

## The Piltdown Hoax

Once cited as the 'missing link' between man and beast, and definitive proof of the theory of evolution, this year marks the 50<sup>th</sup> anniversary of the exposure of the Piltdown Man as a hoax. *Eoanthropus Dawsoni* as he was once known was 'excavated' in 1912 by amateur archaeologist Charles Dawson from a shallow gravel pit in Piltdown, Sussex.

Great excitement greeted his find, as at the time fewer than five human fossils had been discovered and most of those had been incomplete, their dates uncertain and almost worst of all at a time of intense imperial rivalry, foreign. France and Belgium had long boasted Neanderthal skeletons. Germany had Heidelberg Man. Now here at last was the first great British palaeoanthropological find. The Piltdown man, as he was immediately dubbed, was the 'first Englishman' and he caused a world sensation.

The initial remains that Dawson discovered comprised of human-looking calvaria - the upper domelike portion of a skull - and a broken right half of an apelike mandible. Over the next few years, as the site was further excavated by Dawson and his team more prehistoric fauna was unearthed - teeth from a mastodon; bits of a hippopotamus, a beaver, a stegodon; and flint implements thought to have been used by enigmatic Piltdown Man.

Dawson and his colleague, Arthur Smith Woodward, argued that the humanoid jawbone, one of the teeth and the cranial fragment all came from the same individual. The remains came in for a very detailed examination by the greatest anatomical minds of the time. Some were unconvinced, arguing that the specimens came from separate species, but no one doubted they were genuine fossils. A new genus and species of man was established - *Eoanthropus Dawsoni*. Dawson was catapulted into scientific superstardom, and the Piltdown man took his place alongside Heidelberg and Peking Man in the palaeontological pantheon.

In 1912 when the greatest minds of the day convened to analyse the Piltdown remains, there was little comparison to

be drawn with other specimens, as there were so few in existence. But over the next thirty-odd years men like Raymond Dart began to travel further afield in search of prehistoric evidence of humanity. His discovery of the *Australopithecus* in the caves of the Transvaal painted quite a different picture of man's ancestral past to the one portrayed by the remains at Piltdown.

Piltdown Man had a very large apelike jaw and a smaller more modern braincase. This reflected contemporary evolutionary thinking. But *Australopithecus* seemed to suggest the reverse: that a modern jaw evolved relatively early on and a large braincase came later. Palaeoanthropology had reached an impasse. On the one hand there was the *Australopithecines* and on the other the Piltdown Man.

As time passed, and more archaeological evidence was disinterred, Piltdown Man became more and more of an anomaly. Impossible to reconcile, he became marginalized in evolutionary theory, but remained on the syllabus. Students were writing dissertations on Piltdown in the fifties.

Then in 1953 following a lecture on Piltdown at the British Museum, South African born Doctor Joseph S. Weiner had an epiphany on the train home to Oxford. The Piltdown Man had to be a fraud. But his suspicions were hard to prove: since the Piltdown remains were still prized exhibits at the British Museum, a degree of ingenuity was required even to access them for testing.

With his friend and colleague Geoffrey Ainsworth Harrison, who is now the now Professor of Biological Anthropology at Oxford, Weiner set about collecting as much evidence as he could before approaching the Head of the Anatomy Department at Oxford, Professor Wilfrid Edward Le Gros Clark.

Using the latest scientific techniques, including fluorine measurement and radiocarbon dating, the team proved that the mandible had been deliberately stained with potassium bichromate and the teeth filed down. The jaw was later

shown to have come from an orang-utan. All the remains, including the miscellaneous surrounding fauna, had been planted.

In November 1953 the hoax was publicly announced and for a second time Piltdown Man shook the world. Immediately questions were raised as to who might have been responsible and why they might have done it. Dawson was an obvious suspect, and few of the many professional and amateur sleuths who have quested for the identity of the perpetrators since have discounted him entirely. But over the last fifty years investigators have raked back and forth over the Piltdown story and at least six other names have been put forward as possible conspirators in this quintessentially English hoax story.

One might reasonably ask why it matters now who forged the Piltdown remains. From a philosophical perspective it illuminates the importance of honesty – and the motives and consequences of lying – in the scientific process. Besides that, as Le Gros Clark pointed out in 1968:

‘Who was the actual forger... it is a question which has made quite necessary a good deal of detailed enquiry, not so much because it is important to know who was the culprit, but it obviously is a matter of importance – in order to completely exonerate others of all trace of suspicion – to know who could not have been the culprits’.

In Britain Piltdown Man was quickly taken up in the canon partly because he was in line with prevailing scientific theories. Only when more information came to light did Piltdown Man become anomalous, suspicious, and eventually discredited. Which scientific facts today, governing anything from the way we bring up our children to the vitamins we take, will be seen in future as victim to the scientific trends of our time?

The mysterious Piltdown saga is riddled with egos and lies. Piltdown’s legacy is to remind us to be sceptical about science and suspicious of facts.

*To commemorate the 50<sup>th</sup> anniversary, the subject of this year's Natural History Museum Annual Science Lecture will be the Piltdown hoax, following which the Piltdown remains will be on public display for several weeks. A revised edition of Professor J S Weiner's book 'The Piltdown Forgery' is being reissued by OUP on 8 October.*