

HANG GLIDING

Ken de Gussy Collection

*Catch the
Wind*

GLENN WOODWARD

OVER THE EDGE

The race for the fastest, highest, biggest and most spectacular, but keeping within the parameters of safety and comfort, became expensive. Technical advances and government control advanced simultaneously until the ownership and maintenance of private flight systems became the privilege of the wealthy.

As hang cages evolved into luxury airborne penthouses and passenger seats into cocktail lounges, the glory of "flying by feel" was lost to all save the balloonists, skydivers and sailplane pilots.

"In developing aviation, in making it a form of commerce, in replacing the wild freedom of danger with the civilised bonds of safety, must we give up this miracle of the air? Will men fly through the sky in the future without seeing what I have seen, without feeling what I have felt? Is that true of all things called human progress — do the gods retire as commerce and science advance?" asked Lindbergh fifty years ago. Flight for the masses, however, still remained as romantic as the legend of Icarus.

Ironically, it was the same technology that will eventually send men to interplanetary space that helped develop the simple low-cost, low-impact, fuel-less, foot-launched flight system which today we call hang gliders.

NASA scientist Dr Francis Rogallo is credited with developing the system which in 1948 he called the sailwing, as Cayley had done a hundred and fifty years before. But Rogallo could not have envisaged that the

sailwing would, in the years ahead, give more than flight to humankind. At this stage he was concerned with the solution to an aero-philosophical problem: to design a flexible wing that would retain its shape by air pressure. After years of model testing and experimentation, in 1951 he was granted a patent for a triangular (delta) shaped kite. For more than ten years Rogallo tried to find a use for his design. His only success was with a child's kite which was too expensive.

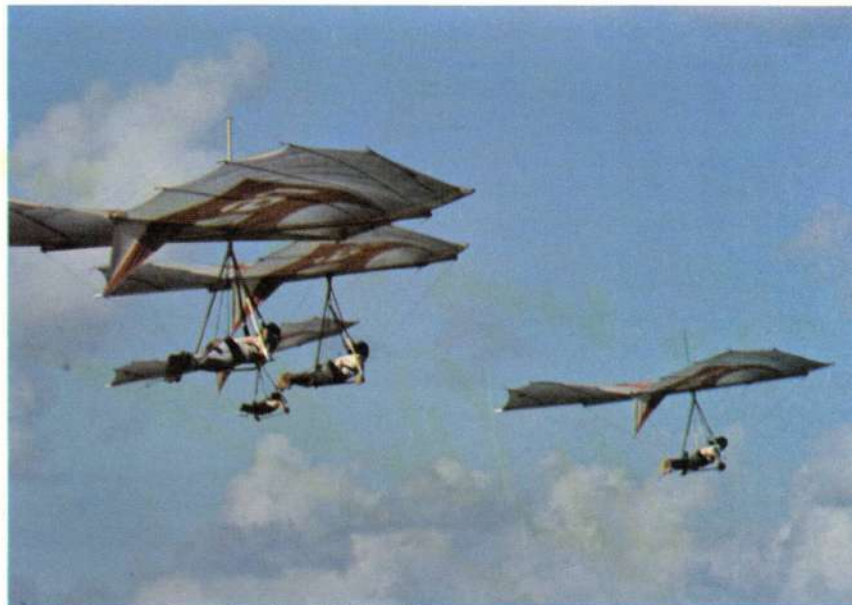


Photo courtesy Skyriders Hang Gliding Team.

In July 1963 Rogallo gave the United States Government the right to use twenty-five of his patents in return for a royalty fee and in the next decade and a half the Government spent over a hundred million dollars on research and development.

The sailwing, under the control of Rogallo at NASA, was flying jeeps at 95 km/h over rivers, dropping from as high as 60,000 metres, and guiding capsules through the earth's atmosphere to pinpoint landings.

At about the same time Australian engineer John Dickenson was independently developing his own versions of the delta wing. In 1963, in a kite made from oregon, banana plastic, sticky tape and baling wire, Dickenson was towed aloft behind a ski-boat. The kite cost £6 and it flew!

A year later he had developed the delta form so successfully that rope releases and free flights had become a matter of course. In the same year Dickenson was granted a patent for "An Improved Gliding Apparatus". This patent was a significant landmark in the development of the sport throughout the world, for it included the triangular "A" frame or control bar which allowed the kite to be accurately manoeuvred about its centre of gravity. "... a single central point enables the pilot to pivot the whole supporting surface about that point and he can thus cause the kite to climb, descend, turn and execute climbing or diving turns in a manner not previously possible." The patent also incorporated the notion of free flight in a delta kite. These two major advances enabled hang gliding to progress as it has.

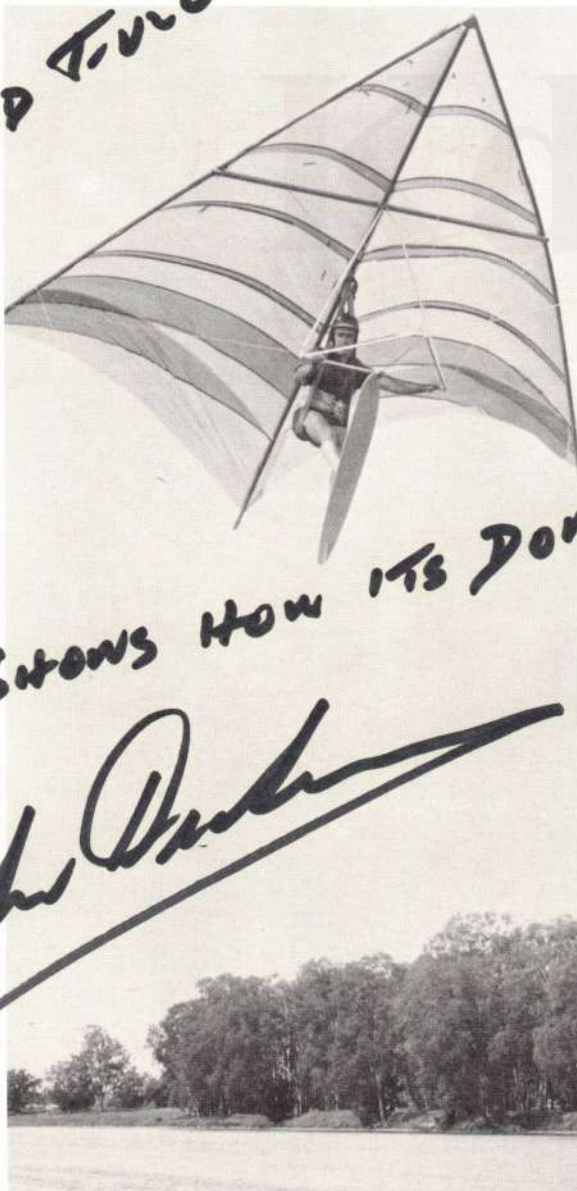
Dickenson continued his experiments until 1967 when he introduced two aspiring "birdmen", Bill Moyes and Bill Bennett, to the delta kite. The history of hang gliding from that date is brief but one of rapid progress.

Moyes purchased a kite from Dickenson and within two months held the world altitude record of 318.5 metres for towed flight. It stood for two years until he pushed it to 854.5 metres over Lake Ellesmere in New Zealand. This was broken by fellow Australian, Bill Bennett, now living in the States, with a height of 884 metres. So Bill Moyes went back to his favourite lake in New Zealand and pushed the record to 1448 metres, where it stands today.

In 1970 Moyes stepped over the edge of the Grand Canyon for a flight of eight and a half minutes and a vertical descent of 1463 metres. He was arrested and fined \$150 for "holding a special event in a National Park without a permit".

The next year in a specially strengthened kite Moyes was towed to 2624 metres behind a Super Cub aeroplane.

As early as 1968 he was foot-launching off Mt Crackenback, Thredbo, for record distance flights of up to two and a half kilometres. "That seemed a lot then but the sky's the limit these days." The list of Moyes' exploits goes on, but not without cost. The complexities of the human anatomy are



John Dickenson's kite built in 1964.
Photo courtesy John Dickenson.

made even more complex by broken bones and scar tissue: "I didn't get the experience for nothing. I paid for everything," says Bill. These days he has to swim half a mile a day to keep his joints flexible.

Back in the United States, as early as 1961, young men like Barry Palmer and Richard Millar were foot-launching in bamboo and plastic kites with parallel bar "hang cages", much the same as Lilienthal's gliders of the late nineteenth century. It did not occur to them to control the kites any other way until the Australian Bill Bennett introduced Dickenson's "A" frame or control bar to them in 1969.

Bennett's exploits in the States rival only those of Moyes. He inspired a James Bond movie, flew circles around the Statue of Liberty, was towed 55 kilometres behind a car for a TV commercial and became the new Birdman by piloting his kite over the Golden Gate Bridge to land on Alcatraz.

The vast population of the United States and their particular type of daring provided a great impetus for the hang gliding movement. The first soaring flights took place in 1971 and within two years the country boasted 5000 registered flyers. Membership of the United States Hang Gliding Association now totals well over 15,000. The sport spread rapidly and developed in countries around the world: Europe, Canada, Great Britain, South Africa and Japan.

Steve Cohen waiting for his turn to take off as part of the Skyriders demonstration team. Photo courtesy Skyriders Hang Gliding Team.

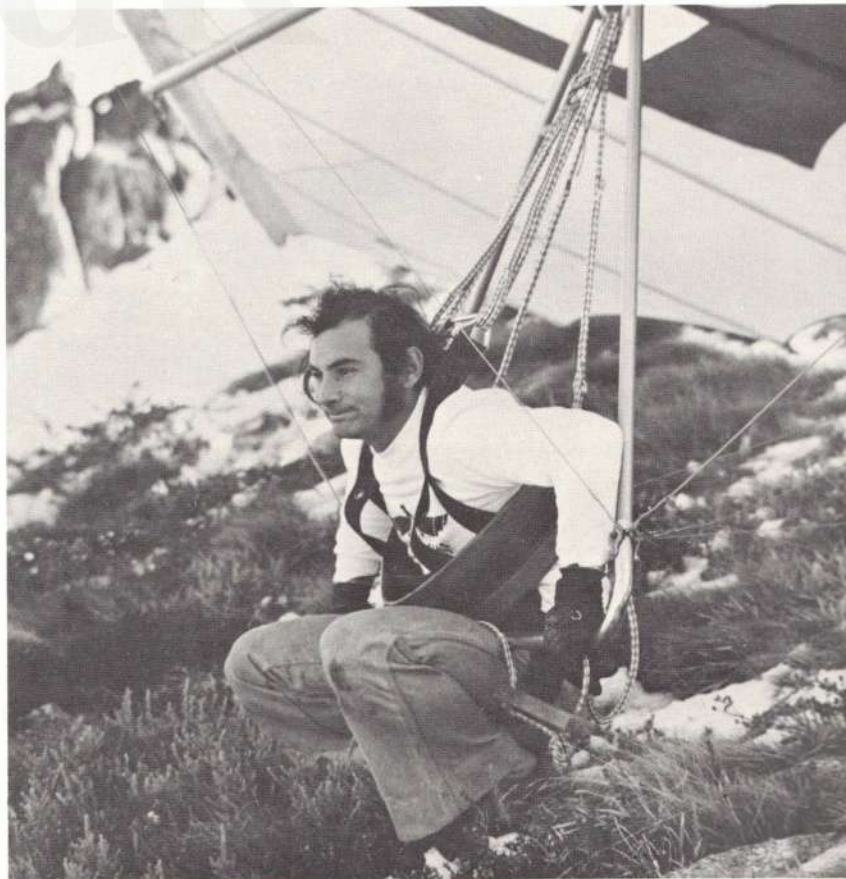


Photo Glenn Woodward.



Photo Bruce Usher.

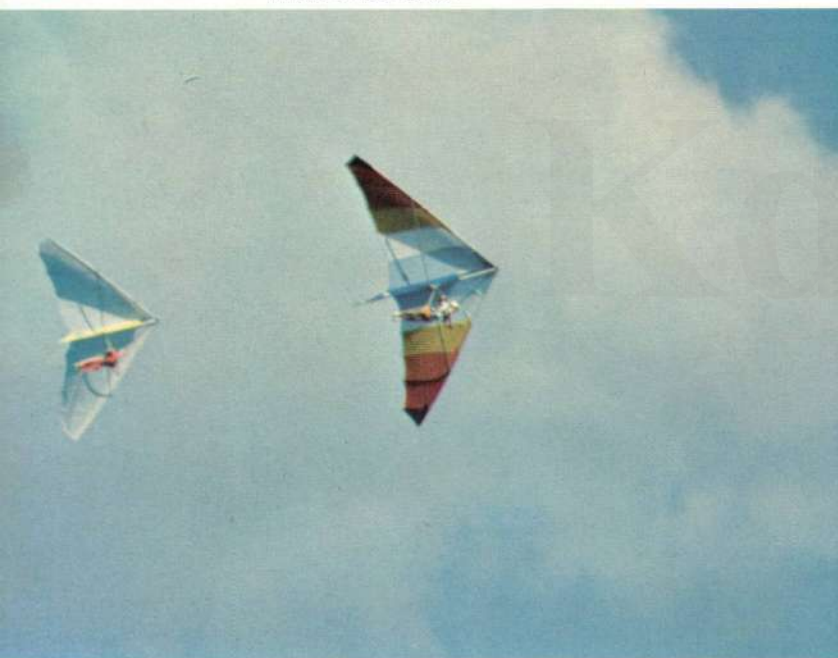


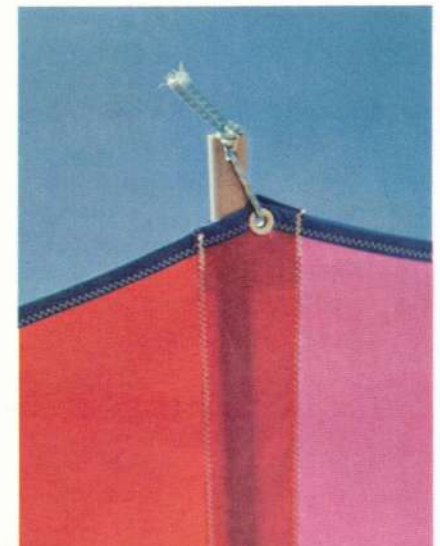
Photo Robbi Newman.

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A Photo courtesy Skyriders Hang Gliding Team.

Photo Robbi Newman.



Australia's contribution to the development of hang gliding didn't suffer by being cut off by distance from the mainstream of activity. On the contrary, due to this country's initial involvement, there was a sound basis on which to work. From the beginning equipment emerging from Australia has been hailed as the safest and amongst the best in the world — a reputation which was enhanced by our safety record and performance at the 1976 World Hang Gliding Championships in Austria. Of a total of a hundred pilots representing twenty-seven different countries, Australia had five of its nine-member team in the top nine places. The title of World Hang Gliding Champion went to a New Zealander, Terry Delore, flying a machine specially developed for the championships by Steve Cohen of Sydney. Cohen started flying when he was eight on a wing of plastic, plywood and nailed timber. It flew for about 2 metres in flights lasting three seconds, on the sandhills at Cronulla. Progressing through towed flights in his late teens, he became a catalyst for foot-launched hang gliding in the early seventies. His name is now synonymous with the sport in both this country and overseas.



Photo Bruce Usher.

Photo Robbi Newman.

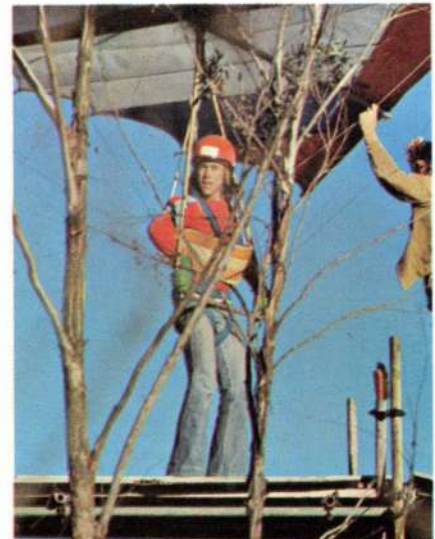
Photo Glenn Woodward.



Photo Robbi Newman.



Photo courtesy Skyriders Hang Gliding Team.



Cohen's Ultra Light Flight Systems and Moyes' Delta Gliders head the growing list of kite manufacturers: Wings, Free Flight, Sunshine Soaring, Farrelly, McDonald Hovering, Skyland Kites. A group of completely new associated industries has also grown up to cater for the sport.

Hang gliding history tends to be selective. It is usually only the first person to perform some feat, or the major achievements that are remembered. There have been hundreds of obscure aeronauts whose aspirations to foot-launched flight have contributed so much to its development. Their ideas and views are diverse but they have all shared the one goal — to achieve as much as possible with as little as possible.



Photo Robbi Newman.



Photo Ken Grieves.