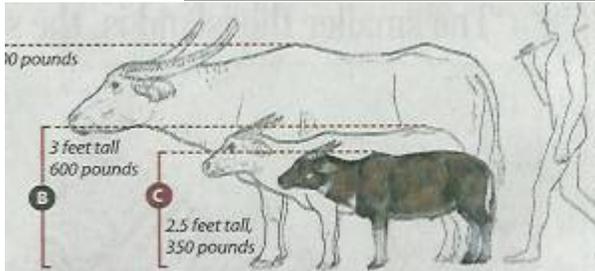




New Small Insular Mammal Found – *Bubalus cebuensis*



This new dwarf buffalo is described by Darin Croft, John Flynn and current Field Museum curator of mammals Larry Heaney although the bones were first found by a local on the island of Cebu in the Philippines in 1958. There were two teeth, two vertebrae, two upper arm bones, a foot bone and two hoof bones

that finally caught the eye of a Chicago physician who brought them to the Field Museum. Here they were found to belong to *Bubalus cebuensis*, which is the second dwarf species found in the Philippines. The first is found on the larger island of Mindoro and is the tamaraw (*Bubalus mindorensis*). The drawing shows the full sized water buffalo at 5 to 6 feet tall and 2,000 pounds, the tamaraw at 3 feet tall and 600 pounds and the new dwarf buffalo at 2.5 feet tall and 350 pounds. This is another case of a species getting smaller in a smaller environment. It may have lived between 100,000 and 20,000 years ago although the dating is not definite. (Croft et al in **J. of Mammology**)

Dog Mummies Found in Peru Graveyard



Archaeologists have found the bodies of 40 mummified dogs in a 1,000 year old pet cemetery south of Lima Peru. It was found while uncovering a human cemetery of the agriculture Chinbaya culture that thrived from 950 to 1350 AD before the rise of the Inca culture. They dogs were preserved by the desert sands and were found with treats for the afterlife. Some were full grown and some were puppies. The dogs were often used in herding llamas and were prized for their ability. (National

Geographic News)

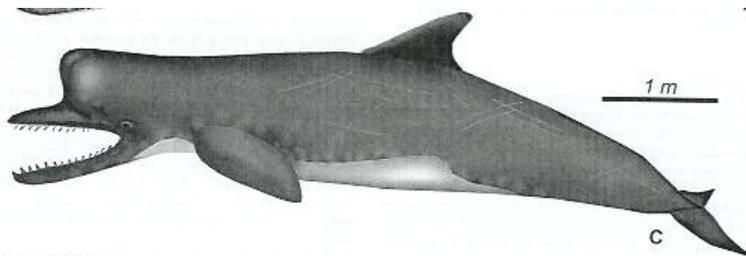
Hawaiian Crickets Lose their Songs to Save Their Lives

This is another of those modern stories that may give some insight into how things may have happened in the past. The male field crickets in Hawaii have sung songs to attract mates for many generations. They have used their wings the same way to generate their loud songs to ensure reproduction. However, in 2001 researchers encountered silence and feared that the cricket population had plummeted. Instead the crickets were still there – they were just silent. What they discovered was that the cricket song not

only attracted the female but also a newly arrived parasitic fly from North America that would deposit its eggs in the cricket's body that would then kill its host. The pressure from the parasitic fly triggered the rapid proliferation of males with a mutation of the wing formation they called 'flatwing'. This wing shape is like the female wing that is unable to create the loud male noise. So now they had the advantage of not attracting the fly but they were also unable to attract the females. How would they mate? The scientists theorized that they would hang around the loud males and then intercept the females that would be attracted while avoiding the flies. But there is still the question of why would a female mate with a male that can not sing? They are still studying this. The amazing thing was that in two years 90% of the cricket population was able to change such an apparently important feature. (National Geographic News)

A New Killer Sperm Whale from Italy – *Zygophyseter*

An almost complete fossil of a large new whale has been reported from the Late Miocene (8-10 MYA) in southern Italy. It has large body size, large teeth in both the lower and upper jaws that suggest that it was an active predator of large prey, similar to the living killer whale (*Orcinus orca*). It is named *Zygophyseter varolai* emphasizing the elongation of the zygomatic process of the squamosal and Physeter for the type genus of the family Physeteridae. The species name is for the discoverer Angelo Varola.



Above is a drawing of the new whale in lateral view, showing the huge nasal area housing the spermaceti organ and the large jaws and teeth. It is estimated at 6.5 to 7 meters long (21-23 feet). (Bianucci et al in **Zool J of Linn Soc** Vol. 148)

Three Year Old Australopithecine from Ethiopia



The cover girl of the September 21 **Nature** has been called "Lucy's child" because she is a juvenile of the same species, *Australopithecus afarensis*. It is unusual to find so complete a child of three years old and her young body must have been buried quickly in a small river channel near a lake. Her skeleton was found in Dikika, Ethiopia, is dated to 3.3 MYA, and includes much of the skull and many parts of the axial skeleton, including a foot and knee. Although the pelvis and lower back and parts of the limbs are missing, some of the very delicate parts such as the hyoid, knee caps and almost all of the teeth are found. It has taken five years of careful preparation to remove these delicate bones from the rock. These parts clearly indicate bipedal locomotion. However,

other parts of the skeleton including the gorilla-like scapula and long curved manual phalanges indicate a more arboreal life style. So the body tells us *A. afarensis* may

have spent more time in the trees than on the ground. The skull has the smaller chimp-sized brain case, and large chewing teeth are primitive features as well as the ape-like hyoid bone. How valid is the data from this fossil? The date of 3.3 MYA is reliable based on argon-argon dating and the skull is similar to other specimens of this species which is known from about 3 MYA to 4 MYA. The age of the infant is less secure and is based on the teeth with the best match being with the 3 year old chimpanzee. This is just a guess at this time. (Alemseged et al in **Nature** Vol. 443 9-21)

An Olmec Slab May Have Oldest Writing in New World

A stone block unearthed from Mexican gravel may show evidence of the earliest writing in the New World. It has been named the "Cascajal block" and has been dated to 900 B.C., which is three centuries before other known systems of writing in the area. The stone has 62 glyphs or symbols on it including insects, ears of corn, and fish on serpentine the size of a legal pad. It is 5 inches thick and weighs 26 pounds with a smooth face with a slightly concave surface. This may mean that it had been written on many times and erased repeatedly. The symbols are in horizontal patterns and in consistent reading orders and conform to reading expectations. It was found near the capital of the Olmec civilization San Lorenzo in the state of Veracruz. However, it was not excavated by archaeologists but was dug up by road builders. It was found with pottery fragments and figurines in stone. Gary Feinman of the Field Museum indicates that it would be helpful if they could find more samples of the writing. (Martinez et al in **Science**)

Strong Nasals of Tyrannosaurids Imply Cranial Strength

This is yet another study on the skull of tyrannosaurid skulls, this one concentrating on their nasal bones which are fused and vaulted. That braces the cranium against the high forces of feeding. The high strength of the maxillary teeth of *T. rex* indicate that it could exert greater relative strength than other tyrannosaurids. The fused nasals and the broad crania are consistent with the deep bites that impacted bone and the powerful lateral movements of the head for dismembering prey. This agrees with other studies done on the *T. rex* skull. (Snively, Henderson et al in **Acta Palaeontol Polonica** 51 (3))

Mongolian Mummies Defrosting

Some 2,000 years ago the fierce Scythian culture that occupied Central Asia struck fear into the hearts of the ancient Greeks and Persians. They buried their dead warriors in the icy highlands using a distinctive type of embalming. They removed the innards and filled the insides with sweet smelling grasses. The dead were surrounded with goods and buried in the earth under stone mounds or kurgans. Sometimes water seeped in after burial and froze preserving the remains with the permafrost below. A team of archaeologists led by Hermann Parzinger, director of the German Archaeological Institute of Berlin, reports of the finding of a partially mummified remains of a warrior. It was found in 2004 in northwestern Mongolia. The body was surrounded by slain horses and was dressed in felt boots. It has fantastical animal tattoos on his skin. They are hoping to find more burials before the fast melting permafrost destroys the delicate remains. (Curry in **Science** Vol. 313 8/25/06)

Karen Nordquist, Paleontology Study Group