



# Buddy Line

## San Miguel Island: Wild and Wonderful

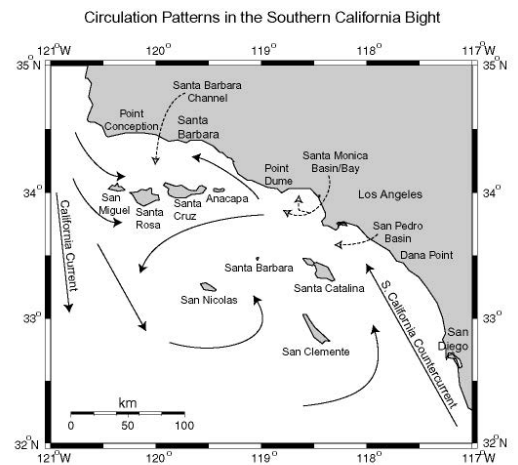
by Brad Carter

This summer, NCRD will charter the boat *Vision* for an affordable and convenient 3-day dive trip to the Channel Island Marine Sanctuary. Weather permitting, we will begin diving at San Miguel Island, which was very popular with divers on last year's NCRD Channel Islands trip. San Miguel Island is considered a renowned California diving destination. Let's take a closer look at San Miguel Island and what makes it such a wild and wonderful place.

### Coastal Upwelling

From March through September, prevailing winds, combined with the effects of Earth's rotation, tend to drive surface water away from the coast of northern and central California. As surface water moves away from the coast, deep waters from below move in to replace it. These cold, nutrient-rich upwelled waters encourage seaweed growth and support blooms of phytoplankton. These phytoplankton blooms

cold water current is driven offshore at Point Conception, where the general coastline direction changes from north-south to east-west and delivers a plume of

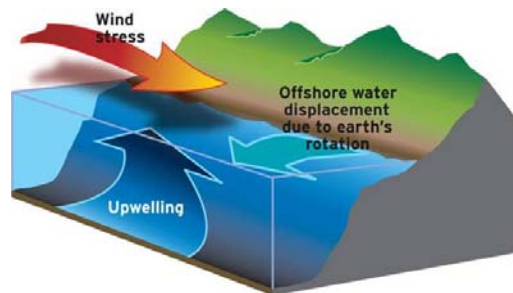


(After Hickey, B. M., 1992, *Progress in Oceanography*, V30: 37-115)

The cold, nutrient-rich California Current flows south along the California coast to Point Conception where it is driven offshore toward San Miguel Island. Note how the warmer waters of the Southern California Countercurrent flow northward, meeting and mixing with the cold waters from the north.

cold, nutrient-rich upwelled water southward toward the westernmost islands of the Northern Channel Islands (San Miguel and Santa Rosa Islands), facilitating high productivity. By contrast, the eastern islands (Anacapa and Santa Cruz) are bathed by the warmer waters of the Southern California Countercurrent and are associated with subtropical species, which are transported north from Baja California. The sharp boundary between the cold, nutrient rich waters from the north and the warm nutrient-depleted waters from the south creates a biological transition zone between temperate and subtropical species that is unique to the

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Forces affecting coastal upwelling

along our north and central coastlines form the base of a food chain that supports one of the most productive near-coastal ecosystems in the world.

### Point Conception Biological Transition Zone

The California Current moves south along the west coast of North America from British Columbia to Baja California. This



# San Diego Wrecks and Reefs

by *Christophe Beraud*

Join us for a weekend of diving the wrecks and kelp beds of San Diego on May 3 and 4, 2014. We have chartered the *Pacific Swann*, a six-passenger commercial dive boat and will have the entire boat to ourselves.

We will do 3 dives a day. The cost of \$233 includes tanks, weights, food and refreshments on the boat, and an in-water dive guide. Registration will be open until March 15. If we do not have 6 people signed-up for the trip by



Near-shore wrecks outside San Diego Harbor

San Diego is known for many dive sites, ranging from a variety of wrecks (including the famous *HMCS Yukon*), kelp forests, canyons and rock outcroppings. If we are lucky, we may even encounter the 7-gill sharks that frequent the area at that time of the year.



Seven-gill shark

then, the trip will be cancelled and your payment refunded.

Since some of the dive sites are deep, we are recommending recent cold-water diving experience, deep diving experience (100-130 fsw), reduced visibility diving experience, good buoyancy and ability to make ascent without a reference.



San Diego wreck

**Northern California Rainbow Divers, Inc.**  
a California non-profit mutual benefit corporation

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<http://www.rainbowdivers.org/>

### CLUB POLICIES

Board meetings are held once a month and are open to any club member in good standing. If interested in attending, please contact any of the Board members listed above for location.

Membership dues are \$35/year and \$55/year for couples at the same address. A free email-only option is also available, although paid club membership is required for trip participation.

Advertising is available to club members for a business card-size ad, or for \$10/issue for non-club members, space permitting. If you are interested in advertising, please contact the editor. NCRD does not warrant, recommend or guarantee the products or services contained in advertisements in this newsletter.

Unless otherwise noted, all monies paid for club-sponsored events are non-refundable.

## Sailfish Diving in Isla Mujeres, Mexico

by Karen Doby

It's not everyday that the world's fastest fish swims right up to about three feet in front of you, but that's exactly what happened off Isla Mujeres, Mexico, this past January.

Sailfish, a type of marlin, are members of the billfish family. Adults grow up to ten feet long and weigh up to 220 pounds. Their two most identifiable traits are their long upper jaw that extends into a "spear" and their enormous, erectile dorsal fin (aka "sail") from which the fish gets its name. The dorsal fin spans almost the entire length of the fish and is amazingly taller than the fish is wide! Usually the sail lies flat, folded to the side during normal swimming, but it extends high overhead when the fish is excited or threatened to make the sailfish appear much bigger than it actually is. It also uses the sail when feeding to herd smaller fish like anchovies, sardines and even squid into tight baitballs. It was this feeding behavior of big fish that propelled our group of friends to Isla Mujeres, Mexico.

Sailfish are found near the surface all over the world in warm and temperate waters. I'd been long drawn to the sardine run off South Africa, where sailfish and other predators reliably swim annually from May through July to gorge themselves on the hordes of sardines migrating through the area on their way out of cold waters. But that's really far and really cold. How happy I was to discover that sailfish could be easily observed so much closer to home!

Because sailfish swim so fast, they are highly prized as game fish. So, not only



Happy sailfish divers in Isla Mujeres, Mexico

are divers interested in finding them, so are fishermen. Sailfish have been routinely clocked swimming as fast as 68 mph and are known for their incredible leaps and dives when hooked. Fishermen who land one have often spent hours fighting the fish's great speed and powerful lunges. Ironically, because of the sailfish's tough meat, not many people choose to eat it. Nonetheless, our task as divers was to beat the many fishermen out to the sailfish, getting there first.



9-10' sailfish feeding Photo by Jennifer Lally Sargeant

Every morning, our dive boat left at 7:15 a.m. from the pier in front of our Posada del Mar hotel for a 1-2 hour boat ride into the deeper waters between Isla Mujeres and Cancun. We'd first look for masses of gulls and albatross diving into the water, then below the birds we'd see the "boil" of jumping fish at the surface. Sometimes we found as many as 20-40 sailfish shepherding a sardine baitball a few feet below. Unwittingly, fish would try to escape by jumping out of the water away from the sailfish, right into the waiting mouth of a keen-eyed sea gull!

Slipping quietly into the water, we were sometimes on snorkel, and sometimes we strapped on small, 13-cubic-foot pony bottles to help us dip and stay slightly below the sailfish and baitball. Our BCs were made specifically for pony bottles without an air bladder for buoyancy. Thus, we could hover effortlessly below the

surface without the weight and drag of full dive gear, as well as get in and out of the water quickly to follow a baitball.

Our Isla Mujeres dive operator, Arturo Delfin of Delfin Diving, positioned us in the water such as to encourage the baitball to use us as cover and thus draw in the sailfish up close. Initially, we were wary of the long spear extending in front of the fish, harboring a secret fear that we may actually get stabbed being so close to the feeding frenzy. This could not have been more unfounded! It turns out that the spear isn't used for stabbing but for wagging swiftly from side to side inside the baitball to knock nearby prey unconscious. Although sailfish are powerful and spectacularly fast, they are also incredibly accurate. It was amazing to watch the sailfish swimming through the baitball, flicking their beaks with the deftness of an accomplished fencer to kill or stun individual fish. As soon as a sardine became separated from the baitball, a sailfish was right there to swallow it up, a spectacular example of collaborative feeding! A few times, a separated fish would regain consciousness long enough to hide amongst us divers for cover. It was hard not to feel sorry for them as they scampered from diver to diver to avoid being gobbled up.

Something that surprised me is how fast sailfish can change their colors in an instant, similar to squid, octopus and cuttlefish, a change controlled by their nervous system. When excited, the sailfish appeared light blue with yellowish stripes and/or white dots. Swimming around, they appeared anywhere from silver to blue to dark gray to brown to red to bright purple. Like the cephalopods they feed on, sailfish seem to use their body colors to confuse prey and communicate with other sailfish in the area.

Keeping up with these amazing big fish was tiring but nothing short of spectacular, and we're already talking about going back next year!



# The Silver Bank's Atlantic Humpback Whales

by Jennifer Lally Sargeant

Rainbows and whales. Rainbows and whales. Those were the two main themes of our expedition with Aquatic Adventures onboard the *Turks and Caicos Explorer II* in Silver Bank, Dominican Republic.

We were blessed to see Atlantic Humpback Whales -- and rainbows -- every day that we were on the liveboard during the first week of February. While, per the experienced crew, the rainbows were "the most they have seen in a week ever", the whales are a constant.

Each morning and afternoon, the ship's occupants split up into two tenders, endearingly named "Escort" and "Challenger" after the male companion to an adult female whale (or female and calf pair) and the male who comes along after to try to displace the former then mate with the female.

On the Silver Bank, the females run the show. The best encounters with the whales occur when you find a female. An adult female whale is the dominant member of a mom-calf pair, the one setting the tone for an encounter with a male escort (he follows her lead) with or without a challenger, or the one leading the pack of a rowdy group, where two or more males vj for the desired position next to the female, leading to lively behaviors such as pec slapping,

bubble streaming, lobtailing, breaching, and more.

We were able to observe a comprehensive set of the behaviors

them from above as they napped and then rose to the surface to breathe. One tender was lucky enough to come across a male who was singing and



A curious Atlantic Humpback whale calf circling above its mother Photo by Jennifer Lally Sargeant

that occur in the Silver Bank, where the whales' focus is on raising new calves and mating. Our first trip out, we found "sleepers", whales who were resting on the bottom. We slipped into the water and observed

observe him from above as he swam through the area, belting out his song. A male's song, a series of guttural noises punctuated by whoops, can even be heard by placing an ear to the hull of the tender when the whale is so close.

We had multiple encounters with mom-calf pairs. Interestingly, moms with a calf do not seek the company of other mom-calf pairs but instead prefer to stay by themselves or permit the presence of an escort. We had some nice encounters with a very patient mother, whose calf would leave her protection to circle her in the water, swimming around and checking us out. One of these encounters lasted about three hours, and the two sets of snorkelers from the tenders were able to switch in and out multiple times.

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... Humpback Whales, continued from p.4

The calves are particularly endearing, as at this point in the season they are very young and still learning to “be a whale”. Their buoyancy isn’t quite refined, so they frequently settle underneath Mom’s belly in between her pectoral flippers, where she serves as a hovering ceiling to help the baby maintain position. Baby whales have an innocent charisma, and one of our favorite moments was having a curious calf swim through and check us out.

One of the more interesting moments was being in the water to experience “dancing”, a pre-mating behavior where a male and female present their ventral sides to each other and swim around each other, twirling their long, graceful pectoral flippers. The excitement of the crew relayed to us that this was not a typical occurrence, and it was absolutely amazing to watch the seemingly choreographed display.

It took a turn for the more interesting when a challenger entered the scene (unbeknownst to us in the water), and the male turned back and thrust his


flukes quite abruptly and quite close to us. We promptly returned to the tenders, confused as to what had happened until we saw the newcomer, but it was quite an exciting time! The dancing behavior had been quite captivating until then, and we enjoyed watching the rest topside.

All in all, our time with the whales was an amazing experience. The crew is knowledgeable and patient about finding whales who will interact with their human visitors, and they set you up for success with the “soft in-water encounters” where you are able to interact with the whales in their realm. Whales are identified as candidates for these encounters based on their behavior. For example, it is unsafe to be in the water with a rowdy group, and so that is not permitted. One tender in particular had a very nice, open, positive presence, and it was a sincere pleasure to spend time with them.

The nightly presentations gave a glimpse into whale biology, anatomy,

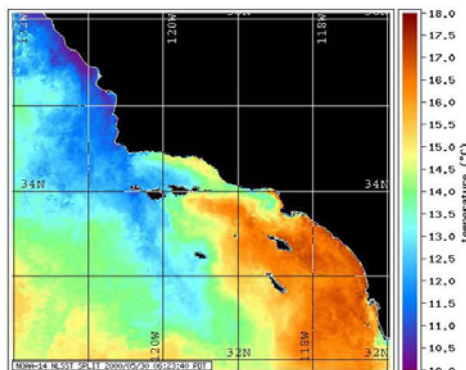
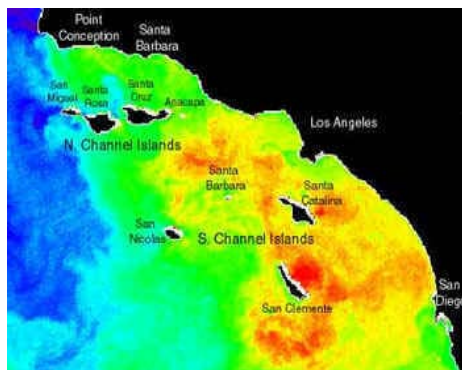
and the behaviors we were seeing, and rounded out the educational aspect so that we could have a deeper understanding of our experience.

The genuine excitement and exhilaration of some of the staff (there were moments where crew members were observed fist pumping and yelling “I LOVE THIS!”, or where an exuberant crew member gave high fives throughout the tender after a calf encounter), were also appreciated.

And those rainbows every day were a great finishing touch. 



... San Miguel Island, continued from p.1



Two satellite images that illustrate the upwelling filaments from north of Pt. Conception that extend offshore and bathe the San Miguel and Santa Rosa Islands in cold nutrient-rich waters. Note the striking change in water temperature between the western and eastern islands of the sanctuary.

waters around San Miguel and Santa Rosa Islands.

**Abundance of Life**

Due to these factors, the waters around the Northern Channel Islands have high levels of biomass and species diversity including numerous endangered, threatened and sensitive

species such as blue, grey and humpback whales. San Miguel Island is the most important sea bird nesting site in southern California. It is also home to one of the largest pinniped breeding colonies in the world. About 90% of the entire population of California sea lions is produced on San Miguel Island.

**Diving San Miguel Island**

Because it lies beyond the shadow of Point Conception, San Miguel Island is exposed to a lot of weather, which means you often cannot get there. If the weather is calm and the seas flat, it is possible to experience the aquatic treasures of this unique place. During the late summer months, air temperature is comfortable and underwater visibility often spectacular as ocean currents carry upwelled waters south from Pt. Conception to San Miguel Island. Cold, nutrient-rich waters carry plankton and minerals that benefit filter-feeding organisms, leaving the water teeming with filter-feeders and invertebrate life such as anemones, scallops, sea stars and red abalone. And because of its limited accessibility, commercial fishing and recreational diving have had less impact here, leaving many large fish, lobster, abalone and scallops to be seen at San Miguel Island.

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## Board Meetings

### Upcoming: March, TBA

Board meetings are open to club members. If you are interested in attending, please email Karen at [president@rainbowdivers.org](mailto:president@rainbowdivers.org)

## Insurance Update

In February, DiveAssure expanded their new, annual dive trip insurance coverage options now to include scenarios specific to liveboards (e.g. missing the boat due to delays, termination of trip due to accident to other passengers onboard, mechanical failure, liveboard financial default, etc.) This new liveboard trip insurance is offered in combination with DiveAssure's multi-trip plans. As always, please read the fine print and weigh all of your options before buying a policy.

## Calendar

Please see details at <http://rainbowdivers.org/>

Non-Diving Events	California Diving	Exotic Dive Destinations
<p>TBA — check website for dates <i>Board Meeting</i> via Skype / Conference Call</p> <p>June 7-8, 2014 <i>SCUBA Show</i> Long Beach, CA</p>	<p>TBA — check Facebook group for dates and buddy postings Monterey/Carmel, CA</p> <p>May 3-4, 2014 <i>Swann Charters</i> San Diego Southern California</p> <p>August 24-26, 2014 <i>Vision Liveboard</i> Channel Islands Southern California</p>	<p>March 9-16, 2014 <i>Yap Pacific Dive Resort</i> Yap, Micronesia</p> <p>March 16-23, 2014 <i>Tropic Dancer Liveboard</i> Palau, Micronesia</p> <p>March 23-31, 2014 <i>Blue Lagoon Resort</i> Chuuk, Micronesia</p> <p>May 31 - June 7, 2014 <i>Shearwater Resort &amp; Sea Saba</i> Saba, Caribbean</p> <p>September 13-20, 2014 Diving For Life SCUBA Jamboree <i>Captain Don's Habitat</i> Bonaire, Caribbean</p> <p>November 9-16, 2015 <i>Maluku Divers Resort</i> Ambon, Indonesia</p> <p>November 16-28, 2015 <i>Sea Safari 8 Liveboard</i> Raja Ampat, Papua, Indonesia</p>

... San Miguel Island, continued from p.5

San Miguel Island has many excellent dive sites and more offshore pinnacles than the other northern islands. If the weather is exceptionally calm, a lucky boatload of divers may have the good fortune of visiting the north side of the island. Two miles to the northwest of the island is Wilson's Rock, a small isolated reef with steep walls that plummet hundreds of feet downward and are blanketed with hydrocorals, anemones, tubeworms, barnacles and other filter feeders.

Even more spectacular than Wilson's Rock is Richardson's Rock, which is located eight miles northwest of San Miguel Island in the open ocean. Any diver making it to San Miguel Island should always consider himself/herself lucky. Divers who make it to Wilson's Rock are truly fortunate. But any diver visiting Richardson's Rock should be reverent and grateful for the experience of diving there. This steep-sided, wave-swept land mass is a haul-out site for California sea lions and Guadalupe fur seals. Beneath the waves, every inch of



Northern elephant seals breed on San Miguel Island. These bulls are fighting for breeding dominance.

surface is covered with invertebrate life, and rockfish hide inside ledges and cracks.

### Join us on Vision

We have chartered *Vision* for our August 24-26 trip to San Miguel and other Northern Channel Islands. The cost is \$525, which is very low for a 3-day liveboard charter. The price

includes all meals and snacks. Tank refills with air are free, and there is a small charge for Nitrox refills.

We need 25 divers in order to secure a full-boat charter of *Vision*. Right now we have 7 divers signed up, and 18 spots left to fill. So please go the NCRD website today and reserve your spot on the annual NCRD Channel Islands dive trip.

