutions with more the 10%. Fill a syringe with the acid and prick the canula into the animal. Push some acid into its body. You must care to the pH value very carefully. If the pH drops below 7.5 you must stop at once. In water with low KH value the pH will fall off very fast. Do not use other acids like phosphoric acid, sulphuric acid or organic acids. The first two acids are extremely dangerous in handling and organic acids can cause bacteria bloom.

Hydrochloric acid is corrosive and you must take care while handling. Pay attention to the safety instructions on the bottle.

Water Climate

All factors that cause a bloom of *Aiptasia* are not known. These animals can survive in dark habitats by eating organic particles (heterotroph) and in bright habitats with the zooxanthellae (autotrophy). To reduce feeding for destroying *Aiptasia* makes no sense. All other animals will starve first. And many fishes gets aggressive if they do not get enough food. Fluid food for corals will increase the *Aiptasia* population, too.

The water parameters should be at their optimum. Especially too high nitrate and phosphate concentrations stimulate the growth of *Aiptasia*. But it is not possible to reduce these both fertilizers in that way that *Aiptasia* cannot growth. All other animals will die first.

Prophylaxis

If you have an *Aiptasia*-free tank new invertebrates on rocks (corals) should not be put into the tank at once. To prevent the introduction of *Aiptasia* but of others like *Turbellaria*, too, it is possible to steep the new animal for 10-15 seconds into reverse osmosis water (25°C). Only a very few corals do not like this procedure, but *Aiptasia* will not survive. Do not use this methods for anemones.