HISTORY ON THE ROAD "WISCONSIN'S FLYING TREES": WISCONSIN PLYWOOD INDUSTRY'S CONTRIBUTION TO WORLD WAR II



hat war brings technological advances on the battlefield is well documented. What has received little attention from historians and museums are the revolutionary changes

that war can bring to the forest products industry thousands of miles from the battlefield. The traveling museum exhibit, "Wisconsin's Flying Trees: Wisconsin Plywood Industry's Contribution to WWII," examines the evolution of machinery, the wood manufacturing process, and aircraft construction that took place in Wisconsin during World War II. The exhibit, which will tour Wisconsin in 2006 before going on the road in 2007, illuminates the contributions of the numerous Wisconsin forest products companies and the men and women who worked for them during the war. Corporations, museums, and individuals throughout Wisconsin, the United States, Canada, England, and Germany have contributed to the fascinating story of the race for aerial superiority during World War II and Wisconsin's critical role in the Allied victory.

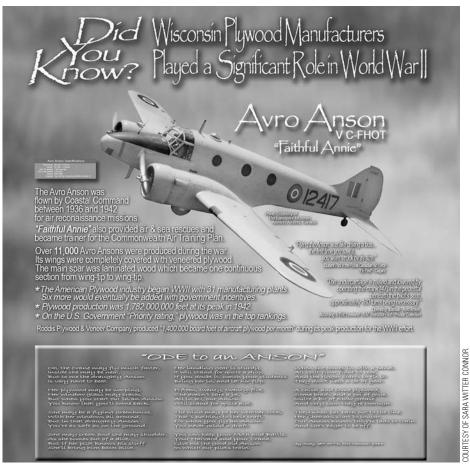
The story behind the victory begins in the depth of the Great Depression, which decimated not only the forest products industry, but also the fledgling aviation industry. Unfazed, John E. Parker, a former naval officer turned financier, had his New York-based investment firm of Auchincloss, Parker and Redpath re-evaluate the U.S. aircraft industry in 1937. Sensing opportunity, the firm decided to heavily invest in companies like Cessna, Bell, Boeing, Piper, and Northwest Airlines. Parker also formed the Northwestern Aeronautical Corporation that same year and established a relationship with Northwest Airlines that eventually led the new firm into the glider business.

Two years later, World War II began with Germany's invasion of Poland, which drew Great Britain into the war. Britain

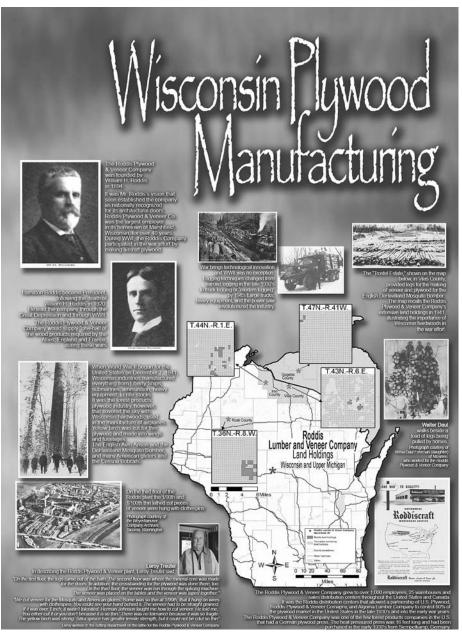
desperately needed war matériel. The Lend-Lease Program, designed by President Franklin Roosevelt to help the cashstrapped Brits, created an immediate demand for ships and airplanes from American companies and contributed to the resurrection of the American industrial sector, especially the forest products industry. After the United States entered the war in 1941, Northwestern Aeronautical became the second largest builder of gliders for the Army. The firm, along with Steinway & Sons, Pratt-Read Company, Cessna Aircraft, and twelve other military glider manufacturers, turned to central Wisconsin plywood makers for supplies. Roddis Plywood and Veneer Company, as well as Lullaby/Oshkosh Pluswood/ Northern Veneer Company, met that demand here

at home and also supplied Sir Geoffrey DeHavilland's firm, which built the famed "Mosquito," the fastest airplane manufactured during the war. The Roddis Plywood and Veneer Company boasted having supplied one-half of the wood products required by England and France for the war effort.

"Modern logging" got underway during the war, with the introduction of the two-man power saw, and big trucks and caterpillar tractors to move the logs. It also brought the end of logging camps and railroad logging. All this played out in Wisconsin's "Northwoods," from which came the yellow birch critical for ship and aircraft construction. Wisconsin plywood manufacturers not only controlled 60% of the plywood market in the U.S., but,



Sample panel from the traveling exhibit, "Wisconsin's Flying Trees."



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building on the pioneering research of Dr. James A. Nevin at Harbor Plywood in Washington, they developed additional waterproof glues and laminates that would help aircraft withstand the Pacific tropical humidity. Gluing techniques for plywood, particleboard, and paper laminates were adapted for use in the emerging plastics and fiberglass industries. The U.S. Forest Products Laboratory in Madison, Wisconsin, worked hand-inhand with industry to test aircraft plywood for stress, sheer, and glue capabilities. With the unrivaled contribution of Wisconsin's "flying trees," the Allies prevailed.

The exhibit tells the story of the companies and the men and women who worked the factory floors. Women who worked on the veneer and plywood panels tell their stories about being "Women on the Homefront" and "Rosie the Riveter." Wisconsin men who made the doors for Henry Kaiser's Liberty Ships discuss working for the war effort. The same technologies used by these men and women were applied to Howard Hughes' ambitious airplane project, the "Spruce Goose," which was conceived as a "flying boat." Once again, Wisconsin's birch region supplied the wood for the effort.

Sara Witter Connor, granddaughter of Hamilton Roddis, who guided the plywood firm from 1920 through the depression and war years, is Director of Education/

Curator of Camp 5 Museum Foundation. For Connor, her interest in the topic went beyond familial ties. She's also a commercial jet pilot herself: "Creating the exhibit was a natural outgrowth of my love of aviation. The story needed to be told while the people who can tell the story are still alive. Central Wisconsin was the core of aircraft plywood in World War II! The exhibit honors those who not only fought in WWII, but contributed so much to the Allied victory at home. I have actual aircraft pieces, and have participants from throughout the country, England, Canada, Australia, and Germany. I wanted to substantiate the history, too. My research is ongoing at the University of Wisconsin's school of forestry." In addition to her pilot's license, Connor has a M.S. in Curriculum and Instruction. As a teacher, she created "Forests for All: The Economics of Conservation." Presently, she is President of the Forest History Association of Wisconsin and editor of its magazine, Chips and Sawdust.

The interpretive traveling exhibit opened at Camp 5 Museum on July 8, 2006, in Laona, Wisconsin. It will open at the University of Wisconsin, Marshfield, in the Hamilton Roddis Library on October 12, and the U.S. Forest Products Laboratory in Madison, Wisconsin, in January 2007 before beginning its nationwide tour. The exhibit opens at the Airborne and Special Operations Museum in Fayetteville, North Carolina, in April 2007; continues to the Oshkosh Public Museum in the summer 2007; Evergreen Aviation Museum in McMinneville, Oregon, for the 60th Anniversary of the Flight of the "Spruce Goose" in November 2007; the Silent Wings Museum in Lubbock, Texas, in the winter of 2008; and the National World War II Museum in New Orleans in the spring of 2008. "Wisconsin's Flying Trees" was made possible by a grant from the Hamilton Roddis Foundation through the Camp 5 Museum Foundation in Laona, Wisconsin. Other exhibit items were made possible by the Mead-Witter Foundation and Plum Creek Timber Company in Tomahawk, Wisconsin. The exhibit was prepared by Northwoods Graphics Display. For more information, contact Sara Connor at SWCN6488SC@aol.com or visit www.camp5museum.org.

—Sara Witter Connor and James G. Lewis