

Spot Checking in La Jolla

Jim Serpa

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Leopard Sharks - *Triakis semifasciata*

I was swimming along in crystal clear water (for San Diego, at least) with DSBIA President Bill Brooks and my son Noa when I spotted what we had driven all the way down to La Jolla to see, a five-foot leopard shark cruising slowly below me. I swam behind it for a few minutes, the shark not seeming to have a care in the world, when I suddenly came upon the mother load. Below Noa and me in about 15 feet of water were at least 30 leopard sharks ranging in size from four to six feet. I probably let out a little shriek. I have been diving here for over 40 years and still get excited seeing these beautiful creatures, as do Noa and Bill, both grizzled veterans of leopard shark mania.



Jim and Noa Serpa with DSBIA Prez Bill Brooks



The leopard sharks were in a tight mass not too dissimilar from the ball of snakes Indiana Jones spotted in the *Temple of Doom* movie. “Incredible!” I thought. Then I remembered Bill so I surface to locate him. He was about 50 feet from us when I yell for him to come over quickly. “You won’t believe what’s going on down below! There are tons of sharks!” Just then, a stand up paddle boarding

lady swooped up, looked at me and excitedly gasped, “Where are the sharks, right here?” I stupidly answered, “Yes.” With great bravado, she cannonballed off the SUP with her little underwater camera tucked beneath her arm. As she exploded through the surface of the water, the sharks took off in every direction like billiard balls hit by the cue ball. In

the blink of an eye they were gone! This boorish behavior did not make Noa, Bill or me very happy, as you can well imagine. With my son at my side I bit my tongue. With great restraint, I remained silent, although the water may have been boiling around my head. Grrrrrr...!



Until recently, it was a mystery as to why leopard sharks congregate in such large numbers in La Jolla. Leopard shark researcher, Dr. Andy P. Nosel of the Birch



Dr. Andy Nosel

Aquarium in La Jolla, solved the puzzle in July of 2012 with his doctoral paper on the demography and movement patterns of leopard sharks aggregating near the head of a submarine canyon along the open coast of southern California. Bill Brooks and I attended a presentation Andy gave at the Legoland Aquarium several years ago and had the great pleasure of talking with him after his formal presentation. At the time, he was conducting the study that would lead up to his doctoral thesis. Now, I modestly think he actually learned a little something about leopard sharks from us. At that time, Andy was trying to figure out where the little sharks were born since newborns were not seen in the La Jolla area, even though over 97% of the females in the area are pregnant. I told him we had been seeing

newborns around the Doheny / Dana Point area forever and that he should come up and check it out. He was thrilled with the information and did come north to conduct his research.

Here are some of the facts Dr. Nosel developed in his extensive study:

1. The Rose Canyon Fault is a north-to-south strike fault that runs through San Diego entering the Pacific Ocean in La Jolla where it joins with the underwater portion of the La Jolla Canyon, as well as other faults and canyons. This is the area where the leopard sharks like to aggregate because the seawater temperature is warmer than the surrounding waters. The warmer water speeds up the gestation rate of pregnant females.
2. A whopping 97% of the leopard sharks that are in the La Jolla area are pregnant females. "What these females are essentially doing is incubating," said Dr. Andy in an Associated Press article printed in the San Jose Mercury News (http://www.mercurynews.com/travel/ci_23696336/swimming-sharks-la-jolla). "They're developing embryos like a mother bird would do, sitting on the eggs to keep them to warm."
3. There is still the unsolved mystery that the babies (pups) are not born in the La Jolla area, and here is where the "Jim and Noa Serpa Hypothesis" kicks in (and the tie-in to Doheny State Beach). We believe that the sharks swim north to have their pups in the sea kelp off Dana Point. Adult leopard sharks have been tagged in the La Jolla area and have been found around Dana Point, and vice versa.



4. A mother leopard shark can give birth to as many as 35 baby sharks at one time (pups).
5. Leopard sharks feed on the squid found in the La Jolla Canyon at night, returning to the shallows by day.

On a somewhat related note, I got a call about three years ago from Dr. Andy inquiring about a large white shark I found washed up on the beach at San Onofre (San O is well known to be the home of white sharks and to be a white shark nursery). He had seen me on a certain shark program on TV (Shark Week!) where I had been talking about what I had discovered inside that white shark's stomach. Turns out, I was witness to one of only a few confirmed instances of a white shark preying upon leopard sharks.

In the old days when our Doheny Visitor Center aquarium was open and I was a ranger at Doheny, I successfully recruited local fisherman while they were surf fishing on the beaches of Doheny. When they caught baby leopard sharks, they would flag me down while I was making my rounds. I'd take the fish and plop the little critters into a bucket, transfer them to our aquarium holding tanks for a short while, then place them in our aquarium's display tanks. We could keep them for about a year before releasing them back into the sea or transferring them to another facility.

Leopard sharks can grow up to seven feet long, but I have never seen one larger than about six foot. The largest are always the females. These sharks feed on bottom dwellers such as worms, shrimp, crabs, squid, (and their eggs), octopus and fish eggs. Leopard sharks live over 25 years, but females don't sexually mature until about 10 years of age. California fishing regulations state the bag limit for leopard sharks is three and they have to be at least 36 inches in length to be legal.



Unfortunately, there is a black market for these uniquely patterned sharks, not only because they are so strikingly beautiful with their leopard like spots and saddles, but also because they can thrive in many different water temperatures. They are frequent visitors to the waters off Doheny. Before you go running for the hills in terror, however, you must understand that they are completely harmless and avoid people if at all possible. Recently, there seems to be an increase in their numbers since the ban on inshore gill netting off the California coast has been initiated. Good for them and for us, too!

[Doheny Beach visitors can enjoy a snorkel swim with leopard sharks without having to drive all the way down to La Jolla. The caveat of course, is that the visitor must be a relatively strong ocean swimmer. A swim with mask, snorkel and fins off shore of Doheny, beyond the surf line and among the rocky reefs and kelp beds will usually put you among leopard sharks. Unfortunately, the water in those areas is not often clear. A

better local area is about a mile west of the park entrance on Dana Point Harbor Drive, behind the Ocean Institute in the waters beyond the Dana Point outer breakwater. A short walk down the beach access stairs and along the beach to where the rocky reefs meet the sand is the spot to swim out, then to swim parallel along the coast through the green sea grass forest. This is a wonderland of small bass, orange Garibaldi, an occasional lobster and leopard sharks, harmlessly cruising along the bottom of the outer intertidal zones of the Dana Point headlands. ED]

Come swim with a leopard shark: http://www.youtube.com/watch?v=_RWaVLbE0mw