



# Penzance B.S.A.C. Conservation Officer's Report February 2012



In 2009 a fossil of a bird-like dinosaur with 4 wings was found in north eastern China. The specimen bridged the critical gap in the transition from dinosaurs to birds, and revealed new insights into the origin evolution of feathers. The transition from dinosaur to birds is poorly understood because of the lack of well preserved fossils, and many scientists argue that bird-like dinosaurs appear too late in the fossil records to be the true ancestors of birds. This new well preserved fossil, named *Anchiornis huxleyi*, had long feathers covering the arms and tail, but also the feet, suggesting that a four winged stage may have existed in the transition to birds. The fossil dates to the earliest Late Jurassic, meaning that it is the oldest bird-like dinosaur reported so far, and older than *Archaeopteryx*, the earliest known bird.



Anchiornis

Scientists conclude that the presence of such a species at this time in the fossil record effectively disputes the argument that bird-like dinosaurs appeared too late to be the ancestors of birds. Further studies in 2010 provide yet more evidence that birds did not descend from ground dwelling theropod dinosaurs challenging decades of accepted theories about the evolution of flight. Analysis was done on an unusual fossil specimen found in 2003 called 'microraptor' in which three-dimensional models were used to study its possible flight potential and it concluded that this small feathered species must have



microraptor

been a glider that came down from trees, somewhat like a modern-day gliding squirrel. The weight of evidence is now suggesting that not only that birds did not descend from dinosaurs, but that some species now believed to be dinosaurs, like the velociraptors, may have descended from birds. Latest studies examined a remarkable fossil specimen that had feathers on all four limbs and glide tests

based on its structure concluded that it would not have been practical for it to have flown from the ground, but it could have glided from the trees down, and researchers have long believed that gliders such as these were the ancestors of modern birds.

Researchers have found the smallest known frogs in south eastern New Guinea, this also means that they are the smallest tetrapods (non-fish vertebrates). The frogs belong to the genus *Paedophyrne*, all of whose species are extremely small, with adults of the two new species - named *Paedophyrne dekot* and *Paedophyrne verrucosa*, only 8 to 9 mm in length. Miniaturization occurs in many frog genera around the world, but New Guinea seems particularly well represented, with species in 7 genera exhibiting the phenomenon.



*Paedophyrne dekot* Top  
*P. verrucosa* Bottom

7 or 8 Bottlenose Dolphins were seen off Carbis Bay on the 13th January and 3 or 4 were seen off Cape Cornwall on the 31st. On January 9th, 2 Fin Whales were seen off the Isles of Scilly and 3 Harbour Porpoises were seen off Porthgwarra. This was a pod of 2 adults with a juvenile, feeding under hundreds of Kittiwakes. Probably the same pod was seen on the 10th in the same place and again on the 12th off Gwennap Head. Single Harbour Porpoises were seen off The Cowloe, Sennen on two different days and off Porthgwarra and The Lizard. 6 Harbour Porpoises were seen off Gwennap Head on the 28th, this was two small pods of 2 adults with a juvenile