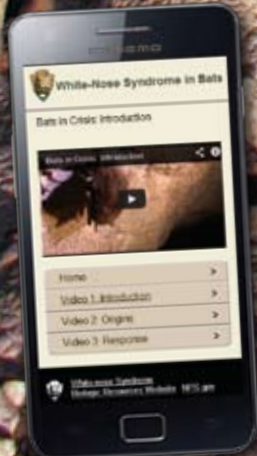


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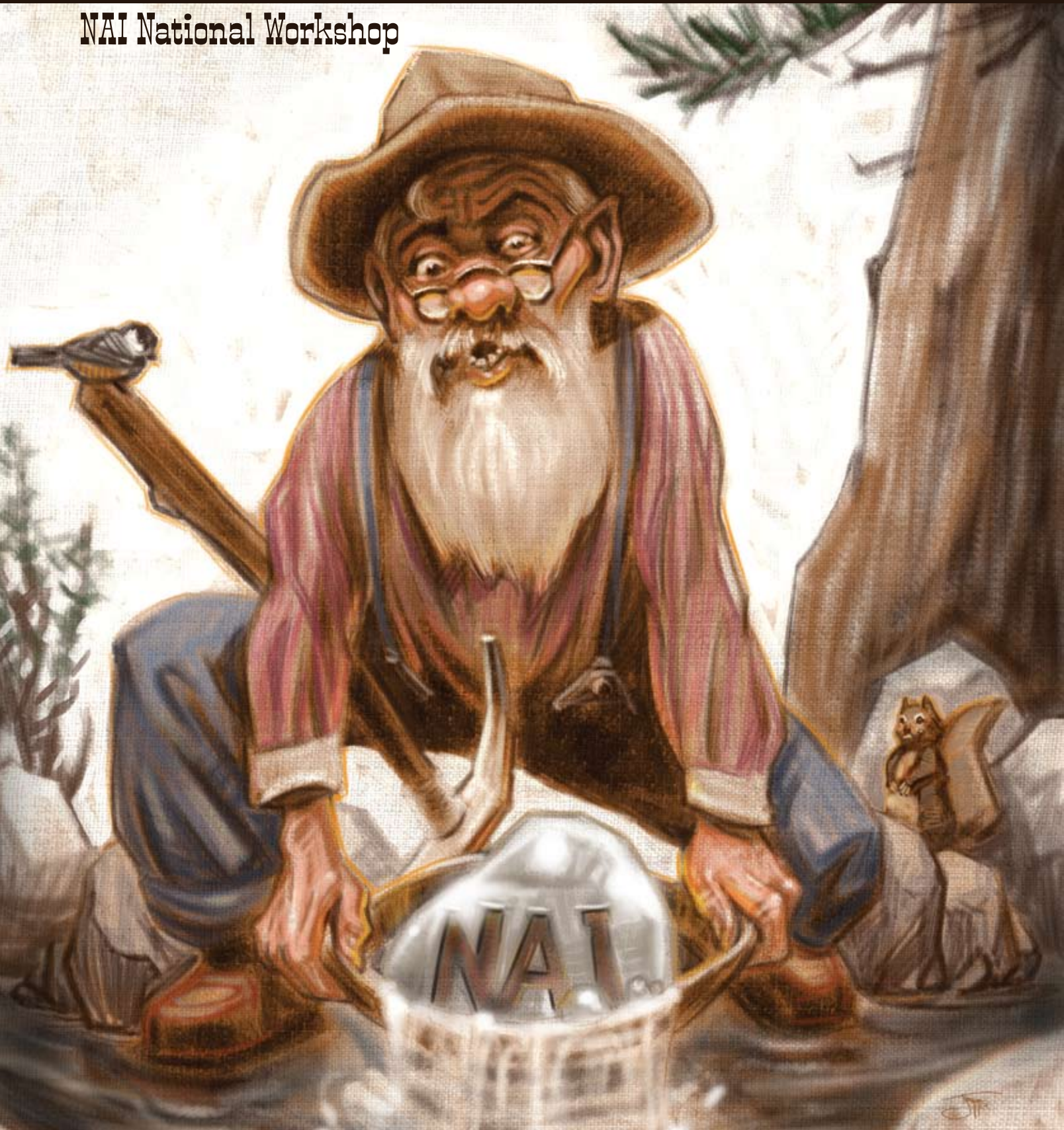
Legacy



Technology
in Interpretation

Mining Nuggets of Interpretation

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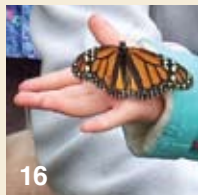
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Legacy

September/October 2013

Volume 24, Number 5

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First Impressions

Five Rivers MetroParks in Dayton, Ohio, uses social media to further conversations about conservation. Conservation action knows no age boundaries as Caroline and other tikes plant milkweed in a new pollinator garden at Germantown MetroPark. Photo by Joshua York. See page 16.







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NAI's mission is to inspire leadership and excellence to advance heritage interpretation as a profession.

Interpretation is a mission-based communication process that forges emotional and intellectual connections between the interests of the audience and the meanings inherent in the resource.

Technology: It's the Worst. It's the Best.

PAUL CAPUTO

Technology is responsible for some really amazing things, like man's ability to land and remotely operate an exploratory rover on Mars, or toasters that will toast your favorite baseball team's logo right onto your bread. Technology is also responsible for some terrible things, like weapons of mass destruction, or the typeface Comic Sans.

The very word *technology* conjures an emotive response—positive or negative—in interpreters. Technology is the thing that connects visitors past, present, and potential through an unfathomable worldwide network of more than two billion people known as the Internet. It creates a world of opportunities for enhancing visitor experiences—from interactive kiosks to “augmented reality” smartphone apps that will change how we see the three-dimensional world. Technology is also the thing that wreaks havoc when the LCD projector breaks at the beginning of a presentation, or worse yet, it's the thing that keeps kids' faces buried in portable glowing screens as Mom and Dad drive the family truckster through the sweeping valleys of Yellowstone National Park.



A recent survey of NAI members indicates that about two-thirds of you would read *Legacy* less if it were only online. (I'm with you.) So thankfully for us, you're holding an actual printed magazine in your hands. But how long will that last? How long will *anything* actually be printed by *anyone*? Like it or not, technology is not only here to stay, it's becoming more a part of our lives every day. Moore's Law, named for a co-founder of the tech company Intel, suggests that the capabilities of technological things in our life (to use a lot of technical terms) doubles roughly every two years. The idea of creating human-level artificial intelligence is becoming more than just a pipe dream and is actually seen by some as something that could happen in the next 100 years.

So the clever and creative among us will find ways to embrace technology and use it to our advantage, as have the interpreters whose feature articles highlight this issue of *Legacy*. Others will face a future as Crocodile Dundee-style noble savages, living in the swamp, making boots out of giant reptiles, and eating toast that doesn't even have a baseball logo on it.

Reach NAI Art & Publications Director Paul Caputo at pcaputo@interpnet.com.
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Get the Lead Out
Birds often snap up lost sinkers and spent shot. Lead poisoning can result, causing loss of balance, tremors and impaired ability to fly. An affected bird is more vulnerable to predators and may have trouble feeding, mating, nesting and caring for young. Often, the bird dies. Protect birds by using tackle made from less toxic materials such as steel, brass, copper, bismuth and tungsten.

Lake Temperature Layers
The reservoir provides a comfortable home for both warm- and cold-water fish. Each spring, as lake ice melts, wind vertically mixes the water in a process called turnover until a uniform temperature develops. As the summer sun warms the surface water, though, temperature layers develop once again, lasting until autumn turnover.

Labels in diagram: Wind can cause a down-wind action that mixes water. Cold Water Sinks. Farm Pond. Campground Pond. Great blue heron.

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Saving Bats

One Cell Phone at a Time

Sara Melena

6 September/October 2013



In the summer, I like to sit on my back patio in the evenings and watch for bats darting around the sky hunting for insects. Their seemingly erratic flight is fun to watch. Nationally, there are 47 different species and over 1,200 species of bats worldwide. Bats are vital to healthy ecosystems and humans. Nectar-feeding bats pollinate plants and fruit-eating bats disperse seeds, but my favorite, insectivorous bats, play an even more important role for me—they help keep pesky insects at bay. A little brown bat can eat thousands of insects every night and other insectivorous bats eat crop pests, which means fewer pesticides enter the ecosystem. Sadly, these essential creatures are under attack by a disease called white-nose syndrome, and the National Park Service (NPS) is looking to technology to help protect them.

Bats have been the sources of myths and misinformation for centuries: rabid attackers of humans, blood-sucking vampires, affinity for hair. These myths sound scary, but they just aren't true. What is terrifyingly real is the devastation the *Pseudogymnoascus destructans* fungus has reaped on hibernating bat populations in the eastern United States and Canada. The fungus, which thrives in the cold and humid conditions characteristic of caves and mines used by bats, was discovered in New York State in the winter of 2006–2007. The fungus causes white-nose syndrome, which has a mortality rate of 90 to 100 percent in some populations of hibernating bats. Since that winter, white-nose syndrome has spread to 21 additional states and five Canadian provinces, killing millions of bats. It is slowly spreading westward, but has not been detected west of Oklahoma. Scientists are investigating the fungal infection, but no cure has been found, and like most wildlife diseases, there may not be a way to control it.

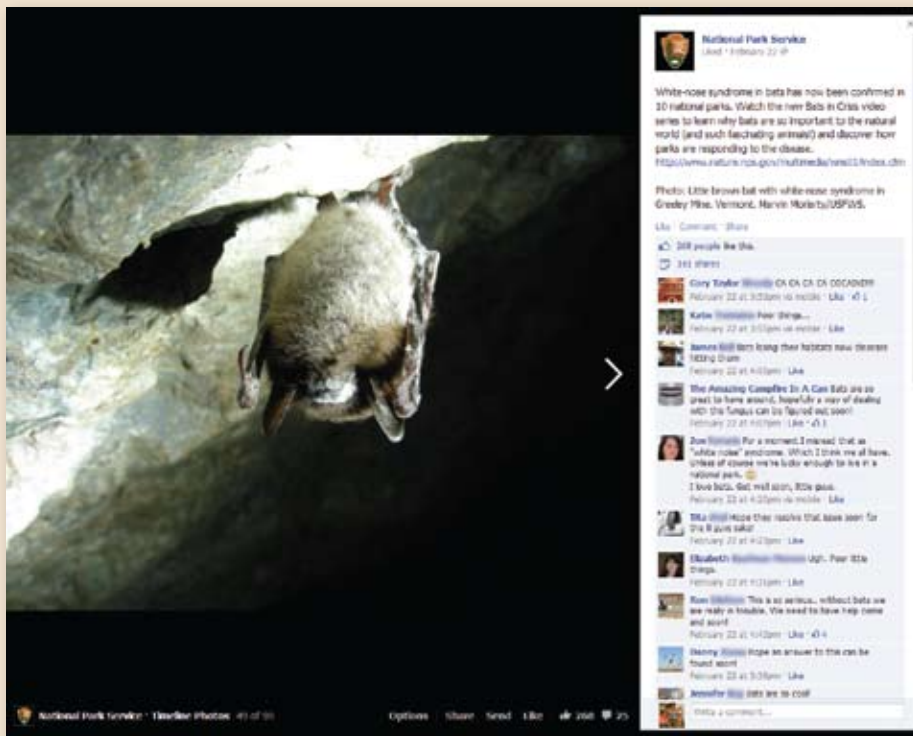
The National Park Service is one of a number of federal agencies

concerned about the spread of white-nose syndrome. One in four NPS units has caves, and one in three contains mines that can provide habitat for bats. For some national parks such as Mammoth Cave in Kentucky and Carlsbad Caverns in New Mexico, caves are the primary attraction. Scientists believe that the fungus is primarily transmitted from bat to bat, although infrequent, human-assisted transmission is also suspected. Across the nation, parks with hibernating bat populations are raising awareness of white-nose syndrome and encouraging visitors to take precautions. In some parks, visitors are screened to determine if they have accessed other caves recently; for a number of years, Mammoth Cave has used decontamination methods to minimize the risk of visitors transmitting the fungus into the park. Now that white-nose syndrome has made its way into the Mammoth Cave system (likely via bats), the park is taking steps to minimize the risk of visitors taking the fungus out of the park. Educational and interpretive products and services introduce

visitors to the importance of bats and the threat of white-nose syndrome, and, when necessary, caves may be closed.

So what do bats and technology have in common (besides Batman)? The National Park Service has embraced the web and social media and is exploring different ways to interpret park resources. Many parks use web-based videos to interpret park resources for distant visitors. The “Photos and Multimedia” sections of park websites are very popular. The NPS Facebook page has 211,000 fans, and the Facebook pages of individual parks rival or surpass servicewide numbers. The NPS YouTube Channel includes 85 videos, and parks are starting to use Quick Response (QR) codes to direct visitors to place-based content. It is through the web that bats and technology are meeting.

To increase awareness and understanding of white-nose syndrome, the NPS Wildlife Health Branch teamed up with the natural resources Office of Education and Outreach (including me and three other interpreters) and Colorado State University (CSU) to create a series of movies. The movies, available at www.nature.nps.gov, describe the importance of bats, the role of



The NPS posted videos to its Facebook page. Over 150 few people shared the videos with their friends, extending their visibility far beyond the initial reach.

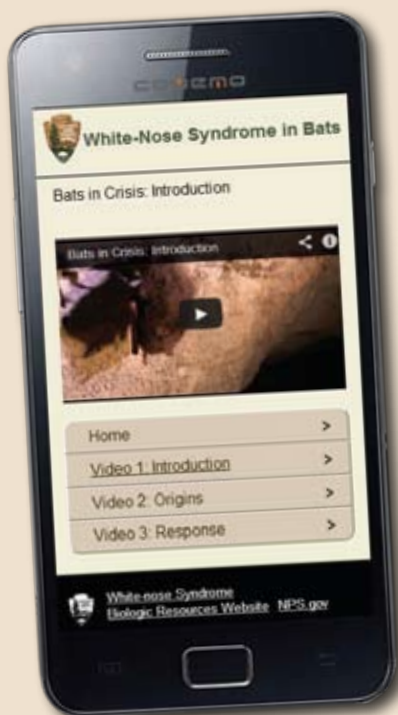
science in understanding white-nose syndrome, and the NPS response to the disease. The team recognized that the website has a limited reach, so we also ventured into the world of social media. We posted links to our videos on the NPS Facebook site, where they were shared 158 times and a number of people commented on the dire situation. The videos have been viewed nearly 4,000 times in their four months on YouTube and were broadcast by public television stations in Michigan and Massachusetts. In addition, the videographer encouraged us to create a media page that includes expert interviews, B-roll, and still images for local television channels to use to create their own segments on white-nose syndrome in their geographical area.

We also recognized that it is important to contact visitors in parks—their actions while visiting can help or hinder the spread of the fungus. We decided to use QR codes to direct them to a mobile website that featured the movies. The QR codes can be placed on brochures about bats, “cave closed” signs, or

backcountry permits, allowing people in the parks to access the movies when they need more information about bats and white-nose syndrome. The interpretive opportunity connects people with bats (tangible), their fight for survival (intangible), and the NPS effort to preserve them (intangible)—all near bat habitats where the message is most salient (appropriate technique). The QR codes are paired with interpretive products that already introduce the topic and give visitors access to more information.

On the other end of the QR codes, we tackled another challenging aspect of interpretation: evaluation.

Evaluating interpretive efforts is challenging. It's hard to know what impact your program is having. With web-based content we can track standard web analytics—number of page views, average time on a page, etc. With social media, we can read user comments. The use of QR codes added the potential for another layer of information. QR codes are pretty simple: a QR code generator creates an image that is linked to a web page.



The image can be placed on all sorts of media. People scan the code with their smart phone and are directed to web content (ideally a mobile-friendly version). We created separate QR codes for publications, signs, and backcountry permits, as well as a generic QR code, that linked to a database. The database tracks the type of media (publication, sign, permit, other) the codes were scanned from, giving us a better understanding of where visitors are accessing the movies and helping us evaluate the effectiveness of the communication vehicle used. At the moment we are encouraging parks (and anyone else who is interested) to use the QR codes on their interpretive products. The jury is still out on where people are encountering them, but we are hopeful that we can learn something from this experiment.

When I reflect on the use of technology to interpret white-nose syndrome in bats, I believe that the technology we used allows us to reach a broader audience by coming to them. The fundamental story has to be told well—it has to be emotional and intellectual and we need to create an opportunity for our audience to discover something meaningful. Through technology we are able to reach our audiences in their homes—through their television, through their social media, and through their trip-planning web visits. We also use technology to offer a greater interpretive opportunity while visitors are in parks by providing additional content where they might encounter the resource. Technology has helped us magnify our reach and will, we hope, raise awareness about this disease. In this case technology is our “Batphone.”

Sara Melena is an interpretive specialist in the NPS Natural Resource Stewardship and Science Directorate. Her colleagues, Ginny Reams, writer/editor, and Kevin Castle, wildlife veterinarian, contributed to this article.

Beyond Human Senses

Beyond Human Imagination

JAMES E. EGGERS

Recently spotted on a wildlife researcher’s truck bumper: “My bat is smarter than your honor student; echolocating bats can calculate cross-correlation functions and compensate for Doppler-shift.”

There is probably no more sophisticated and amazing animal adaptation than echolocation, and there are few areas where recent technological advancements have so rapidly expanded our ability to accurately interpret nature and excite audiences. This is especially true and especially important when teaching about bats, which are so misunderstood and persecuted, yet of such critical importance to the world, including humans. For nature interpretation, these new tools and techniques provide a window to the world of animal super-senses, which lay beyond human senses and even beyond human imagination.

We can define echolocation, sometimes called biosonar, as the production, reception, and analysis of sound waves for the purpose of locating objects. The 18th-century Italian scientist Lazzaro Spallanzani hypothesized that bats navigate by sound and not sight, but not until the 1930s did humans develop the technology to “hear” bat calls, and only lately have we been able to begin interpreting those calls. Today there exists a wide range of “bat detectors”

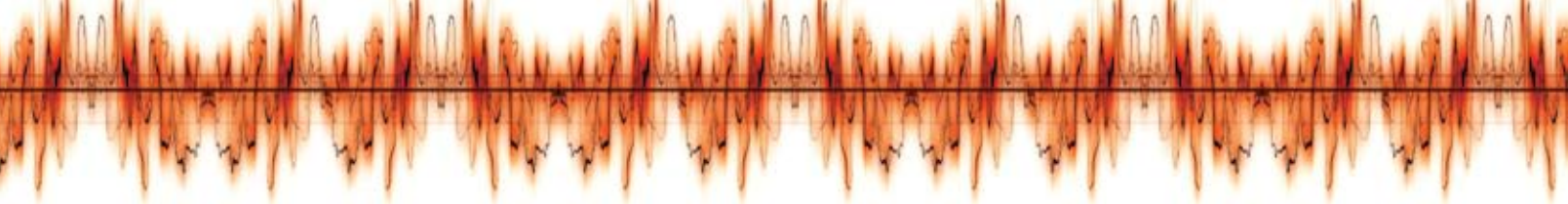
for amateur and professional bat researchers and educators. A basic understanding of echolocation and the technology to hear it can take interpretive programs to a whole new level.

Imagine sitting on the beach. How many waves are hitting the beach per minute? We use a similar method for labeling sound waves and describe their frequency in Hertz (Hz). A wave/event that repeats one time in one second has a frequency of 1 Hertz. One thousand times per second would have a frequency of 1,000 Hz, or one

A Mexican free-tailed bat echolocates to avoid obstacles and find food.

© MERLIND TUTTLE / BAT CONSERVATION INTERNATIONAL / WWW.BATCON.ORG





kiloHertz (kHz). Humans hear in the range of 20–20,000 Hz. If you look at the technical specifications for most audio speakers, including headphones and ear buds, they only produce sound in this range because that’s all that most humans can hear. Dogs hear in the range of 40–60,000 Hz, cats 55–79,000 Hz, bottlenose dolphins 75–150,000 Hz, and elephants hear in the very low range of 14–35 Hz. In addition to variances by individual and by age, different breeds of dogs and cats have different ranges, and so do different species of bats. While some bat species can produce and detect sounds as low as 1,000 Hz and other species as high as 200,000 Hz, an average range of sensitivity is 15,000–90,000 Hz. Species that echolocate in the lower end of the range, such as the hoary bat found across much of the Americas, can sometimes be heard by attentive humans.

The order *Chiroptera* (meaning “wing-hand”) is composed of more than 1,290 identified bat species, nearly one-quarter of all mammal species. They range in size from Kitti’s hog-nosed bat, barely one inch long and weighing less than a dime, to giant fruit bats weighing as much as three and a half pounds, and with wing spans of nearly six feet. Seventy percent of the world’s bat species (and 99.9 % of U.S. bats) are echolocating insectivores; the majority of the rest are frugivores. Some species hunt over water, others over grasslands, agricultural fields, in deserts or dense forests, and even at altitudes of 10,000 feet to find migrating moths. Many species roost in caves, others in tree crevices, some in foliage, and a few even make tents of leaves or fronds. Species in temperate areas have adapted



JAMES E. EGGERS

A BCI bat researcher prepares a detector and data storage unit for passive monitoring in the field.

to limited resources during cold weather by either hibernating or migrating, sometimes short distances but sometimes thousands of miles. One could hardly find a more diverse Order of animals, especially among mammals, and this diversity extends to their power of echolocation.

Bats face a wide range of challenges which have created different species with the need to echolocate in different ways. One good example is prey size. Put simply, the higher the frequency, the “tighter” the waves and therefore the smaller the prey that can be detected. We can roughly say that the smaller the bat the smaller the prey, so the higher the frequency the bat will need for echolocation. If higher frequencies “catch” more information, why

don’t all bats echolocate at higher frequencies? High-frequency sound waves are expensive, requiring more energy to produce, and the higher the frequency, the more quickly the waves attenuate. While elephants can hear each other’s 14 Hz rumblings from kilometers away, a bat’s 90 kHz sound wave, even when “shouted” at 120 decibels, might only project for a few yards.

Nocturnal, aerial, and mostly inaudible to humans, bats must be one of the most difficult animals to study. A great help has been the development of “bat detectors,” which detect ultrasound and convert it to sound within the range of human hearing. Scientists early on noticed consistent differences between bat species’ echolocation

calls, not only in frequency, but also in duration, shape of the “notes,” and even harmonics. They began to realize that these differences could help us identify species and even behaviors. In the past few decades electronics engineers and scientists have developed better hardware and even software to this end. Today handheld detectors with software to graphically show echolocations on a laptop can be purchased for less than \$150. Professional models for bat researchers, ranging from \$500 to \$7,000, can be programmed, record passively or actively, work in many weather conditions, display real time and playback graphics and sounds, utilize timers, store days of recordings, and analyze them for species identification.

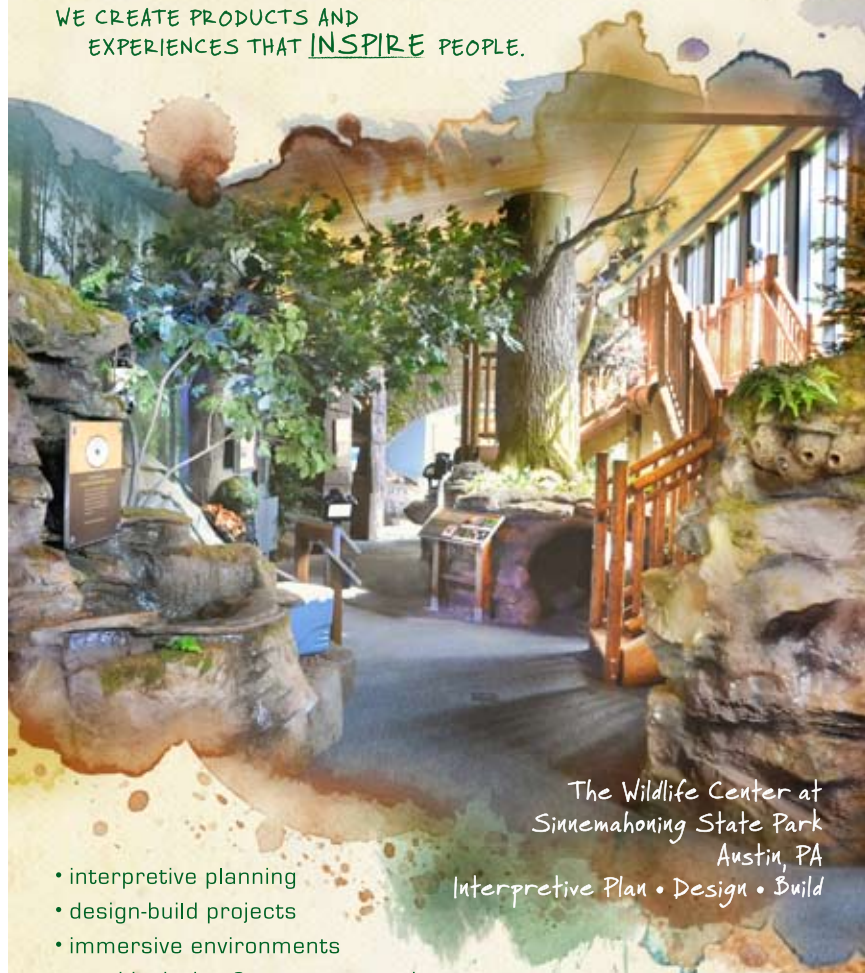
For most people, just “hearing the unheard” can create a teachable moment and even a lifetime of interest. Determining the mere presence of bats echolocating is the most basic way to use a bat detector and can be done nearly everywhere in the U.S. if the correct times of day and year are chosen. You can determine the species in your area, and discover much about their annual and daily behavior cycles at trusted sites such as batcon.org.

For this level of interpretation even the most primitive bat detector is acceptable, which will have an on/off button, a special microphone to detect echolocations, internal components to convert the sounds into the range of human hearing, and either headphones or a built-in speaker. Such a bat detector can even be homemade by people with a bit of electronics knowledge, with plans or kits available online. Ready-to-use models can be found for as little as \$65, but I strongly recommend



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the more dependable, durable, and adaptable models starting around \$125, such as Baton by Batbox.com. I and many others have had particularly good experiences with this detector, which has a very sensitive microphone, a built-in speaker good for small groups, a port for connection to an external speaker (for larger groups), and the ability to record calls on other devices such as MP3 players. The Baton also comes with free sound analysis software and can be attached to a laptop computer to produce real-time sonograms for spectacular presentations and detailed call analysis, thus allowing utilization in higher levels of interpretation as described below.

The second level of interpretation can be an examination of the variation in sounds that are heard. Even with the most elementary detector you should be able to follow a single bat's series of echolocations with individual calls that begin relatively far apart as the bat is hunting, become more rapid when prey has been located, then very rapid as the bat approaches the prey, then a short continuous buzz as the prey is captured.

A third level of interpretation can examine the frequencies at which bats echolocate. For example, California myotis (*Myotis californicus*) typically echolocates in the range 45.6–90.0 kHz, silver-haired bat (*Lasionycteris noctivagans*) 25.4–41.5 kHz, and spotted bat (*Euderma maculatum*) 9.6–14.5 kHz. This can lead to a discussion comparing the size of the species (e.g., those three in ascending order), the size of their common prey, and how that relates to the frequency each species uses.

A fourth level of interpretation

can examine the variation in call shapes between bat species. These differences can be well seen using software and hardware that graphically reveal call characteristics such as duration and slope. *Slope* here can be defined as the steepness

Even with the most elementary detector you should be able to follow a single bat's series of echolocations.

of the change in frequency during the call, for example from 45 kHz to 25 kHz in 3 milliseconds. Expressed in degrees, the greater the slope, the steeper the decrease, so 0.7 degrees is a very slight decrease but 16 degrees is a sharp decrease. For example, Brazilian free-tailed bats (*Tadarida brasiliensis*) use relatively long calls, typically 11.5 milliseconds in duration, and have very little change in frequency, typically a slope of

0.7. In contrast, small-footed myotis (*Myotis ciliolabrum*) typically use short calls that sharply drop in frequency, with a duration of only 3.2 milliseconds and a slope of 16.0.

With a basic understanding of frequency, duration, and slope, and familiarity with your specific equipment, you and your program participants can enter a fifth level of interpretation and begin to more accurately identify and compare calls, either through active or passive monitoring. Active monitoring is done with a bat detector in hand, paying close attention to your equipment in order to determine the presence, behavior, and species of bats. Passive monitoring uses bat detectors that can record calls for hours, days, or even weeks, to be analyzed later and possibly with more powerful software than is commonly used in the field. For this serious level of interpretation, I highly recommend attending a course designed to introduce you to the range of equipment options, which will help you choose and use the best for your specific situation.

The technology is still new and our ignorance is still profound, but these are exactly the opportunities to encourage younger people to enter (and older people to support) this exciting field on the cutting edge of science, exploring beyond human senses and even beyond human imagination.

James E. Eggers is the director of education with Bat Conservation International (www.batcon.org). Reach him at jeggers@batcon.org.

Geocaching

Be More Than a Mile Marker

ROGER GRIFFITH



Geocache found: end of the road or part of the journey?

JESSICA ROSIER

They come to your property. They use high-tech devices to investigate each crack and crevice of your historic Civilian Conservation Corps shelter, searching for the concealed prize. They hike your trails seeking bragging rights and a sense of accomplishment among deer tracks and fall colors. Suddenly, they find the hidden geocache and they're gone. They've

left your property without pausing to read interpretive signage. They've forgotten about your nature center. They've learned very little about your property during their short, eyes-on-the-prize visit. From the viewpoint of an interpreter, these fanatics are a missed opportunity.

Although this slightly cynical scenario doesn't describe the majority of nature-loving geocachers, it may sound familiar. Geocaching, an

activity that uses satellite technology to guide participants to latitude and longitude coordinates of hidden cache boxes, can attract in-and-out, grab-it-and-go visitors. These people may leave the property without taking time to forge a connection with the landscape. As interpreters, it is our responsibility to reach these people and link their hobby with an understanding of the property and an appreciation for its resources.

My interest and work in geocaching stems from my years in graduate school. As a student at St. Cloud State University in Minnesota, I studied geography. One day, I found myself overwhelmed with homework. I was taking a research methodology class and was plagued with having to choose a topic for my thesis; I was stressed out and needed a break. I left the stuffy office and joined the geography club on a fresh-air geocaching excursion along the nearby Mississippi River. I had never tried the activity but soon found myself confidently maneuvering along the autumn landscape with a handheld GPS leading me to latitude and longitude coordinates where small cache boxes were hidden. Climbing trees, riffling through leaves, and overturning rocks in search of the caches was challenging and rewarding. While exploring the river banks, I picked up on things about the landscape that I'd never stopped to notice before and I found



Indiana Dunes State Park

Find History!

a multi-stage puzzlecache



This puzzle sheet is your guide to discovering Indiana Dunes State Park's unique history. You'll be challenged to answer questions by reading interpretive plaques. Write your answer in the corresponding blank. Then, you'll be able to decode the coordinates for the final cache which will lead you to an off-the-beaten-path historic site with a hidden cache box.

Stage 1: Did you know Indiana Dunes State Park is linked to the Revolutionary War? Originally a small fort that stored furs and had a garden, Le Petit Fort almost became a place of refuge for 13 Americans under attack by British sympathizers. The 13 American men from Illinois had successfully raided a fort in Michigan. On their return trip, they passed through the dunes. They were met by a group of fur traders who supported the British. The fur traders overtook the Americans who tried desperately to evade them by seeking refuge at Le Petit Fort; they weren't able to reach the fort in time. Four men were killed, seven taken prisoner, and two wounded.

Follow these coordinates (N 41° 39.641' W 087° 03.747') to answer the following question:

What was the name of the British commander?

Answer: _____
6 4 9 1

Stage 2: Did you know there was a shipwreck just north of Indiana Dunes State Park? The J.D. Marshall, a sand barge, spent the day of June 11, 1911 sucking sand from the bottom of Lake Michigan. With a full load, the barge anchored offshore for the night. Suddenly a squall came in from the west. Although the barge withstood the storm for ten minutes, she began leaking badly. At the height of the storm, a strong wind struck the barge. The J.D. Marshall rolled over like a log and sunk into Lake Michigan's stormy waters. Crew members were washed overboard. The captain desperately clung to a piece of driftwood and floated ashore. He commandeered an old skiff to search for the barge's First Mate but had no luck. The following morning, tugboats were sent from Chicago to assist with rescue efforts. Among the wreckage, they spotted the First Mate's dead body, which was kept afloat by a cork vest.

Follow these coordinates (N 41° 39.738' W 087° 03.789') to answer the following question:

What was the name of the First Mate?

Answer: _____
3 8 0 7

Stage 3: Did you know the land within Indiana Dunes State Park once held summer cottages for locals and city dwellers? Before the park was founded in 1925, these cottages were scattered throughout the dunes. In the years following park formation, many of these structures were torn down so the dunes could be restored to their natural condition. A few cottages remained, including one dubbed "The Governor's Cottage" which was used by Governor Jackson who served the State of Indiana from 1925-1929. Jackson enjoyed spending time in the dunes and was a supporter of the park's founding legislation. After he left office, it is believed the cottage was used by the succeeding governors. Eventually, the cottage was torn down though remnants are still visible today.

Taking the answers from stages one and two, decode the final coordinates:

N _____° _____' _____" W _____° _____' _____" _____
R E M Q T D E A T H A M R A M

These coordinates will lead you to the footprint of The Governor's Cottage where you can find a hidden cache box.
Hint: Walk east along the lake until you see a trail into the dunes.

myself asking many questions. What sort of animal made this burrow? Why are those islands in the river named "The Beaver Islands"? Why is some of the bark flaking off of this tree? As I geocached my way along the river bank, it occurred to me that this activity could be a very powerful learning tool if paired with interpretation. At that moment, I knew I had found my thesis topic.

As I developed the framework for my thesis research, I worked closely with the Minnesota Department of Natural Resources. I ultimately ended up surveying and interacting with geocachers at Wild River State Park. The naturalist staff there did, and still does, a superior job of bringing their interpretive themes to geocachers. Instead of simply hiding

a cache box and making the latitude and longitude coordinates available, the naturalists make geocachers use critical thinking and analysis skills to find the coordinates for the hidden cache. Their *St. Croix Puzzlecache*, for instance, is a five-stage, fill-in-the-blank type puzzle. To begin, geocachers are given coordinates to find the first cache. Once participants open the cache box, they are greeted with another puzzle requiring them to read an interpretive write-up about the park. Filling in the clue sheet and reading interpretive text, stage after stage, geocachers eventually obtain coordinates to find the final cache box. In the process of completing the *St. Croix Puzzlecache*, geocachers are educated about the park's historic Nevers Dam, painted turtles, the Wild

and Scenic Rivers Act, glaciers, and the Mississippi River watershed.

Similarly, Wild River State Park's (*Way*)points of Interest is a series of virtual caches that allow geocachers to discover the sites of an old stagecoach line, the remains of a fizzled electric railway line, areas where beetles and beavers are seen, and trillium bloom. Although no cache boxes are hidden, participants are guided via GPS technology to the "best kept secrets" of the park, according to retired naturalist Dave Crawford.

I spent seven months at the park, surveying and interviewing geocachers. Over the course of the summer, I came to realize that, generally, there are two types of geocachers. The first type is park lovers. They may come alone or they may have the whole family in tow. They may be camping for a week, or they may be out for a leisurely afternoon. Either way, they truly love the land and have come to enjoy the way that geocaching aids them in exploring new trails or scenic points. The second type is a highly motivated group of people. They are driven by the rewarding sense of accomplishment that finding a tough, hidden cache can bring; their eyes are on the prize. Don't get me wrong, many of these people also love the park, they are just more focused on their "geocaching marathon." I met these people many times and asked them for 15 to 30 minutes of their time to help me with my research. Most of them declined, saying things like, "We have five other parks to visit today so we have to run along" or, "We still have three caches to find so we're in a rush." Despite being rejected many times, I was able to get a wide sample of geocachers. When all was said and done, 86 percent of participants believed they had learned about Wild River State Park's history, flora, and fauna through geocaching. This didn't occur by chance, however. They were educated because of the thoughtfully designed geocaches placed by Wild River State Park's naturalist staff. When I reflect on my geocaching research, I often think



Summer campers at Indiana Dunes State Park explore the landscape using GPS technology.

about those people who would not take my survey because they were on a geocaching marathon; I view them as a missed opportunity. I hope, at least to some extent, that the puzzlecaches did allow them to learn about Wild River State Park.

A few years later, I found myself working as an interpretive naturalist at Indiana Dunes State Park on the shore of Lake Michigan. During my first few months of work, I interacted with thousands of visitors. Many of them would comment about how much they loved the raccoons that plagued our bird feeders or how they enjoyed seeing the prickly pear cactus in bloom. Many of them never mentioned learning about our historic shipwreck or Revolutionary War battle. Being a history lover, I saw the need to bring these interpretive stories to the attention of our visitors. In addition to developing interpretive *programs* on these topics, I created *Find History!*, a three-stage puzzlecache. A clue sheet provides geocachers with a brief snippet of Indiana Dunes State Park's history and a prompt to follow latitude and longitude coordinates to a nearby interpretive sign. Upon arrival at the sign, participants must read

the text in order to correctly answer a fill-in-the-blank question. After repeating this step at two different interpretive signs, geocachers can decode their answers to obtain the final coordinates for the hidden cache. In this case, GPS technology brings participants to an off-the-map historic site nestled in the dunes, the former Governor's Cottage site.

Geocachers have the option to keep track of their finds in a logbook on www.geocaching.com. In browsing the entries for *Find History!*, I read the following comments: "Made the hike here and marveled at the remaining foundation and shingle pile! What a fun history nugget that we wouldn't have known about without geocaching!" and, "Really cool lesson in history at the dunes." Although many geocachers may leave Indiana Dunes State Park without visiting the nature center or reading an interpretive plaque, it is my hope that *Find History!* fosters an understanding of the park's landscape and results in fewer "missed opportunities."

Taking these two parks as an example, I urge you to create interpretive geocaches at your own property. By creating your geocaches in a way that encourages—or requires—participants to read interpretive signage, you will be lessening the occurrence of those missed opportunities. Geocachers will leave your property with an increased sense of understanding and you will be more than a mile marker on their geocaching marathon.

Jessica Leigh Rosier is an interpretive naturalist at Indiana's Mounds State Park. Reach her at jrosier1@dnr.in.gov.

Recommendations

- Incorporate interpretive centers, nature trails, and educational exhibits into geocaching.
- Provide clue sheets that require geocachers to solve educational puzzles and riddles in order to find a cache.
- In a multi-stage cache, consider placing laminated coordinates on the back of interpretive signs. This way, you will be bringing attention to your sign and perhaps people will read the sign instead of simply walking by it during their geocaching outing.
- Don't forget to gear geocaching activities toward kids. They're the ones who have grown up with technology. Kids are comfortable toting around handheld video games and iPads; replacing those systems with a GPS unit should be an easy transition.



Inspiring Conservation through Social Media

JOSHUA YORK

JOSHUA YORK & LAUREN STAYER

Technology. It is a symbol of human ingenuity and an example of what our species can achieve. In 2005, the Association of Fish & Wildlife Agencies (AFWA) supported a discussion on the progress of technology and its impacts on nature-based childhood. Many in the room were aware of how technology can restrict nature-based activities by unknowingly imprisoning people within their homes. But after an exploration of Facebook, GPS units, digital camera use, and field guides for smartphones, we were reminded that it's not the tool that is the enemy, but rather its use.

A debate ensued regarding government agency Facebook usage,

along with the perceptions and liabilities that come with using such a marketing tool. Although everyone in the room was skeptical about creating profiles for Division of Wildlife (DOW) offices, they recognized that Facebook is the new classroom; it is "where" the people are. Consequently, it is also where anti-hunting and fishing groups are, and without a DOW presence, Facebook users are only hearing one side of the story.

Since then, like dandelions popping up in a lawn, Facebook has become ornamented not only by various fish and wildlife agencies, but by many other conservation-based agencies ranging from park districts to zoos. These entities soon found themselves connecting with followers via photos and commentary posted



Aspen and other tikes celebrate conservation through citizen science while tagging monarchs.

to keep interested people informed. The responsiveness of follower feedback subsequently turned what was once a one-way conversation (mostly through newsletters) into a dynamic, interactive, two-way conversation with the potential to occur in real time. Despite this newfound capacity to forge

proactive, positive communications, a key question remained largely unanswered: Is using Facebook to get people outside effective, or are agencies unintentionally replacing a nature hike with a screen? Five Rivers MetroParks in Dayton, Ohio, decided to explore this question by incorporating Facebook into its preschool programming strategy.

Modeling AFWA's progression toward environmentally responsible behavior, MetroParks' preschool strategy is twofold. It begins with the average preschool parent, typically a Generation X mother who values nature and wants her child to explore it with others. Accordingly, she brings her child to Tike Hikes, where they together explore their local ecology as well as their place within it. Tike Hikes are designed to establish a gateway for a lifetime of nature exploration by reducing psychological barriers, such as fear and perceptions of discomfort, while elevating unstructured outdoor activity as a priority in their lives. Children once afraid of "creepy crawlies" find themselves holding wolf spiders with pride, as their parents take pictures.

Participants who have conquered their nature-based challenges and are not afraid of getting wet or dirty find themselves immersed in the next level of the strategy, Tikes Taking Action. This program series fosters a sense of ownership by involving young families in caring for the land. Conservation knows no age restrictions, and these families prove it as three- to five-year-old children collect seed, plant trees and other native plants, monitor bluebird boxes, tag monarchs, monitor bird populations, and engage in other conservation efforts. Preschoolers participating in these activities inherently evolve as conservation protectors, as little four-year-old Brady attests: "I saved a frog! ... These other kids at my school found the frog, and they were going to kill it, but I told them 'No!', took it from them, and let it go in a safe place."

But where do these families go from here? Many of their fears of

nature have been conquered, they feel comfortable outside in unfavorable conditions, and they are invested in the health of Dayton's local ecology. Is that it? Mission accomplished? Certainly not. Now that these families "speak conservation" and set a good example for an active, outdoor, nature-based lifestyle, MetroParks' goal is to empower them to become conservation advocates.

Just like any advocacy group, people need to be supported before they feel strong enough to speak out and change their culture. Because Tike Hikes and Tikes Taking Action programs are facilitated by park staff, when the program ends, these like-minded individuals are left in the parking lot with a desire—but (formerly) no viable mechanism—for ongoing communications with each other. This observation made it clear that before advocacy could be nurtured, MetroParks needed a way to grow relationships outside of

programming. Through exploring online tools, surveying participants, and piloting, the active Dayton Tikes in Conservation Facebook group was born and has since emerged as an integral element of the preschooler strategy.

After attending their first Tike Hike or Tikes Taking Action program, families are invited to join this closed group, where participants gather, conversations continue, and new friendships strengthen. Members are encouraged to post questions and comments, as well as photos of their own nature explorations. Further, they have access to an event calendar that provides quick, easy access to upcoming Tike Hike and Tikes Taking Action programs. While the parents "own" and control their Facebook account, the children are aware of this online presence and frequently want to contribute, as Kira explains of her five-year-old son, Gryffin:



Families engaging in conversation through social media: The nature conversation continues and friendships strengthen in this small social network.

Aiden and Andrea challenge their fears by exploring a large nursery web spider during a water quality assessment.



SUSAN BUCHER

“While exploring in the backyard, Gryffin found an egg and came running into the house and immediately yelled, “Take a picture and send it to the tikes!” He wasn’t sure what kind of egg it was and was very curious to find out what kind of bird that egg came from. Gryffin knew to do this because at the last tike hike...the naturalist told us about this great Facebook page that was formed to keep everyone connected, post tikes schedules, and that if we found something in nature that we wanted to share, we could post it on there. I posted the picture and got several responses to what bird it was believed to have come from. Gryffin was excited to share his egg picture with his fellow tikes and to also learn the answer to his question!”

Dayton Tikes in Conservation

serves MetroParks’ preschool audience in a multitude of ways. It serves as a direct line to naturalists for nature questions, as a networking tool for families to become closer and/or plan adventures beyond formal park programming, and as a resource for parents to find scheduled programs for their preschooler. Reports Emily, mother of three tikes:

“The Facebook page has been a great way to start connecting names with the faces I regularly see around me at the programs. I also stay on top of what is happening. I tell all of my friends about the Tike Hikes programs.”

Since the creation of the Facebook page, attendance at MetroParks’ preschool programs has increased significantly. Participation has nearly doubled in many of our more

remote parks. We are impacting more families than before, and by having a way to unite these families and strengthen their connection both to nature and to each other, we are helping to ensure that the experiences they enjoy do not stop when the program ends. Tiffany started volunteering for MetroParks when she noticed program numbers steadily increasing, and she and her two children, Wyatt and Athena, have become important helping hands at these preschool programs. As Tiffany describes below, their adventures continue well beyond program hours:

“We tend to stay after programs or even spend our weekends to explore [parks] further and show Dad and our family and friends the fun we have! I’d have to say that one of the greatest gifts the programs have given



Athena shows her seed collection for the Five Rivers MetroPark's reforestation campaign.

us, though, are the friends that we make. We stay after to eat lunch with a few families and have grown really close, and I know that the kids and I consider Joshua and Lauren our friends as well!"

So are we replacing a nature hike or a stream study with a screen? We believe the results speak for themselves. More parents are seeing the value in and bringing their preschoolers to our programs.

These families are readily seeking experiences with nature, and technology adds a home component that fills in the gaps between formal programs.

Cultivating a culture of conservation obviously requires a much greater effort than the creation of one Facebook group. However, the MetroParks Facebook group Dayton Tikes in Conservation is an important support system—a powerful technological tool—for families in the Dayton area, and helps MetroParks to foster a deeper connection between families and their natural world. By offering quality programs like Tike Hikes and Tikes Taking Action, and providing support and networking opportunities through Facebook, there is no telling what these families could accomplish as their children grow older, and their voices, stronger.

Joshua York and Lauren Stayer are naturalists for Five Rivers MetroParks in Dayton, Ohio.

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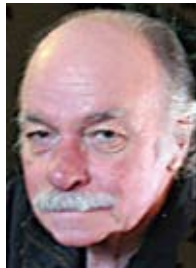


Love Letter From A Luddite

BOB CARTER

I have always walked what I thought was a comfortable middle ground, neither technophile nor technophobe, neither early adopter nor laggard. I have owned and built computers. I played Pong on an Atari, then Asteroids, and eventually, Space Invaders. I played SimEarth on an early PC, but later computer games held no attraction. Too much pretend. I have tried audio books and tablet books but they both are lacking something for me. I'd rather read a real book, one that offers the thrill of a potential paper cut with every turn of the page. I do own a smartphone and use almost all of its features, but no tablet or iPad, thank you. Social media? How about a bar stool and a good beer? Over the years I have owned or coveted any number of high-tech toys. But enough is enough. Officially, finally, I have reached the point of techno-saturation. Techno-bloating. Techno-overdose. I am transformed!

My tipping point was the announcement of the impending release of Google Glass. My transformation though is really the culmination of a long-term process



Technology often does provide wonderful enhancements to interpretation but it also comes with two really big snags: maintenance and appropriateness.

fueled not by technology itself but by its misuse, abuse, and most definitely overuse. And here I cast a wide net: technology in education, in interpretation, and in our lives. The seed of my discontent was planted following the eras of stone tablets and moveable type, when we went from opaque projectors, overhead transparencies, and 35mm slides to that marvel of modernity: PowerPoint, possibly the most

misused presentation software of the computer age. There was a wide spread and naïve belief that stilted lectures and boring presentations, laden with mediocre or worse slides and amateurish transparencies, were somehow made phenomenal simply by their transference to PowerPoint. “Wow! Look at me, Mom!” *Humbug!*

That was the beginning of what I call the techno-delusion. And like any virulent and untreated infection, it has reached epidemic proportions. Technology is nothing if not pervasive, both for better and for worse. Arguably, it is intrusive—sort of like air pollution, and frequently as irritating, like that unswattable fly buzzing around me as I write this. And therein lies the rub. When it comes to technology, we, as a society, and as individuals, have failed to heed the age-old admonitions of *caveat emptor* and moderation in all things.

So what does my current tirade have to do with interpretation? Only everything. This issue of *Legacy* is devoted to technology in interpretation. In the previous issue Paul Caputo noted that “Interpreters Are an Artistic Bunch.” I would add that they are also innovative, adaptive, and adoptive, and generally have good sense and education with regard to the best use of technology to enhance interpretive offerings. Unfortunately, such decisions are not always in the hands of interpreters,

but that is a subject for another time. Suffice to say, we have all probably fallen for the technology sales pitch or the glitz potential at one time or another, or been forced to work with something that someone else thought was “cool” or “awesome” although we knew better.

Technology often does provide wonderful enhancements to interpretation but it also comes with two really big snags: maintenance and appropriateness. As interpreters we have all traveled to, viewed, experienced, and assessed the interpretive offerings of myriad sites served by our profession. Do a quick mental inventory. How many times have you seen a technology-dependent display, kiosk, or other form of interactive medium sporting some variation of the “Out of Service” sign? Or worse, sans sign, silently mocking and frustrating all who approach? Murphy’s Law was written with technology in mind.

But the greater sin is when the

technology is inappropriate for, or overwhelms, the content. Jim Covell of the Monterey Bay Aquarium advises his staff and volunteers who may be sporting a bit too much in the way of personal decoration, “If you are more of an attraction than the animals or exhibits you’re interpreting, you need to tone it down.” The central idea is, of course, that any distractions from the focus of the interpretation reduce the effectiveness of both the interpreter and the interpretation. And that is a maxim that should be liberally applied to technology and its use.

Technology can be, and often is, a wonderful asset in interpretation and education. However, it is only a tool, sometimes a fallible one, and not necessarily ever an essential one. For any interpretation, whether personal or nonpersonal, the two most important components are its design and the interpreter’s execution of it, all with an eye to doing justice to the resource while engaging the visitor.

Caveat emptor and moderation in all things. There is a saying in formal education—you should be able to teach out of a shoebox. I am not certain how Ned Ludd would view that statement but I believe Freeman Tilden would give it a tip of his hat.

So there you have it, dear reader. MS Office indicates I have again exceeded the word limit for this column, I need to check my e-mail, and I have to update some apps on my iPhone so it is time for this Luddite to bid you adieu.

Bob Carter teaches outdoor and environmental education, interpretation, and museum studies at Northern Illinois University in DeKalb, Illinois. He has been an NAI member since 1989, is a Certified Interpretive Trainer, and is NAI Region 5 director. Contact him at carter@niu.edu.





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Reflections on Change and Whitewater

GAIL VANDER STOEP

NAI PRESIDENT, 1994–1995

This article is part of a series by former NAI presidents commemorating NAI's 25th anniversary.

Perpetual whitewater. This phrase is used by Dr. Lou Anna K. Simon, Michigan State University president, to describe the context of universities in recent years. I'm uncomfortable with that condition. Perhaps, as an avid canoeist who actually loves to paddle whitewater, I still relish eddies where paddlers can escape whitewater to reassess, to take a breath. I still relish the stretches of calm pools between whitewater runs. I even like occasional portages, especially when blueberries are ripe along the trail. I like the variety, the time for reflection; I do not want to be in perpetual whitewater.



However, one positive element of running whitewater is that you have to stay focused—sort of in “flow,” to observe and think constantly, to be deliberate in actions. Without these qualities, and without eddies or calm waters in which to pull out, one is likely to tip over, go under, sink—to lose your boat.

Perpetual whitewater. That is the

Funny things about *change*: Many people are uncomfortable with change because it disrupts comfort zones and *the known*. Others love it because of the opportunities it facilitates.

image that comes to mind when thinking about the two years of my NAI presidency. NAI had just marked its sixth anniversary. In its early years, NAI had made numerous changes beyond the merger of two organizations and creation of a new name and logo. The national office moved from Derwood, Maryland, to Fort Collins, Colorado. The paid “staff” position had changed from a

part-time general manager to a full-time executive manager, and then to executive director. Thus, change—intentional and unintentional—was a hallmark of NAI's early years.

Funny things about *change*: Many people are uncomfortable with change because it disrupts comfort zones and *the known*. Others love it because of the opportunities it facilitates. Change can be slow and gradual, allowing for adaptation along the way—sort of as your own face, seen in the mirror each morning, aging—not startling until you compare photos across decades; or as rainwater freezing to form ice that carves kettle holes and cracks stone. But change also can be abrupt, rapid, and catastrophic, particularly at “tipping point” times—as when heavy monsoon rains in the Himalayas trigger rapid, devastating landslides.

The two years of my presidency comprised a tipping point of sorts for NAI. We had to figure out how an executive director's role responsibilities were different from those of a general or executive manager. The Board, previously involved extensively in most aspects of organizational policy and operations, had to shift its understanding of Board roles and responsibilities. And we had to sort out a shifting relationship between Board and executive director. This meant releasing some functional tasks from Board control to focus on policy. With a growing and professionalizing organization, we had to begin paying

attention to IRS rules and regulations, to understand legal guidelines and procedures at federal and state levels related to personnel management and accounting, to understand roles of attorneys and auditors. Our meetings were too long and too many (my apologies and thanks to all Board members from that time).

We were neophytes in operating as a business, albeit nonprofit, when almost everyone in NAI leadership roles had neither the training nor experience to operate a business. We needed to change, to professionalize, to think differently. This eager, committed group of interpreters, staff, and board members—who loved working with people; giving programs; being creative; protecting and celebrating natural, historic, and cultural resources; and being liked by each other—had to make deliberate changes to help NAI survive, grow, and thrive.

The process was long; it was hard; it was tedious. Interpersonal relationships were strained. We were in jeopardy of losing our boat in the perpetual whitewater. But we were determined to do the research, to learn, to get trained, to persist through those intense and long meetings, to disagree and debate, to make hard decisions, to temporarily put aside “friendships” for the sake of organizational survival. We had to focus on NAI’s “directional truth”—a construct borrowed from the Wharton School that refers to a clear vision and persistence of purpose. That was the goal; the how-we-get-there within our current stage of organizational growth and varied external and internal factors was the challenge.

We also had to recognize that different types of leaders who have different skills, strengths, and styles are needed at different stages of organizational development. Think “situational leadership.” Various publications identify six, eight, 10 different leadership styles, categorized broadly as authoritative, participative, and delegative—each appropriate within different contexts and with varying external forces operating. Rhea Blanken, writing for the *Associations Now* newsletter, describes

eight common leadership styles, and describes for each the characteristics and behaviors, appropriate use contexts, and impacts on others. Analyzing NAI’s status and needs at the time, it was clear that NAI had to make a significant personnel change.

Although painful, this action and all the associated work set the stage for a national job search that resulted in hiring a business-savvy, entrepreneurial executive director; for rewriting the bylaws; for intentionally shifting the focus of board meetings to policy issues. We even had a successful National Interpreters Workshop at the end of 1995 in Orlando, despite media reports of the National Park Service sending many staff to Disney—while the government was shut down. Through all of this, the boat in the middle of NAI’s perpetual whitewater did not sink. We were able to paddle to an appropriate shore to build a strong foundation for growing the organization. In the years following, and based on this stronger foundation, NAI moved its office out of a room in a university building to its own facility, professionalized accounting and auditing systems, expanded products and services to provide tangible value to members, and stabilized the financial base of NAI. Membership grew; the certification program grew; sub-groups expanded from only geographic regions to include communities of interest, or affinity groups (now called sections).

NAI grew, professionalized, thrived as a result of difficult, deliberate changes made in the mid-1990s. NAI is undergoing yet another major change, as both external and internal factors have indicated a need for another significant change. As we begin our second 25 years, it is valuable to reflect on lessons from the first 25 years, and use them as process guidelines—not to copy, but to address a need to reassess where we are as a profession and as an organization, to reassess our directional truth, to re-envision how best to move forward positively to meet member needs, continue to expand and professionalize our work, and to keep the importance of our interpretive

work a strong element of our vision.

We may be in whitewater perpetually. My challenge to all interpreters is to recognize our constantly changing world and to respond positively. My hope is that, along the way, we can enjoy the Class I rapids and celebrate positive outcomes—but also recognize when the rapids ahead are Class V and VI, needing our focused attention, careful reflection and reassessment, followed by deliberate action so our boat does not sink.

I’m looking forward to an exciting next 25 years. Pick up your paddle and slide your canoe into the whitewater!

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Personalizing Tilden's Priceless Ingredient

TED CABLE

“Thus, the six principles with which I began this book may be after all (like the ‘single science’ mentioned by Socrates) a single principle. If this should be so, I feel certain that the single principle must be Love.



“You are to love people in the sense that you never cease trying to understand them and to realize that whatever faults they have, whatever levity, whatever ignorance, they are not peculiar.”

—Freeman Tilden
“The Priceless Ingredient”
Interpreting Our Heritage

I confess. I have never finished a Russian novel. The problem with Russian novels is that they are filled with the names of Russian people and Russian places. I find it hard to plow through the polysyllabic nouns and keep the characters and locations straight—or even to know whether the noun is a place or person! Fortunately I have a friend who, although he too struggles, makes it deeper into the stories than I do. He recently shared this passage with me from *The Brothers Karamazov* by Fyodor Dostoyevsky. It was spoken



by a wise man with “sorrowful humor.”

I love mankind, but I am amazed at myself; the more I love mankind in general, the less I love people in particular, that is, individually, as separate persons. In my dreams I often went so far as to think passionately of serving mankind, and, it may be, would really have gone to the cross for people if it were somehow suddenly necessary, and yet I am incapable of living in the same room with anyone even for two days....

Can you relate to that wise man?
I can. I found this passage to be

personally convicting. I love my students in general, but wouldn't want to spend two hours, let alone two days, with the needy student knocking on my office door. When I worked in the field, I loved (in general) park visitors, Audubon members, REI-clad Subaru Outback owners, but with actual people I often failed to exhibit Tilden's priceless ingredient.

Tilden wrote that the priceless ingredient for effective interpretation is love. He encourages us to love individuals and “never cease trying to understand them.” Maybe you can say you love the visitors to your site; you might even call them your “Guests.” But you might find it difficult to practice love to the person who inadvertently parks on the grass or doesn't share your appreciation of spinning wheels, swamps, or snakes.

Many of us entered into the interpretation profession to, like the wise man, devote ourselves to “passionately serving mankind.” We envisioned serving mankind by enriching lives with our compelling stories or by promoting stewardship of cultural and natural resources. Often this service to others has come with sacrifices. Certainly many passionate interpreters have foregone higher salaries to serve others. (It is interesting to note that although we tend to think of *passion* as synonymous with *enthusiasm*, another older meaning

of the word passion is to suffer or sacrifice.) And yet although we may speak eloquently about serving mankind through interpretation and loving our visitors in general, unless we love actual people—flawed individuals with questions, opposing perspectives, and complaints—we are not practicing the greatest of Tilden’s principles.

Dostoyevsky’s wise man spoke to me in another way too. Many of us are trying to save the world, but we can’t work with the person in the next office or next door. As we strive to love those who come to us through our interpretation, the most difficult place to exhibit Tilden’s priceless ingredient may be in our own office or neighborhood.

In considering the application and practice of Tilden’s principle of the Priceless Ingredient we might do well to reflect on these two questions:

Do I consistently demonstrate Tilden’s Priceless Ingredient to each individual guest regardless of (as Tilden said) their faults, levity, or ignorance?

Do I demonstrate Tilden’s Priceless Ingredient towards the individuals I am around the most—those with whom I live and work?

I particularly like that the wise man reflected with “sorrowful humor” on his paradoxical shortcoming of loving everybody, but not being able to show love to anybody in particular. It is good to be able to smile at ourselves through our regret when we try, but fall short in applying Tilden’s Priceless Ingredient to real persons. Showing love to our *individual* guests—real people—can be challenging and it takes a conscious effort, but you may find it is easier than reading a Russian novel.

Ted Cable is an award-winning professor of park management and conservation at Kansas State University. He is the author of eight books and more than 150 articles about natural resource management, interpretation, and birds. Reach him at tcable@ksu.edu.



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Stand and Smile Your Way to Success

KRIS WHIPPLE

“A good stance and posture reflect a proper state of mind.”

—Morihei Ushiba, founder of the Japanese martial art of Aikido

Want to feel happier, more confident, and less stressed? According to scientists, it's easy—simply smile and stand like Superman. *Excuse me?*



While we know our emotions shape our facial expressions, posture, and physiology (we smile when we're happy, slouch when we're sad, and feel our hearts race when we're scared), scientists have learned that the opposite is true as well. Changing your facial expression or posture can change your emotions, thoughts, and even your body chemistry.

Reducing Stress with Just a Smile

We smile because we feel happy, right? Studies show we can also feel happy because we smile. Results from a well-known study in 1988 (in which participants rated cartoons to be more humorous when they were forced to smile by holding a pencil

Before facilitating your next workshop, presentation, or other stressful event, don't forget to smile. Tell a joke, watch a cartoon or funny YouTube video, or hang out with someone who makes you laugh.

between their teeth) as well as other studies demonstrate a positive link between smiling, happiness, and even your health. Current findings suggest that smiling during brief periods of anxiety can reduce your body's stress response, whether you actually feel happy or not. These results are likely due to facial feedback—the phenomenon where

your brain senses and reacts to the flexion of certain facial muscles. When you flex your “smile muscles” (like the zygomatic major muscle which is required to smile) your brain interprets this as, “I must be happy.” When the muscles are not flexed, your brain thinks, “I must not be that happy.”

While any smile helps, an authentic or “Duchenne” smile (named for the French physician Guillaume Duchenne, who studied the physiology of facial expressions in the 19th century) is required for best results. How does your brain identify an authentic smile? *Crows' feet.* (Take that, Botox!) It turns out that when we smile with just our mouths it feels forced and unnatural to our brain and to others. A genuine smile engages the muscles in our mouth, cheeks, and eyes. We create crow's feet by flexing the orbicularis oculi—a muscle that only flexes when we truly smile. By involving this and other muscles, our smile looks and feels authentic. So before facilitating your next workshop, presentation, or other stressful event, don't forget to smile. Tell a joke, watch a cartoon or funny YouTube video (at last, a legitimate excuse to watch cute puppies!), or hang out with someone who makes you laugh. It doesn't matter how, just be sure to put on a happy face.

Want to Feel and Act like a Super Hero? Just Stand like One

You're probably familiar with the classic "super hero stance"—head back, hands on hips, and feet wide apart. Or how about the traditional "high-powered CEO pose," the one where you lean back in a chair with your feet on the desk, hands folded behind your head? Psychologists describe these expanding poses, where the limbs spread out and take up space, as open postures. In contrast, closed postures like crossing your legs or holding your arms close to your body take up little space. Past studies have shown that open postures convey a sense of power, while closed postures do not.

But can assuming open, powerful poses actually make you feel and act more powerful? Researchers Dana Carney, Amy Cuddy, and Andy Yap from Columbia University's School of Business decided to find out. They conducted a study where male and female participants were

randomly assigned to pose in either two open "high-power" positions or two closed "low-power" positions for one minute each. While posing, the researchers took saliva samples to measure the participants' levels of testosterone (a hormone associated with power) and cortisol (a hormone associated with stress). Past studies have shown that powerful, successful leaders naturally have lower levels of cortisol and higher levels of testosterone. They've also shown that during stressful situations, their cortisol levels didn't rise as much as it did for those who considered themselves powerless. Based on this information, the researchers wanted to see if assuming a pose would lead the brain to shift into the typical high-power or low-power hormonal pattern. The answer was yes. Participants who assumed open, powerful poses for two minutes saw their testosterone levels increase and cortisol levels decrease. On the other hand, those who assumed closed,

low-power poses for two minutes saw their testosterone levels drop and cortisol levels rise. More importantly, researchers discovered that posing in high- or low-power positions also led to attitudinal and behavior changes. Participants who assumed the powerful positions felt and acted more confident and powerful, and less stressed. This who assumed closed, powerless positions felt just the opposite effect.

So, the next time you need a confidence boost, do what your mom always told you to do. Smile, stand up straight—and for good measure throw in your best Superman pose.

Kris Whipple, CIG, CIT, CIP, is an interpretive consultant/trainer in Naples, Florida. She can be contacted at kris.w@earthlink.net.



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Fee for All: Struggling with Pricing Interpretive Programs

ROB BIXLER, CIT

An interpretive naturalist who worked at a not-for-profit nature center in the Northeast always enjoyed high attendance at an early morning owl walk followed by a pancake breakfast at a hefty price of \$18 per person. After moving to a government-run nature center in a large metropolitan area, the same program priced at the cost-recovery level of \$4 per person was poorly attended.

A not-for-profit nature center associated with a national conservation organization established its entrance fee level of \$6 by averaging the fees charged by others with similar facilities and grounds. Despite other nearby nature parks being free, a steady stream of visitors pay the fee and visit the exhibit hall and gift shop and walk the trails.

A history society offers historic pub crawls. Participants pay \$30 and are taken by trolley (public transportation) to four different pubs. They learn about the history of the pubs and the surrounding community, but must buy their own drinks. These monthly programs are fully enrolled, and have attracted different and younger members to the organization.

An interpretive naturalist who leads early-morning hikes to the top of a mountain with a striking view, to watch the sun come up, is ordered to raise the price from \$5 per person to \$25 per person. Two years later, there



A visitor to McDowell Mountain Regional Park in Arizona pays an entrance fee.

is no decrease in attendance, and participants are often ecstatic about their \$25 experience.

A state park began charging a per-person admission fee. After the fee was implemented, a survey of visitors using a US Forest Service site a quarter-mile down the road with no admission fee found recreationists who had quit going to the state park. This group was mostly from low-income households.

In combination, the examples above tend to illustrate that no matter how interpretive experiences are priced, some subgroup of people will choose not to attend. This is true even if a

program or experience is free. In this era of slim budgets, knowing when and how much to charge for programs is an important skill for interpreters to refine.

There are three methods commonly used to determine fee levels. Typically, government agencies use a cost-recovery calculation. Formulas vary widely but take into account direct costs (prep and labor cost for the interpreter and/or materials costs) but may also include fixed or indirect costs (e.g., building, bookkeeping, and utilities typically added as a percentage). If the program is to be offered over many years, some of these costs (prep, materials, equipment) are

prorated over the life expectancy of the program.

Cost recovery is a weak method because it views fee levels from the perspective of the organization's needs. Potential attendees do not have access to all the figures needed to make these calculations, nor would they bother. When the agency's calculated cost of the program varies dramatically from the visitor's perception of what the program should be worth, people may be wary of the program. This difference between the agency's fee and the visitor's perceptions of value of the program may explain the poor attendance at the owl walk described above. The \$4 fee for five hours of programming including a breakfast may have sounded to people like bad coffee and a stale doughnut, not something that would get someone out of bed. In this case, the low price probably discouraged attendance.

The second method, and the one used by the nature center mentioned above to establish its entrance fee, is norm-based, or normative pricing. This process is remarkably simple. Typically, similar program offerings by other similar organizations are scanned for prices and the same fee level is chosen as long as costs can be recovered. At least for common types of programs, visitors may have some sense of what other organizations charge, and use this knowledge to judge the fairness of a program fee.

For programs and experiences that are novel, there may not be an established norm for fee levels among potential attendees. Particularly in these cases, value-based pricing strategies should be used. The historic society's pub crawl program is an example of setting fee levels based on value. The program design is novel to attendees so it is an experience worth talking about back at work on Monday (ego-value), the presence of alcohol precludes children participating so higher prices are expected (adult-only programs are worth more to childless adults), and the program brings together like-minded adults (social, like to drink, and intellectual). Lacking any other reference pricing,

these multiple values make the \$30 per person price seem fair. The \$25 interpretive program that involves a hike to the top of the mountain to see the sun rise is another example of a novel program. This one is rich in the excitement of a night hike and aesthetic experience of a sunrise at the top of a mountain.

Unless an interpretive program is very generic, in most cases value-based pricing is the best strategy for maximizing attendance and capturing the economic value of the program to participants. To effectively judge the value of a program and establish a fee level requires understanding the

Pricing levels can play a strategic role in accomplishing our work.

psychology underlying value-based pricing. Additionally, developing such an understanding helps in how to design and publicize interpretive programs.

If an interpretive program is being presented by an unknown interpreter on a common topic, at a convenient and non-iconic location, the program is "generic." Such programs should be priced based on a *reference price effect* or norm-based pricing discussed above. One caveat is that when all else is equal for a generic program, a *price-quality effect* will be at work. A higher-priced program may be perceived by visitors as better quality than its identical lower-priced counterpart when price is the only information they have available.

The psychology of value-based pricing comes into play when potential participants can judge a difference among programs. A *comparison effect*

occurs when potential participants are aware that a program/interpreter/agency has a particularly good reputation. These two program descriptions illustrate how a comparison effect might be at play:

Animals for Preschoolers

Parents and children learn about and see common animals. \$4 per child.

Animals for Preschoolers

Parents and children join Darlitta Darling, our early childhood education specialist, plus Daphne the duck, and Sam the skunk, to learn about common woodland animals. \$8 per child.

Along a similar vein, a *differentiation effect* occurs when potential participants view a program as having added features or experiences not offered by others. As an example, a zoo located in the state capital offers overnight programs for schools at \$45 per child. The reason that teachers are willing to pay the price is that they intend to visit civic attractions in the capital the next day. The zoo serves as a less-expensive, novel "hotel" and the children are safer to manage than if they were scattered around many rooms in a hotel.

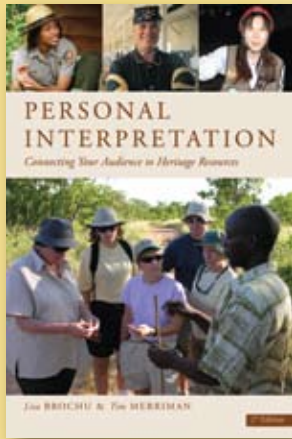
When an interpreter adds options that require additional fees to a program a *bundling effect* occurs, and provides two benefits to participants. First, the basic program can be offered at a lower rate for participants who are price sensitive. The bundling strategy often includes selling materials used in the program so that participants who are not price sensitive can easily continue their experience after the program. Comparing these two programs, the second one includes both comparison and bundling effects:

Bug Program 1

Join the park interpreter and explore the park for insects. \$4 per person.

Bug Program 2

Our resident entomologist will help you use insect nets to catch and observe butterflies and other insects in our wildflower meadow. Our meadow will be in full bloom this



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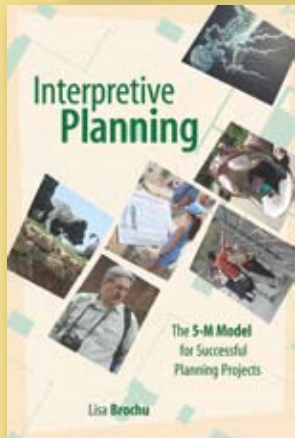
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Personal Interpretation: Connecting Your Audience to Heritage Resources

Lisa Brochu and Tim Merriman

This book shares traditions back through Freeman Tilden's principles and Enos Mills's thoughtful ideas on nature guiding. It will connect you with more in-depth resources developed by authors such as Sam Ham, Bill Lewis, Douglas Knudson, Ted Cable, Larry Beck, and Joseph Cornell.



Interpretive Planning: The 5-M Model for Successful Planning Projects

Lisa Brochu

The 5-M Model outlined in this book is drawn from the author's 25 years of experience in creating interpretive plans, and explains the process she has taught to hundreds of interpreters. This book can be a valuable tool for those wishing to develop an interpretive plan as well as those aspiring to work as a consultant or planner.



Interpretation By Design: Graphic Design Basics for Heritage Interpreters

Paul Caputo, Shea Lewis, and Lisa Brochu

Written for interpreters who have little or no training in graphic design but find themselves responsible for creating or overseeing the production of nonpersonal media, this book focuses on using basic principles of both graphic design and interpretation in nonpersonal media.



Interpretive Writing

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There are several other issues that arise in the psychology of pricing, such as expenditure effects. Not only do people spend money on programs, they must also spend their time. Park visitors will evaluate the cost of the program in greater detail if there are other readily available options or time is tight. Expenditure effects rarely operate when a program fee is low and/or the program is of a short duration, but may be quite important when an item is expensive or takes a lot of time.

Many interpreters are concerned that fees may discourage participation among low income people. Such a conclusion is logical and studies on the effects of entrance fees to parklands suggest that there is some reason for concern. Therefore a *fairness effect* also plays into the psychology of pricing. This effect subsumes several ethical issues. For instance, one person might judge a fee for a program as unfair because it excludes park visitors with low income. Offering some free programs, sliding-scale pricing based on income, scholarships, and bundling can help address these perceptions. Another dimension to the *fairness effect* involves some park visitors viewing public parks as having “good” motives and being open to paying a fee that seems high because the parks need help.

Miscellaneous Issues

At least in the public sector, interpreters should strive to use pricing strategies that are value based. Fee levels should be clearly and logically tied to offered experiences that create public value. For instance, giving out free but very salty popcorn at an interpretive program and then selling soda-pop for twice the store price is not appropriate and will slowly erode public confidence in a public agency. This money-making strategy is manipulative and has nothing to do with engaging visitors with heritage resources. When a program fee level is based on a thoughtful evaluation of what characteristics of the program provide value, no interpreter should be self-conscious about charging an appropriate fee.

Value-based pricing only works if how the program delivers value is evident to the potential attendees. Program blurbs and how visitor services staff describe programs to visitors must include indicators of value. For instance, the description of Bug Program 1 above is actually an accurate but skeleton description of Bug Program 2, but no one could determine anything but a generic value from its description and price.

Lastly, as consumers, most interpreters would be readily categorized by market researchers as price-dominant consumers. That is a nice way of saying we do not make much money and often buy the cheapest workable things we can afford. Interpreters often have a hard time believing that someone

would pay \$25 to walk to the top of a mountain and watch the sun rise. But, many people who make \$100,000 a year do value heritage resources, and \$25 is a routine amount of money to spend for a half-day leisure activity. Just as we should provide some free programs for low-income people, providing attractive opportunities to upper-income people to forge emotional and intellectual connections with heritage resources is also important. These folks typically will not attend free programs, but they could mention your park in their will. That should be incentive enough to offer elaborate programs with hefty fees that match the tastes of the Macy's/Nordstrom crowd.

Public-sector organizations have little choice but to charge fees. Whether the program is free, inexpensive, or high priced, some potential attendees will choose not to attend because of the costs, which include money, time, and ego. Pricing levels can play a strategic role in accomplishing our work. The strategic use of varying fee levels based on value is slowly becoming another tool in attracting visitors to programs and establishing the worth of interpretation.

Rob Bixler is an associate professor at Clemson University, where he teaches interpretation and champions, through research, the roles of local and regional heritage resource parks in socializing the next generations of park enthusiasts. He can be reached at rbixler@clemson.edu or 864-656-4849.

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Drawing Parallels in Professional Planning

MAUREEN STINE

“If you fail to plan, plan to fail.” Addressing his forestry students atop a limestone outcrop in the Garden of the Gods in Illinois, our professor kicked off the 1999 spring semester Recreational Land Use Planning course in the heart of the Shawnee National Forest. I didn’t give it much thought at the time, but the impact of his lesson has stuck with me throughout my career and as with many teachings in life, it resurfaces now and again.



Years later, I learned that the USDA Natural Resources Conservation Service (NRCS) trains hundreds of soil conservationists across the country as “Certified Conservation Planners.” This certification process takes a year to complete and is founded upon the agency’s *Nine Steps of Conservation Planning*. These serve to help soil conservationists address natural resource concerns on agricultural land, and offer alternatives to landowners to target those concerns. An additional purpose of the steps is to develop and implement plans that protect, conserve, and enhance natural resources within a social and economic perspective. Armed with the nine steps, a GPS,



The author interprets the ecology of Petoskey State Park during a sunset over Lake Michigan

the Munsell Soil Color Chart, and pre-settlement vegetation maps, an annual groundswell of skilled USDA conservationists visit thousands of acres across the nation upholding the agency vision to promote harmony between people and the land.

In a recent planning course, resource conservationist Sally Van Lieu offered this lighthearted insight: “You can apply the nine steps of conservation planning to other areas of your life, professional and personal.” Lieu continued, “A very good friend had a problem she was struggling with so over a couple beers, I walked her through the nine steps, and it worked. Her issue was resolved.” Of course,

these aren’t a universal remedy, but it got me thinking: Could these steps, developed for conservation practices, be applied to interpretive planning? After considering each step, adding a few minor tweaks, I discovered that the following formula can be used to help interpreters establish solutions to new challenges or invigorate existing interpretive programming. Consider the amplified steps:

Identify Problems and Opportunities

Everyone needs a reason to plan. Planning can start with a problem, an opportunity, shared concerns, or a perceived threat. Do you have

a shortage of docents? A fabulous grant opportunity? Marketing needs? Or even an encroaching stand of non-native phragmites near your park? Initial opportunities and problems are first identified based on readily available information. There may be information available through your partners or through a larger-scale project. There are many excellent local, state, and federal examples of how this process works on a system-wide scale, with multiple stakeholders and objectives. Look around, dig a little.

Determine Objectives

A planner guides the process so that it includes visitor needs, resource uses and values, and on- or off-site ecological protection. Objectives may need to be revised and modified as new information is learned later in the inventory and analysis stages.

Inventory Resources

In this step, appropriate social, economic, and natural resources for the plan are collected. Who are the supporters? Who are current partners? What is the annual budget? What's working now? The information will be used to further define the problems and opportunities. It will also be used throughout the entire process to define alternatives and to evaluate the plan. It is important that as much information as possible can be collected so that the plan will fit the needs of everyone involved. Inventories can range from a small park all the way up to a complete inventory of resources for an entire park/forest system.

Analyze Resource Data

Study the resource data and clearly define existing conditions for all of the interpretive programming, including limitations and potential for desired expansion. This step is crucial to developing plans that will work for your visitors, facility management, and the site. It also provides a clear understanding of the baseline conditions that will help to judge how effective a project is after it has been put into place.

Formulate Alternatives

The purpose of this step is to achieve the goals for the plan, by solving all identified problems, taking advantage of opportunities, and meeting the social, economic, and environmental needs of the planning project. Often this step can help formulate funding or planning alternatives that help offset the financial expense of implementing plans.

Evaluate Alternatives

Evaluate the alternatives to determine their effectiveness in addressing the visitor experience, opportunities, and objectives. Attention should also be given to those ecological values protected by law or executive order (such as threatened and endangered species, for example).

Make Decisions

At this point the planner chooses which project will work best for their situation. The planner prepares the reporting documentation. In the case of broad-reaching interpretive plans, public review and comment may be obtained before a decision is reached.

Implement the Plan

Technical assistance should be sought to help with implementing professionally designed interpretive plans. Assistance is also available in procuring visitor surveys, final plans and designs, and inspections for any structural practices (new auditoriums, etc.).

Evaluate the Plan

Interpretive planning is an ongoing process that continues long after the implementation of a program or project. By evaluating the effectiveness of an interpretive plan or a practice within a plan, one can decide whether to continue with other aspects of an overall system-wide strategy.

Maureen Stine is a conservation educator with the USDA in Michigan. She is a Certified Heritage Interpreter and chairs the Scholarships and Grants Committee for NAI Region 4. Maureen has a degree in forestry from Southern Illinois University. Reach her at maureen.stine@mi.usda.gov.

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Lessons from a Non-Interpreter

JEANNIE GAGNON

They say that couples start to look alike after being together for many years. Could it be they actually start to think alike as well? I'm starting to wonder.

I first met my interpreter at a provincial park in Canada over 15 years ago. Since we've been together, I have learned many important lessons in communication. It's weird, huh, a woman learning how to communicate from a guy? But it happens. And it just so happened that I learned three valuable lessons from being with an interpreter: Feed your inner child, adapt to your audience, and know your typography.

Feed Your Inner Child

The first clue I was with an interpreter presented itself when we visited our first museum. We walked in together, but I left alone. When I went back to find him, he was still at the first sign, examining it thoroughly and taking a multitude of pictures. Sound familiar?

Another time we were on vacation, with a set itinerary and not much time to spare. My interpreter spied a sign: "World's Largest Ball of Twine." I thought, "Wow, someone had a lot of time on their hands." But before my thought had finished, I noticed our car was turning around. "We'll just have a quick look," he said. Next thing I knew, our plans were on hold, and I was listening to different



The author with interpreter spouse Cal and traveling companion Finnegan.

ways you can talk about twine. It is a process, after all.

Frustrating at first, I have since learned that there is a valuable lesson here: *Always encourage your inner child.* Be curious, use your imagination, and always have a sense of wonder. After all, in order to inspire others, you need to find the inspiration within yourself.

Adapt to your Audience

Originally, when dating my interpreter, I was drawn to his incredible stories. Everything was so entertaining and engaging. But I quickly started to notice that when he was telling stories and I thought

they were ending, they never did. I call this the "never-ending story" or "eternal joke"—you think the story or joke is over, but like *The Hobbit* (the unexpected trilogy), the story continues on and then some.

Perhaps you can relate to this. Once an interpreter commits something to memory, it will be remembered for a long time. This can be an imitation of a bird song or a funny line from a movie that is repeated for years. How is it that someone can quote every line from *The Princess Bride*, but not remember three things on a grocery list?

Alternatively, funny signs seen around the world will be committed to an interpreter's memory. Like the one that we saw when travelling in Swaziland: "Remove your dentures and put on your bra straps—you are in for a bumpy ride." This happened five years ago, and I still remember it well. Why? Because it is retold to me before every bumpy road we drive on.

Over time, it was clear that my interpreter was rubbing off on me. I sometimes catch myself telling the never-ending story, pushing the limits a little further than necessary. But when is it necessary? And when is it not necessary? This is the part where I learned the fine art of knowing your audience. Some appreciate the endless joke while others not so much. Reading my audiences greatly improved my

delivery—whether it was for a talk, telling a joke, or making a brochure.

Know Your Typography

If reading this is making you twitch, then you have impeccable taste.

Being the geeky girl that I am, I paid a lot of attention to grammar but not as much to typography. But being with an interpreter taught me that communication is visual as well. Grammar matters but so does typography. I will never forget my interpreter screaming at the subtitles in the movie *Avatar*, “Papyrus? Are you kidding me?” I’m surprised he didn’t ask for a refund. In a nutshell, avoid Comic Sans and Papyrus at all costs, unless you are in the mood for a rant about fonts, letter spacing, and typography.

These are just a few of the lessons I have learned since entering the world of interpreters. I’ve learned a lot through the years, but the one thing that stands out is that you need to have patience. Whether waiting while someone examines signs in a museum or listening to a joke for the umpteenth time, patience will help you sit back, relax, and see the underlying lesson. After all, losing your patience and blowing your lid is not really a good look—just like using Comic Sans for a presentation.

Jeannie Gagnon is a former Canadian national park warden who is now a freelance writer. She can be reached at wordsworthexploring@gmail.com.

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Making the Mundane Exciting and the Exciting Mundane

ETHAN ROTMAN

I sat through two presentations recently. One was an exciting talk that held the attention and interest of the audience and when it was over, many individuals approached the speaker for more information. The second talk was a recitation of facts delivered in an accurate, but rather dry manner and when it was over, the audience quickly left their seats in search of food.



One talk was on how to handle an IRS audit, the other was a guided boat tour of the wildlife of Humboldt Bay in northern California.

Call me crazy, but the CPA speaking on audits was the better talk. It is not that her topic is more inherently interesting to me (which it is not); it is that she is a trained speaker. From the beginning, she demonstrated how her topic was relevant to the audience, told stories, and used humor. She had a single, clear message that was easy to understand, an outline that was easy to follow, and a call to action.

The tour of Humboldt Bay was relaxing and beautiful—a fun experience without question, but the speaker relied solely on his

encyclopedic knowledge of the cultural and natural history of the area to deliver an informative, yet incredibly uninspiring lecture. While the tidbits of information were interesting in themselves, there was no message, no story, and no call to action. It was a long morning of somewhat interesting and unrelated factoids.

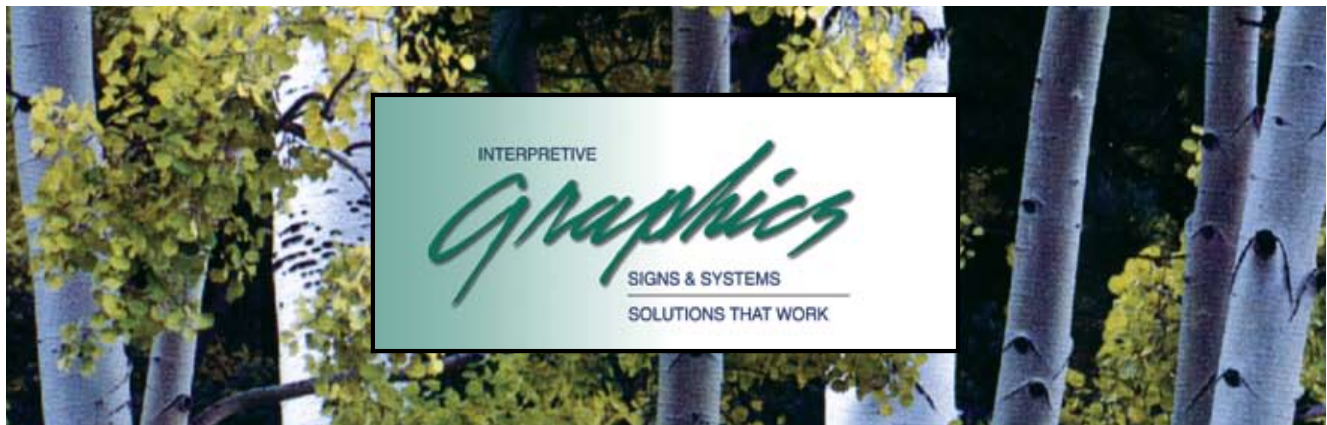
She was a trained and prepared speaker. He was a man with a lot of information.

Topics are not boring and beautiful scenery does not make a talk worthwhile. A good speaker makes a presentation.

As the naturalist on the boat demonstrated, it is not wise to assume that your knowledge of the topic will allow you to speak well. The CPA demonstrated that any topic can be exciting, if it is presented properly.

Learn to present well. It will make all the difference to you and to your audiences.

Ethan Rotman is a presentation coach offering workshops and coaching in the San Francisco Bay area. For more information, call 415-342-7106 or visit www.iSpeakEASY.net.



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In Memoriam: NAI member

Bob Garrison

The field of interpretation lost a champion, a great talent, and a friend in July.

Longtime

NAI member

Bob Garrison passed away in a tragic traffic accident. Bob was a regular at NAI National Workshops and was heavily involved with Region 9.



NAI Region 9 director Kevin Damstra wrote, "As with any death in our NAI family, especially the sudden ones, our thoughts are with Bob's family, friends, and colleagues. We will be passing along any information about memorials or remembrances that we learn about."

Bob was memorialized in local news outlets after the accident. The *Sacramento Bee* published an article about Bob's role in the community as a Boy Scout leader and conservationist. The *Auburn Journal* published a tribute to Bob as "Mr. Nature" as well. Those links can be found on NAI's website, www.interpnet.com.

Congratulations to NAI's scholarship recipients

Congratulations to the four students who were selected from a pool of applicants to receive scholarships to attend the NAI National Workshop in Reno. The recipients are Amy Brennan, Stephen F. Austin State University; Joy Kacoroski, Unity College; Jessica Pope, Oregon State University; and Doug Lowthian, Stephen F. Austin State University. Learn more and register for NAI 2013 at www.interpnet.com/workshop.

This is a companion to NAI's monthly e-mail newsletter. If you do not receive *NAI Now* by email, please call 888-900-8283 or visit www.interpnet.com to update your membership to confirm that NAI has your current e-mail address. Please add naimail@interpnet.com to your address book to avoid your spam filter.

August Board meeting kicks off strategic planning

NAI's Board of Directors met in Fort Collins at the national office on August 15 and 16. A business meeting was conducted Thursday morning with reports from officers and updates on specific projects, including the 2014 International Conference in South Korea, upcoming nominations and elections, development of a social media policy, the operating manual for the Advisory Council, association software installation, and progress on the 2013 National Workshop in Reno. The rest of Thursday and all of Friday were devoted to a facilitated discussion for the development of a new strategic plan.

The next meeting of the Board will be Wednesday, November 6, in Reno. To review reports and minutes from the meeting, go to the Resources tab along the top of the NAI website, and then to NAI Administrative Documents. Members will be asked to participate in the strategic planning project starting in mid-October. Keep an eye on the website.



Carolyn Ward honored by White House

Carolyn Ward, CEO of the Blue Ridge Parkway Foundation and editor of NAI's *Journal of Interpretation Research*, was honored by the White House as one of 13 leaders being recognized as "Let's Move! and Physical Activity Champions of Change" for their work to inspire and empower America's youth to lead active, healthy lifestyles. First Lady Michelle Obama launched her Let's Move! initiative to solve the problem of childhood obesity within a generation, and physical activity is a key focus of the initiative. Diverse organizations are offering innovative programs and tools that get kids moving. This event highlighted some of these models and celebrated the individuals that are driving them at the local level.

Carolyn was chosen for her work in developing the Kids in Parks program. Kids in Parks installs self-guided, brochure-led hiking trails, called TRACK Trails, designed to connect children to the outdoors, address the health problems associated with physical inactivity and nurture the next generation of stewards for our public lands. She is pictured above with Jason Urroz, program director for the Kids in Parks program.

NOTE: This took place in 2012, but we just learned about it thanks to a tip from NAI member Sam Ham. If you have news to share, please don't be shy! Email interpnews@interpnet.com.

Legacy announces upcoming themes

If you are interested in writing for *Legacy*, please review the themes for upcoming issues below. Submit queries to pcaputo@interpnet.com.

January/February 2014

Interpreting Controversial Issues
Submit queries by October 10, 2013
Completed manuscripts for accepted queries due November 15, 2013

March/April 2014

Interpreting the Prehistoric
Submit queries by December 10, 2013
Completed manuscripts for accepted queries due January 15, 2014

May/June 2014

Interpreting Play/Youth (including working with school curricula)
Submit queries by February 10, 2014
Completed manuscripts for accepted queries due March 15, 2014

July/August 2014

Evaluating Interpretation
Submit queries by April 10, 2014
Completed manuscripts for accepted queries due May 15, 2014

September/October 2014

Interpreting Natural Disasters
Submit queries by June 10, 2014
Completed manuscripts for accepted queries due July 15, 2014

November/December 2014

Authenticity in Interpretation
Submit queries by August 10, 2014
Completed manuscripts for accepted queries due September 15, 2014

Tentative themes for 2015

(Specific dates TBA)

- Interpretation for Diverse Audiences
- Interpreting Native Peoples
- Roving, Accidental, or Spontaneous Interpretation
- Special Events at Interpretive Sites
- Interpreting Sports
- Interpreting the Sea

Upcoming NAI Events



NAI 2013

Reno, November 6-9

NAI National Workshop

November 6-9, 2013
Reno, Nevada
www.interpnet.com/workshop

Certification and Training

Visit www.interpnet.com/certification.

Certified Interpretive Guide

Sept. 21-Oct. 12, 2013, Columbus, OH
September 23-26, 2013, Kalispell, MT
September 23-26, 2013, Birmingham, AL
October 7-10, 2013, Vancouver, BC
October 8-11, 2013, Sandy Springs, GA
October 17-20, 2013, West Yellowstone, MT
November 4-7, 2013, Dayton, OH
November 5-8, 2013, Littleton, CO
November 15-18, 2013, Clermont, KY
December 14-17, 2013, Olympia, WA
January 7-10, 2014, Milford, OH
February 3-6, 2014, Atlanta, GA

Train the Trainers

October 7-11, 2013, Felton, Delaware
February 24-28, 2014, Wells, Maine

Certified Interpretive Host Trainers

September 25-26, 2013, Kirkwood, Missouri

Social Interpretation:

Graphic Design and New Media

September 23-24, 2013, Kirkwood, Missouri

Webinars

Visit www.interpnet.com/webinars.

Big Theme Planning Will Change Your Life!
September 17, 2013

Buildin' on Tilden
October 25, 2013

NAI National Workshop Webinars

- Interpretive Placement: Fool's Gold or Real Wealth? (Nov. 7)
- Pilgrimage to the Past: Discovering Interpretation's Guiding Roots (Nov. 7)
- Into Outside, The Paradox of Connecting to Disconnect (Nov. 8)
- Staking A Claim: Creating an Interpretive Program Plan (Nov. 9)

Honoring the Past and Dreaming Big for the Future

AMY LETHBRIDGE

This is a critical and exciting year for NAI. As we celebrate the first 25 years of the organization, all that it has accomplished, and all that it means to each of us, we look toward the future and think big—what will be the challenges of our next 25 years? Has our purpose changed? What is the public promise to our members and how do we craft it together?



As I mentioned in the last issue of *Legacy*, the NAI board has begun a strategic planning process that will include member and stakeholder participation as we set a course for the next 25 years. Our first planning session was held in Fort Collins in August in conjunction with the summer Board meeting. One of the things that our facilitator, Brian Crockett, emphasized, was the role and responsibility of Board members. Given that election time is upon us, I thought this was a good thing to go over with you, the membership. Remember this list when you are voting, and be sure to read candidate bios and statements and think about the skills and experience you'd like to see as we chart the course for the next 25 years.

Ten Basic Roles Of Board Members

- 1) Determine the organization's mission, vision, values, and purpose;
- 2) Select the executive director;
- 3) Support the executive director and assess his or her performance;
- 4) Ensure organizational planning;
- 5) Ensure adequate organizational resources;
- 6) Provide financial oversight;
- 7) Determine, monitor, and strengthen the organization's programs and services;
- 8) Enhance the organization's public standing;
- 9) Ensure the legal and ethical integrity of the organization; and
- 10) Recruit and orient new Board members and assess Board performance.

It is an exciting time to serve on the board of directors. We continue to shape the internal infrastructure of NAI as made necessary from last year's by-law changes as well as discuss policy issues. For example, at the recent meeting, in addition to beginning the strategic plan, the board acted on the distribution of donations and a new model for the International Conference (South Korea, April 2014) as well as discussing a social media policy, the nominations and elections process, and the development of policies regarding the advisory

council (formerly section and region leadership councils). Our new executive director, Margo Carlock, has jumped right in and is doing great work making the fiscal operations more transparent, and the rest of the NAI staff continues to work hard on providing member services.

We will be having an interactive session with members at the National Workshop in November regarding the strategic plan. For those of you who cannot make it, don't worry, we have a plan to use social media and other strategies to gain maximum participation for those who want to be involved. In addition to individual members, this includes our various sub-units as well as stakeholder agencies, sister organizations, and staff. While this will take time, we believe that the end result will be a guiding document that serves us well into the future.

Twenty-five years ago, members from AIN and WIA came together and created an organization that has served us well. They did not have internet, digital technology, social media, or apps for their cell phones, but they had inspiration and planning and a passion for interpretation. They knew that together we were stronger and that a national association would both better us as individual practitioners and strengthen the profession as a whole.

As we consider the next 25 years we need to plan not only for the changes we are witnessing but those that we haven't even dreamed of. I can't imagine anything more exciting.

NAI's president Amy Lethbridge is the deputy executive officer of the Mountains Recreation & Conservation Authority in southern California. Reach her at lethbridgeathome@aol.com.

Electronic Titles from InterpPress

Available in print at Amazon.com and for download on the NAI store: www.interpnet.com/store.



Establishing a Nature-Based Preschool

Rachel A. Larimore

Nature-based preschools are powerful programs that fuse early childhood and environmental education to develop a child's lifelong connection with the natural world. With the number of these unique, cutting-edge programs growing throughout the country, many nature centers are asking, "Is a nature-based preschool right for us?" *Establishing a Nature-Based Preschool* helps answer that question, and provides a how-to guide to move from concept to implementation.



Interpretive Perspectives

Larry Beck and Ted Cable

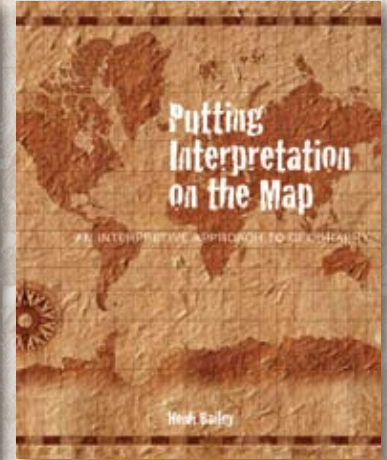
Interpretive Perspectives: A Collection of Essays on Interpreting Nature and Culture represents the work of two significant, contemporary voices in the field of interpretation, including original pieces written for this publication and reprints of articles that have appeared in National Association for Interpretation publications spanning three decades. You will be inspired by Larry Beck and Ted Cable's unique ability to find interpretive lessons in tangential fields, beauty in the everyday, and hope in the future.



Interpretive Solutions

Michael E. Whatley

Interpretive Solutions will help you harness the power of interpretive communications to improve critical resource protection issues and situations. Matching the right communications approach with the audience most in need of being reached can play a pivotal role in whether a situation stabilizes, improves, or worsens. Appropriate communications can make a positive difference in the role people play in helping to achieve desired resource protection outcomes and results.



Putting Interpretation on the Map

Heidi Bailey

Putting Interpretation on the Map: An Interpretive Approach to Geography is a handbook for frontline interpreters, managers, and planners on incorporating maps and other geographic technologies into interpretive media, exhibits, and programs. This book reviews basic geography concepts and map skills, and introduces resources from simple map activities to the most advanced geotechnologies.



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