

# Penzance B.S.A.C.

## Conservation Officer's Report

### October 2009

Scientists are continually finding new species, both on land and in the sea., recently they have discovered a unique group of worms that live in the depth of the ocean. They have nicknamed these worms 'Green Bombers' because they can release body parts that produce a brilliant green bioluminescent display. They have found seven previously unknown species of swimming worms in the Annelid phylum ranging from 18 to 93 millimetres (•7 to 3•6 in) in length. These are not rare animals, often when seen they number in the hundreds, but their habitat is really hard to sample in depths between 1,000 and 4,000 metres, the biggest habitat on earth, but also the least explored. The scientists speculate that the bombs are used as a defensive mechanism against potential predators, but more studies are needed to fully understand the process.



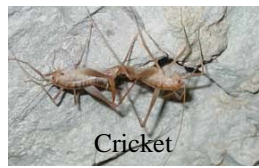
Green Bomber



Speleonectes atlantida

Another new underwater species discovered recently was a little predatory crustacean of the class Remipedia, found by divers exploring submerged lava tubes off Lanzarote in the Canary Islands. Living in complete darkness in underwater caves, they are without eyes, but instead rely on long antenna which search the lightless voids in all directions. Like some type of science fiction monster, their head is equipped with powerful prehensile limbs and poisonous fangs. The scientific diving team name the creature *Speleonectes atlantida* after the lava tube where it was found, the Tunnel de la Atlantida, the world's longest submarine lava tube. The team also found two new species of annelid worms of the class Polychaeta.

Other newly found land based species are a tiny bug, a booklouse, only 1•3mm long, found in a cave in The Grand Canyon, which may lead to further protection for the cave system, and in a different cave in the Grand Canyon by another team of researchers a new Cricket Genus, so far un-named.



Cricket



Booklouse

There are little creatures that I find regularly in my concrete bird bath, called Tardigrades, or Water Bears. They are tiny and can only be seen under a microscope. I have known for a long time that they are tough little creatures for although they are usually found in water or damp places, like mosses or roof gutters, they can survive the bird bath drying out and becoming baked in the sun until you could fry an egg in it. But just add water and the Tardigrades are still alive and well. To my surprise I learn that they have been taken into space. Of all environments, space must be the most hostile: It is freezing cold, close to absolute zero, there is a vacuum, so no oxygen, and the amount of lethal radiation from stars is very high, at least 1000 times that on Earth, and yet the Tardigrades are able to do away with space suits and can survive exposure to the open-space vacuum, cold and Radiation. Because their homes on Earth often fall dry, they are very resistant to drying out and can resurrect after years of dryness. Along with this amazing survival trick comes resistance to heat, cold and radiation so Tardigrades seemed like an ideal animal to test in space. After their return to Earth, the creatures that had been exposed to the cold, vacuum, cosmic rays and solar UV radiation, it was found that they could reproduce fine after their space trip.



Tardigrade

There were only 6 reported sightings of Bottlenose Dolphins during September, 5 off Gwennap Head and a pod of about 50 near the Wolf Rock. 3 other sightings of unidentified dolphins were probably Bottlenose. Unusually there were 4 times as many sightings of Minke Whales, with 24 reported sightings, all in the Gwennap Head area except 2 near the Wolf Rock. 20 reports of Common Dolphins and 2 reports of Risso's Dolphins were all in the Gwennap Head area. There were 35 reported sightings of Harbour Porpoises, They were seen from North Cliffs on the north coast to Coverack on the south. The 39 sightings of Basking Sharks were all around the west end of Penwith from Botallack on the north coast to Porthgwarra on the south. There were 3 reported sightings of Ocean Sunfish, one off Gwennap Head another off The Longships reef and the third off Black Head near The Lizard. Grey Seals were seen from Falmouth and west as far as the Longships with 39 reported sightings with 24 animals off Gwennap Head on the 20th being the largest group. A Pilot Whale was seen off Mevagissey on the 20th and another sighting of a large cetacean off Pentewan on the same day, was probably the same Pilot Whale. Another large whale was seen off Gwennap Head on the 25th which was considered to be a Sei Whale.