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**Friends of Perdido Bay**  
10738 Lillian Highway  
Pensacola, FL 32506  
850-453-5488

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# Tidings

The Newsletter of the Friends of Perdido Bay

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Jackie Lane -Editor

[www.friendsofperdidobay.com](http://www.friendsofperdidobay.com)

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## **Planning a More Active 2018**

For the past five or six years, Friends of Perdido Bay has kept a relatively low profile. Our fight to save our bay from the ravages of the paper mill chemicals has received little media attention. This is going to change. We could all see how fast our bay recovered once IP shut down for two weeks last January. In two weeks time, we had algae growing on our sea walls, baby blue crabs and shrimp, pin fish and bigger fish following. When the paper mill started back up, most life disappeared. It is really disheartening that one industry can kill a bay and nothing is done. But we can not expect help from our government. If anything, our government is helping these big industries pollute. So we are going to have to take our bay back by ourselves. We are going to have to write letters to the editors, and get media attention for the bad condition of our bay. We are planning on having a rally or two to get this media attention. We will notify you when we plan on having a rally and hopefully your activist spirit will come alive. We still have signs from past rallies and will pass them out. So get ready. Make a new sign if you wish. It is time to turn this fight around.

## **The media make the news**

Over the years, we have learned many things about our government and society. One of the things we learned was the power of the media. Unfortunately, Friends of Perdido Bay has not been able to harness the power of the social media or any other type of media such as the printed news. On the other hand, we have seen some environmental issues become "hot" topics. One "hot" topic is Global Warming. This has become a very big issue and Al Gore won a Nobel Prize in 2007 for his work in making this an issue. The weather certainly appears to be changing as the earth warms for which there is no question. I am sure the insurance industry views extremes of weather with alarm.

I recently had an opportunity to travel to Patagonia and witness the melting of the glaciers first hand. Yes, it is alarming to see the icebergs drifting by at an accelerating pace; to see areas flooded by the excess water. But I also saw where the ice had been thousands of years before. Ice melting is not a new phenomena. When I came home I looked on the internet to find out how long the ice has been melting. To my amazement, the ice has been melting for 11,500 years according to Goggle. This is a long time. I also remember taking an Oceanography course and having the instructor explain that as the ice of the earth melts, the earth will warm. The ice helps to reflect the heat of the sun back out into space. With less ice, the earth has less reflective power. So it is understandable that the earth is warming simply because we have less ice. Even if there was no industrial revolution or increasing carbon dioxide in the atmosphere, the earth would still be warming. The last ice age peaked at about 21,000 years ago and since then the ice has been melting. Why has this not been brought out in the discussion about global warming? I don't know.

Perhaps man's spewing of carbon dioxide into the air has acerbated the problem, but the earth would still be warming nevertheless. My environmental friends are going to be angry with me for casting doubts on man's causing global warming. But I believe that it is important to have some perspective on a problem and be able to recognize fact from fiction, if you can. Media hype is not going to solve this problem.

### **Heterosigma - Another Hoax**

We had our own obvious hoax here on Perdido Bay. This hoax was perpetuated by the scientist who worked for Champion Paper Company, the previous owners of the paper mill. In 1995, Dr. Livingston found that a toxic algae, *Heterosigma*, had begun appearing in Perdido Bay. He attributed the lack of life in Perdido Bay to the bloom of this algae. He also correlated the bloom of algae to increasing nutrients. I found this very hard to believe. To begin with, we had begun to see increasing nutrients and lack of life in Perdido Bay long before the Heterosigma bloom of 1995. What did occur in 1995 was the conversion of the bleaching operation at the paper mill from chlorine to chlorine dioxide. I was doing research on Perdido Bay at the time; growing algae on glass plates. In 1995, the algae stopped growing. I hypothesized it was the change in bleaching chemicals which inhibited growth of algae. These bleaching chemicals were herbicidal and, as it turned out, toxic. It was the bleaching chemicals, not a toxic algae, which were killing Perdido Bay. I wrote to the EPA to let them know what was happening. They informed me that Dr. Livingston's study would answer everything. The Livingston study only served to hide the real answers.

I later found out that the EPA had allowed the paper industry to convert to chlorine dioxide from chlorine based on three pieces of research - all of them done by researchers from the National Council for Air and Stream Improvement (NCASI) which sounds like an independent group but is run by the forest products and paper industry. I was able to obtain two of the three papers and was amazed at the poor science of the papers. There were insufficient samples taken and the standard deviations would suggest that chlorine

dioxide was, in fact, herbicidal even though the papers said it wasn't. I even contacted one of the researchers and questioned his data, but he assured me that there was no significant difference between chlorine dioxide and "no chlorine dioxide" tests. But nevertheless I was appalled that the EPA allowed this type of research to dictate their policy. Of course, you have to consider politics in what type of science is accepted. Clinton and Gore were heading up the EPA in those years and I always believed there was collusion between the chemical industry and the Clinton/Gore people.

Conversion from the chlorine to the chlorine dioxide did help solve the problem with formation of 2,3,7,8 TCDD dioxin in the paper mill bleach process, but it did not eliminate all the other different forms of dioxin. In the latest dioxin sampling of Perdido Bay clams which Friends of Perdido Bay did last Fall, we were still finding different forms of dioxin and PCB's in the clams. While the paper mill (IP) went from making 100% bleach paper to making 66% brown paper and 33% bleach paper in 2004, they have increased their production so that they are still using a lot of the bleaching chemicals. These chemicals are still having a deleterious effects on our bay. The switching of the discharge site of the effluent from Elevenmile Creek to a wetland bordering Perdido Bay has done little to help the life in the bay and has had a devastating effect on the trees in the wetland.

To get back to the hoax - Livingston continued to find *Heterosigma* in Perdido Bay right up until he was fired by IP in 2007. His last report blamed outbreaks of *Heterosigma*, for killing life in the bay, even though I don't believe that even he believed that *Heterosigma* was killing life in the bay. As he said in his last report, life in the bay just quietly slipped away without any fish kills or sign of what happened. He said the environmental agencies were unaware of the bad condition of the bay. This was an obvious lie as we kept writing letters and bringing it to the EPA and states' s environmental agencies attention. Once Dr. Livingston was no longer working on Perdido Bay, no one was actively sampling our bay. IP did hire Dr. Wade Nutter to study the wetlands and study the phytoplankton in a few water samples taken in the Upper Bay. He has not reported finding any *Heterosigma*. There has been a little selective research done in the lower bay by Alabama researchers, but no one is reporting any *Heterosigma*. The bay is still dead.

Just where those *Heterosigma* came from has been an active area of debate for me. Was it a figment of Dr. Livingston's imagination or were *Heterosigma* actually present but in small numbers? Maybe *Heterosigma* was not toxic as Dr. Livingston claimed. When learning of this organism, I contacted several authorities on toxic algae. One authority was a friend of mine so I believed her. She told me that she knew the researcher who had identified *Heterosigma* for Dr. Livingston. So I figured it had to be present. But how did this organisms conveniently get into Perdido Bay when needed. I concluded it was being seeded in Perdido Bay by some entity, maybe the paper mill. But in recent conversations with my friend who is an expert on toxic algae, she said it may have been possible to seed the samples taken in Perdido Bay with *Heterosigma*. She did not think it was plausible to seed the entire bay with *Heterosigma*. So the mystery about where *Heterosigma* came from continues, and so does the degraded condition of our bay. Without a doubt, *Heterosigma* was used to cover up the herbicidal and toxic impacts of paper mill chemicals.

But maybe there was another reason for using a toxic algae as a cover for toxic chemicals. The reason given for blooms of toxic algae was excessive nutrients. And it is true, excessive nutrients are a horrible problem which certainly need to be controlled. But just having green beaches or masses of drift algae floating in the water, as we saw at our beaches on Perdido Bay in the 1990's, did not seem to get the policy makers and politicians attention. But excessive nutrients causing toxic algae blooms did. One toxic algae bloom, in particular, the *Pfiesteria* outbreak in the estuaries of the Chesapeake and North Carolina really got the media's attention. In the summer and fall of 1998 and 1999, the media (newspapers and television) carried the horrible stories of fish getting lesions and dying by the thousands. People who handled the fish were also affected. Memory loss, sores and unexplained illnesses were attributed to this toxic microorganism, *Pfiesteria*. Since this area was close to Washington, DC, the politicians heard these terrible stories. The tourist and seafood industry along the Chesapeake were badly affected in these years. Pressure was brought on the politicians. Money (a lot) was allocated for the study of toxic algae. And according to my friend, this was the beginning of serious research into toxic algal blooms. It was also the impetus for setting nutrient standards using specific nutrient limits for each water body. Thanks to Dr. Livingston, Perdido Bay has the highest allowable total nitrogen level and one of the highest total phosphate levels in Florida. Would these specific nutrient levels have ever been established by the EPA had there not been an outbreak of *Pfiesteria* and the ensuing media hype, is questionable. I don't think so. What happened to *Pfiesteria*? It disappeared, like *Heterosigma*. Some scientists are saying, it was bad science and media hype which caused all the uproar. But it did produce, specific nutrient limits for which many environmental groups were pushing. Interesting!

**Seems like the paper mill is controlling foam.**

We have seen no foam on the bay in the past several weeks. Maybe this is what IP did with its tax windfall.

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