Forrest Gump Lives, or How the George Wright Society Helped Me Learn to Overcome Existential Career Adversity

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Following his science career with the US National Park Service, ***Gary E. Davis*** *established the environmental and travel consultancy GEDavis and Associates along with his spouse, Dorothy Ann Davis. In their capacity as professional photographers, they also created GEDA-pix, which provides visual narratives that combine art and science with unique images from around the world to better connect people to nature and other cultures.*

This story is about the power of knowing what you want, being at the right place at the right time, and risking action. Much like Winston Groom's fictional character, portrayed by Tom Hanks in the movie "Forrest Gump," I was born in 1944 and came of age in the 1960s. We both enjoyed amazing careers based on passion, preparation, persistence, and resilience—all practiced with a positive attitude.

In many of my more-challenging career endeavors, I found plenty of adversity, great and small, and the fog of adversity often obscured my view of the present. At first, I found it difficult to identify strategies and actions. My vision of how to cope with adversity seems clearer now, looking back at 50+ years of national park research, stewardship, and science advice. With that experience, it's easier to discern repeating patterns of challenges and adversity. I can also remember approaches that helped me to develop personal resiliency based on experience.

From California to the Virgin Islands and beyond

There I was, in California … after five years as a national park ranger with a graduate degree in biology, and I could not find a job as a scientist in the US National Park Service (NPS). I

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was told that NPS already had six scientists and did not need more. So in 1968, one of the nation's most tumultuous years, I accepted a campground ranger position in Virgin Islands National Park. Then I looked in an atlas to find out where in the world I was going: Cinnamon Bay on the island of St. John in the Western Atlantic Ocean was in my front yard to the north and the Caribbean Sea on the other side of the island, with about 1,800 new neighbors. What a great adventure that turned out to be.

Two events stand out in my memories of the Virgin Islands adventures that helped me find a career in national parks: I met Dr. William B. Robertson, Jr., and I became a Tektite Aquanaut.

In 1953, "Dr. Bill," as he was better known to his National Park Service family, wrote one of the most important reports on South Florida ecology ever produced. He entitled it "A Survey of the Effects of Fire In Everglades National Park." In this paper, he demonstrated that wildfire determined much of South Florida's vegetative patterns, and showed the importance of fire in maintaining the Everglades ecosystem. This seminal work laid the foundation for present-day NPS fire management practices. And that was only the beginning of Bill's incredible, far-sighted, ground-breaking, long-term research in national parks.

In 1968, Secretary of the Interior Stewart Udall sent Dr. Bill to the Virgin Islands to assess ecological effects of a potential new airport to be built in a mangrove forest within sight of the new Virgin Islands National Park. I was assigned to facilitate Bill's field work. From Bill, I learned that the Park Service under Secretary Udall was developing a renewed interest in science, particularly ecology, indicating that he was adopting the advice he had solicited from Professor A. Starker Leopold and a panel of scientists on wildlife management to guide NPS policies (Leopold Report 1963). It seemed things were looking up for NPS science careers.

My Tektite assignment was another chance encounter, successful because I was at the right place at the right time and knew what I wanted. When asked to show a small group of program managers from the Office of Naval Research, National Aeronautics and Space Administration, and Department of Interior a few potential sites to place an underwater research station called Tektite in Virgin Islands National Park, I included Lameshur Bay, near an old 1950s University of Miami marine biology field station. They chose Greater Lameshur Bay as the project location, and asked me to join the aquanaut team to test the feasibility of living continuously on the seafloor for 60 days to conduct research and to explore human physiological and psychological limits in isolated and stressful environments.

Project Tektite was caught up in the same public excitement for exploration that preceded the first man to walk on the Moon, which occurred a few months later in 1969. As Tektite aquanauts— our tissues saturated with a nitrous gas compressed by the weight of 50 feet of seawater— we were just as isolated from the surface of the earth as the lunar astronauts soon would be, and working under similar strict time and resource constraints. Such a complex undersea endeavor taught each of us lessons about cooperation, and overcoming challenges with often conflicting missions and goals. The Tektite team set new limits for continuous time underwater (1,440 hours), evaluated physiological effects of aquanaut saturation with a novel nitrogen–oxygen gas mixture, and examined psychological and behavioral responses by self-motivated scientists as would be done in a space lab. We also explored the efficacy of

conducting ocean research from an undersea habitat at ambient pressure. Another personal outcome of Tektite for me was that the NPS now considered me a scientist with park ranger experience. Could this be the start of a NPS science career?

When Tektite ended in 1969, any hope of an NPS career spun out of my control. I was drafted into the US Army just as the number of American personnel in Viet Nam peaked and the war there intensified. Basic training offered few opportunities to avoid fighting in a jungle, since only two of the 300 men in my training company at Fort Ord, California, received assignments other than advanced infantry training. Yet I was one of the those two, ending up serving two years in a diagnostic virology laboratory at the 6th Army Medical Laboratory in Sausalito, California. During my three-minute Army intake vocational interview, I was able to tell an engaging 90-second "elevator" story about my role in Tektite to an interested fellow SCUBA diver whose dive buddy commanded the interview unit. After the three of us talked diving for an hour, they suddenly asked me, "What do you want to do for the Army?" I had a choice and took it. This adverse situation was resolved because I knew what I wanted, had landed at the right place and time, and was willing to act on the opportunity proffered by my interviewers.

I survived my Army service, but getting back to an NPS career remained a challenge. I wanted a science position in an agency that was largely ambivalent about science as a guiding principle for park stewardship. I had both training and field experience in park operations and applied science, but that was not enough. Then Joe Brown called. He was the park superintendent who had mentored me in the Virgin Islands. Joe provided CPR for my incipient NPS science career. He was now at Everglades National Park, Florida, and needed a marine biologist for his staff. Even better, I would get to work with Dr. Bill and learn the priceless value of long-term research studies of nature and gain the perspective to understand and to cope effectively with the crises du jour common in many national parks. My next adventure in learning to overcome adversity was underway.

South Florida National Park Service science program

When I arrived in South Florida in the early 1970s, NPS was fighting an army of adversaries over water, pollution, invasive species, and exploitation of fish and wildlife in Everglades National Park, Fort Jefferson National Monument (now Dry Tortugas National Park), Biscayne National Monument (now National Park), and Big Cypress National Preserve. Few park managers at the time seemed to embrace the idea that science was the best, fastest, and cheapest way to resolve the multiple, apparently conflicting strategies for finding common ground among adversaries. With Joe Brown's foresight, I became the fourth NPS scientist in South Florida. Joe had two resource managers on his staff, and NPS Chief Scientist Dr. Robert M. Linn had assigned two research scientists from his office in Washington, DC.

Our first order of business was to get the National Park Service players all on the same team and to agree on a shared strategy. Even this seemingly basic step took four years of proposals, a series of program reviews (each complete with week-long field visits) first from the NPS Regional Office in Atlanta, Georgia, then NPS headquarters in Washington, DC, and finally from the secretary of the interior's office. We also demonstrated our competence to

produce results with several "proof of concept" ecosystem-level research projects. A series of interim science directors, several of whom were asked to leave or were reassigned, tried to guide us through this process. Eventually, by demonstrating a willingness to compromise and with patience, persistence, and clear articulations of our needs, we finally resolved enough of the critical issues to build over the decade of the 1970s a Park Service research and management science program of nearly 150 scientists. This program, with an innovative parallel environmental education effort that connected schoolchildren to nature, proved sufficient to lay a foundation for today's multi-billion-dollar ecosystem restoration program in South Florida with national parks at its heart.

Vital Signs Monitoring and Channel Islands National Park, California

When Channel Islands National Monument in California was expanded and redesignated as a National Park in 1980, I saw an opportunity to take back home with me many of the lessons learned in South Florida national parks. Simultaneously, legislation was being drafted to re-designate Biscayne National Monument as a National Park, and I was asked for comments and advice on both park proposals. I suggested that conducting periodic inventories of natural resources, including population dynamics of biota, was critical for evaluating efficacy of park stewardship and resolving conflicts over natural resources, ecosystem integrity, and sustainable uses. Language to that effect survived congressional editing in the law establishing Channel Islands, but did not for Biscayne.

The upshot of this process turned out to be a prototype ecological monitoring program called "Vital Signs Monitoring" at Channel Islands National Park, but it was not achieved without substantial opposition and adversity. In November 1980, a dozen of the NPS western regional research scientists assigned to parks from NPS Cooperative Park Studies Units in universities across the region roundly rejected my stated intention to develop a long-term ecological monitoring program for Channel Islands National Park. They indicated that in their opinion monitoring was not research, and therefore inappropriate for NPS science program funding. They also noted that such monitoring had never been done in national parks before because it was not possible or feasible, and even if it could be done, many other things were more important for parks to know. Some suggested not enough was even known about park resources to select what to measure and monitor.

Then I knew where I stood, and what I needed to address to continue our conversation. I also knew from my South Florida and Virgin Islands experiences with Dr. Bill that such monitoring was critical for parks; that it required rigorous science to design, test, and evaluate monitoring protocols; and that, in turn, required research. In addition, it would yield long-term perspectives on ecosystem integrity that were impossible to discover any other way. Critical to turning this situation from rejection to advocacy started with building trust and soliciting help from other park scientists and managers, from academics, and from other agencies and organizations. When the NPS western regional director convened a panel of seven influential park superintendents, aided by two park scientists, to recommend the best way to organize the region's science program, we needed a short, clear description of what challenges the science organization was to address on behalf of parks. In that two-year pro-

cess, we classified park stewardship into four functional activities that also linked vital signs monitoring to operations and stewardship needs: (1) to know and understand the park, (2) to restore and sustain park resources, (3) to protect parks and mitigate threats to resources, and (4) to connect people to parks. We also identified who was responsible for each role and how it should be done, so park staffs and their partners could identify their individual contributions to each of the four functional activities. It became clear that vital signs monitoring played key roles in all of them and engaged every aspect of park operations.

We also developed a one-page step-down diagram that described everything regarding vital signs monitoring that was required to comply with the law establishing the park. For example, we could monitor population dynamics of species, if, and only if, we selected taxa, developed sampling systems, and implemented those systems. After selecting taxa using expert panels in workshops, we solicited monitoring protocol design studies from a broad array of research scientists from academia, state and federal agencies, and private businesses. All were encouraged to publish their findings in scientific journals to garner critical reviews and elicit further ideas, in addition to producing peer-reviewed monitoring protocols.

Eventually, the philosophical and technical barriers began to fall and we demonstrated vital signs monitoring could work at Channel Islands National Park. However, skeptics still insisted that what might work on islands and in the sea would not work in mountains, deserts, and forests. But the most persistent and formidable opposition was budgetary, where any new program was deemed to threaten existing operations in a perceived "zero-sum" budget system. We needed more creativity to change how NPS deployed science.

Flexibility and adaptation led to trying different tactics, including using model programs to share experience with skeptics and give them reasons to join the effort. So ten prototype vital signs monitoring programs were identified for a diverse set of parks, and funds for design studies were approved. When National Park Service research scientists were reassigned to a new agency called the National Biological Survey (now part of the US Geological Survey) in 1994, only the vital signs monitoring program remained in the Park Service. Eventually vital signs monitoring became the core of the agency's 1999 Natural Resource Challenge budget initiative and the essence of NPS field science.

George Wright Society to the rescue

Today we see disruption of government operations becoming a new norm. It is easy to see chaos all over the news. However, as strategists have known for millennia, "In the midst of chaos, there is also opportunity" (*The Art of War*, Sun Tzu, ca. 544–496 BC). Affecting change is often one of the most difficult obstacles to overcome in trying to improve conditions. Chaos forces change and thereby provides opportunities. The best strategy is often to embrace the changes and take advantage of such opportunities.

In this context, I have found that stewardship of protected areas is like triage at an accident. One must protect scenes from further damage, assess current situations, treat life-critical conditions, and learn how to prevent reoccurrences. Similarly, park stewards need to: know and understand parks, restore impaired resources, protect parks and mitigate threats, and connect people with parks.

Invariably, park stewards need help; it takes teams to overcome adversity. Pioneers of science-based park stewardship banded together with kindred souls in the George Wright Society (GWS) to find common ground and shared interests. The Society helped hasten viable solutions for parks and broadened team efforts to learn from historical experiences, to borrow from other fields of scholarship and science, and to learn from other cultures to avoid repeating mistakes.

When I found that national parks needed help to even start talking about limiting exploitation of fish and other marine life in so-called "protected areas," GWS came to the rescue. Dialogue began in *The George Wright Forum* with a strategy for improving marine ecosystem integrity and resilience. As the idea spread, a few parks began exploring possibilities with local communities and with state and other federal agencies. A decade later, six parks now actually protect fish and other marine life from exploitation in 21,507 hectares of coastal ocean ecosystems. Such changes are difficult to initiate, but grow with experience. GWS brings these kinds of difficult or contentious topics into sharp focus, where they can flourish in the light of informed discussion.

GWS also provided unique opportunities for me and other park professionals of all disciplines to share experiences, successes, and lessons that focused more on protected area stewardship more than on individual fields of study, like archaeology, botany, history, or ecology alone. Unlike most other professional associations that focus on a single subject, GWS celebrates stewardship of places. GWS also helps park practitioners learn to take care of themselves so they can be resilient enough to care for parks and others on their team. Social families of kindred souls meet and sustain one another through GWS, while elders stay refreshed by mentoring new members of the family.

No professional society existed in my early career that focused on the special places we sought to preserve in the national park system. NPS Chief Scientist Robert M. Linn organized a symposium at the 1971 meeting of the American Association for the Advancement of Science in Philadelphia. What a revelation it was to meet so many practicing scientists, historians, archaeologists, and other scholars focused on parks and other protected areas. We field scientists laboring in parks were heartened by the knowledge of others in similar situations.

When leading park managers and scientists met in New Orleans (1976) and again in San Francisco (1979) it seemed finally as if the 1963 Leopold Report was about to bear fruit. Nevertheless, what transpired was a call for an independent nonprofit professional association to exchange and synthesize information useful to natural and cultural resource management. Linn, who by then had retired from NPS, joined with another former chief scientist of the agency, Theodore Sudia, and guided the foundation of the George Wright Society in 1980, with publication of the first issue of *The George Wright Forum* in 1981.

Over the past 38 years, GWS has become the largest and most diverse forum in the world for protected area professionals. It meets the needs of protected areas large and small, and of people from all walks of life who seek to learn how to be better stewards of special places protected for everyone.

Like Forrest Gump, I was fortunate to participate in a transformational age of social advancement, especially in protected area stewardship. Finally, in closing, I offer for your con-

sideration some things I learned along the way that helped me and may help others address their own obstacles.

By the way, Dr. Bill's 1968 recommendations regarding a new airport in the Virgin Islands were typically prescient and persistent. No new airport was built, and a mangrove forest still protects people on that section of the coast from hurricanes and winter storms.

Top Ten Ways to Overcome Career Adversity

- *Strategic thinking is the guiding principle*
- *Nothing beats being prepared, knowing what you want, and acting effectively when chance offers opportunities*

1. Find your passion—follow it steadfastly
2. Focus on critical missions—never forget the overall objective
3. Be flexible—embrace change
4. Persuade opponents with facts—don't only push back
5. Trust and respect yourself—mentor others
6. Develop and nurture your curiosity—explore your discoveries
7. Share your discoveries—tell stories and engage others
8. Band together—cultivate colleagues and ask for help
9. Develop resilience—practice it
10. Be positive—and persistent