

**Circle of Geographers:  
A History of the Geography Department at New Mexico State University**

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This paper describes the chronology of events and people at New Mexico State University that have played a role in shaping the geography program. The department was formally established in 1992 as the culmination of more than four decades of offering a major in geography in the College of Arts & Sciences. Currently six faculty teach topics spanning all aspects of geography with an applied focus. Student enrollment includes more than 120 undergraduate majors and 25 full and part-time graduate students. Current grants and contracts exceed \$1.6 million. This success did not happen overnight, nor is it an anomaly for this department. This represents over six decades of work by a group of talented, dedicated and fully engaged geographers. *Key Words: New Mexico State University, history of the geography department.*

Prior to earning departmental status in 1992, geography had established a strong presence within the College of Arts & Sciences at New Mexico State University (NMSU). This began in the Department of Geography and Geology with James I. Culbert (Ph.D. 1939, Clark) as department head and sole faculty member from 1946 through 1967.<sup>1</sup> As early as 1947 undergraduates could major in geography with a 9-course offering focused on physical geography. Enrollments also included education majors at NMSU who relied heavily on geography courses for preparation to teach social sciences.

The forties and fifties saw dramatic social and political changes resulting in changes in American thinking as American troops circled the globe during World War II and returned home with a curiosity about names, places and cultures previously unknown. America was no longer an isolated nation. The NMSU geography curriculum adapted to this need and added courses that emphasized current human events including *The Industrial & Commercial Structure of Europe* and *Geographic Foundations of World Power*. This contributed to increasing enrollment and interdisciplinary collaborations. The department also fostered collaborations with physical chemists who helped out by teaching geology courses.

### Astronomical Forces Change Names

Change was strong in the department throughout the 1960's. In 1962 Clyde Tombaugh, an astronomer who had recently discovered Pluto joined the college faculty in what was then the Department of Earth Sciences. In 1964 a geologist, William E. King (Ph. D. 1959, University of Wisconsin) was hired into the Department of Earth Sciences and Astronomy. By 1965 course offerings included 15 geography, 3 geology and 3 astronomy courses. The researchers from each discipline in this department worked closely with those of other departments and developed connections across campus with the physical sciences laboratory (PSL) to house the first computer laboratories. This was before the personal computer (PC) and mainframes needed ample space and support staff. The computers were necessary within the department to address spatial analysis of the man/land relationships that were becoming the focus of the geographer's research. Recent advances at that time in aerial photography and imagery meant that new skills were needed; the digital age was upon them and the department responded by establishing the *Laboratory for Cartography and Spatial Analysis*.

A strong positive influence of this era was Richard Helbock (Ph. D. 1973, University of Pittsburg). Hired in 1968, Helbock was instrumental in the development of a major in city & regional planning, which was first offered as a major in 1973. When Helbock joined NMSU the department included two astronomers, two geologists and two geographers including Culbert who was retiring and John Whaley, an instructor. Whaley decided to leave and continue his education in 1969.

Helbock recalls Clyde Tombaugh as "a scholar of the *old school*" who had taught geography courses as needed before Helbock arrived (personal communication). Faculty offices at that time were housed in Baldwin Hall, described by Helbock as a one-story cinder block across from the library (Branson Hall). Helbock is remembered as having an outgoing personality and he was well liked by students and faculty (Czerniak, personal communication).

In 1969 William King assumed the role of department head from James Culbert. The astronomy faculty had grown to four and they separated from the department, which then reverted back to its former name: Department of Earth Sciences.

In the early years many instructors contributed to the success and growth of geography at NMSU. One of these, Carlos Parra (M.A. University of Colorado, 1971) joined the faculty in 1972. He enabled the department to offer Spanish/English bilingual courses, as New Mexico State University is a minority serving (Hispanic) institution and the role of geography in providing such service courses to the university has been large. Up to four bilingual geography courses were offered: *Geographica General*, *Meso-America*, *Sud-America*,

and *Nuevo Mexico*, primarily taught in Spanish from 1973 to 1978, when only a bilingual seminar was offered in the Department of Earth Sciences. Geography maintained steady growth in this period and by 1973 had 15 undergraduate majors and three faculty members: Ronald C. Sheck, Richard Helbock and Carlos Parra.

Gerald E. (Jerry) Mueller joined the faculty in 1976 (Ph.D. 1973, Johns Hopkins University). Mueller had specialization in environmental geomorphology, cartography and fluvial geomorphology.

Russell Clemons (Ph.D. 1966, University of Texas, Austin) replaced Wm. King as department head in 1978 and the next year a graduate degree in geology was offered. The geography course offerings nearing the end of the 1970's offered choices from a variety of geographic core courses, techniques and regions; core courses included *Cultural Geography*, *Urban Geography*, *Transportation Geography*, *World Regional Geography*, *Conservation Geography*, *Historical Geography* and *World Agriculture & Food Problems*. Technical courses included *Meteorology*, *Physical Geography*, *Cartography*, *Map Analysis*, *Geomorphology*, *Spatial Analysis*, and *Remote Sensing*. Regional courses included *Australia & Oceania*, *Asia*, *Europe*, *South America*, *North America*, and *New Mexico*. In addition, courses for education majors achieved high enrollments, primarily *Earth Sciences for Teachers* and *Teaching Geography in Secondary Schools*.

### Separate yet Equal

In 1982 Russell Clemons passed the scepter and Jerry Mueller assumed the role of department head. During this time John A. Harrington, Jr. (Ph.D. 1980, Michigan State) taught *Biogeography* and brought strong remote sensing skills to the Earth sciences department. At this time geography had two labs where contract and research grants were fulfilled for a variety of federal, state and local agencies. The *Laboratory for Cartography & Spatial Analysis* was a modern production facility with photographic, typesetting, and full color capabilities; the *Digital Mapping Laboratory* housed computer technology for digitizing, map display, output, and digital image processing. These labs gave students hands-on experience, skills and connections outside the classroom and fostered collaborations locally within NMSU, as well as state and nationwide. Students gained experience solving real-world spatial problems using geographic information systems, spatial analysis, and remote sensing techniques.

William J. (Bill) Gribb (Ph.D. 1982, Michigan State University) came to NMSU in 1982 bringing specialization in cartography, geostatistics and the geography of Native Americans. He established the *Geography Applications and Research Laboratory* (GARL) as a joint facility between geography and the Physical Science Laboratory. Gribb taught *Survey of Geography* and *Cultural Geography* as well as *Cartography* and *Remote Sensing*.

Kenneth E. (Ken) Kunkel (Ph.D. 1978, University of Wisconsin-Madison) had a joint research and teaching position in the department of Earth sciences beginning in 1982. He also served as the New Mexico State Climatologist. His research emphasized atmospheric optical phenomena at the Atmospheric Sciences Laboratory at White Sands Missile Range. He taught *Climatology*, *Meteorology* and offered a graduate seminar in *Electro-optical Meteorology* in 1987. Kunkel left to join the Illinois State Water Survey in 1988.

Ronald Sheck (Ph.D. 1969, University of Oregon) had taken over Helbock's planning courses (Helbock left in 1981) and also taught *Survey of Geography* and *Middle America*. Richard A. (Rich) Earl (Ph.D. 1983, Arizona State University) taught *Introduction to Physical Geography*, *Meteorology* and *Map Analysis*. He also set up a broadcast meteorology program for students in journalism. Mueller's *Cartography* courses remained strong and he also offered *Desert Geomorphology* for advanced undergraduate and graduate students.

Robert J. (Bob) Czerniak (Ph.D. 1979, University of Colorado-Boulder) joined the faculty in 1983. He had research interests in land use, urban geography, transportation, and city & regional planning. Czerniak's arrival marked the start of the modern era for geography at NMSU. He fostered relationships of trust and collaboration with the city of Las Cruces and the State of New Mexico, and these facilitated an improvement in growth planning, urban development and transportation management in the region.

In 1986 the department head became Bill King's job again as Mueller passed the scepter back. At this time the number of geography and planning majors was continually growing and this drove the need for a graduate program in geography. The *Master of Applied Geography* program was added in 1987. Now the Department of Earth Sciences offered four majors for undergraduates and two graduate programs. The 75 undergraduate majors could choose from: geography, city & regional planning, geology, or geological sciences. Thirty-nine graduate students focused on either applied geography or geology.

The addition of Albert (Al) Peters, (Ph.D. 1989, Nebraska-Lincoln) to the faculty in the mid-1980's moved the analysis of land use and land cover at NMSU into the digital age. Al arrived ABD with his MS from San Jose State University and started as an instructor. His research emphasized land classification and change detection, accomplished with technological advances in digital processing of aerial photography and satellite imagery. Bradley Reed (Ph.D. 1989, University of Kansas) specialized in biogeography and taught *Biogeography, North America* and a *Geography Colloquium* in the late 1980's.

John B. (Jack) Wright, (Ph.D. 1990, University of California-Berkeley) joined the NMSU faculty in 1989. He brought experience in land conservation, cultural geography and land tenure. He enhanced the department with a strong passion for understanding the man-land relationship in the American

West through the application of cultural geographic research and landscape analysis. As the department prepared to start the nineties there were 21 geography majors, 16 planning majors and 12 graduate students, two of these had completed their programs to earn masters of applied geography (MAG) degrees by 1989.

By this time the two disciplines in the Department of Earth Sciences (geography and geology) had established independent operating procedures. Each had a separate secretary managing the daily affairs for a subset of the 12 faculty, two adjunct professors and five college instructors. Graduate enrollment was nearly split 50/50 between applied geography and geology. The geography/geology equity in the Department of Earth Sciences did not include the budget and operating costs. Both disciplines experienced increasing demands for computers and specialized equipment so, not surprisingly, resource allocation became a point of tension.

### **Independence**

The nineties were a decade in which many trends in geography at New Mexico State began to come full circle. Czerniak had demonstrated strong leadership skills from the early days and served as co-department head from 1990-1992. He established a positive trajectory for the department and easily assumed the role as the first department head when the Department of Geography was formally established in 1992. The near even split of faculty in each the newly formed departments resulted in Jerry Mueller, Jack Wright, Bradley Reed, and Al Peters working under Czerniak in geography.

The discipline was growing in many ways. The PC was popular; geographic information systems (GIS) and remote sensing programs and data sources were becoming available without the need for a mainframe computer. The adoption of the graphical user interface (GUI) for spatial analysis programs, i.e. Arc-Info to Arc-View, brought non-programmers onboard for geographic information systems and spatial analysis. Research conducted by NMSU's geographers during this time approached the physical environment and the man/land relationship from every aspect. Collaborations, grants and contracts with many of the counties of New Mexico and Texas, White Sands Missile Range, Fort Bliss, and NASA supported graduate and undergraduate research and training.

The *Geographic Applications Research Laboratory* (GARL) completed projects and contracts spanning a variety of geospatial needs in the region including cadastral mapping, airport and highway transportation planning, taxation districts, economic development opportunities and numerous cases of technical GIS assistance for the states, cities and counties of Texas and New Mexico.

Wright's emphasis on land tenure, community development, and conservation easements began a trend in which hundreds of thousands of acres of agricultural and open space would be preserved throughout Montana, Wyoming, Colorado and New Mexico.

The applied focus of the geography department at New Mexico State University was further expanded when Michael N. DeMers (Ph.D. 1985, University of Kansas) joined the faculty in the fall of 1992. Geographic Information Systems (GIS) had revolutionized the geographic discipline as a whole, and the study of GIS quickly became a priority for land managers and planners of many backgrounds. DeMers' research combined zoogeography interests with a landscape ecology approach to evaluate the influence of spatial patterns on the distribution of organisms across a surface. He had worked closely with Duane Marble and others at The Ohio State University (1986-1993) to develop GIS theory and applications courses, and he applied his technological skills and enthusiasm toward developing applied Cartography and GIS courses in New Mexico.

Daniel P. (Dan) Dugas (Ph.D. 1993, University of Oregon) arrived at New Mexico State University in 1996. He had extensive geologic exploration experience in the field with work in Africa exploring fossil grasses and soils, and in Oregon evaluating landforms and aeolian processes. This strong background in geomorphology and physical geography with a focus on field techniques and mapping provided a link between the digital mapping and an understanding of processes driving patterns. Dugas developed dynamic, engaging and popular *Introduction to Physical Geography, Geomorphology, Map Use & Analysis* and *Aerial Photo Interpretation* courses and lab activities. He emphasized getting students out of the classroom and demonstrated skills such as map creation, GPS navigation, and land cover identification and field techniques that brought students into the major.

### **5-Year Check-up (97-98)**

When Dan Dugas arrived the department was five years young and a re-evaluation of the undergraduate curriculum was on the slate for the next year. Bob Czerniak remained department head and directed GARL, with Mueller, Wright, DeMers and Dugas filling out the faculty roster. Faculty research interests at the time included physical geography, transportation, planning, biogeography, landscape ecology, geographic information systems and Latin America. Funded projects for the 97-98 academic year totaled \$347,000 (the lowest since the department was established). The department boasted a 100% placement of graduates.

Mike DeMers' combined skills, perspectives and experience in the classroom built upon his education background to culminate in the 1997 publication

of a widely adopted GIS textbook: *Fundamentals of Geographic Information Systems* (now in 4<sup>th</sup> edition). His accomplishment generated enormous positive energy for the department and brought many graduate and undergraduate students to NMSU.

Geography course offerings at this time included 21 courses: *Introduction to Physical Geography*, *Survey of Geography*, *Introduction to Meteorology*, *Map Use & Air Photo*, *World Regional Geography*, *Latin America*, *Fundamentals of Biogeography*, *Economic Geography*, *Urban Geography*, *Australia*, *Geomorphology*, *Cultural Geography*, *Fluvial & Environmental Geomorphology*, *Land Use & Land Rent*, *Transportation Geography*, *Environmental Planning*, *Applied Geomorphology*, *GIS Modeling & Design*, *Introduction to Remote Sensing*, and *Advanced Spatial Analysis*. Cross-listed courses added to the choices (*Soils*, *Soil Classification*, and *World Agriculture & Food Problems*). Planning majors were also offered *Introductory Planning & Community Development*, *Legal Aspects of Planning*, and *Housing & Land Development*.

There were now 34 geography majors, 13 planning majors and 18 full and part-time graduate students in the department. Course objectives and sequencing were re-evaluated to reflect the impact GIS and software innovations were having across the globe. The need for experienced graduate teaching assistants in the labs started a positive feedback loop in which the quality and intensity of lab exercises and projects bloomed. Undergraduates frequently earned hands-on experience via internships, course projects and fieldwork, and this helped establish the quality and utility of the applied geography major to many professional communities.

Thirty-four masters degrees had been awarded since the creation of the MAG in 1989, and these spanned topics from the application of satellite data for land classification, forest architecture, and sedimentation patterns; GIS to model elk habitat, urbanization and flood hazards, community potential for retirement locations, county assessment, and recreational management. The need to increase computer access and work stations, as well as maintain licensing for state-of-the-art programs drove the department to seek funds for these as well as for a departmental computer technician, and to increase the number of and stipends for graduate students.

Recruitment of undergraduate majors remained successful and graduate student success continued. The trend of increasing enrollments sat positively with the dean and the department's growth was supported. At the five year mark the geography department at New Mexico State University had successfully established itself as a well-rounded, self-sustaining program with both cultural and physical emphases and the technology to employ spatial analysis to each.

### The New Millennium

By the turn of the century NMSU's geography faculty had established a positive reputation and a synergy among themselves, across the university and in the community. This overlying success fostered collaboration and student participation giving the department an open and friendly feeling. Classrooms were being remodeled to include a "smart podium" which provided multimedia software and hardware to support and enhance traditional lecture and laboratory activities. Jack Wright had a special charisma in the classroom that boosted enrollments in his courses and brought more students to the major. He also taught the graduate *Research Design* course in which he had a positive influence on graduate research development and success. Dugas continued to give students field experience via his *Geomorphology* course by employing a wet lab that included a stream table and by providing tools for analysis of sedimentation at check dams constructed in the Rio Grande Basin during the 1930's and 40's.

Czerniak passed the scepter of department head to DeMers in fall of 2000 and took on the role of graduate advisor. Czerniak remained the anchor for the planning major, which offered courses in *Introduction to Planning & Community Development*, *Transportation Geography*, and *Urban Geography*, and required an internship. Wright offered courses in *Environmental Planning* and *Land Use Law*. Cartography labs were now conducted using GIS and the demand from geography majors and students across campus made this and the *Fundamentals of GIS* popular classes. This popularity spawned the creation of both undergraduate and graduate minors in GIS by 2001.

Christopher P. (Chris) Brown (Ph.D. 1998, San Diego State University/University of California at Santa Barbara) arrived to join the faculty at NMSU in 2000. His research background in transboundary (U.S.-Mexican border) water issues of the Southwest made him an excellent compliment to the department. In addition, he brought a strong background in GIS and geospatial tools, which he presented in an intense yet easy-going style. He also quickly established a strong relationship with the Water Resources Research Institute (WRRI), which would foster numerous research projects and employ both graduate and undergraduate students.

A strong contributor to the department in this era was Biology Emeritus Professor Walter G. Whitford. He contributed a course in *Wildland Restoration* to the planning course list and also offered *Desert Ecology*, which was cross-listed with Geography, Biology and Fisheries & Wildlife Science. A series of adjunct faculty and college instructors continued to provide courses to enhance the regular course list including *Introduction to Meteorology & Climatology* taught by Terrence Huck (MAG 1998).



In spring of 2000, David Garber taught an advanced GIS course, *Using PC ArcInfo*, followed by *Using ArcView 3.2*. This course, typically offered through Weekend College, provided advanced GIS training for professionals, advanced undergraduates and graduate students. As instructors cycled through and software upgrades prevailed the course evolved into a capstone course *GIS Practicum* with instructors Ed Falconer (2001-2002), Mathew Rich (2003-2005) and John Kennedy (2006 to present). Cross-listed courses with the college of agriculture also enhanced the geography curriculum including *Soil Morphology*, *Soil Classification*, and *Soils & Land Use* taught by Hugh Monger, and *World Agriculture & Food Problems* taught by Brian Hurd and others.

### **2002 – A Decade Strong**

At the ten-year mark the Geography Department had demonstrated an impressive increase in research activity and funding while maintaining strong numbers in undergraduate and graduate enrollment. DeMers remained department head and Czerniak continued as director of GARL, while Wright took over as graduate advisor, with Dugas and Brown filling out the faculty roster. Research funding and grants topped \$1.32 million with much of that continuing to support student experiential learning as employees in the project lab, which was renamed the *Spatial Applications and Research Center* (SpARC). Projects in the lab included cadastral mapping, biodiversity & endangered species monitoring, and transportation analysis. Chris Brown took over as director of SpARC in 2003.

There were now 41 geography majors, 9 planning majors and 18 graduate students enrolled in the program. The breadth of students from many disciplines choosing a GIS minor indicated the popularity and success of the GIS minor. Among these were students from fisheries & wildlife, range sciences, environmental science, sociology & anthropology, surveying, and education. Graduate research projects incorporating GIS included collaborations with the Bureau of Land Management, NM Fish & Game, Texas Department of Transportation, U.S. Department of Transportation, Jornada Experimental Range, and White Sands Missile Range. Graduates of the department still enjoyed 100% employment in careers related to their degree when sought. MAG graduates accepted positions in local, state and national agencies and offices including NOAA, USFS, ESRI, EROS, NM-DOT, TX-DOT, WSMR, NPS, BLM and the Nature Conservancy. The master of applied geography was not strictly a terminal degree; a number of students have continued to obtain their doctorate.

Faculty research publications span a range of professional journals including *Journal of the American Planning Association*, *Focus*, *The Journal of Arid*

Environments, Quaternary Review, Geographical Review, Urban Lawyer, Operational Geographer, Journal of Planning Research and Education, Resources in Education, Journal of Geography, Southwestern Geographer, Journal of California and Great Basin Anthropology, Journal of Contemporary Water Research and Education, and the Journal of Borderland Studies. In addition, book reviews by faculty are published in The Annals of the Association of American Geographers, Geographical Review and The Professional Geographer.

Changes to the curriculum had focused mainly on renaming and renumbering to reflect societal trends and sequencing. For example Geography 111G, *Introduction to Physical Geography* was renamed *Geography of the Natural Environment*; Geography 201G (*Survey of Geography*) was renumbered to Geography 120G. Other than these administrative changes in curriculum, internal course updates and revisions of materials continued as always to reflect current issues and research results. Faculty continued to emphasize the application of basic geographic concepts, mapping and technical skills in all courses.

Increasing enrollments meant increasing pressures on faculty with high course loads (3/2), graduate advising, and service and research requirements. These pressures prompted DeMers to seek to increase the number of faculty in the department by untried means. He approached the department about sponsoring an enthusiastic MAG student to the New Mexico Commission on Higher Education's loan-for-service program, which would bring the promising candidate back to NMSU geography in a tenure-track faculty position upon completion of their doctorate degree. Theoretically this would take the faculty count to six. The proposal was accepted and the student (this author) left to begin her doctorate at UCLA.

In 2004 the dean tapped Bob Czerniak's talents and he was promoted to interim associate dean of research. His presence in the dean's office was a success and the "interim" was dropped from his title. This meant further demands on his and the department's time as he necessarily reduced the number of courses he taught. The popularity of the planning major had never increased as hoped and a decision about the future of the geography department and how to effectively cover both majors without Czerniak's contribution came into question. Add faculty to cover the planning major or let it go? Though a difficult decision, the planning major passed into history. In an interesting turn of events the Western Planners Association named Czerniak 2005 Planner of the Year.

In fall of 2004 DeMers passed the scepter of department head to Wright and Dugas took over as graduate advisor. The trend of increasing enrollments in the geography major had continued and the decision to focus on one major was proving to be wise. Wright injected new energy into the program by ac-

tively recruiting new majors and establishing a goal to upgrade classroom and lab facilities. This began with computer upgrades in the teaching lab, and planning for expansion and remodeling of existing space and resources. Current faculty included DeMers, Dugas, and Brown, with Czerniak teaching a course or two per semester as his availability allowed.

Chris Brown developed successful collaborations with researchers in many departments across campus including Animal and Range Sciences to explore the effects of land use change on acequia systems in northern New Mexico, and Health and Social Services to conduct research into the distribution of West Nile Virus. He has also established collaborations with researchers at universities in Spain and the Middle East.<sup>2</sup> In addition, he is a member of the faculty senate and numerous other committees at NMSU.

Both DeMers and Brown have made strong contributions to the University Consortium on Geographic Information Science (UCGIS) and DeMers also served as an editor of the Geographic Information Science & Technology Body of Knowledge.<sup>3</sup>

Dan Dugas has created such interesting field and lab exercises for his *Map Use & Analysis* and *Geomorphology* courses that he has had to add lab sections to each. He has also proven to be an excellent graduate mentor with a large proportion of his students continuing on to the doctorate.

Carol L. Campbell (Ph.D. 2005, University of California Los Angeles) returned to join the faculty in fall of 2005. She brought a strong background in biogeography with field and remote sensing skills obtained from experience describing bird habitats and niches in space and time. She had worked as a wildlife biologist for the USFS in the Sierra Nevada, and for the BLM monitoring endangered species in New Mexico. Campbell taught *Biogeography*, and *Humans and the Natural Environment* (renamed from *Survey of Geography*), and team-taught *Desert Ecology* with Walt Whitford. She also developed a course, *U.S. National Parks*, which would add to the regional course offerings in the department and, after her first year, taught *Digital Image Processing*. Though at first it was hoped her position would increase the number of geography faculty, this did not come to pass as Czerniak was increasingly called away from his departmental duties by the dean's office.

Wright continued his expansion efforts by enlarging the teaching lab from 28 to 40 workstations with upgraded computers and flat-screen monitors. The newly designed lab was also fitted with a "smart podium" and a high-resolution projector resulting in the largest GIS teaching lab in the southwest. He also continued recruitment efforts and by fall 2007 the department boasted 75 majors, and a 20% increase in student credit hours over the previous year. This growth dramatically increased pressures on the current faculty and two new positions were requested.

### Finally Growth

Michaela Buenemann (Ph.D. 2007, University of Oklahoma) joined the faculty in fall 2008. She brought strong cartography, remote sensing, and GIS skills, and research interests in arid lands and field methods. She taught *Cartography & GIS*, and developed two seminar courses *Southwest Environmental Geography* and *Geospatial Natural Resource Analysis*. Her position represented the additional geography faculty originally requested in 2002 bringing the total number of faculty to six.

Two prestigious university awards were presented to geography faculty in 2008. Chris Brown was awarded the Exceptional Achievement in Creative Scholarly Activity award, and Jack Wright was rewarded for his teaching talent with a Donald C. Roush Award for Teaching Excellence.

Czerniak's time for teaching in the department was nearly gone yet he maintained a collaborative role in the SpARC lab contracts, and continued to advise graduate students with research interests in planning. This too would pass into history when he was named associate vice president for research & administration in fall of 2008.

Wright and Czerniak began working toward winning a grant to increase geospatial training and workforce development through the National Geospatial-Intelligence Agency (NGA, formerly the National Imagery and Mapping Agency). The grant was in the form of a federal earmark that would provide funds to universities to meet the nations growing need for geospatial analysts. The location of NMSU in proximity to three major military facilities (WSMR, Fort Bliss, and NASA) and the arid landscapes of the region, which may be used as landscape analogs for strategic sites such as those in the Middle East, made NMSU a logical choice for this project. This grant, worth more than \$800,000, was awarded to geography, surveying & engineering, and the physical sciences lab in fall of 2008. The grant included funding for geography student scholarships and advanced training, two factors which were used to further recruit students in to the major.

Currently the NMSU Geography Department is poised to start spring 2009 with over 120 undergraduate majors and 25 full or part-time graduate students. Over 80 MAG degrees have been awarded. Grants and contracts for the year exceed \$1.6 million. Requests and proposals are in place to continue the growth and expansion the department has demonstrated over the past 16 years. Energy among the faculty and students is high and the influence of the circle of geographers associated with the Geography Department at New Mexico State University is expanding.

**Notes**

1. William King, Earth Sciences, ed. Monroe Billington, *New Mexico State University College of Arts and Sciences Centennial History*, Published by the College of Arts and Sciences Centennial Committee, Las Cruces, 1988, pages 77-81.
2. See *Panorama: New Mexico State Alumni Magazine*, Vol. 57, no. 1.
3. See <http://www.aag.org/bok>