

Walking the Walk

HOW THE PLANETWALKER AND NATIONAL GEOGRAPHIC HELP COMMUNITIES MAP THE FUTURE

EARTH SCOPE

 *Dr. John Francis is a remarkable man with an unassuming demeanor and a twinkle in his eye as he listens. He is the epitome of a good listener, a trait he acquired from 17 years of total silence as he walked on foot across this nation and through South and Central America, eschewing automobiles and other modern transportation (Figure 1). His incredible personal journey in discovering the human condition and our place in the environment earned him the title of Goodwill Ambassador for the United Nations Environment Programme, and has been delightfully chronicled in his book *Planetwalker: 22 Years of Walking; 17 Years of Silence* published in 2008 by the National Geographic Society.*



The National Geographic Society (NGS) picked up the book, and honored Dr. Francis as an Educational Fellow for the Society. This dynamic partnership can be expected to lead to a bountiful outreach and engagement experience for school children and communities, as John Francis expands

the innovative methods of his Planetwalk program and Planetlines field collection.

Planetlines was created about five years ago when John Francis was conducting a Planetwalk lecture and excursion across the island of Cuba. He was accompanied by Professor David Morimoto, of Lesley

University, and John Graham, of San Diego State University. As they enjoyed their Planetwalk together, they discussed ways to capture people's journeys as contemplative and exploratory educational experiences. Planetlines was fortunate to have John Graham, of the San Diego State University Visualization Laboratory, to contribute his MacGyver-style methods for low-cost Web-based technological solutions to capture in real-time environmental measurements and record these data onto a Digital Earth framework.

John Graham has been literally instrumental as the technical guru behind many innovations for Web-based mapping and communications, including the Strong Angel Integrated Disaster Response Demonstration series and the recent Haitian rescue efforts. Bringing together the technical capacity to capture environmental conditions and other observations under the Planetlines educational curriculum creates a noteworthy addition to school children's and teachers' science activities. The results from individual and group data collection during Planetwalks will build valuable baselines for calibrating and understanding the status of our environment. This last point is crucial.

It may come as a surprise to some, but it turns out that neither the U.S. Environmental Protection Agency nor the United Nations Environment Programme can tell its citizens what the actual conditions of the nation or planet are. Neither these agencies, nor any other institution on the planet, can tell us what the water quality, air quality, soil condition, or biodiversity of a place is, because they simply do not know. They don't have the data and they don't have a framework in place for consistent monitoring of Earth's vital systems. All of these organizations rely upon published literature, consensus from regional experts,

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▲ **FIGURE 1.** *Dr. John Francis (aka the Planetwalker)*



▲ **FIGURE 2.** Dr. John Francis talking to Yough School District Middle School seventh grade science classes of Rachel Reissman and Sarah Hackney in Mendon, Pennsylvania

and spot sampling on a vast planet.

We simply do not know the status of the planet's systems within an error range that would be acceptable to any governing body. While I could go on to explain this fact of our absence of facts in much more detail, I shall leave it for discussion for a future column. (My service with the USEPA, NASA, and UNEP substantiates these statements.) The key here is that the only way to measure and map the planet with any fidelity is through distributed upwelling of hundreds of thousands of Planetwalkers around the globe. National Geographic understands this perspective, as should any mapping organization.

Planetwalk was established in 1982 as a non-profit educational organization, now in partnership with the NGS, which has

► **FIGURE 6.** Dr. John Francis and John Graham of San Diego State University taking real-time water samples

been dedicated to raising environmental consciousness and promoting stewardship of the Earth. John Francis has demonstrated the truth of the concept that each community can and should care for its immediate environment, because no one else is going to do it for them. He truly lives the creed of working toward saving the planet one step at a time. Importantly, John Francis has applied his talent and charisma to foster increased communication and research among young people, scientists, and environmental practitioners through a global network. His annual Planetwalk journeys around Earth Day usually begin and end with talks with local middle school students and educational organizations (*Figure 2*).

This year he begins the Planetwalk celebration near Columbus, Ohio. I joined

Dr. Francis in 2008 when he crossed the Youghiogheny River valley in Ohio (*Figure 3, 4, 5*). Taking time to walk, to experience, to contemplate is not a luxury, but a requisite step for our citizens to recapture our understanding of nature and our proper place in it. We are so busy in our lives that we often squander the most precious of gifts that creation has provided – a world of wonder and inspiration for all that we do and love.

Remote sensing technology and the spatial information infrastructure have proven to be seminal modern adjuncts for our walks across the landscape under the Planetlines approach. Using portable scientific sampling field equipment, Planetwalkers can stop and measure the water quality of every body of

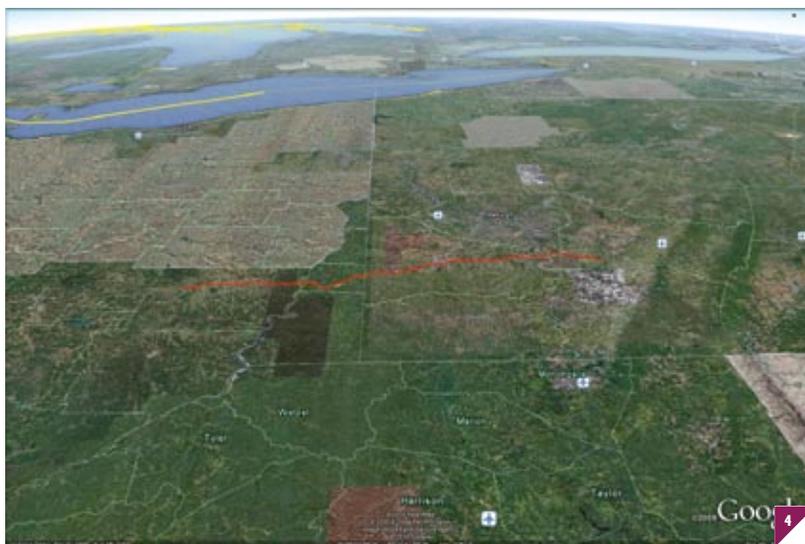


water, whether stream, lake, or puddle, and share their data with the vast and virtual network maintained by John Graham (*Figure 6*). As these data become more complete in geographic extent, interested educators, scientists, government officials, and citizens can begin to monitor the true data about our planet, one journey at a time.

This provides for a tremendous release of human potential to effectively take the planet's pulse and temperature. In fact, as



◀ **FIGURE 3.** *Web globe with Planetlines transacts*



◀ **FIGURE 4.** *Planetlines web tracking from Pennsylvania to Ohio*



▼ **FIGURE 5.** *Planetlines web tracking across the Youghiogheny River Valley in Pennsylvania*

previously stated, there is no other method known to us to accomplish this important activity. As school children learn that they are instrumental in measuring and mapping the Earth's conditions, in collaboration with scientists around the globe, the experience not only provides for an unparalleled educational experience, but it empowers them to think forward. That, my friends, is a catalytic combination that is sorely needed for our planet and society.

In the 2010 winter issue, we shared the phenomenal success of Amazon tribes in using Digital Earth technology to communicate and display their landscape in order to help preserve and protect their way of life. Planetwalk, under the guidance and support of John Francis and National Geographic, is opening new opportunities for school children to become better educated citizens and to recognize that they must accept the charge to protect and preserve the environment for the survival of all. While that is a sober and heavy responsibility to place upon our younger generation, there appears to be no other option. We should be thrilled that our community's prowess with technology and Earth observation systems can be handed to the next generation, who are learning to care for and take charge of their world. ☞

WEB LINKS
www.planetwalk.org
www.strongangel3.net
www.unep.org/geo