

## MORE THAN BISON

A science perspective on management of the National Bison Range Complex.

Given the flagship name “National Bison Range,” it is easy to overlook the fact that the annual funding agreement (AFA) with the Confederated Salish & Kootenai Tribes went well beyond the role of protection of bison. It is easy to overlook the fact that the agreement included the Pablo and Ninepipe National Wildlife Refuges as well as a set of federally-protected Waterfowl Production Areas.

It is easy to overlook the fact that the lands involved are a mosaic of habitats and topography, from marshy pond to grasslands to mountain forest. It is easy to overlook the fact that the lands, the wildlife and the wildlife science practices of management exist as they do today as an outcome of multi-agency, public and private roles that link local, national and continental resources and standards. It is easy to overlook the fact that the National Bison Range (NBR) does not and cannot stand alone.

It is easy. But easy is no excuse.

Consider the wildlife and the lessons that they give us. The US Geological Survey (USGS) maintains a Gamebird Database that is a record of bird banding data that links the place where a band is recovered from a bird to the place where it was first banded. On lands involved in the NBR agreement, banding has been a major activity dating back to 1927. Over the decades to 2005, records show that 9,588 NBR Complex-banded waterfowl have been recovered in 32 states, six Canadian provinces and even as far away as Central America and the African migratory flyway.

STATES				PROVINCES
Alabama	Indiana	Montana	South Carolina	Alberta
Alaska	Iowa	Nebraska	South Dakota	British Columbia
Arizona	Kansas	Nevada	Tennessee	Manitoba
Arkansas	Louisiana	New Mexico	Texas	Northwest Territories
California	Maine	North Dakota	Utah	Ontario
Colorado	Minnesota	Ohio	Washington	Saskatchewan
Idaho	Mississippi	Oklahoma	West Virginia	Source: USGS Gamebird Database 2005
Illinois	Missouri	Oregon	Wyoming	

Listing of U.S. states and Canadian provinces demonstrating migratory range and conservation relationships of game birds banded at the National Bison Range Complex.

There can be no doubt that the quality of habitat health and management in these and other Waterfowl Production Areas is a continental conservation issue.

Beyond the waterfowl nesting sites in ponds and marshes, the rivers crossing the NBR are edged with habitat of broad-leaved trees, home to deer, mink, raccoons and numerous birds. The prairie lands are breeding territory for meadowlarks, song sparrows, western bluebirds and common snipe, amidst the foraging of pronghorn antelope, bison and immense numbers of grasshoppers. This is Palouse prairie, a short-grass ecosystem and the largest remaining grassland of its type on the globe.

The bison and pronghorn forage up into the foothills, to the edges of the tree line. In the conifer forest beyond, deer, elk and big horn sheep have a year-round safe haven joined by ruffed grouse, mountain bluebirds, tree squirrels and a myriad of other species.

During the 99 years since the National Bison Range was established, numerous foundation-funded scientists have trekked to this unique place for their research. Recent examples demonstrate the great value in the partnership of scientifically-managed wildlife refuges, research funders and the international wildlife science community.

◆ Dr. Jack Hogg of the Montana Conservation Science Institute, with the help of National Geographic Society (NGS) funding, spent more than 20 years studying the big horn sheep, correlating findings of this insular herd with a parallel study of a wild herd in Canada. Those findings, with conclusions applicable to studies of other large ungulates like bison, received international attention when published in the British *Proceedings of the Royal Society* and referenced in the US publications *Science* and *Nature*.

◆ Dr. Renee Duckworth of Duke University spends six months of the year in Montana and at the NBR studying the competitive factors involving mountain bluebirds and their reintroduced cousin, the western bluebird. Some of her work's funding has come from the National Science Foundation (NSF) and results have been published in the *Proceedings of the Royal Society* and the journal *Behavioral Ecology*.

◆ Dr. Peter Gogan, a federal wildlife research biologist with the USGS Northern Rocky Mountain Science Center, worked with NBR staff on a project involving collection and compilation of genetic data on individual bison. The data was then added to a comprehensive bison database managed by Dr. Jim Derr at Texas A&M University's Veterinary College. This tool is used by scientists and wildlife managers nationally in efforts to improve the purity and diversity of bison herds.

◆ Prior to his current, temporary assignment as a program manager at the National Science Foundation headquarters in Washington, DC, Dr. John Byers spent 25 years studying the NBR's pronghorn antelope, splitting his time each year between the University of Idaho and the NBR. He plans to return to the University and the pronghorn studies upon completion of the NSF assignment. His research has received grant support from NSF, NGS and the National Institutes of Health. His book, *Built for Speed*, is a delightful look at pronghorn and at the NBR Palouse habitat that sustained them. Over all those 25 years, those grasslands remained intact and healthy, year on year.

◆ Other studies that continue today at the NBR include two other NSF-funded projects: (1) Dr. Gary Belovsky of Notre Dame University performs ecosystem studies of the role of grasshoppers in prairie nutrient cycling including the interaction with birds. (2) Based out of the Field Museum of Natural History in Chicago, Dr. Sabine Huhndorf studies the process of fungal decomposition of bison dung for research that reviews similar data from South America.

All of these scientists publish their results, making their conclusions and insights available to wildlife managers around the globe including the management of our National Wildlife Refuges.

No refuge or protected wetland or herd of bison can stand alone. The slogan "Think Globally, Act Locally" comes to mind as an apt description of the management needed at the NBR Complex (NBRC) as on all lands of our National Wildlife Refuge System (NWRS). The practice of information-sharing is basic to scientists of all disciplines. Within the US Fish & Wildlife Service,

NWRS biologists and managers access new research findings, communicate as applied science teams, cooperate interagency on the federal, state and local levels and have their own findings peer-reviewed. It is wildlife management where the decisions are made on the best available evidence. It is just such practices that have made the NWRS, in one short century, a model for wildlife conservation on the globe.

In contrast, at the NBRC the attempt is being made to place sensitive science-based responsibilities with a single, local contractor-tribe. Organization size alone significantly limits its capabilities and the opportunity for the Tribe's biology staff to take advantage of best-case interaction with the international wildlife science community. That professional difference introduces the threat of scientific disconnects that could end a century when the best available science produced the best available solutions.

As Department of Interior officials weigh the decision regarding reinstatement of the AFA at the National Bison Range Complex and as members of Congress take oversight action, it is of critical importance that no one takes the easy way out. There are other perspectives on this issue that require all due diligence inclusive of law, capability, accountability, personnel and management. A theme running underneath it all must be that these special lands do not and cannot stand alone.

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February 5, 2007: The document was prepared by Eileen McLaughlin, Project Director of Wildlife Stewards, a Refuge Friends group that works as partner to the San Francisco Bay NWR Complex. Eileen was a participant at the National Wildlife Refuge System Conservation Summit in May 2005 and is a member of the Public Outreach Committee of the San Francisco Bay Joint Venture. She can be contacted at [WildlifeStewards@aol.com](mailto:WildlifeStewards@aol.com).