Article Title: Revealing History: Another Look at the Solomon D Butcher Photographs

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Article Summary: In 1998 the Nebraska State Historical Society began to generate digital images from the glass plate negatives of the famous Butcher photographs of homesteading on the Plains. The new digital images reveal details previously hidden in the shadowed areas of prints made from the negatives.

Cataloging Information:

Names: Solomon D Butcher, Uriah Oblinger, John Curry, Bob Olive, Luther Mitchell, Arni Ketchum, Anton Smock, Harvey M Pickens, Fred Pickens

Nebraska Place Names: Overton, West Union, Oconto, Ortello Valley

Keywords: Solomon D Butcher, Custer County

Photographs / Images*: grocery store in Overton, Nebraska, 1904; “Nebraska Gothic,” the John Curry sod house near West Union, Nebraska, 1886; old sod house where cattleman Bob Olive was fatally wounded in a shootout with homesteaders Luther Mitchell and Arni Ketchum in 1878, photographed August 4, 1888; new family northwest of West Union, Nebraska, 1886; Anton Smock homestead near Oconto, Custer County, Nebraska, 1904; Harvey M Pickens and Fred Pickens, Ortello Valley, Custer County, Nebraska, 1889; unidentified family in southwest Custer County, Nebraska, 1892

*Note: An area of enlarged detail appears alongside each Butcher image in this article.
Introduction

Sod Houses. No other symbol encompasses the story of European settlement on the Great Plains more eloquently than does the sod house. And the images of those houses and the determined people who built them were captured by the camera of Nebraskan Solomon D. Butcher. His photographs are familiar to anyone who has seen a documentary film on the West, read a book about settling the Great Plains, or just taken an American history class. For more than fifty years the Butcher photographs have served as the illustration of homesteading on the Plains. We thought we knew everything there was to know about these photographs. We were wrong.

Almost two years ago the Nebraska State Historical Society began to generate digital image files of all 3,000 Butcher glass plate negatives. This project, funded by Ameritech and the Library of Congress National Digital Library Award Program, will produce in electronic form the entire Butcher photograph collection along with the 1862 to 1911 letters of the Uriah Oblinger family, which offer important testimony about settlers’ lives on the Great Plains.

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Both collections will go online as part of the American Memory portion of the Library of Congress website.

As we began scanning the Butcher plates, it immediately became apparent that there was more information in the photographs than initially realized. By the very nature of photography, negatives hold more detail than prints. The negative, when exposed, creates the photograph. The print is simply a mechanism to make it easier to view the image.

A black and white photographic print contains many shades of gray, from the deepest black in shadow areas to the whitest white in the highlights. In a traditional darkroom a printer must “pull-in” the highlights by printing them darker to maintain detail. The opposite is true for shadow areas. The printer must “hold” the shadows and make sure they do not get too dark, thus losing detail. A good black and white print shows both black shadow areas with detail and white highlights with detail. This detail is only apparent, however, when captured in the negative.

Printing from nineteenth- and early twentieth-century glass plates is especially difficult today because of the changes in the manufacture of photographic papers. Glass plate negatives have a tremendously broad tonal range. To illustrate that point, let’s say a glass plate has 250 different shades of gray. Today’s photographic papers, however, may allow the creation of prints having only 175 or 200 shades of gray. This limitation makes it practically impossible to print a glass plate negative accurately. The result is a print that does not reveal all of the information that appears in the negative.

The advances made in scanning technology during the last several years have allowed for capturing increasingly higher resolution and density range. More information can be pulled from the original object during the scanning process than ever before. And more information in the electronic file leads to a better understanding of the original.

When the Society began scanning the Butcher plates in July 1998, we immediately realized the depth of information “hidden” in the plates that does not appear in the prints. Here we present some of the more poignant examples of that hidden information and show how digital imaging reveals the rest of the history documented so well by Butcher more than a century ago. The faces will be familiar, but the details will not be. As you look at these photographs, remember that the information in those dark doorways has not been seen since Butcher released the shutter and created the photograph.
Grocery store in Overton, Nebraska, 1904. RG2608.PH-2556

"Nebraska Gothic," the John Curry sod house near West Union, Nebraska, 1886. RG2608.PH-1048

This is a favorite from the Butcher collection. The Currys have a fine fluffy feather tick on their bed just inside the door.
The old sod house where cattleman Bob Olive was fatally wounded in a shootout with homesteaders Luther Mitchell and Ami Ketchum in 1878. Photographed August 4, 1888. RG2606.PH-1434

There is probably no connection between the young boy peeking around the corner of the house and the events that led Butcher to photograph it.

A new family northwest of West Union, Nebraska, 1886. RG2606.PH-1100

Many of these images show beds near doorways, which undoubtedly made sleeping more comfortable during Nebraska’s hot summer nights.
Anton Smock homestead near Oconto, Custer County, Nebraska, 1904. This is an important photograph because it shows the evolution of the settlement experience. Here are pictured the original sod buildings, the new frame house and barn, and the eventual division between living and agricultural space. RG2608,PH-1746b.

Without the detail provided by the scan of this plate, Smock's young children are invisible to researchers.
How did we do it?
Creating an image file with this amount of detail requires scanning from the original in-camera negative. Dark shadow details on prints will not reveal hidden information. It is also necessary to turn off any automatic settings on the scanning software. The other important factors are resolution and dynamic range. The higher the resolution, the more small details held in the glass plate negative will be recorded by the scanner. Both elements contribute to revealing the hidden secrets of the negatives.

Once a scan is complete, a photo manipulation software is needed to change the contrast in selected areas of the image. This software makes it possible to “pull-out” detail from the darkened areas. The short tonal range that exists in a shadow area with detail is expanded to cover more tonal values, creating a higher contrast and making the information in the shadow area more easily seen.

Why is this technology important?
Aside from the obvious benefit of allowing access on a website to every Butcher image, we finally have the opportunity to offer access to information that was always available, but practically impossible to use. Because prints were available that were loaded with good information about settlement on the Great Plains, no one thought about looking at the negatives. The question of whether there might be more to the images than met the eye never came up until we started scanning.

The implications of digital technology for historical research are startling. The ability to look inside a sod house was limited until we scanned the Butcher collection. Very few photographs were taken inside sods, so opening these dark doorways and looking inside changes everything for the researcher. Small details barely apparent and usually overlooked are now easily highlighted and recognized. There are many more people in these images than we ever supposed. And new questions must be posed about why they are peering around buildings, skulking in doorways and windows, and hiding behind the livestock.
Unidentified family in southwest Custer County, Nebraska, 1892. RG2608.PH-1633

The walls inside this house have been whitewashed, which would have helped brighten the interior. The bed and the babies' cradle are right by the door. Notice the quilt on the bed and the potted plants on the windowsill.