“Red” gorgonians

Family Antothelidae, Genus *Diodogorgia*

Diodogorgia nodulifera – finger sea fan. The finger coral comes in two colors, bright orange yellow with red calyces and white polyps and the other is red with darker red calyces and white polyps. Finger corals are rather brittle and will break. They usually only grow to about 25 cm (10 inches). They are not photosynthetic. Usually found in water deeper than 25 meters (75 feet) on hard-bottom (among the top ten harvested species in state waters in 2008 by Dr. Henry Feddern).

Family Gorgoniidae, Genus *Leptogorgia*

Leptogorgia virgulata – sea whip, colorful sea whip.

Typical adult size of *Leptogorgia virgulata* is 15 - 20 cm. *Leptogorgia virgulata* occurs from New York and the Chesapeake Bay to Florida and Brazil.

Leptogorgia hebes – false sea fan, regal sea fan. Branch color may range from orange or red to purple. Polyps are white and alternate along the branches in rows. *Leptogorgia hebes* occurs from North Carolina to Brazil, including the east central and gulf coasts of Florida. Depth distribution is approximately from 25 - 130 ft. Typical adult size of *Leptogorgia hebes* is 15 cm.

Family Plexauridae, Genera *Swiftia* and *Muricea*

Swiftia exserta – orange tree gorgonian. (this species was #3 among the top ten most harvested species in 2008 by Dr. Henry Feddern in the South Atlantic).

The various members of the genus Muricea, which includes photosynthetic and non-photosynthetic species, are a bit delicate in captivity. The deepwater fine branched "silver bush" gorgonian from Florida is an exception. It ships well and is hardy in aquariums. A sister species to the silver gorgonian Muricea is rusty-orange colored, occurs in shallow water (10 feet deep) along the Keys, and is very hardy in aquaria.

Other species require very strong water currents or surge to survive, and they ship poorly, often decomposing a day or so after being transported.

Muricea pendula -- North Carolina to Florida Keys; Gulf of Mexico, 13-125 m.

Muricea muricata—spiny seafan. Pale yellowish brown to light brown; polyps white.

Muricea elongata – orange spiny sea rod. Branches yellow to yellowish brown, orange or amber. Polyps white. Inhabit a wide range of shallow to moderately deep environments; from sandy bottoms to sloping rocky substrates and patch reefs. Common to occasional in Florida, Bahamas and Caribbean.

"Purple" gorgonians

The three species of *Pterogorgia* are common on backreefs and nearshore habitats, growing upright in extremely shallow water. They tolerate very bright illumination, and thrive where other gorgonians would quickly become smothered by algae. Their success is largely due to their capacity to shed a waxy surface coating that prevents algae from gaining a foothold on them. They are not successful at preventing another type of gorgonian from growing on them. The encrusting gorgonian, *Briareum asbestinum* commonly grows onto and over *Pterogorgia*, kills it, and uses the former's axis for structural support.

Pterogorgia has the poorest long-term survival record in aquariums. This stands in contrast with its position as among the most tolerant of wide fluctuations in temperature and water quality in the habitat where it naturally occurs. It has a very good survival rate in shipping, with very low mortality.

The poor survival in captivity relates to this genus seeming to require very strong illumination. It also seems to need some supplemental feeding. When strong light is given the members of this genus grow well in captivity.

Pterogorgia sp.-- purple sea blade gorgonian or purple ribbon gorgonian. It is a branching coral that is closely related to hard corals and predominately found in shallow waters. Its branches are flattened and blade-like, with polyps extending along the edges. Like other members of this family, it is photosynthetic. It is extremely difficult to identify its exact species unless it is examined under a microscope. Color variations are brown, gray, olive, orange, purple, yellow.

Pterogorgia anceps -- angular sea whip, angular sea whip. (this species is #9 among the top ten most harvested species in 2008 by Dr. Henry Feddern).

Pterogorgia citrina -- yellow sea whip, yellow sea whip. Small, bushy and highly branched colonies. Branches quite flat and narrow with polyps extending from swollen, slit-like apertures along the thin edges. Branches bright yellow to green to olive with purple edges, occasionally all purple; polyps white to cream. Colony height: 4 - 12 in. Branch width: 0.25 in Inhabit a wide range of shallower, inshore environments, from back reef areas to patch reef in 3 - 40 ft. (this species is # 10 among the top ten most harvested species in 2008 by Dr. Henry Feddern).

Pterogorgia guadalupensis -- grooved-blade sea whip.

"Other" gorgonians

Pseudopterogorgia

Members of the genus *Pseudopterogorgia* have narrow smooth branches and the colonies are commonly pinnate (feather shaped). The most common colors are pale lavender and brown, but they may be gray, deep purple or yellow. In Florida there are five common species found on the reefs and numerous other species that occur only in back reef areas and in bays. The most popular species that is commercially harvested for aquariums is *Pseudopterogorgia elisabethae*, known in the aquarium trade

as the "Purple Frilly." It occurs on outer oceanic reefs, attached to vertical faces and the undersides of ledges. This contrasts with most other species in this genus that normally are attached upright on hard flat bottoms, or on the tops of reef structures. *Pseudopterogorgia bipinnata* occurs with *P. elisabethae*, attached in the same orientation, and ranges slightly deeper. It looks quite similar to *P. elisabethae*, but has finer branches. It may be deep purple, but more commonly is pale gray.

Pseudopterogorgia americana is a giant species with a rapid growth rate. It may reach heights in excess of six feet and colony diameters of more than eight feet. This species is not popular in the aquarium trade because it is too large and produces a lot of slime. It does not survive well in holding tanks.

Potent anti-inflammatory agents have been identified from the Purple Frilly gorgonian, *Pseudopterogorgia elisabethae* collected in the Florida Keys. New compounds are being discovered from extracts of this species and other members of the same genus. The compounds include novel pseudopterosins, seco-pseudopterosins and elisabethadione. *P.elisabethae* was the most harvested species from South Atlantic Federal waters in 2008 by Dr. Henry Feddern. Two other species in this genus ranked among the top ten most harvested species in the South Atlantic by Dr. Henry Feddern in 2008.

Muriceopsis

This genus has two common species in the Caribbean, *M. flavida* and *M. sulfurea*. The former is sold under the common name "purple bush." The latter is not harvested commercially for the US and European aquarium trade. The purple bush was #2 among the top ten most harvested species in 2008 in the South Atlantic by Dr. Henry Feddern. *Muriceopsis flavida* is hardy and easy to propagate in aquariums.

Plexaura

The genus *Plexaura* has two common Caribbean species, *P. flexuosa* and *P. homomalla*, and at least a couple additional uncommon species. The former is commonly purple while the latter is a distinctive chocolate brown. This genus, *P. homomalla* in particular, gained attention in the scientific literature because it produces prostaglandins, steroids known usually from mammals. Prostaglandins have also been found in *Plexaura nina* and the arctic soft coral *Gersemia fruticosa*. These compounds are believed to be used for defense, to prevent predators from eating the gorgonian. Members of this genus do not ship well and are therefore rare in captivity.

Plexaurella

The slit-pore gorgonians belong to the genus *Plexaurella*. They are all pale brown or yellowish, and form colonies with club-tipped branches. Large specimens may have many branches, but average sized colonies consist of a main axis and just a few branches, giving a shape like a big saguaro cactus. These are very hardy and can be recommended as a "beginners" coral. Plexaurella sp. is #8 among the top ten most harvested species in the South Atlantic (Dr. Henry Feddern).

Pseudoplexaura

There are three common species in Florida and an unknown number of others in Florida and the Caribbean. *Pseudoplexaura* species are similar to *Plexaurella*, but are distinguished by having purple sclerites, and round pores. All *Pseudoplexaura* spp. have a slimy consistency, while only one species of *Plexaurella* (that appears to be a mimic of the former genus) does.

Pseudoplexaura spp. grow very rapidly, and new branches seem to appear literally overnight sometimes. A swelling of tissue precedes their development. This rapid growth seems to be promoted mostly by the symbiotic zooxanthellae rather than food additions, though this species readily accepts fine particulate foods. It is a simple matter to cut off branches and propagate this species, though the slime production makes them poor shippers.

References:

Caribbean Gorgonians: Beauty in Motion: http://www.advancedaquarist.com/issues/mar2004/invert.htm

Animal World: http://animal-world.com/

Guide to the Shallow-Water (0-200m) Octocorals of the South Atlantic Bight: http://www.dnr.sc.gov/marine/sertc/octocoral%20guide/octocoral.htm

Integrated Taxonomic Information System (IT IS): http://www.itis.gov/index.html

PetEducation.com: http://www.peteducation.com/

Smithsonian Tropical Research Institute: http://biogeodb.stri.si.edu/bocas_database/

Dr. Henry Feddern, SAFMC Coral AP member and marine life harvester.