PANOPTICON presents

Children of the Wind

In memory of
JESSICA DUBROFF
1989 - 1996

CHILDREN of the WIND

Produced by
JEFFREY FREDERICK GOLD

Narration:

When ancient man looked upon the flighted birds, he must have longed for his own place in the sky. His envious nature would help him realise that dream --- the dream of Icarus. The challenge culminates in gliding, considered by many the purest form of human flight. Chairman of the Cambridge Gliding Club, Pat Harris.

Pat Harris:

Well, gliders, gliding is a fantastic sport because by definition it does not use internal combustion engine or the jet engine and so therefore it is using all of the natural meteorological forces that are in being.

Narration:

Gliding is flying reduced to its essence. Having to rely only on one's skill and the aircraft which keeps one aloft, gliding becomes a challenging sport tied to the clouds.

Pat Harris:

And going from the early days of gliding some fifty, sixty years ago up to present day, the very clever use of meteorological readings that our present day pilots give is quite phenomenal...quite phenomenal. Where a number of years ago, in my early experience one would look at a particular cloud and look to see
if it was giving what we call lift under that cloud, we now have pilots who have the capability of looking into segments of the cloud and cells as they are called, and that takes a lot of experience to know when you are under a cloud just where the cells are and where to use them.

Narration:

Unlike our feathered friends, gliders are unable to lift themselves into the air under their own power.

Pat Harris:

There are generally two prime methods of launching. One is by way of winch. This is where there is a motorised drum of cable at one end of the field which is pulled out to the glider and by a particular signal sequence the slack is taken out of the cable and then the signal of "all out" is given and then the glider is then launched into wind across the field depending on the wind strength; depending on the height, but generally 1500 to 2000 feet is commonplace.

Narration:

Another means of launching a glider into the air is by towing it to the desired altitude using another powered aircraft. Once it's in the air, however, the glider is freed for its solitary descent.

Pat Harris:

To give an idea of gliding, we have gliders that have a lift-drag ratio, how do I say, rate at which they descend, because gliding is only a controlled means of descent in still air, they have ratios as high as 55:1, and this means, theoretically, that in still air conditions from 1 mile high this glider could do 55 miles in a straight line.

Narration:

The delphine-shaped sailplanes are simple and elegant monuments to the principles of aerodynamics—an architect's dream where form and function are satisfied simultaneously.

Pat Harris:

The reason an aircraft flies, is precisely the same for a glider, a single engine powered aircraft or even a jumbo. They have what is known as an airfoil, or the wings that people normally refer to them. And fundamentally, an airfoil going through the air, and I just show you a quick shape, if you can just
visualise this piece of paper here is level underneath and cambered on the top and then that progresses across from my right to my left in going through the air, the air splits before the leading edge and because it is a fact that the air going underneath the wing is going to travel a shorter distance than going across the top of the wing, and it wants to arrive at the rear of the airfoil at the same time, one gets a speeding over the longer distance and therefore a decompression and so therefore that creates lift. And to just demonstrate that if you can imagine that this is...I'm bending this paper across my mouth and I'm just blowing over the top of it, you can see that it lifts.

Narration:

But lift must be obtained by various means to maintain one's ability to soar.

Pat Harris:

A glider remains airborne because it uses usually warm air currents which are called thermals. And thermals are produced by the sun heating up the earth's surface. It heats unevenly and immediately there is an area of static air which becomes slightly warmer than its surrounding; it dispatches itself from the earth and then proceeds to climb and on an ideal day produces these lovely cumulus cloud, which are rather like cauliflower. That is the ideal thing for a thermalling glider to go and sit under. The next form of lift is called wave lift. Wave is created by strong winds blowing over, say, mountainous areas, which causes a disturbance in the layer and air has characteristics very similar to water: immediately one level is disturbed it continues to disturb other levels and so it creates waves which continue downwind, and these waves are created and then they will drift, usually downwind, and often they are identified, and one of the main indicators is what is called a lenticular cloud.

Narration:

Other means of keeping a glider aloft include mountain flying and ridge soaring. The duration a glider may remain airborne by virtue of various meteorological means, tied closely to the terrain, is staggering.

Pat Harris:

People ask me frequently how long can a glider remain airborne? and it's commonplace in the U.K. in the summer months to have anything up to 7 hours. Much over that becomes a little too tiring, but it
is rather more commonplace to have 5 to 6 hours, should I say, but it is possible to get a little longer.

Narration:

Despite the many inherent challenges of flying, gliding remains an extremely safe sport.

Pat Harris:

I've been involved with gliding for 40 out of the last 50 years. In other words I had a spell away from it. In all of that time, I've only known of one fatal accident in very much in the early days of this club. And so I would not be involved with it if it were not much, much safer than crossing the road.

Narration:

An invitation to flight can be irresistible.

Pat Harris:

Everybody that I've flown, either in a glider in my early days and in the powered aircraft that we use in the club now, every single person who gets into the air for the first time are absolutely thrilled and as I often say to people who come gliding for the first time, when you're vaccinated with it, you'll never get it out of your blood.

Narration:

And gliding does not attract only those who haven't chosen aviation as a career.

Pat Harris.

Try gliding. I'm terribly interested in our club, but we have many professional pilots who fly these big jets all around and big turboprops all around and they enjoy getting into the club here and gliding; and that seems to be real flying, and it is a real combination of aviation of where you are a pilot and flying the aircraft, a combination, combined with that, you have reading the meteorology and also using all of the natural meteorological conditions, which is very green, and you're using all natural power. That to me is flying in its best order.

Narration:

Perhaps Eli Khamarov captured it best when he wrote:

A sacred privilege is flight.
Those who share in it have become guardians of the earth:
Have seen what the gods have seen.
Flight reminds us of our fragile nature
And the extent of our temporary presence.
It is a sacred thing,
A reminder of where we were not meant to be,
A reminder of where we are,
Easily consumed,
Our waxen wings lie within the perilous grasp
Of our distracted star.

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Special Thanks to
PAT HARRIS
Chairman, Cambridge Gliding Club

Transportation
SIGFRID NEUMANN

Also Thanks to
DEBBIE THOMAS
ARKADY IZYUMOV
STEPHEN MADLE
SIGFRID NEUMANN
STEPHANIE PURSGLOVE
PETER McGREGOR
PETER COOK

Produced with the aid of the
CAMBRIDGE FILM & TELEVISION SOCIETY
and the
UNIVERSITY OF CAMBRIDGE
AUDIO VISUAL AIDS UNIT

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