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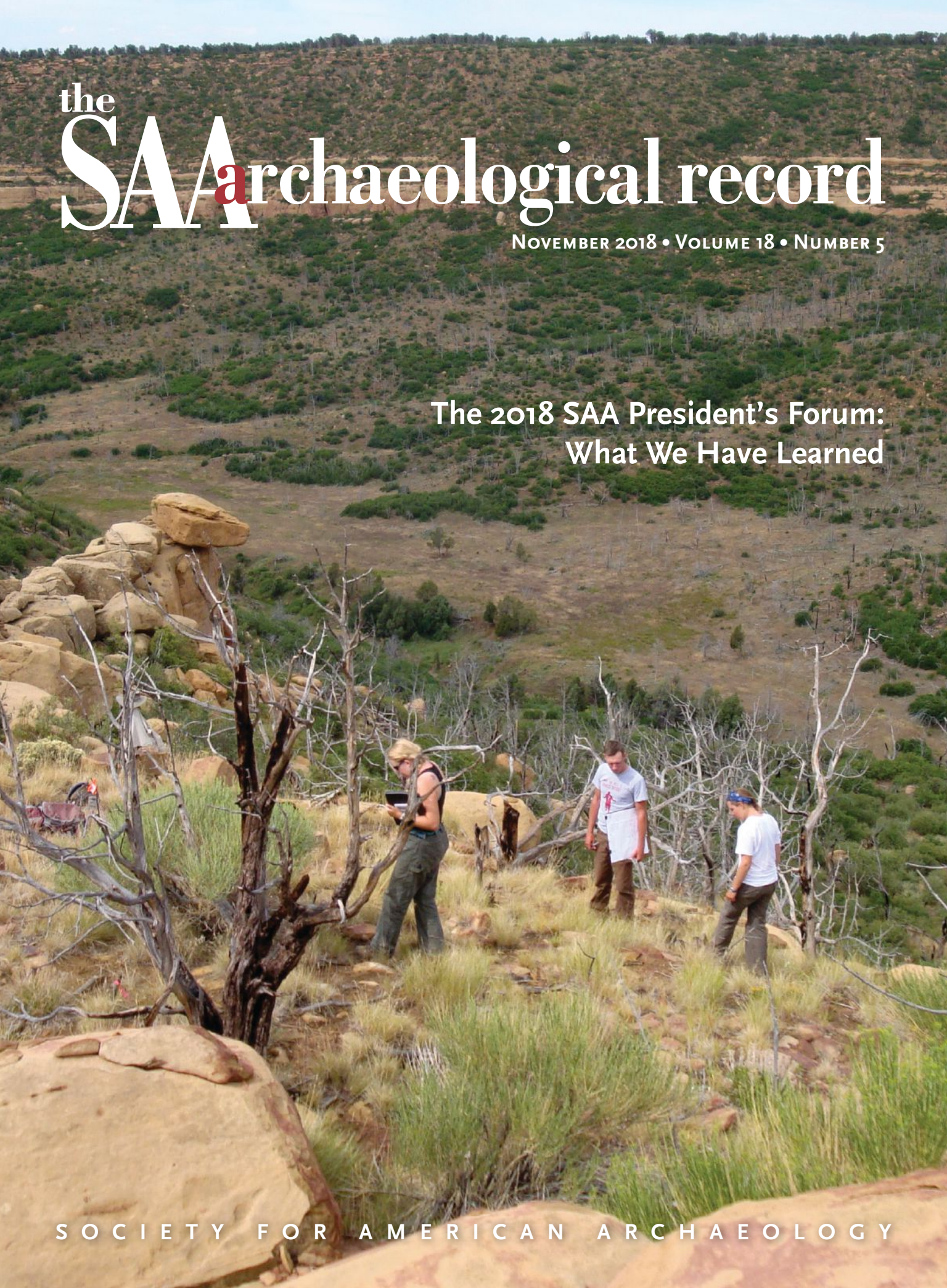
# The 2018 SAA President's Forum: What We Have Learned



SOCIETY FOR AMERICAN ARCHAEOLOGY

# Generationally-Linked Archaeology


## By Dale R. Croes, Ed Carriere, and Darby C. Stapp

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On the inner Salish Sea of the Northwest Coast of North America, basketry artifacts have been recovered in low-oxygen waterlogged/wet sites dating back to the Charles (4,500 BP), Locarno Beach (3,000 BP), Marpole (2,000 BP), and Late Phases (1,000 BP+). Two of the authors have worked with this ancient basketry from opposite directions: one using statistics to link basketry techniques and types from deep time upward, and the other as a Coast Salish Master Basketmaker to experimentally replicate these techniques going backward in time, with both coming together scientifically and culturally from different directions. Their research traces the evolution of traditional and ancient basketmaking by applying scientific techniques and cultural transmission observations from thousands of years ago to contemporary times and vice versa.

The research involved the efforts of a wet archaeological site specialist (Dale Croes) and a Master Basketmaker and Elder from the Suquamish Tribe (Ed Carriere), who joined together to replicate and scientifically analyze the 2,000-year-old basketry collection from the Biderbost wet site, Snoqualmie Tribal Territory, housed at the University of Washington (UW) Burke Museum Archaeology Program (Figure 1). Working on this analysis and replication project over the past four years, we concluded that it was not enough to call this a case of *Experimental Archaeology*; we describe our work as a new approach termed *Generationally-Linked Archaeology*, an approach that chronologically connects from both directions, linking contemporary cultural specialists with ancient and ancestral basketmakers through the science of archaeology. We present our approach here after publically presenting our efforts to both indigenous and scientific archaeological audiences, including Native peoples at the Northwest Native American Basketweavers Association, Indigenous Ainu of northern Japan, and at a National Maori Weavers conference in New Zealand, and to archaeological scientists at two annual SAA conferences, the Wetland Archaeological Research Project (WARP) 30th Anniversary Conference in Bradford, England, and a Wetland Archaeology Conference in central France.

*Figure 1. Ed Carriere and Dale Croes in front of replicated Biderbost and other baskets that they made and now use to explain a new approach that involves both ongoing cultural transmission and archaeological analysis: Generationally-Linked Archaeology. Photo courtesy of authors.*

*Figure 2. Examples of the two types of 2,000-year-old Biderbost basket pack basket fragments from the site (above) and replicas of the two Biderbost type pack baskets: Dale's BI-B1 type checker plaited example (below, left); and Ed's BI-B2 type large fine open-twined example (below, right). Photo courtesy of authors.*

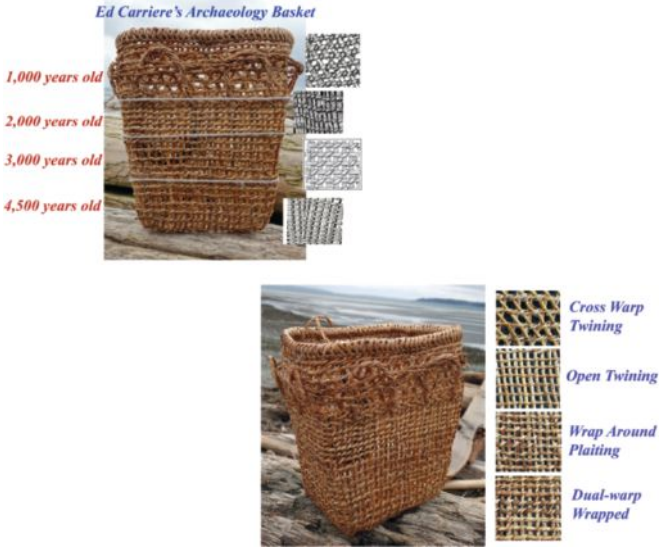


*Figure 3. Ed Carriere's Archaeology Basket with the main pack basket weaves used by his ancestors over a 4,500-year-period. In Northwest Coast archaeological phase sequence, this basket "layering" represents the Charles (4,500 BP), Locarno Beach (3,000 BP), Marpole (2,000 BP), and Late (1,000 BP) Phases. Photo courtesy of authors.*

To share the new concept of *Generationally-Linked Archaeology* with the readers of *The SAA Archaeological Record* for feedback, the authors discuss its conceptualization below:

## Development of the Scientist/Tribal Elder Collaboration

**Dale Croes:** In late 2014, I came up with the idea to take another look at the 2,000-year-old wet site Biderbost basketry collection housed at the UW Burke Museum, which I had first examined in 1973 for my PhD dissertation (Croes 1977). As I was thinking about Biderbost, a site just east of Seattle and currently owned by The Archaeology Conservancy, I thought back on my decade of work with Suquamish Elder (age 84) and Master Basketmaker, Ed Carriere, and wondered if he would be interested in attempting to replicate these ancient Salish baskets—a form of *Experimental Archaeology* (Figure 1). I called him with the suggestion, which he welcomed with open arms. Our effort represents a bringing together of our personal work into a united front that truly opened the doors to both cultural and scientific explorations that neither of us ever imagined. To Ed, this was working like his ancestors had 100 generations back. For me, as a wet site archaeologist, I realized this would provide an actual example of how my 40 years of statistical testing of ancient Salish Sea basketry from 3,000 years ago to 400 years ago might link to the present and its cultural transmission to Master Basketmaker Ed Carriere. Ed learned old style cedar limb and root basketry through his great-grandmother, Julia Jacobs, who raised him from infancy, and her parents Chief Wa-hal-chu and Wes-i-dult, and their ancestors they learned from. Chief Wa-hal-chu took over Suquamish leadership after the passing of Chief Seattle/Sealth.

Over the past four years, Ed and I, guided by Ed, successfully replicated the two major types of 2,000-year-old Biderbost cedar root pack baskets, using cellular ID to identify the almost exclusive use of ancient split cedar roots; Ed made four large open-twined pack baskets and four small open-twined baskets, and I made two checker-plaited pack baskets and one miniature example (Figure 2).

After mastering replicating these ancient Biderbost examples, we visited even earlier wet site basketry collections at the University of British Columbia (UBC) Museum of Anthropology, dating from 3,000 and 4,500 years ago and recovered from Fraser River Delta wet sites. Ed needed to make slight shifts in weave to master and make samples of the 3,000- and 4,500-year-old pack basket weaves. After mastering these earlier techniques, Ed began working on what he called an "ar-

chaeology" basket, which was composed of five to six sequential rows, or "layers," of the techniques from the four different time periods (Figure 3). By including each technique in one basket, he could potentially show the evolution of techniques used to make pack baskets by his Salish ancestors for over 4,500 years (that is, over 200 generations of his "grandparents," in one basket; Figure 3; Carriere and Croes 2018:210–218).

From my archaeological and deep-time perspective and my ongoing average linkage cluster analyses statistical tests, I set up hypotheses proposing style continuity in three different regions of the Pacific Northwest, and particularly tight continuity in the inside Salish Sea region where Ed lives. I essentially tested these hypotheses with new wet site work and additional ancient basketry data about every 20 years (in 1977, 1995, and 2013); the ongoing results have increasingly strengthened these proposed regional continuity models and hypotheses (Carriere and Croes 2018:117–123, 133–136; Croes 1977, 1995, 2010:215, 2013, 2015). A different statistical approach, cladistic analysis was conducted with my explicitly defined basketry attribute and types data to see if these tests compliment the earlier degrees of similarity statistical results; these tests fully correlated with the earlier ones, further supporting the three region continuity hypotheses proposed (Carriere and Croes 2018:133–136; Croes 2013; Croes et al. 2005; see one cladistics test result, Figure 4). These testable scientific results have shown a direct linkage from at least these 3,000-year-old collections to 2,000- and 1,000-year-old collections and ultimately with Ed Carriere's Coast Salish cultural training in the inside Salish Sea (Figure 4).

**Ed Carriere:** I must say that the answer to why I am doing this project is to learn from my ancestors and in the process reconnect with them through the millennium. This project would not be possible if archaeologists had not recovered these perishables from the Salish Sea wet sites, especially baskets and other important wood and fiber artifacts from my deep past. Having these artifacts to hold and study has opened the door to deep-rooted cultural transmission, teachings through the generations, and showing how many of our Coast Salish Traditions have continued to the present. By taking what we have learned and sharing it with our community, these traditions will continue into our future, providing cultural wealth to all traditions in our Salish Sea territory. If we all do our work, both archaeologically and culturally, we show how our cultural transmission is strong in all directions—past, present, and future. Statistically ancient basketry provides a direct link to our ancestors for up to 4,500 years—which provides a deep-rooted, tangible, and direct cultural connection to our ancestors.

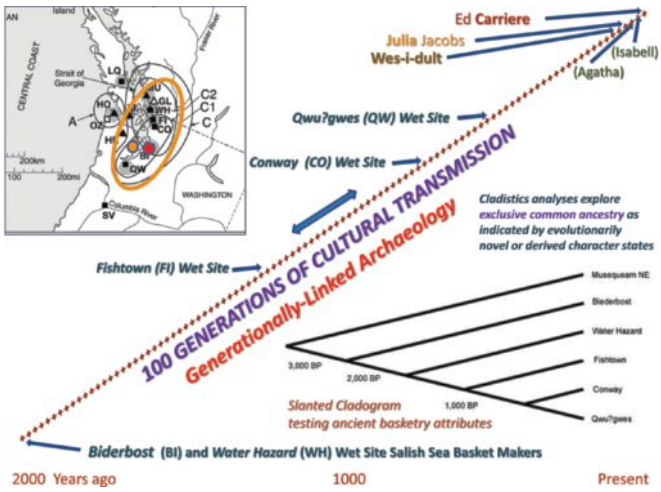


*Figure 4. Chart illustrating Generationally-Linked Archaeology, where + signs represent the generations from Ed back through his teacher and great-grandmother Julia Jacobs (his mother Isabell and grandmother Agatha showed no interest in basketry); Julia's mom, Wes-i-dult; and with other generations before her and statistically back through data from wet sites in the inner Salish Sea, eventually leading to the Biderbost and Water Hazard 2,000-year-old archaeological wet sites evidence. Ed works from the present back through these 100+ generations. Dale works from the deep past upward with wet site basketry data, statistically showing stylistic continuity through 3,000 years of generations, as shown by the results of his slanted cladogram using cladistics tests (below right) and his generated map of regional basketry areas (above left). The red dot is Biderbost (BI) and the orange dot is where Ed lives today in the inside Salish Sea—his traditional territory. Figure created by Dale R. Croes.*

## Emergence of the *Generationally-Linked Archaeology* Concept

**Darby Stapp:** The UBC experience really crystallized Ed and Dale's belief that this cultural artisan/scientific archaeology collaboration was important. Their approach was something different, more than *Experimental Archaeology*, more than *Ethnoarchaeology*. Moreover, it was something that needed to be shared; shared with both the anthropological and archaeological community, and Native communities of the Northwest.

**Dale Croes:** As a scientist, I began pondering what kind of archaeological approach this actually represented in our field; nothing exactly fit. From the beginning I called our work *Experimental Archaeology*. Experimentation is a method that clearly sits within the realm of science—probably more in the scientific approach area of verification with experiments.

I have frequently conducted experimental archaeology in my wet site archaeological work (Croes 1995).

However, we should ponder what exactly *Experimental Archaeology* means. Dr. John Coles, a major international leader in wet site/wetland archaeology from England, and my long-time mentor, published the first books on this kind of archaeology: *Archaeology by Experiment* (1973) and *Experimental Archaeology* (1979). John stated that the aim of *Experimental Archaeology* is to "reproduce former conditions and circumstances" (1979:1). In a sense, especially with Ed's stitch-by-stitch recording of his replication work, he is reproducing the former conditions both he and the original basketmaker experienced in making these baskets (Carriere and Croes 2018:199–206). Ed and the 2,000-year-old basketmaker are certainly in different circumstances; however, there has to be a link through those 2,000 years in cultural transmission of ideas involved in making these two pack basket types, from gathering and processing the cedar roots, through construction; and some uses they both may have seen as the outcome—though the uses are completely different—one for everyday cultural life and one for current scientific and cultural research.

Another archaeological approach that has some relevance here is *Ethnoarchaeology*, often considered a blending of cultural anthropology and archaeology; however, I do not believe it exactly fits either. Ethnoarchaeology is considered "a research technique that involves using information from living cultures—in the form of ethnology, ethnography, ethnohistory and experimental archaeology—to understand patterns found at an archaeological site" (Hirst 2017). Although Ed does provide abundant ethnographic and experimental data, we seem to be doing more than making analogies about his current culture to better explain and understand the Biderbost basketry and ancient site.

A third approach promoted in the 1920s/1930s in the United States, called the *Direct Historical Approach*, has some similarity to our approach; at that time archaeologists argued that knowledge relating to historical periods could be extended back into earlier times, and reflected in archaeological sites from the recent past back. We are certainly doing this from Ed's knowledge; however, unlike the direct historical approach, we are also coming from the other direction, with statistical links from the deep past, using ancient basketry data, through time to the traditional cultural training Ed has from his past generations (Figure 4).

After pondering our actual scientific approach here, I decided we needed a new concept and definition to make a better fit, calling this *Generationally-Linked Archaeology*: linking the current cultural artisans back through the generations and with the archaeological evidence through a process of cultural/ideational transmission. In our case the cultural artisan is Ed Carriere, who strove to work back through generations of training following the guidance of his great-grandmother Julia Jacobs, who learned through past generations of her parents, Wes-i-dult and Chief Wa-hal-chu, and those who taught them (Figure 4). The Northwest Coast of North America wet site evidence we have so far recovered, representing a solid 3,000 years in the inner Salish Sea, statistically links from 3,000-year-old basketry, through 2,000-year-old examples (for one, Biderbost), and then through 1,000- to 400-year-old sites and styles that link in tradition to Ed's generational teachers and styles (Figure 4; Carriere and Croes 2018:117–123, 133–136; Croes 2015).

I believe *Generationally-Linked Archaeology* best represents our scientific, and for that matter, cultural approach to understanding ancient basketry collections and for facilitating the transmission of traditional basketry to current and future generations. I believe this kind of approach can be applied elsewhere, and to other types of archaeological artifacts and features; however, it requires that archaeologists recover and share the archaeological evidence found with potentially generationally-linked cultural descendants. Nonperishable artifacts with similar potential that come to mind include pottery in many sites around the world and outside the Northwest Coast (for example Southwest mesa-top Master Potters and the archaeological examples of their ancient traditions), as well as stone, bone, and wooden spindle whorl art in our Pacific Northwest region for over a millennium (see Croes 2014).

To be clear, it is the archaeologist's professional obligation to both recover and share this ancient material culture so that current cultural artisans have the opportunity to demonstrate that this transmitted cultural knowledge exists and can be linked and reconstructed from the deep past in their traditional territories when evidence of cultural transmission and style continuity is scientifically demonstrated. In a sense, one of archaeology's best scientific virtues is revealing how shared ideas, i.e., culture has been transmitted through vast periods of time using databases of artifacts from archaeological sites.

### The Benefits of *Generationally-Linked Archaeology* to Descendant Communities

**Ed Carriere:** From my personal and cultural perspective, I had throughout my life strove to generationally link back to the old traditions of basketry, especially through my Kia'h Julia, and baskets she got from her parents, Chief Wa-hal-chu and Wes-i-dult, which I had proudly inherited. Of course I worked with other Master Basketmakers in my Salish cultural communities and elsewhere (a good place, for this is the annual Northwest Native American Basketweavers Association [NNABA] where

up to 1,000 mostly Native weavers meet), and I never hesitated and often ask to visit old basketry collections in museums. However, I never dreamed I would be able to generationally link back and learn from 100+ generations of my ancestors through the wet site archaeology evidence in our region, and thank all archaeologists who have contributed to the recovery of this rich cultural heritage in the Salish Sea and beyond. When Dale asked me to help with the 2,000-year-old Biderbost collection, I definitely was excited to try and take on this complicated challenge, and really did not know what to expect. I always strove to work through my ancestors' work, but the possibility of extending this back 100+ generations never crossed my mind. Fortunately the archaeologists from the Washington Archaeological Society (WAS) took on the task of rescuing and preserving these ancient baskets that were washing out of the banks of the Snoqualmie River in the late 1950s and early 1960s, or we would not have these available for attempting this linkage. Also it took an archaeologist specializing in ancient basketry from these wet sites, Dale Croes, to recognize that I might be an artisan from my Salish cultural community that could connect to these 100+ generations of ancestors through my teachers and life's work in Coast Salish styles of basketry. Now I can share what I have learned with others and keep the ancient traditions alive.

## Defining the Concept

**Darby Stapp:** As this study came together, we confronted one final challenge—defining the concept of *Generationally-Linked Archaeology*. If we wanted our archaeological colleagues to join us in the pursuit of a method and theory of this concept, we needed to lay out the core components and a process from which others could apply the concept in their worlds. We came up with the following:

- Identify a material culture/artifact class that can be tied historically, ethnographically, or contemporarily to a group.
- Consult with the contemporary descendant community to determine their interest in a collaboration and their parameters/requirements.
- Develop a collaborative program among the archaeologists with knowledge about the material culture/artifact class and the cultural specialist(s) to advance connections and knowledge.
- Share the knowledge gained with the descendant community for its use and cultural perpetuation benefit, certainly a central goal of this current work. Where appropriate, information and knowledge using this archaeological method and theory should be shared with the archaeological discipline through presentations at conferences and scholarly publications.

Our experiences have shown that, at least in the Pacific Northwest, the time is right for *Generationally-Linked Archaeology*. Tribal communities are working hard to strengthen their communities, and many cultural perpetuation efforts are underway across the region (e.g., the annual coast-wide Canoe Journeys). *Generationally-Linked Archaeology,* using statistical tests to present hypotheses of regional cultural continuity, provides one way in which the archaeological record can assist with these efforts. As we gain more experience applying this concept in communities across the world, the advances in method and theory will allow it to reach its full potential.

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