Development of a
New Natural History Museum Building for
Louisiana State University, Baton Rouge
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Introduction

In 1979, Louisiana State University began to move to unite many of its natural science and cultural collections into the LSU Museum Complex, including the Museum of Natural Science (Zoology) and the Museum of Geoscience (Geology, Anthropology). In the 1990s, natural sciences and geosciences were grouped into a single unit. Part of the Museum of Geoscience (rocks and minerals) remained in Geology and Geophysics, as did curators working on Micropaleontology, Invertebrate Paleontology, Mineralogy, and Paleopalynology. The art museum, which had been included in the Museum Complex, was moved off campus to downtown in 2005, where it resides in the Shaw Center. As the 1990s closed, 16 scattered collections were placed within the Louisiana Museum of Natural History (as the Louisiana State Museum of Natural History, enacted through legislative action). [Our references to the LMNH will include all of the various permutations and groupings of buildings, collections, and personnel in the expanded definition of the museum, thus avoiding confusion, unless we wish to highlight a particular portion of the museum.] The collections are not currently housed within a single building, however, and they do not have the same reporting lines, or even report to the same senior administrators (e.g., the Louisiana State Arthropod Museum reports through the Dean of Agriculture, whereas most collections report through the Dean of Basic Sciences.) The present facilities that house the collections range from excellent (the herbarium) through very poor (Foster Hall) to dismal (the fish collection in the Gym Armory). The LMNH also includes various fossil preparation and storage buildings, the petroleum core drill collection of the Geological Survey, and the textile collection of the Human Ecology school (the latter presents regular exhibits and is active in fundraising). Present collection storage facilities total less than 36,000 square feet of mostly inadequate and unsafe spaces, whereas the collections include 2.6 million objects and specimens and together comprise the largest collection of Louisiana's natural history heritage. Many, if not most, specimens and objects are irreplaceable and their value would have to be measured in the tens of millions of dollars, at least, if they were to be placed on the market. Their value to Louisiana is incalculable.

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Mounted Kudu

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Visitation to Foster Hall is minimal—perhaps 20,000 people per year—though it may be less because visitors are not counted. This is much lower than most major university museums (e.g., Florida, 194,000; Harvard, 175,000; Minnesota, 166,050; Oklahoma, 180,000; Yale, 150,000). Most visitors to Foster Hall are children. In addition to having outmoded exhibits, parking for visitors who wish to view the exhibits in Foster Hall is not available nearby and cannot be developed given the position of Foster and Geosciences within a gated area of campus that is also the historic campus center. When one considers the limited material that is on display in Foster Hall, its antiquated style and limited content, and the difficulty in accessing the exhibits, it is no surprise that there are few visitors.

Mounted grizzly

The LSU Museum of Natural History finds itself in a challenging situation. A group of museum supporters (the Build-a-Museum group) wishes to see a modern facility on campus that can protect the collections, showcase the state's natural history heritage, and be easily accessed by the public for exhibits and public programs, while also meeting research and teaching needs of LSU. Indeed, this group of supporters envisions a major state university museum that will be able to serve students, researchers, and the public, while ensuring quality care of the irreplaceable collections. University administrators have been supported by this group in visiting the Sam Noble Museum in Oklahoma and in preparing a report examining potential sites for a new LSU natural history museum on campus.

A group of senior curators, mainly the biodiversity group in Foster Hall, opposes the new unified museum initiative. Their arguments are based on the view that the first mission of university museums is undergraduate and graduate education and research, with collection
preservation also being important, though less so than research, a view which we infer given the marginal care that most collections are receiving at present. These scientists do not feel that

public service and public education via extensive programs and exhibits are advisable for a university institution. They base their arguments in part on the belief that, should funding for the museum become restricted at some future point in time, public and university pressure will deemphasize collections and research and shift funds to exhibits and public programs. They cite at least two non-university museums as examples of this having taken place (the Academy of Natural Sciences in Philadelphia, a non-academic private museum, and the San Diego Museum of Natural History, a non-academic city museum). They also envision the university of the future cutting back on curatorial positions to protect public activities during times of financial stress.
The curators opposed to a unified museum note that a productive group of scholars in the museum of natural sciences maintains a highly successful graduate program. They do not wish to jeopardize their success by either moving the museum operation away from the old campus center to the developing science emphasis academic core area of the south side of the present main campus or deemphasizing in any way the scholarly activities of museum personnel. Their hope is to remain in Foster Hall, their current facility, which is over 100 years old and was originally developed as a cafeteria. Recent campus planning documents show the campus center shifting southward. Even the present library is scheduled to be moved toward the new campus center that is developing south of the present historic center occupied by Foster Hall. The curators currently in Foster Hall also hope to obtain access to the entire building (which is presently shared equally with the School of Art), and to have the university renovate the aging building to serve as a collections/research museum that will be able to store some, but not all, collections, and with little space being allocated for exhibits in any renovation that may occur.

Diorama in Foster Hall

Below, we carefully consider the arguments from both groups and provide our best estimate of the merits of each point of view. Together, we have more than 8 decades of museum experience, including museum management, strategic planning, building construction, fundraising, research, and undergraduate and graduate education. We also have familiarity with museum operations in more than a hundred museums of all sizes and types. Our experience includes dozens of in-depth assessments and reviews of state and university natural history museums for the Accreditation Program of the American Association of Museums (AAM) and the Museum Assessment Program (MAP) of the Institute of Museum and Library Services, as well as consulting work for many other museums. Thus, we feel qualified to comment on all aspects of the LSU situation and can provide reasoned arguments for further consideration by the LSU administration, museum curators and staff, museum supporters, and Louisiana state officials. We hope to point out the strengths and weaknesses of the arguments being made for and against a new museum facility.
LSU’s Responsibility to the Public: Potential and Promise of the LMNH

University/state museums such as the LMNH at Louisiana State University are ideally suited to provide comprehensive interpretations of our world and participate in the development of solutions to the world’s problems from poverty to global warming. Museums offer one of the most effective interfaces between academia and the public. A basic question that has to be answered is the following: Does the State of Louisiana want its state museum of natural history to function only as several distinct academic research units with some attention being given to collection preservation, or does the state wish to have a unified museum that serves all of the people of the state whose taxes underwrite the entire museum operation? The basic argument between the supporters of a new museum building and those curators who wish to see Foster Hall renovated as a biodiversity unit, can be reduced to this simple choice. A biodiversity research institute has great value to the university as a teaching/research unit. We believe that this is what the curators would prefer in the best of all worlds. Public service and public education would be minimized and interactions with the public would remain at a minimal level. This is an acceptable strategy for the state to follow if it wishes its natural history museum to function in this manner and to remain as a variety of scattered units on campus.

Snake exhibit in Foster Hall

The university, in addition to the state, must also answer this question. Will its museum of natural history remain a scattered group of collections with a rather limited teaching/research operation, or become a leader among university museums in the quality and extent of its programs to the students and faculty of the university and to the citizens of the state? Indeed, the inability of anyone in a decision-making position to articulate these questions
and to provide answers to them lies at the heart of the problems afflicting the museum at present. Two groups, each with the best interests of the "museum" at heart, are pitted against one another and no one in authority has rendered a decision that will end the stalemate.

The strengths and resources of the LMNH [e.g., paleopalynology collection, bird collection, frozen tissue collection, micropaleontology collection, geology collection, vertebrate paleontology collection, botany collection; and outstanding curators (including a Boyd Professor in Botany)] are impressive, and make the museum a likely candidate to assume a leadership role in public education at the broadest level should this be desired, thus building on its academic success. LMNS, LMNH, and LSU share several qualities that distinguish them from their competitors such as non-university museums: a deep respect for intellectual attainment and learning for its own sake; first rate research; broad-based understanding and research related to some of the major problems facing the natural world; an appreciation of and questioning about humanity's role in the world; and a sense of commitment or obligation to society with respect to educating its citizens.

Leaky skylight in Foster Hall

Curators and staff of major university museums have the distinct advantage of being able to provide an equally high level of academic excellence and public service, as demonstrated by the success of other museums, such as those at the Florida Museum of Natural History (UF) and the Sam Noble Oklahoma Museum of Natural History (SNOMNH) at the University of Oklahoma (OU). We will note at the outset that we do not view academic and public missions as antithetical. There is no inherent conflict in a museum being either a research/education and collections museum or a public programs museum. Indeed, in the case of SNOMNH, it was only after a new building was constructed and could serve the public through exhibits and public programs by utilizing the collections and ongoing research in the museum, that the people of Oklahoma agreed to provide the significant funding required to develop a major university natural history museum and expand the size of the staff from 12 people to more than 100 full-time museum employees, including 13 curators. The notion that these two roles cannot exist together and be mutually beneficial is unfounded and is illustrated daily by the major university/state museums across America.
Although there has been an explosion of global information due to new technology, much of the information remains fragmented. A need—and a great opportunity—exists for LSU through its museum to be among the leaders in translating the specialized knowledge of museum professionals to benefit the scientific and cultural awareness of the citizenry as a whole. Museum scientists have the opportunity to be among the most effective scholars and teachers, people who can extend their influence beyond college students to society in general. Based on their educational mission, LSU and its LMNH can be vital centers of learning if they become collaboratively involved in research, collecting, teaching, disseminating information, and serving the public. Universities are finding that, although they were once dedicated solely to graduate and undergraduate education of young people, today’s students may include adult learners, people changing careers, retirees, and others who wish to benefit from the investments they have made in university programs and institutions. In addition, universities must reach out to children, who will eventually become the university’s students. Museums are centers for such informal and even formal continuing education of all demographic groups.

Museums are one of the finest bridges between the university and the general public, including undergraduate and graduate students, their parents, and others who are committed to the success of the university itself. A fully functioning university museum can be a tremendous asset to a university, as has been shown at such institutions as Harvard, Yale, Berkeley, the University of Pennsylvania, the University of Oklahoma, the University of Texas, the University of Florida, the University of Minnesota, and many others. At each of these campuses, museums are seen as a contributor to education, research, public education, service, outreach, and even fundraising. At none of these museums have curators been sacrificed to increase the resources that were dedicated to public programs and exhibits during difficult financial times, and all of these institutions have experienced serious funding problems over the last few decades. Indeed, their programs have expanded during this period. During the recent global financial crisis, university museums that have had an exhibits/public programs function have reduced operations or closed the facilities of the public face of the museum, rather than reduced the research/teaching activities (e.g., Humboldt State University, University of Wyoming, Idaho State University, University of Florida). Significantly, those “museums” that were primarily research collections without a significant public face have in some cases lost curators (e.g., Berkeley, Michigan).

In the recent period since our on-site visit to LSU, there is a heightened sense of urgency for the future of the LMNH given factors related to the external political, economic, technological, and social milieus. We hope that out of this sense of urgency, the university community will be roused into more decisive and timely responses to issues raised in this report. For example, how will the museum respond to the explosion of distance and digital learning, and how will that fundamentally affect the way the museum positions itself in the educational marketplace? What is the point of convergence of the museum’s subject matter and society’s needs? Does the crisis in science education in the classroom frame new responsibilities for the museum and the university? In our opinion, the LMNH may have key answers to such questions. Recently (08/05/09), the Louisiana state Civil Service Commission approved six new unclassified Department of Education jobs in a move the state’s school chief said is designed to help Louisiana education reach its new vision for “world class education in Louisiana”. Superintendent of Education Paul Pastorek said the jobs are part of an agency initiative to provide more direct support for academically poor public schools including the elimination of “gaps between race and class.” How will LSU utilize the LMNH to be a part of the
new vision? How can the LMNH assist in bridging these gaps? How can LSU and the LMNH work with the state’s educational system for mutual benefit?

In the following pages, we present a brief review of the general strengths and resources of the LSU museum—with a few specific examples from the SNOMNH and suggestions for LSU—that will indicate how LMNH can be successful by taking advantage of its state/university status and increasing its value to LSU and its community.

**Specialized Collections**

For centuries, university/state museums such as LMNH have amassed more than 100 million specimens and objects that document the diversity and history of life and culture on earth, especially in their local region, and provide the basis for ongoing research and teaching activities to the world’s scientific and cultural communities. The collections are a shared legacy of inestimable value and are more than repositories of inspiration and memory—they are a constantly working and growing database. LSU’s collections also play a role in the “global collection” of all items used for investigation of any specific species or topic. In addition, loans and reciprocal exchanges of items are commonly made between museums in different countries, and LMNH is active in this activity. The LMNH collections also have large numbers of original objects or “type” specimens that serve as the ultimate authority on the description and characterization of a species. The numerous type specimens in the micropaleontology collection of the Department of Geology and Geophysics are excellent examples. These objects also provide an opportunity to connect with the scientists who collected the objects and experience the history of their discovery. From the standpoint of a university/state museum, the collections at LSU are superb. The collections are so extensive that they contain numerous examples of unique specimens/objects that would be iconic exhibit items that would excite the public to visit the museum (e.g., a fossil whale—potentially the most iconic object in the museum and a candidate for state fossil if such does not already exist), a fossil mammoth, a dinosaur, spectacular minerals, diverse anthropological items from many cultures, textile materials, and a variety of specimens that are currently not exhibited but that would be the envy of many major museums).

At LSU, the frozen tissue collection provides another excellent example of an important collection that can and does extend its influence far beyond basic taxonomic research. How the animals represented by these tissues can survive is of great interest to scientists from disciplines such as ecology, genetics, evolution, and physiology. More importantly, biological processes underlying discoveries are applicable to all organisms on earth, thus impacting our ability to effectively manage our limited resources. Louisiana’s—and the Earth’s—human health, agribusiness, marine and freshwater studies, and conservation management directly benefit from such collections and the work associated with them. The tissue collection is impacting research throughout the world and is clearly one of the most important such collections on the planet.

Similarly, the bird collection is also one of the finest in the world. Its curators and students have published hundreds of articles and books on birds represented in this global collection. The bird collection, the nation’s 4th largest, is arguably the most important collection in the museum. The problems of housing a significant portion of a major museum’s collections in an old, dilapidated building are clearly illustrated by the state of the bird collection. The juxtaposition of this magnificent collection—built on the labors of generations of students and scholars who gave significant portions of their lives to its development—with the decrepit
Foster Hall storerooms was jarring. To see one of the world's greatest bird collections with gallons of flammable accelerants piled up by its doors was frightening. Yes, the building is shared with the School of Art, but how can this situation be tolerated? According to the American Association of Museums, the interests of the public are above the interests of the institution or of any individuals in the museum. By AAM standards, one of the characteristics of an accreditable museum is that the museum is a good steward of its resources that are held in the public trust. The poor collection storage conditions we observed bring the level of care into serious question.

Specialized Resources

University/state museums such as LMNH and SNOMNH also differ from private freestanding museums in that they have access to important and specialized facilities such as libraries, archives, and laboratories. At OU, for example, the History of Science Collection is a part of the University Libraries system, and the museum and library work together on preparing exhibits and public programs (such as this year's Darwin celebration) or by providing resources for each other's graduate and undergraduate students and faculty. For a weather exhibit, the SNOMNH will seek assistance from the U.S. National Severe Storms Laboratory, an internationally recognized research laboratory located at OU. In university/state museums such as LMNH and SNOMNH, these resources are usually much more extensive than similar resources at freestanding museums. University museums are thus unique organizations where cutting
edge and creative science can be shared with undergraduate and graduate students and with the general public, whose awareness of science has declined precipitously in recent years. The nation’s university museums are the engines that generate scientific discoveries in the areas of taxonomy, systematics, biodiversity, biogeography, conservation, evolution, anthropology, and other fields of study related to museum collections. Without these institutions, the supply of new scientists would cease. In this regard, LSU has been extraordinarily successful, as noted in Dr. Fred Sheldon’s Flagship Agenda, which was prepared for the Mares/Tirrell visit and is located on the special museum information website: hereafter termed Flagship Agenda.

Art classroom in Foster Hall

Specialized People

People are among the greatest assets of a university museum. They include students, faculty, curators, administrators, staff, alumni, volunteers, trustees, political allies, and donors. Once committed to the museum and galvanized into action, this is a powerful group of partners for solving problems such as the need for a new facility or the need to develop a strategic plan, critical needs for many university/state museums. The existence of a group pushing for a new museum building and the expanded programs and services of a complete natural history museum (Build-a-Museum group) should be seen as a highly positive development in the life of the Louisiana Museum of Natural History at LSU. These supporters are the people who will bring pressure to bear should future budget cuts or political machinations interfere with the ongoing programs and development of the museum. Ideally, supporters such as these should be encouraged and assisted with providing much needed public support and visibility to a museum that is in serious trouble as far as the physical plant for most of its specimens is concerned.

With the help of such partners, the SNOMNH raised $45 million and built a new facility that opened in 2000. The museum worked closely with university officials to form a campaign council, train volunteers, and develop fund-raising strategies and activities. As examples of partnerships with university departments, students from the Journalism School were assigned to write stories about the museum’s activities, collections, curators, and plans; students from the
Business School assisted museum staff in preparing business and marketing plans; and students from the School of Architecture developed class projects with a focus on designs for the new SNOMNH. Partnerships of this type are win-win situations in which the university achieves its ultimate educational goals and objectives through a creative learning process with a real outcome. There is every reason to believe that the LMNH can be built through a similar process, already off to a great start with the establishment and efforts of its Build-a-Museum group of community volunteers.

The Flagship Agenda noted that the MNS curators are very productive, as are other curators at the LMNH. This is indeed the case. LSU students are highly sought after throughout the nation's museum and academic community. The 10 MNS curators produced 161 peer-reviewed papers over 10 years. This is a good rate of publication (for comparison, SNOMNH's 13 curators produced about 400 papers over this same period). Clearly, state museums can be important campus units, whether from the standpoint of publication of scientific papers, training college students at all levels, or attracting grant funds. MNS brought in $7.8 million in grants over the last decade, a highly respectable number (for comparison, the SNOMNH brought in over $10 million over the same period). One reason for the difference in external funding is that the Oklahoma museum is able to attract private funding and competitive grants for public programs and exhibits, as well as for research. Indeed, in the last week SNOMNH attracted $2 million dollars to support its public programs. A museum that extends its reach beyond the limitations of the research enterprise becomes a magnet for programmatic support that is not related to research, but that will influence research at some point in the future. Scientists
working at the interface of research and public outreach will find that NSF or other grants can be increased and enhanced if there is a significant public face to the research.

Hands-on access to objects is critical to understanding science, arts, and culture. When real objects from museum collections are placed in the hands of an audience such as university students, teachers, or parents and their children, complex concepts such as biodiversity, evolution, scientific understanding, and cultural integrity become clear. Fossils, feathers, and artifacts can fire the imagination as they are touched, sorted, and discussed. There is a thrill in seeing the original object or specimen rather than just seeing text or digital images. "Is it real?" is the question most often asked by children and adults in the museum. Nothing electronic will substitute for the real thing. Dinosaurs, for example, are more popular than ever thanks to new discoveries, new theories, and new technologies. And although the SNOMNH is a major dinosaur museum, Oklahoma youth participate in the million-dollar ExplorOlogy program at the SNOMNH and work side-by-side in the field with internationally recognized paleontological curators, biologists, and other staff members discovering real dinosaurs in the field. These programs offer a life-changing experience to young people who may pursue careers in science because of the unique opportunity afforded them by the museum, its curators, and its public programs staff.

Community Engagement

University museums are ideally situated to connect with their communities. In many ways the campus is the center of life in the community, much as the central business district was in the pre-automobile city or the shopping mall is in suburbia. University communities have
many things that are attractive and important to the quality of people’s lives, such as galleries and exhibits, restaurants, bookstores, recreational facilities, concert halls, sports stadiums, park-like green spaces, and special events. Campuses are hubs of activity that serve not only students and staff, but also the larger population of a town and region. Thus, the campus serves as both an environment for learning and a public space for the exchange of cultures. For example, the Michigan State University Museum has developed cooperative programs with Arabic and Native American communities in Michigan, and the SNOMNH has developed an extensive Native American language outreach program that serves almost 2,000 Native Americans each year with a goal of salvaging dead or dying languages.
Outreach

The LMNH has a great opportunity to create a substantial outreach program that will benefit all parts of the museum. A program of this type is likely to be highly valued by LSU and there is no doubt that educators, students, librarians, visitors to the library, and citizens in all communities will be interested and supportive. The LMNH already has the basic elements, such as scientific expertise, significant collections, an underserved audience, an opportunity for increased integration, and a wide-open playing field in the state.

The LMNH has “SOAR” (Scope-On-A-Rope), an extensive outreach program for school-age students in the classroom that provides loans of hand-held video microscopes. Using these scopes, the students can examine all kinds of objects such as insect wings, crystals, and fossils. A variety of school disciplines can be linked with SOAR including math, life science, social studies, earth science and language arts. Over 200,000 K-12 students in Louisiana have participated in SOAR. We hope that the LMNH will develop more outreach programs in response to the recent announcement by the Department of Education to create a new vision for “world class education in Louisiana”.

A program of outreach to the public is an excellent way to generate grant funding, disseminate curatorial research and generate public support. At the SNOMNH, one of the most successful strategies for the museum was to draw on the power of the citizens by connecting directly through outreach. SNOMNH’s traveling exhibits and educational kits reached out to our public in highly visible and positive ways to develop a popular constituency, thereby increasing our strength with our supporters and providing a concrete illustration of service to the state. We think that this strategy played a major role in our ability to plan and fund our new facility.

Additional university museums have found outreach to be a successful strategy for grant-funded outreach programs. The Institute of Museum and Library Services has just awarded a $144,000 grant titled "The Idaho Geology Outreach Project: Bridging the Natural History Gap" to the Idaho State University Idaho Museum of Natural History. “We are delighted that the Idaho Museum of Natural History has received this grant from the Institute of Museum and Library Services,” said ISU Provost Gary Olson. “It is yet another
indication that agencies throughout the state and region have great confidence in the museum and its newly appointed staff." The IMNH is a top priority of ISU's administration and recently underwent a major personnel reorganization in order to strengthen its position as a research museum and to respond to recommendations from its accreditation agency, the American Association of Museums. "I think we are going to continue to see great things from the museum over the next few years," Olson added.

The SNOMNH's decision to develop a traveling exhibit program was the result of careful strategic planning. Like the LMNS, we had limited exhibit space of very poor quality. Outreach appealed to funding sources, and provided tangible results and opportunities for cooperative efforts with constituents such as Native Americans. We started out with very simple educational "kits" and small traveling exhibits. However, the program grew with grant funding and curatorial input so that it took sophisticated, object oriented, traveling exhibits to nearly every town in the state.

As an example of research and public "sides" of the museum working together, the educational and scientific staff of SNOMNH worked together to create the traveling exhibit "Life In A Nutshell" from Dr. Janalee Caldwell's (associate curator of herpetology and former LSU graduate) research on poison dart frogs in the Brazilian rain forest (as part of a $245,000 grant from the Howard Hughes Medical Institute). We not only featured an exceptional Native American female scientist, but also a research method. The Nutshell exhibit and other outreach programs reached nearly 6 million participants at over 1000 sites such as museums, schools, libraries and cultural centers in 17 states and Canada (over 100 communities in Oklahoma). Over 50 of these projects were funded by private or governmental grants ($1.7 million) that brought new money into the community. Nearly all the exhibits were developed with links to agencies such as the Oklahoma Archeological Survey, the Oklahoma Department of Wildlife Conservation, and in consultation with special interest groups such as teachers and Native Americans.
Web-based outreach also is an area where the research and educational program of the museum can partner for the benefit of all. All grants from the NSF now require an educational or public component. As part of an NSF grant of $130,000 for “Foreland Basin Development”, received by Dr. Steve Westrop, Curator of Invertebrate Paleontology, we will develop a “virtual exhibit” and other web-based resources that will bring the general implications of the study of extinction to other audiences. We will take a broad approach that includes not only extinctions in “deep time”, but also the recent past and the challenges currently facing the biosphere. The latter include such issues as global climate change, ocean acidification, habitat destruction, invasive species, and overexploitation. This part of the project will be performed in collaboration with the Education Department to develop the web-based resources. Our goal is to produce web resources that complement those of the University of California Museum of Paleontology’s “Understanding Evolution” site <http://evolution.berkeley.edu/>. The web content will also contribute to the SNOMNH’s broader mission in public education. As even a casual viewer of the Discovery Channel will appreciate, there is considerable public interest in extinction. However, the popular media invariably focus on the most sensational cases, and we intend to show that the study of extinction extends beyond asteroid impacts and dinosaurs. By emphasizing that extinction occurs at many scales and is the response to a variety of processes, we will be able to give the results of our work on the Ordovician some immediacy and relevance to the modern world. We hope to show that the lessons of the past can illuminate the future. Finally, by educating the public about extinction is, we will answer the question that they inevitably ask of all scientists, “Why are you doing this research?”

**Exhibit Quality at LSU**

To most people, and certainly to the general public, exhibits are the museum. Minimally, they are the public face of the museum. At LSU, what are the exhibits? Why would the public seek them out? For example, the museum’s exhibits fall into two general categories in MNS: 1) aged traditional displays of natural history specimens based on local environments – typical of an era long past; and 2) a new interpretive exhibit centering on LSU-based Antarctic research. The formats for the two categories are very different and in sharp contrast: wood-framed dioramas vs. gleaming metal and modern-day photos and graphics. Additional attempts to serve visitors have been made with small interactive displays and stations. Other exhibits have been prepared at scattered locations around campus (e.g., the textile exhibits, the *Allosaurus*, the Blake mineral collection, the Indian Room in Howe/Russell), but these, too, are small isolated exhibits unconnected to any overall museum exhibits program.
As the largest natural history museum in the south-central United States, it is unfortunate that the LMNH does not have more and better exhibits to offer. The LSU exhibits suffer greatly from poor locations on campus that are not only difficult to reach and find, but also do not have a people-friendly building exterior in most cases. Although many of us who work in museums may have found solace or inspiration in the tired old displays, and some individuals still may, the reality is that old-style exhibits will not attract a present-day audience that is much more sophisticated in marketing, presentation, and modern computer-generated programming. Exhibits at the LMNH clearly fall far short of the present-day mark in the world of natural history museums. Moreover, according to the Flagship Agenda, the LMNH has a substantial national and international reputation for the quality of its research collections and graduate student training programs. Very little of this is expressed in the form of exhibits that are available to the university community or the public.

At the core of the LMNH's present state of angst is the struggle to define the role, if any, that exhibits should have in the future of the museum. At one time, beautiful and attractive exhibits were the featured attraction and cornerstone of a museum's interpretive programs. Will the museum create a new life for itself and a new public dimension by designing, developing and funding a new, "state-of-the-art" facility or will it renovate an aging, antiquated, and outdated structure that will only provide storage for a portion of the museum's collections? Should the present structure even be renovated and all the dioramas kept intact? It is our opinion that renovation of Foster Hall will only be partially effective in solving the long-range needs of the museum for improving its public dimension.

Our suggestion is that the LMNH should be asking questions such as: "What is the role of habitat dioramas in the future of the museum?" "Should the present exhibit galleries be renovated and all the dioramas kept intact?" It is our opinion that even a renovated Foster Hall can only be regarded as being partially—if at all—effective in solving the long-term exhibit needs of the museum for improving its public dimension, should such a public face of the museum be desired. Exhibits can be an excellent way of presenting curatorial research—and its value—to the university community and to the public. In addition, exhibits can be teaching tools
for university students, particularly in general or introductory classes. In our experience, concepts are much better understood through a visual "real" experience than a lecture.

Vertebrate paleontology storage lab

Current Situation of Museum and Potential of a New Museum

Presently the LSU Museum of Natural Science is functioning at the level of an academic department where some areas of the museum (birds, mammals, vertebrate paleontology, etc.) are active in research and education of university students. Scientists publish at an acceptable rate in the MNS in quality journals and there is competitive funding to help drive the research programs. However, there are many challenges facing the curators and staff in the present physical plant (Foster Hall), as well as significant unrealized opportunities to being able to better serve the students of LSU and the people of Louisiana as a part of a complete fully functioning natural history museum.

Museum professionals have the long view of collection preservation. As noted, we have routinely worked with specimens that are centuries old, including type specimens of Linnaeus. During such long spans of time, the specimens and objects have been preserved in spite of the threat of fire, flood, pests, theft, and even war. It is the job of museum professionals to ensure the continuity of collections through time, notwithstanding the vicissitudes that will inevitably be faced over the passing decades. The museum ethic is to protect and preserve collections into a continuing future that, over great spans of time, is filled with challenges. In this long-term
future, there is almost a certainty that floods will occur, severe storms will happen, fires will break out, insects and other pests will enter collections and destroy specimens, and other possibly catastrophic occurrences will occur. This is why efforts are made to eliminate such threats as much as possible. Thus, collections ideally are stored in buildings that do not leak, that have fire control and security mechanisms in place, that protect against damage from light, heat, cold, humidity, and pests.
The present physical plant of the LMNH fails on almost all these counts. Many spaces are dirty, encouraging pest damage. Doors are unsealed. Ceilings are falling in. Climate control is poor. Highly flammable materials, indeed, accelerants, are stored cheek by jowl with the precious collections. Spaces are shared with people having nothing to do with the museum and no understanding of the value of its collections. Food materials are placed in collection areas. Clearly, the present collection storage situation of the LMNH is not one that lends confidence in the preservation of the collections over time. Given the value and irreplaceable nature of these materials, we believe that they are being given very poor care by the standards of modern collection management.

As discussed, the bird and tissue collections are irreplaceable. Yet as important as these collections are, 20 gallons of turpentine was stored outside the doors of the collection within the ancient Foster Hall building. The collections are poorly housed and in danger of catastrophic loss due to flood, fire, or loss of electricity for a significant period of time. The aged building was never designed for such specialized care of global treasures. In an area subjected to catastrophic hurricanes, how can one of the most important and valuable tissue collections in the world be stored below grade, thus requiring the freezers be placed on elevated dollies to at least offer some level of protection against the floods that will inevitably occur? With the art school storing solvents in the building, a match, a spark, a lightning bolt, spontaneous combustion from rags placed nearby, a prank gone bad, a short circuit, or the act of an arsonist would, in minutes, lead to disaster. Due either to tradition or the prevailing mythos that Foster Hall would be the ideal building after renovation, curators seem to be unwilling to recognize the extreme danger in which irreplaceable collections are stored. We do not feel that a renovated Foster Hall would be ideal either as a collection storage facility for a collection research institute or for a museum.

In part, it is the substandard buildings that influence the level of care that the collections are receiving, although there also appears to be a lack of modern collection management understanding or appreciation among museum staff. Moreover, if a museum is forced to share
its space with the School of Art—where paints, paint thinners, solvents, and other materials fill half of the museum building—then possible damage from vapors, fire, or accidents becomes likely.

Notwithstanding ownership of Foster Hall, the physical plant itself is a problem. Foster Hall is a dismal building from the point of view of meeting the needs of a modern museum. It is not secure; it has very limited space even if all the space were assigned to the museum; it is very old; and it was not designed to be a museum. What the building does have is tradition and placement at the center of campus. We believe that these two factors are overriding points in
arguments made by curators in Foster Hall against a new museum building. The one-time central location (on a campus where the center is shifting southwards) trumps accessibility, building quality, and collection preservation, as well as the many benefits offered by a new facility located elsewhere on the campus—whether such a facility would be a true museum or a collection storage/research facility.

Is there an advantage to renovating a hundred-year-old building to serve as a modern museum for about half of the LMNH’s collections? In some cases buildings have been renovated to serve as museum space and these renovations have been successful. However, this assumes that the building can meet the needs of the museum. In its present configuration, the LMNS is a rather small research/teaching institute whose raisons d’être are undergraduate and graduate teaching and research, as well as faculty research. A small group of curators are comfortable with their funded research, with their rather poor laboratory facilities, and with not having to add additional duties to their curatorial and professorial roles, such as exhibits and other activities that characterize curators in museums that have a more expansive program of service to the public. There is a philosophical underpinning to the arguments against a new museum building that has little basis in fact, in our opinion. The belief that research productivity will inevitably diminish by the reallocation of funds and positions in a natural history museum of the future as budgetary challenges appear simply does not stand up to scrutiny when university museums are considered.

University museums are about research and teaching. Those are the primary goals of such institutions. Exhibits, public programs, and other activities are secondary to, and supportive
of, the primary mission. Thus we are hard-pressed to identify examples of university museums that have cut research programs in favor of public programs, especially where active, well-funded research programs were in place. Indeed, we feel it is more likely that a university would move to expand research/teaching programs where a natural history museum has been developed to serve a broader array of audiences than an academic research department or institute generally reaches. This has been the case with a number of university museums, including the Sam Noble Oklahoma Museum of Natural History. In recent years, Berkeley (paleontology), Harvard and MIT all added more expansive public museums to their existing facilities, though their emphasis on research and teaching was maintained.

LSU and the people of Louisiana must ask themselves if they are content to have a museum honored with state museum status that has only a limited service function for the citizens of the state? Are the university and state content to support a rather small group of faculty in pursuing their teaching/research interests while not adequately protecting the collections under their charge, or while working against an expansion of the mission of the museum to better serve the people of Louisiana? It will take significant funds to save the collections by providing a proper facility and it will also require significant funds to add a public face to such a facility. How the museum can best serve Louisiana and LSU is not simply a matter for museum supporters or for museum staff and curators to determine, however. These are basic philosophical and budgetary questions that only the university and state can answer.
Clearly, there is growing support among some museum and university staff, and among a significant number of museum supporters, for an expansion of the state museum to include modern collection care, modern exhibits, increased outreach to students from K-12 and adult learners, as well as continuing excellence in teaching and research. Museums, especially state museums, are established to serve the broad interests of the state in preservation and interpretation of the state's collections, as well as in filling an important role in public education at all levels. The present fragmented LSU Museum of Natural History falls far short in most categories of full museum function. The collections are not well cared for. Outreach activities are minimal. Exhibits are poor. Visitation is low. The present physical plant is unacceptable as a museum building(s) and is unable to fulfill the many functions that a museum building must meet.

State Museum or Research Collection?

We believe there would be less of a dilemma if the present LSU museums did not have state museum status, but were only research collections maintained by the university solely for its academic research programs. Under this scenario, one would say that the collections are not being well cared for and the university should provide a new facility for collection care, teaching, and research. By elevating the LSU museums to state museum status, however, one expects that the state desires the full services of a state museum, something it is not receiving at this time.

If Foster Hall were to be renovated, the Museum of Natural Science could continue to function as a research institute manned by a small number of curators and staff and filling a limited role, though one of importance to the university. Our experience leads us to believe that if some positive changes are not made at LSU, the collections face a significant probability of long-term loss and the museum itself may face cutbacks as grant funding declines or as current areas of research become less popular. Museums are designed to transcend the ages, thus curators and research interests come and go, while the museum continues through time protecting and interpreting its collections.
RECOMMENDATIONS

The Need for Vision

When university/state museums such as LMNH have been undergoing a difficult period without developing a cohesive developmental and operational plan, they can be under intense stress over a long period. This situation can result in the inability to develop a cohesive vision that can extend beyond the immediate crises swirling around museum operations and development. Such museums can become fragmented, having areas of excellence, but with no singular direction or purpose encompassing all museum activities. Some areas of museum operations, such as exhibits or collection care, may become problematic within the museum. Indeed, an overarching agreement as to the mission of the museum that encompasses and guides the modern university museum's goals of collection care, teaching, research, exhibits, public programs, and service may be lacking. Different groups of staff, such as curators, may carve out niches of opportunity and perform well within their comfort zones of limited dimensions. These comfort zones and the groups that operate within them can develop a highly limited and insular view of the museum world, and may resist accepting change that is urgently and immediately required. Over the long term, they may put their collections and programs at risk because they do not wish to see the "big picture" of museum operation.

The LMNH, in our opinion, is moving toward this position. One of the greatest challenges facing the LMNH and LSU is a need to create a new multidimensional vision for the museum's future. Absent an overarching vision of what the museum hopes to accomplish for the people of Louisiana, the university, and the curators, staff, and students, the museum will continue to be pulled in different directions by different interest groups and potential audiences, thus weakening a museum operation that already cannot be described as strong from the standpoint of a full-service publicly-supported state museum of natural science.

The Need for Leadership and Management

The LMNH also faces a fundamental challenge of leadership and management. It is not unusual for a modern museum director to manage a research institute, a collections conservation program, an exhibits program serving hundreds of thousands of visitors yearly, outreach school and exhibit programs, a university and post-graduate level academic and research institution, a café, a venue for public gatherings, a theater, a security force, and many other operations that fall within the purview of a modern full-service museum. Museum directors and their staffs struggle to manage the problems, benefit from the successes, create strategies for solutions, and articulate a plan that shows the value of their museums to their superiors and supporters. University administrators often turn a deaf ear to the needs of museums because they only see museums as expensive warehouses with few obvious redeeming benefits to the university. An active teaching/research area within the museum may attract administrative support for a time, but as scientific or general research interests shift, such support may become problematic over the long term (decades). The benefits of a visionary, organized, dynamic, and enterprising museum to the university must be clearly articulated if the institution is to garner support over the long term.
The Need for Defining What a Museum Is

The International Council of Museums (the world’s largest museum organization), defines a museum as: “A non-profitmaking, permanent institution in the service of society and of its development, and open to the public, which acquires, conserves, researches, communicates and exhibits, for purposes of study, education and enjoyment, material evidence of people and their environment.” Several significant definitions may describe exactly what constitutes a museum, but all include public outreach. The Federal Government, through its Institute of Museum and Library Services (IMLS), holds that a museum is: “A public or private nonprofit agency or institution organized on a permanent basis for essentially educational or aesthetic purposes, which, utilizing a professional staff, owns or utilizes tangible objects, cares for them, and exhibits them to the public on a regular basis.” The American Association of Museums (AAM) notes that, among other considerations, a museum must:

- Be a legally organized nonprofit institution or part of a nonprofit organization or government entity
- Be essentially educational in nature
- Have a formally stated and approved mission
- Use and interpret objects and/or a site for the public presentation of regularly scheduled programs and exhibits
- Have a formal and appropriate program of documentation, care, and use of collections and/or objects
- Carry out the above functions primarily at a physical facility/site
- Have been open to the public for at least two years
- Be open to the public at least 1,000 hours a year
- Have accessioned 80 percent of its permanent collection
- Have at least one paid professional staff with museum knowledge and experience
- Have a full-time director to whom authority is delegated for day-to-day operations
- Have the financial resources sufficient to operate effectively
- Demonstrate it meets the characteristics of an accreditable museum

These fundamental definitions as to what constitutes a museum are not being met by the LMNH in its present configuration. At present, we must disagree that “By virtue of its productivity and reputation, as well as its curatorial contributions to LSU and the state, the Museum of Natural Science is a classic hallmark of a flagship (see Flagship Agenda)”. The museum professional is dedicated to protection of the collections at all cost. They are the museum’s gift to the future and are only in the care of a particular group of curators and staff for a short period of time, during which all manner of challenges may be faced. Curators come and go, but the collections remain. We have worked or examined museum specimens that were preserved by Linnaeus, Darwin, and other early collectors, some going back more than four centuries. Over these long spans of time, which are not excessive by museum standards, great obstacles to preserving the collections (global war, for example) may be placed in the path of curators, museums, and collections, yet it is the duty of the museum professional to eschew personal gain or glory for the protection and persistence of the collections.
The Value of Institutional Alignment and Preparation for the Future

All of the stakeholders of the LMNH need to expend significant time and effort on articulating its goals and planning for the future. The assumptions are that LMNH wants to be responsive to challenges, seek opportunities, and serve its stakeholders. LMNH also wants to sustain its operations far into the future. To do so, LMNH will need to change in order to survive. Any museum that does not have a direction and a plan to get there is likely to find itself in a dead-end situation. Yogi Berra supposedly said, “You’ve got to be very careful if you don’t know where you’re going, because you might not get there.” This malapropism is apropos to the LMNH. The LMNH needs to articulate its long-term vision and develop a path to achieve that vision, one that extends into the distant and often unforeseeable future. As challenging as this task is, it is vital for museums to do this because museums transcend the ages.

LMNH does have a plan in the form of its Flagship Agenda that discusses a more complete museum, not only with a strong research and teaching component, but also a strong program of improving its image, improving resources for university students, and increasing its effectiveness as an educational center for K-12 students. The objectives in the plan are excellent, with one exception: Foster Hall. Unfortunately, it does not have a plan that extends beyond renovating an old building to provide modern laboratories and to house some collections in better conditions than exist at present, although we can foresee no renovation of Foster Hall that would provide an ideal museum space for the State of Louisiana.

From our perspective, LMNH faces a series of sobering financial, functional, and ethical questions. What will happen to it if it just continues on its current path? What is the responsibility of LSU to the museum, itself, and to the State of Louisiana, whose collections it holds in trust? What will be missing in the area of informal science education for the citizens of Louisiana if the state museum remains largely a collection of scattered teaching/research units of the university? How significantly will the scientific and cultural world of Louisiana be impoverished? According to the AAM, an accreditable museum engages in current, comprehensive, timely, and formal planning for its future.

The LMNH needs a plan of action to guide strategic organizational change. This amounts to not only “getting all your ducks in a row,” but also headed in the same direction with a single-minded purpose. The idea of “strategic planning” may be off-putting. However, we all plan strategically throughout our lives by making calculated decisions for our best interests. Strategic planning is merely answering two basic questions: “Where are we going (mission, vision, goals, leadership)?” and “How do we get there (objectives, strategies, tools, management)?” By answering these questions, the plan provides institutional alignment. With strategic planning, the LMNH will define the comprehensive focus and thrust of its actions and resources to create its most advantageous position in the future. The LMNH should:

- Agree on a mission and vision of where it wants to go and what it wants to achieve
- Identify its primary audience and community
- Ensure that the mission and vision meet the needs of its audience and community
- Ensure that it identifies the resources needed to fulfill the mission and vision
- Allow for sound decision-making in response to changes in environment
Specific Strategies and Recommendations

We strongly suggest that LSU, LMNH, and government and public stakeholders jointly form a task force to begin strategic planning. It is vital that the state and private sector, as well as university representatives and museum professional staff and curators, be represented. Such an effort will eliminate the current situation where people are talking past one another. We find the strong support from the Build-a-Museum group of community supporters to be a remarkably powerful stimulus to encourage all parties to participate in good faith dialogue to discuss the long-term health and development of the LMNH. Many museums do not have a committed group of people supporting their activities and expressing concern about its long-term future. They are a group that should be encouraged by the state and university, for it is on such an assemblage of supporters that the museum’s future as a full-service organization may depend. It would be a serious error in strategy to discourage this kind of support from the public, regardless of what the final form a collection/museum building might take. Such good will is impossible to buy and difficult to attract under the best of circumstances.

Short-term Objectives

1. Develop a shared vision among stakeholders, probably the most difficult task the task force will undertake.
2. Immediately provide better security and fire safety for the collections in Foster Hall as a first priority in addressing present dangers to the collections.
3. Read and discuss the report “Museums and Society: 2034” (American Association of Museums) as it applies to LMNS.
4. Apply for a Governance Assessment for LMNH through MAP ([information available on: http://www.aam-us.org/museumresources/map/index.cfm]). This will provide an assessment and recommendations for future governance and will provide museum professionals who can advise the museum on its planning process.
5. Contact the office of Superintendent of Education Paul Pastorek, Department of Education, to discuss the new vision for “world class education in Louisiana” and how LSU and the LMNH can be part of this initiative.
6. Contact the office of Secretary of State Jay Dardenne to discuss the future of the LMNH in Louisiana as its state museum.
7. Prepare LMNH for change, if such is desired, and foster synergy, unity, and cooperation among the staff, stakeholders, and community.
8. Decide how best to deal with the needs of the collections, which transcend the research needs of the curators in significance and longevity. The state’s collections are now housed in substandard facilities where catastrophic loss is possible. Whether or not a complete natural history museum is developed to meet the needs of the state, the invaluable collections are not being properly cared for. The university and state should make their position clear on this issue.
9. Make a list of all the things that are successful in the public arena (e.g., the Bird Resource Center; the efforts of the Build-a-Museum group to elevate the visibility of the LMNH) and be creative in expanding their applications (e.g., new vision for world-class education in the state? Bridging gaps between race and class?).
10. Find a way to get more of the collection in the public arena (e.g., have a “coming out party” for Basilosaurus and make miniature replicas to send around to LSU administrators, politicians, state educators and prospective donors; highlight other treasures that illustrate the breadth of the collections in public activities).
11. Seek funds to hire a full-time museum educator who will take charge of developing K-12 resources and outreach. The Build-a-Museum group would seem to be a natural place to begin serious fundraising for a new museum facility.

**Long-term Planning, Goals and objectives**

1. The task force should create a multi-year (at least 10 years) ongoing strategic plan to deal with strategies for designing and funding a new facility and developing and funding the research and public programs (It took 17 years for the SNOMNH to gather support, plan, design, fundraise, and build its new building.). Emphasis should be placed on long-range financial planning. This will require the assistance of a professional facilitator.

2. A powerful coalition must be identified and a strong vision for the future of the Louisiana Museum of Natural History must be made clear. It must be decided at the outset whether or not Louisiana wishes to have a full-service state museum of natural sciences to serve all people in the state who support the museum with their tax dollars, or whether the museum’s curators and university are content to operate the state museum as a group of small research facilities for faculty and graduate students. Neither choice is a wrong choice, but the choice must be clearly identified by all stakeholders. There are successful university exhibit museums and successful university research collections. As a state museum, however, the LMNH has accepted additional responsibilities, and it is here that the hard work of forging a future direction for the museum must occur.

3. The task force should develop a program of information gathering, or sampling, that yields data about the research and public programs, such as where visitors are from, how often they visit, and why they are visiting. This information is basic for evaluation and planning. They will have a difficult time doing this with the low number of visitors. They may have to gather data from other university museums to use as a guide to their potential visitors.

4. The task force should identify and track key performance indicators, such as the number of visitors, research papers published, and grants awarded. Assemble this information for past years. This information is important to the strategic planning process.

5. The task force should create a broad vision that is distinct from the present narrow vision and consistent across all areas and potential areas of museum operation and development. This includes creating a beliefs and values statement, rewriting the mission statement, and writing a focused strategic vision statement to support the new mission statement.

6. The task force should include key objectives under each goal of the strategic plan: a budget, a schedule, alternative strategies, benchmarks, and an evaluation process.

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