

March 2, 2010

SPECIAL REPORT

Ecology, feral horses and the West Country

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(With the recent arrest of individuals charged in the shooting of a feral horse west of Sundre, it was my professional opinion as a range ecologist that the impact the horses have on the rangeland should be addressed. The men charged, if found guilty, should be prosecuted to the full extent of the law.)

The Upper Foothills Natural Sub-region west of Sundre, Caroline and Water Valley is a beautiful complex of forest communities, wetlands, exposed rock and productive grasslands. These grasslands have over the centuries adapted to grazing ungulates, providing excellent forage seasonally and potentially will continue to do so well into the future. The unique nature of these rangelands can be found in the richness of the species composition which is dominated by a few critical grass species. Rough fescue (*Festuca campestris*), our provincial grass, is a keystone species. It is:

- Extremely long lived – an individual tussock may be hundreds of years old – and because of its longevity it sets seed only periodically (every 4-8 years).
- Deep rooted, often exceeding three metres, allowing it to thrive in drought and act as an effective carbon sink.
- Characterized by rolled leaves which aid in its drought tolerance but also plays an important role in rough fescue's ability to maintain its forage value through the dormant seasons.
- Productive of large volumes of leafy vegetation which is critical to grazing ungulates.



Continuous over-utilization of rough fescue by feral horses, especially in the months of March, April and May, will reduce its prominence and potentially eliminate it from the community. (Domestic livestock are not placed onto these grasslands until June to minimize impact.)

With early season grazing, by feral horses, the fescue community degrades from a seral state to species hesistant to grazing and leaves the range susceptible to drought, weedy invaders and quality/quantity deficits.

There are deleterious affects to soil microryza and associated fauna as well. We see these changes along some of the river and creek terraces in the West Country and since the productivity continues to decline the affected area increases as the horses search out forage on adjacent ranges.

The accumulated damage will continue to increase until the horses are removed or their numbers substantially reduced. Livestock producers typically utilize rotational grazing or some other active management tool to prevent this problem while habitat biologists will reduce wildlife numbers through hunting regulations.

If a Sustainable Resource Development (SRD) range specialist were to say, for example, the resident feral horses have done significant damage to the range on the lower Burnt Timber River then logically the horses should be removed and the problem solved. The difficulty is that there is not the interest in catching these horses that there once was and these horses continue to reproduce and be abandoned into the forest reserve by uncaring owners.

Horse owners who no longer want their horse will drive up into the forest reserve and release the animal

to survive on its own. Thus there is a constant source of new breeding horses coming onto the range. Even though most horse breeders no longer brand their horses, I saw a branded horse on the Little Red Deer River running with a dozen feral horses in the summer of 2009.

When in 1994 the military removed 1,200 feral horses from the Suffield Block it was not because these horses had somehow surpassed the carrying capacity of the approximately 1,600 square kilometres of mixed grass prairie located there. It was the uncontrolled grazing patterns of the horses that would set up a home range then continuously graze until damage to specific plant communities occurred.

The ecological damage done by the horses was the primary motivating factor. With the courage we have come to expect from our military they made the right decision and had all the feral horses removed from the base. It is worth noting that cattle continue to be grazed on the base with tightly controlled on/off dates and rotations that ensure healthy native range. In addition, elk, deer and antelope are found in abundance along with a significant number of moose.

Feral horses in the forest reserve have grazed the grasslands for in excess of 60 years and the primary control of the numbers has been those adventuresome individuals who chased them down to be sold as saddle horses or for the meat market. Carnivores including cougars, bears and wolves predate on horses but not at a sustainable level. Wolves are the primary carnivore but horses are difficult to pull down because in the absence of deep snow the hooves pose a threat to the wolf pack. In addition the gregarious nature of the horses results in herds that are effective protection for the individual.

In the past a deep snow winter resulted in horses "yarding up" in a meadow or good forage area that would allow wolf packs a physical advantage. Over the last 30 years access to industrial development has resulted in roads throughout the forest reserve that are kept open all winter. Horses may now escape along these roads, moving from one range site to the next and not having to struggle in the deep snow, minimizing predation. This allows the horses a longer breeding life, potentially impacting the sustainability of the range.

Any horse that goes lame or is at an age where it cannot escape a wolf pack is predated. Horses do not gracefully lie down and die of old age. A pack will run down the lame, ill or elderly horse, pull it down and eviscerate it. The terror the yet living horse goes through as the wolves begin to feed can be seen in the disturbance at the kill site.

It is for this reason that those who believe retiring a domestic animal to the forest reserve is either woefully misguided or cruelly negligent. Punitive penalties for those who release horses should be implemented, including a time limit to recover the animal, the cost of the roundup and significant fines. The predation of feral horses habituates wolves to treat horses as prey, thus endangering all horses living in the proximity of the foothills.

Feral horses are escaped domestic animals that are not native to the foothills range and should be treated as an invasive species. If there are 350 horses grazing between the Bow River and the Clear Water River in 12 different herds then as these horses are captured and removed 350 bison could be reintroduced. The bison are a native ungulate. Wolves have historically preyed on bison so the sustainability of the relationship may occur naturally. Hunting licences can be utilized to maintain the herds. If the SRD range specialist determines that there is damage being done to an allotment, additional hunting licences could be issued to control the bison in the given drainage.

Capture and removal of the feral horses could be the responsibility of WHOA, a non-profit organization that would ensure the horses are treated humanely. Rescued horses could be adopted out or the society could find a ranch that would accept the entire herd then adopt the annual progeny.

Feral horses in the forest reserve are currently treated as pets because of their domestic origins. Even cats and dogs are not released to multiply unchecked. Those who would support feral horses have to concern themselves first and foremost with the health of the habitat. Wildlife biologists do so when considering deer or elk ranges and the same is true of responsible ranchers with other domestic animals including horses.

(The author is a range inventory specialist with seven years with Public Lands Division and 23 years as a private consultant in Alberta, Saskatchewan and British Columbia.)