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InterpNEWS

The International Heritage Interpretation e-Magazine.



A John Veverka & Associates Publication.

Spider in Amber – Lithuania Amber Museum



The international heritage interpretation e-magazine.



July/Aug issue.

Hi Folks. Welcome to our largest issue of InterpNEWS with over 100 pages of great articles, news releases and advertisements. IN reaches over 300K in 60 countries to help you share your ideas, exhibits, research or other interpretive innovation with heritage interpreters all over the world. A big thank you to our regional editors. If you would like to be one of our regional editors send me an e-mail and we can chat about it. With this issue done, I am now looking for articles for our July/August issue with a due date of the 15th May. Hope to hear



from you future authors.

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InterpNEWS is published six times a year as a FREE John Veverka & Associates publication and published as a service to the interpretive profession. If you would like to be added to our mailing list just send an e-mail to jvainterp@aol.com and we'll add you to our growing mailing list. Contributions of articles are welcomed. It you would like to have an article published in InterpNEWS let me know what you have in mind. **Cover photo: Amber from the Amber Museum.**

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Meet Our Regional Editors

Regional Editors are professional interpreters with a mission to help advance the interpretive profession and make connections with other interpreters, agencies and organizations to encourage folks to share knowledge and ideas about heritage interpretation. They may represent InterpNEWS at conferences or other interpretive gatherings to help generate articles about new technologies, approaches, exhibits or other innovative advancements in interpretation. Want to be one of our Regional Editors? Let's chat. jvainterp@aol.com.



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Rod Burns - CPHI - (Certified Professional Heritage Interpreter - **Canada**). Rods long career in interpretation includes being the Education Supervisor, Salmonier Nature Park, Newfoundland, Canada, and currently being the owner of Bold Point Centre EcoTourism Training and Services. He also has 22 years of experience as co-owner /operator of Bold Point Farmstay, www.farmstay-ca.com. He will be working to generate articles on innovative interpretation for IN from Canada. He can be contacted at: bpc@connected.bc.ca



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Stephen W. Madewell has an extensive back ground with outdoor education and recreation. **He has served as Executive Director for three Ohio park districts: Metroparks of the Toledo Area, Lake Metroparks and Geauga Park District.** He has managed design and development for several environmental education and interpretive visitor centers, web based communication systems as well as way-finding and interpretive sign systems. Mr. Madewell's involvement with conservation-based initiatives has included policy development, operations, natural resource stewardship, land acquisition, grant development and advocacy. He has written and recorded two conservation-themed musical CD's: *Arrow Creek* and *Rivers and Trails*. steve@madewellmusic.com madewellmusic.com



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Rocio Carvajal is the editor of SABOR! This is a Mexican food magazine and producer of Pass the Chipotle Podcast. She has a degree in Communication, an MA in International Aid and studies in cultural management and medieval history. Rocio is passionate about the culture gastronomic heritage and traditions of Mexico which she explores through her projects.

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Sydney Johnson is the Curator of Exhibits at the Missouri State Museum and a scholar of Black woman's social activism in the early 20th century. As a historian, she is interested in both the theory and praxis of community ownership as a means towards inclusive cultural spaces and transformative experiences.

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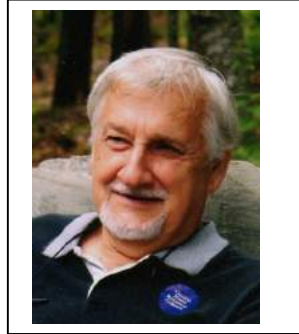
Nicole Hoffmann is currently the Museum Officer at the University of Pretoria Museums in the Department of UP Arts at the University of Pretoria. She completed her Bachelor degree in Heritage and Cultural Tourism in 2008, her Honours in 2009 (both *cum laude*) and was conferred a Master's degree *cum laude* (MHCS Heritage and Cultural Tourism) in 2015. She has also served from 2014 to 2016 as a part-time lecturer in the Department of Anthropology and Archaeology and in 2016 in the Department of Historical and Heritage Studies at the University of Pretoria. She is presently enrolled at the University of South Africa (UNISA) for a BA Honours degree in Archaeology in order to broaden her heritage knowledgebase. Following from her MA thesis title, "*On-Location Film-Induced Tourism: Success and Sustainability*", she has also published on the subject of heritage and tourism and presented a conference paper in 2016 at the 1st Tourism Educators South Africa (TESA) International Conference in Cape Town. Nicole is an accredited Gauteng tourist guide (cultural guide) at national level and speaks and writes multiple languages fluently, including Afrikaans, English and German.

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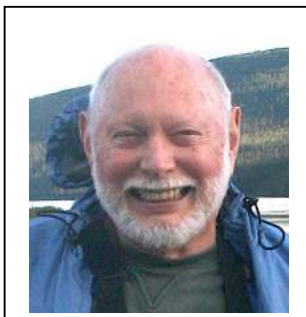
J. Patrick Barry spent 35 years as an interpreter with the NPS and US Army Corps of Engineers. For 27 years he supervised the Bonneville Lock and Dam Visitor Center on the Columbia River. He was the lead interpretive trainer for the Corps for 14 years. Pat is now the owner of **J. Patrick Barry Interpretive Training and Retired Ranger and Associates LLC**. He serves on the Board of Directors as Communications Chair for the Corps Foundation. He served as Regional Director, Pacific Northwest Region 10, National Association for Interpretation 2016 -2017, member since 1988, and Certified Interpretive Trainer since 2002. He is the author of the newly published book: *Bonneville Lock and Dam: A Gift from the People of the Great Depression*. You can reach Pat at: jpatbarry@hotmail.com



Ron Kley. Ron's undergraduate and graduate training was in geology, but he has worked in museums since the 1960s, first as a curatorial/registrarial staff member and, since 1988, as an independent consultant/contractor in collection management/research/interpretation. He has worked with large governmental institutions on four continents as well as with small all-volunteer organizations from Eastern Canada to Southern Africa and Western Australia. The development of low-cost/no-cost interpretive initiatives has been one of his abiding professional interests. He welcomes the submission (to ronkley@juno.com) of papers for InterpNEWS, or informal exploration of embryonic ideas for such submissions.



Want to join our regional editor or subject specialty team – help to advance the interpretive profession and find (or write) great articles that we pass on to 300K in 60 countries? Let me know: John Veverka – jvainterp@aol.com



Ed Clifton is a geologist with strong ties to the ocean. He spent 25 years with the U.S. Geological Survey's Branch of Pacific Marine Geology, which he led from 1978-1981. Much of his research at the USGS focused on using SCUBA to explore geological processes in the coastal waters of the western U. S. As an aquanaut in the Tektite 1 Man-in-the-Sea Project in 1969, Ed spent 58 continuous days living in and working from an undersea habitat in the Caribbean, where he studied sediment/animal interaction. He continued these studies in 1970 for an additional 20 days of underwater living in the Tektite 2 habitat. After his retirement from the USGS in 1991, Ed spent another 8 years as an internal consultant to Conoco, Inc.

Ed taught numerous courses at UCSC and Stanford, where he served as Adjunct Professor before his retirement from the USGS. His nearly 200 published papers and abstracts are largely directed toward open coast, estuarine and deep-sea environments. In 2004, the Society for Sedimentary Geology awarded him the Francis J. Pettijohn Medal for "Excellence in Sedimentology". Ed volunteers at the Monterey Bay Aquarium, as a Docent at Point Lobos and at the Pacific Grove Museum of Natural History. A regular contributor on geologic subjects to InterpNEWS, he also is a yearly lecturer in the Osher Lifelong Learning Institute (OLL)I at the California State University at Monterey Bay.

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Interpreting the story of Amber at the Lithuania Amber Museum.

John Veverka
 Certified Interpretive Planner/Trainer
 IN Editor



In November last year I was invited to Klaipeda State University in Lithuania to provide training in interpretation and heritage tourism (and guide training) at the University. During my free time I had the chance to wander the historic city center and noticed all the major shops selling amber jewelry. I really didn't know much about amber so asked my hosts about it. In true interpretive form they took me to the Lithuania Amber Museum, house in a historic home (photo above left).

If you remember the start of Jurassic Park, they found a piece of amber with a mosquito in it that led them to create dinosaurs. The museum had lots of amber with insects, spiders and everything imaginable encased in the golden orbs. Of course the museum had a huge gift shop so I brought home "Baltic Amber" with me. I thought I would share with you what I learned about amber. Interpreters never quit learning and discovering. So here is your lesson on Amber and some of the pieces with insects in them.



Amber is fossilized tree resin, which has been appreciated for its color and natural beauty since Neolithic times. Much valued from antiquity to the present as a gemstone, amber is made into a variety of decorative objects. Amber is used in jewelry. It has also been used as a healing agent in folk medicine. The origins of Baltic amber are associated with the Lithuanian legend about Juratė, the queen of the sea, who fell in love with Kastytis, a fisherman. According to one of the versions, her jealous father punished his daughter by destroying her amber palace and changing her into sea foam. The pieces of the Juratė's palace can still be found on the Baltic shore.

The abnormal development of resin in living trees (*succinosis*) can result in the formation of amber. Impurities are quite often present, especially when the resin dropped onto the ground, so the material may be useless except for varnish-making. Such impure amber is called *firniss*.

Such inclusion of other substances can cause amber to have an unexpected color. Pyrites may give a bluish color. *Bony amber* owes its cloudy opacity to numerous tiny bubbles inside the resin. However, so-called *black amber* is really only a kind of jet.

In darkly clouded and even opaque amber, inclusions can be imaged using high-energy, high-contrast, high-resolution X-rays.

Amber is globally distributed, mainly in rocks of Cretaceous age or younger. Historically, the Samland coast west of Königsberg in Prussia was the world's leading source of amber. The first mentions of amber deposits here date back to the 12th century. About 90% of the world's extractable amber is still located in that area, which became the Kaliningrad Oblast of Russia in 1946.

Pieces of amber torn from the seafloor are cast up by the waves, and collected by hand, dredging, or diving. Elsewhere, amber is mined, both in open works and underground galleries. Then nodules of *blue earth* have to be removed and an opaque crust must be cleaned off, which can be done in revolving barrels containing sand and water.

Amber occurs in a range of different colors. As well as the usual yellow-orange-brown that is associated with the color "amber", amber itself can range from a whitish color through a pale lemon yellow, to brown and almost black. Other uncommon colors include red amber (sometimes known as "cherry amber"), green amber, and even blue amber, which is rare and highly sought after.

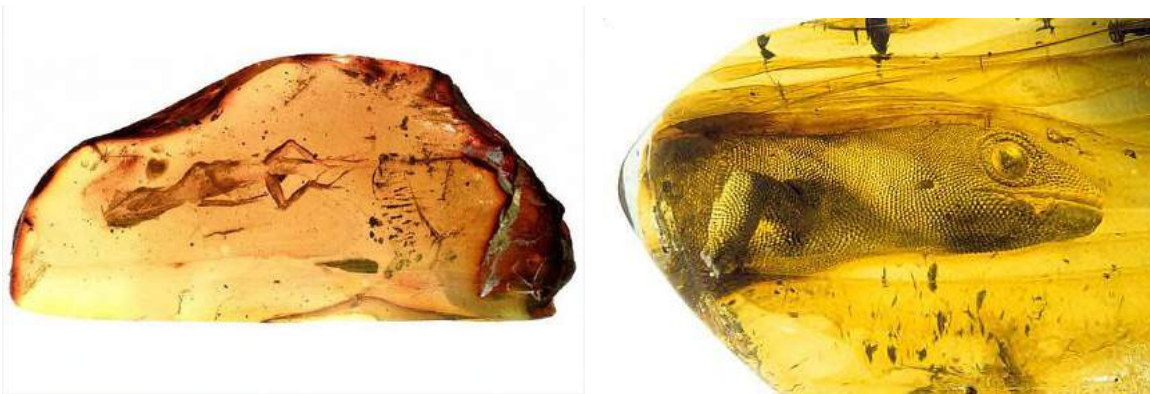
Yellow amber is a hard, translucent, yellow, orange, or brown fossil resin from evergreen trees. Known to the Iranians by the Pahlavi compound word kah-ruba (from kah "straw" plus rubay "attract, snatch," referring to its electrical properties), which entered Arabic as kahraba' or kahraba (which later became the Arabic word for electricity, كهرباء *kahrabā'*), it too was called amber in Europe (Old French and Middle English ambre). Found along the southern shore of the Baltic Sea, yellow amber reached the Middle East and western Europe via trade. Its coastal acquisition may have been one reason yellow amber came to be designated by the same term as ambergris. Moreover, like ambergris, the resin could be burned as an incense. The resin's most popular use was, however, for ornamentation—easily cut and polished, it could be transformed into beautiful jewelry. Much of the most highly prized amber is transparent, in contrast to the very common cloudy amber and opaque amber. Opaque amber contains numerous minute bubbles. This kind of amber is known as "bony amber".

Although all Dominican amber is fluorescent, the rarest Dominican amber is blue amber. It turns blue in natural sunlight and any other partially or wholly ultraviolet light source. In long-wave UV light it has a very strong reflection, almost white. Only about 100 kg (220 lb) is found per year, which makes it valuable and expensive.

Sometimes amber retains the form of drops and stalactites, just as it exuded from the ducts and receptacles of the injured trees. It is thought that, in addition to exuding onto the surface of the tree, amber resin also originally flowed into hollow cavities or cracks within trees, thereby leading to the development of large lumps of amber of irregular form.

Amber is a unique preservational mode, preserving otherwise unfossilizable parts of organisms; as such it is helpful in the reconstruction of ecosystems as well as organisms; the chemical composition of the resin, however, is of limited utility in reconstructing the phylogenetic affinity of the resin producer.

Amber sometimes contains animals or plant matter that became caught in the resin as it was secreted. Insects, spiders and even their webs, annelids, frogs, crustaceans, bacteria and amoebae, marine microfossils, wood, flowers and fruit, hair, feathers and other small organisms have been recovered in Cretaceous ambers (deposited c. 130 million years ago). The oldest amber to bear fossils (mites) is from the Carnian (Triassic, 230 million years ago) of north-eastern Italy



Animal entombed in amber.

Interp Magic: Politics and Heritage Interpretation.

*Rod Burns, B.Ed. CPHI
Quadra Island, B.C., Canada*



I currently subscribe to 3 Heritage Interpretation association news feeds. Over the years, there seems to be a consistent soft, gentle tone in the articles covering the many aspects of natural and or cultural history.

A year ago, upon renewing my lapsed membership, to one association, I inquired about any political actions, in which they might have been or are involved. The regional representative could not refer me to a single issue. Pressing the obvious point “why not” he responded simply: There are so few government jobs out there now, we DO NOT dare upset the government and the holders of the budget purse strings. Talking with others, the Keep Quiet mantra, seems to be the consensus!

I am quite familiar with the politics of government budgets and not ruffling any waters. I have 13 years of being a classroom Teacher and government hired Heritage Interpreter. I now have double the years as a self-employed Heritage Interpreter, working in the Agriculture and EcoTourism sectors. In private business, there are challenges to earning a paycheck, including where one stands politically.

Away from the job site, can a Heritage Interpreter keep politics out of their personal life? Or, is there something in our make-up, our personalities to get Political Do our hearts beat stronger when we Relate, Reveal, then Provoke?

When a developer proposes to tear down a heritage building; to channelize a fish-bearing stream, or to drain an endangered wetland for luxury condominiums, does the private, at home Political You rush to action stations? Do you send your cartoons to local, regional news outlets and social media? Some HI's are songwriters and theatre performers in their private lives.

InterpNEWS

Away from the office, are you sitting on one or more boards, councils or associations? Are you there because somewhere deep within you, is a drive, a need to contribute, to give back to the community? It is normal for you to do extensive research on issues. When called upon, you can argue, discuss, offer counter perspectives, because you are the critical thinker who has done the research! You make it a point to be fair and balanced! You peel back the layers of fake news!

It is your specific plus broad knowledge of different issues and their histories, which gives you the well-rounded factual content in a presentation at a community forum. It is your front line HI communication skills plus the use of multi-media, which adds to your confidence making presentations? Your presentations have added impact, as you know to go beyond words. Your presentations might include costumes, sound effects, and other sensory props, with the specific purpose of enhancing the clarity and sincerity of your message.

Are your interests at work, an extension of activities you would be doing with family and friends? You just do not go for a bicycle ride, hike or canoe for the afternoon or for a few days! Your trips include photographing seasonal changes, taking note of the changes in stream flows, listening, smelling, and feeling! Your computer files are jammed with your observations plus files downloaded from all manner of internet sources. You have traveled far and wide, much more than many of your neighbours. Your photo records with copious notes have been indexed and filed over many years if not decades.

At home, you fill your shelves with clippings, animal bones, rocks, music collections, much the same as when you are at work, where you rely on the historical documents and collections of others.

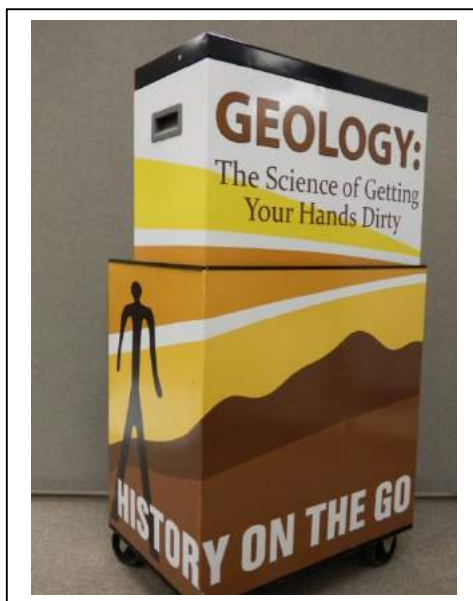
Out of uniform, your community in many ways has benefited from your articles and presentations. You have made a positive difference to social conditions and environmental conflicts.

On behalf of those of the Feather, Fur, Fin and Fungi, plus those of human cultures past, present and future -

Thank you – Political Heritage Interpreters!

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Photos: Save the Wild Salmon – get Atlantic Salmon Farms out of British Columbia waters.
Credit: Rod Burns



“Rocking Field Trips with Geology”

*Anne C. Morgan
Archivist/Head Curator
Imperial Valley Desert Museum
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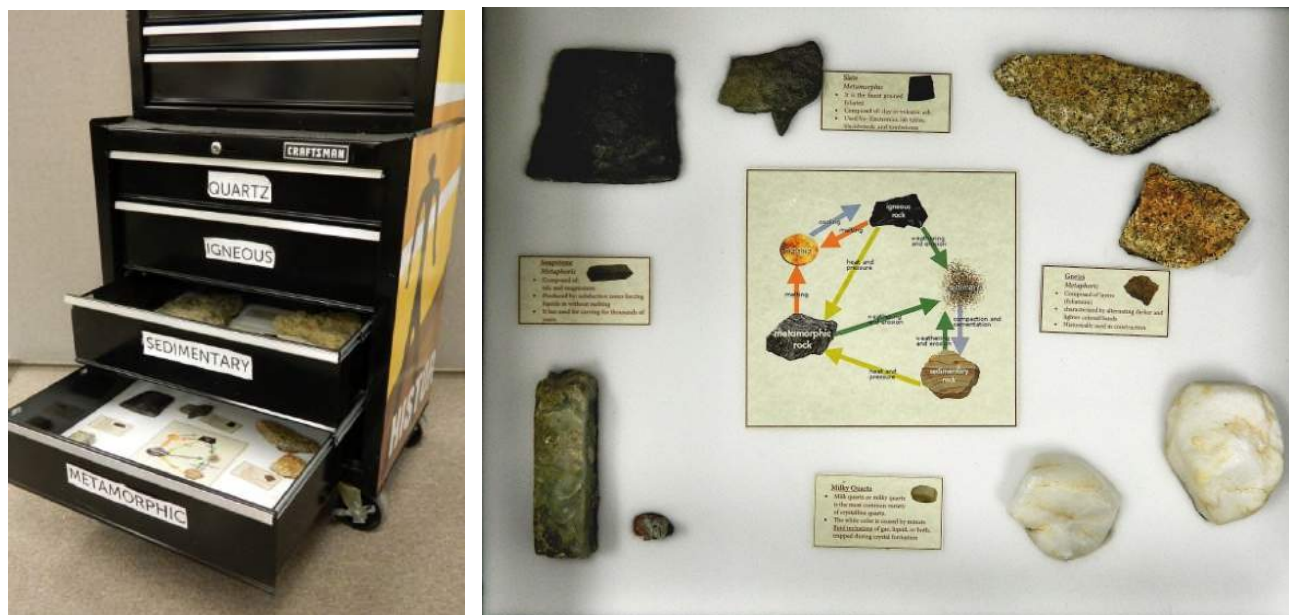
At the Imperial Valley Desert Museum (IVDM) we interpret the land, the history, and the culture of the Imperial Valley as one seamlessly integrated whole. From helping visitors appreciate the history and culture of the local Native Americans (the Kumeyaay), to encouraging them to explore the natural wonders of the desert, it is our job to make sure people leave the museum more enthusiastic about the richness of the Imperial Valley than when they arrived. This includes designing school field trips where students will both learn and enjoy themselves.

Field trips to the Museum are large, with a staff of four regularly handling 100 students at a time. In order to accommodate these numbers, students are divided into three groups and rotate through three different modules. Grade specific Common Core curriculum connect the modules to a theme that is central to the Museum’s educational mission: adaptation through observation and critical thinking is key to desert survival. Fourth graders in particular are a perfect fit for this message.

California fourth grade curriculum introduces students to geology and earth science- and the students are thrilled to get some hands-on time with rocks. What they discover during the course of their field trip is that geology is a part of every aspect of life in the desert and in their local community. We tell the kids that the “Desert is a Toolbox” and spend the entire field trip helping them discover what that means.

The Desert is a Toolbox

With this theme it only made sense to use an actual toolbox when talking about geology and how people adapted to living in the desert. We start with a small, two-drawer rolling toolbox (following page).



“Metamorphic” drawer with rock samples, info cards, and the rock cycle.

One drawer holds modern tools. We hold up each one and ask the kids what they are and where you would buy one today. All the students know “hammer”, “knife”, and “screwdriver” and “Home Depot” is usually the most popular hardware store they name. Then we open the second drawer and pull out artifacts from our education collection: an obsidian point, a hammerstone, and a stone punctate (more an awl than a screwdriver, but experimentation taught us kids don’t know what an awl is so we take a few creative liberties with tool comparison). The hammerstone gets passed around so that the kids can begin to see that some things aren’t “just rocks” but could also be the tools to successfully living in a pre-Home Depot world. There is always at least one student who asks the important question “what makes a good tool?” which leads to discussing properties of different stones and why what makes a good knife would make a terrible hammer. Every student I’ve worked with in the last five years has been familiar enough with Minecraft to instantly recognize obsidian. While they know how obsidian is formed, they are all surprised to learn that there are eight active volcanoes in their home state of California- including one less than sixty miles from where they live. They instantly want to find the volcanoes on a map, talk about why obsidian from one volcano looks different from another, and before the teachers know it their students are talking about silica levels and conchoidal fractures.

Making Clay

At the IVDM we have a large exhibit of pottery found by archaeologists across the Imperial Valley. We get the kids talking about the different shapes of the vessels: large mouthed pots for cooking and storage, narrow necked ones for holding water. Then comes the question: how are they made? We hold up something and ask the kids what they think it is. It looks like a rock, but is in fact clay we found in the desert and so is in its “natural” condition.



Students compare ceramic vessels to understand the role clay played in daily life and learn about clay by grinding it before making clay bowls

Even if they've never done anything with ceramics before, the kids know this isn't going to squish into shape like playdough. So how does it change from 'rock' to 'clay' to the vessels they see on display? Our education collection contains a large collection of unprovenanced grinding stones and we set one up at a perfect height for kids. Each student gets to grind some of the rock-like clay into a fine powder- discovering not only how the clay starts to change but also how hard and time consuming it would be to grind enough clay to make a large cooking pot!

Putting the clay powder they've ground into a cup of water, we show them how mixing the two forms the more malleable material they think of as 'clay'. The kids also get to take clay and learn the basics of making a coiled clay bowl using the same techniques that local Kumeyaay potters have used in the region for five hundred years- including all the ceramics the students see in the museum.

Geology as Geology

While these two modules interpret geology as it relates or is applied to everyday life, the third module focuses on interpreting geology as geology: not only what is a sedimentary rock but what does it look like in the wild? We start with another toolbox: a large, seven-drawer, rolling toolbox wrapped to proclaim that geology is "the science of getting your hands dirty." What kid isn't attracted to that idea? Each drawer is fitted with polyethylene foam sheets cut to hold individual rocks based on a theme: Metamorphic, Sedimentary, Igneous, etc. California fourth grade science introduces students to the rock cycle. To reinforce that idea, an illustration of the rock cycle sits in the center of each drawer. Each rock features its own information card with an image of the rock and interesting facts, allowing teachers or museum volunteers to assist staff in talking about particular rocks. While students usually claim obsidian, geodes, or fossilized shells as their favorites, museum staff developed a trick to make quartz stand out in their memories.

Quartz is the most common mineral in the earth's crust and is found throughout the Imperial Valley. It is also considered a powerful and important stone by the local Kumeyaay tribes, who describe how it glows in certain ceremonies. Frank Salazar, a museum staff member from the Campo Band of the Kumeyaay Nation, introduced the rest of the staff to the phenomenon of triboluminescence. A flash of light produced "when material is subjected to friction,"¹ triboluminescence can be created with many minerals but is particularly effective with translucent quartz where the light visibly penetrates deep into the stone. Simply by turning off the lights in the room and vigorously rubbing two quartz pieces together, common quartz becomes something extraordinary and memorable. We then take the students on a brief walk on the museum grounds where they try to identify rocks in their natural habitat, as well as identifying landscape that has been eroded by water and wind.

Teachers and parents often tell us that their students relate to geology in a very different way after these field trips. They begin to apply their geology lessons to the world around them: whether that means explaining clay to their parents or wanting to learn more about local volcanoes. Kids want to return to the museum for events and to show off what they remember about obsidian, quartz, and clay. Emphasizing seamless integration between geology and adapting to life in the desert through hands-on exploration has excited local students not only about geology as a science class, but geology as a whole new way of looking at the world around them.

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Interpreting Beaches

Edward Clifton
Geologist.

InterpNEWS Regional Editor



“Let’s go to the beach!” These are welcome words to many of the 2.5 billion people on this planet who live within 100 km of a coastline*. Whether this means enjoying the solitude of an isolated beach, or basking in the sun amidst a great throng of similar-minded beach-lovers, the sandy strips bordering the sea hold a special magic for us. This was not always the case. In a recent (June 23, 2016) Smithsonian.com article, Daniela Blei notes that, prior to the middle 1800’s, beaches were viewed with dread. They were the boundary of the unknown, a dangerous wilderness. How things have changed! In this article, I will discuss why beaches exist, the factors that determine their character, a few of the more unusual organisms that make a beach their home and some of the hazards that beaches present to the unwary, and the threats that human activities pose to the beaches of the world.

* ”Presently about 40% of the world’s population lives within 100 kilometers of the coast”.

(http://www.un.org/esa/sustdev/natlinfo/indicators/methodology_sheets/oceans_seas_coasts/pop_coastal_areas.pdf)

What is a beach?

Technically, a beach is an accumulation of loose particles, typically sand and/or gravel, at the margin of a body of water. The composition of a beach depends on the material available—typically ordinary sand and/or pebbles. Most beaches consist of sand-sized quartz, feldspar and small rock particles. Some beaches are more exotic in their composition. On tropical islands, where such material is rare, grains of calcium carbonate derived from living organisms compose much or all of the beach material. Some beaches are colored by the minerals within them. On volcanic islands, beaches can be green, owing to concentration of the mineral olivine. Purple beach sand occurs where erosion of metamorphic rocks contributes the mineral garnet to the shoreline. Some exotic beaches exist in areas where human trash was long dumped on the shoreline. A deplorable practice, but it generated colorful beaches composed small colorful rounded pebbles of glass (Fig. 1).



Figure 1 – Glass beach Fort Bragg, GA.

A bit about waves

Waves are fundamental to beach development — constantly moving beach sand shoreward or returning it to the sea. Because of their importance, we digress here into a brief discussion about waves.

Sizable bodies of water typically bear wind-generated waves at their surface, waves that range in size from small ripples to towering whitecaps, depending on the wind velocity, how long it blows, and the distance over which it is maintained. The size of a wave (Fig. 2) is specified by its height (vertical distance from crest to trough) and length (horizontal distance between successive crests).

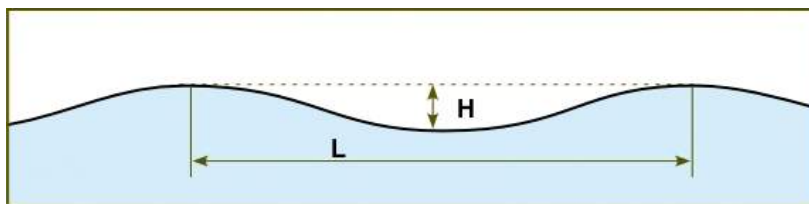


Figure 2. Wave size.

For most descriptions, the wave period (time interval between successive crests) is used instead of length because 1) typically it is easier to measure and 2) unlike wave length, which decreases as a wave enters shallow water, the wave period remains constant.

Great storms generate waves of many different heights and periods that radiate away from the storm area, much as ripples in a pond radiate away from the splash created by a falling pebble. Shorter period waves (<8 seconds) lose energy rather quickly, but long-period (10-20 seconds) waves can travel for thousands of miles with little energy loss. As a result, waves arriving at a shoreline may be generated by local wind, but they also can be the result of far-away storms. These waves, which roll onto a beach even on windless days, are called “swell”.

As swell travels across the surface of the ocean, the water it encounters does not travel with the wave; instead, at the surface, it moves in a circle as the wave passes (Fig. 3). This circular water motion persists in the water beneath the wave, diminishing with depth until there is no significant motion (wave base, Fig. 3).

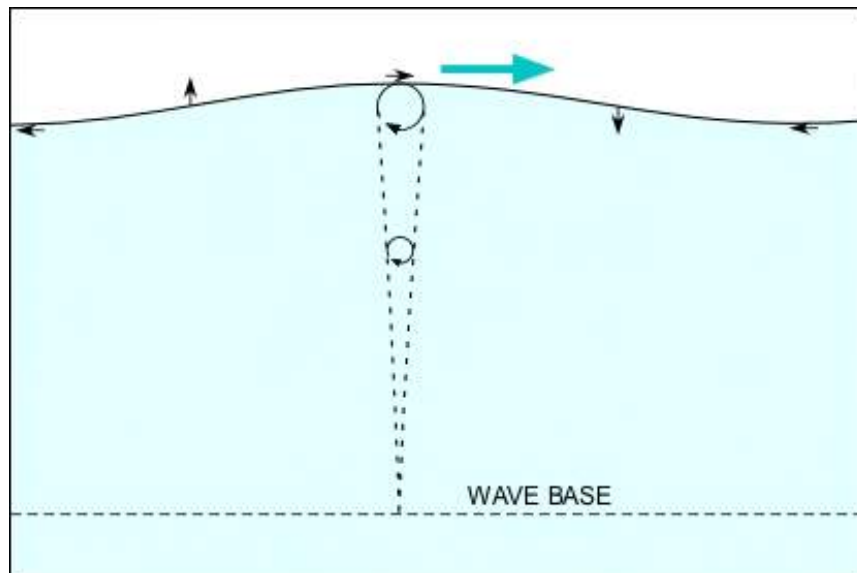


Figure 3 – Wave base.

In shallow water, (i. e., depths less than a half of the wave length), the circle deforms with depth into an ellipse, and at the bottom the motion becomes horizontal: the water moves forward along the bottom under the wave crest and backward as the wave trough passes. (Fig. 4).

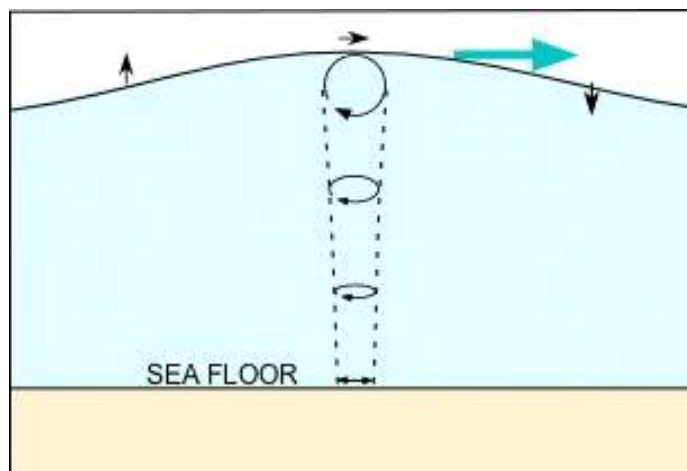


Figure 4 – Rounded waves.

When crossing deep water, swell takes a broadly rounded form, but as it approaches a beach, the waves transform into peaked crests separated by broad flat troughs (Fig. 5).



Figure 5 – peaked waves.

This change has a profound effect on the velocity of the currents generated by the passing wave. Waves seaward of the breaker zone transport little-to-no water as they pass. The volume of water that moves forward under the crest of the wave is approximately equal to that moving seaward under the trough.

As long as the wave form is rounded, the velocity of the landward (crest) motion is equal to that of the seaward (trough) motion (Fig. 6a). But as waves move into shallow water, the crests become peaked and less time is available for the landward flow beneath the crest. As a result, the velocity of shoreward flow under the crest exceeds that of the seaward flow under the trough (Fig. 6b).

The strong landward surge beneath a wave crest is familiar to anyone who has experienced the surge of the waves in or near a breaker zone.

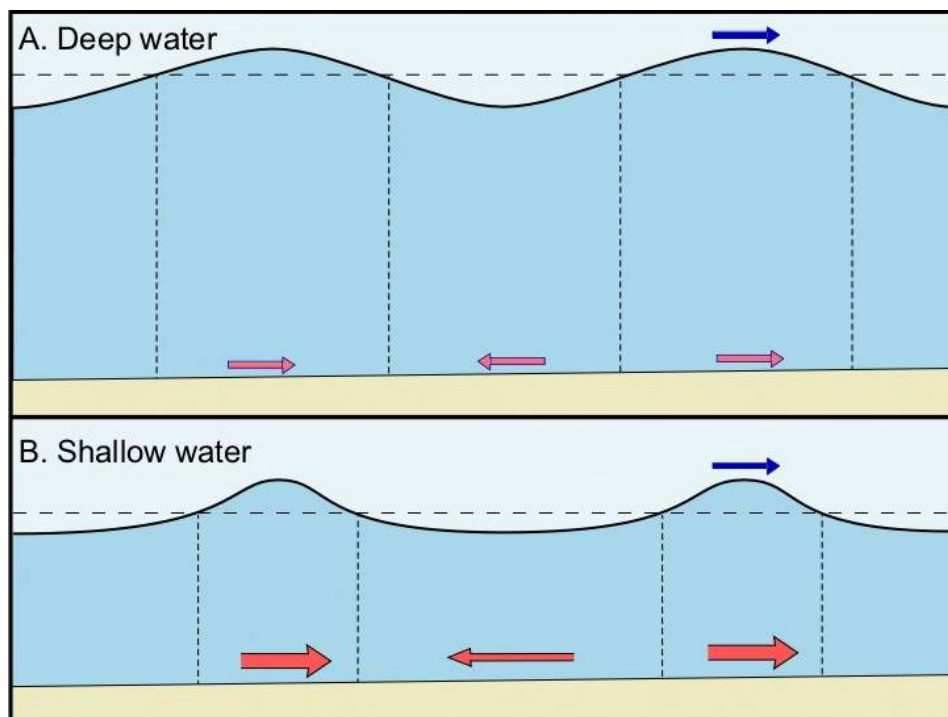


Figure 6a and 6b.

Although the water does not significantly move shoreward as a wave approaches its break point, the stronger landward surge at the sea floor drives the sand on the sea (or lake) floor toward the beach. The surf further pushes the sand toward the beach, although, as will be noted, the currents of a surf zone can be quite complicated.

Waves and beaches

Once on the beach, the sand is worked and reworked by the swash (uprush of a wave) and backwash (return flow to the body of water). Swash and backwash are quite different in the way they move sand and this difference accounts for several notable features of a beach. As swash moves up a beach, much of the sand is carried in the water, suspended above the bottom (Fig. 7a). Smaller particles of sand are preferentially carried in suspension up the beach. As the water flows back down the beach (backwash), a different transport process prevails: much of the material returned to the lower part of the beach is moved along the bottom in a flowing concentration of sand and water (Fig. 7b). If you have stood on a beach during a wave backwash, you may have felt this flowing mass around your feet. Particle transport in backwash is quite different from that during the uprush—the sand is carried in a flowing bed of jostling grains. Larger and less dense particles are carried preferentially down the beach. The result is that the beach sand becomes progressively finer in a landward direction, a textural pattern seen on beaches composed of sand of various sizes.

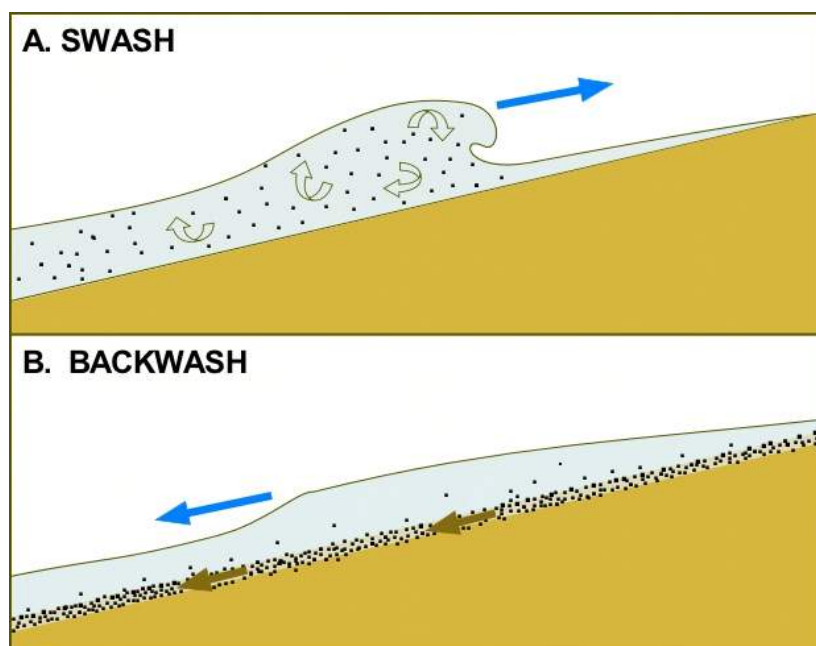


Figure 7a and 7b.

Commonly beach sand contains a component of “heavy minerals”, mineral grains that are denser and typically smaller than the associated quartz sand. Because of their smaller size, heavy minerals are carried in suspension up a beach where they accumulate on the upper parts of beaches. Commonly the concentration is obvious as “black sand” or “purple sand” depending on mineral content (Fig. 8). In a few places these concentrations are rich enough to be mined as “beach placers”.



Figure 8 – Garnet beach.

Internally, beach sand displays a distinctive planar stratification or layering (Fig. 9). Each layer represents an individual wave backwash (only a few of which are preserved, of course). If the beach sand is relatively coarse, each lamina may display an internal upward increase in sand grain size produced by sorting within a wave backwash. As a result, we can recognize ancient beaches in sedimentary rocks of all ages by their stratification and their position between underlying surf zone deposits and overlying aeolian (windblown sand).



Figure 9 – Beach lamination.

Most beaches are relatively flat, but some can be steep. Eroded beaches typically are flat, but may contain a steep wave-cut scarp. On stable beaches, sand grain size is probably the dominant factor in establishing beach slope. Equilibrium is reached when the volume of sand transported up a beach by wave swash equals, on average, the volume transported down the beach by backwash. On coarse beaches, some amount of the up-rushing water is lost as it soaks quickly into the underlying unsaturated sand thereby reducing the volume of the backwash. Such a beach builds out until it reaches a steepness that compensates for the reduced backwash.

“Rivers of Sand” and shoreline features

As one stands on a beach, it is easy to assume that its sand grains have always been there, but in reality, they may have traveled many tens of miles before they arrived, and they may have many tens of miles of additional transport in their future. On many (perhaps most) beaches, the sand is transient, creeping along the coast in a form of “longshore drift”. The direction of their transport depends on the orientation of the prevailing waves relative to the shore. Typically waves approach a shore at an angle, which causes the sand to move in one direction down a coast, either by a slow creep along the beach or in a longshore current that flows like a river just off the beach (Fig. 10). The sand thus moved can travel far along a coast.

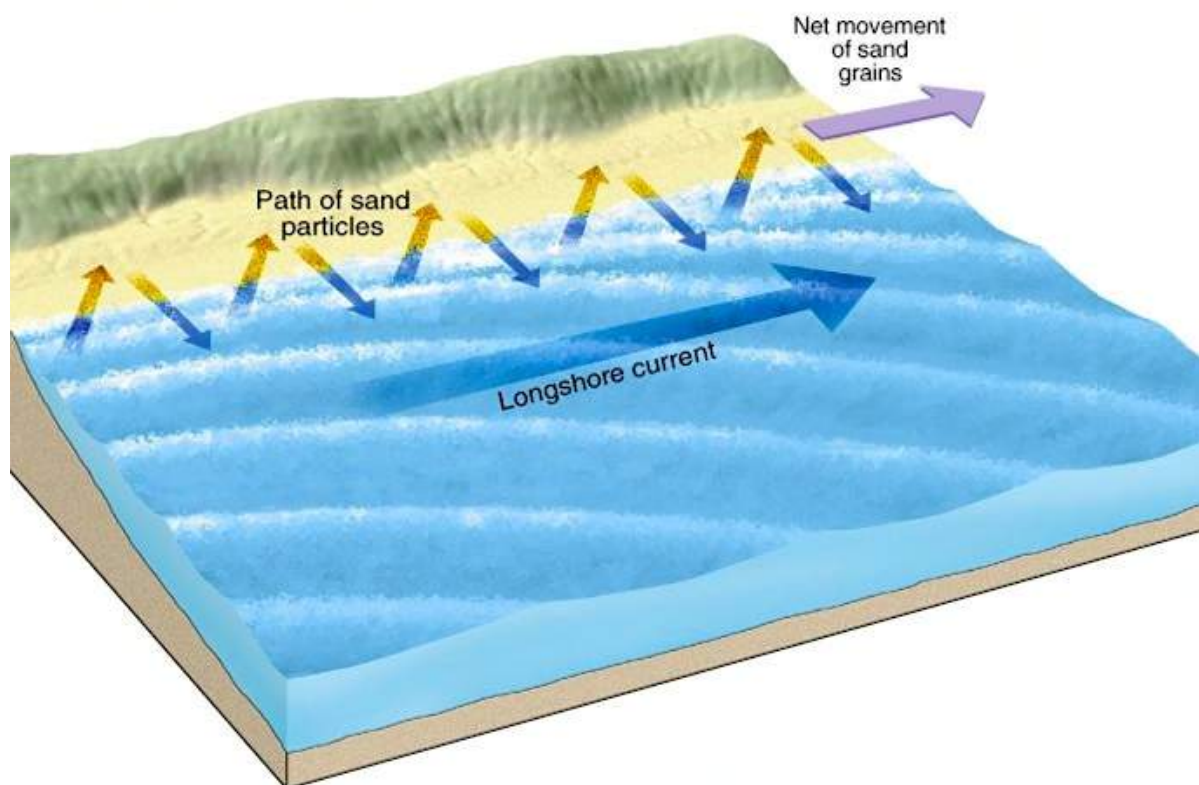


Figure 10 . Longshore current.

As the sand moves, it forms beaches that take their shape from features along the shoreline (Fig. 11).

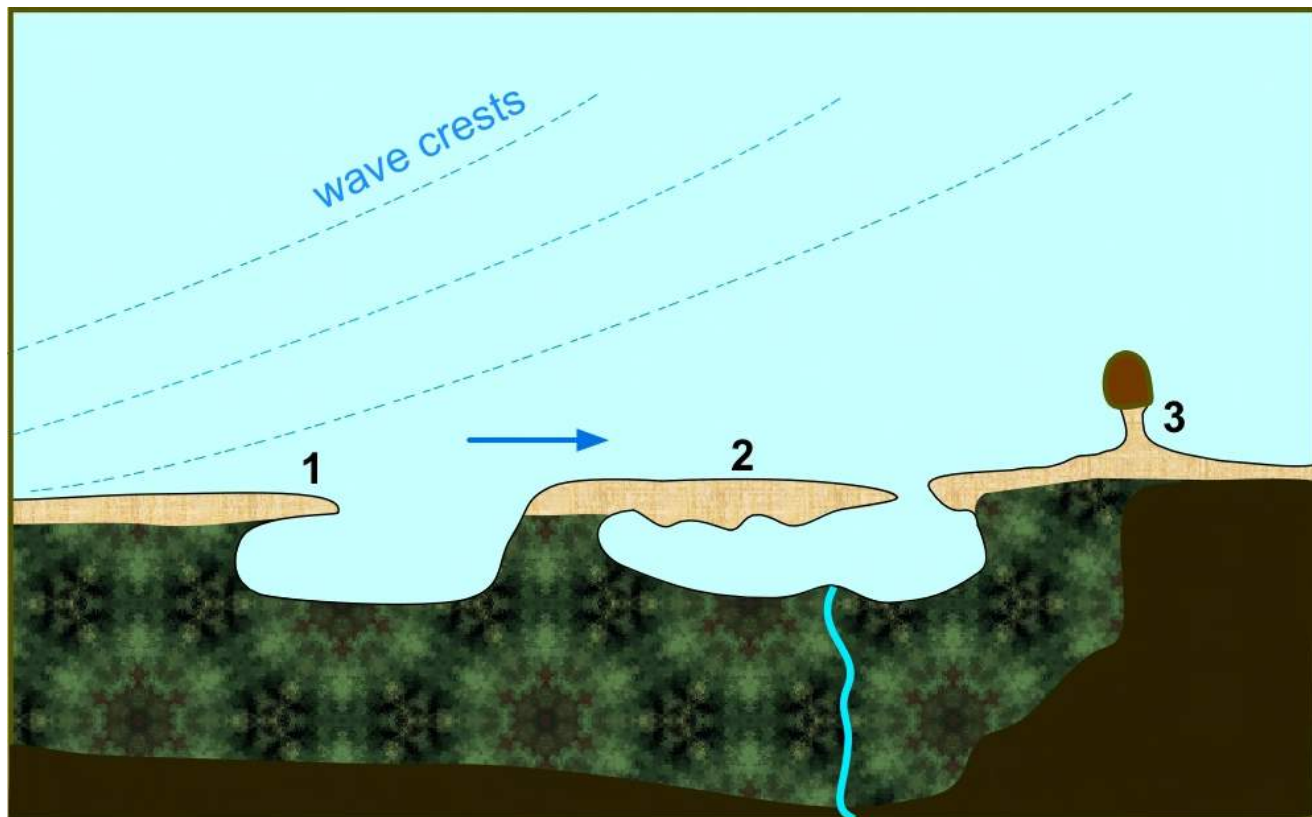


Figure 11.

A break in the shoreline due to an inlet or other irregularity can generate a sand spit, where a beach extends away from the land in the direction of the longshore flow. If a spit isolates a body of water on its landward side, it is called a “barrier spit” or “barrier island” if it is detached from the shore (Fig 12). In some places, a large rock just offshore provide protection from the waves that allows the beach to grow toward the rock. Such a beach, if it joins the rock to the shore is called a “tombolo”.



Figure 12. Assateague Island.

If the water immediately offshore is particularly deep (as in the head of a submarine canyon), sand can be permanently lost to the ocean. In California's Monterey Bay, the head of Monterey Submarine Canyon extends nearly to the beach. There it intercepts the long shore transport, possibly diverting as much as 750,000 cubic meters of sand into the canyon every year (Patsch and Griggs, 2007).

Beach erosion

The natural tendency of shoaling waves is to move sand shoreward, but under the right conditions they can also strip it from a beach. Storm waves upset the equilibrium that exists during fair-weather conditions. During a storm, large waves and strong rip currents can transport much of the beach sand seaward where it is deposited in offshore bars beyond the normal breaker zone. Here it resides until non-storm waves slowly return it to the shore.

On barrier island beaches, storm waves drive beach sand inland, away from the sea (Fig. 13). This sand is lost to the beach until the barrier migrates far enough landward to release the sand once again to the beach. Otherwise the sand is lost to the beach unless artificially returned.



Figure 13 – Santa Rose Island.

Artificial structures emplaced along a shore such as breakwaters or dredged harbors can interrupt the transit of sand along the shore, promoting erosion of beaches “downstream” from the structure. Such loss typically can only be compensated by the artificial introduction of sand from elsewhere.

In the U.S., coastal erosion is responsible for roughly \$500 million per year in coastal property loss, including damage to structures and loss of land. To mitigate coastal erosion, the federal government spends an average of \$150 million every year on beach nourishment and other shoreline erosion control measures (NOAA Guide to Beach Nourishment: <https://coast.noaa.gov/archived/beachnourishment/html/human/law-/index.htm>)

Beaches as a natural habitat

Few environments pose the challenges that a beach brings to its living occupants. Sometimes fully underwater, sometimes high and dry for extended periods, an oceanic beach is alternatively exposed and inundated by oceanic tides. In the swash zone, surficial sand shifts with every passing wave. Yet a prolific fauna can survive here.

Deposit-feeding and predaceous polychaetes (worms) live beneath the surface. Mole crabs burrow into or just below the sand surface. Sand fleas, small parasitic crustaceans, may bedevil the human sunbather on numerous beaches. But the most remarkable organisms, I think, are the countless microscopic animals that live in the space between the sand grains (Fig. 14).

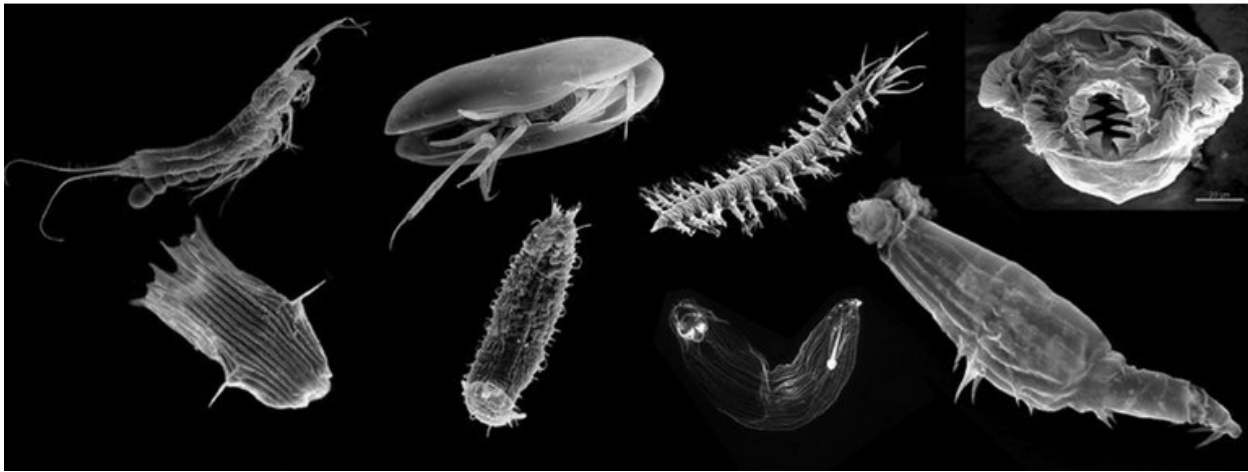


Figure 14. Meiofauna.

Referred to collectively as *meiofauna*, these organisms are remarkably diverse, including 18 of the 35 recognized major groups of animals (phyla). Special adaptations to this incredibly hostile environment include the ability to navigate tiny spaces in a dark, mobile substrate. Although most beach visitors never see them, meiofauna are sufficiently abundant that the U. S. Geological Survey recommends that you wash your hands after handling beach sand.

A good source of information about the fauna that dwell on beaches is Susan Woodward's book, "Marine Biomes", published in 2008 by the Greenwood Publishing Group. It is available on line at:

https://books.google.com/books?id=sgYFCUyCcNYC&pg=PA63&lpg=PA63&dq=airbreathing+beach+animals&source=bl&ots=45qQ9dISae&sig=HDbKkTuzEBx0q2IV_IV2xVpHWel&hl=en&sa=X&ved=0ahUKEwjpIteCyLXYAhUpsVQKHbyXDvgQ6AEIUjAN#v=onepage&q=airbreathing%20beach%20animals&f=false

Hazards

I love beaches and, as an adult, have spent more time playing on them than any responsible person should admit to. In the 1960s and 70s, my research focused on the geologic processes that shape a beach and the adjacent surf zone and how to interpret a near-shore environment when preserved in rocks. During that time, I had a few experiences that reminded me that beaches can be very dangerous.

A major hazard (other than sunburn) to a beach-goer is the so-called “sneaker wave”. This is a wave that suddenly appears out of nowhere and is much larger than the ambient waves. Such waves take the lives of beachgoers every few years on the U. S. West Coast. In my experience, sneaker waves result from a coincidence of several large waves with different periods. If you are on a beach and see several very large waves converging as they approach the shore, it is time to consider how quickly you can reach higher ground.

Steep beaches are more hazardous than flatter ones. Large waves which break directly on the beach are more likely to catch the unwary and steep beaches commonly have a drop-off or step beneath the water at the base of a beach. A person playing in the waves on the lower part of a beach can suddenly find him- or herself in water over his or her head among some very large breaking waves. A steep beach just off the highway on the Central California coast is officially known as “Monastery Beach” due to a nearby Carmelite Monastery (Fig. 15). But the locals call it “Mortuary Beach”, after the number of individuals who have lost their lives there.



Figure 15 – Monastery Beach.

Another hazard awaits the unwary swimmer immediately off many beaches. As noted previously, waves in the breaker zone transport water landward. Sea level adjacent to the beach actually rises a bit, Water thus elevated returns to the sea in the form of narrow offshore flows called “rip currents”. Typically, rip currents can be readily recognized from the shore. The seaward-flowing currents carve channels on the seafloor, over which, because the water is deeper, the waves do not break. Persistent gaps in the breaker line are areas to avoid, unless a person wants a rapid ride offshore. Some rip currents (like that shown in Figure 16) are relatively small, but others, driven by large breakers, can extend hundreds of meters offshore (Fig. 17). Incidentally, the concept of an “undertow” that sucks an unwary swimmer beneath the surface is a myth, but if one is knocked down by a wave and simultaneously swept into a rip current, it could certainly feel like an undertow.



Figure 16 – small rip current (left), Figure 17 – Oregon rip current (right).

Future of beaches

Looking at an extended set of beaches along a coast, it would seem that they contain an unlimited amount of sand, but this is not the case. Many beaches today are sustained only by the artificial resupply of the sand from other sources. Storms characteristically remove sand from a beach; on high-gradient coasts, the sand is carried offshore where, with time, it can be returned to the beach. On low-gradient slopes, however, the sand is driven shoreward (Fig. 13), and only artificial restoration can keep it from becoming permanently lost to the present-day shoreline.

Human activities have led to the loss of many beaches. As noted previously, artificial structures, such as harbors or breakwaters, trap sand that would otherwise replenish that lost further down the coast. The input of sand into the coastal environment has been diminished by the damming of rivers that feed sand to the shoreline. Much river sand is trapped in river mouth estuaries; a process likely to be augmented by the current rise of global sea level. Sand mining for industrial purpose (mostly in the manufacture of concrete) is an increasing issue for beach maintenance. The global demand for concrete and cement is huge, and it is expected to grow.

According to the Weather Channel (2013), “75 to 90 percent of the world’s natural sand beaches are disappearing, due partly to rising sea levels and increased storm action, but also to massive erosion caused by the human development of shores.”. The New York Times noted in 2014 that “apart from water and air, sand is the natural element most in demand around the world, a situation that puts the preservation of beaches and their flora and fauna in great danger.”

So, enjoy beaches while you can, and help protect them if you can. Take plenty of sunscreen, watch out for sneaker waves, avoid rip currents, and wash your hands after handling beach sand. Beaches are special places. Jimmy Buffet said, “If there is a heaven for me, I am sure it has a beach attached to it.” And I don’t know who first said it, but “You can shake the sand from your shoes, but it will never leave your soul.”

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Rare ancient shark relative captured by fisherman

BY
NATSUMI PENBERTHY

Reprinted just for fun – IN staff.



A fisherman has caught a rare specimen of the eel-like frilled shark.

A RARE AND PREHISTORIC species of shark has been captured by a fisherman off the Gippsland Coast, in south-eastern Australia.

The frilled shark (*Chlamydoselachus anguineus*) was a shock find for angler David Guillot, who has been fishing for over 30 years and had never before encountered the species.

The almost 2m-long, eel-like shark was caught at about 1100m, is a scarce occurrence on the ends of fishing lines; however, it is often scooped up as by-catch in mid-water trawl nets off the coast of Japan.

"It was like something out of a horror movie...quite horrific-looking," David told Fairfax Radio.

First described in 1884, the frilled shark received its name from the six frilly protruding gills on either side of its nape. An ancient species of shark and one of two living species from the prehistoric Chlamydoselachus family, its lineage is thought to date back to the Late Cretaceous period, 95 million years ago.

The frilled shark has distinct 300 pin-shaped, backwards-facing teeth and consumes prey whole, with the teeth helping to 'trap' prey. David reported that after he hauled in the shark aboard the *Western Alliance* it displayed aggressive behaviour, coordinating its muscles like an eel and turning backwards on itself attempting to bite a deck hand.

Rare frilled shark is barely studied

The species is described by the IUCN as rare, with a conservation status of Near Threatened. However, insufficient studies have been performed to record accurate population estimates and describe potential threats of the species.

Frilled sharks occupy the 'benthopelagic' ecosystems of Atlantic and Pacific oceans, typically living at depths ranging 500-1000m below the sea surface.

"We assume that its body shape is adapted to its niche, but because there are so few observations of the species in the wild, we are not really sure what that niche actually is," says Mark Meekan, fish biologist at the Australian Institute of Marine Science.

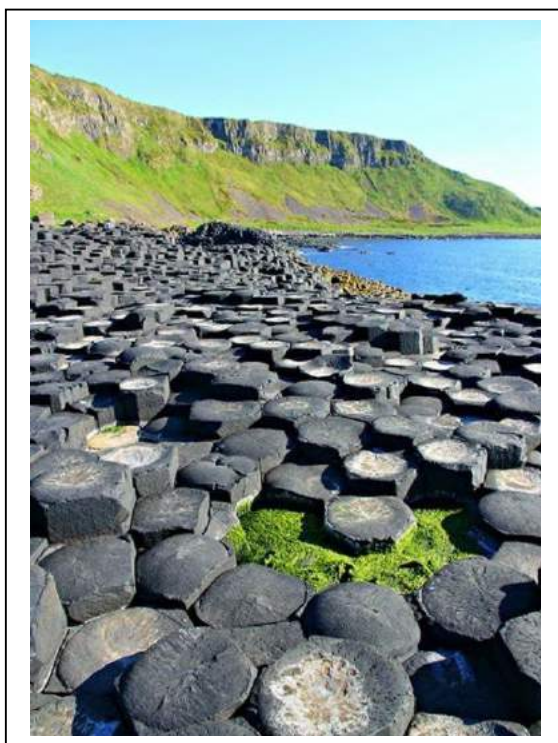
Existing typically in cool temperate waters, the species has been captured in notable concentrations around New Zealand, Japan and the United Kingdom. 😊



John Veverka at the Giants Causeway (consultation project.)

Interpreting the Giants Causeway World Heritage Site, Northern Ireland.

*John Veverka
IN Editor
Interpretive Planning Consultant*



Several years ago I had the pleasure of providing interpretive planning consultation services for the National Trust – Northern Ireland. One of the sites I visited was the Giant's Causeway, a dramatic geological feature. Interpretation services were minimal at the time, with a visitor center being operated by a friends group from a trailer. A lot has happened since then, so I thought you might enjoy this overview and update of this amazing geological site. – JV

The **Giant's Causeway** is an area of about 40,000 interlocking basalt columns, the result of an ancient volcanic eruption. It is located in County Antrim on the north coast of Northern Ireland, about three miles (4.8 km) northeast of the town of Bushmills.

It was declared a World Heritage Site by UNESCO in 1986, and a national nature reserve in 1987 by the Department of the Environment for Northern Ireland. In a 2005 poll of Radio Times readers, the Giant's Causeway was named as the fourth greatest natural wonder in the United Kingdom.

The tops of the columns form stepping stones that lead from the cliff foot and disappear under the sea. Most of the columns are hexagonal, although there are also some with four, five, seven or eight sides. The tallest are about 12 metres (39 ft) high, and the solidified lava in the cliffs is 28 metres (92 ft) thick in places.

Much of the Giant's Causeway and Causeway Coast World Heritage Site is today owned and managed by the National Trust and it is one of the most popular tourist attractions in Northern Ireland.^[6] The remainder of the site is owned by the Crown Estate and a number of private landowners.

Around 50 to 60 million years ago, during the Paleocene Epoch, Antrim was subject to intense volcanic activity, when highly fluid molten basalt intruded through chalk beds to form an extensive lava plateau. As the lava cooled, contraction occurred. Horizontal contraction fractured in a similar way to drying mud, with the cracks propagating down as the mass cooled, leaving pillarlike structures, which are also fractured horizontally into "biscuits". In many cases the horizontal fracture has resulted in a bottom face that is convex while the upper face of the lower segment is concave, producing what are called "ball and socket" joints. The size of the columns is primarily determined by the speed at which lava from a volcanic eruption cools. The extensive fracture network produced the distinctive columns seen today. The basalts were originally part of a great volcanic plateau called the Thulean Plateau which formed during the Paleocene.

According to legend, the columns are the remains of a causeway built by a giant. The story goes that the Irish giant Fionn mac Cumhaill (Finn MacCool), from the Fenian Cycle of Gaelic mythology, was challenged to a fight by the Scottish giant Benandonner. Fionn accepted the challenge and built the causeway across the North Channel so that the two giants could meet. In one version of the story, Fionn defeats Benandonner. In another, Fionn hides from Benandonner when he realises that his foe is much bigger than he is. Fionn's wife, Oonagh, disguises Fionn as a baby and tucks him in a cradle. When Benandonner sees the size of the 'baby', he reckons that its father, Fionn, must be a giant among giants. He flees back to Scotland in fright, destroying the causeway behind him so that Fionn would be unable to chase him down. Across the sea, there are identical basalt columns (a part of the same ancient lava flow) at Fingal's Cave on the Scottish isle of Staffa, and it is possible that the story was influenced by this.

In overall Irish mythology, Fionn mac Cumhaill is not a giant but a hero with supernatural abilities. In *Fairy and Folk Tales of the Irish Peasantry* (1888) it is noted that, over time, "the pagan gods of Ireland [...] grew smaller and smaller in the popular imagination, until they turned into the fairies; the pagan heroes grew bigger and bigger, until they turned into the giants".^[12] There are no surviving pre-Christian stories about the Giant's Causeway, but it may have originally been associated with the Fomorians (*Fomhóraigh*);^[13] the Irish name *Clochán na bhFomhóraigh* or *Clochán na bhFomhórach* means "stepping stones of the *Fomhóraigh*". The *Fomhóraigh* are a race of supernatural beings in Irish mythology who were sometimes described as giants and who may have originally been part of a pre-Christian pantheon.



Visitor Center

The Causeway was without a permanent visitors' centre between 2000 and 2012, as the previous building, built in 1986, burned down in 2000. Public money was set aside to construct a new centre and, following an architectural competition, a proposal was accepted to build a new centre, designed by Dublin architectural practice Heneghan Peng, which was to be set into the ground to reduce impact to the landscape. A privately financed proposal was given preliminary approval in 2007 by the Environment Minister and DUP member Arlene Foster. However, the public money that had been allocated was frozen as a disagreement developed about the relationship between the private developer Seymour Sweeney and the DUP. It was also debated whether a private interest should be permitted to benefit from the site – given its cultural and economic importance and as it is largely owned by the National Trust. Coleraine Borough Council voted against the private plans and in favour of a public development project, and Moyle District Council similarly signalled its displeasure and gave the land on which the previous visitors' centre stood to the National Trust. This gave the Trust control of both the Causeway and surrounding land. Ultimately Mr. Sweeney dropped a legal challenge to the publicly funded plan. In 2007, the Giant's Causeway visitor centre was awarded with a National Award of Excellence for 'Best Tour Visit' by CIE Tours International, for the 5th consecutive year.

The new visitor centre was officially opened by First Minister Peter Robinson and Deputy First Minister Martin McGuinness in July 2012, with funding having been raised from the National Trust, the Northern Ireland Tourist Board, the Heritage Lottery Fund and public donations.^[24] Since opening, the new visitor centre has garnered very mixed reviews from those visiting the Causeway for its pricing, design, contents and placement across the causeway walk descent.



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There was some controversy regarding the content of some exhibits in the visitor centre, which refer to the Young Earth Creationist view of the age of the Earth. While these inclusions were welcomed by the chairman of the Northern Irish evangelical group, the Caleb Foundation, the National Trust stated that the inclusions formed only a small part of the exhibition and that the Trust "fully supports the scientific explanation for the creation of the stones 60 million years ago." explanation for the causeway's origins.



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blog for critical, self-reflexive, & radical re-examination of museum practice

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- + a critical stance toward old assumptions and ways of working (Ross 2004: 85)
- + critical, self-reflexive and radical re-examination of museums (Macdonald 1996: 7, 13)
- + sustained reflexivity and rigorous deconstruction of museum practice (Shelton 2013: 8, 14)
- + a scientific and academic discipline for the critical and theoretical examination of the museal field (Desvallées & Mairesse 2010: 11, 19, 56)
- + assist museum workers to become more critical thinkers and moral practitioners, permitting taking control of the future (Teather & Carter 2009: 28, 30)
- + theorising museum practices (Shelton 2013: 14)
- + navigate “dysfunctional divide” between theorists and practitioners (Teather & Carter 2009: 26)
- + analysis of areas of tension and contestation (Shelton 2013: 15)
- + sustained incredulity to itself as well as to the museum field (Shelton 2013: 18)
- + develop analytical tools to better understand museum practice (Shelton 2013: 20)
- revise the lens through which we view museums (Shelton 2013: 18)
- + metacognition => higher order thinking skill centred on awareness and analysis of thought processes, actions, and the comprehensive context in museum practice (Thistle 2014a).

Introduction:

The aim of this occasional Critical Museology Miscellanea blog is to present well-documented long-form analysis reflecting on, and hopefully resulting in, the overhaul of current museum practice so that it more closely parallels the ideals espoused by museum organisations and practitioners. It also will re-examine those ideals *per se*. I hope to scrutinise some of what I find to be analytical silences in the museum industry. This blog will be a wide-ranging exploration of museum issues beyond the author’s other critical museology blog *Solving Task Saturation for Museum Workers* that focusses specifically on working conditions and working lives in museums. Those interested in the latter issues might begin by consulting posts tagged “[critical museology](#)” (e.g. Thistle 2015).

Background:

During more than a quarter century of work in the museum and archives field, I have become increasingly concerned about the need for attention to more resolute analysis—or “critical museology” if you will—in museum practice. See for example Thistle (1990) and Thistle (2017).

At the outset of my own museum career in the early 1980s and based on my academic training in the humanities and social sciences—that essentially trained me to be a critic—I had assumed museology itself included critical thinking. I tried to practice it this way by reading and applying the museology literature to my day-to-day work developing exhibits and programmes, drafting analytical editorials and articles, creating a blog, proposing and delivering conference sessions on issues surrounding unhealthy and unethical working conditions for museum paid and volunteer workers. Regarding the latter labour issues however, I eventually encountered resistance to my critical analysis among senior staff of professional museum organisations, museum managers, conference organisers, anonymous proposed journal article referees, as well as a highly respected museum consultant. See an outline of these opposing responses to the author in Thistle (2017: 4-5, 7, 8-9, 11-12).^[i]

Thinking about such reluctance to consider the need for analysis of strains in museums workplaces,^[ii] I have presumed—and in one instance I was told directly by a conference organiser—that my subject of interest [chronic museum worker task saturation and resulting stress] was “too political” and therefore would be unlikely to be accepted as proposed. I also speculate that another aspect of the existing resistance to critical analysis in the field is an aversion among the leadership of museum professional organisations to engage in reflection about the potential for negative impacts of organisational priorities on workers in the field. In retrospect, I confess becoming increasingly disillusioned about the dearth of critical analysis in the museum industry.^[iii]

I have, therefore, come to agree with Vergo (1989), Macdonald (1996), Ross (2004), Janes (2009), Teather & Carter (2009), Shelton (2013), and Hunter (2017) among many other scholars in the field who describe a lack of—and identify the need for—concerted, serious, sustained, and in-depth critical analysis of museum practice.

Museology per se:

To begin with the foundation concept, what is “museology” itself? Thirty-five years ago, the University of Toronto Masters Programme in Museum Studies definition that popped up in my recent Google search follows:

Museology is a new academic discipline and practising profession. It endeavours to find the theoretical basis of museum work and aims at a further development and improvement of museum activities, not only on the basis of experience but first and foremost on theory. Theory and methodology are the foundations of all aspects of museology (Anonymous 1982: 12, 13).

Although the above definition made no mention of critical theory, the term ‘critical’ in relation to museology does appear in this source, but: i) only in a list of the words in various languages used to represent the theory and practice of museum work (Anonymous 1982: 1 [appearing after 4 unnumbered pages], 19) and ii) near the end of this chapter, “The basis of thought should be a rational and critical questioning of why, what and how the museum exists and functions” (Anonymous 1982: 18).

The International Council of Museums’ (ICOM) *Key Concepts of Museology* does inject the ‘critical’ element directly into its preferred definition. *Inter alia*, ICOM describes museology as:

a scientific and academic discipline for the critical and theoretical examination of the museal field . . . Museology can thus be defined as all the attempts to theorise or think critically about the museal field, or as the ethics and philosophy of that which is museal (Desvallées & Mairesse 2010: 11, 19, 34, 49, 54).

A museum field movement in the late 1970s and 1980s had coalesced around the idea of a ‘new museology’ that has been described as “a critical stance . . . taken towards old assumptions and ways of working” (Ross 2004: 85). According to Lee (2017), this ‘new museology’ was “a reaction against an ‘old museology’ which Vergo (1989) and his colleagues felt was unreflexive, uncritical, and dated, concerned with the conservation and display of objects above all other issues.”

I believe it is rather important to add here that ‘current’ assumptions and ways of working also require serious analysis—as do ‘emerging’ impulses in the field such as what I have called the “expectation inflation” involved in the continuous ramping up of standards across the museum enterprise—yet without adequate resourcing of the real world work necessary to achieve the higher standards (Thistle 2017: 2, 7, 11, 16; Dubé 2001: 8).

Despite a broad—but apparently limited and somewhat superficial—support for ‘new museology,’ Anthony Sheldon, author of “Critical Museology: A Manifesto,” asserts that the ‘new museology’ **“never defined a distinct field or method of study, or subjected the ‘old’ museology to sustained critical evaluation”** [emphasis added] (Shelton 2013: 8).

As a consequence of my own experience, reading, and teaching in the museum field, I am convinced of the absolute necessity for “critical museology,” not only in relation to my primary concern to maintain the occupational health of museum workers, but also for increasing the effective impact of our work “in the service of society and its development”—and indeed for the very sustainability of museum institutions (Janes 2009: 25, 42, 166, 177-8, 184 *passim*).

Critical Museology:

As noted above, a central element of context for the development of “critical museology” was recognition in the late 1970s and 1980s of the need for critical, self-reflexive, and radical re-examination of museums (Macdonald 1996: 7, 13). Peter Vergo’s statements in his influential book *The New Museology* about rising dissatisfaction with the ‘old’ ideas in the field and the absence of theoretical analysis, gave rise to ‘new museology’ that called for revolutionary re-examination of museums (Vergo 1989: 1, 3).

Anthony Shelton (2013: 8) cites another book, *The Museum Time Machine* compiled by Robert Lumley (1988) that was published a year before Vergo’s, as an exemplar of the “growing disquiet about traditional museological presuppositions and operations.”^[iv]

In this context, critical museology developed through “cross-fertilization with critical theory, sociology, history, historiography, and cultural studies” (Shelton 2013: 8). Andrews (2005: 2) has asserted:

Critical museology stands on the shoulders of the philosophical tradition of cultural criticism, encompassing Marxist, deconstructive, post-structural and post-colonial theory, and distinguished by the formulations of Marx, Gramsci, Foucault, Derrida, and Said. For other elements characterising critical museology, see the Key Concepts references listed at the outset of this post.

Significance of Theory in Critical Museology:

McCarthy (2016: [not paginated on-line]) argues that museum practitioners devote little attention to achieving deep understanding or carrying out critical analysis of their practice, despite the fact that museum work is founded on beliefs and principles; essentially, “. . . every time we carry out some activity or procedure, a theory or set of assumptions is in place to give meaning to that action.”

One reason for this reluctance is that museum workers’ “demanding daily schedules leaves little time for deep, critical, and sustained discussion and analysis of theory” (Silverman and O’Neill 2012: 195, cf. 194, as quoted in McCarthy 2016: [unpaginated on-line]). This kind of “role overload”^[v] matches your blogger’s long-held analysis of chronic task saturation among museum workers resulting in high stress levels in museum workplaces.^[vi] Research in the museum field by Sullivan (2015), Janes (2009: 64), and Dubé (2001: 8) supports the “task saturation” reasoning.^[vii]

Anthony Shelton also argues for the importance of theory in his Critical Museology Manifesto:

Only by theorizing museum practices do we become conscious of the presuppositions that we apply to our everyday work, and only through a rigorous deconstruction and reflexivity of that work can we develop fresh insights and innovations necessary to ensure the future development of museums, . . ." (Shelton 2013: 14).

In this light, the theory behind museum work is ignored at our peril. For example, Shelton (2013: 12) argues that a paradigmatic shift in material culture studies—that to me should be a museum matter of central concern—has been poorly integrated in curatorial museum practice. I also would say that current material culture theory is disappointingly rare in museum interpretive practice. Teather & Carter (2009: 26) point to a “dysfunctional divide” between museum theorists and practitioners. “Clearly, implementing a link between theory and practice is a necessary ingredient to the concept of critical museology . . . thinking about how any theoretical precept relates to practice, and vice versa.” (Teather & Carter 2009: 26; cf. McCarthy 2016).

Regarding the relationship between theory and practice, very strangely in my view Shelton (2013: 17-18) seemingly repudiates his statement above, despite the fact he does maintain that “Critical museology has as its subject the study of operational museology” (Shelton 2013: 8). To begin, Shelton states that it would be naïve to presume that the insights derived from critical museology would not be integrated into museum operations, policy, and programming. However, he continues by negating such integration:

The **purpose of critical museology is not, however, to reform institutions** or to claim a privileged position for its own practice, but to sustain an ongoing critical and dialectical dialogue that engenders a constant self-reflexive attitude toward museum practices and their wider constituencies” [**emphasis added here and following**] . . . Critical museology must, therefore, always maintain a sustained incredulity to itself as well as to its field of application. **It follows that critical museology could never be an operational tool** or provide an alternative strategic position for museums though it needs to encourage institutions to adopt more experimental practices, champion openness and transparency, and support critical community engagement [**emphasis on contradiction added here**] (Shelton 2013: 18 and compare with p. 7 Abstract, para. 2).

Shelton ends his Manifesto with the following statement: “It is a worthy enough aspiration that a critical museology might strive to help constantly renew such quixotic and such essentially dialectical institutions as museums and galleries” (Shelton 2013: 20) [**emphasis on contradiction added**].

One must ask Dr. Shelton: Is to use critical museology to “repurpose” in his Abstract and “renew” in his conclusion not to “reform” in his lexicon (Shelton 2013: 7, 18, 20)?^[viii] If critical museology should **not** be employed to “reform” museums as maintained by Shelton (2013: 18), is this discipline then simply an ivory tower intellectual exercise without any effective practical application(s)? This latter attitude is in fact one more reason why museum practitioners seem to be reluctant to engage with theory (Silverman and O’Neill 2012: 194-5 as quoted by McCarthy 2016: [on-line source unpaginated]) or to simply underestimate its value (Teather & Carter 2009: 26).

In the end analysis, what could the rationale for any critical museology possibly be, if not to consolidate and advance museum practice—as Shelton himself reiterates several times in his Manifesto? Surely, the identification of problems in our field by means of “rigorous deconstruction and reflexivity” to “develop fresh insights and innovations necessary to ensure the future development of museums” (Shelton 2013: 14) should logically lead to remedial action. If not, do we then fail to uphold professional museum ideals and sidestep the Pledge of Excellence and its related standards urged on every museum by the Alliance of American Museums (2017)?^[ix]

Significance of Critical Museology for Museum Management:

From Shelton's Critical Museology Manifesto:

By comparing management models, which represent the ideal distribution of power and authority within an institution, to their practical implementation it is possible to locate the contradictions and areas of tensions and contestations that play a fundamental role in institutional change and transformation, and that form an **essential part of critical museology** (Shelton 2013: 15) [**emphasis added**].

Besides institutional management—that can be described as the control over the means of museum production—I also would argue that the impact of professional museum organisations' activities and governmental priorities, also are appropriate subjects worthy of critical museology, subsequent dialogue, and serious effort at reform.

For many years, your blogger has been engaged in what I regard as a much-needed analysis of museum workplace tensions and ethical contradictions produced through what can well be argued is the **exploitation** of museum workers by the management of museums as well as the related unheeding approaches of professional museum organisations, to say nothing of imposed governmental "policy"—the latter defined as 'what actual happens on the ground' in our field (Thistle 2017: 9-11; Thistle 2012).

I personally have experienced denial by and more or less strident resistance among leaders of museum professional organisations, some museum directors, as well as other stakeholders regarding my analyses of museum working conditions and their negative impacts on the physical, mental, and social health of museum workers—to say nothing about the damage to our ability to achieve museum goals (see Thistle 2017: 4-5, 7, 8-9, 11-12). Museum leadership has evidenced reluctance even to take the first step in addressing such problems: i.e. to acknowledge that a problem exists (cf. Posen 2013: 68, 73, 321; Edmonson and Detert 2005: 422).

From their large-scale longitudinal research on Canadian workers with quite similar professional and educational characteristics as the museum workforce, Higgins *et al.* (2007: 35, 103) report management's "strong resistance" to dealing directly with the problem of work intensification and stress. In my view it is long past time to apply critical museology to the management of museums and analysis of these institutions as workplaces. Crucially, witness recent intensive discussions arising out of issues involved in young museum professionals and mid-career workers leaving the museum field due to low pay and related overwork (Milldrum 2017; Baldwin 2017; Erdman *et al.* 2017). In many respects, therefore, I believe strongly that, following Shelton (2013: 15, 14), museum management is in dire need of "rigorous deconstruction and reflexivity," dialogue, and "reform."

Role of Metacognition in Critical Museology:

One perspective that I believe strongly is important to emphasise in the theory and practice of critical museology in order to deepen our understanding of what effective "reflexivity"^[x] should be is the concept of "metacognition." My own initial definition given at the outset of this survey is a "higher order thinking skill centred on awareness and analysis of thought processes, actions, and the comprehensive context in museum practice" (Thistle 2014a). The following is a scholarly view.

What is basic to the concept of metacognition is the notion of thinking about one's own thoughts. Those thoughts can be of what one knows (i.e., metacognitive knowledge), **what one is currently doing** (i.e., metacognitive skill), or **what one's current cognitive or affective state is** (i.e., metacognitive experience) [**emphasis added**] (Hacker n.d.).

From my own perspective, what is of utmost importance to strengthen the definition of critical museology is, first and foremost, deliberate “self-reflexive” (Macdonald 1996: 7, 13; Shelton 2013: 18) contemplation about exactly what we museum workers actually are doing day-by-day. The meaning of ‘reflexive’ in the sense of deliberate contemplation must be employed as opposed to the allowed meaning of reflexive as “action performed as a reflex, without conscious thought.” What I believe absolutely necessary is awareness and intentional contemplation of the entire context of our work. *Inter alia*, this needs to incorporate aspects such as i) expectations including professional standards, ii) resources available, as well as iii) the actor’s own physical, mental, family, social, & spiritual health in the context of the workplace.

In the realm of museum workers’ activities, this cannot be accomplished simply from the academic perspective of “skill,” i.e. physical or mental ability, but must be a purposeful deep reflection about the real meanings, consequences, costs/benefits for self and others, and actual outcomes of our work activities. These concepts should be used to clarify the term “reflexivity” used by Shelton (2013: 14, 17, 18), Macdonald (1996: 7, 13) and the term “Critical Reflexive Museum Practice” cited by Teather & Carter (2009: 26). I maintain that “reflexivity” in critical museology and the academic definition of metacognition must go above and beyond knowledge, thoughts, and feelings to include analysis of the entire context of our practice in the museum field.

For example of something I believe museum practitioners need to think deeply about is what impact the ‘love for our work’ has on our over-commitment and tendencies to overwork (cf. Milldrum 2017; Erdman *et al.* 2017) . I believe museum practitioners overwork by default because we are “occupational devotees” who sociologist of work Robert A. Stebbins (2004, ix, 10, 17, 76) explains are engaged with highly challenging, intensely absorbing, and immensely appealing work, engendering high value commitment and rewards of self-actualisation. In the context of such deep commitment to our vocation, we simply overwork ‘on autopilot’ because it is expected by colleagues, management, other stakeholders, and perhaps—most significantly as “occupational devotees”—our own expectations of ourselves.

Indeed, many museum workers likely will recognise the concept of “task saturation,” defined as overwork due to the lack of necessary time, tools, and resources to accomplish the mission posed by James D. Murphy (2000: 130-3; 2008) in his book *Business is Combat: A Fighter Pilot’s Guide to Winning in Modern Business Warfare*. Note that task saturation by other names is often mentioned in the recent on-line discussions surrounding museum workers leaving the field because of low pay coupled with over-the-top overwork expected in our field (Milldrum 2017; Baldwin 2017; Erdman *et al.* 2017).

Task saturation is one of the most serious problems in the military aviation field, with application for many medical and corporate management practitioners. Murphy (a former United States Airforce fighter pilot) explains that, under conditions of task saturation [attempting to juggle too many balls at once], perfectly good pilots [read businessmen—and we also could say museum workers] can fly perfectly good fighter planes and turn them into ‘smoking holes in the ground.’ The problem of having too much work to handle is serious (cf. Posen 2013).

In the museum field, Janes (2009: 64) and Gurian (2004: 19) point to the dysfunctional impacts of overwork (cf. Posen 2013). Museum workers must seriously consider the negative impact of rising expectations, work intensification, task saturation, and time poverty on our physical, mental, family, social, and spiritual lives—to say nothing about our work performance—in the context of our “occupational devotee” love for our work.[\[xi\]](#)

In summary here, if museum practitioners are to work sustainably and help ensure that museums can operate sustainably in a world where—following Janes (2009)—the relevance of museums as institutions ‘in the service of society’ will come increasingly into question because of limited resource availability, critical museology that employs metacognition therefore can become an institution, career, and life saver.

Limits to Critical Museology?

University of Toronto Master of Museum Studies Programme professors Lynn Teather & Jennifer Carter give 2 cautions about working with critical approaches in our field:

First, starting from theory can potentially identify the wrong problem or elements to be researched or tested; even fundamental concepts should be informed by reflection about an actual site. Second, adapting an extreme critical stand can be so destructive that it can in fact block a transformative practice. And this is true of any profession (Teather & Carter 2009: 28).

Frist, surely “starting from theory” is a prerequisite for both social science and critical museology research so as to be able to structure any study effectively and connect it to the existing published research (Hoover 1980: 34).^[xii] Teather & Carter (2009: 26, 28) themselves propose “theory-practice-theory” as the “core” of critical museology. Theory is measured through practice and practice is evaluated by theory with the aim of reciprocal correction.

Indeed, can there be “wrong problems?” Generally in my view, academic freedom should obviate concern here. Any ‘problems’ identified for research of course do need to be carefully examined and they also require analytical “reformulation” in a prior step to proper research hypothesis formulation (Hoover 1980: 33). Once properly evaluated in the preliminary processes of structuring research and if the testing of a theory through research on a specific problem identifies that the initial model is “wrong,” then understanding of the subject is enhanced and other more fruitful avenues of analysis can then be pursued.

As noted above, resistance from professional museum organisation leaders to my own work on museums as workplaces as a ‘waste of my time and energies’ (Thistle 2017: 8) needs to be overcome by claiming an intellectual right to inquiry. No “transformation” in museum practice can be attained in the face of resistance and denial of the evidence. Such barriers to effective change must be overcome as a first step in the adaptive change that Teather & Carter desire in our field.

Second, Teather & Carter present no explanation or evidence supporting the idea that “an extreme critical stand can be so destructive that it can in fact block a transformative practice.” Of course, the meaning of “extreme” is subjective and dependent on the interests of the perceiver. However, if critical museology is by definition “rigorous deconstruction,” “sustained reflexivity,” “critical stance,” “radical”—and even “revolutionary”—should it be precluded by disparagement as “extreme?” Can museum practitioners afford to avoid what Desvallées & Mairesse (2010: 55) refer to as “critical discourse” in museology on the challenges facing museums and their workers in the postmodern world?

I believe free, open, well-informed, rational, and demanding deliberation on the issues in our field is the **only** way to struggle effectively for the survival of museum work in the postmodern world. Reflect on this in light of the recent discussion about racism relating to debate in the United States over how Civil War monuments should be dealt with and interpreted after a ‘white nationalist’ rally clash with its counter-protesters in Charlottesville, VA, USA on 12 August 2017. See the author’s [post](#) and especially the related Comments on this blog.

Serious and concerted critical museology therefore in my view is an absolute necessity to generate dialogue and needed reform in the world of museums.

Stay tuned . . .

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[i] In recent years, my conference session proposals addressing issues of overwork & resulting stress in the museum field have been rejected. See for example the disingenuous response to my "Brainwriting Solutions" session proposal for a conference titled "Inspiring Solutions" for the sole reason given it was judged not to fit the conference theme (Thistle 2016) at <https://alternativecma2016session.wordpress.com/about/> . The late Barry Lord, while president of one of the world's largest museum consulting firms, responded to my panel presentation "Fully Loaded Camels: Addressing Museum Worker Task Saturation" given at the Museum Management session of the University of Toronto Master of Museum Studies programme 40th anniversary conference Taking Stock: Museum Studies and Museum Practices in Canada, Toronto, ON (24 April 2010) by stating categorically that, as information workers, museum practitioners should expect 15-hour work days. See page 5 of my Solving Task Saturation for Museum Workers paper at <http://solvetasksaturation.files.wordpress.com/2013/09/thistle-fully-loaded-camels.pdf> (accessed 11 September 2017); cf. Posen (2013: 65).

[ii] Elaine Heuman Gurian in the book *Institutional Trauma: Major Change in Museums and its Effect on Staff* gives a clear statement of museum corporate responsibility for addressing the overwork problem: "Even if impaired work performance were not the outcome of unabated staff stress, I would proffer another, and perhaps better reason to pay attention to staff needs. If our work in museums is evidence of our collective commitment to enhancing the quality of life for society, then we must be attentive to maintaining a high quality of life for our work community" (Gurian (1995: 20-21; cf. Brumgardt 1995: 70).

[iii] Occasional glimmers of hope for critical museology in journal publications [in what sometimes appears to your blogger as a museum periodical analytical desert] do emerge from time to time. I was extremely pleased recently—not to say astounded—to see the Canadian Museum Association’s journal *Muse* publish an extremely rare example of what I would call “critical museology” in this publication. David Garneau (2015) provides trenchant analyses of what is termed ‘Indigenization’ of museums. As colonial institutions now taking up partnering with Indigenous people & institutions on various projects, many museums still remain “bent on maintaining their colonial status and privileges.” Garneau proposes that “exhibition space be recognized as sovereign Indigenous display territory, or as a neutral (treaty-like) ground, but never as “colonial territory” (Garneau 2015: 30, 32). Strong support of the need for critical museology in this respect is found in Hunter (2017). See another encouraging sign in a subsequent issue of *Muse* that published a challenging critique of institutional presumptions about their ‘neutrality’ in the face of museums’ increasing reliance on corporate funding that also included an accompanying “Response” from a different perspective (Janes 2016).

[iv] For example, one chapter that impressed your blogger is Gaby Porter’s contribution to the Lumley collection identifying the disappointing rarity of questioning about presupposed authority of museum exhibitions in the cross-cultural context (Lumley 1988: 123; cf. Garneau 2015 & Hunter 2017).

[v] Role overload has been reported by 58% of respondents in a sample of 25k Canadian workers possessing similar characteristics to us who work in museums according to Higgins et al. (2007: 9, 10, 143) resulting in debilitating “time poverty” (Schor 1991, xx, 5; Schor 2003, 6-11). I hypothesise that Canadian museum workers likely have a similar proportion experiencing role overload & burnout as found in the research of Dubé (2001) in the province of Quebec, Canada.

[vi] Longitudinal studies over 20 years have found stress levels are increasing and life satisfaction is declining among full-time employed Canadians. Significantly, more than half of the 25,000+ sample consists of knowledge workers, while 60% are classed as professionals (Duxbury and Higgins 2012, 6, 9, 13-14), so closely match the profile of the museum workforce.

[vii] For critical analysis of & solutions to the chronic dilemma in museum practitioner overwork, time poverty, stress, & burnout see the author’s Solving Task Saturation for Museum Worker blog at <https://solvetasksaturation.wordpress.com/> .

[viii] Shelton (2013) is not entirely an easy read & I find it some sections hard to follow. When considering museum theory, many have “complained with some justification that much theory is ‘jargon-ridden’ and difficult to understand” (Silverman & O’Neil 2012:195 as quoted in McCarthy 2016: [not paginated on-line]).

[ix] Without denying the value of professional museum standards, I believe it also is important to apply critical museology to this and related AAM programmes from the perspective of the impact on museum practitioners of the unresourced expectations that are rampant in our field due to constantly rising standards. See the justifications in Thistle (2017: 10-12) & Thistle (2014b: 2, 9).

[x] I have not yet encountered an actual definition of the term “reflexivity” in the literature on critical museology. The on-line Oxford English Dictionary does not define ‘reflexivity’ *per se.*, but simply referring back to ‘reflexive,’ gives the following option “3. (of a method or theory in the social sciences) taking account of itself or of the effect of the personality or presence of the researcher on what is being investigated” at <https://en.oxforddictionaries.com/definition/reflexive> . An *OED* example sentence includes ‘being reflexive . . . requires of us the ability to name the assumptions that guide our practice.’ The on-line Social Research Glossary provides the following among the various irrelevant meanings (focussed only on the data arising from research): “A fourth level is a more complex philosophical one, namely the idea of reflexivity as self awareness (i.e. reflecting back on oneself)” at <http://www.qualityresearchinternational.com/socialresearch/reflexivity.htm> . All this apparently aims chiefly at elements other than the overall material conditions of the situation that I believe strongly are crucial for true “reflexivity” in critical museology. I also have a concern about the use of this term because the OED relates a meaning focussed on “action performed as a reflex, without conscious thought.” Neither metacognition nor necessary “reflexivity” in critical museology can happen without conscious intentional thought.

[xi] Dr. David Posen, author of *Is Work Killing You? A Doctor's Prescription for Treating Workplace Stress* and who has been treating stressed out workers for more than a quarter century, maintains that, in order to avoid physical and mental health problems, workers need to monitor their level of stress and take remedial action when their productivity and non-work life begins to suffer (Posen 2013: 91-92).

[xii] Despite disapproval by senior staff of various professional museum organisations and other stakeholders in the field, if I identify published evidence that the postmodern world of work is characterised by growing pressures to work intensification & resulting stress (Posen 2013; Duxbury & Higgins 2012: 90 *passim*) & there are related findings in the working experience of museum practitioners who possess similar characteristics to the previous studies’ samples (Sullivan 2015; Dubé 2001: 8-9), surely critical analysis of museum working conditions is valid & justified.

You can access Paul’s Blog at:

<https://miscellaneousmuseology.wordpress.com/about-critical-museology-miscellanea/>



“Let’s Travel back to London’s Vauxhall Gardens”

By

Dr. Martha Benn Macdonald

For about twenty years, about 1744-1764, Thomas Arne, later awarded the title of Dr. Arne, was the musical director at London’s Vauxhall Gardens, a resort or pleasure garden where visitors enjoyed fine dining, strolling, flower gardens, and music, among other delights, just as they had at Marylebone Gardens and Ranelagh Gardens.

Because many of us seek something different, let’s turn back the keys of our old grandfather clocks or wave a magical scythe and travel back in time to London’s Vauxhall Gardens, perhaps the most enchanting and inviting of the gardens simply because the proprietors featured stairs descending to the River Thames (“Sweet Thames run softly ‘til I end my song,” to wit words of Edmund Spenser who died on January 16, 1599), boating, picnic suppers, and they allowed children to play, in addition to offering musical concerts, dancing, sculpture, lodging, games, and cards. Who wouldn’t want to visit there, albeit through the powers of the imagination?

Because Thomas Arne was baptized a Roman Catholic, he was not allowed to perform on the organ in certain churches, but he was at liberty to play the organ and entertain in Vauxhall Gardens and other venues and bring his entourage of vocalists and instrumentalists. In the early days he brought his wife, Cecilia Young Arne, who sang soprano to Vauxhall; along with his mistress, Charlotte Brent (this liaison occurred when Arne and his wife were temporarily estranged); his younger sister, Susannah Maria Arne Cibber, for whom he and George Frederic Handel wrote a number of vocal selections (she was a vocalist and an actress); and his younger brother, Richard.

During this time, Arne composed the music for songs from Shakespeare’s plays, as well as oratorios, operas, and masques. To experience the joy and pleasure of Vauxhall Gardens, look at one of Antonio Canaletto’s paintings, *** and imagine yourself enjoying refreshments, music, and flowers. Hopefully (yes?), someone who enjoys lyrics would treasure hearing Arne’s tunes such as “Under the Greenwood Tree” and “When Daisies Pied” from Shakespeare’s *As You Like It*, along with a host of other melodies, as well as operas, oratorios, and masques. Hearing “Rule Britannia” from an early masque, *Alfred*, for which Arne had written the music, would have been glorious. Susannah sang the role of the spirit of Pallas. To enrich this imaginary tour, you might find these selections on the ever- inviting You-Tube.

Why consider an imaginary tour of an eighteenth-century garden? Sometimes, it is simply engaging to look at the past and learn. Knowing that Marylebone Gardens in the 18th century stood on what was once Henry VIII's hunting Lodge and later the site of two bowling green and a tavern near a country estate is intriguing, our minds at once imagining the hunt scene, perhaps a mug of ale in a tavern, and so forth, we might slow down our rapid heartbeats and appreciate various leisurely activities of the past. What do you think?

And wonder if visitors at Vauxhall Gardens ever enjoyed almond cheesecake which was allegedly served at Marylebone Gardens? You might enjoy sampling the following adaptation of Almond Cheesecake.

To make a crust, mash together $\frac{1}{4}$ cup of cookie crumbs (your choice) and two ounces of melted butter.

Press this blend into a buttered pie plate, about eight inches.

Preheat oven to 325 degrees.

Blend together 8 ounces of cream cheese, $\frac{1}{2}$ cup of light brown or white sugar, one Tablespoon lemon juice, a little grated lemon rind, pinch of salt, and $\frac{1}{2}$ teaspoon almond flavoring. Beat in eggs, one at a time, and fold in about one half cup crushed almonds. Bake about thirty minutes. Remove from oven, and mix topping (below).

Mix one cup sour cream, two tablespoons of sugar, $\frac{1}{2}$ teaspoon vanilla or almond flavoring, and spoon over cheese cake. Return to oven for about ten minutes. Cool, and chill for several hours.

Dr. Martha Macdonald

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and performer.*

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Vauxhall Gardens



Photo courtesy of daveynin / Flickr

Calling All Young People: Interpretation *Is* a Career

*Chris Brusatte,
Interpretive Planner at
[Taylor Studios, Inc.](#)*

Tell me if this sounds familiar. A young person loves history or nature. Growing up, they are told that they can only make a career out of it by teaching or by becoming a PhD-level historian or scientist. They grow disillusioned, feeling that there are so few options to turn their passion into a career. All along, they do not realize that an exciting and unique opportunity is out there – that of professional interpretation.

My story runs along these lines. In high school and college, I developed a deep love for history. But at the same time, I realized that I didn't have the same passion for the classroom setting or for high-level academic publication. I wanted to share my love for history in a more informal setting, a more creative setting, and in a way that would reach the general public. What I wanted, although I didn't realize it at first, was a career in professional interpretation.

I was one of the lucky ones. By my junior year of college, I had stumbled across the field of interpretation. It may sound laughably basic, but I first had to simply learn that it existed. Then, once I realized that such a career was possible, I sought more information and then internships in the field to make sure that it was the right fit. But even by the time that I had completed a graduate degree in the field and secured my first jobs, most of my friends and family still expressed complete surprise that such a career path existed.

Making Ourselves Known

How wonderful would it be if such surprise was the exception rather than the rule? But unfortunately, we in the interpretive field must admit that most people still do not know that our profession exists. This is not too horrible for us – we do not need any ego boosting. But for all of the young people out there interested in history, nature, and similar topics, this is a big problem. How many young people each year give up their true passion to find a job that is less ideal (and perhaps even downright boring!), not knowing that there is a career out there that caters to their interests?

We are fortunate enough to have discovered the field of professional interpretation – and it is our duty to let others know that this opportunity exists. This will benefit us as well, as more talented and skilled people join our ranks and bring fresh ideas. But what are the best ways to “make ourselves known,” and to let young people discover that our field exists? Here are a few simple ways.

Teach & Inform

This is perhaps very simple, but we don't do it enough: we need to tell people that our career exists. We need to teach and inform them that our profession is out there, ready and waiting for a new influx of young minds. These efforts do not even have to be formal – at the end of our programs and during sidelines conversations at our sites' events, we should make it a point of telling our visitors that they too can do what we do. We should tell the young people who visit our site that Interpretation and Museum Studies programs are creeping up at colleges in every state. We should engage in small-talk conversations about the “life of an interpreter,” what we do, and why we love it. These actions might seem simple – and many of us are already doing them – but they do wonders in letting the public know that our field exists. And the more people who know we exist, the more children and young adults who know about interpretation as a possible career option.

Programming

Our programming can provide another way to make our profession known, again with minimal resources. What if every nature site dedicated a specific program to teaching young people about the role of the interpretive ranger? Or what if every museum conducted a program that gave a “behind-the-scenes” look at exhibition development, writing, and curation? Every person in attendance would learn that careers in interpretation exist, and a few might even catch the “spark” and pursue such a path. Some nature centers, museums, and other sites are already offering such programs, but the vast majority still do not have these.

Training & Internships

This is something that we do well. Perhaps the best way to make people aware of – and ready for – our career is by offering training and internships. Not only do young people get first-hand proof that jobs in our field exist, but they also acquire the skills and expertise needed to pursue these jobs. Museums in particular provide stellar internship opportunities. In fact, it was one such summer internship during college that made me aware of interpretation as a professional career. But we can always do better – our sites should push to expand our internship programs to include more interns if possible. Again, if feasible, we should provide stipends and financial help that would allow youth of all socioeconomic backgrounds to pursue internships.

Venture Forth

Finally, we should make it a point to venture forth beyond our bubbles – that is, reach as many people as we can outside the walls of our museums and beyond the boundaries of our parks. Almost every college, and indeed many high schools, have some type of career fair. How much effort would it be to simply show up and represent your site – and, in doing so, represent the interpretive field in general? Many schools also offer opportunities for guest speakers in their classrooms, and many teachers would love to have someone from a park or a museum visit their students and tell them about their careers. It definitely takes a little extra effort, but outreach like this pays extreme dividends. My boss at Taylor Studios, Betty Brennan, has made it a point to go out into the community and tell young people about the work that we do. More and more, people know who we are and that they could follow a similar career path. Regardless of how you do it, the main point is *to do it*. Speak up, talk to others, simply inform them that our profession exists. Reach out to youth in your community, telling them about your job and what your site or organization does. Offer – and help guide – interns and volunteers hoping to gain experience in professional interpretation. Show up at career fairs and at local schools. More than anything, be proud of what you do and share your passion with others. Your love of history or of nature might ignite their own interests – and illuminate the fact that these passions can easily be turned into a career.



Some Interpretive Notes on the Ponderous Boring Beetle (*ergates spiculatus*).

Rod Burns

InterpNews Regional Editor.

Ponderous Boring Beetle (*ergates spiculatus*). They live in the remaining /standing trunks of old growth trees, favouring Douglas Fir. They burrow through the ancient wood for about 3 years before pupating then metamorphosing into their adult stage.

One can conclude that on Quadra Island, indeed along the total B.C. coast, with the almost 95% eradication of valley bottom forests and the collapse of the remaining ancient trunks, that finding a place to have a family for these Beetles has become very tenuous.

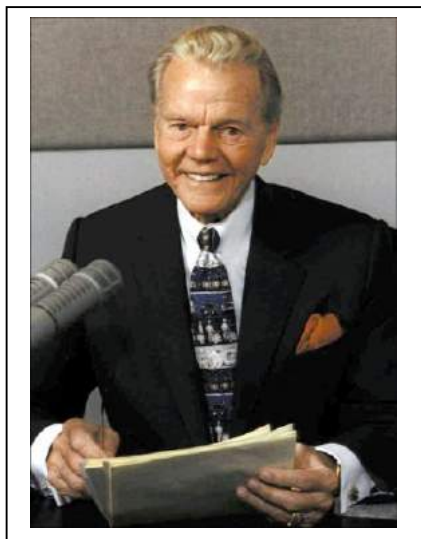
There is a strange irony, that in 2018, the same story of habitat loss accompanied by the stresses of finding a place to live for the “human species” globally and locally, somewhat mirrors that of the Ponderous Beetle.

From Webster Thesaurus, ponderous synonyms are burdensome, trying, gloomy, serious, and cumbersome)

Rod Burns



Photo credits: Larvae and ruler Rod Burns;
adult beetle and foot, from Google / Ponderous / Photo gallery
beetle in hand taken from Google / Ponderous / Photo gallery



Paul Harvey and “The Rest of the Story” –

My reflections on my early contact with true interpretive story telling.

John Veverka

*Director, Heritage Interpretation Training Center
Interpretive Writing Coach/Contractor*

A long time ago – I guess that would be the 1950’s, when I was in grade school and coming home for lunch, my grandmother would have my lunch ready for me (my parents both worked), and have the radio on. On the radio I would listen to “Paul Harvey and the Rest of the Story”. There were engaging and masterful stories that I later realized were based on Tilden’s Interpretive Principles – Provoke, Relate and Reveal. I wouldn’t have imagined back then that my future career (now into its 40th year), would be based in large part on just how Paul Harvey constructed his stories, painted a picture with his words, and held onto his listeners for the “rest of the story” reveal. His “rest of the stories” are probably the best interpretive writing, and storytelling examples, you will ever hear or read.

Years later working on my PhD in interpretation at Michigan State University and teaching the introductory and advanced interpretation courses there, one of my textbooks (besides Tilden) was Paul Harvey’s Rest of the Stories. You can still buy these books today – check out Paul Harvey Rest of the Stories on Yahoo or Amazon. You can also buy a video/DVD of him doing his story telling. Paul Harvey died in 2009, but his stories linger on. If you do any form of interpretive training for your staff or seasonal interpreters, this is a resource you need to have to illustrate what real excellence is in heritage interpretation. His work is also one of the resources for my Interpretive Writing courses I teach through the Heritage Interpretation Training Center. http://www.heritageinterp.com/interpretive_writing_course.html

Here is one of my handouts for the writing course. Can you find the provoke, relate and reveal elements, and a theme? Can you identify the learning, behavioral and emotional objectives of the piece? Are you ready to try “The Rest of the Story?” approach for your own interpretation? Give it a try.

Willem's Passion

More than anything, Willem wanted to be an evangelist. He was only twenty-five, a century ago, but already he's been an art dealer, language teacher, bookseller... and unsuccessful in love.

But more than all the paintings and all the words and all the books and all the women, Willem wanted to devote himself to his fellow man, and the Word of God.

It was this passion that brought young Willem, in the spring of 1879, to the coal fields of southern Belgium. It was there, in a little mining town, that Willem outlined "the rest of the story" on the back of a faded envelope.

Perhaps it was the young minister's total selflessness that first captured the respect of the miners in that tiny Borinage community. In a mine disaster sores of the villagers were injured and no one fought harder to save them than he.

Every Sunday they overflowed Willem's services to hear this unassuming man preach the literal Word of God. And then lightning struck.

A visiting church official discovered Willem living in a simple hut, dressed in an old soldier's oat and trousers made of sacking. When he asked Willem what he had done with his salary, Willem answered simply that he'd given it to the miners.

The church official told Willem that he looked more miserable than the people he taught. Willem was dismissed from the service of the church that day. He was devastated. The career that had meant everything was suddenly gone. There followed weeks of despair.

Then one afternoon, Willem noticed an old miner. He was beneath the enormous weight of a full sack of coal. In that instant, Willem again felt the desperation of these people - and recognized that it would always be his own.

Fumbling through his pockets, the Dutchman pulled out a tattered envelope... and then a pencil... and began to sketch crude ones, but he tried over and over again.

Beginning that day Willem was to capture for the world the torment, triumph, and dignity of the people he loved.

If Willem had failed as a minister, there was now a new passion...a new purpose.

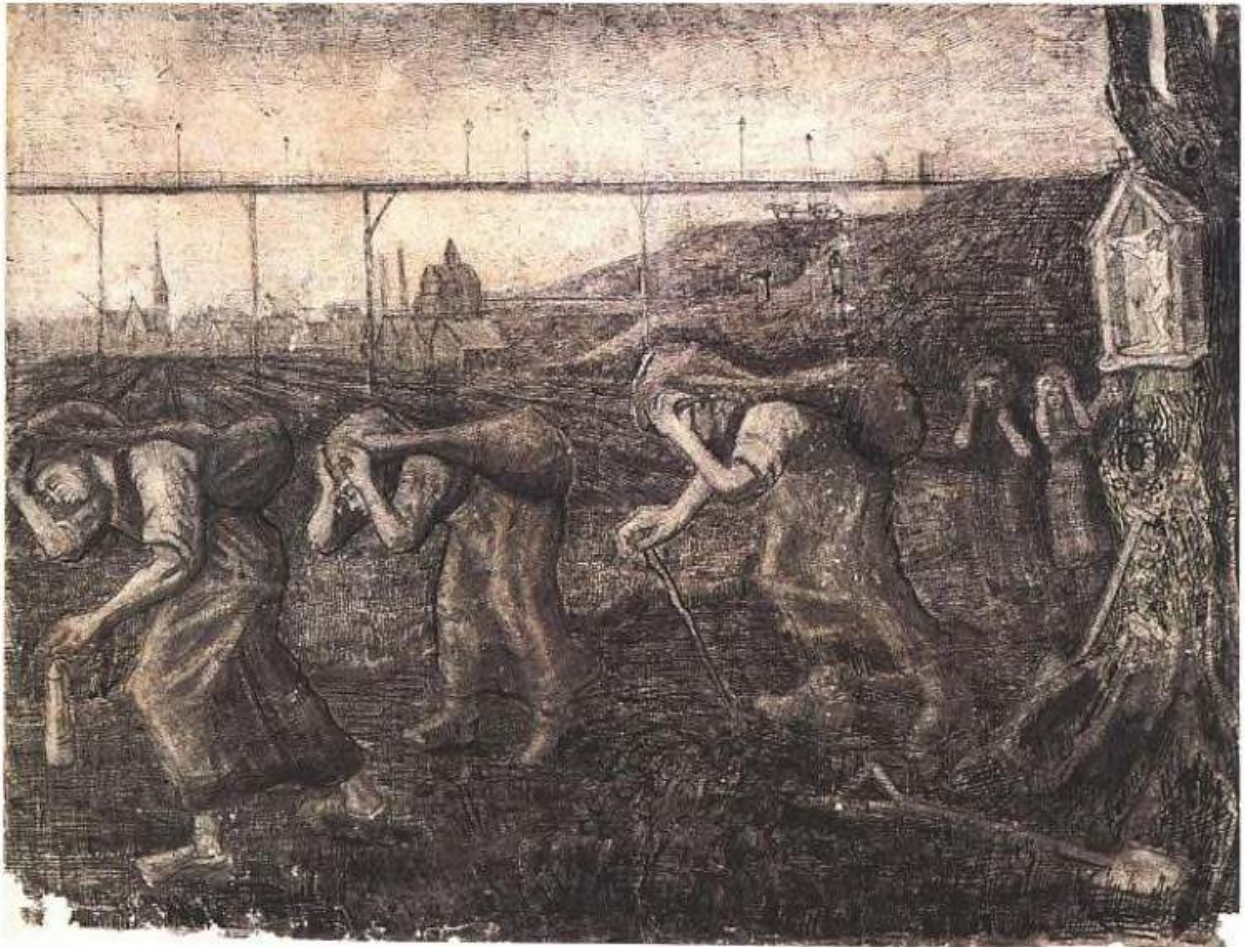
And the people he was not allowed to teach, he was able to reach through art. In the process he immortalized them...and they him.

For the end of Willem's career as a clergyman motivated a ministry more monumental than he had ever dreamed.

Because the preacher, who wasn't to be, became the artist the world would know... as Vincent Willem van Gogh.

So now you know the "rest of the story" about this amazing artist.

(From example of artist interpretation from *Paul Harvey's Rest of the Story*).



Paul Harvey Aurandt (September 4, 1918 – February 28, 2009), better known as **Paul Harvey**, was an American radio broadcaster for the ABC Radio Networks.^[1] He broadcast *News and Comment* on weekday mornings and mid-days, and at noon on Saturdays, as well as his famous *The Rest of the Story* segments. From 1952 through 2008, Harvey's programs reached as many as 24 million people a week. *Paul Harvey News* was carried on 1,200 radio stations, 400 Armed Forces Network stations and 300 newspapers.

Want to hear some "Rest of the Stories"? Just Google "Paul Harvey YouTube Videos. JV

Playing History.

Peter Hood
Director "*Pastpresent*"



I used to be a teacher but maybe I'm better now! Actually I am not so sure.

As a child I learned stories from our family history back to the 1745 Jacobite rebellion, went exploring historic sites and loved to read about the past. GA Henty was a regular part of my reading list..WE Johns and Biggles never really appealed. So not surprisingly I studied History, also Geography as I saw the two as inseparable. But, after a short period of formal teaching, my paths were to lead elsewhere and eventually to being a project manager of a £2.4m regeneration project which involved creating a 17th century Heritage Centre and restoring a Victorian Pannier Market, then on to Regional Learning and Interpretation Officer for the National Trust; before finally going freelance.

So what is Playing History?

For me it is exploring our past through costumed characters from history.

Why ?

Because for me History is people in a time and place -people make history and history makes us.

And How?

Through discovering by research in every way about a reality of living in the past and the people there. Then using that knowledge, experience, costume and artefacts to present characters from the past.

Now the big question Who?

Do you choose the great and famous about whom much is known and about whom your audience will have their own views. Or choose someone less well known which, perhaps, gives more scope for creativity in interpretation. Or do you go for the unknown, un-named, the true history makers. If you choose a famous person do you play him/her or do look at them through the worms eye view of a person working for them? Additionally it maybe the location that is the driving imperative which selects for you the who and when.

The majority of the characters I play have strong local associations, since to play someone where they lived is an immediate hook to link with the audience (and sometimes a certain frisson too). But equally there are many other reasons, such as the message they can bring to the present, reflecting that some things change little but others significantly.

Thus I have presented two rather different views of Sir Francis Drake, challenging our heroic image. As **the father of Mary Newman, Drake's first wife**, presented in their own home in Saltash, I saw him in his younger days.

"Of a truth, Drake was not the first choice I would have chosen for her. He was a rough sailor and not even a captain when they met. I had my doubts about his religious beliefs too but he did bring her wealth before she died. Mind he's married above his station now".



After the Armada, in 1589 Drake spectacularly failed to destroy the remnant of the Spanish ships back in Lisbon and lost men and ships belonging to the Queen, bringing back no plunder. He came within an inch of being put in the Tower and possibly executed. In a project at Buckland Abbey called 'Talking with Ghosts' I worked as part of a team representing Drake's household staff, who were facing loss of lively-hood, amongst other things, if he were imprisoned. As **Steward of his Plymouth properties** and as an ex-soldier I could provide a rather more negative angle, knowing somewhat of his dealings in Plymouth.

“ Know this then, he lost nigh on 8,000 men from Sir John Norris' army by his failure at Lisbon –. He landed them far from the city, on a lee shore and then left them to die ashore. Whilst he wandered about seeking plunder, failing, before coming back in his own good time to rescue them ”

Thus my character provided more of a worm's eye view. In a strange turn this was to lead to a further development as a Murder Mystery! In both Ghosts and the Murder Mystery Jen, my wife, played the role of Lady's Maid to Drake's wife based on the lost navigation papers from his voyage in the region of California.

Interestingly, Drake's path crosses with another character **Sir Richard Grenville**, who again I have played both as himself (briefly) and as viewed by **a soldier who went on his attempt to colonise Virginia**. As the latter I had been tempted to desert the colony and been brought home by Drake just before Grenville brought a re-supply ship a few days later. Given that the journey from Devon to Virginia could take upto 3 months, all sorts of questions are opened as to why they left and Drake's motive in offering passage home.. In the process the research led deep into the ships, expedition logistics and navigation skills of the Tudor period.

Whilst researching Grenville's life I discovered something he had in common with another N.Devon famous character who contributed significantly to our history – George Monck – the man who played a crucial role in the restoration of Monarchy .

Grenville as a young man in his teens went to the Inns of Court in London to widen his education. Whilst there he quarrelled and killed another student with his sword. Luckily he was pardoned for this, maybe because of family connections and because he went into hiding and was unavailable to answer any charges. It did not stop him entering Parliament in his twenties – perhaps it was this raw strength of character that led to the last fight of the Revenge.

Monck too was involved in 'teenage knife crime' when he, his brother and 2 friends went in search of the Under Sheriff of Devon for dishonouring his family. In this case the Under Sheriff had accepted a bribe not to arrest Monck's father when he went to meet Charles 1 on his visit to Devon in 1626, but reneged on the deal! When they met up with him and his friends a fight ensued and Monck ran him through when he attempted to escape through a window. Luckily for Monck the man survived and so no charges were brought, although the Under Sheriff did die within a few months but by then Monck was safely soldiering abroad. I now play **Monck**, and Jen plays **Nan Clarges his wife**, who had been his 'laundress' when imprisoned in the Tower of London and was considered below his status, especially after his elevation to Duke of Albermarle. It is at the end of his life and he is deciding what to tell his chaplain who is writing his biography. This role has been played in his old house at Potheridge, under the wonderful wooden fire over mantel with its carvings of his life including a fine pair of female buttocks – a not so oblique reference to Nan I suspect. But we have also played this else where, which involves taking screens, furniture and props with us. Thus a whole range of questions arise as he sees some things somewhat differently in his own time than hindsight does today. As an aside, he too was linked indirectly to both Drake and Granville as he was a named shareholder in the Carolina company where Roanoke was and has a sound named after him



A rather less known character, again played where he had lived and worked, was **Bartholomew Read** who was a glover in the mid seventh century in Tewkesbury. 'Out of the Hat' was an Heritage Lottery Fund funded project to restore the 17th century building and create a museum with in it. To celebrate it's opening we were asked to play Read and his wife. He was an ardent Parliamentarian and Puritan. But beyond that detailed research proved limited in terms of direct biographical information, but required a significant amount on his trade. So to present him in his original home and shop I needed to recreate the tools and learn the skills, so as to make gloves whilst playing him, it was one of the more challenging roles. Equally his political leanings were opposite to most of the characters I portray and his world view very different too, so a complete change of mind set was essential.



My favourite role of a known person is that of **Sir John Arundel**, nicknamed 'John for the King'. He was famous as the septuagenarian who held Pendennis castle from March to August in 1646 and it was the last Royalist Castle in England to surrender to Parliament, but only when he had run out of food. He lived at Trerice near Newquay, now a National Trust property. I have played Sir John in both locations - in the former as a determined, servant of the King who stands by his oath of loyalty come what may, and in the later post war as a still staunch royalist but tempered by the death of his wife and one son as a result of the war, the exile of another son, the death of his daughter's husband at the siege of Bristol; and above all the harrowing experience of the siege. For the latter role, his Will provided so much to work with, on top of his life history.

When creating the role at Trerice I was able, using the Will, to identify his 'cousin' who was also his housekeeper after his wife's death in 46, which in turn created a role for Jen. But on one occasion by also including another cousin from Truro and her husband named therein, we created a larger presentation, allowing different views to be expressed in the period post the execution of the king. Playing him in both locations also appealed to Cornish identity too!!

There are three characters of pure imaginary creation but based on research of everyday life and times, religion, politics. These are an archer who fought at Poitiers 1356, a taverner in the late Wars of the Roses period 1470s, and a seventeenth century ex soldier 1650s. All of these are worm's eye view of life and times, and are generic in the sense of assembling pieces from many sources to create their feelings, their skills and their world view. Each has a particular story to tell and provide windows on their times, but equally each addressing issues that have parallels today

-**The Musketeer**, black powder engrained in his hand, deaf from explosions, who does he really support in the late wars? He's seen the country, served in High Germany in what we now call the 30 Years War, does he really accept the current changes in government and church? Given my own age it allows me to place him within the broader period of the first half on the 17th century.

-**The Taverner** , bombard (a large leather jug) in hand, game on the table and maybe some money hidden away. Where did he get it, what's his past, do you trust him at dice? He tells a good tale but did he acquire that silver chalice fairly?

-**The Archer** - Hero or Villain? What did he do when not fighting for his Lord and the King? Why was he happy to give up the exciting life of foreign travel and potential wealth to return to be Piers the Ploughman? Indeed why did he leave in the first place – was he called up or did he escape justice as the muster roles might indicate?



So where do we start with all of these. First there is the research through original documents such as wills or the muster rolls of both the medieval period and 16/17th centuries, or even medieval cookery manuscripts! Then more recent published histories and biographies, articles in journals and archaeological reports. Visiting museums and locations where they may have been.

Then discovering the life around them through practical or experiential archaeology such as using the navigation equipment, sewing a glove, using both bow and musket, and cooking from period recipes' using replica artefacts.

Finally there are clothing and specific artefacts that need to be made or acquired. In the case of clothing we always endeavour to use original patterns and authentic materials, which almost always means we have to make our own. Artefacts maybe bought, borrowed or made or, in the case of the Astrolabe, traded for in exchange for a 17th century black linen suit plus white linen shirt made to measure for a friend in Portugal!

Language too is an issue. If the Archer or Taverner were to use Chaucerian English very few would understand us. Later periods allow us to use the English of Shakespeare and the King James Bible. Where the words may be unusual I will often include an interpretation using – *as ye might say*..... So for the earlier period we use the same language but bring in period specific terms and perhaps explain them in a roundabout way with an illustrative example.

This also raises the style we use. When possible we use 1st person – in other words in character pure and simple. We recognise nothing beyond our own period. It is only after a presentation that we come out of character and respond to modern questions. There is, what is sometimes referred to as second person or ghost interpretation, that allows limited recognition of the time changes between us and our audience. In such a situation I might remove my hat to show I am out of character and recognise the modern context. Third person is where we do not play in character simply using costume and artefacts as hooks and to illustrate a period of history.

With all of these roles an outline script is developed. This is not so much a formal script with speeches but rather the themes to be explored against the times, what is know of the person and the location and audience. This can lead down interesting paths such as the teenage knife crime mentioned earlier, but always trying to look at their world through eyes that see a very different one to our own. Perhaps that is the hardest aspect of this type of work, translating oneself into a totally different world yet in a way that allows one's audience to find opportunities to relate to them and their times.

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Old Phoenix

**“Responses,
Or *What You Will*, to Use an
Alternative Title as in a Restoration
or 18th-century Comedy”.**

By Dr. Martha Benn Macdonald

After reading titles for articles, articles, and what amounted to a white board on the first few pages of *Legacy (DIALOGUE, The future of STANDARD INTERPRETATION: WHERE DO WE GO FROM HERE?* (hope I got that right) of the future of interpretation, I found myself tossing some comments aside, e.g., engaging youth, motivating youth of color, and empowering youth, but finding real value in others, in particular, “exploring inner interpretations (letting people find their own meanings in our places and histories)” and LaPage’s “We are the open book, the open mind, the open heart. Interpreters have but one agenda: to share” because, after all, these notions seem to encompass every idea posed. Jay Miller’s title, “Like the Mythical Phoenix, the Future Arises from Our Past,” was inviting.

Indeed, as interpreters, wherever we are, we cannot exclude elders any more than we can exclude young people. Interpretation needs to be intergenerational; needs to include all cultures, sexualities, races, religions; needs to include the arts; needs to be my story, your story, his/her/its story/our story/your story/their story (all the personal pronouns!), and more. Interpretation does not need to be totally digital. Social media to advertise is fine. But to insist on technology for a lot of interpretations seems gimmicky. Whatever resonates between the interpreter’s story and the audience is interpretation. It is not simply facts, stated or digital, spouted out, and it is not a power point.

When I read Miller’s title, I immediately thought of Eudora Welty’s beloved short story, “A Worn Path” and the main character, Old Phoenix, a black woman who is probably 80 years old, if not older, and who must rise (and does), like the mythical bird, from her own ashes to create. Why? She has to get the medicine for her grandson. How does she rise? She has this inner motivation/mission, a keen sense of humor, and an amazingly contemporary view for someone her age. Of all people, she has a right to feel entitled. She is of color, she was denied an education, and she suffers from extreme poverty. When I have asked college students if they enjoyed the story, the response is sadly typical each semester: “No, it’s just a story about an old black woman who has Alzheimer’s.” “Really?” I ask. “What suggests Alzheimer’s?” One student meekly raises her hand and answers, “Well, she’s like my grandma who’s in the nursing home because she can’t remember.” There’s one scene in the story when Old Phoenix forgets and feels addled, and that is probably from fatigue and hunger. After all, she has walked many miles through the woods from her home on a cold day in December to the doctor’s office where the receptionist is disgustingly condescending. She says, “A charity case, I suppose,” then a minute later, “Speak up, Grandma. What’s your name? We must have your history, you know. Have you been here before? What seems to be the trouble with you? Are you deaf?” No receptionist should have gotten away with that. Right?



"A Worn Path" and the main character. Old Phoenix.

A strong believer in collaborative learning, I divide the class into groups and ask the students a few questions. This approach illustrates what someone wishes for in interpretation: "more listening, less explanation. Let people find their own meanings in our places and histories." The groups discuss the character's mission and motivation (medicine for her grandson who once swallowed lye), Phoenix' sense of humor (when, for example, she dances with the scarecrow in the middle of an abandoned cornfield and laughs as she chats with this creature, and she steals a nickel), and her awareness of changes in society (or her hopes for an openness between the races. It happens when she asks an older white "lady," as Welty describes the character, to tie her shoes. The white lady graciously does. The students, in analyzing the story, come to find meaning by what resonates within them. It's sort of like the comment on the paginated whiteboard in the January issue: "provide choice in learning and opportunities for participants to be co-creators of knowledge. Engage and build understanding together."

I have found myself wondering if this story could serve as a backdrop for a real interpretation. It would be a marvelous opportunity for an interpretation commemorating Black History Month. Sadly, many old black women probably had to trudge through the woods of necessity---a job, something from a nearby farm, and something in the village. We have the setting: the woods, perhaps a crumbling cabin in the distance. Invite your audience to gather there, and use Dr. Veverka's "provoke, relate, and reveal" to get your audience involved.

As the interpreter, get your audience's attention by briefly identifying Old Phoenix. This is the PROVOKE. (Phoenix Jackson could, in fact, be an archetype for someone who has remained on a plantation long after the Civil War was over). Ask your audience how they might feel. Then, move into the RELATE section. You might talk about the character's coping mechanisms (her mission which, of course, drives her, her humor, and her openness when she speaks to the "white lady" in Natchez. Then ask your audience what other coping mechanisms people in Phoenix' situations have. These questions get them involved, for there is no right or wrong answer. You could be your own visual if you enact the part of Old Phoenix dancing with the scarecrow and engaging him in conversation (you might ask if all scarecrows☺--a talking point-- were male---and have a short dialogue about that---a significant moment, an epiphany. That would be fun. You could have a scarecrow, and involve the audience by giving someone the kind of clothing Phoenix was wearing.----"She wore a dark striped dress reaching down to her shoe tops, and an equally long apron of bleached sugar sacks, with a full pocket." To be sure, interpreters need a purpose, a mission, and they need humor. Even if it is not for an interpretation, we may all learn from Phoenix.

It was December---a bright frozen day in the early morning. Far out in the country there was an old Negro woman with her head tied in a red rag, coming along a path Through the pinewoods. Her name was Phoenix Jackson. She was very old and small and she walked slowly in the dark pine shadows, moving a little from side to side in her steps, with the balanced Heaviness and lightness of a pendulum in a grandfather clock. She carried a thin, small cane made from an umbrella, and with this she kept tapping the frozen earth in front of her. This made a grave and persistent noise in the still air, that seemed meditative like the chirping of a solitary little bird.

Interpretation is a learning journey, certainly not one that requires a power point, however. Perhaps studying Phoenix's strategies (mission, humor, openness, and, yes, inventiveness (making that cane from an umbrella☺-another talking point) would "provide choice in learning and opportunities for participants to be co-creators of knowledge . . . engage and build understanding together" and "we are the open book, the open mind, the open heart...We share." In sharing, we begin a conversation with others to discover, understand. Finally, the REVEAL comes at the end when you talk about the importance of Phoenix' role (the importance of whom she represents---why we should remember these people). I can see this interpretation near the remains of any historic setting you are trying to preserve. By motivating your audience to appreciate people such as Phoenix, you might find participants making contribution to that old slave cabin way in the woods, as it were.

If you do not use this story, you might find another one which you could connect with a site, an artifact, or a person you want to interpret. I enjoyed the January magazine.

Our setting for this interpretation of a mythical idea could be a woods.

So why might we interpret Old Phoenix? Do you think determination, humor, and a contemporary approach may encourage you to deal with problems and/or consider interpretation: "the future arising from our past." Old Phoenix' future and that of her grandson will only occur if she arises, like the mythical bird. Perhaps Interpretation may as well.

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Memo to Interpreters: You're communicating a lot more than you think!

*Ron Kley
InterpNEWS
Regional Editor*

I'd like to believe that all of us in the interpretation field are doing what we do because of our enthusiasm for our subject matter and for the satisfactions of communicating that interest along with some elements of factual information. Okay...some of our colleagues may be interpreting mainly because it pays the rent and buys the groceries, but I hope that the more idealistic motives will eventually take root in them as well, because interpreting can become a chore and a bore if your heart isn't in it.

Even those who interpret for all the right reasons and in a subject area of genuine personal interest seldom realize how much more than "mere" information they are communicating every day and to every visitor. Every interpreter, consciously or not, is conveying a spectrum of attitudes and predispositions regarding subject matter, regarding the discipline(s) that generate, refine and update that subject matter, and regarding respect (or lack of it) for the spectrum of humanity reached and (hopefully) served by their interpretation.

The most factually correct and smoothly delivered interpretation may have a negative impact if it's presented by someone who projects a lack or personal enthusiasm, demonstrates an inability to connect with an audience (of one, or a hundred) or (even worse) harbors an ill-concealed contempt for the visitor by virtue of greater knowledge, superior education or any number of other manifestations of a "better than thou" aloofness.

As Groucho Marx was fond of saying, "the opposite is also true." I have seen, heard and (I hope) provided interpretations that have sent visitors away not only knowing more, not only pondering new ideas, but actually feeling better about themselves and about their place in the world.

I've seen elderly folks perk up because I found a way to tap into the reservoir of their personal experience, by acknowledging that understandings in every field evolve over time, and asking how some of their own understandings, like mine, have changed since they were young. The visitors immediately became engaged as active participants in the interpretive process and not merely as passive consumers. And yes, I also learned a few things I hadn't known before.

I recall an instance when, as a newly-minted “visitor services” staff member, I was guiding a three-generation family group through an exhibit representing the industrial history of Maine. I mentioned the basic functions and the economic significance of a 19th century power loom on display – only to have the eldest member of the group chime in to say that he had personally worked for years as a “loom fixer” in a cotton mill filled with just such machines – and for the next several minutes the interpretation was almost magically transformed from a third-person commentary by a “book-learned” docent to a first-person narrative by a real live “been there and done that” expert. “Grandpa” walked away with the justifiable air of an “authority.” His two grandchildren (and their parents) looked as though they had just discovered a hero in their midst; and to this day I can recall some of the arcane facts that only a retired loom fixer might know about the Crompton & Knowles W3 power loom.

I’ve seen kids from deplorable home and neighborhood environments stand a little taller when an adult shows a genuine interest in them and addresses them with respect, and when they encounter the unfamiliar experience of having someone speak to them with courtesy, without sarcasm, in full sentences not laced with expletives. We can probably never hope to measure the degree to which our visitors are influenced as much, or more, by our attitudes toward them as by whatever information and ideas we think we’re conveying.

It’s no exaggeration to say that we have opportunities to change the life of every person we come in contact with in our roles as interpreters – in ways that may have nothing whatsoever to do with the subject matter that we communicate. We’ll probably never know how or if those contacts have made any difference, and there will be days when we may doubt whether anything that we say or do in our interpretive role has any positive impact. But it can!

I’d enjoy hearing (ronkley@juno.com) from interpreters who recall instances in which they’ve managed to connect with an individual or a group on a level that supplements and even transcends the factual information being presented. The collected recollections might make an interesting article for a future issue of InterpNEWS. I’d also love to hear about techniques that our colleagues have used to sharpen their ability to “tune in” to visitors’ personal interests or cultural/attitudinal “baggage” in ways that can facilitate the transmission of information, understandings, curiosity, self-respect and more.

Until next time...

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Advocating for Public Lands and the US Army Corps of Engineers Natural Resources Management Program.

*By
Nancy Rogers
Board Member
The Corps Foundation*

“If you’re not at the table, you’re on the menu”- Former Interior Secretary, Sally Jewel.

Secretary Jewel’s remarks at the 2017 Outdoor Retailer’s Market in Salt Lake City this past July were both urgent and profound, especially with regard for the US Army Corps of Engineers and its Natural Resources Management (NRM) Program. Heather Burke and I were fortunate to attend the Market on behalf of USACE and the Corps Foundation. Together we shared the “table” with representatives from all the Federal agencies that manage public lands and waters for recreation- National Park Service, US Forest Service, Bureau of Land Management, Bureau of Reclamation and NOAA- National Marine Sanctuaries. The Outdoor Retailer Market is the world’s leading outdoor sports show where industry retailers, suppliers and recreation providers gather to share their products. It is also an ideal setting to increase awareness of the Corps as a leading recreation provider and promote public/private partnerships.

During the week-long retail frenzy for over 1500 outdoor recreation vendors, the Federal agency representatives staffed the Great Outdoors USA booth coordinated by recreation.gov. We also presented information on our agency’s recreation priorities as well as reached out to potential partners in the retail environment.

This is only one example of what it means to be “at the table”, and what the Corps Foundation is doing to increase its advocacy efforts. Advocacy can take many forms and the Foundation is focusing on several new initiatives:

- Participating in public/private efforts to support public lands. Agency budgets are decreasing and there is considerable push by the Administration and industry stakeholders to increase private/public partnerships to address infrastructure needs and funding of programs. The Foundation has begun to investigate private and other non-profit partners who might be interested in providing funding for grants to local projects.
- Networking to increase visibility of Corps managed lakes and waterways by attending meetings, conferences and conventions where other Federal land management agencies and our stakeholders are present.
- Re-invigorating the effort to establish the Corps Foundation as a Congressionally authorized non-profit Charter- similar to National Parks Foundation.
- Increasing efforts to be a visible presence at Corps agency functions such as attending Ranger Training meetings, Park Manager meetings, 2017 NRM Meeting in Norman, OK, Partnership meetings in addition to meeting with Chief of Operations and other HQ personnel who need to know who we are and what we do.

I look forward to updating you as we work to achieve these big goals, and I hope you will be a part of advocacy too. The impact of one person- YOU- can make a big difference, one step at a time. If you believe in the Corps' NRM program- speak up in local papers, social media, and conversations – and join the Corps Foundation!



Heather Burke and Nancy Rogers at the Outdoor Retailers Market, July 2017



What Is Important To Not Say?

Speaking Tip #17

Ethan Rotman

<http://ispeakeasy.net/index.html>

Think back to the last time you ate at a buffet: did you scan ahead to see what was offered other than the food in front of you? You were probably thinking you have a limited amount of space in your belly and should fill it with those things most important to you. While you may have appreciated the abundance, you did not place equal value on all the choices. You took some of one dish while ignoring others completely.

Information is like this: some is very important to us while other information is of lesser value.

As speakers, we often feel the need to tell everything we know on a subject. We feel we are cheating, or not telling the whole truth, if some bit of information is left off. "Data dumps" tend to overwhelm, overstuff, or just plain bore the audience. Rather than going away with more information, listeners check out, and retain less.

It is up to you as speaker to determine which 3-5 bits of information are essential to your point. The most important info may vary from situation to situation even though the topic is the same. The objective of your talk, the audience, and what you want the audience to remember will determine which information is critical. Everything else should be left out. While this may seem hard, your audience will appreciate your efforts. You will make it easier for them to understand and retain the information you give them.

It is hard to cut information out of your talk. The goal, however, is to awaken and provoke the audience. If there is something not covered that is of interest to them, they will ask.

As you plan your next presentation, whether it is to a large group or one-on-one, take time to scan ahead at the great buffet of information ahead of you. Select what to say and what to leave out. This will help your audience remember your message while reducing the chances of overstuffing them.

Interpreting Death to Save Lives: A Matter of Life and Vest

*Amber Tilton, Park Ranger
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The Fear Factor

I remember the conversation clearly. A colleague and I sat debating the latest water safety campaign messaging developed by the U.S. Army Corps of Engineers (Corps). “*Are You Next?*” was the slogan. As in, are you the next drowning victim?

Talking about our own mortality is not something people like to do, let alone be reminded of it while relaxing on a sun filled beach with a cool drink and a smile on their face. There is no sugarcoating in that kind of message.



As a park ranger for the Corps, I enforce rules and regulations for visitor and resource protection, when I have to. Threats of rules and consequences is a last resort. I would much rather help visitors make better decisions through understanding the ‘whys’. Why do we have this rule and why should you care, and when it comes to visitor safety on the water, why should you wear a life jacket? That last ‘why’ seems obvious but our statistics show it is not. Every year, an average of 164 people drown on Corps managed waterways and most (89%) were not wearing a life jacket.

I often feel like a parent, concerned and responsible for my visitor’s safety, pointing out the blind spots and hidden dangers of recreation. Sometimes it’s as simple as a ‘did you know’ talk. Like, “Did you know it is tick season? Ticks can transmit disease so please check yourself and your dog for ticks after hiking today.” or “Did you know poison oak is common along this trail? It can cause severe allergic reactions in people. Let me show you what it looks like so you can avoid it.”

In both of these examples people may perceive the consequences as ones they can live with and not necessarily as a life or death matter. It is a subtle appeal to fear compared to “Did you know that X number of people have drown here this year? Don’t let this be your watery grave. Don’t go home in a body bag; wear a life jacket.”



So should we use fear as a motivator to change behavior? Is it effective? Just because people don’t want to hear or talk about the elephant in the room, does that mean we shouldn’t? Should we only focus on positive messages? Does messaging need to be optimistic in order to achieve a desired outcome?

This was the debate.

Shock Value – To Shock or Not to Shock?

I recall the scare tactics of my childhood. For example, the ever popular myth “don’t swim after you eat or you could be seized with cramps and drown”, forever changed my behavior. I still will not swim after eating.

Scare tactics are one tool parent’s use along with positive reinforcement, redirecting, modeling good behavior, and education. Therefore it’s not surprising that shocker messages are used in interpretation because people remember them. They provoke. But do they also provoke people into staying inside where it is safe; scared to death to recreate, to play, and to be outdoors?...that is food for thought.

Love – Till Death Do Us Part

Like fear, love is a powerful emotional influence. No one wants to part from their loved ones or watch them suffer from loss. People will protect what they love. The authority of our hearts is tied directly to the people we love and when we are reminded of this we take more care to protect ourselves.

This is exactly what the Corps found when it conducted focus groups with adult men (63% of drownings are adult men ages 20-60), to develop new water safety campaign messaging. The majority of the men in the focus groups said that trying to scare them into wearing a life jacket does not work. What does work, are positive messages that clearly connect to why they should wear a life jacket.

In 2015, based on the results of this study - the Corps, in cooperation with the Corps Foundation - launched a new adult water safety campaign, “*Life Jackets Worn...Nobody Mourns*”.

“A positive approach combined with a pull on a person’s heart strings can be more effective than the shock value of scare tactics” said Pam Doty, USACE National Water Safety Program Manager. “The ‘*Life Jackets Worn...Nobody Mourns*’ slogan combines a call to action with a positive outcome, which according to our focus groups had an emotional impact that changed their perspective and ultimately their behavior” said Doty.



Regardless of which side of the debate you are on, it does not change the bottom line:
Life Jackets Save Lives.

NOTE: Photo credit belongs to U.S. Army Corps of Engineers.

LJWNM campaign resources such as video and audio PSAs, posters, social media and publication ads are available for public use at www.PleaseWearIt.com. These resources can be combined with interpretive programs and events to help promote water safety.

"reprinted from Legacy" – May/June Issue with thanks.

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The Cretaceous-era arachnid had the front end of a spider and a scorpion-like tail appendage, but more specimens are required to find its place on the evolutionary tree.

Newly-discovered species of spider with scorpion-like tail found in amber.

Multiple News Releases.

Chimerarachne is a genus of extinct arachnids containing a single species ***Chimerarachne yingi***. Fossils of *Chimerarachne* were discovered in Burmese amber from Myanmar which dates to the mid-Cretaceous, about 100 million years ago. These fossils resemble spiders in having two of their key defining features: spinnerets for spinning silk, and a modified male organ on the pedipalp for transferring sperm. At the same time they retain a whip-like tail, rather like that of a whip scorpion. *Chimerarachne* is not ancestral to spiders, being much younger than the oldest spiders which are known from the Carboniferous, but it appears to be a late survivor of an extinct group which was probably very close to the origins of spiders. It suggests that there used to be spider-like animals with tails which lived alongside true spiders for at least 200 million years.



The name is taken from the chimera, a monster in Greek mythology composed of parts of different animals, together with the suffix 'arachne' after the legendary weaver who was transformed into a spider for insulting the gods. The species name honours Mr Yanling Ying who collected one of the specimens.

The legs and body of *Chimerarachne* are generally spider-like. The chelicerae (mouthparts) are similar to those of spiders belonging to the Mesothelae or mygalomorphs. The fang does not have any hairs, which is another typical spider feature, but it is not clear whether or not the animals had venom. The male pedipalp has a palpal organ consisting of the tarsus (or cymbium), which is divided at the tip into two long lobes, and a simple palpal bulb similar to that of some mygalomorph spiders but apparently less complex than the bulb of mesotheles.

The abdomen is segmented, like that of a mesothele spider. However, unlike spiders, there are several short cylindrical segments at the back from which a long segmented tail (or flagellum) emerges. The abdomen also bears spinnerets on the underside, and these are especially interesting given that it was widely assumed that spiders should initially have had four pairs in the middle of the underside as in modern mesothele spiders. By contrast, *Chimerarachne* has two pairs of quite well developed spinnerets towards the back of the abdomen which are similar in shape to those of mesotheles and which are probably equivalent to the anterior lateral spinnerets (ALS) and posterior lateral spinnerets (PLS) of modern spiders. There are, however, no posterior median spinnerets. In the place where the anterior median spinnerets (AMS) would be expected in spiders there is instead a pair of stubby spigots which could be spinnerets in the process of formation.



Four specimens of ***Chimerarachne yingi*** are known so far. Two pairs of specimens were acquired independently by two different research teams during the summer of 2017. Their results were published back to back as companion papers in February 2018 in the journal *Nature Ecology and Evolution*.

The two publications agree on the basic anatomy and significance of these fossils, but differ slightly in the interpretation of their position of *Chimerarachne* in the arachnid tree of life. The Wang et al. study, which also named the fossils, placed the genus closer to spiders. The Huang et al. study placed *Chimerarachne* a little more distant from spiders and as part of an extinct arachnid order known as *Uraraneida* which are also spider-like, and have a tail, but which were not previously thought to have spinnerets. The fossils thus raise the question whether spiders should be defined by acquiring spinnerets and a male pedipalp organ and/or be defined by having lost the tail.

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Downlisting: Don't Leave Manatees Out in the Cold

*Op Ed by Anne Harvey Holbrook, JD, MS
Save the Manatee Club*

Last year, the U.S. Fish and Wildlife Service downgraded the West Indian manatee's status from endangered to threatened under the Endangered Species Act. Save the Manatee Club is concerned that down listing will further slow efforts to secure key habitat protections needed for the species' longevity in Florida. In order to sustain the progress made toward recovering the manatee, increased reporting of manatee boat strikes and a stronger emphasis on preserving and restoring warm water habitat are essential.

Florida Fish and Wildlife Conservation Commission (FWC) statistics indicate that the two most recent years – 2016 and 2017 – resulted in record manatee deaths from boat strikes. Manatees injured by boats stand a much better chance of being rescued and rehabilitated if they are found as soon as possible following collisions, but many accidents go unreported. The lack of data makes it difficult to distinguish between accidents versus incidents – whether waterway conditions, operator inattention, or some other factor is primarily responsible. Increased reporting of vessel collisions with manatees can also better inform policy-making related to manatee speed zone development and revision. Boaters can help protect manatees by observing manatee speed zones, wearing polarized sunglasses in manatee areas, and reporting any sick, injured, dead, or tagged manatees to FWC at 1-888-404-FWCC (3992).

Securing sufficient natural warm water habitat for manatee use during the winter months is key to the species' recovery. Historically, manatees sheltered in Florida's natural freshwater springs, with their constant 70+ degree temperatures and nearby aquatic vegetation upon which they could feed. However, as spring flows declined from excessive groundwater pumping and hydrologic projects impeded access to some historic habitat, approximately two-thirds of Florida's manatees learned to rely on warm water effluent from industrial discharges. This reliance has altered manatee migration in recent decades.

Looking to the future, power companies are changing how power is generated in order to meet environmental standards and move towards sustainability. As a result of these much-needed improvements, protecting and restoring springs and travel corridors connecting these vital sites will be imperative for manatee survival, as will a strategy to transition manatees to these alternative sites. One viable starting point would be to breach the Rodman Dam on the Ocklawaha River in Marion and Putnam Counties, in order to restore manatee access to numerous springs whose flow is impeded by large volumes of impounded water. The federal and state governments have long acknowledged the need to restore the river, but the project remains stagnant in the absence of political will and agency leadership. Without an adequate plan to address warm water habitat, it is easily conceivable that positive manatee population trends could reverse without the same potential for recovery as when they were first listed.

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Interpreting gardens for health and wellness.

*Reprinted from Ohio State University "Insights".
September, 2017*

In this garden, there is no cancer. There is no medulloblastoma or acute lymphoblastic leukemia. There's no talk of radiation or transplants or sickness or other terrible things.

In this garden, there are just rows and rows of happiness. Huge, yellow sunflowers stretch toward the bright blue sky. Plump, juicy tomatoes hang off the vine, ready to be picked.

Kids like 11-year-old Cailea Williams run back and forth from plant to plant, picking a pepper here. A beet over there. She holds them triumphantly in the air like trophies.

"She is a survivor," said her mom, Laura Williams. Cailea's now in remission after two bouts with brain cancer. During her treatments, she would spend weeks at a time in the hospital, with most of her nutrition coming through an IV.

Today, her weight is coming back. But because of the intense chemotherapy, her tastes have changed. "Things she had liked before she just won't touch now," her mom said. "So we're going to focus on more nutrition." Cailea's part of a research study run by Dr. Colleen Spees, an assistant professor and cancer researcher with The Ohio State University's College of Medicine. Spees has several research gardens located at Waterman Farm, Ohio State's working farm that includes acres and acres of crops just steps from the hustle and bustle of a city setting.

The research gardens are an extension of The Garden of Hope, a program started in 2012 by JamesCare for Life in collaboration with Ohio State's Comprehensive Cancer Center and the College of Food, Agricultural and Environmental Sciences. This unique program supports cancer survivors by allowing them to harvest their own fresh produce and discover how healthful dietary patterns can assist in cancer recovery.



11-year-old Cailea Williams, a cancer survivor, makes a project as part of her experience with the research garden.

Biology benefiting cancer survivors

Spees says the program was a success from the start — survivors reported improvements in their physical and mental health. As a researcher, though, Spees wanted to know more. She wanted hard proof that cancer survivors were actually improving their health. “A lot of people say how great gardening is. But we’re trying to prove it with biology. Does it impact health outcomes? In fact, we’re showing that it does.” So in 2013, Spees, in collaboration with Steve Clinton, set up their own research space at the farm. They recruited cancer survivors and had them harvest produce and learn about the benefits of healthful eating and lifestyle behaviors. Spees and her fellow researchers conducted surveys with the survivors, took blood samples and studied their behaviors. The research showed improvements in the survivors’ quality of life, dietary and physical activity patterns, and health-related biomarkers like cholesterol.

“It was pretty remarkable,” Spees said. “What they were telling us — we were now proving.”

The next year they tried the same study with another group — overweight and obese cancer survivors. They refined their intervention and taught them some new ways to prepare the food. Once again, the results were astounding. Researchers found significant reductions in body composition and cardiometabolic risk factors.



Dr. Colleen Spees talks with pediatric cancer survivors and their parents about the importance of a plant-based diet.

Adapting for pediatric patients.

This year, in partnership with Cindy Gerhardt from Nationwide Children’s Hospital, researchers piloted the garden-based intervention survivors of childhood cancer. The kids engaged in and learned about physical activity and healthful eating, created art projects with fruits and veggies, and even got to harvest their own produce. Along the way, researchers collected data points and assessed biomarkers in the kids.

“It’s been a learning experience,” said mom Misty Farrell, whose daughter, Mika, is in remission after being diagnosed with acute lymphoblastic leukemia when she was just 5 years old. “During treatment, we want to give them food that’s going to stay down and going to put weight on them. This program is going to help us get the right foods in her in hopes of keeping her healthy.” Spees says the early results are promising. The kids are exercising more, and their dietary patterns are improving. She plans to continue her research linking primarily plant-based diets with better health outcomes in cancer survivors.

“It’s been quite a fabulous journey,” said Spees, who was inspired to get into cancer research after losing her brother to the disease. “It’s the most meaningful work in the world.”



Cancer survivor Dominic Clarke celebrates a harvest from the garden.

From Ohio State University ‘Insights’.

[https://insights.osu.edu/health/harvesting-health?utm_campaign=UNIV%20February%20Connect%20\(openers\)&utm_medium=email&utm_source=EOACLK](https://insights.osu.edu/health/harvesting-health?utm_campaign=UNIV%20February%20Connect%20(openers)&utm_medium=email&utm_source=EOACLK)



Interpreting the "rest of the story" hidden in your artifacts.

The Museum of Western Reserve Farms & Equipment Example.

Jim Fry

The Museum of Western Reserve Farms & Equipment is located in Northern Ohio, the U.S. We have collected 40+ buildings from 6 counties, gathered artifacts from 32 counties and recorded stories, tales, histories and remembrances from all over. It is a somewhat rare day we don't learn something new. We love curiosity. We love the digging and exploring. The what it is. Where it came from. Who used it. What it changed. When it was built or invented. And we tell those stories to others, sometimes when folks visit, sometimes on our website. We have living shops, not just static displays. One of our goals is to have every shop and every trade common to a small town 150 yrs. ago. And we have classes teaching those heritage skills.

I like to visit other museums. I like looking at their websites. And like as not, I am surprised. So often the museums and websites are very quiet places. Not the quiet of nature or contentment, but the quiet of little to say or write. And I wonder. Where is the enthusiasm? Where is the spark? For me, history is endlessly interesting. It's where we were, it's where we may be going. And I love the gifting of it to others.

The other day, John Veverka sent a email headlined, "Interpreting the 'rest of the story' hidden in your artifacts". And I thought, "I do that", ..I think? So I wrote him and suggested he look at our website and see if we are doing what he was advocating. He wrote back and asked me to write about what we do. (This all may seem like a lot of 'splaining to get to the point. But for me, the history of a thing/how it came about, is as important (and fun) as the thing itself). So write I am. Not as a "learned" masters degree doctor, but as a guy whose earliest memories are of our family's daily furniture, that I later learned has been in the family since we kicked the King and his tax collectors out of our country. I write here as someone whose several greats grandma (whose family had settled in what would later become the second State to join the Union) got her head chopped off for being "impolite" to the Delaware's. And I write because I have lived nearly all my life in and around museums.

I grew up on our family farm. We made hay, took the pigs to the county fair, made our own soap and maple syrup. And as soon as I could, I got a job at a nearby recreated Western Reserve village. Unfortunately, as much as I loved the place, it was to prove a disappointment. What I wanted was the life my Amish ancestors lived. What I got was a rule book. I suppose much of that experience was founded on the practices of the nearly forty year tenure of the site manager.



What the site manager had never understood was why people wanted to work at that site. Sure, a paycheck was good, bills had to be paid. But the lowly rate of pay was certainly never enough compared to self-employment or jobs in industry or education. The most of us were there because of what I always thought of as ~The Dream. We longed to live the life as we had read or been told, that our ancestors had lived. Most of us thought we were born 150 yrs. too late. We wanted that life. We wanted to bend metal, shape wood, shear sheep, dye and spin wool, weave the cloth. We wanted days of silence livened only with the ring of axe and songs of birds. With the occasional whistle of the steam driven mill. We didn't want cars, and polyester clothes, and Taco Bells. We wanted a cast iron pot and a cook stove. A treadle sewing machine, not a shopping mall.

So there I went, and became the wood worker. I whittled toys for visiting children, I repaired antique chairs brought to me by the public, I fixed the derelict foot powered lathe so I could turn candle holders and rolling pins. I denied the existence of the electric lights used to light my shop. I wasn't just "interpreting", I lived the "first person". And soon got to know the other crafts people. As they got to know me. Just like happened in any 18th Cent. small American town. And as we got to know each other, we began to do business. ~Liv'n the Dream. Like our Ancestors.

The potter came to me and said he needed a screening table to clean his newly dug clay. I said, "I'll trade you for a clay paint pot". The glass blower came to me and said he needed several boxes for sorting and storing his failed creations. I replied, "I need an ink jar". And soon all the crafts people were functioning as a town, "selling" what we made to each other for the improvement of our "businesses". It was so nearly like what my great grand parents had done. And our dreams lived. And life and work was very good.

Good that is, until the site manager found out. ~His anger abounded. It reached us all. He said, "If you need something for your shop, you will send a request to the office, along with a reason to have. Then office will inform the concerned craftsman of the request and ask for a price of the requested item. Accounts will be entered, costs will be reckoned and books will be balanced. No one is to trade goods or services. Office will decide who gets what !! And the office will decide how time, effort and materials are portioned."

So the dream died. We were no longer living in the 18th Century. We were just employees, doing only as we were told. Not living it, not breathing it, barely even interpreting it. And year after year, now decades have passed, the best and brightest came and then they left. Disappointed that the hoped for promise was mere illusion. If the life that museum portrayed could not be lived, the pay check was not enough. And the visitors suffered from unenthusiastic role players. Attendance declined. The museum just stagnated. And the joy, for employee and visitor alike, disappeared.

But even with that, the manager still did not understand. The decline has continued. The bureaucracy wanted control. The employees wanted involvement. The public desired an experience that spoke to them. --And what spoke was a blacksmith who loved his work so much that he could explain for hours the intricacy's of his craft. They wanted a woodworker who could make a toy for them as they watched, instead of an employee who just stood and said, "lathe, wood plane, saw". They, the visiting public, wanted sparkle in the eyes of the brick maker, whose whole heart song in life was making bricks. Instead what they got, once the "Dream" was gone, was the rote. The routine. The same approved "story" repeated over and over again.

This was so perfectly illustrated for me by the blacksmith next door to my shop. Despite being told to do as ~The Woodworker~ was told to do, I wanted to improve. So, as I could, I used to go over to the blacksmith shop and listen to his spiel (out of sight so he didn't know I was there). And every time I listened, he said exactly the same thing, in the same order, with the same tone (monotone actually) of voice. But I continued to listen none-the-less. I was learning. Until one day I could listen no more. A little girl asked the smithy a question out of his routine. He could have answered, obviously. He was ~The Blacksmith~. But he had been so dulled by repetition and bureaucracy mandate, he couldn't do it. He couldn't answer her. He stopped, he looked at her, he looked puzzled, then he continued on word for word never skipping a beat.

And maybe a chance was lost. Maybe if the smith had engaged, maybe taught, for sure been lit up, ~instead of merely lecturing, that little girl might have been inspired to become a blacksmith (or weaver, or potter, or other craftsperson) herself.

So, what is the point of all these remembrances? Maybe it's about all the lost opportunities we all so often miss. Whether in our museums or in our "other" lives. We so often do the routine. We miss the sparkle. We tell the same stories. Missing the new story. We see things as expected, and end up not seeing them at all. And maybe we can do better. I guess I did. I left there and began anew. I had learned that,Our lives and museums can be places of magic. We can tell the stories that that little girl needed/wanted to hear. We can turn our artifacts and antiques into living tools. We can dig the history until we know the grandma and what she sewed, instead of just, .."That's a treadle". And so we do here. We collect the stories as much as the buildings and stuff. Then we connect it all in the telling. And in our experience, the new friends visiting or those reading our website, seem to love it all. That for me is, ..."the telling of the rest of the story hidden in our artifacts".

Thank you for your time. Come visit year around. We are open seven days a week, daylight. Our hours are: "We're always here. We're always open. -Except when we're not."

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P.S. We are quite good at the knowing of what things are. My family, and I, and the museum have been at this a long time. If you have a question about something, send us a picture and we'll see with what we can come up.

3D sculpting is an amazing tool for interpretive work.

*Carlyn Iverson
Absolute Science Studios*



As I sit here in my home studio, painting a tiny tubenose goby with acrylic paint, I muse about the past. Holding the 2-inch model displaying tiny scale details, I think about natural history objects and their interpretive power. From the turn of the 19th century, with pickled specimen jars and taxidermy behind glass, people have looked for ways to bring the dynamics of life into our museums, natural history and environmental centers.

For many years I worked in museum fabrication studios as an artist. Now on my own, I am designing interpretive exhibits and adding the creative power of 3D sculpting and printing.

3D printing or "additive manufacturing" is a process of making three dimensional solid objects from a digital file. An object is created by laying down successive layers of material until the form is created. Sometimes the material is powder-based and then made solid through heat, other times a liquid that can be solidified by various means.

The science behind the 3D programs has been with us for awhile. CAD work, "computer assisted design" has been used by architects and designers for years. However, the ability to sculpt a woolly mammoth, became an intuitive and creative joy with the development of the program ZBrush, by Pixologic. 3D sculpting has allowed me to be freed from the constraints of traditional sculpting. Limitations from complex undercuts, delicate parts difficult or impossible to cast, and the high cost of materials of traditional sculpting and casting are removed.

Benefits go further, as the actual sculpting process allows for clients to see exact images of how the finished model will look before its "printed". The ability to produce at any size, have a choice of materials from plastics to metals, and make multiple versions, leads to exciting design possibilities. Full color is added by hand-painting.

Finally, 3D sculpting can bring a level of detail and intricacy difficult to capture with traditional methods. Models can be designed for mechanical interactivity with unique interpretive qualities. Imagine an interactive bee hive, with life-sized bees coming and going into a hive, showing both external and internal structures to the observer. All without the need to maintain a real, living bee hive.



Some of the wider benefits embrace conservation. Instead of collecting animals to be used for taxidermy, we can sculpt to realistically re-create them. Endangered species, soft-bodied organisms, or delicate objects can be modeled. Animals or plants can be sculpted when there is no other way to represent them. Display can include hands-on "pick me up and look" models, placed in dioramas, as large over-sized sculptures in the round, or base-relief sculptures mounted to walls or graphic panels.



Geographic features and formations, anatomical structures, artifact replication, fragile insects and flowering plants, are all examples of what can be created with this process. The sculptures can be for indoor or outdoor use, or even underwater.

Some of my more recent projects include a Bald Eagle in flight, with one side of the body presenting the internal anatomy. The computer file will also be used for a "walk-thru" Virtual Reality tour. The creative reach is endless for this new way to bring dimensional work into an educational center.

One recent project for the University of Minnesota was to develop models of **invasive plant species** found in the region. The University of Minnesota is using the realistic- painted plant models to help farmers distinguish between the invasive plant and native species. The models travel to various sites for workshops and presentations. Another project was to create 12 different models of invasive and native freshwater fish species, to encourage the recognition of invasive species as compared to native fish. The use of 3D sculpting has even reached across the planet. The new Natural History Museum of Kuwait was also a recent project where models of fish, mammals, birds and reptiles depict the unique natural history for that region of the world. As an artist, 3D sculpting is an amazing tool for interpretive work, freeing me from the constraints of material limits and opening up new paths for creative education.



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Singing for Songbirds

Peoplescape Theatre creates a participatory theatre performance with Chester Zoo (UK) as part of their campaign to help the songbirds.

Emily Capstick



In 2016 Chester Zoo contacted me to discuss their outreach programme ‘Wildlife Connections’. Delivering a series of workshops in primary schools on our local wildlife (such as bats, moths, hedgehogs and toads), Chester Zoo wanted an event at the final workshop to celebrate the learning and activity that the pupils had done. They were thinking of a performance of some kind which could be shared with the rest of school and wider community. For this, we decided to devise a series of creative writing activities which the teacher would facilitate in class time (supported through Continuing Professional Development training at the zoo). The work of each class was then sent to me and I created a class poem from their words. I ensured that there was a contribution from every individual in the class. Each class had a rehearsal in school with a professional theatre practitioner and performed their poem as choral speaking to school friends, family and careers.

During the course of planning for ‘Wildlife Connections’, we discussed the possibility of a theatre performance...

Peoplescape Theatre have been creating participatory theatre experiences for audiences of all ages for more than 20 years, working often in partnership with museums, galleries and heritage sites. Together with Alison Hale, I am a Creative Director of **Peoplescape Theatre**. In autumn 2016, we decided to expand our work to devise a high quality performance for children in primary and special schools in Greater Manchester, particularly for those in areas of high social and economic deprivation who have little or no access to the arts. We were awarded a grant from Arts Council England and our original interpretation of ‘Three Little Pigs’ went very well.

The following year we wanted to build on this reputation for original interpretation of a traditional tale. We applied to Grants for the Arts (Arts Council England) for further funding for a new participatory performance which would be created in collaboration with Chester Zoo; as Hannah Brooks, the zoo’s Community Engagement Manager, explains:

“All over Indonesia the forests are falling silent because the songbirds that once lived there are threatened by extinction. We’re facing a crisis because these beautiful, remarkable and rare birds are being captured and trapped by local people to be used either in singing competitions or kept in cages as a status symbol.

Sing for Songbirds is a Chester Zoo campaign to take action to combat this crisis. We're acting for wildlife by directly supporting projects in South East Asia, and by raising awareness and fundraising here in the UK.

Chester Zoo's Safari Ranger outreach program has recently expanded to reach schools in Liverpool and Manchester with a focus on schools which face barriers to engaging with Chester Zoo. To allow the students to be immersed in the learning we offer a repeat engagement program which includes a visit to the zoo to see these remarkable birds first hand.

We're also passionate about working in partnership and supporting the students that we engage to consolidate their learning through a creative process."

So, the challenge was to devise a performance based on a traditional tale which would also address the crisis for songbirds including raising awareness of birds' needs and some practical ideas of ways to help. Our performances are narrative and character-lead rather than issue-based so the campaign needed to be integrated into the everyday life of the characters. This was a challenge and the solution was found through a drama-based intervention called 'Speech Bubbles' (originated by London Bubble Theatre) which Peoplescape Theatre deliver on a regular basis in primary schools. 'Speech Bubbles' uses story-making and performance as an intervention for children aged 5-7 with communication issues. Children with selective mutism are often referred to Speech Bubbles and this condition was the key to our story; where forests are silent and, in the markets, little can be heard over the cacophony of birdsong. The birds are also entered into 'singing competitions' and their cages are hung in the brilliant sunshine for prolonged periods in order for them "to practice".

Our main character is called Joy and she has selective mutism. She loves helping her Grandpa in the garden, particularly caring for the birds but at school she doesn't speak and she worries about being different. The original tale that we drew on is 'The Ugly Duckling' however our story celebrates difference and diversity.



“Our pupils and staff were mesmerized by the performance and we feel the children grasped a lot of important messages. This was highly significant due to the number of problems we are having in the community with anti-social behaviour and hate crimes. As a school we are tackling the diversity and community work, but Early Years and KS1 is always hard to find support for.”

Our performance ‘The Silent Songbird’ uses puppetry, live music (flute & cello), movement, song and our innovative participation techniques, such as applied puppetry. Chester Zoo were very supportive of the creative process and provided invaluable insight and feedback, as did specialists who support children with selective mutism, hearing impairments and autistic spectrum condition. There were some significant challenges, such as not anthropomorphising the animals which traditional stories do extensively and devising multiple versions of the performance in order for it to be engaging and accessible to diverse audiences



Between November 2017 & March 2018, The Silent Songbird was performed to more than 2,500 children and young people:

“As well as tackling diversity pupils found out about the Songbird and were shocked to discover this was happening. A very valuable performance and we would love more like this. Staff have taken the resources and are working on them in the classrooms. They are creating posters to save the songbird!”

“The use of music and puppets is wonderful for children and you interwined a very important message into a story the children could relate to. ...it was a real hit and fits perfectly with so many of our current topics. I know the younger children are hoping to make bird feeders and the Year 2 children will be using the theme for their learning on living things and habitats. We will look forward to meeting the Safari Ranger from Chester Zoo tomorrow to extend the project further.”

Hannah Brooks, Chester Zoo’s Community Engagement Manager sums up:

“This was an exciting opportunity for us to share the key messages of the campaign in a fun and appealing way to allow us to reach new audiences and hopefully to inspire more future conservationists.

The partnership with Peoplescape Theatre has been a great opportunity to engage more students in this really important campaign. We want as many people as possible to be provided with opportunities to connection with nature and to take action for wildlife.”

Supported using public funding by the National Lottery through Arts Council England.

Emily Capstick, Creative Director of Peoplescape Theatre

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**Can some people be beyond interpretation?
Have your say.
*Follow the thread...***

Dan Boys

Can some people be beyond interpretation? Have your say.

In the last issue of InterpNews Dan Boys, Creative Director at audiotrails.co.uk I played Devil's Advocate and posed the question "Can some people be beyond interpretation?" I invited readers to share their view on this subject. Many of you will know Jon Kohl (Coordinator PUP Global Heritage Consortium) or know of his work, and he took the time to give his take on the subject.

"The question of whether someone can be too specialized to be receptive to interpretation has a very important assumption behind it. It assumes that the more reductionist you get, the deeper into esoteric detail you go, the closer to truth and enlightenment you are. And the closer to enlightenment you are, the less there is to discover about the world and thus the less needy or desirous one would be to engage in an interpretive program of some sort.

I would argue that that assumption and the subsequent line of reasoning is not only untrue but completely opposite to the reality of interpretation. When Tilden spoke of interpreting wholes, he didn't mean delving into greater and greater detail, which as you imply is the realm of technical specialists. Interpreting wholes is to head in the opposite direction, that is, locating the interpreted subject in the larger panoramic of life, of the universe, connecting the specialist's field to the rest of existence. It means heading toward universal or deeper truths. It has nothing to do with technical details. Very often highly specialized scientists are accused of not seeing the big picture, of being siloed, cut-off from reality where all disciplines come together into one reality. If anything, people lost in the details of ultimate specialization would be those most needy of interpretation to bring them back from their disciplinary hole. Whether or not they would choose to engage in that kind of program is another question altogether."

Here's a different perspective from another reader who wrote:

"This piece really struck home to me. I've been working as an interpreter for nearly 30 years, and I find that while I still love my work, and I still enjoy visiting other sites, I often "check out" at other sites because the information provided is mostly stuff I already know...it is basic.

I certainly do not claim to "know it all" and I refuse to be an "expert" (after all, an "ex" is a has-been, and a "spurt" is a drip under pressure), so I figured maybe I had reached the limit of my interest in learning about nature.

We need to stretch the limits of what we interpret. Just like the internet, where most sites seem to regurgitate the same information they found on other sites (yes, we've all encountered articles/sites that are verbatim...site after site after site), I am now seeing nature centers across the country that are all basically providing the exact same information. We are losing individuality...and the messages given are all generic. Truly, we need to embrace finding the story of our sites and relaying that, vs. providing the same old nature vignettes that everyone else is doing. It is difficult for small nature centers with little or no budget, but I think that in order for us all to survive, we need to embrace this."

What do you think? I'd love to keep this thread running for the next issue so if you have any comments then please do get in touch at interpnews@audiotrails.co.uk.



The marbled crayfish is a mutant species that clones itself, scientists report. The population is exploding in Europe, but the species appears to have originated only about 25 years ago. Credit Ranja Andriantsoa

Massive crayfish that didn't exist 25 years ago are capable of cloning themselves — and it's terrifying scientists

Carl Zimmer
The New York Times

Frank Lyko, a biologist at the German Cancer Research Center, studies the six-inch-long marbled crayfish. Finding specimens is easy: Dr. Lyko can buy the crayfish at pet stores in Germany, or he can head with colleagues to a nearby lake.

Wait till dark, switch on head lamps, and wander into the shallows. The marbled crayfish will emerge from hiding and begin swarming around your ankles.

“It’s extremely impressive,” said Dr. Lyko. “Three of us once caught 150 animals within one hour, just with our hands.”

Over the past five years, Dr. Lyko and his colleagues have sequenced the genomes of marbled crayfish. In a study published on Monday, the researchers demonstrate that the marble crayfish, while common, is one of the most remarkable species known to science.

Before about 25 years ago, the species simply did not exist. A single drastic mutation in a single crayfish produced the marbled crayfish in an instant.

The mutation made it possible for the creature to clone itself, and now it has spread across much of Europe and gained a toehold on other continents. In Madagascar, where it arrived about 2007, it now numbers in the millions and threatens native crayfish.

“We may never have caught the genome of a species so soon after it became a species,” said Zen Faulkes, a biologist at the University of Texas Rio Grande Valley, who was not involved in the new study.

The marbled crayfish became popular among German aquarium hobbyists in the late 1990s. The earliest report of the creature comes from a hobbyist who told Dr. Lyko he bought what were described to him as “Texas crayfish” in 1995.

The hobbyist — whom Dr. Lyko declined to identify — was struck by the large size of the crayfish and its enormous batches of eggs. A single marbled crayfish can produce hundreds of eggs at a time.



Soon the hobbyist was giving away the crayfish to his friends. And not long afterward, so-called marmorkrebs were showing up in pet stores in Germany and beyond.

As marmorkrebs became more popular, owners grew increasingly puzzled. The crayfish seemed to be laying eggs without mating. The progeny were all female, and each one grew up ready to reproduce.

In 2003, scientists confirmed that the marbled crayfish were indeed making clones of themselves. They sequenced small bits of DNA from the animals, which bore a striking similarity to a group of crayfish species called *Procambarus*, native to North America and Central America.

Ten years later, Dr. Lyko and his colleagues set out to determine the entire genome of the marbled crayfish. By then, it was no longer just an aquarium oddity.

For nearly two decades, marbled crayfish have been multiplying like Tribbles on the legendary “Star Trek” episode. “People would start out with a single animal, and a year later they would have a couple hundred,” said Dr. Lyko.

Many owners apparently drove to nearby lakes and dumped their marmorkrebs. And it turned out that the marbled crayfish didn’t need to be pampered to thrive. Marmorkrebs established growing populations in the wild, sometimes walking hundreds of yards to reach new lakes and streams. Feral populations started turning up in the Czech Republic, Hungary, Croatia and Ukraine in Europe, and later in Japan and Madagascar.

Sequencing the genome of this animal was not easy: No one had sequenced the genome of a crayfish. In fact, no one had ever sequenced any close relative of crayfish.

Dr. Lyko and his colleagues struggled for years to piece together fragments of DNA into a single map of its genome. Once they succeeded, they sequenced the genomes of 15 other specimens, including marbled crayfish living in German lakes and those belonging to other species.

The rich genetic detail gave the scientists a much clearer look at the freakish origins of the marbled crayfish.

It apparently evolved from a species known as the slough crayfish, *Procambarus fallax*, which lives only in the tributaries of the Satilla River in Florida and Georgia.

The scientists concluded that the new species got its start when two slough crayfish mated. One of them had a mutation in a sex cell — whether it was an egg or sperm, the scientists can't tell.

Normal sex cells contain a single copy of each chromosome. But the mutant crayfish sex cell had two.

Somehow the two sex cells fused and produced a female crayfish embryo with three copies of each chromosome instead of the normal two. Somehow, too, the new crayfish didn't suffer any deformities as a result of all that extra DNA.

It grew and thrived. But instead of reproducing sexually, the first marbled crayfish was able to induce her own eggs to start dividing into embryos. The offspring, all females, inherited identical copies of her three sets of chromosomes. They were clones.



Now that their chromosomes were mismatched with those of slough crayfish, they could no longer produce viable offspring. Male slough crayfish will readily mate with the marbled crayfish, but they never father any of the offspring.

In December, Dr. Lyko and his colleagues officially declared the marbled crayfish to be a species of its own, which they named *Procambarus virginalis*. The scientists can't say for sure where the species began. There are no wild populations of marble crayfish in the United States, so it's conceivable that the new species arose in a German aquarium.

All the marbled crayfish Dr. Lyko's team studied were almost genetically identical to one another. Yet that single genome has allowed the clones to thrive in all manner of habitats — from abandoned coal fields in Germany to rice paddies in Madagascar.

In their new study, published in the journal *Nature Ecology and Evolution*, the researchers show that the marbled crayfish has spread across Madagascar at an astonishing pace, across an area the size of Indiana in about a decade.

Thanks to the young age of the species, marbled crayfish could shed light on one of the big mysteries about the animal kingdom: why so many animals have sex.

Only about 1 in 10,000 species comprise cloning females. Many studies suggest that sex-free species are rare because they don't last long.

In one such study, Abraham E. Tucker of Southern Arkansas University and his colleagues studied 11 asexual species of water fleas, a tiny kind of invertebrate. Their DNA indicates that the species [only evolved about 1,250 years ago](#).

There are a lot of clear advantages to being a clone. Marbled crayfish produce nothing but fertile offspring, allowing their populations to explode. "Asexuality is a fantastic short-term strategy," said Dr. Tucker.

In the long term, however, there are benefits to sex. Sexually reproducing animals may be better at fighting off diseases, for example.

If a pathogen evolves a way to attack one clone, its strategy will succeed on every clone. Sexually reproducing species mix their genes together into new combinations, increasing their odds of developing a defense.

The marbled crayfish offers scientists a chance to watch this drama play out practically from the beginning. In its first couple decades, it's doing extremely well. But sooner or later, the marbled crayfish's fortunes may well turn.

"Maybe they just survive for 100,000 years," Dr. Lyko speculated. "That would be a long time for me personally, but in evolution it would just be a blip on the radar."

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Making Museums Matter: Re-Interpreting the University of Pretoria Museums in South Africa

Nicole Hoffmann, Jeff Meade & Sian Tiley-Nel

The University of Pretoria Museums, managed by the Department of UP Arts are located on the main Hatfield campus of the University of Pretoria in the City Capital Pretoria, South Africa. The university has acquired and collected art and heritage for more than a century, since its founding in 1908. The University of Pretoria Museums curates more than 52 collections located across eight campuses. The museums comprise of twelve public galleries showcasing archaeological, sculptural, ceramic and other art-related collections. Currently, the museum collections are exhibited within two buildings: the Old Arts Building and the Old Merensky Building, each of which has been declared a national monument.



Figure 1: The Old Arts Building (left) and the Old Merensky Building (right) both South African national monuments at the University of Pretoria housing the Museum. Photographs courtesy of the Department of UP Arts. © University of Pretoria

Although the University of Pretoria has a long collections history, the “museums” as such are recent constructs mainly developed as public spaces only post-1994 with a national call for the wider recognition of transformation and museum’s role in society. In the past the recognition of the art and heritage collections took a back seat in comparison to the academic drives of the university, fortunately this view has changed in the recent two decades. Initially, the University of Pretoria public collections (as opposed to departmental teaching collections) received low visitor numbers. This was due to lack of marketing, institutional interest and outdated colonial, Eurocentric cultural heritage practices and apartheid perceptions of the University of Pretoria and its standing in society. In the past, exhibitions were named according to collections, they were minoritised and only a handful were placed on public view, where possible and only if funds were available. There were no formal museums, no adequate staffing structures and little interpretation. Twenty years into democracy, the institutional view and public perceptions of the University of Pretoria Museums has significantly changed and this is reflected in the total visitor numbers per annum with the museums now welcoming approximately 35 000 to 40 000 visitors a year - a figure that is increasing.

In response to professionalize the University of Pretoria Museums and to align with national and international museum standards, as well as an increase in public interest in the university collections, the university committed to improving the museums by expanding gallery spaces, refurbishing facilities, providing funding and providing institutional support to the art and heritage collections for public benefit. As a means to improve the interpretation in the University of Pretoria Museums, new technology was incorporated such as digital frames and oversized LED TV screens for short documentaries. The exhibits were upgraded and updated to reflect more interpretative information, moving away from general descriptive and chronological narratives.

In post-democracy South Africa, after 1994 many museums across the museum fraternity were compelled to transform and move away from colonial and apartheid narratives to a more accurate re-telling and re-interpretation of the history and heritage of South Africa. Furthermore, national calls for the decolonisation of the teaching curriculum at schools and tertiary institutions, particularly universities in South Africa, and also internationally, are becoming increasingly louder due to rise in politics not only influencing museums but education institutions as well. Eurocentric views are still firmly entrenched within tertiary institutions in the country, who have largely failed to “change the curriculum since the demise of apartheid” (Heleta 2016). Indeed, Heleta (2016) states that “colonial and apartheid marginalisation, racism and exploitation live on in many spheres of life and work, including higher education” and it is also entrenched within the museum sector in South Africa, as well as globally.

Historically, as with the University of Pretoria, many museums were founded during colonial times and upheld largely Eurocentric worldviews and not the Afrocentric views of today. As such, Smith acknowledges that museums are often still places that are “saturated with notions of racial difference and human classification popular at the time”. As a result, the term decolonisation is currently an abstract notion with far reaching consequences. In order to redress imbalances of the past, transformation and de-colonization of traditional museum narratives are imperatives as is the dissemination and interpretation of the museums to the public. Compounding the above challenge of transformation, a significant factor which affected the University of Pretoria Museums was the disruption caused by political protests in national calls for the nationwide #FeesMustFall campaign.

In April 2017, Nicole Hoffmann - a qualified cultural tourist guide and former lecturer in Heritage and Cultural Tourism - was appointed to address all tours as well as revisit museum interpretation for the public. As part of the museum interpretation efforts, she has been collaborating with Jeff Meade, a former employee of the Smithsonian Institution in the USA, who is a teacher and a museum education expert. Together, they have studied numerous learning and interpretation strategies and have begun an implementation programme custom-made for the University of Pretoria Museums.

Incorporating interpretation theory into the tour programme increases visitor engagement, allowing visitors to establish connections with the museums’ collections, exhibitions and themes in a personal way. Moving away from traditional, authoritative tours requires the introduction of education-based theory, both specific to museums as well as to learning in general. Hoffmann and Meade devised a strategy to explore museum interpretation and learning theory through research and practice. The working method of orienting tour programs away from a strictly curatorially-specialist stance towards a visitor-centered experience involved meeting on a regular basis to discuss different learning theories. This was followed by exploring the museum galleries to implement a particular theory. As museum education draws upon a variety of different learning approaches, theories built upon one another allows for layers of different interpretation approaches.

As a knowledge base several interpretation studies were explored such as the visitor engagement strategy of Ideas, People, and Objects (IPO), devised by Meade's former Smithsonian colleagues, including Andrew Pekarik (see Pekarik et al, 2014 and Pekarik and Mogel, 2010). Ideas, People, and Objects which currently includes an additional strategy of Physical, thus resulting in new acronym referred to as "IPOP", discusses visitor engagement in terms of what particular visitors are most inclined to be interested in. This application categorises visitors into four particular groups: (1) "Ideas-oriented visitors" are thinkers, and these are the people that read ALL the labels. They want big-picture understanding of the exhibit's themes and collections. (2) "Objects-oriented visitors", on the other hand, focus more on the objects themselves: how objects are made, their current physical condition and how they were used. Objects-based visitors are those that investigate paintings not just for beauty, but for specific materials an artist used, down to the very strokes of the brush on the canvas. (3) "People-orientated visitors" tend towards the social context of exhibit collections, in terms of the stories and narratives behind the object and how they may have impacted the lives of the people who experienced them. These are the types of visitors that do not just want the *history* of a particular collection or exhibit (which an Ideas-based visitor might need), but rather they want to hear stories of what life was like in the past. This approach has been used and applied for example in one of the archaeological exhibits. For example, visitors enquire about the people of the past and how the artefacts on display may have actually been worn and for what purpose. In fact, the visitor is more than inquisitive and wants to find parallels between that ancient person and themselves. Many visitors assimilate information and knowledge about the past much easier if parallels or comparisons are made with modern or contemporary society. Lastly, (4) the "Physically-orientated visitors" come to every museum, and they really part take in every tour. These are the people that need to move through all the exhibits, they need to touch, to manipulate and to be immersed in movement opportunities. Offering a tour that addresses all IPOP elements ultimately allows for a tour experience that exceeds the expectations of museum visitors.

Meade and Hoffmann spent several weeks practicing the IPOP theory in the University of Pretoria Museums. Practicing this interpretation strategy meant developing an understanding of what the different types of visitors on tours might need from the museum, and then identifying specific objects on exhibit that were suitable for IPOP interpretation. An informed museum tourist guide can bounce between the authoritative, knowledge-based tour strategy, and creative, unexpected interpretation opportunities. With a specific set of objects in mind, Hoffmann was able to incorporate all four aspects of IPOP into just a few tour stops. As a practical example to test the IPOP approach to interpretation, a well-known artwork titled "De Zwaan/The Swan" by the Dutch artist Jan Jacob Spohler (1811-1879) was selected.



Figure 2: "De Zwaan/The Swan" by J.J. Spohler (1849) oil on canvas. Photograph courtesy of the Department of UP Arts. © University of Pretoria

This particular painting allowed for interpretation using a variety of IPOP approaches, including object interpretation by identifying the artistic medium (oil on canvas) that was used to create the artwork in the 19th century. In addition, ideas related to the ways in which the metaphor of death is depicted in artistic expression, prominently feature in the interpretation of the painting to visitors, including references of an inn (depicted on the right side of the painting) as a metaphorical place in-between life and death, and physically associated with a place where one rests only for a short period of time before moving on. In fact, the title of the artwork originates from the depiction of a swan on the signage for the inn, the swan being a symbolic bird often associated with death. In addition, emanating from one of the chimneys is the suggestion of subtle smoke, perhaps not immediately obvious but also resembling the shape of a bird. Moreover, the black flag on the ship in the middle ground of the artwork, the artist's white illusion of a ghostly figure at the entrance to the inn and the bale of hay or wheat lying on the roof are also symbols for death. The artist was known to use symbolism in order to relate to actual events in history. For example, this artwork displays the orange, white and blue flag of the Netherlands on back of the boat, as well as the St. Dionysius church depicted in the background, which are symbols of the commemoration of the death of King Willem II of the Netherlands, who died at the age of 57 in the town of Tilburg in 1849.

Furthermore, a people-oriented interpretation approach allows museum visitors viewing this particular painting to engage with issues of how different cultures interact with the very notion of death. In addition, the physical activity of observing the original artworks from different angles, such as standing back or moving closer to examine and try to identify detail adds layers to interpretation allowing the visitor to not only observe the subject matter of the painting, but more non-tangible aspects such as the observation of the shadows or the intended "mood" or emotion of the painting. This artwork can be interpreted from a variety of angles, providing a strong opportunity to connect with a range of visitor learning preferences. To bring this idea further demonstrates, that a single museum object can be used to connect with a range of visitor interests and that a pre-existing tour program can be supplemented with particular interpretation opportunities.



Figure 3: Interpretation of the Mapungubwe Gold Rhino by Nicole Hoffmann to a student group. Photograph courtesy of the Department of UP Arts. © University of Pretoria.

As a second case study, the IPOP theory was applied to a number of artefacts identified in the museums' archaeological gallery. The exhibition text panels favour traditional knowledge dissemination, so focusing on connecting the objects on display with visitors becomes crucial. In the Mapungubwe gold gallery, there is also a display of organics showcasing archaeological worked bone tools made from animal bone, including worked elephant ivory. Hoffmann connects the use of functional tools such as bone points and needles with different skilled groups or craftsmen such as weavers. This analogy makes the interpretative connection of a functional tool with its manufacturer or maker, thereby connecting with people-orientated visitors. As an example, bone awls used for working animal skins can be connected with the idea of contemporary weaving or sewing. Having visitors actually survey their own clothing, or pointing out one particular visitor with a leather belt on, is a great way to make connections between contemporary museum visitors and past communities.

Another example of connecting with people-orientated visitors is by making use of the archaeological gold jewellery (gold beads, necklaces and bracelets) on display and make interpretative comparisons with contemporary gold jewellery. Furthermore, South Africa has a rich tradition and historical connection with beadwork, widely used in both a traditional and commercial context, which again brings the past into contemporary culture. The Mapungubwe gold gallery features a trio of gold foil animal figurines: a rhino, a feline and a bovine as well as a gold sceptre (mace) and a bowl, including several other incomplete gold foils. The gold rhino figurine became a national icon of Mapungubwe, which is recognised as a national and world heritage site. Focusing attention on the detail of the gold rhino and relating this ancient artefact to highlight the plight of rhino poaching around the world may be particularly relevant for people- and ideas-orientated visitors, whereas connecting with indigenous craftsmanship may be particularly pertinent for object-oriented visitors, but the interpretation of the entire gallery also needs to be considered holistically. Within this relatively small exhibit, each of the IPOP typologies can be targeted, creating the opportunity to "flip" visitors from what might be their primary learning approach to another IPOP category. According to Pekarik and Mogel (2010) "the flip" may be the crucial aspect of IPOP theory, as visitors have an unexpected and powerful moment of meaning making by learning outside their particular preferences. This "flip" is what visitors tend to remember, as experiencing the unexpected tends to leave a lasting impression.

Another key interpretation strategy that was explored involved observing at what type of museum is actually being presented. George E. Hein's discussion of the Constructivist-type museum (see, Hein 1995 and Hein 2005) involves challenging museum educators to consider how theories of knowledge acquisition and learning have been implemented within traditional and non-traditional environments. This useful article by Hein (1995) places learning within a historical framework suggesting that Constructivism as a learning theory is one of four methods of engaging learners, and one that museums are particularly well-suited for. Traditional theories of knowledge production and learning include a knowledgeable teacher that disseminates information to students, who readily absorb that information. Hein discusses school textbooks as good examples of linear teaching, with knowledge built on a foundation that becomes increasingly more complex as information is added. The use of the University of Pretoria Museums and their link to the South Africa teaching curriculum is a critical connection and is employed throughout the interpretation strategies for school learners.

Many museum exhibits follow this linear approach, with ideas roughly sketched out at the beginning, and becoming increasingly more complex through specific objects or label text. By the time a visitor finished with the visit, a significant amount of knowledge has been acquired. However, what the visitor does with that knowledge is a different question. What happens when knowledge is actually taken in by a learner? Is that knowledge strictly “new,” or does it get added to what a visitor thinks they already know, and thus a new understanding is developed? Designing constructivist museum exhibits means considering Hein’s theory from the very inception of exhibition planning. What many museum educators experience, is an already constructed exhibit that they have to interpret to the public. That means a museum tourist guide has the freedom to specifically interpret the museum’s exhibits and collections so that visitors can develop their own understandings. Constructivist tours tend to be discussion-oriented, rather than specifically tourist guide-led, and visitors end up challenging or building on another’s ideas and understandings. Constructivist tours then are particularly social in nature, and allow visitors to offer alternative viewpoints for deeper engagement. Since visitors inherently bring their previous experiences with them into the museum exhibit, having space and encouragement to include previous experiences can lead to deeply personal and meaningful tour experiences. Constructivist interpretation strategies then may be particularly crucial to changing the ways in which visitors understand specialist museums, especially in the context of re-interpretation efforts.

No discussion of the experiences visitors may bring with them on their museum tour is complete without consideration of John Falk’s classification of visitor identities. There simply is no such term as a “typical” museum visitor. The museum educator can only expect that every visitor is different and unique. Falk’s classification system involves considering what “identity” itself means, and how fluid that understanding truly is. Identity can include macro identities, such as skin colour, gender preference, education level, and country of origin. Those categories tend not to change, and surprisingly tell little about who a visitor actually is. The micro identity, which is personal, is what tends to bring visitors to a museum. A personal connection increases meaningfulness to the museum visit and this in turn helps a museum sustain a community of visitors. In fact, it may be the very purpose of why a visitor is there and not somewhere else. Falk notes that museum experiences tend to be deeply personal, and it is personal experience that creates lasting meaning for visitors. When discussing visitor interviews, Falk further notes that, “time and time again, what leaps out ... is how deeply personal museum visits are, and how deeply tied they are to each individual’s sense of identity.”

Visitor identity is tied directly to personal motivations for the museum visit, and can include intentions of exploring to see new things, facilitating museum interaction between visitors and collections, professionals or hobbyists looking at rare or exquisite objects, experience seekers that are looking almost for a pilgrimage destination, or those visitors seeking to recharge themselves with a particular collection that takes their minds off the real pressures of daily life. Museum visitor surveys tend to overlook these particular motivations though, focusing instead on the macro-identities listed above. However, a museum educator interested in developing a personally-satisfying museum tour will start off with questions designed to understand what motivated their visitors to attend in the first place. And identities can change. A visitor motivated in a particular way one day may visit the museum again with a completely different set of intentions and may become repeat visitors to the museums.

In conclusion, the first step a tourist guide needs to take is to recognize who the visitors actually are, and then to develop a museum experience based on drawing those identity-based needs out, thereby making museums matter to them. Once visitors are understood in terms of unique individuals, museum experiences can be truly based around interpretation strategy. The interpretation approach and training over a period of several months between Hoffmann and Meade, explored different visitor identities and questioned the ways of educational approach. This has enabled a tangible strong impact on not just how visitors are guided through the museum, but rather upon the very way in which the museum's importance is considered. At first, the museum was interpreted from a strictly knowledge-based approach, as so many museums worldwide are. However, through consistent discussion of and practice with a variety of interpretation strategies and the implementation as well as experimentation of the application of IPOP theory, interpretation within the University of Pretoria Museums has transformed into a veritable playground for the museum educator. The vital connections with current issues such as decolonisation, #FeesMustFall campaign and re-interpretation of museum collections and with the past is critically important in today's world that allows for visitors to personally and freely relate to the collections on display and walk away with their own interpretations.

The apt title chosen for this article, "Making Museums Matter", alludes to the institutional "ringtone" of the University of Pretoria to "Make Today Matter". It centres on the premise that by drawing from experiences of yesterday and using the knowledge of today will improve tomorrow. As is the case of tackling the issue of re-interpretation of the University of Pretoria Museums in understanding that every action in the present has the potential to shape the future.

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Alter prior to restoration.

THE SPIRITUAL LEGACY AT RISK: CONSERVATION OF RELIGIOUS ALTARS IN MEXICO.

By Rocio Carvajal.

Last year Mexico was hit by a 8.2 magnitude earthquake, the strongest seismic event in a century, affecting many cities and towns in central and south-east regions of the country, the Mexican government launched the DN-III-E or Civil Relief and Aid Plan for Disasters, the situation was critical and the response slow, however the frequency and gravity of such natural disasters in the past has galvanized the nation to react in well organized emergency plans to provide humanitarian aid, volunteer in the rescue of victims and to join efforts in the reconstruction of entire towns.

Rural areas are particularly vulnerable to such disasters, not only for their geographic location that difficult the immediate assistance but the state deterioration that many family homes and heritage building such as churches have, represent a life threatening risk to the inhabitants and to the survival of the buildings themselves. Soon after the earthquake, the head of Mexico's National Institute of Anthropology and History estimated that nearly 2,000 historic buildings were severely damaged, hundreds of them beyond repair, and when the rescue and protection of survivors is vital, once the emergency is over, restoring basic services such as electricity and water supply are intermediate followed by the evaluation and subsequent demolition or reconstruction of homes, schools, hospitals, historical buildings and monuments. The southern states of Chiapas and Oaxaca were the most affected by the first quake and the more than 20 aftershocks of magnitude 4.0 or greater that continued occurring in the following hours.

For decades, the federal government and many private entities such as Fundacion Alfredo Harp Helu, Oaxaca have invested hundreds of millions of pesos cataloging and restoring historical monuments and listed buildings, almost ten years ago I curated an exhibition about 9 churches and their main altars that were fully restored by Fundacion Alfredo Harp Helu, the research from my team and the field work by the conservation experts revealed surprising facts about the main causes of damage and in many cases irreparable loss of such objects and buildings, and that is the man-made alteration or destruction of them by unqualified builders or rouge conservation that jeopardizes the historical legacy of entire communities.

An old adagio says “we can’t protect and appreciate what we don’t know and understand” and there is truth in it, how many times have we stopped and pondered about the state of conservation or history of our local parishes and historical buildings? They often are part of the local landscape and only when natural disasters or accidents such as fires occur, they reveal the critical state of these monuments. The purpose of the exhibition all those ago was to raise awareness of the critical state of our built heritage, educate the local communities about the basic aspects of conservation, help them understand and re-interpret religious altars as historical objects and galvanize the community about the importance of preventing deterioration, how to better protect them against theft and black-market trafficking and re-frame their relationship as stewards of their own cultural legacy.

Mexico is a profoundly ritualistic culture that feeds our imagination, in our rural communities art is an indivisible component of our spiritual expression, preserving historical objects and listed buildings is a permanent and arduous work, the government’s ability to respond to such a high and complex demand is simply impossible to fulfill. Even more challenging is changing the perceptions and engagement of how we relate to this tangible heritage as a society, which is why the participation of NGO’s and private initiatives is essential, and the only way to ensure a permanent change is to create and reinforce legal frameworks to ensure the protection of such monuments, educate and accompany local communities and transform the way in which we protect, manage and interpret our tangible heritage.

Why is this important? The loss of tangible heritage is physical disappearance of the significant objects that are part of our territorial identity, religious altars are one of the most representative and unique artistic manifestations of the religious craftsmanship during the colonial period in Mexico, in these objects we can see the physical manifestation of the cultural syncretism through the newly created spiritual iconography that blended indigenous and christian symbols to create a new common language, they are evidence of the religious change that shaped the spiritual identity of the nation. Colonial sacred objects such as altars are in essence pedagogic tools, built in large scale, combining sculptures, paintings and ornaments to impress, provoke admiration, to move and provoke devotion and even to inflict fear, but they also are undeniable objects that transcend their physicality and are seen as portals to allow a connection to the spiritual world.

Religious altars are part of the symbolic language of churches and are crucial to the religious and social life of local communities, anyone who has visited Mexican churches might notice the active way in which people interact with the statues and paintings in the altars, tokens, candles, flowers and even fruits and food are presented to the saint or virgin depicted. But the formal language of altars is determined by the evolution of artistic and even architectural styles, the ideological content that is meant to communicate and the particular take of the Gospel by religious order that has commissioned it.

But what specifically is an altar? Is an architectural structure designed to contain religious objects and is considered as part and not just a feature of a church or chapel, as mentioned before, their main function is to serve as a vehicle of religious indoctrination, communicating through physical objects key concepts of a religion’s dogma. In New Spain, today’s Mexico, they were fundamental to facilitate the transmission of complex ideas and concepts to the native communities, a key tool in a time when the lack of a common language presented a real challenge for the church. The history of catholic altars dates back to early Christianity and formal altars can be found in temples from the 9th C onwards, originally they were built in separate panels that could be easily transported and often contained as a key feature the relics of a saint or martyr, over time the dimensions and structure changed to become monumental pieces, specifically during the Gothic period, but it wasn’t until the 16th and 17th centuries when their architectural development transformed into complex objects built with engineering precision to which voluptuous sculpted elements were added in the baroque period.



Alter Santa Ana Zegache Oaxaca (left) and Alter Santa Ana Zegache (right). These altars were part of a long -term restoring and managing program of historical monuments and listed buildings in the state of Oaxaca, Mexico, run by Fundación Alfredo Harp Helu Oaxaca Co-funded by the Rockefeller Foundation, the National Institute of Anthropology and History of Mexico, the National Council of Arts and Culture, World Monuments Fund and the National For Conservation of cultural Heritage amongst others. You can view or download the Spanish version of the 2010 exhibition catalogue here: <http://bit.ly/2a1raj8>

The first catholic altars in Mexico were introduced by Spanish religious orders, their construction required the participation of builders, sculptors, painters, carpenters and artisans to guild and polychrome the panels, this meant the training and creation of guilds and apprenticeships. The tradition of altar building in Mexico has existed almost uninterruptedly for over 450 years but today the conservation and protection of altars face challenges such as vandalism, illegal trafficking, abandonment, lack of basic maintenance and the unpredictable effect of natural disasters.

The conservation of these historical objects does not intend to restore them to its original aspect at the moment of their creation but to find a balance between the object's own history, scars and interventions and a desirable balance between its original aspect and what is technically and historically possible to obtain.

On a final note, I would like to underline the fact that after the War of Reform in Mexico that ended in 1861, by law the church and state were completely separated and no longer would the church as an institution receive funding for its operation by the government. To this day, the operation and maintenance of functioning religious buildings is funded by the church itself and the voluntary donations of the congregation. The limited funds and lack of expertise are often the cause of non professional interventions that result in damages or destruction of altars and churches. Although there are a number of national and international conservation programs and funds to which conservation projects can be submitted, the lack of information and guidance prevents many communities and their authorities to apply, which is why the reinforcement of education and information campaigns to help these communities to better preserve their heritage is essential.

Rocio Carvajal.

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To accomplish this we provide online professional development. We offer courses on a broad range of topics important to running a cultural institution including; Administration, Exhibits & Public Programming, Facilities Management, Collections Management, and Collection Preservation & Care. Our goal is to help you develop policies, procedures and programs to run your institution successfully.

April 2, 2018

* Introduction to Integrated Pest Management

*Assessing Risk to Cultural Property 2
Moving Museum Collections

* Creating Exhibitions Through the Collective

April 9, 2018

*AASLH Project Management for History Professionals

April 16, 2018

*AASLH Caring for Museum Collections

May 7, 2018

*Interpretive Planning for Historic Homes and Gardens

*Storage Techniques

June 4, 2018

*Policies for Managing Collections

*Social Relevance: Environmental Sustainability in Museums

*Rights & Reproductions: Guidelines and Best Practices

*Practical Approaches to Disaster Preparation

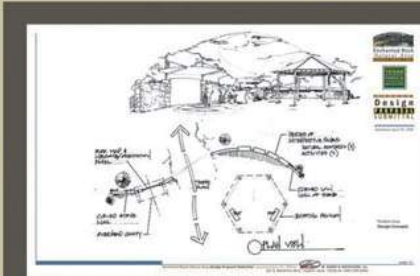
*AASLH Basics of Archives

For more information on these and other courses visit the Course Schedule on MuseumStudy.com

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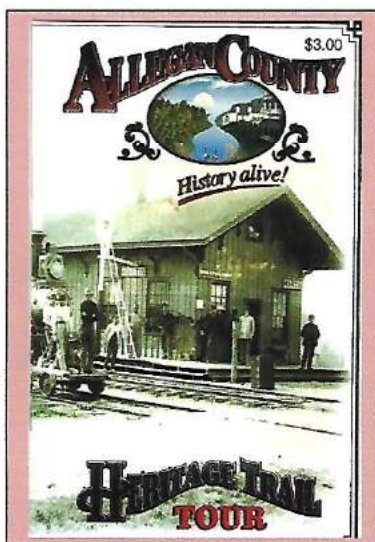
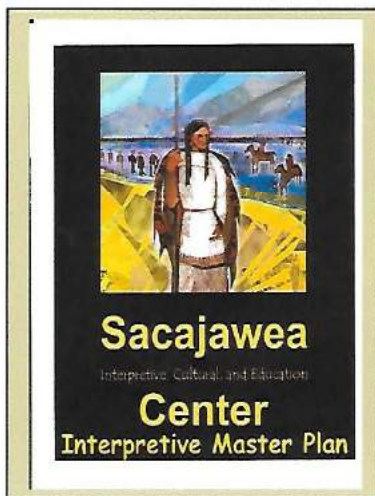
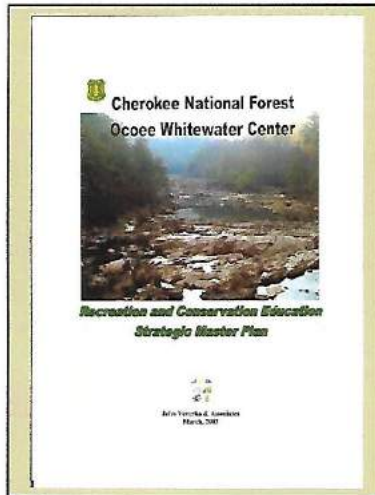


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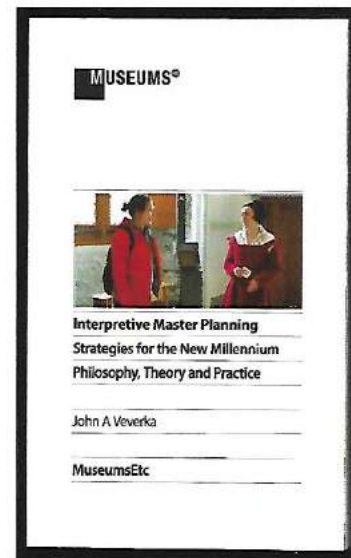
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- Interpretive planning for exhibits and exhibit evaluations.
- Interpretive regional systems planning.
- Interpretive planning featuring mass customization, markets of one and site experience planning and analysis.
- Interpretive planning for large scale "landscape" museums.
- Interpretive site/facility feasibility analysis.
- Interpretive site/facility marketing plans.
- Interpretive tourism analysis and new-audience development.
- Interpretive planning coaching services (we help your interpretive planning team produce their interpretive plan).
- We also sub-contract our interpretive planning expertise to other firms developing landscape architecture plans or interpretive facility planning, designs and exhibits.

We think our interpretive planning products are the very best available – so in that vein, I am happy so send you a copy of one of our interpretive plans to compare our content details against others. Products tend to speak for themselves. John Veverka

John Veverka & Associates
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The Heritage Interpretation Training Center

The Heritage Interpretation Training Center offers 39 college level courses in heritage interpretation, from introductory courses for new interpretive staff, docents and volunteers, to advanced courses for seasoned interpretive professionals. Courses can be offered/presented on site at your facility or location, or through our e-LIVE on-line self-paced interpretive courses.



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Training for Interpretive Trainers e-LIVE Course - 11 Units and 2 CEU Credits. \$200.00

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The Interpretive Exhibit Planners Tool Box e-LIVE course - 11 Units and 2 CEU Credits. \$200.00

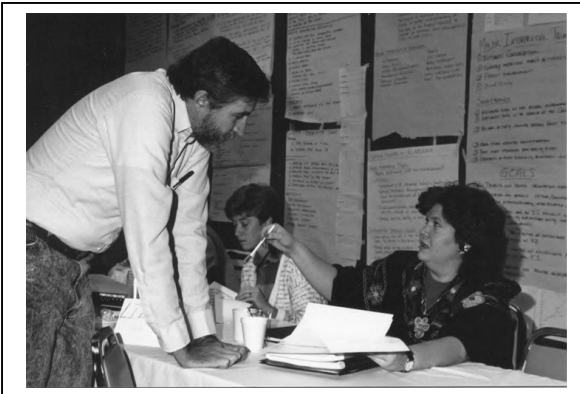
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Interpretive Master Planning - e-LIVE. 13 Units, 3 CEU Credits. \$275.00

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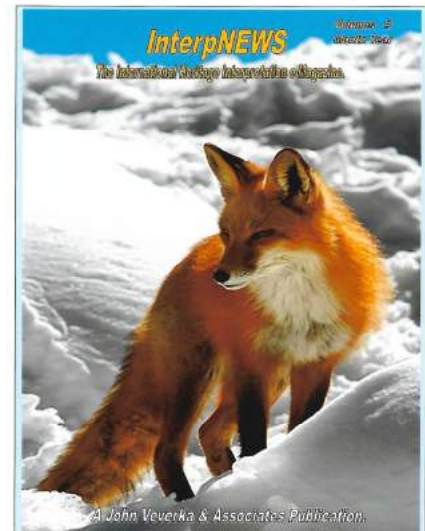
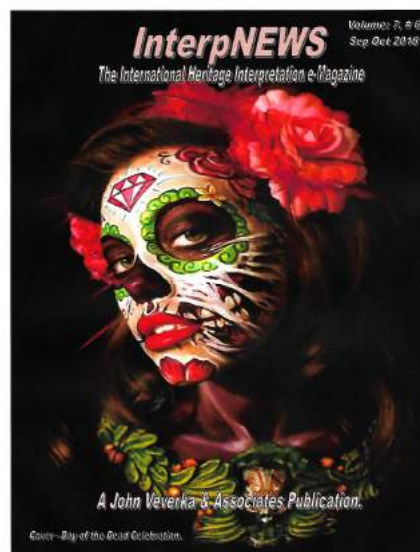
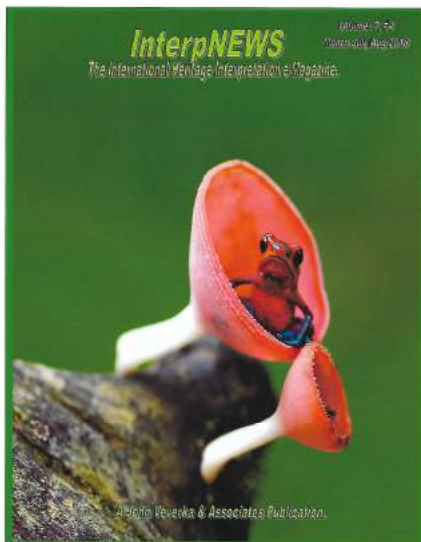
Interpretive Training Courses.



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July/August, September/October and November/December. Wait till you see what's coming for 2019.



Contact me for any questions: jvainterp@aol.com, www.heritageinterp.com