Saltwater Attack of the Fish Ich

How do you prevent a saltwater fish ich outbreak?

By Scott W. Michael

Q. I have a 75-gallon reef aquarium and since January my fish have been experiencing repeated saltwater ich attacks. Because the whole aquarium is infested, I decided to use a product called Organicure to cure the ich. I called the company and they said the medication was safe for invertebrates. However, various corals and anemones died during the treatment. They did not die right away. They stopped opening up and never recovered. Also during this time, most of the saltwater fishes continued to die. Maybe the medication is not strong enough or not as effective as it claims to be.

The ich seemed to disappear until last week, when it started again. Two weeks ago I began using a copper and iron absorbent to remove residual copper in the water. I also saw a display for the new product, X-Parasite, which claimed it is not copper based and is completely safe for all invertebrates. I started using both of these last week. Within a week a cleaner wrasse and a sleeper goby died. I suspect they ran out of parasitic foods to eat.

Do you know of any other more effective medication to get rid of ich in a reef aquarium? I started using a quarantine aquarium two weeks ago (I should have done this a long time ago). I used old gravel from the display aquarium and treated it with copper for a week. Then I added an ocellaris clownfish to cycle the water. I tested the water for nitrate a few days ago. Then I bought a yelloweye bristletooth (Ctenochaetus strigosus) and placed it in the quarantine aquarium yesterday. I plan on keeping it in quarantine for at least another three weeks, or until the aquarium is free of ich.

A. Like so many of us, it appears that you learned the hard way about the importance of quarantining your fish! Some people may tell you that the conditions in their reef aquariums are so good that you could add a sick fish and it will recover on its own. Although there is some merit to this claim, because a healthy environment does facilitate the immune system in fighting off disease, I have seen many reef aquariums become fish death traps because an infected specimen was introduced directly into the display aquarium. As you now know from personal experience, when a parasite gets a foot- (or should I say cilia-) hold in a reef aquarium it can be difficult to eradicate.

When it comes to saltwater fish parasites, prevention is the best cure, especially when you're keeping them in a reef aquarium. And the best way to prevent your reef aquarium from becoming disease ridden is by quarantining your fish! To all you saltwater aquarists who do not properly quarantine your fish, this is the only way you can be assured of having long-term success in maintaining a healthy fish community.

Proper quarantining is of even greater importance in a reef aquarium — if a fish gets sick it is difficult to treat them effectively because most antiparasitic medications will kill invertebrates. Another problem is that it is often difficult to remove a fish to treat it in a hospital aquarium. By quarantining your fish first, you will have the opportunity to observe, and medicate as appropriate, before they are introduced to the display aquarium.

What do I mean by properly quarantining your fish? First, let's consider the aquarium itself. I prefer using a 10- or 20-gallon aquarium that has no substrate. The simpler the better — you will tear the aquarium down and sterilize it after each quarantine period anyway. You need a light to observe your fish, set to a normal day-night cycle, and a heater and thermometer to maintain the proper water temperature. For biological filtration you can use a sponge filter or a power filter or canister filter filled with a plastic filter media (no crushed coral or carbon should be placed in these filters). A sponge filter, placed in the trickle filter on your display aquarium, or a functioning power or canister filter can be moved to the quarantine aquarium when you're ready to get a new fish.

After the quarantine period is completed it is very important to sterilize the filter and filter media before placing it back on the display aquarium. To do this, soak the sponge filter media or the inside of the filter in a mild bleach solution (2-percent chlorine bleach, the rest tap water) for 24 to 48 hours, and then rinse it repeatedly with freshwater until the chlorine smell is gone. To ensure that all the bleach has been reduced, place the sponge or filter media in a bucket of freshwater or place some water in a power or canister filter and add chlorine remover.

If you do not have the use of an established biological filter, you can just add an air source (airstone) and do frequent water changes (every second or third day change about 10 to 15 percent of the water) to prevent the buildup of

nitrogenous waste products. Although you need to make sure your fish is properly fed during the quarantine period, it is important not to overfeed. Remove any uneaten fish food from the aquarium immediately.

The quarantine aquarium should also have plenty of hiding places so the fish feels secure and less stressed. Plastic flowerpots with a hole cut in one side and a rock set on top to weigh them down work great as, do sections of PVC pipe. Stay away from hard coral skeletons and any calcium carbonate substrates (e.g., crushed coral) because they pull some medications out of solution and are more difficult to disinfect.

Your quarantine aquarium should not be set up near your display aquarium because parasites can be spread more easily this way, and it should have its own set of utensils (e.g., net, thermometer, scrubber pad). The reason for having separate equipment is to prevent the transfer of parasites from the quarantine to the display aquarium.

It is also possible to transmit pathogens from the quarantine to the display aquarium on your hands. To prevent this from occurring, vigorously wash your hands after working in the quarantine aquarium — but not with soap!

Between each quarantine period all utensils, decor and the aquarium should be disinfected. Fill the quarantine aquarium full of water, place the utensils and decor in the aquarium, add a small amount of chlorine bleach and let it set for 24 hours. Then remove the water and rinse the aquarium and accessories thoroughly and soak them in tap water with added chlorine remover.

As far as the quarantine procedure is concerned, I would recommend keeping your fish in quarantine for at least three weeks. It is important to observe it carefully during this period and to promptly treat it if a problem arises. If treatment is necessary make sure you leave the fish in quarantine at least 10 days after treatment is completed to ensure that the fish has fully recovered.

As a final disease treatment measure, some aquarists will give their fish a freshwater dip before moving them from the quarantine to the display aquarium. This is done by placing the fish in a bucket (which is designated for aquarium use only) containing freshwater. The freshwater in the bucket should be dechlorinated and the same temperature and pH as the quarantine aquarium.

Leave the specimen in the bucket for five minutes, but watch it carefully and remove it and place it in the display aquarium if it seems extremely distressed (e.g., swims about the bucket erratically, lies on its side). The freshwater in the bucket may contain parasites that have dropped off as a result of the change in salinity, so try not to transfer water from the bucket into the display aquarium. The best way to avoid this is to quickly lift the fish out of the bucket and into the aquarium with a soft fish net.

One important rule when quarantining is that a fish must go through the entire three-week process without being exposed to any other fish. If a new fish is added to the aquarium while another specimen is still being quarantined, you should start the whole three-week process over again.

I know of few treatments that can be used to eradicate parasites in a reef aquarium. One of the few medications I have tried, with limited success, is metronidazole. This can be used to treat velvet disease (Amyloodinium ocellatum). I would not use any copper- or formalin-based medications with invertebrates, no matter what the manufacturer says!

Dropping the specific gravity to about 1.016, over several hours, for a duration of two weeks, is another method some have reported success with in treating ich (Cryptocaryon irritans). It has been my experience that this procedure has no or little impact on parasitic infections. Others have reported that it is necessary to drop the specific gravity to 1.012 to successfully eradicate ich, which would also kill your inverts. If you try dropping the specific gravity to 1.016, it is important to monitor and maintain the proper calcium and alkalinity levels so that you do not kill your corals.

One final way to rid an aquarium of a parasitic infection is remove all the fish for two months. In this time period all the spores should hatch, and if there are no hosts to feed off, the parasites should die off.