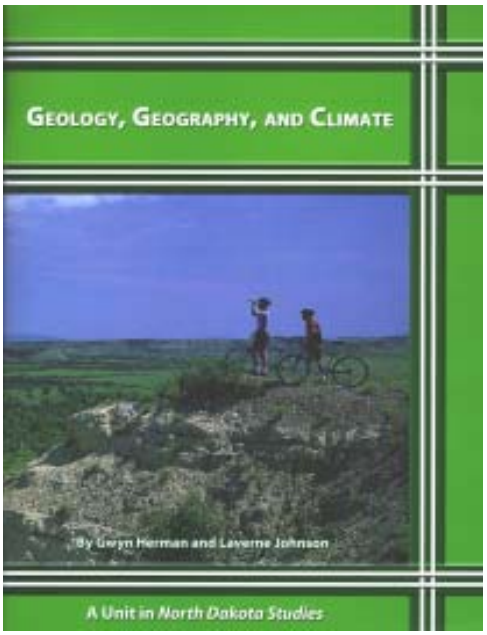
News in Brief

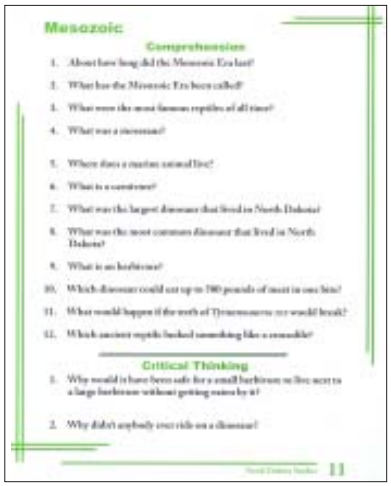
Compiled by Lorraine A. Manz, Editor

ND Geological Survey assists with 4th Grade Science Curriculum



The front cover and example pages from the study curriculum for the 4th grade earth science unit in North Dakota schools.

The North Dakota Division of Independent Study recently published *Geology, Geography, and Climate, A Unit in North Dakota Studies*. This series was funded by the 59th North Dakota Legislative Assembly. John Hoganson assisted with the editing of the curriculum guide and the North Dakota Geological Survey provided a number of photographs and diagrams for the book. This guide is for use in the 4th grade, we are also assisting with an earth science guide for 8th grade.



Comings and Goings

In October, the Survey welcomed **Stephan Nordeng** who joined the staff as a carbonate geologist. Originally from Houghton, Michigan, Steve took the long route to North Dakota, coming via Alaska, Wyoming, Kansas and, most recently, Wisconsin. This is not his first encounter with the state, however. Steve was here during the last oil boom back in the late 70's and early 80's, so he is already familiar with our oil patch and our climate!

Rick Dunn and Jennifer Staub both joined the Oil & Gas Division in August as field inspectors in the Williston Field District. Also in August, the Bismarck staff welcomed **Tom Schumacher** who joined the team as the Underground Injection Control Supervisor.

Welcome aboard!

Hoganson Reappointed to Advisory Council

In October, John Hoganson was reappointed to a second term on the Bureau of Land Management's Dakotas Resource Advisory Council. He was appointed by Secretary of Interior Dick Kempthorne to represent North Dakota state government on the committee. John will serve as Vice-Chair of the council during FY 07. His term expires September 20, 2009.

DMR Hosts Visitors from Russia

On November 30, the North Dakota Department of Mineral Resources hosted three employees of ZAO Samara-Nafta, a Russian oil and gas company. Alexander Andriyanov (Production Manager), Andrey Plekhanov (Environmental Health and Safety Manager), and Sergey Shaposhnikov (Interpreter) were accompanied by Amerada Hess Corporation employees Gary Johnson (Senior Environmental Specialist) and Brandon Herda (Environmental Health and Safety) from Williston. Amerada Hess has a 65% interest in Trabant Holdings, which owns 100% of ZAO Samara-Nafta. Samara-Nafta is an exploration and production company located in the Volga-Urals region of the Russian Federation. The company currently produces about 7,500bbls/day of high quality crude from fields in the Mamurinsky license area in the southern Samara region, about 600 miles southeast of Moscow. The city of Samara is situated along the Volga River and has a population of more than one million people. They chose to visit North Dakota because our climate and landscape is very similar to that of the Samara area. The DMR presentations focused on the interactions between the Oil and Gas Division, Geological Survey, and industry.

Meeting participants: (front row) Lynn Helms, Gary Johnson, Alexander Andriyanov, Andrey Plekhanov, Sergey Shaposhnikov, and Brandon Herda (back row) Glenn Wollan, Mark Bohrer, Ed Murphy, Bruce Hicks, and Fred Anderson.

Erratum

In the summer 2003 issue of the NDGS Newsletter, former Survey geologist Mark Gonzalez wrote an article entitled *Continental Divides in North Dakota and North America.* In it, he made reference to the work of William Dring, specifically, an excellent piece he wrote on the Oak Park Continental Divide near Chigago, IL and its role in a cholera outbreak that occurred in the area in 1885, which resulted in the death of some 80,000 people. A few months ago we received a note from Mr. Dring drawing our attention to a serious error in his publication that he wished to correct. In his own words:

"When website, oprf.org/divide, was originally written and published in 1998, reference was made to a large number of deaths in Chicago, in August of 1885, due to waterborne disease. To my great embarrassment, I now find that there were no deaths and that I was perpetuating an urban myth.

From a review of contemporary newspaper articles, it is perfectly clear that there were no cholera nor (sic) typhoid deaths due to the storm in August of 1885.

The myth about cholera deaths is quite pervasive, and is still being told as true, in very recent times, even now, 125 years after the event.

The first time that that the fabricated story was told may never be known. The origin of the myth is of particular interest to author Libby Hill and is the subject of her upcoming article; "The Chicago Epidemic of 1885: an Urban Legend?" which will be published in Fall, 2006 issue of *The Journal of Illinois History.*

Murphy Appointed to IOGCC

Governor John Hoeven recently appointed Ed Murphy to the Interstate Oil and Gas Compact Commission (IOGCC). Ed will serve on the Energy Resources, Research and Technology Committee. Other DMR staff who represent North Dakota at the IOGCC are Lynn Helms and Bruce Hicks. North Dakota has been a member since 1953. The IOGCC was founded in 1935 to resolve common issues regarding conservation of the nation's oil and gas resources. Governor Hoeven is currently chairman of the IOGCC and Lynn Helms is second vice chairman.

Ongoing Geologic Mapping Projects in North Dakota

The Survey continues its surface geological mapping under the USGS STATEMAP program with geological mapping investigations being conducted in three areas of the state (fig. 1). New mapping is currently being conducted in the south Fargo urban area by geologist Fred Anderson. New mapping is also being conducted by survey geologist Lorraine Manz in the Devils Lake area. Completion of the mapping in this area will mark the completion of surface mapping for the Devils Lake urban and surrounding areas. State Geologist Ed Murphy is also conducting geological mapping in southwestern North Dakota in the vicinity of Taylor. Ed will also complete mapping in this area that has been of recent interest by local industry for the identification and extraction of new clay resources.

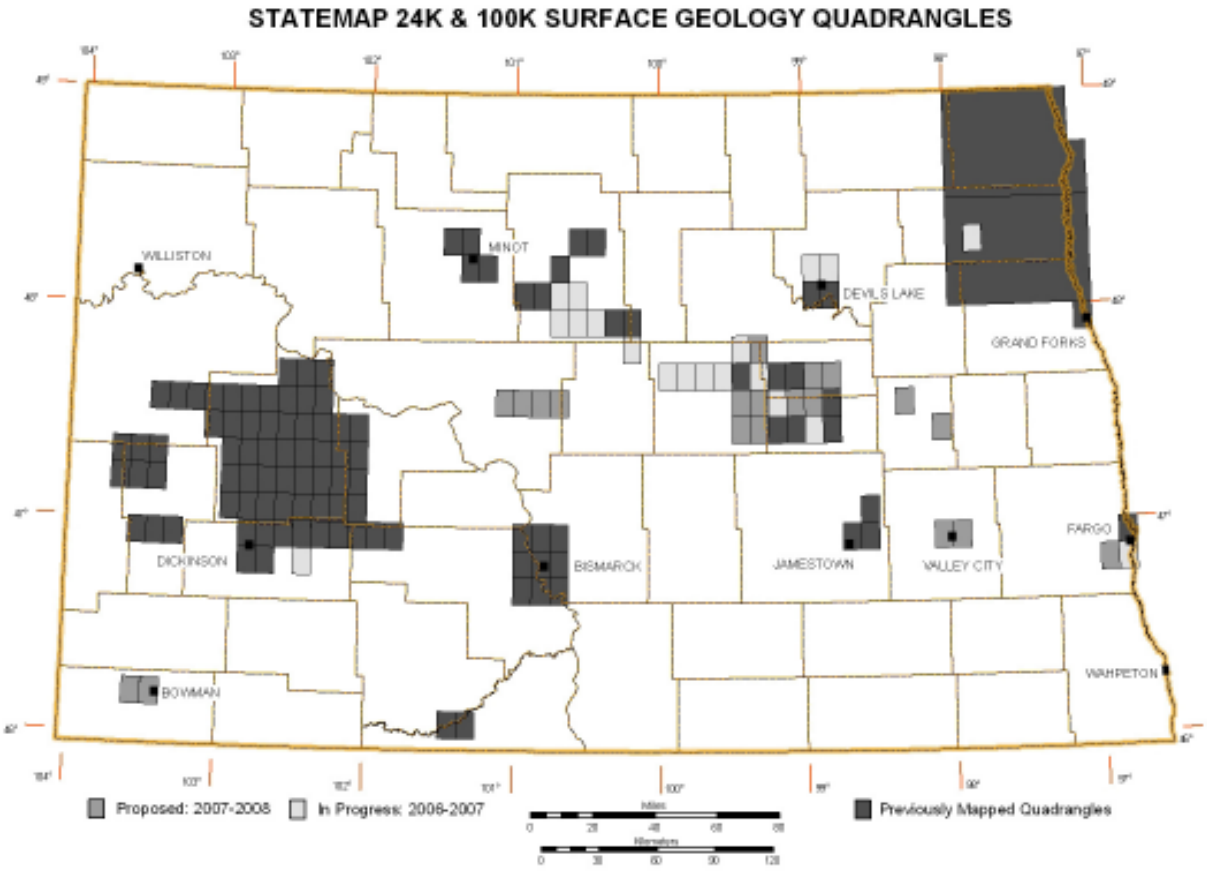


Figure 1. Map of 1:24,000 scale (7.5 minute) quadrangles in North Dakota. Previously mapped quadrangles (dark gray), quadrangles in progress (medium gray), and quadrangles planned for mapping in 2007-2008 (light gray) are shown. Over 140 detailed quadrangles have been mapped.

Four new detailed scale (1:24,000) geologic maps will be published by the Survey in July of 2007.

Current USGS/NDGS STATEMAP Geologic Mapping Projects for 2006-2007			
Mapping Area	**Quadrangle (Map) Name**	**Map Relevance or Use**	**Author**
Fargo Urban Area	Fargo South	Urban Geology, Engineering, Land-Use Planning	Fred Anderson
Devils Lake Area	Grand Harbor	Urban Geology, Engineering, Land-Use Planning	Lorraine Manz
Devils Lake Area	Sweetwater	Urban Geology, Engineering, Land-Use Planning	Lorraine Manz
Southwestern ND	Bratburg Butte	Non-Metallic Mineral Resource Development, Land-Use Planning	Ed Murphy

Fargo Area

Detailed geologic mapping has been ongoing in the Fargo area since 2004. At the 1:24,000 scale, there are four quadrangles that cover the rapidly expanding urban footprint (fig. 2).

The Fargo North Quadrangle has been mapped and was completed in the summer of 2005. Currently, the Fargo South Quadrangle is being mapped. The two remaining Quadrangles are planned for mapping in the 2007-2008 (West Fargo South) and 2008-2009 (West Fargo North).

Figure 2. 2005 NAIP aerial image of the Fargo area with the outline of 1:24,000 scale geologic quadrangles shown. The Fargo North Quadrangle (black outline) was completed in 2005, the Fargo South Quadrangle (white outline) is currently in progress. The West Fargo North and South Quadrangles (gray outlines) are planned for mapping during the 2007-2008 and 2008-2009 STATEMAP program years.

Devils Lake Area

Survey geologist Lorraine Manz has been conducting geologic mapping in the Devils Lake area since 2003. Two quadrangles have been completed; the Devils Lake Quadrangle, completed in 2003, and the Camp Grafton Quadrangle, completed in 2004 (fig. 3).

The Sweetwater and Grand Harbor Quadrangles are currently in progress and will be completed in the summer of 2007. Lorraine is planning geologic mapping in the Valley City area for 2007-2008.

Figure 3. 2005 NAIP aerial image of the Devils Lake area with the outline of 1:24,000 scale geologic quadrangles shown. The Devils Lake and Camp Grafton Quadrangles (white outline) were completed in 2003 and 2004, respectively. The Grand Harbor and Sweetwater Quadrangles (black outline) are in progress.

Hebron Area

State Geologist Ed Murphy has been mapping in the Hebron area for the past several years. Ed's mapping has been focused on mineral resources within the Golden Valley Formation (Tertiary) in southwestern North Dakota (fig. 4).

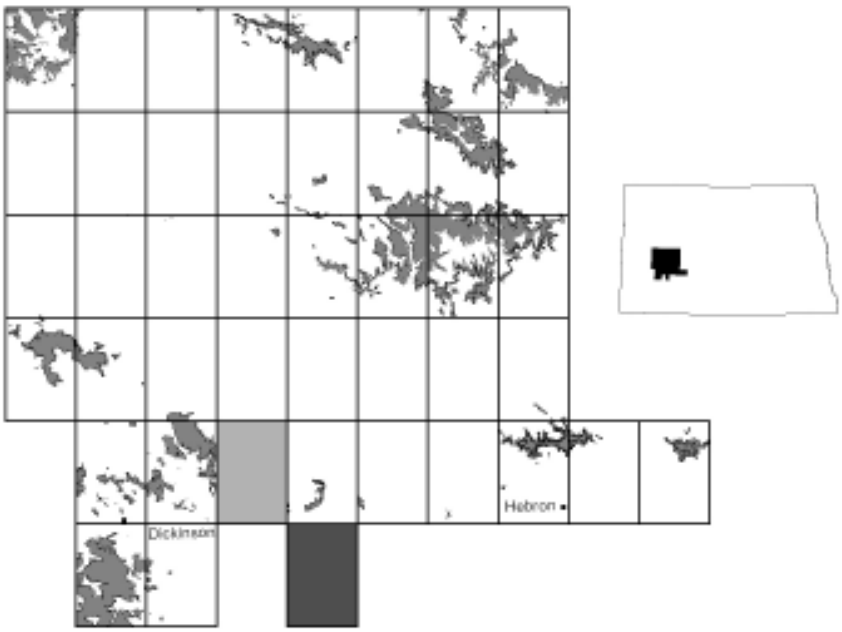


Figure 4. Locations of 1:24,000 scale geologic quadrangles previously mapped in southwestern North Dakota by State Geologist Ed Murphy. Over 40 quadrangles have been mapped in previous years. The Boyle Quadrangle (light gray shaded) was completed in 2006. The completion of the geologic mapping for the Bratburg Butte Quadrangle (dark gray shaded) in 2007 will mark the completion of kaolinite mineral resource mapping in the area. The Golden Valley Formation is shown in this figure as gray. The remaining area is geology undifferentiated.

Mapping in the Bratburg Butte Quadrangle is currently underway and will also be completed in the summer of 2007. The completion of this map will also mark the completion of the mapping in this area. State Geologist Ed Murphy is planning on conducting geologic mapping in the Bowman area in 2007-2008.

Mapping in North Central North Dakota

Prior to his retirement from the North Dakota Geological Survey, Dr. John P. Bluemle, former ND State Geologist, had conducted detailed mapping throughout much of the glaciated portion of North Dakota. Field mapping was completed for over 40 quadrangles (fig. 5). The Survey and Dr. Bluemle have been digitally compiling these maps over the past two years. At the end of the 2006 STATEMAP program year in July of 2007, the Survey will have completed 28 of 44 selected 1:24,000 quadrangles. The remaining 16 quadrangles will be completed in 2007-2008.

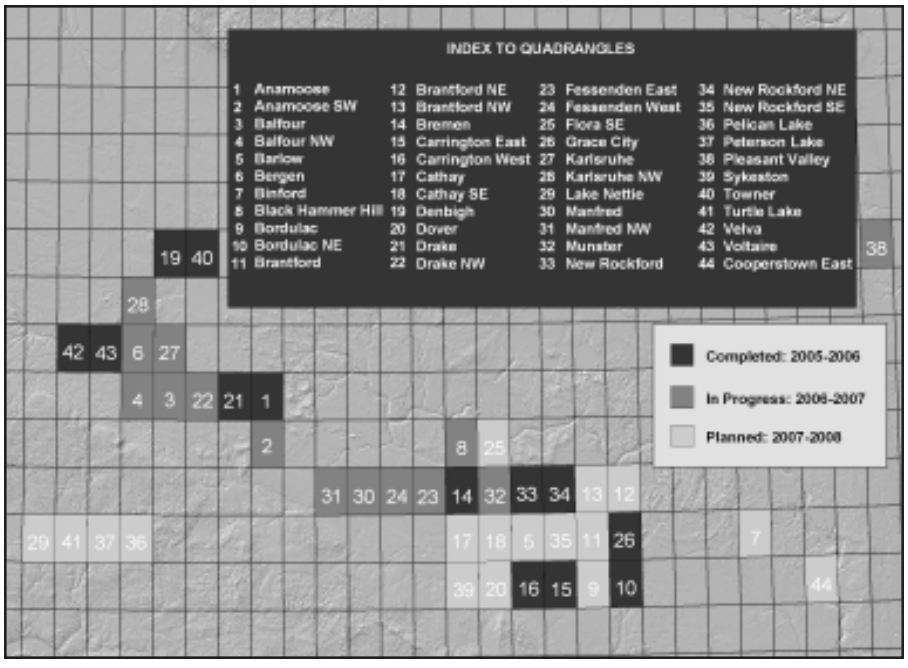


Figure 5. 1:24,000 scale quadrangles mapped by former State Geologist John P. Bluemle that are being digitally compiled by the NDGS.