



### PENNSYLVANIA GEOGRAPHICAL SOCIETY

2010 ANNUAL MEETING OCTOBER 23 and 24, 2008 WEST CHESTER UNIVERSITY, WEST CHESTER, PENNSYLVANIA

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# **2010 Meeting Arrangements Committee**

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Joe Sernell, Conxx

### 2009 PENNSYLVANIA GEOGRAPHICAL SOCIETY ANNUAL MEETING SCHEDULE OF EVENTS Friday, October 23 8:00 am - 5:00 pm Conference registration - Sykes 209 Sykes 255 A Sykes 255 B Sykes 210 9:00-9:40 am **Physical Geography 1** GIS 1 Chair: Francis Galgano Chair: Joe Bencloski **Student Map** 9:00 W. Weiland\* and D. Parnell -9:00 J. Bencloski - The Impact of the Contest and Snowfall Characteristics and Variability 1997-98 El Niño on Vegetation Health in Posters across the Delmarva Peninsula the Piura Region of Northwestern Peru: An NDVI Analysis 9:20 F. Galgano - Modes and Patterns 9:20 S. Fortnam\* - The Identification of of Shoreline Behavior Archaeological Remains on Cyprus via Quickbird Imagery and Remote Sensing 9:40 G. Faiers - Critics and the 9:40 J. Lugo\* and G. Coutu - Mapping **Evolution of Global Climate Change** the Mexican Networks in Southern Chester County Theory 10:00-10:10 Questions 10:00-10:10 Questions 9:45-10:30 am Coffee break 10:15-11:25 am **Human Geography 1** GIS<sub>2</sub> Chair: James Saku Chair: Matin Katirai Student Map 10:15 K. Silberfein and S. Lukas -10:15 B. Klitch\* and D. Harris - Impact Contest and Liberian Refugees: The Influence of the of Distance to Market Travel Times on **Posters** American Resettlement Option Rural Household Income: GIS Network Model 10:35 J. Saku - Poverty Reduction in 10:35 M. Katirai - Mass Transit and Ghana: A Model for African Countries? Development in LA and D.C. A Comparative Study 10:55 M. Applegarth - Geography of 10:55 T. Dolney - Reprioritizing the Phoenix, Arizona Severity of Abandoned Mine Lands (AMLs) using GIS 11:15-11:25 Questions 11:15-11:25 Questions \*Elaine F. Bosowski Award student paper presenter PGS luncheon 11:30 - 1:00 pm Autograph Library in Philips Memorial Building, Room 201 Luncheon Guest Speaker - John Katana - Sneakerology 101: 12:30 - 1:00 pm The Geography of Athletic Footwear

PGS Annual Business Meeting

1:00 - 1:15 pm

	Sykes 255 A	Sykes 255 B	Sykes 210	
1:15 - 4:00 pm	Physical Geography 2	PASSHE GIS Consortium		
	Chair: Gina Bloodworth	<u>Chair</u> : Tim Dolney		
	1:15 K. Schreiber - Does Drought Really Improve Chesapeake Bay Water Quality? The Effect of Precipitation on Stream Nitrate by Land-Use Type in a Tributary of the Chesapeake Bay	1:15 B. Lee and M. North - Web Based Long Term Ecological Monitoring System Development	Student Map Contest and Posters	
	1:35 G. Bloodworth - Dam Removal in the American West versus East: Is It Pragmatism or Ideology?	<b>1:35</b> G. Coutu - Mapping Ponds in Chester County: Historic Perspectives		
	1:55 K. Bergmann and J. Fava - Brandywine Valley Association's Red Streams Blue Program: A Model for Stream Restoration	<b>1:55</b> G. Turcotte - Pennsylvania Sunday Hunting Allowance's Effect on Recreational Users		
	2:15-2:25 Questions	<b>2:15</b> R. Martin - Is Everything Where It Should Be?		
	Green Asset Management: New Approaches for Tree and Woodland Assessment and Preservation	2:35 D. Fyfe - Network Connections of		
	Chair: Joan Welch	Mobile People: Linking Places through Circuits		
	2:30 J. Fritschle and E. Alexander - An Evaluation of Methodological Approaches to Determining Carbon Storage of Trees in Urban Parks	2:55 K. Crossney and E. Romero - High Cost Lending in Philadelphia		
	2:50 D. Fitz-Patrick and D. Ives-Dewey - Conservation Design in Chester County, Pennsylvania: Assessing Preservation Outcomes	<b>3:15-3:25</b> Questions		
	<b>3:10</b> E. Alexander, J. Fritschle, J. Welch, and G. Coutu - Creating a Green Legacy: Assessing and Predicting Benefits of Campus Trees			
	3:30 J. Abraham and G. Coutu - Using CITYgreen/GIS to Analyze the Ecological and Economic Benefits of Tree Canopy in the Central City of Philadelphia, Pennsylvania	Special Presentation: The Battle of Brandywine Animated Map S.Moir and M. Mattie, Chester County GIS 3:30-4:10	PASSHE GIS Board Meeting 3:30-5:00 pm	
	3:50-4:00 Questions			
4:00-5:00 pm	Panel Presentation: Career Opportunities and Job Outlook in the Field of Geography			
	William B. Kory (chair), Greg Faiers, Ola Johansson, Tanya McCoy-Caretti, Joe Sernell (panelists)			
5:00-6:00 pm	Student Awards Presentation and Student Pizza Party			

6:00 - 9:00 pm

# **Annual PGS Banquet - Brandywine River Museum**

# Distinguished Geographer Award Winner George F. Rengert

"A Brief History of Mapping in Crime Research"

3:00 - 9:30 am	Conference registration - Sykes 109					
	Sykes 255 A	Sykes 255 B	Sykes 210			
9:00 - 11:40 am	Geography Education					
	Chair: Brent Zaprowski					
	9:00 O. Johansson - Energy in the Geography Curriculum					
	9:20 B. Zaprowski - Using E-books to Teach Introductory Earth Science Courses: Thoughts and Perspectives					
	9:40-9:50 Questions					
	Human Geography 2 Chair: Karen Trifonoff					
	9:50 S. Oluic - Balkan Muslim Emigre Communities in the US – A Radical Islamic Threat?					
	<b>10:10</b> M. Graham and R. Stone - Prelude to Vicksburg: Overlooked Battlefields of the Vicksburg Campaign					
	10:30 K. Trifonoff - Population Change: A Comparison of Schuylkill and Monroe Counties					
	10:50 S. Silverman - The Influence of the WB & A Electric Railroad on Early Black Suburbs in Prince George's County, Maryland					
	<b>11:10</b> D. McDermott and P. Mobley - Vignettes of the Backcountry: The Story of Washington County, Md. 1730-1830					
	11:30-11:40 Questions					
12:00-5:00 pm	Field trip		•			

Matlack Parking Structure Philips Memorial Hall South High St. (3) Sykes Student Union

West Chester University Campus

# DIRECTIONS TO THE WEST CHESTER UNIVERSITY CAMPUS

# From Western Pennsylvania (via PA Turnpike)

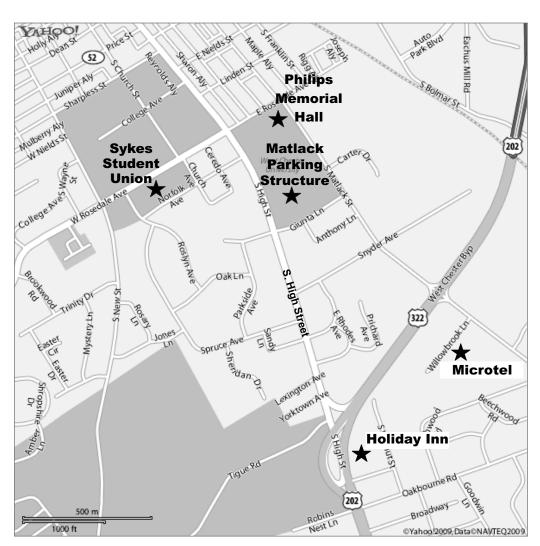
Take Pennsylvania Turnpike to exit #312, Downingtown. Follow signs for Rt. 100 South. Shortly after the intersection of Rts. 100 and 30, follow the signs for Pottstown Pike. Route 100 S. will become High Street in the borough of West Chester. Stay on High Street until you come to East Campus Dr. on your left. PARK IN THE MATLACK PARKING STRUCTURE. Walk to the Sykes Student Union for the talks.

# From Delaware Memorial Bridge and points south:

Take Rt. 95 to the exit for Rt. 202 N. (Concord Pike). Continue north on 202. (From the intersections of Rts. 1 and 202, it is approximately seven miles to West Chester.) At the Holiday Inn proceed straight ahead under the overpass, following the signs for the Business District, Rt. 322. Continue north on High Street to until you come to East Campus Dr. on your right. PARK IN THE MATLACK PARKING STRUCTURE. Walk to the Sykes Student Union for the talks.

# From New Jersey Turnpike (North or South) and points east:

Follow Pennsylvania Turnpike West to exit #326, Valley Forge. Go about 1/4 mile to exit #328, to Rt. 202 South, West Chester, and continue for approximately 20 minutes. Take the High Street exit. Continue north on High Street to East Campus Dr. on your right. PARK IN THE MATLACK PARKING STRUCTURE. Walk to the Sykes Student Union for the talks.



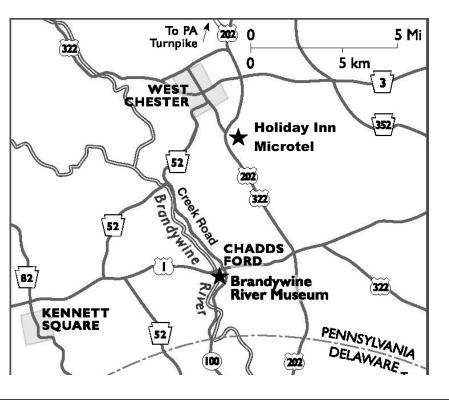
## **BRANDYWINE RIVER MUSEUM**

Take Route 202 south from West Chester.

At the intersection of Route 202 and Route 1, turn right onto Route 1 south.

Follow Route 1 for approximately 3 miles.

The Brandywine River Museum is located on the left side of US Route 1, just past the intersection with Creek Road (formerly known as Route 100) in Chadds Ford.



# Call for 2010 PGS Awards

The Pennsylvania Geographical Society Awards Committee is soliciting *nominations* and *self-nominations* for the following 2010 awards:

**Teacher Recognition Award**. Given to K-12 teachers who are effective at teaching Geography, Earth Science, Environmental Science or other courses such as Social Studies where a significant geographic component is present. More than one award is given each year, and recipients need **not** be members of PGS.

**Distinguished Teacher Award.** Given at both the K-12 and college/university levels. The recipient must have documented evidence of excellence in teaching as well as innovative and effective classroom methods in Geography, Earth Science, Environmental Science or any other course (s) with a consistent and substantive geographic base. There may be more than one recipient each year. Recipients **must** be members of PGS, but an exception may be made in the case of highly qualified K-12 teachers.

**Distinguished Scholar Award.** Given to an individual with substantive research, publications and professional development in Geography. There is usually only one award per year, and the nominee **must** be a member of PGS. This award may not be bestowed each year, but is dependent on the quality of the nominees or self-nominees.

**Distinguished Service Award.** Given to any individual who has given substantive and long-term service to both the discipline of Geography and to the PGS. There is usually only one award per year. The recipient **must** be a member of PGS. This award may not be awarded each year, but is dependent on the quality of the nominees and self-nominees.

**Ruby S. and E. Willard Miller Lifetime Achievement Award.** This award is given occasionally to an individual of exemplary, long-term dedication to the discipline of Geography and to the PGS. The award may be given posthumously. The recipient **must** have been a member of the PGS (or its predecessor, the PCGS).

Nominations or self-nominations should be sent to: Dr. Mary J. Sacavage, Director of Alvernia University Schuylkill Center, 1544 Route 61 Hwy S., Suite 6190, Pottsville, PA 17901-4213 Phone: (570) 385-2382; e-mail:mary.sacavage@alvernia.edu. All nominations must be accompanied by a letter stating why the nominee is qualified for a given award. Please include the nominee's full name, address, phone number, and e-mail address. The deadline for 2010 nominations is March 28, 2010.

### **LIST OF ABSTRACTS**

### Geography of Phoenix, Arizona

Mike Applegarth (Shippensburg University)

The city of Phoenix, Arizona has undergone rapid expansion and growth, particularly over the past twenty years, which has led to it being one of the most populated cities in the US. The fast growth has created many urban contrasts in the city and the subsequent need for growth in infrastructure to meet the population increase. We will explore the city and see the many contrasts and examples of urban development in the Phoenix area.

### Creating a Green Legacy: Assessing and Predicting Benefits of Campus Trees

Eunice Alexander (West Chester University), Joy Fritschle (West Chester University), Joan Welch (West Chester University) and Gary Coutu (West Chester University)

Urban trees, including those found on many college campuses, can contribute to sequestering and storing carbon, mitigating urban heat island effect, ameliorating air pollution, reducing stormwater runoff, improving water quality, providing habitat for native fauna, and enhancing the aesthetic setting. Furthermore, on college and university campuses, trees provide a number of learning opportunities for students. Adequate planning and management of such a valuable resource first requires an inventory and assessment of campus trees. To this end, a collaborative group of faculty, staff, and students at West Chester University conducted an inventory and assessment of campus tree resources and developed a management database. An initial analysis of the database using the CITYgreen extension in ArcGIS found that campus trees: removed 1,165 pounds of air pollutants per year, stored 760 tons of carbon, sequestered 5.92 tons of carbon per year, retained 113,622 cubic feet of stormwater, and reduced biological oxygen demand by 16.9% and chemical by 26.0% to nearby streams. We ran future scenarios for the campus modifying tree canopy and impervious cover, and compared these with existing conditions. This evaluation of campus trees could be applied by other schools, colleges, and universities as they create and manage the "green legacies" of their own campuses.

# The Impact of the 1997-98 El Niño on Vegetation Health in the Piura Region of Northwestern Peru: An NDVI Analysis

Joseph W. Bencloski (Indiana University of Pennsylvania)

The normalized difference vegetation index (NDVI) is a satellite image analysis technique commonly used to study changes in vegetation health over two or more time periods. This study uses the NDVI to analyze the impact of the 1997-98 El Niño on changes in vegetation health in the Piura region of northwestern Peru. Northwestern Peru is normally an arid area during the normal and La Niña periods of the El Niño Southern Oscillation (ENSO) cycle. However, during the El Niño phase of ENSO, the area receives abundant precipitation, which causes vegetation to flourish. After study areas were extracted from 1997 and 1998 Landsat 7 Enhanced Thematic Mapper (ETM+) images covering northwestern Peru, the band 3 (visible red) and band 4 (near infrared) pixel digital numbers were converted to NDVIs (NDVI = NIR-R/NIR+R). Analysis of the NDVI maps and graphs yielded the expected patterns. In 1997, before the onset of heavy El Niño rainfall, the NDVI values fell into the lower range indicating a lack of vegetation vigor. However, with the onset of heavy El Niño rainfall in 1998, the NDVI values fell into the higher ranges indicating an increase in vegetation robustness.

# Brandywine Valley Association's Red Streams Blue Program: A Model for Stream Restoration Kathy Bergmann (Brandywine Valley Association) and Jane Fava

To address the problem of impaired streams in the Brandywine watershed the Brandywine Valley Association (BVA) initiated the Red Streams Blue Program. The BVA created maps showing the streams not meeting water quality standards in red and those attaining standards in blue. The overall goal of

the Program is to ensure that all streams in the Brandywine meet Pennsylvania water quality standards or in program terms make a red stream blue. To accomplish this task the BVA completed comprehensive assessments in small impaired subwatersheds. From these assessments a restoration plan was created listing the actions needed to improve water quality. Based on cost, impact and priority projects were selected in each watershed for implementation. The BVA will present our progress to date on our Red Streams Blue Program.

# Dam Removal in the American West versus East: Is It Pragmatism or Ideology? Gina Bloodworth (Salisbury University)

In water resource management, the single largest generational trend in policy and planning centers on dam removal. Removing dams began in the eastern part of the U.S. then migrated westward. However, the radically different geography between the wet East and the dry West spawned equally different views on water management priorities, values and practical solutions. Now that water managers face the new complication of dam removal, deep divisions in motivation, development patterns, bureaucracy, law and policy are once again visible. While chaos in the realm of water management is not new, the solutions regarding dams are new and reveal deep conflicts in ideology as well as pragmatic options. This paper explores how both sides of the country deal with dam removal, by examining the growth and evolution of dams, their inherent problems and the range of solutions seen thus far from both a policy and a legal perspective. It is hoped that understanding these divergent trends will reveal some clarity about how the next generation will address this issue, which is only now beginning to take center stage in water management debates.

# **Mapping Ponds in Chester County: Historic Perspectives**

Gary W. Coutu (West Chester University)

Dr. Gary Coutu (Geography and Planning) and Dr. Win Fairchild (Biology) of West Chester University have compiled a historic GIS database of ponds in Chester County over a 6 decade period. The results of this project include an analysis of pond proliferation over a 5 year period and a focused look at 5 townships over a 60 year time span. Results also include an analysis of sedimentation rates in this area over a 20 year period.

# Using CITYgreen/GIS to Analyze the Ecological and Economic Benefits of Tree Canopy in the Central City of Philadelphia, Pennsylvania

Gary Coutu (West Chester University) and John Abraham (West Chester University)

The city of Philadelphia is going through a rapid redevelopment to become one of the greenest cities in the Nation. The objective of this research is to calculate the benefits of trees and other green spaces in Center City Philadelphia. The analysis, based on a land cover dataset (i.e., trees, buildings, and impervious surfaces), shows the amount of air pollution removal, storm water diversion, carbon sequestration and carbon stock in terms of dollar values and volume removed. The ArcGIS extension, Citygreen/GIS was used for this analysis. Data layers include, tree database for the parks of the City of Philadelphia, 2005 land use cover, aerial photography and Digital Elevation Models (DEM.)

### **High Cost Lending in Philadelphia**

Kristen B. Crossney (West Chester University) and Esteban Romero (West Chester University)

This paper explores HMDA data from recent years to identify high-cost mortgages in Philadelphia, Pennsylvania. Census data and additional HMDA data are used to better understand the neighborhood whose residents have high-cost mortgages and the historical context of mortgage lending. The paper considers the distribution and characteristics of subprime lending across the City of Philadelphia, and concludes with a discussion of the effect of high cost lending on urban neighborhoods.

# Reprioritizing the Severity of Abandoned Mine Lands (AMLs) using GIS

Tim Dolney (Penn State Altoona)

Abandoned mine lands (AMLs) associated with past coal-mining scar Pennsylvania's landscape with environmental and safety hazards. Reclamation projects have been instituted to eliminate and reduce the hazards they pose through the Bureau of Abandoned Mine Reclamation (BAMR). Because of the large number of AMLs and limited funds available, the state is only able to reclaim the most hazardous sites. These sites are identified trough an assessment process that assigns priorities to AMLs. However, these priorities are out-dated and do not accurately reflect the current spatial distribution of land use and census data. This talk presents a GIS methodology for the prioritization of AMLs using the process of extrapolation and focal statistics. By incorporating BAMR's current assessment techniques into GIS with current land use and census data, AML priorities were reassigned to accurately reflect the current spatial landscape. Results indicate current AML priorities assigned by the state do not accurately reflect current land use and census data and underestimate the safety hazards of many sites, including high priority sites.

## **Critics and the Evolution of Global Climate Change Theory**

Gregory E. Faiers (University of Pittsburgh at Johnstown)

Human-induced global climate change has become a highly politicized topic, especially in the United States. The idea that human activities are currently, and will increasingly, impact world climates has been attacked as an attempt to attack or weaken capitalist and democratic societies. Those who criticize the output of models and doubt the existence of human-induced warming are often labeled as right-wing extremists and anti-science. However, over the past thirty years, critics of the global climate models have contributed to the improvement of the models themselves. This presentation will outline various ways by which climate change forecasting methods have improved as forecasters respond to valid critical analyses.

**Conservation Design in Chester County, Pennsylvania: Assessing Preservation Outcomes**Daniel Fitz-Patrick (West Chester University) and Dorothy Ives-Dewey (West Chester University)

Conservation development has become a widely accepted residential development option in suburban areas in Pennsylvania. As an alternative to conventional, sprawl settlement patterns, conservation development is touted as a land development form that can more effectively preserve natural resources at both the site level and over a region. Based on a sample of completed conservation developments in Chester County, Pennsylvania, this research empirically assesses the outcome of these projects in regard to preservation of selected natural features. The features that are tested include steep slopes, woodlands and open space. The results indicate that conservation development is more effective at preserving open space and moderate and steep slopes than woodlands. The findings have implications for the design of effective regulations of conservation development to better preserve all natural features.

# The Identification of Archaeological Remains on Cyprus via Quickbird Imagery and Remote Sensing

Sara R. Fortnam (Indiana University of Pennsylvania)

The Pyla-Koutsopetria Archaeological Project (PKAP) is an interdisciplinary archaeological investigation of a Late-Roman village found along the southern coast of Cyprus. This research attempts to indentify and interpret archaeological features within the defined project area. The use of remote sensing technologies enables archaeologists to detect features or anomalies on Earth's surface that are often not visible to the human eye at ground level. High resolution Quickbird panchromatic and multispectral images were obtained for analysis within the range of sub-meter accuracy. This study was conducted on approximately a 2 sq. km. area within the site boundaries utilizing three remote

sensing techniques: Panchromatic Band Analysis, Principle Component Analysis (PCA) and Normalized Difference Vegetation Index (NDVI) Analysis. Preliminary results reveal an area with multiple linear features that display similar spectral properties as those found in Central Italy. Satellite image analysis also reveals the possible location of a Late-Roman basilica in the same area.

## **Olive Oil in the Ancient World** (Student map submission) Sara R. Fortnam (Indiana University of Pennsylvania)

The usage of olive oil has deep roots in the ancient world of the Mediterranean. According to Greek mythology, Zeus had promised the region surrounding Athens, to the god or goddess who could create the most useful invention. Athena struck the ground with her staff and there emerged a tree, bearing the fruit that would prove the most useful and beneficial, the olive tree. The olive and its liquid gold were so fundamental in the stability of the ancient world that it was considered a form of portable wealth. The olive tree is believed to be a native of Asia Minor and was first cultivated in Syria over five thousand years ago. Olive oil evolved to be one of the main foundation stones of the ancient Mediterranean economy and has encompassed the lives of ancient cultures for thousands of years.

# An Evaluation of Methodological Approaches to Determining Carbon Storage of Trees in Urban Parks

Joy Fritschle (West Chester University) and Eunice Alexander (West Chester University)

Global climate change has led to intense interest in how much carbon trees can sequester annually and store over time. Public parks in particular are among the most important sites for carbon sequestration and storage in many urban landscapes due to greater tree cover and lower impervious surface per unit area. Several methodological approaches and tools have been developed to estimate carbon storage, ranging from published equations to widely available software programs such as i-Trees and CITYgreen. The purpose of this study was to estimate the carbon stored in trees found in urban parks using the Borough of West Chester, Pennsylvania as a case study; and to evaluate different methodological tools available for determining carbon storage. The authors counted, measured, and identified all tree species greater than 5 cm in diameter-at-breast height in 11 borough parks. Carbon stock (tonnes C/ha) varied widely among the parks; however smaller parks (<1 ha) generally contributed less carbon storage per unit area and in total compared to larger parks (>2 ha). A comparison of three different methodological approaches to estimating carbon found that each approach yielded statistically significantly different results. The paper concludes with recommendations for maximizing the various benefits urban trees can provide in mitigating climate change.

# **Network Connections of Mobile People: Linking Places through Circuits**

David A. Fyfe (York College of Pennsylvania)

In the late nineteenth century, in the era that mass-advertising and catalog sales were beginning to take shape, manufacturers hired traveling salesmen to promote their products to retailers, and retailers often took on the roles of peddler and huckster to sell items and extend the range of their store. Their circuits help to trace the commercial networks throughout the urban system, especially for the small-town places. In addition, entertainers of various kinds traveled from place to place, large and small, and across seasonally repeated routes; here too, networks of commerce – and sociability, given the importance of entertainment for community gathering – are evident. This paper is centrally concerned with mapping and analyzing network connections of mobile people: traveling salesmen, vaudeville or minstrel troupes, and the circus to explore the broader context of how commerce and entertainment linked places around the turn of the twentieth century. This study uses route-based data to visualize the spatial and temporal extent of these networks and assesses how places, small and large, were connected by commercial and entertainment agents.

### **Modes and Patterns of Shoreline Behavior**

Francis A. Galgano (Villanova University)

Coastal scientists have been mapping historical shoreline positions to determine trends and predict future changes. It is difficult, however, to forecast future changes by extrapolating past trends if the causes of previous shoreline changes are insufficiently established. Understanding patterns of change provides a geomorphic framework for interpreting shoreline movements. Barrier islands are dynamic landforms and inevitably change position and shape because changes in coastal processes combined with human intervention create temporal and spatial diversity in shoreline movements that are manifested as geographic variations in coastal landforms. Essentially, the problem is twofold. First, we do not have a clear understanding of how beaches move in time and space because of the high noise to signal ratio in the data. Second, coastal managers do not often understand the spatial and temporal variability of shoreline change, and therefore do not perceive the importance of using long-term data to properly identify the background erosion trend. This paper employs long-term shoreline data derived from maps, aerial photographs, and GPS to delineate discrete patterns or "modes" of shoreline behavior along the U.S. East Coast barrier island system.

## Prelude to Vicksburg: Overlooked Battlefields of the Vicksburg Campaign

Mary M. Graham (York College of Pennsylvania) and Richard D. Stone (Shippensburg University)

During the Civil War, the last stretch of the Mississippi River that was controlled by the Confederates in early 1863 was between Vicksburg, MS and Port Hudson, LA. Preventing the Union from gaining control of the Mississippi in its entirety was the Confederate stronghold at Vicksburg. Union forces first assaulted the city from the north and were repulsed in late December 1862. The next strategy was to by-pass Vicksburg on the west bank of the river, then cross the river south of the city, and attack the citadel from the east. This presentation examines three battlefields of the campaign to take Vicksburg. Two battles, Champion Hill and Big Black River Bridge occurred prior to the time the Union started its siege of Vicksburg, while the third, Milliken's Bend, occurred while the siege was in progress. All three battles have received scant attention from scholars and very little effort to preserve the battlefields on which they were fought has been made.

### **Energy in the Geography Curriculum**

Ola Johansson (University of Pittsburgh at Johnstown)

Geography's position in the intersection of the natural and social sciences makes it a natural fit for energy research and education; however, very little is known about the teaching of energy geography. In this paper, 41 energy geography courses are identified and syllabi content is analyzed. Existing energy courses tend to be taught at large departments, but primarily for an undergraduate audience. Courses are equally divided between broad exposes of energy issues and more narrow and specialized energy topics. Moreover, the course content is usually within the human geography than physical geography tradition. However, energy is limited to being an interest of individual geographers rather than a departmental program specialty; therefore, the teaching of energy seems to be a neglected endeavor in geography. To rectify this, departments should reconsider their nature-society curriculum to create space for energy courses, and energy geographers should produce text material that emphasizes the geographic perspective on energy. Geography needs to rethink the position of energy within the discipline and award it a higher status.

# Mass Transit and Development in LA and D.C. A Comparative Study

Matin Katirai (West Chester University)

Millions of Americans live in suburban neighborhoods that are completely reliant upon an automobile to commute to work, take a shopping trip, or accomplish anything meaningful on a daily basis. Long drives to work, major traffic congestion, and sedentary lifestyle are just some of outcomes of living

within these typical American neighborhoods. These sprawled developments have not come about by accident, and have been the result of United States (U.S.) government policies and actions for many years. Within the past several decades city planners have contemplated upon how to reverse this pattern of decentralization and sprawl. The expansion of transit systems has been seen as one of the solutions to urban sprawl that have been utilized in the fight against highway expansion. Development that occurs around mass transit is referred to as transit oriented development (TOD). TOD has been recently used as a method to reduce sprawl by concentrating development around subway or rail stations. The primary focus of this paper was to investigate the impact of transportation choices on urban development. The focal point was to examine mass transit and the impact of proximity to rail lines on property values, and housing densities in two major U.S., Los Angeles (LA), California, and Washington, D.C. Data regarding population and housing characteristics were retrieved from the U.S. Census Bureau for the year 2000 and 1990, for D.C. and LA. Data was gathered at the census block level. Two methods of analysis were used. First, census blocks were selected at 1 mile intervals from the transit stations using Geographic Information Systems (GIS). Specifically, aggregated housing values along with unit density were retrieved at 1 mile intervals using the GIS. This data was plotted on a graph to indicate distance from the station and housing values, and densities. Values up to 20 miles were plotted on the graph at one mile intervals. Multiple linear regression analyses were performed in SPSS to determine the relationship between home values, socioeconomic status, and the distance from transit stations. Regression results indicate that distance from a Metro station was associated with median home values in D.C., and were significant at the 0.05 level. Distance from a transit station was an important predictor of median home values, as approximately 64% of variation of median home values could be explained by one of the models. Peak housing prices occurred at distances that were several miles from transit stations. In D.C., the peak in housing prices occurred approximately 5 miles from transit stations. In LA peak values occurred about 10 miles away. Proximity to a transit station was a significant factor for median home values in D.C. (up to 4 miles away), but not L.A.

# Impact of Distance to Market Travel Times on Rural Household Income: GIS Network Model Brian E. Klitch (Salisbury University) and Daniel Harris (Salisbury University)

In recent decades farming households on the Amazonian frontier have long been the source of widespread deforestation impacting biodiversity and degrading the landscape. This study statistically evaluated the impact of distance to market for agriculturally produced goods by small scale farmers in a frontier settlement in the Brazilian Amazon. Using an origin-destination network model developed in GIS and constructed from GPS collected transportation infrastructure in six municipalities in Rondonia, Brazil, travel times were modeled between farms and commercial centers. Average GPS travel times and DEM derived slope data were used to segment the travel network and calculate travel times for each farm. Resultant travel times were used to aggregate farms into classes to evaluate agricultural production income differences reported by household survey data collected in July of 2009.

# **Web Based Long Term Ecological Monitoring System Development**Byoungjae Lee (Washington & Jefferson College) and Matthew North

The goal of this project is to develop an online ecological database that will give faculty, student, researchers, and the public the ability to share and collaborate on ecological data collected from the Abernathy Field Station (AFS) in Washington County, Pennsylvania. Washington & Jefferson (W&J) College was awarded a grant by the Howard Hughes Medical Institute (HHMI) to provide a place for data to be easily collected, stored, manipulated, exported, and presented using geographic information systems. This "Web Based Long Term Ecological Monitoring (WebLEM) System" is designed based on ArcGIS server to support web-based spatial data management using a versioned geodatabase concept, provide geoprocessing tools for data users, and deploy mobile applications that allow mobile workforces to dynamically query and update server data remotely with global positioning system (GPS) technology. Basically, the web mapping application for the WebLEM system provides the tools for map navigation, identifying features, measuring distances, finding addresses, and querying and searching

attributes. It will create a sustainable collaborative environment for Long-tem Ecological Research (LTER).

### Mapping the Mexican Networks in Southern Chester County

Jason Lugo (West Chester University) and Gary Coutu (West Chester University)

Chester County is located in Southeastern Pennsylvania, home to West Chester University. It is in southern Chester County that this study examines the growing Latino immigrant groups and their networks. This study utilizes Geographic Information Systems (GIS) to analyze and map these locations. The research is mapping the social service networks for the Mexican population to assist in their daily functions. The study uses field work documenting social service networks, available published data, interviews with Latino organizers, and GIS to capture the data and display the results in a graphic application.

This analysis displays the growing Mexican community and its growing social services network. The visual spatial display of the results provides a clear warehouse of data that can be useful to researchers and members of the community alike.

## Is Everything Where It Should Be?

Robert N. Martin (Kutztown University)

This paper discusses how satellite images and aerial photography may be incorporated into building a campus GIS geodatabase. Using Kutztown University as an example the aspects of the problem will be discussed: the process used to develop the campus CAD files; how the CAD files were moved to an ArcGIS geodatabase; the georeferencing of database using GPS; and how remotely sensed data is being used to determine if everything is in place.

**Vignettes of the Backcountry: The Story of Washington County, Md. 1730-1830**Dan McDermott (Montgomery College) and Phil Mobley (George Mason University)

The Backcountry was in effect a vernacular region. It was defined by the people of the period. In this case a small PowerPoint program has been created to show how the region was defined. Other vernacular applications are also identified building on the work of Wilbur Zelinsky using the GNIS system now available at the USGS website. In this case, more identities are accessible and capable of map output. Further using primary source materials, the presenters were able to clear up some issue relating to the regions physical geography and population growth

### The Battle of Brandywine Animated Map

Sean Moir (Chester County GIS) and Mark Mattie (Chester County GIS)

The Battle of Brandywine was the largest single-day battle of the American Revolution and, although the Continental Army was defeated, George Washington demonstrated, for the first time, his ability to withstand a direct engagement with General Howe's army. This project will identify and inventory threatened parcels of land within the Brandywine Battlefield National Historic Landmark boundaries, prioritize their importance, and develop a GIS-based animated map to aid in the county's effort to raise awareness of the battlefield's significance among members of the community.

# Balkan Muslim Emigre Communities in the US - A Radical Islamic Threat?

Steven Oluic (United States Military Academy)

The purpose of this research is to explore the distribution, spatial patterns and cultural imprints of Balkan Muslim immigrant and Diaspora communities in the United States. It also investigates the communities' possible ties to radical ideologies and organizations. This research focuses on the Bosnian (Bošniak) and Albanian Muslim communities. Through a combination of document/literature/web

research, field research, and opportunity interviews the research data and findings presented is a first step in producing a more thorough and comprehensive understanding of two Diaspora communities in the United States.

# Poverty Reduction in Ghana: A Model for African Countries?

James C. Saku (Frostburg State University)

Poverty is a major problem confronting African countries. Comparatively, African countries account for the highest incidence of poverty in the world. According to the World Bank, in 2005, Sub-Saharan Africa accounted for about 28.74 percent of people living under extreme poverty. Poverty in Africa is characterized by low income, high illiteracy rate, unemployment and underemployment, high infant mortality rate and low standard of living. The question is what are the causes of poverty in Africa? What poverty reduction policies have been initiated by African governments to address this problem? Over the past several years, a number of African countries including Ghana have initiated poverty reduction policies which are designed to solve this endemic problem. While there are mixed results in the outcome of these policies, Ghana's policies appear to be making significant impact on poverty reduction. This paper examines the institutional structures of Ghana's Poverty Reduction Strategy (GPRS) and the resulting impact on poverty reduction.

### **Images of the City: New Explorations** (poster)

Rickie Sanders (Temple University) and Emily Gleason (Temple University)

Cities can be conceptualized as "abstract receptacles for displaced feelings about other things" (Kennedy, 2003). As metaphors standing in for our feelings about race and class, clean and dirty, ugly and pretty, safe and dangerous; what we see on the urban landscape reflects our values and assumptions. Thus, the urban landscape offers unique insights into our complex relationship with the urban experience. While it is our imaginations that shape the physical structure of cities, we are, in turn, shaped by that structure.

The images displayed here provide the basis for exploration of concepts from urban geography, e.g. juxtapositions of power and politics, abandonment, and landscapes of tragedy. The photos are best understood in the context of the rapid and totalizing transformations currently underway in American cities -- deindustrialization/shifting employment patterns, snowballing suburbanization/decentralization, increased immigration of people of color, heightened levels of surveillance and militarization, growing racial concentration, escalating commodification of place/space, and increasing class polarization. These transformations speak to the "crisis of urbanity" that has surfaced in the music of rap and hip/hop; the advertisements in magazines such as Fadar, LUCKY., Colours; the paintings of Edward Hopper; and the fiction of Toni Morrison.

# **Salt of the Earth: Envisioning Bolivia's Role in the New Energy Economy** (poster) Natania Schaumburg (Temple University)

Bolivia, one of the least developed countries in Latin America, is currently undergoing revolutionary economic, political and social changes that are influencing the shape of its national development. Bolivia's recent election of their first Indigenous president, Evo Morales, has redefined Bolivian nationalism.

Less known, however, is that Bolivia may also be highly influential in shaping the direction of fuel efficiency on a global level. It is estimated that 5.4 million tons of lithium could be extracted from Bolivia's lithium reserves. This is pertinent to governments worldwide which seek to both promote a fuel efficient industry while reducing dependency on foreign oil.

I conducted a research project that explores the dichotomies existent between the spiritual connections that Bolivian cultures have with their land; the desire of foreign auto industries seeking to tap the lithium resource; and the varying perspectives of communities surrounding the salt flats. Is

there an international understanding of the need to respect Bolivian's nationalism and right to control their resources?

# Does Drought Really Improve Chesapeake Bay Water Quality? The Effect of Precipitation on Stream Nitrate by Land-Use Type in a Tributary of the Chesapeake Bay

Kathleen V. Schreiber (Millersville University of Pennsylvania)

After more than two decades of multi-state programs aimed at improvement of Chesapeake Bay water quality, multiple pollution issues still exist for the Bay region. Foremost, the Bay continues to suffer from eutrophication, including hypoxia of deep water and seasonal algal blooms that result from excess loading of nutrients from Bay watershed tributaries. Nitrate concentrations in Chesapeake Bay appear to decline in drought periods, as illustrated during the dry years of 1999 through 2002. Reductions in nitrate loads during dry times occur presumably because fewer precipitation events and amounts result in less runoff carrying pollution into headwaters of rivers feeding into the Chesapeake Bay. This study examines the role of climate and land use in water quality variations for select first-order streams of Lancaster County. The region is an intensive agricultural area within the drainage basin of the Susquehanna River, which is a major source of nutrients delivered to the bay. Stream water quality (nitrate nitrogen, total dissolved solids, conductivity) was collected as part of a 3-year (2007-2009) student summer REU research project using Lamotte water quality test kits for two urban, two agricultural, and two forested first-order streams near Millersville, Pennsylvania. Non-parametric analysis of variance revealed statistically significant differences across land use for nitrate-nitrogen. Additionally, days with precipitation showed significantly higher nitrate concentrations for agricultural and forested land uses, but not for urban land uses. Continuing studies will help establish the link between precipitation and water quality in river headwaters that feed into the Chesapeake Bay. Considering that the vast majority of stream miles of major rivers exist within the headwater region, the health of the Susquehanna's low order tributaries are strongly tied to the overall health of the Chesapeake Bay.

# **Liberian Refugees: The Influence of the American Resettlement Option**Marilyn Silberfein (Temple University) and Susan Lukas (Temple University)

Liberia has been beset by a sequence of civil wars (1989-96, 1999-2003) that have produced thousands of refugees and internally displaced persons (IDPs). These conflicts have also impacted the political space of neighboring countries, complicating further the lives of those displaced by war. For example, many Liberian refugees relocated to Côte d'Ivoire where, in 2002, they ran into a new Ivorian civil war. So constrained were the narrowing options available to refugees in Côte d'Ivoire that the US government agreed to admit some of these refugees on special visas.

The admission of Liberian refugees to the US has had two important consequences and this paper will focus on each of them in turn. First of all, the Liberians were expected to leave the US as soon as conditions allowed. Yet, almost immediately after the first contingent arrived in the early 90s and the second in 2004, campaigns were begun to extend visas and allow for an indefinite stay. Several US administrations have played a role in this process but the final decision on the status of the refugees has still not been made. Secondly, many of the Liberians remaining in the refugee camps continue to anticipate another admission to the US. Consequently, Liberian refugees currently residing in other African counties are often reluctant to return home, hoping instead for permission to enter the U.S. This situation has serious geopolitical consequences for Liberia, including strained relations with neighboring countries and problems determining the exact legal status of refugees.

# The Influence of the WB & A Electric Railroad on Early Black Suburbs in Prince George's County, Maryland

Sherman E. Silverman (Prince George's Community College)

Diffusion of electricity, in the context of illumination and transportation, early in the twentieth century, began the transformation of the American city. Development of electric railroads extended the residential city deeper into the rural periphery. Before the innovation of electric trolleys and interurbans, the built-up city was limited to less than a few miles from the city's center. While steam railroads made it possible for affluent communities to evolve along their right-of-ways, working class families were limited to blue-collar enclaves close to where their jobs existed. Electrification of railroads made it possible for working and middle class families to leave the city proper moving into newly developed communities made accessible by inexpensive transportation to their work in the city. The Washington, Baltimore and Annapolis Electric Railroad's trackage ran through Prince George's County between the black communities of Bowie and Fairmont Heights thus beginning a linear pattern of African American settlements that would be the precursor of black suburbanization that became more intensive consequential to the Civil Rights Movement of the 1960s. The interurban railroad gave African Americans an option to live in communities removed from racism in Washington prevalent during the 1920s and the ability to intensify the concept of black separatism as advocated by Garvevism. Dismantled in the 1930s, the right-of-way is now a biking trail. In a county that prides itself as being the nation's largest suburban concentration of affluent African Americans, the former right-ofway is an important artifact of black heritage.

(Note: Please schedule for Saturday morning.)

# Population Change: A Comparison of Schuylkill and Monroe Counties

Karen M. Trifonoff (Bloomsburg University)

The counties of Pennsylvania exhibit a great deal of variety in terms of the percentage of population change from 1990 to 2000. Schuylkill County has one of the largest negative percentage changes, while Monroe County has one of the largest. This paper compares and contrasts the population and economic characteristics of these two counties.

### Pennsylvania Sunday Hunting Allowance's Effect on Recreational Users

Guillaume Turcotte (Villanova University)

Hunting is a popular activity in the state of Pennsylvania, with participants comprising of residents and visitors from neighboring states. However, it remains one of a few states prohibiting hunting on Sunday. While the origin of this law can be attributed to the now defunct state's ecclesiastical blue laws, Sunday hunting continues to attract very vocal opposition citing more secular concerns.

At the center of the debate is the right of land access. Pennsylvania is generous in its allowance of hunting access on public lands. Due to the inherent risks involved with hunting, other recreational visitors abstain from utilizing the public lands that sanction hunting. This paper examines the effects that Sunday hunting would have on recreational users in Pennsylvania. Specifically, GIS analysis will ascertain the extent of public state land and recreational trails that would be affected on Sundays during hunting season.

# Snowfall Characteristics and Variability across the Delmarva Peninsula

William R. Weiland (Salisbury University) and Darren B. Parnell (Salisbury University)

This study examined snowfall characteristics for thirteen locations across the Delmarva Peninsula from 1949 through 2005. Time series graphs illustrate extreme spatial variability in monthly and seasonal snowfall totals across a relatively small area. The length of a snowfall season was determined to be a significant factor contributing to seasonal snowfall totals and the distribution of annual snowfall. Analysis at daily, monthly, and seasonal time scales revealed the variability in the timing of when

locations received their largest one day snowfall, largest monthly total, and largest seasonal total on record. Monthly snowfall totals were correlated to the monthly Southern Oscillation Index to understand the relationship between El Nino and monthly snowfall values. Results indicate that El Nino does not have a significant influence on monthly snowfall values for locations in the study. Atmospheric circulation patterns were analyzed for historical snowfall events to recognize the atmospheric circulation associated with significant snowfalls.

# Using E-books to Teach Introductory Earth Science Courses: Thoughts and Perspectives Brent J. Zaprowski (Salisbury University)

The ever increasing use of electronic media to convey information has produced a new generation of textbooks called e-books (or e-texts). E-books are a paperless way to present the same material found in traditional textbooks. Unlike traditional textbooks, e-books also give students access to a wide range of multi-media options such as video tutorials and virtual flashcards. In this way, e-books are more than just books, they are tools which can be used to help students learn the material better.

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Pennsylvania Geographer", a highly respected, peer reviewed journal with articles of interest to a wide audience. The journal is found in leading research Throughout the year, the Society publishes "The institutions across the country.

The schedule includes an address by a noted geographer, Each fall, the Society holds its two-day annual meeting. a local fieldtrip, and sessions of interest to all segments of membership.

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Senior High (9-12) Elementary (K-6) Junior High (7-9)

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1. Learning/Teaching Evaluation

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26. Applied Geography

27. Other

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23. Africa

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# Evaluation form for the 2009 PENNSYLVANIA GEOGRAPHICAL SOCIETY (PGS) ANNUAL MEETING October 23-24 2009, West Chester University, West Chester, PA

Your input is most important for future annual meetings and other PGS programs. Please complete this form and return it to the PGS Registration table before you leave the meeting or mail it to:

Brent Zaprowski, Department of Geography and Geosciences,
1101 Camden Ave, Salisbury University, Salisbury, MD 21801

1. How would you rate this meeting?	Poor		Neutral		Excellent
•	1	2	3	4	5
a. Overall	( )	( )	( )	( )	( )
b. Site/Location of Meeting	( )	( )	( )	( )	( )
c. Meeting Program	( )	( )	( )	( )	( )
d. Hotel Accommodations	( )	( )	( )	( )	( )
e. Meeting Rooms	( )	( )	( )	( )	( )
2. Presentations:	Poor		Neutral		Excellent
	1	2	3	4	5
a. Friday AM	( )	( )	( )	( )	( )
b. Friday PM	( )	( )	( )	( )	( )
c. Saturday AM	( )	( )	( )	( )	( )
d. Maps and Posters	( )	( )	( )	( )	( )
3. PGS Luncheon	( )	( )	( )	( )	( )
Luncheon Speaker	( )	( )	( )	( )	( )
4. PGS Annual Banquet	( )	( )	( )	( )	( )
Banquet Speaker	( )	( )	( )	( )	( )
5. My expectations of the meeting were:	Unmet	t	Neutral		Met
	1	2	3	4	5
	( )	( )	( )	( )	( )
Why?					

6. What would make the Annual Meeting more valuable to you?