



Conservation Officer's Report

Penzance
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An international team of scientists led by British Antarctic Survey (BAS) has established that warm ocean currents are the dominant cause of recent ice loss from Antarctica. New techniques have been used to differentiate, for the first time, between the two known causes of melting ice shelves—warm ocean currents attacking the underside, and warm air melting from above. This finding brings scientists a step closer to providing reliable projections of future sea-level rise. Researchers used 4.5 million measurements made by a laser instrument mounted on NASA's ICESat satellite to map the changing thickness of almost all the floating ice shelves around Antarctica, revealing the pattern of ice shelf melt across the continent. Of the 54 ice shelves mapped, 20 are being melted by warm ocean currents, most of which are in West Antarctica. In every case, the inland glaciers that flow down to the coast and feed into these thinning ice shelves have accelerated, draining more ice into the sea and contributing to sea level rise. In all cases where ice shelves are being melted by the ocean, the inland glaciers are speeding up. It's this glacier acceleration that's responsible for most of the increase in ice loss. This supports the idea that ice shelves are important in slowing down the glaciers that feed them. It means that we can lose an awful lot of ice to the sea without ever having summers warm enough to make the snow on top of the glaciers melt - the oceans can do all the work from below.

A research team has produced the first published study on the use of satellite telemetry to track the open-ocean journeys of the world's largest ray, the Manta Ray, which can grow up to 25ft in width. This ray is listed as 'vulnerable' by the International Union of Nature (IUCN) and has become increasingly threatened by fishing and accidental capture and now needs more protection. The research team from Exeter University and the government of Mexico attached satellite transmitters to the rays off the coast of the Mexico's Yucatan Peninsula over a 13 day period. The tracking devices were attached to the backs of six individuals, four females, one male and one juvenile. The tags revealed that some of the rays travelled more than 1,100 kilometres during the study period, and spent most of the time traversing coastal areas plentiful in zooplankton and fish eggs from spawning events. Like baleen whales, Basking Sharks and Whale Sharks, Manta Rays are filter feeders than swim through clouds of plankton with their mouths agape. In spite of its malevolent, bat-like appearance, the Manta Ray, sometimes referred to as the "devilfish" is harmless to humans and lack the stinger of the better-known Stingray, and possesses the highest brain to body ratio of all sharks and rays, and gives birth to live young.



Manta Ray

There were 38 reported sightings of Basking Sharks during June, all between Mounts Bay and Pendeen except for a sighting of one off the mouth of the Helford River on the 27th. There were only 4 reported sightings of Bottlenose Dolphins from the Gear Pole to St. Ives, the largest pod of 15 was off Pedn-mendu near Lands End. Three of the four sightings of Common Dolphins were in Mounts Bay including a pod of 80 or more off Mousehole on the 17th. The other report was of a single well up the Helford river near Groyn Point. There were fears that it might strand, but it left without being rescued. Only 2 reports of Rissos Dolphins included a pod of about 40 seen off Lamorna on the 1st of the month. This is an unusually high number for a pod of Rissos. They are more often seen in much smaller pods. The 5 reports of Harbour Porpoises were all in Mounts Bay in the early part of the month, up to the 10th. There were 3 reported sightings of unidentified dolphins, a pod of 3 seen off Cape Cornwall and two singles in Fal Bay. A Striped dolphin stranded alive at Combe Beach Fowey on the 7th of the month. BDMLR members attended, but it died before they were able to rescue it. The most interesting sighting of the month must be off Gwennap Head on the 24th. A keen coast watcher spent a couple of hours looking out over a quiet sea with hardly a seabird to be seen but then noticed a group of gulls gathering excitedly about 3 Km out, obviously interested in something below. Something surfaced and started thrashing about, looking a bit like a huge snake, but then it breached clear of the water and revealed itself to be a huge Thresher Shark.