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## The Work In Darwin's Shadow

Evolution History Lives In a D.C. Dining Room

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It was in 1979, in an antiques shop in Arlington, that a young law school graduate named Robert Heggestad noticed a lovely rosewood cabinet parked behind the counter. How much? Six hundred, the shopkeeper said. Sold, Heggestad said. The shopkeeper asked, "Don't you want to know what's in it?" Heggestad said, "Not really."

It was, it turned out, a cabinet of wonders. It is now in Heggestad's dining room in his apartment in the Kalorama section of Washington. Open up the cabinet, and the world of 2009 vanishes, replaced by the world of a very meticulous, extraordinarily curious 19th-century naturalist.

There are butterflies and beetles, moths and shells. There's a small bird. Flies. Bees. Praying mantises. Tarantulas. Seedpods. A hornet's nest.

This is the specimen collection of Alfred Russel Wallace.

There is no shame in failing to recognize the name. Wallace was a field biologist who never cared about notoriety, which may explain why so few people know that he co-discovered the theory of evolution by natural selection.

On Thursday, the world will celebrate the bicentennial of Charles Darwin's birth, but Wallace had the same idea that made Darwin famous, and he arrived at it independently while collecting insects in the Malay Archipelago. The tale of Darwin and Wallace, and how one became synonymous with evolution and the other a footnote, is one of the great dramas in the history of science.

Heggestad himself knew almost nothing about Wallace until two years ago. Soon after he bought the cabinet, he contacted the Natural History Museum in London to ask whether the collection had any particular value. The museum said it looked interesting and suggested that Heggestad contact the Smithsonian Institution. But he soon lost interest in pursuing the matter. Over the years, he lugged his lovely piece of furniture and its interesting scientific collection through four different household moves.

"I'd forgotten his name. I knew it was some important British biologist," he said. "I didn't appreciate what I had for many years. It was kind of a show-and-tell piece. It's a beautiful piece of furniture."

Two years ago, hoping to sell it, he resumed his research. By that point, Wallace's reputation had become resurgent. Popular books and magazine articles extolled Wallace's overlooked genius. Heggestad's research began to fill up his dining room.

Heggestad hired a handwriting expert to study the labels in the collection and in the only other Wallace collection, at the London museum, and she concluded that they matched.

Heggestad won't say how much he thinks the collection is now worth. "It's very, very valuable. It's priceless. There's nothing like it in the world," he said.

"I think it's a fabulous thing," said David Grimaldi, curator of invertebrate zoology at the American Museum of Natural History in New York. "I think it's a national treasure, actually."

Grimaldi has examined the cabinet several times and is convinced that it is really Wallace's collection. For one thing, there's the cabinet itself, which, with 26 drawers labeled A to Z, is designed to hold a specimen collection and matches the design that Wallace himself advocated.

Nearly as certain of the authenticity is David Furth, collections manager for the Smithsonian's entomology department. He said he thinks the collection is Wallace's but would like to see further confirmation. "It's a pretty big deal all of a sudden to find a Wallace collection here in Washington," Furth said.

Both the American Museum of Natural History and the Smithsonian would like to buy it but have had trouble raising money in the current economic climate, Grimaldi and Furth said. In the meantime, Heggstad has been painstaking in its care, using flakes of mothballs to ensure that no invading creatures will eat up the 1,500-odd preserved insects in the collection.

The provenance of the cabinet becomes mysterious as the narrative moves back in time. Heggstad has documented that Anthony Juliano III of Drexel Galleries in Philadelphia bought the cabinet in 1964 at a sale of unclaimed baggage. Sold again at auction in 1973, the cabinet was described as being "of Empire Period, all drawers are dovetailed with specially made glass lids, which were originally hermetically sealed."

How it left Wallace's possession is unknown. He may have sold it for income, Furth said. Wallace was known to have traveled in the United States in 1886 and 1887, including a jaunt to Washington, where, in a diary entry, he enthused about the architecture and noted that he'd seen "Mr. Ulke's collection of American beetles -- Fine!"

Wallace was a professional specimen collector, which meant that he spent much of his life far from civilization, in remote jungles and isolated islands. During a malarial fever in February 1858, he had a revelation about a mechanism that could cause certain traits among species to be favored over time -- what would become known as the survival of the fittest. He jotted down his thoughts and mailed a paper outlining his theory to the foremost naturalist of his era: Charles Darwin.

Darwin was aghast. He had been developing his theory of evolution since the 1830s but never published it, fearing that it would cause a great public tumult and undoubtedly upset his extremely devout wife. Now he feared he had been scooped by an obscure bug collector.

Darwin's friends came to his rescue. They arranged for a gathering of the Linnean Society of London, where they presented a "joint communication" by Darwin and Wallace, even as the latter was still on the other side of the world. A scientist read an unpublished essay and a private letter written by Darwin that outlined his theory. Then another scientist read Wallace's paper. The event established evolution as a powerful scientific theory; it also established Darwin as having scientific priority.

With Wallace's breeze at his back, Darwin quickly finished his masterpiece, "On the Origin of Species," published in 1859.

Wallace never begrudged his fate, and he became Darwin's friend, even using the term "Darwinism" to describe the theory of evolution. At the 50th-anniversary celebration of the 1858 joint communication, Wallace said Darwin deserved the glory. He noted that Darwin had spent two decades developing the theory, while Wallace had spent a week. "I was then, as often since, the 'young man in a hurry'; he, the painstaking and patient student, seeking ever the full demonstration of the truth that he had discovered, rather than to achieve immediate personal fame," Wallace said.

Wallace was a bit of an eccentric, dabbling in fringe science even after he had made his signal contribution to the revolutionary theory of evolution. Unlike Darwin, he did not believe that natural selection could explain human consciousness. By the end of his life, he was sometimes dismissed as an oddball; only in recent years have scholars come to appreciate his achievements and his centrality in the discovery of evolution.

The cabinet in Heggstad's home offers a glimpse into Wallace's thinking. What both Grimaldi and Furth noticed was that Wallace pinned not only big bugs, but also tiny moths and almost imperceptibly small flies. He was clearly interested in the diversity of life.

"It's not just what we call an 'Oh, my' collection, something with pretty and big and bizarre creatures," Furth said.

This is as close as a modern scientist can get to looking at the world through Wallace's eyes. Grimaldi doesn't sign on to the notion making the rounds in some precincts that Darwin lifted aspects of Wallace's theory and effectively stole Wallace's glory. But he does think Wallace deserves greater acclaim.

"Wallace was in the field all the time, suffering from malaria and all sorts of stuff. Wallace was also a real, broad naturalist, and Darwin would have specimens sent to him," Grimaldi said. "I think in many respects Wallace was as talented, if not more talented, than Darwin