

Project: *ieldran*: the Early Anglo-Saxon Mapping Project  
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## I. Overview

The goal of *ieldran*: The Early Anglo-Saxon Cemetery Mapping Project is to display all burials in England that date from the mid-5<sup>th</sup> to early 7<sup>th</sup> centuries CE with relevant information about each location. While there are numerous studies that have covered this period, there are no open access or shared databases of sites. With this in mind *ieldran*, meaning ‘ancestors’ in Old English, was created to provide an online geospatial database of all excavated cemeteries from Early Anglo-Saxon England. The project seeks to display excavated cemeteries from this period with information on the burials present, references to books and journals, location of museum collections, and links to other relevant digital material.

## II. The Problem

### b. The Problem within Mortuary Archaeology and Early Anglo-Saxon Studies

There are a number of issues facing studies of early Anglo-Saxon England burial practices. First, excavations of early Anglo-Saxon sites are quite common in England and have been occurring since the late 17th century. The result is that hundreds of museum collections that have yet to be fully analyzed, interpreted, or included in broader surveys. It is important that available and underutilized resources be integrated into analyses and exploited prior to further excavation.

Second, research has shown that when collections of human remains are fully digitized or easily found online, they are more likely to be restudied and used. Locations of museum assemblages need to be known to improve sampling and spread the use load among multiple collections.

Third, there is no sharing of spatial locations of cemeteries, which means that each scholar must recreate a map or borrow one if they want to add it to their research. There are a few Anglo-Saxon specific databases available online including the Anglo-Saxon Kentish Electronic Database, Anglo-Saxon Graves and Grave Goods of the 6th and 7th Centuries AD, and *Novum Inventorium Sepulchrale*. There is no spatial data available for these projects despite the fact that many probably have had a GIS based analysis done on them at some point, and it is clear that the research on this material is being consistently re-done.

## b. Context of the Problem Within My Dissertation

The project began as part of my broader Ph.D. research and my involvement in the Michigan State University Cultural Heritage Informatics Initiative. My own research focuses on the relationship between cremation and inhumation burials in early Anglo-Saxon England and will require a large general map inclusive of different types of cemeteries in this period and region. With this in mind, I set out to not only create a digital map with all early Anglo-Saxon cemeteries, but also to make it open access so that others could download the data and use it to make their own makes freely.

## IV. Project Objectives and Audience

1. Accumulate information on early Anglo-Saxon cemeteries online in an easily accessible format. This database will provide a single location for information, references and links to other online resources.
2. Provide information on where museum collections and parish holdings of Early Anglo-Saxon cemetery material can be found to improve reuse.
3. Display information through an interactive map, providing users with the opportunity to explore spatial relationships between cemeteries, as well as download the spatial data for themselves.
4. Provide a database that is open access and linked to other resources. With this in mind, *ieldran* is available online under an attribution and share alike Creative Commons license. Further, data will be available in non-proprietary geoJSON spatial data, and future iterations of the project will allow stable URIs to be linked to other resources.

The purpose of *ieldran* is to provide a central location for basic spatial and cemetery information for scholars and professionals working with this type of material. It provides individuals with a way to locate potential collections for study, aids in selecting study samples, provides data for manipulation and creation of maps, and serves as a case study in demonstrating the importance of digitization and open access. The intended audience is primarily academic, however it may have use to any amateurs or students who are interested as well in either the Anglo-Saxon period or geospatial mapping.

## V. Tools and Development

The project was built using [Bootleaf](#) and [Leaflet Hash](#). Support and technical aid was received through MSU's Cultural Heritage Informatics Initiative Fellowship program.

[Bootleaf](#) is a mash-up framework created by Bryan McBride, and is freely available for download. It is a simple responsive template for building geospatial applications that leverages Twitter Bootstrap 3, Leaflet, and typeahead.js.

[Leaflet Hash](#) is a plugin created by Michael Evans that generates dynamic URL hashes to web pages with Leaflet maps that allows you to link users to specific map views. As the user zooms and moves across the map, the URL of the site will change.

All primary data was collected and catalogued by Matt Austin as part of his Masters thesis. All of his data is included in his thesis as a Microsoft Access database (.accdb) and as a Microsoft Excel spread sheet (.xlsx). Austin is a collaborator of this project involved in data collection and dissemination.

## VI. Key Issues

1. While geoJSON offers an easy way to add data to mapping applications, there are difficulties working with Leaflet and integrating plugins, as well as no easy way to directly add a license to this type of file format.
2. Data collection has been limited by the research interests of Austin and myself, which has focused on cemeteries with cremation. However, this is an issue we hope to amend in the future.
3. Cemetery sites are sacred location, especially if the human remains are still present. To protect the sites, spatial locations have been slightly degraded to post-code rather than exact location. This creates an issue if people want to do specific spatial analysis, rather than just generalized display.

## VII. Future of the Project

The current iteration of *ieldran* is live and allows for interaction with both cremation and mixed cemetery sites. In its current state, it is useful for locating cemeteries and references, as well as visualizing the general spatial layout of the sites. However, there is much work that still needs to be done to reach the final goal of the project.

1. Add inhumation sites: currently the database only contains cemetery sites that have cremation burials, but we are actively working to add inhumation only layers.

2. Links to other resources: there are numerous digital resources online that relate to different early Anglo-Saxon cemeteries. It is the hope to add links to these resources in the attributes of each cemetery site.

3. Data download and data submission: these two features are probably the most important as they will allow people to gain access to the geoJSON data as well as add their own data to the project, and are currently being worked on.

Both myself and Austin are excited to continue to update and refine *ieldran*, and I strongly believe that this database will be a major benefit to early Anglo-Saxon archaeologists, as well as serve as an example of how easy it is to share and create this type of program.