

1982

UA66/8/3 Annual Report

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DEPARTMENT OF

GEOGRAPHY AND GEOLOGY



75th ANNIVERSARY YEAR!
1907 - 1982
☆☆☆

Annual Report

1981-82



WESTERN KENTUCKY UNIVERSITY

Bowling Green, Kentucky 42101

★ 75 ★

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ACKNOWLEDGEMENTS

This issue of the Annual Report is dedicated to Mr. Tyrel Moore who left the department last year to take employment elsewhere. Mr. Moore's friendliness and dedication to his teaching will long be remembered. Thanks are due to Dr. Ronald Dilamarter for assisting on this project. Finally, I wish to express my gratitude to Mrs. Betsy Lowrey for seeing me through my seventh year as department head.

Wayne L. Hoffman



WESTERN KENTUCKY UNIVERSITY

BOWLING GREEN, KENTUCKY 42101

Department of Geography and Geology

February 1, 1983

Dear Reader:

This is the fifth of a continuing series of Department of Geography and Geology Annual Reports. The purpose of the series is to provide the administration with an assessment of our current status in instruction, research, and public service. Moreover, the report provides an exchange of information regarding alumni, students, faculty, and the geography and geology program.

Geography traces its heritage to the founding of Western Kentucky State Normal School in 1907. Mr. R. P. Green was employed that year to teach geography and Latin at the new state institution. January 22, 1982 marked the 75th anniversary of the school and the teaching of geography. This Annual Report is dedicated to all the former faculty members both in geography and geology who have dedicated their lives to their respective disciplines.

Financial difficulties continued to plague higher education in Kentucky this past year. These monetary difficulties were transmitted into staff reductions in the university and within the department. Despite these adverse conditions departmental faculty continued their commitment to excellence in teaching, applied research, and public service activities.

Faculty in the department published nineteen journal articles, monographs, or reports during the past year. Nick Crawford and Glen Conner produced the majority of these studies. Mark Lowry, Conrad Moore, Tyrel Moore, Ron Seeger and Michael Trapasso also contributed in this area. Fourteen professional papers were presented to state, national, and international organizations. Reza Ahsan, Glen Conner, Nick Crawford, Ed Hegen, Conrad Moore, Tyrel Moore, Al Petersen and Ron Seeger participated in this effort.

Faculty continued to improve their expertise and classroom instruction through participation in computer and other discipline related workshops. This department ranks among the leaders in the university in computer use and computer related instruction. We will soon receive our fifth Apple II computer and a new plotter. Moreover, we have applied for a \$500,000 Department of Defense equipment grant

to establish a remote sensing laboratory. The computer equipment requested in this grant would place us on the forefront of instruction and research within the United States.

Enrollment continued to increase during the past year. The significant increase in program enrollments (majors and minors) was particularly gratifying. As we project for the five year period, however, we envision a state of dynamic equilibrium manifested by moderating trends in total program enrollment.

The geography and geology programs continue to prosper. We invite you to visit us at your convenience.

Sincerely,

Wayne L. Hoffman, Head
Department of Geography and Geology

FACULTY

- S. Reza Ahsan, Ph.D. (Florida), Professor. Cartography, Air Photo, South Asia.
- James M. Bingham, Ph.D. coursework (Indiana State), Assistant Professor. Economic, Location Theory, Planning.
- Glen Conner, M.S. (Western Kentucky University), Assistant Professor. Meteorology, State Climatologist.
- Nicholas C. Crawford, Ph.D. (Clark), Professor. Geomorphology, Hydrology.
- James L. Davis, Ph.D. (Northwestern), Professor. Urban, Transportation, North America.
- Ronald R. Dilamarter, Ph.D. (Iowa), Professor. Geomorphology, Cartography, Air Photo.
- Noland E. Fields, Jr., Ph.D. (Louisiana State), Professor. Environmental Geology, Sedimentary Geology, Paleontology.
- Edmund E. Hegen, Ph.D. (Florida), Professor. Resources and Conservation, Cultural, Field Methods, Latin America.
- Wayne L. Hoffman, Ph.D. (Florida), Head, Professor. Urban, Economic, Planning.
- Mark Lowry II, Ph.D. (Syracuse), Professor. Urban, Social. Planning.
- Jack D. McGregor, Ph.D. (Illinois), Professor. Mineralogy, Petrology, Petroleum Geology.
- Conrad T. Moore, Ph.D. (U.C.L.A.), Associate Professor. Resource Management, Biogeography, Environmental Perception.
- Albert J. Petersen, Jr., Ph.D. (Louisiana State), Professor. Cultural, Rural Settlements, the Great Plains.
- Claude E. Pickard, Ph.D. (Nebraska), Professor. Economic, Settlement Patterns, North America.
- James Quinlan, Ph.D. (Texas), Adjunct Professor. Hydrogeology.
- C. Ronald Seeger, Ph.D. (Pittsburgh), Professor. Planetology, Lunar Geology, Structural Geology, Geophysics.
- L. Michael Trapasso, Ph.D. (Indiana State), Assistant Professor. Physical Geography, Climatology, Geomorphology, Remote Sensing.

PERFORMANCE OBJECTIVES 1982-83*

A new feature of the Annual Report is the inclusion of performance objectives for the academic year. These objectives will serve as guidelines for short and long range planning within the department.

Instructional Objectives

- Resubmission of the Master of Science in Geology proposal.
- Seek an additional staff member in the coal geology area.
- Establish a new academic minor in City and Regional Planning.
- Acquire an additional mini-computer and a quality printer.
- Increase our activity in computer instruction.
- Seek a workshop grant through federal or state funding concerning science literacy.
- Seek to integrate various geography and geology courses into the curriculum of other related natural and social sciences.
- Develop and expand a cartography emphasis under the existing Master of Science Degree in Geography.
- Seek government funding to purchase equipment for a remote sensing laboratory.
- Maintain and expand the number of students majoring and minoring in our various programs.
- Evaluate the existing programs in geography, planning, and geology with respect to the present and future employment market.
- Delete from the curriculum a number of courses that have not been taught during the past four years.
- Increase our instructional activity for international students and seek additional teaching opportunities in foreign areas.

*Please note that objectives have not been placed in priority order.

Research Objectives

- Increase grant proposal and contract activity by fifty percent.
- Seek funding to resume the activities of the Cartographic Center and to employ a technician for research and instructional purposes.
- Increase publications in national and international journals.
- Increase the number of papers presented at professional meetings.
- Increase our activity as officers, editors, etc., within professional organizations and societies.
- Seek increased international opportunities for research and consultation.
- Develop additional Computer Assisted Instruction materials in the areas of meteorology/climatology, introductory geology, economic geography, and other areas of emphasis.

Public Service Objectives

- Expand our extended campus efforts to the Owensboro-Daviess County area.
- Seek a grant to conduct a summer workshop for Bowling Green-Warren County Realtors.
- Maintain and expand departmental relations and consultation with public and private agencies.
- Increase the data and the service availability of the Kentucky Climate Center.
- Maintain the services of the College Heights Weather Station for its many users in the region.
- Maintain the already successful summer program at Mammoth Cave National Park.
- Increase the activities and data availability of the Center for Cave and Karst Studies.
- Continue the comprehensive surveys of the architectural and cultural resources of the counties of BRADD.

CRITERIA FOR DEMONSTRATED ACHIEVEMENT FOR PROMOTION

One of the major accomplishments of the department during the past year was the establishment of promotion guidelines. After extensive discussions criteria were established in the area of teaching effectiveness, research, and public service. These criteria have been approved by all administrative levels within the university. They now await final Presidential and Board of Regents approval. The document as adopted by the department faculty follows:

Teaching Effectiveness

A truly objective measure of teaching effectiveness is difficult to establish and may require a certain degree of subjective evaluation. The evaluation of teaching will include but is not limited to the following:*

- student evaluations of recent courses.
- alumni evaluations.
- statements made by fellow faculty members.

Research/Creative Activity

The faculty of the Department of Geography and Geology recognize that a professional geographer/geologist must involve himself in scholarly research. Evidence of research/creative activities will include but is not limited to the following:*

- publication in refereed journals.
- publication in nonrefereed journals.
- presentation of papers at professional meetings.
- publication of reports for local, state, federal, or international agencies.
- authorship of textbooks, monographs and maps.
- receipt of externally funded grants.
- invitations to lecture or conduct research at other universities or research-oriented agencies.

University/Public Service

The faculty of the Department of Geography and Geology recognize that, while teaching and research are fundamental professional responsibilities, there is a growing need to project our professional expertise into the broader community. Evidence of public or university service will include but is not limited to the following:*

- service to international, federal, state,

regional or local governmental agencies or business as a technical expert or as a member of a policy advisory committee.

- service to professional organizations, including committee work and leadership positions at local, state and higher levels, and service to professional publications as a referee or in an editorial capacity.
- work with secondary and elementary school, through contacts with and assistance to science and health teachers, participation in science fairs and college-day programs, and recruitment of students to the College.
- service to the College and University through the many general and special committees by which the university develops and implements its policies.

*The departmental rank and promotion committee will determine if additional materials are to be considered in the teaching effectiveness, research/creative activity, and university/public service areas.

Guidelines for Promotion to Individual Ranks

Promotion to Professor

- clearly achieved professional recognition in research/creative activity at the international, national or regional level.
- demonstrated teaching effectiveness.
- made important public service/university contributions.
- demonstrated intellectual and academic leadership.

Promotion to Associate Professor

- achieved professional recognition in research/creative activity at the international, national or regional level.
- demonstrated teaching effectiveness.

- made satisfactory public service/university contributions.
- demonstrated intellectual and academic leadership.

Promotion to Assistant Professor

- demonstrated an interest and/or aptitude for teaching and has the potential to become an effective college teacher.
- demonstrated an interest and/or aptitude to engage productively in some form of research/creative activity.
- demonstrated an interest and/or aptitude to engage productively in some form of university/public service activity.

GRADUATE STUDENTS, FALL - 1982

Cynthia Atkins, University of Kentucky
Timothy Asher, Western Kentucky University
Bobby Barker, Western Kentucky University
James Chansler, Eastern Kentucky University
Billy E. Cooper, Western Kentucky University
Steven Dale, Western Kentucky University
Donna Hopper, Western Kentucky University
Gary Wayne Larimore, Western Kentucky University
Ali M. Mahramfar, Golan College of Management, Kerman, Iran
Manouchehi Nazem, Teacher Training University, Iran
Gregory Powell, Western Kentucky University
Geary Schindel, West Virginia University
Robert M. Simpson, Western Kentucky University
Sherree L. Tipton, Western Kentucky University
William K. Watts, Eastern Washington University

MASTERS DEGREES AWARDED - 1981-82

Master of Science

James C. Cabbage, "Hydrology of the Sinking Creek System, Logan and Simpson Counties, Kentucky." Dr. Ronald Dilamarter, Director.

Nancy L. Tucker, "Nonpoint Agricultural Pollution in a Karst Aquifer: Lost River Groundwater Drainage Basin, Warren County, Kentucky." Dr. Nicholas Crawford, Director.

Master of Public Service (City and Regional Planning)

Kashi Banifatami

Napoleon S. Momodu

Barry S. Stephens

DEPARTMENT GRADUATES
1981-1982

Geography Majors

David Ashby
Janet Bemiss
Jon Crumbie
Francis Cuffe
Steven Dale
Randell Feese
Mark Held
Greg Holzknecht
Phillip King
Sonya Biggs Lanham
Joseph Lesch
Robert Mattingly
Sherri McNeill
Bruce Odle
David Orme
Constance Rogers
Karen Stuart
James Thomason
David Watkins
James Wells
Aric Wilhelm

Geography Minor

Roger Breeden
Barry Bumm
David Chandler
Kenneth Collins
Susan Dyer
Tim Ford
James Hale
June Haycraft
John Ingram
Mary Ellen Jones
Scotty Robertson
Mary E. Schreiner
Bradley Williford

Cartographic & Mapping

Tech - Associate Degree Majors

Rebecca Gott

Geology Majors

Roger Breeden
Barry Bumm
David Chandler
Susan Dyer
Tim Ford
James Hale
Kenneth Harris
Rodney Howard
Jeffrey Johnson
John Kuenzi
Scotty Robertson
Dennis Rouse
Randolph Shields
Royce Sturdevant
Bradley Williford
Christopher Zirkelbach

Geology Minor

Janet Bemiss
John Ewer
Phillip King
Karen Stuart
David Watkins

OUTSTANDING SENIOR AWARD

Randell Feese - Geography
Scott Newcomb - Geology

UNDERGRADUATE ENROLLMENT DATA

Program Enrollment

Program enrollment in the Department of Geography and Geology significantly increased during the academic year. There were 322 majors, minors, or associate degree candidates enrolled in departmental programs during the Spring 1982 Semester (See Table 1). Compared to Spring 1981 this is an absolute increase of 75 students and a percentage increase of 30 percent. Excellent employment opportunities, quality instruction, and concern for the individual student are the foundation for program growth within the department.

TABLE 1

Historical Perspective

	Fall '79	Spr '80	Fall '80	Spr '81	Fall '81	Spr '82
Earth Science -- Major	2	1	1	1	2	1
Geography -- Major	52	75	73	81	96	95
Geology -- Major	49	49	69	70	86	96
Earth Science -- Minor	1	1	1	-	4	6
Geography -- Minor	30	35	36	39	48	52
Geology -- Minor	13	16	10	11	12	30
Cartographic & Mapping Technology--Associate Degree	5	7	6	5	6	4
Meteorological Technology -- Associate Degree	23	26	29	31	32	33
TOTAL*	181	216	232	247	293	322

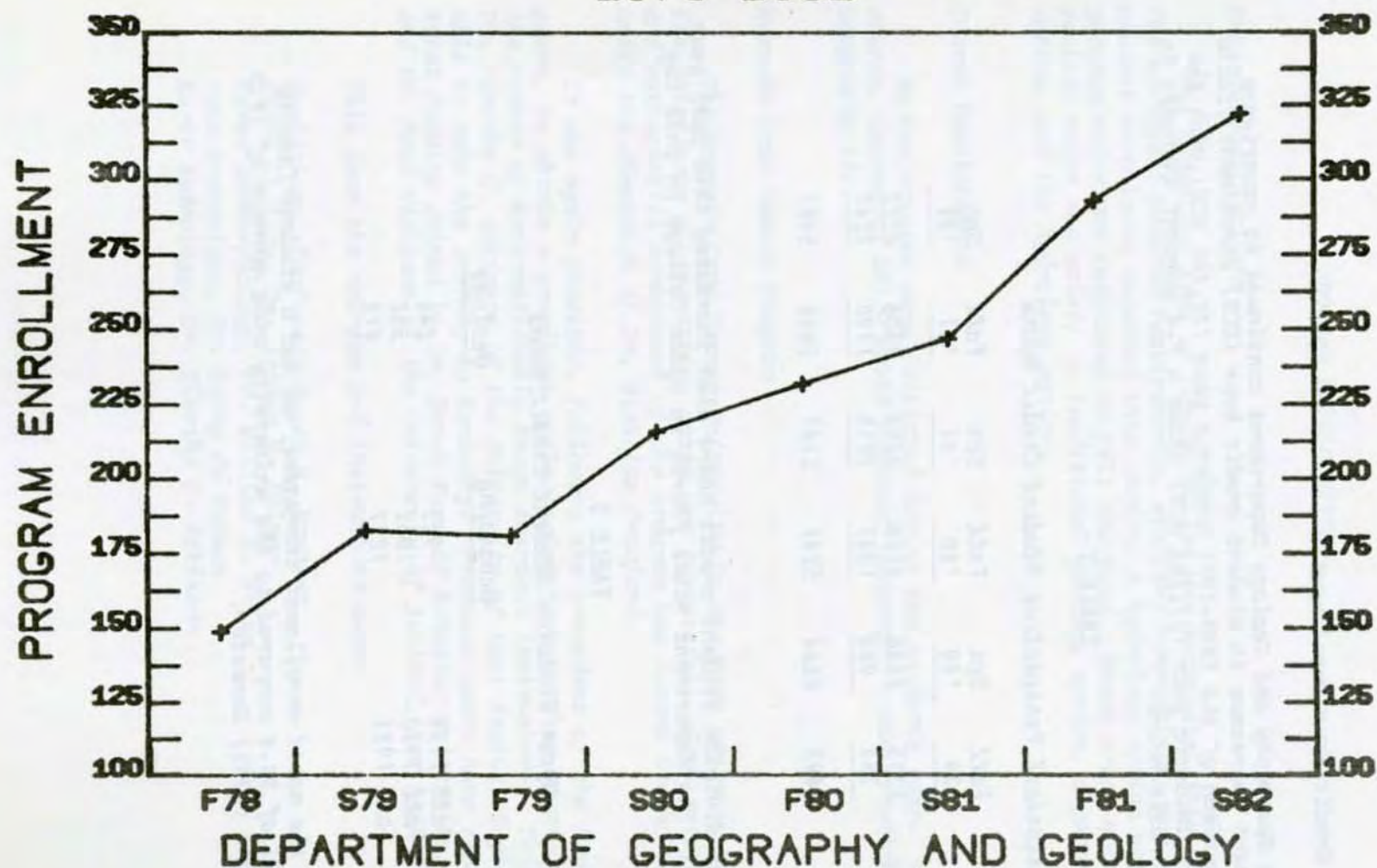
*Total includes enrollment in the Geophysics major and the Hydrology Area of Concentration. These programs were recently terminated.

Figure 1 presents an historical perspective detailing the increase in program enrollment from 1978-1982. One readily observes the upward trend of the curve.

The largest individual program increase was observed in the geology major and minor. Enrollment grew by 26 students in the major and by 19 students in the minor during the two reference years (1981-1982). This is more than a 50 percent student increase and far exceeds the projections that were made last year.

A significant enrollment increase was also observed in the geography major and minor. An increase of 14 majors and 13 minors was

UNDERGRADUATE PROGRAM ENROLLMENT 1978-1982



attained. This is a 22 percent increase in program enrollment and is essentially what we projected a year ago.

Student Credit Hour Enrollment

The Geography and Geology Department continued to experience significant increases in student credit hour (SCH) enrollment (Table 2). Comparison of the 1980-1981 academic year (10,390 SCH) with the 1981-1982 academic year (11,163 SCH) shows a 7.4 percent increase in student credit hours.

TABLE 2

Historical Perspective Student Credit Hours

	<u>Fall</u> <u>'79</u>	<u>Spr</u> <u>'80</u>	<u>Fall</u> <u>'80</u>	<u>Spr</u> <u>'81</u>	<u>Fall</u> <u>'81</u>	<u>Spr</u> <u>'82</u>
Geography	3735	3896	4196	4094	4506	4227
Geology	<u>758</u>	<u>968</u>	<u>1045</u>	<u>1055</u>	<u>1190</u>	<u>1240</u>
TOTAL	4493	4864	5241	5149	5696	5467

Upper division student credit hours also increased this past year (Table 3). The department ranks fourth in Ogden College on this key indicator.

TABLE 3

Upper Division Student Credit Hours

	<u>Geography</u>	<u>Geology</u>
Fall 1979	923	246
Fall 1980	1062	352
Fall 1981	1227	418

With the noted enrollment increases, we had a student faculty ratio (FTE) of 22.4 compared to the university wide average of 18.2 for the Fall (1981) Semester.

PROGRAM DEVELOPMENTS

Program Modifications

The Hydrology Area of Concentration was terminated this year. The stringent program requirements, staffing constraints, and low student enrollment required this action. A hydrology option under the geology major was initiated to fill the void. Three areas under the geology major now exist: a traditional geology option, a geophysics option, and the hydrology option.

Course Developments

No new courses were initiated during the academic year. One course, Geography 361 - World Regional Geography - was renumbered Geography 110.

Mammoth Cave Summer Program

The Mammoth Cave Summer University in the Park program, now in its third year of operation, again was successful. Good enrollment and enthusiastic acceptance of the program has become its hallmark, under the direction of Dr. Nicholas Crawford.

It was again possible, following the precedent of the first two years, to obtain a prominent speleologist from another country to join the roster of internationally known American instructors. This year Dr. Timothy C. Atkinson of the University of East Anglia, England, was able to make the journey to Kentucky. Previous years have seen the karst faculty joined by Dr. Derek Ford of McMaster University, Canada, and Dr. Paul Williams of the University of Auckland, New Zealand.

This year the courses and instructors were:

*Speleology, Professor Roger W. Brucker
Karst Geology, Dr. Arthur N. Palmer
Karst Geomorphology, Dr. William B. White
Cave Archeology, Dr. Patty Jo Watson
Karst Hydrology, Dr. Timothy C. Atkinson*

VISITORS TO THE DEPARTMENT

Mr. Watson H. Monroe, U.S. Geological Survey, retired.

Dr. Richard G. Stearns, Department of Geology, Vanderbilt University.

Ms. Cora Willis, Division Chief, Defense Mapping Agency, Louisville.

Ms. Dorothy Witten, Branch Chief, Defense Mapping Agency, Louisville.

The remainder of the annual report documents the involvement of the faculty in various professional activities outside the classroom.

PUBLICATIONS

- Conner, D. Glen, "The Kentucky Climate Center," *The State Climatologist*. Vol. 5, 1981, pp. 7-8.
- Conner, D. Glen, "Climate of Ashland, Kentucky," *Climatology of Kentucky Series, Kentucky Climate Center*, 1982, 4 p.
- Conner, D. Glen, "Climate of Barbourville, Kentucky," *Climatology of Kentucky Series, Kentucky Climate Center*, 1982, 4 p.
- Conner, D. Glen, "Climate of Bardstown, Kentucky," *Climatology of Kentucky Series, Kentucky Climate Center*, 1982, 4 p.
- Crawford, Nicholas, "Karst Flooding in Urban Areas: Bowling Green, Kentucky," *Proceedings, Eighth International Congress of Speleology, Western Kentucky University, Bowling Green, Kentucky*, 1981, pp. 163-165.
- Crawford, Nicholas, "Karst Valley Development and the Headward Advance of the Sequatchie Valley of Tennessee Along the Sequatchie Anticline," *Proceedings, Eighth International Congress of Speleology, Western Kentucky University, Bowling Green, Kentucky*, 1981, pp. 814-819.
- Crawford, Nicholas, "Subterranean Stream Invasion, Conduit Cavern Development and the Growth of Karst Valleys in the Grassy Cove Area of Tennessee," P. H. Dougherty, (ed.), *Environmental Karst, Cincinnati: Strathmore Press*, 1981.
- Crawford, Nicholas, "Ground Water Geothermal Energy from Subsurface Streams in Karst Regions," *Abstract in Proceedings, Eighth International Congress of Speleology, Western Kentucky University, Bowling Green, Kentucky*, 1981, p. 820.
- Crawford, Nicholas, *Karst Hydrogeology and Environmental Problems in the Bowling Green Area, Warren County, Kentucky, Report of Investigations No. 3, Center for Cave and Karst Studies, Department of Geography and Geology, Western Kentucky University*, 1981, 21 p.
- Crawford, Nicholas, "Karst Groundwater Flow and Slope Retreat Along the Cumberland Plateau Escarpment of Tennessee," *Abstracts with Programs, Geological Society of America*, 1981, p. 434.

- Crawford, Nicholas (co-author), *Karst and Caves of Tennessee and Missouri, Guidebook, Eighth International Congress of Speleology, Western Kentucky University, Bowling Green, Kentucky, 1981, 176 p.*
- Crawford, Nicholas (co-author), *Hydrogeology of the Mammoth Cave Region, Guidebook, Eighth International Congress of Speleology, Western Kentucky University, Bowling Green, Kentucky, 1981, 85 p.*
- Crawford, Nicholas, "Karst Management in Urban Areas: Sinkhole Flooding in Bowling Green, Kentucky," R. C. Wilson and J. J. Lewis, (eds.), *Proceedings of National Cave Management Symposia: 1978-1980*, Pygmy Dwarf Press, 1981, pp. 76-78.
- Dilamarter, Ronald, "Geomorphology of Portions of Western Kentucky and Adjacent Areas," Topical Report 019277-B, Department of Geological Sciences, University of Michigan, Ann Arbor, 31 p. (reprint of Appendix B of *Geological Remote Sensing of the Moorman Syncline, 1980, Philip L. Jackson, ERIM Report 114000-26-F*).
- Hoffman, Wayne L., Book review of William Withington's "Kentucky in Maps," *Kentucky Libraries*, Vol. 45, 1981, pp. 25-26.
- Lowry, Mark II, Editor, *1980 Proceedings, Geography Section, Kentucky Academy of Science, 1981.*
- Moore, Conrad T., "Vegetational Impoverishment in the Great Plains, 1800-1868," *Program Abstracts, Association of American Geographers, 1982, p. 60.*
- Moore, Tyrel G., "Appalachian Agriculture in the Nineteenth Century: Examples from Eastern Kentucky," *Proceedings, Conference on Appalachian Geography, 1982.*
- Seeger, C. Ronald, "Geologic and Petrologic Content of the Skylab Lunar Multispectral Scanner Data," *Abstracts with Programs, Geological Society of America, 1981, pp. 550-551.*
- Trapasso, Michael, "Cloud Band Morphometry: An Alternative Approach to Satellite Image Analysis," *Physical Geography. (forthcoming).*

PAPERS PRESENTED

- Ahsan, S. Reza, "Applications of Remote Sensing Techniques," National Association of Geographers, New Delhi, India, 1981.
- Conner, D. Glen, "Requirements for Data Base Developments in Climate Centers," American Association of State Climatologists, 1981.
- Conner, D. Glen, "Geography and Geology Uses of CAI," Computer Awareness Conference, Western Kentucky University, 1982.
- Conner, D. Glen, "Mutually Supported Aspects of A Collocated State Climatologist and Geography Department," Association of American Geographers, San Antonio, 1982.
- Crawford, Nicholas, "Karst Flooding in Urban Areas: Bowling Green, Kentucky," Eighth International Congress of Speleology, Western Kentucky University, 1981.
- Crawford, Nicholas, "Karst Valley Development and the Headward Advance of the Sequatchie Valley of Tennessee Along the Sequatchie Anticline," Eighth International Congress of Speleology, Western Kentucky University, 1981.
- Crawford, Nicholas, "Ground Water Geothermal Energy from Subsurface Streams in Karst Regions," Eighth International Congress of Speleology, Western Kentucky University, 1981.
- Crawford, Nicholas, "Environmental Problems Associated with Groundwater Flow in Karst Regions," Tennessee Public Health Association, 1981.
- Crawford, Nicholas, "Karst Groundwater Flow and Slope Retreat Along the Cumberland Plateau Escarpment of Tennessee," Geological Society of America, Cincinnati, 1981.
- Hegen, Edmund, "Quilquilco: The Deterioration of an Indian Community," Southeast Conference of Latin American Studies, Callaway Gardens, Georgia, 1982.
- Moore, Conrad, "Vegetational Impoverishment in the Great Plains, 1800-1868," Association of American Geographers, San Antonio, 1982.

Moore, Tyrel, "Appalachian Agriculture in the Nineteenth Century: Examples from Eastern Kentucky," Conference on Appalachian Geography, Big Mother State Park, West Virginia, 1981.

Petersen, Albert, "A Study of the Rural and Ethnic Landscape of South Central Kentucky," Conference on Kentucky Architecture and Images, Louisville, 1982.

Seeger, C. Ronald, "Geologic and Petrologic Content of the Skylab Lunar Multispectral Scanner Data," Geological Society of America, Cincinnati, 1981.

PROFESSIONAL WORKSHOPS ATTENDED

- Ahsan, S. Reza - Map Librarian Workshop. Southeast Division Association of American Geographers, Atlanta, Georgia, 1981.
- Ahsan, S. Reza - Applications of SPSS. Western Kentucky University, 1981.
- Bingham, James - Computers in Education. Western Kentucky University, 1981.
- Comer, D. Glen - Computers in Education. Western Kentucky University, 1981.
- Crawford, Nicholas - CAUSE Computer Workshop. Western Kentucky University, 1982.
- Fields, Noland - Paleontology Workshop. Geological Society of America, Cincinnati, Ohio, 1981.
- Fields, Noland - CAUSE Computer Workshop. Western Kentucky University, 1982.
- Hegen, Edmund - Global Issues Workshop. Kentucky Council on International Education, Barren River Lodge, 1981 and 1982.
- Hoffman, Wayne - Department Chairman Leadership Workshop. American Education Society, Columbus, Ohio, 1981.
- Hoffman, Wayne - Geography Assessment Workshop. Association of American Geographers, San Antonio, Texas, 1982.
- Hoffman, Wayne - Computer Workshop. National Association of Regional Councils, Louisville, 1982.
- Moore, Conrad - CAUSE Computer Workshop. Western Kentucky University, 1982.
- Trapasso, Michael - CAUSE Computer Workshop. Western Kentucky University, 1982.

POSITIONS HELD IN PROFESSIONAL ORGANIZATIONS

- Ahsan, S. Reza
Chairman, Honors Committee
Midsouth Region, American Society of Photogrammetry
- Bingham, James M.
Steering Committee, Southeastern Division
Association of American Geographers
- Conner, D. Glen
Secretary-Treasurer
American Association of State Climatologists
- Hegen, Edmund
Geography Section Representative
Kentucky Academy of Science/AAAS

Chairman, Nominating Committee
Sigma Xi, Western Kentucky University
- Hoffman, Wayne
Membership Committee
Southeastern Division, Association of American Geographers

Editor, Midwest area, Kentucky Planner
Kentucky Planning Association

Energy and Environmental Policy Committee
National Association of Regional Councils

Resolutions Committee, Kentucky Academy of Science
- Lowry, Mark II
Chairman, Geography Section
Kentucky Academy of Science
- Petersen, Albert
Program Chairman, Pioneer American Society
- Seeger, C. Ronald
President Elect, Sigma Xi

REPRESENTATION AT PROFESSIONAL MEETINGS

**participated in meeting as chairman of a session, paper presentation, officer, or in some other professional manner.*

Eighth International Congress of Speleology, Western Kentucky University, July, 1981. Crawford, Dilamarter*, C. Moore*.*

American Association of State Climatologists, August, 1981. Conner.*

Pioneer American Society, October, 1981. Petersen.*

Conference on Appalachian Geography, Big Mother State Park, West Virginia, October, 1981. T. Moore.*

Geological Society of America, Cincinnati, Ohio, November, 1981. Crawford, Fields, Seeger*.*

Midsouth American Society of Photogrammetry, November, 1981. Ahsan.

BIFAD Conference on Farming Systems Research, Kansas State University, November, 1981. Hegen.

Kentucky Academy of Science, Murray State University, November, 1981. Hoffman, Lowry*.*

Southeast Division, Association of American Geographers, Atlanta, Georgia, November, 1981. Ahsan, Bingham, Davis, Hoffman*, T. Moore, Petersen, Pickard, Trapasso.*

National Association of Geographers, New Delhi, India, December, 1981. Ahsan.*

National Association of Regional Councils, Washington, D.C., January, 1982. Hoffman.*

Association of American Geographers, San Antonio, Texas, April, 1982. Conner, Hoffman, C. Moore*, Petersen, Trapasso.*

South East Conference of Latin American Studies, Callaway Gardens, Georgia, April, 1982. Hegen.

National Association of Regional Councils, Louisville, May, 1982. Davis, Hoffman.*

National Educational Computing Conference, Kansas City, Missouri, June, 1982. Conner.*

Conference on Kentucky Architecture: People and their Buildings, Louisville, June, 1982. Petersen.*

American Society of Photogrammetry, Knoxville, Tennessee, June, 1982. Ahsan.

ACCREDITATION OR SPECIAL CONSULTANT

- Hegen, Edmund - Energy Resources Advisory Committee of Corporacion Internacional Para El Desarrollo Educativo, Bogota, Colombia.
- Petersen, Albert - Special Advisor to the Attorney General of Kentucky concerning Supreme Court case on Ohio River boundary.
- Trapasso, Michael - Evaluation team assessing a grant proposal concerning the Climate of the Sahel, Halcomb Research Institute, Butler University.

GRANTS AND FELLOWSHIPS

Crawford, Nicholas - Nonpoint Pollution of Karst Aquifers in Bowling Green, Kentucky. Funded by Kentucky Division of Water and EPA.

- Karst Hydrogeology Workshop.
Funded by EPA.

- Groundwater Flow in the Vicinity of the Eaton Corporation. Funded by Eaton Corporation.

- Dye Trace Analysis at Cutler-Hammer. Funded by Daugherty, Trautwein and Harris.

- Groundwater Observatory for Hydrogeologic Studies. Funded by Western Kentucky University.

Hegen, Edmund

- Development of a New course--Prospect 2000. Faculty Summer Development Grant, Western Kentucky University.

Moore, Conrad

- Travel to Association of American Geographers Meeting, Faculty Development Grant, Western Kentucky University.

SERVICE ON OFF-CAMPUS ADVISORY COMMITTEES

- Conner, D. Glen - Kentucky Representative, National Climate Plan.
- Chairman, Allen County Planning Commission.
- Chairman, Wind Committee, Alternate Energy Advisory Council, Kentucky Department of Energy.
- Crawford, Nicholas - Organizing Committee and Sessions Chairman, Eighth International Congress of Speleology.
- Davis, James L. - Special Advisor, Barren River Area Development District (BRADD).
- Dilamarter, Ronald - Secretariat and Organizing Committee, Eighth International Congress of Speleology.
- Hegen, Edmund E. - Board of Directors, Kentucky-Ecuador Partners.
- Chairman, Education Committee, Kentucky-Ecuador Partners.
- Energy Committee, Kentucky Universities.
- Hoffman, Wayne L. - Kentucky Representative, Citizens Advisory Committee, Ohio River Basin Commission.
- Board of Directors, Barren River Area Development District (BRADD).
- Chairman, Natural Resource and Environmental Problems Committee, BRADD.
- Moore, Conrad - Organizing Committee, Eighth International Congress of Speleology.
- Petersen, Albert - Board of Directors, Bowling Green-Warren County Landmark Society.

OTHER PROFESSIONAL PUBLIC SERVICE AND CREATIVE CONTRIBUTIONS

- Conner, D. Glen
- As State Climatologist provided data and information in response to over 500 requests for climate data.
 - Tours of Weather Station and Climate Center.
 - Presentation to Port Oliver Sail Club.
- Crawford, Nicholas
- Presentation to gifted students of Burkesville Senior High School, Auburn Rotary Club, and one church fellowship group.
 - Free consultations concerning flooding, foundation problems, and gasoline spills to the State Fire Marshall, City-County Planning Commissioners, private developers, and individual home owners.
- Hegen, Edmund
- Presentations to the Warren County Kiwanis Club and the Bowling Green Public Library Lecture Series.
- Fields, Noland
- Presentations to the Lions Club and Kiwanis Club.
 - Landfill consultations for the Department of Natural Resources and Lake Cumberland Area Development District.
 - Geologic evaluation of incidence of thyroid deficiency for Vanderbilt University.
- Lowry, Mark II
- Sister Cities Program.
- Trapasso, Michael
- Meteorologist forecaster for WKYU-FM.
 - Three presentations to local civic groups.
 - Weather Station tours.

COLLOQUIA, SEMINARS AND FIELD TRIPS CONDUCTED

- Ahsan, S. Reza "Application of Space Derived Data for Geographical Studies," seminar presented to Department of Geography, University College, Bahrain, 1981.
- Ahsan, S. Reza "Patterns of Education in the U.S.A." Sheikhpura College, India, 1981.
- Conner, D. Glen Instruction in CAUSE Computer Projects, Western Kentucky University, 1982.
- Crawford, Nicholas "Hydrogeology of the Cumberland Plateau Escarpment," and a two day field trip. Geology Club, Georgia Southwestern University, 1981.
- Crawford, Nicholas Led three field trips for Eighth International Congress of Speleology:
-Hydrogeology of the Mammoth Cave Region with James Quinlan and Ralph Ewers, 1981.
-Karst and Caves of Tennessee and Missouri with Jerry Vineyard, 1981.
-Karst Hydrogeology and Environmental Problems in the Bowling Green Area, 1981.
- Crawford, Nicholas Conducted workshop for the Tennessee Public Health Association, Nashville, Tennessee, 1981.
- Petersen, Albert "Folk Architecture in Kentucky," University of Kentucky, 1982.