Chapter 3: Genealogy of the THRO Horses

[1] Notable Lineages

Several lineages of horses have had a considerable social and genetic influence on the park herd from the time of the 1954 round-up through the present. These lines are notable for their genetic success, as measured by the number of their descendants, or for some peculiarity of type. A brief discussion of some of these lines follows, based on information provided by Tom and Alvin Tescher, Gerald Barnhart, and John Griggs. Evaluative comments regarding particular horses are those of Tom Tescher, who also provided genealogical data. Numerical identifications of individual horses follow the 1987 census record.

The "Original" Greys

The Teschers and others recall several bands of grey horses that ranged north of the present park boundary along Government Creek circa 1930–1955 and that were considered to be wild and of unknown origin. The Teschers say that this line of greys were not the draft horse type, but smaller and more fine-boned, and extremely wary and difficult to capture. Alvin Tescher remembers a "sharp headed, pink-nosed" grey stallion that had a forelock falling below his nostrils and an exceedingly long mane and tail.
Alvin admired this horse because he was uncatchable and would always manage to re-collect his own mares after local cowboys had dispersed several bands while chasing them through the badlands.

The grey stallion described by Alvin Tescher and several mares (4-5) were shot by a local rancher (Oyhus) around 1950. When the northern part of the park was fenced, another band of the greys were inadvertently enclosed within the park boundary. Some of the early THRO staff were aware of a distinction between these horses and trespass domestic stock, as evidenced by the following statement by former Ranger Robert Morey (SR; THRO 1953-1957):

I was told by the Chief Ranger, Harvey Reynolds (1950), that there were two bunches of wild horses—about 20 head in each bunch. They ranged in and out of the South Unit on Grazing District lands along Government Creek and in the park around the head of Jones Creek, Buck Hill area. As they were building the north boundary fence, some local ranchers attempted to eliminate the horses. They shot one of the herd stallions and a couple old lead mares and were able to corral the rest of that band. The other band ranged in and out of the park during fencing and by chance were in the park when the north fence was closed between the road and east boundary. Probably about 1951 or 1952.

As trespass stock was removed from the park throughout the 1950s, the grey group remained; many of the horses discussed in the Management Section during the 1960s were from this lineage (e.g., pp. 96, 116). A grey stallion first observed by Tom Tescher in 1949-1950 dominated throughout much of that decade. This horse had a malformed back leg, which Tom Tescher believes to have been a birth defect. Nevertheless, the stallion was the “wildest” and most successful in the park, maintaining mares and eluding capture for fifteen years. The horse escaped from traps on several occasions, once climbing an eight-foot corral. It was
roped and removed by Tom Tescher in 1965. A blue roan bald-faced stallion (1960–1980) that was exceptionally wild and that contributed to the blue roan lineage (see below) was sired by one of the grey stallions (either the horse observed by Tescher in 1949–1950 or a second, smaller grey). Several grey stallions and mares extant in the park during the 1970s were descended from this line (see Photos No. 2 and No. 11); an entire band, the "White Bunch," was sold in 1978 (see Photo No. 6). A pink-nosed grey stallion (f. circa 1963; removed) has several direct descendants extant in the park: A-6 (mare), C-2 (mare), C-3 (mare), and E-1 (stallion). The "Painted Canyon stallion," B-1, also goes back to this line of greys through his sire, the "Hereford stud," which came out of the "White Bunch" (see below).

Park memoranda state that the feral horses are descended from "two mares which escaped from the Barnhart ranch and a white stud of unknown ancestry" (e.g. 1976 Resource Management Plan). The "white" stallion was almost certainly the "wild," crippled grey that was dominant throughout the 1960s and that ran with a black and white mare and a red roan mare, both of which had been owned by L. M. Barnhart.

**The Barnhart Horses**

L. M. Barnhart moved to Medora from Grassy Butte in the mid-1940s and often grazed his rodeo and saddle stock in the park until his death in 1961. Most significant of these were two mares: one black with a bald face and a white spot on the right side, the other a bald-faced red roan. Tom Tescher remembers the
black mare as having been "stylish" although both mares were small, common, "Indian type" horses.

These two mares ran with a crippled grey stallion from a line of greys that had been in the badlands prior to NPS jurisdiction (see above). As mentioned, this trio is often credited with providing the genesis of the park herd. While that is an overstatement, they and their offspring have impacted the horses down to the present.

The Barnhart mares and the grey stallion influenced the genetic make-up of the park horses primarily through two black and white (overo paint) colts foaled by the black mare in 1960 and 1961. The younger of the colts, described by Tom Tescher as "snip-nosed" and as the uglier of the pair, retained 2-4 mares until circa 1980, when the stallion became crippled and was shot by NPS personnel along I-94 (see Photo No. 5). A "good looking" grey stallion, probably related to the paint through the "original" grey line, "ran second" to the paint stallion; this band ranged between Goens Dog Town and I-94. The older paint colt out of the Barnhart mare was less prolific and lived with one or two mares and several bachelor stallions. It is probable that he sired a black, bald-faced stallion removed from the park and sold to a stock contractor in 1981 (see Photo No. 10). In old age this stallion was a loner in the vicinity of Paddock Creek; the horse died of natural causes in the winter of 1975.

In 1969 the "snip-nosed" paint stallion sired a blue and white colt from a white mare. From a second white mare the same year, the stallion sired a blue and white paint filly. Both of
these half-siblings matured as grey horses. The filly was later called the white "Lindbo mare" because the Teschers once roped her on Lindbo Flats. At one time the "Lindbo mare" ran with the "White Bunch" of grey and white horses that was eliminated in 1978. Leo Kuntz, Jr., owns a black, blue-eyed mare (f. 1974) out of the "Lindbo mare" captured and sold by the Thompsons after the 1978 round-up (see Photo No. 120). Kuntz also owns a gelded roan horse out of the 1974 black mare.

The blue and white paint colt (f. 1969), roped and earmarked by the Teschers in the early 1970s, acquired two mares in 1972. One was a brown Thoroughbred-type filly (f. 1970) that probably wandered from Ralph Mosser's ranch as a weanling and was henceforth known as the "Orphan Brown mare" or the "Good Brown mare." This brown mare had foals by the paint (grey) stallion until that horse was removed in 1981 (see attached list). The Arabian Tiger Tu (D-6) then acquired the mare, but she died foaling in 1984. Three offspring of the brown mare are owned by Leo Kuntz: a grey gelding, a blue roan mare, and a bald-faced roan overo gelding (see Photos No. 123 and No. 127). The roan gelding, known as "Bad Toe," is Kuntz's race horse in the Great American Horse Race circuit. Bad Toe's conformation and color, particularly the bald face and spotted sides, typify one of the major park horse lines.¹

Another product of the grey stallion and the "Orphan Brown" mare is a "nice, cute-headed" blue and white paint mare, E-2. Although many horses have been born in the park with this colora-

¹ Irregular white body spots, bald faces, and blue eyes are characteristic of the overo paint.
tion, E-2 is one of the few to retain this rare coloration into maturity. In 1985 E-2 produced a blue and white colt (H-3) by the Arabian (D-6), and in 1988 produced a blue and white filly by E-1, a black stallion.

In 1979 the grey stallion was cut by wire and temporarily crippled, and a subdominant stallion that "ran second" to the grey horse assumed control of the mares. This horse, foaled in 1979, was known locally as the "Hereford stud" by virtue of having had a wide bald face as a colt. The "Hereford stud" was out of the old-line "White Bunch" and was probably sired by a "good looking, small-nosed" grey stallion that did not produce many offspring and was sold in 1981 (see Photo No. 11). The "Hereford stud" was born a paint but faded to grey and also had one blue eye. Out of the "Orphan Brown" mare the Hereford stallion produced a grey colt, now known as the "Painted Canyon stud," B-1. The "Painted Canyon" stallion has a tendency to sire bald-faced and/or overo offspring, but in 1984 he sired a "look-alike" grey colt (F-2; see Photo No. 109) from a steel grey mare (C-3).

Another Barnhart horse possibly impacting the park herd was a part-Arabian blue roan stallion. This horse was brought to Medora by L. M. Barnhart in the mid- to late-1940s and escaped into the badlands. The Barnhart family recaptured the horse several times but were finally unable to locate the stallion. It is possible that this horse either died or was removed by another party, as Tom Tescher does not recall the stallion.

The most famous horse captured in the park was the rodeo bucking horse "Whizz Bang," at one time owned by world champion
saddle bronc rider Casey Tibbs. Whizz Bang, a buckskin, was out of a buckskin Barnhart or Cooper mare and was possibly sired by a grey park stallion. Whizz Bang was removed from the park as a colt during the 1954 round-up.

The red roan Barnhart mare also had several foals while in the park. The only one that Tom Tescher clearly remembers was a blue roan mare with a wide, bald face, believed to have been purchased by Kuntz in 1981.

Upon the death of L. M. Barnhart in 1961, Tom Tescher purchased the black and the roan mare from Mr. Barnhart's widow. The mares were removed from the park in 1965 (see Management Section); the black mare suffered a broken leg when snared and was destroyed, and the red roan was sold to slaughter. Tom Tescher waived claim to their offspring in 1973. See attached list for other owned and branded horses that Tescher recorded in the park, 1950-1965, and that were removed.

The Blue Roan Line

Sometime just prior to or after the 1954 round-up (informants disagree on this point), a blue roan Quarter Horse mare purchased by Bub Nunn from the Binyon Ranch of Jordan, Montana, was released into the park by local cowboys to "upgrade" the herd. In the late 1950s, L. M. Barnhart began trapping and selling park horses, sometimes using aircraft to chase them into a trap the Teschers had rebuilt on the north side of the park. After one such round-up, the Nunn mare was hurt while being driven
into Medora and was left lying by the railroad tracks with a presumed broken neck. Informants disagree as to whether the mare died or recovered and returned to the badlands. However, neither she nor her body was seen again.

The Teschers believe that the Nunn mare was responsible for introducing the blue roan color into the park herd. However, blue roan horses appear in photographs of the 1954 round-up (see Plates No. 23-28), and Gerald Barnhart recalls attempting to capture a mature blue roan stallion in the early 1950s. Other informants (e.g. Griggs, Schwint) have stated that blue roans were present in the badlands circa 1920-1954. Thus, the origin of this coloration remains obscure.

In 1962 or 1963 Tom Tescher made a horseback reconnaissance of the park. After climbing a gumbo butte ("Look-Out Butte") in the northwest corner of the park, he observed the following horses: two "wild" grey stallions, two young black and white paint stallions (out of the black Barnhart mare), two or three "wild" grey mares, a blue roan mare with a young filly, a young blue roan colt with a bald face and a white right front foot, a second, smaller blue roan stallion, and several other mares, none of which were branded.

Mr. Tescher made two assumptions: that the blue roan mare was a daughter of the missing Nunn mare; and that she had in turn foaled the young blue roan stallions (born circa 1960) and sired by one of the "wild" grey stallions. Whatever the origin of the blue roan mare and the blue, bald-faced stallion, together they produced a line or family of horses that dominated until the 1986
round-up. If biological fitness is measured by reproductive success and the ability to survive changing pressures, this line adapted well to the social and natural environment. Both the stallions and mares have been socially dominant, long-lived, and prolific. They also tend to be large, heavy horses. The Teschers attribute this characteristic to the Nunn mare, which they describe as having been "stout" and having weighed around 1100 pounds. Only a few horses of this once abundant line can be mentioned here.

The bald-faced blue roan stallion observed as a colt by Tescher (f. 1960) greyed with age and was considered by the Teschers to be the dominant horse in the park until dying of natural causes in the winter of 1980. By 1977 this stallion was crippled but continued to maintain a group of 11 horses. This horse was considered extremely tough and "uncatchable" by local cowboys, who also felt that he was "better looking" than most of the horses. Tom Tescher later found the bones of this stallion south and east of Buck Hill. The lower jawbone of this animal was removed for study by researcher Elena Hovland during the summer of 1989.

The blue roan mare observed by Tescher in 1962 became known as the "Old Blue mare" and was the oldest mare in the park until removed by the Thompsons after the 1978 round-up. This mare was a member of the band controlled by the bald-faced blue horse (f. 1960), a presumed "mother-son" union. The first recorded offspring of these two blue roans was a colt born in 1966 (see attached list of the mare's produce). Known as the "Scarred Blue stud" because of battle scars on the right stifle, this stallion
had a band of twenty horses, the largest group in the park, when captured and sold during the 1978 round-up.

The second offspring of the "Old Blue" mare and the blue (aged grey) stallion was a black, star-faced filly foaled in 1967 and now owned by Leo Kuntz (see Photo No. 121). The star-faced mare ran with the "Scarred Blue" stallion, a full sibling. Their offspring included two nearly identical blue roan colts, foaled in 1973 and 1974.

Both of the blue roan colts became dominant stallions (see Photo Nos. 8 and 9). In 1980 the black star-faced mare (f. 1967) produced a blue roan, star-faced filly sired by the 1974 blue roan stallion (her son). This filly is now B-2 and has also produced blue roan offspring. The 1974 blue roan stallion was captured in the 1981 round-up and sold to a rodeo stock contractor.

In 1983 the white "Lindbo" mare produced a strip-faced blue roan colt sired by the 1973 blue roan stallion. That colt is now D-1, a stallion with a small band of horses (see Photos No. 92-99).

During 1984, the 1973 stallion controlled a band of twenty-five horses, over one quarter of the total population, then distributed among seven dominant stallions. In 1986, the 1973 stallion controlled seventeen horses, the largest group in the park, but collapsed and died from presumed heart failure during the round-up that year.

A blue roan daughter of the "Old Blue" mare produced a blue roan colt by the blue bald-faced (aged grey) stallion (f. 1960) in 1980. The colt had a white left front foot and controlled a band
of 12 horses when removed in the 1986 round-up as a mature, six-year-old horse. This stallion was purchased by the author and then resold to Leo Kuntz (see Photos No. 23 and 113). The dam of the stallion ("Nocona") became grey with age but retained a black spot on the right shoulder. This mare bled to death in 1986 from injuries sustained while escaping from the corral following the round-up, leaving an orphan colt (A-13 in 1987; see Photo No. 64).²

The "Scarred Blue" stallion (f. 1966) and the black star-faced mare (f. 1967) (siblings) produced a grey colt in 1979; the colt, purchased by Leo Kuntz following the 1981 round-up for $700, is the highest selling park horse to date. This horse, called "Jumping Mouse," is regarded by Tom Tescher as a "freak" because of his unusual size (see Photo No. 116). As a sire, Jumping Mouse has produced overo paint offspring, some with blue eyes, from solid-colored domestic mares (see Photo No. 117). The origin of this genetic predisposition is unknown (but see below).

The "Old Blue" mare and her yearling filly were among a group of 10-12 horses caught and sold by the Thompsons following the 1978 round-up. One direct descendant of the "Old Blue" mare remains in the park, B-3. B-3, a black bald-faced mare, was sired by the blue (aged grey) bald-faced stallion (1960-1980). This mare has also produced bald-faced and overo paint offspring, so it might be assumed that either her sire or dam carried this genetic

² This identification is somewhat tentative. The blue roan mare with the black spot is known to have been in the park in 1986 and has disappeared. She is not believed to be at Kuntz's ranch and, although Tom Tescher was not certain at the time, he now believes her to have been the mare that died.
trait. B-3 produced three bald-faced black colts sired by an "old line" dappled grey stallion roped by the Teschers and sold by the park in 1982. These black colts were purchased by Leo Kuntz. B-3 has subsequently produced four sorrel and white and another black and white spotted offspring sired by B-1.

Several horses from the blue roan lineage (e.g. C-1) remain in the park; see 1987 census and genealogy lists.

**The Griggs Mares**

In the late 1960s a pregnant unregistered grey Quarter Horse-type mare owned by John Griggs escaped into the park. A few years later, John Griggs succeeded in recapturing the mare and either a yearling or a weanling filly. A red roan filly (f. 1971) from the Griggs mare remained in the park. In 1974 the red roan mare produced a brown "Thoroughbred-type" filly. By the bald-faced blue (grey) stallion (f. 1960), the brown mare foaled a bald-faced red-grey filly in 1977 (now A-8). The brown mare also produced a blue star-faced filly purchased by Kuntz in 1981. In 1978, the red roan Griggs mare was captured and sold by the Thompsons. According to Tom Tescher, the brown mare was always in poor condition and was missing in the spring of 1979. In 1980, the bald-faced red-grey mare (A-8) produced a grey and white filly with a white left front foot (now A-7). In 1981 the red-grey mare (A-8) produced a black and white filly, and in 1982 produced a black and white filly with a spot on the right side and a crop ear. In 1983, the red-grey mare produced a strip-faced dark grey filly. The fillies foaled in 1981-1983 have been sold to Leo
Kuntz, as was a brown 1985 colt out of the 1982 piebald mare and by a red roan stallion sold by to Kuntz in 1986.

The Brookman Stallion

In 1981 the Teschers and other local ranchers donated to the park a bay Shire and paint-bred colt purchased from the Brookman rodeo string of Wolf Point, Montana. THRO round-ups in 1981, 1982, and 1986 and other removal efforts succeeded in eliminating most of the mature dominant blue roan stallions (see Management section). Since reaching sexual maturity, the "Brookman stallion," A-1, has become the dominant stallion in the park, controlling a band of 20 horses in 1988.\(^3\) A-1 is larger and heavier than the park horses, and, unlike the other introduced domestic animals, has adjusted well to the park environment. The Brookman stallion is mentioned here because his offspring may be expected to dominate the park herd (at least numerically) in the future.

Inbreeding Among the THRO Horses

Inbreeding among the feral horses has been a long-standing concern at THRO, as evidenced by frequent mention in park memoranda and documents. THRO staff identified inbreeding as a problem in the 1970 Wild Horse Management Plan and have continued to do so in virtually every subsequent park document pertaining to the horses (see Management section). This concern provided the

\(^3\) As noted elsewhere, A-1 might be considered less successful than C-1, one of the park-born stallions. Band A has increased in size through reproduction, while Band C has increased through the recruitment of new mares. Also, A-1 lost several mares during 1988-1989.
basis for the park's policy of removing park-born stallions between 1978 and 1986 and replacing them with domestic animals (see Management section).

The question as to whether inbreeding occurs among wild horses is somewhat controversial and is beyond the scope of this report. However, a number of observations pertinent to this issue at THRO may be made on the basis of the herd's genealogical history. The presence of undesirable or maladaptive traits and a low reproductive rate are two indices of inbreeding (Frei, 1977). During the 1960s, when park policy sought complete elimination of the herd and the horse population was reduced to an all-time low of approximately sixteen animals, informants (Tescher, Northrup) report that a few horses exhibited deformed legs and hump-backs. Tom Tescher recalls a naturally crippled grey stallion that was able to control a harem of mares and elude capture during that decade. Also, the 1970 Wild Horse Management Plan indicates poor reproductive success among the horses during the period 1965-1970, when a total of only ten foals were produced. Informants could recall only one "deformed" park horse since circa 1970, a blue-grey, hump-backed mare purchased by Leo Kuntz in 1981 and since sold to slaughter (see Photo No. 118).

During the 1970s, when blue roan horses predominated numerically and most dominant stallions in the park were of the blue roan lineage, THRO memoranda cited this color conformity as an index of inbreeding (e.g. 1978 Feral Horse Reduction Plan). By examining genealogical records of the horses, it is apparent that inbreeding did occur (see above), but there appears to be no evi-
dence of deleterious effects. On the contrary, the blue roan horses reproduced well, and the dominant stallions in the park were of this lineage. Color homogeneity within bands of wild horses is a common phenomenon (see Frei, 1977; Berger, 1980; Symanski, 1985), and the blue roan coloration is produced by a dominant, although relatively rare, gene (see Appendices B and C). The mating of two blue roan horses can result in a lethal gene combination or dead foal (see Spoonberg, Appendix B), but the increase in the horse population since 1970 would indicate that this has been a negligible problem.

Many authorities discount inbreeding as a problem among wild horses. Berger (1980) points out that both colts and fillies leave their natal group upon reaching sexual maturity, a phenomenon observed among the THRO horses (compare 1987 and 1988 census reports). Frei (1977; see Management section) states that inbreeding is not necessarily deleterious, and he found no evidence of inbreeding problems among the THRO horses extant at the time of his evaluation (1977). Breeders of domestic horses utilize both in-breeding and line-breeding techniques in order to concentrate desired characteristics. For example, veterinarian Dr. J. K. Northway, who developed the breeding program for the King Ranch Quarter Horses, bred Solis (by Old Sorrell) first to mares by Old Sorrell (his "sisters") and then to his own female offspring. When questioned about this program, Dr. Northway replied:

We call it concentrating desirable blood. You know, young man, I have a definition that covers this close breeding business. When you do it, I call it in-breeding. When I do it, I prefer to call it line-breeding (Widmer, 1959: 47).
Inbreeding is a concern among populations that are confined and where the population is limited artificially, such as on THRO and BLM wild horse ranges (see Herd Management Plan, Pryor Mountain Wild Horse Range). However, it would appear that the problem of inbreeding among the THRO horses has been ameliorated as the herd has been allowed to increase since 1970. This population increase has presumably provided young horses with the opportunity to emigrate from their natal groups at sexual maturity and to join more distantly related bands.
A-1. Bay stallion, blaze, f. 1980 (the "Brookman stallion")

Introduced 1982 (Tescher donation) Shire and Paint breeding

A-2. BLM sorrel and white paint stallion, f. 1979

ID # 81807716; introduced 1982


By "Fat Grey" stallion f. 1969 (sold 1981) and out of bald-faced blue mare (sold 1981, Kuntz)

A-4. Black bald-faced mare WLF, f. 1980

By black bald-faced stallion f. 1973 (sold 1981) and out of bald-faced red-grey Griggs mare (A-8)

A-5. Dark grey mare, light tail, f. 1979 or 1980

By pink-nosed grey stallion f. 1963 and out of white "Lindbo" mare f. 1970 or out of "wild" white mare f. 1963

A-6. White mare, crop ear, f. 1979 (formerly blue and white)

By pink-nosed grey stallion f. 1963 and out of white "Lindbo" mare f. 1970


By black bald-faced stallion f. 1973 and out of A-8

A-8. White mare, f. 1977 (formerly red-grey)

By blue bald-faced stallion WRF (turned grey) f. 1963 and out of brown Griggs mare f. 1974


By pink-nosed grey stallion f. 1963; dam unknown

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4 Abbreviations are used for leg markings in this section. "WLF" means "white left front," "WLH" means white left hind," and so forth.
A-10. Blue filly, star, f. 1985
By blue roan stallion f. 1973 (died 1986) and probably out of A-6, A-8, or A-9.

A-11. Blue filly, grey face, f. 1985
unknown

A-12. Red roan colt, f. 1985
By red roan stallion f. 1979 (sold 1986) and out of A-4

By A-1 (?) and out of blue-grey mare died at the horse trap 1986

By A-1 or blue roan stallion f. 1973 (died 1986) and out of A-6

By A-1 or "Nocona" blue roan stallion f. 1980 (sold 1986, Kuntz) and out of A-9

A-16. Bay and white paint colt, f. 1987
By A-1 or 1973 blue roan stallion (died 1986) and out of A-8

A-17. Buckskin colt, f. 1987
By A-1 (?) and out of A-5

By A-1 and out of A-3

Comments

Band A is the largest group of horses in the park and seems to be the most mobile. A-1 is the most successful of the introduced stallions and is the heaviest stallion in the park. A-1 has had mares since 1984, but the present group is primarily a result of the 1986 round-up.

A-2 has associated with A-1 since they ran together as bachelors following their introduction in 1982. A-2 "runs second" to A-1 and is extremely active in this subdominant role. A-2 is not permitted to breed mares and is extremely deferential to A-1. However, A-2 keeps the group herded together (see Photos No. 48 and No. 49) and defends the mares against non-member stallions. This pattern of behavior between a dominant and subdominant stallion is typical of wild horses (Berger, 1980). It is questionable whether A-1 could maintain such a large harem of mares without the cooperation of a subdominant male.
In 1985 and 1986, A-6 and A-8 were associated with the blue stallion (f. 1974) that died during the 1986 round-up; their 1987 offspring may have been sired by the blue horse. In 1986 A-9 was with the blue stallion ("Nocona") removed during the round-up and purchased by McLaughlin (now owned by Kuntz).

There are five grey mares in Band A; both the author and Tom Tescher have experienced difficulty differentiating between A-8 and A-9. The identity of A-9 is not absolutely certain. This mare appears to be younger than 20 years old, and at one time Tom Tescher thought that the mare he had always called the "Fat Grey" had been sold in 1986. However, he now feels the identification of this mare as the "Fat Grey" is secure.

A-7 produced a white, stillborn foal in 1987 (see Photo No. 58).

In 1987, A-11 was observed to be extremely lame on the left front foot. With limited mobility, this mare attracted the attention of opportunistic bachelor stallions, which A-2 and A-1 were obliged to discourage by fighting. On one such occasion on 17 September, A-1 defended his possession of this mare and then forcibly bred her, although the mare could barely stand. In 1988 this mare had been recruited to the harem of C-1.

The dam of A-13 (a grey mare with a black spot on the shoulder) died while escaping from a pen following the 1986 round-up; A-13 survived as an orphan.
1987 Census and Genealogy: Band B

B-1. Tall grey stallion, f. 1979
("Painted Canyon Stallion") By "Hereford" stallion and out of "Orphan Brown" TB mare from Mosser's ranch

B-2. Blue mare, small star, f. 1980 By blue roan stallion f. 1974 (sold 1981; Photo No. 9) and out of black star-faced mare f. 1967 (Kuntz)

B-3. Black bald-faced mare, f. 1976 By blue bald-faced stud WRF (turned grey), f. 1963, and out of "Old Blue" mare

B-4. Sorrel and white bald-faced colt, f. 1986 By B-1 and out of B-3

B-5. Blue filly, star, f. 1986 By B-1 and out of B-2

B-6. Sorrel filly, star, WLH, f. 1987 By B-1 and out of B-3

B-7. Blue colt, star, f. 1987 By B-1 and out of B-2

B-8. Sorrel Quarter Horse stallion, f. 1982 Introduced 1983; donated by Tom Tescher

Comments

Band B is the most visible group in the park, frequenting the upland flats near I-94. B-1, known as the "Painted Canyon Stallion," is a favorite of Tom Tescher's and among THRO staff, and this group is seldom harassed during round-ups. Band B (with some membership changes) has been extant since 1984.

B-8, an introduced domestic stallion, has "run second" to B-1 since 1985. However, B-8 appears to be less integrated into this role than A-2, another subdominant stallion. B-1 assumes responsibility for herding and defending this social unit, and B-8 is kept at a distance. In the fall of 1987 B-8 was injured in a fight (with B-1 or C-1) and traveled alone throughout the fall and winter of 1987-88. B-8 rejoined Band B in the summer of 1988.

B-2 was one of two fillies that were released with the Arabian (D-6) in 1982.
B-3 is representative of early park bloodlines and according to Tom Tescher is the "wildest" and most dominant mare in the park. On one occasion during the summer of 1987 when all of the bands took flight together after being spooked by horseback riders, this mare led all of the park horses (see Photo No. 110).

Two young horses approaching sexual maturity were observed to leave this band in the spring of 1987. A sorrel and white filly out of B-3 (f. 1985) migrated to a neighboring group, Band C. A red roan colt out of B-2 (f. 1985) joined the bachelor group (F-5). These horses were photographed while still with Band B in April (Photos No. 68-71).
1987 Census and Genealogy: Band C

C-1. Blue roan stallion, f. 1982
   Heavily built ("Target")
   (Tentative) By blue roan stallion f. 1973 (died 1986), and out of the
   "Fat Grey" mare (A-9)

C-2. Dark blue mare, small star,
   f. 1980
   By pink-nosed grey stallion, f. 1963, and out of blue-grey strip-
   faced mare, f. 1976 (both sold 1981)

C-3. Iron grey mare, f. 1979
   By pink-nosed grey stallion, f. 1963 and out of "wild" white pink-nosed
   mare, f. 1963 (sold 1981)

C-4. Dark chestnut bald-faced filly
   with white side spot and face,
   f. 1984
   By B-1 and out of B-3

C-5. Sorrel and white bald-faced
   filly, f. 1985
   By B-1 and out of B-3

C-6. Brown colt, star, f. 1986
   By B-1 and out of C-2

   By B-1 and out of C-4

C-8. Sorrel filly, strip, f. 1985
   By B-1 and out of C-2

C-9. Bay filly, star, WLF, WRH,
   f. 1987
   By B-1 and out of C-3

Comments

This group ranges the Peck Hill/Painted Canyon area west of Band B
and is difficult to approach. Band C has developed since the 1986
round-up. Prior to that event, C-1 ran in the vicinity of Peck
Hill with B-8 (Tescher's Quarter Horse) and A-11 (a blue roan
filly).

C-1 is a thick, heavy representative of the blue roan line. THRO
staff have desired the elimination of this stallion; hence the
nickname "Target." Since the 1986 round-up, C-1 has acquired and
steadily expanded a harem of mares. C-1 has engaged in fights
with B-1 and with bachelor stallions on a number of occasions.

After the Fall 1986 round-up, C-1 acquired two mares from Band B:
C-2 and C-4. C-1 acquired a third mare from Band B, C-3, when the
mare temporarily left Band B to foal in the early spring of 1987.
C-2 was one of the two fillies released with Tiger Tu (D-6) in 1982.

C-3 had a paint colt in 1986 that became separated from her during the round-up and that disappeared.

C-5 left her natal group, Band B, in the spring of 1987 and joined Band C.
1987 Census and Genealogy: Band D

D-1. Blue roan stallion, strip, f. 1983
By blue roan stallion, f. 1973 (died 1986), and out of white "Lindbo" mare

D-2. Bay Quarter Horse mare, star, f. 1980
Introduced 1983; donated by the Teschers

D-3. Bay colt, star, f. 1985
By D-6 and out of D-2

D-4. Bay colt, strip, f. 1986
By D-6 and out of D-2

D-5. Bay filly, star, f. 1987
By Buckskin BLM #80808271 (sold 1986) and out of D-2

Introduced 1981; donated by Les Sellnow

Comments

Band D has developed since the 1986 round-up. During 1987 this group remained primarily in the Biocourt Spring/Lindbo Flats area.

D-1 is superior in conformation (by modern standards) to the other blue roan stallion, C-1; but unlike Band C, which has steadily increased in membership, Band D has lost membership since 1986.

D-2 is a registered Quarter Horse, but her second dam was removed from the park in the 1950s and was out of a buckskin Cooper mare. The dam of D-2 was AQHA registered by inspection.

D-6 is a registered Arabian stallion donated by Les Sellnow. Since being released in 1981, D-6 has been only marginally successful at adapting to the social and natural environment. In 1982 D-6 was injured and temporarily removed for treatment. In 1984-85, D-6 had two mares, D-2 and E-2, both of which produced foals. In early 1986 these mares were usurped by park-born stallions, and D-6 associated for a time with the bachelor stallions at an age (6) when stallions are approaching their social and reproductive prime. D-6 is not well integrated into Band D and remains primarily on the periphery of the group (see Photos #94-99). D-6 is readily approached by humans and will initiate human contact.
1987 Census and Genealogy: Band E

E-1. Black stallion, f. 1980
("Midnight")

By pink-nosed grey stallion, f. 1963, and out of blue star-faced mare, f. 1975 (both sold 1981; mare owned by Kuntz), out of black star-faced mare, f. 1967

E-2. Blue and white paint mare, f. 1981

By grey (originally paint) stallion, f. 1969, and out of "Brown Orphan" TB mare, f. 1970

E-3. Dark grey, bald-faced mare, f. 1983

By blue roan, dark-headed stallion, f. 1977 (dead), and out of A-8

E-4. Buckskin filly, star and snip, f. 1986

By Buckskin BLM stallion #80808271 (sold 1986) and out of E-2

E-5. Buckskin colt, strip, f. 1987 (July 21)

By Buckskin BLM stallion #80808271 (sold 1986) and out of E-2

Comments

Band E has developed since the 1986 round-up. During 1987 this group remained in the Biocourt Spring/Lindbo Flat area.

E-1 is representative of old park breeding and traces back through both the sire and dam to the "original" grey horses present prior to 1947. E-1 is the smallest park stallion and one of the most difficult to approach. Bill Phillips of the BLM and Bill Valentine of the Spanish Mustang Registry consider this horse phenotypically mustang on the basis of photographs.

Prior to 1986, E-1 had two mares, one of which was removed and one of which died during the round-up. During that event, E-1 was driven to within a few feet of the trap gate, then ducked back underneath the helicopter and escaped. A black mare running with E-1 hit the fence and broke her neck, dying instantly.

E-2, an unusual blue and white paint, exhibits a strong preference for the Lindbo Flat area and has affiliated with a number of stallions in that area, including the Arabian (D-6) and the buckskin BLM horse sold in 1986. E-2 was bred by E-1 on 30 July 1987.
E-3 had a bay, star-faced filly in 1986 that became separated from her during the round-up and that was taken to the sales facility in Dickinson, where it died from injuries sustained after capture. E-3 was dry in 1987.
1987 Census and Genealogy: Band F (Bachelor Stallions)

F-1. Black stallion, f. 1983 or 1984
   (Tentative) By grey stallion roped and removed 1982 and out of C-2

F-2. Grey stallion, f. 1984
   By B-1 and out of C-3

F-3. Blue and white stallion, f. 1985
   By D-6 (Arabian) and out of E-2

F-4. Dark grey stallion, f. 1983 or 1984
   (Tentative) By grey stallion roped and removed 1982 and out of B-2

F-5. Red roan stallion. f. 1985
   By B-1 and out of B-2

F-6. Bay stallion, star, f. 1984
   By blue roan stallion, f. 1974 (died 1986), and out of A-9

Comments

These horses were sometimes observed in one group, sometimes in smaller groups of 2-4 animals, and sometimes alone. F-2 was observed several times with either F-1 or F-4 (see Photo No. 109). There could be another (bay or brown and out of C-4) bachelor stallion that was observed several times alone and at a distance.
A-1. Brookman stallion, f. 1980
A-2. BLM paint stallion, f. 1979
A-4. Black bald-faced mare, f. 1980
A-5. Dark grey mare, f. 1979 bred 2 April 1988
A-6. White mare, crop ear, f. 1979
A-8. White Griggs mare, f. 1977
A-10. Blue roan filly, star, f. 1985 out of A-6, A-8, or A-9?
A-12. Sorrel and white colt, f. 1986 orphan

*The 1988 census of THRO horses was provided by Tom Tescher. Genealogies are provided in the 1987 census.
Comments

Tom Tescher found a 1988 pinto colt by A-1 and out of A-4 in a wash-out by Sheep Butte Spring in the late spring of 1988. The mare had rejected the colt, and Mr. Tescher gave the colt to his son Doug to raise.

1988 Census: Band B

B-1. Painted Canyon stallion, f. 1979
B-2. Blue mare, small star, f. 1980
B-4. Sorrel and white colt, f. 1986 out of B-3
B-5. Sorrel filly, star, f. 1987 out of B-3
B-6. Blue colt, star, f. 1987 out of B-2
B-7. Piebald paint colt, f. 1988 out of B-3
B-9. Sorrel Quarter Horse stallion, f. 1982 (Tom Tescher donation)
1988 Census: Band C

C-1. "Target" blue roan stallion, f. 1982
C-2. Black mare, small star, f. 1980
C-3. Iron grey mare, f. 1979
C-4. Chestnut and white filly, f. 1984
C-5. Sorrel bald-faced filly, f. 1985
C-6. Sorrel filly, strip, f. 1985
C-7. Bay filly, star, WLF, WRH, f. 1987
C-8. Brown filly, star and snip, f. 1987
C-9. Blue filly, f. 1985
C-10. Blue filly, star, f. 1986
C-11. Dark colt, f. 1988
C-12. Dark filly, star and snip, f. 1988
C-14. Dark colt, f. 1988

out of B-3
out of B-3
out of C-2
out of C-3
out of C-4
was A-11
out of B-2
out of C-3
out of C-2
out of C-6
out of C-10

Comments

C-9 and C-10 have joined Band C since 1987. This band is increasing. In one sense, C-1 is the most successful stallion, as he is the only one increasing his harem through "recruitment." In contrast, Band A is increasing through reproduction.
1988 Census: Band D

D-1. Blue roan stallion, strip, f. 1983

D-2. Bay Quarter Horse mare, f. 1980


D-5. Bay Arabian stallion, f. 1980

Comments


D-2 was found dead near Boicourt Spring in August 1988.

F-8, a 1986 colt out of D-2, was found dead at Boicourt Spring in September 1988.
1988 Census: Band E

E-1. Black stallion, f. 1980
E-2. Blue and white paint mare, f. 1981
E-3. Dark grey bald-faced mare, f. 1983
E-4. Buckskin filly, star and snip, f. 1986
E-5. Buckskin colt, f. 1988
E-6. Dark colt, star, f. 1988
E-7. Blue and white filly, f. 1988

out of E-2
out of E-2
out of E-3
out of E-2
1988 Census: Band F (Bachelor Stallions)

F-1. Black stallion, f. 1983 or 1984
F-2. Grey bald-faced stallion, f. 1984
F-3. Blue and white stallion, f. 1985
F-4. Grey stallion, f. 1983 or 1984
F-5. Red roan stallion, f. 1985 By B-1 and out of B-2
F-10. Red roan stallion, WLH, WRH, sold 1986 and f. 1985 By red roan stallion out of A-4

Comments

F-7, F-8, F-9, and F-10 left their natal bands in late 1987 or early 1988.

F-8 was found dead at Boicourt Spring in September, 1988.
### 1988 Age and Sex Distribution

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</table>

**Total** = 61 or 62 head; possible unobserved bachelor

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**Comments**

Bachelor stallions F-1 and F-4 foaled in either 1983 or 1984 were counted as 1984 foals.

Two 1988 mortalities from Band D (D-2 and D-4) and removed orphan foal from Band A not included.

[6] **Owned Horses in Park Observed by Tom Tescher**

*Circa 1950-1960*

1. Old grey freckled mare, blotched brand. Family of greys with her, including a 2-year-old stallion.

2. Cliff Rue mares, branded "OU"
   a. bay mare (sold for slaughter)
   b. black mare (shot)

3. Frank Kessell chestnut mare; flaxen mane and tail, branded "\(\sqrt{5}\)" and/or "\(\Sigma/\)"

4. Walt Ray mares, branded "\(\mathcal{S}\)"
   a. bay, star
   b. bay, strip

5. Bill Neuens—one or two old black geldings, branded "\(\mathfrak{S}\)"

6. Grey gelding, 20-30 years old, branded "\(\mathcal{R}\)"

7. Grey gelding, 20-30 years old, branded "\(\mathcal{X}\)"

8. Oyhus grey gelding, branded "\(\mathfrak{l}1\)"

9. Talkington bay mare, branded "\(\mathcal{T}\)"

10. Rasmussen sorrel mare, branded "\(\mathcal{E}1\)"

11. Nunn blue roan mare, branded "\(\mathcal{J}\)"

12. Barnhart mares (2), branded "\(\mathcal{C}\)"

13. Griggs white mare, unbranded

*John Griggs remembers his mare as having entered the park a decade later, so this date may be tentative. I have also received contradictory information as to whether the Nunn mare was released before or after the 1954 round-up.*

Tom Tescher mentioned that the Talkington and Rasmussen mares produced paint colts.

1973 Grey stallion (transferred from park to B. Lowman to Kuntz)

1974 Paint stallion (shot by NPS on Lindbo property)

1975 Blue and white paint stallion (sold to stock contractor)

1976 Roan bald-faced stallion (Kuntz)

1977 Blue roan mare (Kuntz)

1978 Paint stallion (sold by NPS to stock contractor at auction, 1978, then died)

1979 Grey stallion (B-1) by Hereford stud*

1980 Blue roan stallion (found crippled during 1981 round-up and shot by NPS)

1981 Blue and white filly (E-2)

1982 Blue and white filly

1983 Dry

1984 Orphan Brown mare died while foaling

*In 1978 the blue and white, ear-marked stud was incapacitated by a wire cut and was temporarily displaced by the grey, bald-faced "Hereford" stud that "ran second" to the dominant horse.
[8] Produce of Old Blue Mare, f. circa 1957-59; sold 1978
With Baldfaced Blue and Grey Stallion, f. 1960; d. 1980*

1966 Blue roan stallion (scarred)
1967 Black mare, star (Kuntz)
1968 Dark grey filly
1969 Dry
1970 Black baldfaced colt (sold to Gold Seal Zoo)
1971 Dark baldfaced filly (trapped at Mosser's; sold to slaughter)
1972 Blue roan stallion (shot in 1976)
1973 Blue roan stallion (roped and removed 1973)
1974 Blue roan colt (died)
1975 Dry (Many mares in all bunches were dry in 1975.)
1976 Black mare, baldface (now B-3)
1977 Blue roan filly, star (sold with her in 1978)
1978 Old Blue mare trapped and sold by Thompsons; was oldest mare in park

*Possibly a mother-son union
[9] Summary

Horses born in the park since the 1954 round-up can be traced to three major lines: the original "wild" greys, the black Barnhart mare and the crippled grey stallion, and the blue roans, most of which descended from the "Old Blue" mare. During the 1960s, stallions from the grey line were predominant, but most horses of this lineage were removed by 1978. Blue roan stallions dominated throughout the 1970s, but a concerted effort was made to eliminate these horses in preparation for the introduction of domestic stallions in the early 1980s. Since reaching maturity, the introduced "Brookman stud" has become dominant by virtue of controlling the largest group of horses (twenty in 1988).

However, the stallions that controlled mares in 1988 do represent each of the major known lines. E-1 (black stallion) combines the "old grey" and blue roan lines; D-1 (blue roan) the Barnhart and blue roan lines; C-1 (blue roan) the blue roan line; and B-1 (grey) represents the "old grey" line through his sire.

Inbreeding has been documented among horses of the blue roan lineage during the late 1960s and early 1970s. However, inbreeding does not seem to have affected the reproductive and social success of the blue roans. The recent genealogical history of the park herd provides no evidence of inbreeding, and horses born with physical deformities have not been reported since circa 1970, when the population was very low.

The social organization of the horses changed in 1989; current behavioral and census data on the horses has been collected
by Elena Hovland of Montana State University. Once completed, MSU's report is expected to contain detailed behavioral and organizational data on the horses, information that was beyond the design of the present undertaking.
Summary

History of the THRO Horses

The free-roaming horses at Theodore Roosevelt Park are descended from horses that inhabited the Little Missouri Badlands when the park was created in 1947. Those horses were of two types: domestic ranch stock and "wild," unclaimed animals. Both domestic horses and a wild contingent had been present in the badlands since at least 1880. Area ranchers grazed their own livestock in the badlands and frequently chased and captured unclaimed horses for use or sale.

Most horses extant in the park area from 1940 to 1954 were rodeo or saddle stock owned by local ranchers. During the Roosevelt era of large-scale cattle ranching (1880-1900), ranchers raised horses on the open range, gathering and branding them periodically. After most of the range was fenced in the early twentieth century, local stockmen continued to use the badlands as a grazing area, particularly during the winter. This practice continued until the park's establishment and fencing, 1947-1958. In 1954 a cooperative round-up was staged by the NPS and area ranchers with the purpose of removing trespass horses. Nearly all branded and/or claimed animals were removed at that time (150-200 head). However, isolated reports of trespass grazing continued, with decreasing frequency, through 1984.
Also present in the park during the 1940s and 1950s were small groups of wild, unclaimed horses. Ranchers and cowboys from the Medora area report observing such animals in the badlands as early as 1920. Informants state that an earlier generation of cowboys frequently chased and captured wild horses in this area during the late nineteenth and early twentieth centuries. Individuals such as William "Badlands Bill" McCarty and Fred Gorham are reported to have made a portion of their living capturing and selling horses from the badlands during the period 1900-1935, and a few horse trap sites from this period remain visible in the park (see Photo No. 33). At least one large-scale wild horse round-up is reported to have taken place circa 1915. The Tescher brothers and other local cowboys frequently captured and sold wild or unclaimed horses during the period 1940-1960.

Wild horses were first reported in the Medora area in 1881 by Theodore Roosevelt, who stated that the animals were estrays from Indian groups or ranches. Indian and ranch horses of the nineteenth century were primarily Spanish mustangs or mustang-crosses. Mustang-based horses of western North Dakota included the "Montana" or Cayuse, the Texas cow pony, and horses obtained from Indian groups. The stamina and thriftiness of the "bronco" or Indian type made them ideally suited as ranch mounts in the rugged badlands environment. Wealthy stockmen such as the Marquis de Mores, A.C. Huidekoper, and Theodore Roosevelt used such horses as their foundation stock for saddle horses. There would have been little difference between wild and domestic horses of nineteenth-century western North Dakota.
Over time, ranch horses of the Indian or "bronco" type were crossed with Thoroughbreds, Quarter Horses, and other breeds to produce a more aesthetically pleasing animal. However, the "bronco" type seems to have endured well into the twentieth century. Virtually all informants stated that the ranch or saddle horse of the period 1900-1940 was the "common" horse of no particular breeding, often described as an "Indian type." Several informants described typical early twentieth-century ranch horses as rangy, bald-faced roans. Gerald Barnhart stated that his father once purchased a Thoroughbred horse, but the animal stepped into a prairie dog hole and was crippled. In contrast, informants describe the "common" horse as an animal that could withstand continual hard work with little or no care and could travel tremendous distances through the badlands.

By 1930 the changing nature of ranch life no longer required a horse with such characteristics. Removed from the rigors of open range work and released from a dependence on horse power by mechanization, ranchers placed increasing emphasis on the appearance of a horse, and the roping arena became the "proving ground" for a horse's abilities. The American Quarter Horse, bred for short bursts of speed and quick stops, became the western ideal. Long popular in the Southwest, by 1941, when the breed was officially organized, the Quarter Horse had become the standard ranch horse in the North and far West (Denhardt, 1967).

Ranch horses extant in the park at the time of the 1954 round-up are reported to have been "common" horses, Quarter Horses, and some with Thoroughbred blood. Tom Tescher states that
the "good" saddle horses "were always taken in and out." Therefore, it would seem that horses that were truly abandoned in the badlands were the older, "common horse" variety, which had become undesirable. These horses were described by informants as "broom-tails" and "mustangs." The only owned and identified horses left in the park after the 1954 round-up were the two Barnhart mares, which both Gerald Barnhart and Tom Tescher have described as "Indian ponies."

The origin of the "original greys" that remained after 1954 and that had been wild for many years is unknown. It is possible that these horses were descended from groups of animals reported to have been in the badlands since the nineteenth century. Such horses could have survived both because they were undesirable and because non-domestic horses were more difficult to catch. Tom Tescher reports that the "wilder" stallions were virtually impossible to capture prior to the use of helicopters, and the Tescher brothers state that they "didn't even try" to chase some groups for that reason. During the period 1900–1940, when people captured horses in the badlands, a primary market for these animals was the slaughter house. Horseback riders would have captured the slower and less agile horses, such as abandoned work or draft stock or other formerly domestic animals. Although it is known that draft horses were abandoned in the badlands circa 1920–1930, the Teschers do not recall such animals. Feral horses in the badlands came under increased pressure after the park was established and the NPS attempted to eliminate them in the period 1947–1970. The 1954 round-up was designed to remove all free-roaming horses,
but Tom Tescher states that of the captured animals, "99% were branded." It is reasonable to assume that only the hardiest and "wildest" horses survived repeated attempts at capture during this period.

When capturing horses for use or for sale as saddle stock, local cowboys did not select for the "Indian type." The "Indian type" was partially identified by color, as Indians exhibited a preference for roans, paints, and bald-faced horses. Roe states that "the range prejudice against pintos was very strong. . . . The plainsman regarded the pinto with contempt because the Indian liked it" (1955: 170-171). When A. C. Huidekoper (H.T. Ranch) purchased 60 Sioux mares from the Marquis de Mores, he attempted to choose solid-colored horses (Huidekoper, 1955: 64). However, many of the mares were roans, and when they were cross-bred, many of the offspring had bald faces and other white markings (Noyce, 1959). Harry Roberts stated that many of the Sioux-Thoroughbred cross horses at the HT had "plumb white heads. There were a lot of bald-faced horses in the old days; they reminded people of Herefords; they didn't like that." According to informants' descriptions, many of these early horses were probably overo paints, horses with white faces and irregular white body markings. Denhardt (1947: 196) states,

Pintos have never been extremely popular with North American horsemen. Perhaps one of the main reasons is that with one exception, and that exception does not occur in North America, practically every recognized
breed refuses to allow spotted horses in the stud-
books.¹

Regarding horse round-ups in the badlands circa 1945-1960, Gerald
Barnhart stated that "bay was the ideal; people didn't try to
catch the others." Bruce Northrup commented that during the
1950s, the horses people tried to catch in the park were the off-
spring of Walt Cooper's Quarter Horse stallion "Dick Thomas."

Photographic and descriptive evidence for the feral preser-
vation of a type of horse present in nineteenth-century western
North Dakota is convincing. The feral horses in Theodore
Roosevelt National Park are predominantly roan, grey, or overo
paint (white markings such as side spots), and many have bald
faces. Except for being larger in stature, their conformation is
consistent with that of the Indian pony: large heads, short backs,
steeply sloping croups, strong, straight legs and feet, and an
over-all rough or "common" appearance deemed undesirable in the
modern horse. Many of the horses at THRO bear a strong resem-
blance to horses illustrated in nineteenth-century photographs and
drawings. For example, compare the grey mare in Photo No. 117 or
the blue roan mare in Photo No. 122 with Remington's drawing
"Northern Plains Cowboy," Figure 4. A line of blue roan stallions
(Photos No. 114 and 115) appear nearly identical to the mount of
Sioux warrior Long Dog, shown in Figure 10. Overo paint horses in

¹ This prejudice has fallen away. For the past decade the
American Paint Horse Association has been the fastest growing
breed registry in the United States. Horses registered by the
APHA are not the "Indian type" but are almost wholly of Quarter
Horse breeding. Because the Quarter Horse was partially founded
on the Indian or mustang type, occasionally animals of this breed
are born with overo paint markings and blue eyes ("crop outs").
Selective breeding has produced a paint horse that conforms to the
Quarter Horse ideal with paint coloration.
the park (e.g. Photos No. 73, 123) approximate in build and color the Sioux horse in Figure 11. Roan horses in the park are very similar to nineteenth-century Medora ranch horses shown in Plates 9, 10, 12, and 16. Most striking are two photographs of the Marquise de Mores (Plates 9 and 10) with a large-headed, bald-faced roan that is very nearly the prototypical park horse. Compare this horse with E-3 (Photos No. 102, 103, and 107), the mares in Photo No. 11B, the Kuntz horse "Bad Toe," Photos No. 123-125, B-3 (Photo No. 74), or A-5 (Photo No. 37).²

Medora-area ranchers in the late nineteenth century, including De Mores, Huidekoper, and Roosevelt, selectively bred and/or kept the Indian pony for sale and use. Those men ran their horses on the open range, and it is possible that some of their stock became feral. Dobie (1952: 90) claims that descendants of the Sioux-Thoroughbred crosses of De Mores and Huidekoper were still used as ranch and saddle stock in the Medora area during the 1930s. However, it is not necessary to hypothesize a direct line of feral descent between those horses and the extant park animals to conclude that the THRO horses are representative of an early North Dakota ranch type. Informants state that the "common" or "Indian type" horse was the standard ranch mount a decade later. Therefore it is unlikely that a dramatic divergence in type between wild and domestic horses occurred until circa 1930-1940, even with the continual introduction of ranch stock to the feral herds. Although feral and domestic horses of the early twentieth

² This characterization of the THRO horse phenotype is much less accurate than it was prior to the round-ups of 1978, 1981, and 1986 and the introduction of outside stallions.
century seem to have remained essentially the same as their nineteenth-century counterparts, admixture with other breeds undoubtedly increased over time. For example, the saddle horse of Sam Rhodes shown in a photograph probably taken during the 1920s (Plate 20) bears a resemblance to the park horses (compare with Photo No. 125) but is more muscular and compact, possibly due to a Quarter Horse cross. Wild or feral horses, while mixing with a variety of abandoned or loose ranch stock, probably remained true to the "Indian type" through the selective pressures of round-ups. Still, occasional cases of admixture did occur, as with the Griggs mare that escaped into the park during the early 1970s.

We may conclude that wild horses and, to a lesser extent, ranch horses found in the Little Missouri Badlands circa 1940 were of the same general type used in Medora during the late nineteenth century. Phenotypically, the park horses strongly resemble the nineteenth-century horse, and informants identify the extant animals as "old time ranch horses." This type of horse gradually lost favor during the twentieth century and has today been completely eclipsed by the American Quarter Horse. "Common" or Indian-type horses remained in the park because "they weren't worth catching" and because they were harder to capture than domestic stock.

The Tescher brothers attempted to "upgrade" the herd by removing "mustang type" horses that they considered "poor" during the period 1945–1975 (mares and young stallions). THRO accelerated this process by selectively removing blue roans, "older type" horses, and dominant park stallions and replacing
them with domestic animals such as a purebred Arabian (D-6) during the period 1978-1986. The goal of this policy has been to change the appearance (phenotype) of the horses to achieve a closer conformity to modern standards of conformation and hence a higher sale value for culled animals. As a consequence, the extant horses appear more like modern saddle horses than they did a decade ago (compare Photos No. 1-21 with photos of extant animals). Although some extant horses exhibit the conformation of the older or "original" park type circa 1954 (e.g. A-5, A-3, A-14, B-3, C-1, E-1, E-3), most others (e.g. B-1) now look entirely "modern." The most tenacious aspect of the park horse "type" seems to be patterns of coloration: roan, grey, and overo paint. A factor in the preservation of the "older type" horse in the park has been the inability of introduced stallions (with the exception of A-1) to successfully compete against the park-born horses in terms of reproductive success (the acquisition and maintenance of mares).

In sum, the original feral horses at THRO were descended from a type of ranch horse common in the Medora area from 1880 to 1930, which was based on the Indian horse or mustang, often cross-bred. This type survived primarily (but not wholly) in a feral state after becoming undesirable as saddle animals. Admixture with modern and domestic horses has occurred, but some park horses remain phenotypically similar to horses observed in southwestern North Dakota during the late nineteenth and early twentieth centuries.

Many of the removed park horses were purchased by Leo Kuntz, Jr., of Linton, North Dakota.
Management of the THRO Horses

Management of the feral horses at THRO has changed throughout virtually every administration since 1947. With the exception of the McCaw superintendency of 1960-1963, until 1970 the goal of the park was total elimination of the horses. A large-scale round-up was conducted in 1954, and numerous small-scale removal efforts were attempted throughout the ensuing twenty years. The removal policy was supported by the NPS regional administration and was pursued most forcefully by Superintendent Warren Hotchkiss throughout 1964-1966. During that time the horse population was reduced to approximately 16 known animals.

Public and local opposition to removal of the horses, coupled with the discovery of historic documentation establishing the presence of wild horses in the Little Missouri Badlands during the nineteenth-century, motivated superintendent Arthur Sullivan to reverse the elimination policy during his tenure of 1966-1970. A Wild Horse Management Plan developed in 1970 established the policy of protecting a designated number of horses at THRO "in the interest of historical accuracy."

Since 1970, the most consistent policy regarding the horses has been "comprehensive management," i.e., the periodic reduction of horses through a round-up process each time herd numbers surpass a designated level. The 1970 Wild Horse Management Plan established 40 head as the ceiling figure. By 1978 the population had risen to approximately 75 animals. A Proposed Feral Horse
Reduction Plan and Environmental Review stipulated that the horses would be reduced "at intervals of from every two to four years to maintain the herd at from 35 to 60 head."

A round-up was staged on 5 and 6 September, 1978; Tom Tescher was contracted to provide riders, and one helicopter was used. Extremely hot weather and a long drive to the buffalo corrals contributed to the deaths of seven horses, and 14 were removed and sold at Stockman's Livestock Exchange on 12 September. A rancher adjacent to the park trapped approximately 10-12 horses that broke through the fence during the action and subsequently sold them for slaughter.

Horse corrals were constructed in the northeast corner of the park during the summer of 1981, and a second round-up was staged on 5 October. Tom Tescher and a helicopter were contracted to assist. A total of 32 horses were removed, reducing the population from approximately 71 to 39 head. Twenty-eight horses were sold at Stockman's Livestock Exchange on 13 October. This round-up received regional news coverage and generated some local opposition to park policies.

By 1986 the horse population had increased to approximately 97-100 animals. Two helicopters and Tom Tescher were contracted, and a round-up was conducted on 23 and 24 August. Eighty head were captured, and 54 animals were sold at Western Livestock Company on 2 October 1986. During the round-up the horse trap and pens sustained substantial damage.

A total of approximately 103 horses were removed from the park through round-up and sale during the period 1970-1986. In
addition, approximately 30 horses were roped and sold by local ranchers (most with park approval) or were removed through direct reduction. A 1988 census revealed 61-62 horses in the park.

As expressed in park memoranda and documents, several management objectives have yet to be clearly formulated. Major concerns include defining the desired number of horses, defining the desired type of horse, evaluating the extent of inbreeding within the population, and determining the ecological role of the horses. No research had been undertaken prior to 1987, and the park has not collected or recorded annual census and genealogical data on the horses that would reveal changes in herd composition and numbers. Therefore, while these concerns have been common to all administrations since 1970, they have been differentially addressed.

Inbreeding has been specified as a concern in virtually all THRO documents regarding the horses since the 1970 Wild Horse Management Plan. At that time the horse population was only 26 animals, the herd having been drastically reduced during the previous decade. Indications of inbreeding cited by park documents include the occurrence of crooked legs, a preponderance of grey and blue roan horses, and horses with poor overall conformation. A 1977 evaluation of the park horses by BLM Range Conservationist and Wild Horse Management Specialist Milton Frei found no evidence of inbreeding among the park horses, as determined by appearance and vigor. This report was cited in only one subsequent THRO document, most of which continued to assert significant levels of inbreeding among the horses. Genealogical research con-
ducted for the present report has documented the occurrence of inbreeding among the horses during the early 1970s, when population levels were extremely low. However, the resultant offspring were physically sound and became socially dominant animals, as indicated by significant reproductive success. Inbreeding appears to have virtually ceased with the population growth that has occurred during the past two decades. (See "Genealogy" section and the 1984 Natural Resources Management Plan and Environmental Assessment.)

The concern with inbreeding among the horses resulted in the development of a policy to remove dominant park stallions and to replace them with introduced animals. The introduction of replacement stock was first suggested in the 1970 Wild Horse Management Plan, but Superintendents James B. Thompson (1969-1972) and John Lancaster (1972-1978) were conservative in their approach to this issue. During Thompson's administration, several Spanish Mustang breeders lobbied for the introduction of that type of horse. Thompson resisted the suggestion on the grounds that mustangs would be "historically inaccurate," and he argued that area residents were opposed to the introduction of horses that would change the historic park type. He stated that the chief criterion for the introduction of outside horses was to "acquire animals with a good amount of color to break up the preponderence of greys, blacks, and whites that exists within the present horse herd." The Pryor Mountain Wild Horse Refuge was notified that THRO would be interested in acquiring two of their surplus stallions.
Superintendent John Lancaster (1972-1978) established the legalization of ownership of the herd as his top priority regarding the horses, and succeeded in accomplishing this in 1973. Second, he was interested in replacing park stallions with new stock "to forestall inbreeding problems." With regard to the introduction of outside horses, Lancaster stated that

... We would not want to corrupt the present herd with introductions of any special breed until or unless it can be firmly established by professional genealogists that the present herd does indeed contain Spanish mustangs.

A Resource Management Plan developed in 1976 recommended the removal and subsequent replacement of park stallions on the grounds that "an inbred herd would not be aesthetically pleasing and would reflect poor management judgment." Horses targeted for removal were defined as "older studs or animals displaying noticeable physical deformities." Introduced animals should be "of the same general domestic stock that is now present" and "of mixed colors to provide contrast within the herd."

The 1978 Proposed Feral Horse Reduction Plan and Environmental Review focused on the need to forestall environmental degradation by reducing the horse population. During the subsequent round-up, two dominant stallions were removed and one was shot, but the 34 horses removed from the park were about equally divided by sex.

The policy of replacing park horses by introducing new animals was implemented during the Wickware administration (1978-1986). The expressed rationale supporting this decision was to increase color variation in the herd and to improve the sale
potential of the horses by creating a more desirable type of horse according to current standards of conformation. Initially the plan was to introduce outside mares. In 1981, Wickware began the introduction of new stallions by negotiating the donation of a purebred Arabian colt with breeder Les Sellnow of Brainerd, Minnesota.

The Wickware administration recognized that the successful introduction of new stallions could not be accomplished without removing dominant park stallions:

The goal of increasing the genepool will succeed only if the stud is dominant enough to take mares from the present stud or if he is assisted to this end by having the competition removed. . . . We plan on taking just such measures.

The primary goal of the ensuing 1981 round-up was to remove dominant stallions (i.e., those with the largest and most stable mare bands). This objective was realized, as many of the dominant stallions were removed by round-up and direct reduction on 8 and 9 October. The implementation of the "replacement" policy received news coverage and met with some local opposition.

During 1982 at least four more stallions were removed or destroyed. The possibility of introducing mares was again raised but was not pursued.

Six young stallions were released during 1981-1982: a registered Arabian, a registered Quarter Horse, three wild horses obtained from the BLM, and a Shire-Paint horse purchased by Medora ranchers from a Montana stock contractor.

The 1984 Natural Resources Management Plan and Environmental Assessment addressed horse management at THRO in some detail. The
plan cited a need for research in order to formulate specific policies, and called for the regular monitoring of the herd and the development of interpretation. The plan recommended the removal and replacement of park-born horses. At the same time, the plan acknowledged that the preservation of "a historic bad-lands horse herd, with the animals being direct descendants of the horses which were found here when the park was founded" was an alternative approach. In the same discussion, the plan noted that two mechanisms for the selection of horse types at THRO have operated: biological fitness and success, and human preference. Cultural factors that have no effect on biological fitness, such as a desire for a wide range of color patterns, have directed changes in the genetic and phenotypic changes in the herd.

During 1981-1986, the park selectively removed the most biologically and socially successful stallions in order to facilitate their usurpation by the introduced domestic animals. To date, approximately 150 horses descended from stock present in 1947 have been removed from the park. However, only one of the introduced stallions has been able to successfully collect and maintain a harem of mares. Two of the introduced stallions were badly injured in fights with park horses and had to be removed; three others have assumed sub-dominant roles within bands controlled by dominant park-born horses. The Arabian has adapted poorly. A-1, the most successful introduced stallion, controlled 25 horses in 1988, nearly one-half of the entire population (62 or 63). This horse alone can be expected to make a significant impact on the genealogical future of the horses (see "Genealogy").
His offspring are large and strong, and may sell well as potential rodeo stock.

In sum, the National Park Service was not prepared to manage wild horses when the park was established in 1947, and no research had been undertaken to guide that process prior to 1987. Park policy has changed from total elimination of the horses to the protection of a designated number; but more specific decisions regarding the herd have fallen upon the judgment of succeeding superintendents and staff. Future decisions regarding the number and type of horses to be conserved, methods of herd reduction, the continuation of introductions, etc., are decisions pending study; such research must provide the basis for establishing policies and developing a Wild Horse Management Plan.
Bibliography

I. Books and Articles


Denhardt, Robert M. 1947. *The Horse of the Americas.* University

--------- 1967. *Quarter Horses: A Story of Two Centuries.*


University of Texas Press: Austin.


--------- 1938. "The Northward Spread of Horses among the
Archives of American Art Journal 28, no. 2.
Private printing: Dickinson, N.D.


State Historical Society of North Dakota (SHSND).

Record Group 179, Papers of Lewis Crawford (Notebook Nos. 28, 29, 33, and miscellaneous).

Record Group 206


2. Government Publications


U.S. Department of Interior, BLM. 1984. *Herd Management Area*
Plan: Pryor Mountain Wild Horse Range. Miles City District Office: Billings.


3. THRO Documents


Some Old Time Cattle Men From Killdeer Vicinity, 1883, To 1900

From left to right, Sam Rhodes, Ab Murray, Austin Pelton, Rasmus Jensen, Paul Paulson, Red Murphy, Sime Cuskelley, Ingman O. Haugen, Layton George, William Connolly, Lewis F. Crawford