



Spyhopper

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Laguna San Ignacio

One of North America's Unique Marine Ecosystems



Spyhop in the sunset. Photo © Steven Swartz and Mary Lou Jones

**By Steven Swartz and
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In late January thirty-three years ago we first set foot on the shores of Laguna San Ignacio, Baja California Sur, Mexico. Our objective was to document the gray whales that utilized the lagoon during the winter months to breed and care for their newborn calves. With initial support from the American Cetacean Society and other environmental organizations, we conducted studies on gray whales and documented the lagoon's wildlife from 1978 to 1982. While many things have changed at Laguna San Ignacio since that time, one of the most impressive things is all that has remained the same; sort of universal constants that wild places like the lagoon and the surrounding Baja desert preserve for all time. Most important of these is the diverse variety of coastal and marine animals that call Laguna San Ignacio their home for all or a part of each year. The world is fortunate that the residents of La Laguna and the government of

Mexico have seen fit to make this area a federally protected marine sanctuary, and thereby ensure that it will persist for generations of people to visit and appreciate. But it wasn't always like that.

At Christmas each year between 1977 and 1982 we found ourselves among holiday shoppers as we prepared for three months of camping in a remote portion of the southern Baja desert. At a time when most families draw together, we were focused on leaving town. Frantically we searched for necessary camp gear and other items, made countless arrangements for coordinating our field season from afar, and waited for our grant money to arrive. Coleman stoves and lanterns, tents, water proofing, inflatable boats and outboard motors, crates of batteries, 35mm film, audio tapes, ice coolers, etc. had to be purchased before holiday shoppers grabbed the last remaining items. Finally, we would cross off the last remaining items on our seemingly endless lists of things to do, load our vehicles, and venture across the border from San Diego into Mexico.

San Ignacio, cont.

In those days it took at least two days to get to the town of San Ignacio, even longer if the winter rains had recently washed out the only highway, Baja No. 1. During these first few days in Baja the ringing in our ears (the inertia from the sounds of the city) would subside and yield to the domineering silence of the desert. Gradually we would hear only the sound of sand under our feet, a kangaroo rat in the brush, the “cackle” of a raven, the screech of an osprey, or the sound of whale blows across the water on still nights. We settled into the rhythm and dictate of a new timekeeper, and yielded to the pace of the winds and tides. This annual transition in attitude and perception, a slowing down to follow more natural clocks, developing an full appreciation of what each day brought us, for better or worse, is what we came to call “lagoon time.”



Gray whale mother and calf. Photo © Hiram Nanduca (LSIESP)

The Laguna San Ignacio wetlands complex lies along the Pacific coast in the middle of the Baja California peninsula, and is surrounded by, and is part of, the Vizcanio Biosphere Reserve. It is included in the UNESCO World Heritage Site: “Whale Sanctuary of El Vizcanio.” The lagoon is best known from the gray whales that congregate there each winter to breed and calve. However, it is also home to bottlenose dolphin, sea lions, commercially important fish and shellfish, and multitudes of migratory waterfowl, and shore birds. Protected species such as Osprey, sea turtles, Peregrine falcons, and desert iguanas are also found in and around Laguna San Ignacio.

There were only a handful of families that lived along the shores of the lagoon in the 1970’s, making their livings by fishing at the lagoon and ranching in the mountains to the east. The town of San Ignacio was 60 km or more from the lagoon

depending on which road was not washed out. All of the roads were unpaved, rocky, and had to cross the mudflats which were notorious for miring vehicles. It generally took all day to go to town, and another day to drive back, without any breakdowns. Throughout the 1980s and 1990s seasonal fishing for shellfish and finfish increased dramatically in Laguna San Ignacio and resulted in the establishment of fishing camps along the southern shores of the lagoon. The fishing village of El Cardon, located 11 km from the lagoon, is now the permanent residence for 100 or more families. The residents of Ejido Luis Echeverria, located 8 km from the lagoon, now number approximately 400, mostly employees of the eco-tourism companies and local fishing cooperatives. The community supports a primary and secondary school for approximately 100 students, a church, community store and other local businesses. In concert



Tri-color Heron. Photo © Steven Swartz (LSIESP)

with the governing regulations of the Biosphere Reserve, regulated eco-tourism provides a reliable economic base for the surrounding community and the prosperity of its residents, and thus the potential for a sustainable future for this very unique marine ecosystem.

Laguna San Ignacio attracted world wide attention in the late 1990s when it was targeted by a multi-national corporation as the proposed location of an industrial scale solar salt production facility; a project that would have significantly altered the lagoon ecosystem, perhaps irreversibly. After a five-year campaign by a coalition of local, national and international environmental organizations, on March 2nd, 2000, Mexico's President Ernesto Zedillo halted the salt plant project stating, "There are few places in the world like the Vizcaino Reserve... We're dealing with a unique place in the world both for the species that inhabit it, and for its natural beauty, which we should preserve." Mexico had previously established the gray whale lagoon sanctuaries in the 1980s, and now Mexico again demonstrated its leadership for preserving wilderness areas for breeding gray whales. This time, however, it was clear that the Laguna San Ignacio reserve was intended to protect all the species that lived there, including the local people. The Laguna San Ignacio marine protected areas is not a museum. Rather it, like the larger Vizcaino Reserve, is zoned for specific economic activities that can be conducted in accordance with maintaining the integrity and productivity of the ecosystem, such as local ranching, fishing and eco-tourism. All such activities within the Reserve are regulated by government permits and monitored to ensure compliance with the mandates and mission of the Biosphere Reserve. Local fishing cooperatives, eco-tourism associations, the community,

cooperatives, eco-tourism associations, the community, and officials have evolved a partnership for conservation to implement these measures so as sustain the unique nature of the lagoon and their livelihoods.

Since the defeat of the proposed salt production plant, local residents, fishing co-operatives, and eco-tourism entrepreneurs have developed a thriving eco-tourism business that focuses on the winter-time occupation of the lagoon by gray whales, and that hosts thousands of whale-watchers and eco-tourists each year. The "Association Rural de Interés Colectivo" (ARIC), all of the Eco-Tourism operators, non-government environmental organizations, and the local residents strive to be stewards of the "ecosystem" and to maintain a balance between eco-tourism, community development, and the biological integrity of the lagoon. The prosperity of local business provides the economic incentive to preserve the lagoon habitat that offers a world class wildlife experience attracting visitors from every continent. As a hedge against future development threats, a consortium of Mexican and international environmental groups formed the Laguna San Ignacio Conservation Alliance to carry out measures that will guide development in the areas surrounding the lagoon, and to hopefully secure the lagoon's future as an ecologically healthy and functional marine protected area. To date the Alliance has worked with local landowners and the Mexican National Protected Area Commission (CONANP) to conserve 140,000-acres of lagoon habitat. The Alliance hopes to conserve more than 100,000 additional acres by then end of 2011.

Thirty years ago most whale watchers arrived from San Diego on sport fishing vessels that numbered only a dozen

ACS is currently booking February and March trips to San Ignacio. Dates are listed on our web site at www.acsonline.org. These are unforgettable trips where you reside in a catered camp situated at water's edge, with safari-style tents, cots, and solar-heated showers to make your days and nights comfortable and carefree. With delicious Mexican food and happy hour each evening, you will capture a lifetime of memories as you grow to love and respect the gray whales you will see so closely. The crew consists of both American and Mexican guides, skiff drivers and cooks. Naturalist leaders are drawn from both sides of the border and may include professional naturalists or students with a special emphasis on gray whales. For more information, contact the ACS office at 310-548-6279 or send an e-mail to acsoffice@acsonline.org.

San Ignacio, Cont.

or more trips each winter. Other than the few local families that fished and ranched at the lagoon, human visitation was sparse to say the least. Today multitudes of visitors arrive at the lagoon each winter by boat, plane or overland to view gray whales from small “pangas” operated by local professional naturalists, and to take kayak excursions into the red-mangrove marshes to view more than 200 species of waterfowl and marine birds that frequent the lagoon. As in the past, hundreds of gray whales continue to arrive at the lagoon in January and remain in residence until April each year. These include the now famous “Friendly Whales” of Laguna San Ignacio, whose natural curiosity with humans in small boats continues to thrill and amaze all human visitors. Eco-tourism operators developed a management plan that limits the number of whale-watching “pangas” that are allowed on the water each day and the areas they may visit so as not to overpopulate the lagoon with boats and noise. The inner two-thirds of the lagoon are reserved for the gray whales, with only local fishermen and scientific researchers allowed to operate in this portion of the lagoon during the winter.

In 2006 with our colleagues Dr. Jorge Urban, and Alejandro Gomez-Gallardo of the Autonomous University of Baja California Sur (UABCS) we established the “Laguna San Ignacio Ecosystem Science Program” (LSIESP) to monitor the wildlife in the lagoon and to assess the health of the ecosystem. The LSIESP is a project of The Ocean Foundation and is supported entirely by non-government and non-profit organizations. Our goal is to provide information on the biological status of the lagoon and its wildlife that would serve as the basis for evaluating options for future development, and to evaluate the outcome of implemented management actions and regulations. Through its outreach efforts, the LSIESP promotes social awareness and stakeholder participation from within the community and local schools for the conservation of this unique marine protected area.



Gray whale calf underwater. Photo © Sergio Matinez (LSIESP)



Gray whale at sunset (and past ACS conference photo contest winner! Photo © Steven Swartz (LSIESP))

LSIESP researchers monitor a suite of “ecosystem indicators” that represent a mix of physical parameters (e.g., sea temperature and salinity) and biological parameters that include a range of organisms representing various trophic levels (e.g., primary production, zooplankton, fish, turtles, migratory waterfowl, dolphin, and gray whales). The program builds on available historical information and implements new surveys that document trends in the wildlife populations and their use of the lagoon’s habitats, and so doing foster an understanding of the dynamics between lagoon wildlife populations and the physical and biological environments inside and outside the lagoon, including human activities. The principal work force consists of Master’s and Ph.D. level students and collaborating researchers from Mexican and other universities that contribute their expertise in many related fields including zoology, biology, oceanography, and desert ecology. As LSIESP researchers, graduate students obtain opportunities to participate in applied wildlife conservation and field research to learn skills that will serve them in their careers as wildlife conservation scientists. The LSIESP distributes

its findings in scientific publications, lay-person journals and articles, at professional scientific meetings, and through its internet web-site at www.lsiecosystem.org.

While human activities will continue to evolve around Laguna San Ignacio we remain optimistic that local communities and visitors from around the world will continue to support the conservation of this unique coastal marine protected area by encouraging eco-tourism and the local economy that benefits its human residents, the gray whales, and all marine wildlife that derive their livelihood from this essential ecosystem.

You may learn more about the history of conservation in Baja California’s gray whale breeding lagoons from reading Serge Dedina’s book “*Saving The Gray Whale, People, Politics, and Conservation in Baja California*” (2000, University of Arizona Press), and by visiting the Laguna San Ignacio Ecosystem Science Program’s web-site at www.lsiecosystem.org.