



# ROOTDIGGER

3rd Quarter: July - September 2012

The Rootdigger is a publication of the Marion County Genealogical Society, a division of the non-profit Historic Ocala Preservation Society. Annual membership fee is \$15.00.

## Global Positioning System (GPS) and Family History

By: George L. Bass

I have fond memories of growing up on my parents' farm. When I was young, I would help feed the chickens in the chicken lot. My dad liked to rabbit hunt and we kept our red bone hound in the dog lot. As I grew older I had to feed the hogs. I remember all the work my mother and dad did after the hogs were slaughtered in the fall. Mom would render the lard, make liver mush, souse meat, and sausage. Dad would put salt on the bigger pieces and hung them to cure [in] the smoke house. The smoke house also had two large bins in which we kept oats and wheat that we raised on the farm. We would have the wheat ground into flour that mom used to bake our bread. We also kept the smelly stone crocks in which we made [sauerkraut] in the smoke house. I remember the "corn shucking parties" that we had every fall when we harvested the corn and filled up the corn crib. We kept our hay and fodder in the barn loft. When I was old enough, my dad would let me use the horse drawn mowing machine and rake to cut and pile the hay in rows so the threshing machine could bail the hay and thresh out the grain. The outhouse was used until my dad had the new house built in 1969. Going to the outhouse on a cold winter night was no fun. We kept two horses and a cow in the barn. One of my primary daily chores was feeding and watering the horses. Dad had the well house built after we got electricity when I was in the fourth grade. The electric well pump made watering the livestock easier. Our shower was located in the well house. There was hard work to be done at the saw mill. When I was young I helped roll the logs to the carriage to be sawed. When I was older and stronger, I would catch the sawed lumber as it was cut and place it in a pile. During my senior year in high school, my dad went back to work for the furniture factory. The fall after I graduated from high school, I married and went into the Navy. My dad sold the horses and the saw mill and then bought a tractor. He built a shed for the tractor. He loved to work with his tractor.

I find my personal memories of the old home place both precious and valuable. I want to preserve them for my descendants. They will be able to find the place with the coordinates I have included in this documentation and walk over some of the same ground as I have and imagine what it may have been like when I was growing up.

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# Global Positioning (GPS) and Family History *Continued*

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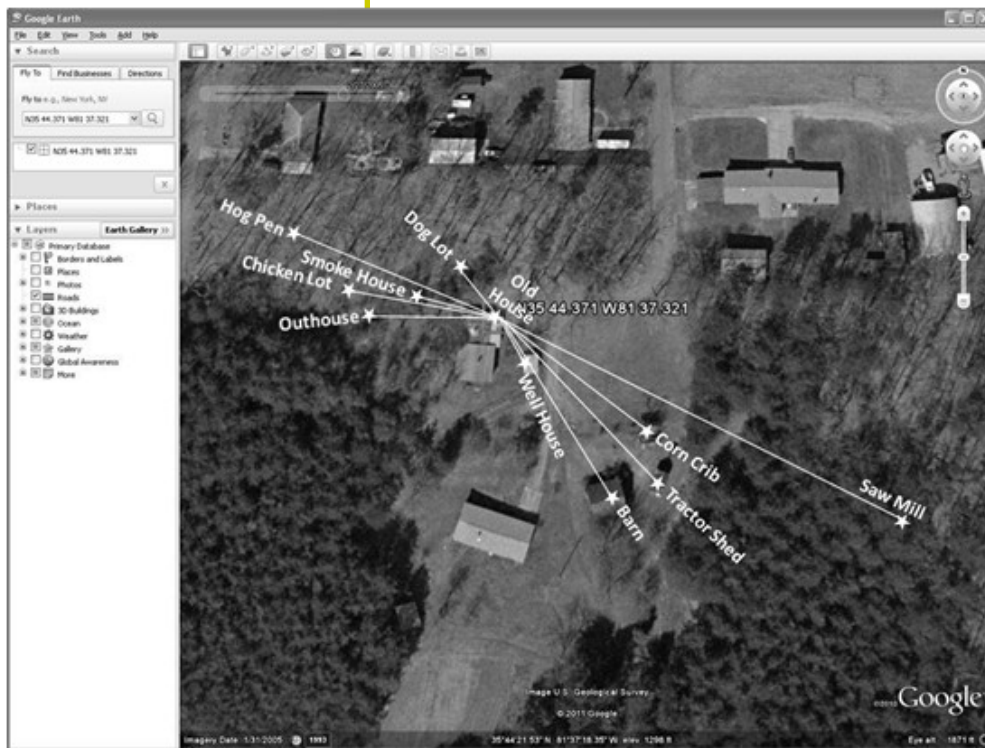


Figure 1, James Leon Bass Home Place

My sister purchased my father's home place and has had most of the old buildings removed. The significant features of the old home place included the house, pig pen, chicken lot, outhouse, smoke house, dog lot, well house, barn, corn crib, tractor shed, and saw mill. The old smoke house is the only structure still standing. The image history in Google Earth shows a number of the buildings that have been demolished (see Figure 1).

## GPS and the Old Home Place

In 2008 I used my first GPS receiver to record the latitude and longitude coordinates of the house, barn, smoke house, corn crib, well house, and outhouse. But the location of the chicken lot, dog lot, and pig pen were under trees where reception was unreliable. I decided to measure the distance from the house coordinates to these features and take a magnetic direction reading since my GPS receiver had a built-in magnetic compass. This information was used to compute latitude and longitude coordinates.

(Degrees, Degrees-Minutes, or Degrees-Minutes-Seconds) and turn on WAAS.

Google Earth and Google Maps are convenient sources for cross checking GPS coordinates ([www.google.com/earth/download/ge/agree.html](http://www.google.com/earth/download/ge/agree.html) and [maps.google.com/maps?hl=en&tab=w1](http://maps.google.com/maps?hl=en&tab=w1)). Google Earth permits you to read latitude and longitude coordinates by moving the pointer (mouse) position. The Google Earth application must be loaded on a computer with a web connection. Google Earth is rich with features that can be used for family history documentation. With Google Maps, right click on the point of interest, select the "What's here?" menu command to read latitude and longitude coordinates.

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# Global Positioning (GPS) and Family History *Continued*

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The “NGS Geodetic Tool Kit” renders coordinate computation ([www.ngs.noaa.gov/TOOLS/](http://www.ngs.noaa.gov/TOOLS/)). The “Forward” program will compute a [second] set of coordinates based on a set of coordinates and a distance and direction (also called “range” and “bearing”). The “Inverse” program will compute distance and direction based on two sets of coordinates.

“GeoComp” (a “freeware” windows application) performs both of these computations, but has a friendlier user interface and eliminates most conversion requirements.

The geographic coordinates for the old home place are listed in Table 1 below:

|  |   |
|--|---|
| <b>House:</b> N35° 44.371' W81° 37.321'      | <b>Smoke house:</b> N35° 44.371' W81° 37.334' |
| <b>Well house:</b> N35° 44.369' W81° 37.317' | <b>Corn crib:</b> N35° 44.355' W81° 37.299'   |
| <b>Barn:</b> N35° 44.350' W81° 37.307'       | <b>Outhouse:</b> N35° 44.369' W81° 37.342'    |

The dog lot was about fifty feet northwest of the house. The chicken lot was about twenty feet northwest of the outhouse and the hog pen was about eighty-one feet northwest of the outhouse. The saw mill was about 450 feet east-southeast of the house. The tractor shed was about 192 feet southeast of the house. A magnetic deviation of six degrees and fifty-nine minutes for the old home place was obtained from the National Oceanic and Atmospheric Agency (NOAA) website ([www.ngdc.noaa.gov/geomagmodels/Declination.jsp](http://www.ngdc.noaa.gov/geomagmodels/Declination.jsp)). GeoComp was used to compute the coordinates in Table 2 below:

|  |  |
|--|--|
| <b>Dog lot:</b> N35° 44.378' W 81° 37.326'       | <b>Chicken lot:</b> N35° 44.373' W 81° 37.344' |
| <b>Hog pen:</b> N35° 44.381' W 81° 37.354'       | <b>Saw mill:</b> N35° 44.330' W 81° 37.245'    |
| <b>Tractor shed:</b> N35° 44.348' W 81° 337.294' |  |

I placed a Google Earth historical image of the old home place in Microsoft PowerPoint and labeled it using the visual features and measurement capabilities, as seen in Figure 1. This diagram provides a visual record of the old home place for my descendants.

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**Table 1, James Leon Bass Home Place Coordinates**

**Table 2, Computed Coordinates**



## Global Positioning (GPS) and Family History *Continued*

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### GPS and the Cemetery

Five years ago my sons and I were trying to find my grandfather's grave in a cemetery in Western North Carolina. It had been a number of years since I was there and we spent forty-five minutes locating my grandfather's tombstone. My youngest son, Erich, suggested that I use my GPS receiver to record the geographic coordinates of the grave so that we could easily find it the next time. His suggestion gave me the idea and motivation to record GPS coordinates in my family history research.

GPS receivers provide the capability that enables us to determine the location of graves in a cemetery which is called "mapping." We can document these coordinates in our cemetery and genealogy research. Future generations will be able to find the cemetery and graves even when the markers are missing.

The first step in the cemetery "mapping" process is to identify at least one accurate GPS coordinate point within the cemetery or close to it. Ensure that your GPS receiver is set to give the most accurate reading with WAAS turned on. A clear view of the sky with no obstructions will provide the best reading for this "key" coordinate reading. Then make a magnetic compass reading and a distance measurement to a tombstone (or other appropriate grave marker). This grave then becomes a second point from which we can take compass readings and measurements; this process is called a "daisy-chain" measurement. The measurement process is easier if the graves are in rows. Repeat this process until you have measurements to all tombstones in the cemetery. The mapping process also provides a great opportunity to include a photographic record of the tombstones as well as transcribing the information from the tombstones. It is best to work in teams to minimize errors.

Use a computer program and a source for magnetic deviation to complete the computations. The "Forward" and "Inverse" computer programs may be downloaded from the NGS Geodetic Tool Kit site and used to compute the latitude and longitude. You may obtain the magnetic deviation from the National Oceanic and Atmospheric Administration (NOAA) website or any other appropriate source ([www.ngdc.noaa.gov/geomagmodels/Declination.jsp](http://www.ngdc.noaa.gov/geomagmodels/Declination.jsp)). The magnetic deviation (or declination) is used to compute true bearing that is used in geodetic computation: True Bearing = Magnetic Bearing + Magnetic Deviation. The "Forward" and "Inverse" programs require that all heading and coordinate data be entered in the format of degrees-minutes-seconds and distance in meters. A

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## Global Positioning (GPS) and Family History *Continued*

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Microsoft Excel spreadsheet may be used to manage the unit conversions needed for these two programs. I designed and built the GeoComp program. It may be used without having to do external unit conversion (E-mail me for a free copy: [GLBass@Bellsouth.net](mailto:GLBass@Bellsouth.net)).

This detailed “mapping” process is required because of the inherent inaccuracy of most consumer GPS receivers. Most good GPS receivers with WAAS will have an error of less than eight feet provided it has several minutes to settle out. The computer programs (NGS Geodetic Tool Kit and GeoComp) calculate coordinates with an accuracy of less than an inch. The relative accuracy of the coordinates of graves based on the measurements will be very good. The largest source of error will be the magnetic direction and the location of the initial point.

St. Margaret’s Church cemetery located in Clay County, Florida, provides an example for computing the latitude and longitude coordinates for tombstones. Margaret Fleming’s tombstone, and those of seven other family members who are buried in close proximity, are used in this example.

Margaret Fleming’s tombstone is not visible with Google Earth/Maps. Thus, Snell’s tombstone was used as a reference point since it is discernible with Google Earth/Maps and can be used to verify the GPS coordinate readings. The GPS receiver coordinates of Snell’s tombstone were recorded as 30.06755°N 81.69649°W. The coordinates obtained from Google were 0.067540°N 81.696469°W (see Figure 2). The coordinates from USGS Named Features

([geonames.usgs.gov/index.html](http://geonames.usgs.gov/index.html)) for Saint Margaret’s Church were 30.0674633°N 81.6964821°W. The readings were close enough (thirteen and seventeen feet, respectively) to provide confidence that the reading from my GPS receiver was good.

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**Figure 2, Snell Tombstone**



# Global Positioning (GPS) and Family History *Continued*

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Margaret Fleming’s tombstone lies 82.5 feet in a magnetic compass direction of 211° from Snell’s tombstone. Using the NOAA website ([www.ngdc.noaa.gov/geomagmodels/Declination.jsp](http://www.ngdc.noaa.gov/geomagmodels/Declination.jsp)), a magnetic deviation of 5° 51’ west was obtained for the cemetery. Using the GPS coordinates and the distance, magnetic compass direction, and magnetic deviation, the GeoComp program computed the coordinates for Margaret Fleming’s tombstone as 30.06734466°N 81.69660083°W.

Using Margaret Fleming’s tombstone as my new reference, I measured the distance to each of the other tombstones (that were in a straight row), and computed the coordinates. Instead of performing a “daisy-chain” computation, I kept Margaret Fleming’s coordinates as the “reference” and changed only the distance since all of the tombstones were in the same direction (031° magnetic). Table 4 below contains the results of the computations.

| Name on Tombstone        | Distance (feet) | Latitude (° N) | Longitude (° W) |
|--------------------------|-----------------|----------------|-----------------|
| Margaret Fleming         | (Reference)     | 30.06734466    | 81.69660083     |
| Lewis Fleming            | 3               | 30.06735213    | 81.6965968      |
| Augustine Cortez Fleming | 6.167           | 30.06736001    | 81.69659254     |
| Francis Phillip Fleming  | 9.4167          | 30.0673681     | 81.69658818     |
| Julia Spades Fleming     | 13.75           | 30.06737888    | 81.69658236     |
| Herbert Earpe Fleming    | 17.75           | 30.06738884    | 81.69657698     |
| Herbert Fleming Williams | 21.75           | 30.06739879    | 81.69657161     |
| Julia Fleming Brown      | 26.167          | 30.06740979    | 81.69656568     |

Table 4, Tombstone Coordinates

I have a great aunt who is buried in the Alva Cemetery in Lee County, Florida. When visiting the cemetery, I was able to find her son’s tombstone, but her tombstone is missing. Approximately ten feet north of her son’s grave I found a tombstone base that could be hers, but I have no proof. If GPS coordinates of her grave had been documented, her grave location could have been confirmed without having to research the ownership

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## Global Positioning (GPS) and Family History *Continued*

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of plots.

GPS can be a valuable tool for documenting and finding many genealogically significant features including tombstones, cemeteries, old home sites, and churches. The US Geological Survey has a website with a database that provides coordinates for named “features” that include churches, cemeteries and sixty-two other named features in the United States. As of December 2011 there were 2,209,772 named “features” containing 139,136 cemeteries and 230,322 churches ([geonames.usgs.gov/index.html](http://geonames.usgs.gov/index.html)). A number of other websites, such as “Find a Grave” ([www.findagrave.com](http://www.findagrave.com)), provide geographic coordinates for cemeteries.



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## MCGS Remembers Francis Harlow

In May of this year Marion County Genealogical Society member Francis Harlow passed away at the age of 92. Below is a reprint of his obituary from the May 26, 2012 issue of the *Ocala Star Banner*.

Ocala – Francis E. Harlow, 92, of Ocala, passed away May 16, 2012. Born in Jersey City, NJ, the son of Patrick Harlow and Geraldine Ruiz, he served in WWII with the US Army Air Corps. Fran is survived by a sister, Alice Grom, of Long Island, NY, and several nieces and nephews, and was preceded in death by his wife, Delsie P. Cruce Harlow, and a sister, Jeanne Moore. The funeral service will be on Tuesday, May 29, 2012 at 10 a.m. at Woodlawn Cemetery. Arrangements by Roberts Funeral Homes, Downtown Chapel, 606 SW 2 AVE, Ocala, (352) 622-4141.





# Another Underused Resource - PERSI

By: Nancy Hendrickson

Reprinted with permission from *AncestorNews, An Electronic Newsletter for Internet Genealogists*, V. 2, #3 - Jan 29, 2000

The Periodical Source Index, or PERSI, is the largest subject index to genealogical and historical periodical articles in the world. Created by the foundation and department staff of the Historical Genealogy Department of the library here in Fort Wayne, Indiana, PERSI is widely recognized as being a vital source for genealogical researchers. PERSI is a comprehensive subject index covering genealogy and local history periodicals written in English and French (Canada) since 1800. The time period of the articles ranges from the 1700s to the present. More than 1.1 million index entries from nearly six thousand titles are represented by this work.

The bad news is that the index is not available online for free. The CD-ROM runs between \$80 and \$100, and is available at online stores like Ancestry.com. However, if you live anywhere close to a Family History Center, PERSI is available there for free. If you are a member of Ancestry.com, PERSI is one of the databases included in your membership.

To give you an idea of the information available, I obtained copies of the membership records at my great-grandparent's church. I also got the ledger of the little village store where my great-great-grandparents shopped. Because PERSI is an index of genealogy and local history articles, it covers such things as old copies of a genealogical society's newsletters or magazines--the places where those oddball kinds of articles are likely to turn up.

Whether you own the CD-ROM, or access the information at the FHC, this is only an index. If you live near Fort Wayne, IN, you can go to the Allen County Library and get copies of articles off the microfilms. If you don't live there, you can send a request to the library (form is located at [http://www.acpl.lib.in.us/database/graphics/order\\_form.html](http://www.acpl.lib.in.us/database/graphics/order_form.html)).

You may request six articles at a time, and the charge is a flat \$7.50 fee, plus \$0.20 per page copied. Believe it or not, you don't enclose money with your request--when they send the copies they send a bill with it.

Ed. Note: Many public libraries with genealogy sections have this in book form, too. A number of local libraries now subscribe to Ancestry.com for patron use, so you can use that database.

Rootdigger Editor's Note: The PERSI Index is available via the Heritage Quest database at the Marion County Library website [http://www.marioncountyfl.org/library/Databases\\_Subject.aspx#Genealogy](http://www.marioncountyfl.org/library/Databases_Subject.aspx#Genealogy). Anyone can access this database in person at the library, and cardholders can access it from their home computers. See a librarian for details.



Allen County Public Library Genealogy Center Homepage





**Marion County  
Genealogical Society**

*Mission Statement*

*The Marion County Genealogical Society is dedicated to creating and promoting an interest in genealogy, focusing on research in Marion County, Florida and in supporting members in their research.*

3rd Quarter: July – September 2012

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[Mariongenealogy.tripod.com](http://Mariongenealogy.tripod.com)**

## Upcoming Events and Programs

**November 15, 2012** Marion County Genealogical Society Meeting  
2:00 p.m. Marion County Public Library, 2720 E. Silver Springs Blvd.,  
Ocala, FL

Speaker: Joe David Bellamy  
Topic: Virginia and New England Genealogy

**November 15, 2012** Special Interest Meeting  
1:00 p.m. Marion County Public Library, 2720 E. Silver Springs Blvd.,  
Ocala, FL

Speaker: Judy Wright  
Topic: Family Tree Maker 2012 Training

**December 20, 2012** Marion County Genealogical Society Meeting  
2:00 p.m. Marion County Public Library, 2720 E. Silver Springs Blvd.,  
Ocala, FL

Speakers: MCGS Members  
Topic: Annual Holiday Party