

2004

Iowa's Covered Bridges

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Iowa's Covered Bridges

The Graduate Research Project

Submitted to the

Department of Curriculum and Instruction

Division of School Library Media Studies

in Partial Fulfillment of the Requirements for the Degree

Master of Arts

University of Northern Iowa

by

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December 17, 2004

Abstract

The purpose of this project was to write and illustrate pictorial an informational picture book on Iowa's covered bridges. This picture book was meant to assist upper elementary teachers in teaching transportation and architecture to their students and inform them of the value of covered bridges in Iowa's history. The finished product is an informational picture book aimed for nine to twelve year olds, but which younger children and adults could enjoy. In sharing this book with others, the readers mostly were drawn to the photographs, but were also drawn to the writing, especially the ghost story.

Table of Contents

	Page
List of Tables and Maps	# v
Chapter	
1. Introduction	# 1
Background	# 1
Reason for bridges to be covered.....	# 3
Iowa Bridges.....	# 4
The Iowa Bridges in K-6 Curriculum	# 6
Availability of Books	# 7
Description of the Problem.....	# 8
Research Questions	# 9
Purpose Statement.....	# 9
Definitions.....	# 9
Assumptions	# 11
Limitations	# 11
Significance.....	# 11
2. Review of Literature	# 13
Historical Background	# 13
Standards and Benchmarks.....	# 16
Writing Historical Books for Children.....	# 18
3. Procedures	# 23
4. The Project – <i>Iowa’s Covered Bridges</i>	# 26
5. Summary, Conclusions, Recommendations for Further Study	# 27
Reference List.....	# 31
Appendices	
A. Content Knowledge.....	# 34
B. National Standards for History Grades K-4	# 36
C. Cedar Rapids School District Related Social Study Standards.....	# 37
D. Resources to Assist in the Writing Process	# 38
E. Covered Bridge Interview Questions	# 40
F. Letter Requesting Interviewees	# 41
G. Returned Postcard	# 42
H. Letter Requesting Interview.....	# 43
I. Release for Inclusion in Book	# 44
J. Bridge Worksheet.....	# 45

Tables and Map

Table	Page
1. 2002 Covered Bridge Count by State.....	# 2
2. Iowa's Covered Bridges	# 5
3. 1970 Covered Bridge Census	# 15

Map

1. Location of Iowa's Covered Bridges.....	# 5
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Chapter 1

Iowa's Covered Bridges

We crossed this river by a wooden bridge, roofed and covered in on all sides, and nearly a mile in length. It was profoundly dark; perplexed, with great beams, crossing and recrossing it at every possible angle; and through the broad chinks and crevices in the floor, the rapid river gleamed, far down below, like a legion of eyes. We had no lamps; and as the horses stumbled and floundered through this place, towards the distant speck of dying light, it seemed interminable. I really could not at first persuade myself as we rumbled heavily on, filling the bridge with hollow noises, and I held down my head to save it from the rafters above, but that I was in a painful dream; for I have often dreamed of toiling through such places, and as often argued, even at the time, 'this cannot be reality.' (Dickens, 1922 p. 493)

Background

A bridge built of wooden timbers that form supporting trusses and with a floor protected from weather by a roof came to be known as a covered bridge. As early as the 14th century, Swiss and German carpenters devised simple trusses for timber bridges, although most bridges were still built of stone. They also evolved the idea of protecting these bridges with huge roofs (Allen, 2000, p. 126). In the 18th century, American builders became acquainted with the technique of building timber bridges when drawings of the Italian architect Andrea Palladio (1518-1580) were republished. Timber was plentiful in the American colonies, and after the American Revolution ended in 1783, wooden bridges began to be built, often replacing ferries.

The first known covered bridge in America was a 500-foot structure built in 1805 over the Schuylkill River, at Philadelphia, Pennsylvania, by Timothy Palmer. At the suggestion of Judge Richard Peters, whose estate bordered the river, the bridge

was handsomely sided and roofed. The covered timbered bridge soon became a common structure on highways and, later on railroads of the United States (p. 127).

The United States has over 800 remaining covered bridges in thirty-three of the fifty states. These numbers are only estimates as there are many undiscovered, new, and private bridges that may not have been included in the count. There appears to be neither rhyme nor reason as to where the bridges are located. Table 1 is a listing of the location of existing covered bridges in the United States; the right column lists the states that do not have covered bridges.

Table 1: 2002 Covered Bridge Count by State.

East	West	South	Midwest	No Bridges
Connecticut 7	Alaska 2	Alabama 1	Illinois 13	Arizona
Delaware 8	California 5	Arkansas 4	Indiana 14	Colorado
Maine 9	Oregon 37	Georgia 10	Iowa 14	Florida
Maryland 20	Washington 47	North Carolina 33	Kentucky 17	Hawaii
Massachusetts 21		South Carolina 40	Michigan 22	Idaho
New Hampshire 29		Tennessee 42	Minnesota 23	Kansas
New Jersey 30		Texas 43	Missouri 25	Louisiana
New York 32			Ohio 35	Montana
Pennsylvania 38			Wisconsin 49	Mississippi
Rhode Island 39				Nebraska
Vermont 45				Nevada
Virginia 46				New Mexico
West Virginia 48				North Dakota
				Oklahoma
				South Dakota
				Utah
				Wyoming

(Atawalk Pont Couverts Covered Bridges, n.d.)

Many of the covered bridges are listed on the National Register for Historic Places. There are two criteria for being placed on this registry. First, the quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association. Secondly,

the sites are associated with events that have made a significant contribution to the broad patterns of our history; or that embody the distinctive characteristics of a type, period, or method of construction; or that represent the work of a master; or that possess high artistic values; or that represent a significant and distinguishable entity whose components may lack individual distinction; or that have yielded or may be likely to yield, information important in prehistory or history (National Register of Historic Places, n.d.).

Covered bridges were also used for advertisements; at one time or another all the local traffic had to use the bridge. They were also used for town and other types of meetings until suitable structures were built. Covered bridges were spots where young men took their dates to share a few kisses and the longer the bridge the better, but this was not a reason for them to be covered (Atawalk Pont Couverts Covered Bridges, n.d.).

Reasons for bridges to be covered.

Many theories abound for why the bridges were covered. A Pennsylvania Carpenter said, “Keeps ‘em dry” (Allen, 1970, p. 449). A Maryland bridgebuilder felt the same way about it but his answer was more colorful: “Our bridges were covered, my dear Sir, for the same reasons our belles wore hoops skirts and crinolines – to protect the structural beauty that is seldom seen, but nevertheless appreciated” (p. 449).

A likely reason was that water scared the horses and that covering the bridge helped keep the horses calm and secure, allowing the animals to feel as if they were

in their barns at home. The covering on the bridges also allowed for man and wagon to stop and stay dry during a storm (Howard, 1998, p. 9).

Many other motives are suggested for covering the bridges. It is possible that bridges were covered in order to keep water from joints where it might freeze during winter, and dry up during the summer or to keep the floor of the bridge dry, because it was oiled and becoming wet would make it slippery. The added bulk would make the bridge more solid. The most common suggestion is that roof kept snow off the roadway. Actually, snow had to be placed on the bridge to allow sleighs to cross the bridge (Allen, 1970, p. 450).

The most likely reason for bridges to be covered is that wood can last a long time in water and a long time in sun, but the combination of the two is deadly to a bridge. An uncovered wooden bridge might last ten years before needing major repairs, such as the replacement of beams. An uncovered wooden bridge treated with chemical preservative might have a somewhat longer life. But a roofed bridge would last indefinitely (p. 450-451).

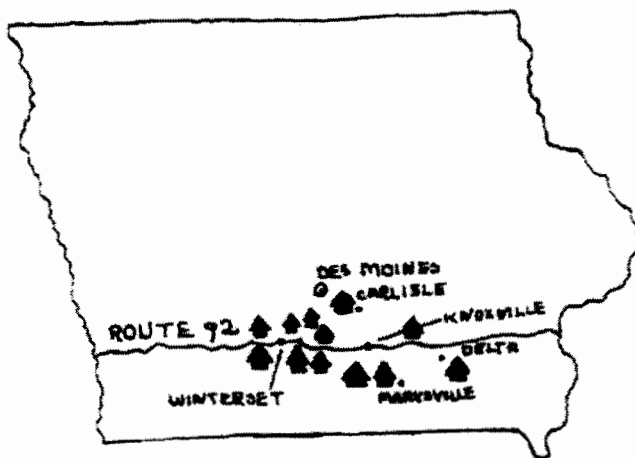
Iowa Bridges

There are fourteen identified covered bridges in Iowa. Seven of the bridges are listed on the National Register of Historic Places. Five of those are located in Madison County (Holliswell, Hogback, Imes, Cutler-Donahue, and Roseman) one in Marion (North Cedar Creek Hammond), and one in Keokuk County (Delta) (Travis, 2002).

One bridge was found on the Historic American Building Survey. This bridge is located in Des Moines in Polk County (Owen) (Covered Bridges Recorded by

Historic American Buildings Survey (HABS) and the Historic American Engineering Record (HAER), June 15, 2002). Map 1 shows the location of the Iowa bridges, and Table 2 shows the distribution, age and status of Iowa bridges.

Map1: Location of Iowa's Covered Bridges.



Swanson (1960p. 20)

Table 2: Iowa's Covered Bridges.

	Bridge	Location	Built	Length	Renovated	Cost	Relocated	NRHP
1	Holliwell	Madison County	1880	122'	1995	\$225,000	No	Yes
2	Hogback	Madison County	1884	97'	1992	\$118,810	No	Yes
3	Imes	Madison County	1870	81'	1997	\$31,807	1887 1977	Yes
4	Cutler-Donahue	Madison County	1870	79'	1997	\$35,538	1970	Yes
5	Roseman	Madison County	1883	107'	1992	\$152,515	No	Yes
6	Cedar	Madison County	1883	76'	1998 *Fire	\$128,073 Destroyed	1921 09-03-02	No 8:30p.m.
7	Delta	Keokuk County	1869	76'	*Fire	Destroyed	09-03-03	No 8:30p.m.

Table continued on the next page

8	Owens (Warren County)	Polk County	1866 1882	94'			Late 1960s	Buildings
9	Hammond	Marion County	1870	80'				Yes
10	Marysville East of Attica 2	Marion County	1870	40'				No
11	Marysville Knoxville 1	Marion County	1891	41'				No
12	Wilkinson	Cero Gordo County	1969	52'				No
13	Schwab	Johnson County	?	17'				No
14	Twin Lakes	Calhoun County	?	41'				No
15	Hartley	O'Brien County	?	70'				No

(Travis 2000)

The Iowa Bridges in K-6 Curriculum

The K-4 national history standards state that students need to have an understanding of the people, events, problems and ideas that were significant in creating the history of their state (McRel, 1995). One of the state of Iowa's larger schools district's K-6 social studies history standards and benchmarks also indicate that students should know significant historical developments, events, personalities, buildings, and places in the local community (Newton Community Schools, n.d.).

Iowa's covered bridges help students construct meaning to build a sense of Iowa's history by enlightening students about architecture and transportation. The architecture of the bridges is unique and their role in transportation gives students the sense of travel from over 100 years ago.

Availability of Books

Three major bibliographic databases were searched to determine if materials are already available for students on Iowa's covered bridges. The researcher chose these as the most comprehensive and likely to list such material. *Books in Print*, a searchable database of every book in print, the union catalog of the State Library of Iowa (*SILLO*), a state wide searchable database of most public libraries in Iowa, and *Amazon.com*, an Internet site that sells books and other materials to the public, were searched for material for children on the covered bridges in Iowa.

The *Books in Print* search retrieved 67 hits for covered bridges. When this researcher added the word, "Iowa" to the search, there were three hits. The books retrieved were: *Bridges in Time: Keepsakes Celebrating the Bridges of Madison County* by R. Hoskinson (1995), *Covered Bridges of Madison County, Iowa, A Guide* by A.R. Howard (1998) and *Covered Bridges in Illinois, Iowa and Wisconsin* by L.C. Swanson (1960). The listed books are informational books, but not written for children.

Amazon.com was viewed for the availability of books on covered bridges in Iowa for children. This researcher typed in Iowa covered bridges with the hope of a long listing of books. *Amazon.com* lists only the Howard and Swanson books.

SILLO was also used to establish the availability of books on covered bridges in Iowa. Twelve records matched the query. Two of the hits were not books. One was a videorecording and the other a filmstrip. Nine out of the ten remaining hits were copies of the Swanson book and the last book was the Howard.

The results of these searches show the lack of books on Iowa's covered bridges for children.

Robert and Francesca brought life, romance, and tourism to the bridges of Madison County in the books by Robert Waller and in the movie. Picture an elementary school teacher planning a lesson on the history of Iowa. S/he is looking for a new approach to history and is looking for something that is not taught year after year. The district mandates that s/he use the standards and benchmarks, which include architecture, transportation, and local history. Teaching about Iowa's covered bridges would meet the district's expectations. S/he has read *The Bridges of Madison County* by Robert Waller and decides the Iowa covered bridges would be a good topic to cover this year. S/he makes a trip to the school library media center to collaborate with the library media specialist (LMS). After a quick explanation of what s/he is looking for, they try the catalog. The only item covering the topic of covered bridges are Waller's books. They agree that they are inappropriate books for children. A search of the Internet and various book catalogs turn up no books for children on the subject. They find nothing written on the elementary child's reading level for them to gain knowledge of and understand Iowa's covered bridges.

Description of the Problem

Iowa has seven remaining covered bridges on the National Register for Historical Places and one on the list of Historic American Building Survey. Iowa's covered bridges represent a significant part of the state's history. There is a need for an informational picture book for children on not only the bridges of Madison County, but on all of Iowa's covered bridges.

Research Questions

Questions which need to be addressed in order to study covered bridges, as an element of history Iowa's children should know, include:

1. What is the process of creating a book for children about Iowa's covered bridges?
2. Is it possible to incorporate all the covered bridges in one book?
3. What is the history of the bridges?
4. Why do they appear to be along Highway 92 in southern Iowa? Is there a reason behind these locations?

Purpose Statement

The purpose of this study was to design an informational picture book for elementary children focusing specifically on the role of covered bridges in Iowa's history.

Definitions

Benchmark – A standard for judging a performance (McBrien, 1997, p13).

Bridge – a structure carrying a pathway or roadway over a depression or obstacle (Merriam-Webster Online, n.d.).

Covered Bridge – a bridge that has its roadway protected by a roof and enclosing sides (Merriam-Webster Online, n.d.).

Collaborate – is a symbiotic practices that requires active, genuine effort and commitment by all members of the instructional team. It may take considerable time and energy to establish truly collaborative relationships, but developing effective collaborating strategies is crucial to the library media

program. Collaborating with the full range of school personnel to identify and solve information problems presents a model of the approach that students and others must take to thrive in the information age (ALA, 1998, p.51).

Picture books – A book consisting mainly of pictures, with little or no text, intended mainly for children of preschool age, but sometimes of interest to older children and adults because of the artistic quality of the illustrations and/or the originality of the text. Picture books are often used by children's librarians in storytelling. Published in large format, they are sometimes oblong in shape (Reitz, n.d.). An *informational picture book* combines strong visual features with memorable language. Both illustrations and words should be equally strong. Though informational picture books serve the same general purpose as fiction, these books can provide language input for children. They provide visual information students can reflect upon and serve to stimulate verbal response, as children talk, write about their observations and reactions (Stewig, 1988, p.156).

Standards – Statements of what students should know and be able to do. Different types of standards address various aspects important to learning (McBrien, 1997, p. 93).

Trusses – A triangular load-bearing structure used to support the roofs of churches and other buildings. The beams are usually made of wood, though they may also be steel or concrete (Your Way to Florence, n.d.).

Assumptions

A book of this nature would be of most value in elementary classrooms and libraries across the state of Iowa. It was assumed that there would be enough accurate material on this subject for a book and that the researcher would be able to find the bridges. It is also assumed elementary teachers are looking for a new point of view to use to approach the teaching of Iowa history.

Limitations

There was a shortage of information on the covered bridges that are not located in Madison County. Many of the bridges are located in isolated rural Iowa and it was difficult to find them. This researcher encountered conflicting information about two of the bridges (Warren County/Owens Table1, Number 8) and wrote an informational picture book as accurate about these bridges and all of the others. Pictures are a significant part of the book and a digital camera was used capture the bridges. The pictures show the covered bridges at various times of the year. Some of the covered bridges were built in the twentieth century and are not truly a part of Iowa's history. It was decided to include all the bridges, with several sharing pages.

Significance

Based on preliminary research there is not an informational picture book written on Iowa's covered bridges for the elementary student. *Amazon.com*, *Books in Print* and *SILO* searches show no books available on the subject. The significance of this study is that it will bring a new dimension to studying Iowa's history. Teachers of Iowa history are continuously looking for new resources to teach history. Transportation has a major role in the history, settlement, and economic development

or our state. Covered bridges are a part of transportation as they link one side of the river or creek to the other. This allowed farmers the opportunity to bring their goods to market without the worry of how to get there.

Settlements tend to spring up close to rivers, so bridges were needed to reach the settlements. Settlers in many areas in Iowa decided to build covered bridges as they have a life span longer than those that are not covered. The covered bridges are now over 100 years old; visitors flock to see them and explore their beauty. This adds to the economic development of the area. Their preservation and promotion will be up to future generations, and without the knowledge of these bridges a vital part of Iowa's history could be forever lost.

Another significance of this project is that Iowa's covered bridges are starting to disappear. As this researcher was working on this project, Cedar (Madison County) and Delta (Keokuk County) Covered Bridges burnt to the ground. At this time it is unknown as to how the fires started, but it appears to have been arson. There was no lightening in the area nor was there electricity close to the bridges. Cedar Bridge was the only covered bridge still allowing traffic to cross it. Cedar Bridge was rebuilt and dedicated in October 2004. The Delta Covered Bridge will not be reconstructed. These bridges were identified and described for children before others are destroyed.

Chapter 2

Review of Related Literature

This research project introduced a design of a book for elementary children with the focus on the covered bridges as a significant part of Iowa's history. Related research falls into three categories: historical background about covered bridges throughout the world, justification of the need for teachers to instruct students on transportation units that include Iowa's covered bridges, and writing historical books for children.

Historical Background

Covered bridges have an almost universal appeal. Many Americans have highly romanticized feelings about them. They were built by able carpenters of native materials. They have provided long, dependable service in the development of our country. There is even a body of homespun folklore that has collected about them. For these and other reasons, many Americans cherish them as fascinating treasures of a simpler, slower, bygone day (Diehl, 1998, p. 31).

The Hofbrücke in Lucerne, Switzerland built in about 1260 is recognized as the first covered bridge. The Kapellbrücke (1300) and the Spreuerbrücke (1408), still standing in Lucerne, are famous for not only for their great age but for the marvelous paintings that adorn them (p 31).

It was not until the early nineteenth century in the United States that covered bridges reached their zenith. The first covered bridge in America was built over the Schuylkill River, near the Philadelphia water works in or around 1805 (p. 32). As pioneers started the movement westward, they brought along the knowledge of

building covered bridges. The abundance of good timber and the many streams to be crossed made it all possible. With the Eastern Seaboard furnishing men, energy, and know-how, it was in the Middle West that covered bridge building in American reached its peak of production and perfection (Cheever, 1970, p.454).

The early bridgebuilders, many of them unable to read or write or do the easiest sums, were no professional engineers. But they were skilled craftsmen, usually carpenters by trade, who could design and erect a house, a church or a town hall as easily as they could build a bridge. They built as they went. They had none of the tools of today, using the broadax, the adze, and the wooden plane to shape the big timbers and planks; and they worked without nails, spikes or bolts. Their trusses were fitted together by treenails (often referred to as “trunnels,”) or wooden pegs, which were pounded into position (p. 455).

As far as records are available, it would appear that the first Iowa covered bridges listed were constructed in Floyd and Polk counties; Keokuk County’s Delta Bridge was started in 1867 and is the oldest covered bridge still standing in Iowa. The Delta Bridge was destroyed by fire on September 3, 2003. Madison County’s earliest bridge (Imes) was erected in 1868 (Cheever, p.460).

The heyday of the covered bridges in Iowa was between 1865 and 1890. Iron and steel bridges, gradually took over the wooden covered bridges during the period, and had just about become the norm of the bridge building industry by the turn of the century (p. 460).

Table 3 shows an Iowa Covered Bridge Census by county, number of bridges, and years built.

Table 3: 1970 Covered Bridge Census

Iowa County	Number of Covered Bridges	Year Built
Allamakee	1	1870
Appanoose	3	1868
Black Hawk	1	?
Cerro Gerro	1	1969
Clayton	11	1869-1890
Dallas	1	1875
Delaware	1	1889
Floyd	3	1865-1868
Hamilton	1	1870s
Henry	5	1870-1874
Iowa	1	?
Keokuk	1	1867
Madison	16	1868-1878
Mahaska	1	?
Marion	9	1870-1891
Page	9	1872-1890
Polk	3	1870-1872
Van Buren	1	1871
Warren	6	1870-1872
Wayne	1	?

Cheever (1970, p. 468-492)

Table 3 on the previous page shows that Iowa had numerous covered bridges in 1970. Many have been torn down, burnt by arson, or washed away by flood. Thirty-three years after the census was taken Iowa has only fourteen covered bridges remaining.

What little attention has been devoted to covered bridges in academic literature has focused on their historical evolution, their architectural details, and their rapid disappearance. Few have stopped to contemplate the impact which covered bridges, old and new, are having on the development of late twentieth-century landscapes as they are being recast by the forces of post industrialism. Some of the authentic bridges are undergoing a process of incumbent upgrading as local governments and private organizations recognize their value as regionally distinctive, scenic attractions. Others are being moved to new locations where they can better serve the recreational, and educational, and aesthetic needs of affluent, urban population (Zeigler, 1986, p 14-15).

Children need to know and be informed about Iowa's covered bridges before they completely disappear. We as educators can do that while meeting curriculum standards and benchmarks.

Standards and Benchmarks

States have worked throughout the past decade to put academic standards into place. As of 2001, 49 states and the District of Columbia, all but Iowa, have at least some academic standards (*Education Week: Standards*, 2002, Electronic version). Iowa has a local district standard. This researcher has looked at two sets of national

social studies standards and the Cedar Rapids, Iowa, Community School District's standards and benchmarks to determine a justification for incorporating Iowa's covered bridges into the study of Iowa's history.

Mid-continent Research for Education and Learning's (McRel) collection of standards in social studies are used for this research. McRel is a private non-profit organization established in 1996 in Aurora, Colorado (Kendall J.S. & Marzano, R.J. 1997, p. 1).

Covered bridges can be included in transportation units in the standards and benchmarks, as covered bridges are part of the infrastructure of early transportation particularly in the Midwest. Appendix A lists the McRel standards for social studies.

When the topic of transportation is taught in Iowa, usually the horse and wagon is one of the earliest types discussed. The horse and wagon usually had to cross water to allow family and crops to arrive at their destinations. Many roads had bridges over the bodies of water, but some had special bridges that were covered. If bridges had not been built people would have had to take the horse and wagon through the water making it extremely hard to cross a river or creek.

Covered bridges offer a way to teach units on architecture and transportation. Bridges represent an example of architecture from our past. Pictures and diagrams of bridges can be viewed at and compared to bridges of today. It can be explained that most covered bridges today are used only for foot traffic and not vehicles. The students can compare and contrast the bridges of long ago with today's in terms of both architecture and transportation.

McRel is not the only source for social studies standards. The National Center

for History in schools also includes standards for state history. For young children, history, along with literature and the arts, provides one of the most enriching studies in which they can be engaged. "What children of this age need," Bruno Bettelheim has written, "is rich food for their imagination, a sense of history, how the present situation came about" (National Center for History in the Schools (U.S.), 1994, p.2). History enlarges children's experience, providing, in the words of Philip Phenix, "a sense of personal involvement in exemplary lives and significant events, an appreciation of values and a vision of greatness" (p. 2). History connects each child with his or her roots and develops a sense of personal belonging in the great sweep of human experience (p. 2). Appendix B lists the standards written for National Center for History.

The National Center for History in the Schools believes that historical literature is vital in the k-4 classroom settings, while the Cedar Rapids Community School District has third and fourth graders looking at it in a cultural perspective. Appendix C lists the Cedar Rapids Schools District's standards third and fourth grade for social studies.

Schools use standards and benchmarks to teach the district's curriculum. Teachers are required to teach these, but need extra sources to cover new material. A book on the covered bridges in Iowa would be new material. This type of book falls into the genre of a non-fiction historical picture book. In order to write this type of book, the researcher needed to comprehend how to go about the process.

Writing Historical Books for Children

Jean Fritz, Russell Freedman, and Milton Meltzer are authors who write award-winning historical non-fiction for young people. They have all expressed their ideas about how to write for children.

Fritz, author of such books as *And Then What Happened, Paul Revere?* and *Will You Sign Here, John Hancock?* is constantly asked, how she predicts what children will like. “I don’t expect all children to react in the same way, but I write as if I am talking to children, naturally. I limit my vocabulary, but not any more consciously than I do when I’m talking with my grandchildren. If you’re intent on communicating, the vocabulary takes care of itself” (Zinsser, 1990, p.27).

Fritz will not omit words because they may be strange to a young reader. In her research on Paul Revere, she had discovered Revere’s own account of his midnight ride. He reported verbatim the talk between him and the British soldiers who stopped him. One soldier said, “Sir, may I crave your name?” She relished that eighteenth century use of the word “crave” and was not going to take it out. Children could surely figure out its meaning from context. Another officer, however, was not as polite. He said, “Damn you, stop. If you move an inch further you are a dead man.” She did not meddle with that officer’s words either (p.27). Although her framework is chronological, she doesn’t feel bound by chronology. She can begin a series of sentences with “once or sometimes,” listing events regardless of their sequence. She knows that in the end the book will assume the shape of the story, not because it has been forced or coaxed into that, but because the story is already there.

Every person is a story. And when a writer lives with a character, the story line emerges, gradually becoming more distinct, until at last it takes command (p.29).

Russell Freedman, author of Newbery Award titles: *Lincoln: A Photobiography*, *Eleanor Roosevelt: A Life of Discovery*, and *The Wright Brothers: How They Invented the Airplane* takes a different perspective about how to write books. He believes that from a child's point of view, classifications such as fiction and nonfiction are irrelevant. A book is either absorbing and fun to read, or it's stuffy and boring (Freedman, 1994, p.138). A good book about American history, or natural history, or any other subject, can be just as compelling as any adventure story. The word *history*, remember, contains the word *story*. Historians traditionally have been storytellers. Going all the way back to Homer and beyond, historians have been people who were telling, singing, and reciting epic poems about the past. They were storytellers sitting around the fire inside the cave, holding their audience spellbound on a winter's night.

When Freedman begins a new book, that's the tradition he likes to remember. He thinks of himself first of all as a storyteller, and he does his best to give dramatic shape to his subject, whatever it may be. He always feels that he has a story to tell that is worth telling, and wants to tell it as clearly, as simply, and as forcefully as he can (p. 138).

By storytelling, he does not mean to make things up, of course. He doesn't mean invented scenes, or manufactured dialogue, or imaginary characters. As a writer of nonfiction, he has a pact with the reader to stick to the facts, to be as factually accurate as human frailty will allow. What he writes is based on research,

on the documented historical record. And yet, there are certain storytelling techniques that he can use without straying from the straight and narrow path of factual accuracy. When he speaks of storytelling, he uses the word story in the sense of igniting the reader's imagination, evoking pictures and scenes in the reader's mind. Storytelling means creating vivid word pictures of people, places, and events—creating a convincing, meaningful, and memorable world. It means pulling the reader into that world. And it means using a narrative framework, a storytelling voice, that will keep the reader turning the pages with a mounting sense of anticipation and discovery (p. 138-139).

Milton Meltzer, author of *Brother, Can You Spare a Dime?: The Great Depression 1929-1933*, *Ten Queens: Portraits of Women in Power*, and *In Their Own Words: A History of the American Negro 1865-1916* has a third opinion of how to write for children. In his preparation to write history he reads as widely as possible in the available sources, both primary and secondary, making notes on what he thinks he might want to use. At the same time he hunts everywhere for the documentary material that will let people speak their own words. In other words, he does not mean only the kings and generals, but the anonymous ones upon whom society rests, without whom the superstructure would collapse. Their words are found in letters, journals, diaries, autobiographies, in songs, and poems, in speeches, in court testimonies and in legislative hearings, in newspaper reports, in eyewitness accounts, and more recently, in oral history interviews. He wants the reader to discover how it felt to be alive at the time and share directly the experience, to know the doubts, the

hopes, the fears, the anger and the joy of men, women, and children who were the blood and bone of that history (Tunnell, 1985, p.28).

History of the ordinary people was once not thought to be important. Many of the books used in the schools downplay actions of working people or the poor when they challenge social injustice. It is that neglect which has led many scholars in recent years to search for the history from below, for workers, women, ethnic and racial minorities, immigrants--all have a history that should be uncovered, and made known (p.28).

Fritz with her direct approach, Freedman's storytelling, and Metzler's search for the history of the common person are all excellent methods of approach to writing history for children.

There are national and local standards and benchmarks about transportation, the role of architecture in history, and local history. Iowa's covered bridges are an appropriate topic for study in any of these areas.

Although many authors write historical nonfiction, there are no books for children on covered bridges. This researcher's book on Iowa's covered bridges will fill a void about this subject.

Chapter 3

Procedures

Informational picture books are usually for young children, but can be enjoyed by anyone. They can be used by educators for many functions, but can be especially useful as literature in a history lesson. The intent of the pictures and text was to present the covered bridges of Iowa in a factual manner at a comprehension level of an elementary student. The completed book enhances school curriculum in social studies, particularly for standards written for Iowa's history. This book has principles of quality, appeal, and effectiveness that characterize quality literature for children.

This researcher began the creative process by resolving confusing information about the correct number of covered bridges in Iowa. The chambers of commerce in towns with a covered bridge located in them or nearby were contacted and information was requested about their bridge(s). The knowledge gained from the information was used to decide on the content and to help in the write the book.

While waiting for the arrival of material, the researcher investigated different resources about writing children's books, found the best approach on how to do a book, established the proper way to take pictures, and the best type of photographs that worked in this type of book. A list of books and web sites that was used to help the researcher determine the best method of writing a children's book is Appendix D.

After the bridges were clearly identified, digital pictures were taken of the bridges from many angles, and of interesting objects in and around the bridge.

The tour of bridges started with the bridges closest to the researcher's home and worked outward. Nine of the bridges were within a two-hour drive, while the

remaining five required an overnight stay. The researcher in photographing the bridges closer first, was able to retake pictures if the first ones were not suitable. This was a time saving element and the photography of the outlying bridges did become better with practice.

The project data set was enhanced with personal interviews. People interviewed were historians, architects, photographers, descendents of bridge builders, and anyone with extensive knowledge of a certain covered bridge. An interview schedule during interviews was devised. The questions would not have the same impact as with a survey, where the results would be tabulated, but it helped the researcher keep the questions straight in her mind and reminded her to ask certain questions of each interviewee. The interviewees were able to expand on their answers, as their answers were not used in a quantitative study, but extended the background of the project. Appendix E is the tentative schedule. Appendix F is a letter requesting an interview. Appendix G allows for inclusion of material in the book.

All information received about the bridges was reviewed and the researcher determined what types of information would be written about each bridge. The researcher did try and see that the same type of information was given for each bridge. This allows students to compare and contrast the bridges. A preliminary database for recording information about each bridge is Appendix H.

After all the historical information was gathered and pictures taken, the design layout of the book began. It was decided how and where the pictures and the text were placed. It was done in a manner that is pleasing and interesting to a young

reader. The researcher also decided what information was written about each bridge. A table of contents, index and end pages were designed. An index of some type is a definite need in a book of this manner. The researcher decided to incorporate a separate subject. The researcher determined the placing of a map of Iowa with the bridges highlighted, a glossary, and a bibliography in the book. The cover of the book was decide to include a picture of one of Iowa's covered bridges, but this may be a matter that will be decided on with a publisher should the book become published. The decision was made that the book was written in landscape. The researcher hopes to build on this project by adding the remaining covered bridges, have the book published and copies placed in every elementary library in the state of Iowa.

Chapter Four

The Project

See accompanying book
Iowa's Covered Bridges

Chapter Five

Summary, Conclusions, Recommendations

The purpose of this project was to write and illustrate an informational picture book on Iowa's covered bridges. This picture book was meant to assist upper elementary teachers in teaching transportation and architecture to their students and inform them of the value of covered bridges in Iowa's history. The finished product is an informational picture book aimed for nine to twelve year olds, but which younger children and adults could enjoy. In sharing this book with others, the readers were drawn mostly to the photographs, but were also drawn to the writing, especially the ghost story.

Summary

Iowa's Covered Bridges is a nonfiction book teachers could use not only for Iowa's history, but also for teaching general architecture and transportation to upper elementary or middle school students. The older bridges show life long ago and how the bridges have become an important part in not only our history, but also our future as groups continue to restore / rebuild them. *Iowa's Covered Bridges* can also be read for enrichment for adults. The pictures show many aspects of the bridges from the truss to the underside.

The book was put together with each of the major bridges having its own spread (two pages). Some of the lesser-known or newer bridges were combined. This book uses the pictures to attract the readers' interest and text to add to their knowledge. On the left page of the spreads are wide shots of most of the bridges.

There also are directions about how to find the bridges. The right pages show various aspects of the bridges. Anything from a bird's nest in the rafters to the underside of the bridge. Also found on the right page are the statistical facts about each bridge. There is a table of contents and an introduction to Iowa's covered bridges.

The author visited all fifteen of the covered bridges, some more than once. This is a fair representation of Iowa's covered bridges to enrich school children in architect, history and transportation.

Conclusions

The actual process of completing *Iowa's Covered Bridges* varied several times from the actual procedures in chapter three. The computer added to the author's overwhelming stress by crashing and then not recognizing the floppy disks, or zip drive where the paper and book had been saved. This problem was resolved with sending it in various stages to her email accounts and burning it on CD-ROM.

Pictures of two of the bridges were totally lost and a drive to northern Iowa was required once again. This problem was resolved with purchasing a different type of CD-ROM and giving up floppy and zip disks. A 256 MB flash drive was purchased to store the paper and book. It was much too small with all the pictures contained in the book. All pictures are now burnt to CD-ROM and hidden away. The book and paper are also on CD-ROM.

No one was hired to take pictures. The author relied on her husband to take all of them. He did this with little problem even though he is considered legally blind. He had no trouble with taking the pictures as long as the subject did not move.

Another hardship the author endured was the loss of two of the bridges to arson, and a third one was set on fire. The Cedar Covered Bridge was burnt on September 3, 2002. This was the day after Labor Day. All weekend the author thought of driving the twenty miles to Winterset and taking pictures, but did not do it. She asked another photographer to borrow two of his for her book. The Delta Covered Bridge was burnt exactly one year later, much to the dismay of the author. She and her husband had visited the bridge in August and taken pictures. They did make a second trip to the bridge for pictures of the ruins. The Hogback Covered Bridge was set on fire shortly after the Delta. Thankfully, it received only a small scorching and after time it is hard to find the burnt location.

The postcards sent to the ninety-nine chambers of commerce were productive. Only a handful of counties did not respond. The local people who provided information were beneficial.

Although the author experienced overwhelming stress and frustration during the writing process, she has a strong emotional attachment and a love for covered bridges that she earned from the hours of studying them. The emotional attachment was so strong that when two bridges were destroyed by arson, it felt if she had lost a family member and observed a period of mourning.

The author has pride and is very possessive of her paper and book. Many hours and hard work were needed to complete this task. These hours were not just in front of the computer, but traveling the state of Iowa, and talking to various people about Iowa's Covered Bridges.

Recommendations

This author would and has considered several recommendations for further research. The most obvious would be a full-length book on the historic covered bridges in Iowa. While writing the book, two of the historic bridges were destroyed by fire. This is not only a disgrace, but also a lost part of Iowa's history. Other options could be Creston history, the Mormon Trail, or a book on the Iowa Dragoon Trail. Another suggestion given to the author was to take the covered bridge pictures and make them into a calendar. The recommendation most favorable and possibly the most beneficial would be Creston history. At this time there is not a source for students to use for classroom assignments. Most of the information comes from elderly citizens and is quickly becoming lost as they die. This author in the position as library director can work with various people in a combined effort to preserve the history of Creston for generation to come.

Reference List

- American Association of School Librarians and Association for Educational Communications and Technology. (1998). *Information power: Building partnerships for learning*. Chicago: American Library Association.
- Allen, R. S. (1959, April). Roofs over rivers. *American Heritage*, 10, 30-37,82-84.
- Allen, R.S. (1970). Iowa: Flat-tops in the cornfields. In *Covered bridges of the Middle West* (pp. 101-104). Battleboro, VT: The Stephen Greene Press.
- Allen, R. S. (2000). Covered bridge. In *The encyclopedia Americana international edition* (Vol. 8, pp. 126-127). Danbury, CT: Grolier.
- Atawalk ponts couverts covered bridges. (n.d.). Retrieved June 28, 02, from <http://www.atawalk.com>.
- Cedar Rapids Community School District. (n.d.). *Academic standards*. Retrieved July 11, 2002, from http://www.cr.k12.ia.us/departments/teach_learn/academic/index.htm.
- Central Iowa Tourism. (n.d.). Retrieved June 29, 02, from <http://www.iowatourism.org>.
- Crabtree & Nash (1994). *National standards for history for grades k-4 : Expanding children's world in time and space*. Los Angeles: National Center for History in the Schools.
- Cheever, L. O. (1970, Nov.). Covered bridges in Iowa. *The Palimpsest*, LI, 449-497.
- Diehl, J. (1998, May/June). Bridge to the past. *Timeline*, 15,3, 30-51.
- Dickens, C. (1922). Chapter IX. In *American notes* (p. 493). Boston: Houghton Mifflin Company.
- Eastwood, C. (1995). *The Bridges of Madison County memory book*. New York: Warner Books.
- Education Week (2002). Standards. [Electronic version]. Retrieved October 9, 2002, from <http://edweek.org>.
- Freedman, R. (1994, March) Bring'em back alive. *School Library Journal*, 40,3,

138-141.

Hoskins, R. (1995). *Bridges in time: Keepsakes celebrating the covered bridges of Madison County*. Cumming, Iowa: Landauer Books.

Howard, A. R. (1998). *Covered bridges of Madison County a guide*. Unionville, CT: The Village Press.

Iowa General Assembly. (n.d.). Retrieved June 21, 02, from <http://www.legis.state.ia.us>.

Kendall, J.S. & Marzano, R. J. (1997). *Content knowledge : A compendium of standards and benchmarks for K-12*. (2nd ed.) Grades k-4 history. Aurora, CO: Mid-continent Regional Educational Laboratory.

Madison County Chamber of Commerce (2001). *Map of Madison County Iowa featuring covered bridges locations and movie sites* [Brochure]. Winterset, IA:TYPEXpress.

Marion County Development Commission. (n.d.). *Marion County & Lake Red Rock Area*. Retrieved June 29, 02, from <http://www.marioncountyiowa.com>.

McBrien, J.L. (1997) *The language of learning : A guide to education terms*. Alexandria,VA: Association for Supervision and Curriculum Development.

Merriam-Webster Online. (n.d.). Retrieved June 30, 02, from <http://www.m-w.com>.

National Register of Historic Places. (n.d.). Retrieved June 22, 02, from <http://www.nationalregisterofhistoricplaces.com>.

Newton Community Schools. (n.d.). *Social studiesKk-6 curriculum*. Retrieved June 29,2002, from <http://www.newton.k12.ia.us>.

Polk County Conservation Board (2002). *Easter Lake Park* [Brochure]. Des Moines, IA: Author.

Reitz, J. M. (n.d.). *ODLIS: online dictionary of library and information science*. Retrieved July 14, 02, from <http://vax.wcsu.edu/library/odlis.html#I>.

SILO. (n.d.). In *State library of Iowa*. Retrieved June 21, 02, from <http://www.silo.lib.ia.us>.

Smith, L.H.(1961). *Scenic Madison County, Iowa historical significance*. (2000 ed.) Winterset, IA: The Shopper.

Stewig, J.W. (1988). *Children and literature*. (2nd ed.). (p.156) Boston: Houghton

Mifflin.

- Swanson, L. C. (1960). Iowa bridges. In *Covered bridges in Illinois, Iowa and Wisconsin* (pp. 31-38). Moline, IL.
- Travis, D. J. (2000). *Round barns and covered bridges*. Retrieved June 15, 02, from <http://www.dalejtravis.com>.
- Tunnell, M.O. & Ammon, R. (Eds.). (1993). Voices for the past. *The story of ourselves : teaching history through children's literature*. (p. 27-30.) Portsmouth, NH: Heinmann Educational Books, Inc.
- Vance, M. (Sept. 1979). *Covered bridges: a list of books*. Monticello, IL: Vance Bibliographies.
- Waller, R. J. (1992). *The Bridges of Madison County*. New York: Warner Books.
- Waller, R. J. (2002). *A thousand county roads: An epilogue to the bridges of Madison County*. Houston, TX: John M. Harding Publishing Company.
- White, A. G. (Jan. 1981). *Bridges architecture - covered bridges in America: A selected biography*. Monticello, IL: Vance Bibliographies.
- Your Way to Florence. (n.d.). *Glossary of art terms*. Retrieved July 16, 02, from <http://www.arca.net/florence.htm>.
- Zeigler, D. J. (1986). Covered bridges and the customization of the American landscape. *Pioneer American Society Transactions, IX*, 9-15.
- Zinsser, W. (1990). The teller and the tale. *Worlds of childhood : The art and craft of writing for children*. New York: Houghton Mifflin Company.

Appendix A

Content Knowledge : A Compendium of Standards and Benchmarks K-12 Education Related Curriculum Standards

Grades K – 4 History

Topic 1 – Living and Working Together in Families and Communities, Now and Long Ago

Standard 1

Understands family life now and in the past, and family life in various places long ago

Level I Grade: K-2

4. Understands family life in a community of the past and life in a community of the present (e.g., roles, jobs, communication, technology, style of homes, transportation, schools, religious observances, and cultural traditions (McRel, 1997, p.117).

Standard 2

Understands the history of a local community and how communities in North America varied long ago

Level I Grade: K-2

1. Understands changes in community life over time (e.g., changes in goods and services; changes in architecture and landscape; changes in jobs, schooling, transportation, communication, religion, recreation

Level II Grade: 3-4

8. Understands changes in land use and economic activities in the local community since its founding (e.g., changes in technology, the work people did, transportation, local resources (p.118-119).

Topic 4 – The History of Peoples of Many Cultures Around the World

Standard 8

Understands major discoveries in science and technology, some of their social and economic effects, and the major scientists and inventors responsible for them

Level II Grade 3-4

5. Knows the different forms of transportation and their development over time (p. 127-128).

Appendix B

National Standards for History for Grades K-4 Related Curriculum Standards

Topic 1

Living and Working Together in Families and Communities, Now and Long Ago

Standard 1:

Family life now and in the recent past; family life in various places long ago.

Standard 1A:

The student understands family life now and in the recent past; family life in various places long ago.

Standard 2:

The history of students' own local community and how communities in North America varied long ago.

Standard 2A:

The student understands the history of his or her local community.

Topic 2

The History of Students' Own State or Region

Standard 3:

The people, events, problems, and ideas that created the history of their state.

Standard 3A:

The student understands the history of indigenous peoples who first lived in his or her state or region.

Standard 3E:

The student understands the ideas that were significant in the development of the state and that helped to forge its unique identity.

Appendix C

Cedar Rapids Community School District Related Social Studies Standards

Grade Three Expectations - Social Studies

Students should be able to:

Historical Perspective

1. identify changes in the history of their community.

Cultural Perspective

2. describe ways in which language, stories, folktales, music and art serve as expressions of the cultures in the community.

Geographic Perspective

3. locate places within the community.

Grade Four Expectations -Social Studies

Students should be able to:

Cultural Perspective

2. recognize that the cultural identity of a regions is influenced by the heritage of the people and their customs, traditions and beliefs vary from region to region.

Civic Perspective

3. identify symbols that represent the state of Iowa.

Economic Perspective

2. identify the economic resources of the states and regions of the United States.

Appendix D

Resources to Assist in the Writing Process (listed in order of significance)

Books

- Dils, T.E. (1998) *You Can Write Children's Books*. Cincinnati: Writers Digest Books.
- Pope, A. (Ed.). (2001) *2002 Children's writers & illustrator's market*. Cincinnati: F & W Publications.
- Shepard, A. (2000). *The business of writing for children: An award-winning author's tips on how to write, sell, and promote your children's books*. New York: Lothrop, Lee & Shepard Books.
- Mogilner, A. (1999). *Children's writer's word book*. Cincinnati: F & W Publications.
- Hickman, J. & Cullinan B.E (1989). *Children's literature in the classroom: Weaving Charlotte's Web*. Norwood, MA: Christopher-Gordon Publishers.
- Hickman, J. & Cullinan B.E (1994). *Children's literature in the classroom: Extending Charlotte's Web*. Norwood, MA: Christopher-Gordon Publishers.
- Huck, C.S. (2000). *Literature in the elementary school*. New York: McGraw Hill.
- Lee, B. L. (2000). *A basic guide to writing, selling, and promoting children's books : Plus information about self-publishing*. Brunswick, GA: Learning Abilities Books.
- Pitz, H.C. (1977). *Illustrating children's books: History, technique, production*. New York: Watson-Guptill Publications.
- Gates, F. (1986). *How to write, illustrate, and design children's books*. Monroe, NY: Library Research Associates, Inc.
- Underdown, H.D., Rominger, L., & Yolen, J. *Complete idiot's guide to publishing children's books*. New York: Alpha Books.

Websites

Creative Marketeam Canada Ltd. (n.d.). Retrieved from http://www.suite.101.com/welcome.cfm/childrens_writing.

Corbally, J. (n.d.). *Children's literature online lectures*. Retrieved from <http://home.earthlink.net/~jcorbally/eng218/lecture.html>.

What You Need to Know about Publishing. (n.d.). Retrieved from <http://publishing.about.com/cs/writetechildrensbooks>.

Writing-World.com. (n.d.). Retrieved from <http://www.writing-world.com/links/children.html>.

The Institute of Childrens Literature. (n.d.). Retrieved from <http://www.institutechildrenslit.com>.

Appendix E
Covered Bridge Interview Questions

Name of interviewee _____ Date _____

Name of bridge _____

Location _____

How are you involved with this bridge? _____

Years Built:
Cost:
Builder:
How was the bridge name?
Any other significant information?

Appendix F
Letter Requesting Interviewees

Dear

I am a graduate student at the University of Northern Iowa in Cedar Falls, Iowa. I am currently working on writing a book to fulfill a graduation requirement for receiving a Master's Degree in School Library Media Studies.

My book, *Iowa's Covered Bridges* will be a nonfiction book for third through sixth grade students. The book will be on the historical impact of covered bridges and not the fires or arsons that have been plaguing the bridges.

I am looking to interview persons in the area with knowledge of the bridge(s) in the immediate area. On the enclosed postcard or in an email, please list potential interviewees and their contact information.

Thank you for your cooperation.

Sincerely,

Marilyn K. Ralls

mkralls@hotmail.com

Enclosure: postcard

Appendix G
Returned Postcard

The following person(s) would be a good interview candidate(s) for covered bridges.

Name _____

Address _____

Phone _____

Email
Address _____

CoveredBridge _____ Town _____

Appendix H
Letter Requesting Interview

Dear

I am a graduate student at the University of Northern Iowa in Cedar Falls, Iowa. I am currently working on writing a book to fulfill a graduation requirement for receiving a Master's Degree in School Library Media Studies.

My book, *Iowa's Covered Bridges* will be a nonfiction book for third through sixth grade students. Having recently taught in a Madison County school and living in their vicinity, I feel a special desire to write about the covered bridges of Iowa.

You were suggested to me as an interview source by _____.

Would you be willing to meet with me, at your convenience, so that I may ask you some questions regarding the covered bridge located near you?

If you are willing, please e-mail me or mail the enclosed postcard so that we can set up an interview time.

Thank you for your cooperation.

Sincerely,

Marilyn K. Ralls

mkralls@hotmail.com

Enclosure: postcard

Appendix I

Release for Inclusion in Book

This is to certify that _____ agrees to the use of his/her name. If _____ prefers to stay anonymous, initial here _____ and no mention of his/her name will appear in the book) along with information told to this interviewer in the book, *Iowa's Covered Bridges* being written by this researcher as a fulfillment of the graduation requirement for a Master's Degree in School Library Media Studies.

It is also agreed that _____ will have an opportunity to view the information from the interview that has been included in the book before its publication.

Interviewee:

Signed: _____ Date: _____

Interviewer:

Signed: _____ Date: _____

Appendix J
Bridge Worksheet

Bridge _____

Location _____

Directions _____

Built:	Builder:
1 st Location:	Other Locations:
Body of Water:	Type of Truss:
Historical Status:	Length:
Cost to Build:	Cost to Renovate:
Cost to Move:	Significance of Name:
Preservation Society:	Other Groups:
W.G. No.	
Photography Records:	

Comments:
