

FRAGGING

Zoanths

Marine Habitat welcomes Reef Culture owner **Jason Thresher** who starts his brand new series discussing techniques on how to care and create your very own frag garden. This time Jason looks at one of the most popular fragged corals – Zoanths!



JASON THRESHER

Age: 35

Hometown:
Bookham, Surrey, UK

Occupation:
IT manager; owner of
Reef Culture

Marine experience:
18 years

Tank size:
24g D-D Nano Cube

Favourite
fish: gobies and blennies
coral: zoanths
and palythoa
other: Pistol Shrimp

Specialist areas:
coral propagation

Image courtesy of
Neville Green.

OUR OCEANS AND CORAL REEFS ARE UNDER THREAT

The combination of pollution, coral bleaching, and unsustainable harvesting practices for the marine food and hobby trade have led to the complete devastation of many coral reefs and fish species around the world. Statistics vary, but generally indicate that between 10 and 15 per cent of the world's reefs have generally been destroyed.

The simple fact is that if left unabated, estimations indicate that by 2050, 60% of coral reefs will disappear from the world's oceans altogether. If our children and grandchildren are to enjoy our wonderful oceans, something has to be done urgently.

The good news is that if you have a marine fish tank, you are in a position to do something about it! Aquaculture, which was once the domain of large companies with hugely expensive setups, has become so mainstream that it can even be achieved in a relatively small tank.

In the coming issues, this series will provide fragging and aquaculture advice, and instructions on a huge range of corals, thereby equipping you to do the same.

TOOLS OF THE TRADE

The tools required for coral propagation are relatively simple. You will need the following equipment, depending on the corals you want to propagate.

BONE CUTTERS: An essential piece of kit if you are working with hard corals such as SPS and LPS.

TWEEZERS: These were procured, so to speak, from my wife's make-up bag and are fantastic for making the handling of the polyps easier. They offer precision because trying to hold a polyp with your fingers would be very difficult. (I advise caution if you are planning to source your tweezers in the same way as I sourced mine. Make sure you have chocolate nearby in case you get caught!)

SCALPEL: Essential for working with soft corals such as zoanths, mushrooms and xenia.

PLUGS AND MOUNTS: People have different tastes regarding what they like to mount the corals to. Some people prefer frag plugs, some frag discs, and others live rock rubble. Frag plugs are usually made from ceramic or aragocrete.

CYANOACRYLATE GLUE: While most superglue should work, it is worthwhile investing in a decent cyanoacrylate formulated to work in water. There is nothing worse than spending time and effort fragging corals, only to find empty plugs in the morning because the coral has detached from the poor-quality glue.

CONTAINERS: You will also need a couple of containers in which to keep the mother colony and frags while you work.

SAFETY EQUIPMENT: The final important bits of kit are a pair of safety glasses, a mask, and some latex gloves, because some corals such as zoanths can be toxic.

It is worth investing in decent tools and looking after them; saltwater is extremely corrosive and will eventually even cause stainless steel to rust. Washing the tools in fresh water and drying them after fragging goes a long way to prolonging their life.

I will kick off this series with advice and instructions on how to frag zoanths and palythoa. The most important thing to consider when working with zoas and paly is that they are toxic, and so you must wear safety equipment if you are to effectively frag these corals. Their polyps sometimes squirt when agitated, which is why eye protection should be worn. I have

seen some photos of people who have had a zoanthid squirt in the eye, and trust me, it is an experience you want to avoid!

POISON BREAKDOWN

The poison in question is called palytoxin, and was first discovered in a palythoa species in Hawaii. It has subsequently been discovered in zoanthids as well, and is one of the most toxic poisons known to occur naturally. The poison was used by Hawaiian locals to poison their hunting darts in the past, so it must be very potent indeed!

Toxicity varies, with protopalythoa and palythoa having the highest, and zoanthids having the lowest. However, caution should be taken when working with ANY coral of the genus. If you do handle any zoas or polyps without gloves, it is important to wash your hands thoroughly with soap and warm water afterwards. DO NOT touch your eyes, nose or mouth until you have. It is also important to mention that if you have open cuts on your hands and arms, it is best not to frag zoas until you have healed. It is possible for the palytoxin to enter these cuts and cause you problems. If you do come into contact with palytoxin and you start experiencing side effects, seek medical attention immediately. Having said that, thousands of people around the world have huge success fragging zoas, and with a little caution and common sense, so can you.

HOW TO FRAG ZOAS

There are four ways to frag your zoas:

- Method one involves using a scalpel to lift the zoa and its surrounding mat off the live rock it is attached to and gluing it onto a coral mount. In my opinion, this is the best method to use and is what the tutorial will be based on.
- Method two involves breaking up the live rock and gluing the pieces with polyps onto your coral mount.
- Method three involves cutting the actual stalk of the zoa in half and attaching the polyp head onto a mount. I don't recommend this method for beginners because it involves excess zoa slime and toxin, and has a lower success rate than the previous two methods.
- Method four involves lying frag tiles side by side and allowing the zoa to naturally grow from one tile to the next, then splitting the tiles to form a second colony.

POST FRAGGING CLEAN UP

I can't stress how important this is. You don't want to leave anything used for the fragging session lying around the house unsupervised. So these are the steps I urge you to follow.

- Throw any towels or cloths that you have used into the wash immediately.
- Dispose of the water that was in the fragging containers.
- Thoroughly wash all tools and containers with



fresh water, and then dry the tools.

- If the gloves you used were disposable, throw them away.
- Give the area where you were working a good spray with antibacterial fluid.
- Wipe down all surfaces.
- Wash your hands thoroughly with soap and water.

This might seem like a waste of time, but trust me it is not. I have heard of dogs dying after drinking the water from a frag container that had zoas in it, so it is important to follow the above steps.

POST FRAGGING CARE

So the zoas are fragged, you have cleaned up, and you now want to enjoy the fruits of your labour. These are the steps you should follow with newly fragged zoas:

- The zoas will probably sulk for a few days. Don't worry if your newly fragged zoas do not open. They could stay closed for up to a week.
- Place new frags in a lower flow section of the tank. Strong flow could wash the zoa off the plug.
- Lower the lighting for 24 hours. I have found that my newly fragged zoas respond well to subdued lighting.
- If you are fragging for trading or sales, allow at least 2 weeks for the zoa to recover and reattach to the plug. The adhesive is only meant to hold the zoa in place until it reattaches naturally.
- There are all manner of tank mates that could pose a problem to the new frag. Turbo snails and hermit crabs are capable of easily pulling newly fragged zoas off the plugs and urchins can do the same. I have a pistol shrimp that is partial to stealing frag plugs and using them to strengthen his burrow.
- The best solution is to use a frag rack to relocate the frags to a low-flow area and keep them safe from the tank mates.

Sometimes, no matter how well you have

fragged the zoas, or how well the zoas are protected, they still detach from the plug. If this happens and you are able to find the zoa polyps, just glue them back onto the plug and place it in an even lower flow area of the tank.

GETTING THE BEST OUT OF YOUR ZOAS

Assuming your zoas have survived the fragging and the boisterous tank mates, the next steps provide the best tank conditions for the zoas to thrive in.

- Zoas grow better in nutrient-rich water. I have experimented with various feeding regimes and a zoa that is fed always grows faster than a zoa that isn't fed. The zoas don't have to be target fed, although this brings even better results. Just having food in the water column should be sufficient.
- Zoas are not fussy about food types. I use flake, mysis shrimp and plankton.
- Decent lighting is also critical to your success. I have found that T5 lighting is more than adequate to keep the zoas healthy and happy.

OPTIMUM ZOA GROWTH

Frag your colonies often. I have found that mini colonies of around 20 to 25 zoas do best. Five colonies of 20 zoas will yield more polyps per month than a larger colony of 100 zoas. It must be remembered that zoas depend on surface area to grow, so the polyps in the middle of the 100 zoa colony will contribute little to the overall growth. The zoas on the fringe, however, will have more surface area to grow into and hence can expand faster. By utilising the idea of smaller colonies, you will have more zoas on the fringe and more surface area to grow into.

FINAL THOUGHTS

While fragging zoas might initially seem daunting, following a few simple steps will allow you to achieve very good results. Also, every frag you propagate yourself is at least one less coral that has been ripped out of the oceans. That alone should motivate us all to take up coral propagation.

Zoanthids come in a variety of colours and always make a bright addition to any marine tank. Image courtesy of Steve Bleazard.



FRAGGING - Zoanthids

FRAGGING NOTES

The most important thing when you are going to frag zoas is preparation. Firstly, you need an hour of uninterrupted time. Given the possible toxicity of the zoas, you can't afford to leave the fragging station unsupervised if you have children or pets. Accidents happen quickly, so be prepared and be careful.

Secondly, you want all your fragging gear within easy reach. You don't want to have to go in search of your trusty scalpel with hands covered in zoa slime and saltwater!

It is worth having a few containers with tank water in them. I usually have a large container for the mother colony and a smaller container for the frags and plugs.

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STEP 1

Here you can see the mother colony out of the tank. Don't worry too much about the colony being out of the water. It should be fine for 10 or 15 minutes at a time. What I do is give it a quick dip every few minutes just to keep the polyps moist.



STEP 2

If you can't find any loose polyps, slide the scalpel under the zoa mat. It is best to work from the outside of the colony towards the middle.



STEP 3

Here I have successfully removed a few polyps from the colony. Now would be a good time to dip the colony back in the water to moisten it a bit.



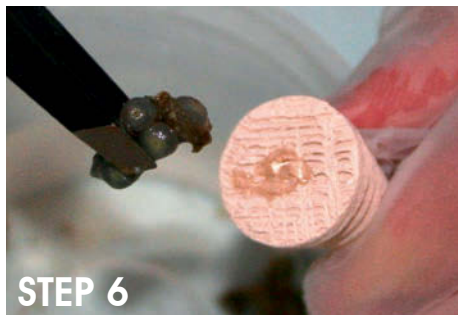
STEP 4

You can see my small container with the zoa polyps in it, as well as two of our Reef Culture frag rocks and a few zoa plugs. Everything is within easy reach.



STEP 5

Using a coral adhesive gel, apply the gel to the centre of your plug. It is a matter of taste, but I feel the gel allows for better adhesion when working specifically with zoas and polyps.



STEP 6

Here is where the tweezers come in handy. You can see that trying to pick up a few polyps with your fingers may be difficult, so tweezers fit the role perfectly.



STEP 7

Lay the zoas onto the gel and use the back of the tweezers to gently push them into the plug. Curing times vary, but the zoa should have decent adhesion within a couple of minutes.

STEP 8

After a couple of hours in low light, the zoas will slowly start to open. Within a few months in optimum growing conditions, many more heads should have grown on the plug.

