The Florida Museum of Natural History inspires people to value the biological richness and cultural heritage of our diverse world and make a positive difference in its future.

2010-2011 IMPACT by the numbers:

- 3,307 Facebook fans.
- 509,001 website database queries.
- 1,310 Twitter followers.
- 380 collection loans to other institutions.
- 33 countries visited by Museum researchers.
- 17,587 Discovery Room visitors.
- 8,165 public programs attendees.
- 34,110 hours donated by 659 volunteers.
- 133 peer-reviewed scientific publications.
- 47 UF courses taught by Museum faculty.
- 1,768 news articles published.
- 15.23 million web page views.
- 39 new grants and contracts worth more than $4.58 million received by Museum scientists.
- 115 graduate committees served, including 84 chaired by Museum faculty.
- 34 million total specimens.
- 22,365 specimens loaned to other institutions.

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About the design concept
Challenged to visually communicate the Museum’s focus on impact this past year, I was inspired to explore visual metaphor. I thought of highly evolved systems in nature that ensure the survival of plant species by dispersing multitudes of tiny seeds, which are opportunities for potential life and growth. Some seeds are designed to travel far and wide, to establish as many new plants as possible. The dandelion, Taraxacum officinale, on the front cover, seemed the perfect visual metaphor to communicate what I feel represents the Florida Museum of Natural History’s far-reaching and never-ending impact. My hope is that as you read this report, you’ll see what I mean, and be inspired to care about life on Earth.

Elecia Crumpton
Graphic Design Coordinator
A message from the DIRECTOR

This past year the Museum invested a great deal of energy into analyzing our intended impact on the various audiences we serve. While our mission – understanding, preserving and interpreting biological diversity and cultural heritage to ensure their survival for future generations – describes what the Museum does, our intended impact describes the result of the Museum’s work, or what we hope to achieve as we carry out our mission.

Understanding the ultimate effect of our efforts is especially important in the current landscape of limited resources and heightened accountability. It helps to guide decision-making, prioritization of actions and the alignment of precious resources. Assisting us in the impact-planning process was Randi Korn and Associates, Inc. of Virginia, who helped us articulate the Museum’s impact statement: People are inspired to value the biological richness and cultural heritage of our diverse world and make a positive difference in its future.

It follows that the organizing theme of this Annual Report is impact. The ensuing pages highlight some of the many ways the Museum inspires people to care about life on Earth and value our cultural heritage. Perhaps nowhere was this more clearly seen than in the temporary exhibition, The Blue Path: Protecting Florida's Springs, which described the uncertain future of our state’s precious water resources. We also opened our long-awaited Lastinger Family Foundation Gallery featuring Collections are the Library of Life, an interactive exhibit emphasizing the positive impact scientific biocollections have on some of the major challenges facing society today. At the same time we also opened an award-winning exhibition, Dugout Canoes – Paddling through the Americas, inspired by the discovery of 101 dugout canoes at nearby Newnans Lake.

The Museum posted its most successful year ever in terms of competitive grants and contracts. Particularly noteworthy are two large NSF grants: 1) Bruce MacFadden and a team of paleontologists received $3.8 million in the highly competitive Partnerships for International Research and Education program to work on ancient biodiversity in the Panama Canal region. This will impact the lives of many students and young professionals as a new generation of globally competent scientists is trained. 2) The other grant is the largest in the Museum’s history – $10 million – awarded to Larry Page and colleagues from the Museum, the UF College of Engineering and Florida State University to establish a national center for digitization of biocollections.

In August we reluctantly celebrated the retirement of Distinguished Research Curator and James E. Lockwood, Jr. Professor of Archaeology, Dr. Kathleen Deagan. Few would question the enormous and lasting impact Kathy has had on the Museum, her students and the field of historical archaeology. Fortunately she continues to work in St. Augustine and remains involved as curator emerita, extending the impact of her brilliant career.

I hope you enjoy this report, and after reading it will agree with me that the Florida Museum of Natural History’s impact is both significant and lasting.

Douglas S. Jones, Ph.D.
Director, Florida Museum of Natural History
Since sixth grade, 17-year-old Rosie Kereston has committed her summers to serving the Museum as a Junior Volunteer. “I had always loved visiting the Museum as a child,” she says, “so I felt dedicating my time to working there would be very worthwhile and fun.”

Rosie also knew she would later need volunteer experience for college scholarships, but wanted to volunteer someplace she loved. She said the Museum was the perfect fit.

“Interacting with people of all ages and sharing what I’ve learned are two of my favorite things,” she said. “Going back to the Museum is something I look forward to at the start of every summer.”

Education assistant Jennifer Hunzinger, who coordinated the junior volunteer program last summer, said Rosie embodies many of the qualities the Museum looks for in junior volunteers.

“Rosie is enthusiastic about learning new skills and excited to share her knowledge with visitors,” Hunzinger said. “She also approaches her assignments with a mature sense of service, is highly regarded by her supervisors and other junior volunteers, and has a wonderful reputation for dependability.”

Rosie has served in a variety of positions as a volunteer, from working with children in the Discovery Room to engaging visitors at the discovery cart. Throughout all of these experiences she has taken on every task with intelligence and enthusiasm.

Rosie’s favorite job at the Museum is working as a Butterfly Rainforest interpreter. She loves not only talking with visitors, but also learning about the different butterfly species in the exhibit. Last summer, Rosie was excited for the opportunity to volunteer in the McGuire Center scientific collections because it provided her with hands-on experience working with Lepidoptera specimens.

Recently, Rosie’s passion and hard work have enabled her to earn a volunteer position in the McGuire Center laboratory where she will assist a team of scientists analyzing Lepidoptera genetics. Now in her junior year, Rosie plans to attend college and hasn’t yet decided on a major. But she said her volunteer work at the Museum has sparked her interest in biology and chemistry.

“Without question, volunteering at the Museum has already impacted my earliest career decisions,” she said.

Just as Rosie has benefited from her Museum service, the Museum, in turn, is more successful because of the work of talented and dedicated volunteers like Rosie.
The Florida Museum of Natural History houses more than 34 million scientific specimens. The collections include field notes, photographs, databases, and libraries that complement the irreplaceable scientific value of the specimens themselves. Most of the Museum’s ever-growing collections of plants, animals, fossils and artifacts rank among the top 10 nationally and internationally.

The Museum’s Collections and Research Division had an outstanding year during 2010-2011. While its main focus is Florida, the southeastern United States and the Caribbean, the Florida Museum’s many research projects span the globe—including work in 33 countries last year. Museum researchers brought in more than $4.58 million in new grants and contracts to support field and laboratory research, collections and education ranging from pre-K to the postdoctoral level.

Among many others, exciting new projects include research on the evolution and ecology of plants and animals on tropical islands, the evolution and early diversification of mammals after the extinction of dinosaurs, and the production, trade and social implications of prehistoric American Indian pottery. These projects support and educate students from the University of Florida and around the world, as part of our commitment to train the next generation of scientists.

The Museum also received the largest grant in its more-than-100-year history: $10 million over five years from the National Science Foundation to improve access to the nation’s biological collections. The Museum is leading the Advancing Digitization of Biological Collections initiative with the UF College of Engineering and Florida State University. The award establishes iDigBio, a national center for digitization at the Museum and UF.
**ANTHROPOLOGY AND ARCHAEOLOGY**

**Caribbean Archaeology**
Bill Keegan studied archaeological sites on Middle Caicos, Turks & Caicos Islands. He also worked with the Antiquities, Museums, and Monuments Corporation on several proposed projects in The Bahamas and advised The Island School (Eleuthera, Bahamas) concerning its archaeological research program. Keegan’s articles with Betsy Carlson in the popular magazine *Times of the Islands* informed a broad audience of island residents and visitors about topics from the first Amerindian colonization of the Turks & Caicos to bead-making and the mythical importance of sea turtles.

**Ceramic Technology Lab**
Neill Wallis was hired in August 2010 as Assistant Curator of Florida Archaeology. He and Collection Manager Ann Cordell began upgrading equipment and improving the analytical and storage capabilities of the lab, which is currently involved in multiple projects with prehistoric pottery from the Southeast.

**Environmental Archaeology**
Kitty Emery and her students investigated overhunting vs. sustainable hunting practices in the Maya region, comparing the prey remains left by both prehistoric and modern hunters. With recent UF Ph.D. recipient Erin Thornton, Emery also studied the prehistoric domestication of turkeys using evidence from osteology, osteometry and ancient DNA, discovering that the Maya kept captive turkeys nearly 1,000 years earlier than previously recognized.

**Florida Archaeology**
Bill Marquardt supervised the laboratory and field work at the Pineland Site Complex by graduate students Melissa Ayvaz, Andrea Palmiotto and Michael Wylde. With Karen Walker, Marquardt prepared the final synthetic chapter on environmental and cultural change for an upcoming book about the Pineland Site. Working with colleagues from the UF Department of Geological Sciences, University of North Florida and University of Missouri, Neill Wallis developed protocols to investigate prehistoric ceramics using mass spectrometry with laser ablation, a method of isolating clay from its additives so it may be used to better understand social interactions of early peoples. Wallis also studied collections, reassessed old excavations and field-tested sites in Florida’s Big Bend region.

**Latin American Archaeology**
Susan Milbrath curated and studied archaeological materials, especially pottery, from the spectacular Cerros site in Belize. Southern Methodist University transferred this collection to the Museum with permission of the Belize government, and the Museum’s priority was analyzing the artifact caches in relation to the Preclassic Maya architecture at Cerros. Milbrath’s archaeoastronomy research was highlighted by publication of the book *Heavenly History: Ancient Mexican Astronomy in the Codex Borgia*.

**Spanish Colonial Archaeology**
Kathleen Deagan retired in September 2010 after an outstanding career at the Florida Museum of Natural History. Nevertheless, she and Gifford Waters worked in the field and laboratory on 16th century Spanish Colonial sites in St. Augustine, with a focus on comparing the material culture from St. Augustine with that of other Spanish Colonial regions in the Americas. A major discovery during excavations was the coquina and oyster shell foundations of the Nombre de Dios mission, a church built in 1677 by the Spanish governor of Florida.

**GENETIC RESOURCES REPOSITORY**
The Museum added nearly 3,000 DNA samples of plants, birds, amphibians, reptiles, fishes, butterflies, marine invertebrates and various animal tissues to its Genetic Resources Repository, bringing the total number of specimens to about 30,000. This collection shares materials with researchers around the world and is featured in the Frontiers of Science display in the Museum Collections are the Library of Life exhibit at Powell Hall. The exhibit highlights the wide range of biological materials preserved for long-term storage in the liquid nitrogen freezer.

**INFORMATICS**
Nico Cellinese continued the development of informatics websites including TOLKIN (www.tolkin.org), RegNum (http://wiki.flmnh.ufl.edu/regnun), and BiSciCol (www.BiSciCol.org) with special effort on building interfaces to manage phenotype ontologies as well as semantic data integration and interoperability. Reed Beaman spent the year as a program officer at the National Science Foundation in Washington, D.C. Larry Page, with UF co-PIs Jose Fortes, Bruce MacFadden and Pam Soltis, was awarded a five-year, $10 million NSF Advancing Digitization of Biological Collections grant for the iDigBio project, which will coordinate 92 institutions in 45 states working to digitize the nation’s biological collections and serve as a clearinghouse for museum-based biological information across the U.S.
NEONTOLGY

Herbarium
Cellinese investigated the systematics, evolution and biogeography of Alpine and Mediterranean forms of Campanulaceae (bellflowers), which include complex sets of endemic species. She also worked with Evgeny Mavrodiev on the biogeography and evolution of floras in the lower Volga and Caucasus regions. Norris Williams and Mark Whitten completed a major molecular phylogeny of a group of Neotropical orchids called Oncidiinae. They analyzed 598 species and seven gene regions. Williams and Whitten also collected genetic data for nine plastid genomes of orchids. Kent Perkins spearheaded the digitization of the Herbarium’s type specimens for the Global Plants Initiative, the largest coordinated effort to digitize plant type specimens and scholarly resources from herbaria around the world. With support from the Andrew W. Mellon Foundation, the Herbarium has been imaging its type specimens for inclusion in the JStor Plant Science website (jstor.plants.org).

Herpetology
Max Nickerson and students surveyed and analyzed microbes on injured versus non-injured amphibians. They also studied a population of cottonmouths near the northern range of this venomous species. Kenneth Krysko’s field work in South Florida continued to enlighten scientists and the public about the state’s many established non-native species of amphibians and reptiles and the damage they cause. The geographic ranges of some of the most invasive species of frogs, lizards and snakes are expanding northward, with unknown long-term consequences for Florida’s native flora and fauna.

Ichthyology
Larry Page’s All Cypriniformes Species Inventory, an NSF-funded Planetary Biodiversity Inventory grant, hit full stride in year two of this four-year project, including revisions of several genera of Asian cypriniform fishes. Page also has been revising the Handbook of Darters and continued studying the systematics and biogeography of North American freshwater fishes. A highlight of this work was publication, with Brooks Burr, of the Peterson Field Guide to Freshwater Fishes of North America North of Mexico, the most comprehensive field guide to North American fishes.

Invertebrate Zoology
Gustav Paulay and his students worked on a systematic revision of aspidochirotid holothurians, or sea cucumbers. They also were an essential part of a major biodiversity and bar coding survey of marine invertebrates on Mo’orea Island, near Tahiti in the tropical Pacific. In response to the Gulf of Mexico oil spill of April 2010, Museum researchers surveyed marine invertebrates off Florida’s Gulf Coast. Fred Thompson analyzed the morphology and systematics of the land snail genus Epirobia and related genera in Mexico and Central America, including the description of a new family, Epirobidae. Thompson also studied undescribed species of land and freshwater snails from Hispaniola and Florida.

The Katharine Ordway Chair in Ecosystem Conservation
Scott Robinson investigated the phylogenetic and trait-based community ecology of birds in tropical dry forests, tropical moisture gradients and Amazonian white sands forests with David Steadman, Andy Kratter and a number of graduate students. He also examined the behavior and ecology of urban birds in Florida, especially mockingbirds with Doug Levey and graduate and undergraduate students. Robinson also worked with graduate students to study the biotic factors, such as predation, and abiotic factors, such as temperature and rainfall, that limit the elevational ranges of birds in humid forests of the tropical Andes.

Mammalogy
David Reed’s lab made great progress on several fronts, including a new program to study the effect of climate change on gene flow in Caribbean bats, which resulted from recent trips to the Bahamas, Cuba, Dominican Republic and Puerto Rico. Reed and students completed research estimating the number of times endosymbiosis has evolved in mammal lice, discovering a roughly 10-million-year cycle between the appearance of new endosymbionts. They also obtained lice worldwide for several other studies, such as trying to determine the degree of population structure in human head lice and the extent they can be used to study human migration patterns in the Americas.

Molecular Systematics and Evolutionary Genetics Laboratory
Pam Soltis, her students and colleagues, including Matt Gitzendanner, focused on angiosperm phylogeny, floral evolution and the conservation genetics of rare Florida plant species, such as Ziziphus celata, Hypericum cumulicola and Crotalaria avonensis. An ongoing, major NSF-funded project analyzed gene expression, gene loss and chromosomal rearrangements in Tragopogon polyploids, plants with multiple sets of chromosomes. Another collaborative NSF-funded project investigated the patterns and mechanisms of floral development and the identification of floral genes expressed in basal angiosperms such as Amborella, a plant endemic to New Caledonia considered to be the single living sister species to all other flowering plants.
Ornithology
David Steadman, Andy Kratter and Jessica Oswald incorporated data from both living and fossil birds to understand the complex history of bird communities in the tropical dry forests of northern Peru. Steadman and Oswald’s studies of Ice Age birds from northwestern Mexico revealed the blackbird family, including blackbirds, cowbirds, grackles and orioles, thrived until the collapse of the large mammal faunas. Florida’s Early Miocene birds continue to become better known through excavations at the exceedingly rich Thomas Farm fossil site in Gilchrist County. Discoveries during the past year include fossils from undescribed species of falcons and owls and only the second known bone from an undescribed species of tody.

PALEONTOLOGY

Invertebrate Paleontology
With support from the Toomey Foundation, Roger Portell made important collections of invertebrate fossils at Guantanamo, Cuba. Doug Jones and Portell received an NSF grant to curate and database two exceptional fossil collections, one assembled by Jules DuBar during nearly a half century of fieldwork in the Carolinas, Florida and Texas, and the other consisting of 7,500 micropaleontology slides from the Florida Geological Survey. Portell and colleagues reported a new genus and species of Miocene seastar, Kionaster petersonae, from Calhoun County, Florida. Excavations near the Panama Canal began, with dozens of new Miocene invertebrates discovered including crabs and a small seastar. Jones and Irv Quitmyer studied shell growth increments in hard clams, Mercenaria, as a proxy for population dynamics and water chemistry. Their data show prehistoric Native Americans over-harvested the clams, whereas modern coastal residents do not over-harvest the clams, but nevertheless degrade the water quality.

Paleobotany and Palynology
Steve Manchester studied the Early Paleocene flora of the Deccan Traps, India, which feature fossil plants from just after the extinction of dinosaurs. Manchester also examined the Middle Eocene fruit and seed flora from the Messel oil shale in Germany. A highlight of his research on the fossil history of grapes and their relatives included an article on grape seeds in the International Journal of Plant Sciences. Manchester and graduate students Fabiany Herrera and Greg Stull investigated the fossil history of the Annonaceae (custard apples), Arecaceae (palms) and other tropical families from Central and South America and the southeastern United States. Hongshan Wang continued his research on the Cretaceous angiosperm floras of the Western interior and the Eocene angiosperm floras from the Southeast United States. Wang described a new genus and species of sycamore in the same issue of the International Journal of Plant Sciences in which Manchester’s paper appeared.

Vertebrate Paleontology
Jon Bloch and his students collected mammalian faunas across the Paleocene-Eocene boundary in the central Bighorn Basin, Wyoming, as part of a collaborative project to document biotic changes in response to a rapid, large-scale global warming event 55 million years ago. Fossils from this time interval also are crucial for understanding the origin and early evolution of primates. Funded by NSF, Bruce MacFadden, with co-PIs Bloch and Jones, began a major five-year program of collaborative research, education and outreach on Miocene fossils from Panama, especially land mammals and marine invertebrates. This highly interdisciplinary, international project takes advantage of a once-in-a-century opportunity to explore for fossils along the Panama Canal in sediments freshly exposed while the canal is being widened and deepened.

RESEARCH LOCATIONS

Florida – All counties with special attention to Alachua, Calhoun, Charlotte, Citrus, Collier, Columbia, Duval, Gilchrist, Glades, Hamilton, Highlands, Jackson, Lee, Levy, Liberty, Marion, Monroe, Nassau, Pasco, Polk, St. Johns, Sarasota, Suwannee, Volusia and Washington.

Other States – Arizona, Arkansas, Georgia, Hawaii, Kansas, Louisiana, Missouri, Nebraska, Tennessee, Washington and Wyoming.

International – Australia, Bahamas, Bhutan, Canada, China, Colombia, Costa Rica, Cuba, Ecuador, France, Greece, Guam, Honduras, India, Indonesia, Jamaica, Japan, Kenya, Malaysia, Mexico, Nigeria, Pakistan, Panama, Papua New Guinea, Peru, Philippines, Poland, Puerto Rico, Solomon Islands, St. Lucia, Thailand, Turks and Caicos and United Kingdom.
SPECIAL ACHIEVEMENTS, FACULTY and STAFF

Reed Beaman served as a Program Director at the National Science Foundation Division of Biological Infrastructure.

Bruce MacFadden served as Program Officer (rotator) at the National Science Foundation Division of Research on Learning, Lifelong Learning Cluster.

William Marquardt received an Honorable Mention Preservation Award for Rehabilitation of the Randell Research Center Ruby Gill House from the Florida Trust for Historic Preservation.

David Reed appointed University of Florida Research Foundation Professor.

Pam Soltis received the Botanical Society of America Merit Award.

NEW GRANTS and CONTRACTS

Florida Museum of Natural History scientists received 39 grants totaling more than $4.58 million during 2010-11 from the following organizations:

- American Ornithologists Union
- Botanical Society of America
- Charlotte Harbor National Estuary
- Evolving Earth Foundation
- Florida Fish and Wildlife Conservation Commission
- Guy Harvey Ocean Foundation
- Herb Society of America
- Lee County, Fla.
- Andrew W. Mellon Foundation
- National Geographic Society
- National Science Foundation
- National Secretariat for Science, Technology and Innovation (Panama)
- Paleontological Society
- Schlumberger Foundation
- The Community Foundation
- The Pennsylvania State University
- University of Auckland (New Zealand)
- University of South Florida
- U.S. Department of Agriculture
- U.S. Department of Commerce
- U.S. Department of Defense
- U.S. Department of the Interior
- Wenner-Gren Foundation

TEACHING

ANG 4905 Individual Research in Anthropology, 19 credits
ANG 5162 Maya Archaeoastronomy and Ethnoastronomy, 3 credits
ANG 6110 Archaeological Theory, 3 credits
ANG 6186 Kinship Theory and Archaeology, 3 credits
ANG 6905 Individual Studies, 24 credits
ANG 6910 Supervised Research, 2 credits
ANG 6915 Research Projects in Social, Cultural, and Applied Anthropology, 15 credits
ANG 6930 Zooarchaeology of Mexico and Central America, 3 credits
ANG 6950 Individual Reading, 2 credits
ANG 6971 Research for Master’s Thesis, 6 credits
ANG 7979 Advanced Research, 25 credits
ANG 7980 Advanced Research, 25 credits

ANT 4914 Honors Thesis Research, 3 credits

BOT 5725 Vascular Plant Taxonomy, 3 credits
BOT 6935 Herbarium Management, 1 credit
BOT 6935 Molecular Systematics, 3 credits
BOT 6935/6554 Evolutionary Biogeography, 6 credits
BOT/ZOO 6935 Systematic Fruit and Seed Morphology, 3 credits

ENT 6932 Advanced Research, 3 credits

ENY 4905/6934 Biology of Lepidoptera, 2 credits

GLY 4930/5786 L/ZOO 6927 Florida Vertebrate Paleontology-Field Course, 2 credits
GLY 4930/6932 Vertebrate Paleontology: The Fossil Record and the Evolution of Mammals, 3 credits
GLY 6971 Advanced Research, 9 credits
GLY 7979 Advanced Research, 11 credits
GLY 7980 Advanced Research, 20 credits

IDH 4917 Honors Research, 2 credits

PCB 6605 Principles of Systematic Biology, 4 credits
PCB 6791 Research for Master’s Thesis, 4 credits

WIS 4905 Structure and Function in Snakes, 2 credits
WIS/BOT 6935 Molecular Ecology, 3 credits

ZOO 2203C Invertebrate Zoology, 4 credits
ZOO 4905 Individual Studies in Zoology, 16 credits
ZOO 4914 Honors Thesis Research, 12 credits
ZOO 4927/5846C Mammalogy, 4 credits
ZOO 6905 Individual Studies in Zoology, 8 credits
ZOO 6927 Advanced Invertebrate Zoology, 4 credits
ZOO 6927 Avian Anatomy and Specimen Preparation, 4 credits
ZOO 6927 Museum Seminar: Life, the Universe and Everything, 1 credit
ZOO 6927 Structure and Function in Snakes, 2 credits
ZOO 6927/GLY 6932 Broader Impacts of Science on Society, 4 credits
ZOO 6927/GLY 6932 Cenozoic Vertebrates of the Neotropics, 3 credits
ZOO 6927/GLY 6932 PIRE Seminar, 2 credits
ZOO 6927/GLY 6932 Vertebrate Paleontology Seminar, 5 credits
ZOO 6971 Research for Master’s Thesis, 3 credits
ZOO 7979 Advanced Research, 35 credits
ZOO 7980 Research for Doctoral Dissertation, 24 credits

Graduate Committees Served: 115
Graduate Committees Chaired: 84
Independent Studies: 39
Collection Loans: 380 totaling 22,365 specimens
EXHIBITS

**Museum opens two new exhibitions**

The permanent exhibit *Collections are the Library of Life* communicates the history, nature and value of the Museum’s collections and research programs. Discovery drawers filled with objects illustrate the important role collections play in teaching about the Earth’s climate, ecology, people, evolution, extinction, health, heritage, diversity, resources and beauty.

**Dugout Canoes: Paddling through the Americas** opened with a splash and remains on view through 2013 before beginning its national tour. Since ancient times, people of the Americas have relied on canoes for daily life and worldly connections. The exhibition takes visitors through the Americas to explore the multi-millennia dugout tradition, still alive and well. Inspired by the discovery of 101 ancient dugouts at Newnans Lake, Florida, the exhibit features artifacts, videos and interactive displays as well as model and life-size canoes.

**Focus on Energy**

The Museum tackled two new projects related to its conservation mission to educate visitors regarding energy consumption and climate change. Relighting the *Florida Fossils: Evolution of Life and Land* exhibit with metal halide lamps reduced the exhibit’s energy use 75 percent. Installation of a 75kW solar array on the Museum roof supplies about 8 percent of the building’s electricity. The array also inspired a companion exhibit, *Our Energy Future*, slated to open next year. The exhibit introduces critical energy topics while focusing on ways people can conserve at home.

**Changing Exhibits**

Temporary exhibits help the Museum present diverse mission-related subjects to visitors. This year two large exhibitions, *CSI: Crime Scene Insects* and *Florida Cattle Ranching: 500 Years of Tradition*, along with smaller exhibits, including *Florida Cowboys* and *The Blue Path: Protecting Florida’s Springs*, also allowed the Museum to partner with community groups and other institutions.

**Traveling Exhibits Program – Museum on the Road!**

Two Museum exhibits traveled to five national venues. The Mississippi Museum of Natural Science, Exploration Place, Kansas, and The Wildlife Experience, Colorado hosted *Megalodon: Largest Shark that Ever Lived*. *TUSKS! Ice Age Mammoths and Mastodons* traveled to the Gray Fossil Site Museum in Tennessee and the Macon Museum of Arts and Science in Georgia. The exhibits have toured 21 museums nationwide.

The Museum’s *Megalodon: Largest Shark that Ever Lived* and *TUSKS! Ice Age Mammoths and Mastodons* exhibits traveled to various venues across the country last year.
If “impact” was the Florida Museum of Natural History’s overall theme this year, Museum donors responded in-kind with generous gifts that will have significant immediate and future impact. Whether “Faculty Now” initiative gifts to establish endowed chairs; “Legacy” gifts to establish endowed research funds; important gifts of private collections, or cash gifts to help support exhibits and public programs, all will impact Museum faculty, staff and visitors.

In response to UF President Bernie Machen’s “Faculty Now” initiative, which matches newly created faculty endowments with an annual payment of 4 percent of the gift for three years, the Museum received three deferred gifts to establish endowed chairs in the McGuire Center for Lepidoptera and Biodiversity. McGuire Center Director Tom Emmel established the John F. Emmel Chair in Lepidoptera in honor of his brother who lives in California; John and Tom are writing what is likely to be the definitive text on California butterflies. Renowned butterfly enthusiast and author Gary Noel Ross also capitalized on this initiative with a two-part gift to enhance the Museum’s ethnographic collections and establish the Dr. Gary Noel Ross Chair in Lepidoptera. An anonymous friend of the Museum used a bequest to establish an endowed chair in Microlepidoptera Taxonomy. Funds from the “Faculty Now” match will enhance current teaching and research opportunities, while the endowments will provide reliable future funding.

The Museum also received a deferred gift from Suzanne Leahy to establish an Ornithology endowment allowing students and faculty to respond to immediate research opportunities. Leahy worked closely with the Museum’s Natural History Department to designate a gift that would be meaningful to her and also useful to the department.

Dr. William and Nadine McGuire continued their generous support of the Museum with another gift of specimens that adds more breadth to the remarkable Lepidoptera collection. Bradley and Rebecca Stirn also contributed a notable gift of butterfly specimens. UF Student Government contributed $60,000 to help fund the CSI: Crime Scene Insects exhibit and related activities, providing free admission to the fee-based exhibit for all UF students. The Toomey Foundation for the Natural Sciences donated $30,000 to support a temporary fossil display within the exhibit Cruisin’ the Fossil Freeway, opening in February 2012, that will bring dinosaurs back the Museum.

I.S.K and Sara Reeves continued their generous support with another beautiful collection of Native American ethnographic material, and Dr. Harry and Sarah Lee donated a collection of shells, continuing their sponsorship of the Museum’s Malacology Division. Additional notable gifts include support for the Discovery Room from the Francis & Miranda Childress Foundation, and a unique gift to the Florida Program for Shark Research of a flats boat from Hell’s Bay Boatworks custom painted by Guy Harvey. The boat was proudly featured in UF’s Homecoming Parade.

Museum membership continues to hold steady and saw an increase in MembershipPlus. Membership offers great value and helps support the Museum’s important work. The Museum Associates Board hosted another highly successful Passport fundraiser, raising more than $50,000 to support research, collections, education and programs. The Passport to Cowboy Florida theme complemented the Museum’s Florida Cattle Ranching: Five Centuries of Tradition temporary exhibit for a fun-filled country extravaganza!

The Museum is deeply indebted to its friends and supporters who have given so generously of time, talent and treasure during this difficult economic period. Private support has allowed the Museum to continue to grow and strive to achieve impact. For more information about opportunities to support the Museum, please contact Josh McCoy in the Museum Development Office, 352-273-2086.
School Programs
In an effort to provide under-served communities the opportunity to visit the Museum, the UF Center for Latin-American Studies partnered with the Museum to fund bus transportation for field trips. The initiative served 635 participants from seven schools.

The Museum’s Admission Assistance Program allowed 642 children and 118 adults to visit the Butterfly Rainforest exhibit.

Three events provided area educators the opportunity to learn about the Museum's statewide resources and learning experiences for teachers and students, including the annual Educator Open House and teacher programs in February and April.

Education Programs - Camps
Spring campers learned the ABC’s of animal “Hunting Tactics” in January, took flight in an educational “Space Odyssey” in February and discovered the alluring topic of “Antarctica” in March. Spring break camps, “Ways We Eat” and “Florida Cowboys,” allowed participants to learn about animal eating habits and provided additional insight on a popular temporary exhibit.

Young scientists filled 486 spots in Museum summer camps during seven weeks in June, July and August. Campers immersed themselves in ancient cultures, discovered new facts about the animal kingdom and gained valuable insight on environmental topics. Camps such as “Marine Mammals,” “Blue Florida,” “Ice Age” and “Creature Construction” provided students with a broad range of experiences highlighting the importance of science in daily life. Field camps on invasive species, insects and plants provided additional hands-on learning opportunities.

An internship program provided staffing for camps and assisted in guiding UFTeach students and other future educators to pursue informal science education careers. Many interns made commitments to focus on science-based learning, continuing their work in education at museums and other youth-oriented institutions. UF Senior and UFTeach minor Nicholas White said his experience at the Museum enhanced his understanding of youth.

“I want to teach middle school, and through the Discovery Room and the summer camp, I gained experience with children who are just shy of entering middle school,” White said. “I have a vastly expanded notion of where kids are before they get to me.”

Anthony Finelli, another UFTeach student who interned at the Museum, echoed this sentiment, adding that he found new confidence in his abilities as a result of the program.

“As a mathematics major, developing curriculum guides and lesson plans for topics in science and natural history was something that I was uncomfortable with initially,” Finelli said. “I now feel confident in my ability to research unfamiliar topics and even develop lesson plans on those topics.”

Florida Cattle Ranching exhibit opening
More than 2,700 visitors attended February’s opening of the Florida Cattle Ranching exhibit, making it the second-largest exhibit opening in Museum history. Twenty-four organizations participated in the event, planned in partnership with the UF Office of Sustainability.

Other Public Programs
The Museum collaborated with the UF geological sciences department for the annual “Can You Dig It?” event. More than 1,500 visitors enjoyed hands-on activities while learning about geology, gems, fossils and minerals. The Gainesville Chamber Orchestra also performed a soundtrack to echo the natural melodies of the Grand Canyon.

Showcasing prized possessions and favorite mementos, 93 collectors participated in Collectors Day in January, sponsored by Home Court Sports. More than 2,500 visitors viewed the collections, which included Titanic memorabilia, Star Wars collectables and Simpsons souvenirs.
Explore Research exhibit spotlights UF science

In 2011, the Museum’s Center for Informal Science Education launched a new campuswide collaboration of faculty, students and staff to better connect University of Florida researchers with public audiences. The Explore Research exhibit is helping UF scientists communicate their findings in a comprehensive multimedia display. Housed in the Museum, the exhibit includes two high-definition monitors and an interactive Smart Board with custom hands-on learning activities, as well as cross-promotion on the UF website and in the university’s Explore magazine. Featured videos produced by UF students are updated frequently to reflect breaking research news. The project web page hosts current videos and a searchable archive available on the Museum’s YouTube and TeacherTube channels. Future plans include connecting researchers and school groups through video conferencing, developing curriculum-based Smart Board activities for classrooms and installing interactive kiosks at key campus and off-site locations. The Explore Research exhibit partners include UF’s Florida Museum of Natural History, Office of Research, and Scientific Thinking & Educational Partnership.

WINGS participant’s exemplary work promotes citizen science

Project Butterfly WINGS: Winning Investigative Network for Great Science continues to inspire youth throughout the state to pursue careers and personal commitments to scientific research. Erin Barbeau, a high school student and WINGS participant, recently employed the techniques she learned in the WINGS program to investigate the effects of prescribed burns on butterfly populations in her hometown of Port St. Lucie. Barbeau was honored at the 2011 Florida State Science and Engineering Fair for these efforts, winning first place in the environmental sciences category. She also ranked within the fair’s top 20 projects out of 400 high school submissions. Barbeau also was awarded Female Youth Volunteer of the Year by the Friends of Florida State Parks for her volunteer work at the Savannas Preserve State Park. She continues to credit the WINGS program and website for encouraging and facilitating her projects.
The McGuire Center for Lepidoptera and Biodiversity expanded its impact on biodiversity education, research and outreach during a very successful year.

Collections acquired from private donors and other institutions raised the estimated number of butterflies and moths housed in the McGuire Center to more than 10 million, one of the world’s largest collections. The McGuire Center is one of the world’s premier locations for visiting researchers investigating Lepidoptera diversity, evolution, classification, genetics and distribution changes related to global warming and other environmental patterns.

The center also added two new researchers. Assistant Curator Akito Kawahara completed a postdoctoral year at the University of Hawaii where he studied next-generation techniques for gene sequencing and published a number of research studies on Lepidoptera of the Hawaiian archipelago. Assistant Research Scientist Delano Lewis was hired in June, and immediately began obtaining new research grants, authoring publications and teaching in the UF entomology department.

Center staff and graduate students are having a steadily increasing impact on conservation worldwide, using Lepidoptera as flagship and indicator species for monitoring and preserving habitats, wildlife refuges and national parks. Scientists conducted field work in Ecuador, Honduras, Jamaica, Kenya, Malaysia, Papua New Guinea, the Philippines, Solomon Islands and South Florida. They also are leading Lepidoptera conservation workshops across the U.S. and in other countries to promote a wider appreciation and utilization of captive propagation techniques, habitat restoration and conservation knowledge to protect endangered species and enhance public and governmental support of natural history and biodiversity education.
Volunteer Hours Served
- 39,258 in 2009-10
- 34,110 in 2010-11

Museum Visitor Attendance
- 188,544 in 2009-10
- 182,893 in 2010-11

Outreach
- 55,631 in 2009-10
- 130,581 in 2010-11

Public Programs Attendance
- 9,092 in 2009-10
- 8,165 in 2010-11

Discovery Room Attendance
- 13,004 in 2009-10
- 17,587 in 2010-11

Museum Website
Visits
- 4.55 million in 2009-10
- 4.11 million in 2010-11

Pages viewed
- 18.03 million in 2009-10
- 15.23 million in 2010-11

Database queries
- 476,213 in 2009-10
- 509,001 in 2010-11

Media Coverage*
Number of news articles
- 1,973 in 2009-10
- 1,768 in 2010-11

Potential known viewership:
- 1.59 billion in 2009-10
- 1.27 billion in 2010-11

*As reported by Meltwater News Online Media Monitoring

FY 2010-11 Financials

Revenue
- Earned Income $1.4 million (7%)
- Collections & Research $9.7 million (63%)
- Gifts $0.9 million (4%)
- Investments $2.9 million (14%)
- State Allocations $9.2 million (45%)
- Operations $2.6 million (17%)
- Exhibits & Public Programs $3.1 million (20%)

Total $20.5 million*

Expenditures
- Collections & Research $9.7 million (63%)
- Operations $2.6 million (17%)
- Exhibits & Public Programs $3.1 million (20%)

Total $15.4 million

* Includes $5.1 million in multi-year grant funds and gifts to endowments.

Social Media

Facebook fans (www.facebook.com/FloridaMuseum)
- 2,600 in 2009-10
- 3,307 in 2010-11

Twitter followers (www.twitter.com/floridamuseum)
- 675 in 2009-10
- 1,310 in 2010-11
HONOR ROLL 2010-2011

$1 million or more
Anonymous
Thomas Emmel
William & Nadine McGuire
Gary Ross

$500,000 or more
Anonymous
Thomas Emmel
William & Nadine McGuire
Gary Ross

$100,000 or more
Mary Habeck
John Powell Trust
Robert & Ann Powell
Floyd & June Preston
I.S.K. & Sara Reeves
Bradley & Rebecca Stirn

$50,000 or more
Suzanne Leahy

$100,000 or more
Mary Habeck
John Powell Trust
Robert & Ann Powell
Floyd & June Preston
I.S.K. & Sara Reeves
Bradley & Rebecca Stirn

$50,000 or more
Richard & Barbara Anderson
Benedict Advertising
Florida Museum Associates Board
Guy Harvey Ocean Foundation
Hell’s Bay Boatworks
Ann Milner
Progress Energy
UF Student Government

$25,000 or more
AT&T Real Yellow Pages
Harry & Sarah Lee
Bruce Walsh

$10,000 or more
Anonymous
Francis & Miranda Childress
Foundation, Inc.
Gladys Cofrin

Catherine & Richard Crandall
Gainesville Community Foundation, Inc.
Gainesville Sun
Lewis & Frances Lee
Middleton Corporation
Toomey Foundation for the Natural Sciences
Irving Finkelstein
The Flying Biscuit Cafe
Leonard & Libby Furlow
Sam & Deborah Goforth
Richard & Mary Ann Green
Jamie Grooms & Lisa Wasshausen
Richard Hulbert, Jr.
Robert & Donna Ing
Gerald & Kathryn Kidder
Mark Meisel & Anna-Lisa Paul
Ray Nagle
RRC Western Stores, Inc.
S&S Dry Cleaners
Thomas & Kathy Shannon
Mark & Deborah Simon
Storter/Childs Printing Company, Inc.
Karen Walker & William Marquardt
The Hon. Martha & Thomas Warner
Wells Fargo
Jo Wiggins

Fellow - $1,000 - $2,499
Anonymous
Richard Allen & Susan Mastin-Allen
Christina & Juan Arango
Association for Tropical Lepidoptera
Lawrence & Carol Aten
Bank of America Foundation
Jon & Marti Berger
Harvey Budd & Iline Silverman
Joe & Ginny Cauthen
Alicia Churchill
Climb for Cancer Foundation, Inc.
Community Foundation of New Jersey
John & Gretchen Coyle
Roland & Joyce Daniels
Michael Dion
Teresa Dolan & Stanley Given II
Betty Ann Dunckel
Elizabeth Ordway Dunn Foundation, Inc.
ExxonMobil Foundation
Ronald & Dianne Farb
Fossil Club of Lee County
Gainesville Regional Utilities
Elizabeth Haeseker & Hugh Popeneo
Harriett Hulbert
Roy Hunt
John & Peggy Kirkpatrick
Thomas & Virginia Klein
Dennis & Carrie Lee
Madelyn Lockhart
Joshua McCoy & Sarah Mendonca
Robert & Joelen Merkle
Robert Milbrath
Jacqueline Miller
Michael & Becky Moulton
Joyce & Thomas Mutz
Newcomer Dairy, Inc.
Darlene & Jeffrey Novak
Jack & Sandra Otahian
Penniman Family Foundation
Annette Perry
Pineland Marina
PPI Construction Management
Anne & Charles Reynolds, Jr.
Deborah Russell & Elmer Wheeler
Jon & Beverly Sensbach
Graig & Kris Shaak
Shands at the University of Florida
Robert & Beverly Singer
Skyland Pla-Net/Vision Unlimited
Richard & Jean Smith
Robert Spangenberg
The Villages Garden Club North
Dr. Emily Vokes
Wallace Ward III
Richard & Patty Jo Watson
Neil & Mary White
Joe & Eve Wilder
B.J. & Eve Wilder Family Foundation Inc.
Norris & Nancy Williams
Victor Yellen & Arlene Huszar

Benefactor - $500 - $999
Anonymous
Virginia Amsler
BBI Construction Management, Inc.
John & Tifi Bierley
Stan Charity Blomeley
Cape Coral Charter Schools
Charles & Mary Cichra
David & Marion Colburn
Richard & Gloria Comstock
Anthony & Edith Marquardt Cuda
Nick Davis & Sergio Marentes
Joshua & Sally Dickinson
Lamott duPont
Christine & John Engels
The Florida Cracker Horse Association, Inc.
Ira & Gerri Gessner
Gulf Elementary School
Desta & Peter Hansen
Jeffrey & Sarah Harrison
Keith & Mirian Hay-Roe
Gene & Evelyn Hemp
Giovanna Holbrook
Robert & Lynne Weissmann Holt

Starry Night provided the opportunity for visitors to view stars, planets and the moon through telescopes.
A summer camp participant attempts to open his mouth as wide as the shark jaws he is holding.
SCIENTIFIC PUBLICATIONS


Florida Museum of Natural History www.flmnh.ufl.edu


Invertebrate Paleontology collection manager Roger Portell preserves a 26-foot giant squid recovered off the coast of Jensen Beach. The rare specimen is the only one of its kind in the Museum’s collection.


Visitors viewing skeletons on the island in the Florida Fossils exhibit are framed by a steel sculpture of the Terror Bird.
Florida has more than 4,000 plant species, including this showy **Hibiscus** photographed along a roadside.


Visitors view a collection of spurs during opening day of the Florida Cattle Ranching and Florida Cowboys exhibits.


PROFESSIONAL STAFF July 1, 2010 – June 30, 2011

Director’s Office
Director – Douglas S. Jones, Ph.D.
Associate Director – Beverly S. Sensbach
Assistant to the Director – Griffin E. Sheehy

Budget and Human Resources
Assistant Director – A. Darlene Novak
Office Manager – Barbara L. Hackett
Pcards/Purchasing/Travel – Katie M. Suggs, Shuronna C. Wilson
Personnel/Payroll – Christian B. Pickles, Arja A. Rombotti-Horn

Center for Informal Science Education
Program Director – Betty A. Dunckel, Ph.D.
Project Director – Shari A. Ellis, Ph.D.
Project Director – Dale Johnson
Science Coordinator – Matthew Trager, Ph.D.
Secretary – Dona-Marie Mintz/Stephanie Kelly

Development/Membership
Development Director – Joshua D. McCoy
Assistant Director of Development and Membership – Leslie L. Ladendorf
Development Assistant – Brittany Snipes
Secretary – Susan A. Jarzen

Graphics
Graphic Design Coordinator – Elecia J. Crompton

Marketing and Public Relations
Assistant Director – Paul E. Ramey, APR
Coordinator – Leeanne K. Bright
Photographer – Jeffrey L. Gage

Museum Technology
IT Director – William G. Paine
Systems Administrator Lead – Warren Brown
Systems Administrator – Andrew Liewertz
Webmaster – Sarah E. Fazenbaker
Tech Support Lead – Timothy J. Talley
IT Expert – Hilary F. Miller
IT Practitioner – Richard A. Swilley

Department of Natural History (Collections & Research)
Associate Director and Chair – David W. Steadman, Ph.D.
Assistant to Chair & Anthropology Registrar – Elise V. LeCompte
Facilities Manager – George D. Hecht
Program Assistant – Pamela W. Dennis

Caribbean Archaeology
Curator – William F. Keegan, Ph.D.

Environmental Archaeology
Associate Curator – Katherine F. Emery, Ph.D.
Collection Manager – Irvy R. Quitmyer

Florida Program for Shark Research
Director and Curator, International Shark Attack File – George H. Burgess
Education Coordinator – Cathleen L. Bester
Post-Doctoral Research Associate – Yannis Papastamatiou, Ph.D.

Herbarium
Curator and Keeper – Norris H. Williams, Ph.D.
Assistant Curator – Nicoletta Cellinese, Ph.D.
Collection Manager – Kent D. Perkins

(Palaeobotany and Palynology)
Curator – Steven R. Manchester, Ph.D.
Collection Manager – Hongshan Wang, Ph.D.
Biological Scientist – Terry A. Lott

South Florida Archaeology and Ethnography
Curator – William H. Marquardt, Ph.D.
Assistant Scientist & Collection Manager – Karen J. Walker, Ph.D.
Collection Manager – Ann S. Cordell

Spanish Colonial Archaeology
Distinguished Research Curator – Kathleen A. Deagan, Ph.D.
Collection Manager – Gifford J. Waters, Ph.D.

Vertebrate Paleontology
Curator – Bruce J. MacFadden, Ph.D.
Associate Curator – Jonathan I. Bloch, Ph.D.
Collection Manager – Richard C. Hulbert, Ph.D.
Sr. Biologist – Jason R. Bourque
Biological Scientist – Arthur R. Poyer

Exhibits and Public Programs
Assistant Director – Douglas R. Noble, Ph.D./Jaret C. Daniels, Ph.D.

Business Office
Office Manager – Charlene O. Smith
Program Assistant – Katherine K. Gerard
Fiscal Assistant – G. Colin Martin
Special Events Coordinator – Karen A. Judd/Amber Tison
Store Manager – Stacey D. Crandall

Education
Assistant Director – Jamie C. Creola/Betty A. Dunckel, Ph.D.
Public Programs Coordinator – Kendra Lanza-Kaduce
School Tours – Jeannette E. Carlisle
Volunteer Program – Julie V. Crosby

Exhibits
Assistant Director – Dacie A. MacMahon
Designer – Ian M. Breheny
Traveling Exhibits – Thomas L. Kyne

Security and Fabrication
Operations Coordinator – Kurt Auffenberg
Artisan – Ronald A. Chesser
Craftsperson/Cabinet makers – J. Patrick Bennett, Nathan R. Bruce
Security Guards – Jason A. DeBottis, John H. McIntosh, Harvey E. Yawn

Emeritus Faculty
Associate Director Emeritus – Graig D. Shaak, Ph.D.
Associate Scientist Emeritus – Richard Franz, Jr.
Curator Emerita – Elizabeth S. Wing, Ph.D., NAS
Curators Emeriti – Carter R. Gilbert, Ph.D., F. Wayne King, Ph.D., Jerald T. Milanich, Ph.D.
Charles A. Woods, Ph.D.
Distinguished Research Curator Emeritus – S. David Webb, Ph.D.