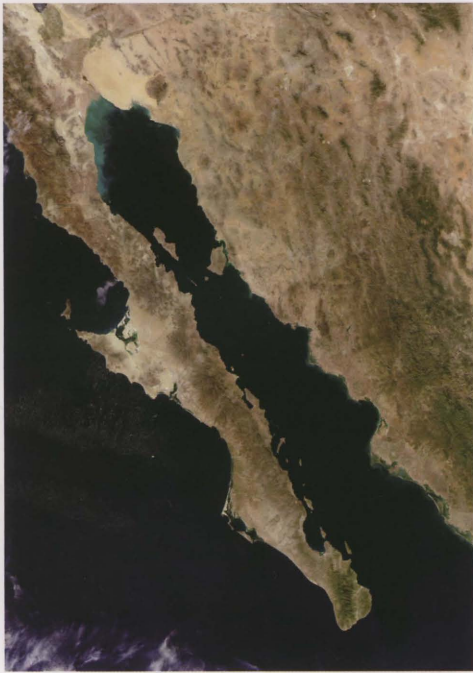


# THE SONORAN DESERT'S SPECTACULAR SEA

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Baja peninsula, Sea of Cortez. © Courtesy of NPSA



*The Sea of Cortez.* The name alone evokes romance, murmurs like a siren, promises glimpses of Shangri La. It is a magical place, there's no doubting it. And it's a biological wonder as well; one that has held the fascination of naturalists and adventurers since the Spanish sea captain Hernando Alarcón first sailed to the head of the Gulf in 1540.

Also known as the Gulf of California (both names are equally valid, and both derived from Sixteenth Century Spanish maps), this great sea is over 700 miles long and spans 9 degrees of latitude, crossing the Tropic of Cancer near the city of La Paz. It was created 5.6 million years ago, when tectonic forces ripped the Baja California Peninsula away from mainland Mexico, allowing the waters of the tropical Pacific to rush into the newly formed basin. The great East Pacific Spreading Center runs right through the middle of the Sea of Cortez, and continues to push Baja (and much of California) away from the mainland at a rate of several inches per year. The sea divides the Sonoran Desert into two halves, on the mainland and on the Baja Peninsula, with southern Arizona being the capstone that connects the two parts of this desert.

Its warm subtropical waters, and abundant upwellings that bring deep-sea nutrients and oxygen to the surface, have created one of the most productive and diverse seas on the planet. The Gulf's 6000 recorded animal species are estimated to represent only about 70 percent of the actual (total) fauna lurking in its rich waters. So productive is this sea that about half of Mexico's total fisheries production comes from the region. So rich in plankton is the Sea of Cortez, that populations of two species of migratory great whales have forsaken their ancestral migratory instinct and taken up permanent residence there (sperm whales and finback whales). And with nearly 1000 islands and islets, the Sea of Cortez is home to one of the world's largest island archipelagos.

The "long arm" of the Sea of Cortez even reaches Tucson, and much of the southwest in the form of summer monsoons. Once thought to originate in the

Gulf of Mexico, researchers now know that almost all of the region's summer rain comes from the Gulf of California/Tropical Eastern Pacific, often in masses of water-laden air called "Gulf Surges" that rush right up the middle of the Sea of Cortez to dump their harvested moisture in southeastern Arizona and adjacent areas. The oceanic waters of the Pacific also rush up the length of the Gulf, in twice-daily tidal surges, and as they funnel into the shallow, narrow uppermost Gulf, they create some of the world's largest tides—up to 24 vertical feet at Puerto Peñasco ("Rocky Point") and over 30 feet at the very head of the Gulf. On shallow tidal flats in the northern Gulf, a 20 – 30 ft vertical fall can expose several miles of once-submerged seabed, with the sea rushing back in just a few hours later. Many a naive tourist has watched the sea swallow their off-road vehicle with these rapidly returning tidal waters.

The Desert Museum has been involved in the Sea of Cortez since its earliest days. In fact, the Museum was responsible for the very first protected natural area in Mexico, Isla Rasa, a one-square kilometer island in the Gulf that is home to 95 percent of the breeding population of elegant terns and Heerman's gulls. A "Gulf Hall" exhibit has been on the planning boards at the Desert Museum since the 1960s and has finally become a reality!



Sperm whale fluke, Sea of Cortez. © 2012 Linda Klipp. www.ukimages.net

Terns on Isla Rasa, Sea of Cortez. © 2013 Linda Klipp