

Friends of Penzance B.S.A.C. Conservation Officer's Report June 2013



In the last few decades, glaciers at the edge of the icy continent of Antarctica have been thinning, and research has shown that the rate of thinning has accelerated. New ice core research suggests that, while the changes are dramatic, they cannot be attributed with confidence to human-caused global warming. Previous work had shown that rapid thinning of Antarctic glaciers was accompanied by rapid warming and changes in atmospheric circulation near the coast and that the majority of Antarctic warming came during the 1990s in response to El Niño conditions in the tropical Pacific Ocean. This new research suggests the '90s were not greatly different from some other decades - such as the 1830s and 1940s - that also showed marked temperature spikes. The research was based on new ice cores going back some 2000 years, which found that during that time there were several decades that exhibited similar climate patterns as the 1990s, the most prominent of these being the 1830s and the 1940s which were also periods of unusual El Niño activity like the 1990s.

About 230,000 marine organisms have names, a fraction of the millions of species believed to live in the sea. At the rate new species are being described it will take centuries to give them all names. But even if every species had a name, identification would not be easy. The eggs and babies of different fish often look alike and even the adults can be hard to distinguish. The solution? Bar Codes. Not the string of tiny black lines scanned at the cash register but the string of DNA letters in a gene (A,C,G or T) that are, for certain genes, unique to a species. Whales are an example of barcoding in action. Japan claims the right to harvest a limited number of certain species for scientific research, the remains of which can then be sold. To check the legality of what was on sale, two scientists bought 16 specimens at Tokyo markets for genetic analysis. By copying the DNA in their clandestine hotel laboratory and bringing back only the copies for analysis they avoided breaking laws on international transport of endangered species. They found that all but three of their purchases had almost certainly been illegally hunted, imported or processed. Unfortunately the problem of fraudulent marketing of seafood is not limited to whales.

The first amphibian to have been officially declared extinct by the International Union for Conservation of Nature (IUCN) has been rediscovered in the north of Israel after some 60 years and turns out to be a unique "living fossil" without close relatives among other living frogs. The Hula painted frog was catalogued within the *Discoglossus* group when it was first discovered in the early 1940s. The frog was thought to have disappeared following the drying up of the Hula Lake at the end of the 1950s, and was declared extinct by the IUCN in 1996. As a result, the opportunity to discover more about this species' history, biology and ecology was thought to have disappeared. Based on new genetic analyses of rediscovered individuals and the morphologic analyses of extant and fossil bones the conclusion is that the Hula frog differs strongly from its other living relatives, the painted frogs from northern and western Africa. Instead the Hula frog is related to a genus of fossil frogs, *Latonia*, which were found over much of Europe dating back to prehistoric periods and has been considered extinct for about a million years.

Hula painted Frog



Researchers from Oxford and Vienna Universities have filmed a Cockatoo that has been reared in captivity making and using tools for reaching food and other objects. It uses his powerful beak to cut long splinters out of wooden beams in its aviary or twigs out of branches to reach the objects out of its reach. How the bird discovered how to do this is unclear but shows how much we still don't understand about the evolution of innovative behaviour and intelligence. Video can be seen at <http://www.zoo.ox.ac.uk/group/kacelnik/movie>

There was a report of a pod of 25 or more Bottlenose Dolphins off Pendennis Point on May 2nd. 4 other reports of smaller pods were from St Agnes to Sennen. Two other reports of small pods of dolphins off Porthcurno and Sennen were probably also Bottlenose. Five reports of Common Dolphins were one off Stepper Point, north Cornwall and the other 4 from Penzance to Lands End. A pod of 50 or more dolphins seen off Duckpool north of Bude was probably also Commons. Rissos dolphins were reported twice, one of which was of a pod of a dozen or more, which is a larger pod than usually seen. All of the 9 reported sightings of Harbour Porpoises were along the South Penwith coast, and a Minke Whale was seen off Porthgwarra on the 12th. The first Ocean Sunfish for the year was seen in Fal Bay on the 22nd of May. Grey Seals were reported in the water or hauled out on rocks around Mounts Bay on 10 different days