

Slingsby Sailplanes by Martin Simons

My friend Keith Eldred recommended one of Martin's books to me. It was Model Aircraft Aerodynamics. I was very impressed by the depth and breadth of the book and especially by Martin's clear writing style and superb drawings. His style is as brief as possible but without missing out any detail. He makes a point of including every possible relevant fact however minor. When you have read a paragraph you know that you now know. All of that, and our illustrious editor, prompted me to look into his other writings.

Terence has obtained the generous permission of the family to reprint passages from his books, and he suggested that I make the selections. It might be that you already own, or have read, one or more of his books. Bear with me as there is always more to learn from his work.

I start with his book on the Slingsby company, and I will use extracts about the company itself, the first and last gliders it built and Fred Slingsby himself. All text directly quoted from the book is enclosed by quotation marks "" and any included comments from me are marked [].

But first, for those of you who are not familiar with Martin here is a brief biography.

Martin Simons

From the covers of his books and his own website.

Martin Simons began gliding in 1947 and has been involved with the sport ever since. He has about 1 500 hours soaring time and is still active as a pilot. He has a strong interest in designing, building and flying model aircraft, and has had lifelong interests in education, philosophy, aeronautics, especially the sport of gliding. He has written extensively about these and other subjects.

Martin was born in Derbyshire, England, in 1930. After completing national service with the RAF he attended college and university in London while teaching full-time. He graduated with first-class honours in 1959 and subsequently became a university lecturer in London. In 1968 he emigrated to South Australia to teach at Adelaide University. He completed master's degrees in education and in philosophy. From 1970 to 1980 he edited *Australian Gliding*.

In 1954, he married Jean, and they have two daughters, Patricia and Margaret. After fifty happy years, Jean died of pancreatic cancer in 2005. Since then he has lived alone in suburban Melbourne but remains fully engaged with his writing and other activities. In recent years, while continuing to fly and write nonfiction, he has written three very unusual novels, *Jenny Rat*, *Cities at Sea*, and *The Glass Ship*.



Martin with the rebuilt and modified Skylark 2S at Dunstable (UK) in 1987. Photo from the Slingsby Sailplanes book. There is a better picture just of him on his website at <http://www.martinsimonsbooks.com/>

He has written four print books about gliding, the first three of which are available to buy new:

- Gliding with Radio Control
- Model Flight
- Model Aircraft Aerodynamics
- Slingsby Sailplanes

Articles about the first three will appear soon.

The Slingsby Sailplanes book

This book is no longer in print. Secondhand copies are available but it is a tribute to its quality that they are very expensive. Fortunately you can download a copy free of charge from the address at the end. Martin doesn't lose anything so there is no need to feel bad about it. He makes nothing from secondhand sales. Gliding, both model and fullsize, is an enthusiastic activity but possibly has too small a market to justify a conventionally printed new edition. Maybe one of the on-line and on-demand publishers might make it feasible?

I was impressed by the clarity and coverage of the book and the superb quality of the drawings. This book is a great source of pictures and information for the scale model builder. For many of the gliders there are constructional photographs and descriptions of the building methods. Anyone wanting material for the next scale model need look no further. Slingsby in the UK designed and built sailplanes starting with the simplest machines in the 1930's up to the glass ships of the 1970's. I have a blueprint plan of a Vega kindly sent to me years ago by Slingsby but have not yet built a model. Might it be a winter 2022/3 project?

You could blow up the excellent drawings in this book with of course appropriate permission and acknowledgement or redraw from scratch based on the drawings. The drawings have named aerofoils, dimensions and fuselage profiles. Exact aerofoil profile data can be downloaded from other sources using the name. The text contains the remaining data and all the other details that any committed scale modeller might need. In some cases there are photos of the gliders being built and of the cockpit interiors. The

whole history of glider design can be seen in the succession of drawings as profiles became smoother, materials change and aspect ratios steadily increased.

This is not a book to be read from front to back. Most of it is made of chapters each of which covers one of the glider models. It is a gem to dip into. Make sure you are sitting comfortably when you start as you will find a lot of time has gone by before you know it.

This is what Martin says about it in the book:

Slingsby Sailplanes

“This book describes Slingsby sailplanes and gliders from the *British Falcon* of 1931 to the last motorless aircraft produced - the *Vega*. Each type is illustrated with an accurate full page, three-view drawing, with photographs and text outlining the background to the design. The drawings are based on the original workshop plans. Slingsby was for fifty years the main, and for most of the time only, producer of gliders and sailplanes in Britain. The company was one of the first to use glass fibre reinforced plastics in production aircraft as early as 1953 and were probably the first to use carbon fibre composite materials for main structural members. Many examples of their models are to be found all over the world.”

Fred Slingsby

[There will be a picture of Fred Slingsby in the next article.]

“Frederick Nicholas Slingsby, born on 6 November 1894, had joined the Royal Flying Corps in 1914, and as a flight sergeant gunner/observer earned the Military Medal, when after his pilot had been killed in the air, he regained control and flew the aircraft back to the British side of the trenches. He remained in the service (by this time the Royal Air Force) until 1920, at which time he bought a partnership in a woodworking and furniture factory in Queen Street, Scarborough, on the east coast of Yorkshire [UK]. Early in 1930 newspaper reports of the BGA's foundation were brought to his attention by a young dance band leader named Sanders who knew of Slingsby's service experience. With a few friends they founded the Scarborough Gliding Club in February.

“The manager of the luxurious Royal Hotel joined and was elected chairman. Members came to meetings in the hotel wearing their best suits for a good meal beforehand. There were lectures and discussions. Flying operations began with a Dabling glider bought from the R. F Dagnall Company of Guildford, Surrey. They flew at weekends and on Wednesday afternoons, using sites at Flixton Hill, due south of the town, and at Sutton Bank, overlooking the Vale of York. Amy Johnson agreed to become president of the club. This, and the Scarborough Council's support, helped to attract members, especially after the spectacular but rather unsuccessful demonstration by Kronfeld and Magersuppe on Castle Hill above the town in July. Magersuppe's Professor sailplane was damaged when it hit a fence on take-off, and he came down in the sea to be rescued by a fishing boat. Despite this, he was appointed instructor to the gliding club at a salary of £10 per week. By the end of 1930 the club had 40 active flying members, and more than twice that number were paying small subscriptions to become social members and, doubtless, joining the festivities at the Royal Hotel.

“Slingsby gained his A and B gliding certificates during the year, becoming the first Scarborough member and only the 30th person to do so according to the BGA register.

The A certificate required a straight glide under control lasting 30sec. By the end of the year the club had trained six members to this standard. Sanders, the band leader, was not one of them. The B Certificate required a flight of 1min and two further flights with safely executed right- and left-hand turns with good landings. Three of the six Scarborough members achieved this. (The training methods used are described in the chapter on Slingsby's Type 3 Primary.) The Dagling was broken regularly, and Slingsby, the club's ground engineer, found himself and his factory constantly involved in repairs. He was forced to present bills for materials and working hours spent away from his business. Thus he entered the gliding industry as an ancillary to his regular occupation. He had a sound background in aircraft woodwork and rigging, and was an excellent draughtsman. The factory provided tools and machinery. His workmen, he said, began to prefer working on the glider to furniture making. Slingsby had no formal qualifications in aeronautics or engineering but was ready to employ qualified consultants. He had a shrewd business sense and a great enthusiasm for gliding."

Slingsby – the company

"This book describes Slingsby sailplanes and gliders from the British Falcon of 1931 to the last motorless aircraft produced, the Vega. Each type is given an accurate three-view drawing, photographs, and text outlining the background to the design and mentioning operational successes or occasional failures. Type numbers were allocated to some design projects which never flew. These and the powered aircraft produced by the company are not included in this volume.

"Full sets of working plans for almost all Slingsby aircraft before 1950 were discovered in 1969 by Norman Ellison in the lofts above the offices. They were saved from destruction, and after a long period in storage are now preserved by the [UK] Vintage Glider Club [<https://vintagegliderclub.org/>]. The drawings by the author in this book are based on these originals and on other plans of later types from the company's archives, rather than on previously published outlines or extracts from brochures.

"Fred Slingsby first built gliders at his furniture works in Scarborough, but as the business grew and demanded more space he moved for a while into the abandoned tram sheds belonging to the town corporation. A transfer to Kirbymoorside on the northern edge of the Vale of Pickering was made in 1934. (For some reason the town is now spelled Kirkbymoorside on maps and road signs, but to gliding people it will probably always be without the second 'k'.) In 1939 a new factory was built at Ings Lane, south of the village, where it still remains. There were several changes of ownership, and a period of closure when the company was in receivership during 1969. The works reopened later in the same year. Glider design and production at Kirbymoorside then continued until 1982. The modern company, Slingsby Aircraft Ltd, is exclusively concerned with powered aeroplane manufacture."

The origins of a sport

"Before their first powered aeroplane flights, the Wright brothers made many trials with gliders, and on about a dozen occasions achieved soaring flights of more than a minute's duration. The longest of the four famous powered flights on 17 December 1903 was still of less than 60 seconds endurance and another year passed before they exceeded this time. In 1911 Orville Wright returned to Kill Devil Hills, North Carolina, with a glider. On 23 October he made a soaring flight of 9 min and 45 sec. Many years afterwards he was asked why he went back to gliding after eight years. His 'official' explanation was that

some serious testing of a new control system was to be done, but this was only part of the reason. At the age of 68, Orville admitted that he found soaring to be more fun than flying with an engine. A new sport had been discovered.

“The first gliding competition also had a serious purpose. The Versailles Treaty of 1919, ending the First World War, banned aeroplanes in Germany. Many pilots, aircraft manufacturers and students of aeronautics saw a bleak future for German aviation, but gliders were not specifically mentioned in the prohibition. Wolfgang Klemperer and his younger friend Erich Meyer, who had experimented with hang gliders in Dresden before the war, saw the loophole. Early in 1920, in an article in the magazine *Flugsport*, they suggested that a glider competition should be held in the Rhon mountains of the Fulda district. The dome-like Wasserkuppe, swampy in places and at that time covered by unfenced pastures, had been successfully used for gliding during several pre-war summers by a group of schoolboys from Darmstadt.

“Oscar Ursinus, editor of *Flugsport*, supported the idea of the competition with enthusiasm and agreed to take on the organisation. Under his guidance the two-month-long meeting from mid-July into September was modestly successful despite a fatal accident. Klemperer himself, recently appointed to an academic post in the Aerodynamics Institute of Aachen Technical College, made the best flight in the *Schwarzer Teufel (Black Devil)*, a cantilever monoplane glider which he had designed and built with his students in the Institute. From the beginning, sailplane development in Germany was closely associated with such student flying groups, the *Akafliegs*.

“The Rhon contests became annual sporting events, continuing even after the lifting of the ban on powered flight in 1925. A full-time gliding school was established on the Wasserkuppe, and another at Rossitten on the sand dunes of the Baltic coast. Extended slope soaring flights of several hours were achieved in 1922, and thermal upcurrents were discovered in 1925 and used systematically from 1928. Cross-country flights of more than 150 km had been achieved by 1930. Sailplane and glider building factories, notably those of Alexander Schleicher at Poppenhausen near the Wasserkuppe, Edmund Schneider at Grunau in Silesia and Gerhard Fieseler at Kassel, were established.

“Apart from a brief flurry and one lively meeting at Itford Hill in 1922, very little interest was shown in Britain until the news of the German successes filtered through to the pages of *The Aeroplane* magazine. The British Gliding Association (BGA) was formed late in 1929, and visits by prominent German experts were arranged. In February 1930 Professor Georgii lectured to the Royal Aeronautical Society on soaring meteorology, and Fritz Stamer, who was running the training school on the Wasserkuppe, described the methods used there. The BGA issued its first gliding certificates in March that year. Most influential of all, Robert Kronfeld brought his beautiful Wien sailplane and toured the country, performing a famous slope-soaring cross-country flight from Itford Hill to Bedworth near Portsmouth on 17 June. Carli Magersuppe, sponsored by the *Daily Express* newspaper, joined the tour with a Professor sailplane.

“There was an upsurge of enthusiasm. More than 90 gliding clubs were formed all over Britain, and some aero clubs established gliding sections. Fifty clubs responded to a questionnaire distributed at the end of 1930. Every club had at least one glider or was in the process of building one; some possessed two or three. The total active involvement in gliding approached 2,000 persons. The largest group was the London Gliding Club, not yet settled at Dunstable, with 112 members, three club gliders and four privately owned machines.” [Dunstable Down is a large hilly area that looks out westward over a flat

landscape. This gives wonderfully smooth winds on the western slopes though other directions are also soarable. Full size and model gliders each use part of the area. The part called Ivinghoe Beacon is where I learned to slope soar but sadly I now live too far away.]

Picture of Ivinghoe showing the west facing slopes, not from the book.



https://en.wikipedia.org/wiki/Ivinghoe_Beacon

This shows the view westward and the excellent landing areas behind the slope, also not from the book.



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