

TYE HUSHEER'S FIRST GLIDER

Tye Husheer was truly the pioneer of gliding in Hawkes bay. He was a founding member of the Napier Aero Club and was very active in building and flying gliders during the years preceding WW2. \par

As a youth he was living on the family farm at Haumoana when WW1 started. Some years earlier his father had emigrated from Germany, successfully grew tobacco and went on to found of the National Tobacco Company. The outbreak of war invoked a hysterical reaction in the country to anyone or anything remotely German. Mr Husheer senior instructed his family never to speak German, not even at home. However, notwithstanding their industriousness and good standing in the community, the family found themselves classed as enemy aliens. Two weeks after the War started rumours of German submarines cruising in the Pacific resulted in Police searching the family property for wireless installations.

In September 1914 Leo Walsh came to discuss with Tye's father the layout and assembly of machinery for the tobacco factory at Ahuriri. Leo and his brother Vivian were aviation pioneers pre-war and went on to become well known in NZ aviation circles for their Flying School at Kohimarama, Auckland. During his short visit Leo taught the young Tye about the fundamental principles of flight and encouraged him to build and fly kites and study them carefully. This kindled in Tye an interest and enthusiasm in aviation and a belief that it might be possible, someday, that even he would be able to fly.

Tye's brother Ingolf had other ideas and wanted build a boat. After gaining some informal boat-building experience he determined to build a ten-foot clinker row boat using an open tobacco drying shed on the farm as workshop and shipyard. Tye became Ingolf's helper on the project. Although it was cold working in the open shed at nights with only a hurricane lamp to see by, Tye enjoyed these evenings and learned a lot about woodwork and tools.\par

In 1916 Tye was given a "Boys Own Annual" that included sketch plans of a suggested glider. This caught his fancy and it wasn't long before he got Holt's timber mill to pick out some suitable straight-grained timber for its construction. It was a bi-plane with a 5m span, a wingcord of nearly one metre, and a box-kite tail assembly giving an overall length of less than 4 metres.

It was called a hang glider because the pilot, while on the ground, carried the contraption by straps on his shoulder. His legs doubled as both undercarriage and the motive power for launching. The scheme called for the pilot to run directly into wind (preferably downhill) and, if all was well balanced and at just the right angle of incidence, the wings would take the load. Upon becoming airborne the pilot would literally hang in the machine, resting elbows and forearms while in flight. The principle was that the weight of the pilot would act similarly to the string attached to a kite. While in the air the legs were to be tucked up to extend the gliding distance and the tail fins were intended to maintain direction square into the wind.

Tye found no difficulty in constructing the glider according to the drawings, nor in covering the wings and tail in a very light calico. The biggest difficulty lay in the correct tensioning of all the bracing and stay wires (landing and flying wires) and to produce a firm, true and symmetrical structure.

At last, after many weeks, it was finished. Everyone else on the farm took his venture as a bit of a joke. To avoid embarrassment he waited until a Saturday afternoon in 1916 when everyone else was away and carried the glider to an open field where a light sea breeze was blowing. He stepped into the thing,

fastened the straps over his shoulders, and lifted it up. It didn't weigh more than 20-25 lbs (9-11 Kgs). There were no printed instructions, nor any instructor to turn to. In common with other early aviation pioneers he instinctively knew that, in learning to fly, he would have to register each experience and learn from it.

Facing the breeze, he stood perfectly still, gripped the forward struts and rested his forearms on the longerons. By raising and lowering the tail he found that he could feel the wind pressing the wings either up or down. Venturing to increase the angle of incidence until the tail touched the ground, the upward pull of the wings nearly lifted him off his feet. This gave him quite a start. After some reflection he shifted his weight further forward and tried again. Now he knew what to expect and felt in a better position to control the machine. Although he didn't understand it at the time he later came to realise that by shifting his weight forward he had moved the centre of gravity nearer to the centre of lift.

He played around with it for a little longer, but being alone thought it better to take it home again before anything should happen to it. While trying to turn around the wind caught under one wing, nearly blowing the machine on top of him. He managed to wrestle it back facing the wind and started to walk backwards, which seemed the safest. Once in the shelter of the buildings he managed fine until at the last gate where one wing hit the fence, tore the fabric and cracked one strut.

In spite of this mishap he felt very pleased with himself and started on repairs, which took quite a few days spare time to effect. Thereafter he practised at every opportunity and never got tired or disappointed at the many failures and tedious repairs – the few successes repaying in full the hours of labour. Later he said that the thrill of the sense of floating in the wind couldn't be described - it had to be felt.

He never forgot his first successfully controlled glide. The glider became airborne in free flight for nearly two seconds - covering a distance of about 50 feet (17 metres) and with his feet never more than a metre off the sloping ground. However, the landing was not according to plan. In his excitement he tried to stop too suddenly. His feet touched the ground and tripped up, resulting in a two-week repair job.

The weather wasn't always suitable but over several months he managed to get in quite a few hops. The best on that hang glider was just on four seconds with a record altitude rise of about 2 metres. As there was a nice breeze the distance covered was no more than 20 metres.

Unfortunately, just at this time, a German raider captained by Von Lucknow was rumoured to be around the New Zealand coast. Coastal and fishing boats in Hawke Bay reported lights emanating from the Husheer farm that were thought could be signals to the raider. A further visit by the Police then took place and during their investigations they saw Tye's hang glider in one of the curing sheds. After serious consideration the Police decided that it would be in the best interests of everybody if the glider were destroyed. In the circumstances the Husheers felt they were in no position to argue although it was a blow to Tye.

It was subsequently realised that the lights seen at sea coming from the farm were in fact from the hurricane lamp Ingolf and Tye used when working at night in and out of the hull of Ingolf's boat. A journalist who wrote later summed up the irrationality of officialdom's actions; "Maturer

reflection must conclude that no other aircraft, before or since, has had such a high performance potential as was inferred by the official action taken”

Thus Tye’s first practical flying experiments were nipped in the bud. Though his parents sympathised with him, they felt he was safer on the ground instead of, as his father said, “trying to be a grasshopper”. However, his desire to fly gliders had not been quenched and was later to be fully realised.