

**North Carolina  
Archaeological Society**

**N e w s l e t t e r**

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Research Laboratories of Archaeology, Campus Box 3120, University of North Carolina, Chapel Hill, NC 27599-3120

Society Website: <http://www.rla.unc.edu/ncas/index.html>

## NCArchaeology@Home

by Kim Urban, Courtney Page, and Emily McDowell  
(North Carolina Office of State Archaeology)

The year 2020 has brought with it the rise of a pandemic resulting in new challenges to all facets of life and forcing humans everywhere to do what we do best: adapt. As the new coronavirus spread throughout the United States, more and more states, including North Carolina, adopted stay-at-home orders to curtail the pandemic. These new orders forced businesses to institute work-from-home orders and schools to shift from in-person instruction to online teaching, leading teachers, parents, and kids to adapt to a newer form of learning, distance education. In an effort to help facilitate and navigate some of these new challenges for parents, teachers, and kids, the North Carolina Department of Natural and Cultural Resources (DNCR) launched an at-home learning initiative called *NCLearn@Home*, a gathering place for DNCR online content and educational resources. In conjunction with the DNCR initiative, the North Carolina Office of State Archaeology (OSA) launched *NCArchaeology@Home*, a collection of online content from the OSA and our partners that can be accessed anywhere, anytime, for free.

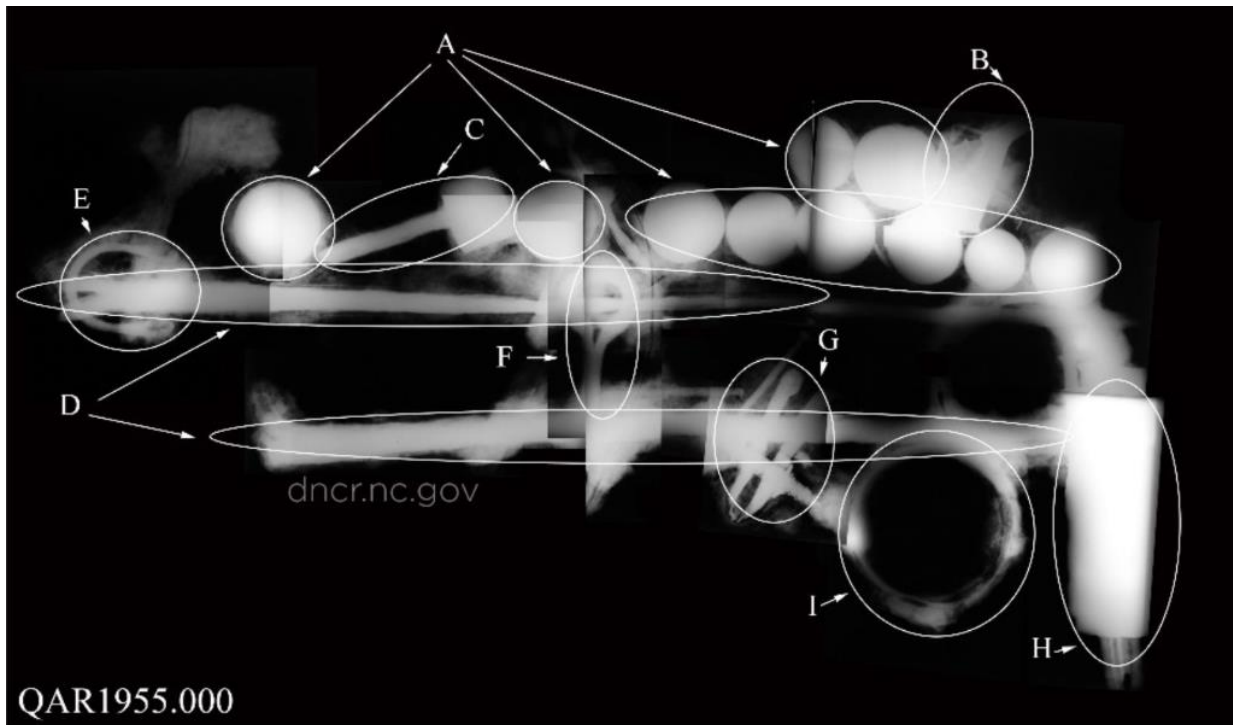


Our website hosts a myriad of archaeology related activities that parents or teachers can do with their kids. Most of these activities were designed with limited supplies, resources, and overall simplicity in mind, some requiring only a printer, like the stratigraphy activity with printable artifacts and stratigraphy board. Other activities require nothing but a sunny day, like *Archaeology in your Backyard!*, an activity given to us by Shane Petersen, NCAS President and an archaeologist at the North Carolina Department of Transportation who has done the activity with his son. These activities will challenge kids to think about how their present surroundings can impact the future all while learning about the past!

Our *NCArchaeology@Home* page also features purely online resources like educational videos from OSA's excavations at Historic Halifax and Lumber River State Park, our Facebook Live Video featuring artifacts currently being curated at the OSA Research Center, and videos from our lecture series. Additionally, we highlight other great resources in the state, like UNC RLA's curated digital content, with online 3-D models, a timeline of North Carolina history, and other fun activities and resources for those new to archaeology and distance education!

We also feature our maritime archaeology branches with a section specifically dedicated to submerged resources. This includes an underwater activities packet, a blog on one of NC's Heritage Dive Sites, Condor, and even a virtual tour of the Queen Anne's Revenge Conservation Lab! Among the activities in the *Maritime Archaeology Packet* is an artifact guessing game. Can you guess what artifacts are in the concretion x-ray on the next page? Find the answers

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at [https://files.nc.gov/dncr-arch/OSAUnderwaterArchActivityPacket\\_2020.pdf](https://files.nc.gov/dncr-arch/OSAUnderwaterArchActivityPacket_2020.pdf) and check out the other activities when you're finished! The end of the page highlights our past and upcoming blog series where you can read about our excavations at State Historic Sites, learn about women who impacted North Carolina history and archaeology, and search through interviews with the women of the OSA! Be sure to check out our newest blog series, *Submerged NC*, which is a feature of this year's North Carolina Archaeology Month theme. Come back often to see the latest articles on North Carolina's submerged resources and the archaeologists that study them!

To access these resources, check out OSA's website: <https://archaeology.ncdcr.gov/programs/education-outreach/ncarchaeologyhome> and follow us on Facebook and Instagram @ncarchaeology for the latest content!



## SECHSA 2020 Call for Papers

The 2020 Southeastern Conference on Historic Sites Archaeology (SECHSA) is scheduled for August 7-8, 2020, at the Cayce Tennis and Sports Center in Cayce, South Carolina. Check [sechsa.org](http://sechsa.org) in the coming days for details. Folks are encouraged to pre-register; however, registration fees will not be collected ahead of time, since it is possible that we will have to postpone until next year. Fees will be paid at the door.

The overall theme for the 2020 SECHSA Conference is "Colonial and Early National Period Trade and Commerce". As always though, presentations on all forms of current research in historical archaeology are welcomed. Papers should be 15 to 20 minutes long. If you plan to give a presentation or bring a poster to display, abstracts are due by June 30, 2020. Thematic sessions are also welcomed, but all abstracts for the session must be grouped together at the time they are submitted. Your submittal should include the following information: 1) Paper Title, 2) Authors and their Affiliation, 3) Email Address, and 4) Abstract (no more than 300 words). Please email abstracts to Natalie Pope at [nadampope@newsouthassoc.com](mailto:nadampope@newsouthassoc.com).



## SEAC 2020 UPDATE

As was mentioned in the last issue of the NCAS Newsletter, the annual Southeastern Archaeological Conference (SEAC) was scheduled to take place in Durham, North Carolina later this year. With Dr. Levy's permission, I have chosen to include her update regarding the conference for those of you who may not be members of SEAC but may have had interest in attending a local archaeology conference.

Dear SEAC Members:

I am writing on Sunday, April 12, 2020, as we are all hunkered down to grapple with the unprecedented constraints imposed to respond to the threat of COVID-19. I am writing to tell you what I can about SEAC's 2020 annual meeting, scheduled for the end of October, and to remind you to renew your 2020 membership and pay your dues (see below). Conditions are changing rapidly, so I do not know what the situation will be when you read this, but we are in for the long haul. SAA and most other public events and conferences in the near future have been canceled; and many communities, including my own, are in "shelter-at-home" mode.

We do not know yet how this public health emergency may – or may not – impact the 2020 SEAC annual meeting scheduled for the last week of October in Durham, NC. What I can tell you now is that the SEAC Executive Committee (familarly known as "the board") is aware that we may have difficult decisions ahead of us. We cannot make those decisions right now, but we are regularly gathering data and considering our options, in collaboration with the organizers for the Durham meeting. We will continue those preparations which will be essential if we are able to hold the meeting (e.g., setting up the paper submission process). We hope that by early summer we will have enough information to make an appropriate and informed decision. We will try very hard to serve the membership in the safest and most productive way that we can, while protecting as best we can SEAC's financial status. We will be in touch via email and social media as is necessary and as we have more information.

In the meantime, however, it's important that we keep SEAC fiscally sound for the future. **If you have not yet done so, please submit your 2020 membership dues**, so that when conditions improve SEAC can continue the work of supporting archaeological research, teaching and learning, and public engagement that we all consider important. You can submit dues online at: <https://www.southeasternarchaeology.org/membership/membership-options/>. If you prefer, you can submit dues via regular mail by printing out the Mail-In PDF in the right-hand column of that web page, and submitting with a check. If you choose to use the Mail-In PDF, please send to the Treasurer at his home address because his university snail mail system is currently closed. The correct address is shown below.

The Board will communicate further via email, social media, and the SEAC website as we have new information. In the meantime, I hope that all of you and your families, colleagues, and friends remain safe and healthy.

Janet E. Levy  
Charlotte, NC  
SEAC President

## Dating the Wilmore Cache

by Joe Herbert (Fort Bragg Cultural Resources Mgmt Program)

From the perspective of a Piedmont hunter during the Middle to Late Archaic periods (4,000-2,000 BC), the Sandhills might seem a risky place to venture. Replacing broken or exhausted spear points, knives, and scrapers was routine on long hunting trips or when one's family was on the move; but in the Sandhills and on the Coastal Plain, where no high quality stone could be found, other tactics were needed to minimize the risk of running short of critical stone for retooling. In contrast, a Piedmont hunter might judge the Coastal Plain a rewarding place to venture if one carried an extra stored toolstone for use or trade. When a strategically thinking hunter carried a quantity of raw stone blanks or partially finished bifacial tools into the Sandhills, he or she often cached the hoard by burying it. Finding caches of preformed bifaces is not uncommon in the Sandhills (for an excellent summary of archaeological caches and caching behavior, see Patch 2016), but being able to date a cache is rather remarkable. This article describes how a cache of high-quality stone flake blanks found on Fort Bragg was dated, and why this is important.

In the fall of 2011, forester Jim Wilmore contacted the Fort Bragg Cultural Resources Management Program with information about an interesting find. While blading a fire-break road, Mr. Wilmore's motor grader exposed a small concentration of stone that proved to be a cache of flake blanks. When investigated by Fort Bragg archaeologists, the cache was found to consist of 159 flake blanks (weighing about 30 lbs), all made from the same metasedimentary stone procured from the Carolina Slate Belt. Recent results of Optically Stimulated Luminescence (OSL) dating places the age of the Wilmore Cache in the Middle to Late Archaic periods, and this article explains why, although it is valuable to fix the age of the cache in prehistory, this date's real significance is in documenting how OSL dating may be used to estimate the age of any stone tool, given appropriate recovery contexts and proper methods.

The lithology, petrography, and geochemistry of stone tools found on Sandhills sites has long been understood to document a pattern of direct procurement or exchange from quarry sources in the Carolina Slate Belt. Many Slate Belt quarries have been demonstrated as sources of toolstone for highly mobile hunter-gatherers (e.g., Daniel and Butler 1996; Daniel 1998). Geochemical studies have linked Late Archaic Savannah River points from Fort Bragg with quarry sites as far as 50 miles away (Steponaitis et al. 2006). GIS models have predicted likely locations of overland trails on drainage-divides connecting Slate Belt quarry locations with the fertile hunting and fishing grounds of the Coastal Plain (Moore and Irwin 2013). And it is indisputable that such a network of upland trails strongly influenced prehistoric mobility, social structure, and demographics by facilitating group migration, logistical procurement, trade, and seasonal aggregation among hunter-gatherer bands inhabiting the Piedmont and the South Atlantic Slope.

What is most important about dating the Wilmore Cache, however, is the implication that the age of any artifact may be estimated with OSL so long as conditions are right. OSL is a type of dating that relies on the fact that radio isotopic energy regularly accumulates in grains of quartz sand in the soil and is released when the grain is exposed to



*This flake with adhering sediment is similar to the one from which the OSL sample was taken.*



*The assemblage of 150 blanks in drying trays. Only 6 exhibited bifacial retouch, and this was minimal.*

sunlight. Energy is captured in quartz as it is exposed to radiation in the soil. As long as quartz is exposed to radiation, it continues to capture or trap energy, with the amount it traps growing in proportion to the amount of radiation to which it is exposed (dose rate or  $D_r$ ) and the length of time it is exposed (estimated dose or  $D_e$ ). Each time a grain of quartz sand is exposed to sunlight, however, the trapped energy charge escapes; the grain is “bleached” and, thereafter, begins anew the process of slow accumulation. When exposed to light under laboratory conditions, the energy charge that is released may be precisely measured as light emission (luminescence) and, in general, the greater the measured emission, the longer the period of time since the last exposure to sunlight. Results from the Wilmore Cache indicate that the technique is useful not just for dating sediments in soil columns but also single-episode events like features, or cache pits.



**The cache location was within a firebreak road where it was exposed by a motor grader. The string placed at ground level shows the depth (10 inches) below the surface.**

In the case of the Wilmore Cache, flake blanks were buried in a tight package, indicating that they were interred in a single event and not subsequently disturbed. The cache was sited slightly downslope of a small seepage spring and, when the flakes were excavated, they were moist and very minimally oxidized. Sand adhering to the underside of one large flake near the bottom of the pit provided the quartz grains for dating. When excavated, this flake was wrapped in tin foil and not unwrapped until the adhering sand grains were removed in successive layers in a photographic dark room with safety lights. Four sediment samples were submitted for OSL dating, each sample corresponding to a successively removed layer of adhering sand. The sample from the outermost layer provided no luminescence signal, indicating that it had been bleached when the cache was excavated. The other three samples provided good signals with preliminary results indicating ages from 4,000 to 2,000 BC. It is assumed that a cache hole was dug, the package of flake blanks placed in the hole, and the excavated soil used to backfill the pit. The sandy soil used to backfill the pit must have lain on the surface, exposed to sunlight long enough to bleach the quartz grains.




**After excavation, the string placed at ground level shows the maximum depth of the cache (23 inches) below the surface.**

Thanks to the sharp eyes and keen interest of forester Wilmore who brought this cache to the attention of the team of archaeologists in the Cultural Resources Management Program at Fort Bragg, this unique archaeological site, no bigger than a UNC basketball net, has provided a great deal of information. For more information, please contact the author at: [joseph.m.herbert8.ctr@mail.mil](mailto:joseph.m.herbert8.ctr@mail.mil).

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## *Upcoming Annual Meetings*

**Southeastern Conference  
on Historic Sites Archaeology  
Cayce, SC  
August 7-8, 2020**

**Southeastern Archaeology Conference  
Durham, NC  
October 28-31, 2020**

**NCAS Merchandise** - Need new work clothes as you prepare your Victory Garden? Maybe a new NCAS hat to protect you from that summer sun? Visit our website at: <http://www.rla.unc.edu/ncas/Merchandise/index.html>.

### **NCAS Officers**

**President:** Shane C. Petersen (scpetersen@ncdot.gov)  
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**Executive Board Members:** Catie Bailey, Danny Bell, Nicholas Henderson, John Krizmanich, Angela McArdle, and Celeste Purvis

### **NCAS Newsletter Publication Schedule**

All NCAS members should submit articles and news items to Paul J. Mohler (pjmohler@ncdot.gov) for inclusion in the Newsletter. Please use the following cut-off dates as guides for your submissions:

|                                  |                                |
|----------------------------------|--------------------------------|
| <b>Winter Issue – January 31</b> | <b>Summer Issue – July 31</b>  |
| <b>Spring Issue – April 30</b>   | <b>Fall Issue – October 31</b> |

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