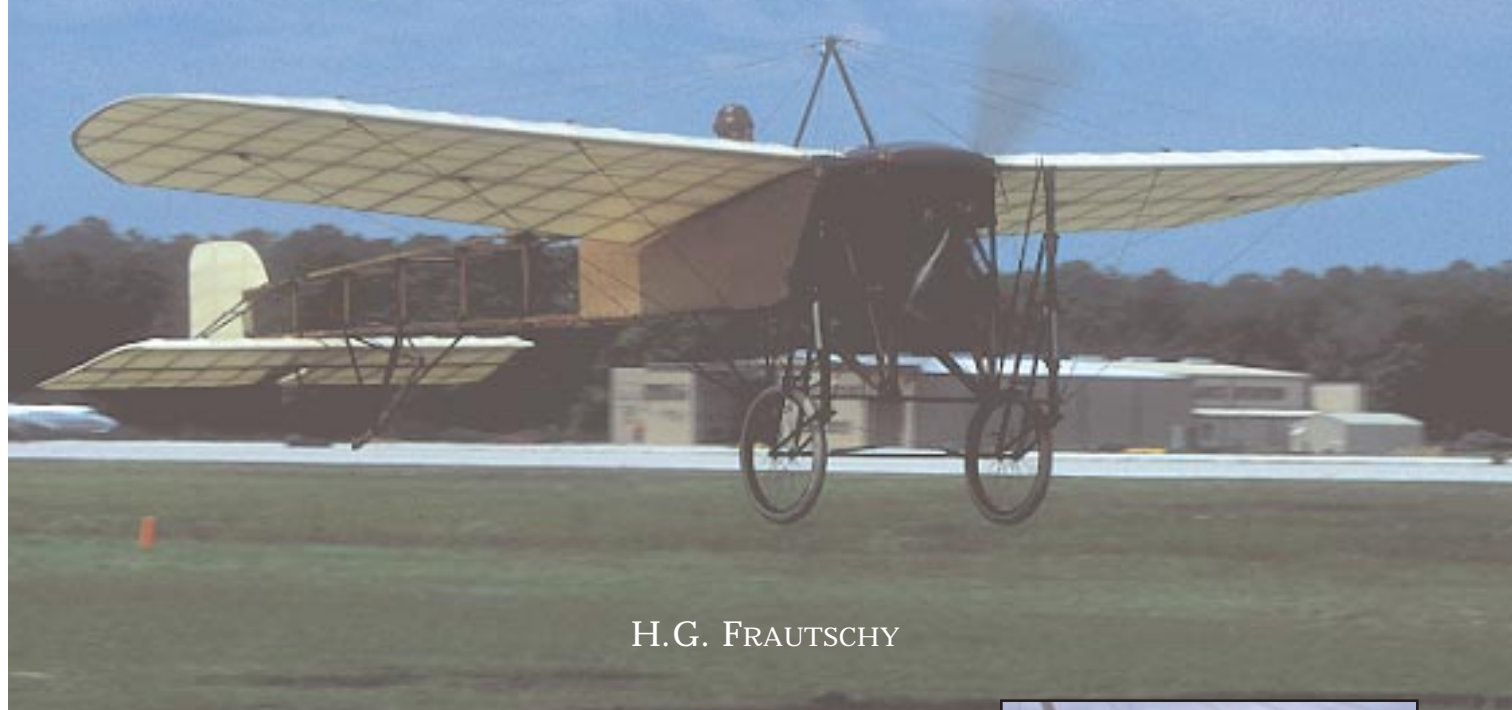


# Carlson's Thulin-Built Blériot



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**I**magine you have a rare airplane, one that people love to see fly, and you love to share it with others. Now imagine you want to show it to folks, but the only way to get it there is by freight container. That's what Mikael Carlson must do whenever he chooses to display his Blériot XI. The logistics are daunting enough when you look at what he and his small crew must go through to take the Blériot to a site on the European continent where he lives, but what about overseas?

Undeterred, Mikael and his wife, Gunilla, showed the airplane at both Sun 'n Fun 2003, and later for the Dayton Air Show.

What the admiring crowds got to see was one of the oldest flying airplanes still in existence, and they were treated to the sounds and smells of a rotary engine-powered airplane from the pioneering days of aviation.

In 1989, Mikael found his aviation treasure in a barn in Sweden. Fully intact (but not assembled), it was in remarkably good condition. All the parts were in one place, and only a few (outside of the original linen covering and the plywood pieces) of the parts needed to be replaced during the ensuing restoration. When completed in 1991, 95 percent of the original airframe remained, including the 50-hp Gnôme rotary engine. Since its restoration, Mikael has logged over 35 hours of flight time in the Blériot, most of it 7-9 minutes at a time. That's over 260 flights in the Blériot!

The Blériot XI found by Carlson was one of the many built in Europe and the United States under license from Blériot. After Louis Blériot's epic flight across the English Channel, the model XI became a highly sought after aeroplane. The XI was designed by Raymond Saulnier, who would go on to even



*Mikael Carlson*

greater fame as an aircraft designer, and in cooperation with the brothers Leon and Robert Morane they would form Société Anonyme des Aéroplanes Morane-Saulnier near Paris and produce some of France's most famous aircraft. The model XI was seen as a great advancement in the art of aviation design, with its single monoplane wing

producing less drag than its bi-plane contemporaries. The weakest link in the early versions of the airplane was the anemic 30-hp, 7-cylinder R.E.P. engine, or the 3-cylinder, 25-hp Anzani engine, which tended to overheat. Neither engine was really up to the task to adequately power the 700-pound, high-drag airframe.

Early Swedish aviator Carl Cederstom bought a Blériot XI in 1910 and brought it home to Sweden. A few years later, he sold the airplane to Enoch Thulin, who founded the AB Enoch Thulin Aero-planfabrik (AETA) in 1914, and went on to build 23 license-built examples of the Blériot XI, powered by the 7-cylinder, 50-hp Gnôme Omega rotary engine, which was introduced to the aviation market in 1910. The airplane bought by Mikael is the 18th Thulin Type A built, and could have been constructed any time between 1914 and 1918, when the company stopped production on the Type A. Except for the engine installation, the basic design of the Type A mimicked the design of the 1909 Blériot XII, piece for piece, including the obsolete wing-warping used to control

the airplane along the roll axis. Blériot had already been using ailerons on earlier aircraft, so it is unclear why wing-warping was incorporated in this design.

Mikael found out about the potential project during conversations with a model airplane judge who had been judging Carlson's scale models. He was nearing completion of a full-scale, rotary engine-powered Thulin Tummelisa when the judge mentioned that he too owned a Thulin aircraft.

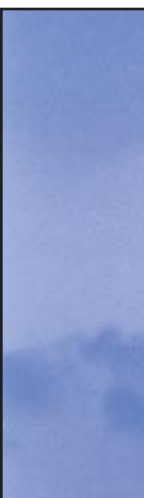
It took a few years of gentle coercion, but in 1986, he was able to buy the Type A, after the owner realized that Carlson had the talent and the drive to restore the Blériot to flying status.

Its individual history is a story of serendipitous survival. Serial No. 18 Thulin Type A was flown in a barnstorming role until 1919,

## Blériot XI

( Built under license by AETA Sweden )

Engine: . . . Gnôme Omega rotary 50-hp (Thulin K)  
 Cruise: . . . . . 42 knots (53 mph)  
 Empty weight: . . . . . 317 kg (700 lbs)  
 Wingspan: . . . . . 8.95 m (29 ft.)  
 Length: . . . . . 7.76 m (25 ft., 5.4 in.)  
 Height: . . . . . 2.54 m (8 ft., 4 in.)



and then was sold at auction in 1920 or 1921. A couple of brothers bought a pair of the Thulin-built Blériots at the auction, and a week later they sold one of the pair to a potential aviator in northern Sweden. He would have attempted to fly it, too, if the local police hadn't put a stop to it because he didn't have a pilot's license. At that, he

took the wings off and stored it in a barn, and left to work as a carpenter in America.

When he returned to Sweden a few years later, he asked for some help from a fellow townsman to dismantle the airplane even further, and store it in boxes. In one can went the bolts; in a box went all the metal fittings. The wood structure was bundled up, and

the bracing wire coiled up like bailing wire. The engine, along with its special tools, was disassembled and stored as well. There it sat in the barn, a pioneer airplane kit, until the model airplane judge's father bought it for \$50 in 1965. They stored it on the second floor of their barn until Mikael Carlson bought it in 1986. Because he was still working on his first homebuilt project, the Tummelisa fighter plane replica, the Thulin-built



## Other Sources on the Blériot



[www.shuttleworth.org](http://www.shuttleworth.org)

Besides Mikael Carlson's Thulin-built original aircraft, there are a number of flying replica Blériot XI aircraft in the world, including ones built by Roger Freeman, president of the Vintage Aviation Historical Foundation, Marion, Texas, and Chuck Wentworth, Antique Aero, Paso Robles, California. There are other flying Blériots in the world, including the world's oldest flying original aircraft with

its original engine, maintained as part of the Shuttleworth Collection at Old Warden Aerodrome in England. Visit [www.shuttleworth.org](http://www.shuttleworth.org).

For more information on the Blériot XI, visit [www.blériot.org](http://www.blériot.org) and [www.blériot.com](http://www.blériot.com). Thanks to the recommendation of member Don Campell of Chicago, we have a pair of books that might be of interest:

*Blériot, Herald of an Age*, by Brian Elliot, available by calling 888/313-2665. If you can find it, a French book entitled *Blériot L'Envol Du XXe*, a biographical work produced by Blériot's grandson of the same name, is a large format work that numbers over 500 pages. It was published in 1994.

Finally, an out-of-print softbound book published by Smithsonian Institution Press *Blériot XI - The Story of a Classic Aircraft - Volume 5*, ISBN 0-87474-345-1, was written by noted aviation author Tom Crouch. It was published in 1982 and may still be available at a used bookseller or at the local library.

Blériot would have to wait.

Thanks to the completeness of the project, and his good fortune in having a solid, well-preserved engine to rebuild, the Blériot's restoration only took a year. He did

carve a new mahogany propeller, and all the rubber and other "consumable" materials in the airframe were replaced. The Swedish airworthiness inspector reminded Carlson that he wasn't allowed to deviate





The wing-warping control is very evident in this snapshot of Carlson's Thulin-built Blériot XI.

from the drawings for the Thulin/Blériot, so it's quite exact, right down to the 22 threads per centimeter for the linen fabric cov-

ering, and the nitrate dope covering. So what's it like to fly? For one thing, early aeroplanes were meant to takeoff and land into

the wind. Period. Fighting a crosswind with an airplane that has roll control that is both slow to react and fairly ineffective is not conducive to a long service life. As Mikael pointed out during our interview, light winds are also the best, if for no other reason than the fact that there are times when a wing drops due to a gust, and no amount of wing-warping seems to bring it up in a time period that the pilot would be happy with!

There is not much range between what is needed for cruise power and for descent, and with all the bracing wire, a drop in RPM means the airplane will come down. With twice the horsepower available than the first models of the Blériot XI, it's not as fast a descent, but there's not much reserve thrust. There are a lot of brace wires and a high-drag airfoil, plus the bedstead style landing gear with a rotary engine nestled between the posts.

Mikael's trust in the airplane, tempered with the knowledge he's gained over his hundreds of demonstration flights, allows those of us lucky enough to see the Blériot in flight to feel the tingle of watching something historic happen. With all we've seen over the past century of flight, it's still a bit breathtaking to see a pioneer era antique airplane take to the sky.

