



FREE AS A BIRD

A HomeschoolRadioShows Listening Guide
Written by Rose Clark

The program "Free as a Bird" is hosted by Paul Shannon and was originally heard on Adventures in Research, a syndicated radio program broadcast in the early 1950s. The run-time of this radio show is 14:25 minutes.

Summary

Man's oldest dream is to fly as free as birds. One man to share this dream was a French Sea Captain who lived over 100 years ago. Jean-Marie Le Bris (1817-1872) was an eccentric man that was fascinated with the albatross and the way it flies. He shot at albatross following his ship to examine the wings even though it was considered bad luck to kill an albatross.

In 1854, Le Bris built a artificial albatross out of wood and cloth with a wingspan of 23 feet. He tested the flying machine by hiring a man with a mule and wagon to pull him aloft. Similar to flying a kite, he was able to get his flying machine into the air. Although he did fly in his albatross, he could not untie the rope in time and it it pulled him back to the ground. Captain Le Bris broke his leg from the crash and this ended his experimentation. This experiment may not have ended well for the captain's leg, but he made great advances in understanding how birds' wings interacted with air.



Two years later in Germany, Otto and Gustav Lilienthal were also watching birds. The boys found, upon studying the birds, that they flew towards the wind to take off. From the Middle 1800s until the turn of the century Otto studied the flight of birds. Otto has become

known as the Father of the Glider. He created a glider nine by three feet and made plans for a Ornithopter. An ornithopter is a huge glider fashioned after a bird with flapping wings capable of carrying a human in flight.



In 1880, Otto calculated aerodynamics and the curved wing of birds. He studied plants and notice they also have the curved “wing” to help seeds glide to a new locations. The test flight had over 1,000 feet in distance, but every time he crash landed his glider needed repairs. Otto's many test flights in the ornithopter was helping him become more instinctive in flight. Next, the brothers wanted to add a motor onto the glider. In 1896, after the rudder and wings were fixed, Otto had another test flight. However, this flight ended in a crash after Otto lost control and he later died from his injuries. After his brother's death, Gustav bundled up the research. This was not the end of dreams of flight. Two men in the United States were shaken by the death and inspired by the work of the Lilienthal brothers.

Links

Captain Jean-Marie Le Bris Biography

<http://www.flyingmachines.org/lebr.html>

Birds are built for flight

<http://www.learner.org/jnorth/tm/FlightLesson.html>

Video: How bird wings work

<http://www.brainpickings.org/index.php/2012/10/08/how-bird-wings-work/>

Video: Why planes stay in the sky

<http://www.youtube.com/watch?v=GjfUaRahnvY>

Make a paper helicopter

<http://www.wikihow.com/Create-a-Paper-Helicopter>

Photos of Lilienthal's flying machines

<http://www.flyingmachines.org/lilthl.html>

Discussion Questions

Is there anything you care about so much that not even breaking bones would stop you?

Get some art supplies and design your own flying contraption. Write down some notes about how it works (ex: pedals, engine, wing shape, materials, etc).

Can you think of tools or machines other than gliders that are built to fly through the air?

Why do you think the sailors believe killing an albatross is bad luck?

