





—Diving Mexico's Sea of Cortez, Midriff Islands and Baja California.

Whale shark, whale shark! After several unsuccessful hours of searching the bay by small boat, these longawaited words came as a welcome relief. Only a handful of us had heard the radio call after opting to stay behind and skip the last dive of the trip. The excited skiff driver making the transmission had just dropped off his divers when a 15- to 20-foot juvenile whale shark came up to investigate. An explosion of activity ensued as our remaining few frantically scrambled for snorkel gear and made last second camera checks before jumping into the now returning skiff in hopes of seeing the world's largest fish up close. For 16 magical minutes we were fortunate to have a very inquisitive youngster exhaust each of us in turn with its oversized version of follow the leader. The whale shark literally chased us in circles at the surface, as we passed the virtual baton, from one snorbreath before it came around again.



keler to the next, in hopes of catching our Head-on view of a juvenile whale shark just below the water's surface, Bahia de los Angeles (above); Panoramic view of Salsipuedes Island in late afternoon sunlight (top); Diver and yellow polyp black coral growing on rock wall at Andrea's Eagle off Angel Island. PREVIOUS PAGE: California sea lions circling each other at Ravijunco off San Pedro Martir Island



68 X-RAY MAG: 56: 2013

EDITORIAL FEATURES TRAVEL







Bahia de los Angeles

Whale sharks are commonly seen in this area from late July through September, and as this was the

first week of October—we were very lucky to have such an interaction. Located on the eastern shoreline of the Baja Peninsula,

this large, protected anchorage is also known as the Bay of the Angels and Bay of LA. The entrance to the bay is dotted with 16 separate islands and farther east, across the Canal de las Ballenas (Whales Channel), lays the southern portion of Isla Angel de la Guarda (Angel Island).

## Angel Island

The second largest of the Midriff Islands, Angel Island is the northernmost landmass of the archipelago. This rugged, mountainous and uninhabited island is 69km (42.7mi) long, runs northwest to southeast, and contains no freshwater. The arid landscape supports various grasses, succulents and shrubs, along with a variety of birds and reptiles. The Angel Island speckled rattlesnake exists nowhere else, and the cardon cactus—nearly

endemic to Baja California—is the world's largest cactus, growing as tall as 18m (60ft).



Diving the Midriff Islands is accomplished by liveaboard dive boat. Trips typically run Saturday to Saturday from July through early October and include five and a half days of diving plus snorkeling opportunities with whale sharks and other pelagics when possible. Passengers are shuttled from the United States at Phoenix, Arizona's Sky Harbor International

Airport, through the Sonoran desert and the Organ Pipe Cactus National Monument, across the Mexican border and on to Puerto Penasco (Rocky Point), where guests board the boat for their overnight passage, traversing the Sea of Cortez.

We awoke that first morning to glassy sea conditions, while motoring into Refugio Bay, at the northern end of Angel Island.







69 X-RAY MAG: 56: 2013



Male orangethroat pikeblenny (left) displaying to attract a mate while in it's burrow off Angel Island; Aggregation (right) of juvenile blue-and-yellow chromis, scissortail chromis, Mexican hogfish and king angelfish swimming above the rocky reef at Andrea's Eagle, Angel Island; Angelfish swimming amongst yellow polyp black coral off Angel Island (below)

lions swam by for closer inspection. Lolo's Cove offered our first look at the endemic bullseye electric ray, and our guide pointed out a pair of seahorses that had taken up residence within the structure of an old lobster trap. A school of baitfish, corralled by circling barracuda, pro-

Over the next two days we would explore several dive sites, rock outcroppings, bays and coves as the crew guided us down the western side of the island.
Our first stop was La Muela (Molar Tooth) for a shallow check out dive. Here, we were

treated to an array of bluespotted jawfish, living in burrows amid the rocky bottom, several species of stingrays and a fine spotted moray eel. Next came a drift dive along walls covered in gorgonians, hydroids and several schools of fish, all the while, dozens of curious California sea

vided plenty of distraction on our safety stop.

The Sea of Cortez, or Gulf of California as it is also known, offers a varied mix of macro subjects, scenic rocky reefs

and pelagics. Numerous colonies of California sea lions provide ample opportunities to dive and interact with these gregarious underwater acrobats. Whale sharks and sperm whales can be seen in the late summer and fall, along with pilot whales, dolphins, manta and mobula rays.

For those adventurous souls willing to jump into a cage at night, it is also possible to dive with humboldt squid. Sadly, whether a product of climate change, over fishing or a simple change in their whereabouts, the squid have become increasingly hard to find.

Sharks are another species that are difficult to locate around the Midriff Islands, and unfortunately, mankind is very much to blame for their absence. From 1985-1995 over 200,000 sharks were killed by fishermen from camps in San Francisquito Bay, 50 miles south of Bahia de Los Angeles. Sadly, an equal amount of bycatch was also discarded in the process, and when it was over, the shark population was decimated. We were encouraged to see a couple of sharks swimming at the surface during our trip, and I hope that they make enough of a comeback to consistently be found underwater as well.



Fine spotted jawfish hiding in rubble burrow on sea floor off Angel Island



70 X-RAY MAG: 56: 2013

EDITORIAL

FEATURES

TRAVEL

WRECKS

**EQUIPMEN** 

SCIENCE & ECOLOG

EDUCATI

PROFILE

PHOTO & VID

PORTFOLIO

**Sea of Cortez** 

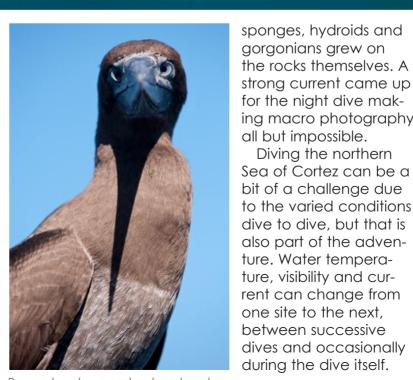


California sea lion (left) just below the surface at El Morro, San Pedro Martir Island; Raft of California sea lions (right) reflecting in the smooth surface of the water and diver (below) with playful California sea lions at Ravijunco, off San Pedro Martir Island

ders and abundant marine life. The crevices between the rocks allowed for plenty of hiding places for the various invertebrates and reef fish, while anemones,

Andrea's Eagle. Our second the size of a baseball—hid day of the expedition began in a burrow in deeper water. with two dives at Andrea's Large aggregates of blue Eagle, one of my favorite and yellow chromis, Mexican sites—so named for the osprey hoafish and king angelfish pulsated above the rocky reef (fish eagle) nest on the cliffs overhead. Underwater, this and Cortez angelfish swam through forests of pristine rocky pinnacle provided an yellow polyp black coral at equal breadth of amazing wide-angle and macro subdepth. iects. Male orangethroat pikeblennys were displaying for a

**El Aquario**. After lunch we had two dives at El Aquario, a site with piles of large boul-



for the night dive making macro photography all but impossible. Diving the northern Sea of Cortez can be a bit of a challenge due

to the varied conditions dive to dive, but that is also part of the adventure. Water temperature, visibility and current can change from one site to the next, between successive dives and occasionally during the dive itself.

Strong tidal currents produced by the lunar tides in the Pacific Ocean can create drift dive conditions and are especially robust during a full moon. These tidal currents also produce upwelling's that bring nutrients from the depths, which can affect visibility as well as temperature. Amongst the various dive sites, over the week of diving, we experienced a ten-degree difference in temperatures.

San Pedro Martir Island

Overnight, the boat moved south from Angel Island to the island of San Pedro Martir, and we were subsequently serenaded awake by hundreds of brown booby birds fishing for their breakfast.

Brown booby perched on boat

71 X-RAY MAG: 56: 2013

mate in the shallows, while a

fine spotted jawfish—its head

TRAVEL



CLOCKWISE FROM LEFT: Stone Scorpionfish, with dorsal fin raised, at Ravijunco, San Pedro Martir Island: Tubedwelling anemone tentacles flowing with current; Pacific creolefish resting in a crevice on the rocky reef at night; Giant hawkfish hiding in a crevice on the rocky reef off San Pedro Martir Island

dens. Countless scorpionfish, in a

multitude of colors, dotted the reef, along with several giant hawkfish, tube-dwelling anemones and panamic cushion stars.

After dark we returned to Ravi Junco, scouring the large rock formations to find sleeping fish, moray eels and scavenging pinto spiny lobsters.

followed closely by an aggregation of king angelfish and chromis, and then ultimately more sea lions joined us at our safety stop, posing for photos amidst the sun's rays.

El Arroyo. That afternoon we dove a site called El Arroyo where deep sand channels separate rock formations and black coral gar-



Panamic cushion star covered in hundreds of baby brittle stars

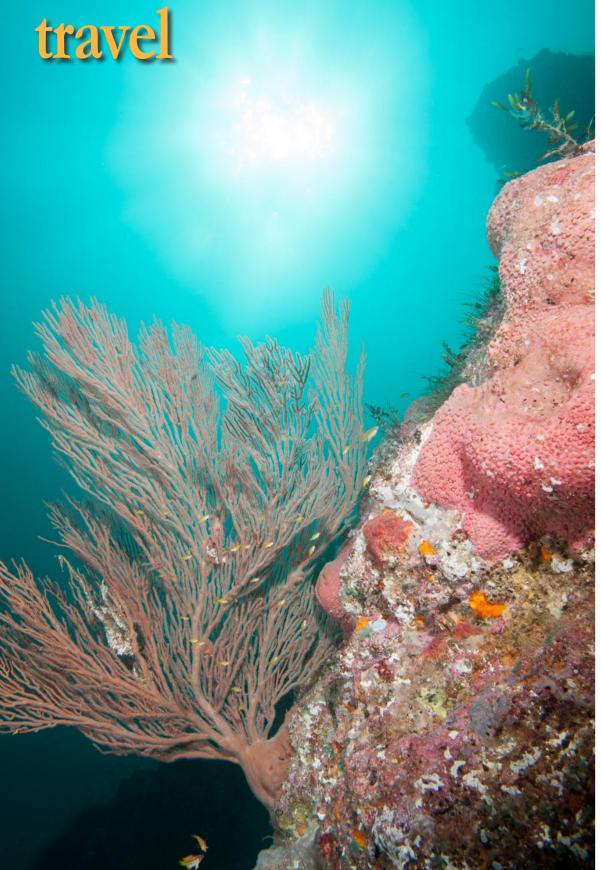
El Morro II and Shareny. Two more amazing rock pinnacles were explored the following morning at El Morro II and Shareny. Each was covered in gorgonians, hydroids, sponges, black coral and large schools of reef fish. When compared to some of my previ-

ous destinations like the Socorro Islands, Cocos or the Galapagos, I found the colors and reef life here much more vibrant. While each of these locations has similar underwater topography and fish species, only the Sea of Cortez had reefs with such vitality and beauty.

Ravi Junco and El Morro. The early morning was spent frolicking with sea lions at Ravi Junco as they swam circles around each other and us, often hovering above

unwitting divers, playing in their bubbles. From there we moved to a rocky pinnacle called El Morro, where a huge school of Pacific creolefish swam by to greet us,

72 X-RAY MAG: 56: 2013 TRAVEL



Salsipuedes Island The final full day of diving brought even larger numbers of sea lions, both floating in rafts on the surface and swimming en mass underwater. The rafting behavior entails several sea lions floating together at the surface, often raising one or more of their flippers out of

**CLOCKWISE FROM LEFT:** Large gorgonian sea fan and pink barrel sponges at Shareny off San Pedro Martir Island; Balloonfish hiding in rocky reef; Pinto spiny lobster hunting on the rocky reef at night at Ravijunco, San Pedro Martir Island; Pyramid sea star amonast pink barrel sponges with scissortail chromis swimming overhead at Shareny off San Pedro Martir Island

the water as a form of thermoregulation. We found many of the usual fish suspects, as we dove two more pinnacles covered with marine life. New additions from the first dive included several finescale triggerfish protecting their nests in the sand and a pair of seahorses was discovered on the last dive of the day.

I skipped that last dive to hike and explore Salsipuedes Island and photograph the hundreds of brown pelicans lining its coastline. I also took advantage of being on dry land, using my tripod to create a panoramic image of the island itself and document several Sally Lightfoot crabs. At sunset, I was

fortunate to silhouette three pelicans on a rock outcropping against a beautiful orange sky reflected in the water's surface. While disappointed to have







73 X-RAY MAG: 56: 2013





missed the seahorses, I was very pleased with my land excursion and topside shots.

The Midriff Islands are remote and isolated, the terrain rugged and the scenery dramatic. Spectacular sunrises are only outshined with brilliant starry nights and the complete lack of light pollution or any sign

of civilization. Ours was the only boat we saw for days, and our only companions on the water were the dolphins that played in our wake during transports.

It is hard to put into words the peace and tranquility that comes from being so removed from daily life. The sights and





Scissortail chromis (above) over pink and yellow barrel sponges at Shareny, San Pedro Martir Island; Raft of California sea lions (top) near Salsipuedes Island; California sea lion (top left) over rock wall covered with barrel sponges and stinging hydroids at La Pared, San Pedro Martir Island; Sea lions (left) swimming close to each other underwater at El Caballo, Salsipueded Island



74 X-RAY MAG: 56: 2013 EDITORIAL FEATURES TRAVEL NEWS WRECKS EQUIPMENT BOOKS SCIENCE & ECOLOGY TECH EDUCATION PROFILES P





Images this page from Salsipuedes Island. CLOCKWISE FROM LEFT: Sally Lightfoot crab on rocky shoreline; Flock of brown pelicans taking flight; Three brown pelicans silhouette against an orange sunset sky

To see more of his work and to order photo prints, please visit: Matthewmeierphoto.com

SOURCES: WIKIPEDIA.ORG ROCIODELMARLIVEABOARD.COM SEAWATCH.ORG/SEA\_OF\_CORTES/SHARKS\_ DEATH CAMPS.PHP

sounds of the Sea of Cortez will remain with me for quite some time, and I very much look forward to my next visit.

The author extends a special thanks to the management and crew of the Rocio Del Mar (Rociodelmarliveaboard. com) for hosting this adventure. The author also thanks Blue Abyss Photo (Blueabyssphoto.com) for assisting with underwater photo gear.

Matthew Meier is a professional underwater photographer and travel writer based in San Diego, California.



California sea lion barking while floating at the water's surface near San Pedro Martir Island, its flippers out of the water to regulate body temperature



75 X-RAY MAG: 56: 2013

## fact file Sea of Cortez, Mexico



SOURCES: U.S. CIA WORLD FACTBOOK, XE.COM

**History** Mexico was home to the Maya and Aztec people, along with several other advanced Amerindian civilizations, before Spain conquered and colonized the country in the early 16th century. For three centuries. Mexico was administered as the Viceroyalty of New Spain before gaining its independence in the early 19th century. Mexico lost a large portion of its territory to the United States at the end of the Mexican American War of 1846 and nearly a tenth of their population during their Mexican Revolution from 1910-1929. The country stabilized in the 1930s and was controlled by the Partido Revolucionario Institucional (PRI) party until 2000.

Geography Mexico is landlocked between the United States and Guatemala in North America and bordered by the Caribbean Sea and the Gulf of Mexico to the east and the North Pacific Ocean to the west. The Sea of Cortez is located between the Baja California Peninsula, one of the longest peninsulas in the world, and mainland Mexico. The sea is 700 miles (1,126km) long and between 30 to 150 miles (48 to 241km) wide, with a mean depth of 2,684 feet (818m). It contains 37 islands, most of which are found on the peninsular side of the gulf. One of the largest is Isla Angel

de la Guarda (Anael Island). The Gulf of California is a **UNEXSO** World Heritage Site.

Ensenada •

Isla Guadalupe

Morro 4

Reclondo

NORTH

**PACIFIC** 

**OCEAN** 

Climate The Northern Sea of Cortez has a dry and arid climate that is hot in the summer months from May to October and milder in winter from November to May. Air tem-

perature can range from 80°F to 100°F in summer months and 60°F to 95°F in winter. Water temperature can range from 72°F to 85°F in summer and often fluctuates depending on currents. A 3mm to 5mm wetsuit is recommended for divina.

**Economy** Mexico has a free market economy containing a mixture of industry and agriculture. Their per capita income is one third that of the United States and roughly 50% of the population lives below the poverty line. Imports from the United States have increased from 7% to 12% since the implementation of the North American Free Trade

Acapulco Agreement (NAFTA) in 1994 and more than 90% of Mexico's trade is under free trade gareements. In the recent global economic downturn, Mexico's GDP dropped 6.2% in 2009. It rebounded with positive growth of 5.6% in 2010 and slowed to roughly 4% in 2011 and 2012. A comprehensive labor reform was signed into law in November 2012 in hopes it would prioritize structural economic

Hermosillo

Chihuahua

Puerto

Manzanillo

REVILLAGIGEDO

**Currency** Mexican Peso (MXN) U.S. Dollars and international credit cards are widely accepted at tourist destinations. Exchange rates: 1EUR=16.77MXN; 1USD=12.65MXN; 1GBP=19.48MXN;

reforms and competitiveness.

1AUD=11.70MXN; 1SGD=10MXN

Mérida

RIGHT: Global map with location of

Sea of Cortez

BELOW: Location of

map of Mexico

Gulf of California, or Sea of Cortez, on

LOWER RIGHT: Lizard

triplefin camouflaged

against the rocky reef

UNITED STATES

Nuevo

Laredo

San Luis

Toluca Puebla

\_León

Torreón

Topolobampo Monterre

Aguas calientes Potosí

ISLAS Vallarta Guadalajara MEXICO CITY

Culiacán

at Los Cuervos off

Salsipuedes Island

Gulf of

Mexico

**CUBA** 

Cancún

HONDURAS NIC.

Caribbean

Matamoros

Veracruz

Oaxaca

Altamira

Tampico

**Population** Mexico has a population of 116,220,947 (July 2013 est.)—the majority of which are Roman Catholic. The capital, Mexico City, is the second largest urban agalomeration in the Western Hemisphere at 19,319 million. Conversely, the Midriff Islands in the Sea of Cortez are mostly uninhabited.

Language Spanish is the official language of Mexico, but there is still a small portion of the population that speaks indiaenous and other regional languages. English is widely spoken in tourist areas.

**Voltage** 110 volts, with U.S. standard 2- and 3-prong plugs are available on the liveaboard

dive boats.

**Cuisine** Mexican cuisine has a mixture of indiaenous and European influences, mainly Spanish. Native corn, beans and chili peppers are staples, to which are added beef, pork, chicken and seafood, dairy products, herbs and spices. The food is tied to local conditions and culture and varies greatly by region. Corn is the most common starch and is usually served as a tortilla.

The menu on the liveaboard boat includes a variety of local dishes, fresh fish, fruits and veaetables and American style breakfasts.

**Tipping** A 10-15% tip is customary for shuttle drivers, dive guides and boat crewmembers, as well as wait staff in restaurants.

**Driving** Vehicles travel on the right side of the road. An international driver's license is accepted for renting a car, and you may

also be able to use your home country's. The roads are generally paved and in good condition, though not necessarily well marked.

> **Decompression** chamber The negrest hyperbaric chamber is located on the mainland in Puerto Penasco (Rocky Point). There are no chamber facilities on the Midriff Islands.

Travel/Visa A passport is required for entry into Mexico. Visas are not required for U.S. citizens but may be necessary for travel from other countries. Phoenix, Arizona's Sky Harbor International Airport (PHX) is the most convenient for boarding a liveaboard boat to the northern Sea of Cortez. Shuttles run between Phoenix and Puerto Penasco (Rocky Point) where auests board the boat for their transit down to the Midriff Islands.

ADDITIONAL SOURCES:

EN.WIKIPEDIA.ORG/WIKI/GULF OF CALIFORNIA ROCIODELMARLIVEABOARD.COM/INDEX.HTML



76 X-RAY MAG: 56: 2013

TRAVEL