FOSSIL NEWS

A collection of fossil snippets from around the world, by Simon Cohen

A unique collection of humanoid bones from Ethiopia of a 3.3 million year old 3 year old has shed new light on human evolution. Findings were recently published in Nature. The fossil belongs to the family Australopithecus afarensis of which superstar fossil Lucy, an adult female found nearby in 1974 is the most famous member, Nicknamed Selam (peace in Ethiopian) she has fingers, a foot, a complete torso and a pretty complete skull so that a face has been reconstructed, which graced the cover of a recent National Geographic.

The fossils were found in 2000 by an Ethiopian team and have now been prepared. She has a tongue bone, previously only found in recent Neanderthal finds, which suggests she could make loud noises like gorillas and chimps. She probably walked upright but had long curled finger bones like a chimpanzee, so she probably supported her upright stance by hanging on to low branches. She doesn't have opposable big toes that baby monkeys use to hang on to their mothers so probably had to be carried by mum which limited mum's mobility and suggests family group cooperation. She has a brain the size of a chimpanzee, gorilla-like powerful arms and shoulder blades, a flat nose like a chimpanzee and a long projecting face.

The find has been greeted with considerable excitement, described as 'once in a lifetime', 'truly amazing' and 'of incalculable importance'.

A new 'living fossil' thought to have died out 50 million years ago has been found in the Coral Sea (south west Pacific Ocean). Nicknamed the Jurassic Shrimp it is a large-eyed cross between a shrimp and a lobster.

Study of a Neolithic village in Israel has unearthed a food store containing 9 carbonised figs from a variety of tree that cannot reproduce through pollination and can only be propagated by cutting and planting branches. This is the earliest evidence of fruit cultivation.

The latest from Liaoming, China. A two headed baby lizard! Reports of modern two headed snakes, lizards, crocodiles and turtles are not that uncommon but as these mutational mistakes means the animals usually die in early infancy the likelihood of any fossil freaks like this being preserved is very slight. This 140 million year old lizard is 3 inches long and is thought to have died just before or after birth. The specimen now resides in the Paris Natural History Museum.

A 43,000 year old horde of Neanderthal bones found in a cave in North West Spain shows evidence of cannibalism. Cut marks and dismemberment are common. Unusually, the remains of 8 individuals concentrated in a small space are not accompanied by any animal bones so the cave could have been used for ritual cannibal ceremonies. The growth pattern of some of the teeth shows evidence of episodes of starvation so life was tough. Jaw bones indicated facial differences from northern Neanderthals, notably smaller noses!

A limb bone and horse-sized complete skull of a 15 million year old 10 foot tall carnivorous 'terror bird' has been found in Argentina. Phorusihacids were vicious flightless birds with eagle-like bills that could gobble up lamb-sized mammals. Notoungulates have been found in the same strata, as have armadillos! It's calculated this half ton birdie could move at 30mph and it's 150lb, 10 million year old descendant could reach 60mph. South America was an island continent at this time and there were no carnivorous mammals around to compete with Phorusihacids.

A team led by David Martill of Portsmouth University has found unusually old (and predictably tiny) pieces of amber in the Santanna formation of North East Brazil, lower Cretaceous 110 million years old, otherwise famous for prolific nodular fish of all sizes, the occasional flying reptile and plenty of extremely well preserved insects and plants. The amber contains pieces of fungi and debris from coniferous trees. What is most significant about the find is that it comes from the Southern Hemisphere. Most major occurrences of amber are from the Northern Hemisphere.

Exciting news for fossil millipede enthusiasts. A species from the upper Devonian (360 million years) previously only found in the Old Red Sandstone of Scotland have been found in Pennsylvania, USA. This represents 'a geographic continuum in the millipede fauna across the Old Red Sandstone Continent during the Devonian!' The largest fossil millipede comes from the late Carboniferous (325 million years) and is over 2 metres long.

In an attempt to understand the relationship between woolly mammoth and modern elephants, German scientists sequenced the DNA of a 12000 year old Siberian mammoth using a small fragment of bone. This showed a 95.5% match with modern African elephants and 95.8% match with Asian elephants. The last common ancestor of mammoths and Asian elephants lived about 440,000 years ago.

Very, very small spiders have been found in rare Cretaceous amber from Myanmar (Burma) and Canada by a researcher from Manchester University.

It was thought that snakes evolved and lived in a watery environment and emerged on land limbless…..until the recent discovery of an almost complete primitive snake with well developed limbs from the upper Cretaceous of Patagonia that clearly lived in a non marine environment. This has also put into doubt the theory that snakes developed from Mosasaurs – a large vicious marine reptile that thrived through the Cretaceous and Eocene periods.

Ever wondered why the Isle of Wight's new(ish) dinosaur museum is called Dinosaur Isle not Dinosaur Island? A couple of shrewd chancers on the Island copyrighted the name Dinosaur Island for £50 shortly before the opening of the museum and then offered the name to the council for a mere £1000 (or so). The council didn't buy.

Using a technique called high energy x-ray tomography an international group of scientists have carried out a virtual dissection of a collection of 160 fossil embryos, each consisting of up to 1000 cells from sediments from China dated 580 million years old. Each embryo is under 0.5mm across. The fossils are thought to be primitive animals that were the ancestors of sponges. A spokesman from Bristol University commented 'We see no features of any living animal group here. These are embryos of a grade of animal evolution preceding all living groups. There is going to be a huge scrap over this'.