

UBIQUE – Notes from the American Geographical Society

Volume XXIV, Number 3, December 2004

GEOGRAPHERS HIT THE PRESS, COURTESY OF AGS

Since early this year, several geographers have been writing op-ed page articles distributed electronically by AGS to more than two hundred newspapers nationwide.

Identified as members of the American Geographical Society's Writers' Circle, the authors focus on the geographical components in issues of current importance. They do not make an overt pitch for the field of geography. Instead, they demonstrate how much better a situation can be understood when geographical factors are taken into account. And they often make specific recommendations for applying geographical thinking to solving the problems described.

The articles are offered to the newspapers for use without charge, which means a newspaper can run an AGS op-ed piece without contacting us. As a result, we cannot be sure just how many newspapers have carried the pieces. But feedback from readers or editors shows that the articles have appeared in papers from Kentucky to Alaska and California.

AGS Councilor Deborah E. Popper, who has herself had considerable experience writing for the press, has shaped and oversees this project, with critical advice from AGS Councilor John Noble Wilford, senior science correspondent of the *New York Times*. The geographers write by invitation from AGS.

A sampling of the titles of op-ed pieces distributed to date suggests the breadth and the vital nature of the topics addressed.--- Mary Lynne Bird

“Let the Walls Talk.” Deborah Epstein Popper, professor of geography at the City University of New York's College of Staten Island, suggests that environmental clues incorporated into design can improve the lives of those in congregate housing suffering from dementia.

“Precision-guided Weapons. Precision-guided Wives.” Jerome E. Dobson, a leader in the field of geographic information science and technology, cautions about the immense powers for good and ill, for war and peace, now easily available through Geographic Information Systems.

“Putin's Reality is Russia's Geography.” In this essay, geographer David Keeling argues that Putin's recent electoral power grab is a plausible, but fatally flawed, response to his ultimate challenge: how to control Russia's ethnically fragmented territory.

“Geography Education in a Complex World.” This essay by University of Oregon geographer Susan Hardwick shows how to improve geography education.

“Human Tracking Has Arrived. Geoslavery Looms.” The following essay by Jerome E. Dobson warns that new geographic techniques already in use pose unprecedented threats to personal freedom.

Two samples of op-ed pieces appear below:

FREE TRADE AND THE GEOGRAPHY OF IGNORANCE

By David J. Keeling

With debate sharpening on the implications of the Sept. 11 commission report -- and as NAFTA celebrates its 10th anniversary, an historic Free Trade Agreement with Central America is signed and the World Trade Organization rolls out a farm-trade deal -- few questions are raised about the links between free trade and global terrorism.

Rhetoric about tariffs, subsidies and the impacts of labor and job redistribution runs high, but discussions about the geographic impacts of global trade are barely heard. Acronyms for regional trade associations (CAFTA, EU, APEC) presume an unproblematic and homogeneous environment for trade relationships. Indeed, marginalized peoples of the world often are explained away as simple economic units that can be "developed" with the right combination of free trade, financial reform and democracy. Some commentators have gone so far as to announce the end of the nation-state and elimination of geography as a barrier to free trade. Even the Sept. 11 commission argued that modern terrorists are defined more by societal fault lines than by the boundaries between states, intimating that political-territorial units are not as important as they once were.

Supposedly, socioeconomic differences between Chiapas and Tijuana, or between southern Afghanistan and Kabul, can be eliminated by open and free global trade. The stark realities of the internal geographies of political states are dismissed as minor challenges to the forces of globalization. The conventional mantra is that globalization strategies, combined with strong regional trade alliances, will eliminate the tyranny of space and provide equal trade opportunities for all societies, thus reducing the threat of terrorism.

Barely acknowledged by free-trade proponents is the reality that the world's 200-plus political states continue to exert significant sovereignty over internal and external relations, including trade. Also frequently ignored are the different geographies that shape all states, from the most advanced industrial centers of the world to underdeveloped societies struggling with disease, isolation and inadequate infrastructure. The global reality is that a powerful relationship exists between radicalism, terrorism and the geographies of difference.

Understanding the geography of free trade, globalization and terrorism becomes critical when developmental challenges meet regional differences. Political and economic analyses of Iraq that focus on introducing democracy and building an economy that can be regionally and globally integrated tend to underplay the country's internal geographies. Iraq's major disparities in resources and infrastructure require a level of spatial development not anticipated by current plans; its geographically significant ethnic and religious differences make a U.S.-style democracy unlikely.

In regions such as Africa and Latin America, geographic disparities are so profound within and between countries that an investment of at least \$2 trillion dollars in basic infrastructure -- according to figures from both the World Bank and the Economic Commission on Latin America and the Caribbean -- would be required just to prepare the regions adequately to take advantage of free-trade opportunities.

Over the past two decades, the United States has championed the principles of free trade, globalization and democracy internationally with barely a hint of a basic geographic understanding of national and regional differences. What the Sept. 11 commission cites as a failure of imagination is, in reality, a stunning level of geographic ignorance about how the world works. Economic collapse in Argentina, terrorist attacks on New York, nuclear rhetoric from North Korea, ethnic butchery in the Sudan and societal meltdown in Haiti can all be linked to policies that demonstrate a

profound geographical naiveté about socioeconomic differences within political boundaries and across the globe.

Successful free and fair trade, meaningful regional development and economic integration that improves the lives of all citizens can be achieved only if geographic differences are recognized. Until this goal is achieved, the threat of terrorism will remain significant.

(This op-ed piece originally appeared in the *San Francisco Chronicle* on Tuesday, August 3, 2004)

TO UNDERSTAND RADICALISM, WE MUST KNOW GEOGRAPHY

By David J. Keeling

A growing and dangerous paradox of globalization is the tension between an ever-shrinking and integrated economic world and an increasingly fragmented cultural and political world. The number of sovereign states has grown from 56 at the height of European imperialism in 1900 to nearly 200 today, and the list continues to grow.

There are also nearly 5,000 discrete culture groups, many of whom yearn for a distinct political or national identity. In recent years, the Basques, Kurds, Palestinians, Tamils, Chechnyans, and Timorese all have gained notoriety for pursuing a separatist or nationalist agenda that has resulted in bloody conflict or spurred terrorist acts. Woodrow Wilson's concept of the "right to self-determination" continues to plague those who have a vision of a harmonious world bound together by free trade, open borders and Western democratic ideals.

The American-led war against terrorists is a stark reminder that radical nationalism and terrorism are fast becoming hallmarks of a globalized yet fragmented world. Control and influence over territory and resources, both practically and symbolically, have never been more important. Tensions still exist between friendly states over territory claimed long ago or over land subject to competing interests. Witness the diplomatic fuss between Spain and Britain over Gibraltar's celebration of 300 years of British rule, or the ongoing tensions between China, Vietnam and the Philippines over control of the Spratley Islands in the South China Sea. And tensions between Greece and Turkey over tiny uninhabited islands in the Aegean Sea have simmered for decades. Old hatreds die hard, and new hatreds can explode quickly into violence.

The United States has long failed to understand the importance of attachment to territory and identity when shaping its geopolitical policies. Witness the outcomes of strategies applied in Vietnam, Nicaragua, Yugoslavia, Iran, Afghanistan and now Iraq. History tells us that geography matters today more than ever because disparate people from profoundly different cultures are interacting in ways that position territory, resources and cultural identity at the very heart of nationalistic struggles.

Politicians, policy-makers and pundits in the post-9/11 environment continue to gloss over or ignore completely the root causes of radical nationalism and terrorism: unequal economic, social and political conditions. Viewing the world as an ever-shrinking, homogenous, integrated economic space, where political boundaries are much less important than trade relationships, is problematic. Indeed, we are far from the demise of the nation-state or the elimination of geography as a barrier to globalization. Rather, many national borders continue to harden. The 1,950-mile U.S.-Mexico border, for example, has become the most militarized boundary on Earth between two democracies, a visceral fault-line between developing and developed nations.

Today's terrorists are developing a deep and intense hatred of U.S. political influence in the Middle East and elsewhere, of Western culture's sweep across the globe and of neo-imperialistic

policies that seem to value resources, such as oil, more than people. Tomorrow's radical nationalists are being shaped ideologically by today's terrorists, and today's radical nationalists are nurturing tomorrow's terrorists.

There can be little disagreement that those who commit atrocities against innocents must be brought to justice, either through international war crimes tribunals or national courts of justice. However, there also should be little disagreement that our increasingly fragmented world desperately needs policies that recognize the root causes of radicalism and terrorism. To do that, we must understand its geography.

(This piece originally appeared in the *Lexington Herald-Leader* on September 7, 2004)

EARTHWORKS By Peter Lewis

DOWNTOWN (Little, Brown), by newspaperman Pete Hamill, renders New York---or at least south of 42nd Street (with a handful of excursions north)---in all its delirious human evidence.

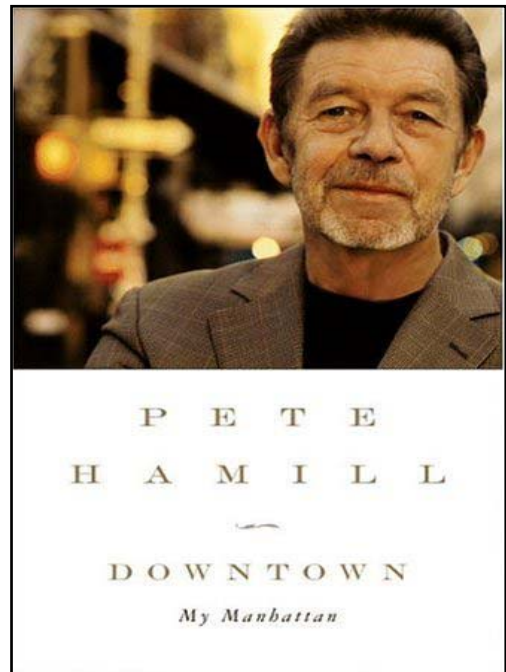
“New York is a city of daily irritations, occasional horrors, hourly tests of will and even courage, and huge dollops of pure beauty.” For Hamill, it is also “infused with a mixture of memory, myth, lore, and history, bound together in an erratic, subjective way,” especially for a man who has lived within the mysterious mixture of those elements for so many years. And what a delightful, personal, informative, elegantly colored portrait results.

It starts with his mother, who took her children on excursions through Brooklyn, where at one point she stopped when taking in the Manhattan skyline and said to the thunderstruck Hamill, there is the land of Oz.

Hamill proceeds to take readers on a historically rich, memoir-laden walking tour of the area below Times Square. Not just the architecture and anecdotal material that grace each of the city’s parishes, but their emotions, from greed to explosive anger, all the fallout that accompanies continuous change, what New Yorkers have come to recognize as their own special sense of nostalgia. Say, the Battery, “in some unexplained way...now a necropolis”; or the patchwork of Trinity Church and its graveyard; or the grid imposed by the Commissioner’s Plan of 1811, with its “rigid order over wilderness,” in counterpoise to the supremacy of technique over topography; or Broadways “honking velocity.”

Hamill revels in a citizenry that refused to be lectured about sin, the Jewish Rialto of 2nd Avenue, the once vibrant newspaper district of Park Row, and just how “the poor of New York made the city better.”

Hamill is one of those rare reporters who has lived long and hard in his beat--historian, geographer, frequenter of emporia---providing background to etch and then hand-color his own New York.



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Many of us have made the cold climes an Otherworld, but Gretel Ehrlich finds it a special place in this praise-singing alarum, THE FUTURE OF ICE (Pantheon), as greed-fed malfeasance works its havoc on cold environments.

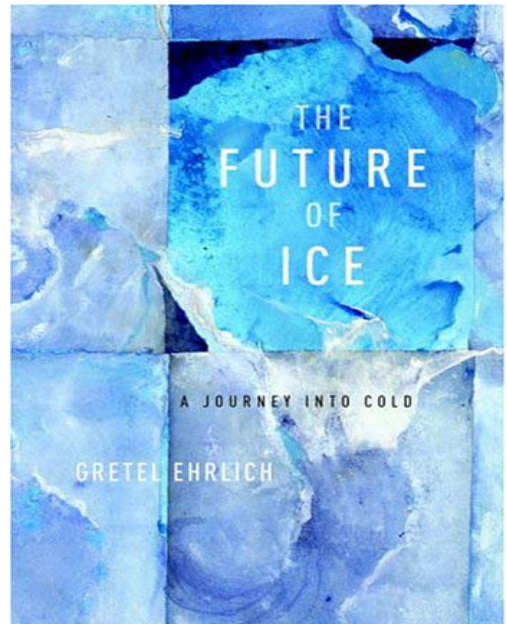
An editor calls Ehrlich---living in a snow-bound tent in Wyoming---and asks if she would write a book about winter and climate change and the prospect of deseasoning. Ehrlich, who has logged some time in cold places, bites: "What is the future of winter, of snow, of ice?" she wonders.

She possesses a weather consciousness---"Weather streamed into my nose, mouth, eyes, ears, and circulated in my brain"---that knew something was already amiss, a human-fueled acceleration of global warming and general habitat (pick a habitat, any habitat) degradation.

While she tenders lucid slices of what is thought by scientists to be behind the loss of cold on earth---glaciers on the run, ice caps melting, greenhouse gases, the trapping of poisons by the snow---she will also, and more to the point, seek to express the vital connections between cold and planetary health, biologically and spiritually. These will be revealed in fleet impressions and experiences she has while traveling in Tierra del Fuego, to the great islands of the Russian far north, on her home turf.

They are personal, these impressions, sometimes crystalline and sometimes obscure (winter's the "season we dive through the Big Dipper's cup to the other side of the constellations; we go behind the scenes of our own lives"), though communicative of cold's fine urgency, how its danger can drive beauty to the bone, how it creates brilliant cultures (not to mention colors), nurture a fine menagerie, like that bumblebee---"looking like a piece of fire"---flying into the maw of a snow squall.

"To be driven into action by the wild beauty and difficulty of a place," Ehrlich urges, action to defend and action as the act of living.



GREENPEACE (Rodale) is a strumming, deep, and colorful history of the direct-action, environmental organization, from 1970 to 1979, written by one of its founders, Rex Weyler.

The origins of Greenpeace and its activities over its first decade are finely crafted here by Weyler, who gives the book an elegant pacing as it echoes the eco-political times it passes through, and whose humility gives it its special grace.

The movement was a fusion event, explains Weyler, of ecology and disarmament concerns that had long been brewing. He speaks of the mentors to the group, who had been sailing boats into harm's way as far back as 1958, and inspired the first actions against underground nuclear-bomb testing on Amchitka Island. Any reader who has thought the testing was benign in the environmental sense, and the protest against it a symbolic if powerful voice, will be appalled by the physical destructiveness of the testing to the environment.

Weyler chronicles the early work of Greenpeace, from the origin of that indelible conjunctive, to its shift from protest of nuclear testing to the killing of whales and seals, when they ran into their first nationwide negative reaction, "for depriving Newfoundlanders of their honest income," even if it was clubbing baby seals in their nursery. He details the guerilla-theater tactics of

running Zodiacs in front of giant Russian whalers, painting seal pups to destroy their commercial value, withstanding French military brutality, and all the other Gandhian non-violent actions the group undertook and captured on film, which would shock world opinion and situate Greenpeace as an especially media-savvy bunch.

Importantly, Weyler interprets the evolving philosophies of the organization---notoriously the break with Paul Watson---and the drift away from the early elemental spiritualism into the now well-known bureaucratic juggernaut of mass-mailing and legalistic wrangling.

There lies the meat of this history---what launched this armada of ecological awareness---and it is a rousing story, capable of energizing a whole new grassroots force.

Sable Island is a thirty-mile crescent of each-colored sand, dotted with greenery and wild horses, orchids and the Ipswich sparrow, and considered one of the great graveyards of the North Atlantic. In *SABLE ISLAND* (Walker), Marq De Villiers and Sheila Hirtle outline the history of the island, both natural and chronological, that will still eat an occasional ship for supper.

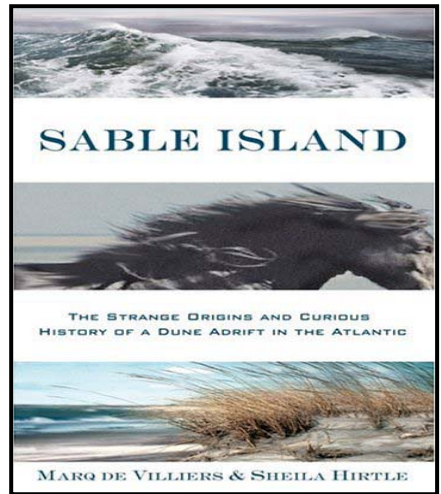
It sits out there in the steel-gray roil of the Atlantic, on the edge of the continental shelf. Who would ever suspect that there would be a shape-shifting island in this vastness, with submerged bars ready to trap and topple a ship? Very few, at least at first, explain de Villiers and Hirtle in this glinting profile of the island.

The island's distant past is as foggy as its summer weather; Basque sailors may have been there, maybe Vikings, maybe an Irish monk in a coracle. De Villiers and Hirtle provide a sweet little geological history of the place, a child of glacial retreat, and detail the island's special location "in the center of this vortex, this complex system of currents, gyres, and rings," that give it stability on the one hand and may spell its doom by pushing it into the abyssal gully to the east.

For such a scrap of sand, the island has a dogged human history as well, borne of the rivalry between the French and English, where an establishment was founded to aid shipwrecked sailors---the known ones are covered like a tarp by Villiers and Hirtle, with excerpts from letters, diaries, and news reports---as well as to dump a lunatic or misfit or two.

Access is guarded these days to protect the fragile estate and its inhabitants---seals who serve as fodder for the elusive Greenland shark, birds, feral ponies---but still the island is threatened by energy interests, and by nature itself.

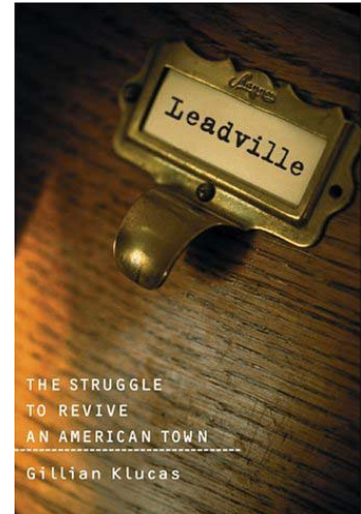
De Villiers and Hirtle come through again, as they did with *Sahara*, in this finely etched portrait of a strange, romantic place.



Journalist Gillian Klucas patiently details the origami of environmental missteps that have marked LEADVILLE (Island Press/Shearwater), Colorado's entire history.

Leadville sits atop an impressive array of mineral deposits: silver and gold, copper and manganese, molybdenite and, of course, lead. This variety, explains Klucas, allowed Leadville to survive when other one-horse mining towns went bust.

During its heyday, the town would host Oscar Wilde and Sarah Bernhardt at the opera, make a multi-millionaire of Meyer Guggenheim, and generate enormous quantities of mining waste. Even during lean times, Leadville was a tight-knit community of friendship, camaraderie, and pride in its mining tradition. But all that mine waste produced horrific quantities of pollutants. Tunnels often burped a gush of suspended metals into the Arkansas River, creating Technicolor hues. One spectacular belch coincided with the rise of environmental concern sweeping the country, bringing the EPA, the CDC, and other federal agencies to Leadville's door and a reputation as the Rockies' poison central.



Here is where the story gets interesting and Klucas's clarifying touch pays off. The defenders of the environment came on like gangbusters, alienating the citizenry to the point where they felt the EPA was more toxic than the tailings. Klucas shows how all the concerned parties acted in their own worst interests: the regulators' stultifying bureaucracy, the mine operators treating the problem as a legal rather than an engineering issue, the Colorado attorney general's absurd class action lawsuit, the Superfund's severe liability provisions and general clumsiness: one judge commented, "any law that invites this much litigation is poorly drafted...a law so complicated that everyone spends more on lawyers than they do on the technical side."

Klucas is particularly good with her character sketches---she makes even the drab players as bright as the river---which are a refreshing break from all the legal squabbling and stalling.

Meticulous almost to a fault, Klucas's story flashes with human interest and keen environmental insight. An illuminating march through environmental politics at a crux time for green awareness.

NEW AGS COUNCILORS

By Mary Lynne Bird.

Braden R. Allenby and Lawrence M. Sommers were elected to the Council of the American Geographical Society at the November 6th meeting of the Council. Both Dr. Allenby and Dr. Sommers are academics with special ties to the business community, a combination with many precedents in AGS history.

Dr. Sommers was a member of the long-range planning committee of the Applied Geography Conferences from 1980 through 1996 and a member of the board of directors of the American Paytel Corporation from 1993-1996. His publications and the Ph.D dissertations he has overseen show a strong and ongoing interest in primary industry, development, energy issues, and commerce in many parts of the world but especially in Scandinavia. He was, for instance, the U.S. representative to the International Geographical Union Commission on "Dynamics of Marginal and Critical Regions", 1995-1998. Dr. Sommers earned his bachelor's and master's degrees at the University of Wisconsin in 1941 and 1946 and his Ph.D. in 1950 at Northwestern University. He has been a member of the geography



faculty at Michigan State University since 1951 and is now Professor and Assistant Provost Emeritus. In recent years he has been an active member of the Retired Geographers specialty group of the Association of American Geographers. He has been active in Phi Kappa Phi and has held several national offices in that honor society.

Dr. Allenby is currently Professor of Civil and Environmental Engineering at Arizona State University, having moved from his previous position as the Environment, Health, and Safety Vice President for AT&T. He is also a Batten Fellow in Residence at the University of Virginia's Darden Graduate School of Business Administration, an adjunct professor at the University of Virginia's School of Engineering, and a visiting lecturer in ethics at Princeton Theological Seminary. From 1995 to 1997, he was Director for Energy and Environmental Systems at Lawrence Livermore National Laboratory, on temporary assignment from his position at AT&T. Dr. Allenby earned his bachelor's degree cum laude from Yale University in 1972, his Juris Doctor from the University of Virginia Law School in 1978, his Masters in Economics from the University of Virginia in 1979, his Masters and Ph.D in Environmental Sciences from Rutgers University in 1989 and 1992 respectively. He went to AT&T in 1983 as a telecommunications regulatory attorney and was an environmental attorney for AT&T from 1984 to 1993. Dr. Allenby is a prolific author on industrial ecology and design for environment.



YOUR CHANCE TO OWN 2 ½ POUNDS OF THE GREAT OUTDOORS

Geographical Review's "Doing Fieldwork" issue has established itself as the sine qua non of personal, geographic reportage from the field in all its beautiful, contemporary diversity. Insights and trials, lessons and advice, a global ambit that reaches from Russia to Montserrat to Thailand to Mexico---"Doing Fieldwork" is not just a valuable tool for geographers, it is inspirational. The material is engaging and lively, serving as a recruiting poster for the study of geography. And it is a reminder that we go and live among others to better understand them and ourselves, to make the world a less strange and difficult place by returning with information---which may well include respect and empathy---from whatever front we have investigated. It's not a small world after all. It's huge and weird and full of glories and deserves to be explored on foot.

"Doing Fieldwork" is, of course, ideal for classes in which the field is a major component. But it is also a reminder and a spur about the importance of being there, wherever there may be. Like mother used to say: "Go outside, you." She was right.

("Doing Fieldwork," *Geographical Review*, Volume 91, Nos. 1 & 2, 508 pp., sixty-three contributors, 2 ½ pounds, \$44.85 [postpaid in U.S.], lower rates for bulk orders)

JOSEPH L. SCARPACI RECEIVES ALUMNI AWARD FOR EXCELLENCE IN INTERNATIONAL PROGRAMS

Joseph L. Scarpaci, professor in the Department of Geography in the College of Natural Resources at Virginia Tech and a lecturer in the AGS Travel Program, has received the university's 2004 Alumni Award for Excellence in International Programs.

Scarpaci has demonstrated unparalleled excellence in supporting and enhancing international programs and curricula at Virginia Tech. In particular, his long-term dedication to providing rewarding study-abroad experiences in Latin America, blending classroom activities with intensive fieldwork experience, is highly worthy of recognition.

MOSELEY WINS MCCOLL FAMILY FELLOWSHIP

The McColl Family Fellowship for 2005 has been won by William G. Moseley, Assistant Professor of Geography and Coordinator of the African Studies Program at Macalester College in Saint Paul, Minnesota.

With roundtrip airfare between Saint Paul and Cape Town provided by the fellowship, Dr. Moseley will spend June through August, 2005 carrying out a study entitled “Subaltern Agroecological Knowledge and Environmental Justice in the New South Africa: Farm Worker Insights and Land Reform in the Western Cape Province.”

Dr. Moseley has been working and conducting research in Africa since 1987. He is a human-environment and development geographer with research interests in political ecology, tropical agriculture, environment and development policy, and livelihood security.

To fulfill the terms of the fellowship, within six months of his return from the field, Dr. Moseley will submit an article for publication in *FOCUS on Geography* magazine based on the research conducted under the fellowship.

This fellowship is awarded annually by the American Geographical Society with funds provided by Suzanne E. and Robert W. McColl. The first fellowship was given for work in 2000. The selection committee, made up of several members of the AGS Council plus one previous winner of the fellowship, presents its recommendation to the AGS Council for confirmation.---

Mary Lynne Bird

IN MEMORIAM - Visit the AGS Webpage http://www.amergeog.org/ags_in_memorium.htm for more details

THE HUMBOLDT CLUB

The Humboldt Club is a group of devoted friends of The American Geographical Society who give to or obtain for the Society a donation of at least \$5,000 per year. They enjoy all the privileges given to the Galileo Circle and, in addition, meet privately with the AGS Council and staff once a year to discuss policy, priorities, and progress.

Thomas D. Barrow*
William P. Doyle*

Norman V. Kinsey*
Robert W. McColl*

*Founding Members – Humboldt Club

THE GALILEO CIRCLE

The Galileo Circle is a group of special friends of The American Geographical Society who give to or obtain for the Society a donation of at least \$1,000 per year. They play an important part in the work of AGS, and they help to ensure the strength of the Society.

Galileo Circle members enjoy priority access to the AGS staff and Council and through them to authorities on economic, cultural, political, environmental, and other geographical issues. They attend special events and private briefings with the Council, as guests of the Council.

Donald L. Boudreau*	David J. Keeling
Dawn & Marshall Bowen	Kathleen & John Kelmelis
James J. Boyle*	Mitchell E. Krauss
Lawrence A. Brown	Sandra F. Mather
Damion Carufe	John J. McCabe*
Barbara Chow	Ilse Melamid
Bobbe' Christopherson	Alexander B. Murphy
Robert Christopherson	Frances M. Nickerson
Joan Clemons	Richard H. Nolte
Therese D. Crandall	Jeffrey P. Osleeb
Jack Dangermond	Clifton W. Pannell
William E. Derrenbacher	Muriel H. Parry
Jerome E. Dobson	Betty Parsons
Kenneth G. Dobson	Deborah & Frank Popper
Larry R. Ford	Marie D. Price*
Dorothy & Jonathan M. Fox	Allan M. Shapiro*
John W. Frazier	Don E. Six
Richard Fusch	Jack Stadler
John E. Gould*	Rita & Jesse Walker
Susan W. Hardwick	Pidge & Michael W. Weir
Shin-yi Hsu	Anne T. Withington
Richard W. Janson*	William A. Withington
Daniel Kaveney	Joseph S. Wood

* Founding Members – Galileo Circle

JOHN NOBLE WILFORD PROFILED IN PHI BETA KAPPA'S *THE KEY REPORTER*

AGS Councilor John Noble Wilford was profiled in the Fall 2004 issue of the Phi Beta Kappa Society's publication *Key Reporter*. Wilford, who has been on the staff of *The New York Times* since 1965, where he has won two Pulitzer Prizes, spoke about the role of "informed wonder" in his pursuit of scientific understanding.

"Informed wonder is imagination modulated by reality---knowledge, observation, inspiration anchored in real possibilities," he told the *Key Reporter*. "A sense of wonder is a receptivity to experience the new, the different, the unexpected. It is inquisitive open-mindedness.

And when the sense of wonder is informed by knowledge and experience, it can be a liberating and creative force.”

Widely traveled and widely published, Wilford, whose books include *The Mapmakers* and *The Mysterious History of Columbus*, also noted that one way for the general audience to relate to science is to think of it as exploration. “The word ‘explore’ comes from the Latin, ‘to cry out.’ That is, to search out and exclaim discovery. The word ‘discover’ means to make known something secret, unknown, or previously unnoticed.” Fitting words from a man who has served on the American Geographical Society Council for over a dozen years and is currently Secretary of the Society.

