

Friends of Penzance B.S.A.C. Conservation Officer's report May 2014

A New study of Bats reveals a capability within their wondrous wings that may help them fine-tune their flight. They appear to use a network of hair-thin muscles in their wings to control the stiffness and shape of their wings as they fly. Aerodynamic performance depends upon wing shape, and the shape of a membrane wing might initially begin flat but as soon as it starts producing lift it will not remain flat because it has to deform in response to that aerodynamic load. The Bat also has bones that can control the general shape as well so they can adopt any number of profiles.



A new genetic study has revealed that populations of humpback whales in the oceans of the North Pacific, North Atlantic and Southern Hemisphere are much more distinct from each other than previously thought, and should be recognised as separate subspecies. Understanding how connected these populations are has important implications for the recovery of these charismatic animals that were once devastated by hunting. The team, led by scientists from the British Antarctic Survey and Oregon State University, analysed the largest and most comprehensive genetic database so far compiled for this iconic species, and the findings show that the three populations are on independent evolutionary trajectories. Known for their amazing acrobatics, humpback whales annually undertake the longest migration of any mammal between their winter breeding grounds and summer feeding grounds. Although they travel vast distances it appears that the paths of the populations do not cross. Their populations appear separated by warm equatorial waters that they rarely cross. The colour of the bodies and undersides of the tail (the flukes) of humpback whales in the northern oceans tend to be much darker than those in the Southern Hemisphere. Until this study, it was not realised that these kinds of subtle differences are actually a sign of long-term isolation in the three global ocean basins.



In the rainforests of South America, scientists have discovered a new genus and three new species of insect with the highest ultrasonic calling songs ever recorded in the animal kingdom.



Katydids (or bushcrickets) are insects known for their acoustic communication, with the male producing sound by rubbing its wings together (stridulation) to attract distant females for mating. The scientists discovered the three new species in the rainforests of Columbia and Ecuador. These male insects were found to produce ultrasonic calling songs reaching 150kHz. The calling frequencies used by most katydids range between 5 kHz and 30 kHz. The normal human hearing range ends at around 20 kHz. For this reason, the new genus has been named *Supersonus*

Bottlenose Dolphins were sighted and reported 9 times during May, seen between Padstow Bay on the north coast and Carrick Roads, Falmouth on the south. Mostly in small pods of 3 to 6 but a pod of about 27 was seen at Polhawn Cove near Rame Head on the 17th. No Common Dolphins were reported, but there were 2 sightings of Risso's Dolphins. a pod of 3 at Maenporth near Falmouth on the 8th and a pod of 6 in Mounts Bay on the 16th. There were 12 reported sightings of Harbour Porpoises all in Mounts Bay, most seen on any one day were about 20. Basking Sharks were seen on 10 occasions. They were seen from Cape Cornwall around the Lizard to Cadgwith, mostly of single sharks, but 6 were seen in Mounts Bay on the 4th and 4 off Black Head, near The Lizard, on the same day. The first reported sighting of an Ocean Sunfish was on the 28th of the month, when 2 were seen in Mounts Bay, 3 were seen in the Bay on the 30th and another one on the 31st. There were 16 reported sightings of Grey Seals, all in and around Mounts Bay, some in the water and others hauled out on rocks around the Bay. There was a bit of an invasion of Barrel Jellyfish, *Rhizostoma octopus*, around Cornwall during May with sightings from St Agnes on the north coast to Cremyll in Plymouth Sound on the South. Although actual numbers were not given the reports said vast numbers were seen.



Barrel Jellyfish