

The Child is Coming

How will El Niño affect your diving?

Surfers in Northern California don't need wetsuits, because water that is normally 50°F is now 67°F. Two men fishing for albacore tuna land a 104-pound marlin, the first ever caught off Washington's coast.

Pick up any newspaper and you'll find a number of events attributed to El Niño, changes in patterns of Pacific Ocean water temperatures and wind directions that have global effects. Even in the pages of this issue of *Undercurrent*, the high winds that brought about the tragedy in Papua New Guinea and the coral bleaching found on the reef newly discovered off Florida are attributed to El Niño.

El Niño is the second-largest driver of the world's weather — only the changes of the seasons have bigger effects. Much about the phenomenon remains a mystery, and its effects are unpredictable. However, after the exceptionally strong El Niño of 1982–83 caused more than \$2 billion in damage, more scientific research and data collection methods were implemented. A network of 70 buoys, set up by the international Tropical Oceans and Global Atmosphere Program (TOGA), now stretches across the Pacific along the equator to monitor water temperatures.

Now a compilation of these new measurements is telling us that off South America's Pacific Coast there's a mass of warm water 1½ times the size of the continental United States. Predictions are for the worst El Niño in 150 years.

Effects on Cocos Diving

Most research and forecasts of El Niño's effects on sea life focus on economics. It's interesting to note that mackerel range farther north than usual during an El Niño year and that they are voracious feeders preying on juvenile salmon, or that the anchovies don't fare well these

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years, but it's hard to interpret how this relates to ocean life on a dive trip to Cocos, where everyone is expecting to see large pelagics.

The office of the *Undersea Hunter* (Cocos Island) told me they were updating their future clients by staying in constant radio contact with the boats and advising them based on the captains' reports by radio during the trips. Company president Avi Klapfer has issued this message concerning El Niño:

"Many people have expressed their concern with regards to the El Niño and how this phenomenon could affect their diving experience at Cocos. I would like to take this opportunity to share some of my experi-

ences with this phenomenon. El Niño is a phenomenon which causes the surface water temperature to rise six to eight degrees beyond the normal here. This causes certain marine creatures to seek colder waters. These marine creatures accomplish this by either going to greater depths or by swimming north. In our case, this causes sharks (mainly hammerheads) to go deeper in search of colder water. Sharks would still be seen at Cocos, but the chances of seeing them in shallow waters (100 feet or less) would be significantly reduced. But it is very important to note that in seven years of diving at Cocos, we have not had a single trip without hammerheads.

"By mid-June, water temperature would normally drop to 79°–80°F and wind patterns would shift from northeast to southeast. At the moment, water temperature is steady at around 84°F and the wind and weather patterns have not completely shifted.

"Hammerheads swimming individually and in schools are still present at the island in a quantity typical of the months of March, April, and May (a quantity which is normally lower than in the months of June, July, and August, during which the number of hammerheads is at its peak).

"We are not severely affected by El Niño as of yet, but there is a delay in the return of the massive quantity of hammerheads typical of this time of the year.

"When we last experienced El Niño, in spring of 1992, about a year after we began our

operation at Cocos, we, due perhaps to our inexperience, thought of this phenomenon as a normal pattern at Cocos. But the fact is that in this 1992 El Niño, we witnessed some unique marine life activity that has not repeated since. We saw a tremendous increase in the number of schooling jacks, greater presence of marine mammals such as dolphins, pilot whales, and false killer whales, great concentrations of schooling mantas and of some other visitors not normally found around the island, as well as more whale sharks.

“So what I am trying to say is that even if El Niño were to strike with full force, there would still be much to see at Cocos, as there is much more to Cocos than just sharks. I truly believe that any diver who looks at Cocos as a whole, and not just as a place for hammerheads, will have a great experience, even if this were to occur.

“We log all our dives, and we rank them on a scale of 1 to 10. Only two dives in the past seven years have scored a 10. Many have scored a 9, but the very exclusive rating of 10 has been reserved for only these two dives, one of which was my extraordinary bait-ball experience; the other one took place at the end of May 1992, also during the El Niño. [*Ed. note: I count the bait-ball episode — a feeding orgy of big jacks, tuna, sharks, and even birds diving into the melee from the surface — as the most exciting underwater video I've ever seen.*]

“We will continue to closely monitor the El Niño phenomenon and we'll be happy to update you at any time on its progress and on the diving conditions at Cocos.” (phone [in Costa Rica] 506-228-6535 or 506-228-6613, fax 506-289-7334; <http://www.underseahunter.com>,

info@underseahunter.com;
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Effects in the Galapagos

I asked Marc Benardi of Aquatic Encounters, who hosted five dive excursions to the Galapagos this summer, what El Niño effects he had witnessed. His response: “The last big one was in 1992 and it damaged the orange-button coral in the archipelago. The water temperatures reached 90°F. The coral has recovered, although it took a few years.

“In May of this year El Niño surprised us, since it didn't come with much warning. The northern Islands of Darwin and Wolf on my first four trips had fewer hammerhead sharks than usual, but otherwise the only difference was warmer water. On my last trip in mid-June, everything was back to

normal. We had whale sharks, hundreds of hammerheads, and dolphins galore” (phone 303-494-8384, fax 303-494-1202).

Recommendations

Based on the information above and on reports from Cocos and the Galapagos sent in by readers in El Niño years, I'd say that if your only motive for going either place is just to see vast schools of hammerheads, wait for a non-El Niño year. If you're prepared to dive deeper to find sharks or willing to experience what other marine-life oddities may be precipitated by the changes in water temperatures and upwelling, it could still be an excellent dive trip. I would trade a lot of hammerheads to have been there when the bait-ball video was made.

J. Q.

El Niño affects the weather around the world, and therefore the diving as well. Reports from Papua New Guinea have water visibility lower and wind higher than normal for this time of the year. Fortunately, PNG's biggest dive attraction is muck diving for weird creatures, so lower vis has not represented much of a problem. Also, boats in PNG have a good selection of alternate sites with different conditions.

Micronesia is expecting rainfall 10–15 percent above normal from June through September, with an active southwest monsoon. By October, the winds should recede, and October through January 1998 is expected to be 15-20 percent drier than normal. Runoff is not a major factor in diving there. I have not heard any reports so far of altered diving conditions in Palau or Truk.

In Hawaii, El Niño is associated with below-normal wintertime rainfall, but the best news may be for the Caribbean. As we reported earlier, this year's hurricane season was expected to be very active, but El Niño may be changing that prediction. The strong west-to-east winds generated by El Niño blow into the Atlantic hurricane cradle and tend to blow tropical disturbances apart before they can develop into hurricanes. This may be the year to take advantage of lower hurricane-season rates and do a Caribbean trip.

J. Q.

Elsewhere in the World