Focal Points

DGA and NCGE in Philadelphia

Alliance Doings at NCGE
By MaryAnna Taylor

The 87th Annual Meeting of the National Council for Geographic Education was held in Philadelphia, October 16-19. The program was extensive, aiming to meet the needs and interests of the participants. Teaching strategies, mapping activities, integrating geography with other subjects, updates on research in geographic learning and, of course, a number of field trips, filled the schedule each day. Jacqui Wilson and Dawn Willis presented a session, "Ground Truth or Consequence" that used ground truth data to create surface maps using GPS and GIS software.

A special session was held at the Independence Seaport Museum at Penn’s Landing where we enjoyed a ‘feast of Philly foods’ and a tour of the museum. None other than Ben Franklin, applied geographer, capped the evening with a surprised visit and lecture.

In addition to the usual site guide (next column), participants received a copy of Philly Style, The Five Themes of Philadelphia. This was an introduction to the city through the eye’s of Masterman School students.

DE Figures Big in “Pathways”

For each annual convention, the NCGE publishes a book for its series Pathways in Geography concerned with the geography and history of the host city. This year’s volume, Philadelphia: Transforming Tradition in the 21st Century owes nine of its thirteen chapters to Alliance or University of Delaware writers.

First, Alliance Coordinator Peter Rees served as the editor and as such wrote the introduction, giving an overview along with an admirable list of ‘firsts’ the city can claim and an enlightening pronunciation guide to a bit of ‘Philly-ese.’ Peter also contributed the first three chapters covering the development of the Merchant City, 1680-1800; the Industrial Era, 1800-1945; and Renewal, 1945-2002.

William J. Cohen, adjunct professor at the University of Delaware traces the influence of Edmund N. Bacon on the urban design of Philadelphia’s Center City. Bacon served as Executive Director of the City Planning Commission from 1949 to 1970.

Daniel J. Leathers, Delaware State Climatologist and Chair of the University of Delaware’s Department of Geography, contributed a chapter on Philadelphia’s “eccentric” weather, including a fascinating map showing five years’ of 50-knot winds, 1/2” or larger hailstones and tornado touchdowns or tracks.

Thomas C. Meierdingy, associate professor of Geography at the University of Delaware, wrote a chapter on the sad inheritance Philadelphia’s industrial past has left in the form of weathered marble tombstones. Most other vulnerable surfaces have been cleaned or replaced, leaving only the poorest areas to show the history of pollution destruction.

Our own MaryAnna Taylor wrote a lesson for grades 5-8 using the concepts of site and situation to introduce the city and to show how such physical systems could promote certain health crises such as the yellow fever epidemic of 1793.

Peter Rees congratulates Barbara Prillaman on her DTA Award

The awards banquet got off to a lively start with the appearance of a string band that propelled many to get up and do the Mummer’s strut. Delaware Alliance high spirits continued when two of our TCs, Barbara Prillaman, Al. DuPont MS, Red Clay, and Barbara Saulsbury, Wm. Henry MS, Capital, were awarded the NCGE

See NCGE, Page 5

See Pathways, page
About Geography

The bad news

Last Month, the National Geographic Society released the results of a global geographic literacy survey. More than 3000 young adults aged 18-24 from nine countries including the U.S. were asked 56 questions that focused on geographic knowledge and contemporary events. Overall, Americans improved their position from a similar 1988 survey by one place, from last to next-to-last, this time edging out Mexico. Swedish, German and Italian young people ranked highest, answering 70% of the questions correctly, followed by the French (61%), Japanese (55%) and British (50%). Canadian, American and Mexican students answered fewer than half the questions correctly.

Some of the responses of U.S. young adults have been widely reported in the press: 83% could not find Afghanistan on a world map, more knew that the island featured in last season's TV show "Survivor" is in the South Pacific than could find Israel, and just half could locate New York state.

Less publicized results indicated that the number of young U.S. adults who had taken a geography class in school had risen from 30% in 1988 to 55% today, and those who had scored better on that part of the test involving country identification on maps. Young Americans who reported accessing the Web within the previous 30 days scored 67% higher than those who had not been online.

Navigational skills were relatively well-developed. Seven in ten young Americans could identify correctly the western-most city on a hypothetical map - up 12 points from 1988 - and 73% could identify the direction needed to travel between two hypothetical cities.

Generally, U.S. respondents who had completed more school did better as did those who had traveled internationally or could speak a foreign language. Internet use and media exposure also improved performance. Finally, in all countries except France, men did better than women. To take the survey, go to www.nationalgeographic.com/poll.

......and the good news

A report, also commissioned by NGS, compared the achievement of eighth-grade students of Geographic Alliance teachers across the nation with a matched sample of students who had taken the 2001 NAEP geography assessment. Students of Alliance teachers had significantly higher scores compared with students in the NAEP sample. Alliance students performed particularly well on understanding U.S. geography, reading maps, and drawing and interpreting maps. When examining student performance against numerous teacher variables such as years of teaching and hours of general professional development, the only variable that significantly impacted student achievement was the frequency with which the teacher had participated in Alliance summer institutes and workshops.

Overall, the study by Kerry Englert and Zoe Barley demonstrated that nationwide the Alliance program was having an important impact on student achievement in geography.

To download a copy of the report (15 pages), go to www.mcrel.org

by Peter Rees
We're looking at the closest we could come to books about the use and, we hope, conservation of public lands, starting with Against the Tide, The Battle for America's Beaches, by Cornelia Dean, Columbia University Press, 1999.

Dean, the science editor of New York Times, has given us a well-written and carefully researched account of America's largely misguided efforts to "protect" the nation's beaches.

Scientists, municipalities, state and national governments, and property owners have consistently and stubbornly refused to accept the basic truth that the oceans will in the end almost surely foil their efforts and will often cause the opposite of what they'd planned. She gives example after example where man's efforts have resulted in the loss of beaches which would have been naturally repaired if left alone.

Dean starts off by detailing the truly herculean project the city of Galveston undertook following the infamous hurricane of 1900 that took 6,000 lives. They built a seawall seventeen feet high, sixteen feet thick at the base, and five feet wide at the top. By August of 1904 the wall was complete. Then owners of the remaining buildings were given a choice: jack them up, tear them down, or watch them be inundated by the fill that was to raise the land surface to eight feet at the bay side and to twenty-two feet on the gulf side. The basic project was completed by 1911, though continued filling lasted until 1929.

Protected by stout rip-rap, the wall was expected to stand up to any hurricane. It did. In August of 1915 another hurricane made a direct hit; some rip-rap boulders were carried over the wall, but the wall held. And, "only fewer than a dozen" people were killed.

A success story? Well, hardly. . . . "Galveston had made a Faustian bargain, and it would pay the price.

"Beaches and seawalls cannot coexist for long, especially in erosion-prone areas like Galveston. The reason is as simple as it is inexorable: an eroding shoreline is dynamic, but a wall is fixed. The water moves in, the wall stays put. Result: a narrower and narrower beach. Finally, the beach is gone, drowned in a process geologists call 'passive erosion.' Unless it is extended, raised, rebuilt, and reinforced, no wall is a match for the ocean on an eroding beach. Eventually it will be undermined and it will collapse. It may even accelerate its own destruction by inhibiting the natural ways beaches respond to bad weather.

"When a beach is threatened by a storm, it rearranges itself to cope. Harsh storm winds quickly carry lighter sand particles on the surface of the beach to the dunes, where the beach has already established reserves of sand. The heavier particles left behind form a kind of protective


Schneiderman has collected thirty-one essays written or co-written by thirty-four scientists, including herself. As she says in her preface, "This book is akin to a chorus of voices. Each part can be encountered alone or in relation to the others. Readers can enjoy the essays in any order they choose because each piece of written work was crafted individually." That is true; however, we found that her order of presentation was a positive addition to the reader's enjoyment. She has grouped these pieces into seven sections: Records of Time and History, Scientific Judgments and Ethical Considerations, Resources Reconfigured, Local Manipulations, Inventive Solutions, Whole Earth Perturbations, and Global Perspectives. She begins each section with a short descriptive, unifying introduction of a page or less.

The first section contains four essays on Earth's geologic history. We particularly enjoyed the last, "Henry's Land," by Paul R. Bierman. It is an easy-going account of the history of Henry Moultrip's farm in northwestern Vermont. Bierman and his geology students at the University of Vermont have been studying northern Vermont's history with the good-natured permission and help of Henry and his backhoe. They found and identified two logs deposited on the land during a flood of the Huntington River, which hasn't flowed anywhere near there for the past 8000 years. The logs were preserved by being buried beneath an alluvial fan, a feature which is quite common at the bases of mountains. While in some places alluvial fans are enormous, the few in Vermont are small, and most have been lost in the trees. This gives just a taste of Bierman's topic.

In the second section, we enjoyed "Down to Earth: A Historical Look at Government-Sponsored Geology." It's a somewhat off-putting title for what turn out to be a history of the U.S. Coast and Geodetic Survey, U.S. General Land Office Survey, and, principally, the U.S. Geological Survey. This is one of those institutions one has always heard about and that seems almost a natural phenomenon. Actually, it wasn't formally established until 1879, though various ad hoc projects had been government-funded previously.

Section three contains "The Edwards Aquifer: Water for Thirsty Texans," by John M. Sharp, Jr. and Jay L. Banner. They explain the geology which produced the aquifer over one hundred million years. But its recent history is more social and political. Several towns and cities have risen at the foot of the Balcones Escarpment where many springs rise from the aquifer. Controversy has arisen where roads and parking lots, among other constructions,
covering of coarse grains too heavy for the wind to pick up. If waves do bite into the dunes, the sand they carry away collects in underwater sandbars. These are exactly what the beach needs to break the waves offshore and weaken them before they hit the beach itself. The reserve battalions of sand are turned into frontline troops. Eventually, the storm passes. Now gentle swells pick up sand from the offshore bars, carry it inland and return it to the beach.

"This system offers every advantage. It operates automatically, requires no government funding, and provides, as a fringe benefit, the fun and beauty of the beach itself. But it has one giant drawback: it only works when people keep their houses, hotels, boardwalks, parking lots, roads, sewer lines, and the like out of the way -- and the beach is free to move as it must to respond to storms. Nowadays, however, this kind of infrastructure is all over the coast. It is too valuable to lose, and the cry goes up: build a wall to protect it. Few people stop to calculate that the infrastructure's value derives in large part from the beach -- the beach the wall will inevitably destroy."

We have quoted lengthily in order to give a more clear description of Nature's beach preservation program than we could have written.

Galveston tried to save itself as a commercial port, but while the citizenry were investing their all in the seawall and fill projects, upstart Houston used the newly-found Beaumont oil field to challenge, surpass and finally totally eclipse Galveston. At the end of World War I, the city fathers turned to the city's famous beach and began advertising for vacationers. Before two decades had passed, the wide beach which had once easily supported auto races had been reduced to a narrow strip at low tide and waves slapping rocks at high tide.

Several states have enacted laws banning seawalls, and they were seldom challenged -- until erosion put roads and buildings in danger. Usually legislatures back down when confronted by angry landowners. North Carolina, for instance, was among the first states to limit coastal protections of all types; however, when sandbag 'seawalls' appear frontal erosion-prone roads, the State authorities turn the other way. South Carolina, too, passed exemplary building restrictions and then weakened them after Hurricane Hugo brought not only destruction but a follow-up storm of lawsuits from owners who suffered loss.

Another serious aspect of the beach erosion problem is that Americans are moving to the beach. Before the twentieth century, people didn't live near the ocean -- it was too dangerous.

"Today, the opposite pattern is well established. Almost half of all construction in the United States in the 1970s and 1980s took place in coastal areas." Presently, or very soon, 80 percent of Americans will live within an hour's drive of the coast. We'll approach a population density near our ocean coasts of 400 people per square mile and only 100 for the rest of the nation.

"But the coast is not a stable landscape. Inlets open, heal, and reform. Seaside cliffs erode and slump. Sand shifts . . . and Nature always bats last at the coast."

Dean goes on to describe place after place where beaches have been 'protected' out of existence, groins being the chief engine of destruction. In a chapter called "Unkind Cuts," Dean discusses the tensions between those whose living depends on keeping cuts, whether natural or man-made, open and those whose downshore beaches are being destroyed. Jetties built to maintain inlets that Nature would otherwise close starve the downdrift beaches of sand. And the dredging carried out to keep the inlet navigable is wasteful; the sediment from channels is usually dumped at sea. One coastal geologist has likened this practice to "cutting old-growth forest and burning it on the spot," since such far-out sand will not return to the beach recycling system. But it's also true that sand dredged from shipping channels may be too contaminated with heavy metals and other pollutants to serve as beach sand.

If any of this sounds familiar, you'll not be surprised to hear the Dean cites Delaware's bypassing system at Indian River Inlet as one of the more successful attempts at pleasing all interests. The inlet was built and jetted in the late 1930s. The flow of sand is to the north, so the south jetty trapped the traveling sand in shoals. By the mid-50s, the beach north of the inlet was eroded so badly that the State fed it with sand from the shoals and back bay borrow sites. The bypass system pumps water from the inlet, mixes it with sand trapped at the south jetty, sends the resulting slurry across the bridge in a pipe, and sprays it on the northside beach. In spite of its relative success, Delaware's system must be supplemented.

See Dean, Page 6
Distinguished Teaching Achievement Award.

On Saturday, Peter Rees led the “Planning Downtown Philadelphia” field trip. Since his starting point was the hotel in center city, it was a matter of taking off the geographic layers until they arrived at Penn’s Landing – the site of the original settlement. Joel Glazier reported that it was an excellent field study.

Other alliance members who attended the conference were Mary Alice Aguilar, Lewis Huffman, Maggie Legates, Fran O’Malley, Becky Reed, and MaryAnna Taylor. Attending a conference of this caliber is an excellent professional development experience and we recommend that teachers take advantage of this opportunity. Next year the conference will be held in Salt Lake City, Utah.

Barbara Saulsbury receiving her DTA award from Michal LeVasseur, Executive Director of NCGE

An Odds and Ends Quiz about Iraq
1. What natural resource does Iraq have in abundance that its neighbors lack?
2. Which crop is not grown in Iraq: barley, coffee, dates, grapes, tomatoes, watermelons, wheat?
3. Is it true or false that Iraq has 600 miles of inland waterways?
4. What was the most recent empire in which present-day Iraq was a poor province?
5. What two cultural advances began in what is now Iraq?
6. What country occupied present-day Iraq during both World War I and World War II?
7. What natural features bounded the area of Iraq called “the Cradle of Civilization”? 8. Where does Iraq stand in the list of countries with proved reserves of oil (first, second, third, etc.)?
9. What ethnic minority in Iraq is also an ethnic minority in both Turkey and Iran?
10. What is the official language of Iraq?
11. How many of Iraq’s six neighboring countries can you name?
12. What precipitated the decade-long Iran-Iraq War, which began in 1980?

MaryAnna Taylor teamed up with Myrna Newman, one of our own but working in Pittsburgh now, to produce a lesson for grades 7-12 on degradation of racially and/or economically disadvantaged communities by hazardous waste landfills and incinerators. The lesson is adapted from an earlier one by Myrna. Using the city of Chester as a prime example, the five-day lesson uses a video and a number of websites and gives the students some ethical issues to consider.

All in all, the book is an interesting and illuminating compilation of pieces about many aspects of Philadelphia and environs. It is written felicitously in general and is not “too deep” for the average mortal to enjoy.

A Useful Website for Delawareans
Try www.datamil.udel.edu for maps of Delaware. You can get aerial maps, roads, waterways, elevations, and railroads. You’ll be able to zoom in on your neighborhood.

Recent TC Work and Honors
On October 6, Judy Purcell, Terry Kopple and MaryAnna Taylor “worked” the Alliance table at the Delaware Coast Day. They had many visitors, some bribed in by candy, or so we hear, anyway.

Judy Purcell has received a $1600 MBNA Grant to implement an after-school social studies program for twenty-five fifth graders at Banneker Elementary.

Becky Reed (Colonial) and Gene Modzelewski (Christina) have been selected as Social Studies cadres for their respective districts.

At the Fall Social Studies Conference at Milford High School on October 11, Peter Rees and TCs Maureen Greenly, Barbara Prillaman, MaryAnna Taylor, Patsy Warner, and Dawn Willis presented to a total of 173 participants. TC presenters in other strands were Peggy Dawson, Fran O’Malley, Becky Reed, and Eileen Wilkinson, while Charlotte Byrd worked at the registration table.

Patsy Warner shared her Russia trip with teachers at the Fall Social Studies Conference.
Dean, from page 4 periodically, and at 100,000 cubic yards a year, it is far smaller than many inlets would require.

Dean includes an aerial photo of the Ocean City, Maryland inlet. A 1933 storm cut the inlet, and the jet-ties and inlet have starved Assateague Island’s seaward beach, leaving it terribly vulnerable. The photo shows clearly that Assateague’s beach now aligns with the sound side of Ocean City.

The Corps of Engineers is even now replenishing Assateague’s beach with sand which we know will go the way of its previous sand. “Nature always bats last at the coast.”

This is a highly readable and enlightening book, though not an undiluted pleasure to read.

Schneiderman, from page 2 decrease the quality of the water and inhibit the filtering and water retention capacity of the area. Luckily, there is little irrigation, but such as there is represents what is called consumptive use. The water is not returned to streams or groundwater, but plant respiration releases it into the atmosphere. Some springs have been lost. Sharp and Banner go on to discuss some options Texas may use to try to satisfy all water users.

Having just finished Dean’s book, we were taken by the first selection in part four, “Lessons from Lighthouses: Shifting Sands, Coastal Management Strategies, and the Cape Hatteras Lighthouse Controversy,” by Orrin H. Pilkey, David M. Bush, and William J. Neal. The piece follows the life ‘paths’ of some of our more familiar lighthouses, past and present. Florida lost the first Ponce DeLeon Lighthouse; it was undercut by a storm soon after construction and fell into the ocean later that same year. Block Island lost three in the 1830s and 1840s. Our own Cape Henlopen, one of several actually built on dunes, succumbed and toppled into the sea in 1926. A few, such as Anclote Key Lighthouse in Florida, find themselves too far inland because of beach accretion. Three ‘solutions’ have been employed: setback, relocate, or abandon. Setback delays the problem on a receding shoreline, but sooner or later the building nears the shoreline willy-nilly. Relocating is expensive, but some lighthouses are being built to be disassembled and moved. Oddly, few lighthouses have been ‘protected,’ so one would think governments have learned the lessons Nature teaches.

Part five describes what its title suggests: inventive solutions to some of the problems raised by our misuse and overuse of resources. We liked Rosa E. Gwinn’s “Appetite for Toxins: Bioremediation of Contaminated Soil.” She is concerned with the newly-coined term biogeochimnistry, “the study of microbial populations that live within soil and sediments near the earth’s surface.” These microbes, with very little care, can be used to eat sewage and petroleum.

This ability is being exploited at some of the military installations that ‘disposed’ of large quantities of explosives. Weapons were disarmed by hosing shells and casings; the process lessened the chance of accidental explosions. The water was then often pumped into ponds, called washout lagoons, which usually covered several acres.

It’s well known that composting can reduce household wastes to plant-usable nutrients. The principle is being applied to a few washout lagoons as a test. Because of the huge presence of contaminants, the bacteria count may be very low; however, adding other nutrients boosts their activity. “The goal is to find the correct mixture of nutrients to add to the soil in order to get the organisms to thrive, break down compounds in their feeding, digest the nutrients, and leave behind clean soil.”

She documents the bioremediation tests conducted at Tooele Army Depot Utah. Scientists built two huge compost piles containing soil, cow and chicken manure, lettuce, barley, alfalfa, and wood chips.

After forty days of careful tending, the piles consisted of dark, rich, and nontoxic soil. It seems clear that this is the least expensive and most effective clean-up for superfund sites that contain organic compounds. Of course, not all superfund sites do, but this should still be an extraordinarily useful clean-up technique.

The fifth part concerns the interdependency of all of Earth’s systems -- atmosphere, hydrosphere, and lithosphere. It would seem we need to add the human being into that mix.

Robin L. Hornung and Thomas F. Downham II, in “Nature’s Sunscreen: Ozone Depletion and the Health of the Whole,” discuss the ozone layer. Until about 450 million years ago, all life on Earth was marine; the lethal ultraviolet rays prevented them from evolving into land-dwellers. They point out that ultraviolet rays damage human skin from dis-coloring and blistering, to skin cancer; 75% of skin cancer death are attributable to over-exposure to ultraviolet rays. About 1 in 50 Americans will suffer from melanoma. High doses of UV light produce the temporary cloudy cornea of the human eye known as snow blindness. Repeated exposure over time can lead to cataracts, permanent corneal changes which may lead to blindness.

“Destruction of stratospheric ozone is one of today’s major environmental issues. In fact, some researchers maintain that we are in the middle of an ultraviolet radiation experiment on a global scale.” If we and the rest of land animals are to dodge extinction, it’s time to act.

The four essays in part seven explore various aspects of the overall picture of our damaged Earth and what critical choices will have to be made, particularly by those nations that are guilty of the greatest waste of resources and pollution. Such countries are confronted by some real ethical dilemmas.

The authors of these essays are scientists who write with considerable skill and do their best to bring their subjects to the general public, but there is no gainsaying the fact that this is not an easy book, nor is it always pleasant. The reader must bring to it time and full attention. The reward for such a thoughtful approach is a better-rounded awareness of the problems the people of the entire world face.
Amazon Rainforest Workshop, Inca Trail, and $1000 Scholarship

Teachers are invited to enter to win a $1000 scholarship for a lifetime experience! The Amazon Rainforest Workshop July 7-16, 2003, is a professional development opportunity for teachers to work side-by-side with scientists in one of the most biologically diverse environments in the world. Participants will have the opportunity to:
- Join a spirited faculty of specialists in ornithology, botany, marine biology, and entomology.
- Ascend over 115 feet on a 1/4-mile Rainforest Canopy Walkway.
- Visit local schools and families and see how indigenous cultures use the forest for medicine, food, and shelter.
- Integrate field study with slides and support materials as a catalyst for local environmental education projects at home.

Full land cost for the workshop is $1948. Academic credit through NC State University, budget airfare, optional Andes extensions, and Inca Trail Expedition July 16-25, 2003 are available. Deadline is March 8. Application form is at HTTP://WWW.TRAVEL2LEARN.COM For further workshop and funding information check this web site, call Frances Gatz 800-669-6806, or email: fgatz@earthlink.net

Delmarva Bays Map Contest

The Assateague Coastal Trust announces the Delmarva Bays Map Contest for Fourth Grade students in Sussex County, DE, Worcester Co, MD, and Accomack Co, VA. This contest is an exercise in geographic education; the fourth grade students are to create maps to illustrate some aspect of the living resources or history of the region. In the process the students will increase their awareness and appreciation of their local natural landscape. This seems to be a good connection with the fourth grade social studies curriculum.

Cash prizes will be awarded. First prize is $100, second prize is $75, and third prize is $50.

The deadline for the entries is March 19, 2003. Teachers, parents, scout leaders can visit Assateague Coastal Trust's website for more information; www.actforbays.org or by calling the ACT office in Berlin, MD, 410-629-1538.

Answers to Iraqi Odds & Ends
1. Water
2. Coffee
3. True
4. the Ottoman Empire
5. Writing and Astronomy
6. Britain
7. the Tigris and Euphrates Rivers
8. Second
9. Kurds
10. Arabic
11. Turkey, Iran, Kuwait, Saudi Arabia, Jordan, and Syria
12. The Tigris and Euphrates unite to form the Shatt al Arab, the last 50 miles of which form the border between Iraq and Iran. Iraq claimed territory on the Iranian side.

A TRIP TO CHINA FOR EDUCATORS

The Chinese-American Cultural Bridge Center, a non-profit organization, has created a trip especially designed for educators. Not only will you experience the geography, history, culture, economics, government, and technology of China firsthand, but you will be provided with background information and instructional materials, which will bring China alive to your students as well. There will be opportunities to meet with Chinese educators, and share ideas and information with each other.

On this unforgettable 15-day journey, you will go to Beijing, Zhengzhou, Kaifeng, Luoyang, Shaolin Temple, Xian, and Shanghai. Explore the tomb of China's first Emperor who unified China, with its amazing army of life-size terra-cotta soldiers. Walk along the Great Wall, marvel at Beijing's Forbidden City, speculate at Luoyang's Longmen Grottos, and experience the Ancient Song dynasty life in Kaifeng. The journey concludes in the vibrant Shanghai. The cost of $3,250 includes international air fare from CA, 4 star hotels, all meals, transportation, guide, and sightseeing. Tentative travel dates: June 25- July 8, 2003. For detailed itineraries, check the website: www.cacbc.org/go/explorecchina Or call toll free: 877-592-7072, email: services@cacbc.org
# Focal Points

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