Curriculum Vitae

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ACADEMIC BACKGROUND

Peter is a graduate of Texas Tech University (TTU). He earned a B.S. in Physical Geography with a minor in biology in 1992 and a M.S. in Biology with a minor in geographic information systems in 1997. Peter's research interests focused on the relationship between disturbance and productivity gradients and plant community structure in short-grass prairies and deserts of the western United States. Peter pursued further studies as part of the U.S. Fish and Wildlife Service's Breeding Biology Research and Monitoring Database program (BBIRD). The BBIRD Project is a national cooperative program that uses standardized field methodologies for studies of nesting and breeding success and habitat requirements of interior forest songbirds. Peter was part of the research team that documented the effects of cowbird parasitism on several species of interior forest songbirds in the Sangre de Cristo Mountains of northeastern New Mexico. Peter also worked with Site-Specific Technologies (SST) in conjunction with the USDA's Agricultural Research Service as part of a cooperative effort to develop innovative applications for GPS and GIS technologies in precision agriculture. Since arriving at Garrett College in 2000, Peter, an Army Corps of Engineers certified wetland delineator, has worked closely with State and Federal agencies to preserve and restore critical wetlands in the upper reaches of the North Branch of the Potomac. In addition, Peter has worked in Mexico, Costa Rica, and Nicaragua with the Organization for Tropical Studies (OTS) and La Suerte and Ometepe Biological Field Stations (LSOBFS) to develop undergraduate biological research programs in neotropical environments. He is currently working with the OBFS in Nicaragua to develop a plan to map, assess, and prioritize the conservation of biological corridors on Isla de Ometepe in Lake Nicaragua. In Costa Rica, Peter is working with La Suerte Biological Field Station to develop a program for the reintroduction of native amphibian, reptile, and mammalian species whose populations have either declined significantly or have been extirpated from the Sarapiqui region of northeastern Costa Rica. In 2012, Peter received a grant that funded exploratory travel to two regions in China with the purpose of developing undergraduate education and research opportunities. The first leg of the trip covered 1500 miles of the lower Yangtze River from Chongqing to Shanghai with stops in the Three Gorges area, the Three Gorges Dam, and Huangshan (Yellow Mountain region), a UNESCO World Heritage site. The second leg of the trip was to Guangxi Autonomous Province near Guilin on the Lijiang (Li River). This area is famous for tower karst topography, numerous caves, unique flora and fauna, the Longsheng, Longji, and Dragon's Backbone rice terraces, and is home to numerous ethnic minorities like the Zhuang and Red Yao people.

CURRENT RESEARCH INTERESTS

Wetland restoration ecology
GIS and GPS technology
Acid mine drainage phytoremediation
Neotropical natural history and ecology

COURSES TAUGHT

Environmental Science - NRW 105/106
Geographic Information Systems – CSC 180
Geospatial Data Collection and Analysis – ENT 170

Natural History – BIO 110
Principles of Biology (for non-majors) – BIO 104
General Biology (for majors) – BIO 102
Chemistry and Quantitative Methods – ENT 201
Physical Geography – ES 121
Physical Geology – ES 101
General Chemistry II – CHE 102
BIO 109 – Human Biology and the Environment
Neotropical Natural History – BIO 250 (Costa Rica, Nicaragua)

PROFESSIONAL DEVELOPMENT

1. Army Corps of Engineers (ACOE) Certified Wetland Delineation Training: a 40 hour ACOE course in the latest legal, technical, and scientific requirements for wetland delineation. Date of training: May, 2000.

2. Integrating GPS and GIS Technology in the Classroom: a 40 hour training seminar in how to use the latest Global Positioning Systems (GPS) and Geographic Information Systems (GIS) technology in education. Training was funded by a grant from the National Science Foundation (NSF) and was administered by the Northwest Center for Sustainable Resources (NCSR) in partnership with Chemeketa College in Central Oregon. Date of training: July, 2000.

3. ARCINFO Advanced GIS Training Seminar: a 40 hour training seminar in how to use the latest ARCINFO Geographic Information Systems (GIS). Training was funded by a grant from NSF and was administered by the NCSR in partnership with Chemeketa College in Central Oregon. Date of training: July, 2001.

4. Advanced ArcGIS v8.2 Training: a Towson University ESRI-certified 30 hour training seminar in the use of the latest version of ESRI's GIS software. Date of training: May, 2002

5. Advanced ArcGIS v9.x Training: a Towson University ESRI-certified 30 hour training seminar in the use of the latest version of ESRI's GIS software. Date of training: January, 2007

RESEARCH GRANTS AND PROJECTS

1. Maryland Department of Natural Resources Kempton Mine Complex Acid Mine Drainage Grant: a $200,000 five-year grant (2001-05) from the Maryland Environmental Trust Fund to monitor and restore critical wetlands in the headwaters of the North Branch of the Potomac. This project has been completed (2005). Funding is expected for another five year period.

2. Veracruz GIS Institute: a multidisciplinary effort to develop a GIS for La Florida, an ecological preserve in the southern Sierra Madre Oriental near Cordoba, Mexico. The Veracruz GIS Institute was funded by NSF and administered by NCSR. Date of Institute: December, 2001

3. Green Ridge State Forest GIS Development Project: a $2,500 grant to develop a GIS for inventory and management of Maryland's Green Ridge State Forest. The project has been completed (2002).

4. La Cruces Research Station Experimental Forest Research Project: This research was funded by the Organization for Tropical Studies, a global consortium of 65 universities, and the government of Costa Rica. The project is based at the University of North Carolina and is designed to promote educational and research opportunities for students and educators. The purpose of the team's work was to develop an experimental forest GIS that can be used as both a research tool and as an educational matrix. The project has been completed (2003).

5. Potomac-Garrett State Forest GIS Development Project: a $2,500 grant to develop a GIS for inventory and management of Maryland's Potomac-Garrett State Forest. The project has been completed (2003).

6. Hoyes Run DNR Fisheries Monitoring Project: an $8,000 Maryland DNR Fisheries grant to monitor water chemistry and flow for Hoyes Run, a small stream heavily impacted by quarry activities and other land uses. The duration of the project is expected to be 12-18 months and began in May, 2003. The project has been completed (2004).

7. Winding Ridge-Frazee Mine Reclamation Project: a $6,000 grant from Maryland's Bureau of Mines to monitor flow and water chemistry in the reclaimed Frazee Mine Complex. The duration of the project is open-ended and began in May, 2003. The project is active.

8. Seige of Acre Acid Mine Drainage Monitoring Project: a $4,000 grant from Maryland's Bureau of Mines to monitor flow and water chemistry in the reclaimed Seige of Acre Mine Complex. The duration of the project is open-ended and began in May, 2003. The project is active.

9. Marsh Hill GIS Project: a $60,000 grant for a project to delineate wetlands and develop a GIS for infrastructure management and projected development of the Wisp Ski Area and adjacent land development projects. The project has been completed (2004).

10. MD DNR/US EPA Amish Road/North Branch of the Casselman River Wetlands Project: a $30,000 MD Bureau of Mines and USEPA grant to assess the ecological integrity of habitat near an abandoned high wall coal mine that has been reclaimed. Assessment included quantifying the effects of acid drainage from the reclaimed area on aquatic ecosystems of the Casselman River. Two rare and endangered species, the hellbender (*Cryptobranchus alleganiensis*) and the stonecat (*Noturus flavus*), are of special concern in the area. The project has been completed (2003).

11. MD DNR Ruffed Grouse GIS Project: a $2,000 grant to develop a GIS to monitor and assess habitat and populations of ruffed grouse in Garrett County. The project has been completed (2005).

12. MD DNR Forestry Division Pocomoke State Forest GIS Project: a $2,500 grant to develop a data management GIS for tracking forestry practices and harvest information in the 15,000 acre Pocomoke State Forest. The project has been completed (2005).

13. MD DNR Garrett County Bear Biology Database Project: a $2,500 collaborative effort to create a GIS for both historical and current bear data in Garrett County. This database will be used as the primary analysis tool for developing management plans for bears in Garrett County. The project has been completed (2005).

14. US Fish & Wildlife Federation/Western Maryland Resource Conservation & Development Council Project: a one year $23,500 grant to monitor and restore critical wetlands in the headwaters of the North Branch of the Potomac. The project has been completed (2006).

15. WMRCD and Power Plant Research Program Wetlands Monitoring and Restoration Project: a $30,000 grant that continues funding for monitoring and restoration of critical wetlands in the headwaters of the North Branch of the Potomac. The project has been completed (2006).

16. WMRCD and Power Plant Research Program Wetlands Monitoring and Restoration Project: a $6,100 grant that continues funding for monitoring and restoration of critical wetlands in the headwaters of the North Branch of the Potomac (April-June, 2007). The project is active.

17. WMRCD and Power Plant Research Program Wetlands Monitoring and Restoration Project: a $12,000 grant that continues funding for monitoring and restoration of critical wetlands in the headwaters of the North Branch of the Potomac. The project is complete (2007).

18. Power Plant Research Program (MD DNR) - Kempton Mine Complex Acid Mine Drainage Grant: a $90,000 three year grant (2008-11) to monitor and restore critical wetlands in the headwaters of the North Branch of the Potomac. This project is active.

19. Costa Rica and Nicaragua Neotropical Biology Project: This project is an effort to develop a course that teaches students how to integrate GPS and GIS technology in neotropical biology field studies. The goal is to create a curriculum for a course that can be offered to students annually over the winter intersession. Concurrent with this goal is the future development of a working partnership with the Ministry of the Environment and Ometepe Biological Field Station in Nicaragua to synthesize a plan to map, assess, and prioritize the conservation of biological corridors on the island of Ometepe in Lake Nicaragua. In Costa Rica, the concurrent goal is to set up a working partnership with La Suerte Biological Field Station to develop a program for the reintroduction of native amphibian, reptile, and mammalian species whose populations have either declined significantly or have been extirpated from the Sarapiqui region of northeastern Costa Rica. This project is active (January, 2008, 2009, 2010).

20. Neotropical Natural History Course Development Project: NNH is a field course in the basic principles and methodologies of natural history studies in a lowland tropical rainforest. Topics include climates and ecosystems, rainforest structure and diversity, evolutionary patterns, coevolutionary complexities and the ecology of fruit, the neotropical pharmacy, land use in the neotropics, savannas and dry forests, mangroves and coral reefs, and deforestation and conservation of biodiversity. Field and lab activities focus on amphibians, reptiles, birds, and mammals. Students study the taxonomy and ecology of each of these faunal groups and develop skills in locating, observing, handling, and field identification of common neotropical species. This 3 credit course is offered during the Winter Intersession during the first two weeks of January at the Ometepe and La Suerte Biological Field Stations. The LSBFS is located in an Atlantic lowland tropical rainforest on Caribbean slope of northeastern Costa Rica. The OBFS is located on Isla de Ometepe in Lake Nicaragua. This course is now fully developed and is offered to students during Winter Intersession as BIO 250 – Neotropical Natural History.

21. Hoyes Run Benthic Macroinvertebrate Colonization Study: a $2,500 grant from the MD DNR Power Plant Research Program and Western Maryland Resource Conservation and Development Council to determine colonization rates and success of BMI's on artificial substrate composed of coal combustion byproducts. This project is active and will run through 2011.

22. Woodcock/Ruffed Grouse Habitat Restoration Project: a $7,500 grant from MD DNR Wild Game Bird Section and Western Maryland Resource Conservation and Development Council to modify and monitor tracts of mid-successional forest patches in Garrett County, MD in order to create habitat more suitable for woodcock and ruffed grouse. This project is active through 2013.

23. Garrett County Abandoned and Retired Mine Water Quality Monitoring Project: a $70,000 grant from the Power Plant Research Program and Maryland's DNR to monitor mine water quality and flow from six sites located in Garrett County. The long term goal is to develop innovative ways to treat AMD using coal combustion byproducts. This project will run through January, 2013.

24. Power Plant Research Program (MD DNR) - Kempton Mine Complex Acid Mine Drainage Grant: a $60,000 three year grant (2012-14) to monitor and restore critical wetlands in the headwaters of the North Branch of the Potomac. This project is active.

25. China Undergraduate Education Abroad Grant (May, 2012) – a single donor, privately funded $6,000 grant to develop opportunities for undergraduate research and education abroad in China. The grant funded exploratory travel to two regions in China. The first leg of the trip covered 1500 miles of the lower Yangtze River from Chongqing to Shanghai with stops in the Three Gorges area, the Three Gorges Dam, and Huangshan (Yellow Mountain region), a UNESCO World Heritage site. The second leg of the trip was to Guangxi Autonomous Province near Guilin on the Lijiang (Li River). This area is famous for tower karst topography, numerous caves, unique flora and fauna, the Longsheng, Longji, and Dragon's Backbone rice terraces, and is home to numerous ethnic minorities like the Zhuang and Red Yao people. This project is active.

TOTAL GRANT FUNDS TO DATE: $540,000

PUBLICATIONS AND TECHNICAL REPORTS

1. Lee, Jeffrey A., Attebury, J. Kelly, and Skylstad, Peter L., 1996, Soil Erosion Control Methods on the Southern High Plains, 1930s-1980s; Fifth International Conference on Desert Development, Lubbock, Texas.

2. Lee, Jeffrey A., Attebury, J. Kelly, and Skylstad, Peter L., 1996, Soil Erosion Control Methods on the Southern High Plains, 1930s-1980s; Association of American Geographers Annual Meeting, Charlotte, North Carolina.

3. Lee, Jeffrey A., Attebury, J. Kelly, and Skylstad, Peter L., 1999, Soil Erosion Control Measures on the Southern High Plains, 1930s-1980s: Desert Development: The Endless Frontier, Proceedings of the Fifth International Conference on Desert Development, 11-16 August 1996, vol. 2, International Center for Arid and Semiarid Land Studies, Texas Tech University, Lubbock, Texas, p. 710-714.

4. Skylstad, Peter L. and Dodge, Kevin M., 2001, Annual Report for the Kempton Mine Complex Wetlands Monitoring and Restoration Project. Prepared for the Power Plant Research Program, Maryland Department of Natural Resources, Tawes State Office Building, B3, 580 Taylor Avenue, Annapolis, MD 21401

5. Skylstad, Peter L., 2002, Annual Report for the Kempton Mine Complex Wetlands Monitoring and Restoration Project. Prepared for the Power Plant Research Program, Maryland Department of Natural Resources, Tawes State Office Building, B3, 580 Taylor Avenue, Annapolis, MD 21401

6. Skylstad, Peter L. and Klotz, Alan W., 2004, Report on the Baseline Biological Assessment of Wetlands and Stream Habitat Impacted by Acid Mine Drainage in the North Branch of the Casselman River Watershed. Prepared for and funded by the United States Environmental Protection Agency under Section 104(b)(3) of the Clean Water Act in cooperation with Maryland Department of Environment, Water Management Administration, Maryland Mining Program, Bureau of Mines, Maryland Department of Natural Resources, Tawes State Office Building, 580 Taylor Avenue, Annapolis, MD 21401.

7. Skylstad, Peter L. and Klotz, Alan W., 2005, Five Year Report for the Kempton Mine Complex Wetlands Monitoring and Restoration Project. Prepared for the Power Plant Research Program, Maryland Department of Natural Resources, Tawes State Office Building, B3, 580 Taylor Avenue, Annapolis, MD 21401

8. Skylstad, Peter L., Aronhalt, Gary W., Brewer, Jessica R., and Klotz, Alan W., 2006, Annual Report for the Kempton Mine Complex Wetlands Monitoring and Restoration Project. Prepared for the Power Plant Research Program, Maryland Department of Natural Resources, Tawes State Office Building, B3, 580 Taylor Avenue, Annapolis, MD 21401

9. Skylstad, Peter L. and Klotz, Alan W., 2008, Annual Report for the Kempton Mine Complex Wetlands Monitoring and Restoration Project. Prepared for the Power Plant Research Program, Maryland Department of Natural Resources, Tawes State Office Building, B3, 580 Taylor Avenue, Annapolis, MD 21401

AWARDS, PRESENTATIONS, CONFERENCES, WORKSHOP AND COURSE DEVELOPMENT

1. Multiple presentations at Maryland's Bureau of Mines Kempton Mine Complex Working Group annual meetings for the North Branch of the Potomac Wetlands Project.

2. GPS and GIS workshop for Maryland Agricultural Program High School teachers. (August, 2002)

3. GPS and GIS workshop for Garrett County high school science teachers. (November, 2002)

4. GPS and GIS workshop for Garrett County Board of Education. (October, 2003)

5. Multiple Gear-Up grant seminars and workshops for Garrett County middle and high school students.

6. USAID South Africa education cooperative presentation on acid mine drainage issues. (October, 2003)

7. Trout Unlimited guest speaker at annual meeting of George's Creek chapter. (July, 2003)

8. Gear Up in Tucker County, WV presentation on the NRWT Program and wetland restoration. (March, 2004)

9. Organizer and judge at FSU Regional Science Day where NRWT student poster and paper presentation were awarded 2nd and 3rd place. (April, 2004)

10. Field seminar on wetland ecology and restoration presented to California University of Pennsylvania graduate students. (April, 2004)

11. Recipient of the Western Maryland Resource Conservation and Development Award, 2006 for innovative research in monitoring and restoring wetlands degraded by acid mine drainage. (2006)

12. Navigating with GPS seminar and field activity for Continuing Education course. (April, 2007)

13. Navigating with GPS seminar and field activity for Continuing Education course. (September, 2007)

14. Navigating with GPS seminar and field activity for Continuing Education course. (April, 2008)

15. Guest speaker at the University of Maryland Appalachian Laboratory. The topic of the seminar covered integration of GPS and GIS technology with wetland monitoring and restoration projects. (September, 2007)

16. Guest speaker at Mountain Ridge High School, Frostburg, MD for AP courses in environmental science. The topic of the presentation covered integration of GPS and GIS technology with wetland monitoring and restoration projects and how practical field experience can enhance career potential in natural resource science. (October, 2007)

18. Guest speaker for the annual Western Maryland GIS Users Conference. Topic: Integration of GPS and GIS technology with wetland monitoring and restoration projects (July, 2008)

19. Navigating with GPS seminar and field activity for Continuing Education course. (September, 2008)

20. Navigating with GPS seminar and field activity for Continuing Education course. (April, 2009)

21. Faculty Professional Development Presentation – Experiential Learning in Tropical Environments (March, 2009)

22. Garrett County Soil Conservation Annual Cooperators Dinner Presentation – Where Rivers Are Born. (April, 2009)

23. GIS training supervisor for Forestry Camp sponsored annually by Allegany College of Maryland. A week long camp designed to introduce regional high school students to the theory and application of GPS and GIS technology in natural resources science, especially forestry. (July, 2009)

24. Field seminar on wetland ecology and restoration presented to Hood College Coastal Studies Group. (September, 2009)

25. Acid Mine Drainage Site Visit Leader for Power Plant Research Program administrators, Maryland Bureau of Mines personnel, and scientists from the Smithsonian Environmental Research Center. (June, 2010)

26. Frostburg State University Upward Bound Presentation for Allegany County high school students. Presented information about experiential learning in Costa Rica and neotropical natural history. (June, 2010)

27. GIS training supervisor for Forestry Camp sponsored annually by Allegany College of Maryland. A week long camp designed to introduce regional high school students to the theory and application of GPS and GIS technology in natural resources science, especially forestry. (July, 2010)

28. Field seminar on wetland ecology and restoration presented to Hood College Coastal Studies Group. (September, 2010)

29. GIS training supervisor for Forestry Camp sponsored annually by Allegany College of Maryland. A week long camp designed to introduce regional high school students to the theory and application of GPS and GIS technology in natural resources science, especially forestry. (July, 2011)

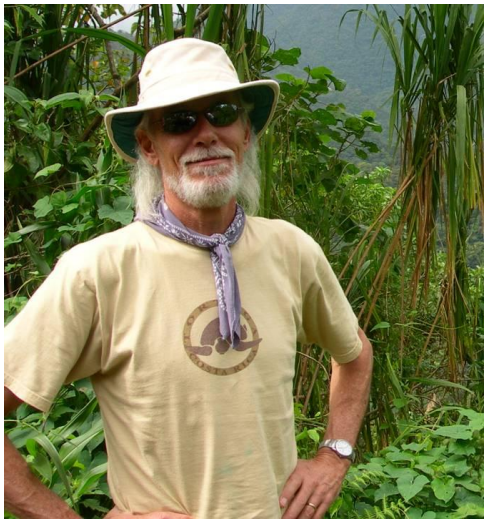
30. Presented seminar at Texas Tech University on acid mine drainage remediation and wetland monitoring and restoration as part of Visiting Scholar Seminar Program. (August, 2011)

31. Presented seminar on undergraduate education abroad in neotropical environments at Texas Tech University's Junction Field School as part of the Howard Hughes Medical Institute's Summer Life Sciences Program. (August, 2011)

32. Field seminar on wetland ecology and restoration presented to Hood College Coastal Studies Group. (September, 2011)

33. GIS training supervisor for Forestry Camp sponsored annually by Allegany College of Maryland. A week long camp designed to introduce regional high school students to the theory and application of GPS and GIS technology in natural resources science, especially forestry. (July, 2012)

34. Field seminar on wetland ecology and restoration presented to Hood College Coastal Studies Group. (September, 2012)



Professor Peter Skylstad near Braullio Carillo National Park in Costa Rica