



Arnold Ebneter '60: Some Dreams Never Die

BY EILEEN A. BJORKMAN

ON JULY 25, 2010, MY FATHER, ARNOLD EBNETER, FLEW ACROSS the United States in the E-1, an airplane he designed in 1960 as an aeronautical engineering student at Texas A&M. Upon landing at Shannon Airport in Fredericksburg, Va., after flying 2,328 miles nonstop, he set a new distance world record for an aircraft weighing under 500 kilograms. Although the flight took about 18½ hours, the 50-year journey was propelled by dreams he'd had since childhood.

Perhaps the meandering road that led to Texas A&M was a harbinger of the E-1's long history. Ebneter left Rensselaer Polytechnic Institute in 1947 after two terms due to rising tuition, and then left the University of Minnesota in 1950 when the Korean War started. After flying research balloons for General Mills as part of a Navy contract, he joined the Air Force in 1952 as an aviation cadet, earning his commission

Ebneter poses with the E-1 after his record-breaking flight.

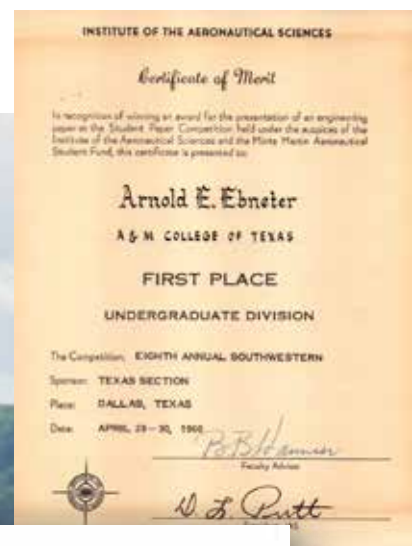
and pilot wings in 1954. He then flew F-86s and F-100s at Foster Air Force Base near Victoria, Texas.

Although Ebneter loved flying fighter aircraft, his lack of a college degree nagged at him. As a teenager, he had paid for flight lessons in a Piper J-3 Cub by recovering airplanes for the local airport. From that experience, he decided to be an aeronautical engineer, an aviation mechanic, and a pilot so he could design airplanes, build them, and then fly them—what could be better? In 1957, as he approached his 30th birthday, he applied for an Air Force program to finish his degree.

When Ebneter arrived in College Station to begin his studies in the summer of 1958, he was married with two small children (including me) and another on the way. By early 1960, the only thing left for graduation was a senior project. As he considered a topic for his project, he stumbled over a short article about Juhani Heinonen, a Finnish pilot and engineer who had set a world distance record in 1957 in an airplane he had designed and built himself. Ebneter wondered if he could accomplish such a feat, and a few days later his faculty advisor, Ben Hamner, blessed the attempt at a record-setting design.

Ebneter laid out his design and the reasons for his choices regarding major characteristics such as wing layout, landing gear, and engine in a paper. In the end, he thought he might more than double Heinonen's 1,767-





ABOVE: Arnold Ebnetter '60 lands his E-1, an airplane of his own design, at Harvey Field in Washington. At age 82, he flew the E-1 more than 2,300 miles across the U.S. without stopping.

TOP RIGHT: Ebnetter's design for the plane won first place in an aeronautical sciences competition in 1960.

RIGHT: Ebnetter was 32 on the day of his graduation from Texas A&M in 1960.



mile record. Impressed by the design, Hamner and other A&M engineering professors submitted Ebnetter's paper to a regional student competition sponsored by a professional engineering organization, the precursor to the American Institute of Aeronautics and Astronautics. The competition, held at a hotel in Dallas, included students from 12 other top engineering schools, such as Notre Dame and the U.S. Air Force Academy. Students presented papers on topics such as "midcourse interplanetary guidance," but Ebnetter's paper was the only one focused on the design of an actual airplane, and perhaps that persuaded the judges to award him the first-place prize, along with \$300.

Ebnetter planned to use the \$300 to start building his record-setting airplane right away. However, he spent the next 14 years flying the F-100 on various overseas deployments, including Turkey and Vietnam, and bouncing around the United States on various assignments. He retired from the Air Force in 1974 and moved to Seattle to work for Boeing as a safety expert, not his dream job of design engineer.

Seattle held new distractions to building the E-1, among them flying part-time as chief instructor pilot for a local airport, becoming a designated pilot examiner for the FAA, restoring a Piper J-3 Cub for my mother, Colleen (also a pilot), transporting fish in Alaska, and flying a thunderstorm research aircraft in New Mexico.

In the mid-1990s, Ebnetter retired from Boeing to focus on completing the E-1. In 1999, with the E-1 about half finished, Colleen died unexpectedly, leaving Ebnetter to focus on his dream without his biggest fan.

In July 2005, the E-1 finally made its first flight. After working some minor bugs out of the airplane, Ebnetter spent four years making refinements to increase the E-1's speed. He made an attempt at the record in 2009, but low clouds in the Seattle area wouldn't let him take off from Paine Field in Everett, Wash. A year later, on July 25, 2010, everything came together.

Although Ebnetter never met his original goal of working as a design

engineer, he says his crooked path was ultimately more satisfying. By being open to opportunities as they came along, he experienced many more things than he would have at the same job his entire life. And he points out, "If I had worked for Boeing or Cessna or Beechcraft as an engineer, I would have designed one small part of an airplane. No one at those companies really designs the whole airplane anymore. But I can say that I designed every single bit of the E-1, and that I know where every single part is, what it does, and why it's there. No one at Boeing can say that about the airplanes they work on."

Often the road taken turns out to be the best.

More details on Arnold Ebnetter's adventurous life can be found in Eileen Bjorkman's book, The Propeller under the Bed: A Personal History of Homebuilt Aircraft. For more information, see tx.ag/AggieBooks.