

# Flower Garden Banks National Marine Sanctuary

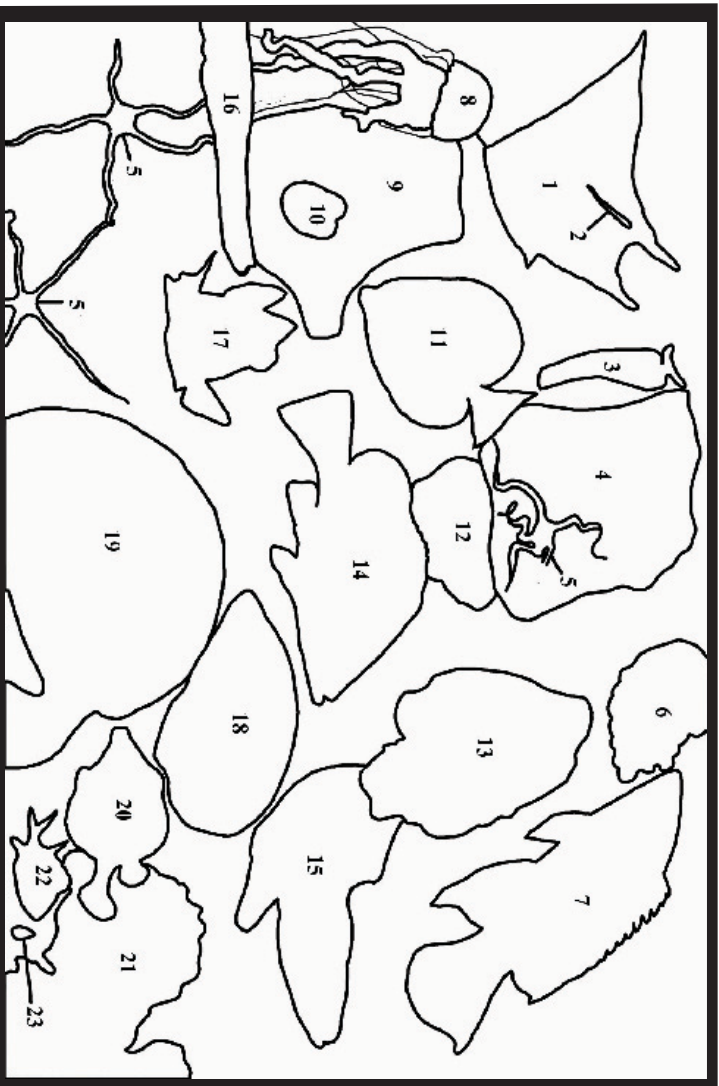


The Flower Garden Banks National Marine Sanctuary, located roughly 100 miles south of the Texas/Louisiana coast, harbors the northernmost coral reefs in the continental United States. Massive boulders of brain and star coral, as well as drowned reef areas, provide habitat for multitudes of colorful reef fishes, sponges, delicate marine plants, and sea turtles, and a relatively shallow environment for the pelagic manta rays, and whale sharks. The pristine reefs are bathed in clear, warm waters carried into the Gulf of Mexico through the Yucatan Strait to the Flower Garden Banks and Stetson Bank. Divers visiting the Sanctuary hope to witness the annual mass coral spawning, large schools of hammerhead sharks, or catch a glimpse of the unique golden phase of the smooth trunkfish.

*Sanctuary Collage. Photography by Joyce and Frank Burek, Mary Donato-Curie, Emma Hickerson, GP Schmahl and Russ Wilkins.*



# Key to Sanctuary Collage



1. Divers visiting the Flower Garden Banks often encounter these graceful manta rays (*Manta birostris*) swooping and gliding through the pelagic zone above the coral reef cap. On the edges of the reef, these animals are sometimes seen performing acrobatics referred to as “barrel rolling” - a feeding behavior by which the animal funnels the water (and plankton) into its mouth. Through recent surveys at the sanctuary, at least 35 individuals have been identified by their characteristic markings on their undersides.
2. The remora (*Remora remora*) can often be seen hitching a ride on larger, free-swimming fish such as sharks or the manta ray. The remora attaches to its host using an adhesive disk located on the top of its head, which is actually a highly modified dorsal fin. This animal can then obtain bits of food missed by its host, as well as use the animal as a means of transportation.
3. An animal rarely encountered is a very colorful sea slug, the painted elysia (*Elysia picta*). Not many sea slugs have been documented at the sanctuary, perhaps because we have limited numbers, but also because divers tend to overlook these small, cryptic animals.
4. The phenomenon of the annual mass coral spawning (including this star coral, *Montastrrea franksi*) usually occurs 7 to 10 days after the full moon in August. The Flower Garden Banks coral reef system is probably the most visually prolific site in the Caribbean to witness the event because of the large colonies and high coral coverage of the mass spawners. At least 7 species of coral participate in the spawning event, as do numerous species of sponges, fish, and brittle stars.
5. The ruby brittle star (*Ophioderma rubicundum*) takes advantage of an abundance of food during the annual mass coral spawning event. These animals generally live in the deeper parts of the reef and can be found underneath coral ledges. Ruby brittle stars are nocturnal animals, and therefore are much more active at night.
6. This great star coral (*Montastrrea cavernosa*) is one of more than 20 species of coral found at the sanctuary. The polyps of this coral are easily visible and about the size of a human thumb nail. This animal extends its tentacles at night to feed on small planktonic animals.
7. A colorful addition to the sanctuary is the Spanish hogfish (*Bodianus rufus*). As a juvenile, this animal acts as a cleaner fish, removing parasites and debris from larger fish. While some fish continue this behavior for life, the Spanish hogfish ceases this activity once it matures and changes its diet to include mollusks, sea urchins and crabs.
8. The sea nettle (*Chrysaora quinquecirrha*) is a jellyfish that can sometimes be seen pulsing through the waters above the reefs at the sanctuary. This animal has four ruffled oral arms, surrounded by a number of nematocyst-bearing tentacles. Divers beware as these tentacles can deliver a painful sting when they come into contact with bare skin.

9. Sponges are found on all three banks in the sanctuary. However, the most prolific and colorful sponges are known to be found on Stetson Bank. Encrusting sponges such as this brightly colored variety vary widely in shape and size, and microscopic examination is often required to identify the species.
10. A small fish frequently overlooked by divers is the seaweed blenny (*Parablennius marmoratus*). These animals are quite common at Stetson Bank, and can often be seen looking out of small holes or crevices. The hair-like appendages located directly above their eyes are called cirri, and a key to identifying them are the tiny iridescent lines radiating out from their eyes. Two color variations are seen – the pale white, and the brilliant golden variety.
11. This juvenile blue tang (*Acanthurus coeruleus*) is easily spotted swimming among the reefs with its bright yellow coloration. As the fish matures, it will change to a powder blue or deep purple. These animals feed on algae found growing on coral or other substrates in the sanctuary. Their teeth are specially adapted to assist them in this feeding behavior.
12. This coral, the ten-ray star coral (*Madracis decactis*) is an inhabitant of all three banks of the sanctuary. Perhaps the most recognized spot that is home to this coral is Sierra Madracis, which is located on Stetson Bank. Divers who enjoy this area gave Sierra Madracis its name.
13. One cephalopod found at the sanctuary is the Caribbean two-spot octopus (*Octopus filosis*). The cephalopods are one of the least known classes on the sanctuary, and Octopus filosis was only recently found to inhabit the area. This species can be recognized by the iridescent blue ring located in an ocellus, or false-eye spot.
14. Due to its diminished numbers, probably caused by over fishing, the marbled grouper (*Dermatolepis inermis*) is rarely seen by divers. The juvenile grouper is stunning to see – jet black with large irregular white splotches. Before reaching a medium size, the juveniles have historically been documented associated with aggregations of spiny sea urchins (*Diadema antillarum*). The marbled grouper can be large in size, reaching a maximum of 3 feet in length.
15. While most moray eels are nocturnal and feed at night, the goldentail moray (*Gymnothorax miliaris*) forages for food during the day. It is commonly seen inhabiting holes or recesses found in the reef. This animal continuously opens and closes its mouth, which was once thought to be a threat to divers. However, this action is not a threat, and is required in order for the moray to respire.
16. A uniquely shaped fish that divers encounter at the sanctuary is the trumpetfish (*Aulostomus maculatus*). The trumpetfish has a long, thin body and a tubular snout with a terminal mouth. This animal can often be found floating vertically, head down, alongside gorgonians such as sea rods or sea feathers, which serves as excellent camouflage for the animal and helps to protect it from likely predators. Gorgonians are not found on the reef cap of the sanctuary, so the trumpetfish have to make do with, for example, a mooring line.
17. The smooth trunkfish (*Lactophrys triquetra*) is commonly seen swimming above the reefs at the sanctuary. This animal is a type of boxfish, and its body is almost completely enclosed in a carapace formed from modified scales. This protective encasing gives the smooth trunkfish its unique shape and serves to discourage predators.
18. The Atlantic deer cowrie (*Cypraea cervus*) is a type of mollusk that can be found grazing on algae on, and at the sanctuary. This animal possesses a lustrous shell that once was highly prized in shell collecting. These animals are now protected from such shell collecting at the Sanctuary.
19. Underwater surveys and satellite tracking have determined that the loggerhead sea turtles (*Caretta caretta*), such as the one pictured here, have fairly tight home ranges encompassing the East and West Flower Garden Banks. The animals are often encountered resting underneath the coral ledges at night. Divers can report their encounters with sea turtles to the sanctuary office using sighting cards provided to the recreational charter operators.
20. This golden phase of the smooth trunkfish (*Lactophrys triquetra*) tops the list for fish watchers - the coloration takes divers by surprise, as the usual color expressed is a rich chocolate brown to black with white spots and honeycomb markings. The golden phase of this trunkfish is only found, to date, in two places in the Caribbean – the sanctuary and the Bay of Honduras. Recreational divers can contribute to the monitoring efforts of the reefs by conducting reef fish surveys during their dive.
21. This colorful addition to the sanctuary is the branching tube sponge (*Pseudoceratina crassa*). The most simple member of the animal kingdom, this sedentary filter feeder is found on all three banks of the sanctuary. The most prolific and colorful sponges can be found on Stetson Bank.
22. One species of fish encountered at the sanctuary is the squirrelfish (*Holocentrus adscensionis*). With its prominent large eyes, this fish is most active at night. Divers can also spot this fish during the day in recesses or shaded areas along the reef.
23. Christmas tree worms (*Spirobranchus giganteus*) are abundant throughout the sanctuary, and in many shades of color. The two “trees” are the gills of the worm – the body, which is embedded in the coral, may be nearly a meter in length. These animals usually withdraw into their tubes when approached, but if divers are still and patient, they will slowly extend.

*Developed by Flower Garden Banks Research Team 2003*

**For more information contact: Flower Garden Banks National Marine Sanctuary, 1200 Briarcrest Dr., Ste. 4000, Bryan, TX 77802 (979) 846-5942; [flowergarden@noaa.gov](mailto:flowergarden@noaa.gov); <http://flowergarden.noaa.gov/>**

References: Reef Fish Identification, Reef Creature Identification and Reef Coral Identification by Paul Humann and Ned DeLoach. New World Publications.