Management Toward Extinction

Courtesy: Wild Horse and Burro Freedom Alliance, 2000

Newly-uncovered scientific evidence points to the likely disappearance of the vast majority of wild horse and burro herds in the U.S. The question then arises: can we save the remaining wild herds before it is too late? In the past decade, tremendous strides have been made in genetics research through DNA analysis. Scientists are now better able to project the point at which a lack of genetic diversity threatens the long term survival of a species. This research has included studies of wild horse populations in the American West. It reveals how precarious the situation is for the majority of wild horse and burro populations under the management of the Bureau of Land Management (BLM).

A leader in the field of equine population genetics is Dr. Gus Cothran, Director of the Equine Blood Typing Research Laboratory at the University of Kentucky. In addition to blood and hair samples collected from horse breeds around the world, Dr. Cothran has been analyzing blood samples from U.S. wild horses. He has been studying the Pryor Mountain wild horse herd of southern Montana since 1991 as well as other wild horse herds on public lands in the West.

Dr. Cothran suggests that managing wild horses at low population levels leaves them vulnerable to a long range loss of genetic diversity. This is the same sort of problem which plagues endangered species around the world. But, just how small is too small? At what point do wild horse populations suffer the risk of irreparable genetic damage?

Based on his DNA analysis, Dr. Cothran now believes that the minimum wild horse and burro herd size is 150-200 animals. Within a herd this large, about 100 animals will be of breeding age. Of those 100, approximately 50 horses would comprise the genetic effective population size. These are the animals actually contributing their genes to the next generation. Dr. Cothran has stated that 50 is a minimum number. A higher number would decrease the chances for inbreeding.

(A number of variables such as an unbalanced sex ratio in favor of males would cause this minimum number to be revised upward. Unbalanced sex ratios with many more males than females occur on at least some of the wild horse and burro herd areas.)

Dr. Cothran has worked in collaboration with Dr. Francis Singer, a research ecologist with the Biological Resources Division of USGS in Fort Collins, Colorado. Dr. Singer's conclusions will be published in mid to late October of this year. His preliminary evidence, however, has been eluded to in a July 7, l999 letter from BLM Field Manager, Sandra Brooks to Custer National Forest Ranger, Rand Herzberg regarding the need to expand the range for the Pryor Wild Horse herd.

Ms. Brooks states that "preliminary evidence suggests that the herd {Pryor Mountain Wild Horse Herd} has been managed at dangerously minimum levels over the past 25 years and an increase in established appropriate management levels (AML's) will need to be considered in order to preserve the genetic viability of the herd."

Just how dangerously small is the wild horse population in the Pryors? Dr. Singer indicated in his 1997 report to the Pryor Mountain Management Forum that the herd had averaged 169 animals in each autumn count from 1992-1996, a count that includes the foals of the year. According to BLM's own statistics, the Pryor herd size is larger than 61% of the herds under their management. The Pryor AML of 121 is larger than 70% of the herd areas by AML based on the BLM's last formal report to Congress in 1995.

Using these BLM statistics, the number of wild horse and burro herds with an AML of over

150 animals, the absolute minimum population size to insure long term genetic viability, is startling. Out of 209 areas, only 52 areas met this minimum requirement. This means that 75% or 3/4 of the herds are in danger of extinction if managed at AML. (In calculating the total number of herd areas, areas with an AML of zero that had either wild burros or wild horses present in 1995 were included.)

When the statistics for wild burro herds are isolated from wild horse numbers the picture is even more dismal. Of the 56 areas having wild burros, 14 contain viable populations. Under BLM management plans, the AML which would allow for over 150 animals is 5 or 9%! Even the Marietta Wild Burro Range of west central Nevada, the only designated wild burro range in the country, has no where near the number required to maintain genetic viability. Just 85 burros are allowable under the current BLM management plan for this remote area of 66,500 acres.

It is possible that some of these non-viable wild horse and burro herds have the ability to interchange with contiguous herd areas. When asked for information indicating whether wild horse and burro herds share common boundaries and have the ability to roam from one area to another BLM could not provide this information. We know that all the Colorado wild horse areas are isolated, the same is true of the Pryors of Montana, the McCullough Peaks herd in northern Wyoming, the Cerbat herd in Arizona, the Bonanza herd in eastern Utah, the Bordo Altravesado Wild Horse Herd in New Mexico, the Marietta Wild Burro Range in Nevada and many, if not most, other wild horse and burro herd areas.

In some cases, BLM has introduced horses from other herd areas to try to offset extremely low AML's (i.e. Bordo Altravesado—AML=50, Little Book Cliffs—AML=80), overlooking the unique characteristics which a herd originally exhibited or developed over years, if not centuries, of natural selection—i.e., the Spanish genetics of the Pryor and Cerbat herds, the unusual color genetics in some herd areas, the survival adaptations of most individual herds, etc.

Rather than manipulate the genetics with outside introductions, we believe it is more prudent to allow populations to increase to genetically viable levels. This may require re-writing management plans, decreasing the available AUM's for livestock grazing in the herd areas, expanding herd area boundaries, or simply allowing levels to rise naturally over time within each area in jeopardy.

Amazingly, wild horse populations have shown remarkable genetic diversity compared to

any one domestic horse breed. However, this will not be the case under the current AML's set by BLM in their management plans, especially if they are allowed to reduce overall wild horse numbers to between 16,000 and 17,000 animals. On over 43 million acres managed by BLM as legally designated wild horse and burro herd areas, this would allow for one wild horse or burro per 2,688 acres.

To illustrate the vastness of the herd areas in relationship to the allowable size of the herds, one need only look at the enormous Little Colorado Herd Management Area in southern Wyoming, over a half a million acres with an allowable population of 69 to100 wild horses. The Sinbad Herd Management Area in Utah contains 242,000 acres yet allows for only 35 wild horses. Spring Mountain Herd Management Area of Nevada at over 575,000 acres has an AML of 50 wild horses. Unfortunately, there are many other such examples.

BLM should be guided by the Wild Horse and Burro Act and scientific research as we move into a new millennium. Otherwise, we will lose our precious wild horse and burro resource for all time. Wild horse and burro advocacy groups have charged that the BLM is managing wild horses and burros to extinction. Current scientific research bears this out.

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States With Number of Herd Areas with Viable Wild Horses & Burros Areas Populations (150+)

Arizona	11	3
California	31	2
Colorado	6	1
Idaho	6	2
Montana	1	0
Nevada	100	31
New Mexico	1	0
Oregon	19	6
Utah	25	3
Wyoming	9	6
Total	**209***	**53**

(*Areas including those listed as AML zero
but which had wild horses and burros in 1995.)

The Wild and Free-Roaming Act stipulates that rangeland conditions shall be carefully monitored to allow optimal viable herds of wild horses and burros in a non-prejudicial fashion. This clearly makes it illegal for the BLM to set the arbitrary, population-crippling Appropriate Management Levels (AML's) it has. Care must also be taken to preserve their

free-roaming life style, by eliminating the blockage or piping of public water sources and the fencing and cross-fencing of the public lands.

Officials of the Bureau of Land Management, which now control wild horses and burros management on both BLM and USFS lands, currently are planning to allow what is equivalent to only one wild horse or burro to remain on the public lands per public lands livestock operator. This equates to approximately 17,000 wild horses and burros for 17,000 ranchers! To appreciate the inequity, each one of these ranchers may have 100's or even 1,000's of head of domestic livestock.

The remaining herds represent highly fragmented populations that in many cases cannot interchange genetically. Fences erected to rotate cattle and sheep from one "pasture" to another keeps herds away from healthy inter-breeding. Combine this with BLM's policy of removing younger animals, leaving predominately horses and burros older than 5 years of age and in many cases leaving only those older than 9 years of age, and it becomes clear that the BLM is setting our "national heritage species" (PL 92-195) up for inbreeding, winter kill, failure to reproduce, low vitality, population fragmentation and eventual extinction in the wild.

Wild horse behavior patterns make them more ecologically harmonious when compared with livestock. Behavioral studies show that wild horses range widely throughout both steep, hilly terrain and lower, more level areas, while cattle concentrate on lower elevations where they camp on and destroy riparian meadow zones, laying them waste! Those who know wild horse habits, however, realize that a band will not camp on a riparian zone but will water in a quick and orderly fashion, then move on to highland grazing areas rarely frequented by cattle.

As a consequence and due to the judicious wide spread of grazing behavior of horses, range conditions in steep hilly areas which cattle do not frequent are generally much better than in lower areas. As is frequently the case, reducing horse populations in these areas has a negligible effect on the resource. As proof, after massive wild horse roundups, the herd areas show little or no improvement, since cattle numbers remain the same (or may increase). In spite of the foregoing, massive appropriations by the U.S. Congress for wild equid elimination has continued since the mid 1980s.