



Friends of Penzance B.S.A.C.
Conservation Officer's Report
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Tropical Ecosystems Boost Carbon dioxide as Temperatures rises. NASA scientists and an international team of researchers have found tropical ecosystems can generate significant carbon dioxide when temperatures rise. Researchers discovered that a temperature increase of just one degree Celsius in near surface air temperatures in the tropics leads to an annual growth rate of atmospheric carbon dioxide equivalent to one third of the annual global emissions from combustion of fossil fuels and deforestation combined. In tropical ecosystems carbon uptake is reduced at higher temperatures. This finding provides scientists with a key diagnostic tool to better understand the global carbon cycle. What has been learned is that in spite of droughts, floods, volcano eruptions, El Nino and other events, the Earth system has been remarkably consistent in regulating the year-to-year variations in atmospheric carbon dioxide levels. The study provided support for the “carbon-climate feedback” hypothesis proposed by many scientists. This hypothesis asserts a warming climate will lead to accelerated carbon dioxide growth in the atmosphere from vegetation and soils. The team used a state-of-the-art high-performance computing and data access facility called NASA Earth Exchange (NEX) to investigate the mechanisms underlying the relationship between carbon dioxide levels and increased temperatures. The NEX facility allows scientists to analyse widely available data of atmospheric carbon dioxide concentrations and global air temperatures between 1959 and 2011 while studying outputs from several global dynamic vegetation models.



Researchers have warned of an “economic time-bomb” in the Arctic. following a ground-breaking analysis of the likely cost of methane emissions in the region, Economic modelling shows that the methane emissions caused by shrinking sea ice from just one area of the Arctic could come with a global price tag of 60 trillion dollars, the size of the world economy in 2012. Academics argue that a significant release of methane from thawing permafrost in the arctic could have dire implications for the world’s economy. The researchers, from Cambridge and Rotterdam, have for the first time calculated the potential economic impact of a scenario some scientists consider increasingly likely—that methane from the East Siberian Sea will be emitted as a result of the thaw. This constitutes just a fraction of the vast reserves of methane in the Arctic, but scientist believe that the release of even a small proportion of these reserves could trigger possibly catastrophic climate change. According to the new assessment, the emissions of methane below the East Siberian Sea alone would also have a mean global impact of 60 trillion dollars.

August was great for sightings of marine creatures. Reports came in for every day except one. There were only 7 reports of Bottlenose Dolphins from Pentire Head on the north coast to Plymouth Sound on the south. Largest pod was of 9, and two other sighting of unidentified dolphins were probably also Bottlenose. There were 19 sightings of Common Dolphins, from Newquay to Porthkerris, with 3 sightings of a pod of over 100, probably the same pod seen in different locations on two days. 35 reports of Harbour Porpoises were from Gurnards Head on the north coast around to Fal Bay on the south. Over 80 were seen on a boat trip out of Penzance on the 26th. Only one sighting of Rissos Dolphins was of a pod of 5 in Mounts Bay on the 18th. There were 6 reported sightings of Minke Whales, all along the south Penwith coast from Mounts Bay to Lands End. 46 sightings of Ocean Sunfish were from Boscastle on the north coast to Fowey on the south, largest number seen in one area was 20 in Mounts Bay on the 7th. Basking Sharks were also seen on 46 occasions from Fal Bay to Pendeen. Mounts Bay was again the spot to be, for 17 were seen there on the 7th. Grey Seals were reported 26 times, sometimes in the water but mostly hauled out on rocks from Mounts Bay to Fal Bay. Two Blue Sharks were seen off Newquay on the 8th and a Thresher Shark off Gwennap Head on 11th. A Leatherback Turtle was seen in Mounts Bay on the 24th, and lots of Jellyfish were reported in Fal Bay and Mounts Bay on the 23rd and 24th

