

**CREATION OF A NEW CENTER AT THE UNIVERSITY OF MONTANA-MISSOULA
WITH AN ASSOCIATED FIELD STATION**

1. Identify the center's purpose:

The new center would be called "The University of Montana Paleontology Center" (UMPC) and the associated field station would be designated as the "Fort Peck Field Station", or FPFS. The purpose of the center and the associated field station is to preserve the fossil heritage of Montana and the region, to be a repository for important fossil discoveries, and to serve as a center of excellence for research, teaching, and public outreach. Associated with this will be the development and maintenance of an electronic database and a website, which will support research and education, including distance learning and a "museum without walls." Partnership with the non-profit organization "Fort Peck Paleontology, Inc. (FPPI) and its facilities in the Glasgow area, which may include some buildings at the old Glasgow Air Force Base, will allow creation of a summer program with paying "volunteers" to assist in digs and fossil preparation. UM and other students would be involved in course work at these facilities for these and/or academic credits. Finally, "The Fort Peck Dam Interpretative Center and Museum", operated by the Army Corps of Engineers has designated about 1000 sq ft of Museum space for fossil exhibits to be prepared and managed jointly by FPPI and UMPC.

2. State the center's objectives:

There are four primary objectives associated with creation of UMPC:

1. To give State, national and international recognition of a unit of The University of Montana, which has contributed to world-wide education and science for 110 years.
2. To expand the educational and research components of the Montana University System.
3. To have a recognizable and specifically designated "Center" for bringing funds to the University (grants, contracts, donations, etc.) and for attracting students (both traditional and non-traditional) and visiting scholars.
4. To provide an administrative unit for the Fort Peck Field Station, which will be created in the Glasgow Region of Montana.

1. The present UM paleontology facility consists of a fossil preparation lab and a world class research collection. Holdings represent the fossil heritage of the State of Montana as well as other places in North America and the world. The facility attracts researchers from the U.S. and abroad. The facility was started in 1895 with a grant from the Smithsonian Institution. Research publications based on the collection started in 1899 and, to date, the bibliography list includes nearly 300 scientific papers. The current collection has over 100,000 specimens of vertebrates, invertebrates, and plants, which include 1,000 type-specimens (either illustrated or representing a new taxon). Highlights of the collection include: The Burgess Shale - Cambrian Period (410 million years ago), containing the rarest fossils in the world from British Columbia. The Bear Gulch Biota - Soft-bodied plants, vertebrates, and invertebrate animals from the Carboniferous Period (320 million years ago). This collection includes the most

complete fossil fish collection in North America. The Field Collection - The most extensive holdings of Cenozoic Period (5 - 25 million years ago) mammals in the Rocky Mountain region. It includes specimens from elephants, rhinoceroses, horses, and many extinct animals. This collection is used as the main method of dating the rising of the Rocky Mountains. The Stanley Collection - This is the most extensive collection of early Mesozoic Period (200-240 million years ago) representing marine invertebrates in the U.S. This collection includes many types that form the basis for new species of corals, sponges and mollusks. The Miller Plant Holdings - Rare and unusual Early Cretaceous and Cenozoic Period (40 - 100 million years ago) plants and pine cones. This collection also includes many type plant specimens.

2. Paleontology research and education in Montana and the Inland Empire region can be expanded profitably. At the University of Wyoming and the University of Idaho, there is little teaching in paleontology and limited teaching collections of fossils. Washington State University offers a paleontology emphasis in its Geology Department. The Earth Science program at Montana State University through an emphasis in Geology offers paleontology. The Museum of the Rockies at MSU emphasizes vertebrate paleontology, primarily dinosaurs. According to their website, 45% of the collection is in anthropology, 36% photo-archives, 10% history, 8% vertebrate paleontology, and 1% other. The vertebrate paleontology part of the collection is primarily dinosaur bones. Thus, an objective of The University of Montana Paleontology Center is to provide research and educational opportunities predominantly in fields of paleontology other than dinosaurs.

3. A "Paleontology Center" designation would enhance the University's ability to attract outside funding and students. Grant announcements from the United States Department of Interior, the National Science Foundation, the National Award for Museum Service, and Museums for America all contain programs with awards of \$150,000 to \$1,500,000 annually for equipment, salaries and other operating expenses for designated units like "The University of Montana Paleontology Center." Reviewers of these grant applications look for an institutional commitment to the project. A Center designation would be one such commitment that could strengthen an application.

Studies of paleontology, within the realm of the earth's natural history have been attracting more traditional and non-traditional students. A "Paleontology Center" at the University would retain Montana students and would attract out-of-State students, wishing education and/or research opportunities in this field.

4. The University of Montana has been approached by FPPI and economic developers in the Glasgow region to create a "Field Station" in the area in order to provide scientific direction and leadership for their existing field station, to help with the paleontology exhibit part of the Fort Peck Interpretative Center and Museum, to assist in building programs that would bring in researchers, students and tourists to enhance the economy of the regions, and to exploit opportunities to use certain facilities at the old Glasgow AFB. A "Fort Peck Field Station", although operating year-around, would be mostly a summer operation. Administratively, the UMPC's Director, curator and collections managers would serve at both sites. FPPI would hire a Business Manager

and other staff to deal with non-scientific/academic aspects of the joint Glasgow area operations. An MOU has been created between UM and FPPI outlining their respective responsibilities and objectives.

3. The center's anticipated activities:

A. Funding the UMPC's programs will be a major activity. Grants must be written, submitted, and funded grants have to be administered. It is hoped that, as the reputation of UMPC grows in the community and the region, the Center will attract private contributions, as well.

B. Administration and oversight of both the UMPC and the FPPI will fall on the Center's staff, who report to the Center's Director; the UMPC's Director reports to the Chairperson of the Department of Geology. Financial administration, personnel management, coordination with FPPI, curricular management, and coordinating outreach will be included in these activities.

C. Scientific activities include collecting, processing, archiving, studying, and publishing on fossils. Many of these activities will be carried out under UMPC's administrative oversight by students, staffers, visiting researchers, and volunteers in the various Center programs.

D. Educational activities of the UMPC fall into two general areas. First are outreach activities through special programs, seminars and courses (i.e., distance education). Management of museum exhibits is also considered as educational outreach activities. Management of The Army Corps of Engineers Interpretative Center and Museum at Fort Peck will be a major activity, but smaller exhibits are planned for Missoula and other communities around the State.

4. Agencies, organizations, institutions, and advisory councils involved:

The University of Montana - Missoula
Department of Geology at UM
Fort Peck Paleontology, Inc., PO Box 123, Fort Peck, MT 59233
Two Rivers Economic Growth, Inc., 74 4th St N, Glasgow, MT 59230
US Army Corps of Engineers Interpretive Center, PO Box 208, Fort Peck, MT 59233

According to the MOU between UM and FPPI a joint Advisory Board will be established to coordinate and advise on scientific, educational and business activities of the Fort Peck Field Station.

5. The center's reporting line within the University:

The UMPC will be under the Department of Geology at UM and its Director will report to the Chairperson of the Department of Geology. Curator, Collection Managers,

and staff of the UMPC will report to its Director. All personnel at the Fort Peck Field Station will also report to the UMPC Director.

6. Relationship of the center to the University's mission, departments involved, and contributions of the center to academic programs:

The mission of The University of Montana includes creating knowledge, providing an active learning environment, generating outreach and service to the State/nation/world, providing unique educational experiences, while being responsive to the needs of Montanans. The proposed University of Montana Paleontology Center and the associated Fort Peck Field Station are in complete synchrony with the University mission. It will continue to give scientific oversight on collecting, preparing, analyzing fossils from Montana and elsewhere in the world. This will create an excellent learning environment for Montana students (graduate, undergraduate and K-12) and non-traditional students, many of which will come from out-of-State. Creation of the field station in the Glasgow/Fort Peck region and the virtual museum website are outreach activities to the State and region. National and international outreach will come from the expanded opportunities for scholars to participate in collecting and studying the paleontological treasures of and in Montana. Finally, a side benefit of those aspects of the project scheduled for the Glasgow/Fort Peck area is enhancement of the region's economy through increased employment, purchase of local goods and services, and increased tourism to the region.

The Department of Geology currently administers the "Museum of Paleontology." This museum allows prearranged tours and study opportunities for qualified scientists. Creation of the UMPC and the FPFS (which will interact with the Fort Peck Interpretative Center and Museum) will allow greater opportunities for public display of some of the museum's treasures. All courses in Paleontology are currently taught in the Department of Geology's course offerings. This will not change if a Center and a Field Station are created.

7. Describe any similar programs in Montana and the surrounding region:

Although there are other paleontology programs in Montana and in the surrounding region, the establishment of the proposed Center will expand the collections and enable additional research and teaching opportunities. As stated in section 2.2., the University of Wyoming and the University of Idaho possess limited teaching collections of fossils and restricted teaching in paleontology. Washington State University offers a paleontology emphasis in its Geology Department. The Earth Science program at Montana State University offers paleontology as an emphasis in Geology. The excellent collections at the Museum of the Rockies at MSU focus on anthropology, history, and vertebrate paleontology, especially dinosaur fossils. The websites of the Universities of North and South Dakota indicate that each offered a single course in vertebrate paleontology and North and South Dakota State Universities also have minimal or no offerings in this field. Thus, an objective of The University of Montana Paleontology Center is to provide research and educational emphasis and

opportunities predominantly in fields of paleontology other than dinosaurs; this would fill an academic need for Montana as well as for this region of the country.

8. Budget for first five years:

See the attached Budget Sheet and Attachment A, B, C, and D.

a. Identify faculty and staff requirements:

1) Names and percentage of professional time they will devote to the center:

George D. Stanley, Professor, Department of Geology - 0.5 FTE as Director of the UMPC.

2) The need and cost for new faculty, and special qualifications:

Additional personnel will be added to The University of Montana Paleontology Center and to the Fort Peck Field Station summer staff as programs grow and federal and private funding become available.

3) Support personnel and graduate assistants:

During summers of years 2 - 5, graduate assistants will be hired as the needs arise and as funds from federal grants and private sources become available.

b. Identify library, telecommunications, computing, equipment and space needs:

The existing Mansfield Library holdings will suffice; no major additional demands are anticipated in the near future. Likewise, nothing extraordinary is anticipated for telecommunications needs. At UM-Missoula, the Center will need its own telephone and fax line. Similar communications systems will be required at the Fort Peck Field Station. Computer work stations will parallel the telephone requirements. However, the "Virtual Museum" website will need a webmaster and a server. It is anticipated that these will be provided through a contractual arrangement between the Center and the UM IT office. For the first 5 years of operation, the existing office, preparation and collection space used by the paleontology group at UM-Missoula will be sufficient. However, renovations are needed in the existing paleontology space in the basement of the Science Complex. Costs for these renovations have been included in the Budget Analysis. New, space-saving specimen storage cabinets will constitute the majority of the new equipment purchased. These will allow consolidation of the collections, making more space available in the existing square footage for educational and research purposes. A new addition to the Skaggs Building (by Pharmacy and DBS) will contain about 1000 square feet of space, which might accommodate public displays from the UM Paleontology Museum.

In an agreement, being negotiated with Fort Peck Paleontology, Inc., office, research and preparatory space will be provided for the FPFS in their existing 7000 square foot facility. Some remodeling will be required and costs for this are included in the Budget Analysis. The Army Corps of Engineers, in cooperation with FPPI and the FPFS, is making available about 1000 square feet of museum space (at no cost) in the Fort Peck Interpretative Center, for public displays and exhibits organized and maintained by the FPFS. Additional space for long term storage of fossils and for some work on larger specimens can be obtained through an agreement with managers of abandoned facilities at the old Glasgow AFB. There also is housing (both apartments and barracks), which can be rented at low cost from current managers of the AFB for use by students, staff, and administrators of the FPFS.

c. Sources of funding to support the center:

A grant from NASA, funded in 2005 will provide \$50,000 of "seed money" during the Center's first year of operations; if this funding is delayed, the \$50,000 will be underwritten from the Office of the Vice President for Research at The University of Montana from indirect costs funds. Requests for \$1.5 million per year for 4 years, through the initiative process, have been requested from the Energy and Water Division of the Army Corps of Engineers. In addition, the UMPC has identified Requests for Applications for grants from the National Science Foundation, the Smithsonian Institution and the Department of Interior to cover renovation expenses, capital purchases, and some operating expenses. If funded, these grants could bring in several million dollars per year. Program fees for summer students at the FPFS will also generate considerable revenues. Tuition payments and private contributions will contribute other funding for the Center and its activities.