

AQUANEWS

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Our 2009 Diving Season is over Or is it?

By, Paul Galeazzi Jr.

Now that the Hessian Lake diving is over, many of us will pack up our gear and wait for next season. The rest of us will polish up everything and set our gear up for the warm water diving that we will do on vacations or just some getaways.

I know that just last month I returned from diving in Florida. It was unseasonably warm, 96 degrees, and there was no current at all. It seems that even the Gulf Stream decided to take a little break and actually reverse itself and was moving South instead of the normal North flow. This was very unusual and made drift diving a bitch. Talk about kicking my little heart out.

The first day they dropped us in the water about 75 yards from a wreck so in order that we could drift into the dive site. Well as you can expect that didn't work at all. Not only did we have to kick all the way, but we were going against the current. By the time we all reached the wreck over half our air was gone. It made for an interesting dive to say the least.

Getting back to the Hessian Lake dives, this was probably the best season that we ever had. The weather was perfect on ever dive except the last one. Of course this was the one that was cancelled because the weather was so bad and cold. It was also the last weekend for the

Oktoberfest. There was a lot of garbage taken out of the Lake this year as well as a really strange item.

On the last physical dive former and now new member Jeff Talamini found an outboard motor on the lakes bottom. Other members were looking for this motor on the previous dive but were given the wrong location for its whereabouts. I don't know if Jeff was actually looking for the motor or he just happened upon it. I was not at this dive because that is when I was in Florida. All I do know is that it netted the club \$100.00 as a donation from the boat concession. I must say that this was the first time that they ever gave us anything for the work that we do for them. We have pulled up sunken boats as well as many other items over the years and were always given a nice heart full thanks. Let's face it that is all we ever needed anyway or asked for.

So now it is up to all of us to make the best of the end of 2009 and the beginning of 2010. If any of you do anything, write a little article for our newsletter. As usual any help is appreciated. And thank you to all who helped with the BBQ's this year. Everything worked out perfectly.

(photo on page 3)

AQUANEWS

THE OFFICIAL PUBLICATION
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Stainless Steel Wire line- A Bad Idea

By Capt. Lada Simek

I have been on and below the waters of Long Island Sound for 51 years. During this time I have found over 100 fishing rods, hundreds of anchors and miles of monofilament fish line. The fish line is a killer. I have freed many crabs, lobsters and even fish, from tangled lines. The system becomes self-baiting, just like an abandoned lobster trap. A crab gets tangled. This attracts a fish which may get caught by the dorsal fin or the gill covers. When it dies, it attracts more crustaceans etc. This goes on until the line deteriorates in probably a year in salt water. In the Hudson- I have no idea.

Wire line is forever. Its advantage is its density. I was told that trolling 100 yards will leave your bait ten feet down. I have no idea of its longevity if snagged and lost, but I am seeing an increasing amount of it. For the most part it is found in shallow water, (where its advantage is not warranted). The same caring boaters who would never discard a plastic bottle in the water, which may last 50 years, are unwittingly littering the sound with stainless steel line which may last hundreds of years!

In summary: Don't ever throw ANY fish line overboard.
If you snag the bottom, make every effort to retrieve the line.
Don't use wire- there are other and cheaper ways.

Rockland Aquanauts Organization Inc.
Mission Statement:

To provide, promote, and advance environmental protection, care, and voluntary clean-up of waterways by any and all lawful means; to promote the importance and care in every manner possible by environmental awareness and otherwise; to purchase, print, publish, and circulate literature to promote the importance and care of the waterways and the work of the Corporation. To perform all acts the Corporation may deem appropriate or advisable in such operation; to establish, provide, and voluntary clean-up waterways, to encourage, support and subsidize the cleaning and protection from pollution.

ANNUAL MEMBERSHIP FEES

Rockland Aquanauts Organization
2009 & 2010 Dues

Many of our members have not paid their 2009 dues. It would be appreciated if you could pay them as soon as possible so that I can close out the books for 2009.

Also anyone that wants to pay their 2010 dues can do so. You can then take your tax deduction in 2009.

So please send in your \$42 dues early to;

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Is There Hope for the Coral Reef!

By Lada Simek

SITUATION

In case you do not know, many authorities are giving the coral reefs 30-50 years before they die. The culprit is “bleaching”, a condition which is primarily caused by excessive warmth of the water. Other things may cause it also, but heat is the number one reason. A major event in 1998, caused by an unprecedented El Nino, resulted in the bleaching of 55% of the Great Barrier Reef and caused 5% of it to die. Similar episodes took place in the Red Sea and the Caribbean. **IT ONLY TAKES ABOUT TWO DEGREES CELSIUS** rise to trigger such an event! With global warming either here or on its way, things look glum for the coral reef.

PUZZLEMENT

Corals that are bleached do not always die; they frequently come back again. More than 40% of the corals damaged in 1998 are back in shape- not necessarily as good as new, but alive. We take them as extremely delicate, living in a narrow temperature range. But wait a minute! Evolution-wise, organisms this delicate do not usually survive very long, and the coral reef has been with us for 220 million years, the last 60 million as a part of tropical, shallow seas. What about the ice ages? It certainly had to adapt.

BACKGROUND

All living things need a source of energy, (sugar, carbohydrates, oils) and also building material to make cells. This means proteins, which require nitrogen. In our northern waters, resembling a green organic soup, nitrogen is quite plentiful. I did an analysis for nitrogen in Jamaican waters. It came up virtually zero! That is why the visibility is so good.

MECHANISM

The coral polyps “fish” for planktonic food, (protein). They could not make it alone in those clear tropical waters. In their tissues they harbor symbiotic algae called zooxanthellae. The algae photosynthesize using sunlight, making food and oxygen from which the polyp benefits. This is why most corals are a brown to green. Once in a while, the polyp may sting and catch some proteinacious food, and to the algae, nitrogen spells fertilizer! There is more. Beneath the polyp are filamentous algae, which are green and also photosynthesize. They are very light and temperature sensitive. Some light loving ones are close to the surface while others, needing less light, are deeper inside the coral. There may be as many as five different kinds. The algae are responsible for over 80% of the caloric needs of the polyp. They can not make it without each other.

When the coral is exposed to an environment it finds stressful, such as different temperature, different salinity, sedimentation or chemicals, it casts out its symbiotic algae. (How and why this is done is a mystery.) It may then appear white, although it may still have 10% of the algae left. At this point, if the stress is removed, the zooxanthellae in its tissue begin to multiply and the coral, though injured, may partially recover.

BAD NEWS

In order to survive, the polyp's energy requirements are not 100% but more like 130-140%. The polyp owns his little calcium carbonate house without a mortgage, but like a coop or condo, there is a high maintenance fee. It must chip in energy and protein for the colony's coenosarc. This is a mucous membrane that covers the entire coral head, making it feel slimy. Through this membrane, a lucky polyp that caught some food is able to share it with the rest of the colony. It also acts as to irrigate the coral head, helping to keep the colony clean, much like a runny nose. The coenosarc is made of fats, carbohydrates and water. These are expensive commodities in the tropical sea.

GOOD NEWS (maybe)

Only in the last ten years has it been found that there are genetic differences in the zooxanthellae, making perhaps four categories. Some appear to be more heat tolerant than others. On a reef, some colonies may get bleached when next to them is a colony that is perfectly healthy. One researcher says that the initial bleaching is heavily determined by the type of zooxanthellae within the corals' tissues. Another individual found that three years after heavy bleaching, the affected corals had changed to a higher temperature tolerant symbionts. The Persian Gulf corals, which are frequently exposed to higher temperatures, have also adopted the heat tolerant algae. A team in Australia experimentally showed that some species of coral could gain two degrees C of thermal tolerance when they were forced to change symbionts.

No one knows where the corals get the replaced algae from. Do they collect them from sea water or do they have a reservoir inside their bodies for such emergencies? It is also not known what penalties there are for a symbiont exchange or how many times it can be done. It might have negative effects, such as slower growth. Regardless though, everyone agrees that bleaching is a bad thing, leaving the corals sick and vulnerable, but it also may be a way of reaching a new stability level and it may be evolution at work.



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November 2009

Our 2009 Diving Season is Over, Wireline, Is There Hope for our Coral Reefs? 2010 Dues

****There Will be NO November Meeting ****

Can Anyone Help Us Set Up Meetings?

Please contact info@rocklandaquanauts.org
