

From clay, to wax, to bronze

The making of the Alfred Russel Wallace statue

As co-discoverer of the theory of evolution by natural selection, it is remarkable that there had never before been a monument of Alfred Russel Wallace. Sculptor **Anthony Smith** took up the challenge of creating a lasting tribute to the world's greatest species seeker – the first new statue commissioned for the Natural History Museum in more than 80 years.

THE DESIGN

First and foremost, Alfred Russel Wallace was a collector – travelling the world, cutting his way through unexplored jungles and risking life and limb to discover exciting new specimens. Over the years he caught and prepared thousands of birds, mammals and insects, and it was his detailed observations of these animals and their habitats that inspired his groundbreaking insights into the nature of species.

When it came to designing a statue to commemorate the life and work of Wallace, there seemed only one appropriate setting in which to depict the great man – out in the jungle, collecting specimens. After a lot of research, and with dozens of aborted designs lying in a heap on my studio floor, I finally struck upon a promising idea. The inspiration

came from a wonderful passage in Wallace's book, *The Malay Archipelago*, in which he describes the spine-tingling moment when he first set eyes upon the golden birdwing butterfly, then an unknown species:

'The beauty and brilliancy of this insect are indescribable, and none but a naturalist can understand the intense excitement I experienced when I at length captured it. On taking it out of my net and opening the glorious wings, my heart began to beat violently, the blood rushed to my head, and I felt much more like fainting than I have done when in apprehension of immediate death. I had a headache the rest of the day...' (Batchian Island, December 1858)

I began working on a design that would capture the build-up to this memorable moment – Wallace frozen in his tracks, butterfly net in hand, gazing up at the magnificent specimen as it fluttered in the trees. My twin goals were to try and capture something of Wallace's sense of wonder at the natural beauty of this striking insect, and at the same time invite the viewer to ponder: what do you do if you can see a spectacular new species of butterfly, but it's out of reach of your net? After several months of work, I had finalised the design.

THE MAKING OF THE STATUE

The first step for creating the statue involved building a strong armature to support the 200-kilogramme sculpture. On to this skeleton

of metal and wood, I built up the general form of Wallace's body and limbs with wood wool – an old taxidermists' trick – and coated it in a thin layer of plaster.

With the aid of a model playing the role of Wallace and dressed in the appropriate garb, I sculpted the body and clothes in clay on to the plaster base. The most challenging part was, of course, the face. Thanks to the excellent research of Dr George Beccaloni, whose vision it was to create the statue, I had lots of high-quality reference images of Wallace at varying ages and from different angles. By carefully studying all of these I was able to build up an accurate three-dimensional image of Wallace, aged around 35.

The clay sculpture complete, I set about taking a mould, coating the statue with a layer

of silicone rubber and encasing it in a plaster jacket. Once everything was set, this gave me a perfect negative impression of the original clay sculpture, right down to the marks of my fingerprints in the surface of the clay.

At the bronze-casting foundry, the mould was used to create a hollow wax replica of the statue. This was then coated inside and out with plaster, before being placed in an oven to melt out the wax. The result was a fireproof shell with a small gap where the wax used to be, into which the molten bronze was poured. The hot metal was then left to cool and solidify before the plaster was finally broken apart to reveal the hollow bronze sculpture inside.

Once everything had been cleaned up, the final stage was to give the statue its colour. This was achieved by heating up the bronze

with blowtorches and applying a cocktail of chemicals that reacted with the surface of the metal to give it its beautiful green hue.

COME AND TAKE A LOOK

Alfred Russel Wallace now stands in his rightful place, near the Wildlife Garden outside the Museum's Darwin Centre, which houses many thousands of his insect specimens. Also on show is a bronze replica of the golden birdwing butterfly, mounted on the windows of the Darwin Centre. The whole scene captures the spine-tingling moment when Wallace first spotted this magnificent specimen. Unveiled by Sir David Attenborough late last year, remember to take a look at the first ever statue of Wallace on your next visit.



From left to right The steel, wood-wool and plaster base for the sculpture (image 1). The clay sculpture, almost finished (image 2 and 3). Creating the silicone rubber mould (image 4 and 5). The hollow wax replica of the statue being prepared for casting (image 6).