

By Robert Schadewald

He knew Earth is round, but his proof fell flat

A renowned English naturalist,
seeking to convince a nonbeliever,
won argument, lost the money

On the morning of March 5, 1870, a small, grim-faced party, principals and seconds, met near the end of the Old Bedford Canal, 80 miles north of London. There was no possibility of reconciliation; gleaming instruments were removed from rosewood cases and the men proceeded to the task at hand. One of the principals was Alfred Russel Wallace, the brilliant naturalist who coincidentally with Darwin had arrived at the concept of evolution. The other was John Hampden. Their purpose was not to fight a duel, but to settle a £500 bet about the shape of the Earth. Hampden swore roundly that the Earth is flat; Wallace stated unequivocally that it is round. Each confidently expected to pluck a £500 pigeon.

John Hampden, the challenger, was born in 1819. His father was the rector of a small church and the author of a strange commentary on the prophecies of Daniel. John graduated from Oxford in 1839 with an interest in military affairs. He devised a grandiose scheme for fortifying the English coast, the "rampart of steel," and was incensed when the government ignored it. When new discoveries in geology and biology raised questions about some traditional interpretations of the Bible, Hampden rejected the findings of science. His absolute confidence in his own interpretation of the Bible led him into one

Alfred Russel Wallace (left) and John Hampden, who issued the challenge,

of the great follies of the 19th century.

In 1869 John chanced upon the foundation work of flat-Earth theory, *Earth not a globe* by Samuel Birley Rowbotham. In it he found a persuasive refutation of Copernicus and Newton. The Bible says the Earth has foundations, and here was proof. The Earth isn't a ball, spinning giddily through space (according to Rowbotham), but is a flat, immovable plane, with the North Pole at the center and no South Pole. The sun is small, and circles above the Earth at a comfortably close 700 miles. When Joshua

prepare for Moment of Truth. When it came, each saw it in his own way.

ordered the sun to stand still, it stopped dead until he let it move again. Eclipses, sunsets, ships apparently disappearing over the horizon—all the supposed proofs of the Earth's rotundity were explained away. There was instantaneous conversion at the first reading.

The excited Hampden rushed forth to reshape the world. He sought out the author of *Earth not a globe* and got permission to publish a pamphlet of extracts from it. He located some other flat-Earth pamphlets written by a printer named William Carpenter and bought up both



Illustrations by W. B. Park



Disdaining the telescope, Hampden was supremely confident that he had won.

the remaining stock and the copyright. Then, in a burst of zeal, he placed the following ad in the January 12, 1870, issue of *Scientific Opinion*:

The undersigned is willing to deposit from £50. to £500., on reciprocal terms, and defies all the philosophers, divines, and scientific professors in the United Kingdom to prove the rotundity and revolution of the world from Scripture, from reason, or from fact. He will acknowledge that he has forfeited his deposit, if his opponent can exhibit, to the satisfaction of any intelligent referee, a convex railway, river, canal, or lake.

John Hampden

Alfred Russel Wallace accepted the challenge. His studies of plants and animals had taken him to the Amazon and the East Indies. At 47 he was a renowned

Mr. Schadewald, a free-lance writer from Rogers, Minnesota, is preparing a book on the flat-Earth movement.

naturalist, second only to Darwin in reputation. He championed many unpopular causes, and was something of a do-gooder. He saw Hampden's challenge as an opportunity to spike the flat-Earth nonsense and, just incidentally, make some money.

Arrangements for the experiment were made through a lengthy correspondence. The naive and idealistic Wallace assumed his opponent was rational and a gentleman, so he began losing points immediately. To spare Hampden public embarrassment, he suggested a simple private demonstration, but John, who did want to embarrass his opponent publicly, refused vehemently. The wily Hampden had read in *Earth not a globe* that Old Bedford Canal had been proved flat, so he recommended it to Wallace as a suitable place for the experiment. As stakeholder and referee, Wallace appointed a complete stranger, John Henry Walsh, editor of the weekly country gentleman's paper, *The Field*. And he generously allowed Hampden to appoint a second referee, one William Carpenter, printer and author!

"Simple and conclusive"

On Saturday morning, March 5, 1870, the parties to the experiment gathered in Downham Market, near the north end of Old Bedford Canal. One experiment had already proved unsatisfactory: on Wednesday, Wallace had attempted a demonstration with a line of markers six feet above the surface of the canal. Walsh was satisfied that the experiment showed the Earth's curvature, but Carpenter disagreed. Faced with meeting the deadline for Saturday's *Field*, Walsh had to return to London before the second experiment. Dr. Coulcher, a local surgeon, was appointed referee in his place.

Wallace now intended to educate Hampden with a simple and conclusive demonstration. The Old Bedford Canal ran straight and unobstructed for nearly six miles between Old Bedford Bridge and Welney Bridge. By placing a tall marker in the middle and banners on both bridges, all at the same height above the water, the Earth's curvature could easily be seen. Even allowing for atmospheric refraction, the center marker should appear about five feet above the line of sight from banner to banner.

The little party split up. Carpenter accompanied Wallace while he rigged the banners on the bridges, 13 feet 4 inches



Hampden buried Wallace in a blizzard of pamphlets and letters to the

editor. Wallace ignored them, though they are classics of denunciation.

above the water. They erected a pole in the canal midway between the bridges with a marker disc centered at the same height. It was nearly one o'clock by the time they joined Hampden and Dr. Coulcher on Welney Bridge, and there was a small crowd.

Wallace set up a large telescope so that its optical axis was exactly 13 feet 4 inches above the water and focused it on the distant bridge. The center disc showed well above the banner. Dr. Coulcher made a sketch of the view through the telescope, and Carpenter signed it as an accurate record of what he saw. But he claimed that it proved nothing, as the telescope could not be leveled.

They had brought along a surveyor's level, and Carpenter now fetched it from the carriage and helped Wallace set it up. Wallace carefully centered the leveling bubble and focused on the distant bridge. Carpenter looked through it and actually jumped for joy. The center marker was somewhat below the horizontal crosshair, and the banner at a similar interval below that. Most people would interpret that to mean that the Earth curves gently away from the observer, but Carpenter claimed that the equal intervals proved that level, marker and banner were all three in a straight line!

Wallace was flabbergasted. He had done precisely what he had set out to do, and had demonstrated the curvature of

the Earth in a simple manner. But Carpenter couldn't or wouldn't understand it, and Hampden wouldn't even look through the telescope.

While the naturalist alternately sputtered to himself or appealed to the crowd, Carpenter and Dr. Coulcher made sketches of what they saw in the surveyor's level. Then, mostly in silence, the little party drove back to Old Bedford Bridge and repeated the observations in the opposite direction. The result was the same as before.

That evening, at the Crown Hotel in Downham Market, Hampden accosted Wallace and demanded that he admit he had lost. Wallace's response was to maintain a dignified silence.

The referees, Carpenter and Dr. Coulcher, violently disagreed about the result, and the party dispersed in confusion. Hampden, supremely confident that he had won, wrote to Wallace a few days later and suggested that Walsh be called back, with authority to settle the matter. Wallace eagerly seconded the suggestion, and the editor of *The Field* found himself in the middle again.

John Henry Walsh was a gentleman with a high sense of honor. As a prominent and respected member of the British sporting set, he had held the stakes for many a wager. No doubt he conscientiously studied the sketches and written reports submitted to him by Carpenter



Five times convicted of criminal libel, Hampden got off with apologies

three times. But on the last two occasions he was sentenced to jail.

and Dr. Coulcher, although a glance at either set of sketches was sufficient. No doubt he tried to suppress the outrage he felt, having now learned that "unbiased" referee Carpenter was author of a flat-Earth book. He deliberated for two weeks, and in the March 26 issue of *The Field* he announced his decision in favor of Alfred Russel Wallace.

The furious Hampden demanded his money back, but Walsh delivered the stakes to Wallace anyway. Hampden responded to this "perfidy" with a blizzard of pamphlets and letters to the editor in which he suggested that Walsh and Wallace were less than honorable. If his reasoning powers were limited, his supply of venom was not, and his writings are classics of denunciation. But he was so filled with righteous anger that everything he wrote was libelous per se.

At first, Wallace grandly ignored him. Naturally, Hampden accepted his silence as an admission of guilt, and he bombarded Wallace's friends and colleagues with sulfurous letters and postcards. Wallace eventually grew tired of having words like knave, liar, thief, swindler, imposter, rogue and felon associated with

his name, and in January of 1871 he sued Hampden for libel. The suit was not contested, and Wallace was awarded £600, a large judgment in those days. But while Wallace was in court, Hampden signed all his assets over to his son-in-law and declared bankruptcy. So Wallace ended up with a whopping bill for legal costs and a bit more education.

Shortly afterward, Walsh, who had also been decorated with the fallout of Hampden's rage, brought a criminal action for libel. The evidence was overwhelming, so Hampden pleaded guilty and apologized. He was ordered to keep the peace for a year, the British equivalent of being put on probation.

In June, Hampden sent the following letter to Mrs. Wallace:

Madam—If your infernal thief of a husband is brought home some day on a hurdle, with every bone in his head smashed to a pulp, you will know the reason. Do you tell him from me he is a lying infernal thief, and as sure as his name is Wallace he never dies in his bed.

You must be a miserable wretch to be obliged to live with a convicted



As a spiritualist, Wallace had reason to dread Hampden even in death.

felon. Do not think or let him think I have done with him.

John Hampden

Needless to say, Hampden soon had an opportunity to explain this letter to a judge. He explained that some young friends of his were very much disturbed about the way Wallace had treated him, and that, fearing violence, he had tried to warn Wallace. The judge was skeptical and ordered John to put up £100 as surety that he would keep the peace for three months, and also to find two other sureties at £50 apiece. Hampden spent a week in jail before he was able to find the two additional sureties.

Criminal libel became a habit with Hampden, and in the next four years he was convicted three times. The first time he got off by apologizing to Wallace in several newspapers. The second time he was ordered to print another apology and to keep the peace, but the judge neglected to confiscate his ink bottle, and the never-peaceful John was soon sentenced to two months in Newgate prison. On the third occasion the disgusted judge sent him up for a year. He was released in six months.

Now Hampden turned the tables and sued Walsh, the stakeholder, for his £500. It was ethically questionable, but he had

an open-and-shut case: English law did not recognize wagers. That is, losers were not obligated to pay up but, once they had, they could not recover their money. The crux of the matter was that Hampden had demanded his money back *before* the stakes were delivered to Wallace. Legally, therefore, Walsh should have handed back the £500.

Naturally, Wallace bore Walsh's expenses in the suit. As Wallace still had a £600 claim against Hampden, and Hampden's bankruptcy was obviously (and perhaps provably) fraudulent, an accommodation was reached whereby Wallace paid the costs of the suit and retained a partial claim against Hampden. He never got a single penny.

For the rest of his life Hampden continued to plague Wallace but the naturalist resolutely ignored him. Unlike the single-minded Hampden, who never once doubted his own righteousness, Wallace came to view his part in the wager as an ethical lapse. And a costly one. He had envisioned a £500 profit but, years later, balancing legal expenses against monies received, he found the project considerably in the red. And except for his own education, the financial loss, embarrassment and persecution he had suffered were all for nought.

The flat-Earth movement thrived, for a while, on the controversy about the wager. Even today, despite the photographs

from space that show the Earth to be as round as a ball, there are still a few hold-outs. There was a story from South Africa recently that a group of farmers in the Orange Free State had collected a sum of money and sent it to a university with the request that it "prove, once and for all, that the world is really flat." And Lancaster, California, is the headquarters of the International Flat Earth Research Society of America, whose president (below) claims about 1,500 members.

To believers in England Hampden became a hero, a David who had boldly attacked Goliath and been diddled out of his victory. Besides his other activities, he founded and edited three short-lived flat-Earth magazines and wrote many articles and pamphlets. In these, he vilified you-know-who, exposed the "errors" of Newton, unveiled his interpretation of the laws of nature, defended his military genius, denounced atmospheric pressure as an "absurdity" and announced the impending end of the world. It came for him on January 22, 1891.

Although Wallace had developed a perverse sort of affection for his old nemesis, he could have been forgiven for breathing a sigh of relief at Hampden's passing. He probably didn't. Wallace was an ardent spiritualist, and he must have shuddered at the thought of hearing Hampden's voice in the séance room, vilifying him across the Great Void.

Two people who reject the notion that the Earth is round: Mr. and Mrs. Charles K. Johnson at home near Lancaster,

California. He is the president of the International Flat Earth Research Society of America, she is its secretary.

