Interpreters Honored

Three interpreters were honored for their outstanding interpretive accomplishments at the Director’s Awards Ceremony held August 27, 2003.

Empire Mines State Historic Park Supervising Ranger Jeff Herman received the prestigious Ingenuity Award for his development of a multi-facetted curriculum-based school program that creates a realistic mining experience for children. Jeff’s program has been hailed as creative, dramatic, fun, imaginative and highly praised by educators.

For his work in promoting excellence in interpretation throughout the Department by his tireless role as editor of the Catalyst, Acting Director Ruth Coleman and Field Services Division Chief Bill Berry presented District Interpretive Specialist Brian Cahill with a Director’s Special Commendation.

State Park Interpreter I Julie Sidel’s instrumental and energetic role in the planning, development and implementation of the Big Basin Redwoods State Park’s Centennial Celebration was acknowledged by a Director’s Special Commendation.
Contributor's Guidelines

The Catalyst welcomes your original articles of any length! Or, send copies of stories published elsewhere that you think our readers will appreciate. Be sure to include information about the publication so we can get permission to use the material. You may submit an article at any time.

We really appreciate articles submitted on disk or by e-mail. We can read most formats of DOS/Windows disks. Printed manuscripts, facsimile or phone messages are also accepted. Please advise if you would like your diskette returned, otherwise we will recycle it in our office to save postage.

Illustrations are strongly encouraged. Drawings, graphs or other illustrations may be submitted on disk or hard copy. Black & white glossy photos are preferred; color prints or slides are usually acceptable. All photos and artwork submitted will be returned promptly.

“The role of interpretation is to facilitate connections between the meanings of the resource and the interests of the visitor. Interpretation does not provide answers; it poses questions. Interpretation does not teach; it offers opportunities for emotional and intellectual connections. Interpretation does not educate; it provokes increasingly sophisticated appreciation and understanding.”

— David L. Larsen
From the Editor

In many places it still feels a lot like summer. But the days will soon be getting shorter, and for many of you, a little less hectic too. We hope this fall Catalyst will help ease you into autumn.

Just turn the page for some great interpretive resources and training opportunities. And you will find the Master Interpreter presiding on page 5 as usual, offering gratuitous advice to the interpretively challenged.

Page 6 sets the tone for the season with Daylight as Nature’s Timekeeper. Written by Bob Dispenza of Metro Parks in Ohio, this piece also appeared in FourThought, the NAI Region 4 newsletter, and is reprinted here with permission.

Page 7 considers the plan to privatize National Park Service positions with some ‘toons drawn by Carlton Stoiber. Mr Stoiber reports having spent some happy times in California State Parks before moving to the East Coast and he wishes us “good luck with those West Coast parks.”

Making Programs Relevant to Schools on page 8 is by By Anne Marie Tipton, Education Coordinator at Tijuana River National Estuarine Research Reserve. You can reach her at amtipton@parks.ca.gov.

The Great Eyeball Race on page 10 is by Jon Kohl, a freelance writer specializing in interpretation, education, and worldview change. See more of his work at www.jonkohl.com. This piece also appeared in the NAI newsletter of the Environmental Education Section and is reprinted here with permission.

Page 12 presents Governor’s Day at Capitol Brings Past Alive. Michael Green, Guide II at the State Capitol fills us in on this recent special event. You can reach him at MGREE@parks.ca.gov.

New Twist on an Old Technique, found on page 13, looks at how one park improved its wooden signs.

The State Indian Museum is doing something fun. Read all about it on Page 14 in Unit Specific Jr. Ranger Program. It’s written by Ranger Joann Helmich, who can be reached at jhelmich@parks.ca.gov.

It is time to start thinking seriously about attending the National Interpreter’s Workshop in Reno this November. Perhaps you should plan to go. Page 16 provides a few more tips to help you get there.

On page 17, you will find A New Look At Interpretation In our Parks by John Werminski. It summarizes some of the findings of our first statewide interpretation survey. John is a Regional Interpretive Specialist with the Interpretation and Education Division.

Winter Bonnin, State Park Interpreter I at Crystal Cove, sends Working Your Way Down the Watershed on page 18. Winter would love to hear from you at crystalcv@fea.net.

Mary Helmich tells us all about Picturing Mexican California on page 20. This incredible collection is now available out in the field on CD.

On page 22 you will find a piece by Wes Chapin, Playing the Geologic Dating Game. Wes would like to challenge some of last issue’s geologic time article. Catalyst places a high value on being open to diverse viewpoints. What do you think?

On page 24 you will find a piece by Jaime Mendez, part of her ongoing series, “The Road Less Traveled.” Jaime is a Guide I at Hearst Castle; you can email her at tahquish@att.net.

And you’ll find another installment of “California’s Tapestry,” back in its usual place.

And that’s about it for our fall issue; enjoy! Thanks to each of you for reading Catalyst!

Brian Cahill, Editor
What's Up?

Waves, Wetlands, and Watersheds
Free workshops are scheduled throughout California this fall! When you attend one of these workshops, you will receive a FREE copy of the California Coastal Commission’s science activity guide titled *Waves, Wetlands, and Watersheds*. You’ll also try out some of the activities in the guide and get an overview of the other free educational resources and programs the Coastal Commission has available. You must pre-register. Contact Annie Kohut Frankel at afrankel@coastal.ca.gov or (415) 597-5888 to register.

October 4, 10am-Noon
Loleta, Humboldt Bay National Wildlife Refuge

October 22, 4pm-6pm
Santa Cruz, Seymour Marine Center

November 4, 4pm-6pm
San Diego Natural History Museum

November 5, 4pm-6pm
Orange County, Upper Newport Bay

November 6, 4:30pm-6:30pm
Santa Barbara Natural History Museum

CAM Workshop
The California Association of Museums’ regional workshops will be held November 17 in San Francisco and November 19 in Los Angeles. For information or registration call (714) 542-2611.

Public Speaking
Have you heard that people fear public speaking even more than heights, snakes and death? That is widely quoted, yet no scientific data can back-up this claim. You have to wonder how these clichés get started! Check out the latest in public speaking at www.upsidedownspeaking.com.

Group Tours
Do you handle scheduling for group tours? A new software package available from Alta Mira Press promises to simplify this process and avoid last minute mishaps. This complete turnkey package handles everything from the first inquiry to confirmation letters, calendars and even invoices. A free demo version is also available. See www.altamirapress.com.

Recreation dot gov
Suppose you are looking online for recreational opportunities in parks. Until recently that meant wading through NPS, BLM, Forest Service, Corps of Engineers and other agency websites. It was a bit like finding a needle in a haystack. Now, recreation.gov helps you transcend departmental boundaries to get the information you need. It took months of meetings to bring all of the agencies together, but now there is one easy-to-use site for information, permits and reservations. It serves as many as 30,000 visitors a day with minimal costs. Some states are even joining in.

Heavenly Happenings
There are two celestial events you may want to keep track of in November. There will be a total lunar eclipse during the evening of November 8. The Leonid meteor shower will also put on a pretty good show for a couple of nights around the 16th.

New Interp Book
*Personal Interpretation: Connecting Your Audience to Heritage Resources* is just out from NAI. Written in clear, concise language with many examples, it employs the most current ideas in the interpretive profession. This resource shares approaches tested and proven by the National Park Service and many other organizations along with research concepts that back up their approaches. Cost, only $15.00 from www.interpnet.com.

Buzzerks Eyewear
Do you do a Jr. Ranger program on insects? Then you could probably use a pair of these bug eyes. We found them in the toy section at Target, or see www.insectlore.com.
Dear Master Interpreter,

I was approached by a lady setting up a visit next month for a group that includes 3 deaf people who will be taking a tour of the park. From her explanation, under ADA we are required to provide a sign language interpreter at our expense as an "auxiliary aid" for the deaf visitors. I asked if a printed transcript of the tour would suffice and she said it would not. As I understand the law, it calls for reasonable accommodation. But "reasonable" in one area of the state may be impossible in the next. And how do we pay for that service when we are not even able to hire park aids to staff entrance stations due to the shrinking budget?

Perplexed

Dear Perplexed,
The lady speaks the truth; State Parks will provide a sign language interpreter when requested. You are wasting your time worrying about what's "reasonable," because that's not part of this law. Yes, you have heard about reasonable accommodation because it is part of Title I, which applies to the employer / employee relationship. But this situation falls under Title II (which applies to public entities). We are held to a higher standard. The law under Title II calls for our program to be readily accessible, period.

Check with your District Interpretive Coordinator or Chief Ranger for help getting a sign language interpreter. Yep, it will cost a little, but we can't afford not to do it. ADA is the law of the land and it has been since January 1992. We may not get requests often, but we'd better respond when we do get a request.

MI

Dear Master Interpreter,

How much does an outdoor interpretive panel really cost? I have heard estimates ranging from a few hundred dollars to several thousand.

Thrifty

Dear Thrifty,

There are many variables involved that can leave you comparing apples to oranges. Do you want to hire someone to research the story, write the text and create original artwork to support the story? Do you want a durable panel with a 10-year warranty in a spiffy aluminum frame? Talk it over with your DIS or specialists from your service center. If you have already done the research and interpretive planning, if you have a good strong theme and about sixty well-chosen words and you want to use existing graphics or photography, and if someone on park staff can design it for you — then you might get a panel for a few hundred dollars. But you could easily spend $500 or more just buying a frame to mount it in. Talk to someone who does this regularly and they can help you sort out exactly what you will need for what you envision. Good Luck!

MI

Dear Master Interpreter,

I am finishing up my college degree in interpretation, but sometimes I wonder why. Most of the interpretation I see is being done by people with little or no training. Volunteers do the bulk of our programs. Other programs are done by seasonals who just watched one Junior Ranger program before they were expected to lead one. Our park rangers have to be good at so many things they have little time for interpretation. What's the point of going to college?

Interp Student

Dear Student,

You bring up a good point. Interpretation is important, but we expect almost everyone to do it. But that does not mean anyone can do it! We are counting on interpreters like you to help show the way to truly professional interpretation.

MI

Dear Master Interpreter,

Who says historical re-enactments are boring? In June, Indian activist Russell Means crashed the National Park Service's dedication of a memorial to the Indian soldiers who died at the Battle of Little Big Horn. Means rode up on horseback and commandeered the podium, causing Interior Secretary Gale Norton and Montana Governor Judy Martz to leave the stage. Afterward, Fort Peck tribal member Chauncey Whitwright III, one of the organizers of the ceremony, told the Billings Gazette that he needed some "intensive counseling and rest" and is "never volunteering for another thing in my life."

Incredulous
Daylight as Nature’s Timekeeper

By Bob Dispenza,
Metro Parks of Ohio

The flaring oranges and bright yellows of autumn leaves tell us of approaching snow and long nights. Even if the fall weather is mild and temperatures are warm, the trees will turn colors and drop their leaves. If autumn leaves tell us that winter is coming, what tells the trees (or, for that matter, the birds, insects and mammals)?

While temperatures are important warnings to plants and animals, it is the length of day (or length of night) that gives the most accurate predictions of impending seasonal change. Day length, or photoperiod, is used by plants to control flowering, loss of leaves, setting fruit, and production of food storing roots and stems. It is used by animals to control reproductive cycles, changes in fur or feathers, migration and metamorphosis.

How plants respond to light depends on genetics—what kind of plants they are. Long-day plants require more than 13 or 14 hours of sunlight per day to flower. Most of these are late spring and summer wildflowers. Short-day plants (all early spring and late summer wildflowers) start blooming when days are shorter than a critical length, usually less than 12 or 13 hours. These include asters, ragweed and violets. Plants found in the tropics tend to be short-day, while plants found north of 60 degrees latitude (south of 50 degrees in the southern hemisphere) tend to be long-day. To many other plants (tomatoes, dandelions and sunflowers), length of day isn’t important in flowering.

The intensity of the light is not as important as the timing; intensities down to about the brightness of the full moon will work. Actually, length of night is more important than day length, and only a few minutes of light in the middle of the night will convince a plant that the day is much longer than it really is. Often, exposing only a small part of one leaf (on some plants) to light is enough to bring on seasonal changes. One theory about why plants fold their leaves at night states that the folding may prevent bright moonlight from interfering with the plant’s “count” of nighttime hours. Photoperiodism is used in the commercial flower business to force flowering outside of normal seasons. But how does a plant, without eyes or a brain, determine the length of a day?

Phytochrome is a blue or bluish-green protein contained in leaves in extremely small amounts. This chemical absorbs certain wavelengths of red light during the day and changes them to an active form. In darkness, phytochrome returns slowly to its original, inactive form, giving the plant a method of keeping track of the length of night. Hot or cold temperatures may speed up or slow down this process.

Photoperiodism in animals controls many facets of life. It helps them know when to head south, when to prepare for hibernation, when to grow more or fewer feathers or fur, when to enter a resting phase and when to seek mates. Insects even have specialized eyes (ocelli) that do not see shapes, but may be used only to measure the length of day! Light stimulus travels from the eyes through nerves to the brain, where it inhibits or speeds up the production of certain chemicals that affect behavior. One of these chemicals is melatonin, which increases at night. More light (longer days) means less melatonin. In many animals this means an increase in reproductive hormones.

Melatonin injected into sparrows during the day causes the onset of nighttime behaviors, such as roosting and a drop in body temperature. Seasonal behaviors also respond to changes in day length, and some peoples’ “winter blues” can be cured by sitting under a full-spectrum light for a few hours, simulating a longer day.

Day and seasonal rhythms are set by light, in concert with internal, inherited biological “clocks” that have their own intrinsic times. In complete darkness, many important rhythms will continue, but will gradually get out of sync with the actual day-night or seasonal cycle.

Cool autumn air is one clue trees use to prepare for winter, but it’s the earlier sunsets and later sunrises of fall that convince the trees (and other plants and animals) that winter is really on its way. The results are migrating birds, bats and butterflies, animals growing thick winter coats and the berries, fruits, nuts and showy falling leaves of autumn.
A View on Privatization

Carlton Stoiber, a freelance cartoonist, shares his interpretation of the Bush administration’s plan to privatize Park Service positions. He lives in Washington, D.C., and is also a consultant on international and nuclear law. A former federal employee at both the State and Justice Departments, Stoiber has been an NPCA member for five years and frequently contributes cartoons to the National Parks magazine. Reprinted with permission from National Parks magazine, Carlton Stoiber, ©2003 by National Parks Conservation Association. For more information see www.npca.org.
Making Programs Relevant to Schools

By Anne Marie Tipton
Education Coordinator
Tijuana River National Estuarine Research Reserve

The San Diego Coast District Interpretive Improvement Team, headed by District Interpretive Specialist Joe Vasquez, decided that we should train District school program providers on aligning school programs to content standards. After reading Jenan Saunders' report on teacher evaluations, we noticed that California State Parks wasn’t up to par on using current pedagogy, so we wanted to include that topic as well. A sub-committee of the Improvement Team planned the training — Joe Vasquez, Nancy Mae Gallagher, and Anne Marie Tipton. We started out by watching Joe Von Herrmann’s PowerPoint presentation “Integrating Academic Content Standards into School Group Interpretive Programs,” to help us plan out the training day. Since the program addresses themes and content standards, we figured we better do a thematic interpretation refresher, too.

We really wanted the visitor services staff and volunteers in the park units to make use of the training. Chief Ranger John Quirk’s support was critical in ensuring a good attendance and the implementation of the training. He sent a memo to the supervising rangers asking them to assign a school programs coordinator. That person would work after the training to ensure that the school programs align with state content standards. He also requested in the memo that everyone who did school programs come to the training as a team led by the coordinator, including permanent staff, seasonals, and docents. The training includes a post evaluation due in October 2003 to determine if the units used the training to help make their programs thematic and aligned with standards.

Approximately 40 people attended the training “Making Programs Relevant and Exciting to Schools” held at Torrey Pines State Reserve on June 18th, 2003. The training included a free lunch and door prizes at the end after participants turned in evaluations. The outside speaker and lunch were funded by Southwest Wetlands Interpretive Association and the Torrey Pines Docent Society. The training began with a team building exercise (interpretation bingo). Then Dr. Donna Ross, a science education professor, gave a presentation on current pedagogy. Participants really liked this section and said they wanted to see more of this kind of training. She spoke about simulations, models, experiments, and mental puzzles. Her main point was that retention and interest would be greatly improved by incorporating the above techniques into programs. She showed a video of two simulations that she did in local schools and had training participants do the Oh Deer! activity from Project Wild.

After a yummy tamale lunch, Joe Vasquez showed the PowerPoint “Integrating Academic Content Standards into School Group Interpretive Programs.” Thematic interpretation was next after a fun energy break (“Rustasha,” which got high

Dr. Donna Ross teaches how Pedagogy can help school programs.
marks in the completed evaluation forms). Anne Marie conducted a condensed version of Sam Ham’s thematic interpretation training from “Training for Interpretive Trainers.” Afterward, she had everyone break into groups by unit to look at themes from their school programs and to try to improve them using Ham’s theme writing advice. The planning team had a real eye-opener when it was obvious that many participants needed basic theme training. Many participants appreciated the practical nature of the exercise to improve school program themes.

We further explored content standards after a cookie break. Park Aide Cynthia Curtis gave a 15-minute presentation on the local pre-contact Kumeyaay Indians. The participants were given a sheet with the content standards that staff at Torrey Pines thought were covered by the presentation. Afterward, we evaluated the presentation to see if it indeed covered those standards.

Technical problems with the AV equipment prevented us from conducting the final activity of participants aligning their school programs to the content standards. The technology fairy was surely not with us this day. After the Kumeyaay presentation, we concluded the day by going over the post-training assignment, finishing evaluations, and giving out the door prizes from Acorn Naturalist.

Joe, Nancy, and Anne Marie tabulated the results of the evaluations (modeled after Asilomar evaluations) and the training received mostly “4s” (agree) or “5s” (strongly agree) on satisfaction with content and instructors. Many, however, felt rushed due to the equipment snafus. The planning group thought that we probably did pack in a lot of content in one day, and if/when we do it again we will make it a two-day training. It is a challenge to get staff and docents for two days given low seasonal budgets. We also discovered our district needs more school program training at each unit. Often park aides are required to do presentations after minimal training (maybe only watching another park aide once). The District Interpretive Improvement Team will try to provide tools for park staff to train school program presenters. The current pedagogy training was popular despite the equipment problems. Staff seemed to take in this training very well — maybe because, like the old saying goes... “an expert is a person that arrives from out of town with a suitcase” or a Macintosh laptop.
The Great Eyeball Race

By Jon Kohl

When I worked as a Peace Corps educator (1993-5) at the National Zoo in Costa Rica, this was my problem: How to educate 300,000 Costa Ricans per year, most of whom were children, in a facility that had 75 years’ experience in using its animals to entertain, not teach, on one small green island floating in a sea of cement?

What’s more, the zoo had aspirations of stripping away its crusty past and building up from itself the National Urban Environmental Education Center of Costa Rica. To do this, we needed to slow down one million racing eyes and promote a new breed of zoogoer that engages the entire body in its education.

As I peered out my office window, I saw those visiting eyeballs roll into the parking lot, bouncing and bumbling as they went. When they caught a glimpse of our front gate, designed as a castle, they got excited and rushed in. Upon entering, the eyes greeted the crocodiles and turtles. They hovered and ogled for a bit and then noticed the jaguar and tapir cages to the left. The eyes hurried over, missing the small “interpretive” signs. Only moments later one eye spied monkies, blinked to other eyes, and off they went. And in no time the eye had raced around the small zoo before finally rolling out in the parking lot to disappear into the urban bowels.

Eyes are the most promiscuous part of the body. They go wherever they please. They are easy to catch and almost impossible to hold. They are fast, tireless, and backed up by a brain that often fully supports the eyes’ antics. The brain, too, can be a troublesome organ: it ignores 95 percent of the world it encounters, and then discards most of the rest. Often the brain only works when pushed, excited, or tricked. It doesn’t like to change its ways — it will ignore, deny, blame, and lie before it finally makes up its mind. It will fully engage an educator’s message only when the educator understands how to play ball.

While the eye can be satisfied with a diet of vapid viewing, such as of animals, architecture, silly presentations, or bright colors, non-formal education must target the rest of the body. While this may be a harsh view of the brain and its henchmen, the eyes, this realization can help educators rise up out of formal education paradigms, which have haunted classrooms since prehistoric stone chalkboards turned to slate.

An educator can take better advantage of non-formal education by understanding psychological realities to manage racing eyes by involving noses, ears, feet, hands, and the prior experience that each person harbors.

Eyes, like all senses, inputs information; they copy it directly from the environment to an area in the brain where raw data lasts 0.25 to 2 seconds. The subconscious brain deems some information potentially important and transfers it to the short-term memory, where the conscious brain has 30 seconds to use it before it also decays into discombobulated history. After passing numerous mental examinations, the information may then be added to long-term memory where it could play in the individual’s thinking.

Hearing and touch have their own storage buffers and can contribute to learning just as vision can. The job of
non-formal education is to exploit as many senses as possible to make as many connections as possible with existing knowledge in the zoogoer’s brain, to effect education. Why then does the brain use some information and discard the rest? A fact without associated conceptual understanding is mental clutter the average brain can do without. Therefore, non-formal education taps structures called “mental schema”: past experiences, understandings, associations to give meaning to new experiences.

A brave new idea with which the recipient has no previous experience is at least a shock, with a great chance of also being discarded since it is time- and energy-consuming to think through, or even worse, to rethink an understanding. But this marks the challenge of education; it tries to use as many channels (sight, smell, hearing, doing, etc.) as possible to tap as much pre-existing knowledge as possible.

For example, eyes loved Fofo, the Zoo’s African lion (though hands steered clear), as did ears which heard Fofo’s roaring. But because of the lack of applicable knowledge schema, the vast majority of people (in trying to incorporate the roar into their past experience) misinterpreted it. Normally when an animal yells it’s because: He’s hungry! He’s sad in his small cage! He’s lonely for a wife! He’s sick! He’s bored!

Common interpretations all, but all wrong. It would have been better had the brain trashed this observation from the start. Actually, like in the African savannah, he’s declaring his territory. But by not making contact with the appropriate schema, ears are miseducated with little help from eyes — or from the educator.

All connections help students learn. And one basic tenet of cognitive psychology is that if new information has a hard time teaming up with pre-existing knowledge, then the brain might leave that new stuff out to wash away in the river of information rushing through buffers.

How, then, can this knowledge be applied to eyeball management? First we try to slow down eyes with signs that engage thought. We have signs that talk and ask questions about littering, in which trees our sloths are likely to be found, or about the polluted Río Torres that flows through the zoo.

More eyes will get stopped in our educational programs as we tempt the other senses into action. An eye can peruse a stuffed sloth but only a hand can feel its fur and only both can discover what the skin is like beneath the fur.

More eyes will get stopped in our educational programs as we tempt the other senses into action. All these programs will use non-formal educational techniques, especially one very appropriate for a zoo: natural history objects. An eye can peruse a stuffed sloth but only a hand can feel its fur and only both can discover what the skin is like beneath the fur and only with an analytical brain can one dare an explanation as to why the fur is green (algae live there).

In addition to using bones, skins, and stuffed bodies that can be manipulated and examined closely both by hand and by microscope, inside and outside, the zoo should shift from big animals to little ones. Smaller animals are easier to manipulate and more educational than big ones.

Thus while the Great Eyeball Race continues, with non-formal methods we hope more parts of the body will compete for the ultimate prey: a meaningful education.
Governor’s Day at Capitol Brings Past Alive

By Michael Green
State Capitol

The California State Capitol, in collaboration with the State Capitol Museum Volunteer Association, hosted its annual Governor’s Day Living History Event on Saturday, August 2, 2003. The turnout was robust on a rare rainy day in August.

Visitors were treated to docents dressed in turn-of-the-20th-century attire who led crowds through the historic rooms on the first floor, led interpretive games, and portrayed past governors and their wives.

Governors’ portrayals were part of four dramatic vignettes played in the historic rooms and on the floor of the Senate chamber. “The quality of the acting this year was superb!” exclaimed Guide I, Oscar Warner. “I don’t think I’ve ever seen them done this well.” The vignettes included Governor and Mrs. Gage (1899-1903) and governors Pardee (1903-1907), Gillett (1907-1911), and Johnson (1911-1917). Each governor discussed issues and events that defined his term of office in 15-minute plays repeated throughout the day.

The annual event is a great way for people to connect to California’s political past and understand the importance of participation in their government. Many people may not realize that, in 1911, it was a fiery progressive reformer, Governor Hiram Johnson, who gave Californians the ballot initiative process and the power to recall the governor.

One of the more popular features of the day was the Children’s Table where kids of all ages had fun playing games of the early 20th century and learning how to make California poppies out of crepe paper and pipe cleaners.

“The mood was so positive!” said Guide I Kay Parkman. “It was great to see so many people turn out on a rainy day.”
**Casting copies of park signs**

**New Twist on an Old Technique**

Handcrafted wooden park signs have a long and proud tradition. Many parks would just not be the same without them. They are an important element of “park rustic” architecture.

Talented craftsmen throughout the Department carry on that tradition today. Using routers, sandblasting, chisel or dremel tools, along with the natural beauty of the wood, they create signs that convey a sense of our history.

Usually each of these wooden signs is a one-of-a-kind work of art. But not necessarily. Recently the staff at Anza-Borrego Desert State Park wanted to add the State Parks logo to the existing wooden entrance signs. But at Anza-Borrego, that’s a whole lot of signs and a sticker just would not do.

So instead of carving a logo in every sign, PMWI Gil McKinnon carved just one original wooden logo. He then made a mold from this original and began to cast duplicate logos in polyurethane. After hand-painting, they are difficult to distinguish from the original. The mold reproduces the natural grain of the wood and even the tool marks from carving with great detail. Gil was also able to cast the mounting hardware right into the back of the logo.

Now every entrance sign is sporting a finely crafted State Parks logo. It gives the signs a nice 3-D feel. Of course it was almost inevitable that vandals would try out this new target. They found it impossible to steal them, and it took quite a bit of effort to destroy one. But of course Gil always pours a few extra copies so they can be quickly replaced.

You can find out more about casting techniques at: www.smooth-on.com or www.castcraft.com.

*Gil McKinnon has mastered the art of park logos, cast in plastic. Painting each one by hand is not as difficult as it might seem. Raised letters and other “carved” elements makes painting easier.*
When a ranger travels with his or her children to other parks there is a certain expectation to have the children involved in the park’s interpretive programs; at least this is so in my family. On a recent trip to the Southwest, my younger boys, then ages 5, 7 and 9, became involved in the parks’ various Junior Ranger programs. (My 18-year-old passed on the program.)

As we traveled from park to park the boys would head to the visitor center to pick up their Junior Ranger booklets. The booklets were site-specific, self-guiding, and age-specific. If the boys completed all of the requirements and took the pledge, they were each issued a badge and certificate. The badges were site-specific and so enticed the boys to collect different ones from the various national parks we traveled to.

Of course the booklets also involved the parents. I learned as much as my boys did. Some of the activities required by the booklet might involve an interpretive walk or program. We saw films, went through museums, went on nature walks, climbed through ruins and caves and endured 100-degree-plus temperature in the Petrified Forest on a self guided nature walk, and all of this because of the Junior Ranger program.

So with the help of graphic artist and computer wizard, Lynda Austin, I did. Lynda Austin is an artist who has her degree in computer graphic design. She has been a seasonal with national parks. The parks included Zion National Park, The North Rim of Grand Canyon National Park, Great Basin National Park, Glen Canyon National Recreation Area, Montezuma Castle National Monument, and Tuzigoot National Monument. All these national parks had a Native American history element to them. We then developed a booklet for the State Indian Museum borrowing and modifying activities from these parks and developing a lot of our own activities based on a combined 45 years of park experience.

All in all it took about a year to develop the booklet that we are using in the museum now. We tested the program on my boys and then ran a pilot program in the museum. We went back and tweaked it some more. We worked with DARC to print the first batch, then modified it again. Our first month we had a total of 167 junior rangers. Things started out slowly as the seasonal park aides were hesitant to ask the visitors to do the program. But it became a kind of contest to see who could get the

We saw films, went through museums, went on nature walks, climbed through ruins and caves and endured 100-degree-plus temperature in the Petrified Forest on a self guided nature walk, and all of this because of the Junior Ranger program.
The greatest number of participants. As a matter of fact, we even offered a prize to the park aid that had the most junior rangers.

The program is simple and does not involve an interpreter to work with the junior rangers for an hour. Again, it is self-guiding, age-specific and park-specific. It works like this: The visitor comes into the museum. The person staffing the front counter tells the visitor about the program. At any time the person at the front counter might be a ranger, a guide or a docent but most times it is a seasonal park aid. The staff person must tell about the program. We tried sign and a special exhibit, but they did not work. The visitor will inevitably ask how long it will take. The answer is about one half-hour to 45 minutes.

The program involves watching the 12-minute video on California's indigenous peoples and the participant must complete four activities in the booklet according to their age group. Our "Coyote" designation is for ages 6 and under, the "Bear" is ages 7-9 and the "Eagle" is for ages 10 and up. Most of our junior Rangers are Coyotes and Bears. The Eagle takes the longest and we're thinking of cutting their requirement to three activities. After completing the booklet, the participant takes it to the front counter where the staff person checks it and has the participant take the junior ranger pledge. The park staff signs the certificate and the participant is given a State Indian Museum patch and a sandstone replica arrowhead (note: fake but fun). The Sacramento Historic Sites Cooperating Association funds the patches and arrowheads. We ran out of patches and had to halt the program for a week. I then learned of our department's new Junior Ranger badge and contacted John Werminski to see if I could get a few to hold us over until our supplies come in. John is the one who recommended that I write this article for the Catalyst, so blame him.

In reality the Indian Museum's visitor spends more than one half-hour if they do the program. The adults learn along with the children and the kids aren't bored while the parents try to read the information for each exhibit. We have used the booklet in our Summer Fun Program (our day camp program) and our docent training program and have incorporated some of the activities into the Museum's Teacher's Guide. It has helped make the museum come alive this past summer, the kids had fun, and my boys have quit bugging me.

An NPS ranger at Grand Canyon helps the Junior Rangers earn their award.
Attending a National Interpreters Workshop

This may be your best opportunity. This year’s National Interpreters Workshop in Reno / Sparks, Nevada is a great opportunity for interpreters of all types. We hope you are getting ready to go.

For a first-time participant, the workshop can seem a bit complex. Hopefully this article will offer a few tips to simplify it and help you make the most of the workshop.

Remember, you are not required to stay at the conference hotel — you are welcome to shop around for lodging. But be sure to stop by the Nugget as soon as you get into town to register. Most interpreters will be arriving Tuesday afternoon. There is a welcome reception that evening to kick off the workshop. Don’t skip the reception even if you are tired after a long drive. It is a great chance to talk with other interpreters in a fun setting, and food is provided. Best of all, it is free to registered NIW participants.

By the way, don’t forget to wear your nametag. It is your ticket into all workshop events and they will be checking them at most venues.

For those who enjoy music, there is an informal musical gathering every night. For some, this is the highlight of the workshop. Ask around to find where it will be held.

On most mornings a light breakfast is served in the exhibit hall. Talk to the vendors while you enjoy your coffee, but be sure to get into the auditorium in time for announcements and the keynote address. The workshop team promises keynote speakers who could change your life.

Lunch is also provided (Wednesday and Thursday). Every year some people skip the meals thinking they require separate tickets, but many of them are included for everyone registered for the workshop. Afternoon breaks often include cookies and cold drinks. Dinner is usually on your own.

Watch for a message board near the registration desk. There will be lots of interesting stuff posted throughout the week. You may also just find someone with a spare field-trip or banquet ticket ready to make you a deal there.

After two full days of sessions and keynotes, Friday will be devoted to field-trips. Be sure to take one of the trips. It costs a few bucks for the bus ride and lunch, but it can be a great learning opportunity. Then on Saturday it is back into the hotel for more sessions. Don’t even think about leaving early. Saturday is a full day with some great stuff.

Finally, Saturday evening brings the closing banquet. Even if you are on a budget and didn’t buy a banquet ticket, you still might find a free one on the message board at the last minute, courtesy of someone whose travel plans changed.

Most interpreters dress nicely for the banquet. Of course, “dressing-up” for some interpreters means putting on a clean t-shirt. But many others will wear suits and ties or little black dresses. So if you enjoy dressing-up, go for it. But you won’t feel too out of place if you don’t. Just make sure your shoes are comfortable for dancing!

And that’s about all. Sleep-in a bit on Sunday before you head back to California. It will take you quite awhile to absorb everything you will have picked up at the NIW. Of course there’s always next year — it’s a good time to start saving for the trip to Grand Rapids, Michigan.

Just because it is in November, don’t forget your swimming suit! The Nugget has a nice pool.
A New Look at Interpretation in Our Parks

by John Werminski,
Regional Interpretive Specialist,
Interpretation and Education Division

Last summer the Interpretation and Education Division conducted a statewide survey of interpretation presented to the public by our department’s permanent and seasonal staff. (This one-time survey isn’t to be confused with the “Semi-annual Interpretive Summary,” DPR 918, which districts submit regularly to Headquarters.) More than 550 state park employees representing dozens of classifications responded to the survey. The data that was gathered gives managers a clearer, more comprehensive look at our programming than has ever been available before.

Many of this survey’s findings are the first of their kind, and the results contain some surprises. For instance, when staff were asked to list both the topics and themes of their various interpretive programs, themes were stated properly in only 38% of the cases. Considering that the concept of theme is fundamental to good interpretation, there appears to be quite a bit of room for improvement.

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In fairness, it’s important to bear in mind that hundreds of presenters were not surveyed, including all of the Department’s volunteers. If their contributions had been included, it’s likely that a more balanced picture of state park interpretation would have emerged.

Among other things, the survey gathered data on the amount of training and evaluation received. Statewide, interpretive staff reported an average of 1.4 evaluations per year and 14 hours of training. Those in classifications that gave the greatest number of programs usually received the most evaluation and training—the "Guide I, PI" class clearly dominated in this regard.

One notable exception involved the “State Park Ranger” and “Park Interpretive Specialist (Seasonal)” classes. Although the rangers reported giving only about half as many programs as the seasonal interpretive specialists did, rangers received nearly 7 times as many evaluations and 22 times as many hours of interpretive training. Ideally, the results of this survey will help park managers allocate our interpretive resources even more effectively than they have in the past. If you would like a copy of the full report, please contact Pam Rocksvold in the Interpretation and Education Division at (916) 653-0760.
Nowhere do we see the love for the outdoors more clearly than in the eyes of children. It might involve seeing a hummingbird drinking from a flower, a hermit crab cruising the tidepools, or a gray whale spouting while on its annual migration. Therefore, as interpreters it is our obligation to teach these children things they can do to help preserve and protect our natural environment.

In Orange County, a recent pilot program sponsored by Orange County Wild, a coalition of public and private wildlands managers, united four agencies and five parks and wilderness areas that were once all part of the sprawling Irvine Ranch to do just that. All five locations provided an ideal setting to ignite the curiosity of 17 local children to learn about the natural world and gain an understanding and appreciation of the bountiful resources found in their own backyard.

The theme for the first-ever Camp Wild was “Working Your Way Down the Watershed.” With water pollution, conservation issues and watershed education such hot topics in heavily populated Southern California, the Orange County Wild planning committee felt that this would be an appropriate debut topic. How to make watersheds interesting? That was another question.

We started the week at the “top” of the watershed at Limestone Canyon where campers hiked to a natural springs, and learned about riparian ecosystems, groundwater, aquifers and water pollution.

The next day at Bommer Canyon we focused on habitat types and their relationship to watersheds, water supply, and downstream communities.
The following day at the San Joaquin Wildlife Sanctuary we bridged the connection between freshwater wetlands and what campers had seen upstream and what they would see downstream. We spent much time observing birds in the wetlands and studied their behaviors. We also examined live pond samples to determine what these birds might be eating.

On Thursday at the Upper Newport Bay, campers took an electric boat ride to explore the estuary and look at birds, and then they studied invertebrates that dwell in the mud (bird food, see how it’s all connected?). Finally, the week ended at beautiful Crystal Cove State Park where we traipsed through the tidepools, viewed footage of underwater animals, and painted environmental messages in our 300'-long tunnel.

Our goal was to instill in these Orange County children, ages 7-11, an understanding of watersheds and how, ecologically, everything is connected.

where we traipsed through the tidepools, viewed footage of underwater animals, and painted environmental messages in our 300'-long tunnel.

Our goal was to instill in these Orange County children, ages 7-11, an understanding of watersheds and how, ecologically, everything is connected. We attempted through science experiments, art projects, and recreational activities to convey an environmental message and to promote an appreciation for their wildland areas.

More importantly, we continually reinforced the lessons they had learned at the previous locations and stressed how their actions, both positive and negative, could affect the waterways.

Judging by written evaluations and informal conversations with participants, Camp Wild was a great success. We received a grant from the Blue Planet Foundation to assist in staffing costs, office and art supplies, snacks and giveaway items.

Because all the naturalists enjoyed the half day camp and because there has been such positive feedback, next summer we will run three camps, one week each month. In fact, we even have a list of kids interested in Camp Wild for next year. We’ll have to develop another topic though, perhaps one even more exciting than watersheds.
Picturing Mexican California

By Mary A. Helmich
Interpretation and Education
Division

While scholarly and popular works about California’s Mexican Republic years have grown in number, most are sparingly illustrated and usually produced in black and white. Color... It permeates our lives and affects our perceptions. What happens when everything is reduced to black and white? Historians, curators, archeologists, and interpreters routinely confront this problem when reviewing historic photographs and line illustrations.

For many, understanding the Mexican Republic Era—when even photography was not available—is of particular concern. Visualizing the period’s lifestyle, objects, and clothing is central to authentically representing them in California State Parks.

In developing the Department’s “Old Towns Initiative,” I began gathering and organizing images of the Mexican Republic Era to use for reference with historic communities, such as Old Town San Diego and Monterey. There are few resources available to guide staff and volunteers about the period’s appearance.

We recognized, however, that the limited number of binder sets would hinder their access. Division Chief

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Among the exciting and colorful pictures I found were vaqueros roping cattle, Mexican street scenes, fandangos, and detailed close-ups of spurs, saddles, clothing, and china. The project grew. With the help of Shannon Rowden and other staff in our division, more than 400 images were scanned and assembled as a three-volume set called Picturing Mexican California: 1821-1846. Ten sets have been produced and distributed to the field (that’s nearly 5,000 pages of copies!).

We recognized, however, that the limited number of binder sets would hinder their access. Division Chief
Donna Pozzi suggested turning the volumes into CDs. With her support and that of Office Technician John Underwood and John Peterson, a web consultant to the Department, and student intern Carren Christensen, the project evolved into an easy-to-use set of three CDs. One hundred sets were created. These are now being distributed to district interpretive coordinators and to cultural resource specialists throughout the Department.

Volume I deals with men’s work, agriculture, transportation, trade, and commerce; Volume II features women’s work, the home, and pictures of pueblos and villages; and Volume III highlights clothing, social and religious occasions, and religion. Staff, docents, volunteers, concessionaires, and others involved with interpreting the Mexican Republic years will find the volumes very useful.

The CDs include historical pictures and first-hand accounts, along with more recent research that captures the texture, color, and energy of life from 1821 to 1846. The vast majority of the pictures and objects are mid-nineteenth century in origin, although later era illustrations have been included where artists are known to have carefully researched the subject.

Material culture examples from the Index of American Design (compiled in the 1930s by the Works Progress Administration) and California State Parks’ own archeological excavations add dimension and substance to the compilation. Together, these images often challenge our expectations, based upon earlier monochromatic views. They put the color back into history.
Playing the Geologic Dating Game

By Wes Chapin
District Interpretive Specialist
Channel Coast District

Remember the British satirical comedy, Monte Python? The announcer would regularly introduce a new segment with the line, "And now for something completely different." That's what this article is intended to be: a completely different, and hopefully thought-provoking, look at the subject of geologic dating.

In the last issue of Catalyst, an article, entitled "Putting Geologic Time into Perspective—California Style," described how to use time segments of seconds, minutes, etc. to relate the 4.6 billion-year age of the earth in terms more familiar to lay people...a sound interpretive technique. (In fact, 'relate' is the first 'R' in RAPPORT, remember?)

However, you'll probably be surprised to learn that there is some controversy surrounding the methods used to date the age of the earth and other geologic phenomena. What's that, you ask? Haven't geologists all agreed that the earth is 4.6 billion years old? As a matter of fact, most geologists do agree with this estimate. Most, but not all. Do I smell controversy?

Controversy is one of the easiest ways for an interpreter to provoke interest—another sound interpretive technique. Presenting multiple viewpoints is an excellent way to encourage your audience to use their critical thinking skills and increase your accuracy at the same time. Finally, I find it stimulating to periodically reexamine my own dearly held assumptions. Doing so may open up new ways of looking at things or help reinforce my understanding of why I believe what I do, not just because I heard it from some expert, but because I've really thought about it for myself.

So I offer a friendly challenge: Read what follows with an open mind. Perhaps even check the references offered that give more in-depth explanations of the controversy from an alternative viewpoint. See if you don't expand your horizons.

Have you ever wondered how scientists date rocks? Are there tiny labels on rocks that tell how old a rock is? Actually, rocks don't have labels, at least not while they're still in the earth. But the impression given by the Catalyst article and by the geologic establishment is that geologists have got this dating thing down to a... well, a science!

There are at least three objections to this impression. The dates are based on unproven assumptions, dates that don't conform to these assumptions are rejected, and, finally, there is ample alternative evidence that indicates the earth is much younger than 4.6 billion years.

Unproven Assumptions

Most geologic dating methods have one thing in common. They all measure something that changes over time. Certain rocks contain radioactive elements, e.g., uranium, which changes into a by-product, e.g., lead. Geologists call the uranium the "parent" material and the lead the "daughter" material.

If you measure the amount of parent material and the amount of daughter material in a rock sample and you know the rate that uranium changes into lead, for example, then it's easy to figure the age of the rock. Except that to do so requires you to make some very significant assumptions that, if untrue, drastically increase the chance of error in your date.

Assumption 1: You know how much parent material and how much daughter material were present when the rock was formed.
Assumption 2: The rate of change from parent to daughter has been constant for the entire age of the rock.

Assumption 3: You know that no contamination has occurred, i.e., no parent or daughter material has left the rock or has entered from another source, again for the entire “life” of the rock.

Given that supposed geologic ages for rocks involve millions and even billions of years, you can see how critical it is that these assumptions be true in order to ensure any kind of accuracy. But how can we know for sure whether these assumptions are true? In two words, “we can’t.” These geologic dating methods rely on unproven and unprovable assumptions.

Huge Disparities

Famed anthropologist Richard Leakey unearthed a fossilized skull and wanted to determine how old it was. The first date he obtained was over 200 million years, too old (humans weren’t supposed to be around then!). After several other tests from other labs, each with different results, Leakey got one that matched his expectation, and that was the age he announced. This practice is not all that uncommon. Conspiracy? Not really. But all scientists bring to their examination of the data certain beliefs that shape their interpretation of the data.

In another not uncommon example of the unreliability of these dating methods, igneous rocks from a volcanic eruption observed in 1949 were dated at millions of years, obviously somewhat impossible.

Conflicting Evidence

Dating rocks is only one way to measure the age of the earth. Many alternative methods give dates much less than billions of years. For example, the oceans aren't salty enough to be billions of years old; at its present rate of decay, the earth's magnetic field would have been comparable to a neutron star’s only 100,000 years ago; the atmosphere contains too much helium to be more than a few million years old; and a growing body of evidence points to rapid formation of sedimentary strata by catastrophic events, e.g., floods, rather than slow deposition over millions of years.

We've only scratched the surface of this subject. To learn more, check out *The Young Earth* by geologist John Morris, *Evidence for a Young World* by astrophysicist D. Russell Humphreys, and *The Mythology of Modern Dating Methods* by J. Woodmorappe.
The dog days of summer have arrived. It’s hot – it’s humid – it’s August! The lazy days of summer you longed for in February are here. Why then does a snowstorm seem like such an attractive option? Parks, museums, and monuments are filled with campers and tourists. Lines are long and tempers are short — at the kiosk and in the break room.

It’s time to lighten up! So grab a moment or two from your busy day and a cold one (ice water—you are on duty) while Russ Surber, Guide I and resident humorist at Hearst Castle, provides us with his interpretations of some memorable events along with a good chuckle.

How about fond memories of closing time and discovering that there is still one last camper in the visitor center?

Now it’s your turn —
Draw your toon here...

Hope your summer season was a great one!
The phrase "For the Benefit and Enjoyment of the People" is written above one of the entrances of Yellowstone National Park. In the past few decades, it has brought to question whether the parks can keep protecting the very natural and cultural resources that caused them to be established and be able to accommodate all the visitors who want to visit the park. But there is another interpretation; can it also mean that the distribution of the benefits of parks or the services they provide should be equitable?

Here is an observation in which the names and other details will be left out to protect the innocent. There is a park where almost every visitor is meet by a team of two or three park staff. The visitors are given programs during their entire six- to seven- hour visit, including slide shows, running accounts of what they see as they travel through the park, and hand-held objects.

The program and themes are typical, about the cultural and natural history of the area, how fragile the park is with a dash of advocacy for park protection. At this park, about 6,000 visitors a day receive this level of service during the busy season. The profile of the visitors is almost entirely White, with average median family incomes of well over $100,000 a year. Some are young, but most are older adults and there are a few foreign visitors. There is no doubt that the visitors are "upper to middle class" Americans. Of the park team giving the program to about 1,500 visitors at a time, two of the employees are White and a third employee is a local "cultural expert" representing the indigenous population.

The park agency belongs to a jurisdiction with a diverse population and a median family income of about $30,000 to 35,000 a year. However, there is little question that the only way this park can operate and serve its visitors is the way it is functioning now — serving a privileged group of visitors and offering special programs just for them. For the agency to balance its services within its jurisdiction, it would have to provide many more programs to those who have much lower incomes. New user groups would have to come from neighborhoods other than those who now visit this nameless park. Of course, there are limited resources to create more programs. There is an even greater problem, those two park staff members like much of the rest of the agency, are not interested in working in those neighborhoods. Furthermore, most of the time, park staff and managers simply do what has been done in the past.

We know that the agency’s funding base is supported by the entire jurisdiction and that its representatives are critical of how resources are being distributed. This situation is not unique; many park agencies have similar circumstances. There are no quick solutions ready to be implemented by the park administration and there are currently no training classes for employees that will solve this issue this year.

The message to the park interpreter: From the beginning, parks were meant to be equitable. As we set up our operational plans and develop programs, whom we serve should be primary among our concerns. Our responsibility reaches far beyond the borders of the park.
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