## **CATCH IT EARLY** Preventing Cryptocaryon irritans (Marine Ich)



Below are the top reasons why an outbreak happens. Following proper quarantine procedure can prevent all of these reasons and more for an outbreak. Fish that are quarantined for thirty days with therapeutic levels of copper, hyposalinity, or chloroquine phosphate or fifteen days using tank transfer method can eradicate Cryptocaryon irritans from your fish.



Environmental Fluctuation/Degradation: Rapid changes or chronic issues in water quality parameters- especially temperature, dissolved oxygen, salinity, ammonia, nitrite and pH cause inhabitants to become stressed, suppressing the fishes immune system, allowing for Cryptocaryon irritans (Marine ich) to take hold on stressed fishes.



Epidemic Introduction: Introducing a fish that is a host to an already large quantity of Cryptocaryon irritans but obvious symptoms were not noticed prior to adding to the aquarium. This causes an outbreak which affects the new fish first but in time that threatens even healthy and unstressed fish due to overwhelming numbers of Marine ich that multiply by hosting on the unhealthy fishes.



Sympatric Aggression: The hostility from one or more cohorts causing physical damage that often results in damaged fins, slime coat and epidermis opening up the fishes immune system to be invaded by Marine ich. Even mild but chronic antagonism from cohorts can suppress the immune system of the subdominant fishes.



Human & Mechanical Failure: As aquarists, humans and mechanics are not perfect, thus at some point problems will arise causing stress to your fish. Whether or not a fish will have an outbreak of Marine ich depends on many factors, however, ultimately the decisive factor to avoiding a Marine ich outbreak is whether your fish are hosting it while the stressful situation occurred. Following proper quarantine procedure can eliminate the chance of your fish dying of Marine ich no matter the circumstances.



**Catch Marine ich early by identifying these symptoms**: White salt grains on fins, body and even eyes. • Heavy breathing 'Flashing' a.k.a. rubbing on décor like the fish has an itch • Lethargic • Loss of appetite

## Catching the infection early greatly improves survival of fish through treatment!

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