

FIRST COAST CATTLE, LLC



WHERE
IT ALL
BEGAN

U.S. Cattle Industry: Saint Augustine, Florida

*DNA confirms local cattle herd
closely related to Spanish cattle from
Saint Augustine's early history.*

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Fall roundup

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WHERE IT ALL BEGAN

DNA tests conducted by the University of Missouri have linked Florida Cracker cattle owned by Allan Roberts of First Coast Cattle, LLC to cattle remains nearly 400 years old discovered in historic St. Augustine, Florida. According to Roberts and several experts this is the first time this connection has been demonstrated through DNA testing.



Florida Cracker cattle

Cattle were introduced to Florida by Spanish explorers and colonists in the 1500s. In 1521, Juan Ponce de Leon brought a small herd of cattle from Andalusia, Spain to Florida when he attempted to establish a colony on the southwest coast, the first record of cattle being brought to what is now the United States. Ponce de Leon's party was attacked by Calusa Indians and forced to retreat to their ships; he was wounded and died a few weeks later in Havana, Cuba. While some

cite Ponce de Leon's cattle as the beginning of Florida's beef industry, many historians doubt those animals survived and multiplied. Attempts by other Spaniards to establish cattle herds followed, but it is difficult to ascertain how many of these cattle may have survived. According to historian Joe A. Akerman, author of *Florida Cowman: a History of Florida Cattle Raising*, "Probably the cattle that really stayed on were those brought by Pedro Menendez de Aviles. Menendez came here in 1565 and established the oldest permanent city in the United States, and that, of course, is St. Augustine. And he brought several hundred head of Andalusian beef with him."

The Andalusian cattle were eventually distributed throughout Latin America and the American West. They were initially known as *criollo* (Spanish for "traditional") cattle—a term still popular in Latin America. In Florida, these cattle eventually became known as Cracker cattle. The cattle descended from the original Spanish stock are known today as Pineywoods cattle in southern states including Mississippi, Alabama and in Georgia. Sometimes the terms Pineywoods and Cracker cattle are used interchangeably in northern and western Florida.



Don Pedro Menéndez de Avilés portrayed by Chad Light & Fernando Arango as Don Juan Ponce de León

Cattle roamed freely on open range, foraging in woodlands, scrub, and prairies. They became well adapted to the environment and multiplied in great numbers. Some historians estimate there may have been as many as 600,000 wild cattle by the time of the Civil War. In the late 19th and early 20th centuries Florida cattlemen began to "improve" their herds by introducing more heavily muscled, "beefier" bulls of British breeds such as Hereford, Shorthorn and Angus, and later heat-tolerant Brahman cattle from India. As a result of the crossbreeding, the original Spanish cattle were nearly bred out of existence.

In the 1970s, Florida Commissioner of Agriculture Doyle Conner began to work with several Florida cattlemen to preserve the native cattle from extinction and establish a

state-owned herd. Eventually a Cattle registry was established and the Florida Cracker Cattle Association was formed in 1988. As a result of similar efforts the Pineywoods Cattle Registry & Breeders Association (PCRBA) was organized and chartered in the state of Alabama in 1999 to preserve Pineywoods cattle. Blood-type technology in combination with expert visual comparison on cattle thought to be the best examples of Cracker and Pineywoods cattle were used in the selection for inclusion in the Cracker and Pineywoods registries. DNA analysis was not employed, as this more precise technology did not exist at the time the selections were made.

The Barnes family of Florala, Alabama, located just north of the Florida-Alabama boundary, maintained control of their cattle for more than a century to ensure their Pineywoods cattle did not mix with other breeds. In 1992, St. Augustine cattleman Allan Roberts purchased twelve Cracker/Pineywoods cattle from the Barnes family herd.



Pottery found in well.

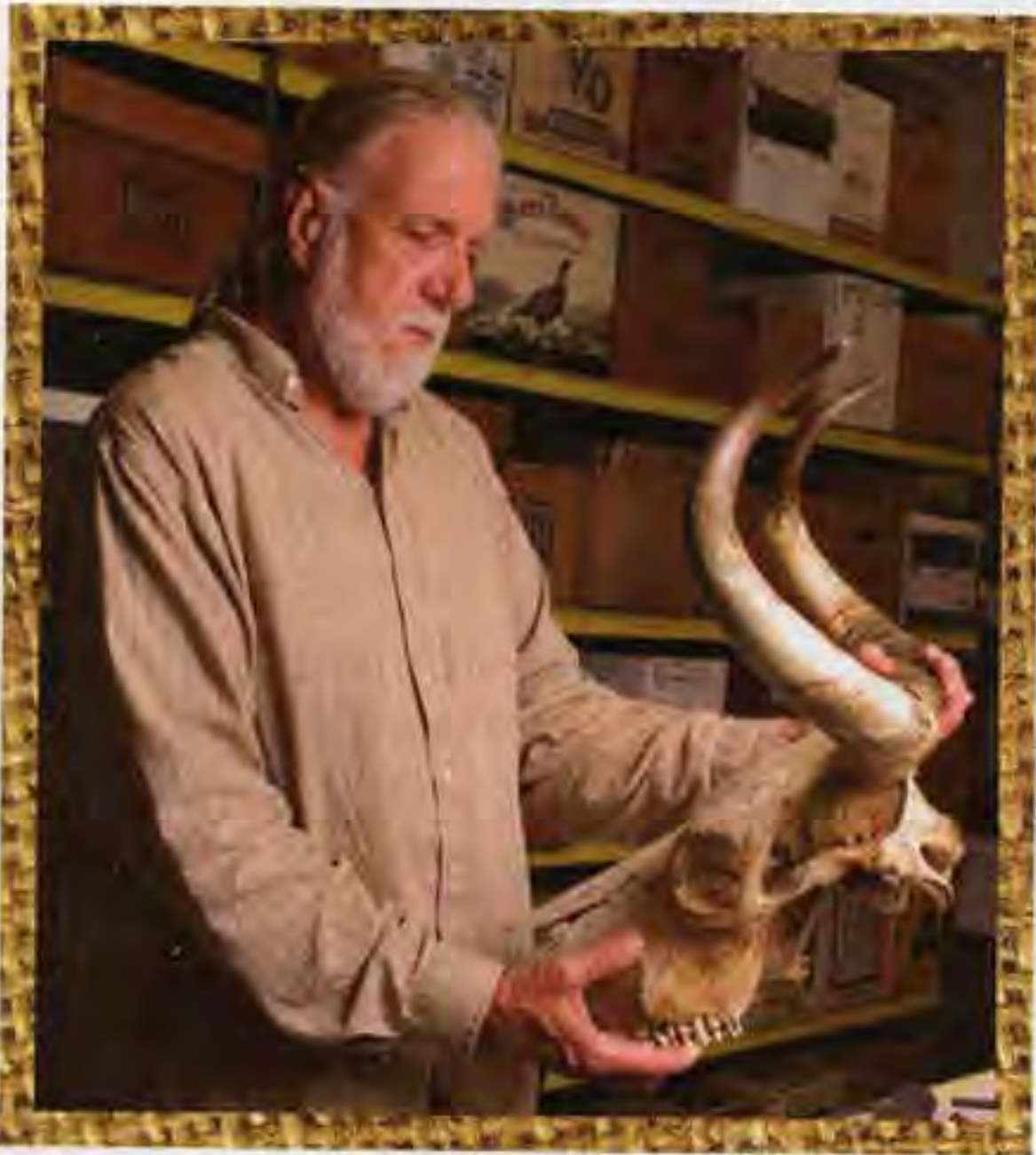


Colorful spring-born calves

Roberts' cattle, which today number over 100 head, are registered with the Florida Cracker Cattle Association and qualify to be registered with the Pineywoods Cattle Registry Breed Association.

A natural curiosity for Florida history—especially the history of cattle—coupled with an appreciation for science and the good fortune of being a St. Augustine native impelled Roberts to embark on a mission to establish solid scientific proof that his cattle

were common descendants of the ancient Spanish cattle of St. Augustine. Everyone knew the reputation of St. Augustine City Archaeologist Carl Halbirt and his volunteers excavating various sites around the city's historic district and read about their findings, so a visit to Halbirt's office seemed like a good place to begin his quest.



Carl Halbirt: St. Augustine Archeologist

1600 to 1625). After it was no longer used as a source for potable water—possibly a result of the sediment seeping through the wooden barrel staves and filling in the shaft—the remaining well shaft became a convenient location to dump trash. The cattle remains were found in the upper well shaft, which dates to about 1624.

Halbirt believes, given the quantity and variety of cattle bone elements present in the well shaft, the remains represent a butchered animal. He noted that numerous bone elements, such as femurs and other long bone fragments, evidenced cut marks indicating a chopping or slicing activity, and that most of the bone elements are represented by what would be present on a single animal. Furthermore, Halbirt stated, "I am of the opinion that what was found in the well is representative of feasting activities, as this type of faunal assemblage is not common in historic archaeological deposits in St. Augustine."

Continuing his quest, Roberts searched for expertise in DNA testing. Eventually he was referred to an internationally-recognized authority: Dr. Jerry Taylor, professor of genetics and animal sciences and chair of animal genomics at the University of Missouri. Dr. Taylor was supervising a comprehensive study of cattle genetics and evolutionary relationships, which was being conducted by Ph.D. candidate Jared Decker. Decker was looking for Florida Cracker cattle to include in the study and Roberts was pleased to have his cattle participate. Dr. Taylor was excited to learn from Roberts and Halbirt that the ancient cattle remains from the St. Augustine excavation could also be included in the study.



Cattle remains discovered in well shaft

To determine if the ancient cow from the well was related to Roberts cattle, DNA from three of its teeth was compared to blood samples from the Roberts herd. The DNA



Cracker Bulls

analysis was conducted at a laboratory at the University of Adelaide, Australia, as Dr. Taylor knew this laboratory to be an excellent facility dedicated to testing ancient DNA.

The results of the DNA testing showed that the ancient cattle remains from the well in St. Augustine and Roberts cattle “share a very recent ancestor,” quoting Decker’s draft dissertation. In other words, the cattle of the Roberts herd are closely related to the cow whose remains were found

in the water well excavation site, which dates to the early 1600s. Roberts cattle, as one would expect, are also closely related to several strains of Latin American criollo cattle.

The DNA tests also revealed something that surprised Roberts and may be news to many readers of this article: his cattle’s DNA also indicates significant influence from crossing with British breeds including Shorthorn, and Holstein, prior to the controls established by the Barnes family 100 years ago. However, this was no surprise to Cracker and Pineywoods cattle experts.

Upon reading a portion of Decker’s dissertation Dr. Tim Olson, retired professor of animal science at the University of Florida who specialized in cattle genetics and was heavily involved in selecting animals for the Florida Cracker cattle registry, stated, “I am pleased that there is a direct descendant to the ancient cow in St. Augustine and not surprised that it shows some evidence of other Northern European breeds.” D.

Phillip. Sponenberg, D.V.M, Ph.D., is a professor of pathology and genetics at the Virginia-Maryland Regional College of Veterinary Medicine at Virginia Tech in Blacksburg, Virginia. Dr. Sponenberg is a recognized authority on heritage livestock and genetics of coat color in both horses and cattle, and has written extensively on the Pineywoods breed. In “Colonial Spanish Cattle in the USA: History and present Status,” an article co-authored by Drs. Olson and Sponenberg in 1992, Dr. Olson stated, “During the early 1900s, and before, there



*Cracker Steers at Florida Rodeo finals:
Silver Spurs Arena, Kissimmee, FL*

may have been some incursions of purebred northern European types into the Cracker cattle. These are most likely to have been of dairy type from milk cows brought with new settlers from other areas of the USA. Devon cattle, for example, were certainly present in Florida by 1860." In "Pineywoods Cattle Strains," (available at www.pcrba.org) Dr. Sponenberg states "...it is appropriate to include within the breed any cattle of long-term residence in the region, reasonably free from recent incursions of



Calves at weaning

outside breeding (last 100 years, ideally) humpless (no Brahman influence), and well adapted." No one can be sure what crossbreeding occurred among Cracker, Pineywoods, and other cattle from the 17th through early 20th centuries. Indeed, specific cattle breeds were not developed until the 19th century.

Establishing the link from the Roberts cattle to ancient Spanish cattle—and specifically to the remains found in the St. Augustine excavation—through DNA testing is exciting news. The evidence of British breeds included in the Roberts cattle DNA reflects Florida's rich history of settlement and cattle ranching. Roberts finds great satisfaction in preserving these heritage cattle and stresses the importance that future generations of cattlemen and cattlemen continue to preserve these special cattle in hopes that science and technology will one day come together to unlock their secrets of longevity and resistance to insects, parasites, and disease. Resistance developed by natural selection for 450 years of living in the hot, humid, rugged Florida environment. Although there have been many advances in today's modern cattle genetics there are desirable traits in these Heritage cattle that could enhance the ability of Ranchers to make further contributions to the U.S. and World food supply.

- Robert Stone; Article for Oct. 2012 FCA magazine

To learn more about heritage cattle visit:

- www.crackercattle.org
- www.pcrba.org
- www.svffoundation.org
- www.albc-usa.org

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"Big Cracker"
Semen Available

Swiss Valley Farm Foundation Immortalizes Rare Barnes Bull

"Big Cracker" may be one old bull, but he's on the cutting edge of science—cryogenic genetic preservation, to be exact. Big Cracker has participated in an advanced form of germplasm collection that will cryogenically preserve his semen and cells—and genetic legacy—for centuries to come. This project is sponsored by the SVF Foundation, a nonprofit organization in Newport, Rhode Island, and a leader in the preservation of America's heritage livestock.

What makes Big Cracker so special? He's an endangered breed evolved from the Criollo, cattle brought to the New World by Spanish explorers in the 1500s. Deposited in the Florida wilds to breed and build up numbers, the Criollo worked their way across the Gulf Coast, adapting to the region's humid swampland, heat and insects, dense forest and scrub, and occasional droughts. Despite these inhospitable conditions, they thrived as a landrace breed and developed their own distinct characteristics, reaching as far as Texas, where they are better known as "Longhorns."

The Criollo's Eastern cousins came to be known as Pineywoods cattle, but you still see the early Spanish influence in the region's place names, such as Andalusia, Alabama, near the Florida panhandle. In recent decades, the Pineywoods' "Florida Cracker" strain was considered distinct enough to deserve its own designation. Big Cracker is descended from the Barnes line, one of twenty sub-breeds so named for the families that started preserving them in the 1800s (the Barnes family lived near Andalusia). While pesticides, medications, and cross-breeding allowed European breeds to dominate the beef and dairy industry, these Southern families tenaciously protected purebred Pineywoods and their hearty traits from extinction. In fact, Barnes cattle are one of the only "families" to be accepted by both the Florida Cracker Cattle Association and Pineywoods Cattle Association.

Pineywoods/Florida Cracker cattle have many naturally selected characteristics that have helped them to survive. Adapted to the Gulf Coast region, the breed is suitable for thriving in extreme weather conditions (drought, heat), resistant to parasites, and able to forage on almost whatever it comes across—tree leaves, grass, brush. Consequently, the breed is considered low-input and low-impact, environmentally speaking. One of the oldest breeds in the United States, it is registered and studied through the Pineywoods Cattle Registry and Breeders Association, the Florida Cracker Cattle Association, and American Livestock Breeds Conservancy.

The SVF Foundation preserves germplasm (embryos, semen, and genetic material) of endangered livestock, including many breeds of sheep, goats, and cattle that are listed as critical or facing imminent extinction. These livestock are some of the oldest "volumes" of unimproved, naturally selected traits in existence. As the commercial meat industry concentrates on fewer and fewer breeds, the world's food supply faces numerous potential crises.

Excerpt from SVF Foundation