

Roots of the Arizona Livestock Industry

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Four and a half centuries ago a 38-year-old Franciscan monk crossed the present international border somewhere near the headwaters of the San Pedro, and the European influence began in Southern Arizona. Fray Marcos de Niza, an Italian, was dispatched by Spanish Viceroy Don Antonio de Mendoza in the name of King Charles V for exploration and spread of the Christian doctrine among the native Americans. Many historians suspect that Mendoza was motivated more by a desire for gold than any true missionary fervor (Corle 1951, Waggoner 1952, Udall 1984).

Legends of the seven golden cities of Cibola and El Dorado lured de Niza and his black-moorish guide Este-

banico far to the north. The good brother laced his reports to the Mexican Capitol with a great deal of imagination which served to inspire the celebrated Coronado expedition. Modern scholars differ as to his motives. Many feel that Fray Marcos was blessed with a gift for fiction, while others defend him with the theory that he was ordered to make certain optimistic reports (Bolton 1949). Although it has been speculated that de Niza may not have penetrated north of the Gila River, members of his party apparently reached Zuni Pueblo (Corle 1951). Under certain light conditions the sandstone buildings of this picturesque village exhibit a spectacular "golden" glow, and this may have contributed to the legend of golden

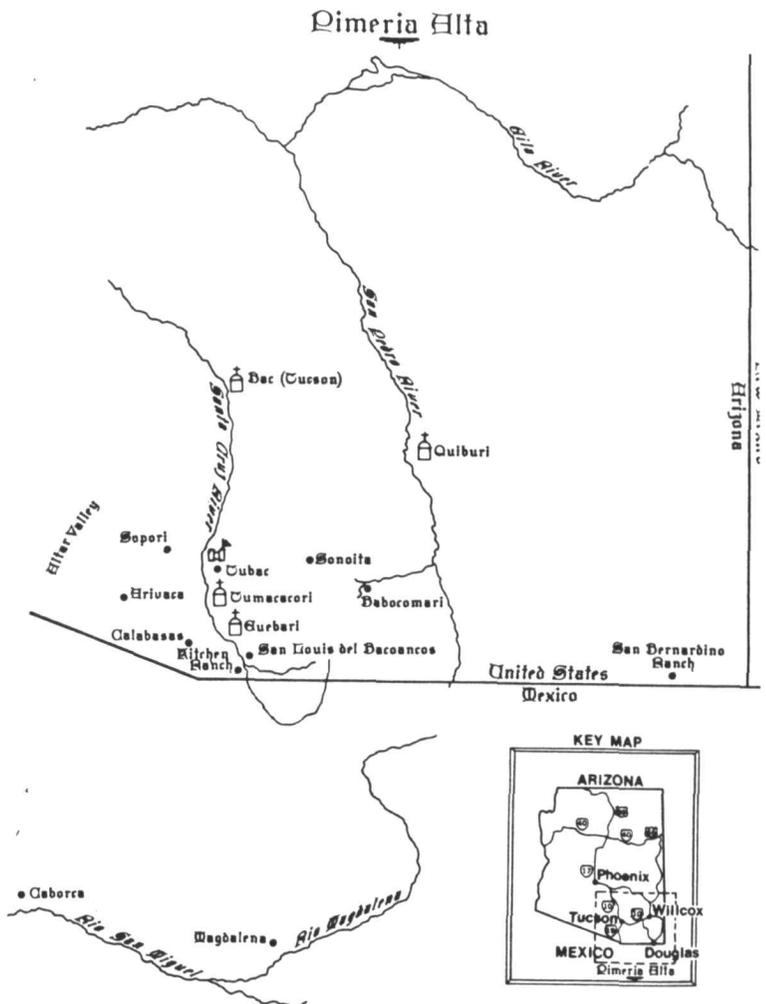


cities.

Spurred on by de Niza's tales of splendor, the Government in Mexico City planned and recruited a large expedition under the leadership of 26-year-old Francisco Vasquez de Coronado. Udall (1984) said, "Coronado's army undoubtedly was the best led and best equipped ever sent into the field from the Capital of New Spain." He estimates the cost at one million dollars. Some speculate that a significant motive of the government was to get the restless young adventurers out of town for awhile. The magnificent expedition set out from Compostela near present day Puerto Vallarta in late February of 1540 with over 300 soldiers and 1,000 servants. Several hundred horses carried the party and their gear. About 5,000 sheep and 150 cattle were taken along for food. Many yarns have been spun around southwestern campfires about mustangs and wild cattle which can be traced back to the Coronado expedition, but no evidence of this exists. These first cattle and horses in Arizona were eaten or died from exhaustion (Wagoner 1952, Bolton 1949). Coronado went north in search of gold and adventure, but he found abundant natural resources and a fertile field for the spread of Christianity. He wrote about his predecessor de Niza, "...he has not told the truth in a single thing..." (Udall 1984). These two expeditions and two other exploratory visits had little or no ecological impact on present-day Arizona (Hastings and Turner 1965). Following the Coronado Expedition, a century and a half passed before white men came to Arizona to stay (Corle 1951).

After his conquest of the Aztecs in 1520 Hernando Cortez, with his outfitter Gregorio de Villalobos, imported six Andalusian heifers and a bull into central Mexico in 1521 and began to promote a Mexican livestock industry. This endeavor was continued by Mendoza when he became Viceroy. As Cortez subdued the Aztecs near modern Mexico City, he used captives branded with a G for guerra (war) to manage his herds. It is interesting to note that cowboys were branded before cattle on this continent (Wagoner 1952). Livestock grazing quickly spread to the lush ranges of the north, and by 1586 Diego de Ibarra had 33,000 cattle in northern Mexico and his neighbor Rodrigo Rio de la Loza had 42,000 (Wagoner 1952).

As the Jesuit Order expanded their influence to the frontiers of New Spain, a priest of Italian descent, Padre Eusebio Francisco Kino, was largely responsible for introducing animal husbandry to Arizona. From Caborca to San Xavier, this Jesuit Missionary founded missions and encouraged the Indians to practice agriculture. Many of these missions still serve the people of Sonora and Arizona. Padre Kino entered Arizona along the Santa Cruz River (near Tumacacori) in 1691 and first went to the village of Bac (Tucson) in 1692. Upon examination of the valley downstream from Bac, he predicted that the area



could someday support a city of 30,000 inhabitants. At that time Northern Sonora had about 100,000 cattle and sheep (Wagoner 1952); and Kino was quick to see that stock raising and farming could provide the attraction which would concentrate Indians around the missions, where they could be educated. In addition to a concern for the spiritual well-being of these native people, the Padre also saw an opportunity to provide an economic base and source of life's necessities. On a trip to Arizona in 1697, he allocated cattle to missions at Quiburi (on the San Pedro), San Xavier del Bac (Tucson), and San Louis del Bacoancos (Kino Spring near present day Nogales). In successive trips, cattle were distributed to all the missions and stock raising spread from there to surrounding Indian villages (Polzer 1982).

Kino was known as the "Padre on Horseback", and his ability to cover the vast reaches of the Pimeria Alta (Arizona and Sonora) is legendary. More than once he was known to have covered 75 miles in one day. In 1698, he made a visit to the pueblos between Caborca and the Gila, covering 25 or more miles per day for 26 days. After he reached 50 years old, he went to the Mexican Capitol by way of Guadalajara in 53 days. On this 1,500-mile journey

he averaged nearly 30 miles a day. In 1700 he went 1,000 miles in a 26-day period (Bolton 1963).

Due to the untiring efforts of this dedicated man of God, stock raising was established at more than 20 locations. On his trips to the Gila he visited the Pimas, but only gave livestock to the Papagos (Bolton 1963). He died at Magdalena, Sonora, in 1711; and his remains are on display in the Magdalena Zocallo about 50 miles southwest of the border town of Nogales (Polzer 1982).

The influence of Kino and his brother Jesuits on the economy and culture of Pimeria Alta was profound. At the time of Kino's death, Christianity was well established in the culture and livestock raising contributed significantly to the economy. Stock raising was intentionally concentrated in the lush valleys near mission churches and any effect on outlying foothill and mountainous rangelands was negligible. The significance of the mission era to modern range management lies in the introduction of livestock to the area and the beginnings of the pastoral culture, not to any widespread impacts on the surrounding range.

Tales of hidden treasure persist to this day. Mostly, they tell of a group of Padres who buried the treasure of one or more churches in anticipation of a raid by the fierce Apaches or Yaquis. The well-known southwestern historian Herbert E. Bolton (1963) said, ". . . the country where they worked is now full of deluded men who are looking for the lost and hidden treasure of the missionaries of olden time. Vain task! For the true soldier of the cross was occupied in conquering the wilderness not for gold, but for the heathen souls which it would yield". The Coronado National Forest of Southern Arizona continues to process applications for treasure hunting. One scar from this activity is visible on the mountainside just northwest of Tumacacori Mission.

In 1694, 100,000 cattle grazed the headwaters of the San Pedro (Southern Arizona) and Bavispe Rivers (North-eastern Sonora) and by 1700, all inhabited parts of the desert had cattle (Hastings and Turner 1965). Arizona's range livestock industry has its roots in the Mexican haciendas that began to be established on large Spanish



Dragoon Mountains, Cochise County, Arizona



Galiuro Mountains, Graham County, Arizona.

land grants about 1699. Some of the larger ranches were at Sonoita, Babocomari, Arivaca, Calabasas, Sopori, Tubac, and San Bernardino. These haciendas prospered for a while as they furnished meat to a growing mining industry and to the military garrisons protecting the missions, mines and ranches. In 1751, the Pima Tribes revolted, missions and haciendas were abandoned, and

all white men left Arizona (Wagoner 1952, Corle 1951).

In 1752, the Spaniards returned and a presidio was established at Tubac. Immediately, the fierce Apaches attacked and the soldados were largely confined to their fort, but the establishment of Tubac marked a turning point from a society dominated by the padres to a military way of life (Corle 1951). European women first came to Arizona at Tubac. For the next century or so ranching in Arizona prospered or declined at the whim of the Apaches, but several large herds were started. Politics in Spain and within the Catholic Church prompted King Carlos III to order the withdrawal of all Jesuit priests from the New World in 1767. These dedicated priests were replaced with the Franciscan Order in about a year, but the fervor and loyalty of the Indians was never the same again (Wagoner 1952, Corle 1951, Hastings and Turner 1965).

Mexican expansion during the early 1800's reestablished the same ranches occupied a century before. Once again great haciendas flourished and herds began to grow in the Altar, Santa Cruz, San Pedro, and San Bernardino Valleys. The Apaches saw these ranches as a ready source of beef and riding stock. Their hit and run tactics and the ability to disappear into the mountains of Arizona and Mexico's Sierra Madre made them a severe challenge to the fledgling military forces. One notable



uprising occurred in 1811; and by the 1830's, the San Bernardino Ranch was again abandoned, allowing 100,000 cattle to go wild. By 1830 the Western Apaches were said to have 30,000 horses within the Gila Watershed (Wagoner 1952, Dobyns 1981). By 1846, all the haciendas were abandoned. Early American settlers found ruins at Babocomari, San Bernardino, Calabasas, Tubac, Tumacacori, and Guebari (Wagoner 1952, Hastings and Turner 1965). Prior to the U.S. war with Mexico, wild cattle were scattered or killed by Apaches or predators. Explorers of this era reported wild cattle over most of Southern Arizona. Reports of the Mormon Battalion dispatched by President James Polk in 1846 to establish a wagon road to California emphasized the many large bulls and warned of dangers from attack by these animals. They encountered more difficulty from wild bulls along the San Pedro than from the Mexican Army at Tucson (Corle 1951).

In 1846, the United States declared war on Mexico, with the objective of expanding territorial limits and providing a route to California. The resulting Treaty of Guadalupe Hidalgo in 1848 added California, New Mexico, and Arizona north of the Gila River to the Union. In this Treaty the United States agreed to honor all legitimate Spanish and Mexican Land grants in the acquired territory. Tubac and Tumacacori were destroyed by Apaches in 1848. Boun-

dary Commissioner John Bartlett, who was in charge of the survey and monumentation of the international boundary, noted small herds of five or six cattle with each bull. He also reported numerous wolves preying on the wild cattle in 1851, and noted that Babocomari Ranch was Sonora's largest with 40,000 cattle (Wagoner 1952, Davis 1982). Late in 1853, the Gadsden Purchase added the area south of Gila to the United States and established the present international boundary (Corle 1951).

Emigrants to California began to bring in cattle from the eastern United States about 1850, but Indians and white outlaws continued to make stock raising difficult until after the Civil War. Most observers do not feel that cattle numbers were sufficient to cause lasting environmental change over large areas of rangeland until the late 1860's. From 1861 through 1865, the war between the States interrupted the marketing of cattle and large herds of longhorns were allowed to build up in Texas. As the war ended in 1865, these cattle were moved north and west from Texas in search of a market or rangeland. Thousands of Texas cattle were brought to Arizona to feed the military personnel and their Indian wards. Many other cattle passed through on the way to California (Wagoner 1952).

A few brave ranchers like Pete Kitchen of Nogales had been able to survive the Apaches. When told that the Apaches would shoot anyone who wore a hat. Kitchen announced his intention to shoot anyone who did not (Corle 1951). General George Crook, using tactics similar to those of the Indians and with the help of Apache scouts, subdued most Apaches by 1870. This made the country safe for stock raising and set the stage for an unprecedented build up in stock numbers (Wagoner 1952, Bourke 1891). "Texas John" Slaughter purchased the San Bernardino Ranch, one of the oldest haciendas, in 1884. This ranch was strategically located along the California Road at the Mexican border and had long been used as a headquarters for the Army (Laetz 1986). The Mormon Battalion camped there in 1846 and General Crook used it as a base to pursue renegade Apaches into the Sierra Madre in 1883 (Thrapp 1972). The best known Apache leader, Geronimo, surrendered to Crook's successor, General Nelson A. Miles for the final time in 1886 and was deported to exile in Florida and Oklahoma along with the loyal Apache Scouts (Mails 1974, Sonnichsen 1986, Thrapp 1967).

An 1870 census indicated only 5,132 cattle in Arizona. It is known that some attempt was made to hide these assets from the tax collectors, but this indicates a minor role for livestock. In 1877, Arizona Governor Safford reported that stock raising had become a leading industry with hundreds of thousands of cattle coming from adjacent states. Most of the land was unregulated public domain with "first come, first serve" grazing. By 1891, one and a half million cattle grazed in Arizona, (Hastings and Turner 1965) with a significant proportion of these on the ranges south of the Gila. Historian Jan Wagoner (1952) reported that range use expanded rapidly from 1876 to 1880. He

said, "The primary objective cattlemen up to 1885 was numbers. Overstocking was the inevitable result of unrestricted use of the federal range. . ."

It is generally agreed by observers, with the wisdom of hindsight, that cattle numbers by the mid 1880's far exceeded the capacity of Southern Arizona's ranges. The reasons for this overstocking and the specific combination of factors which brought about the ensuing sudden downcutting of streams, accelerated erosion, or loss of range productivity are still debated. Early land laws were applied equally in the arid West but the amount of land allowed in a homestead or grazing lease was much too small to support a family (Stoddart et al. 1955). While studying the ecology and distribution of Sacaton grass in Southern Arizona's desert valleys, Cox (personal communications 1985) postulated that early stockmen came to Arizona from more moderate climates and lacked a frame of reference for estimating proper stocking. After several favorable growing seasons they encountered a lush grassland with a near yearlong growing season. Their inflated estimate of carrying capacity was logical, but very wrong. In many areas such as Ft. Lowell (near Tucson) the lush native grass was cut for hay. This harvest combined with overgrazing to set the stage for the events of the late 1880's (Wagoner 1952).

By 1885, cattle were present in sufficient numbers to severely lower the vigor of native grass plants. A severe summer drought finished off many of the weakened grass plants and cattle began to die. Cooke and Reeves (1976) speculate that a scarcity of light "grass rains" in the late 1800's could have weakened native grasses at the same time livestock numbers were peaking. At the same time the price of cattle fell from \$35 per cow to \$10 and in 1890 the railroad increased shipping rates. These factors combined to make it difficult for ranchers to respond to nature's warning by decreasing stocking levels. Good rains in 1888 and 1889 postponed the inevitable disaster. The worst drought on record occurred in 1892-'93. During May and June of 1892 more cattle died, and many were shipped to market that fall. As the drought continued, 50 to 75% of the animals on the range perished in the summer of 1893 (Hastings and Turner 1965). Between Florence and Tucson only 250 calves were branded in 1893 and many wells were completely dry. By June, over 200,000 cattle had been shipped from Arizona's range (Wagoner 1952).

Ecological changes occurred as the inevitable floods followed the drought. Dobyns (1981) records major floods in 1887, 1890, 1891, 1905, 1906, and 1916. Hastings and Turner (1965) indicate that, prior to the severe over-

grazing, floods were common; but they spread over the broad grassy valleys with few ill effects. As European man began to alter the landscape, his ditches, levees, wagon roads, and railroad embankments furnished a loci for the initiation of downcutting (Cooke and Reeves 1976). With the elimination of effective ground cover, frequency and severity of floods increased. Downcutting of the San Pedro and Santa Cruz channels can be traced to a single flood event in August, 1890. Prior to that cataclysmic event, these currently dry arroyos were slow-moving, marshy streams with beavers and fish. They are now dry desert arroyos, with only intermittent flows.

Cattlemen who witnessed these severe changes to Southern Arizona's ranges saw a need for regulation of livestock numbers and grazing practices. This set the stage for the conservation movement of that era to spread to the Southwest and resulted in a general public acceptance of the establishment of Forest Reserves beginning in 1902.

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