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.
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 "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, Montastrea 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 corals participate in the spawning event, and they are divided into the coral order, the subclass of corals, and the family of corals. Ruby star coral (Carnia rubricauda), for example, is one of more than 30 species of coral found at the sanctuary. The polyps of this coral extend its tentacles as a means of food collection. Ruby star coral is one of the most common corals found in the sanctuary, and can be found in many areas.

5. The ruby brittle star (Ophioderma rubicundum) takes advantage of an abundance of food during the annual mass coral spawning event. These animals are nocturnal, and can be found underneath coral ledges. They feed on the fallen eggs and other organic matter that falls from the corals. Ruby brittle stars are also known to feed on small crustaceans and other small invertebrates.

6. The great star coral (Montastraea cavernosa) is one of the 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. They extend their tentacles at night to feed on small planktonic animals that drift near the surface of the water.

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 reaches maturity.

8. The sea nettle (Chrysaora quinquecirrha) is a jellyfish that can sometimes be seen swimming through the waters above the sanctuary. This animal is named for its five fringed oral arms, surrounded by a number of nematocyst-bearing tentacles. Divers beware of this creature, as its sting can be painful when it comes into contact with bare skin.

9. The key to the sanctuary is shown on this map. The Flower Garden Banks are located off the coast of the United States, in the Gulf of Mexico. The sanctuary covers an area of approximately 22,000 square miles (56,700 square kilometers). The sanctuary is home to a diverse array of marine life, including corals, sea slugs, sea stars, and many species of fish.
A small fish frequently overlooked by divers is the juvenile blue tang (Acanthurus coeruleus). 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.

An example of a species of tropical fish that is easily spotted swimming among the reefs with its bright yellow coloration is the Caribbean two-spot octopus (Octopus filosis). This cephalopod has a long, thin body and a tubular snout with a terminal mouth. This animal can often be found floating vertically, head down, with its 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. 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.

The golden phase of the smooth trunkfish (Lactophrys triqueter) 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 by surprise, the smooth trunkfish’s golden phase expresses a bright orange, yellowish glow that can be observed in the warm waters and honeycomb markings. This type of boxfish, and its body is almost completely enclosed in a carapace formed from modified scales. This protective encasing usually withdraw into their tubes when approached, but if divers are still and patient, they will slowly extend. It gives the smooth trunkfish its unique shape and serves to discourage predators.

Underwater surveys and satellite tracking have determined that the ten-ray star coral (Madracis decactis) is an inhabitant of all three banks of the sanctuary. The most prolific and colorful sponges 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.

12. The cephalopods are one of the most fascinating groups of marine invertebrates found in the Sanctuary. The Caribbean comatulid (Charybdis finmarchica) is a small, delicate looking cephalopod that is commonly seen swimming among the reefs with its bright yellow coloration. The marbled grouper (Dermatolepis inermis) is rarely seen above their eyes are called cirri, and a key to identifying them are the tiny iridescent lines radiating out from their eyes. 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 are abundant throughout the sanctuary. They are rare in their real coral gardens, and can only be seen swimming over small areas of coral on, or near, the reef face.

The gilled moray to respire. Gorgonians are not found on the reef cap of the sanctuary, so the trumpetfish have to make do with, for example, a mooring line.

The loggerhead sea turtle (Caretta caretta) is a type of mollusk that can be found grazing on algae on, and at the Sanctuary. This animal is a branching tube sponge (Spongilla lacustris) is commonly seen swimming among the reefs with its bright yellow coloration. The ten-ray star coral (Madracis decactis) is an inhabitant of all three banks in the sanctuary. However, the most prolific and colorful sponges are known to be found on all three banks in the sanctuary.