When Duke lost the Rose Bowl ...at Duke Stadium

In 2021, due to the Covid-19 pandemic, the Rose Bowl, the "Granddaddy" of all college football bowl games, was not played at the Rose Bowl stadium in Pasadena, California; it was played at AT&T Stadium in Dallas, Texas. (Alabama beat Notre Dame and went on to defeat Ohio State in the championship game.)

But that's not the only time the game was moved. Back in 1942, due to paranoia following the attack on Pearl Harbor and the threat of further Japanese military aggression, the Rose Bowl, with Oregon State and Duke set to play, was moved from the West Coast to Durham, North Carolina, site of Duke University. The highly favored Duke Blue Devils were upset by the Oregon State Beavers, 20-16, in a game played under adverse weather conditions. The teams were tied 7-7 at halftime. Oregon State head coach Lon Stiner gave an impassioned halftime speech, interrupted by an inebriated fan looking to urinate in the Beaver locker room. The 1942 Rose Bowl was the only Rose Bowl victory for the Beavers and it's the only time the two programs have played each other. Duke head coach Wallace Wade and many of the game's players ended up fighting in World War II. Oregon State left guard Frank Parker saved the life of Duke backup quarterback Charlie Haynes in Italy after Haynes had been severely wounded. Parker carried Haynes on his back to an abandoned farmhouse to get medical attention. During the Battle of the Bulge, OSU right tackle Stan Czech shared some food with a fellow soldier who had not eaten in two days. Czech soon recognized the soldier as Coach Wallace Wade. Later, Czech was taken prisoner, escaped and recaptured, and spent six months in a POW camp. Oregon State's Gene Gray flew more than 30 bombing missions over Germany.

Sidenote: Following the 1961 season, Ohio State turned down an invitation to play UCLA in the Rose Bowl. The OSU faculty voted to reject the invitation because they thought academics should take priority over sports (besides, the Buckeyes had already beaten UCLA during the regular season). Ohio State students burned effigies of faculty members, broke windows, and marched downtown to the State Capitol. Coach Woody Hayes, of all people, brought calm by supporting the faculty vote even though he disagreed with it. "Football is not worth it," he said. Minnesota went to the Rose Bowl instead, and beat UCLA. Ironically, Hayes' successful career ended when he was fired for punching a rival player at the 1978 Gator Bowl.

Sources: The Chronicle, Duke University; Los Angeles Times; Bob Greene, Wall Street Journal.

Roadside Attraction

Space Shuttle Fuel Tank...Stranded

Sitting on a side street just off the Leonard C. Taylor Parkway, nestled among the dozens of dry-docked watercraft off Green Cove Springs on St. John's River in Florida, is a curious and difficult-to-miss historical object, a relic of the 20th-Century space program. The yellowish-orange cylindrical space shuttle external fuel tank sitting on its side fascinates the observer due to its size — 154 feet long (15 stories high if stood on end) and 28 feet in diameter. It weighs 37 tons empty, and when full holds half-a-million gallons (1.5 million lbs.) of super-cold liquid hydrogen and liquid oxygen.

The tank sits on a wheeled trailer by the side of the road, accessible to anyone interested enough to stop and gawk. Up close, an object so large and so smooth and brightly and evenly colored is difficult to comprehend. There is nothing to compare it with.

The contractor for the external tank was Lockheed Martin (previously Martin Marietta) in New Orleans, La. The tank was manufactured at the Michoud Assembly Facility in New Orleans, and was transported to Kennedy Space Center by barge. The 900-mile voyage usually took six days.

Launched with the space shuttle and two rocket boosters, the fuel tank was jettisoned ten seconds after main-engine(s) shut-off (8 minutes and 30 seconds into the flight and 70 miles high). The tank was destroyed while re-entering the earth's atmosphere. A total of 136 of the giant tanks were constructed.

The Green Cove Springs tank was the third and final test tank for the Space Shuttle Program and was used for structures/stress testing at NASA's Marshall Space Flight Center in Huntsville, Alabama, between 1977 and 1980. No longer needed, it was put on display at NASA's Stennis Space Center in Mississippi. In 1997, it was moved again to Kennedy Space Center (KSC) until 2013. After the space shuttle program ended in 2011, NASA began selling off surplus equipment. The Wings of Dreams Aviation Museum in Keystone Heights, Florida, won the rights to the surplus fuel tank. With the assistance of private volunteers, the relic was transported on a 200-foot barge and two



The Space Shuttle *Atlantis* at lift-off, with the huge fuel tank and two booster rockets attached. (NASA)

tugboats from Kennedy Space Center up the intercoastal waterway, through Jacksonville and south up the St. John's River to Green Cove Springs. Then it was supposed to be towed on land the final 55 miles to the museum in Keystone Heights. However, the logistical nightmare of having to close major highways, take down power lines and other cables, and road conditions in general prevented the movement of the gigantic object, which is probably visible from space (it certainly can be Googled on a satellite map). No aviation-related object that large has been moved on land since Howard Hughes moved his Spruce Goose, a gigantic eight-engine wooden cargo seaplane, from California to Oregon 80 years ago. The Spruce Goose flew only once.

The Military Museum of North Florida, a collection of artifacts from all services and all American wars, is just across the highway and worth a look. The actual space shuttle *Atlantis* (33 space missions) can be seen at Kennedy Space Center in Florida, but the external fuel tank there is only a replica.