

Science Helps Carry the Day

By Gilbert E. Blinn, Superintendent
Badlands NP

Science recently provided some key information which allowed Badlands National Park and Colorado National Monument to resolve some longstanding problems in their bison herds.

Bison had been reintroduced to Badlands in 1963, when 53 animals were brought into the Park from Theodore Roosevelt NP in North Dakota. By 1983 the herd numbered about 375 head, and several hundred surplus animals had been turned over to Indian tribes for restocking their herds over the years. But managers were concerned about inbreeding, and for several years had been looking for new animals which could be brought in to broaden the gene pool.

An opportunity arose when Colorado National Monument decided to surplus their herd of about 25 bison in early 1983. Their range would not support a bison population, and Supt. Denny Huffman wanted to relocate the animals to another park.,

There was a hitch, however. South Dakota law prohibits the importation of bison or cattle that have

not been tested and, for females, vaccinated against brucellosis as calves. Cattle growers are concerned about brucellosis; it is contagious and causes spontaneous abortion in a cow's first pregnancy. As a Federal agency we were not bound by State law, but we wanted to work with the State rather than risk losing their cooperation in other areas.

With the help of local legislators, we were able to get the State legislature to authorize the bison transfer if approved by the State Livestock Sanitary Board. Composed of cattle producers and veterinarians, this Board has veto authority over the importation of cattle and bison into the state.

We met with the Board in April of 1983, and they greeted our proposal with skepticism. They felt that the Colorado herd would not increase our genetic variability for two reasons: The Colorado cows were too small to carry calves sired by the larger Badlands bulls, and the two herds could have come from the original stock. Additionally, the risk of bringing in diseased animals from other states could not be justified by the limited chance of breeding success. The Board suggested that only bulls be introduced into our herd, and that they come from within South Dakota. Nevertheless, the Board scheduled a hearing for June to consider testimony and decide on the matter. We knew we couldn't match the expertise of the cattle breeders. We needed good scientific information if our proposal was to succeed – and we needed it soon.

We found the help we needed by calling Dr. Christine Schonewald-Cox, a specialist in bison genetics in WASO's Division of Biological Resources. She was very supportive of our proposal and assured us our approach was sound. She said that while size differences are important in breeding domesticated cattle, they are not significant in the breeding of wildlife. She pointed out that individuals of a species are larger in more northern latitudes in order to retain body heat, but that skull sizes of Colorado and South Dakota bison showed no significant differences. In any event, the Board's argument was rendered weak by a history of successful bison breeding between cows from the Great Plains and bulls from Canada's Wood Buffalo NP.

Additionally, introducing only bulls would not be effective because the new bulls would not be able to compete successfully for breeding rights in the wild against the established Badlands bulls. It would take an influx of both bulls and cows to insure successful cross-breeding between the two herds. Finally, the disease questions could be resolved through testing the Colorado animals for brucellosis immediately after capture, and then retesting 30 days later before shipping them to South Dakota. We also learned that the Colorado herd had come from the Denver Mountain Parks and was not the same stock as the Badlands herd.

Armed with this information, Superintendent Huffman and I appeared before the Board in June and we carried the day: the Board voted unanimously to allow importation of the Colorado bison to the Badlands herd!

October 27, 1983 was a big day when the Colorado herd was delivered to Badlands NP. Today these animals have become fully integrated into the Badlands herd and are contributing to the gene pool. Both herds are healthier and the range in Colorado National Monument is recovering to a natural, ungrazed condition. The information provided by Dr. Schonewald-Cox played a critical role, not only in making the bison transfer possible, but in making park managers more aware of the factors involved in improving the gene pools of these wild and magnificent animals.