

RANGER

The Journal of the Association of National Park Rangers

ANPR  *Stewards for parks, visitors and each other*
The Association for All National Park Employees

Vol. 23, No. 3 • Summer 2007



Climate Change and the National Parks

Letters

Some Issues with Provocative Column

In the Winter 2006-07 *Ranger*, Jeff Axel wrote a column in the interpretation section of *The Professional Ranger*. He described his original idea for this column as “a provocative statement — interpreters do the most important job in the NPS.” After pitching this idea to his coworkers and receiving some resistance to it, Jeff restated his idea in several paragraphs.

Before my reaction to specific parts of the column, I’ll say that ANPR sorely needs more provocative discussions on many aspects of the National Park System and the NPS. From my perspective ANPR has had serious, provocative and passionate debates over such issues from its founding in 1977 through the passage of the NPS Ranger Careers Program in 1994. Again from my perspective, ANPR has been less vocal, less passionate and less able to articulate a vision since 1994, and we need to reclaim those characteristics if we are to have consistent success in achieving our organizational purposes. So I say to all ANPR members, bring on the provocative statements and let’s have a dialogue about them.

Back to Jeff’s column — I think it is a good thing to have pride in one’s profession, even perhaps a little occupational arrogance concerning the importance of one’s discipline in an organization. However, I respectfully disagree with Jeff’s statements that:

- “. . . interpretation, more than any other division, works exclusively with the core ideas behind each national park.”
- “. . . only interpretation specializes in work with the founding park values.”
- “Interpretation is the most mission-critical and essential job in the NPS. . .”
- “Without interpretation, nothing the NPS does matters.”

When I read the phrases “core ideas behind each national park, founding park values and mission-critical in the NPS,” my assumption is that the writer is talking about the NPS Organic Act of 1916 (as amended) and each park’s enabling legislation or proclamation. The Organic Act and applicable federal case law have defined the fundamental purpose of parks administered by the NPS as preservation of park resources and values (natural and cultural) *and* providing enjoyment of those resources only in ways that will leave them unimpaired. Enabling legislations or proclamations may either mirror the Organic Act or relax certain standards in it, but they almost always demand some level of preservation or

conservation of the park’s resources.

In Jeff’s defense he included phrases that indicated the other disciplines provide critical tasks for parks, but the overall tone that I perceived was that these “tasks” were somewhere below the importance level of interpretation. While interpretation certainly works closely with the core ideas behind each national park [unit] and founding park values, and interpretation is absolutely mission-critical, I do not believe the interpretation discipline performs these duties exclusively or more essentially than other disciplines.

In my mind it would be difficult to successfully argue that any NPS employee who directly preserves park resources through research, inventorying and monitoring, mitigation, education, deterrence/prevention of illegal resource removal/destruction, or prevention of resource destruction by agency actions through proper planning, compliance, and project implementation, or who provides opportunities for the enjoyment of park resources so as to leave them unimpaired through presentation of information, education, and/or resource-sensitive infrastructure is any greater or less mission-critical any other employee in another discipline.

Further, it seems to me that proclaiming any one NPS discipline to be the most mission-critical lessens the potential for the cohesive teamwork necessary between disciplines to achieve the highest standards of the NPS mission defined in the Organic Act.

In order for the parks of our National Park System to exist into perpetuity at least two conditions must remain. First, parks must have intact natural and cultural resources and processes. Second, the country’s citizenry must support the system through their votes and an adequate operational budget.

When I was a young, commissioned ranger I spent the majority of my duty time trying to stop park visitors and neighbors from removing/destroying/damaging/modifying park resources, and I hoped that my actions were not only halting illegal activities in progress but also were providing some deterrence to the activities in the future. I may have perceived that no one was more mission-critical than those doing similar work. After all, without park resources there would be nothing to visit, nothing to understand and nothing to enjoy, right? But as my working years progressed I began to understand the mission-critical connections between the disciplines and the necessity of them all to truly approach the letter and intent of our fundamental purpose.

Park resource preservation in perpetuity



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with appropriate forms of enjoyment is the end product we seek. If that is also your goal as an NPS employee it would seem to matter little your discipline or your job title, as long as you contribute to that end product and as long as we achieve it. Interpretation is undeniably an essential portion of achieving that end product, but no more essential than the other disciplines that preserve the park’s resources from specific threats or provide appropriate enjoyment through mechanical or administrative infrastructure. If any individual park is not achieving that end product then we must ask why, and an adjustment in their staffing plan may be in order to address the identified shortcomings. Perhaps more interpreters will be the answer in part or in whole, but that decision should be based on an analysis of the threats to a park’s resources and values and the reason(s) a park is not fulfilling its statutory mission.

(continued on page 28)



Ranger (ISSN 1074-0678) is a quarterly publication of the Association of National Park Rangers, an organization created to communicate for, about and with National Park Service employees; to promote and enhance its professions, spirit and mission; to support management and the perpetuation of the National Park Service and the National Park System, and to provide a forum for social enrichment.

In so meeting these purposes, the Association provides education and other training to develop and/or improve the knowledge and skills of parks professionals and those interested in the stewardship of national parks; provides a forum for discussion of common concerns of all employees, and provides information to the public.

The membership of ANPR is comprised of individuals who are entrusted with and committed to the care, study, explanation and/or protection of those natural, cultural and recreational resources included in the National Park System, and persons who support these efforts.

ANPR's official address is 25958 Genesee Trail Road, PMB 222, Golden, CO 80401. Members receive *Ranger* as part of their membership dues. Consult the inside back cover for membership and subscription information.

Submissions

Prospective authors should contact the editor or editorial adviser before submitting articles. Editor, Teresa Ford, 26 S. Mt. Vernon Club Road, Golden, CO 80401, (303) 526-1380; fordedit@aol.com. Editorial adviser, Mark Herberger, (605) 433-5552.

Deadlines

Spring issueJan. 31
 Summer issue April 30
 Fall issueJuly 31
 Winter issue.....Oct. 31

Submit copy to editor in Microsoft Word format or Rich Text Format as an attached file to fordedit@aol.com or on computer diskette to the address above.

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Cover art: combination image of data from two satellites, showing North and South America from space 22,000 miles above Earth; earthobservatory.nasa.gov

President's Message

Last November ANPR lost a great friend with the passing of Bill Supernaugh. As many of you know, Bill was a very active member of the association. He not only served two terms on the ANPR Board of Directors as the member for internal communications, but he was also the driving force behind the organization's mentoring program. Bill always seemed to hold a special passion for the recruitment of new members and facilitating their professional development.

In keeping with that passion, at the request of Bill's wife, Jean Sigafoos, the board has established a scholarship to assist in the recruitment of new members while also allowing them to experience a Ranger Rendezvous.

The purpose of the William Supernaugh Rendezvous Scholarship Fund is to provide an opportunity for an NPS employee to experience a Ranger Rendezvous and learn about the Association of National Park Rangers. The eligibility criteria are:

1. Never attended a Ranger Rendezvous
2. Currently an NPS employee (permanent or seasonal) or an ANPR member
3. Able to attend the full week of the Rendezvous (Oct. 6-10, 2007)

What recipients get:

1. Registration fees
2. Cost of hotel room
3. Actual transportation costs not to exceed \$500
4. One-year membership in ANPR

How to apply:

1. Nominated by a current member of ANPR or
2. Self-nomination

All nominations must include:

1. Name
2. Current park or office
3. Contact address and phone number
4. A brief written description on why the nominee would like to attend a Ranger Rendezvous and what contribution they could make to ANPR (e.g., this employee has great organizational skills, always willing to help out with any project)

In this inaugural year nominations are due by July 10. Send all nominations to Lee Werst (contact information on back cover).

A committee of three, comprised of two members of the ANPR Board of Directors and one other ANPR member, will make selection of recipients.

At present we anticipate at least one individual taking advantage of the fund for the 2007 Ranger Rendezvous in Park City. Start thinking about someone you would like to nominate or pass the word at your park. More information can be found shortly on the ANPR website. 

Lee S. Werst

ANPR Calendar

Ranger (Fall issue)
 deadline.....July 31

Ranger Rendezvous XXX..... Oct. 6-10
 Park City, Utah

Ranger (Winter issue)
 deadline.....Oct. 31

Coming next issue: Seasonal Concerns

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Global Climate Change

Leadership in the National Park Service



By Jonathan B. Jarvis
Pacific West Region

Receding water level at Lake Mead, NPS photo

For my entire 31 years of service in the National Park Service I have been a reader. I like to go back and forth between some trashy escapism novels, usually supplied by my brother, to a solid book on some aspect of science. I like all kinds of science: string theory, the big bang, quantum mechanics, genetics, geology, astronomy, anthropology, psychology, climatology and anything biological. For me and the many other people in the NPS, the science of climate change has been in the literature for years and is nothing new.

Twenty years ago, I became the first chief of resource management at North Cascades National Park Complex. One of the first things I did was to bring in a team of scientists who sat around with me and my staff and talked about the future of the park. I asked each one to suggest what we should do to better understand the challenges before us.

Dr. Jim Agee, then with the Cooperative Park Study Unit at the University of Washington, suggested that we deploy remote weather stations every 1,000 feet from the lowest to the highest range in the Cascades. He actually suggested that the climate could be changing and we should be documenting it. We all thought he was nuts, of course, and ignored his idea. But ever since then, I have tried to stay up on the science and the politics

of climate change.

Soon after I became the regional director of the Pacific West Region, I turned to our team of science advisers to tell me the major issues facing our parks in the future. One of the issues they identified was global climate change.

We in the Pacific West pride ourselves with at least trying to think strategically and moving forward on major issues facing our parks. We are also smart enough to not try and tackle them all at the same time. So in January 2006 at the PWR directorate retreat, we decided that it was time to take on the issue of global climate change and the National Park System. The first goal was to bring scientists, resource managers and park superintendents together to build a baseline of understanding of the issue.

We held three workshops during 2006—in Oakland, Seattle and Honolulu—with a full day devoted to the topic of global climate change. The morning was devoted to presentations by invited scientists with special expertise in climatology and public lands. We had three different presentations, all of them excellent. At each workshop we had breakout sessions to address the following questions:

- What changes have you seen or do you expect to see in your park?

- How can we manage the parks to be “unimpaired for future generations”?
- How can we adapt to an issue that is outside of our control?

We had a second set of breakout sessions to address the following questions:

- What role should the NPS have in engaging the topic?
- What should NPS messages be?
- What specific actions should we take?

Here are a few examples of what our managers are observing in the parks:

- Receding glaciers at Mount Rainier, Olympic and North Cascades
- More rain-on-snow events at North Cascades and Mount Rainier that resulted in major flooding
- Less snowpack in the Sierras and particularly lower water content in the snow
- Lake Mead is at 54 percent of capacity, resulting in the need to move marinas, while Las Vegas continues to pressure for more water.
- A record year for wildland fire in the West
- Species shifting upward at Yosemite, well documented by the Grinnell Resurvey
- Coral die-off in Pacific Island parks

There was a lot of great conversation in these workshops, much more than I can articulate

here. I want to focus on four component conclusions regarding the role of the NPS in global climate change:

1. This is very serious issue for our future, potentially throwing into disarray the standard of impairment. Based on the predictive models, the future of Joshua Tree National Park is that it will have no Joshua trees. That is the essence of impairment. The NPS, by the Organic Act, is legally compelled to engage in this issue so that future generation may enjoy their parks unimpaired.
2. We must first and foremost get our own house in order in terms of sustainability, energy conservation, green building and design, and alternative energy. We must lead by example. In the PWR we have started but we have a long way to go. The PWR has some parks that are more than 50 percent solar and we are purchasing green power throughout the region. We are currently investigating carbon credits for our travel miles. When we are planning a project, sustainability must be the first consideration and the last thing to cut, rather than the traditional opposite.
3. The NPS must open its arms to scientists and to the long-term monitoring that will become so essential to understanding the changes we are facing. The over-used metaphor of the canary in the mine needs to be expanded. The value of our parks as centers for excellent science and long-term datasets cannot be overstated. The monitoring programs we have all initiated during the Natural Resource Challenge must become institutionalized and made available to the world.
4. The NPS must engage the public in understanding this issue at a personal level. We must be the translators of the dry and often obtuse scientific reports into something that evokes the power

of the places we protect.

Here are two examples, the first from a scientific journal, the second from literature:

“The larger glaciers are now approximately one-third their size in 1850 (range: 23-38 percent) and numerous smaller glaciers have disappeared. There has been a 73 percent reduction in the area of Glacier National Park covered by glaciers from 1850-1993. Only 27 km² of glaciers remain from the 99 km² which previously existed. Out of 84 watersheds, only 18 have 1 percent glacier cover, eight have 2 percent and four have 3 percent. Average glacier area in the accumulation zone for September 1993 was 35 percent, indicating negative mass balances for most glaciers and continued shrinkage.”

— USGS-BRD Glacier National Park Science Center

“As long as I live, I’ll hear waterfalls and birds sing, I’ll interpret the rocks; learn the language of the flood, storm, and avalanche. I’ll acquaint myself with the glaciers and wild gardens and get as near the heart of the world as I can.”

— John Muir

John Muir took Teddy Roosevelt to Yosemite National Park and he was struck with its awesome beauty. There in 1903, Roosevelt spoke:

“There can be nothing in the world more beautiful than the Yosemite, the groves of giant Sequoias and redwoods, the canyon of the Colorado, the canyon of the Yellowstone, the three Tetons; and our people should see to it that they are preserved for their children and their children’s children forever, with their majestic beauty all unmarred.”



Mike Lewelling

Wildland fire at Lassen Volcano

We have the power of the place and those places are threatened by global climate change. It is our job to help understand those changes and communicate them to the public. In doing so, we must be optimistic, not harbingers of doom. We must be rational interpreters of an inconvenient truth that these special places, so revered by the American people that they have been set aside for future generations, are changing in subtle ways that leave them at risk. That is our challenge, that is our responsibility, and it is our job. 

Jon Jarvis has served as the regional director of the Pacific West Region of the National Park Service since 2002. Previously he was superintendent of Mount Rainier, Craters of the Moon and Wrangell St. Elias. He worked as a law enforcement ranger in Prince William Forest and Guadalupe Mountains and as a resource manager at Crater Lake and North Cascades. He began his NPS career in 1976 on the Mall in Washington, D.C.

Flood damage at Mount Rainier



Mount Rainier

Vanishing coral in Pacific Island parks



National Park of American Samoa

Finding the Facts on Climate Change

The state of knowledge regarding climate change is changing so rapidly that it is hard for publishing to keep up.

By Doug Lowthian

It is hard not to be aware of the changing climate these days. There is ample evidence from report after report from around the world documenting a changing climate. But it is not only the climate that is changing. The science, policy and public perception of climate is changing rapidly. Not a week goes by without some article in the popular media regarding the growing body of climate science, climate policy and the increasing and changing perceptions of the public regarding climate change and global warming. How does one keep up with this information? Where do you go to get up to speed on what has been happening in the world of climate change?

The Internet is an incredible source for material and information. The usual caveats apply that not everything on the Internet is valid or accurate. However, several sites rise to the top and are worth bookmarking and returning to for reference. A simple Google search on “climate change” returns almost 59 million hits. “Global warming” returns almost 46 million web pages. Clearly, there is need to refine these down to the most reliable and useful for our work.

One of the best sites for keeping up on the science of climate change is *RealClimate.org*. Spearheaded by Gavin Schmidt from the NASA Goddard Institute of Space Science, it started as an attempt to communicate directly to the public from the frontlines of climate science. Every few days an article is posted covering some aspect of climate science, often in response to a new report or event. The site maintains a thorough and well-organized archive. Typing “hurricanes” into the site’s search box, for instance, will return all the articles that have discussed global warming and hurricanes. The real value in *RealClimate.org* lies in the comments section of each article where anybody can weigh in with questions and comments. Many prominent scientists participate regularly in these discussions.

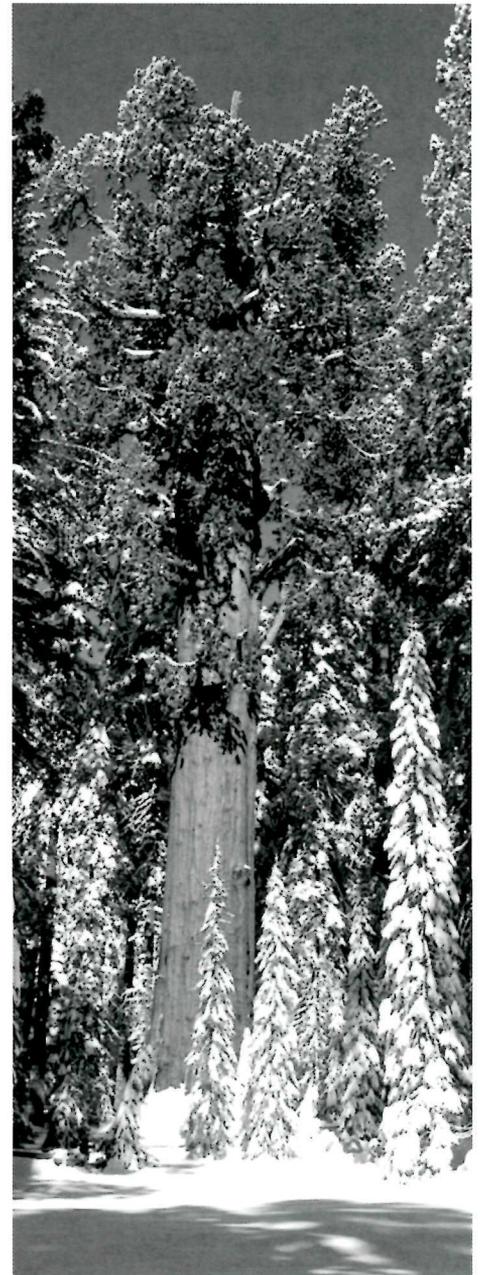
For a more historical perspective on global warming, visit www.aip.org/history/climate/index.html. This site is maintained on the American Institute of Physics website. It includes the full text of the excellent book, *The Discovery of Global Warming*, by Spencer Weart, published by Harvard University Press. The web version of the book is hyperlinked, allowing the whole book to be cross-referenced. There is a lot of additional material on the web version as well. If you are trying to find how scientists discovered the atmospheric greenhouse effect — and who did it and when — this is the place to go.

An excellent summary of arguments made against global warming by skeptics, with referenced rebutting arguments, is found at www.gristmill.grist.org/skeptics. This well-sourced list is a good starting point for looking for ways to counter those who say that climate change is not happening or that humans are not involved. Arguments are categorized by style of argument, scientific topics and levels of sophistication. Written for the non-scientist, the text is easily accessible and acts as a great starting point for further inquiry.

The intergovernmental Panel on Climate Change serves as the central body working on climate change issues on a global scale. Their periodic reports, occurring about every five years, act as the definitive “State of Knowledge” in the climate science field. While many of the documents are very technical, the *Summary for Policymakers*, available at www.ipcc.ch, is a good read. The most recent report was released in February 2007 and makes for a concise, up-to-date read on climate science with predictions for the future and recommendations for policy makers.

The state of knowledge regarding climate change is changing so rapidly that it is hard for publishing to keep up. As soon as a book is published new information updates the published information. Finding a few reliable and well-sourced websites is an invaluable tool for us in our work on public lands whether we are involved in public education, management or research.

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Alex Picavet, Sequoia and Kings Canyon

Declining snowpack in the Sierras

Doug Lowthian worked in interpretation, resource management and fire management for the National Park Service in Boston, Fire Island, Crater Lake and Kenai Fjords. Currently he is self employed and does interpretation and interpretive training and owns a store in Bayfield, Wisconsin. He is particularly interested in communication of climate change issues. He can be reached at dlowthian@centurytel.net.

Climate as a Resource to Protect Unimpaired for Future Generations

By Shawn Norton

National parks are not just the best idea America ever had. We need parks and the environmental services that they provide. Park resources purify our air and clean our water. They preserve biological diversity and ecological heterogeneity. They sustain wildlife and preserve human history. They serve as natural laboratories as they alternately offer peace and quiet. They anchor local economies and build communities.

And now we can add the critical role of parks in climate regulation and carbon sequestration. As globally important storehouses of carbon, park forests and marine protected areas play a critical role in influencing the earth's climate. Forest plants and ocean waters drive the global carbon cycle by sequestering carbon dioxide through photosynthesis and releasing it through respiration. The oceans and forests found in parks are massive storehouses of carbon.

We have established a system of laws and regulations designed to protect park resources. The Organic Act says we need to protect these natural, cultural and scenic park resources unimpaired for future generations, but what about our climate. Is climate a resource? If park resources play an integral part in carbon regulation, and thus climate regulation, is climate a resource for us to protect? If the answer to this is yes (or even maybe) then how can parks begin to understand our role in the global carbon cycle? What is our contribution to the science of climate change and the ecological effects it will bring? How do we begin to view climate as a resource to protect?

The intellectual journey to reach this point where we ask this question has taken longer than Yellowstone (our first national park) has been in existence. It began in the 19th century with the discovery that carbon dioxide traps heat in the atmosphere. It took until the 1980s to develop the climate models and computers that could quantify this greenhouse effect and the realization that human activity could wreak lasting, perhaps irreversible, change on the natural world. In 2007, the Intergovernmental Panel on Climate Change verified what was long believed, that climate change was largely caused by the burning of fossil fuels and that climate effects were noticed at an alarming rate. These effects are especially apparent in national parks due to the resources we are working to protect.

So where do we go from here? What is our role in protecting climate as a "resource"? A good starting point is to begin to understand our contribution to climate change through an understanding of our own greenhouse gas emissions (ghg's). The NPS Climate Friendly Parks program is developing tools for parks to do this now. Equally importantly, however, we need to determine our role in global carbon regulation and convey this critical information to the public — our visitors. The message we convey will require a hard look at how we both encourage people to come to parks and more importantly, what mode of transportation they use to get there. It will require significant public involvement. We will need to ask the public to do their part for climate protection.

In 1864, about the time when the first observations of the "greenhouse effect" were being noticed by scientists, U.S. Rep. George Perkins Marsh of Vermont witnessed the forests of the northeastern United States clear-cut and razed. Later, as ambassador to Italy and Turkey, Marsh saw what "deforestation and overgrazing

had wrought over longer historical periods. . . temperature swings, loss of fertility, less rainfall and failed civilizations."

Are we ready to begin the hard task of protecting climate as a resource unimpaired? First we have to ask ourselves, are we ready to learn from the past — or destined to repeat it? 

Shawn Norton serves in the office of the associate director of the NPS as the environmental leadership program leader. He is responsible for coordinating agency programs toward the goal of more sustainable park management. Most recently, he has developed a new NPS program, Climate Friendly Parks, that is responsible for coordinating a response to the challenge of climate change. Norton's career began with an environmental engineering firm managing water and wastewater engineering investigations. He has worked in local and federal government positions managing solid and hazardous waste environmental compliance programs. He received the Presidential Award for Federal Energy Management for efforts in promoting energy conservation and renewable energy use in the NPS and the Secretary of the Interior Meritorious Service Award.

CLIMATE CONNECTIONS

Lisa Graumlich has done years of research at Glacier and other places and is now the director of the University of Arizona School of Natural Resources. She presented the keynote talk at the George Wright Society conference in April, and later that week was a guest on National Public Radio's Science Friday about climate change and national parks.

To hear the program go to:

www.npr.org/templates/story/story.php?storyId=9716362

"Our national parks can no longer be protected from human influence by building a fence or hiring park rangers. Recall that national parks are an American invention. In fact, the writer Wallace Stegner often remarked that the idea of national parks was the best idea that we ever had. *It is my fervent hope that we find the will to address global climate change in order to ensure that the parks and wild places . . . continue to delight and inspire future generations.*"

— Lisa Graumlich



Pictured Rocks

Climate Change, Great Lakes Parks & You

A REGIONWIDE PERSPECTIVE

By Gregg Bruff
Pictured Rocks

Compiled and edited in part from a Midwest Region Climate Change Talking Points paper developed by Hannah Campbell, Maria Caffrey and Bob Krumenaker.

Scientists have reached a consensus that the earth's climate is getting warmer, and it will continue to warm in the coming decades and perhaps centuries, as a result of human activities related to increases in carbon dioxide levels. The effects are being seen today in a variety of National Park Service areas, from melting ice fields at Glacier to modified phenology of spring migrants, insect emergence and flowering dates in the Sierras, and devastating hurricanes at Jean Lafitte and New Orleans Jazz.

No one is sure how this warming of our

world will affect the heritage we are charged to protect, but many scientists agree that the effects will be more marked at higher latitudes and altitudes. Even middle America, however, will be affected with a potential for more severe heat waves, stronger and more frequent storm events, and changing terrestrial habitats.

Analysis of changes in phenology or range of more than 1,500 species globally show highly significant, nonrandom patterns of change in accord with observed climate warming in the 20th century, indicating a very high confidence (greater than 95 percent) in a global climate change fingerprint. Species ranges shifted approximately 6 kilometers toward the poles per decade, and spring events came more than two days earlier per decade.

Most agree that impacts will include a rearrangement of temperature and pre-

cipitation patterns across the United States, a rearrangement of the distributions of plants and animals, rising sea levels, and potentially critical stress on the major agricultural systems that feed the world's growing human populations. Changes in human practices may avert or reduce the projected impacts, but even if we were to change our habits significantly today, it may take decades to reverse the trends in carbon dioxide-induced temperature changes.

Global warming may seriously affect our ability to protect the species, habitats and natural processes that are now a feature of national parks, forests, wilderness areas and other nature reserves. A number of implications for Great Lakes parks in the Midwest have been predicted as regional climate models have become more sophisticated. For example, the northern Midwest, including the upper Great Lakes region, has warmed by almost 4°F (2°C)

in the 20th century. The southern Midwest, along the Ohio River Valley, has cooled during the same period by about 1°F (0.5°C). The central and northern Great Plains have seen temperature increases of more than 2°F (1°C), although parts of both North and South Dakota have seen temperature increases of more than 5.5°F (3°C). Two-thirds of the winters over the past 15 years in the Midwest have been above the long-term average and winters are getting shorter in the Great Lakes region. The last spring frost is coming earlier and the first autumn frost is coming later.

Extreme heat events are occurring more frequently in the Great Lakes region. Based on climate model predictions, temperatures in the Great Lakes region are projected to rise by at least 3°C, and as much as 11°C in the summer. Depending on the model and the scenario (high, mid-range or low carbon emission predictions) the projected temperature changes vary. However, all projections indicate warming for the region.

What could this mean for Great Lakes parks? Docks on Lake Superior at Apostle Islands National Lakeshore and Isle Royale could be rendered less useful if lake levels drop one to five or more feet as projected. Arctic disjuncts like Arctic crowberry (*empetrum nigrum*), thimbleberry (*rubus parviflorus*), Pitcher's thistle (*cirsium pitcherii*) and Lake Huron tansy (*tanacetum huronense*) and several other genera (like orchids) could be extirpated from upper Midwest parks.

Exotic species that thrive on disturbed environments may increase both in numbers and in their rapidity of encroachment into native plant communities. Current examples include several beech bark disease caused by beech scale, (*cryptococcus fagisuga*) and the emerald ash borer (*agrilus planipennis*). Great Lakes fisheries may change from cold water species such as trout, to warmer water species such as bass, walleye, and other pan fish.

Native American communities are likely to be adversely affected. Deep or flooding waters in the early spring could delay germination of wild rice seed, leading to crop failures. Lower water levels late in summer could cause wild rice stalks to break under the weight of the fruit head or could make rice beds inaccessible to harvesters. Extended droughts could lead to more competition with other shallow water species. Maple and birch habitats are also likely to be reduced on lands accessible to the Ojibwe.

Increased variability of temperature and precipitation will be harmful to vegetation and could cause diebacks. Climate change models

predict higher temperature highs and more extreme precipitation events. As plants rely on specific ranges of temperature and precipitation, longer droughts, more flooding events and heat waves outside of their normal range will stress them. In addition, less predictable winters with warm snaps may cause trees and other vegetation to come out of dormancy, which increases their vulnerability to future cold temperatures.

Future species migrations will differ from the past due to habitat loss and fragmentation, reducing the natural system's ability to respond to global change. In the past, species have migrated through intact forests. With human development, there are fewer sites and individuals. This will make migration of species trying to adapt to changing temperature and precipitation more difficult.

Forest species composition will change. Great Lakean forest composition is predicted to change from northern hardwood/boreal mix to more southern species (model predictions under a 5°C increase in annual temperature). Paper birch habitat is modeled to virtually disappear from the region under some greenhouse gas scenarios, possibly being replaced by oak and pine.

Due to vegetation shifts, and thus, habitat shifts, parks may experience a shift in mammalian species greater than anything documented in the geological record. This is based on the idea that species will change location as a group and is debatable. However, several researchers have concluded that rapid changes on the order of 20 to 50 years are possible.

The Great Lakes region will likely grow drier overall. Any increases in precipitation will likely be counterbalanced by increased evaporation due to temperature increases. Rising temperatures are likely to increase forest fire hazards, increase the fire season and create larger fires. This could in turn increase atmospheric carbon contributions from forests.

NPS employees will likely be challenged to meet their mandate of protecting current biodiversity within park boundaries for mammals. While wildlife may be able to move northward or to higher elevation to avoid the impacts of global warming, national parks cannot. As animals move out of protected regions, they must survive in unprotected habitat.

So what can we as park rangers, educators, natural and cultural resource specialists and managers do?

1. Immerse yourself in climate change literature, in general, and for your region, in specific.
2. Work with your park staff to develop

an information/education/interpretive strategy to communicate climate change issues to staff and the public.

3. Incorporate climate change in your Comprehensive Interpretive Plan.
4. Use every available opportunity to convey the message of climate change impacts on NPS areas.
5. Obtain a supply of and distribute the jointly funded and produced "Climate Change and the National Parks" unigrid brochure.
6. Develop wayside and museum exhibits, site bulletins, web based and other media on climate change.
7. Use existing climate change curriculum in your local school systems.
8. Host a Climate Friendly Park workshop at your park and invite regional collaborators.
9. Purchase "green tag" or "carbon offset" credits for your personal and your park's use of energy.
10. Convert all park facilities and program areas to sustainable or "green" practices. 

Gregg Bruff has served as the heritage education program manager at Pictured Rocks since 1988. His National Park Service career began at Ozark National Scenic Riverways in 1974 as a seasonal interpreter and cultural demonstrations manager. Other assignments have included district naturalist at St. Croix National Scenic Riverway, and camp director of the Young Adult Conservation Corps, Mark Twain National Forest in Missouri. He also served as a Youth Conservation Corps crew leader and wilderness ranger for the Inyo National Forest and in the John Muir Wilderness and White Mountains of central California. His interests include horseback riding, canoeing, snowshoeing, skiing and hiking. He is an accomplished graphic artist, working in oils, watercolor, pen and ink, pencil and digital media. He and his wife, Vicki, have three daughters who are studying nursing, fine arts and pre-veterinary science. He holds a bachelor's in wildlife management from Missouri State University.

Global Climate Change and Melting Glaciers

Compiled and Edited by Leigh Welling
Glacier

Global warming is one of the most pressing environmental issues of the 21st century. Scientists have been studying this phenomenon for many years and the evidence is now clear. Earth's climate is warming and mountain ecosystems like those found in Glacier National Park are seeing some of the most dramatic changes.

In the last 100 years, global average temperature increased by 1.6 degrees Fahrenheit with accelerated warming over the last two to three decades. The 1990s were the hottest decade, not just of the last century, but of the last millennium. The five hottest years of record since the 1890s, in rank order, were 2005, 1998, 2002, 2003 and 2004. Scientists predict that by the end of the 21st century Earth will experience a warming trend of 2-10 degrees. While this may not seem like much, it could bring major changes to Earth's ecosystems, especially those at high altitudes and latitudes like Glacier National Park.

While Earth's climate is known to have changed in the past due to natural causes, the warming trend over the last few decades is primarily the result of human activities. Of major concern is the buildup of carbon dioxide and other greenhouse gases in the atmosphere.

Greenhouse gases hold heat in the atmosphere that would otherwise radiate back out into space. While the greenhouse effect is what has made life on Earth possible, these gases are now increasing at an alarming rate. Since the beginning of the industrial revolution, the carbon dioxide concentration in the atmosphere has increased by 30 percent. Human activities that release carbon dioxide include the burning of fossil fuels, harvesting and burning trees, and land conversion to cities and agriculture.

Glaciers are formed when more snow falls in winter than melts in summer. As snow accumulates over many seasons it becomes ice. The weight from snow and ice causes the bottom layers to move, fashioning a frozen river of snow and ice that slowly flows across the landscape, eroding and shaping it into unique landforms. When this process is reversed, the glaciers retreat back up the mountain. The advance and retreat of glaciers is strongly tied to temperature and precipitation and is a simple, but effective, way to monitor climate change.

The amazing mountains and valleys of

Glacier National Park were sculpted by the action of glaciers over hundreds of thousands of years of glacial advance and retreat. In 1850, at the end of the Little Ice Age, there were an estimated 150 glaciers in the park. By 1968, these had been reduced to around 50, 37 of which had been named. Today the number of glaciers in the park is 27, many of which are mere remnants of what they once were.

Rapid retreat of mountain glaciers is not just happening in Glacier, but is occurring worldwide. While Earth's climate has undergone cooling and warming cycles in the past, the rate and magnitude of change we are witnessing today has not occurred since human civilization began. If the current rate of warming persists, scientists predict the glaciers in Glacier will be completely gone by the year 2030.

The total loss of glaciers will certainly be a major change for the park. For many people, the glaciers are one of the reasons the park holds special significance and are a feature they expect to see when they visit. Glaciers are also an important natural resource, providing vital functions for the ecosystem.

Now that the impacts of global warming are beginning to be understood, managers are taking the issue very seriously. Ultimately, greenhouse gas emissions, especially carbon dioxide, must be reduced. The National Park Service, in partnership with the Environmental Protection Agency, held a workshop in Whitefish, Montana, for park personnel in December 2003 to discuss the issues relating to climate change in the park and what steps the park could take to respond to this threat.

The two-day workshop, "Climate Friendly Parks: Moving From Knowledge to Action," was aimed at park staff, concessioners and park partners. An assessment of greenhouse gas emissions from Glacier was conducted prior to the workshop to provide background on which primary activities can be targeted for emissions reduction. The

single greatest contributor to carbon dioxide emissions in the park is transportation. Other significant sources are energy use in buildings and solid waste disposal.

An important outcome of the workshop included organization of the Glacier Green Team. It meets quarterly to discuss issues relating to sustainable environmental practices in the park. Another outcome of the workshop was development of an action plan that outlines steps we can take toward sound environmental management of our operations.

Many of the ideas from the action plan have recently been integrated into Glacier's environmental management plan completed in May 2006. A number of the actions from the plan have already been taken to reduce greenhouse gas emissions and raise awareness of the issues. These include employee transportation alternatives like the Red Bike Program and bus and carpooling initiatives, along with a recycling plan, and monitoring energy use in buildings. Visitor transportation options are also being planned in conjunction with the Going-to-the-Sun Road rehabilitation project. 

Leigh A. Welling is the director of the Crown of the Continent Research Learning Center, hosted at Glacier National Park, and currently serves as national coordinator for the 18 existing Research Learning Centers in the National Park Service. She holds a Ph.D. in oceanography from Oregon State University and has been involved in climate change research and education since the mid-1980s.

1913 — Shepard Glacier from Pyramid Peak, Glacier National Park



W.C. Alden, Glacier National Park Archives

Climate Change and Biotic Patterns

Compiled and edited by Leigh Welling
Glacier

Glacier National Park is a highly heterogeneous landscape that is home to a rich diversity of plants and animals. One reason for this is the steepness of the terrain. With high mountains and low valleys, dense forests and open meadows, and numerous wetland habitats, Glacier can provide a home to an amazing array of species. But as climate changes, ecosystems will change too. Exactly how our current warming climate will affect Glacier's biotic communities is an active area of scientific research.

Climate helps determine what flora and fauna exist in a habitat. Every species has temperature and moisture ranges within which they can survive and thrive. Glacier's weather and climate can be highly variable from high to low elevations and also between the east and west sides of the Continental Divide. The cool, harsh high alpine environments support very different species than the milder conditions usually found at lower elevations. East of the divide tends to be colder and drier than west because the Pacific maritime climate delivers moisture and heat from west to east.

The temperature range, amount of rain, wind and other climatic conditions that each part of the park receives, help to define the kinds of organisms found there. While not static, these microclimates create diversified and distinct communities within the landscape.

As climate changes, plants and animals adapted to current conditions and locations will either need to adapt to survive in different conditions or "follow" the temperature

range in which they can survive. The ability of populations to adapt or move when climate changes, depends on many factors. One is the rate of change. The current warming climate is accelerated by human activities and it is unclear how, or even if, most modern species can adapt well enough to survive.

In a warming climate, vegetation zones will tend to migrate northward and/or upslope to higher elevations. Alpine treeline studies help scientists understand how this process takes place. Studies from Glacier suggest forest patches at high elevations are getting denser and are beginning to invade alpine meadows.

Of major concern is the potential loss of alpine and subalpine environments that provide prime habitat for plants such as the Jones' columbine and White Mountain avens, animals such as bighorn sheep and mountain goats, and winter hibernation space for bears. Species living here cannot migrate to higher ground.

While some species may be able to move and adapt to climate change, the current rapid rate of warming may present significant difficulties for others. Some vegetative communities, such as old growth forests, are not capable of migrating quickly. In other cases, migration may not occur due to lack of suitable corridors that connect current locations to higher or more northern territories where the plants can become established and thrive. Roads, urban and industrial areas and agricultural fields all present obstacles to the migration potential of plants and animals. Species that cannot adapt or move, will not survive.

Climate change will affect not only the types of plants and animals that can survive

in certain areas, it also will impact processes that shape the landscape such as fire. For example, changes to temperature and precipitation patterns will affect soil moisture and the frequency of storms (which bring lightning that start fires). In general, under warming conditions, scientists expect there to be a greater potential for

more frequent, larger, more severe and more intense wildland fires.

While fire is an important shaper of Glacier's landscape, too intense or too frequent fires may make it more difficult for native species to return. Disturbance by fire may create an ideal environment for non-native invasive species to thrive as we seek solutions to these complex issues.

Climate change, especially the rapid change we are currently experiencing, is a serious issue. As scientists work to understand how Glacier's ecosystems will be impacted, managers struggle to understand what kinds of decisions can and should be made in the face of these changes to protect park resources. It is unlikely that any management actions would be sufficient to preserve Glacier in its current state. Some level of change is inevitable and may even be desirable. Unfortunately, there is no simple solution.

In some cases, managers may be forced to choose when and where to invest limited time and energy for resource protection and restoration. For example, areas such as old growth cedar-hemlock forests, that evolved in a much colder climate, may simply have to be understood as remnants of another time.

In other cases, park managers may need to work with other agencies and land managers to identify and protect corridors that connect important wildlife habitats to allow species to migrate.

Management strategies for disturbances such as fire and invasive plants will need to adapt to the context of climate change pressures. Research and internal education efforts can help park staff become aware of the issues and can encourage discussions that may provide new ideas and approaches. Engaging the support of our neighbors and partners will be critical. 

2005 — Shepard Glacier from Pyramid Peak, Glacier National Park



Blaise Pearson, USGS

Climate Change and the Apostle Islands

A PARK PERSPECTIVE

By **Bob Krumenaker**
Apostle Islands

Melting ice sheets, rising sea levels, more intense hurricanes, endangered polar bears. Do these popular images of global warming have anything to do with the Great Lakes or any national park in the middle of the country?

Perhaps the images don't, but the issue of climate change certainly does. In fact, it could be the most important issue we will face at the Apostle Islands National Lakeshore in the coming decades.

You may have noted that I quickly went from "global warming" to "climate change." According to the National Academy of Sciences, climate change is the more accurate term, as the rise of average global temperatures has cascading effects on precipitation, winds, storminess and other climate factors.

There really seems to be little debate any longer amongst reputable scientists that climate change is already occurring, and it will accelerate in the next decades regardless of whether or not we, as a global society, limit our greenhouse gas emissions. The conversation is

shifting to the impacts of climate change and the need for adaptation. For Lake Superior and the Apostle Islands, like everywhere else, how these changes will ripple through the ecosystem and human society will be far more important than whether it will be warmer or colder, wetter or drier.

The climate-driven changes to the ecosystem translate to changes to the park experience, with implications for the park's future. We are already seeing some of these effects, however, and therefore this is no longer a theoretical discussion but an issue for today.

Climate Change Will Affect Apostle Islands Resources and Visitors			
Predicted Climate Change	Predicted Direct Effects	Probable Indirect Physical & Biological Effects	Probable Indirect Effects on the Park Experience
Warmer summers	Less winter ice	Habitats will shrink or disappear for species at the edges of their ranges (which includes almost all of the unique species on Great Lakes islands)	Longer summer season
Warmer winters, with more precipitation falling as rain rather than snow	Increase in evaporation	Increases in invasive insects and diseases	Shorter winter recreation season
Later freeze-up and earlier ice breakup and snow melt	Lower lake levels	Changes in phenology, potentially disconnecting some critical ecological interactions	Infrastructure problems: fixed docks will be too high and water may be too shallow to allow access to some docks
Irregular, high intensity storm events	Ephemeral wetlands, hugely important biological areas, will dry up. Some current wet areas will become wetlands.	Cold water fish habitat will shrink, warm water habitat will increase	Navigation hazards exposed
	Warmer water extending lower in the water column will affect lake turnover and nutrient cycling, and potentially lead to permanent lake stratification	More algae	Recreational fishing quality will change
		More turbidity	Degradation of submerged cultural resources (lake is no longer cold and relatively sterile)
		Rain-on-snow events will cause more winter and spring flooding	People will bring more boats not suited for cold Lake Superior conditions; likely higher percentage of inexperienced boaters who may not have skills to handle storm events
		Forest fires will grow in frequency, size and intensity	Visitor safety issues increase; more rescues

Some of these things are already happening, and not simply due to the drought of the last few years. There are documented increases in air and lake temperature and reductions in ice cover locally, and evidence that spring events are happening earlier regionally. While it may be only the result of the current drought, what we have seen here the last two years seems to be a harbinger of things to come: hotter, drier summers; warmer winters; less ice; warmer water; lower lake levels; rapidly increasing range of exotic insects such as gypsy moths, resulting in unprecedented defoliation of island forests.

More generally, climate change makes ecosystems, including the Apostle Islands, more vulnerable to other stressors and far less resilient to additional disturbances. Changes in Lake Superior will also affect the economy and quality of life of the park's gateway communities. Many people live and vacation here because they love what the lake offers *today*. Will it still offer the same amenities 50 or 100 years hence?

I sometimes say that national parks are "in the perpetuity business." We're here for the long haul. The NPS mission, established by Congress in 1916, is "to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them *unimpaired for the enjoyment of future generations*."

The challenge is that we don't know what "unimpaired" should mean under the expected climate change scenario.

We need to identify under what circumstances we should resist changing nature (regardless of cause) and when we should acquiesce, however reluctantly, to the changes. Creating refuges for vulnerable species somewhere else, where the climate is expected to remain (or become) favorable, sounds like a great idea when it's *our* species and the place is elsewhere. It may not sound so attractive if the Apostle Islands would be proposed to become the new home of a species from hundreds of miles south. Is there a



Apostle Islands

NPS operations center at Roys Point marina on the mainland, Apostle Islands, January 2007. Doug Pratt, team supervisor for historic structures and utilities, measures the height of the dock above the lake surface. Note the open water and mild temperatures in January, which is highly unusual. January 2007 was the warmest ever recorded regionally and globally.

difference between a transplanted species and a new invasive species?

I have more questions than answers at this point, and I'm glad that discussions are beginning within the agency, and at all levels, as well as in the park's gateway communities. In the meantime, we are taking some tangible steps at Apostle Islands:

1. We have increased our commitment to sustainability across the board, and are active participants in community sustainability efforts, which fortunately are very strong in our area.
2. We're identifying our own contribution to greenhouse gas emissions and working to reduce them. Community members will be invited to participate in a summer workshop to broaden the discussion to those most affected by the changing lake.
3. We will be stating our assumptions about the changing environmental conditions in our general management plan and making sure that all alternatives consider those conditions.
4. We're increasing our educational efforts on climate change and its local effects (including two programs in the summer guest lecture series), presenting peer-

reviewed science in a manner that will be accessible to non-scientists.

5. This summer, in response to near-record low lake levels, we are modifying some docks and taking other short-term mitigation steps, while we consider what, if any, infrastructure changes are appropriate for the long term. It's an acute situation now but it's likely low water will become the norm and we most likely will not be able to, or even want to, modify docks or dredge everywhere it's needed if the lake continues to drop.

Climate scientists predict a slight lessening of the current drought conditions for this summer but record low lake levels remain a distinct possibility. The low lake will be a challenge to both visitors and the park staff but will afford us the opportunity to reflect on what the future of the Apostle Islands may look like.

Long-term changes in the environment seem to be underway now, and we need to begin rethinking what kind of experience and what facilities the park provides. 

Bob Krumenaker is superintendent at Apostle Islands National Lakeshore and has a long history of both writing for Ranger and stirring up issues in the NPS.

Congressional Testimony

Editor's note: Everglades Superintendent Dan Kimball testified April 26, 2007, before the House Subcommittee on Interior, Environment and Related Agencies concerning climate change and lands administered by the Department of the Interior. Excerpts follow.

Everglades National Park is very vulnerable to sea level rise. The entire park lies at or close to the level of the sea. Sixty percent of the park is at less than 3 feet above mean sea level. The highest ground in the park is 11 feet above mean sea level. The February 2007 report of the Intergovernmental Panel on Climate Change (IPCC) allowed the park to model the potential impact of sea level rise on its lands and waters. Using six different climate change scenarios, the IPCC report projects that sea level could rise between 7 inches to 23 inches by the end of this century. If this projection proves true, 10 percent to 50 percent of the park's freshwater marsh would be transformed by salt water pushed landward by rising seas.

The key to predicting the impacts of sea level rise is knowing the rate at which the water will rise. Sea level has been rising in South Florida since the end of the last ice age, more than 10,000 years ago. Geologic evidence shows that much of the marine area of the park, including Florida Bay and the Gulf Coast, was freshwater marsh 10,000 years ago. Beginning 5,500 years ago, rapidly rising seas (a rate of 9 inches every 100 years) flooded the bay and Gulf Coast and pushed saltwater inland far beyond today's coastline. Approximately 3,200 years ago, the rate of sea level rise dropped to about an inch and a half every hundred years. In this time of slow sea rise, South Florida gained land, including Cape Sable and the Ten Thousand Islands.

The rate at which sea level would rise in the future is an important factor. Past evidence tells us that if sea levels were to rise slowly, mangroves and shallow mud banks might be able to keep pace with the change. If sea levels were to rise rapidly, it is likely that mangrove areas and coastal wetlands would likely not be able to adapt and would be submerged.

What impacts would sea level rise have on the natural systems within the park? Much is unknown and the subject of scientific speculation. Most scientific reports agree that sea level in South Florida has risen by 10 inches since 1930. During that time, we have seen the erosion and collapse of a few coastal creeks. As water eats away at the land, it carries away nutrients that have been locked up in peat and

mud soil and makes them available for algae, microscopic organisms that are a normal part of the ecosystem, but that can increase to levels that harm other life if nutrient levels are too high. To date, the impact of coastal erosion has been local and has not threatened the Everglades' ecosystem. But things could change if the rate of sea level rise increases.

A rise in sea level of between 7 and 23 inches, as projected by the IPCC report, would submerge tidal flats and inland freshwater marshes and impact the species that inhabit these areas, such as wading birds and the Federally endangered Cape Sable Sparrow. If sea level rises 23 inches, it could submerge the park's pinelands, one of the rarest ecosystems in South Florida. Rising sea levels could also erode beaches, leaving fewer habitats for nesting sea turtles.

On the other hand, this level of sea level rise would increase the area of shallow basins, mangroves, and brackish marshes resulting in the increase of salt water dependent species.

In the Florida Bay area of the park, rising sea levels could submerge shallow seagrass flats under more water and raise salinity concentrations, adversely affecting fish habitat and associated estuarine fisheries. A June 2006 report by the National Wildlife Federation and the Florida Wildlife Federation highlighted these potential impacts and also suggested that sea level rise would harm the world-class recreational fishery in Florida Bay for bonefish, yellowtail snapper, permit, redfish, snook, spotted sea trout, and tarpon.

Florida Bay could be affected not only by sea level rise, but by rising temperatures as well. The IPCC report predicts that sea surface temperatures could rise between 2 and 5 degrees Fahrenheit by 2100. Scientists have linked high sea surface temperatures in 1987 to the seagrass die-off that occurred that same year. Higher sea temperatures could fuel algal blooms or promote marine diseases.

Sea level rise could also impact park buildings, trails,

campgrounds, roads, and historic sites. Structures such as fixed docks and backcountry camping platforms (chickees) might become unusable if waters rise. On the other hand, deeper water might reduce the number of boat groundings in Florida Bay, a major problem facing the park. Sea level rise will exacerbate storm surge impacts and coastal erosion associated with tropical storms, both to natural systems and park infrastructure.

Sea level rise would likely push salt water into the Everglades and threaten the viability of South Florida's drinking water supply. Today, surface water from the Everglades is the principal source of freshwater for the underlying Biscayne Aquifer, which is in turn the source of drinking water for close to 5 million people in South Florida.

Everglades National Park is undertaking a number of actions in response to climate change. First, we are working hard with our partners to complete the Comprehensive Everglades Restoration Plan. By removing the canals and levees that form barriers to natural water movement, we hope to restore natural flows to the park and restore the Everglades' capacity to store water. More water in the Everglades would create a freshwater head that would act as a barrier to the landward push of saltwater. This freshwater head would make the Everglades ecosystem more resilient to climate change.

Second, we are carefully monitoring climate change indicators and projections, and using this information to shape our management actions. For example, recent information suggests that failed saltwater dams – or plugs – along canals in the Cape Sable area of the park have led to a decline in the number of American



crocodiles in the area. From the 1990s until the failure of the plugs, the Cape Sable canals were the most productive crocodile nesting area in the park. The failed plugs let the tides push into the canals, creating strong currents and saltier conditions, both of which make the canals less suitable for nesting. While we would like to replace the plugs to block salt water incursions into the freshwater backcountry of the cape and protect the crocodiles, sea level rise suggests that we should consider structures that are less expensive and permanent than those we would consider in the absence of sea level rise. We are also considering more extreme actions such as storing the seeds of rare, endemic, and threatened and endangered species, and relocating coastal plant and animal species to adjacent protected areas.

Third, we are carefully evaluating how (and if) we construct and rebuild park facilities in flood-prone zones. For example, we have replaced fixed docks with floating or removable platforms so they are more resistant to sea level rise and storm events. We are taking sea level rise into account as we develop our plans to rebuild the lodging, docks, stores, and other visitor services at Flamingo that were seriously damaged by Hurricanes Katrina and Wilma in 2005. We plan to elevate buildings or construct temporary or mobile buildings that can be relocated in advance of major storms.

Fourth, we are one of nine units of the National Park System that has participated in the National Park Service's Climate Friendly Parks Program, a partnership effort between the Park Service and EPA. As part of that program, we have inventoried our sources of greenhouse gases and taken actions to reduce our emissions; utilize alternative fuels, such as biodiesel; operate a more efficient motor vehicle fleet; and implement comprehensive recycling and sustainable design and procurement programs.

In summary, given its geography and topography, Everglades National Park is very vulnerable to sea level rise. Sea level rise would impact the ecosystem, the park's infrastructure, our visitors and our greater South Florida community. We will continue to monitor indicators of climate change in the park and adapt accordingly based on what the science tells us. Most importantly, we will continue to do everything we can to restore the River of Grass, resulting in an Everglades ecosystem that will be healthier and more resilient to the effects of climate change. 🏠

Dan Kimball is superintendent at Everglades and Dry Tortugas National Parks.



What on earth is a “Climate Friendly Park”?

By Julie Thomas McNamee

No one was thinking about climate change in 1916, when the National Park Service was directed to “...conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment ...in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.” (16 U.S.C. § 1). But here we are, almost 100 years later, and achieving the protection of parks *unimpaired* for the enjoyment of future generations is requiring more than the 1916 legislators ever thought.

For reference, *weather* is what you get when you walk outside. In many places, if you don't like the weather, just wait five minutes; it'll change. *Climate* is what you expect year to year. It's more constant and measured over long periods of time. It's so constant that we don't expect it to change. But it is changing, fast enough to be measured. Twenty-one of the 22 hottest years on record have occurred in the last 25 years.

The effects of climate change are being noted in many of our national parks. Global warming is causing glaciers to melt at an accelerated pace and it is now predicted that all of the glaciers of Glacier National Park will be gone by 2030. Unpredictable weather patterns and rising sea levels are causing significant concern in many coastal parks about how to protect increasingly vulnerable natural and cultural resources. Rising ocean temperatures are now believed to be largely responsible for the declining health of coral reefs in Biscayne Bay and other marine parks. Resident animal breeding habits are changing due to the earlier arrival of spring, and animals and plants are moving into regions they never existed before due to changing habitats. The national parks, because of their location and the unique resources they protect, are places where the effects of these changes are particularly noticeable.

President Bush initiated a Climate Change Initiative in February 2002. In that initiative, he committed the United States to a compre-

hensive strategy to reduce the greenhouse gas intensity of the American economy (how much we emit per unit of economic activity) by 18 percent by 2012. The initiative also established multi-agency programs to:

1. Continue to investigate global climate change and the associated impacts.
2. Accelerate the development and deployment of key technologies that can achieve substantial greenhouse gas emissions reductions.

We began the Climate Friendly Parks program in 2003. Karen Scott, with EPA's Global Program Division, had money, and we had parks. Our goal was threefold:

- To educate park staff and the visiting public about climate change and what it will look like in their parks.
- To provide a greenhouse gas and air pollution emissions inventory to understand each park's “carbon footprint” — how much each park is contributing to climate change.
- To develop an action plan for reducing greenhouse gas emissions and air pollutants. Action plans are written to be compatible with the newly required environmental management plans.

We have since added a fourth goal: To help parks understand the risks to their resources from a changing climate, and to develop adaptation strategies for continued protection of park resources in the face of climate change.

We've been to 10 parks while developing the emissions inventory tool, an Excel-based tool for calculating in-park emissions. The Climate Leadership in Parks (CLIP) tool estimates in-park greenhouse gas emissions in module 1; module 2 helps draft an emissions reduction action plan, and module 3 will address education and outreach on climate change. We hope in the next year, to regionalize our efforts by presenting distance-learning workshops with follow-up support, on how to use the CLIP tool so that parks can begin to assess and reduce their in-park emissions on their own. An NPSwide

Green Parks — Examples of Environmental



Acadia National Park — Island Explorer

The Island Explorer is a seasonal public transport system that serves Acadia National Park and surrounding communities. With more than two million passengers since 1999, the propane-powered buses reduce traffic, parking and air pollution problems on Mount Desert

Island. More than 800,000 vehicles have been kept off the road by people riding the bus instead, reducing pollution by 11 tons. The Island Explorer was created through a partnership of the National Park Service, U.S. Department of Transportation, Maine Depart-

ment of Transportation, Friends of Acadia, six municipalities and private businesses. Downeast Transportation Inc., a nonprofit, operates the Island Explorer fleet.

Climate Friendly Parks *(continued from previous page)*

greenhouse gas emissions inventory based on electricity and fuel use will ultimately show our carbon footprint in order to reduce our contributions to greenhouse gas buildup.

We made the module 2 of the CLIP tool compatible with the NPS Environmental Management System (EMS) plans for several reasons. First, no one really wanted yet another action plan floating around the office collecting dust. Second, if we can quantify in-park emissions, then we also ought to be able to quantify the reductions, and a trackable series of actions would fit nicely into an EMS plan.

Just for background, EMS planning was developed by businesses to reduce their waste and save them money. If businesses don't generate waste, they don't have to clean it up. If they don't assign two people to do a task when one would do, they save time and money. If they list every task they're required to do under every facet of their operations, and assign them

to appropriate employees, then no task is left undone and operations are more efficient. The EMS then becomes a budgeting tool because it quantifies what is required to get a task or job accomplished.

Most importantly, an EMS serves a twofold purpose: Processes are in place to keep businesses (or parks) in compliance and programs are in place to take them beyond compliance, including reducing waste, using less and recycling if possible. "Reduce, Reuse, Recycle" is businesses' constant reminder. Many times the alternatives applied to tasks within the EMS also save money above and beyond just not having to clean up the waste. NPS environmental management plans could be used for the same purposes, and we hope that making the Climate Friendly Action Plans EMS-compatible is a step in that direction.

Here's to another 100 years in protecting resources for future generations! 🏡

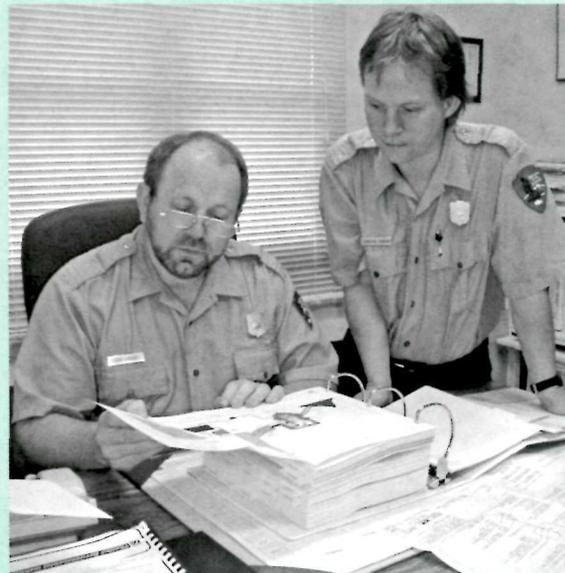
Julie Thomas McNamee is the NPS air quality liaison for the Washington headquarters office, where she communicates the efforts of the NPS Air Resources Division with the NPS and DOI offices. She is also climate change coordinator for the Natural Resources Stewardship and Science Division. Previously, she served as EPA's air quality liaison to the Chesapeake Bay Program, and before that, she served as air quality program manager at Shenandoah where she coordinated the negotiations of air permits between the NPS and the Commonwealth of Virginia. She holds a master's degree in teaching from the University of North Carolina and a bachelor's degree in wildlife and fisheries science from the University of Tennessee.

Leadership & Innovation in the NPS



Catocin Mountain Park — Environmental Landscape

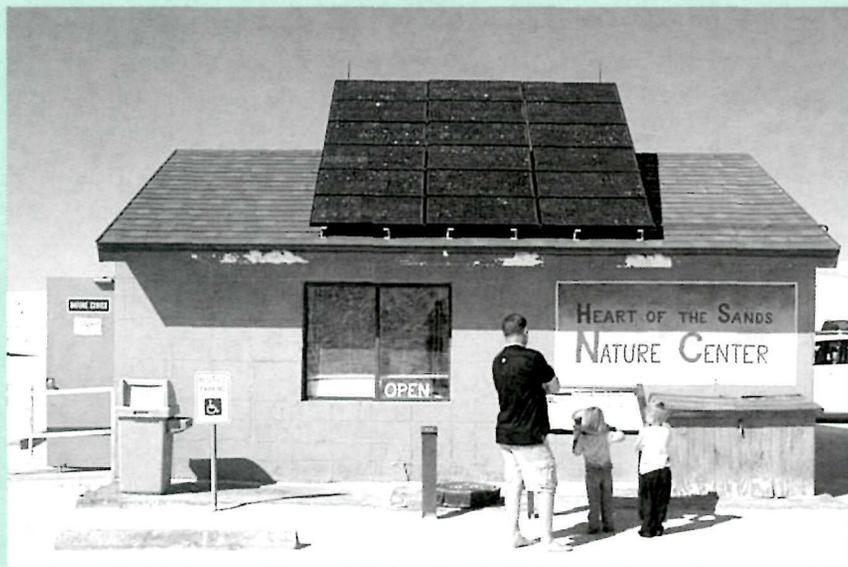
In 2006 Catocin Mountain Park in Maryland replaced the asphalt parking area at the headquarters building with a new turfblock pavement system. Turfblock is a cinder block type material. It is laid on top of a crushed stone and sand base. The openings in the blocks are then filled with soil and seeded with grass. The results provide several environmental improvements over the typical asphalt or concrete pavement. Rainwater is able to infiltrate the surface and recharge the groundwater. Surface runoff is reduced lessening flooding and erosion impact to the banks of Big Hunting Creek which is adjacent to this parking area. The grassy parking area also looks more natural and is cooler in the summer.



Mammoth Cave National Park — Air Quality

At Mammoth Cave National Park, Bob Carson and Johnathan Jernigan work with Kentucky permitting authorities in reviewing industry air quality/emissions applications — a five-inch document of text, graphics, maps and modeling data. Under the Clean Air Act, Class 1 Airsheds may provide comment on applications for factories or power plants to be built within close proximity to the park. When park staff and the WASO—Air Resources Division are actively involved in the state permitting process, emissions can be significantly reduced. Carson said a recent application to Kentucky initially showed a proposed facility would emit 44,000 tons of sulfur dioxide a year; following comments from the park and the Air Resources Division, that number was reduced to 11,000 tons a year.

Photos courtesy of National Park Service



White Sands National Monument — Photovoltaics

How can White Sands provide power for facilities located in the heart of the dune field, six miles from the nearest electric line? Answer: photovoltaics. The dark panels mounted on the top of the Nature Center and on the trailer in the amphitheater are photovoltaic units — more commonly known as “solar cells.” These special semiconductor devices convert sunlight directly into electricity. With no moving parts, PV systems are quiet and reliable. In areas with abundant sunshine, like New Mexico, photovoltaics provide a long-term solution to many energy needs. Solar energy has the potential to become a major source of clean, dependable and renewable electricity for our future energy needs. With current technology, the amount of sunlight falling on White Sands could produce 12 times the energy needs of the entire state of New Mexico.

From *A* Ranger to Many Rangers

A Century of National Park *Serving* Employees

By Ken Mabery
Scotts Bluff

From Harry Yount, the lone ranger of Yellowstone, to 14,000 national park rangers. From one ranger to cover two million acres to hundreds of employees out in the field 24/7 and 365 days of the year.

The National Park Service has always fit Margaret Mead's often quoted phrase: "Never doubt that a small group of thoughtful citizens can change the world; indeed, it is the only thing that ever has." It was the small group of thoughtful citizens sitting around the fabled campfire in the Yellowstone frontier that changed the world forever when they envisioned a pleasuring ground for all people.

From Frank "Boss" Pinckley's pointed yet lighthearted "Ruminations" about the growth of the system in the 1940s, to Keith Hoofnagle's Rangeroon cartoons that took a look at the changes in visitors and visitor service in the 1970s, to P.J. Ryan's often biting Thunderbear™ satire on visitors and conservation policy of the 1990s, and the thoughtful discussions that came out of these, small groups continued to change the world — or at least our NPS portion of the world. On the more serious side, Stephen T. Mather put up his personal fortune to ensure that there would even *be* a National Park Service. Freeman Tilden, George Wright, Connie Wirth, George B. Hartzog, Elizabeth Story, Frank Kowski, Nat Reed, Ro Wauer and Deny Galvin observed what was going on and led the way for remarkable changes.

The NPS has always been about its people. People who came together in the 1910s and '20s — even before there was a uniting national park agency — to establish unifying regulations and policies, including standardized uniforms. People who came together in the 1950s to convince the public and Congress that something had to be done about pervasive deteriorating facilities, culminating in Mission 66. Seven

hundred people who came together in 1991 in a little ski village in Colorado to envision what the NPS could become and penned the *Vail Report*. And people who have come together almost every week for the last 100 years in task groups, committees and teams to address . . . well, anything and everything facing a park, group of parks, a region or the entire NPS.

A little group gets together today on e-mail to discuss *in situ* fossil protection, and a larger group gets together next week in a conference room to wrestle with lighthouse preservation. The first may come up with something that helps four or five parks; the latter develops a funding strategy for two dozen parks. The NPS could not meet its mission without either.

In so doing, these employees, these rangers, are ensuring that Horace Albright's fondest desire does not come to pass: "Do not let the Service become 'just another government bureau'; keep it youthful, vigorous, clean and strong." (1933 retirement speech)

The dedication, desire, commitment and intuitive fortitude of rangers (service employees!) have not only kept the NPS youthful and vibrant, but on the cutting edge. When operational funding started to get tight (you pick the time; maybe it was in the 1940s; or in the 1950s, 1980s, 1990s or the early 2000s), field employees found ways to stretch each and every dollar and, at the same time, advance the mission of the parks and the NPS.

As we approach the century milestone, perhaps we are seeing many of the same trends that other government agencies and most organizations experience as they mature; signs that Albright's desire for a youthful, vigorous, clean and strong agency is no longer being realized. Much of the "family" feel within the agency has waned. As most organizations get older, larger and more complex, more attention tends to focus on the organization itself and less on employee contributions.

We keep trying to focus on "our greatest

asset" through various awards programs — the Freeman Tilden, the Harry Yount, the Stephen T. Mather awards and more — but how many remember who received these awards three, four or more years ago? Where does a new employee go to find out and see their contributions? Where is the archive or hall of fame for outstanding performance and selfless contributions of NPS employees? How many times have you, the supervisor or manager passed over the announcement for one of these awards from lack of time or feeling that your rangers could not compete with those from bigger parks? How about the lesser, but significant contributions to the NPS in other areas? Contributions in music, oral histories, photography, regional award registers, local park preservation or restoration, or policy that the field really needed. When I made a contribution to policy development years ago, the policy office ginned up an award and got the director to sign it. It was presented to me in the confines of my office with only my supervisor present. This is the only award that I hang in my office today because it came from my peers with the director's acknowledgment.

Are we losing focus on our greatest asset? As travel gets tighter, e-mail replaces telephone calls, and WASO gets even greater pressure to answer departmental questions on very short notice, there is an increasing reliance on resources close at hand. Often those resources are computer systems, reports already on hand, and policies generated years ago. Field employees — National Park *Serving* Employees — are not relied upon as much as in the past. Is this a sign of our computer age and fast-paced bureaucracy? Or is it a sign that our agency has gone beyond Albright's dream?

Not all organizations that have approached and surpassed their century mark have lost their focus on employees. Among the federal agencies, the Forest Service celebrated its 100th year with a focus on employees. Their centennial was about building and investing in relationships; nurturing the workforce; encouraging and sharing new ways of doing Forest Service work; informing each other and the public about excellence in Forest Service work; encouraging the use of arts and humanities as a way to convey conservation messages; honoring retirees; and especially, honoring Forest Service



Frank Pinckley was general superintendent of the Southwest national monuments in the 1930s and '40s. He was fondly dubbed "Boss" by Navajo ruins stabilization crew members, a title he proudly used to sign official letters.

history and present work life as a way to reflect on and envision the future. They developed a new employee orientation video; produced a series of historical publications of particular relevance to the centennial and the history of the agency (in conjunction with the Museum of the Forest Service and others); produced a quilt and a cookbook; and produced a DVD, "The Greatest Good," about the history of the Forest Service.

Disney continues to walk the talk and sell entertainment to its employees and to their public. They freely admit that they are in the business of selling fun whereas the NPS needs to recognize this aspect of our mission — we just call it "providing for the enjoyment."

Cabela's is a fairly young company, established in 1961. As its web page states: "Few, if any, businesses today survive the kitchen-table dreams of their founders, . . . Yet, [we have] done just that — survived, grown and prospered from simple beginnings to become the largest mail-order, retail and Internet outdoor outfitter in the world." How has this been achieved in a volatile business world? Again, in Cabela's own words: "We passionately serve people who enjoy the outdoor lifestyle. . ."

Passion. Where does that come from? Not from their catalog or corporate headquarters. It comes from their employees. To hold that focus, four of their five core values speak directly to their employees: "Integrity and honesty; quality . . . service; respect for individuals; and excellence in performance."

Where do today's entry-level rangers see themselves in the National Park Service organization? Do they see themselves as *the* key to the NPS mission as Yount, Wright, Wauer and others saw themselves in the past? Or do they see themselves as pieces of the organization that must accomplish their daily tasks in exchange for a paycheck and a retirement plan? The 1991 *Vail Report* recognized this trend:

"Today, the parks have changed, fewer employees live in the parks, more employees view the parks as nine to five jobs, two-career families tug at traditional loyalties, and political appointees try to influence mid-level NPS assignments. All of these factors and others have eroded the sense of 'family' that was once the



heart of the NPS culture."

As this trend continues to develop, the NPS loses its youthful feel and increasingly becomes just another federal agency. If we have lost our way, is it because we have failed to pass on the strong tradition of mission-orientation, the passion of Albright, and stories of the commitment of George Wright and others? ANPR is committed to improving training programs that will help re-establish these traditions.

What can we do as committed groups of individuals to make a difference as our agency turns 100? What should be done to rebuild the sense of family, to commemorate and celebrate employee contributions as we approach this youthful milestone? Some things are already in motion and more can be brought up from the idea stage. Kendell Thompson gathers the music of rangers, perhaps to sell through cooperating associations one day, just as Disney's "Songs of the National Parks" once was. Every year at the Ranger Rendezvous, those who know field photography best, the attending rangers, judge a photography contest to celebrate employee achievement. We still lack mechanisms to recognize excellence in poetry, creative writing and local innovations, much less any way to archive these outstanding achievements. Almost every ranger knows about mystery author Nevada Barr's contribution, but how many know Rita Cantu? When was the last time we honored one of our own for developing a new sled dog harness, or a protection device for rock art, or a new traffic counter? All of these and more have been developed by park rangers and once were acknowledged in a publication called *Grist*.

As part of the Centennial Challenge there needs to be a challenge to, and celebration of, all the employees who keep this Service youthful, vibrant and strong. A thrust of the Centennial Challenge needs to focus on employees — and ANPR needs to lead those efforts. In addition to the efforts already listed here, rangers need to get behind establishment of the Museum of the National Park Service. The Forest Service had theirs established *before* their centennial. ANPR members have long discussed this possibility; even taking the first step in 1991 by establish-

ing the Museum of the National Park Ranger at Norris in Yellowstone. A proposal has been advanced through at least two region's listening sessions and directly to the Washington Office for this museum. ANPR members and retirees have committed themselves to working toward this goal and committed objects to go into the museum. In particular, ANPR hopes to contribute

the definitive library of NPS books through donation of the Mabery/Supernaugh collection to the museum. Many stories need to be told in such a museum.

At the end of World War II, the National Park Service saw an influx of new rangers and operational budgets were often tight. Because long-distance telephone calls were relatively expensive, the major intra-park communication method was letter writing.

In the Sierra Nevada and Cascade parks there emerged recognition that increased skiing skills were needed. Les Bodine, stationed at Lassen Volcanic, had qualified for the Winter Olympics in ski events. He and members of his support crew had honed their skills in the 10th Mountain Division during the war. This committed group of individuals cobbled together a ski school, eventually including most of the parks up and down the Sierra and Cascade ranges. They eventually expanded this concept to include rock climbing/rescue schools. Their reward and recognition was lifelong friendships and ski vacations where their friends put them to work performing ski patrols. Their park superintendents supported these efforts, when they could, with small amounts of money. More importantly, they supported the efforts by letting their employees have fun while contributing to the park.

The trend verbalized in the *Vail Report* can be reversed: "Moreover, the Service is suffering from increasing bureaucratization which is eroding the independence, autonomy and sense of efficacy of many employees. . . Specialized programs and initiatives become bureaucratic fiefdoms and competing sources of power and influence within the organization."

The reverse vision, that of **National Park Serving Employees** striving to meet a very basic and clear mission, can be realized. 

Ken Mabery is the ANPR board member for internal communications and a member of ANPR's Celebration Committee. He has been associated with the ANPR Board of Directors since the early 1990s. He has served in 14 parks, two regional offices and WASO.



The lead singer for Disney's record, was Stan Jones, a park ranger at Death Valley in the late 1940s.

IRF Update



World Ranger Day—International Ranger Federation, with the support of the IUCN, has established a **World Ranger Day**, to be celebrated every year on July 31 (the date of establishment of IRF in 1992). The purpose of the day is to remind ourselves and others of the importance of field rangers in the protection of parks and areas around the world. The first World Ranger Day this year will center on the premier screening of the international ranger documentary, “The Thin Green Line.” Created, filmed and produced by Australian ranger Sean Willmore, the film shows an unrehearsed and intimate look at the day-to-day life of rangers in more than 50 countries. Filmed over the past four years, this 45-minute film will premiere in Melbourne, Australia, and other places worldwide.

Anyone is welcome and encouraged to hold their own showing on July 31 at their

park or home. Simply go to the Thin Green Line website at <http://thingreenline.info/> (or the IRF website at <http://www.int-ranger.net>) and order the DVD. All proceeds from DVD sales or income from showings will go to IRF to support rangers and the international ranger dependency fund.

A showing is planned for San Francisco and the Golden Gate National Recreation Area. Join the party there or host your own showing. If you plan to show the movie or have questions, let me know at tsisto47@aol.com.

Four times a year **Bill Halainen** prepares a report of IRF actions and associated ranger association activities in the world. This report, *The Thin Green Line*, and is the namesake for Willmore’s documentary film. Thanks to work by ANPR board member Tom Bowling-Schaff and past board member Kale Bowling-Schaff,

an ANPR e-mail list of willing member participants has been developed to assist ANPR in passing on information to members.

As a result, the most recent edition of **The Thin Green Line** has been forwarded electronically to this member list. If you aren’t on this list but are interested in receiving future editions of TGL, ask to have your e-mail address included on ANPR’s list. Send an e-mail to ANPR board member **Tom Bowling-Schaff** at npranger@mac.com, with a subject line of “Please include me on ANPR e-mail list.” (If you want a copy of the TGL’s current issue, contact tsisto47@aol.com).

This current issue is an exciting read with much information about rangers from around the world. As Halainen says, it shows dramatically how far IRF has come since 1992. Don’t miss out!

Travel well. ☐

— Tony Sisto
International Affairs

First Congress of Spanish Environmental Agents

March 30 – April 1, 2007
Murcia, Spain

By Rick Smith

A helicopter circled a vacant lot in downtown Murcia, Spain. Orange smoke rose from the lot and the helicopter slowly lowered. When it was three feet off the ground, a squad of Spanish environmental agents, dressed in Nomex clothing, leaped out. The 300-350 participants of the first congress of Spanish environmental agents (rangers), most in their uniforms, applauded and returned to the congress meeting site. This was the spectacular beginning of the congress.

I was one of five rangers from other countries (France, Italy, Portugal, Argentina and the United States) invited to make a presentation on the roles and responsibilities of rangers in those countries. The congress organizers asked me to pay special attention to the work of Yellowstone rangers because they wanted to pay tribute to the world’s first national park.

With the help of photos from various sources, I put together a PowerPoint presentation that outlined the U.S. ranger’s role in protection, interpretation and resource management. I also threw in some great shots of Yellowstone.

The organizers then asked me to make a second presentation on how the ranger profession works in the U.S. I gave them a brief rundown on the Civil Service System, how

national park rangers differ from state and local rangers, and how we coexist with the Forest Service, Fish and Wildlife Service and Bureau of Land Management employees at the federal level. From the questions I was asked following the two presentations, I got the idea that they were most intrigued by the number of photos that showed women rangers in law enforcement and search-and-rescue situations, by the fact that protection rangers can exercise police powers, and that we don’t leave SAR and EMS to local jurisdictions.

I, on the other hand, was intrigued by the fact that the environmental agent’s job in Spain is so different than what our rangers do. In Spain they have a cross between the job of an agricultural extension agent, an Environmental Protection Agency inspector, a forest ranger and a local open space coordinator. Their national parks are not managed by a national agency but by the jurisdiction in which they are located.

I was also intrigued by the fact that these people seemingly never sleep. The happy hour for the final banquet started at 9 p.m. We sat down to a four-course dinner at 10 p.m., complete with great wines and beers. I got



Spanish Environmental Agents

back to the hotel at 1:30 a.m. and had to be ready for a field trip to a local historic site at 8:30 that morning. It’s a lot different than a typical Ranger Rendezvous.

This was a great opportunity to spread the word in Europe about U.S. rangers and what they do. It was also a great opportunity for me to meet lots of new people and learn more about the conservation programs in another country. It took me a day to tune my ear to the Spanish of Spain, but after that, I was able to get along OK. Both my presentations were in Spanish. As you might guess, it was a bit intimidating to speak in another language in front of 300 people.

It was a great congress, however, and I congratulated them on behalf of ANPR. Their next congress will be even better. ☐

The Professional Ranger

Interpretation

Quality Photographs in Illustrated Programs — The lights dim and the illustrated PowerPoint program has begun. The audience is quiet, their minds intrigued and inspired by the interpreter's words. Using quality images, the interpreter has arranged pictures of wolves and elk that dissolve and dance on the screen. The images are synchronized to the narrative. Masterful choreography allows the audience to explore subtle layers of meaning in the intertwined lives of predator and prey.

So far it is a successful illustrated talk. But then, a stumble. The interpreter, in misguided enthusiasm, inserted a snapshot he took with a point-and-shoot digital camera. The image is bland. Half of a road sign is visible in the lower left corner. The image is tilted 2 degrees from horizontal. The colors are off and whites are too bright. Worst of all, the subject, a lone wolf, is a small dark speck in the background.

The interpreter might as well have farted.

The interpreter had been in the field a few days before the program and saw a wolf in the distance. He used a pocket digital camera for a snapshot he thought would work in the program. While the animal sighting may have been important to the interpreter at the time, the hasty picture didn't belong in the program. With a single poor image, the continuum of quality in the program was lost.

We, as professional interpreters, use images as tools because they facilitate visual connections to park resources. Professional photographers know how to create those powerful images. Our hypothetical interpreter is guilty of casual point-and-shoot snapshot photography. This is a malnourished substitute for quality photography. The use of snapshots is becoming more common in programs due to the prevalence and ease of use of cheap pocket digital cameras. While the camera itself is not to blame, the casualness most people take toward snapping a picture is.

A snapshot may technically capture the subject but that doesn't make the picture compelling, just as *information* is not the same as *interpretation*. We have been spoiled for decades by high-quality park slides from professionals. Don't take those sumptuous images for granted. There's a lot more to photography than many realize. We have to remember what the original photographers went through to get the "keeper" slides we use.

Digital snapshots are temptingly simple to

make, but they are a risky shortcut. A program can be ruined by substandard equipment, lack of knowledge about techniques, and a fatal assumption that the audience won't really care if the picture was taken by Ansel Adams or Joe Blow. Never discount the audience. We don't go to movies and photo galleries to see technical professionalism; we go for entertainment and art. However, we notice when quality is compromised. Likewise, visitors expect a professional level of photography in NPS programs and will notice when it is missing. It is important to maintain that quality of content in our programs. Otherwise, visitors will leave our programs disappointed and Park Service credibility will be lessened.

Interpreters must separate themselves from the personal relationship they have with their snapshot. While the picture may be important to the photographer, that snapshot does not convey the same meaning to the audience. The viewer doesn't know the back story and can't fill in the missing emotional or intellectual details. This is where photographic techniques come in.

Meaningful photography is a learned skill. Skilled photographers know how to take a picture that conveys more than the information in the picture. Even so, in the hunt for the perfect picture, pros may end up with 50 bad pictures for each keeper. But, you never see their mediocre shots because the photographer trashed those. You just see and remember their best shots. This creates the illusion that the photographer has an ability most folks lack. If you invest the time, you can learn these skills. Just be ready to take a few thousand pictures for the 80 slides in your PowerPoint program.

So, how to learn? There are several web sites I consult frequently. The best I've found are fredmiranda.com, luminous-landscape.com, kenrockwell.com and normankoren.com

Study the information on these sites. They provide feedback galleries where people solicit critiques and comments on their pictures and tutorials where photo techniques and Adobe Photoshop tricks are taught. These sites teach new photographers how to avoid common mistakes such as taking pictures in the middle of the day when the light is flat and harsh, taking a picture with everything in focus rather than using a shallow depth of field, failing to properly frame the picture or not cropping irrelevant portions of the image. Other topics: why not to take a picture toward the sun, why to use a flash during daylight, how to avoid obscuring the subject among too many details, exposure mistakes from not understanding a camera's

There's a lot more to photography than many realize.

light meter, or using the horrid digital zoom function.

It is an adage in photography that taking the picture is only half the job. Photographs usually need to be post-processed with a photo-editor program like Photoshop to crop images; adjust colors, sharpness, color levels, white and black levels, contrast, brightness and shadow detail. These corrections add emphasis to important aspects of photographs and enhance their emotional impact.

Your park, if it has a quality slide collection, needs to get those slides scanned with a dedicated slide scanner and put into a searchable database. If interpreters are seeking images from the Internet, it's apparent the park needs to shore up its image collection, or update it beyond images of visitors with neon bell-bottoms and lamb-chop sideburns.

Supervisors need to audit interpreters to ensure that the quality of selected images are of a caliber that visitors have come to expect from the NPS. Set the tone during training that if interpreters want to take their own pictures, those images must be interpretive and professional. Also, make it clear that interpreters have a limited amount of time to make their own images. Talk to them about the elements of photography. Are your interpreters' expectations realistic for what they want to accomplish? What tools do you have for them to use? Does the park have a camera? Lenses? Photo editing software? Available computers? I highly recommend steering your staff toward existing images when program development time is at a premium.

While most interpreters clutch their digital point-and-shoot camera and salivate at the prospect of taking photos for their PowerPoint program, that may be unrealistic. Interpreters should pursue and expand their photographic talents, but we must set realistic goals and manage our time and efforts within time constraints. Photography takes a lot of time and dedication to get right and is not an endeavor a professional interpreter should take lightly.

If you have questions, e-mail me at iceagecaver@yahoo.com. You can find my photographs on the park websites of Tumacácori, Lake Roosevelt, the Anza Trail, and coming soon, Saguaro. I shoot with a Canon 1D Mark IIN and Canon L-series lenses and use Adobe Photoshop CS2. □

— Jeff Axel, Tumacácori and Lake Roosevelt
with Mike Landrum of Tucson, Arizona



Kevin Moses

Ranger Melissa Lamm of Assateague Island rappels down the second pitch of a multi-pitch rappel/mid-face anchor building skill station during the high-angle rescue course at Shenandoah.

Protection

Keeping Rescue Training Affordable—“The skills you will learn this week will someday save a life. It might be your own, your fellow rescuer’s, or a park visitor’s, but some day, someone in this class will save a life because they used skills that will be acquired this week.”

So went part of the introductory briefing given by course coordinator Ranger Rob Turan to this year’s trainees at the NPS Eastern High-Angle Rescue Course, held at Shenandoah this past April. We participate in a lot of training as NPS employees, and all of it is important. One would be hard pressed to find training that is more important than that which will help save lives.

Because the course coordinators know the value of such training, they go to great lengths to fill it each year and to make it as affordable as possible, both to parks and individuals. This sometimes takes creativity. This year’s course implemented four distinct ideas to help make it tuition-free.

1. Assistance from Other Agencies. Though primarily an NPS course, coordinators used other agencies this year, as they have in the past, to offer unique training opportunities and perspectives. In addition to NPS personnel, participants from New Jersey State Parks, Shenandoah Mountain Guides, Shenandoah volunteers and Shenandoah Mountain Rescue Group all played important roles in making the training as comprehensive as possible. Also

notable, the U.S. Park Police Eagle 1 helicopter presented a block on litter and jungle penetrator hoist operations, which was a first for the course.

2. Military Expertise. Three U.S. Navy SEALs, an Air Force pararescue jumper and the director of the Navy’s Special Warfare Tactical Climbing Research and Development Unit joined the instructor cadre to offer their unique teaching abilities and to lend perspective on cutting-edge ideas. As in previous years, their collective expertise made indispensable contributions to the overall success of the course. The military helped absorb the cost of five instructors.

3. Rescue Equipment Manufacturer Sponsorship. Four representatives from the Petzl company attended a full day of training and ran two stations: fixed rope ascending/descending/change-over; and litter raise and lower. One of these reps came from France. Who can better demonstrate the use of certain rescue devices or articulate exact rescue procedures using said devices than reps from the company who builds them? Again, it

was cutting-edge expertise, all of it on Petzl’s dime, and they even donated some equipment for use during the course.

4. Support from the Washington Office.

For years, the eastern rescue course has persevered on a shoestring budget or no budget at all. Instructors’ home parks have absorbed their travel costs, the host park has provided the majority of equipment, and handout materials have been generated locally. This year Dan Pontbriand, the NPS branch chief of emergency services, provided support with several much-needed ropes, printed manuals and miscellaneous equipment. Moreover, Pontbriand, who has an impressive rescue background of his own, spent an entire day with the class, speaking with students and instructors, evaluating the quality of the training, assisting with skill stations and getting on-rope himself. Pontbriand saw the extraordinary degree of learning that occurs during this week. Coordinators are confident that WASO’s support will continue and hopefully expand in the future.

It is our hope to never charge tuition for this outstanding rescue course. We have accomplished this for 12 years. By continuing to use other agencies, manufacturer sponsorship, military expertise and support from WASO, we will continue to make this training available and affordable to any interested rescue-affiliated individual, regardless of their financial resources.

This goal is a lofty one, but no more lofty than the ultimate reason we train at all: “That others may live.” □

— Kevin Moses
Big South Fork



Kevin Moses

Course participants rig anchors at one of several fixed-line descent/ascend/pick-off skill stations at the top of Little Stony Mountain Cliff.

ANPR Challenge Task Force

Progress Report, Part 3 — The “Challenge” that Mike Finley, President of the Turner Foundation made to ANPR at the last Rendezvous has been successfully met. Mike offered ANPR \$10,000 if it would meet a challenge. The challenge, as reported in the past two *Ranger* issues was for ANPR to issue a survey to NPS employees to determine what is important to today’s NPSers. To meet the challenge the survey needed to be completed within 90 days.

ANPR’s volunteer work group, with outstanding support and assistance from Mark Saferstein of the American Park Network, compiled a database of all NPS employees from public sources. Two brilliant young NPSers assisted on their own time, with this. Mark and his staff and contractors successfully issued a 30-point questionnaire to 15,000 employees.

We received 1,176 completed responses; 200 would have enough to be statistically valid.

Your volunteer team is working diligently to produce a report for ANPR that will be made available to the board and membership. We plan to have it completed so that some consideration can be given to the input before the next Rendezvous (in October in Park City, Utah).

A few preliminary results can be reported below.

A. Question: Rate your most important job/personal priorities.

Answers (rated as *very important*):

1. Protecting the environment
2. Collaboration with colleagues
3. Youth programs
4. Leadership training

B. Question: What would encourage you to join an association that supports NPS employees?

Answers (rated as *very important*)

1. Professional development
2. Training programs
3. Collaboration with others
4. Advocacy

Watch for many more of the responses in the fall issue of *Ranger*. Plan to attend the Park City Rendezvous to get all the results and help plan for ANPR’s future.

— Dick Martin
Chairman of Challenge Task Group

ANPR ACTIONS

Actions by Association President

Over the past few months Lee Werst, ANPR’s president, has worked on these matters:

- Set up and presided over two ANPR Board of Directors conference calls.
- Held discussion with the Ranger Rendezvous co-chair on coordination responsibilities.
- Participated in a teleconference on the upcoming Ranger Rendezvous theme and content.
- Discussed additional fundraising opportunities and direction with the board member for fundraising.
- Held discussion with Jean Sigafos on the vision for the Supernaugh Memorial Fund.
- Drafted guidelines and an implementation plan for the Supernaugh Memorial Fund.
- Issued a proclamation of ANPR’s support for the EPA’s Environmental Crimes Prevention Week in mid-April.
- Conducted an interview with a reporter regarding a story on fees in parks.

Resource Management

Sue Consolo Murphy’s column doesn’t appear this time. It will resume in the next issue of *Ranger*. □

Administration

Heather Whitman’s column doesn’t appear this time. Look for it in the next issue of *Ranger*. □



ANPR’s award-winning ‘Lost . . . But Found, Safe and Sound’ video

Now available on DVD!

Designed to show children, ages 4-12, what to do if they become lost in remote areas such as parks or forests.



DVD: \$10 for ANPR members, \$15 for others; Video: \$7 for members, \$12 for others; also available in CD-ROM PowerPoint presentation; quantity discounts available; credit card payment (Visa/MC) accepted

Order online at www.anpr.org/lost.htm

Questions?

Contact ANPR’s business office:
25958 Genesee Trail Road, PMB 222
Golden, CO 80401 • ANPRbiz@aol.com



Share your news!

We want to hear from you. Take a minute to tell others your news. Use the form on the inside back cover or visit the ANPR website: www.anpr.org/family.htm

ANPR Reports

Seasonal Perspectives

Welcome to all our new members! After a year of research ANPR can now offer our members an attractive limited health care plan. We are hoping that more seasonal employees and other interested people will learn of this opportunity when they join ANPR. Please spread the word to those who may not have a health plan even if they are not NPS employees.

Anyone is eligible for the plan if they become a member of ANPR. We hope to see many of you at the 30th anniversary of the Ranger Rendezvous, which is set for Oct. 6-10 in Park City, Utah. For more information about the health plan contact the ANPR business office, fordedit@aol.com, or 25958 Genesee Trail Road, PMB 222, Golden, CO 80401.

Have a safe season and we hope to meet you at the Rendezvous!

— Fred Koegler, koegler@pacbell.net
Board Member for Seasonal Perspectives

Membership Services

KUDOS LIST

These ANPR members have either given a gift membership to a new member in recent months or recruited a new member or an old member to return to ANPR. Thank you for your membership help.

Steve Dodd	Joanna Bleil
William Hackett	Tom Haraden
Carrie Andresen-Strawn	Scott Isaacson
Guy & Ronni Whitmer	Mark Colburn
Melissa French	

I am pleased to be the board member for membership services, and I have been working to come up to speed on membership issues. I will work hard to continue some of the great programs started by Kale Bowling-Schaff. Thanks, Kale, for all your excellent work!

I encourage you to talk to your co-workers and friends about joining ANPR. It is especially good for seasonal workers now that the health insurance program is available. The association provides benefits to employees of all NPS disciplines.

I look forward to serving you over the next three years. Feel free to contact me if I can provide any information or help.

— Gregg Fauth
Sequoia and Kings Canyon

ANPR/Aetna Health Insurance

Any ANPR member may sign up for health insurance through a special program secured from Aetna. The Aetna PPO Affordable Health ChoicesSM is attractive particularly to seasonal park workers, fire crew members, volunteers, park partners and others who may not receive insurance benefits through their employers.

This limited accident and sickness insurance plan is an affordable option and provides participants with access to the Aetna network of health care professionals, about 735,000 nationwide. Check for medical provider availability at www.aetna.com/docfind/custom/aabc

Here are several features of the plan:

- Rate of \$79.52 per month for an individual, payable in advance for a six-month or 12-month period, through ANPR. (Monthly rate for spouse + one is \$198.76 and for a family is \$284.68.)
- Five doctor's office visits a year, copay of \$10 per visit; emergency room benefits
- Maximum coverage annually of \$10,000 for inpatient care
- Prescription drug coverage (\$10 copay for generic, \$20 for brand)
- Wellness coverage for preventive care
- Eyewear discount program

The health insurance can continue year-round as long as the plan is paid in advance and the enrollee remains an ANPR member. Read more on the ANPR website (www.anpr.org). Enrollment packets available from the ANPR business office at fordedit@aol.com or 25958 Genesee Trail Road, PMB 222, Golden, CO 80401.

Mentoring Program

Be Super, Be a Mentor! — The late Bill Supernauth was my mentor on the Natchez Trace in 1968 and he went on to mentor many more NPS employees during his career. I'm Bill Pierce and I am taking over for Bill as the ANPR mentoring program facilitator. The program has been in operation since the late 1990s and has assisted at least 30 employees and helped many more with informal contacts.

If you are interested in becoming a mentor or in signing up for mentoring, ANPR provides an excellent program for you. The goals of the program are:

1. Provide a system for matching interested high-level employees with less experienced employees (protégés) in a mentoring relationship.
2. Help protégés operate more effectively in their present positions, whether within the NPS or with ANPR.
3. Help prepare protégés for future positions in the NPS or ANPR.

The mentor should be someone who is a good listener, interested in supporting employees, is open, honest, candid, builds self esteem in the protégé and follows up to make sure the protégé accomplishes their responsibilities. The mentor is responsible for:

1. Providing help with career planning.
2. Sponsoring the protégé on developmental assignments.
3. Monitoring protégé's progress and giving honest feedback.
4. Providing a role model example for the

protégé to emulate.

The protégé should be someone who has good self esteem, is enthusiastic, honest, respectful, a good communicator, completes assignments on time and follows up with the mentor on all referrals and assignments. The protégé is responsible for:

1. Initiating and managing the relationship with the mentor.
2. Is open about career planning and helps develop a strategy.
3. Communicating with the mentor and following through on all activities.
4. Always maintaining trust and confidentiality.

The program has a goal setting contract that the mentor and protégé jointly develop. There are also mentoring meeting reports, program evaluation forms and a set timeframe that is between six months and two years.

If you are interested in becoming a mentor or protégé go to the ANPR website at www.anpr.org. Click on the Member Services tab, then select Mentoring Program and submit an application; or you can contact me at flamingo12az@aim.com and I will be glad to talk with you about the process.

I remember Bill Supernauth as a man of action, a passionate believer in the NPS mission and a true mentor to all he worked with. I am proud to carry on this program that he led so well for many years. Think it over and if you want to join me just send me e-mail!

— Bill Pierce
Prescott Valley, Arizona

Treasurer's Report

The Status of ANPR Finances, 2007 — When traveling the country and visiting other parks, Clair and I strike up conversations with NPS employees, sharing the experiences, the who-do-you-knows and our vision of national parks in the coming decades. We often mention ANPR, what can be gained from membership, and how much fun we've had at a recent Rendezvous.

Most people have heard of us as an organization, and we're used to explaining that it's *not* just a law enforcement ranger organization, or it's *not* (just) a good ol' boys drinking club. I was caught off guard when someone said, "Oh, I thought they ran out of money and were folding."

I quickly suppressed the rumor and explained we were in the process of restructuring expenses. In the recent fiscal year that ended March 31, 2007, ANPR again had expenses that exceeded income. There are many issues that explain the eroding budget, and the board continues to take steps to cut expenses.

Last fall a committee decided that ANPR could not afford the services of a business office or association management company. In December the board canceled its long-time contract with (business manager) Jim VonFeldt, contracting the membership services portion to Teresa Ford, for an estimated savings of about \$12,000 a year.

As a volunteer, I've taken on financial tracking and bill-paying responsibilities previously performed by the business office. It is yet to be seen whether such an effort is sustainable.

Other expenses have increased. We issued a new contract for Ranger Rendezvous venue coordination at \$5,000 a year. No members were willing to step forward and volunteer for this vital function, and we can't hold a Rendezvous without it. Postage fees and office supplies continue to go up.

Membership dues were raised in January to help cover the increasing costs of the organization. Our membership revenue was up 3 percent at the end of the fiscal year. We can't rely solely on membership dues to support the work of this organization. Fundraising is crucial but efforts and/or success have been limited, and fundraising revenues continue to fall behind other sources of income.

Many members have "rounded up" their membership dues, so we've received more than \$1,500 in individual donations. Thanks to everyone who contributed. Plus, we received \$5,000 to date from former ANPR president Mike Finley, now of the Turner Foundation, when he challenged us at the last Ranger Ren-

dezvous to find out what ANPR can do for employees of the National Park Service (that effort is ongoing). Thank you, Mike.

The donations are wonderful and tax deductible — and they're helping to keep us afloat. Fiscal year 2008 will be a crucial year in determining whether the steps we've taken will put ANPR on firmer ground.

ANPR's **expenses** for the fiscal year ending March 31, 2007:

Contracted services (business and survey functions, <i>Ranger</i> , membership and Rendezvous venue).....	\$39,788
Printing services, postage and shipping	\$24,176
Rendezvous	\$7,494
Communications (e-mail, web service, Internet access, phone calls).....	\$1,918
Sales merchandise.....	\$4,208
Office supplies.....	\$650
Licensing & fees.....	\$347
Miscellaneous.....	\$1,424

Here is the breakdown of **revenue sources**:

Membership dues.....	36%
Rendezvous	30%
Sales of goods and merchandise.....	21%
Donations	11%
Interest and dividends	2%

We welcome your feedback on how ANPR can cut expenses and/or increase revenue. The association needs funds, but just as important, it desperately needs a commitment of time, energy, enthusiasm and ideas from its members. The inner working of this association doesn't happen by itself.

If you have an idea for fundraising and want to help organize an effort to achieve it, contact Debra Hughson or any board member. If you would like to help solicit advertisers for *Ranger* and/or the website, or if you know of an individual or company that would be a good fit, contact Debra or *Ranger* editor Teresa Ford. If you know of an organization that might sponsor part of the Rendezvous, we want to hear from you.

If you are interested in tackling responsibilities currently performed by a paid contractor (Dan Moses would *love* to turn over the Rendezvous venue coordination to someone else), contact any board member. (All contact information is on the back cover.) We are always looking for volunteers. The association *needs you!*

— Liz Roberts
ANPR treasurer

Retirement

Planning For Long-Term Health Care

— There are some insurance policy changes whereby you can reduce premiums by buying a policy that only covers some of the costs of care. Only a small fraction of seniors will ever need nursing-home care for five years or more. But for those unlucky few, the crushing cost can easily devour years of retirement savings. Given such uncertainty, is it worth paying premiums for long-term care insurance for two or three decades?

Your best strategy may be to hedge your bets. You can reduce your premiums by buying a policy that covers only part of the costs of long-term care. But you must be prepared to pay the rest out of pocket.

Until recently, the long-term care insurance industry focused on selling policies with all the bells and whistles. But higher than expected insurance claims have forced companies to significantly increase prices. The biggest hikes have been on policies with long benefit periods, especially those with lifetime benefits.

Now companies are shifting gears, hoping that a hedge-your-bets strategy will appeal to baby boomers, whose parents are experiencing the long-term-care system firsthand. To make policies more affordable insurers are offering plans with innovative features designed to attract consumers who want to forgo gold-plated coverage but would like some protection for their retirement savings.

So, how much coverage should you buy? One way is to cut your premiums by buying a policy with a shorter benefit period, a smaller daily benefit or both. Before you make a decision, figure out how much you would be able to afford out of pocket if the need arose. A simple policy could cover \$105 in daily benefits, even though average nursing home costs could run up to \$150 a day. (You can check area costs at www.maturemarketinstitute.com > click Studies)

Unless you have a family history of Alzheimer's disease, there's little reason to buy a policy with lifetime benefits. A 55-year-old buying a John Hancock Custom Care policy with a \$200 daily benefit and a 90-day waiting period would pay an annual premium of \$2,025 for three years of coverage compared with \$4,458 for unlimited benefits.

Married couples may be better off buying a "shared care" policy instead of two separate policies. One MetLife policy provides a pool of eight years of coverage. If one spouse needs care for just two years, for example, the other can use the remaining six years. Shared care policies generally cost about 10 percent more

than buying two separate policies with the same total years of payouts. But it's cheaper than buying two policies with lifetime benefits. Given the odds that both spouses won't need extended periods of care, this kind of coverage can provide several years of care to both or a lot of care to one.

If you have a family history of long-term illness but can't afford lifetime benefits, you might consider John Hancock's new Leading Edge products. One policy offers a five-year benefit period and an additional \$1 million pool of coverage that would be available if you still need benefits after five years. A 55-year-old who wants a \$200 daily benefit can buy this policy for about \$3,200 a year compared with \$4,458 for a policy with lifetime benefits. But unless you really think you'll need extended coverage, you're better off buying a three-year policy or a shared-care policy.

One area where you don't want to skimp is inflation protection. Without it, your policy might not be worth much if you ever need it. The average cost of one year in a nursing home is now more than \$75,000, according to the MetLife Mature Market Institute. If the cost continues to rise by 5 percent a year, the bill could reach nearly \$250,000 in 2030. Policies with 5 percent compound inflation

protection have kept up with these rising costs. Your premiums remain the same; the coverage increases every year. However, a policy with the protection costs about twice as much as one without it.

Now some insurers are offering new types of inflation protection that can lower annual premiums. Rather than increasing coverage by an automatic 5 percent a year, John Hancock, New York Life and others are selling policies that peg yearly increases to the consumer price index. The premiums on CPI-adjusted policies are about 20 percent to 25 percent less than policies sold with the 5-percent increase. That's because the CPI has only increased by about 2 percent to 3 percent in the past few years. But there's a trade-off for these lower premiums: nursing-home costs usually rise at a faster pace than the CPI. By the time you need care, the disparity could lead to a big shortfall in coverage. Still, the CPI could always end up rising by more than 5 percent in future years — and your pool of available dollars will be bigger.

You should be careful if you're considering a policy with inflation adjustment that forces your premium up over time. Policies with a "guaranteed-purchase option" do not include an inflation adjustment at first but allow you to adjust for inflation every few years. The premiums initially are much lower than those charged for policies with level premiums, but they could eventually be much bigger. For example, a 55-year-old who buys a standard New York Life policy with a \$150 daily benefit for three years and a 5 percent inflation adjustment will pay \$2,377 a year as long as the person holds the policy. A policy with a guaranteed-purchase option will initially cost \$844. Assuming that the policyholder adjusts the benefit every year by 5 percent for inflation, the annual premium at age 80 would be \$9,411.

Premiums of most guaranteed-purchase products are based on the buyer's age when he or she buys the extra coverage — and the price of coverage rises significantly as you get older. A new product sold by New York Life adjusts the premium based on the age of the buyer at the time of original purchase; its eventual premium is lower than what you'd pay for a regular guaranteed purchase product, but you'll pay a higher initial premium. Either way, unless you know that you'll be able to afford higher premiums in the future, the consensus is you're better off sticking to policies with inflation protection that keep premiums level.

Probably the best time to buy a policy is while you are at a younger age. A John Hancock policy that costs a 55-year-old \$2,025 would

cost \$4,984 if this person waited another 10 years to buy. The higher price takes into account the 5-percent inflation adjustment to the daily benefit. In addition, insurers charge higher prices to older individuals because of their greater likelihood to need care sooner. Some insurance brokers advise buying the insurance in the late 40s or early 50s. Financial guru Suze Orman recommends between ages 55 and 60. Of course, poor health has an influence on coverage cost and whether or not you might be denied coverage.

If you are serious about long-term care coverage, study hard. Also consider buying new features if you bought your policy years ago. Visit the websites of John Hancock and MetLife — the companies in the government plan. Other sources include, Long Term Care Financial Partners, www.ltcfp.com, 866-471-4072, and American Association of Long Term Care Insurance, www.aaltaci.org, 818-579-3227.

So shop around and talk to those who have this insurance. It isn't going to be an easy decision. □

— Frank Betts
Retired



ROAD MAP for my heirs

This ANPR-produced "Road Map" can assist family or friends in handling details when a spouse or loved one dies.

This notebook has fill-in-the blank forms about:

- your desires about final arrangements
- civil service, military & Social Security details
- insurance facts, bank accounts and more
- synopsis of life, obituary & family history
- list of disposition of personal items
- anatomical gift wishes
- examples of durable power of attorney

\$10 per book, plus \$4 for shipping and handling. U.S. currency only.

Make check payable to ANPR.

Send to: Frank Betts, 1326 Catalpa Drive
Fort Collins, CO 80521

Rendezvous contacts

Cordell Roy, program co-chair
cordandjudy@comcast.net

Dan Moses, overall Rendezvous coordinator
mosesdd@aol.com

Warren Bielenberg, exhibitors
web9272@msn.com

Dave Anderson, super raffle
npsdlaatl@hotmail.com

Teresa Ford, photo contest
fordedit@aol.com

Registration forms on the web
www.anpr.org

Registration at Yarrow Resort
1-800-927-7694

Room block held until Sept. 5; rates range from \$79 to \$129 a night.

A board member will help coordinate roommate matching & carpooling

Check website for more details
www.anpr.org

A little history lesson about ANPR and Ranger Rendezvous

Nearly 30 years ago a group of park rangers and technicians met in Jackson, Wyoming. It was the weekend of Sept. 30 – Oct. 2, 1977, and while the primary purpose of this meeting was strictly social, talk turned to the state of the National Park Service.

As topics such as seasonal evaluations, the EMT program and the law enforcement task force report were discussed, the group began to perceive that what was really being discussed was a way for rangers/technicians in the field to share their concerns and their expertise with those in leadership positions. Equally important was to find a method of communicating, to share solutions to problems that existed throughout the service. Finally, it was determined that one important way to maintain esprit de corps would be to plan periodic social reunions.

Having reached agreement on these general objectives, the talk turned to the consideration of how they might be realized. It was concluded that perhaps a loose federation of rangers/technicians could serve as a means of accomplishing these purposes. By unanimous vote the Association of National Park Rangers was formed. Also adopted unanimously was the following statement of purpose:

A servicewide organization to communicate for, about and with rangers; to identify, promote and enhance our profession and its spirit; to support management and the perpetuation of the National Park Service, and to provide a forum for social enrichment.”

Two other considerations characterized the prevailing “spirit” or expectations among the Teton group. There was virtually total agreement that whimpering or sad-song syndrome wouldn’t be acceptable. Rather, as a matter of association philosophy and intent, only *positive* approaches to problem-solving would be advocated. Secondly, there was group consensus that the association’s communications (informational and opinion sharing) efforts strive to use and strengthen the supervisory lines and levels of command within the NPS.

The first task was to determine if there was sufficient interest among other rangers across the service to support such an organization. A letter was sent to solicit comments from those in the 025/026 series. Of particular interest were responses from areas in the eastern part of the country. While the impetus to form

the association came mainly from rangers stationed in the West, the belief was that the same concerns were shared by all professionals, regardless of location.

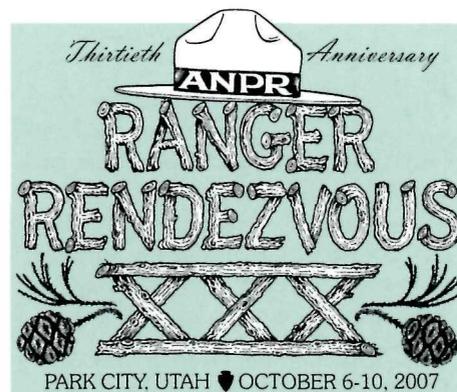
A follow-up meeting was planned in Estes Park, Colorado, in April 1978. At that time, responses were assessed to determine if others felt that an association would be a positive force in the National Park Service.

Agreement had already been reached that the next association meeting would be held at some location in the East in 1979. On that September weekend in 1977 the Association of National Park Rangers was formed.

The Ranger Rendezvous name has been used from the beginning. The basis was to promote the event as a gathering of fellow rangers in the tradition of the historical mountain man rendezvous’ that were held in the western United States during the days of the trappers and fur traders. It was traditionally a time of social gathering, story telling and just good fun. In that regard it seemed like a good example for a group of park rangers to follow. Originally, the event was a social gathering for rangers to meet and talk about work and their lives over the past year with friends and rangers they didn’t see on a regular basis.

Over the years that meeting developed into more of a professional conference but has never lost the social gathering aspect of the event. In fact, many of those attending today do so simply because of the social enrichment and networking they can participate in during the event. Many a ranger career has been enhanced both professionally and politically through friendships made at the Rendezvous.

ANPR has seen peaks and valleys in membership since its inception in 1977. Membership has been as high as 1,500 but has stayed at 900-950 members for years. Many say this can be attributed, to a great extent, to issues that the organization might be involved in. When there are issues close to the heart of many rangers, such as park ranger/technicians, housing, 20-year retirement and more, the membership numbers grow. Realizing that membership numbers are a concern and without changing the original mission and purpose of the organization, for several years, more of an attempt has been made to market the concept of ANPR as an Association for *all NPS employees*. The slogan, “*Stewards for parks, visitors and each other,*” has also been added



Keith Hoofnagle, a life member of ANPR, graciously consented to pull his sketch pen out of retirement and design the logos for ANPR’s 30th anniversary and Rendezvous this year. He is most noted as the originator and artist of the Rangeroon cartoon characters of the mid-1970s and early 1980s. They appeared on pins, note cards, mugs and more. He also designed several of the early ANPR Rendezvous logos and T-shirts. Hoofnagle lives in Bremerton, Washington.

as an ANPR motto. This was a concept to widen membership appeal to other NPS employees, not just park rangers. Today there are many ANPR members from other disciplines — administration, resource management and interpretation.

This year marks the 30th anniversary of ANPR. The Ranger Rendezvous has become more of a professional conference that promotes education and training along with a way to disseminate information among NPS employees and colleagues. However, it has not lost the original intent to be a social event for attendees. Many careers of NPS permanent and seasonal employees have been enhanced by the ability to talk one-on-one with NPS managers and supervisors.

The Ranger Rendezvous also provides the opportunity to renew old friendships and make new ones that will last throughout your career and beyond. There is no better way to show your support for the National Park System or the profession than to become a member of ANPR and attend Ranger Rendezvous.

Plan to celebrate the 30th anniversary of ANPR at this year’s Rendezvous. 

— Dan Moses, Rendezvous coordinator

This year’s Rendezvous theme is ANPR — **Redirecting for the Future**. The program chairs want to look back at the successes of ANPR, but more importantly, look to the future. Where is ANPR going, what can ANPR do for its members and how can ANPR be relevant?

Send suggestions or comments to Todd Stoeberl, board member for education and training, darkside0704@yahoo.com. □

Life Members: TRUE-UP!

The cost to service your life membership, particularly one acquired years ago, exceeds your life membership contribution. The ANPR Board of Directors would be most appreciative if you would consider an additional, tax-deductible “true-up” contribution to ANPR to help defray the association’s costs.

Those who contribute an additional \$125 will be recognized in the **Second Century Club**. **Third Century** membership can be attained by contributing an additional amount to bring your total life membership to \$500; **Fourth Century** membership can be attained by contributing an additional amount to bring your total life membership to \$750.

If you are a life member, please consider raising your contribution to the next level. Contact the business office for details. Thank you for your support!

Second Century Club

Glen Bean	Colleen Mastrangelo
Tony Bonanno	Jack Morehead
Jim Brady	Aniceto Olais
Paul Broyles	Tim Oliverius
Rod Broyles	Bill Pierce
David Buccello	Tom Richter
Patricia Buccello	Edward Rizzotto
Michael Caldwell	Jean Rodeck
William Carroll	Bryan Swift
Cliff Chetwin	Mark Tanaka-Sanders
Bruce Collins	Dale & Judy
Bruce Edmonston	Thompson
Richard Erisman	Karen Wade
A.J. Ferguson	Philip Ward
James Hummel	Kathy Williams
Craig Johnson	Janice Wobbenhorst
Margaret Johnston	Phil Young
Ron Konklin	Deanne Adams &
Mary Laxton	Tony Sisto
Tomie Patrick Lee	Bruce & Georjean
John Mangimeli	McKeeman

Third Century Club

Erin Broadbent	Scot McElveen
Carl Christensen	Dan Moses
Kathleen Clossin	William Quinn
Butch Farabee	Teresa Shirakawa
Maureen Finnerty	Barry Sullivan
Steve Holder	Pat Tolle
Mary Karraker	Bill Wade
Dave Lattimore	Nancy Wizner
Jonathan Lewis	

Fourth Century Club

Vaughn Baker	Jay Liggett
Wendy Lauritzen	Rick Smith
Deborah Liggett	

All in the Family

Please send news about you and your family. All submissions should include the author’s return address and phone number.

Send via e-mail to fordedit@aol.com or write to Teresa Ford, Editor, 26 S. Mt. Vernon Club Road, Golden, CO 80401. You also can send All in the Family submissions and/or update your address/home phone/personal e-mail by visiting ANPR’s website: www.anpr.org. Go to the **Member Services** tab.

Kathy Brazelton Brown (REDW, FLFO, CURE, TICA, GRSA, ROMO) has changed jobs — from park ranger (interpretation) to East District naturalist in Rocky Mountain National Park.

Woody Harrell, superintendent of Shiloh NMP and a life member of ANPR, recently completed a half-century quest to visit every unit in the National Park System when he traveled to the tiny South Pacific island of Ofu. This made the National Park of American Samoa the 390th (and final — at the time) unit of the National Park System he has visited.

In Print

Three books by ANPR members

Off the Wall: Death in Yosemite, Michael P. Ghiglieri and Charles R. “Butch” Farabee Jr., Puma Press, 2007, paperback, \$24.95, 608 pages, ISBN: 978-0-9700973-6-1

Get ready to add a mammoth book by Butch Farabee and co-author Michael Ghiglieri to your national parks collection. As the authors point out in the introduction, the book is not to belabor death but to save lives. It explores decision making that has led to tragic outcomes to people in Yosemite.

Nearly 900 visitors, concession employees and government personnel have made fatal errors at Yosemite. The park’s complex terrain — canyons, cliffs, ravines, mountains, waterfalls, weather and more — continue to challenge outdoor experts and enthusiasts.

Farabee and Ghiglieri have detailed the fatal mishaps in a series of chapters including waterfalls, snow, base jumping, downed aircraft, big walls and freak accidents. *Off the Wall* highlights some of the amazing triumphs and tragedies that have unfolded. The stories preserve history, including oral history, that might otherwise be lost.

Jon Jarvis, regional director of Pacific West Region, won a Student Conservation Association award for “active conservation leadership and in the spirit of enduring partnership.”

John Short (PEVI, FONE, MOCI, COLO) will retire in June after 40 years of government service — 20 in the Air Force and 20 in the NPS. Colonial’s two big events, Yorktown’s 225th in October 2006 and Jamestown’s 400th in May 2007, were two great events to retire after. John and **Sandi** are going to look for a place in Arizona or New Mexico to live. They hope to spend more time traveling and visiting national parks.

Glenn Smith of Steamtown NHS moved into a house with lake rights this past winter and is looking forward to warmer weather to go kayaking and cycling. Address/phone: P.O. Box 325, Gouldsboro, PA 18424-0352; home, 570-842-2751; GSRanger@aol.com

Allen Vaira is a new seasonal park guide at Grant-Kohrs Ranch NHS. He recently moved from Seward, Alaska, to Montana. Address/phone: P.O. Box 757, Deer Lodge, MT 59722; parkranger_42@hotmail.com □

Hey Ranger 2: True Tales of Humor & Misadventure from the Great Outdoors, Jim Burnett, Taylor Trade Publishing, distributed by National Book Network (800-462-6420); May 2007, paperback, \$16.95, 224 pages, ISBN: 1-58979-329-3

In this sequel to his popular book, *Hey Ranger, True Tales of Humor and Misadventure from America’s National Parks*, retired park ranger Jim Burnett casts his net globally in search of the most unusual and humorous stories of man in the eternal quest to experience the natural world. While most of the tales are from national parks, the book also includes amazing miscues from other outdoor recreation areas in the United States and as far away as Australia.

Burnett tells of campers pelted by unusual objects falling from the sky; wildlife photos that went awry; and the drunk driver who mistakenly knocked on a judge’s door to report his accident.

He also lists some of the strangest questions ever asked of park rangers, advice on how not to pick a campsite and some classic bear encounters. His tales are meant to inform and entertain, and they serve as cautions about

Welcome to the ANPR family!

Here are the newest members of the Association of National Park Rangers:

Rebecca Alfafara	Springdale, UT	Ann Francis	Marblemount, WA	John R. McKinney	Ocracoke, NC
James Bailey	State College, PA	Ryan Gallagher	Flagstaff, AZ	Jason Montoya	Grand Canyon, AZ
Charles Beall	Seattle, WA	Jeffrey Glossop	Flagstaff, AZ	Stephen C. Moroz	Waldorf, MD
Brad Bennett	Anchorage, AK	Katharine Goodenough	Baker, NV	Dr. Sara B. Newman	Arlington, VA
Joanna Bleil	Flagstaff, AZ	Jason Halin	Sarver, PA	Eric Pelletier	New Hartford, CT
Laura Bolyard	Tucson, AZ	Mary E. Hamisevicz	New Britain, CT	Tanya Petruney	Bullfrog Basin, UT
Daniel Bracken	Olema, CA	Jennifer Heroux	Moab, UT	Joshua Reyes	Oyster Bay, NY
Jared Brierley	Harwichport, MA	Michael Hinchberger	Groveland, CA	Jeanne Roy	Farmingdale, ME
Shannon Buckmaster	Clermont, FL	Kristi Hines	Houston, TX	Trouper Snow	Washington, DC
Jeff & Mary-Kate Chalup	Empire, MI	Chad Hunter	Page, AZ	Leigh Stansfield	Custer, SD
Jamie Cleaver	Charleroi, PA	Scott Isaacson	Red Bluff, CA	Heather Tassin	Auburn, AL
Corinne Conner	Longmire, WA	Jennifer Jackson	Mesa Verde, CO	Frances Troje	Fredonia, AZ
James Dahl	Houghton, MI	Louis Jahrling	Islip, NY	Ami Turner	North Rim, AZ
Andrew J. Dalle-Molle	Fairbanks, AK	J. Scott Kinghorn	Carlsborg, WA	Lucas Westcott	Springfield, IL
Daniel Dalle-Molle	Fairbanks, AK	James C. Lee III	Raleigh, NC	Theodore White	Flagstaff, AZ
Lois Dalle-Molle	Fairbanks, AK	Rick LeFlore	Davis, CA	Robert O. Whitman Jr.	Norwalk, OH
Daniel DiNicola	Moose, WY	Stephen Long	Norman, OK	Erinn Whitmer	Fairbanks, AK
Raymond Drutis	Slippery Rock, PA	Adam Lucas	Walton, KY	Nathan Whitmer	Omaha, NE
Kathy Eissing	Flagstaff, AZ	Catherine Lyons	Groveland, CA	Jacqueline Winter	Springdale, UT
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(continued from previous page)

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Letters

(continued from inside front cover)

For those interested in learning more about all the disciplines in the NPS, I highly recommend completion of the NPS Fundamentals training program. This five-part training series includes three courses taken at your home park via the Internet, one course taken at Albright Training Center at Grand Canyon, and one course taken at Mather Training Center in Harpers Ferry. All travel and per diem is paid for by the training program, so the only cost to your home park is the employee's salary. Ask your supervisor if you can go.

I urge each of you to reread your park's enabling legislation or proclamation and the NPS Organic Act of 1916 (as amended) now and on a frequent basis when facing issues or competing interests.

And, when your park is formulating a business plan, a core operations plan or an annual operations plan, please consider the totality of the park's obligations as you choose which staff member is and is not mission-critical. Parks cannot survive without intact resources and public support. The NPS employs those who provide some portion of both of these functions, and they are each individually and collectively responsible for achieving the parks' core ideas and founding values. Any employee who mitigates a threat to park resources or provides appropriate forms of enjoyment to the public is equally "mission-critical." □

— Scot McElveen
ANPR President Elect

Columnist Clarifies Ideas

Proposing a new idea is always dangerous because it has the potential to be misunderstood. My column (Winter 2006-07, *Ranger*) targeted interpreters to help them understand their worthy role and to find the motivation to articulate their value to management. My primary concern now is to clarify what I wrote and that I not be mischaracterized or misunderstood. I also think that Scot McElveen and I are not actually talking about the same thing.

We all play a role in our park and we all influence the visitor's experience. Those who know me know I promote the vital work of other divisions on my interpretive programs and respect the work of other divisions, particularly because I know I can't do their work.

My column did not elevate anyone above others. I was exploring the park-visitor process and interpretation's primary role facilitating people's relationship with the park. Scot stated a few points in his rebuttal that he assumed was my position. I saw a clear disconnect between what I meant and what he thought I meant. Sadly, short columns leave scant room to cite examples beyond philosophical generalizations which obfuscate meaning. I cut sentences that may have enhanced clarity, especially this charge of arrogance. If you re-read my column, nowhere will you find me saying that interpreters are better than others.

Scot expresses a concern that labeling interpretation as the most mission-critical job will hinder staff cohesion and create a destructive class hierarchy. I don't understand why people

insist on equating "most mission-critical" with "most important division." "Mission-critical" is related to interpretation's primary role in the visitor-park relationship. "Most important division" is an arrogant classification of a certain profession. My column was not personal; no one is less important than any other employee.

All employee work should reflect the values of the Organic Act and support the park's purpose. This philosophical framework gives our work validity and weaves our collective efforts into a single tapestry. What could be more unifying across divisions than interpreters, who specialize in the park's values, helping other divisions understand how their work is important in the big picture?

I still search for the accurate vocabulary to explore this idea but it doesn't change my mind about what I wrote. I am more driven than ever to discover the language to reveal the process of the park-visitor experience. Visitor enjoyment and the preservation of parks starts with the ideas and values people assign them. Interpreters guard and promote park ideas and values.

What do you think would happen if interpreters disappeared from parks? It is easy to see what would happen if all the other divisions left. Once you contemplate the result of an absence of interpreters perhaps you'll better understand my point. □

— Jeff Axel
Tumacácori and Lake Roosevelt



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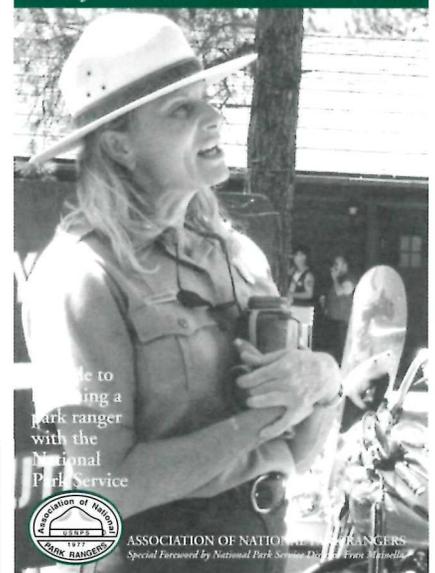
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