

Dr Iain Murray is a lecturer in the School of Computing at the University of Dundee, where his research interests include emotion in synthesised speech. He is Chair of the Tayside & Fife Branch of the British Science Association and acted as a consultant for an episode of the ITV drama series *Foyle's War*, which featured a group working on the 'bouncing bomb'. He lives in Dundee.

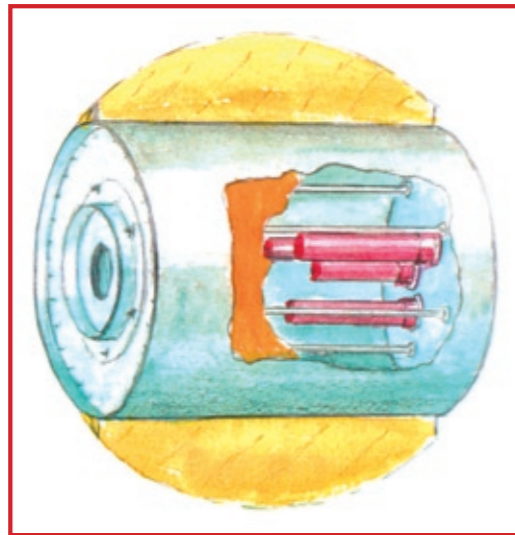


Back cover illustrations, clockwise from top left: Upkeep mine cutaway, sketched by Norman Boorer (*Author's collection*); simulation of the Swallow Research Aircraft (*Author*); one of Wallis's staff takes a break from Wild Goose test flying at Predannack (*BAE SYSTEMS* via *The Flambards Experience*).

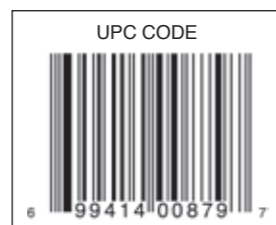
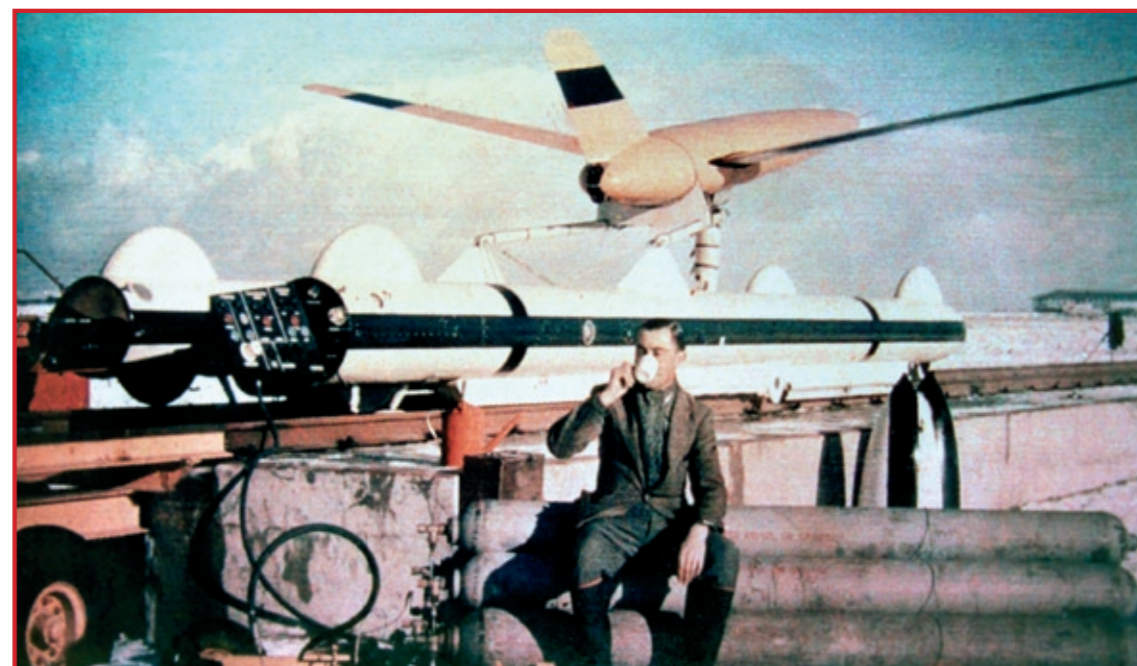
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From giant airships, hypersonic passenger aircraft and a better cricket ball to the legendary bouncing bomb, this fascinating book examines the work of British engineering genius Sir Barnes Wallis. Dr Iain Murray analyses Wallis's ideas as he did himself – like an experiment, to be invented, built and tested in operation. He looks at the huge range of Wallis's inventions and designs, explaining why these were so often superior to the alternatives of the day, and includes reviews of his wide portfolio of patents, and photographs and plans published here for the first time.



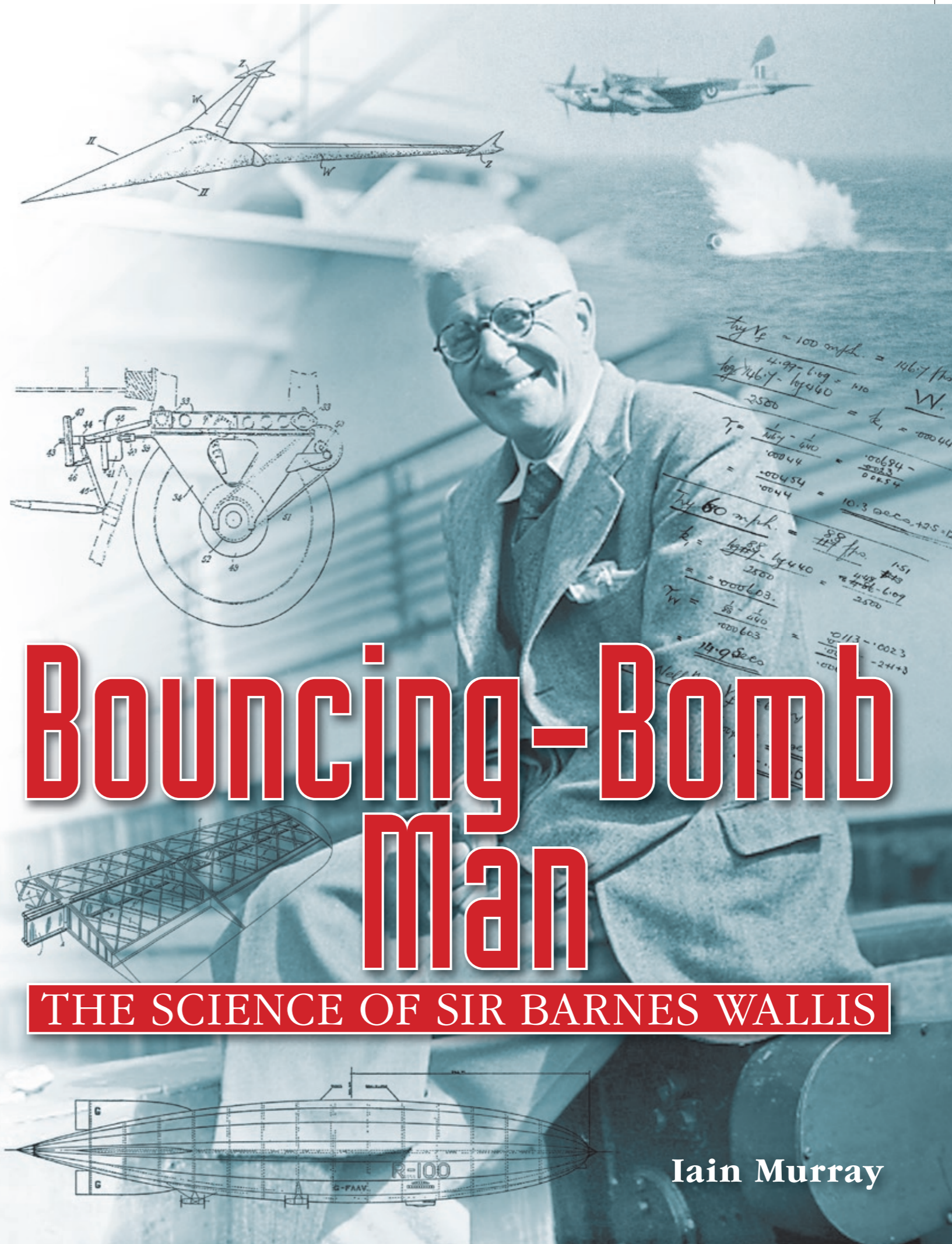
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Bouncing-Bomb Man

THE SCIENCE OF
SIR BARNES WALLIS

Iain Murray



Bouncing-Bomb Man

THE SCIENCE OF SIR BARNES WALLIS

Iain Murray

Barnes Wallis is best known as the 'boffin' behind the famous bouncing bomb used by 617 Squadron to breach the Ruhr dams in 1943, but his work covers a far wider canvas. It ranges from airships, through novel aircraft structures and special weapons to long-range supersonic aircraft, and an extensive patent portfolio.

So how did Wallis's engineering brilliance take ideas from airships and push them forward to create aircraft faster than Concorde? Dr Iain Murray describes the huge breadth of Wallis's work, showing why his genius brought totally new ideas into these fields, and reveals the science and engineering expertise that he deployed to make them work.

This is the first book to describe the entire life's work of Wallis in detail, viewed through the prism of his technical achievements. Murray asks where Wallis's inspiration came from, what the contemporary alternatives were and why his solution was better.

The author examines the evolution of Wallis's designs and the testing that was undertaken, and reveals how the test results changed the direction of development. He describes how the final designs worked, how they actually performed and the results of their use, including Wallis's airships, geodetic aircraft, 'bouncing bombs' (Upkeep and Highball), the 'earthquake bombs' (Tallboy and Grand Slam), supersonic aircraft designs, telescopes, cargo carriers and bridges, as well as his sports and medical projects.

Because many of Wallis's later designs were never built, Murray has used his experience in 3D computer imaging techniques to construct them as computer-generated models. He makes extensive use of illustrations – including line artwork and photographs – to demonstrate the concepts involved.

The result is a compelling glimpse inside the design portfolio of one of Britain's greatest engineering geniuses.

£25.00