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Conservation Officer's Report
August 2010

Scientists have discovered a way of mimicking the stunningly bright and beautiful colours found on the wings of tropical butterflies. The findings could have important applications in the security printing industry, helping to make bank notes and credit cards harder to forge. The striking iridescent colours displayed on beetles, butterflies and other insects have long fascinated both physicists and biologists, but mimicking nature's most colourful, eye-catching surfaces have proved elusive. This is partly because, rather than relying on pigments these colours are produced by light bouncing off microscopic structures in the insects' wings. The scientists said, "We have unlocked one of nature's secrets and combined this knowledge with state-of-the-art nanofabrication to mimic the intricate optical designs found in nature.


Indonesian Peacock Butterfly Wing Scales

When a seal sets off in pursuit of fish for dinner it has a secret weapon in its arsenal: its whiskers . Detecting hydrodynamic trails in water with their sensitive whiskers, seals easily track passing fish even in the most turbid conditions. Scientists at a German University found that a blindfolded seal could pick up a fish trail as long as 35 seconds after the fish had passed. A fish can travel hundreds of metres in that time, but they found that the blindfolded trained seal could detect the trail with over 90% accuracy. The scientists suspects that seals sense the structure of the wake's vortices and jets to determine which way the fish went and were amazed that they could still detect the movement up to half a minute later. They consider the whiskers compare well with the performance of whale and dolphins by echolocation.

On July 6th Scientists returned from a voyage with samples of rare animals and more than 10 possible new species which revolutionised their thinking about deep-sea life in the Atlantic Ocean. One group of creatures they observed—and captured—during their six weeks in the Atlantic is believed to be close to the missing evolutionary link between backboned and invertebrate animals. They used "Isis" the UKs deepest diving ROV for more than 300 hrs of diving to depths of between 700 metres right down to 3,600 metres, surveying flat plains, cliff faces and slopes of the giant mountain range that divides the Atlantic Ocean into two halves—east and west. The north west plains were the home of deep sea enteropneust acorn worms, a little known group of animals which are close to the missing link in evolution. The picture shows one of three, thought to be new species of acorn worms.

There were 10 reported sightings of Bottlenose Dolphins during July, from Newquay on the north coast to Falmouth on the south. Largest pod was 15. 3 other reports of unidentified dolphins were probably also Bottlenose. There were 11 reports of Common Dolphins from Crackington Haven on the north coast to The Manacles on the south. Largest pod about 50. Just 1 report of 2 Risso's Dolphins and 1 report of 5 Whitebeaked Dolphin., both off Gwennap Head. Harbour Porpoises were reported 11 times with the largest number in one area, again off Gwennap Head of 10 animals. Both reports of Minke Whales were off Gwennap Head, one was seen on the 18th and two were seen on the last day of the month. There were 25 sightings of Basking Sharks from Newquay westward around to Perranuthnoe in Mounts Bay. Twelve reports of Ocean Sunfish were from Bude on the north coast around to Gwennap Head on the south. Quite large numbers of Moon Jellyfish were seen in an area north of Newquay on several days with a few Compass Jellyfish and the blue jellyfish *Cyanea lamarckii.* Also in that area were several cluster of Buoy Barnacles attached to birds feathers floating on the surface