MISSION STATEMENT

The Monte L. Bean Life Science Museum at Brigham Young University is a dynamic repository and trustee for a remarkable group of biological collections. These collections are used to celebrate the role of Jesus Christ as Creator, while enhancing student learning and mentoring and promoting faculty teaching and research. They also serve as a unique venue for inviting the public and scientific community to explore and contemplate intricate biological relationships and processes.

We accomplish our mission by

• Collecting and properly maintaining biological specimens and associated data to effectively support current and future research efforts;
• Providing and developing database options to better support research on the biodiversity and ecological complexities of the earth’s ecosystems;
• Producing and sharing quality research products in order to increase scientific knowledge and understanding;
• Facilitating an ongoing dialogue about issues and concerns related to faith and science as different but complementary ways of knowing;
• Educating our students and the public about the natural processes essential to sustaining the biological diversity and ecological complexity of the earth;
• Providing a forum for educating our students and the public about best earth stewardship practices;
• Promoting and facilitating quality learning and mentoring experiences for our students;
• Engaging the public effectively through compelling exhibits and innovative education programs in order to promote understanding and appreciation for the diversity and complexity of the earth’s biological heritage;
• Using the museum’s resources to develop and implement K-12 science education programs based on the Utah State Core Curriculum in order to enhance the education of our local public and private school children while providing powerful, “hands-on” training experiences for pre-service primary and secondary teachers in the School of Education.

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INTRODUCTION

This has been an extraordinary year. In March, we received word that the Board of Trustees had granted permission to begin formal planning for the museum expansion. We immediately began working with the University’s Physical Facilities team to initiate planning and to prepare and submit the documents required to organize the design and construction team. By May, our application to proceed had been reviewed and approved, and we sent out a call for proposals to 10 architectural firms. By June, we had narrowed our list of potential architects to four and had made arrangements to visit with each of these prospective firms. Later in June, the decision was made to hire Jacoby Architects from Salt Lake City and Wadman Construction from Ogden. From the beginning, Jacoby and Wadman have worked together with the museum’s expansion steering committee to effectively plan for the museum expansion. By the end of 2011, Jacoby had the design and development documents ready for review. The plan is to complete the construction documents by early spring 2012 and begin construction as soon as possible. The plans call for a 30,000 square foot addition to the existing building, to be located to the east, with a 10,000 square foot basement to house the museum exhibit team; a 12,000 square foot main level with a spectacular gallery to honor President Boyd K. Packer; and then an 8,000 square foot 3rd level with a 12,000 square foot main level with a spectacular gallery to honor Dr. Larry St Clair Museum Director.

In October, the museum’s first director and dear friend, Dr. Wilmer W. Tanner, passed away. Dr. Tanner would have been 102 years old in December. His positive influence on the museum has known no limits. He gave freely of his time and personal resources to support and build the museum. It seemed that the museum was always on Dr. Tanner’s mind. Until the last six months of his life, Dr. Tanner was in the museum working at least two days a week. Three days before he passed away, he called and indicated that he was planning to come to the museum and wondered if he could spend some time with me while he was here. He called back later that day and indicated that he wasn’t feeling well and would come later in the week. His example and dedication to the museum and BYU were exemplary in every way. In my more than 20 years of working at the museum, I have not known anyone who loved and cared about the museum more than Dr. Tanner. He is missed.

DEDICATION

On October 28th, two months short of his 102nd birthday, Dr. Wilmer W. Tanner passed away, leaving a long lifetime of accomplishments. Wilmer was born on December 17, 1909, in Fairview, Utah. His parents were John Myron and Lois Ann Tanner, descendants of early Utah pioneers, and they resided on a ranch in the open and meadow-bottomed valley at Indianola in Sanpete County. They had five children: Vasco, Wilmer, and Jean. Wilmer began his college studies at BYU in the winter of 1932. He had to drop out, however, and return to ranching for a while to help pay off family debts. Wilmer returned in the fall of 1933, and despite a constant struggle for financial support, he enjoyed university life. By the winter of 1934, he was certain that his future was somewhere in science, and he graduated with a BA in the spring of 1936 with a major in Zoology and Geology. In 1938, he also completed a MS degree in Zoology at BYU.

Wilmer’s early academic career was characterized by heavy teaching loads (three classes per semester). At that time, the zoology faculty included his brother Vasco, D Elden Beck, and C. Lynn Hayward. Wilmer’s group in the Department of Zoology & Entomology was soon joined by entomologists Stephen L. Wood and Dorald L. Bean, a wealthy businessman from Provo, L. Bean, a wealthy businessman from Provo.

Wilmer and other BYU faculty conducted what research they could on their own time and out of their own pockets, all the while still carrying heavy teaching loads. Wilmer’s regular classes included, among others, general biology, general zoology, vertebrate anatomy, herpetology, and genetics. Financial constraints in his early academic career limited his travel to only regional meetings and events, and even these had to be covered from personal funds.

In the early 1970s a committee was organized to explore the possibility of a collections facility separate from the Botany and Zoology departments. Eventually, Wilmer became chairman of the committee and worked closely with Steve Wood and Stan Welch to outline goals and procedures for such a facility. The committee was actively working on the concept of a collections facility when a letter arrived from Monte L. Bean, a wealthy businessman from the Seattle area, in which Monte offered his extensive trophy collection to the university. Monte’s wife Birdie had been encouraging him to donate his collection of trophy animals for a number of years. After some preliminary contacts, Wilmer and Monte

Dr. Larry St Clair

Morone saxatilis

Striped-Bass
Dedication cont.

met to discuss options, and soon after, Monte’s collection of trophy mounts arrived and were displayed temporarily in a portion of the main reading room of the old Grant Library building. What was now required was a building large enough and sufficiently modern to effectively house the university’s extensive life science research collections. Wilmer and Monte, and members of the committee, worked together to define what would be required, and Monte both listened and agreed. Plans were drawn up, presented to Monte and Birdie, and construction was begun in the mid-1970s. Money for the construction was donated by the Bean family, who also established an endowment fund for the museum. The Monte L. Bean Life Science Museum was completed in the autumn of 1977 and officially opened to the public in the early spring of 1978.

Wilmer served as first director of the museum, with Donald Allred and Dick Murdock as assistant directors. Forced by law to retire at age 65, he continued to visit the museum almost daily to follow its growth and development. He continued to publish until the time of his death, with some papers to be published posthumously. Three days prior to his passing, Wilmer contacted the present museum director about meeting to discuss future publications. His body wore out, but his mind never did!

Note: Much of the above narrative was taken from two obituaries written by Dr. S.L. Welsh and Dr. J.W. Sites.

Historical Highlight

Historical Highlight – D Elden Beck was born April 11, 1906, in Spanish Fork, Utah, to Ruth Bean Davis and Mitchell Robertson Beck. Because his father had a difficult time finding work, the family eventually moved to McGill, Nevada, where his father worked in the mines. It was there that young Elden met people from a variety of cultures and ethnic backgrounds—Chinese, African Americans, Greeks, and others. Young men from these backgrounds became his closest friends, and from those interactions came one of Dr. Beck’s finest qualities—his tolerance, respect, and kindness to those of different ethnic and cultural backgrounds.

Early on, Beck struggled in school, except in biology—where he excelled! However, his determination, his ability to work hard, and his faith led him to enroll at BYU in the fall of 1925. He lived in Spanish Fork with his grandmother Grace Matley and commuted every day to BYU on the Orem electric interurban train. The terminal was near the southwest corner of Center Street and University Avenue in Provo. Those early years at BYU were extremely difficult. Not being a gifted student, Beck had to work harder. According to Dr. Vasco Tanner, a lifetime friend and mentor, Beck arrived early at the laboratory and was one of the last to leave at night. The students and teachers with whom he worked influenced his growing interest in entomology. He was frequently chosen to participate in field trips as a collector. In 1929 he received a BA degree, and in 1930, an MA degree in zoology and entomology.

Subsequently, he was accepted for further graduate studies at Iowa State College in Ames, Iowa.

In 1933, Dr. Beck was appointed head of the Biology Department at Dixie College, married Florence Robinson, and was awarded his PhD degree from the Department of Entomology at Iowa State College. Upon moving to St. George, he immediately became immersed in the community. He studied landscape art with his talented wife, Florence, and their mutual interest in painting resulted in the establishment of a Fine Arts Festival in 1934 at the college, which has continued to this day. Dr. Beck also cultivated a profound interest in photography, a passion that lasted throughout his life. Most of his photographs, negatives, and slides are stored in the archival collection in the Harold B. Lee Library at Brigham Young University. In 1938, he was asked to return to BYU as an assistant professor of zoology and entomology. He left Dixie College with mixed emotions; his heart was filled with a deep love and appreciation for the people and places of southern Utah.

From 1942 to 1944 (during WWII), Dr. Beck worked in the United States Medical Entomological Services. Part of that service was in Guadalcanal in the Solomon Islands. It was in these remote jungles that Dr. Beck distinguished himself as director of mosquito control activities. He also spent time collecting thousands of insects, reptiles, etc., all of which were carefully shipped to BYU to become a part of the university’s research collections. After the war, he returned to his scholarly and professional pursuits at BYU, where he was recognized as a devoted teacher who also had a sense of humor. Among his accomplishments while at BYU, Dr. Beck produced an impressive list of more than 60 scientific publications.

In addition to his academic and professional responsibilities at BYU, Dr. Beck was also involved in various service-oriented projects. Some of his accomplishments were related to his academic work. For example, he was assigned by the Utah County Commissioners and the Health Department to develop a mosquito abatement program for Utah County. And, from 1936 to 1957, he worked with the United Nations World Health Organization to eradicate serious malaria-related problems in Taiwan.

After a long struggle with emphysema, Dr. Beck died on August 9, 1967. Prior to his death, he established a scholarship fund for zoology students at BYU, which started in 1970 and continues to the present day.

Note: Much of the above narrative was prepared by Janet Beck Clark, Dr. Beck’s daughter.

Dr. D Elden Beck
**Expansion!**

After more than 10 years of fundraising, the university’s board of trustees authorized preliminary planning for a major addition to the museum. In April, the first meetings of the museum expansion steering committee were held, and by May, the university had received permission to both formally plan and construct the addition! In June, we solicited proposals from several architects, and after visiting four of the respondents, we selected Jacoby Architects of Salt Lake City. Jacoby has an impressive portfolio of work that crosses the state and includes several new buildings at Utah State University. Wadman Construction out of Ogden was selected as the contractor. Throughout the summer months and into the fall, we have worked with both the architects and the contractor on the programming, design, and development documents for the museum addition.

The addition will include 30,000 square feet distributed over three floors, matching the three floors in the existing building. The basement will house the museum’s exhibit planning, design, construction, and installation team in one contiguous area. The ground level will include the President Boyd K. Packer Gallery where we will exhibit President Packer’s magnificent bird carvings and other artwork. President Packer’s gallery will also provide a wonderful venue for declaring the message of Jesus Christ as the Creator! The ground level will also house the museum’s education team, including two classrooms, a new live-animal facility, and offices and work space for our education group. The upper level will accommodate a series of new exhibits surrounding a beautiful center atrium. The expansion will also allow the museum to better accommodate the invaluable research collections, which will remain in the existing building with additional space and improved security. We hope to have construction documents ready by the spring of 2012 and for construction to begin in the late spring or early summer.

**New Exhibits**

The museum’s exhibits generally fall into several simple categories—permanent, long-term but subject to change, and temporary—and often celebrate a particular event or explore a specific current issue. Two of the exhibits below fall into the more permanent category, while one is long-term but will eventually be changed, and the last is clearly temporary.

**Renovated Arctic Exhibit** –

During the summer, Ken Packer and the exhibits crew moved and completely renovated the Arctic exhibit that had occupied the northwest corner of the center atrium for the last several years. The new location, against the north stairwell of the main level, provided more space and brought the exhibit into the center atrium gallery. Again our exhibits team made impressive use of the high-density Styrofoam to create a remarkably realistic Arctic scene that conveys targeted information about several Arctic animals.

**Into Africa** –

During 2011, the museum’s exhibits staff completely renovated the Bean Memorial Room and installed a new exhibit highlighting some of the unique ecosystems features of Africa. Randy Baker and his students painted a remarkable mural that stretches around the exterior wall of the exhibit area from floor to ceiling! Using high-density styrofoam, Ken Packer and Clark Bretenon developed a unique modular foreground plan to support the education element of the exhibit, which highlights several of the major ecological zones of Africa. The exhibit opened in August and will be a permanent feature of the expanded museum.

**Expansion Exhibit** –

Shortly after the museum received permission to expand, we put together plans for a free-standing “Expansion Exhibit” for the north main-level entrance to the museum. This exhibit highlighted the Bean family’s early gift of the existing building, as well as basic information about the museum addition. In particular, the exhibit included details about the President Boyd K. Packer Gallery, a major feature of the addition that highlights President Packer’s remarkable bird carvings!

**Renovation of the Cougar Exhibit in the Wilkinson Student Center** –

The museum’s exhibit team was invited to redo the “Cougar” exhibit at the north entrance to the Wilkinson Student Center. Our exhibits group completely reworked the old rock face and added two new cougars and a deer to the display. This exhibit adds a new and impressive highlight to the Wilkinson Center north entrance!

**Education Programming**

**Nature Experienceships** –

During 2011, the museum sponsored four successful Nature Experienceships. Two of these experienceships were with Merrill Webb, once in April and then again in September. Our birding experience continues to be one of the more popular field trips so we plan to continue offering two birding experiences each year. Our other two experienceships were in August and October. We had a good size group learn about mammals with Duke Rogers; and for the second time, Sam St. Clair led a field trip to Provo Canyon to look at and talk about the Quaking Aspen community. Our nature experienceship program provides our patrons with a unique opportunity to interact with experts in specific life science areas. Anyone 12 years and older is invited!

**Date Night** –

The museum held a “Clue” themed date night in February and October. Both events were sold out! This activity continues to be popular with our patrons. Date nights include dinner and various types of engaging activities.

**Northern Pike**

*Esox lucius*

**Duke Rogers- Mammals**

**Merrill Webb- Birding Experienceships**

**Sam St. Clair- Quaking Aspen**

**Randy Baker- Live Animal Facility**

**Boyd K. Packer Gallery**

**Clark Breton- Artwork**

**Randy Baker- Education Team**

**Ken Packer- Exhibits Crew**

**Sam St. Clair- Field Trips**

**Duke Rogers- Mammals**

**Merrill Webb- Birding Experienceships**

**Duke Rogers- Mammals**

**Merrill Webb- Birding Experienceships**
Development of an iPad dichotomous key –
During 2011, the iPad app, “IdentifyMe,” was launched and submitted to the App Store. It was designed to be used with the iPad, iPhone, or iPod touch. On-site patrons who have a 3G network data plan can download the “Identify Me” app to their own devices. This app can be used to identify specially labeled specimens throughout the museum by carefully observing each specimen and answering a series of questions. The museum also purchased five iPads preloaded with the “Identify Me” app that are available for checkout at the museum store for $3. In conjunction with the new “Into Africa” exhibit, Matt Meese and Katy Knight also added a dichotomous key to the app that highlights several of the animals in the exhibit. In addition, they prepared 16 short videos for the “more info” section of the exhibit. These videos are available on both YouTube and the museum’s website [mlbean@byu.edu]. They can also be accessed using any smart phone with a data plan.

Bio-Box Initiative Update –
The Adaptations and Ecosystems Bio-Boxes continue to be a popular way for local science teachers to bring real specimens, activities, and educational resource materials to their students. The boxes were checked out 22 times during the school year. Bio-Boxes are the next best thing to a field trip to the museum! We continue to make progress on the Utah’s Wetlands, Forests, and Deserts Box. We currently have 20 activities that tie directly to the Utah 4th grade science core curriculum. We hope to have our third Bio-Box ready sometime in 2012.

Partnership School Districts –
We produced and distributed another Teachers’ Guide this year that highlights the museum’s 2011–2012 school programs. This document provides each of the teachers in the partnership districts with pertinent information about the various ways they can access the museum’s unique and valuable resources. The museum partners with our five local school districts to provide teachers and students with enhanced support for learning about the life sciences. We also set up a listserv with the help of Danny Yeo of Life Sciences Computer Support, so now it is much easier to send emails to all of the teachers in the partnership districts.

Live-Animal Webcast Initiative –
During 2011, we completed three trial runs with our new “webcast” live-animal shows. This new program allows teachers to bring the museum’s live-animal shows in real-time to their classroom using readily available remote video technology. The museum education team has been proactively developing this program in anticipation of the museum expansion-related closure next year. They also plan to increase their efforts with the live animal shows as part of the museum’s outreach program.

Central Utah Science and Engineering Fair –
This year, the Central Utah Science and Engineering Fair team moved to the museum. The Cluff Building had been home to this program for many years. However, with construction of the new life sciences building, the Cluff Building was scheduled for demolition, and the CUSEF team moved to the Bean Life Science Museum. The program has been under the direction of John Gardner and Lisa Clarke for many years. Lisa Clarke has been involved with the program for more than 10 years—growing the fair from a one-day event with 200 participants to a three-day event with nearly 900 participants! This past spring, the fair hosted 875 participants over three days in the Harmon Continuing Education Building at BYU. Students received cash awards and prizes of more than $65,000—as well as more than $500,000 in scholarships to local colleges and universities. Five students were also selected to represent Central Utah at the 2012 Intel International Science and Engineering Fair in Pittsburgh. Next spring, Lisa will step down and assume full-time duties as a mother, and Nettina Smith will assume CUSEF management responsibilities.

Western North American Naturalist

In 2011, the museum-sponsored natural history journal, Western North American Naturalist, continued in its 72nd year of publication. The WNAN office handled 119 manuscript submissions and published 661 pages among 3 monograph articles, 7 special feature articles, 42 regular articles, 16 notes, and 2 book reviews. Usage at BioOne.org, WNAN’s major online distributor, exceeded 8,000 full-article downloads, and revenues from this source continue to increase year to year.

In August 2011, WNAN published volume 5 of the monograph series, which volume included articles on bats of Mesa Verde National Park, birds of Glen Canyon National Recreation Area, and cyanobacteria in the Mojave Desert. Another new addition in December 2011 was a special feature on Lake Suckers. Additional special features, with a goal of one per year, are planned to highlight little-studied taxa or ecological systems. WNAN also granted its 4th annual “Outstanding Natural History Paper” to Andrew Kulmatiski, K.H. Beard, L.A. Meyerson, J.R. Gibson, and K.E. Mock for their contribution entitled “Nonnative Phragmites australis invasion in Utah wetlands.”
Museum Sponsored Lectures and Events

Every year the museum sponsors at least two lectures: the fall and spring Tanner lectures. The museum also periodically hosts DVD screening events highlighting topics that support the museum’s mission statement. Occasionally, the museum will also sponsor special lectures to celebrate the opening of new exhibits or to highlight a special event. During 2011, the museum sponsored two Tanner lectures and one DVD screening. Note: The Tanner lectures can be viewed on the museum’s website (mbean.byu.edu).

Spring Tanner Lecture –

Mongolia was the focus of the spring 2011 Bean Life Science Museum John Tanner Lecture, given by Dr. Jon K. Gelhaus of the Academy of Natural Sciences of Philadelphia. He and his team have been surveying the aquatic invertebrates of this remote country for more than 10 years as they document the distribution of these animals. Dr. Gelhaus and his team use the distribution data to assess the environmental quality of streams, rivers, lakes, and wetlands in this quickly developing nation of nomads. Mining and grazing are having noticeable impacts on the landscape and lifestyles of these people, and the Mongolian Aquatic Insect Survey, under the guidance of Dr. Gelhaus, has been training native Mongolians in modern systematic and ecological methods for identifying and classifying both the animals and the watercourses. In addition, during his visit, Dr. Gelhaus also helped curate and update identifications for the museum’s Crane fly collection.

Fall Tanner Lecture –

In his fall Tanner lecture, Dr. Mark C. Belk discussed how knowledge of the biology of living things allows us to better understand and appreciate the living world. He used examples from his study of the evolutionary ecology of fishes to illustrate the beauty and wonder so commonly observed in the natural world. He described the main challenges that fishes face by focusing on the unique adaptations of fishes in terms of how they feed, avoid predation, and find a mate. Examples included protrusible jaws, electrosensory capabilities, poisonous spines, live-bearing, and spontaneous sex change. Dr. Belk concluded by emphasizing to the audience the need for each of us to be personally responsible as good stewards of the earth’s living community.

Screening of “Green Fires” DVD with introduction by Stanley Temple –

During winter semester 2011, the museum sponsored a screening of the new DVD “Green Fires.” We were fortunate to have Dr. Stanley Temple, from the Aldo Leopold Foundation at the University of Wisconsin, attend and introduce this new and intriguing DVD. More than 200 people attended the “Green Fires” screening. “Green Fires” celebrates the life and contributions of the early American conservationist Aldo Leopold. This event was cosponsored by the Charles Redd Center on campus.

Collections-Based Research –

At the core of the museum’s mission statement is a clear commitment to collections-based research. The museum’s nine research-quality collections are used by faculty, students, and visiting scientists to explore and better understand the diversity and complexities of life on earth. Each collection is cared for by the museum’s curatorial staff. The productivity of the museum curatorial team has been consistently impressive, and in 2011, the team secured millions of dollars of external research funds and published more than 80 peer-reviewed journal articles!

Visiting Fulbright Scholar –

During fall semester 2011, Dr. David Muranyi of the Hungarian Natural History Museum, Budapest, Hungary, was a postdoctoral researcher at the museum. He is the most outstanding young plectronologist in Europe and his visit benefited both him and the museum. His research project was on the stoneflies of the Balkans, and he emphasized the genera Amphinemura and Isoperla. In addition, he studied the winter stonefly family Capniidae, and his findings will completely revolutionize the taxonomy of this family in the Holarctic realm. While in Provo, Dr. Muranyi also studied an interesting series of large perlid stonefly nymphs that we had in our holdings, taken from waterfalls in Iran in 2004. He brought a nice collection of Palearctic stoneflies with him that he donated to BYU, and we shared with him stonefly species that he needed from North America. The Muranyi family, David, Szilvi, and Andris (2 years old), lived in Wymount Terrace from September 2011 to January 2012. They had many great experiences here in Utah.

Studying Fishes Across Latin America –

For Jerry Johnson, Assistant Curator of Fishes, collecting fishes is just short of an obsession. Johnson spends time every year exploring rivers and streams in Central and South America sampling all kinds of freshwater species. It’s more than just fun though. Johnson and his students are pursuing important research questions focused on the origins of fish biodiversity. This research has taken them from the coasts of Mexico all the way to Patagonia at the southern tip of South America. Although Johnson loves fishes, he’s even more excited to be able to share his passion with BYU students. “I love being in the field collecting. But one of the best parts of my job as a curator is allowing students to experience the thrill of conducting field work.” Most of the fishes collected in this research end up back at the Bean Museum in our research collections, where students and scientists can use them for teaching and research. Now that’s the kind of work you can get hooked on!
Collections-Based Research – cont.

Research at the Lytle Ranch Preserve –
Currently, there are several long-term research projects operating at the Lytle Preserve. One project involves an impressive team of several young BYU faculty members examining the effects of fire in the Mojave Desert. The Mojave Desert has only recently been exposed to fire, and this exposure is due to the introduction of invasive species that provide sufficient fuel to support wildfires. There is no background data on how the Mojave Desert ecosystem will respond to this new kind of impact. Randy Larsen and Brock McMillan from the Department of Plant and Wildlife Sciences are two of several BYU faculty members actively conducting research at the Lytle Preserve. In this section, we highlight Brock and Randy’s student-centered research.

Wildfire and Small Mammals –
Dr. Brock McMillan, Department of Plant and Wildlife Sciences, and his students are involved in a collaborative effort to look at the interactive effects of fire and small mammals on various functional attributes of the Mojave Desert ecoregion. They have erected 20 small-mammal exclosures and used controlled burns to (1) determine the effects of wildfire on small mammals, (2) examine the impact of small mammals on seed and seedling survival, and (3) explore the interactive effects of fire and small mammals on seeds and seedlings. To monitor the small mammal community, they have been live-trapping for three consecutive nights each April, July, and October. In order to effectively assess the effect of small mammals on plants, they have also been conducting seed and seedling predation experiments.

Gambel’s Quail and Kit Fox –
Dr. Randy Larsen’s research is a collaborative effort with state and federal agencies, as well as nonprofit organizations, to evaluate the influence of water developments in the Mojave Desert on wildlife. More specifically, Randy and his students are interested in the ecology and behavior of Gambel’s Quail and kit fox (two aridland specialists) in relation to available drinking water. The goal of their research is to determine whether or not wildlife water developments represent a positive, negative, or neutral influence on habitat use and the population dynamics of both species. To assess the influence of water on these two species, they are using radiotelemetry (Gambel’s Quail) and remote cameras (Gambel’s Quail and kit fox). Both lines of research are time intensive and require lengthy stays at the Lytle Preserve during the summer field season.

Cynthia Troxell Lichen Collection Donated –
In the fall, Dan Troxell emailed Larry St. Clair (curator of nonvascular cryptogams—lichens, bryophytes, etc.) and inquired about donating his wife’s lichen collection to the herbarium. Cynthia had been a graduate student at the University of Colorado at the same time Larry was working on his PhD at CU. They interacted briefly as Cindy finished up her MS degree, and then she moved on to Louisiana with her husband’s employment. Cindy continued to collect lichens wherever she and Dan lived. In early 2011, Cindy was diagnosed with cancer and passed away in the summer. As Dan sorted through Cindy’s lichen collection, he realized the specimens could be a valuable resource if placed in the right hands. He worked with Bob Egan at the University of Nebraska and Larry St. Clair here in the museum to see that Cindy’s collection was properly secured. Cindy’s mother also donated funds to help with the care of the collection. Those funds were placed in the herbarium endowment, Cindy and Dan’s gift to the museum has become an important part of the lichen collection, which now includes more than 100,000 specimens.

Donors –
The museum’s donors play a central role in funding the operations of the museum. The university generously supports many of the basic functions of the museum, but our donors provide funds essential for supporting the three core programs of the museum: education, exhibits, and research collections. Without the support of our generous donors, the capacity of the museum to support these core programs would be drastically limited.

Mellor Family Donate to the Museum’s Education Enhancement Program –
In September, Reed and Laureen Mellor, along with their two sons, Gabriele and Jade, donated $10,000 to the museum’s education enhancement program. These funds will be used to expand our capacity to strengthen the museum’s education programming so that we can better serve the thousands of school children who visit the museum each year. The Mellor family gives generously to a variety of worthwhile causes, and Reed and Laureen actively involve their sons in the selection process. We deeply appreciate the generosity and support of the Mellor family!

Donors to the Education Partnership –
One of the more recent initiatives of the museum has been the education partnership. This program invites corporate partners to consider providing funds to enhance the museum’s education programming. Every year, the museum’s education team interacts with thousands of school children, both in the museum and through our outreach programs. Generous corporate support is essential to the museum’s efforts to share the unique resources of the museum with our public and private school partners. In 2011, we received generous donations from Craig and Jodie Allred of Springville and Tahitian Noni International. These corporate sponsors allow us to bring the best of the life sciences to our school-age children!

Donor Box at North Entrance –
In the fall of 2009, the museum placed a modest “donation box” at the north entrance to the museum with an invitation to our patrons to give back to the museum. When Monte L. and Birdie Bean donated the money to build the museum, they specifically requested that access to the museum always be free, and we have honored that request faithfully over the years. However, extending an opportunity to our patrons to offer a modest donation has yielded impressive results! Since the “donation box” was set out in the fall of 2009, almost $8,000 has come to us as pennies, dimes, and quarters! These funds are dedicated to visitor services and will consistently come back to help our patrons better engage with the museum’s resources. Thanks to everyone!

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In the fall of 2009, the museum placed a modest “donation box” at the north entrance to the museum with an invitation to our patrons to give back to the museum. When Monte L. and Birdie Bean donated the money to build the museum, they specifically requested that access to the museum always be free, and we have honored that request faithfully over the years. However, extending an opportunity to our patrons to offer a modest donation has yielded impressive results! Since the “donation box” was set out in the fall of 2009, almost $8,000 has come to us as pennies, dimes, and quarters! These funds are dedicated to visitor services and will consistently come back to help our patrons better engage with the museum’s resources. Thanks to everyone!

Cynthia Troxell Lichen Collection Donated –
In the fall, Dan Troxell emailed Larry St. Clair (curator of nonvascular cryptogams—lichens, bryophytes, etc.) and inquired about donating his wife’s lichen collection to the herbarium. Cynthia had been a graduate student at the University of Colorado at the same time Larry was working on his PhD at CU. They interacted briefly as Cindy finished up her MS degree, and then she moved on to Louisiana with her husband’s employment. Cindy continued to collect lichens wherever she and Dan lived. In early 2011, Cindy was diagnosed with cancer and passed away in the summer. As Dan sorted through Cindy’s lichen collection, he realized the specimens could be a valuable resource if placed in the right hands. He worked with Bob Egan at the University of Nebraska and Larry St. Clair here in the museum to see that Cindy’s collection was properly secured. Cindy’s mother also donated funds to help with the care of the collection. Those funds were placed in the herbarium endowment, Cindy and Dan’s gift to the museum has become an important part of the lichen collection, which now includes more than 100,000 specimens.
The Lytle Ranch Preserve –

The Lytle Ranch Preserve is a 600-acre natural preserve located along Beaver Dam Wash at the Utah-Nevada border in Washington County. The preserve has unique ecological and biological features, as well as a fascinating history. The preserve is administered by the M.L. Bean Life Science Museum and serves as a field station for faculty and student learning and research as well as a remote—but remarkable—location for observing nature.

Lytle Preserve Use Policy –

At any one time, there are now 5-7 active research projects underway at the Lytle Preserve involving 7-10 faculty researchers and 75-100 students. With this increased activity and traffic, it became expedient that we develop and implement a use and fee policy for the preserve. This task was completed in 2011. The fees are modest and are used to improve or develop appropriate support facilities/resources at the preserve. Also, this policy provides the preserve manager, Heriberto Madrigal, with clear guidelines and expectations for researchers and visitors at the Lytle Preserve. The Use and Fee Policy is posted on the museum’s website (mlbean.byu.edu).

First Annual Lytle Ranch Preserve Research Meeting –

In December, the museum administration met with the various groups actively conducting research at the Lytle Preserve. The intent of this meeting was to provide better coordination and oversight for the various research projects currently in place at the preserve. Each researcher was asked to (1) prepare a 5-10 minute presentation highlighting their research efforts at the preserve; and (2) submit a written report documenting their 2011 activities at the preserve and outlining their plans for 2012. The meeting provided everyone with valuable information while accommodating an open discussion about concerns and needs.

Flood-related Recovery Efforts and Plans –

In December of 2010, a catastrophic flood caused major damage to the Lytle Ranch Preserve. The irrigation system and old ranch house were seriously damaged, and the hay fields and adjacent orchards were inundated with sediment. Through the winter and early spring months, Heriberto and Ken worked to put critical resources back online while we began to work with our campus planning team to assess the damage and develop a recovery plan. By spring, Heriberto had the irrigation system functional, and by summer, we had started working with a local St. George engineering firm (Bowen and Collins) to develop a comprehensive flood mitigation plan. It was determined that the old ranch house and trailer were beyond recovery and that it was imperative that we move all of the preserve’s critical infrastructure out of the flood plain. From fall into early winter, we developed a solid flood mitigation plan and early drawings for a replacement ranch house. The prospects are promising and the plans and associated costs will be reviewed by the Church in the winter and early spring of 2012.

Visitor Services –

One of the key operational aspects of the museum is the museum’s commitment to provide each patron with a significant, memorable experience. In some way, every member of the museum family contributes to this important assignment. Our goal is to ensure that every patron is treated with respect and kindness. Thanks to the museum employees, students, and volunteers who make the museum experience extraordinary!

Museum Store –

In spite of a struggling economy, sales in the store were once again impressive in 2011. Revenue generated by the sale of store merchandise covered the wages for our five student employees. We sincerely appreciate our student employees and staff whose diligent efforts ensure that the store merchandise is of high quality and directly supports the mission of the museum. We look forward to the new and larger museum store which will be a key element in the museum addition.

Museum Volunteers –

Volunteers play a crucial role in the operation of the museum, and in 2011, the museum was the recipient of over 5,700 volunteer hours! Volunteers serve in a variety of capacities, including help with the research collections, visitor services, education, and exhibit design and development.

Touch Screen Installed –

In order to better facilitate patron access to the museum’s extensive collection of educational videos, a touch-screen interface was designed and installed by Broderick Klemetson, one of the museum’s student employees. This wall-mounted control system allows patrons to select and view videos on an adjacent large screen LCD TV.

Museum Newsletter –

In 2011, two issues of the museum newsletter were published and mailed to more than 1,500 museum patrons while another 1,500 patrons received copies through email. The newsletter is also available on the museum web site and in either foyer of the museum.

Museum Staff Awards –

Each year, the museum staff nominates colleagues for three types of museum awards: curation contributions, service efforts of the full-time museum staff, and contributions by our student employees. This year, a total of six individuals were honored:

- Curator/Collection Manager: Dr. Jack Sites, Curator of Reptiles and Amphibians
- Staff/Administrative: Patty Jones, Assistant to the Director
- Student Employees: McKenzie Giles (Secretary) Hilary Norton (Museum Store) Angela Jensen (Herbarium) John Whitehead (Custodial)

Common Carp

Cyprinus carpio
A slowly improving 2011 economy resulted in a slight increase in the museum’s endowments in terms of both principal and spendable income. The earnings from our more than 30 endowments made it possible to continue to effectively care for and support the museum’s various operations, which include security, physical facilities, equipment funding, salaries for our full-time staff, and supply money to help meet the everyday needs of the museum. In turn, the museum staff consistently demonstrates an impressive commitment to carefully and thoughtfully managing the museum’s resources while producing quality products and opportunities for our patrons.

**CREDITS –**

Again, sincere thanks to Randy Baker for the beautiful design and layout for this year’s annual report; likewise, I am deeply grateful to Janene Auger and the Western North American Naturalist team for their careful and thoughtful editing of the report narrative. At the risk of being redundant, I cannot say enough about all of my colleagues at the Bean Life Science Museum. They are unselfish and absolutely dedicated to the success and improvement of the museum. Their numbers are small, but their efforts are consistently remarkable!

**2011 RESEARCH PUBLICATIONS**

Janene Auger, Assistant Editor WNAN


Iain T. Baldwin, Faculty Research Affiliate


Richard W. Baumann, Emeritus Curator of Insects:


Shawn M. Clark, Collection Manager, Arthropods


Barney, R.J., S.M. Clark, and E.G. Riley. 2011. Annotated list of the leaf beetles

Rainbow Trout
Oncorhynchus mykiss

Albino Rainbow Trout
Oncorhynchus mykiss

Bluegill
Lepomis macrochirus

**ANNUAL FINANCIAL REPORT –**
Channel Catfish

Channel Catfish

Ictalurus punctatus

Proceedings of Parasitology 51:1–18.


Keith A. Crandall, Curator of Crustaceans


Michael W. Hasttiter, Research Associate


Richard A. Heckmann, Emeritus Curator:


Jerald B. Johnson, Assistant Curator of Fishes


Leigh A. Johnson, Curator of Vascular Plants


Randy T. Larsen, Assistant Curator of Birds


C. Riley Nelson, Assistant Curator of Insects


Duke S. Rogers, Curator of Mammals


Dennis Shiozawa, Curator of Fishes


Jack Sites, Curator of Reptiles and Amphibians


Dennis Shiozawa, Curator of Fishes


Jack Sites, Curator of Reptiles and Amphibians


Duke S. Rogers, Curator of Mammals


Dennis Shiozawa, Curator of Fishes


Larry St. Clair, Curator of Nonvascular Cryptogams


Clayton White, Emeritus Curator of Birds


Michael Whiting, Curator of Insects


