Welcome to SeaScope!

Welcome to the new digital edition of SeaScope, with the same information-packed issues coveted by marine aquarists everywhere since 1983. Each newsletter will continue to bring you a variety of topical articles, including reviews, product information, practical ideas, important case studies and interesting points of view. It's all meant to keep you in the know and at the forefront of the marine hobby. We hope you enjoy the issue, and welcome your comments and input.

Update: Coral Aquaculture for Restoration

Coral reef structures play an important role in protecting coastlines, while their beauty drives tourism around the world. Unfortunately, some experts predict they will soon disappear due mainly to climate changes and increased human activities, like coastal development or over-fishing. SeaScope Volume 25, Issue 1, 2009 contained the most recent reports from the Global Coral Reef Monitoring Network, which stated that 20 percent of the world's coral reefs are damaged beyond repair.

Enter the University of Florida's Tropical Aquaculture Laboratory, which is in its fifth year of researching coral aquaculture for restoration purposes. Working with funding from a Florida Wildlife Legacy grant, the project brings together Nova Southeastern University in Ft. Lauderdale, The Florida Aquarium in Tampa, Coral Reef Restoration Foundation in Tavernier and the University of Florida.

Two-inch fragments from Acropora cervicornis, a threatened species in the US, were collected from reefs off of Broward County (the Fort Lauderdale region) and from a nursery site near Tavernier Key, in the late winter and early spring of 2011. Half of the fragments were transported to the University of Florida Tropical Aquaculture Laboratory located in Ruskin, FL and grown in simple, recirculating tank systems in a greenhouse. Half the Broward County corals remained in a flow-through "pond" system on the Nova Southeastern University property, and half of the Keys corals remained on the off-shore nursery site.

Plans are to plant at least half of all the colonies this summer and compare growth and survival of the different corals depending on the culture techniques used. While the early data has not been fully analyzed, it appears that there is no significant difference in growth.
and survival between the various methods, which is encouraging. Being able to grow these threatened species in a number of locations, using a variety of methods, will provide more assurance that these corals will survive even if disaster strikes one location.

The systems at the University of Florida encompass a simple "surge" device bringing water into a long, fiberglass tank where the corals are cultured on elevated racks. A series of two, 100-gallon sumps are used to increase volume. The filtration and life support include a protein skimmer, a calcium reactor fed with compressed CO2, and a chiller for keeping temperatures down during the summer. All of the water used is made from Instant Ocean Sea Salt mixed with pure water generated from a reverse osmosis filter. Water exchanges are made monthly during cleaning of macroalgae in the tanks and are averaging 30 to 50 percent at a time.

Instant Ocean donates its Sea Salt to the project and is proud to be part of this developing research initiative.

A CONTINUING SERIES
Part 4a: Marine Gel Foods and Nutrition

Dr. Hubert Kuerzinger, Senior Scientist Nutrition, Tetra Global R&D Center Nutrition

Visit [www.instantocean.com](http://www.instantocean.com) to read more about Marine Fish Nutrition.

There are a variety of different food types available for feeding marine fish, and it is important to make the right choices to ensure your fish get the balance of nutrition they need.

Frozen food has traditionally been the main option for feeding many marine fish, especially those that do not readily accept dry foods. However, it is also well known that frozen foods have a number of disadvantages and are not always an ideal or convenient diet.

Now, there is a real alternative to frozen food - [Marine Gel](#) foods. Based on a patented gel-technology, this revolutionary new range of foods is set to change the way people feed their marine fish.

Marine Gel foods provide both the natural taste and texture that ensure excellent acceptance and a balanced supply of nutrients for good health. The gel is enriched with proteins, vitamins, minerals, essential omega-3 fatty acids and other nutrients important for marine fish. What's more, the careful production process makes certain that these nutrients are protected and fully available to the fish. [Marine Gel](#) foods are 100% safe, as they are fully sterilized to kill any potentially harmful microorganisms. They do not need to be kept in a freezer or fridge, nor do they require thawing or washing before use. They can be stored in the same place as dry foods and other aquarium accessories. In addition, because they come in convenient-to-use individual pouches, Marine Gel foods do not need to be handled. They can simply and easily be dispensed directly into the
Less active species who prefer to graze may find it hard to compete with other fish at feeding time. To ensure these fish get the nutrition they need, Marine Gel foods are also available in a 24-hour grazing block format. With two varieties for both herbivorous and omnivorous species, it is now possible to cater to aquariums containing species with diverse feeding habits.

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