

## EVALUATION OF THE CRUCE HERD OF HORSES

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This evaluation of the Cruce line of horses is the result of a visit to the Cruce property on January 24, 1990.

The Cruce horses are one of a very small handful (five would be a very optimistic estimate) of strains of horses derived from Spanish colonial days that persist as purely (or as nearly as can be determined) Spanish to the the present day. Most other strains have long been absorbed into the Quarter Horse breed (with draft and thoroughbred influence) or have undergone extinction. They are the only known "rancher" strain of pure Spanish horses that persists in the southwest. The Cruce horses are of great interest because they are a nonferal strain. The only other strains of Spanish horses that persist to this day are the feral strains in certain isolated areas (Kiger and Cerbat BLM herds currently, although examples of pure horses of other populations now extinct or contaminated are present in owned, managed herds), and the Choctaw/Cherokee strains which originated in the Southeast. To this very short list can be added the Belsky and Romero/McKinley strains, but neither of these can claim the historic isolation that the Cruce horses have had, and both are of somewhat doubtful purity as to Spanish ancestry. The Cruce horses, as a nonferal strain, are therefore truly unique.

Visual examination of the Cruce herd indicates that the herd history is very likely accurate. The horses are remarkably uniform, and of a very pronounced Spanish phenotype. In some instances this is an extremely Spanish type, such as is rare in other Spanish strains persisting in North America. This type is illustrated in paintings of Spanish horses during the colonial period, and it was a pleasant though great surprise to see it persisting to this day. The horses varied over a very narrow range from this extreme type to a more moderate type that is more common in other North American strains and Iberian strains today.

The color range of the Cruce horses is varied, but less so than in the past. Dun, grullo, buckskin, and palomino occurred in the past but were not seen during this inspection. Most horses are chestnut, including some very good examples of the rare "black chestnut" shade and some flaxen maned individuals. Blood bays were also present, as well as a few black horses. Greys were few in number, as were tobiano, overo, and sabino paints. The overo is only known to occur in horses of Colonial Spanish descent, and only in North America (elsewhere it can be traced to importation from North America). Only a single example of a true roan was seen.

The need to conserve this herd is great, since they do represent an unique genetic resource. The Food and Agriculture Organization of the United Nations has become interested in rare breed conservation over the last fifteen years, and their interest in horses is limited to those breeds that are uninfluenced by the Arabian and the Thoroughbred. The reason they have limited their interest and energy to horses without such influence is the incredible scarcity of such populations worldwide. The Cruce horses fit in this category very securely, and are therefore of great interest and importance not only in North America. but also in the worldwide efforts to

conserve genetically unique populations of livestock.

The American Minor Breeds Conservancy is very interested in this population. It must be emphasized that this interest is very great in the case of Cruce horses, and very limited with regard to most other horse types. For example, the AMBC has no interest in the conservation of western feral populations except for the few (two) of purely Spanish phenotype. The Cruce population is a most significant discovery of a type of horse largely thought to be gone forever.

the rescue of the Wilbur-Cruce horse herd

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The American Minor Breeds Conservancy was fortunate recently to have been able to directly intervene in the conservation of a unique herd of horses. This is exciting work for the AMBC, and this rescue was very helpful in formulating the ways and means by which rescues can be effectively accomplished. Such rescues always have two sides to them. The one side is that if AMBC is truly effective then direct intervention and rescue should be unnecessary since all populations and breeds will have dedicated breeders. However, in cases where unique populations are in peril it is essential for AMBC to move in, and to do so effectively. With these comments as background I will describe and evaluate this rescue. Many lessons can be learned from this sort of work, and the lessons are as important as the specific rescue since the lessons can be reused with other populations in the future.

The Wilbur-Cruce herd was located on the Buenos Aires ranch near Arivaca, Arizona. This ranch had been in the ownership of one family since the 1600's. The horses on the ranch had been bred by several generations of the ranch family (originally Wilbur, but now Cruce through marriage). Eva Cruce, the present and elderly owner, states that the herd began with the purchase of 25 mares and a stallion from Juan Sepulveda of Magdalena Mexico. These horses were purchased by her grandfather in 1885. No other horses had been added to the herd with the exception of a single stallion, reputedly a "paint Morgan" from Colorado that ran with the herd for two years in the 1930s. This history is interesting, since these horses had a very high likelihood of being purely Spanish ranch stock from the Southwest. Such stock is very rare, even in the Mustang registries which cover pure Spanish stock (Spanish Mustang Registry and Southwest Spanish Mustang Association). As to the "paint Morgan", he could have had some effect on the herd, but was unlikely to be the same as Morgans today (color alone would rule that out) and was likely Spanish himself. The terrain is very rugged in Arivaca, and he could only have had minimal impact on the herd at any rate.

A further word on the original horses is that they are from the area in which Eusebio Kino was essential in encouraging the production of livestock. This occurred in the late 1600s and early 1700s. He brought in good quality stock of various species and was essential in the establishment of the mission chain in Northern Mexico and southern Arizona. This increased the interest in these horses, for we do not know how many of this sort of horse survive in Mexico.

The land on which the horses ranged varies from steep rocky mountains with cactus and ocotillo, to a creek bed with lovely cottonwoods. This land is adjacent to the Buenos Aires National Wildlife Refuge, and Mrs. Cruce was selling the land to the Nature Conservancy to be added to the Refuge. This refuge has the specific mandate to conserve the Masked Bobwhite Quail, which is an endangered subspecies of Bobwhite Quail. As such, the horses had to be removed since the refuge has no such mandate for horses.

Fortunately the mustang grapevine found out about these horses, and that is how I became aware of them and their history. This is really the first important lesson in the rescue: each breed and each species benefits from a network of interested people that keep their ears and eyes open. This is the best way to turn up leads of new populations, or of herds about to be dispersed. This informed network is one of the very important functions of AMBC, and keeps rare or unusual herds and flocks from disappearing without a trace, and without

Marye Ann Thompson was the specific part the grapevine that informed me of the horses. She is essential in the conservation of a very unique strain based on feral horses from the Marble Canyon of the Cerbat Mountains in Arizona. I had not seen her in years, so decided, at the bribe of wild horses and hot food, to go out in January and evaluate the Wilbur-Cruce herd with her. We also had an opportunity to evaluate some horses recently captured from the Marble Canyon area, which was an added bonus.

January is a good time to be in Arizona. It is fairly cool and pleasant, and the sun shines more than in the mountains of Virginia. We evaluated what horses we could find. The herd was estimated at between 75 and 100, and we certainly saw 60 or so in one day. The drought had begun, and the lack of water forced the horses to use a few waterholes along the creek. This concentrated the horses for easy viewing. It is amazing, in the mountains, to witness how quickly horses can disappear into thin air. This first inspection was a critical part of the assessment, for it allowed us to determine if the history made since based on visual appearance.

The horses did indeed look pure Spanish, except for a very few, very tame animals that obviously were not part of the same population. We were curious about these, but figured that they would be easy to sort through and remove from the breeding population. The horses were about 14 to 15 hands (slightly larger than many feral strains) and various shades of chestnut, bay, black, grey with some tobiano, overo, and sabino paints. These were very interesting, and indeed popular in the local area as using horses in the mountains. Recent captures for providing using horses had removed many paints, since this was the desired color, but they still occurred in the population. Previously there had also been duns and palominos, but these were popular as well and ended up being taken out of the breeding herds for using horses. The lesson here is that conservation breeders need to watch the rare variants to assure that they persist in the population.

At this point the main lesson was to hurry up and wait. The horses were to be removed by June, but we were hoping that a reversal of policy would be possible and that the horses could remain as a managed herd on the refuge. We did negotiate the donation of the horses by Mrs. Cruce to the AMBC in order to more effectively monitor their status. At this point Mrs. Cruce had a stroke, and we were in fact lucky to have timed the donation when we did so that the horses could be saved. She is now largely recovered from the stroke, but the stroke does serve to illustrate how precariously perched are those populations in the hands of elderly breeders with no interested younger generation.

The drought continued, which had the unfortunate consequence that foals were being killed by mountain lions. This happened to several foals, and indeed many of the older horses have scars that are consistent with previous bouts with the lions. We also had a few horses stolen off the range. Some of these were found, but some very interesting ones were never found and probably never will be. The Arizona state Livestock inspectors must be given full credit for helping effectively with the legal ramifications of the horses, including the stolen ones. They really went out of their way to help, and were essential to the success of the whole operation.

In June, with the drought and the deadline, it was decided to remove the horses and place them with interested breeders. Once again the mustang grapevine

worked well, and we had plenty of breeders used to working with range horses and familiar with conservation breeding. Some people were disappointed in not getting horses, some were critical that it was not more widely publicized. Still, the horses are now in the hands of good breeders, and that was the first priority of the rescue.

The rescue occurred by trapping the horses at water and removing them to holding pens. This went very smoothly under the guidance and hard work of Richard Jordan of Benson, Arizona. His work cannot be praised highly enough. The herd numbered 77, including 7 foals. The rest were half stallions, half mares. Very few yearlings were present, due to the lions killing them. These horses were assembled and placed in the corrals of the Old Tucson movie set and amusement park, which gave the public some chance to see them.

At that point I went back out to Arizona, in the 114 degree heat, to sort through the herd and place the animals with the various owners. We placed all the mares with breeders, and enough stallions to have a viable population into the future. The goal was to place the horses in such a way that the genetic variability was fairly evenly distributed throughout the herds. Excess stallions were auctioned, on a very hot evening. They brought less money than expected, but Marye Ann Thompson, who was at the auction, says that all ended up as using or breeding horses and none went to the meat market. This is amazing, given the age and sex of the horses sold.

Blood samples were also taken for blood typing. It became apparent in looking at all the horses captured that some few were probably not Spanish, and the blood typing was expected to be the final clue. A few horses were obviously not right: there were two tattooed racing Quarter Horses in the herd! These had been stolen in the fall, and put on the range, probably to be picked up later. It is uncertain the extent to which similar escapades had gone on in the past, but this would certainly change the opinion of the purity of the herd. Fortunately, bloodtyping in horses can help sort through this sort of thing, and Dr. Gus Cothran of Kentucky helped immensely by bloodtyping this herd. This is a time consuming process. The results of the typing indicate that the history is accurate: these are indeed a unique population with a long history of genetic isolation from other horses. The few outside horses had been introduced so recently as to not have any genetic effect on the herd.

The whole rescue was expensive. Some \$14,000 in total, although the AMBC probably saved something very rare in the process. AMBC was fortunate in getting a \$5,000 donation towards the rescue from a donor in Arizona. The auctioned horses produced about \$3,000, with another \$1,000 coming from sale of some of the excess stallions to adopters of the mares. This leaves AMBC about \$5,000 in the red for this rescue. This figure discounts loads of volunteer time, and a very huge number of phone calls while getting everything in place.

AMBC has done something very worthwhile in this rescue. Valuable contacts were made with the BLM, wild horse organizations, and others interested in conserving rare sorts of horses. AMBC also learned a great deal about the value of a network of informed and interested people, as well as how to use the network effectively. In the next few years other such rescues may be possible. It is excellent if AMBC can step in up front, take the animals and the responsibility, and then place them with breeders. With that in mind I hope that AMBC can build a rescue fund so that such endeavors in the future have secure base of funding.