

# Charles Darwin and Associates, Ghostbusters

*When the scientific establishment put a spiritualist on trial, the co-discoverers of natural selection took opposing sides*

by Richard Milner

After lunch on September 16, 1876, Charles Darwin stretched out on his drawing-room sofa, as was his unvarying routine, smoked a Turkish cigarette and read the “bloody old *Times*.” He often fumed at its politics (the editors supported the South in the American Civil War), and his wife, Emma, suggested that they give up the paper altogether. But he replied he would sooner “give up meat, drink and air.”

In the “Letters” column, he noticed a report that a young zoologist named Edwin Ray Lankester was bent on jailing a celebrated spirit medium, “Dr.” Henry Slade, who was bilking gullible Londoners. By hauling Slade into court as “a common rogue,” Lankester would become the first scientist to prosecute a professional psychic for criminal fraud—an action Darwin thought long overdue. Although he was delighted at Lankester’s attack on Slade, Darwin was distressed to learn that Alfred Russel Wallace, his friendly rival and co-discoverer of the theory of natural selection, was also a target.

The Slade trial was to become one of the strangest courtroom cases in Victorian England. Some saw it as a public arena where science could score a devastating triumph over superstition. For others, it was the declaration of war between professional purveyors of the “paranormal” and the fraternity of honest stage magicians. Arthur Conan Doyle, the zealous spiritualist whose fictional detective, Sherlock Holmes, was logic personified, characterized it as “the persecution [rather than prosecution] of Slade.” But what made the trial unique was that the two greatest naturalists of the century ranged themselves



Charles Darwin, 1868

on opposite sides. The “arch-materialist” Darwin gave aid and comfort to the prosecution, and his old friend Wallace, a sincere spiritualist, was to be the defense’s star witness—making it one of the more bizarre and dramatic episodes in the history of science.

Wallace was respected as an author, zoologist, botanist, the discoverer of scores of new species, the first European to study apes in the wild and a pioneer in the study of the distribution of animals. But he constantly courted ruin by championing such radical causes as socialism, pacifism, land nationalization, wilderness conservation, women’s rights and spiritualism. In addition to his classic volumes on zoogeography, natural selection, island life and the Malay Archipelago, he had written *Miracles and Modern Spiritualism*, which lauded spirit-mediums. And he had just allowed a controversial paper on “thought transference” to be read at a meeting of the British Association for the Advancement of Science—touching off an uproar that

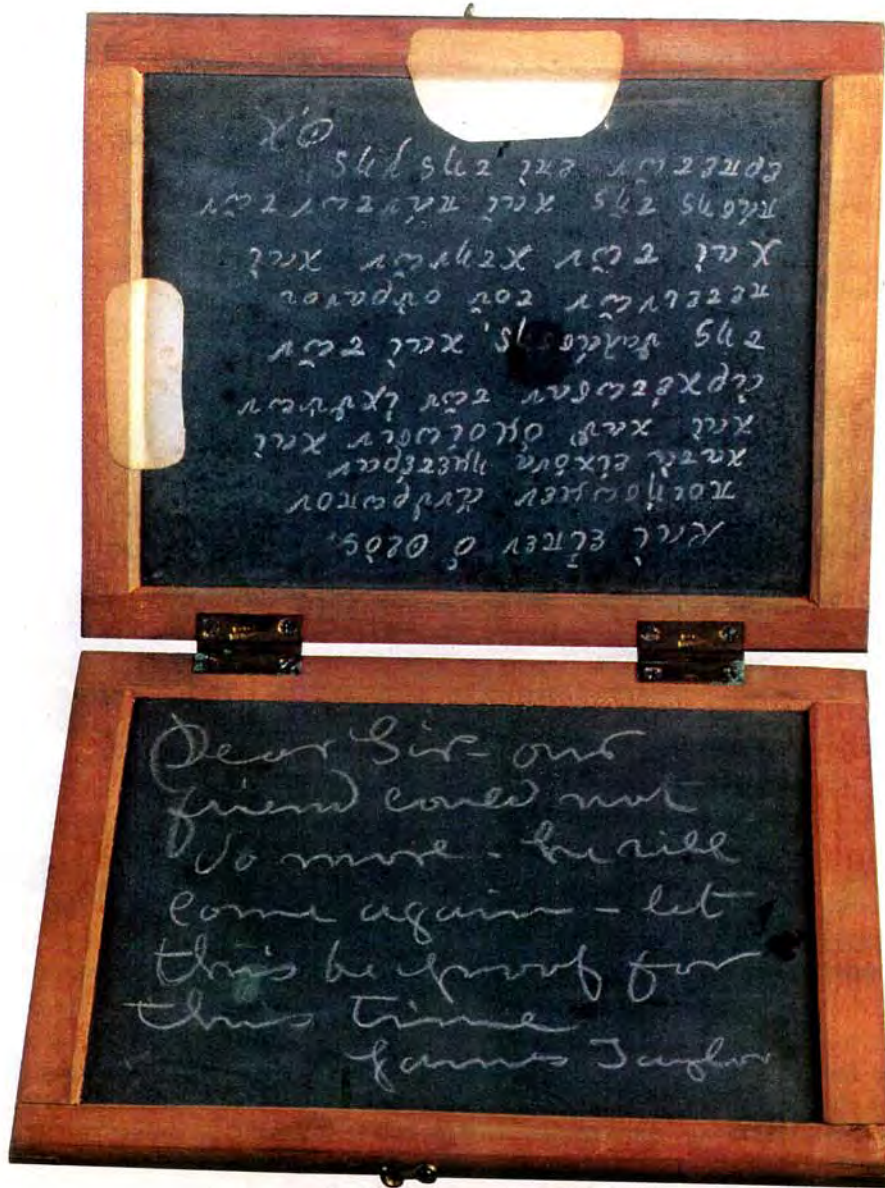
led him to avoid scientific meetings for the rest of his life.

Wallace wanted the best of both worlds. With insects or birds, he was even more rigorous than Darwin in applying the principle of natural selection, but he questioned its efficacy for humans. If early hominids required only a gorilla’s intelligence to survive, Wallace asked, why had they evolved brains capable of devising language, composing symphonies and doing mathematics? Although our bodies had evolved by natural selection, he concluded, *Homo sapiens* has “something which he has not derived from his animal progenitors—a spiritual essence or nature... [that] can only find an explanation in the unseen universe of Spirit.”

Wallace’s position did not stem from any conventional religious belief but from his long-standing interest in spiritualism: a melding of ancient Eastern beliefs with the Western desire to “secularize” the soul and prove its existence. When Wallace published this view in 1869, Darwin wrote him: “I differ grievously from you; I can see no necessity for calling in an additional and proximate cause [a supernatural force] in regard to Man.... I hope you have not murdered too completely your own and my child”—meaning their theory of natural selection.

## Darwin the “Materialist”

Like Wallace (and his New Age intellectual descendants), many Victorians recoiled from the materialism axiomatic in physical science; they sought a “wireless telegraph” to an intangible world. Although Darwin and most oth-



1 The writing within was obtained at a sitting with Dr Slade in the Autumn of 1876. We took two of his slates, apparently new, having the grey look of unused slates. I broke up them, rubbed them with my handkerchief, and putting the rubbed faces together, we tied them up fast with a piece of cord, with a fragment of pencil between them. Thus two of the slates were laid

2 flat on the table without having been put underneath or removed for a moment from under my eyes. I placed both my hands upon them & Slade, one of his. Presently we heard the writing begin. I bent down my ear to listen to it & we both remarked that it did not sound like writing, but like a succession of short strokes. My first impression was that they could not make the pencil mark. But it went on too long for that

3 At last the sound, <sup>entirely</sup> changed giving me the impression of rapid writing in a running hand. When I came to open the slates I found that on one side was written the 26<sup>th</sup> verse of the 1<sup>st</sup> chap. of Genesis in Greek of the Septuagint version or on the other a short message in English. The Greek letters <sup>were what</sup> being written separately had given the looked sound of the first part of the writing.

4 As the writing can be rubbed off with the slightest touch it plainly could not have existed in an invisible state upon the slate when well rubbed with my pocket handkerchief, to be subsequently brought out by the heat of my hand, as some have absurdly supposed. There is the same confusion between X & X that I have seen in most of the other slate-writing cited by Slade or Eglinton.

H. Wedgwood

SOCIETY FOR PSYCHICAL RESEARCH ARCHIVE, CAMBRIDGE UNIVERSITY LIBRARY

SLATE containing alleged spirit writing has been preserved since a séance in the fall of 1876, along with an attached letter from Charles Darwin's cousin and brother-in-law, Hensleigh Wedgwood, attesting to its authenticity. The Greek text (top slate) is a passage from the biblical book of Genesis describing the cre-

ation of humans and animals—perhaps intended to be particularly galling to evolutionists. The author discovered the slate this past summer in the Cambridge University Library, where it had lain unnoticed as part of a collection of letters and photographs donated by the Society for Psychical Research Archive.



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**COURTROOM DRAMA**, seen here in a newspaper engraving, fascinated Victorian England as biologist Edwin Ray Lankester (*standing*) testified against “psychic” Henry Slade (*far left*). Lankester holds a slate used by Slade in his séances.

er scientists kept miracles out of their theories, a few shared Wallace’s views. Among them were the physicist Oliver Lodge and the chemist William Crookes, discoverer of the element thallium.

Spiritualism attracted people with a wide spectrum of interests, but its major focus was on the possibility of communication with the dead. This part of the movement began in 1848, with the rise of Margaret and Kate Fox, sisters from Hydesville, N.Y. When the teenage girls conversed with “spirits,” mysterious rapping sounds spelled out lengthy messages. (Thirty years later, after gaining fame and fortune, one of the sisters admitted that she had always produced the taps by snapping her big toe inside her shoe.) In England, the U.S. and Europe, over the next 80 years, spiritualism enjoyed tremendous popularity.

In the early 1870s Darwin’s cousin and brother-in-law Hensleigh Wedgwood became a convert. Wedgwood yearned to become a respected savant like Darwin, their cousin Francis Galton and Darwin’s grandfather Erasmus. But a pair of swindlers, Charles Williams and Frank Herne, recognized that he was the most gullible of the clan. At their urging,

Wedgwood begged Darwin to come and see the self-playing accordions, levitating tables, automatic writing and glowing spirit hands at Williams’s séances. Darwin always managed to be too tired, too busy or too ill to attend. “I am a wretched bigot on the subject,” he once admitted.

In January 1874, however, Darwin sent two close members of his circle to attend a séance with Williams. His friend and lieutenant, the famous zoologist Thomas H. Huxley, was introduced as “Mr. Henry” (his middle name). Darwin’s son George, then 29 years old, went as well. Although bottles moved around and a guitar played by itself, the two concluded they had observed nothing but crude trickery. George, a budding astronomer, wrote that he was shocked to find his uncle Hensleigh’s account of Williams’s séances “so worthless.” Later that year Darwin wrote to a newspaperman, urging him to expose Williams as “a scoundrel who has imposed on the public for so many years.”

The following year Huxley’s young laboratory assistant, Edwin Ray Lankester, decided to catch Williams and Herne in fraud—an act he knew would

impress his heroes Darwin and Huxley. But after Huxley and George’s visit, the medium became wary, avoiding anyone connected to Darwin’s circle. Then, in April 1876, a tempting new target moved into Lankester’s sights: a celebrated American psychic, “Dr.” Henry Slade, had come to London “to prove the truth of communication with the dead.” Slade claimed that his wife’s spirit wrote him messages on slates.

Lankester and his fellow medical student, Horatio Donkin, went to Slade’s pretending to be believers. They paid the admission fee, asked questions of the spirits and received mysteriously written answers. Then, in the darkened room, Lankester suddenly snatched a slate out of Slade’s hands, found the written answer to a question he had not yet asked, and proclaimed him “a scoundrel and an impostor.”

The next day Slade and his partner, Geoffrey Simmonds, were in the hands of the police, charged with violating the Vagrancy Act, an old law intended to protect the public from traveling palm readers and sleight-of-hand artists. Throughout the fall of 1876, all London was abuzz over the Slade trial. The



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little courtroom was packed with Slade's supporters and detractors and 30 journalists, who spilled out into the street. The *Times* of London carried trial transcripts day after day.

Darwin, whose beloved 10-year-old daughter Annie had died in 1851, had nothing but contempt for the "clever rogues" who preyed on grieving relatives. Yet he avoided saying so publicly—*On the Origin of Species* had stirred up enough controversies for a lifetime. Privately, he wrote Lankester an effusive letter of congratulations. Jailing Slade was a public benefit, he said, and insisted on contributing £10 to the costs of prosecution. (Under English law, the complainant paid court costs; £10 was a substantial sum, comparable to a month's wages for a workingman.)

### Packed Courtroom

As the trial got under way, the prosecutor announced that stage magician John Nevil Maskelyne was prepared to reproduce all the "alleged phenomena" that were observed at the séance. The judge, in turn, warned that performing magic slate tricks in court would prove nothing; the question was whether Lankester and Donkin had actually caught the defendants faking the alleged spirit writing.

Both scientists turned out to be terrible witnesses; their observational skills, developed in anatomy and physiology labs, were useless in detecting fraud by professional cheats. As Huxley later noted, "In these investigations, the qualities of the detective are far more useful than those of the philosopher.... A man may be an excellent naturalist or chemist; and yet make a very poor detective."

Indeed, Lankester and Donkin apparently could not agree on anything much beyond their charge that Slade was an impostor. Did the medium use a thimble device for writing, or did he hold a pencil stub while his thumb was visible on the tabletop? Did he switch the blank slate for one that was previously written on? Was the table of ordinary construction, or did it have sliding bars and trick panels? The two could not establish when or how the writing had been done.

Maskelyne's courtroom conjuring, in contrast, was perfect. In answer to a question about instant writing—and before the judge could stop him—he began scrubbing a blank slate with a wet sponge until writing appeared: "THE

SPIRITS ARE HERE!" Then he wiped the slate clean and ran the sponge over it again. The message reappeared, and Slade's partner, Simmonds, was fascinated. "Marvelous!" he exclaimed. "May I examine the slate?" Maskelyne shot back, "Oh, you know all about it."

Whenever the prosecutor could, he had Maskelyne slip in another slate trick until the judge finally barred them. The prosecutor then offered Slade two small slates joined by hinges and a hasp lock. Why not make writing appear inside the locked slates and convince the world? Slade replied he had been so pestered by such tests that Allie, his wife's spirit, had vowed never to write on a locked slate.

A chemist named Alexander Duffield was one of many witnesses for the prosecution. He said Slade had convinced him "that there could be established a sort of post office in connection with the 'other place.'" But now he had his doubts. Another witness testified that a few years earlier, in the U.S., someone had similarly snatched a slate from Slade in mid-séance and exposed him in fraud.

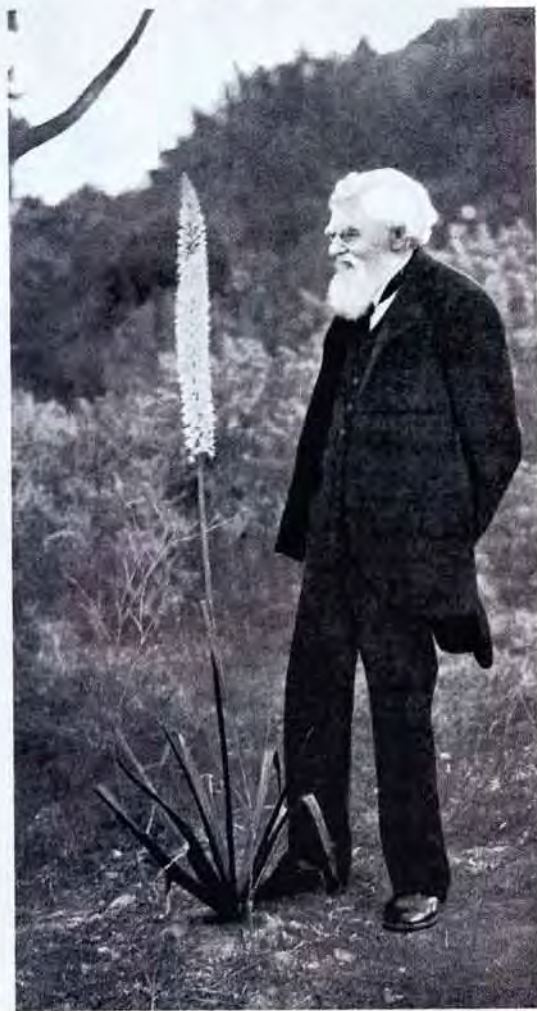
The high point of the trial was Wallace's appearance for the defense. His integrity and candor were known to all. When called, he said that he had witnessed the alleged phenomena but refused to speculate on whether the writings were caused by spirits. He considered Slade to be an honest gentleman, "as incapable of an imposture... as any earnest inquirer after truth in the department of Natural Science."

In his summation, Slade's lawyer argued that there was no real evidence against his client. No one had proved the table was rigged, and Maskelyne's demonstrations of how the trick *could* have been done were irrelevant. The writing's appearance before the corresponding question was asked proved nothing about its origin, and Lankester and Donkin could not agree on exactly what they had seen during the séance. Moreover, such an eminent scientist as Wallace should be considered at least as credible as young Lankester. The



COURTESY OF WEDGWOOD MUSEUM

BELIEVERS in spiritualism included Wedgwood (above) and Alfred Russel Wallace (below, shown in his garden in 1905 with a king's-spear plant). Wallace's scientific reputation suffered because he defended Slade; the episode left Wedgwood and Darwin permanently estranged.



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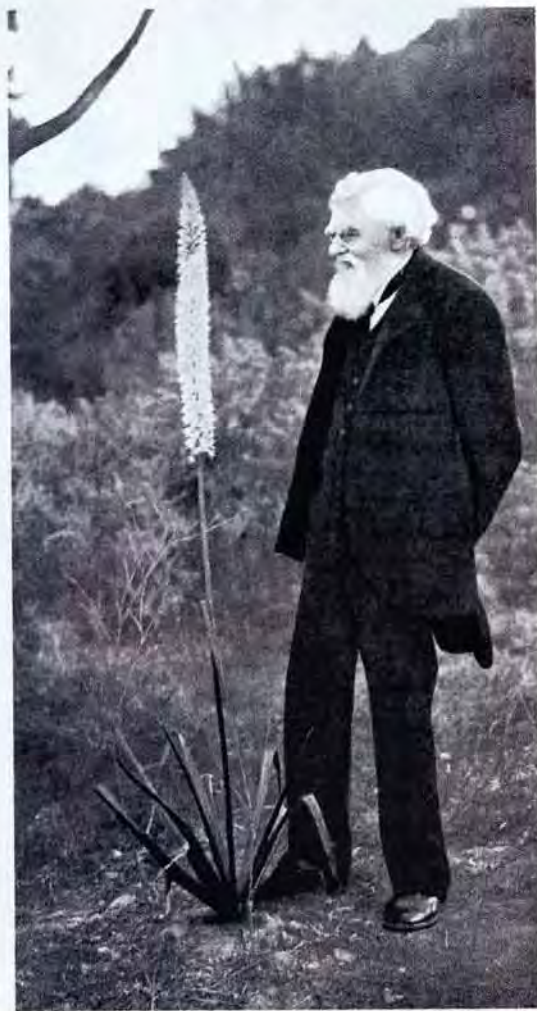
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But nothing could save Slade. The judge said that he understood that spiritualism was “a kind of new religion” and did not wish to offend sincere believers. Still, the question before the court was whether Slade and Simmonds had fraudulently represented their own actions as paranormal phenomena. Concluding that he must decide “according

to the well-known course of nature,” the judge sentenced the defendant to three months’ hard labor in the House of Corrections.

Slade never served his sentence. On appeal, another judge ruled that the Vagrancy Act, which prohibited palmistry, was not applicable to claims of spirit writing. Slade and his partner fled England for Germany. Within a short time, Slade had convinced his landlord, a local conjurer, the chief of police and several prominent German scientists (including the physicist Johann Zöllner of

the University of Leipzig) that he was in contact with spirits and various paranormal forces. When his act wore thin, he took to the road again. Eventually he wound up an alcoholic in a run-down New York boardinghouse, easy prey for tabloid editors who sent cub reporters to expose him one more time.

#### After the Trial

The controversy took a toll on participants other than Slade. In 1879 Darwin tried to drum up support for a government pension in recognition of Wallace’s brilliant contributions to natural history. Wallace, he knew, had to earn his meager living by grading examination papers. But when Darwin wrote to his friend Joseph Hooker, director of Kew Gardens, the botanist refused to help. “Wallace has lost caste terribly,” he replied nastily, “not only for his adhesion to Spiritualism, but by the fact of his having deliberately and against the whole voice of the committee” allowed the paper on mental telepathy at the scientific meetings. In addition, he thought the government “should in fairness be informed that the candidate is a public and leading Spiritualist!”

Undaunted, Darwin replied that Wallace’s beliefs were “not worse than the prevailing superstitions of the country”—meaning organized religion. Darwin and Huxley twisted a few more arms, then Darwin personally wrote to Prime Minister William Gladstone, who passed the petition on to Queen Victoria. In the end, Wallace got his modest pension and was able to continue writing his articles and books; he died in 1913, at the age of 90.

In the years after the trial, Wedgwood and Darwin did not see much of each other. In 1878 a reporter for the journal *Light* had finally managed to unmask Charles Williams, the medium who had attempted to use Wedgwood to win over Darwin’s family. When the journalist suddenly turned on the lights at a séance, Williams was found to be wearing a

LANKESTER eventually became director of the British Museum of Natural History and a well-known figure in British science. This 1905 *Vanity Fair* caricature pictures him eye to eye with a hornbill while observed by a horseshoe crab. Lankester’s monograph on the arthropod is still considered a classic. In 1912, however, Lankester was himself taken in by a proevolutionary hoax, the Piltown man.



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false black beard, phosphorescent rags and, as Darwin later put it, “dirty ghost-clothes.”

“A *splendid* exposure,” crowed Darwin when he read of it. But even then, his brother-in-law’s faith remained unshaken; a few faked performances indicated only that the medium was having difficulty getting through to the other side and was under pressure not to disappoint his sitters. For Darwin, this was the last straw: “Hensleigh Wedgwood admits Williams is proved a rogue,” he fumed, “but insists he has seen real ghosts [at Williams’s séances]. Is this not a psychological curiosity?”

In 1880 Wedgwood sent Darwin a long handwritten manuscript: a spiritualist synthesis of science and religion. Would Darwin read it and perhaps suggest where it might be published? In a melancholy mood, Darwin sat down to reply to his cousin. He may have remembered the times Wedgwood had gone to bat for him many years before: he had helped persuade Darwin’s uncle and father to let him go on the HMS *Beagle* expedition, and it was to his cousin that Darwin had once entrusted publication of his theory of natural selection.

“My dear Cousin,” Darwin wrote, “It is indeed a long time since we met, and I suppose if we now did so we should not know one another; but your former image is perfectly clear to me.” He refused even to read Hensleigh’s paper, writing that “there have been too many such attempts to reconcile Genesis and science.” The two cousins, who had once been so close, were now hopelessly estranged over the question of science and the supernatural.

That same year Lankester, now a professor of zoology, declined requests to continue ghostbusting. “The Spirit Medium,” he wrote in an 1880 letter to the *Pall Mall Gazette*, “is a curious and unsavoury specimen of natural history, and if you wish to study him, you must take him unawares.... I have done my

## Huxley the Medium



MICHAEL HUXLEY

Thomas H. Huxley, 1860s

In contrast to Charles Darwin, zoologist Thomas H. Huxley treated spiritualist claims with either disinterest or good humor. Once he was present when a clever, attractive American woman mystified a select company with a fraudulent display of psychic powers and thought reading. Although he saw through her game, Huxley later reported he was so charmed by the lady that he gallantly refrained from exposing her. “Fraud is often genius out of place,” he mused, “and I confess that I have never been able to get over a certain sneaking admiration for Mrs. X.”

When Alfred Russel Wallace sent him a copy of his book on spiritualism, Huxley responded: “It may all be true...but really I simply cannot get up any interest in the subject.” Huxley had enough interest, however, to master the art of loudly snapping his toes inside his boots, so that he, too, could feign summoning the spirits. “By dint of patience, perseverance [and] practice,” he explained, the toe snaps “may be repeated very rapidly, and rendered *forte* or *piano* at pleasure. To produce the best effect, it is advisable to have thin socks and a roomy, hard-soled boot; moreover, it is well to pick out a thin place in the carpet, so as to profit by the resonance of the floor.” —R.M.

share of the skunk-hunting; let others follow.” He was later appointed director of the British Museum of Natural History.

Ironically, in 1912 Lankester, the nemesis of fakers, was completely fooled by the Piltdown man hoax, one of the most notorious frauds in the history of evolutionary biology. For the next 40 years, scientists accepted the “ape-man” fragments, dug up about 25 miles from Darwin’s home, as remains of the “missing link.” Fired with enthusiasm for the Darwin-Wallace theory, Lankester and the younger generation of evolutionists uncritically embraced this fossil forgery.

Huxley, who died in 1895, knew full well that more than a few scientists were prone to develop their own irra-

tionally held beliefs. While young, he had battled churchmen to establish the scientific approach to unraveling human origins but later quipped to an educator that “we or our sons shall live to see all the stupidity *in favour* of science”—a fitting prophecy of Piltdown, the ersatz “Stone Age” Tasaday tribe of the Philippines, and cold fusion. In *The Descent of Man*, Darwin himself had urged a skeptical approach to unconfirmed observations; he believed that accepting flimsy evidence is much more dangerous than adopting incorrect theories. “False facts are highly injurious to the progress of science, for they often long endure,” he wrote. “But false views, if supported by some evidence, do little harm, as everyone takes a salutary pleasure in proving their falseness.”

### The Author

RICHARD MILNER is a historian of science who has focused on Charles Darwin for the past 20 years. He has uncovered several previously unknown episodes in Darwin’s life. Milner received an M.A. in anthropology from the University of California, Los Angeles, and passed his doctoral exam in human evolution at the University of California, Berkeley, in 1968. He is now an editor at *Natural History* magazine at the American Museum of Natural History. This is his second article for *Scientific American*.

### Further Reading

ALFRED RUSSEL WALLACE, THE ORIGIN OF MAN, AND SPIRITUALISM. Malcolm Jay Kottler in *Isis*, Vol. 65, No. 227, pages 145–192; June 1974.  
THE WEDGWOOD CIRCLE, 1730–1897: FOUR GENERATIONS OF A FAMILY AND THEIR FRIENDS. Barbara and Hensleigh Wedgwood. Collier-Macmillan (Canada), 1980.  
“I WILL GLADLY DO MY BEST”: HOW CHARLES DARWIN OBTAINED A CIVIL LIST PENSION FOR ALFRED RUSSEL WALLACE. Ralph Colp, Jr., in *Isis*, Vol. 83, No. 1, pages 3–26; March 1992.  
THE ENCYCLOPEDIA OF EVOLUTION: HUMANITY’S SEARCH FOR ITS ORIGINS. Revised edition. Richard Milner. Henry Holt and Company, 1993.

false black beard, phosphorescent rags and, as Darwin later put it, “dirty ghost-clothes.”

“A *splendid* exposure,” crowed Darwin when he read of it. But even then, his brother-in-law’s faith remained unshaken; a few faked performances indicated only that the medium was having difficulty getting through to the other side and was under pressure not to disappoint his sitters. For Darwin, this was the last straw: “Hensleigh Wedgwood admits Williams is proved a rogue,” he fumed, “but insists he has seen real ghosts [at Williams’s séances]. Is this not a psychological curiosity?”

In 1880 Wedgwood sent Darwin a long handwritten manuscript: a spiritualist synthesis of science and religion. Would Darwin read it and perhaps suggest where it might be published? In a melancholy mood, Darwin sat down to reply to his cousin. He may have remembered the times Wedgwood had gone to bat for him many years before: he had helped persuade Darwin’s uncle and father to let him go on the HMS *Beagle* expedition, and it was to his cousin that Darwin had once entrusted publication of his theory of natural selection.

“My dear Cousin,” Darwin wrote, “It is indeed a long time since we met, and I suppose if we now did so we should not know one another; but your former image is perfectly clear to me.” He refused even to read Hensleigh’s paper, writing that “there have been too many such attempts to reconcile Genesis and science.” The two cousins, who had once been so close, were now hopelessly estranged over the question of science and the supernatural.

That same year Lankester, now a professor of zoology, declined requests to continue ghostbusting. “The Spirit Medium,” he wrote in an 1880 letter to the *Pall Mall Gazette*, “is a curious and unsavoury specimen of natural history, and if you wish to study him, you must take him unawares.... I have done my

## Huxley the Medium



Thomas H. Huxley, 1860s

In contrast to Charles Darwin, zoologist Thomas H. Huxley treated spiritualist claims with either disinterest or good humor. Once he was present when a clever, attractive American woman mystified a select company with a fraudulent display of psychic powers and thought reading. Although he saw through her game, Huxley later reported he was so charmed by the lady that he gallantly refrained from exposing her. “Fraud is often genius out of place,” he mused, “and I confess that I have never been able to get over a certain sneaking admiration for Mrs. X.”

When Alfred Russel Wallace sent him a copy of his book on spiritualism, Huxley

responded: “It may all be true...but really I simply cannot get up any interest in the subject.” Huxley had enough interest, however, to master the art of loudly snapping his toes inside his boots, so that he, too, could feign summoning the spirits. “By dint of patience, perseverance [and] practice,” he explained, the toe snaps “may be repeated very rapidly, and rendered *forte* or *piano* at pleasure. To produce the best effect, it is advisable to have thin socks and a roomy, hard-soled boot; moreover, it is well to pick out a thin place in the carpet, so as to profit by the resonance of the floor.”

—R.M.

share of the skunk-hunting; let others follow.” He was later appointed director of the British Museum of Natural History.

Ironically, in 1912 Lankester, the nemesis of fakers, was completely fooled by the Piltdown man hoax, one of the most notorious frauds in the history of evolutionary biology. For the next 40 years, scientists accepted the “ape-man” fragments, dug up about 25 miles from Darwin’s home, as remains of the “missing link.” Fired with enthusiasm for the Darwin-Wallace theory, Lankester and the younger generation of evolutionists uncritically embraced this fossil forgery.

Huxley, who died in 1895, knew full well that more than a few scientists were prone to develop their own irra-

tionally held beliefs. While young, he had battled churchmen to establish the scientific approach to unraveling human origins but later quipped to an educator that “we or our sons shall live to see all the stupidity *in favour* of science”—a fitting prophecy of Piltdown, the ersatz “Stone Age” Tasaday tribe of the Philippines, and cold fusion. In *The Descent of Man*, Darwin himself had urged a skeptical approach to unconfirmed observations; he believed that accepting flimsy evidence is much more dangerous than adopting incorrect theories. “False facts are highly injurious to the progress of science, for they often long endure,” he wrote. “But false views, if supported by some evidence, do little harm, as everyone takes a salutary pleasure in proving their falseness.”

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