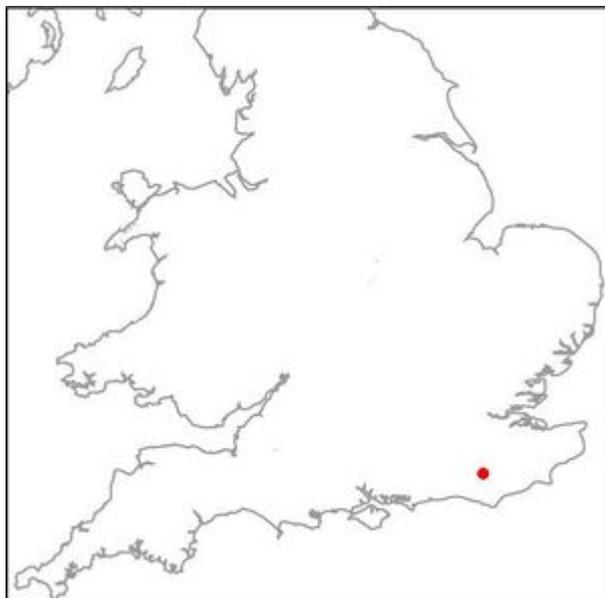


# Piltdown Man forgery

From Earthwise

[Jump to navigation](#) [Jump to search](#)

**Under construction**



Piltdown, Sussex, England, is marked by the red dot. © BGS/NERC Public domain

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## Contents

- [1 Introduction](#)
- [2 Contribution and collaboration](#)
- [3 Timeline](#)
- [4 Suspects](#)
- [5 Piltdown Man and popular culture](#)
- [6 Further reading and detailed bibliography](#)

## Introduction

At a meeting of the Geological Society of London, in December 1912, the fossil remains of what was claimed to be a new type of early human, *Eoanthropus dawsoni*, or 'Piltdown Man', were unveiled to the world.

It appeared that irrefutable evidence had at last been found for the much sought-after 'missing link' between man and ape.

It was not until the 1950s that Piltdown Man was proved to be a forgery.

# Contribution and collaboration

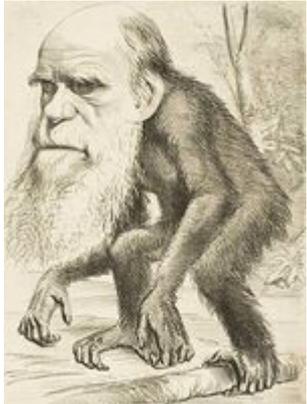
Staff of the [Natural History Museum](#) (previously the British Museum (Natural History)), the [Geological Society](#), and the British Geological Survey (previously H.M. Geological Survey) were all involved with Piltdown — from discovery to unmasking. Some have been implicated in the forgery itself.

Archivists at the Natural History Museum, the Geological Society and the British Geological Survey have pooled their resources to create a web-based exhibition telling the story of Piltdown Man's discovery.

The [Piltdown Timeline](#) reveals the history of the forgery and the identity of the individuals accused of complicity or culpability in the affair.

The Piltdown story provides a cautionary lesson on how scientists can get things wrong and how science, when applied correctly, can reveal error and malpractice.

## Timeline

Date	Event	Text	Image
1859	Paving the way to Piltdown	In 1859 Charles Darwin published <i>On the Origin of Species</i> . One of the implications of this work, which he later developed in <i>The Descent of Man</i> (1871), was that human beings were descended from an 'ape-like progenitor'. If true, there should be some evidence in the fossil record to support such an argument. The search for the 'missing link', an ape-man, had begun.	
1863	Neanderthal Man ( <i>Homo neanderthalensis</i> )	Fossil remains of ancient man had been found in Belgium (1829) and Gibraltar (1848), but had been either misinterpreted or ignored. In 1856 a human skullcap and partial skeleton of peculiar form were recovered from a cave in the Neander Valley (Neanderthal), near Düsseldorf. Thought to represent 'a barbarous and savage race', the remains were recognised in 1863 as a distinct species, <i>Homo neanderthalensis</i> . By the end of the 19th century many more examples of 'Neanderthal Man' had been discovered. It was clear however that despite his somewhat bestial appearance Neanderthal Man was anatomically only slightly removed from modern humans ( <i>Homo sapiens</i> ) and was not the 'missing link'.	

1891 Java Man (*Homo erectus*) In 1891 Eugène Dubois found an ape-like skullcap, a human-looking thighbone and two molar teeth on the banks of the Solo River in eastern Java. He named his discovery *Pithecanthropus erectus*, meaning 'upright ape-man', believing it to be the 'missing link'. Yet doubts were soon expressed concerning the geological age and mutual relations of the finds. Some scientists considered the skullcap to belong to a giant gibbon! It would be some 40 years before further discoveries in China and Java confirmed Java Man as an early primitive human, now reclassified as *Homo erectus*.



1907 Heidelberg Man (*Homo heidelbergensis*) In 1907 Daniel Hartmann discovered a fossil human jaw in a sandpit at Mauer in south-west Germany. The jaw was passed to Dr Otto Schoetensack of the University of Heidelberg who named it *Homo heidelbergensis* after the university. There was no doubt that the jaw, which lacked a modern chin, belonged to a primitive human far older than Neanderthal Man. The discovery of the Heidelberg jaw was received with great interest in England and Charles Dawson, a noted amateur archaeologist and geologist, set out to find England's answer to Heidelberg Man. The stage was set for Piltdown Man to make his debut.

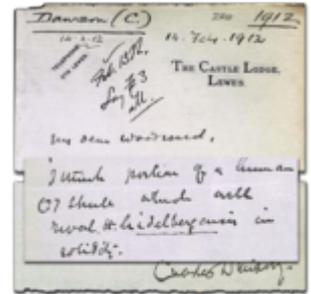


1908 The Piltdown discovery Charles Dawson was steward of Barkham Manor, near Piltdown, East Sussex and it was while attending a manorial court that he noticed workmen digging gravel for road-mending beside the driveway to the house. The gravel was not depicted on the Geological Survey map of the time, but the deposit appeared to be the remnant of an old river-bed. Dawson asked the workmen to keep a look out for any interesting fossils, and it was during one of his periodic visits, in about 1908, that the first Piltdown skull fragment was handed to him. According to Dawson, it was not until the autumn of 1911 that further fragments of the skull were recovered.



14 February, 1912 How's that for Heidelberg?

On 14 February 1912 Dawson wrote to the Keeper of Geology at the Natural History Museum, Arthur Smith Woodward, and mentioned his discovery of a portion of a human skull in a gravel pit at Barkham Manor, near Piltdown in Sussex. Dawson said that it would 'rival *H. heidelbergensis* in solidity.' On 24 May 1912, Woodward received the Piltdown finds from Dawson's hands with the words 'How's that for Heidelberg?'



June, 1912 Further discoveries

On 2 June 1912, Smith Woodward, Dawson and Pierre Teilhard de Chardin, a French Jesuit priest and avid fossil collector, arrived at Barkham Manor to begin excavation of the gravel. They were assisted by a labourer, probably Venus Hargreaves. Dawson discovered another fragment of the skull, while Teilhard found a flint implement and part of a molar tooth of a primitive elephant identified at the time as *Stegodon*.



June, 1912 Ape-like lower jaw

Dawson and Smith Woodward continued digging through June, July and August 1912 (Teilhard returned to France in early July). Three further skull fragments were discovered and more significantly a portion of an ape-like lower jaw. During the remainder of the season further flint implements, teeth of beaver, a mastodon (an extinct relative of the elephant) and a horse, along with a fragment of red deer antler were recovered.



21 November, 1912 The earliest man?

Rumours of the discovery were beginning to circulate widely and on 21 November 1912 the Manchester Guardian ran a story headed 'The earliest man? Remarkable discovery in Sussex: a skull millions of years old'. The paper boldly asserted that 'there seems to be no doubt whatever of its genuineness, and more than a possibility of its being the oldest remnant of a human frame yet discovered on this planet'.



18  
December,  
1912

The unveiling of  
Dawson's Dawn  
Man

The official unveiling of the Piltdown finds took place on 18 December at a meeting of the Geological Society of London, in Burlington House, before a packed and expectant audience. Dawson began by describing the geology of the Piltdown site and the circumstances of the discovery. He concluded that the human and associated finds were of early Pleistocene date (over 2 million years old). Smith Woodward then described the human (and animal) bones in some detail. The cranium, though exceptionally thick, resembled that of a modern human; yet the ape-like jaw made it necessary to regard the Piltdown find as a new type of hominid, which he named *Eoanthropus dawsoni* (Dawson's Dawn Man).



18  
December,  
1912

First restoration of  
the Piltdown skull

Grafton Elliot Smith, Professor of Anatomy at the University of Manchester, to whom Smith Woodward had submitted a cranial cast for detailed examination, considered Piltdown man to possess 'the most primitive and most simian [i.e. ape-like] human brain so far recorded.' Displayed at the meeting was a plaster replica of Woodward's conjectural restoration of the Piltdown skull, which had been prepared by Frank Barlow, a senior preparator at the Natural History Museum.



18  
December,  
1912

By far the most  
important  
discovery ever  
made in England

In the discussion that followed, Arthur Keith stated that the discovery of these human remains were 'by far the most important ever made in England, and of equal, if not of greater consequence than any other discovery yet made, either at home or abroad'. On the other hand David Waterston, an anatomist at King's College London, believed the jaw to be in all respects identical to that of a chimpanzee, and thus incompatible with the essentially human cranium.



1913

Canine tooth

The most significant find in the summer of 1913 was made by Teilhard de Chardin, who had returned to England in early August. On 30 August, Dawson, Smith Woodward and Teilhard were making an intensive search for the missing teeth of the lower jaw when Teilhard found an ape-like canine tooth, which proved to be of crucial importance in supporting Woodward's conjectural restoration of *Eoanthropus*.



3 July,  
1913

Discovery at  
Barcombe Mills

In a letter to Smith Woodward, dated 3 July 1913, Dawson claimed to have 'picked up the frontal part of a human skull this evening on a ploughed field covered with flint gravel'. He would only say that the location was a long way from Piltdown, but he thought that the skull, although not thick, might be a descendant of *Eoanthropus*. The unnamed location is believed to be a hill above Barcombe Mills railway station, about six kilometres south of Barkham Manor. Nothing more would be heard of this 'find' until 1949!



1914

Anyone for  
cricket?

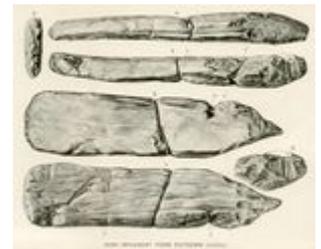
The 1914 season of excavations at Barkham Manor yielded no further human remains, but did result in one sensational discovery. Woodward had been watching a workman (probably Venus Hargreaves), who was using a pick, when he saw some splinters of bone scattered by a blow. He stopped the workman and soon uncovered a heavy blade of bone that had been carved and 'looked rather like the end of a cricket-bat'. Dawson then succeeded in recovering another portion of the club-like implement.



June, 1914

A unique  
discovery!

It was clear that this strange implement had been carved out of the leg bone of an elephant. Nothing quite like it had ever been found before. Its context, however, was a little curious, for it was discovered beneath the hedge which bounds the gravel pit at about a foot below the surface in dark vegetable soil. The pale-yellow clay adhering firmly to its surface indicated that it had come from the bottom of the gravel and must have been thrown against the hedge by one of the workmen; 'with the other useless debris when they were digging gravel from the adjacent hole,' as Dawson put it.



9 January,  
1915

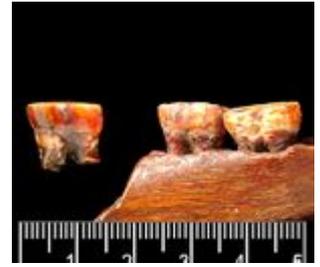
Dawson the  
'Wizard' produces  
'Piltdown II'

On 9 January 1915, Dawson wrote to Smith Woodward; 'I believe we are in luck again! I have got a fragment of the left side of a frontal bone with portion of the orbit and root of nose... the general thickness seems to me to correspond to the right parietal of *Eoanthropus*'. Dawson omitted to mention the location of his find, noting only that it came from a ploughed field (Smith Woodward appears however to have been aware of the general location).



30 July,  
1915 Molar tooth  
discovery

On 30 July 1915, Dawson wrote again to say that he had discovered a molar tooth of *Eoanthropus* from the same new locality. Shortly afterwards it appears that an unnamed friend found 'part of the lower molar of an indeterminable species of rhinoceros, as highly mineralized as the specimens previously found at Piltdown itself', as Smith Woodward later recounted. Yet the exact location of what came to be called Piltdown II (the Barcombe Mills material having been discounted) was never fully revealed to Smith Woodward, although he understood it to be at Netherhall Farm, between Sheffield Park and Fletching, about two kilometres north- west of Barkham Manor.



10 August,  
1916 Charles Dawson,  
1864-1916

On 10 August 1916, Charles Dawson died of septicaemia. He was 52 years of age.



1917 Woodward  
announces  
Piltdown II

Piltdown II (usually referred to as the Sheffield Park find) was revealed to the world at a Geological Society of London meeting on 28 February 1917. The existence of a second *Eoanthropus* consisting of ape- like molar associated with thick human skull fragments, all stained dark brown, provided conclusive evidence of the integrity of Piltdown I. It was enough to silence many of the critics.



1917-1952 A chapter closes

After Charles Dawson's death in 1916 there were no more finds at Piltdown. Smith Woodward continued to make regular visits to Barkham Manor and carried out further excavations, helped at times by Grafton Elliot Smith among others. Shortly after his retirement from the Natural History Museum he moved to Hayward's Heath in Sussex, from which he could more readily make visits to the site. Yet despite years of searching, the Piltdown gravels stubbornly refused to yield anything of significance.



1920-1935 New finds from Asia

During the 1920s and 1930s important finds of early hominids began to emerge from Africa and Asia. The discovery in China of 'Peking Man' (*Sinanthropus pekinensis*), along with further finds from Java, led anthropologists to recognise the validity of Dubois' Java Man. Indeed, the essential similarities between these two hominids subsequently led to both being reclassified under *Homo erectus*. Both Smith Woodward and Elliot Smith believed that the new finds supported their interpretation of *Eoanthropus*. Smith Woodward suggested in 1935 that *Sinanthropus* and *Eoanthropus* had perhaps coexisted as eastern and western varieties of Dawn Man. Not everyone agreed however.



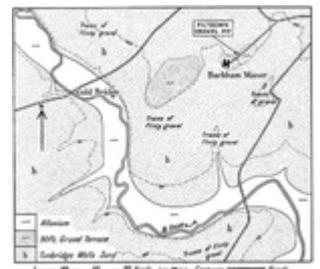
1935-1936 Swanscombe

The status of Piltdown Man was also brought into question with the discoveries in 1935 and 1936 of early human cranial remains in association with stone tools at Swanscombe in north-west Kent. The discoveries were made by Alvan T. Marston, a London dentist, who had for two years past been searching the old '100 foot terrace' deposits of the River Thames for Palaeolithic flint implements and fossil mammals. Arthur Keith professed the Swanscombe fragments to be those of early modern man (*Homo sapiens*), while Elliot Smith judged the new skull to be more primitive than Piltdown. The Swanscombe individual, who was probably a young woman, is now considered to be of Neanderthal affinity (*Homo neanderthalensis*).



1936 Piltdown further undermined

There was another more serious problem raised by the Swanscombe finds. In 1925 Francis H. Edmunds of the Geological Survey was sent out to map the terrace deposits around Piltdown that had been omitted from earlier editions of the official geological map of the area. Edmunds demonstrated that the Piltdown gravel closely correlates with the Thames '50-foot terrace' and is thus younger than the Swanscombe terrace deposits. It appeared therefore that an ape-like *Eoanthropus* had coexisted with modern man! Clearly something was amiss. Alvan Marston became convinced that the ape-like Piltdown jaw could not possibly have belonged with the essentially human Piltdown cranium, but must be a chance association.



1938 A memorial to Piltdown

Early in the 1920s a wooden memorial was erected at Barkham Manor on the site where the first *Eoanthropus dawsoni* had been found, and in 1938 Smith Woodward arranged for this to be replaced by a more permanent sandstone monolith. It was unveiled by Arthur Keith on 23 July 1938 and carries the following inscription: 'Here in the old river gravel, Mr Charles Dawson, FSA, found the fossil skull of Piltdown Man 1912-1913. The discovery was described by Mr Charles Dawson and Sir Arthur Smith Woodward in the Quarterly Journal of the Geological Society 1913-15.'



1949 Fluorine testing

In 1949 Kenneth P. Oakley of the Natural History Museum used a fluorine test to determine whether the Piltdown jaw and cranium were contemporaneous. Fossil bones and teeth accumulate fluorine over the course of time by absorption from circulating groundwater. By analysing the amount of fluorine contained in a sample of material it is possible to determine the relative ages of fossils. The test had already been used successfully on the Swanscombe finds. The Piltdown jaw and skull fragments yielded similar fluorine values and thus appeared to be contemporaneous. However, these values were much lower than those obtained from the Swanscombe individual, implying that Piltdown Man was of more recent geological age than originally thought.



1949 Piltdown III

In the spring of 1949 Dr Robert Broom, a South African palaeontologist, visited the Natural History Museum in order to re-examine the remains of the two skulls attributed to Piltdown Man. He found that the Museum possessed parts of a third fossil skull together with a molar tooth found by Charles Dawson in July 1913 near Barcombe Mills. Smith Woodward had evidently attached no importance to this find and only acquired it after Dawson's death. Broom published a short notice, though he gave no detailed assessment of this previously unremarked material, but in a handwritten report submitted to the Natural History Museum he concluded that the remains probably represented a third individual of *Eoanthropus dawsoni*.

3  
December, 1951 – 19  
May, 1952

Britain's first  
geological  
National Nature  
Reserve

The National Parks and Access to the Countryside Act of 1949 saw the creation of a government body, the Nature Conservancy, a forerunner of Natural England. Its aim was to identify and protect Britain's most important fauna, flora, geological and physiographical features. The Piltdown Skull Site at Barkham Manor was one of the first sites to be considered for acquisition and listing as a National Nature Reserve (NNR). The site was acquired by the Nature Conservancy on 3 December 1951, and formally declared a NNR on 19 May 1952. Although just beaten in the race to become the nation's first NNR by a site in Scotland, Piltdown would soon earn notoriety as the first NNR to be revoked!



1953

Doubts about  
authenticity

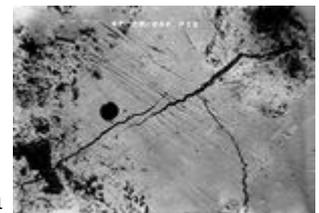
In 1953 Joseph S. Weiner, Professor of Physical Anthropology at Oxford University, was able to examine the original Piltdown remains. He had developed doubts about their authenticity and the more he looked at them the more the doubts grew. Weiner discovered that the Natural History Museum had no record of the exact spot where the remains of Piltdown II had been found. Yet this second site had been used to support the authenticity of the first Piltdown finds and to silence the critics. Piltdown II's lack of provenance was thus of serious concern.



1953

A forgery  
uncovered

Weiner became convinced that the teeth in the jaw had been filed down and this indicated deliberate fraud. He obtained some chimpanzee teeth which he filed down and stained artificially in order to replicate the Piltdown molars. After discussing it with Wilfrid Le Gros Clark, Professor of Anatomy at Oxford, it was decided to contact Kenneth Oakley at the Natural History Museum and inform him of their suspicions. Oakley checked the teeth and was 'utterly convinced' that they had been artificially abraded. Further examination revealed that the canine tooth had been stained using a mixture which included Vandyke brown paint.



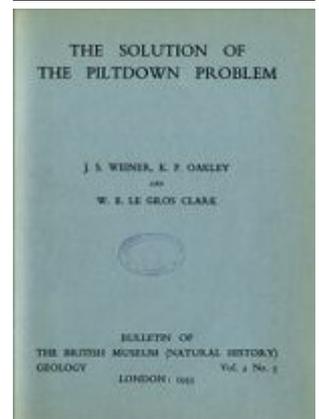
21 November, 1953 'The biggest scientific hoax of the century'

An announcement of the scientific team's startling revelations appeared in *The Times* of 21 November 1953 under the headline 'elaborate hoax', and was quickly picked up by the popular press. A London evening newspaper, *The Star*, presented the story as 'The biggest scientific hoax of the century'. No attempt was made at this stage to identify the perpetrator, but subsequent newspaper reports soon homed in on Charles Dawson.



21 November, 1953-28 November, 1953 Arthur Keith accepts the truth

On the day of the press release, Oakley and Weiner visited Arthur Keith, who was now well into his eighties. On being appraised of their findings, Keith replied 'You may be right, Weiner, and I must accept it, but it will take me a little while to adjust to it.' On 28 November Pierre Teilhard de Chardin wrote to Oakley from New York congratulating him on his solution of the Piltdown problem: 'Anatomically speaking, "*Eoanthropus*" was a kind of monster... Therefore I am fundamentally pleased by your conclusions, in spite of the fact that, sentimentally speaking, it spoils one of my brightest and earliest palaeontological memories.'



1954-1955 Confirmation of the fraud

Over a period of several months the Piltdown remains were subjected to further tests. A full presentation of the scientific results was made at a meeting of the Geological Society on 30 June 1954. The Piltdown jaw and canine were confirmed as being from a modern ape, probably a young female orangutan. The exceptional thickness of the skull (essentially that of a modern human) might be explained as a pathological condition, although such thickened crania are met with in some modern populations.

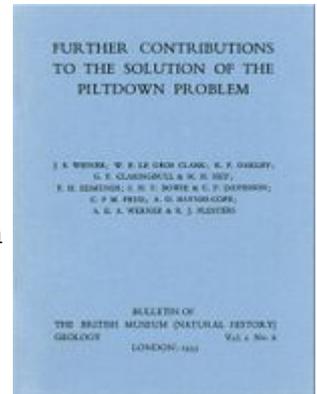


30 June, 1954 Foreign source for mammalian fossils

The mammalian fossil bones and teeth were found to have been derived from a variety of sources. A comparative analysis of the radioactivity of the bones and teeth from Piltdown and elsewhere (undertaken by S. H. U. Bowie and C. F. Davidson of the Geological Survey Atomic Energy Division) demonstrated that some of the material must have been obtained from a foreign source. Thus, it was determined that the *Stegodon* teeth had most likely come from a site in Tunisia, while one of the hippopotamus teeth closely matched examples from Malta. All of this material had been artificially stained.



- 30 June, 1954 Cricket bat carved with metal blade The 'cricket bat' had been carved using a metal blade when the bone was already fossilised and had lost its brittleness. The newly cut surfaces had been stained with an iron solution and then varnished to reproduce, as nearly as possible, the appearance of the remainder of the roughly fashioned bone.
- 1955 'Further contributions to the solution of the Piltdown problem' All of the new evidence was presented in a concluding report from the Natural History Museum entitled '*Further contributions to the solution of the Piltdown problem*', issued 21 January 1955. The report concluded that 'Not one of the Piltdown finds genuinely came from Piltdown.' Within months of these latest revelations the last surviving principal protagonists in the Piltdown affair were dead. Arthur Keith died on 7 January, followed by Pierre Teilhard de Chardin on 10 April.
- 1955 'A most elaborate and carefully prepared hoax' Those who had believed in the authenticity of Piltdown Man had been victims of '*a most elaborate and carefully prepared hoax*'.. Yet the question remained: who had carried out such an audacious fraud?



## Suspects

In the years that followed the uncovering of the forgery, a wearisome succession of names would be added to the list of the 'accused'. In the order in which they were publicly identified, they are: Charles Dawson, Pierre Teilhard de Chardin, W. R. Butterfield, Venus Hargreaves, Grafton Elliot Smith, William J. Sollas, Martin Hinton, Arthur Conan Doyle, Samuel Woodhead, John T. Hewitt, Lewis Abbott, Frank Barlow, Arthur Keith, Chipper the goose (in jest!), Arthur Smith Woodward, and C. P. Chatwin. A few minor names, alluded to but never fully discussed, have been omitted from this list (but see the introduction in the annotated bibliography referenced under "Further reading and detailed bibliography").

- 1953 Charles Dawson (1864-1916) Dawson was a solicitor at Uckfield in Sussex, and a noted antiquarian and amateur geologist, having been elected a Fellow of the Geological Society of London in 1885 and of the Society of Antiquaries in 1895. He made many donations of Wealden fossils to the Natural History Museum. Dawson was ambitious for recognition and fame and fully expected the Piltdown discoveries to secure him fellowship of the Royal Society, an aspiration that was ultimately denied him. When the fraud was exposed in 1953, Dawson became an obvious suspect. He had been the motivating force behind the excavations and was always present when finds were made. Following his death in 1916 there were no further discoveries. Since 1953 many of Dawson's antiquarian 'discoveries' have been shown to be either fraudulent or suspect.



1954 Pierre  
Teilhard de  
Chardin  
(1881-1955)

Teilhard de Chardin was a French philosopher and Jesuit priest who trained as a palaeontologist. He was studying at Hastings when he first met Dawson in 1909. Dawson invited him to the excavation at Piltdown in 1912, and in 1913 Teilhard discovered the canine tooth. He was still alive when the fraud was uncovered, but when questioned was reluctant to talk about it, which in 1954 aroused suspicion in the minds of the investigators. Those who have implicated Teilhard include Louis Leakey and Stephen Jay Gould, both of whom believed it possible that he had worked in collusion with Dawson. Leakey had no clear evidence to back up his suspicion, while Gould's accusation was based on incomplete information. More recently the case against Teilhard has been revived by Francis Thackeray, who believes that Teilhard perpetrated a prank that went too far.



1972 William  
Ruskin  
Butterfield  
(1872-1935)

Butterfield was curator and librarian of Hastings Museum during the period of the Piltdown discoveries. In 1972 Guy van Esbroeck, in his book *Pleine lumière sur l'imposture de Piltdown*, accused Butterworth of being the Piltdown forger in collusion with Venus Hargreaves, the labourer employed at Barkham Manor. His argument is that Butterworth was greatly put out on learning through a chance remark from Teilhard de Chardin, in 1909, that Dawson had quietly appropriated a series of bones of the dinosaur *Iguanodon* from a Hastings quarry and presented them to the Natural History Museum at South Kensington rather than to Hastings Museum. It is claimed that Butterfield carried out the 'hoax' in revenge. This theory seems to ignore the fact that Dawson had already made his first find at Piltdown probably in the previous year, 1908.

1972 Venus  
Hargreaves  
(dates  
unknown)

Hargreaves was the labourer who did most of the digging at Piltdown. Apart from van Esbroeck's assertion that Hargreaves assisted Butterfield by planting the fraudulent Piltdown assemblage (previous entry), Francis Vere had earlier intimated in his book *The Piltdown Fantasy* (1955) that the forger required an accomplice who worked at the site, by which he presumably meant Hargreaves.



1972 Grafton Elliot Smith (1871-1937) Elliot Smith, born at Grafton in Australia, was Professor of Anatomy at University of Manchester, 1909-19, and University College London, 1919-37, and had a special interest in the anatomy of the human brain. In *The Piltdown Men* (1972) Ronald Millar accused Smith of perpetrating the forgery in order to provide support for his views on human evolution. The case made against him is convoluted and entirely circumstantial. Millar regards it as suspicious that Smith allowed Woodward to reconstruct the Piltdown skull incorrectly, as Smith was an expert on prehistoric human skulls. One is prompted to ask why, if implicated in the fraud, did Smith assist Woodward in his continuing attempts to look for further evidence at Piltdown long after Dawson's death? Kenneth Oakley (in a private communication to Charles Blinderman) regarded Millar's accusation as 'absurd', a view shared by many others.

1978 William Johnson Sollas (1849-1936) Sollas was Professor of Geology at Oxford. In 1978 he was accused of complicity in the Piltdown forgery by his former assistant at the university, Prof. J. A. Douglas (died 1978). Douglas was convinced that Sollas had directed the 'hoax' through Dawson in order to revenge himself on Smith Woodward, who he regarded as a bitter enemy. Douglas's evidence consisted of nothing more than his memory of the arrival of a package for Sollas containing potassium 'bichromate', and of Sollas borrowing apes' teeth from the university's Department of Human Anatomy. According to Douglas the whole thing had 'started as a joke and then got out of hand'. It has been suggested that Douglas may have harboured a grudge against Sollas, who un-obligingly retained his professorship to the age of 87 before yielding the Chair to Douglas.

1978 Martin Hinton (1883-1961) Hinton worked as a volunteer in the Natural History Museum from 1910-15. From 1921 to 1936 he worked in the Zoology Department retiring in 1945. In 1953, Hinton wrote to *The Times* saying that he and others at the Museum had always believed the jaw to be that of a chimpanzee. In the following year he told the BBC that the forgery had been an inside job but would not name the forger, who was still alive. In 1978 a trunk bearing Hinton's initials was found at the Museum. Inside were bones and teeth, stained and carved in the same way as the Piltdown fossils and artefacts. It has been argued that Hinton could have sourced the orangutan jaw from the collections at the Museum, in which case it seems odd that he always professed the jaw to be that of a chimpanzee!



1983 Arthur Conan Doyle (1859-1930) In 1983, American archaeologist John H. Winslow put forward the theory that Doyle had carried out the 'hoax'. Doyle lived about seven miles from Piltdown, knew Dawson and Smith Woodward and was a qualified doctor, so could have had the scientific knowledge. He visited the Piltdown excavation in 1912 and is said to have been there on other occasions. His motive for the hoax, according to Winslow, was to fool the scientific community in revenge for their crusade against spiritualism, of which Doyle was to become a committed supporter. Doyle is also described as 'a man who loved hoaxes, adventure, and danger'. Yet the case brought against him is based entirely on supposition.



At the same time the discoveries at Piltdown were being made, Doyle was writing *The Lost World*, involving the discovery of dinosaurs and apemen on a plateau in South America. Of the latter, Lord John Roxton, a character in the novel, is made to say: 'Missin' Links, and I wish they had stayed missin'. A map of the plateau is claimed by Winslow to resemble the Weald in Sussex, with the centre corresponding to the gravel pits at Piltdown, while the figure of Professor Summerlee, described in the novel as an expert in the field of comparative anatomy, acerbic in manner and with a thin goat-like beard, is claimed to be based on Arthur Smith Woodward. Thus, Winslow concludes that 'the Piltdown hoax was inspired by, or developed hand-in-hand with, the plot of *The Lost World*.'



1985 Samuel Allinson Woodhead (c. 1872-1943) Woodhead, a rural analytical chemist accompanied Dawson to make an unsuccessful search of the Barkham Manor pit in 1908, and also undertook an analysis of a small fragment of the Piltdown skull at Dawson's request. He was present at the excavations on a number of occasions. From a letter written by his sons, it seems that Woodhead suspected foul play by Dawson but would not speak of the matter. Two other, earlier letters state that Woodhead not only was present when the Piltdown jaw was found but himself discovered the canine tooth — this recollection appears in reality to relate to the finding by Woodhead of a beaver tooth in October 1913. The case against Woodhead was put forward by Peter Costello in November 1985 but seems to be based on a distorted reading of the above-mentioned letters.

1986 John Theodore Hewitt (1868-1954) The revelation by Costello concerning Samuel Woodhead's supposed involvement in the Piltdown fraud (previous entry) prompted a recollection from Mrs Elizabeth Pryce, a summary of which appeared in the March 1986 issue of the journal *Antiquity*. In 1952-3 she had been a neighbour of J. T. Hewitt, Professor of Chemistry at Queen Mary College, London, who revealed that 'he and a friend had made the Piltdown Man as a joke'. Long before this, in 1898, Hewitt had disagreed with Dawson over the significance of a natural gas discovery at Heathfield in Sussex. Dawson got Woodhead to undertake an independent analysis, the result of which supported Dawson's argument and was subsequently proven correct. It appears that Woodhead and Hewitt later came into contact as fellow council members of the Society of Public Analysts, possibly in late 1911. From this connection, Peter Costello quickly constructed a scenario in which Hewitt obtains the faked Piltdown assemblage while Woodhead salts the site in order to make a fool of Dawson. Apart from Hewitt's supposed 'confession', there is no real evidence to back up his story. It may be noted that Hewitt was described by his obituarist as having had 'a strong sense of humour.'

1986 Lewis Abbott (1853-1953) In his eminently readable book, *The Piltdown Inquest* (1986), Charles Blinderman examined the principal suspects and concluded that 'Lewis Abbott has the best credentials to be the Piltdown hoaxer.' Abbott was a jeweller at Hastings who established a reputation as an amateur prehistorian and supporter of the existence of primitive pre-Palaeolithic (Pliocene) man. He was thus a firm and vociferous believer in the authenticity of the much disputed 'implements' called 'eoliths', all of which were credited to 'Pliocene Man'. Abbott was inclined to be bombastic and self important and was quick to claim credit for recognising the significance of Dawson's discoveries at Piltdown. Abbott genuinely believed in the reality of Piltdown Man, and it is hard to see how his own self-seeking ambition could have been advanced by planting the Piltdown assemblage to the obvious advantage of Dawson.



1990 Frank Oswell Barlow (1880-1950) Caroline Grigson, curator of the Odontological Museum of the Royal College of Surgeons, suggested in 1990 that Frank Barlow, a preparator in the Geology Department at the Natural History Museum, could have been Dawson's accomplice. Barlow was responsible for making the Piltdown casts, from the sale of which he derived some financial benefit. Why, for example, did he not notice or draw attention to the evidence of artificial abrasion on the teeth? He could have supplied the Piltdown jaw from un-catalogued material held at the museum. Dawson may have sought Barlow's advice on the preservation and hardening of fossil material. Yet any suggestion of connivance between them amounts to mere speculation, having as its basis the commonly held view that Dawson was incapable of creating the forgery alone.



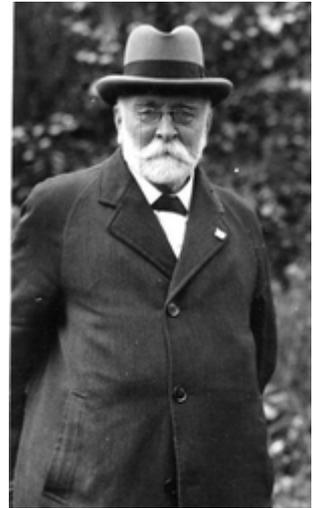
1990 Arthur Keith (1866-1955) At the time of the Piltdown discoveries, Keith was Conservator of the Hunterian Museum of the Royal College of Surgeons. He played a large part in the often heated debate surrounding the interpretation of the Piltdown finds, and he was still alive when the forgery was made public in 1953. In 1990 Frank Spencer accused Keith of being the Piltdown forger in his book *Piltdown: a Scientific Forgery*. The accusation was later reinforced by Philip Tobias. Yet the evidence against Keith is easily dismissed, being either of an inconsequential nature or based on incomplete information. News of the forgery came as a grave blow to Keith, who wrote a few weeks before his death lamenting that he had been so completely deceived by the 'honest' countenance of Dawson, a man for whom he had had the greatest respect.



1990 'Chipper' the goose (fl. 1912-1913) At least two writers have suggested, presumably in jest, that Chipper the goose was involved in the Piltdown fraud. Chipper was a frequent and somewhat threatening presence around the site and features in several photographs taken during the Barkham Manor excavations. It has been suggested, for example, that Chipper's ferocious antics provided an appropriate distraction that enabled the forged items to be dropped surreptitiously onto the rain-washed spreads of gravel! The legacy of Piltdown, along with its increasing list of suspects, continues to grow ever more bizarre—yet it has its lighter moments!



1994 Arthur Smith Woodward (1864-1944) In 1994 American physical anthropologist Gerell M Drawhorn put forward the theory that Smith Woodward may have colluded with Dawson on the forgery. Woodward's motive was to enhance his reputation and improve his chances of being appointed Director of the Natural History Museum. While ambition alone is hardly sufficient to implicate Woodward in the forgery, it might have blinded him to any misgivings he should have entertained over some aspects of the Piltdown evidence - notably, for example, Dawson's reluctance to identify the precise location of Piltdown II. Yet Woodward continued to dig at Piltdown for many years after his retirement, dictating his last book *The Earliest Englishman* shortly before his death.



2003 Charles Panzetta Chatwin (1887-1971) Chatwin progressed from boy attendant at the Natural History Museum (1902-11), to Librarian at the Geological Society (1913-19), lecturer in palaeontology at the University of Liverpool (1919-20) and palaeontologist at the Geological Survey (1920-47). In 1975, Kenneth Oakley (one of the team that exposed Piltdown in 1953-55) privately named Chatwin as a possible conspirator, though his views were not made public until 2003. Chatwin's motive would have been his dislike of Smith Woodward. Oakley came to believe that Chatwin had marshalled Hinton and others from the Museum, with the connivance of Dawson, to perpetrate a vengeful prank on Woodward, though what benefit Dawson was supposed to have derived from the exposure of this prank is left unexplained. Oakley met Chatwin in the 1950s and asked him about the Piltdown forgery. Chatwin apparently said 'No, I am not talking about that' and hurried off.



## Piltdown Man and popular culture

The Piltdown forgery has also found its way into popular culture via TV, theatre, film, literature and music.



A pub in Piltdown used to be called the 'Piltdown Man' © David Bate

## Film and Television

In the first episode of *Quatermass and the Pit* (BBC, 1958) the palaeontologist Matthew Roney (Cec Linder) who is excavating the remains of ape-men in Knightsbridge says that if he is wrong. A pub in Piltdown used to be called the 'Piltdown Man' in his conclusions, 'They'll stick me alongside the Piltdown forgeries as a horrid warning.'

In the ITV science fiction thriller *Undermind*, (1965) one character refers to a scandal involving a compromising diary as 'the biggest hoax since the Piltdown Man'.

In 1987 the BBC series QED produced *Murder on the Bluebell Line* starring Hugh Fraser as Sherlock Holmes and Ronald Fraser as Doctor Watson. In this docudrama Holmes and Watson investigate the Piltdown forgery and the possible suspects including Arthur Conan Doyle.



(Left to right) Ensemble members Alan Wilder and Kate Arrington with Larry Yando in the Steppenwolf Theatre Company's production of *Fake* written and directed by ensemble member Eric Simonson. (Photo by Michael Brosilow. Ref: Fake-2. Used courtesy of Steppenwolf Theatre Company)

In 2009 a script for a proposed film *The Wizard of Sussex* was produced. This is described as a satire that centres on Charles Dawson and his discovery.

## **Theatre**

In 2009 the Steppenwolf Theatre Company produced the play 'Fake' which was based on the forgery. This is set in 1914 at a meeting at Arthur Conan Doyle's house that includes Dawson, Woodward and Teilhard de Chardin and in 1953 when the forgery is revealed.

## **Literature and poetry**

The discovery of Piltdown Man may have been one of the things that inspired Arthur Conan Doyle to write *The Lost World* (1912).

It has been suggested that Rudyard Kipling's short story *Dayspring Mishandled* (1928) may have been influenced by Piltdown. It concerns a forged Chaucer manuscript.

*Anglo-Saxon Attitudes* by Angus Wilson (1956) was partly inspired by Piltdown. The novel features the archaeological excavation of the tomb of an Anglo-Saxon bishop. An idol which is uncovered is later revealed to be a fake. The book was adapted for television in 1992.



The vineyard  
at Barkham  
Manor  
produced  
bottles of  
'Pitdown Man  
Wine'. © David  
Bate

In the novel *Catch-22* by Joseph Heller (1961) a character, Milo Minderbinder says "The Smithsonian Institution is not in a position at this time to meet our price for a second Pitdown Man".

*Mask of the Jaguar* by Jessica North (1981) is centred on a priceless Mayan jaguar mask of jade, bone and gold. At one point two characters discuss a discovery in England that 'fooled experts for years until new scientific tests unmasked the fraud' and 'the little man who must have perpetrated it—a respected, scholarly gentleman who had nothing—absolutely nothing!—to gain.'

*Skullduggery* by Peter Marks (1987) is a fictional treatment of the forgery and features, Charles Dawson, Arthur Smith Woodward, Teilhard de Chardin, Kenneth Oakley, Conan Doyle and Oscar Wilde.

The novel *The Pitdown Confession* by Irwin Schwartz (1994) is narrated by Charles Dawson, features Teilhard de Chardin and Conan Doyle and includes a murder mystery.

In F DiPietro's *The Pitdown latitudes* (2004) it is not at all clear what connection this disturbingly funny and weirdly surreal novel has with the subject of Pitdown, unless it be in regard to the identity of the perpetrator of the novel's crime!

In 2018, Nick Flittner published *Pitdown Man: The Man Who Never Was*, a poem that tells the story of the forgery from various points of view including those of Arthur Smith Woodward, Charles Dawson, Venus Hargreaves, J S Weiner and even Pitdown Man himself!

*The Pilgrimage of Pitdown Man* by Mike O'Leary (2019) is described as "...the story of Link, a cryptid, a knitted-together Pitdown Man..."

## **Music**

In the early 1960s there was a rock and roll instrumental group called The Pitdown Men. They were from California and their singles included 'Brontosaurus Stomp' and 'Goodnight Mrs Flintstone'.

On Mike Oldfield's 'Tubular Bells' (1973) he is listed as playing 'Piltdown Man' which refers to some unintelligible vocalisation he does on the album.

## Further reading and detailed bibliography

If you want to find out more about Piltdown then the following books would be a good place to start:

Russell, Miles, *The Piltdown Man forgery: Case Closed* (The History Press, 2012)

Spencer, Frank, *The Piltdown Papers* (Oxford University Press, 1990)

Walsh, John, *Unravelling Piltdown: The Science Fraud of the Century and Its Solution* (Random House, 1996)

Weiner, J S, *The Piltdown Forgery* (Fiftieth Anniversary edition, with a new Introduction and Afterword by Chris Stringer, Oxford University Press, 2003)

For a more detailed study of the whole Piltdown story, BGS Historian David G Bate has compiled a large [annotated bibliography](#).

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## Navigation menu

### Personal tools

- Not logged in
- [Talk](#)
- [Contributions](#)
- [Log in](#)
- [Request account](#)

### Namespaces

- [Page](#)
- [Discussion](#)

### Variants

### Views

- [Read](#)
- [Edit](#)
- [View history](#)
- [PDF Export](#)

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## More

## Search

## Navigation

- [Main page](#)
- [Recent changes](#)
- [Random page](#)
- [Help about MediaWiki](#)

## Tools

- [What links here](#)
- [Related changes](#)
- [Special pages](#)
- [Permanent link](#)
- [Page information](#)
- [Cite this page](#)
- [Browse properties](#)

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