Reading Unreadable Headstones Without the Traditional Vandalism

By Jim L. Claunch

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Above, the headstone of John C. Buchholz, Wilhelmina Buchholz, and Anna Buchholz, Greenwood Cemetery, Leavenworth, Kansas (this headstone has an inscription of four sides).

On the cover, the headstone of Joseph E. Walter, Fanny Walter, Nancy W. Shaw, William W. Walter, Walter Neeley Shaw, and William Shaw, Mount Muncie Cemetery, Lansing, Kansas.

A grave marker is a family's, and sometimes a nation's, memorial to a lost loved one – be respectful.

A grave marker is an historic artifact, and may be the only evidence of someone's existence – be protective.

Burial sites are repositories of family and national history – be a preservationist.

Photographs by Jim L. Claunch
Except as Noted

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"Show me your cemeteries and I will tell you what kind of people you have."

Benjamin Franklin

Nearly every genealogist, at one time or another, finds themselves in an old graveyard, attempting to decipher the inscription of some old headstone that is often easier to find than to read. An often unrecognized fact, is that difficulty in reading old headstones can be the result of more than just the ravages of time and nature. Damage to stone and metal markers is often the result of the unintentional, and sometimes intentional, vandalism of family researchers. Such destruction can easily be avoided with simple headstone reading techniques.

I have been researching family cemeteries for more than twenty years, and have painstakingly researched the cemeteries of Leavenworth County, Kansas for nearly fifteen years.[1] In that time I have transcribed and recorded thousands of headstones in hundreds of cemeteries,[2] and in doing so, have learned important lessons about reading headstones[3] – even those normally thought to be unreadable.

The most important of these lessons, is that even those intending no harm can damage or destroy burial markers. Though most intend no specific harm, burial markers are often damaged as a result of a lack of information about non-destructive techniques for reading headstones. The internet is full of "helpful suggestions" for cleaning and reading headstones; many of which are destructive in some way, and few of which have been actually tested.

Correcting that situation is why I have prepared this pamphlet on reading and recording headstones. It is also why I have chosen to begin with the "don'ts" of headstone reading. Keep in mind; **ALL damage to headstones is permanent**, and this pamphlet is an attempt to present techniques for reading and preserving those historic artifacts without such destruction.

The Pillars of Hades[4]

The National Genealogical Society (NGS) has published *Genealogical Standards and Guidelines* for researchers wishing to improve their genealogical skills and enhance the results of their research. One of these, *Guidelines for Using Records Repositories and Libraries*, admonishes researchers to "treat original records at all times with great respect . . . recognizing that they are irreplaceable and that all users must help preserve them for future use."[5] The Board

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[1] I began the Leavenworth Burials Project in March 2004, and have been recording burials and burial sites in Leavenworth County, Kansas since. In that time I have recorded 151 burial sites (84 not previously recorded) and more than 112,000 burials (39,000 not previously recorded). I have transcribed tens of thousands of headstones and have taken more than 26,000 photographs of headstones. This project has also produced several aides to Leavenworth County, Kansas burials research, including a county-wide online burials index, which can be accessed through the Leavenworth County official website http://www.leavenworthcounty.org/gis/default.asp.

[2] I use "cemetery" as a common term for all types of burial sites; any place where humans are buried; whether organized or not, or intentional or not. This includes cemeteries, memorial gardens, bone yards, grave yards, potter's fields, etc.; everything from a single grave on a farm to large national cemeteries.

[3] I use "headstone" as a common term for all burial markers, whatever their construction (stone, metal, wood, etc.).

[4] Haides (Hades, Aides, or Aidoneus) was the King of the Underworld and god of death. He presides over funeral rites and defends the right of the dead to burial. Haides is also a name for the underworld abode of the dead.

[5] *Genealogical Standards*, Guidelines For Using Records Repositories And Libraries (3108 Columbia Pike, Suite 300, Arlington, Virginia 22204-4370: National Genealogical Society, 2001). Downloaded from the National Genealogical Society website 21 October 2015, online at «http://www.ngsgenealogy.org/cs/home». Hereinafter cited as *Guidelines For Using Records, Repositories and Libraries*. http://www.ngsgenealogy.org/cs/ngs_guidelines

for Certification of Genealogists, also has a standard for handing source materials: " . . . treat all source materials and images of source materials carefully, with regard for their preservation and future availability."[6]

Since the information and epitaphs found on grave markers provide similar genealogical information – information often unrecorded in other records[7] – they should also be treated as original (if much heavier) records. Hence, there should be a similar set of standards for headstone research, based on three basic principles (a recommendation for such standards can be found at the end of this paper) . . .

> **A grave marker is a family's, and sometimes a nation's, memorial to a lost loved one – be respectful.**
>
> **A grave marker is an historic artifact, and may be the only evidence of someone's existence – be protective.**
>
> **Burial sites are repositories of family and national history – be a preservationist.**

In other words, cemetery researchers should treat burial markers as original historical records and always **do only that which is necessary to read an inscription** (and sometimes not that much), while ensuring they **do no damage.**

These standards can be difficult to uphold – especially in light of the misinformation found on the internet – and they often become victim to the 'needs' of those in a hurry or too selfish to think beyond the here and now. The researcher's objective must be to transcribe headstones, and other burial markers in a manner which preserves the historic artifact, while leaving no evidence that they were ever there.

Those "Great Ideas" on the Internet – Are Wrong

In spite of technological advances, the mystic art of reading old headstones continues to puzzle many researchers. Done right, headstone reading can be a means of recording and preserving history. Done wrong, it can be a means of destroying that history.

The problem lies in the internet, which tends to perpetuate destructive techniques more than preservation. It is unfortunate that information found on the internet tends to be accepted

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[6] Board for Certification of Genealogists, *Genealogy Standards* (New York, New York: Ancestry.com, 2014), page 16, Standard 20. Held by Jim L. Claunch, 2431 South 22d Terrace, Leavenworth, Leavenworth County, Kansas 66048, 913-651-2946. Hereinafter cited as *Genealogy Standards*.

[7] The term "cemetery record" is used here as a common term for all records of burials, whether generated by the cemetery, or compiled by a local researcher (such as cemetery indexes).

without much thought. The really great tragedy is that this destruction is not necessary, as headstones – even very old headstones – can usually be read without causing such damage.

The most common techniques found on the internet can be termed substance abuse – that is the use of shaving cream, chalk, bleach, cleaning solvents, acids, oil, household and industrial cleaners, soap, detergents, abrasive cleaners, or similar materials, in a misguided attempt to make headstones easier to read. All of these 'techniques' can be found on the internet; often extolled with great enthusiasm as a "great idea" that someone has discovered or invented.

Unfortunately, people tend to believe what they read on the internet. Unfortunate, because all of these substances are damaging to stone, including marble and granite. They may make a headstone temporarily readable, but they can also disfigure or damage that stone. Since such damage is permanent, researchers should **NEVER – under any circumstances – use chemicals or abrasive substances on a headstone**.

The most common (and most argued) of these 'great ideas' is the use of shaving cream to make headstone inscriptions readable. I won't restate the tired (and invalid) arguments offered in support of using shaving cream (one website purports that the claims of shaving cream damaging headstones to be a hoax). I will simply state that

Figure 1. The vandalized headstone of Alpha Claunch, Kennekuk Cemetery, Atchison County, Kansas – chalk courtesy of the internet.

shaving cream (or any such substance) is in fact damaging to headstones. However, such damage won't be observed if the headstone is only seen once (as is nearly always the case); which is why most adherents refuse to believe such damage occurs.

Whether or not you understand the chemistry of shaving cream (which contains organic acids), researchers should at least accept the statements of professional conservators, such as the Association of Gravestone Studies:

> **"Our professional conservators tell us it is definitely not a good idea to use shaving cream** [emphasis mine] on porous gravestones because there are chemicals and greasy emollients in shaving cream that are sticky and very difficult to remove from the stone with a simple washing. Indeed, even with vigorous scrubbing and lots of rinsing, the cream fills in the pores of a porous stone and cannot all be removed. The result of leaving it there is that in time it may discolor or damage the stone."[8]

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[8] Association of Gravestone Studies website, http://gravestonestudies.org/knowledge-center/faq-s.

The internet is also replete with the 'great idea' of chalking headstones. This is another substance that can discolor or damage headstones, though many refuse to believe it (yet another tired old argument). One published reference[9] encourages the idea of chalking headstones in order to get a better photograph (see Figure 1). This is wrongheaded thinking, as chalk can eventually damage or discolor the stone, as that same reference also seems to recognize:

> "I discovered that molded chalk is made of plaster of Paris, which is defined as quick-setting gypsum plaster consisting of a fine white powder (calcium sulfate hemihydrate) that hardens when moistened and allowed to dry [permanently adhering to the headstone]. Sidewalk chalk, on the other hand, while similar in appearance, is much harder than regular chalk and is fact will actually scratch a typical chalkboard if used on one . . . As a result of this, I've taken the position of not recommending the use of sidewalk chalk . . . "[10]

Other substances popular with "the internet is always right" crowd include flour, cornstarch, talcum powder, and graphite. These substances can work (more or less), but their use is just another way of defacing and damaging burial markers, and should be avoided.

Adherents of these "cover the headstone" techniques are as adamant as the adherents of shaving cream. They have forgotten, or have chosen to forget, that flour and water are an easy way to make paste, glue, and even paper mache; substances that should never be put on a burial marker. Again, the professional conservators of the Association of Gravestone Studies note:

> "No matter how carefully the stone is brushed afterward some traces of flour will remain, that, when in contact with water, may become tacky, trapping moisture and accelerating deterioration. Because of this, AGS [Association of Gravestone Studies] does not endorse the application of flour to gravestones to read worn inscriptions."[11]

Another common 'technique' found on the internet is the use of various chemicals to clean headstones. Bleach, cleaning solvents, household cleaners, soap, detergents, abrasive cleaners, and other such substances can be very destructive and are unnecessary. These substances are often used in an attempt to clean old or vandalized headstones.

Vandalism of cemeteries and headstones is a problem everywhere and the concerned family historian might be tempted to remove graffiti left by vandals, or the residue of previous cleaning attempts. However, such preservation requires specialized techniques and materials, if it can be done at all, and should be left to professional conservators. They may be easy to use,

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[9] Sharon DeBartolo Carmack, *Your Guide to Cemetery Research* (Cincinnati, Ohio: Betterway Books, 2002), page 114. Hereinafter cited as *Your Guide to Cemetery Research*.
[10] Carmack, *Your Guide to Cemetery Research*, page 115.
[11] Association of Gravestone Studies website, http://gravestonestudies.org/knowledge-center/faq-s.

and a clean headstone can be attractive, but researchers should keep in mind the long-term effects of such substances.

Almost as destructive to headstones as these chemicals, are the various substances used as fillers. This 'technique' involves filling the engraved letters of a headstone with caulk, putty, talcum powder, or some other material in order to make the letters stand out from the marker. Unfortunately, getting the filler out of the headstone damages the headstone as much as not removing the filler, and this technique should also never be used. I have seen headstones with hardened putty and even caulk; such headstones are permanently defaced and can quickly become unreadable to future researchers.

> **Kansas Statute 21-6205.**
> **Criminal desecration.**
> (a) Criminal desecration is: . . .
>   (C) Damaging, defacing or destroying any tomb, monument, memorial, marker, grave, vault, crypt gate, tree, shrub, plant or any other property in a cemetery . . .

Such substance abuse is not the only way to destroy headstones, as I often find people using more destructive means to 'enhance' their ability to read an old headstone. I have found people using pocket knives, wire brushes, metal instruments, steel wool, abrasive cleaning pads, screwdrivers, and even power washers.[12] Those who would use such implements are in fact engaging in vandalism, and evidently think nothing of destroying the headstone they are trying to read.

Using any of these materials and practices can cause serious, irreparable, damage to headstones and are unnecessary. If nothing else, remember the injunction of the Association of Gravestone Studies: "You should always prefer a non-invasive method to interact with gravestones just as we do with medical tests on our own bodies."[13]

But, there are some that won't accept the opinion of so authoritative an organization as the Association of Gravestone Studies, so I'll attempt make the point a different way. Whether with paint, chalk, eggs, shaving cream, or flour (all substances I have found on headstones), the act of defacing[14] headstones

> **If you remember nothing else from this pamphlet, remember this – never use anything other than water and a soft brush on a burial marker.**

constitutes the crime of criminal desecration (a crime in every state) and should not be condoned.

I expect that even the criminal nature of such acts won't deter some people, so be prepared to come across the kind of damage done to the 130 year-old headstone in Figure 1. Some people just have no respect and cannot see beyond their own desires (the same kind of

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[12] Basic Monument Cleaning (National Center for Preservation Technology and Training, 645 University Parkway, Natchitoches, Louisiana 71457: National Park Service, U. S. Department of the Interior, n.d.), page 2. This source includes a video on Basic Monument Cleaning. Hereinafter cited as Basic Monument Cleaning.

[13] Association of Gravestone Studies website, http://gravestonestudies.org/knowledge-center/faq-s.

[14] Black's Law Dictionary (which can be found online) defines "deface" as:" To mar or destroy the face (that is, the physical appearance of written or inscribed characters as expressive of a definite meaning) of a written instrument, signature, inscription, etc., by obliteration, erasure, cancellation, or super-inscription, so as to render it illegible or unrecognizable."

people who tear obituaries out of old newspapers, leaving nothing but a hole for future researchers).

Such people think only of their immediate desires and forget (or never knew) that burial markers are intended to last beyond any individual's lifetime. They never see a particular headstone more than once, and don't comprehend the concept of long-term damage, which can take many years to occur. Evidently, it is unimportant that future ancestors will not be able to view the burial markers they damage or destroy. What is really sad, is the fact that such practices are utterly unnecessary.

The Black and White of It

Such practices are as unnecessary as they are destructive. With the application of some rather simple techniques, almost any headstone can be read and recorded for posterity.

I have been researching headstone reading techniques for twenty years, and though it took some time, I came to understood that the basic technique of reading headstones can be summed up in one word – "contrast." Reading headstones, even those that are generally unreadable, is simply a matter of creating or increasing contrast.

Contrast is the difference in luminance or color that makes an object (or its image) distinguishable. Contrast is created by differences in color and brightness of objects within the same field of view (such as engraved letters on a headstone). Because the human visual system is more sensitive to contrast than absolute luminance, humans can perceive objects easier when contrast between them is increased.

Consider the text on this page, as an easy example (Figure 2). If both the page and the text were black (or both white), it would be impossible to read what is written here. But, increase the contrast by making the page or the text darker (or lighter), and the document becomes easier to read.

This is a good description of the situation would-be headstone readers often find. The headstone and the engraving on the headstone are made of the same substance, offering little or no contrast. Cover the engraved letters with dirt or moss, or weather the engraving until it is worn, and any headstone can appear to be nearly impossible to read. But, it turns out, contrast between the engraving of a headstone and the headstone itself can be created by a variety of techniques, none of which involve chemicals or tools.

Figure 2. Increasing contrast increases readability.

By simply changing light conditions, it is possible increase the contrast between the engraved letters and the stone of the marker. This makes it possible to read 'unreadable' headstones – and it can be easily done without the use of caustic chemicals or abrasive tools.

Find a way to create or increase contrast, and you have found a way to read the headstone. Such techniques are described in this paper, but, before describing them, some comments on preparing for that research trip to the cemetery are in order.

Prepare for Your Research Trip

It is important to remember that the genealogical research standards established by the National Genealogical Society should be applied, and that includes preparation prior to driving out to the cemetery (a common idea which is sometimes poorly executed). Simply taking the time to plan and prepare will greatly improve the results of your research trip.

First, research the people. It can be fun to wander around in a cemetery to see who you run into, but it is much more efficient to first identify the people whose headstones you want to find. Take a list of known and suspected burials to be researched. Include in your list, actual and possible family members who might be buried nearby and be prepared to come across some you hadn't expected.

Second, research the cemetery. Most researchers grasp pretty quickly that it is a good idea to know how to get to the cemetery. This usually requires research with state and local road maps; though there are some less obvious research aids available. For example, latitude and longitude for many cemeteries can be found on the U. S. Geological Survey, Geographic Names Information System (GNIS) website.[15]

This data can be input into a Global Positioning System (GPS) receiver, which can lead you directly to the cemetery (though this may be a little more difficult, if the cemetery is on a farm).[16] Additionally, county research websites (such as those found on USGenWeb[17]) and county historical society websites, often provide directions and even printable maps to local cemeteries.[18] You will also want to identify, if possible where within the cemetery you are likely to find what you seek.

A large public cemetery will likely require contacting the cemetery administrator or manager in order to acquire enough information to find specific headstones. For example, finding a headstone at Leavenworth National Cemetery (with more than 25,000 graves) will require knowing section number, row number, and grave number. Sometimes, this data can be found online,[19] but it often requires contacting the cemetery office. Public cemeteries may also

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[15] Geographic Names Information System website, http://geonames.usgs.gov/apex/f?p=136:1:2274611602288.

[16] Lost burial sites are a little problematic, in that exact locations are generally unknown. However, I have had quite a bit of success by identifying a general location, then talking with property owners in the area.

[17] The USGenWeb project, http://usgenweb.org/.

[18] Cemeteries often have multiple names; e.g. Branscom Cemetery in Leavenworth County, Kansas (see Figure 12) is also known as Branch Comb Cemetery, Branchcomb Cemetery, Branchcomb Graveyard, Branchcomb's Cemetery, Branscombe Cemetery, and Oak Mills Cemetery.

[19] Such information can be found online at The U. S. Department of Veterans Affairs, Nationwide Gravesite Locator, http://gravelocator.cem.va.gov/ (all national cemeteries), and The American Battle Monuments Commission, http://www.abmc.gov/ (overseas military cemeteries).

be open only for specific hours, which may limit access and the availability of necessary assistance. Hence, it is also a good idea to contact the cemetery before traveling there.

It is also a good idea to determine whether the cemetery is accessible to the general public, or is on private property. While state laws generally allow researchers, without evil intent, access to burial sites on private property, it is best to contact the land owner before attempting to travel to a cemetery. There is more to be gained than just obtaining permission to be on the property.

It is remarkable how much can be learned by talking with the property owner (they are often the current representative of a family that has been living on that property for generations). Often, they can not only tell you how to get to a burial site, but a great deal of the burial site's history and who is buried there. Occasionally, there are also hazards to be avoided (getting to one family burial site in Leavenworth County, Kansas, required getting past an open, unmarked well; knowing its location proved important to getting to that burial site safely).

Accessing cemeteries on private property will require identifying the property owner and how to contact them (just driving out to their house, hoping they are home, is betting on rather long odds). This information can generally be found at the county courthouse, though sometimes it is online.

Finally, prepare your cemetery research kit (a list of my kit can be found at the end of this pamphlet). Collect the necessary maps, GPS data, etc. (in order to avoid wasting time driving around), and recording equipment, notebooks, cameras, etc. (in order to accurately record headstone data). The better your preparation, the better your results will be, and the more useful and accurate your research will be.

Recording Burial Markers

Historic preservation requires more than just finding your way to a cemetery and reading headstones, it requires recording the information on those headstones in such a way that the information can be preserved and made available for future researchers – even stone will not last forever, and good researchers always look to the future.

I consider the objective of reading headstones to be acquiring and preserving historical information, which makes a reliable and consistent method of recording headstone inscriptions a critical aspect of research preparation. How well the researcher accomplishes this task directly determines the accuracy and completeness of the research; which in turn, determines the value and reliability of that information to future researchers.

Headstones and other burial markers are historic records and should be treated as such. Unfortunately, published cemetery records generally only record names and dates, omitting other important information (such as epitaphs, family relationships, and nearby burials).

Some find this sufficient, but I think it a bit short-sighted. Often, there are great words and important information in headstone inscriptions, and these words get left out of the historical record when records include only names and dates. This makes the method of recording headstone information critical, and it is important to understand the distinction between "field notes" and "transcribed notes."[20]

Field notes are hand-written notes, recorded at the cemetery, taken directly from the burial marker (in my case, recorded in a hard-bound notebook), and must be recorded in an exacting manner. Transcribed notes (a written or printed version of material originally presented in another medium) are recorded in such a way that the information in those field notes can be assimilated into a body of research (a genealogy database, or some written document used to share information with other researchers).

Field notes are taken at the cemetery and record your observations of the burial marker. They are also the basis for all that follows, and must be recorded with a very exacting, consistent, procedure. Accomplishing this requires the implementing of three rules for field notes.

The first rule of field note taking is to record everything engraved on the marker, including epitaphs and symbols. Record that data as close to exactly as engraved or inscribed, as is possible. However, record only what you see and nothing more. Cemetery records often include the transcriber's interpretation of symbols, inferences about dates, and assumptions about relationships and abbreviations (which can be confusing if you don't know the recorder's secret code).

It is also important to record other information, such as the symbols appearing on the headstone. Such symbols often provide important clues about that person's life and interests (such as a Mason's symbol) and can provide clues to further research. Sometimes, the entire headstone is a symbol, such as the Woodsman of the World

Figure 3. The headstone of Thomas Ward Custer, Fort Leavenworth National Cemetery, Fort Leavenworth, Kansas.
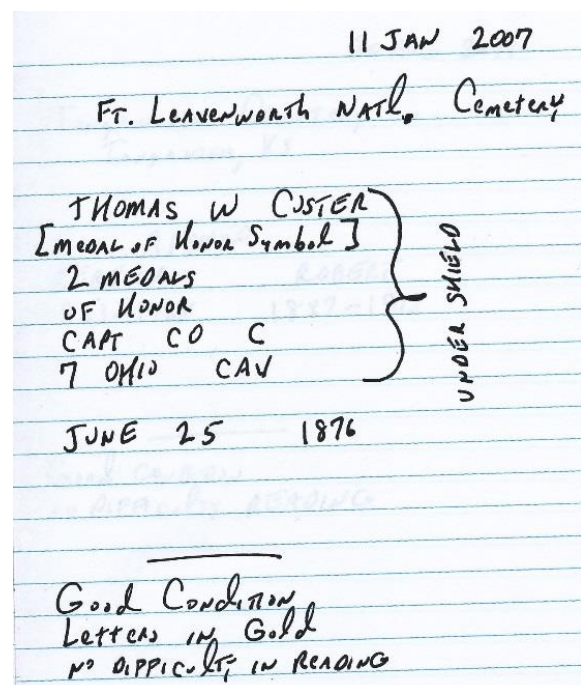

Figure 4. Field notes for the headstone of Thomas Ward Custer.

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[20] Webster defines transcription as a printed version of material originally presented in another medium (in this case, the field notes).

headstones, indicating affiliation with that group (and a possible avenue of continued research).

Record also, the condition of the marker in your field notes. Record whether it is broken, has been knocked over, has been repaired, or has been vandalized. Record whether the headstone is standing as originally emplaced, is in some other location, or even missing altogether. It is common to find headstones laying on the ground near the grave they were intended to mark, instead of actually marking the location of the grave. Such information may prove important to latter researchers or family looking for the same marker, and it is important to include such information in your field notes.

I also find it useful to record the latitude and longitude of each headstone using a hand-held GPS receiver. The GPS receiver I use will store several hundred such locations and can easily direct me back to a headstone.[21] Recording this information will make it much easier to find the headstone again – especially important in very large cemeteries.

Record the history of the headstone (original or replacement), if known.[22] If you have been to this cemetery previously, compare your current field notes to your previous field notes in order to identify changes in the conditions (e. g. a headstone that has recently fallen over, has been vandalized, or is now missing).

In general, create field notes by reading the headstone inscription from top-to-bottom and left-to-right. Record the inscription line-by-line, illustrating symbols as best as can be done. If the marker has multiple sections (as does the Deckelman marker, below), identify these parts in your notes (e.g. main part of a

Figure 5. The headstone of Hugh W. Clemmons (obverse on left) and Charles William Moore (reverse on right), Fort Leavenworth National Cemetery, Fort Leavenworth Kansas.

headstone and the base of the headstone, which will commonly have the family name). If the headstone has inscriptions on more than one side, record that as well, using cardinal directions to identify which side.

Avoid using abbreviations in order to take faster field notes (e.g. don't substitute "KS" or "Kan's" for "Kansas"); you will likely regret these short cuts later. It is important to be able to

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[21] GPS (Global Positioning System) data can also be saved for use by other software.
[22] It is common in national cemeteries for broken or damaged headstones to be replaced; hence a civil-war era headstone may mark the grave of a person buried before the civil war.

distinguish between what is actually on the marker and what has been written about the marker, and it is your field notes that will accomplish that.

In some instances, a headstone is a memorial marker and does not mark an actual burial.[23] This is common in national cemeteries, and field notes must include such information; otherwise, other researchers will believe someone is actually buried at the grave site.

Recording a simple headstone inscription can be illustrated with the headstone of Captain Thomas Ward Custer (Figure 3), who died with his brother, Lieutenant Colonel George Armstrong Custer at the Battle of the Little Bighorn in Montana. Thomas Custer was the first soldier to receive two Medals of Honor, and was originally buried with the rest of his regiment at what is now Custer National Cemetery, in Montana.

In 1877 he, and a few others, were reinterred at Fort Leavenworth National Cemetery, Kansas. Field notes for this headstone, with only one surface and a relatively uncomplicated motif, are not very difficult to record (Figure 4).

But, headstones with such simple inscriptions are generally not the norm. It is more common for a single headstone to have multiple inscriptions (recording multiple burials, the specific location of each burial often being marked by a footstone), displayed in a more complicated motif.

This requires a slightly more complicated method of taking field notes and is why researchers must be sure to inspect all surfaces (all sides; front, back, other sides, and even the top) in order to record all that is engraved on the stone.[24]

Figure 6. Field notes for the headstone of Hugh W. Clemmons and Charles William Moore.

I have recorded more than one headstone with inscriptions on all four sides, and many with an inscription on the top of the marker. Field notes should record all parts of the inscription, as well as the actual layout of the marker.

This is especially true of military markers, as information on a spouse, or other relatives, buried with a veteran can often be found on the reverse side of the headstone. The researcher
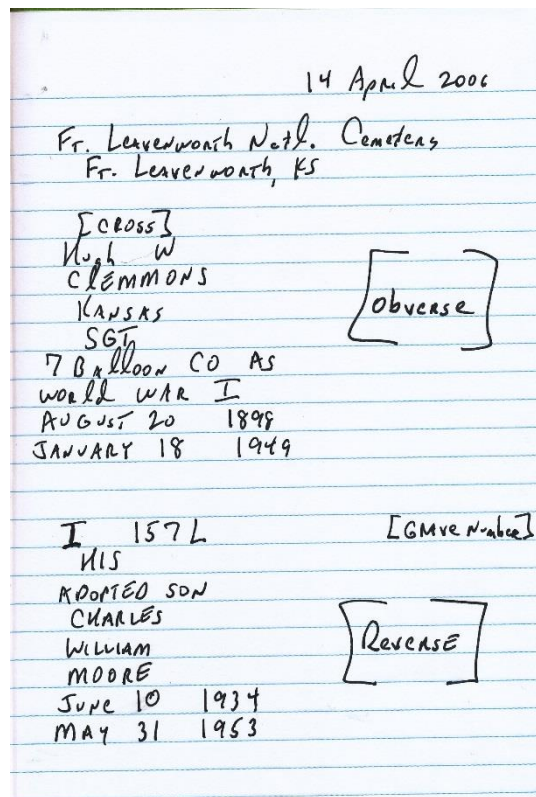
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[23] Such is the case at Fort Leavenworth National Cemetery, where Section MA is a memorial section.

[24] A common error on websites, is for multiple records to have multiple photographs of different sides of a single headstone, without any indication they are all of the same headstone; e.g. one record of a husband, with a headstone photograph and another record of the wife with a different photograph, and no indication they are the same headstone or that husband and wife are buried together.

who fails to look on the back will miss half the people buried there and half the information recorded on that marker. An example is the headstone of Hugh W. Clemmons (a veteran of a World War I balloon company), who is also buried at Fort Leavenworth National Cemetery (Figure 5).

Figure 7. The headstone of Louis Deckelman and siblings, Greenwood Cemetery, Leavenworth, Kansas.

The researcher who fails to look on the back of this headstone will have missed the fact that Sergeant Hugh W. Clemmons, U. S. Army, is buried with Charles William Moore, an adopted son. Field notes (Figure 6) for this headstone would have to be a little more complicated and a little more descriptive (more complicated examples will be discussed later).

This is also true of non-military markers which could have information engraved on any side. Again, the researcher in too much of a hurry could easily miss as much as three-fourths of the valuable family information recorded on such a marker. A great loss, if, as is usually the case, the researcher has but one chance to record the marker. In such a case, field notes should indicate which side of the maker specific information came from with brackets; e.g. "[south side]". The Deckelman headstone (Figure 7) is an example of such a multi-faced headstone.

The second rule of field note taking is to record near-by markers, especially if they are in or appear to be part of a family plot, or have similar names. Family members and those thought of as family members, are likely buried close by. Without a search of the immediate area of the headstones, when you return home, you may find that you wished you had recorded those other markers nearby (you may not be able to make a return trip in order to determine if these others are previously unidentified relatives).

Figure 8. The headstones and footstones of Lina, Etta, and Emma Deckelman, Greenwood Cemetery, Leavenworth, Kansas.

Such is the case of Louis Deckelman (Figure 7), buried in Greenwood Cemetery, in Leavenworth County, Kansas. This headstone marks the burials of Louis Deckelman (1864 – 1870), Caroline Deckelman (1870 – 1871), Amelia Deckelman (1870 – 1871); all children of John and Barbara Deckelman (Caroline and Amelia are twins).

This is an interesting marker and a good example of a headstone with inscriptions on multiple sides (south and west). However, within sight of that marker is a collection of other markers, lying on their reverse side and almost entirely buried in the dirt (and probably not in their original locations) that also bear the name Deckelman (Figure 8).

Within twenty feet of the Deckelman marker are the markers of Lina Deckelman (circa 1860 – 1862), Emma Deckelman (circa 1859 – 1862), and Etta Deckelman (circa 1858 – 1862); children of Henry and Anna Deckelman. These three infants died 5 November 1862 (Emma), 18 November 1862 (Etta), and 10 December 1862 (Lina). If you look closer at this photograph (Figure 8) you see there are actually five markers; the other two are footstones, one for Lina (inscribed "L.D.") and the other for Etta (inscribed "E.D.").

But, there is actually more to this cemetery adventure. Continue searching that part of Greenwood Cemetery, and you come across another headstone nearly buried in the dirt (Figure 9). This is the headstone of Henry C. Deckelman (circa 1865 – 1866), who died 3 May 1866 and is also the son of Henry and Anna Deckelman (who had at least four children die very young).[25]

Figure 9. The headstone of Henry C. Deckelman, Greenwood Cemetery, Leavenworth, Kansas.

The third rule of field note taking is to use a reliable and consistent means of recording your observations. Some prefer to record field notes using pre-formatted forms,[26] but I find a hardbound notebook easier to use and more effective.[27] These notebooks fit in a large pocket (a list of my cemetery kit can be found at the end of this pamphlet) and are easier to use in wind and rain. Either method provides an excellent means of recording all that you would want to learn about a cemetery and its burial markers, provided you do so in a consistent, reliable, and easily understood manner (others may need to read your notes later).

However, as useful as field notes are, they are just hand-written notes[28] and are difficult to incorporate into your research (stuffing a note page into a USB port does not really work). This is why a transcription of those field notes (a written or printed version of material originally presented in another medium) is also necessary, though it may seem redundant.

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[25] A little research should be sufficient to determine if John Deckelman and Henry Deckelman are related; there are at least a dozen more Deckelman's buried in Greenwood Cemetery whose headstones have not been found.

[26] Carmack, *Your Guide to Cemetery Research*, Appendix E.

[27] I use a hard-bound 5 by 8 inch notebook, which I get them from the Fort Leavenworth, Kansas Post Exchange, Federal Supply Service; national stock number 7530-00-222-3521.

[28] I have experimented with taking notes using a digital recorder, which was interesting, but came with its own problems (e.g. variations in spelling and odd layouts of engravings), and still required transcription in order to be useful. So. I have settled on hand-written field notes exclusively.

Field notes must be as exact a representation of what is on the headstone as possible, recorded at the cemetery, without embellishment or interpretation. Transcribed notes are derived from those field notes and can include supplemental information (such as the meaning of abbreviations).

The relationship between field notes and transcribed notes is roughly equivalent to the difference between an original source document and a transcription of that document. In both cases, the genealogy standards established by the National Genealogical Society[29] and the Board for Certification of Genealogists[30] for note-taking and transcriptions should apply.

Over the years, I have tried several methods of transcribing information recorded in field notes, but it was not until I read an article by Wesley E. Pippenger[31] that I learned an adequate technique, as well as some very good pointers for cemetery research.

In general, this method of recording marker inscriptions starts at the top and records each line, separated by a slash mark ("/"), as it is inscribed on the headstone. A simple marker inscription, such as the headstone of Captain Thomas Ward Custer (Figures 3 and 4), would be transcribed as:

"THOMAS W CUSTER / [Medal of Honor symbol] / 2 MEDALS / OF HONOR / CAPT CO C / 7 OHIO CAV / JUNE 25 1876"

Researchers will sometimes find it useful to include in a transcription the meaning of what is engraved on the headstone. In the example of Thomas Custer's headstone (Figure 4), an acceptable transcription could note that "CAPT" means "Captain" or "CAV" means "Cavalry," with the use of brackets. This transcription would then be recorded as:

"THOMAS W CUSTER / [Medal of Honor symbol] / 2 MEDALS / OF HONOR / CAPT [Captain] Co [Company] C / 7 OHIO CAV [Cavalry] / JUNE 25 1876"

Keep in mind that in such a transcription, it is critical to clearly differentiate between what is inscribed on the headstone and what has been written about the headstone. Some inscription motifs can be difficult to describe, and it is also a very good idea to supplement field notes and transcriptions with digital photographs.

Note also, that even with the headstone reading techniques presented in this pamphlet, there will be inscriptions that are difficult, to read. In such cases it is critical that you be very

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[29] National Genealogical Society, *Genealogy Standards*, (Washington, D.C.:Ancestry.com, 2014), pages 17 through 19.
[30] Board for Certification of Genealogists, *Genealogy Standards*, page 18, Standard 27.
[31] Wesley E. Pippenger, "Playing With Dead People," *NGS Newsmagazine*, Volume 26, number 2 (March/April 2000).

specific in your field notes and transcriptions about what you could read ("Gone to Heaven"), what you thought you read ("Gone to [looks like "Heaven"]"), and what you couldn't read ("Gone to [unreadable]"). Whatever you do, do not guess or make assumptions – record what you can read, as accurately as you can record it.

As an example, some headstone inscriptions have a birth date but no death date. The normal assumption is that the headstone marks that person's burial site, and the death date was never inscribed on the headstone (a not uncommon occurrence). Another assumption is that the person intended to be buried at that location, but – for some reason – wasn't.[32] Such a situation requires additional research, but in the meantime, record the headstone inscription as accurately as you can; noting that there is no death date on the headstone; e.g. "[no death date]."
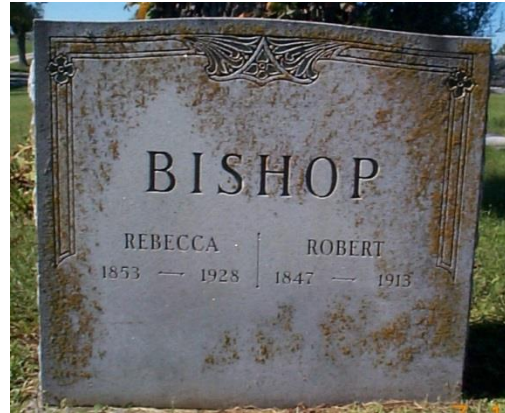

Figure 10. The headstone of Robert and Rebecca Bishop, Tonganoxie Cemetery, Tonganoxie, Kansas.

It is common for headstone inscriptions to be more complicated, especially when more than one person is buried in a single grave, or one marker is used to indicate multiple graves. Inscriptions for a husband and wife are typically separated, with a surname on the top line. Such a marker (Figure 10) requires additional information in field notes (not shown) and the resulting transcription:

"[top] BISHOP / [left] REBECCA / 1853 – 1928 / [right] ROBERT / 1847 – 1913"

It is also common to find a single headstone marking several graves. Such markers tend to be in family plots and are generally accompanied by footstones or other markers, marking the specific burial site for each family member. In such a case, that single headstone will have information on two, three, or even four sides of a single marker (an excellent opportunity to miss important information). Field notes and transcriptions for such multi-faced markers require the use of cardinal directions, indicating which part of the inscription is on which face of the headstone. The Deckelman marker (Figure 7) serves as a good example (field notes not shown):

"[west side] IN MEMORY OF / LOUIS / BORN / MAY 23, 1864 / DIED / JUNE 1, 1870 / AMELIA / BORN / DEC. 20, 1870 / DIED / MAR. 22, 1871 / CHILDREN OF / JOHN & BARBARA / DECKELMAN / [south side] IN MEMORY OF / CAROLINE / BORN / DEC. 20, 1870 / DIED / JUN. 1, 1871 /"

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[32] My great-grandfather, Isaac Milford Lantz, has two headstones; one in Saint Clair, County, Missouri, and one in Clay County, Missouri. Both headstones have a birth date, but only the Clay County headstone has a death date. He intended to be buried with his last wife, Alice, in Saint Clair County, but was buried with family in Clay County.

Such a marker invariably has other markers associated with it; usually footstones; but sometimes you will find additional headstones as well. Researchers must be sure to search the general vicinity for and record these additional markers. It is always a good idea to use multiple means of recording inscriptions (generally, written field notes and photographs), as you may not be able to make a return trip to 'clarify' your research notes.

This combination of field notes, transcription techniques,[33] and photographs, has proven extremely reliable. This is why I take digital photographs of all markers that I record (photographing headstones will be discussed in greater detail later in this pamphlet). There will be a few headstones you can't read – but not many.

Cemetery Surveys

Sometimes I find it useful to survey an entire cemetery, recording and mapping all the markers and parts of the cemetery.[34] Most cemetery researchers do not have the time or ability to return to a cemetery, and it may be necessary to make a complete record of all of those buried there. I have surveyed cemeteries several acres in size with several hundred markers, for my research in Leavenworth County, Kansas; but for family research I generally only survey the smaller and more important family cemeteries.

In such a survey, my field notes will include information (as shown above) on every marker (headstone, footstone, family marker, field stone, etc.) in the cemetery, and will also include cemetery-specific information. This usually includes information about its location (e. g. GPS data to the main entrance), directions to the cemetery (some older burial sites are not near any road), contact information for the property owner or manager, the physical layout of the cemetery (roads, buildings, fences, lots, etc.), physical hazards (one cemetery in Leavenworth County, Kansas has an abandoned, unmarked, well nearby), and the condition of the cemetery, noting such things as any vandalism that may have occurred.[35]

I recommend that, whatever techniques you use to read burial markers, you always take photographs in addition to field notes, as it may be difficult or impossible to return to the cemetery. Written notes and digital photographs complement each other very well, and one can be used to confirm or correct the other.

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[33] I use a modified version of Pippenger's method, inserting such information as "[left]" and "[right]" to indicate information separated on the headstone, and cardinal directions (e.g. "[west]") when there are inscriptions on more than one side of a marker (Pippenger uses a double slash ("//") to separate sides of a marker; I use cardinal directions).

[34] Conducting a complete cemetery survey can become a significant project, involving recording and photographing, every marker (headstones, footstones, family markers, fieldstones, lot markers, etc.), making a complete diagram or map of the cemetery, and researching the history of the cemetery (e.g. who donated or owned the land).

[35] I have found markers broken into pieces, buried in the ground, smashed by a bulldozer, and completely enclosed by a tree. In one family cemetery in Pennsylvania, I found all of the markers pulled up and leaning against the fence (the property owner told me is was to protect them while mowing the cemetery), making it impossible to determine which marker went with which grave.

This technique is as good for the cemetery, as it is for individual headstones, and you should take photographs of the cemetery as a whole. Photograph the general layout of the cemetery, cemetery signs (especially signs that provide contact information for those responsible for the cemetery), cemetery structures (flag poles, etc.), and anything else that seems an important part of the cemetery. These cemetery photographs will help you keep the cemetery as-a-whole in perspective, and you will want to take home more than just hand-written notes.

I often develop, as part of my field notes, a complete diagram of the cemetery, similar to the plat maps or plot maps published by larger cemeteries, only hand drawn. This primary purpose of such a diagram (Figure 11) is to depict the relative locations of the headstones, so they can be found again at a later date.[36] An exact, to scale diagram is not necessary, though I sometimes measure distances between markers and lots for greater accuracy. Generally, all that is necessary is to show their relative locations. Record also in this diagram cemetery structures (e.g. maintenance buildings or signs), divisions of the cemetery (e.g. sections and family lots), and anything that helps clarify how the cemetery is laid out.
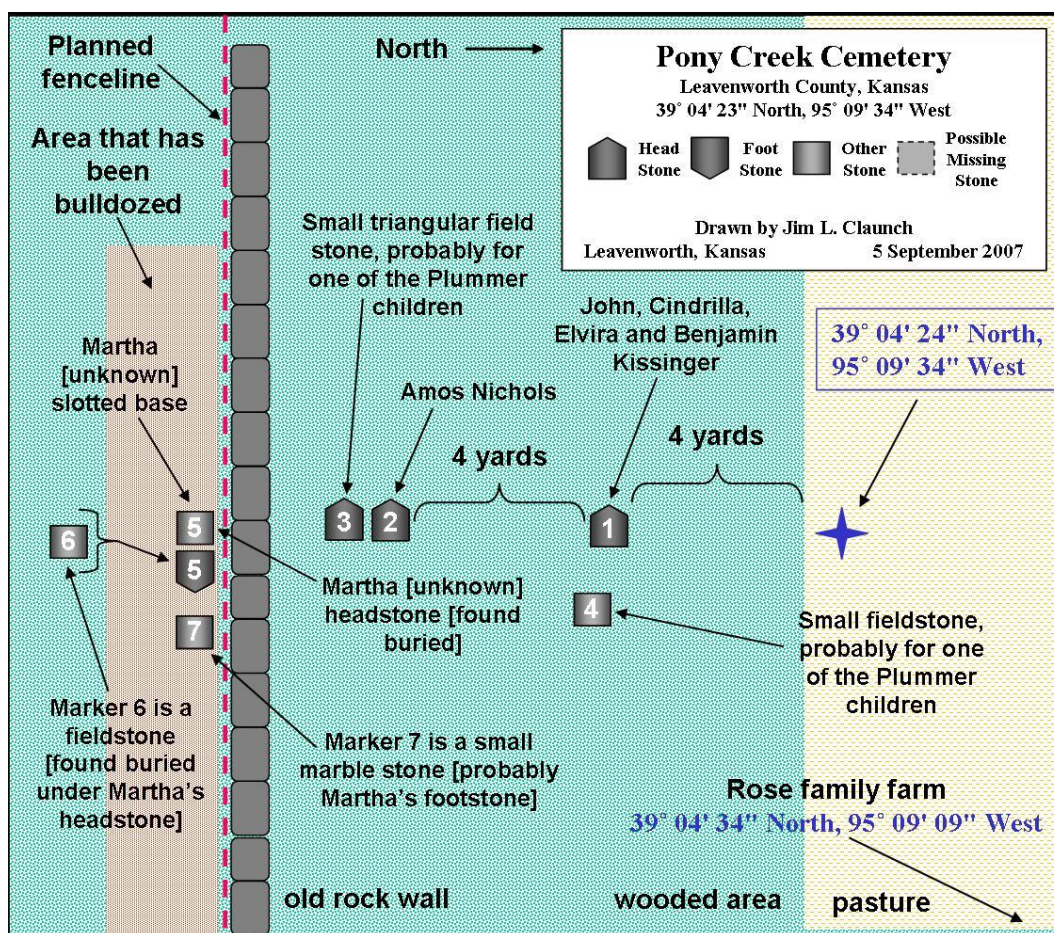

Figure 11. Map of Pony Creek Cemetery, Tonganoxie Township, Leavenworth County, Kansas, 5 September 2007.

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[36] I generally use standard graph paper to initially record such diagrams, then create a graphic, such as the one shown here, in Microsoft PowerPoint, for use in papers such as this one.

Before You Begin – Remember the Rules

Armed with the preceding knowledge of headstone and cemetery research, and techniques for recording that research, you are now ready to sojourn out into the field and begin the actual work of recording the history engraved on your family's burial markers. But, before deciding which of the following techniques to use in reading those markers, take some time to review the basic principles discussed here . . .

The Rule of Preservation – Do no damage.

The Rule of Necessity – Do only that which is necessary to read an inscription.

Keep these imperatives in mind throughout the work you are attempting. When reading headstones, the most important consideration is the composition and stability of the stone. You will find some old stone markers that are unstable; that may not have sufficient strength to withstand the pressure (even hand pressure) of cleaning or rubbing. You will also find headstones made of soft materials, such as sandstone; such markers can easily be damaged with nothing more than water or hand pressure.

In such cases, it may be that all the researcher can do is take the best notes and photographs possible. While the temptation is great, more than once I have opted to not read a headstone (beyond what could be done with photographs) because it was just too fragile or unstable. Good judgment and restraint are necessary. Sometimes you have to accept that, even with these techniques, there are burial markers that cannot be read.

Remember, headstones are historic artifacts and should be protected. If there is any chance of damaging a burial maker, use only non-physical techniques (primarily field notes and photographs). As Wesley Pippenger puts it:

> "The ultimate rule is to never apply anything to a monument because the chemicals from it may ultimately cause damage – this means never use shaving cream, mud, tape, or anything else you might be advised or take upon yourself to do. Even when something you use is temporary – you wash or clean it off afterward – the chemical residue will assuredly speed up the deterioration process."[37]

Threes and Eights - Simple Techniques

After having traveled some distance to a cemetery and spending some time finding the headstones you seek within that cemetery, it can be a bit daunting to find that old marker heavily

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[37] Pippenger, "Playing with Dead People," page 75.

weathered and covered in lichen or moss. It can be even more disconcerting if that headstone is broken and scattered, or even partially buried. You might find old dirt and detritus caked into the engraving, or even that the headstone has been vandalized or removed.[38] Once in a while, you will find a tree has grown into the grave, pushing the marker aside, or even completely enveloping the entire marker (Figure 12). Such conditions can be overcome; often with some very simple techniques.[39]

       In some conditions, creating the contrast necessary to read a headstone is as simple as moving your head and body around. By moving around to view the headstone from different, even extreme angles, the angle of the light source (usually the sun) is changed; increasing or decreasing contrast. This is often sufficient to make headstones (especially those with shiny surfaces) easier to read.

Figure 12. The headstone of Ramon Rutledge, Branscom Cemetery, Leavenworth County, Kansas.

       Another simple technique is simply touching the inscribed letters in order to make them out. It takes some practice, but by feeling the engraving on the stone for fine details if is often possible to distinguish difficult characters. For example, a "3" from an "8" or a "C" from a "G;" both of which can be difficult to distinguish in well-worn headstones merely by sight. Make sure, of course, that your hands are clean and free of foreign substances.[40]
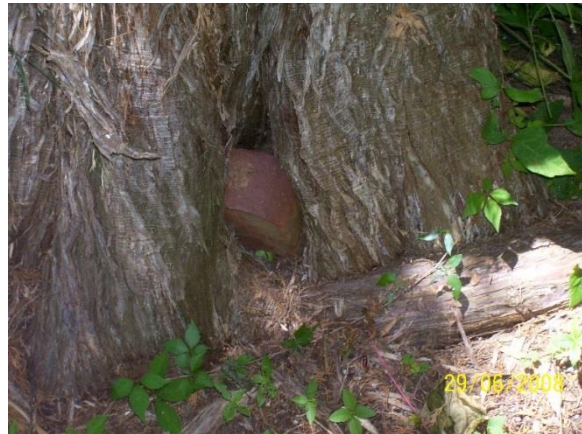
Light Techniques

       A common method of increasing contrast (though most do not realize that is what they are doing), are various techniques of projecting natural or artificial light onto a headstone in order to make it easier to read. These "light techniques" are simply methods of altering contrast between the engraved text on a headstone and the headstone itself by modifying the light conditions. The simplest version of this technique is the projection of natural light onto a headstone by means of a hand-held mirror. This technique can be effective, though it does require some prior preparation (taking a mirror with you).

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[38] In April 2014, residents at a home in Leavenworth, Kansas found a headstone among the stones of their backyard grill pit. It had been stolen from Greenwood Cemetery, in Leavenworth, Kansas, and left there. The two people named on the headstone had died in 1900 and 1901. I returned the headstone to the cemetery, but there was no way to determine where their graves had been. They lie now in unmarked graves.

[39] Keep in mind, that with any of these techniques, you will want to make a written record (field notes) and take photographs (discussed below) of all the headstones you find.

[40] A list of the equipment I use to read old headstones can be found at the end of this paper.

This technique can be useful, though it can be unwieldy and the results are not as good as other techniques. The primary problem with this technique is that, while the light can easily be directed to a particular part of the headstone, it is nearly impossible to control the amount of light projected (Figure 13). This often makes it harder to read and photograph an inscription, as too much light (wash-out), eliminates all contrast. This technique can also be difficult to do while working alone.

Figure 13. The headstone of James A. Tearney, Mount Olivet (Saint Joseph) Cemetery, Leavenworth County, Kansas; as found (left) and with reflected light from a mirror (right).

A more complicated technique is the use of artificial light sources; such as flood lights, or the klieg lights used by professional photographers. While this technique may produce good results, it is time consuming, complicated and requires a lot of preparation (equipment has to be set up and dismantled). Mostly, the logistics of acquiring, transporting, powering, and using electric lights (I have never found a tree or headstone with an electrical outlet) really make such techniques impractical.

A more practical artificial light technique is the use of a pocket-sized flashlight (LED lights work well). Aiming a small flashlight at the headstone from differing angles, even extreme angles, is a simple way of creating contrast sufficient to read difficult headstones. This technique can be especially useful on cloudy days and for headstones made of a very dark stone. Though it really works best with a partner (one person reading and another recording the inscription), this technique is not so difficult that one person alone can't use it.

An interesting variation of the flashlight method is the blanket technique. This involves using a blanket, or some cover, to block out all outside light and shining a small flashlight onto the headstone. In this technique (Figure 14), the headstone and headstone reader are both covered by the blanket, giving the reader complete control of light sources (a wool blanket on a

hot summer day can be really uncomfortable, but whatever you use must completely block out all light). The blanket blocks out all external light and allows more control over light conditions, (and more control over contrast) though it does require some preparation.

This method generally works better than the mirror technique and can be used on sunny or cloudy days, though it works best with two people (a reader and a recorder). However, one person alone can use it if properly prepared (though getting photographs of the headstone can be difficult).

Jeff Culbertson (off camera) transcribing that headstone

Jim Claunch (under the blanked) reading a headstone

Figure 14. Jim Claunch and Jeff Culbertson reading a headstone with the "Blanket Technique" at Friends Church Cemetery, near Springdale, Leavenworth County, Kansas.

Water Techniques

The technique I use most often for reading headstones is the water technique, which is simply spraying water **– only water –** on a headstone from a spray bottle I carry in a cargo pocket in my pants (Figure 15).[41] I have found that simply spraying water **– only water and nothing but water –** on a headstone is often sufficient to create enough contrast between the engraved text and the stone, making nearly any headstone readable.

This works particularly well on stone markers with shiny surfaces that reflect a lot of sunlight, and under conditions of very bright sunlight. The results of this simple, non-destructive, technique can often be remarkable, and I find that this technique also makes it easier to read an inscription from a photograph. In fact, it is often all that is necessary, to read a headstone.

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[41] Never use water on any headstone when it might be subject to freezing.

Just spraying water on a headstone often creates sufficient contrast to read an inscription. However, I usually enhance this technique with a soft brush (I use a straw whisk broom). Using the flat side of the broom to move the water around on this headstone will often cause changes in contrast sufficient to make the headstone even more readable, than with just water alone.

Figure 15. The headstone of Victor and Veronica Payeur, Mount Olivet (Saint Joseph) Cemetery, Leavenworth County, Kansas; as found (left) and with the water technique (right).

Cleaning Techniques

Sometimes, however, reading an old headstone requires more than just water; sometimes the headstone must be cleaned to read an inscription. The concept isn't hard to grasp, but there are important aspects of equipment and technique that must be understood in order to clean a headstone safely.

Some references[42] and organizations recommend cleaning methods using commercial cleaners; but such concoctions are potentially damaging and should only be used by professional conservators. Other techniques found online, involving the use of bleach, cleaning solvents, acids, oil, household cleaners, soap, detergents, abrasive cleaners, or even power washers, should never be used. Such cleaning methods can be very destructive if done

> **If you remember nothing else from this pamphlet, remember this – never use anything other than water and a soft brush on a burial marker.**

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[42] Lynette Strangstad, *A Graveyard Preservation Primer* (Walnut Creek, California: Altamira Press, 1999), page 61. Held by Leavenworth County Historical Society, The Carroll Mansion, 1128 Fifth Avenue, Leavenworth, Leavenworth County, Kansas 66058, 913-682-7759. Hereinafter cited as *Graveyard Preservation Primer*.

incorrectly, and are normally unnecessary; especially since whatever cleaning of a headstone that must be done, can be done with nothing more than water and a soft brush.

Lightly cleaning a headstone, with water and a brush can make a worn and weathered headstone readable. However, researchers should always make sure the stone is stable before attempting to clean it. If the headstone shows flaking, delaminating, or any other kind of instability, do not attempt to clean it. **If there is any doubt about the stability of a headstone, do not attempt to clean it** – transcribe it with notes and photographs only. Above all – **do no damage**. Which is why, if a headstone doesn't need cleaning in order to read it, I don't – I leave it as I found it.

Cleaning a headstone often reveals what is hidden, and the technique is very simple. Start by taking photographs of all surfaces of the headstone; in order to get an "as found" view of the marker, and take other photographs as you work (see photographic technique, below). Thoroughly brush off all the loose material on the marker (dirt, twigs, etc.), as an initial "dry cleaning." Starting at the top and working down, repeatedly spray the marker with water, and brush that water off, removing the material (lichen, moss, etc.) from the headstone, taking notes as your work. Repeat this sequence until the headstone is clean enough to read the entire inscription (Figure 16); updating your field notes and taking additional photographs as you work. Then take a final series of photographs of all surfaces (they can be compared to the initial set of photographs).

The key to this technique is moving the natural material, already on the marker, around in different directions, as you work. By moving the brush in different directions (up-down, left-right), you can create variations in contrast; while simultaneously removing the moss, lichen, and other materials on the headstone. The additional contrast you create while cleaning, in addition to the actual cleaning itself, is what makes the headstone readable. In the beginning, it will appear that you are just moving the material around, and in fact that is what you are doing. But, as you continue the process, your work creates the necessary contrast. As you work, the material will be removed and the headstone will get successively easier to read.

When you have finished, "wet clean" the marker by thoroughly spraying it with water (take a large supply of water with you), in order to remove all traces of your work. If you do this properly, the marker will be readable and there will be no trace of your having been there.

Photographic Techniques

I hold that the primary purpose of reading headstones is the acquisition and preservation of the historical information on those headstones, in a way that can be preserved as part of the historical record and can be shared with other researchers. This makes headstone photography an important adjunct to field notes, as the combination of field notes, transcriptions, and photographs, makes an excellent method of preserving that historical information.

Having said that, the initial question becomes one of photographic equipment and techniques. Film photography is perfectly acceptable, and I used film cameras quite often in my

early research. However, there is a significant financial and time expense associated with film photography, and photographic prints can be difficult to store and share with other researchers.

Digital photography does not have these difficulties, and it has some significant advantages. Relatively inexpensive, the main advantage of digital photographs is that they are easier to store and share. Another advantage is that digital photographs can be manipulated with software, and are easier to embed into research documents, such as Family Group Sheets. As a result, I now use only digital cameras in my cemetery research.[43]

Once the photographs are taken and backed-up, I find it useful to rename the digital file, as a means of identifying and managing multiple headstone photographs. This is easier illustrated than explained. For example, in the case of the August Korben headstone (Figure 16), the camera named one photograph's digital file "DSC1234.jpg." I renamed that file "Korben, August 6.jpg" in order to identify it as the sixth photograph of August Korben's headstone.

Figure 16. The headstone of August Korben, Greenwood Cemetery, Leavenworth; as found (left) and after cleaning with soft brush and water (right).

I also find it useful to annotate the properties of the photograph's digital file (sometimes called metadata) in order to identify the photographer (as "Author") and the cemetery where the photograph was taken (in "Comments"). I will also add a date, if the photograph itself is undated.

In the case of August Korben's headstone, this metadata includes the fields "Author" and "Comments," in which I annotate, respectively, the name of the photographer (not all of the headstone photographs I have collected were taken by me) and the cemetery. In the case of those

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[43] If you choose to use a digital camera, I recommend you get one that dates the actual photograph.

photographs taken before I found a digital camera that dates photographs, I add the date in the "Date Acquired" field (Figure 17).

This combination of new file name and metadata identifies the above photograph as of the sixth photograph of the headstone of August Korben, taken by me at Greenwood Cemetery, Leavenworth County, Kansas on 12 March 2004. This is invaluable information, if you intend to share your research with others.

Each researcher must choose their photography equipment according to their own needs, though I think that digital photography will prove more useful in your research. However, headstone photography isn't "selfie" photography, and though digital photography is very common and generally well understood; there are some specific techniques that will make your headstone photographs more useful in your research.

First, determine the purpose of the photograph. If the purpose of the photograph is to show relatives what the headstone looks like, then one general photograph (such as in Figure 3) will likely suffice. If, however, the purpose of the photograph is to enhance your ability to read a headstone inscription, you will get better results by photographing the entire headstone and all of its surfaces. Photograph it from a variety of angles (creating different contrasts), including close-ups, or even extreme close-ups, of inscriptions and symbols, or specific parts of the headstone (such as the epitaph or a photograph embedded in the headstone).

Figure 17. Annotated metadata of a headstone photograph.

Second, don't be afraid to take a lot of photographs. Digital cameras allow many photos, and the more you take, the more useful the photographs will be when you return home. I have taken as many as thirty photos of a single headstone. I find that multiple photographs, taken from different angles with different contrasts, will make it easier to read an inscription from a photograph. It will also be less likely to come home with an unusable photograph.

Photograph the entire marker (wide-angle) from all sides of the headstone (or at least all sides with an inscription), and several angles. If the headstone is broken or damaged, or has detached pieces, take collective photographs of all the pieces (if they can be gathered together). Also take individual photographs of each piece of the headstone, if it has been broken, damaged, or has detached pieces. Photograph any footstones and other markers that may be associated with the headstone.
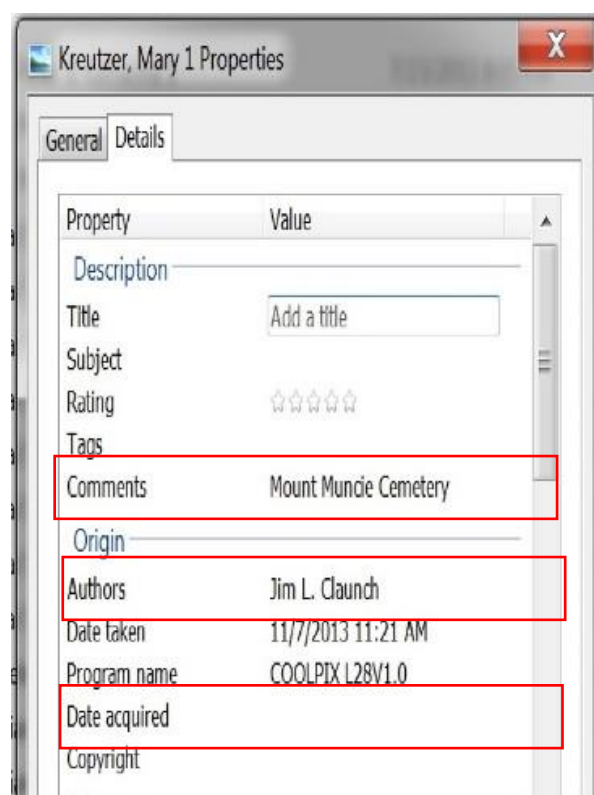
25

If the headstone is part of a family plot, it is a good idea to take photographs of the entire plot, including fences (with close-ups of gates if there in an inscription or other markings), lot markers, and anything else you might find there (I took a photograph of a mad turtle once, but only because he attacked me first). Record in your field notes which markers are in the photographs. I find it very useful to draw out a diagram of family plots, with measurements, (in my field notes), in order to further identify the markers in that plot and how they are arranged.

Take close-up photographs (zoom setting) of all text and images; especially any text or part of the inscription that is difficult to read. Include close-ups of epitaphs, symbols, and other details you want to be sure you can see clearly in the photograph. Use the camera's zoom setting for difficult to read text, and you will find these photographs can be helpful later in confirming your field notes, or dealing with questions that arise in later research (Figure 18).[44]

Figure 18. The tomb of Levan Dadiana (1897-1963), Prince of Mingrelia, and his wife, Eleanor Dadiana (1898-1969), Mount Muncie Cemetery, Lansing, Kansas.

Third, remember that not all headstone photographs must be in color. Black and white photographs are another means of creating contrast, and can be an exceptional means of enhancing difficult to read inscriptions. This is why many professional photographers choose black-and-white photography – for the exceptional contrast in the photograph. In addition to color photographs, take black-and white photographs of hard to read text and symbols, in order to get the best contrast possible.

Generally, I take digital photographs in color, but sometimes there is an advantage to taking black and white photographs. Some researchers recommend only black and white photographs for better detail and texture,[45] but I think that a bit short sighted. Remember, however:

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[44] Mingrelia is an area of western Georgia, bordering on the Black Sea. I don't know how Levan and Eleanor Dadiana came to be in Kansas, but I bet it is an interesting story.

[45] Mary-Ellen Jones, *Photographing Tombstones: Equipment and Techniques*, American Association for State and Local History Technical Leaflet 92 (1400 Eighth Avenue, South, Nashville, Tennessee 37203: American Association for State and Local History, February 1977), page 3. Hereinafter cited as Photographing Tombstones: Equipment and Techniques.

"Artistic photographs are not required; what is needed are high-contrast photographs that clearly show the lettering, the decorative carving, and the stone's condition. Strong sunlight at a 20 to 30 degree angle to the stone can produce a high-contrast photograph."[46]

Older headstones will often require some degree of cleaning (see Cleaning Techniques, above), and it is a good idea to combine cleaning techniques with photographic techniques. If you find that you need to clean a headstone, before you start, take photographs of all its surfaces in order to get an "as I found it" view of the marker. Also take photographs while you are cleaning it, and after you have finished. Photographing the headstone as you find it (prior to cleaning), while you clean it, and after you clean, will provide a complete photographic record of the marker, and greatly aid in reading it.

Finally, do not rely solely on photographs for capturing headstone inscriptions. Always record inscriptions and epitaphs, in a written record (field notes), while at the cemetery, instead of relying on photographs when you return home. The photographs may not come out or be as visible as necessary. As a noted genealogy author, Myra Vanderpool Gormley has written: "Even if you plan to photograph the stones, record the information in a notebook. Cameras and film can fail just when you need them most."[47]

All these techniques combined, can add up to a lot of photographs; especially if you are researching many headstones. But that is just a storage problem, and not much of a problem at that. In the end, you will be glad to not have to return to the cemetery later to get photographs that can actually be read, or to get photographs of aspects of the headstone you wished you had taken. You will also avoid the problem of camera failure, and the great tragedy of losing all of your research (not to mention the time and expense).

Software Techniques

Though not something that can generally be done at the cemetery, there are software techniques that can provide an additional means of using of your headstone photographs.[48] These techniques involve using software to manipulate a digital file of the photograph in order to enhance the image. This is accomplished by downloading your digital photographs onto a computer, and editing those photographs with software. Though not particularly difficult or time consuming, I generally use these techniques only when I am unable to read the headstone inscription with the techniques previously discussed, or if there is some feature of the headstone I want to make particularly visible in a photograph.

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[46] Strangstad, *A Graveyard Preservation Primer*, page 29.
[47] Myra Vanderpool Gormley, "Trip to the Family Cemetery Often Yields a Wealth of Information" Kansas City Star, Kansas City, Missouri, 16 June 1990.
[48] I am only referring to digital photography in this section, though these techniques can be applied to film photography if the negative is converted to a digital file.

What you can do with your digital photographs depends upon the quality of the original photograph, the software you have available, and your individual expertise with that software. Most of the techniques described here are generally available on standard graphics software, though your software may have capabilities beyond the techniques described here. There are too many possibilities to describe them all, so I will only cover the few that I have tried. Generally, I have found them useful, though you may have to try more than one technique to achieve the desired effect.

There are a variety of techniques that can be applied, depending upon the capabilities of the software you have available. Whatever those capabilities are, I recommend that you do not use these techniques on original photographs. Keep the original digital photograph as the camera took it, and work only with copies. Make sure to save a copy of each technique used; naming the digital file in a way that describes the technique used on the photograph (Table 1).

File Name	Notes	Metadata Comments
Windelband, Alfred 20.jpg	Original Photograph	Original Color photograph
Windelband, Alfred 20 Negative 1	Technique 1	Converted to negative
Windelband, Alfred 20 Negative 2	Technique 2	Converted to negative, with tint
Windelband, Alfred 20 Enhanced 1	Technique 3	Enhanced photograph
Windelband, Alfred 20 Enhanced 2	Technique 4	Enhanced photograph, with tint

Table 1. Naming conventions for software techniques.

Annotate additional information in the digital file's properties (metadata, as described above), and annotate your field notes; describing the software techniques used, the file names assigned, and what you could read as a result.[49] This additional record-keeping will identify which software technique was used on that copy of the photograph; information which may prove important if you wish to share your research with others.

The digital effects that can be created depends entirely upon your software and there are too many versions of software to try to describe them here; though there are some basic effects that have proven useful to headstone research. The software I use[50] allows me to adjust contrast, brightness, hue, and tone; convert a photograph to a negative (a version of black-and-white photographs); convert a photograph to grayscale; or smooth and sharpen the image (Figure 19); and increase the size of the image (zoom).

Each of these very basic techniques has the potential to increase the readability of inscriptions in photographs, though they can be can also be used in a great variety of combinations. Each photograph being its own entity, it is not really possible to predict an outcome. You just have to experiment with these techniques (often in combination) in order to determine what works best with a particular photograph.

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[49] With the appropriate software, you can also annotate this data as part of the image itself (Figure 19).

[50] I use the software that came with my scanner; ArcSoft Photo Studio 6; I am not making a recommendation, it's just what came with my scanner.

Figure 19. The headstone of Alfred Windelband, Greenwood Cemetery, Leavenworth; as found (left), and with graphics techniques (center and right).

Generally, I use these software techniques as a supplement other techniques. Sometimes, I find that the photographs taken at the cemetery aren't as clear, or don't show specific features as clearly as I want them too. On occasion, I have found that these techniques can clarify headstone inscriptions, and I have often used them to confirm what I thought I read on the headstone.

Rubbing Techniques

The most traditional method of recording headstone information is the headstone rubbing. Rubbings have the advantage of a physical record (the traditional purpose of rubbings), but they also have the disadvantage of a significant physical storage requirement. Rubbings can be a supplement to photographs and an aid in transcribing headstones, but are difficult to store and share. I generally don't do rubbings as modern technology and techniques really makes them unnecessary. But, there are still some traditionalists and a general technique of rubbings should be discussed in any primer on reading and recording headstones. As there are already so many references describing rubbing techniques,[51] there is no need to reiterate what has been written about so extensively. So, I will only make a couple of pertinent points.

First, be aware that it is easier than you might think to damage, or even break a headstone. The real first step in any attempt at a headstone rubbing must always be to evaluate the headstone, in order to be make sure it is stable enough to withstand a rubbing. Researchers must be prepared to use alternate techniques (e.g. photographs) – **do not take a rubbing of an unstable marker.**

Second, take some care in the choice of materials. Chalk can be messy, and there is always the danger of smearing, rendering the rubbing unreadable. Crayons also work (Figure 20), and I prefer them as they are less subject to smearing. The type of paper you use for the rubbing is also critical.

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[51] Strangstad, *Graveyard Preservation Primer*, pages 11 through 14.

Heavy paper, like butcher's paper can be acquired in a large enough size to rub an entire headstone, depending upon the headstone, but it is harder to get a good rubbing (especially if the headstone has really fine engraving) because of the weight of the heavy paper and difficulty in keeping the paper in place. Regular typing paper also works well, but requires multiple sheets to rub an entire headstone.

There are some commercially available rubbing substances, on the market; mostly waxes (often called Headstone or Tombstone "Rubbing Wax"). I have not tried these substances, and I strongly recommend against their use.

Any substance which adheres to the headstone, carries with it the potential to directly or indirectly damage burial markers. Such substances should never be used – especially since there are so many other techniques which can accomplish the purpose of reading a headstone without applying a foreign substance to its surface.

Figure 20. The headstone of Christopher and Adeline, Mount Olivet (Saint Joseph) Cemetery, Leavenworth County, Kansas; as found (left) and part of the rubbing taken from the headstone (right).

Consider, also, what you will do with the rubbing once completed. Determine how you will inculcate the information on the rubbing into your general research, and – more importantly – how you will store and share the rubbing.

An important purpose of reading headstones is the acquisition and preservation of the historical information on those headstones in a way that can be preserved as part of the historical record, and shared with other researchers. This is difficult to do with rubbings.

This is why, when I do a rubbing (a very rare event), I use crayons and standard size typing paper. Managing multiple sheets of paper to get a single rubbing can be difficult, but when I get them home they fit easily into a scanner, and the scanned images can easily be compiled in to a single image. This provides a much simpler means of storing and sharing the information.

A curious variation of the rubbing technique is to use aluminum foil instead of marker and paper to make a three dimensional reproduction of the headstone inscription. This technique also has the advantage of a creating a physical record, but has an even more difficult storage requirement. It is also very time consuming and is not easily shared.

This technique involves covering the face of the marker with aluminum foil, and is pretty simple (Figure 21). First, cover the face of the headstone with aluminum foil, then rub it so that the engraved letters make impressions on the foil. Then use a dark marker to rub across the face of the foil, in order to make the letters readable. This technique can be effective, but the storage problem makes it difficult to use and I really don't recommend it.

Figure 21. The headstone of George Craton, Mount Olivet (Saint Joseph) Cemetery, Leavenworth County, Kansas; illustrating the foil rubbing technique.

There is one thoroughly unacceptable variation of rubbing techniques, which also appears on the internet with unrelenting frequency – the making of plaster of Paris casts of headstones. As described on the internet, such casts are not necessarily destructive, so long as the stone is stable enough to stand up to the effort. However, I don't see how attempts at removing plaster from a headstone – and it must be removed – can be anything but damaging, and this 'technique' should not be used. **Never use plaster of Paris** or similar materials.

In general, rubbings can be a supplement to photographs and an aid in transcribing headstones. However, they are also time consuming, and are not as useful to research as field notes and photographs. Because of these drawbacks, I almost exclusively use a combination of field notes and photographs as my primary means of recording headstones.

Team Reading

Most people find themselves reading headstones alone, but if others are available I recommend that you "team-read" headstones. Multiple sets of eyes see more than one, and multiple people reading the same headstone can make out an inscription quicker and more accurately. Team-reading headstones has proven a good technique for deciphering and recording

headstones; especially those that are difficult to read, or when there are many headstones to be recorded.

My research group in Leavenworth County, Kansas (Figure 22)[52] has found that teams of three worked very well. Two people would act as readers, deciphering the headstone inscription and calling out loud as they read; the third person acted as recorder, taking field notes and photographs. We also found that teams of two worked well, though not as quickly, with one person reading and the second person recording and photographing. On the more difficult headstones, both persons took turns reading in order to verify the results.

Figure 22. The Leavenworth Research Group "team reading" headstones at Friends Church Cemetery, Leavenworth County, Kansas; Connie Putthoff and Michael Megee (left), Theresa Megee and Emily Berkerjeck, in green shirt (right).

The Leavenworth Research Group[53] has found this technique very effective with large groups of people. On more than one occasion we completely recorded entire cemeteries, even

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[52] The Leavenworth Research Group (LRG) consisted primarily of Leavenworth County residents, Jeff Culbertson, Connie Putthoff, Theresa Megee, Michael Megee, Linda DiSanto, and occasionally other local volunteers.

[53] This group has made a significant impact on the completeness, accuracy, and availability of Leavenworth County cemetery research in formation; recording many previously unrecorded burial sites, and many thousand previously unrecorded burials. This data has been made available, in the form of a county-wide burials index, which can be accessed through the Leavenworth County official website http://www.leavenworthcounty.org/gis/default.asp.

fairly large cemeteries, with the help of local scout troops.[54] As an example; a local Girl Scout Troop, with some training and supervision, recorded all the headstones in a four-acre cemetery[55] (with more than 2500 burials), as a civics project, in a single weekend.[56] Such scout projects can provide a means for local historical and genealogical societies to acquire and record headstone information, improving locally available records.

Combined Techniques – A Modus Operandi

Over the course of a nearly two of decades of research, I have learned several techniques for reading and recording the family information on headstones; techniques I have intended to fully describe in this pamphlet. However, I want to make one last point - that I rarely just use a single technique. All of these techniques described here work best when used in combination, and over time I have developed a consistent pattern of employing them in my research.

At the very least, I always record the headstone inscription in field notes,[57] and take multiple digital photographs of the headstone (including close-ups of details). I also record the location of the headstone with a GPS receiver.

Figure 23. The headstone of Infant Tarr, Greenwood Cemetery, Leavenworth, Kansas; the photograph on the left was taken in 2005; the photograph on the right was taken in 2012. Vandalism is a constant problem at this old cemetery.

I normally use water and cleaning techniques when an inscription is difficult to read. I make use of team reading when possible, and use other techniques (such as the graphic techniques) when these combined methods didn't produce the desired results.

In the course of recording many thousands of headstones, I have developed a standard routine of techniques, which I find almost always works. There will always be some headstones, that are just too warn or too unstable to read; but not many, and far fewer than you might think.

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[54] Boy Scout and Girl Scout troops are always looking for community service and Eagle Scout projects; restoring and recording cemeteries has proven a popular project with such groups. With a little training and supervision, they can complete such projects quickly, and with a great deal of accuracy.

[55] Tonganoxie Cemetery in Tonganoxie, Kansas, known locally as Hubble Hill Cemetery.

[56] Enough cannot be said about these very fine young people; they have restored several local cemeteries, making them accessible to the public and often finding previously unknown burial markers in the process.

[57] I have experimented with using a digital recorder to take notes by voice, avoiding the need to write field notes. However, I found this technique didn't really work any better, and that I had to transcribe my notes from the digital recorder in order to inculcate them into my overall research.

It is more complicated to describe than to execute, so it really isn't as difficult or time-consuming, as it may seem.

Step 1: Evaluate the headstone. Make sure it is stable and in no danger of damage. Make sure it is not fragile, or subject to degradation if cleaned (if this is the case, use only photographic techniques). Examine all sides of the headstone, in order to identify which sides have inscriptions (use the touch technique if this proves difficult). Look around for other markers, such as footnotes and other family headstones, in order to identify related markers (such as would be found in a family plot); avoiding return trips to the cemetery.

Step 2: Photograph the headstone. Photograph the entire headstone in wide-angle (Figures 7 and 20), showing all sides which have inscriptions (this may require several photographs). If the marker is broken or scattered, take at least one photograph of each individual piece and, if possible, take at least one collective photograph of the all the pieces (Figure 23). This can be a bit of a chore if the headstone is badly broken, but the multiple photographs will better show the headstone as it appeared when you found it.

Step 3: Read and record the headstone. Record in a notebook (field notes) as much of the headstone as can be read (using the techniques previously described). In many cases, you will be able to read all of it without further work. Take photographs of each part of the inscription as you read, including close-up photographs of difficult to see inscriptions and symbols.

If the inscription is covered with lichen or moss, use a soft brush to remove as much as the material is possible – be careful, that you do not breathe-in the resulting dust. If the inscription is still difficult to read, use the water technique, updating your field notes and photographing as you work. If more effort is required, use the cleaning technique; again, update your field notes and take additional photographs as you work. It may prove necessary to use other techniques) e.g. a flashlight or the touch technique) in order to read the most difficult parts.

If you have a partner, have them confirm your results. If not, verify that your field notes are accurate and complete. Check your digital photographs, in order to make sure they have captured the headstone and its inscription well enough for your needs.

Step 4: Clean up after yourself. If you have used a cleaning technique, wash down the headstone with water to make sure all loose material has been removed, and that all that is left is the marker – you should leave no evidence that you were ever there. Make sure you have recovered all your equipment and materials, and move on to the next headstone. When finished, you should then be ready to include the results of this work into your research, and to share the information with other researchers.

Conclusion

In a very real sense, cemeteries and the headstones they guard can be thought of as historic artifacts. Though they are records made of stone and metal, instead of paper, such

records provide a unique insight into the history of a family. There is a real need to preserve such records, at least as well as the paper records commonly used in historical and genealogical research. Such preservation is the main purpose of this pamphlet.

Unfortunately, even records made of stone are perishable, and important information about a family's history can be lost without such preservation efforts. Mother Nature and vandals will often have their way, and many family cemeteries and individual headstones have been lost or destroyed.

This means that records produced by the techniques described here, could easily become the only record of the burial markers you have read. Your field notes, transcriptions, and photographs become, in effect, an historical record, and in time, may become the only record of that historical artifact. It is your task to preserve that record, and aiding family researchers in that task is why this pamphlet has been written.

Figure 24: Jim L. Claunch, at Mount Olivet Cemetery (St. Joseph of the Valley Church) Leavenworth County, Kansas; taken 2 July 2011 by Mary A. Brown during his survey to help the church cemetery committee update their burial records.[58]

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[58] Jim L. Claunch, digital photograph (original), taken 2 July 2011 by Mary A. Brown, at Mount Olivet Cemetery (Saint Joseph of the Valley Church) Leavenworth County, Kansas. This digital photograph was taken during a survey of this cemetery, to help the church cemetery committee update burial records that had been lost in a fire.

Guidelines for Research at Cemeteries and Burial Sites

Recognizing that burial markers are historic records, and that how they are treated will affect other researchers, both current and future, family history researchers habitually—

* treat burial markers with great respect, and never mark, mutilate, rearrange, relocate, deface, desecrate, or remove them from the cemetery.

* treat burial markers as original records, recognizing that they are irreplaceable and that researchers must help preserve them for future use.

* follow the rules of the cemetery without protest, even if they have changed since a previous visit, or differ from those of another cemetery.

* acquire permission for access cemeteries on private property from the property owner, even if state of local law does not require it.

* convey personal information about living people—like birth and death dates—only in ways that those concerned have expressly agreed too (a lack of a death date generally indicates the person is still living).

My Cemetery Kit

Sturdy clothes and heavy work boots; heavy work gloves
Notebook with mechanical pencils (for taking notes)
Spray bottle with water; gallon jug (or larger) with extra water
Whisk broom (for brushing off headstones)
Digital camera with SD card (for recording headstones)
Global Positioning System (GPS) receiver (for locating cemetery and headstone locations)
Batteries for camera and other devices (rechargeable batteries can't be recharged in the field)
Hatchet, machete (or something for removing weeds)
Bug spray and counter-poison ivy spray or lotion
Cooler with bottled water and other drinks (especially when the weather is hot)
Sandwiches and snacks; Medications taken daily
Road maps (to find the cemetery)
Cemetery plot or plat maps (to find individual headstones)
Marker flags (like those used to mark underground lines); useful for laying out family plots
Measuring tape (for determining dimensions of markers and measuring family plots)
First Aid Kit
Field Bag (to carry it all in)

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