In 2013, Boreas Heritage was formed as a full-service, independently-owned company of archaeology consultants, heritage researchers and geographic information system (GIS) specialists based in Halifax, Nova Scotia. Co-Directors and founders Sara Beanlands and Steve Garcin actively embrace new technology and innovative approaches to conducting archaeological investigations. We use a range of survey methods, including ground-penetrating radar (GPR), to assess the composition, extent and depth of cultural features, and apply non-intrusive and non-destructive techniques to identify, record and analyse cultural resources.

The mission of Boreas Heritage has always been to move beyond the established limits of consulting archaeology and we are committed to giving back to our community and promoting Atlantic Canadian heritage.

**MAPANNAPOlis**
A joint project of MAPANNAPOlis and Parks Canadas’ Fort Anne National Historic Site in Annapolis Royal, Nova Scotia, resulted in a Garrison Graveyards map, identifying 306 persons named on 234 still-standing grave markers. About 2000 people were buried there over 2 centuries. The map showed the probable location of Acadian and French burial sites from the early 1600s to 1755, though there were no markers or other visible clues. We wondered: what lies beneath?

Boreas Heritage, in partnership with MAPANNAPOlis and Parks Canada, expanded its earlier geophysical site survey - employing Ground-Penetrating Radar (GPR) and Light Detection and Ranging (LiDAR) data - to search for other buried features. Boreas first located nineteen burial sites, then discovered and excavated the original ground surface on which St. Jean-Baptiste church was built, and artifacts dating to the Acadian occupation.

MAPANNAPOlis is an all-volunteer association. Since 2012, it has facilitated self-organized Annapolis County, Nova Scotia, groups in mapping County features and assets, of which the Garrison Graveyard map is one.

**BOREAS HERITAGE**
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**PARKS CANADA**
Parks Canada’s mandate is as follows: On behalf of the people of Canada, we protect and present nationally significant examples of Canada’s natural and cultural heritage, and foster public understanding, appreciation and enjoyment in ways that ensure their ecological and commemorative integrity for present and future generations.

The partnership we have with MAPANNAPOlis is a perfect example of an outside organisation helping us to realise this mandate. Understanding what lies beneath the surface of the grounds at Fort Anne will help us to present this story to Canadians, and people from all over the world. This in turn will help us understand our past, so that we may make informed decisions about our future. It also allows us to talk to Acadian descendants with much more certainty as to the final resting place of many of their ancestors, to let people know that they are indeed standing on the grounds of the Acadian cemetery, or that they are standing within the walls of where their parish church stood, one of the first churches constructed by the Acadian people. The fact that none of this is visible on our grounds today further helps us to discuss the differences in cultural practices between the Acadians and the British, as well as the conflicts that arose on these grounds between the French and British. This project has been a wonderful experience, but, as with all discoveries, it has led to more questions that we will strive to answer in the coming months and years. Stay tuned!!
THE INVESTIGATION

The Garrison Graveyard is one of Canada’s most historically significant burial grounds. It includes an unmarked Acadian cemetery, in use before 1686 until 1755, and a British cemetery used as a community burial ground from 1710 to 1940, where over 230 headstones remain. Many additional gravesites are unmarked, and the graveyard probably contains 2,000 or more burials. The extant headstones have been recorded on an interactive web map, as a joint project of MAPANNAPOLIS and Parks Canada.

The primary objective of the 2018 Garrison Graveyard investigation was to determine whether or not Ground-Penetrating Radar [GPR] could detect unmarked burials within the Garrison Graveyard. The GPR can detect subsurface anomalies up to 3m below the ground without causing disturbance, which is especially important in the context of a burial ground. In an effort to target the location of the early Acadian cemetery, as identified on historic mapping and through parish records, Boreas Heritage geo-referenced available 17th and 18th century mapping using Geographic Information Systems [GIS] software.

Light Detection and Ranging (LiDAR) data was also analysed in an effort to identify buried features in the vicinity of the cemetery. This information allowed the research team to establish a grid, approximately 18m x 20m, designed to intersect the suspected location of the Acadian cemetery.

To facilitate the GPR investigation and provide high-resolution imagery of the grid area, researchers from the Applied Geomatics Research Group (AGRG) of the Nova Scotia Community College (NSCC) conducted an Unmanned Aerial Vehicle [UAV] survey of the burial ground.

Another important goal was to engage the public and encourage community participation in the project. Many residents and local students joined MAPANNAPOLIS, Parks Canada, Boreas Heritage and AGRG at Fort Anne National Historic Site, and were given the opportunity to learn about the technology and participate in the GPR survey. Professional photographer and videographer, Andrew Tolson, captured the excitement of the day, while Alan Melanson shared the history of Acadian settlement at Port Royal with visitors. Several media outlets spent the entire day filming and interviewing participants.

Based on the results of the GPR survey, Boreas Heritage identified numerous anomalies believed to represent the remains of unmarked burials, thus achieving the primary objective of the investigation. The application and integration of various modern technologies also revealed the presence of additional historic features within the Garrison Graveyard.

With these exciting results, Boreas Heritage, in partnership with MAPANNAPOLIS and Parks Canada, expanded its geophysical survey to search for other buried features at Fort Anne National Historic Site, including the St. Jean-Baptiste parish church. Having detected a buried feature believed to be in the location of the Acadian church, Boreas Heritage initiated a small archaeological excavation, which revealed the original ground surface on which the church was built and artifacts dating to the Acadian occupation of the area.