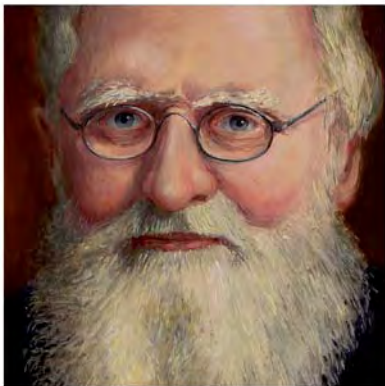
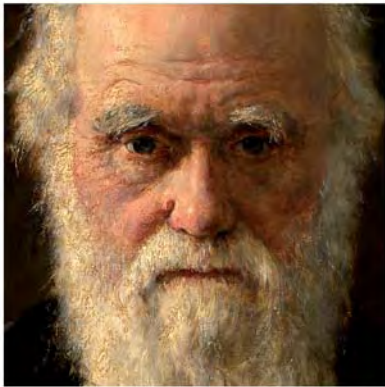




Survival of the Fittest

Celebrating the 150th anniversary of the
Darwin-Wallace theory of evolution



Carl Linnaeus
1707-1778

THE LINNEAN SPECIAL ISSUE NO. 9

A forum for natural history

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Survival of the Fittest

A Special Issue of *The Linnean*
celebrating the 150th anniversary of the
Darwin-Wallace theory of evolution

edited by

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Charles Darwin: Ghostbuster, Muse and Magistrate Richard Milner FLS

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On a chilly, misty morning, several years ago, I rambled across a tract of woodland near the Kentish village of Downe, where I clambered down a muddy slope carpeted with dormant native orchids. It was the fabled “Darwin’s orchis bank,” which I thought had been destroyed years ago to make way for housing estates. My four knowledgeable companions, led by historian Randal Keynes, enthused about how beautiful this place becomes in spring, when thousands of wildflowers bloom, and how much they wanted to preserve it for posterity.

It is one of the remnants of Charles Darwin’s favorite unspoiled natural places within walking distance of his country home, which is now the Darwin Museum. The Victorian naturalist, who was Keynes’s great-great grandfather, had regularly walked these same footpaths a century and a half ago. He had been especially fond of the tiny orchids that still flourish here, but are becoming increasingly rare in Britain. Darwin wrote about them in *The Various Contrivances by which Orchids are Fertilised by Insects* (1862), the first book he published after the *Origin of Species* (1859).

Later that day, we raised our glasses in Ye Whyte Lyon Inn near Farnborough Common, in Locksbottom, Orpington, a centuries-old pub where the public-spirited biologist occasionally held court as a part-time magistrate, meting out verdicts and sentences to local law-breakers.



The author with Randal Keynes (right) and (left) Professor John and Irene Palmer.
Photograph by Alistair Hayes.

The publican overheard our lively talk about Darwin having been to his restaurant – but the name failed to ring a bell. At Randal’s urging, I showed the man a ten-pound note, which has displayed Darwin’s magisterial likeness since 2002, when it replaced that of Charles Dickens. “See this old geezer on your money?” I said. “Well, he used to come in here all the time.” The landlord was suitably impressed by the monetary portrait: “Oh, a regular, was he?”

Well, maybe not. But Darwin and his circle – Thomas Henry Huxley, Alfred Russel Wallace, Sir John Lubbock and others – have been “regulars” in my mental landscape for almost fifty years.

My Darwinising took root during my childhood in Bayside, Queens, New York City, where I became friends with a 12-year-old boy (my own age) named Stephen Jay Gould. Steve had two childhood idols: Charles Darwin and the legendary baseball star Joe DiMaggio. Little did I suspect that he would become a world-renowned paleontologist and inherit Thomas Huxley’s mantle as a premier essayist on evolution – or that I would become his editor at *Natural History* magazine (Milner 2002). Nor could Steve have imagined that one day he would be seen by millions discussing evolution on American national television with his hero, “Joltin’ Joe” DiMaggio.

From our shared boyhood passion for animals and dinosaurs, it was a short step to an interest in Charles Darwin. Even as kids, growing up before the advent of mass dinomania, evolution fascinated us; we were captivated by the pageant of the history of life on earth, and recognized, as Darwin phrased it, “grandeur in this view of life”. A decade later, as an anthropology grad student at the University of California, I became fascinated with the intellect and character of the genius behind the theory. (By then, I had learned that there were *two* geniuses, the other being Darwin’s junior partner Alfred Russel Wallace.) But the Darwin of the science books seemed cold and distant; early on, I developed a thirst to know something about the man himself, the flesh and blood behind the iconic legend.

1. Darwin as the Spiritualist’s Nemesis

It turned out that there was a great deal known about Darwin’s life and personality. His friends and relatives had left their memoirs, in addition to his Autobiography – (Darwin C. and Barlow N. 1993) and thousands of letters were still extant, although only a few hundred had been published at the time¹. By the 1980s, I was well acquainted with the various Darwin biographies, and began a personal quest to know the man better – to seek “unknown” incidents in Darwin’s life that might shed light on new facets of his personality. But what untold stories could I discover in a life so well raked over for more than a century?

By a very roundabout path, I arrived at a front row seat at one of Victorian England’s strangest courtroom dramas: the trial of a celebrated American “psychic” known as “Dr.” Henry Slade. I discovered that when the scientific establishment put Slade and his purported wife’s “ghost” on trial in 1876, Darwin and Alfred Russel Wallace, the co-discoverers of natural selection, became adversaries.

Wallace was star witness for the defense, and Darwin secretly contributed funds toward the cost of the prosecution. (Milner 1990a and 1990b) England’s two greatest

naturalists took opposing sides when the reality of supernatural phenomena was challenged in court. This long-forgotten episode appeared in none of the histories or biographies at the time, and remains largely unknown, even to Darwin scholars.

It was in a London bookseller's basement that I first became aware of this fascinating battle between evolutionists and Spiritualists. Antiquarian bookseller M.E. (Eric) Korn had arranged two long rows of facing bookshelves, with an aisle between them. On one side were volumes about Darwin, evolution, and history of science. Facing them were books on nineteenth-century Spiritualism and the occult. I wondered why anyone would collect so intensively on two such irreconcilable topics.

A few years later, I began to understand something about the cross-connections. Sometimes, both sides of the conflict co-existed in the same persons, such as Alfred Russel Wallace or the chemist-physicist William Crookes, discoverer of thallium and helium. It even turned out that some Victorian authors were writing science books under their own names while penning Spiritualist material under another. Wallace was respected as a great naturalist and biologist, but he constantly courted ruin by championing such disreputable causes as socialism, pacifism, land nationalization, wilderness conservation, women's rights, and Spiritualism. (Wallace 1905).

In addition to his classic works on zoogeography, natural selection, island life and the Malay Archipelago, he had written *Miracles and Modern Spiritualism*, which lauded spirit-mediums. As Chairman of the Anthropology Section of the British Association for the Advancement of Science, in 1876, he allowed a controversial paper on "thought transference" to be read at his session – touching off an uproar that divided the scientific community and caused him to avoid scientific meetings for the rest of his life.²

Like Wallace, Darwin's cousin and brother-in-law Hensleigh Wedgwood became convinced that the living could communicate with the dead, and that he was on to a major "scientific" breakthrough. A pair of swindlers, Charles Williams and Frank Herne, recognized that Wedgwood was the most gullible member of the clan. At their urging, he begged Darwin to come and see the self-playing accordions, levitating tables, automatic writing, and glowing spirit hands at Williams' séances. Darwin always managed to be too tired, too busy or too ill to attend.³

In January 1874, however, Darwin insisted that two close members of his circle, the combative zoologist Thomas H. Huxley ("Darwin's bulldog") and his own son George attend a séance with Williams. Huxley, was introduced as "Mr. Henry", his middle name. Bottles moved around the table, and a guitar played by itself, but the pair was not impressed by the "crude trickery". George, a budding astronomer, wrote that he was shocked to find his uncle Hensleigh's enthusiastic reports of Williams' miraculous phenomena "so worthless."⁴

After Darwin's ten-year-old daughter Annie, the light of his life, died in 1851, he became an implacable foe of heartless Spiritualistic swindlers who preyed on the bereaved. In the 1870s, when Williams tried to insinuate himself into the family circle through his brother-in-law, Hensleigh Wedgwood, Darwin tried to put him behind bars. In 1874, Darwin wrote to a newspaperman, urging him to expose Williams as "a scoundrel who has imposed on the public for so many years".⁵ He was later delighted

to read in the newspaper that another “ghostbuster” had ruined one of Williams’s séances, revealing the “imposture” of his crude spirit impersonations. On hearing about the incident, Darwin absolutely gloated with delight.⁶

In contrast to Darwin’s vehement animosity towards Spiritualists, Huxley regarded their shenanigans with either dismissive disinterest or amused good humor. Once he attended a gathering where a clever, attractive woman mystified the group with a demonstration of psychic powers and thought reading. Although Huxley easily saw through her game, 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.”⁷

Huxley’s range of responses to phony spiritualists included besting them at their own tricks – a theatrical strategy which never would have occurred to Darwin. A flamboyant master of the lecture platform (unlike the reticent Darwin, who almost never spoke in public) Huxley had practiced the technique of loudly snapping his toes inside his boots. He, too, could call forth “spirit raps”.

“By dint of patience, perseverance [and] practice,” he explained in the *Pall Mall Gazette*, the mysterious tapping “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...[and find] a thin place in the carpet, so as to profit by the resonance of the floor.”⁸ Similarly, Huxley liked to embarrass churchmen in debates by quoting their own theology and Scripture at them better than they could.

One of Huxley’s students in comparative anatomy, Edwin Ray Lankester, wanted to catch Williams and Herne in fraud – which he knew would impress his teacher, as



At the Slade trial at Bow Street Court in 1876, zoologist E. Ray Lankester holds a slate used for “ghost writing”. “Psychic” impostor Henry Slade and his accomplice, at extreme left, appear stricken by his testimony, while a clerk, at right, is utterly bored.

well as his hero Darwin. But after Huxley's and George's séance with Williams, the grifters became wary of allowing evolutionary biologists to attend their "experiments" and "demonstrations."⁹

Then, in April 1876, a tempting new target presented himself to the zealous ghost-buster. A celebrated American psychic, "Dr." Henry Slade, had come to London "to prove the truth of communication with the dead". Slade's claim that his wife's spirit wrote messages on slates attracted a well-paying audience of believers.

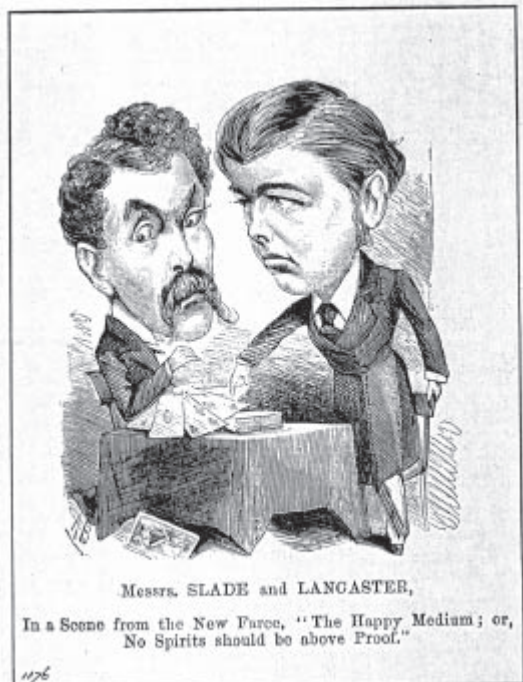
Lankester and a medical student, Horatio Donkin, went to Slade's rooms in Russell Square, paid the admission fee, asked questions of the spirit, and received answers mysteriously written on slates. Suddenly, in the darkened room, Lankester snatched a slate out of Slade's hands, found the written answer to a question he had not yet asked, and proclaimed him "a scoundrel and an impostor."¹⁰

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.¹¹

Throughout the fall of 1876, the little Bow Street 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.¹²

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 – a substantial sum, comparable to a month's wages for a working man.¹³

Lankester's offhand acknowledgement of Darwin's cash contribution, buried in an obscure introductory note he had written years later in a reference book, turned out to be the key that enabled me to fit together all the pieces about the Slade trial and its significance. Odd bits of the story had been scattered throughout letters and fragmentary reminiscences of many people, who had often discreetly disguised the participants' names.



A contemporary caricature of Lankester exposing Slade as a common card sharp.

At the trial, Lankester and his friend 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”.¹⁴

Indeed, Lankester and Donkin could not agree on anything much beyond their charge that Slade was an impostor. 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.¹⁵

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.”¹⁶

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.¹⁷

In another twist, 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, he had convinced the chief of police and several prominent German scientists (including the physicist Johann Zöllner of the University of Leipzig) that he could summon spirit entities and attract paranormal energies.

In 1879 Darwin tried to drum up support for a government pension for Wallace, in recognition of his outstanding contributions to natural history. Wallace, he knew, still had to support his family 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!”¹⁸

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, and 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 90.¹⁹

A cartoon of E. Ray Lankester from *Vanity Fair* reflects his scientific work on hornbills and fossil armoured *Cephalaspid* fishes.

In 1880, Wedgwood sent Darwin a handwritten attempt at a synthesis of science and religion. Darwin certainly 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 Hensleigh 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.²⁰

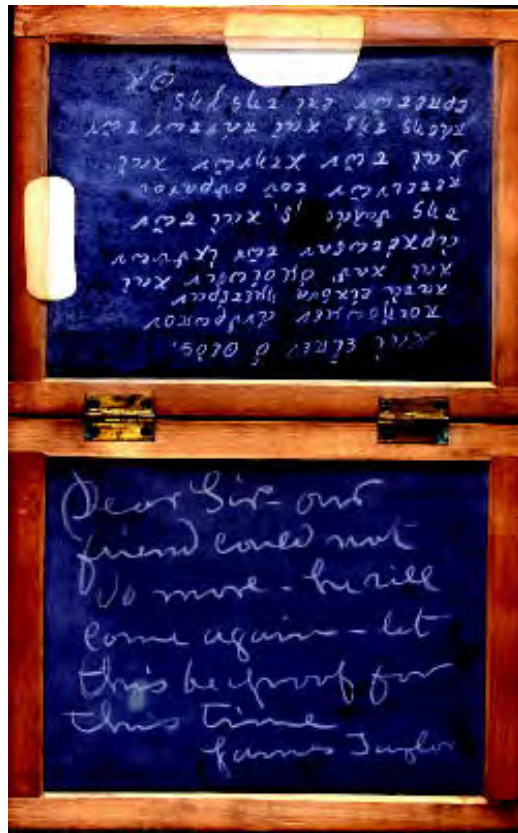
That same year Lankester, now a professor of zoology, declined requests to continue ghostbusting. "The Spirit Medium," he wrote in an 1880 letter to the *Pall Mall Gazette*, "is a curious and unsavoury specimen of natural history, and if you wish to study him, you must take him unawares.... I have done my share of the skunk-hunting; let others follow."²¹ He was later appointed director of the British Museum of Natural History where he served for eight tumultuous years during a power struggle for its independence from the British Museum Library. A Fellow of the Linnean Society for 53 years, he was awarded its Darwin-Wallace Medal in 1908 and the Linnean Medal in 1920.

Ironically, in 1912 Lankester, the nemesis of fakers, was completely taken in 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 many of the younger generation of evolutionists uncritically embraced the famous fossil forgery.

When I first approached *Scientific American* with the story of the Slade trial, the editors accepted it, but were concerned about how it could be illustrated. "We would like to show some relevant artifact to bring the history alive," they said. I was stumped by their request, and so the story remained in limbo for months.



One of Slade’s slates, from 1876, with chalked ghost message still clearly legible. A letter affirming its authenticity from Hensleigh Wedgwood, Darwin’s brother-in-law was attached to the slate. (Courtesy of the London Psychic Society/ Cambridge Manuscript Library.)



I could have kicked myself, because a few years earlier, I had missed a chance to utilize a wonderful historical relic with the article. On a visit to the American Psychic Society’s library in New York, a librarian had proudly produced an archival box containing a set of Henry Slade’s slates, with the chalked “spirit-writing” still clearly legible. He told me it was his favorite object in their collection.

But when I returned some months later to photograph it, the slate had mysteriously disappeared, and so had the archivist. There was no record of it ever having been there, and files on the Slade trial had also gone missing. Frustrated, I complained to the new archivist, “How come you can’t find Slade’s slate? After all, *you’re the psychic society*”. He was not amused.

THE NEW YORK TIMES, SUNDAY, DECEMBER 14, 1913. II

LIFE AFTER DEATH DECLARED PROVED BY EVOLUTION

I Chimpanzee
 II *Pithecanthropus Erectus* (The Ape Man of Java)
 III The Heidelberg Man
 IV The Man of La Chapelle-
sac-Saint-Germain
 V The Pittdown Man
 VI The Combe Capelle Man

His Skull and Their Descendants, Showing the Progress of Evolution from the Chimpanzee to a Representative of the Earliest Race of About Fourteen Years Ago.

By George Macdonald.
Prominent Scientist Holds That Man’s Ascent from Apes Means an Incessant Evolutionary Process for Humanity, Not Stopped by the Grave, and Proves the Existence of a Supreme Being.

Evolutionary... **Supreme Being**... **Evolutionary**... **Supreme Being**...

A *New York Times* article from 1913 lends credence to human evolution “not stopped by the grave”. Many shared A.R. Wallace’s belief that Spiritualism and evolutionary science were incompatible.

A few years later, however, at the Cambridge Manuscript Library in England, I was fortunate enough to come across another one. I was examining some uncataloged materials that had just been donated by a few old men, straggling survivors of the the Psychic Society of London. Immediately, among the trove of century-old séance photographs, I spotted *another* set of spiritualist slates. An accompanying note from (who else?) Hensleigh Wedgwood attested that he believed that the writing phenomena were genuine and that he was certain there was no fraud or trickery involved.

I had these slates photographed right away this time, and the *Scientific American* editors were pleased to publish them with the article (Milner 1996). Evidently, like Darwin's daughter's writing box, a family heirloom that inspired Randal Keynes to write his fine Darwin biography, (Keynes 2001) there is a certain magic and credibility in tangible mementos from another time.

2. Darwin as Magistrate

Even before I began investigating Darwin's private passion for exposing and prosecuting what he called "spiritualistic impostures," I became intrigued by his personal commitment to seeing justice done. He was, in fact a Justice of the Peace, a part-time magistrate in the local courts. When I first read a fictionalized account of his stint as a judge in Irving Stone's novel *The Origin* (1980), hardly any book on Darwin at the time had even mentioned the subject.

In 1984, I wrote the magistrate's courthouse at Bromley, where Darwin once sat upon the bench, to inquire whether they had any records of his cases. A few weeks later, just before my first visit to England, a court officer sent me a paper titled "Charles Darwin, Justice of the Peace" by one of their sitting magistrates, Joan Marsh. (Marsh, J. 1983) Fascinated by Darwin's name in gold letters on the courthouse wall, along with a roster of other previous magistrates, Mrs. Marsh wrote in the journal *Justice of the Peace* that she had vainly searched the courthouse's older records for his cases, but had concluded that none existed. (Apparently, many archives were lost during World War II; indeed, it is fortunate that Down House itself survived the German bombings, which saturated the area because of its proximity to the strategically important Biggin Hill airfield.)

Now I knew not to waste time searching the courthouse. As it turned out, however, a wonderfully astute librarian, Elizabeth Silverthorne, at the Bromley Library Local History Collection, steered me to their excellent archive of the local newspaper, the *Bromley Record*. After spending some weeks perusing years of local newspapers, both there and at the Colindale Newspaper Library, I managed to turn up many summaries of Petty Sessions cases, on which Darwin served as a magistrate.

I first published some of his cases in my short Darwin biography, *Charles Darwin: Evolution of a Naturalist* (Milner 1993). Randal Keynes, whom I did not know at the time, read it, became interested in the magistrate search, and began independently to discover related materials. Eventually, we decided to collaborate, and still plan to publish the results of our joint efforts. (In the meantime, a summary of our historical data has been archived with the Darwin Correspondence Project at Cambridge University Library.) The following is a partial sampling of what we have learned.

On July 3, 1857, two years before publication of the *Origin of Species*, Darwin took on the part-time job of Petty Sessions magistrate at Bromley, the largest nearby town to Downe Village. His neighbor, wealthy banker-scientist Sir John Lubbock (Senior) had talked him into accepting the honorary position to "help keep order in the

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| <p>184</p> <p style="text-align: center;">THE BROMLEY RECORD.</p> <p style="text-align: right;">[FEB. 18, 1860.]</p> <p>FARNBOROUGH, September 17th. Present—George Warde Norman, Esq., C. F. Darwin, Esq., W. Waring, Esq., Col. Cator. <i>Assault at Beckenham</i>—Richard Brooker and John Newell (the latter a Soldier, with three medals), were charged with assaulting James Escott, in the Tap-room of the George Inn, at Beckenham, on the Evening of Saturday the 15th ult. The complainant's face exhibited unmistakable evidence of great violence having been used, and the defendants were fined 10s. each and costs, and the Chairman told Newell that he was sorry to see a soldier, wearing three silver medals, charged with the commission of such an offence. <i>Furious Driving at Hayes.</i>—Grey Sergeant of Police v. Bennett.—The defendant who resides at Hayes, was charged with having on the 28th of August furiously driven a horse drawing a cart, in the public thoroughfare, to the common danger of the passengers, in the said thoroughfare. To this charge defendant pleaded guilty, and was convicted in 10s. and costs, this was the second conviction for a similar offence. Subsequent information induces us to add that if the little fat beast could have been examined in the matter, he would probably have exonerated his master from the charge of furious driving, and taken the blame on himself; it appears he has a great objection to his master being out late at night, and when an opportunity serves, he starts off at a dangerous speed, regardless of police regulations and all efforts to stop him; he is probably encouraged to do this by the kind treatment he receives on arriving home safe with his master.</p> <p style="text-align: center;">PETTY SESSIONS. FARNBOROUGH, 17th FEBRUARY. Present—G. W. Norman, Esq. (Chairman) F. W. Lewin, C. R. Darwin, William Waring, and R. B. Berens, Esqrs. <i>NIGHT POACHING.</i>—George Wakeling, of Bromley, and Edward Jeffery, (residence-unknown) were brought up in custody of the Police, charged with entering the preserves of Samuel Scott, Esq., of Sundridge Park on the night of the 18th ult. with a gun, and destroying three Pheasants. From the evidence it appeared that on the night in question, Pickett, the keeper, Ford, his assistant, and a man named Amos Kennard, were on the "look out," and saw the defendants enter Elmstead Wood, very shortly afterwards firing commenced, and carried on until they were interrupted by the keeper and his assistants, when the man ran away and escaped, except Jeffery, who was caught by Ford, between whom a violent scuffle ensued, until Pickett came up to Ford's assistance. In Jeffery's pockets were found the three pheasants and a quantity of large stones, so that no doubt serious mischief was contemplated. Wakeling was subsequently apprehended, and both defendants were convicted and sentenced to three months imprisonment with hard labour, and required at the expiration of the term of their imprisonment, to find sureties by recognizance not to offend again for the space of one year, or in default, to be further imprisoned and kept to hard labour for the space of six months.</p> | <p style="text-align: center;">MONDAY, JAN. 15.</p> <p>These sessions were held at Locksbottom, before the following magistrates:—G. W. Norman, Esq. (Chairman), W. Waring, Esq., C. R. Darwin, Esq., and F. M. Lewin, Esq.</p> <p>Two women named <i>Skinner</i> and <i>Stevens</i> pleaded guilty to damaging a fence, the property of Mr. Shepherd, of Cudham, and were each fined 1s. and 5s. costs. The money was paid.</p> <p><i>Thomas Wells</i>, of Knockholt, for night poaching on the property of D. Norton, Esq., was sentenced to two months' hard labour, and to find at the expiration of that term sureties for good behaviour for six months, himself in £10 and another in £5.</p> <p>The case of <i>George Marks</i>, who has been summoned by Mr. R. Wilson, the relieving officer of the Bromley Union, for refusing to support his wife, was, in consequence of defendant's ill health, remanded for fourteen days. Mr. C. J. Carttar has been engaged for the defence.</p> <hr/> <p style="text-align: center;">COKE FOR SALE</p> <p style="text-align: center;">AT THE BROMLEY GAS WORKS</p> <p style="text-align: center;">Price 13s. per Chaldron.</p> <hr/> <p><i>Edison Mitchell</i>, of Hayes, who was proved to be in company of Jeffery and Wakeling, in Mr. Scott's preserves, was charged before R. Boyd and S. Long, Esqrs., at the Magistrates' Clerk's office, on the evidence of Pickett and Ford. In his defence Mitchell set up an alibi, which he stated his father could prove; but on his being called, he stated that he thought his son came home about 12 o'clock on the night in question, but could not speak positively as to the time. Defendant who had left Maidstone Goal only on the previous Friday, for an offence against the Game Laws, was sentenced to the same term of imprisonment as Jeffery and Wakeling.</p> <p>On the following day (Tuesday), the 18th ult., three men <i>Patrick McFarland</i>, <i>John Miller</i>, and <i>Best Larkin</i>, were charged on police sheet with drunkenness, &c., at St. Mary Cray. McFarland, who it appeared was a hawker, and attended before the magistrates with the loss of his coat and hawking licence, on being charged with creating a disturbance, in addition to being drunk, protested that the police were under a mistake, as they knew very well that all he had done was to take off his coat and offer to fight the best man of the lot. This mysterious piece of logic was rather perplexing, and occasioned a good deal of laughter in court, but failed to produce a satisfactory result; this defendant and Miller were each fined 3s. and Larkin 7s. and costs, which they paid.</p> <p>BECKENHAM.—The fatal quarrel of two boys.—We regret to state that the lad, Henry Hollands, who was stabbed on the 10th of January last, by another lad, in the village</p> |
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The names of Charles Darwin and Sir John W. Lubbock can still be seen listed with other former Magistrates on a wall in the Court House in Bromley, Kent. (Photo P. Morris)

neighborhood.” As a magistrate, Darwin added to his credentials as a gentleman radical, campaigning for innovative ideas while maintaining a conservative life-style.

In his oath of office, he agreed to “Keep the Peace of one said Lady the queen in the said County, to hear and determine diverse felonies and also trespasses and other misdemeanours.”²² Ironically, in the same document, he was also enjoined from doing “anything to upset the religious values of the country.” For almost two decades, his name remained on the list of active judges, and, when asked to fill out a Census or other official survey, enjoyed stating his occupation as Charles Darwin, J.P. (Justice of the Peace).

Most of the cases that Darwin helped to adjudicate included domestic squabbles, drunkenness, fights in the local pub, abuse of domestic animals, and, most commonly, violations of the tough anti-poaching laws.

Poaching game was considered an antisocial addiction, which in the words of a Royal Commission, “must be cut at the root among young boys” because it “leads man, step by step, to almost every other crime.” Several poachers of the period wrote books expressing their love of constantly trying to outwit animals, gamekeepers, and police. In March 1860, a young man, was accused of “catching a rabbit [in a wire snare] on his father’s plantation.”²³ Magistrate Darwin slapped a fine on the youth, whose father was bent on teaching his son a stern lesson.

One man was charged with “furious driving” of a horse and cart in a public thoroughfare. The driver pleaded guilty to speeding and was fined, his second such offense. The *Bromley Record’s* account of the case suggested that if the horse had been allowed to testify, the driver might well have gotten off free:

The animal was well treated by his master, did not like staying out late, and was anxious to have a good feed in his stall...If the little fat beast could have been examined in the matter, [perhaps] he would have...taken the blame on himself.²⁴

According to Darwin’s son, Francis, he was a sympathetic and often lenient judge, but on one transgression he was implacably harsh: cruelty to animals. Once he witnessed

a man whipping his horse terribly on the road. Pulling to a stop from his own carriage, Darwin angrily told the driver that he was a magistrate in the district and that if he caught the man abusing an animal again, he would personally haul him into court and throw the law book at him.²⁵ Another time, a gentleman farmer had neglected his sheep, which starved to death. Darwin was ill at the time, but roused himself to collect the evidence and got the man convicted.²⁶

One 1864 case that apparently amused Darwin and the other judges was that of a drunken peddler who was accused by the police of being belligerent. He protested that he did not “create a disturbance” as charged. All he had done, he testified, was “to take off his coat and offer to fight the best man of the lot.” Apparently, he thought that he was being prosecuted for removing his coat. The *Bromley Record* reported that “this mysterious piece of logic was rather perplexing, and occasioned a good deal of laughter in the court, but failed to get the man off.”²⁷

A few years after Randal Keynes and I began our magistrate project, he became a consultant to the restoration of Down House. The dining room table looked bare, and needed some authentic “lived-in” decoration. Randal suggested that local law books be spread out as if Darwin was working on a case at home and had taken over the dining room, a scene for which he had found documentation in a letter²⁸ – and that is how it remains today, on public display.

3. Darwin as an Artist’s Muse

The collaboration of an artist and a scientist to reconstruct the lost world of prehistory has become known as paleoart. A direct link between Darwin and the first serious attempts at this genre was a series of paintings commissioned by his only “student” and protégé, John Lubbock (1834-1913), who became a premiere prehistorian. (Milner, 2007)

In his *Descent of Man* (1871), Darwin begins by noting that “the high antiquity of man has recently been demonstrated by the labours of a host of eminent men... and [I] may refer my readers to the admirable treatises of Sir Charles Lyell, Sir John Lubbock, and others.” (Darwin, 1871: 2) Scion of a banking family, Lubbock’s father was the major landowner in the Kentish countryside near the villages of Downe and Farnborough, a few miles from Orpington. His family’s huge estate, High Elms, with its 22-room mansion, was about a mile and a half from Down House. Indeed, Darwin’s property was a small island in the holdings of Lubbock, who owned much of the countryside for miles around.

Young John eventually decorated his indulgent father’s mansion with a collection of prehistoric stone tools, ethnographic artifacts, glass-enclosed colonies of social insects, and some of the first post-Darwinian works of paleoart. (See Lyulph Lubbock’s and Randal Keynes’s articles on the mentor-student relationship between John Lubbock and Darwin in this Special Issue.)

A leader of the “pre-historic movement,” Lubbock commissioned a natural history illustrator named Ernest Griset (1844-1907), whose humorous anthropomorphic animal drawings often appeared in *Punch* magazine, to create eighteen paintings of early humans going about their daily lives. In these watercolors, the generic ancestral tribesmen



A Bison hunt painted by Ernest Griset.

were shown crowding into a ceremonial long house, crafting weapons and dugout canoes, and hunting bison and mammoths.

Griset created these paintings for Lubbock more than five years after the author had published his seminal work *Pre-Historic Times* (1865), in which he coined the terms “Paleolithic” and “Neolithic,” and first popularised the term “cave-man.” Darwin frequently walked the mile-and-a-half footpath between his home and Lubbock’s mansion, where he undoubtedly viewed and discussed each painting as it was completed, and perhaps offered some advice during their planning. However, neither Darwin nor Lubbock ever used any of the paintings to illustrate their books.

Painted between 1870 and 1871, the pictures are now archived in the Priory Museum in Orpington (a.k.a the Bromley Museum), which is not far from Downe village. From time to time a few are featured in the permanent exhibition about Lubbock, but most are usually kept in a stone-brick storeroom, off public view. Fortunately, they had been removed from the Lubbock mansion, High Elms, which later burned down. The conditions under which the Lubbock family donated them to the museum do not allow the collection to be split up or sold off.

Thanks to then-curator Adrian Greene, I was able to photograph and publish two of the Griset paintings of prehistoric scenes for the first time in the *The Last Human* (2007), a book based on new paleoart by the artist-scientist team of Viktor Deak and Gary Sawyer of the American Museum of Natural History.

When I visited the Bromley Museum’s storeroom with the late John Marsden, the erstwhile executive secretary of the Linnean Society and his wife Hazel, and the painter Errol Fuller, the curator showed us painting after painting. We also got to examine artifacts from Lubbock’s ethnographic and archeological collections, including Paleolithic stone hand axes and ingenious tools made by nineteenth-century Eskimos and tribal peoples.

Finally, he pulled out a large triptych – an elongated frame with three panels. It was a lovely, idyllic watercolor of a tropical coral atoll island, fringed by palm trees,

ringed with white sand, and enclosing a blue lagoon in its center. “This one is signed and dated 1871 by Griset,” he said. “We don’t have any idea what it is, or why it is tucked away here with Lubbock’s prehistory collection.”

My heart raced a bit, as I suddenly realized what I was looking at. In the central panel, a tiny, sketchy watercolor detail of a sailing ship near the horizon, approaching the island, caught my eye. Could that be an image of *HMS Beagle*, painted for Darwin’s delectation, that had not been seen or recognized for 130 years? An enlargement is reproduced here. It is unmistakably a classic sloop brig of the Cherokee class; it even has the *Beagle’s* stripe along the hull, and painted dots representing its gun ports. I think it is indeed meant to depict the *Beagle*.

The scene was painted around the twentieth anniversary of Darwin’s first scientific book, *On Distribution and Formation of Coral Reefs*, which appeared in 1849. He was about to publish a revised, updated version of that book. Lubbock, it appears, had commissioned Griset to paint the kind of atoll island that had so captivated his mentor almost four decades earlier. (Darwin had described his initial visits to coral atolls in *Voyage of the Beagle*, published in 1839.) It seems plausible that Lubbock planned to present it to Darwin as a surprise to commemorate the twentieth anniversary and reissue of *Coral Reefs*, his first scientific book. John Lubbock was fascinated by tales of the South Seas and was very interested in corals. He built an artificial grotto decorated with exotic corals and shells near the big house.

The painting inspired me to look into the comparatively unknown history of Darwin and his theory of coral reefs – a story that clarifies and exemplifies Darwin’s quest to demonstrate Charles Lyell’s uniformitarian principles (Milner, R. 2009). Coral reefs, he thought, were a perfect exemplar of how small, insensible forces, operating over immense periods of time, are capable of shaping major geological features.

In fact, I soon learned, the saga of Darwin’s coral reef theory had recently been brilliantly and beautifully told in the underappreciated book *Reef Madness; Charles Darwin, Alexander Agassiz, and the Meaning of Coral* (2005) by David Dobbs. Griset’s coral island painting at the Bromley Museum storeroom led me to appreciate Dobbs’s full account, which bears summarizing here.

When Darwin set sail on his five-year voyage of discovery aboard *HMS Beagle* in 1831, sailors and explorers were quite familiar with coral reefs and coral islands, but no one knew how they got there. While exploring South America, Darwin devoured Lyell’s just-published first volumes of *Principles of Geology* (1830-1833), and realized that coral reefs were perfect exemplars of his uniformitarian doctrine.

We feel surprise when travelers tell us of the vast dimensions of the Pyramids and other great ruins, but how utterly insignificant are the greatest of these, when compared to these mountains of stone accumulated by the agency of various minute and tender animals! This is a wonder which does not at first strike the eye of the body, but, after reflection, the eye of reason. (Darwin 1842, entry for April 12, 1836)

For two years, Darwin had observed the shorelines of South America, which seemed to show contradictory evidence of having been repeatedly built up and worn down. Before he ever had actually seen a coral reef, he began to form a theory of how they were formed, based on the effects and distribution of subsidence and uplift of the ocean floor.



Above: The central painting in Ernest Griset's 1871 triptych of a coral lagoon island, or atoll, with an approaching ship (enlarged right) which may well be *HMS Beagle*.



At Tahiti he made his first field studies of reefs, and gathered other evidence at Cocos, Keeling and Mauritius that convinced him he was on the right track. Upon his return to England, he couldn't wait to explain his theory of coral reefs to Lyell. In an introduction to a later edition of Darwin's *Structure of Coral Reefs*, the geologist John W. Judd recalled "a remarkable conversation" he had with Darwin after Lyell's death, in which Darwin recalled that Lyell, on receiving from the lips of its author a sketch of the new theory, was so overcome with delight that he danced about and threw himself into the wildest contortions, as was his manner when excessively pleased. He wrote shortly afterwards to Darwin as follows: – "I could think of nothing for days after your lesson on coral-reefs, but of the tops of submerged continents. It is all true, but do not flatter yourself that you will be believed till you are growing bald like me, with hard work and vexation at the incredulity of the world." (Judd, 1909, p. 5)

Darwin's theory of coral reefs starts with the fact that live corals grow only in shallow water. He combines that with the observation that reefs seem to be associated with sea floors or submerged volcanoes that are subsiding. Accretions of rock build up as millions of coral animals secrete calcium carbonate atop the accumulated skeletons of older colonies. As the "basement" on which all are resting continues to settle, the



As we go to press, this engraving of Whitsunday Island, and possibly HMS Beagle (which never visited there) was found in an 1890 edition of *Voyage of the Beagle*. Unravelling the history of Darwin's association with coral island artworks continues.

“live areas” thrive only near the surface, where they can receive sufficient light to catalyze the production of nutrients. In other words, colonies keep reaching upwards to receive sunlight, while the ocean floor beneath them keeps sinking. The process of how the tiny “coral insects” could create great reefs a mile long and thousands of feet thick filled him with awe and admiration. He described his exploration of a Keeling atoll he had explored with FitzRoy using two of his favorite words about natural productions, “grandeur” and “simplicity”:

...there is to my mind a considerable degree of grandeur in the view of the outer shores of these Lagoon Islands. There is a simplicity in the barrier-like beach, the margin of green bushes & tall Coca nuts, the solid flat of Coral rock, strewn with occasional great fragments, & the line of furious breakers all rounding away towards either hand.²⁹

Throughout the nineteenth century, Darwin's theory about reef formation remained contentious. Alexander Agassiz, son of the Harvard zoologist Louis Agassiz, spent forty years and his considerable fortune visiting hundreds of the world's reefs, trying to disprove Darwin's explanation and come up with a better one. He never succeeded, and died without having completed or published his projected magnum opus.

Beginning in the 1880s and continuing for decades after Darwin's death in 1882, controversies over coral reef formation raged anew. Agassiz and others thought they had found reefs forming in areas where the seafloor was lifting rather than sinking. Some geologists even blasted Darwin's method of doing science. Rather than seeking patterns of coral reef distribution from charts and maps, they argued, he needed to visit more reefs first-hand, as they had done. However, Darwin thought that more visits to

reefs were pointless unless “some doubly rich millionaire” could be induced to make deep core drillings that would definitively reveal their structure.

Not until 1950 – while attempting to destroy Eniwetok, a remote coral island in the Marshall group – did science find definitive answers. Preparatory to testing an H-bomb there, the U.S. Government sent geophysicists to drill test cores deeper than anyone had previously done. David Dobbs relates that finally, at 42,00 feet, the drills hit

greenish basalt, the volcanic mountain on which the reef had originated. Dating of the tiny fossils in the bottommost layer of coral showed that the reef had gotten its start in the Eocene. For more than thirty million years this reef had been growing – an inch every millennium – on a sinking volcano, thickening as the lava beneath it subsided. Darwin was right, Agassiz wrong. (Dobbs, 2005:255)

Over the next few years, many more drillings and echo soundings confirmed that reefs had formed only in areas of sea floor subsidence all over the Pacific and Caribbean. As it turned out, Darwin’s 1842 model also fits perfectly with theories of plate tectonics, which were only developed in the 1960s. In Dobbs’s words, “the movement of the earth’s huge plates explains the subsidence of the Pacific and many other reef areas... Darwin’s theory was astoundingly correct.” (Dobbs, 2005:256)

“Reef Madness,” as Dobbs has dubbed it – with incessant debates over reef formation persisting on for a century, and Darwin’s ultimate, posthumous vindication – is a fascinating episode in the history of science. The painting led me to it.

That lovely image of the coral lagoon island, which at first seemed enigmatic and out of place in Sir John Lubbock’s collection of paleoart, seen in context, made perfect sense. It had nothing to do with prehistory, but a great deal to do with Charles Darwin’s mentoring relationship with John Lubbock, sometimes known as “Darwin’s apprentice.” The reissue of Darwin’s *Coral Reefs* book in 1874 was an important milestone, and it seems reasonable that Lubbock commissioned the painting as a celebratory commemoration and homage to his teacher. It was republished again several times between 1876 and 1910. (The 1890 version contains essays by the geologist J.W. Judd.)

In Griset’s rendering, the beautiful coral island appears to be isolated beneath a vast sky, desolate but jewel-like, yet somehow pristine and mysterious.

Still locked away against the English winters in its stone-brick storeroom at the Bromley museum, the Darwin-inspired watercolor of an eternal tropical lagoon has survived since 1871. For anyone who sees it, or a reproduction, it tells its tale for a new generation – as well as that of the familiar surveying vessel in the painting that is fast approaching it. The coral atoll island, a spectacular and complex natural marvel, cannot know that a young man aboard that sailing ship has already begun seeking solutions to its mysteries.

4. Epilogue

One sunny spring afternoon last year, several friends and I were treated to an unforgettable walking tour of the ruins of High Elms, guided by Lylph Lubbock, the last of the family to have been raised on the estate grounds. In 1967 the great mansion burned down (ironically, on “St. Lubbock’s Day,” the August secular bank holiday that

Sir John himself had instituted). The bucolic, popular public park and nature reserve is characterized by a delightful combination of well-planted and manicured trees and plants with patches containing ponds and remnants of wild woodlands.

Fortunately, all of the Grisct paintings of prehistoric scenes commissioned by Lubbock and the coral island tryptich had been rescued years before High Elms burned down, and are safely archived at the Bromley Museum. On our walk, Lyulph carried with him an astonishing collection of family photos and heirlooms, including the guest book from the great house – treasures which he has generously shared by reproducing some of them with his article in the present special issue.

When I first began trying to piece together bits of forgotten or “unknown” history of the evolutionists, I was unprepared for so many delightful personal connections that would enrich my life. Thomas Huxley’s great-grandson Michael shared previously unseen family photographs of “Darwin’s bulldog” (Desmond, A. 1999); Randal Keynes has become a dear friend and valued colleague, to whom I am grateful for steering me to the Grisct paintings. Many Darwin descendants attended my historical musical, *Charles Darwin: Live & In Concert*, which I have performed throughout the U.S., as well as in Germany, the UK, Australia, and – most recently – aboard a cruise ship in the Galápagos Islands.

In 1996, when the Linnean Society of London sent me to lecture in the persona of Darwin at the Edinburgh Science Festival, the gracious botanical ecologist and illustrator Sarah Darwin sent flowers and a note: “Break a leg. With love, from your great-great granddaughter.” Gareth Nelson, who has contributed an article on Wallace to this special issue, represented Wallace in that program.

At a Dresden performance at the Deutsches Hygiene-Museum in 1994, I was introduced to Alfred Russel Wallace’s grandson Richard, a teacher of mathematics. His direct and forthright demeanor were so reminiscent of his grandfather’s portraits, that I was emboldened (or impertinent) enough to ask: “Does the Wallace family resent the Darwins for having received the lion’s share of the glory?” (Milner, 1995) I’ll never forget the playful expression in his clear blue eyes. “Grandfather didn’t mind,” he replied, with a kindly but ironic smile, “Why should we?”

Footnotes

1. The Charles Darwin Correspondence Project has undertaken to retrieve, catalog, transcribe, annotate and publish both sides of the entire known correspondence of 15,000 letters, of which about half were written by Darwin. It is located both at Cambridge University Library, England, its headquarters, and at the American Philosophical Society in Philadelphia. All the letters have been transcribed and stored in an extensive computerized archive. The first of a projected thirty volumes of *The Correspondence of Charles Darwin* came out in 1985; a total of fifteen volumes have been published to date. Various letters referenced in these footnotes can be accessed from these sources or online.

In the 1870s, the newly invented telephone became a fad among the well-to-do, and many rushed to have one installed. To our everlasting benefit, Charles Darwin refused to allow one in his home., and continued writing and receiving letters to the end of his life in 1882.

2. An account of the British Association meetings appeared in the *London Times*, September 13, 1876. Alfred Russel Wallace’s (1874) *Miracles and Modern Spiritualism*, Nicols and Co.,

- London, includes many of his earlier articles and statements on the subject. In letters to *The Times* (September 17 and 18, 1876) before the trial, Wallace expressed his confidence in Slade's integrity in producing unexplainable or paranormal phenomena.
3. Henshaw Ward (1927), *Darwin the Man and His Warfare*, Bobbs-Merrill, N.Y. p. 395. Quotes Henrietta Darwin regarding the popular fad for spiritualism in January, 1874 and the séance conducted by Charles Williams at her uncle Hensleigh Wedgwood's. In Henrietta Darwin, Ed., *Emma Darwin: A Century of Family Letters*.
Herne and Williams were not the first mediums to go after Darwin in an attempt to convince him of the reality of the "phenomena." In 1872, the famous "Prince of Spiritualists" D. D. Home tried to lure him to attend a "test séance" through Darwin's cousin Sir Francis Galton. (Apparently, Home had offered a cash challenge if scientists could catch him in fraud.) Darwin begged off on grounds of ill health: "the subject should be investigated...but I dare not accept Mr. Home's remarkably liberal offer...Can you not get some man known for physical sciences to join you?" Darwin used his wife Emma, in her role as nurse to the invalid, as an excuse: "she thinks even more strongly than I do, that it would be impossible for me" [to attend the séance.] Charles Darwin to Francis Galton, April 21, 1872.
 4. George Darwin to Thomas H. Huxley, January 1874. Thomas Huxley Papers. Darwin Library, American Philosophical Society, Philadelphia.
 5. Charles Darwin to an unnamed journalist, September 26, 1878. Also, Charles Darwin to George J. Romanes, September 21, 1878, "Williams is proved a rogue."
 6. Charles Darwin to George J. Romanes, May 23, 1877. "Your negative results are highly pleasing—delightful to me, for I felt convinced Williams was a very clever rogue..."
 7. Huxley, Thomas. Reflections on a Philosopher's Big Toe. *Pall Mall Gazette*, January 1889.
 8. Huxley, *Ibid*. The title refers to Huxley's practiced ability to produce mysterious "spirit raps" by snapping his big toe loudly inside his boot.
 9. Harry Houdini (1924) *A Magician Among the Spirits*. Harper, New York, p. 81: "While touring Europe in 1929 I had the pleasure of meeting Sir Ray Lankester and hearing from him an account of Slade's undoing. Both he and Donkin were physicians. They had been laying their plans to expose the two other mediums, Herne and Williams, but Slade's unexpected arrival in London changed these plans, and instead they plotted the séance which proved to be Slade's downfall." I am indebted to Malcolm Jay Kottler for supplying this important piece of my evidentiary mosaic.
 10. Lankester and his associate Dr. Horatio Donkin both gave accounts of the incident in letters published in the *Times* on September 16, 1876. See also their court testimony reported in the *Times* for October 11, 1876. In his groundbreaking study, "Alfred Russel Wallace, the Origin of Man, and Spiritualism (1974) *Isis*, 65: pp 146-192, Malcolm Kottler notes (p, 179) that "Although Lankester later claimed during his lawsuit [against Slade] that he had gone to the séance unpredjudiced, it seems as if he had for some time been intent on exposing the mediums Herne and Williams" Charles Williams was also the longstanding target of Darwin's attempt to expose him; it seems likely that Lankester's and Darwin's efforts were connected, particularly in the light of Darwin's later offer of financial aid to the costs of prosecuting Slade.
 11. Henry Slade and his partner Simmonds were charged with "unlawfully using subtle craft, means and device to deceive and impose upon certain of Her Majesty's subject." *London Times* for October 3, 1876.
 12. Accounts of the Slade affair were featured prominently in the *Time of London* from September 16 through November 1, 1876. Extensive reportage of the trial appeared on October 3, 11, 21, 23, 28, 30, and November 1. There were also heated exchanges of letters by Slade, Lankester, and Wallace on September 16, 18, 19, 20, and 21.

13. Professor E. Ray Lankester's remarkable little introductory memoir (1896) to a selection from Darwin's writings in the *Charles D. Warner Library of the World's best Literature*, pp 4385-4393, gives brief but very valuable recollections about Darwin which appear nowhere else, and appears to have been overlooked by historians.
In these recollections, Lankester refers to a letter Darwin wrote to him concerning the Slade trial, although the original document has never surfaced: "When I prosecuted Slade the spiritualistic imposter, and obtained his conviction at Bow Street as a common rogue, Darwin was much interested...[and wrote that] he considered [it] to be a public benefit and that he should like to be allowed to contribute ten pounds to the cost of the prosecution. He was ever ready in this way to help by timely gifts of money what he thought to be a good cause..." (p. 4391).
14. Huxley, T., *Op. cit.*, *Pall Mall Gazette*.
15. Truesdell, J. W., 1883. *The Bottom Truth Concerning the Science of Spiritualism*. New York.
16. Wallace's testimony was reported in the *London Times* for October 30, 1876.
17. Many subsequent notices in the *London Times* included Slade's appeal, in which the conviction was quashed (January 31, 1877; March 3, 1877), and meetings of the British National Spiritual Society in support of Slade.
18. Joseph Hooker to Charles Darwin, December 18, 1879. Hooker's mean-spirited letter demonstrates the extent to which the scientific establishment rained abuse on Wallace for his Spiritualistic unorthodoxies.
19. Into his mid-seventies, Wallace struggled in near-poverty, grading school exams to maintain his family. He was extremely grateful for Darwin's efforts to get him a modest pension of £200, which, he wrote, "will relieve me from a great deal of the anxieties under which I have laboured for several years." (That amount was only slighter smaller than the annual bill for meat at Darwin's home.) See Colp, R., Jr. 1992 "I will gladly do my best": how Charles Darwin obtained a civil list pension for Alfred Russel Wallace.?" *Isis*, 83.
20. Charles Darwin to Hensleigh Wedgwood, May 5, 1880.
21. Lankester, E. R. Letter, "The Spiritualistic Challenge," in *Pall Mall Gazette*, January 13, 1885.
22. Quoted in Marsh, J. 1983, p. 636.
23. *Bromley Record*, March 1, 1860, p. 1
24. *Bromley Record*, Oct 1, 1860: Grey Sergeant of Police v.s. Bennet
25. Francis Darwin, 1902, "Reminiscences" in *Life and Letters of Charles Darwin*, London: John Murray, p. 287: "He returned home from his walk pale and faint from having seen a horse ill-used, and from the agitation of violently remonstrating with the man."
26. William Darwin recalled, "Though he was ill and weak and it was most painful to attack a near neighbor, [my father] collected all the evidence himself...and had the case brought before the magistrates, and...got the man convicted." Litchfield, H. ed., 1915, *Emma Darwin: A Century of Family Letters*, ii, p. 168.
27. *Bromley Record*, October 1, 1860.
28. Letter from Emma Darwin to William , March 11, 1858 (probable date) "The other day when Papa was doing some justice work in the dining room [Lenny] went upstairs to Miss Pugh saying "There is Papa being Judge, jury & policeman all himself."
29. The description of a coral island in "the Keelings" that Darwin and FitzRoy explored, appeared in both *Darwin's Diary* and its successor, *Voyage of the Beagle* (1839). Sandra Herbert, in *Charles Darwin, Geologist* (Herbert, 2005, p. 236) points out that he used "two of his favorite words – "grandeur" and "simplicity"" in his description" — a usage that is strikingly reminiscent of the famous last sentence of the *Origin of Species*: "There is grandeur in this view of life, with its several powers, having been originally breathed into a few forms or into

one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved.”

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