

Turkana boy a bastard.

Source: <http://sci.tech-archive.net/Archive/sci.archaeology/2007-08/msg00412.html>

- *From:* "Peter Jason" <pj@xxxxxxxxxx>
 - *Date:* Tue, 14 Aug 2007 13:33:12 +1000
-

It seems our primitive forebears were all living together in a sort of African incestuous commune, freely intermarrying, and screwing it all up for the paleoarchaeologists.

No more the simple family tree....

A.ramidus
A.afarensis
A.africanus
P.aethiopicus
P.boisei
P.robustus
H.rudolfensis
H.habilis
H.ergaster
H.erectus (censored)
H.heidelbergensis
H.neanderthalensis
H.sapiens

but rather now the whole lot mixed in together in the one African cage.

Of course, simple observation and the following tract implies they all still live among us; just glance at any newspaper.

Read on...

African skulls find throws story of human evolution into disarray
IAN JOHNSTON ENVIRONMENT CORRESPONDENT (
ijohnston@xxxxxxxxxxxxxx)
IT IS the iconic image of human evolution: the gradual transformation over millions of years of an ape-like creature into a tall, modern-day human.

Turkana boy a bastard.

But the startling discovery of two fossils in Africa has cast serious doubt on this traditional picture, as they prove an early form of human called *Homo habilis* did not evolve into *Homo erectus*, as previously believed.

Instead the two species lived side by side for hundreds of thousands of years in what is now Kenya.

The finding has effectively created a new missing link as researchers said it was no longer clear which animal evolved into *Homo erectus*, the stage before modern humans, or *Homo sapiens*.

The first fossil, found east of Lake Turkana, is a *habilis* jaw bone dated to 1.44 million years ago, much later than was previously recorded for the species.

The second, discovered in the same area, was a beautifully preserved *erectus* skull dating back 1.55 million years ago. It is remarkable in its own right as it is much smaller than previous specimens and close to the average size of the supposedly more primitive *habilis*.

Dr Meave Leakey, one of the authors of a paper published by the leading journal *Nature* yesterday, said: "Their coexistence makes it unlikely that *Homo erectus* evolved from *Homo habilis*."

"The fact that they stayed separate as individual species for a long time suggests they had their own ecological niche, thus avoiding direct competition."

Both species must, therefore, have had their origins between two and three million years ago, a time from which few human fossils are known, and the hunt is on to find *Homo erectus*'s real ancestor.

Professor Fred Spoor, an anatomist from University College, London and lead author of the paper, said human evolution was much more complex than once thought. The classic single

Turkana boy a bastard.

line from ape to human is something we already knew is not the case," he said. "But we know a bit more about the process of human evolution [as a result of this research]. It is very much like the evolutionary path of any other animal, with lots of side branches and not a single straight line that you see in cartoons." Prof Spoor said that habilis, largely vegetarian, and erectus, which ate a more meat-based diet, would probably have had little contact, much like chimps and gorillas today.

Asked if erectus might have hunted and eaten habilis, he said: "I'm not sure, but I doubt it. I suspect they largely avoided each other.

"These were not enormous populations, they were in relatively small groups over a large area.

"The same discussion is going on with modern humans and Neanderthals. There's no good evidence whether they actually interacted much."

Both habilis and erectus were skilled tool-makers, able to shape stones into large, "impressive" axe-heads. This ability emerged about two to three million years ago, the same time as Homo erectus's unknown ancestor is believed to have lived.

But despite having similar skills, for some reason it appears only Homo erectus was able to survive and eventually turn into Homo sapiens.

"Homo habilis probably died out and is just one of those side branches, but it was pretty successful; it lived for at least half a million years and we, as modern humans, have been here for only 100,000 to 200,000 years," Prof Spoor said.

The small size of the erectus skull is a sign of "sexual dimorphism", where males are much larger than females. This trait is related to social groupings of one dominant male with

several females.

The variation in size of erectus fossils from east Africa – from the small new skull to a large specimen discovered previously at Olduvai Gorge in neighbouring Tanzania – almost rivals that shown by modern gorillas. Sexual dimorphism is believed to be a primitive, or ancestral, feature during human evolution, so the new fossil skull implies that erectus was less human-like than once thought.

"In gorillas, males are much larger than females, related to their strategy of having multiple mates," said co-author Susan Antón. "The new Kenyan fossil suggests that, contrary to common belief, this may have been true of Homo erectus as well."

Q & A: LINKS

If the linear theory that Homo habilis evolved into Homo erectus and on into Homo sapiens is debunked, then from what did Homo sapiens evolve?

All available evidence suggests Homo sapiens did evolve from Homo erectus, possibly via an intermediate form. This process happened in Africa, some time after a million years ago.

What are possible candidates for ancestors of Homo habilis and Homo erectus?

Difficult to tell. The two species will likely have had a common ancestor living in Africa between two and three million years ago.

What were the different ecological niches the two species were inhabiting?

It is not known for sure, but there are clues from the teeth and jaws – which are smaller in Homo erectus – that the diet of Homo habilis was tougher, possibly including more vegetation, than that of erectus. And erectus may have included greater quantities of animal meat and fat in their diets than habilis. Both seem to have favoured areas with a ready source of water, but may have focused on different primary food items.

Why is a notable body size difference between males and females, sexual dimorphism, considered a primitive condition and why is this important to the study of human

evolution?

Early human ancestors, such as species of Australopithecus, are known to show high levels of sexual dimorphism, whereas modern humans and closer relatives such as Neanderthals have much less of a size difference.

Size differences between males and females of a species arise for a variety of reasons, many relating to reproductive strategies and sexual selection.

That Homo erectus may still have been highly dimorphic suggests the possibility of a reproductive strategy that mostly was not monogamous and this may have implications for understanding behavioural evolution, the size of groups that Homo erectus may have lived in and so on.

.. Information supplied by University College London.

.