THE DEPARTMENT OF GEOSCIENCES AT MISSISSIPPI STATE UNIVERSITY--A BRIEF HISTORY

by

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Acknowledgements

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Introduction

Geosciences—which encompass geology, geography, and meteorology/climatology—have comprised an integral part of academic study at Mississippi State University since the establishment of the land grant college in 1878. In tracing the evolution of the geo-sciences, four distinct phases are identified: the Early Years, the Department of Geology, the Department of Geology and Geography, and the Department of Geosciences.

Geosciences in the Early Years, 1880-1902

In the first annual catalog (1880-81) of Mississippi Agricultural & Mechanical College, the mission of the college emphasized a special stress on the sciences, including geology. A senior-level class entitled Geology, taught by D.L. Phares, M.D. in the Department of Biology, was required of all A&M students. Dr. Phares, considered to be one of the foremost experts in botany in the South, also taught zoology, anatomy, physiology, and even veterinary science. By 1884-85, the name of the department had expanded to the Department of Biology and Geology, a name that stood until 1900-1901 except for 1887-1888 when it was listed as the Department of Biology, Geology and Moral Sciences. Dr. Phares was succeeded as department head by G.C. Creelman and R.W. Herrick, respectively. Meteorology, also a required course for all students, was offered through the Chemistry Department. From 1880 until 1887 the course was taught by J.A. Myers, and from 1893 until 1897 it was taught by W.L. Hutchinson. From 1898 until 1904, Meteorology was not listed in the catalog, perhaps because of the absence of a qualified instructor. Geography was considered a prerequisite to a college education, and students with little back-ground were required to take a physical geography course titled Geography (using a textbook by Matthew F. Maury, the eminent ex-Confederate geographer) offered through the Preparatory Department.
The Department of Geology, 1902-1936

During the first three decades of the twentieth century, the discipline of geology became well established at Mississippi State, and geography became an increasingly important component of the "geoscience" curriculum. In 1902, a Department of Geology and Mining Engineering was established in the School of Engineering. William N. Logan (Ph.D.) of St. Lawrence University in New York was hired in 1903 to head the new department. Logan had done considerable work on the State Geological Surveys in Kansas, Michigan, and New York. Logan was also appointed Assistant State Geologist in 1903, a position he held along with his teaching duties until he left Mississippi A&M in 1916. Throughout those years, the course offerings in geology became increasingly diversified, and a new staff position was created in 1909. In addition, Meteorology and Climatology fell under the academic umbrella of Geology in 1905. The old Physical Geography course remained a Preparatory Department offering until 1904, but its scope was expanded from "knowledge of the principal divisions of the earth and their economic bases" to a "nature study" in which soils, climate, and other physical factors were tied in to understanding the variations in world regions. After 1905, Physical Geography was phased out, and a Physical Geography course re-placed the earlier General Geology and Physical Geography courses. In 1915, a year before Logan left the college, a course in Commercial Geography was added to the curriculum.

The incipient importance of geography was temporarily recognized when the Department of Geology and Geography was created in 1916, a date often cited as the be-ginning of the present department. Headed by C.W. Tomlinson, courses in Agricultural Geography, Industrial Geography, and Advanced Map Interpretation were added to the curriculum. (This interest in geography was undoubtedly partly stimulated by World War I and its global implications.) In 1917, however, the department name reverted back to Geology, E.L. Packard was made head, and the department was moved into the School of General Science from the School of Engineering.

In 1918, W.C. Morse (Ph.D., M.I.T., 1927) became head of the Department of Geology. Perhaps because of training at the University of Chicago, where he had taken courses from Rollin Salisbury, the preeminent geologist who was responsible for establishing the oldest separate Department of Geography in the United States (at Chicago in 1907), Morse endorsed geography as an important component of the geoscience curriculum. Early offerings in Industrial Geography and Commercial Geography were re-placed by Economic Geography in the mid-1920s, and a course titled Geography of Latin America appeared in 1920. The broadening of the Department of Geology was in line with the mission of the college, which was upgraded from Mississippi A&M College to Mississippi State College in 1932. In 1934, W.C. Morse left A&M to become State Geologist and Chairman of the Department of Geology at the University of Mississippi. His replacement was Paul H. Dunn (Ph.D., University of Chicago, 1932), whose tenure as department head was to last until 1962. (Sixty years after first arriving, Mrs. Paul Dunn still makes her home in Starkville!)
The Department of Geology and Geography, 1936-1993

Perhaps because of his training at Chicago and/or his recognition of the importance of geography, Paul Dunn was responsible in making permanent the department name that subsequently stood until 1993. In March 1936, Dunn put in a request to change the name to Department of Geology and Geography, a request that was granted and made effective in the Fall of 1936. Several new geography courses were added—including Conservation of Natural Resources, Principles of Geography, a Geology/Geography Seminar and regional courses on Europe and South America—and students were given options of majoring or minoring in geography. In 1937, Franklin Seiler joined Dunn in teaching geology courses, and Roger Prior was hired as the first full-time geographer. Although Prior left after only three years, he added several more courses to the geography curriculum, including Geography of Mississippi and Geography of the South. (At the University of Chicago, Prior completed his Ph.D. dissertation in 1947 on Urban Land Use along Mississippi Sound.)

Under Dunn's leadership, both geology and geography flourished. Petroleum geology became increasingly important, especially after a graduate and former student instructor—Frederic F. Mellen (1911-1989, Class of '34)—discovered Mississippi's oil-rich Tinsley Field in 1939 while an employee of the Mississippi Geological Survey, then directed by W.C. Morse. After Prior departed, Merle W. "Duke" Myers (Ph.D., Clark University, 1948), in 1940 filled the geography vacancy in the department after teaching stints at Troy State and Michigan State. He was to remain the senior geographer in the department until his retirement in 1978, in what was to become the longest tenure ever of any faculty member in the department.

The onset of World War II left both positive and negative impacts on the department. During the war years, the Department of Geology and Geography provided ser-vice courses in geography to members of the United States Military forces, including army cadets and military engineers, as part of the Armed Service Training Program. At its wartime peak (1943-1944), the department boasted of an annual enrollment of 1300 students in geography classes, a development which required the staffing of many class sections with graduate students and part-time instructors. Except for 15 civilians, all of these students were in the military. (An annual enrollment of 1300 in geography along has not been exceeded since, although 1991-1992 enrollments of 1200 approached the record). Among the faculty, department head Paul Dunn was on military leave from 1943 to 1946. Franklin Seiler, a member of Dunn's pre-war teaching staff, was killed in Germany in 1945. In early 1946, the staff of the Department of Geology and Geography consisted only of Dunn and Myers, but by 1947 two assistant professors had been added (including one who taught Geography for Teachers).

The study of geosciences boomed in the postwar years for a variety of reasons. One, World War II stimulated renewed interest in geography, and in 1946 a new curriculum for an under-graduate major in geography (described in the 1948-1949 catalog) was set up. Two, continued high potential of petroleum
discoveries maintained high interest in geology as a major. Three, returning servicemen led to increased college enrollments nationwide. In the late 1940s, Mississippi State's Department of Geology and Geography boasted of approximately 140 undergraduate majors and 20 graduate students. Between 1950 and 1965, the number of majors fluctuated from as few as six to as many as one hundred fifty, stabilizing in the late 1960s in the 25-35 range.

The "field experience" became an important component of both geography and geology during the 1950s and 1960s. Dr. Myers conducted several summer field geography courses, which gave students field experience in the western United States, Alaska, Mexico, and Europe. During two summers (1965 and 1966) the department hosted the NDEA Summer Institute, a geography education program which attracted geographers and social studies teachers from throughout the country. During part of the 1950s, the department also conducted its own summer field course in geology in Wyoming and New Mexico. The geology field program, open to out-of-state students, was terminated in the early 1960s because of integration issues. (Summer field camp is still required for MSU geology students, who must sign up with other universities to fill their requirement.)

Except for Paul Dunn and Duke Myers, there was frequent turnover among Geology and Geography faculty from the early post-war period until the mid-1950s, when a period of continuity began and a relatively strong department emerged. Geologists Ernest E. Russell, John M. Kaye, Donald M. Keady, and Richard H. Herron, and geographer Doris Howell all joined the department in the mid-to-late 1950s and remained throughout the 1960s. Russell and Kaye retired in 1985, and Keady in 1990.

In 1960, the Department of Geology and Geography moved into the newly constructed Hilburn Hall which was the first centrally air-conditioned building on the newly re-named (in 1958) Mississippi State University campus. The 3-floor, dogtrot-style brick edifice became home to the Departments of Physics and Geology/Geography, with the ground-floor breezeway serving as a divide. A 2nd-floor geology museum--containing ac-cumulated fossils, rocks, minerals, and Indian relics--was designated the Dunn-Seeley Museum in 1962 as a memorial to Franklin Seeley and in honor of Paul Dunn, who retired in 1962. Geologist Troy Laswell was hired as department head in 1962, and his term of office lasted until 1985.

The period from the late 1960s until the early 1980s was relatively stable on the geology side of the Department of Geology and Geography, but there was frequent turnover of geographers. Among geologists, Karl Riggs joined the department in 1968 (still teaching in 1993), and Wes Lins joined in 1972 (retired in 1988). Several geographers came and went during that period, and many of the geography courses added to the curriculum--Remote Sensing, Quantitative Methods, Land Use and Location Theory--reflected the interests of individual professors. Upon the retirement of Duke Myers in 1977, climatologist Charles Wax joined the department, and his reintroduction of Meteorology into the curriculum revived a course as old as the university. Wax was appointed State Climatologist for Mississippi in 1983.
The 1980s were a time of adjustment for the department. Degree programs in geography were suspended in the spring of 1982-1983, as a result of misdirected fiscal belt-tightening. Beginning at the same time, the "old guard" began to be replaced by a "new guard", a cadre of geologists and geographers that initiated a new phase of stability in the department. Micropaleontologist Chris Dewey joined in 1984. When Troy Laswell re-tired in 1985, he was replaced as department head by karst geologist John Myiroie, who subsequently guided the department through a major restructuring. By the end of the decade, sedimentologist Mario Caputo (1986-1993), meteorologist Mark Binkley (1986), cultural/environmental geographer Klaus Meyer-Arendt (1987), structural geologist Bruce Panuska (1988), and hydrogeologist Darrel Schmitz (1990) had joined the department. In 1989, Charles Wax was appointed department head, a position he retains today (1993).

From the mid-1980s until the early 1990s, research activity increased and several new programs were developed, notably a field program in karst geology at the Bahamian Field Station (San Salvador Island) and the Broadcast Meteorology Program (BMP) for the training of weather-casters for national media markets. A coupling of the BMP with the Office of the State Climatologist led to the creation of the Mississippi State University Climatological Laboratory (MSUCL). On the basis of faculty interests, research programs were begun in micropaleontology (northern Mississippi and Alabama), tectonic environments (Alaska), environmental management (coastal Mississippi, Mexico), and hydrogeology (Mississippi-based). Continuing past departmental traditions, the "field experi-ence" in the geosciences is considered important in the educational processes, and student participation (both graduate and under-graduate) in the farflung research arenas has been strongly encouraged.

Undergraduate enrollments in undergraduate geology and geography courses climbed steadily in the late 1980s and early 1990s, and Masters' level instructors were temporarily hired to assist the regular faculty in fulfilling enrollment demands. (One of these "part-time temporary" instructors--Mr. Dalton Miller--was appointed full-time permanent instructor in 1993.) Sixteen specialized broadcast meteorology courses were added to the curriculum, and the nationally acclaimed new programs at MSU were attracting off-campus (correspondence through the Division of Continuing Education) and on-campus undergraduate and graduate enrollment demands. Innovative and experimental courses such as Geography of Tourism and Planetary Geology attracted many non-majors, many of whom subsequently developed an appreciation for the geosciences. Geology graduate enrollments remained moderately low in the wake of the worldwide petroleum recession, but the emphasis in geology increasingly was shifting to the arena of environmental sciences.

The Department of Geosciences, 1993-present

In spite of the longevity of the geosciences at MSU and recent advances in all indicators of teaching, research, and service, the department barely survived elimination in the aftermath of a 1991-1992 fiscal crisis. As a result of this sur-
vival, a decision was made to set the department upon a direction that would come to be seen as the fourth phase in the history of the department.

At a retreat held in 1992, the faculty of the Department of Geology and Geography agreed to streamline the department into an environmental earth science department—the Department of Geosciences—that will address innovative environmental geoscience concerns of the 1990s and at the same time maintain the traditional integral component fields of geology, geography, and meteorology/climatology that have been in place at Mississippi State University since its founding. Many of the old courses and course requirements that had become obsolete were discarded from the 1993-1994 MSU catalog, while at the same time new "hands-on" courses were approved (for inclusion in the 1994-1995 catalog). The offering of B.S. and M.S. degrees in Geoscience was especially attractive to prospective Broadcast Meteorology/Climatology and Environmental Geography students as well as "non-traditional" geology majors with career goals in environmental fields. The departure of Mario Caputo in May 1993 facilitated the hiring of a new meteorologist/climatologist (to commence in early 1994) to strengthen the existing Broadcast Meteorology/Climatology program. The name change, new curriculum, and degree program were officially approved in late Spring 1993, and for the Fall 1993 semester, a record-high number of graduate students in Geosciences was attained (23 in residence). The future looks bright for the remainder of the 1990s.