

Florida Museum  
of Natural History

ANNUAL REPORT  
2011-2012



# A MESSAGE FROM THE DIRECTOR DOUGLAS S. JONES



Museums can be paradoxical institutions. Central to their mission is the preservation in perpetuity of their collections. This means museum staff labor to minimize change, and ensure as little alteration as possible to objects under their care.

On the other hand, like the business sector, museums must constantly change to remain relevant to their evolving audiences. The life expectancy of a museum that fails to keep pace with emerging societal concerns, advancing technology, or learning innovation is predictably short. At the Florida Museum of Natural History, we strive to balance those parts of our institutional ecosystem dedicated to constancy and predictability, with those components committed to change and adaptation.

You will see on the ensuing pages that our institution's balancing act between preservation and innovation has been occurring for more than 100 years, and we continue to find new ways to strike that balance. This year we were fortunate to hire two extraordinary faculty curators, Dr. Akito Kawahara in Lepidoptera and Dr. Michal Kowalewski, our first occupant of the newly endowed Jon & Beverly Thompson Chair in Invertebrate Paleontology. These hires simultaneously address our commitment to collections and innovative research. Another notable example is our NSF-funded iDigBio project, which positions the Florida Museum as the national hub of a network seeking to digitize the country's biocollections.

On the public side of the Museum, we initiated a fundraising campaign to reinvent our *Discovery Room* as a permanent addition to Powell Hall. However, the biggest story of the year belonged to our largest reptile, *Titanoboa: Monster Snake*. A team of scientists, including faculty curator Dr. Jonathon Bloch, his students and colleagues discovered this spectacular fossil of the largest snake that ever lived in a Colombian coal mine. It was the subject of a Smithsonian Channel documentary film, many magazine and other news articles, and a Smithsonian traveling exhibition the Florida Museum will display in 2013. Get ready to be impressed!

Our year finished on a high note with completion of a site master plan by the SmithGroup architects of Washington, D.C. A glimpse of this vision for our reinvented, reunited Florida Museum for the 21st century is included in the following pages.

Finally, I am saddened to report that Dr. Arnold Grobman, second Director of the Museum from 1952 to 1959, passed away on July 8, 2012. His innovative leadership, combined with his passion for collections and research, placed the Florida Museum firmly on its current path to balanced success.

Sincerely,



Douglas S. Jones



Former Florida Museum of Natural History Director J.C. Dickinson, Jr. and other employees are pictured in the Dickinson Hall courtyard in 1971, when the building was formally dedicated after the Museum moved from the Seagle Building downtown back to the main UF campus.







COLLECTIONS  
PRESERVE  
DEVELOPMENT  
MEMBERSHIP  
EXHIBITS









## COLLECTIONS AND RESEARCH

Previous page and left: The Museum's first exhibits displayed in Science Hall included bird and egg specimens. The exhibits, including some of the display cases, were moved and later opened to the public in the Seagle Building downtown in 1939.

Opposite page: Museum archaeologists Kathleen Deagan and Gifford Waters work at the Fountain of Youth Park site in St. Augustine.

**The Florida Museum of Natural History houses nearly 40 million scientific specimens**, placing it among the nation's top five largest museums. 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 29 countries and 18 states last year. Museum researchers brought in \$3.05 million in new grants and contracts over the past year, which support collections, education, fieldwork and laboratory research activities.

Among many others, exciting new projects include research on the domestication of turkeys by the ancient Mayas, characterization of marine benthic communities in the Carolinas, digitization of the Herbarium's lichens and bryophytes, as well as collection improvement grants for vertebrate paleontology, invertebrate zoology and ichthyology. These projects support and educate students from the University of Florida and around the world, as part of the Museum's commitment to train the next generation of scientists.

The Museum is also home to two large collaborative grants. The goal of the NSF-funded Panama PIRE project is to advance knowledge of the extinct faunas and floras of the ancient Neotropics based on the new fossil discoveries along the Panama Canal. This collaborative grant promotes discovery and advances knowledge in paleontology, geology and biology while developing global competency among scientists and students, in part through international research experiences. The other collaborative grant is the NSF-funded iDigBio project. Its mission is to develop a national infrastructure to support a permanent database of digitized information from all biological collections in the U.S. This database will lead to new research discoveries, promote a better understanding and appreciation of biodiversity through improved education and outreach, and facilitate better environmental and economic policies.

Both projects bring hundreds of scientists from around the globe to campus for workshops, meetings and other research activities, and bolster UF's reputation as an international leader in biodiversity research.



Museum Associate Curator of Vertebrate Paleontology Jonathan Bloch (center) discusses *Carbonemys cofrinii* during the Titanoboa: Monster Snake screening event with Paige Cofrin (from left), David H. Cofrin and Edith Cofrin (second from right). The extinct giant turtle was named in honor of the Cofrins' father, Dr. David A. Cofrin (d).



## ANTHROPOLOGY AND ARCHAEOLOGY

### ***Caribbean Archaeology***

As part of a long-term interest in the prehistoric peoples of the Turks & Caicos Islands, William Keegan completed the analysis of archaeological materials from sites on Middle Caicos Island.

### ***Environmental Archaeology***

To evaluate the use of sustainable hunting practices by the ancient Maya, Katherine Emery and her students analyzed bone and shell artifacts from the Pacbitun site, Belize, and animal remains from the Royal Court at the Aguateca site, Guatemala.

### ***Florida Archaeology***

Neill Wallis and Ann Cordell investigated exchange and mobility patterns revealed in pottery from Woodland period sites in Florida and Georgia. William Marquardt and Karen Walker undertook excavations at Southern Ridge, an Archaic period habitation site on Useppa Island in Southwest Florida.

### ***Latin American Archaeology***

Susan Milbrath's research focused on Postclassic Maya effigy censers, including those recently donated to the Museum from the Cerros site in Belize, and the Maya codices as they relate to the Maya calendar predictions for 2012.

### ***Spanish Colonial Archaeology***

Using new archaeological evidence, just-discovered historical documents and unique artifacts from the Museum's Spanish Colonial collection, Kathleen Deagan, Gifford Waters, Darcie MacMahon and other staff began development of First Colony: Our Spanish Origins. This exhibit will highlight St. Augustine, the first successful European colony in America, and the ways that science helps reveal and interpret history.



Curator of Latin American Art and Architecture Susan Milbrath displays a copy of the Codex Borgia in front of a replica of the Aztec calendar stone in the Dickinson Hall courtyard.

## NEONTOLOGY

### ***Florida Program for Shark Research***

The program continued monitoring endangered sawfish species through active tracking projects and maintenance of the International Sawfish Encounter Database. The International Union for Conservation of Nature presented sawfish encounter database information to participants of the 2012 Red List workshop in London as a baseline for future research. Updates to the Museum's International Shark Attack File, established in 1958, provided information for ongoing research on shark-human interactions.

### ***Genetic Resources Repository***

The Museum added 6,678 DNA and tissue samples of plants, vertebrates, butterflies and marine invertebrates to its Genetic Resources Repository. The Museum shares these important frozen materials with researchers around the world.

### ***Herbarium***

Nico Cellinese's research focused on patterns of evolution and diversity in Campanulaceae, to determine the history of endemic lineages on continental islands. Norris Williams and Mark Whitten continued their work on the molecular systematics of Orchidaceae and barcoding bryophytes and lichens. Kent Perkins oversaw the digitization and imaging of type specimens for the Global Plants Initiative and for the JStor Plant Science website, [plants.jstor.org](http://plants.jstor.org), a worldwide online archive providing public access to a wide range of content vital to plant science research.

### ***Herpetology***

Max Nickerson undertook comparative population studies of hellbender salamanders in pristine and disturbed habitats to determine the impacts of environmental changes on these threatened amphibians. Kenney Krysko's research on invasive amphibians and reptiles focused on the growing population of Burmese pythons in the Everglades.

### ***Ichthyology***

Larry Page and three graduate students traveled to Thailand in December to study Southeast Asian freshwater fish diversity, with an emphasis on the Cypriniformes (carps and minnows). The two-month expedition added many valuable specimens to the museum's fish collection, used for ongoing research by division staff and students.



Former Museum Curator of Vertebrate Paleontology Walter Auffenberg excavates a complete giant tortoise at a fossil site near Newberry in the early 1950s.



## **Informatics**

Collaborating with the UF College of Engineering, Reed Beaman developed cyberinfrastructure, including virtual computing resources, to support digitization of collections. Nico Cellinese continued to develop informatics websites, including TOLKIN, the Tree of Life Knowledge and Information Network, and BiSciCol Tracker, an NSF-funded project to tag and track biodiversity in scientific collections.

## **Invertebrate Zoology**

Gustav Paulay's global project to genetically bar code marine invertebrates featured species from Florida, Moorea Island and the Hawaiian Islands. Fred Thompson completed the first modern annotated checklist and bibliography of the land and freshwater snails of Mexico and Central America.

## **The Katharine Ordway Chair in Ecosystem Conservation**

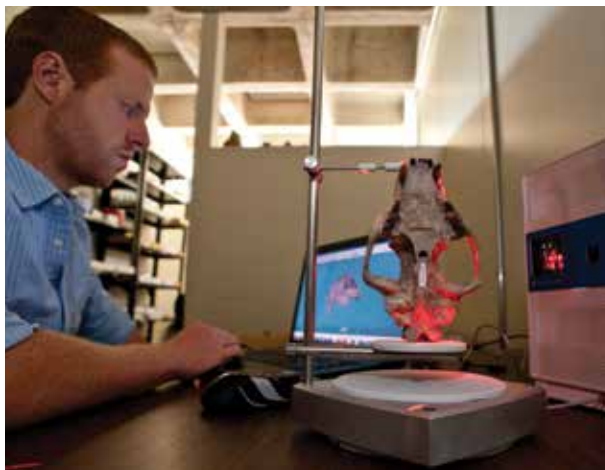
Scott Robinson and his students focused on understanding how the details of bird behavior, such as "decision rules" governing dispersal, social behavior, incubation rhythms and mating systems, make birds more or less vulnerable to human-generated changes in the environment.

## **Mammalogy**

Using DNA analysis, David Reed's lab studied the effects of climate change on gene flow in bats on Caribbean islands, and developed distribution models for human-hosted lice species to evaluate the colonization of the Americas by ancient humans.

## **Molecular Systematics and Evolutionary Genetics Laboratory**

Pam Soltis and colleagues published the genome of *Amborella*, a shrub found only on the Gondwanan island of New Caledonia. Lab employees, including Matt Gitzendanner, also studied other plant diversity in New Caledonia and conservation genetics of rare Florida plant species.



Postdoctoral researcher Aaron Wood scans the skull of a 34-million-year-old extinct species from Nebraska closely related to cats. The Vertebrate Paleontology Division acquired the 3-D scanner with an NSF grant.

## **Ornithology**

Along with students and colleagues, David Steadman investigated ancient and modern ecosystems of the West Indies, focusing on the Pleistocene (ice age) versus the Holocene (more modern) dynamics of terrestrial plant and animal communities in the Bahamas.

# **PALEONTOLOGY**

## **Invertebrate Paleontology**

Michal Kowalewski, formerly of Virginia Tech, joined the Florida Museum as the new Jon L. and Beverly A. Thompson Chair of Invertebrate Paleontology. Through the efforts of Roger Portell, other staff, students and post-docs, the Invertebrate Paleontology program collected fossils in Curacao, Cuba, Florida and Panama.

## **Paleobotany and Palynology**

Steven Manchester analyzed the oldest-known grapes and discovered the oldest raisin, from the Late Cretaceous Deccan Intertrappean beds of India.

## **Vertebrate Paleontology**

At the Cerrejón coal mine in Colombia, Jonathan Bloch and colleagues discovered more fossils of the first vertebrates and plants from a neotropical rain forest. With eight other institutions and the UF College of Engineering, Bruce MacFadden is directing the NSF-funded Partnership for International Research and Education to collect and analyze fossils and other geological specimens excavated during expansion of the Panama Canal.



Archaeology Curator Emeritus Jerry Milanich, pictured in the background here as a UF graduate student in 1969 at the Yellow Bluffs-Whitaker Mound site in Sarasota County, observes as county officials discuss details of further work at the location.



OUR IMPACT





## RESEARCH LOCATIONS:

**Florida** -- All counties with special attention to Alachua, Brevard, Broward, Calhoun, Citrus, Collier, Columbia, Dade, DeSoto, Duval, Flagler, Gilchrist, Gulf, Hamilton, Hardee, Hendry, Hillsborough, Indian River, Jackson, Lee, Levy, Liberty, Manatee, Marion, Martin, Monroe, Nassau, Orange, Palm Beach, Pinellas, Polk, Putnam, St. Johns, St. Lucie, Sarasota, Sumter, Suwannee, Taylor, Volusia, Walton, Washington.

**Other States** -- Alabama, Arkansas, California, Georgia, Hawaii, Louisiana, Mississippi, Montana, Nebraska, North Carolina, North Dakota, Oregon, Pennsylvania, South Carolina, Tennessee, Texas, Washington, Wyoming.

**International** -- Australia, Bahamas, Bolivia, Brazil, Colombia, Cuba, Curacao, Ecuador, French Polynesia, Germany, Greece, Guyana, Honduras, La Reunion, Mexico, New Caledonia, Nigeria, Pakistan, Panama, Peru, Phillipines, Portugal, Seychelles, Senegal, Thailand, United Kingdom, Venezuela.

## TEACHING:

ALS 6046 Grant Writing, 2 credits  
 ANG 4905 Individual Research in Anthropology, 27 credits  
 ANG 6122C Archaeological Ceramics, 3 credits  
 ANG 6224/ANT 4930 Honors Painted Books of Ancient Mexico, 3 credits  
 ANG 6905 Environmental Archaeology Journal Club, 3 credits  
 ANG 6905 Individual Studies, 9 credits  
 ANG 6915 Research Projects in Social, Cultural, and Applied Anthropology, 6 credits  
 ANG 6971 Research for Master's Thesis, 8 credits  
 ANG 7979 Advanced Research, 18 credits  
 ANG 7980 Advanced Research, 39 credits  
 ARH 6930 Museum Ethics, 3 credits  
 ANT 4907 Independent Studies, 6, credits  
 ANT 4930 Florida Archaeology, 3 credits  
 BOT 6935 Biological Nomenclature, 2 credits  
 BOT 6935/0895 Phylogenetic Systematics Seminar, 1 credit  
 BOT 6935/GLY6932 Paleobotanical Methods, 2 credits  
 ENY 4905 Individual Studies in Entomology, 18 credits  
 ENY 4905/6905 Biology of Lepidoptera, 3 credits  
 ENY 6905 Individual Studies in Entomology, 4 credits  
 ENY 6934 Biology of Lepidoptera, 1 credit  
 GLY 6971 Advanced Research, 9 credits  
 GLY 7980 Advanced Research, 20 credits  
 PCB 6791 Research for Master's Thesis, 13 credits  
 VME 7979 Advanced Research, 3 credits  
 WIS 4934/6934 Vertebrates in Lotic Habitats, 2 credits  
 ZOO 4472 Avian Biology, 4 credits  
 ZOO 4905 Individual Studies in Zoology, 16 credits  
 ZOO 4926/6456C Ichthyology, 4 credits

ZOO 6927 Methods of Phylogenetic Inference, 4 credits  
 ZOO6927/GLY 4926 Island Biogeography and Paleontology, 3 credits  
 ZOO 6927/GLY 6932 PIRE Seminar: Exhibits Development, 3 credits  
 ZOO 6927/GLY 6932 PIRE Seminar: Student Research and Journal Club, 1 credit  
 ZOO 6971 Research for Master's Thesis, 16 credits  
 ZOO 7979 Advanced Research, 28 credits  
 ZOOL 432 Marine Invertebrate Zoology, 9 credits (University of Washington)

**Graduate Committees Served:** 127

**Graduate Committees Chaired:** 82

**Independent Studies:** 54

**Collection Loans:**

309 totaling 20,480 artifacts/specimens/lots

## SPECIAL ACHIEVEMENTS, FACULTY AND STAFF:

Jonathan Bloch was awarded a University of Florida Research Foundation Professorship in recognition of his distinguished record of research and scholarship.

Nico Cellinese was awarded the University of Florida 2011 Excellence Award for Assistant Professors.

Jaret Daniels received the University of Florida 2011 Division 4 Superior Accomplishment Award, and was one of 29 international conservationists nominated for the 2012 Indianapolis Prize.

Bruce MacFadden was awarded the 2012 Florida Academy of Sciences Medal.

William Marquardt received the Senator Bob Williams Award given by the Florida Secretary of State to a public servant who has changed the course of historic preservation in Florida.

Jacqueline Miller was elected an Honorary Life Member of the Lepidopterists' Society.

Larry Page was elected President of the Natural Science Collections Alliance.

Scott Robinson was elected Councilor for the American Ornithologists' Union.

Fred Thompson received the Life Time Achievement Award from the American Benthological Society.

Neill Wallis received the C.B. Moore Award for Excellence in Southeastern Archaeology from the Southeastern Archaeological Conference.

Norris Williams had a new species of orchid bee from the Amazon Basin of Ecuador and Peru named after him, *Euglossa williamsi*.



Opposite page: Museum visitors of all ages enjoy one of the *Drums and Dance* public programs presented last fall to complement the *Wild Music* exhibit.

Above: Founding Museum Director Thompson Van Hyning was appointed in 1914. Also pictured is one of his early business cards. Interestingly, the Museum's telephone number at the time was 315.



Science  
Topic  
Project







## EXHIBITS

Opposite page:  
The Museum augmented the *Cruisin' the Fossil Freeway* exhibit with an articulated *Triceratops* skeleton and working fossil prep lab, which were popular with visitors.

Left: This is a view looking out of the Hall of Ornithology in Science Hall on the UF campus, where the Museum's exhibits were first displayed.

### **Changing Exhibits Communicate and Inspire**

Temporary exhibits help the Museum communicate cutting-edge science in accessible ways. Like our permanent exhibits, all aim to engage audiences and inspire visitors.

In the large Changing Gallery, *Wild Music: Sounds and Songs of Life* explored the biological origins of music through interactivity and exceptional sound experiences, expanding visitors' understanding of what makes music. *Cruisin' the Fossil Freeway* brought dinosaurs to Gainesville via a prehistoric road trip through the American Southwest. Specimens from the Museum's collections, paired with the fossil-inspired artwork of celebrated artist Ray Troll and a working Paleo Prep Lab, introduced visitors to the ways scientists use fossils to answer questions about evolution, extinction and early life on Earth.

Five additional temporary exhibits this year highlighted current research. In the Museum's Library of Life series,

two new exhibits showcased the Ichthyology (Fishes) and Mammals programs. The displays explored research on endangered sawfish and other large fishes; and the study of human head lice, their evolution and what this information reveals about human migration and evolution. In the Central Gallery, a new rotating photographic exhibit features objects from the collections as viewed through the lens of a high-resolution imaging system used to answer new research questions. Two West Gallery exhibits, *Birds of the World* and *An Early Maya City by the Sea*, introduced new research from the Museum's Ornithology and Mesoamerican Archaeology collections.

### **New Exhibits Underscore Conservation**

The Museum opened two new long-term exhibitions this year with a goal to inspire conservation efforts.

*Our Energy Future* is a hands-on interactive exhibit that introduces critical issues of energy production and consumption and provides tips and tools for conserving energy at home. It includes information

about the Museum's rooftop solar array, how much energy Floridians use for what purpose and how we can make a difference in our future. The *Monarch Passage* exhibit transforms a Museum hallway into a multimedia experience of monarch butterflies and their winter migration to Mexico – strong ambassadors for the role we can play in species conservation and habitat preservation.

### **Focus on Energy**

The Museum continues to improve on its energy footprint, replacing much of the public area lighting with efficient LED fixtures with funding from a special University of Florida grant.





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## TRAVELING EXHIBITS PROGRAM

Opposite page:  
The Museum will display the *Dugout Canoes: Paddling through the Americas* exhibit through the fall of 2013. The exhibit will begin its traveling tour in 2014.

Left: The Museum developed its first traveling exhibit in 1953 — a panoramic survey of Florida history beginning with the state's earliest inhabitants.

Below: A series of jaws in the *Megalodon* traveling exhibit help illustrate the growth of the extinct shark to an estimated 60 feet long.

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

In a transition year, one exhibit retired, another toured farther, and a third prepared for launch. *TUSKS! Ice Age Mammoths and Mastodons* traveled to its final venue, the Macon Museum of Arts and Science in Georgia, before retiring from service after seven great years on the road. Now in its fifth year of travel, *Megalodon: Largest Shark that Ever Lived* continued its successful tour, showing at The Wildlife Experience in Denver, Gulf Coast Exploreum in Mobile, Ala., and Adventure Aquarium in Camden, N.J. Now at the Museum but ready to hit the road in 2014, *Dugout Canoes: Paddling through the Americas*, is being prepped to travel and promises to reach a new set of national audiences.

### Awards

The Museum's newest traveling exhibit, *Dugout Canoes: Paddling through the Americas*, won the highest Award of Excellence from the Southeastern Museums Conference in its peer-juried recognition of the region's best new exhibits.

### Looking Ahead

What will the future hold for the Museum's exhibition program? Both Changing Exhibits and Traveling Exhibits are holding their own in a fiscally challenging environment. Sponsorships and grants have allowed the Museum to envision and launch new projects. Among these exciting visions—a permanent *Discovery Room* to introduce children ages 3-10 and their families to natural history inquiry, a traveling exhibit titled *First Colony: Our Spanish Origins* to highlight the Museum's decades-long archaeological research of Spanish colonial sites, and a renovation of the Central Gallery to better orient Museum visitors and provide an exciting space for community events and interactions.





DEVELOPING  
WETBROS



Opposite page:  
The annual Tastes,  
Tunes & Treasures event  
featured the Mammalogy  
Division, including this  
skeleton of a Chacma  
baboon, *Papio ursinus*.

Left: Longtime docent  
and Associates Board  
Member Leslie Klein  
and former Museum  
Associate Director  
Graig Shaak, pictured  
during an Associates  
Annual Meeting in the  
early 1980s.



**For more than 100 years**, the Florida Museum has maintained a tradition of excellence in understanding, preserving and interpreting biological diversity and cultural heritage to ensure their survival for future generations. To continue this tradition as a successful 21st century museum, the Florida Museum must work to remain connected and relevant. Museum donors provided generous gifts that will have an immediate impact and make a positive difference in the Florida Museum's future. Each "Legacy" gift that establishes an endowment, each private collection and each cash gift ensure that the Florida Museum is able to inspire people to value the biological richness and cultural heritage of our diverse world and make a positive difference in its future.

For years the Florida Museum has hosted an extremely popular seasonal *Discovery Room*, engaging more than one-third of visitors in hands-on science education. This year the Museum, along with the Museum Associates Board, launched a three-year fund-raising campaign,

*Passport to Discovery*, with the goal of developing an enhanced, permanent *Discovery Room* that fosters critical thinking, collaboration and creativity. In support of the campaign, the Museum Associates Board hosted three events: *Passport to Discovery: A Morning at the Museum*; *Passport to Discovery: An Afternoon at the Museum* and the signature gala, *Passport to Discovery: A Night at the Museum*. In the first year of the campaign, the Museum raised more than \$400,000 and is well on its way to reaching the \$1 million goal. Leadership gifts from Jon and Beverly Thompson and BJ and Eve Wilder, as well as a sold-out gala, helped affirm the Museum's belief that a space with year-round, hands-on science education is a resource the community wants and needs. The newly designed *Discovery Room* will create a lasting impact on children and the adults who support their exploration as well as lifelong learners. The Museum plans to open the new exhibit by 2015, but changes are evident in the current *Discovery Room* as new ideas are tested.

A Florida Museum Membership Survey was launched in March and completed in May. Thank you to all members who participated in the survey. This allows the Museum to better tailor membership benefits and programming for members, creating lasting value. Jon and Beverly Thompson continued their generous support of the Museum with a gift to help renovate Powell Hall's Central Gallery into an area that will inspire and challenge Museum visitors with the wonder of the natural world and prepare them for an exciting journey as they venture farther into the Museum.

The Museum is fortunate to have friends and supporters who give so freely of their time, talent and treasure. At a time when state budgets are decreasing and demand for Museum services is increasing, private support ensures the Florida Museum's continued success. For more information about opportunities to support the Florida Museum, please contact the Museum Development Office, 352-273-2086.



# EDUCATION







## EDUCATIONAL PROGRAMMING

Opposite page:  
More than 1,000 visitors  
attended the popular  
Starry Night public  
program in November 2011.

Left: Museum docent Evelyn  
Hemp leads a school group  
presentation on forests at  
Dickinson Hall in 1976.

### **Earth Day BioBlitz**

More than 700 visitors participated in the Museum's Earth Day event, which included a BioBlitz in the adjacent UF Natural Area Teaching Laboratory.

### **Educator Open House**

In collaboration with the School Board of Alachua County and more than 20 community organizations, the Museum hosted an annual "Educator Open House" to provide information on the educational resources and learning experiences available throughout North Central Florida.

### **Outreach – Museum on the Move**

The educational power of the Museum moved directly into classrooms when the "Inquiry Box" program was revitalized in January 2012. Staff and docents utilized items from Museum collections to engage 1,594 students in inquiry-based activities and discussions.

### **Scout Programs Mentor Future Scientists**

An important part of Museum programs is mentoring future citizens and scientists. In April, 22 Girl Scouts and their chaperones from throughout the Gateway

Council explored paleontology during an evening of hands-on activities. The scouts excavated a miniature "fossil dig," assembled dinosaur fossil replicas and talked with female Museum paleontologists.

### **Title 1 Assistance Program**

To provide under-served communities the opportunity to visit the Museum, the Florida Museum Associates Board funded bus transportation and admission for 434 fourth-graders from nine Alachua County Title 1 schools to participate in *Cruisin' the Fossil Freeway* guided programs. Students used science process skills to examine fossils and artwork that illustrated adaptations, extinction and prehistoric environments. Participating teachers attended a workshop to learn ways to connect the exhibit with their classroom curriculum.

### **Other Public Programs**

Science Cafés provide opportunities for discussions about science topics in an informal venue like a restaurant, offering the speaker and audience members a chance to have a conversation not possible during a traditional lecture. The inaugural café last fall at

the Museum attracted more than 125 attendees and more than 250 participants attended the four spring cafés held in local restaurants. The *Cruisin' the Fossil Freeway* exhibit provided opportunities to showcase Museum paleontologists and their work through a Sunday lecture series. The "Ask a Paleontologist" series gave the public an opportunity to bring fossils to be identified. The Museum also hosted the 13th annual *Trashformations* juried art competition presented by the Alachua County Board of County Commissioners and Alachua County Office of Waste Alternatives

### **Volunteers**

Last summer, the Museum added two positions for Junior Volunteers, who are 12-17 years old. Veteran JVs gained hands-on experience in the *Cruisin' the Fossil Freeway* exhibit Paleo Prep Lab, learning to clean and curate fossils. A few experienced JVs worked in Assistant Curator of Lepidoptera Akito Kawahara's lab. These students learned to run polymerase chain reactions used for DNA studies.



# INFORMAL SCIENCE





## CENTER FOR INFORMAL SCIENCE EDUCATION

Opposite page:  
A young visitor enjoys  
the hands-on wind tunnel  
activity in the *Discovery  
Room*. The Museum is  
raising funds to build  
a new, permanent  
*Discovery Room*.

Left: Visitors enjoy  
the Object Gallery in  
Dickinson Hall during  
the late 1980s.

### **Discovery Room**

As the Museum continues to raise funds for a new, permanent *Discovery Room*, many significant changes have been made to the existing facility. These changes include adding comfortable seating, high-quality books that appeal to readers of all ages, display cases with a changing roster of animal mounts, a coral reef aquarium and myriad resources that encourage active, hands-on exploration such as a wind tunnel, discovery bins and nature-based puzzles and interactives.

### **Explore Research**

*Explore Research* is a collaboration among UF's Florida Museum of Natural History, Office of Research and Department of Agricultural Education and Communication. Through this partnership, UF students produced 46 videos about UF research. In addition to playing in the Museum exhibit, these videos air on WUFT-TV, YouTube and TeacherTube, with more than 120,000 online views over a three-month period.

### **Nature Viewing App**

In 2012, the Museum released the *Nature Viewing Along the Great Florida Birding and Wildlife Trail* app, which provides information to help users identify birds, butterflies and flowering plants and also includes a list of nearly 500 sites along the 2,000-mile trail that extends from the Panhandle to the Keys. Available for the Android platform and iOS, Apple's phone and tablet operating system, the app is downloaded about 14 times per day. The project was funded with grants of \$40,000 from the Florida Wildflower Foundation and \$9,500 from the Florida Museum Associates Board.

### **Water: Discovering & Sharing Solutions**

The Museum collaborated with the University of Florida President's Office and UF IFAS to produce an exhibit celebrating the 150th anniversary of the Morrill Act of 1862, which enabled the creation of land grant universities like UF. The *Water: Discovering & Sharing Solutions* exhibit was featured in Washington,



D.C., during the Smithsonian Folklife Festival in June, which attracts more than 1 million attendees. Through interactive displays, live animals and water tables, the exhibit explains how UF is solving global challenges involving water, invasive species and food production.



WGCURF



WHILE IN **GAINESVILLE** VISIT THE  
**FLORIDA STATE MUSEUM**  
 A DEPARTMENT OF THE UNIVERSITY OF FLORIDA



## MCGUIRE CENTER FOR LEPIDOPTERA AND BIODIVERSITY

Opposite page: Two White Peacock butterflies, *Anartia jatrophae*, mate in the *Butterfly Rainforest* exhibit.

Left: One of the Museum's first billboards.

Below: One of the Museum's current billboards on I-75 advertising the *Butterfly Rainforest*.

**The McGuire Center for Lepidoptera and Biodiversity** was able to add significantly to its collections, staff and other resources during 2011-12, increasing its stature as the leading educational and collections-based research institution for Lepidoptera biodiversity studies.

The total Lepidoptera holdings grew to about 10.5 million specimens through donations of more than 40 private collections and extensive collecting by the staff in many areas of the world. One of the most significant additions came in the Kirby L. Wolf world-class collection of the giant silk moth family Saturniidae, comprised of more than 3,800 specimens of U.S. and foreign species of this group of large, colorful moths. Related to this collection gift, Richard Peigler donated silk textiles from a number of countries, preserved cocoons of many species of silk moths and other materials such as cocoon hand and ankle rattles, for a possible future exhibit on the development of the silk industry in China, Japan, France, the U.S. and other countries through the centuries. Other especially notable collection additions came from John M. Nelson (more than 33,000 U.S. Lepidoptera), Bradley A. Stirn (more than 11,000 Lepidoptera, including

many exceptionally rare foreign butterflies), and Luka Kassarov (nearly 10,000 rare and extinct Palearctic and Neotropical Lepidoptera).

Research highlights include Assistant Professor Jaret Daniels' surveys to identify living populations of two federally endangered butterflies: the Miami blue and the Schaus' swallowtail. Curator Jacqueline Miller surveyed Lepidoptera on North Andros Island, Bahamas, and in the Pico Bonito National Forest, Honduras. Associate Curator Keith Willmott investigated species richness gradients in tropical Andean butterflies from Colombia to Bolivia.

Assistant Curator of Lepidoptera Akito Kawahara's projects ranged from a study of the evolution of case-building by Hawaiian moth larvae, the evolution of chemical defenses in Lepidoptera and ultrasonic stridulation in hawk moths, to the evolution of major Lepidoptera groups using next-generation genome sequencing and functional genomics, specifically studying the green-island forming leaf miners. Assistant Research Scientist Delano Lewis is researching the moth and butterfly fauna of Jamaica, the genetics

and conservation ecology of the endemic giant *Homerus* swallowtail (largest swallowtail butterfly in the Americas), the important role of pollination of Florida native plants by native bees, wasps, Lepidoptera and other insects, and the role of roadside vegetation management practices for enhancing habitat and floral resources for insect pollinators.

Kawahara and Lewis are also expanding the McGuire Center's student training and mentoring programs, contributing their new strengths to the preparation of the next generation of lepidopterists.





# SCIENTIFIC PUBLICATIONS

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This Love Bird, *Agapornis* spp. is one of many bird species living in the *Butterfly Rainforest* exhibit.

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July 1, 2011 – June 30, 2012

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Office Manager – Barbara L. Hackett  
Pcards/Purchasing/Travel – Katie M. Suggs  
Shuronna C. Wilson, Ashley Gazich  
Personnel/Payroll – Christian B. Pickles  
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Project Director – Shari A. Ellis, Ph.D.  
Project Director – Dale Johnson

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Assistant Director of Development and Membership –  
Leslie L. Ladendorf  
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Tech Support Lead – Timothy J. Talley  
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Assistant to Chair & Anthropology Registrar –  
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Program Assistant – Pamela W. Dennis

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#### Environmental Archaeology

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Collection Manager – Irvy R. Quitmyer

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George H. Burgess  
Post-Doctoral Research Associate –  
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Collection Manager – Kent D. Perkins  
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Curator – Max A. Nickerson, Ph.D.  
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#### Ichthyology

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Laboratory Technician – Brian A. Kittle  
Museum Operations Specialist – Sean W. Roberts

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Associate Scientist – Matthew A. Gitzendanner, Ph.D.  
Laboratory Manager – Evgeny Mavrodiev, Ph.D.  
Post-Doctoral Research Associate –  
Brad R. Ruhfel, Ph.D.

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Assistant Curator – Neill J. Wallis, Ph.D.  
Collection Managers – Donna L. Ruhl, Ann S. Cordell





## THE FLORIDA STATE MUSEUM

Left: The Museum acquired this truck in the mid-1920s to pickup donations and conduct field work. Director T. Van Hyning wrote in his 1924-26 biennial report, "Our new auto van is another source of much efficiency and economy... It is such that our collectors can sleep in it while on extended trips after birds, mammals, etc. for habitat group work."

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Collection Manager – Gifford J. Waters, Ph.D.

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Curator – William H. Marquardt, Ph.D.  
Assistant Scientist & Collection Manager –  
Karen J. Walker, Ph.D.  
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Sr. Biologist – Jason R. Bourque  
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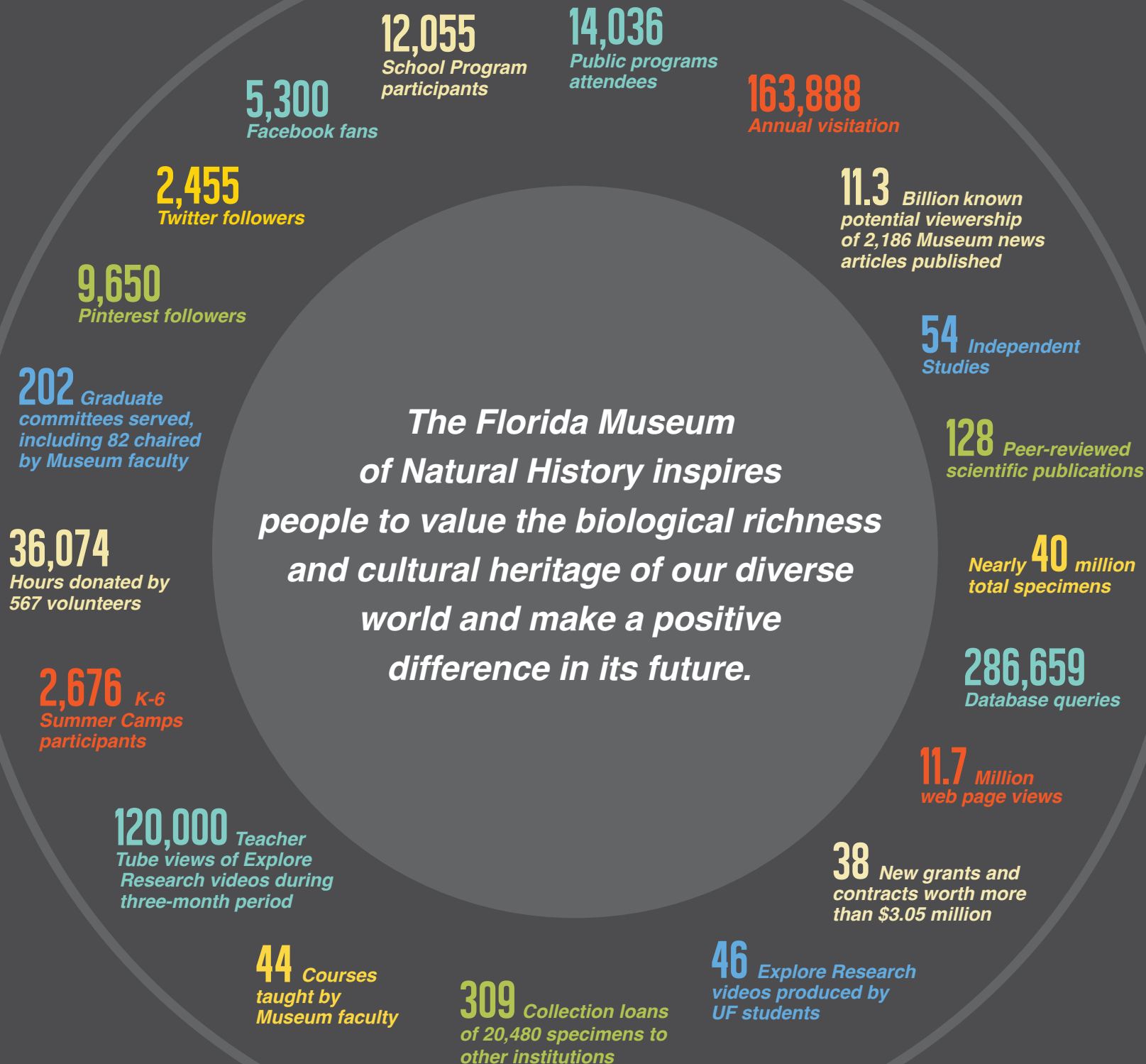
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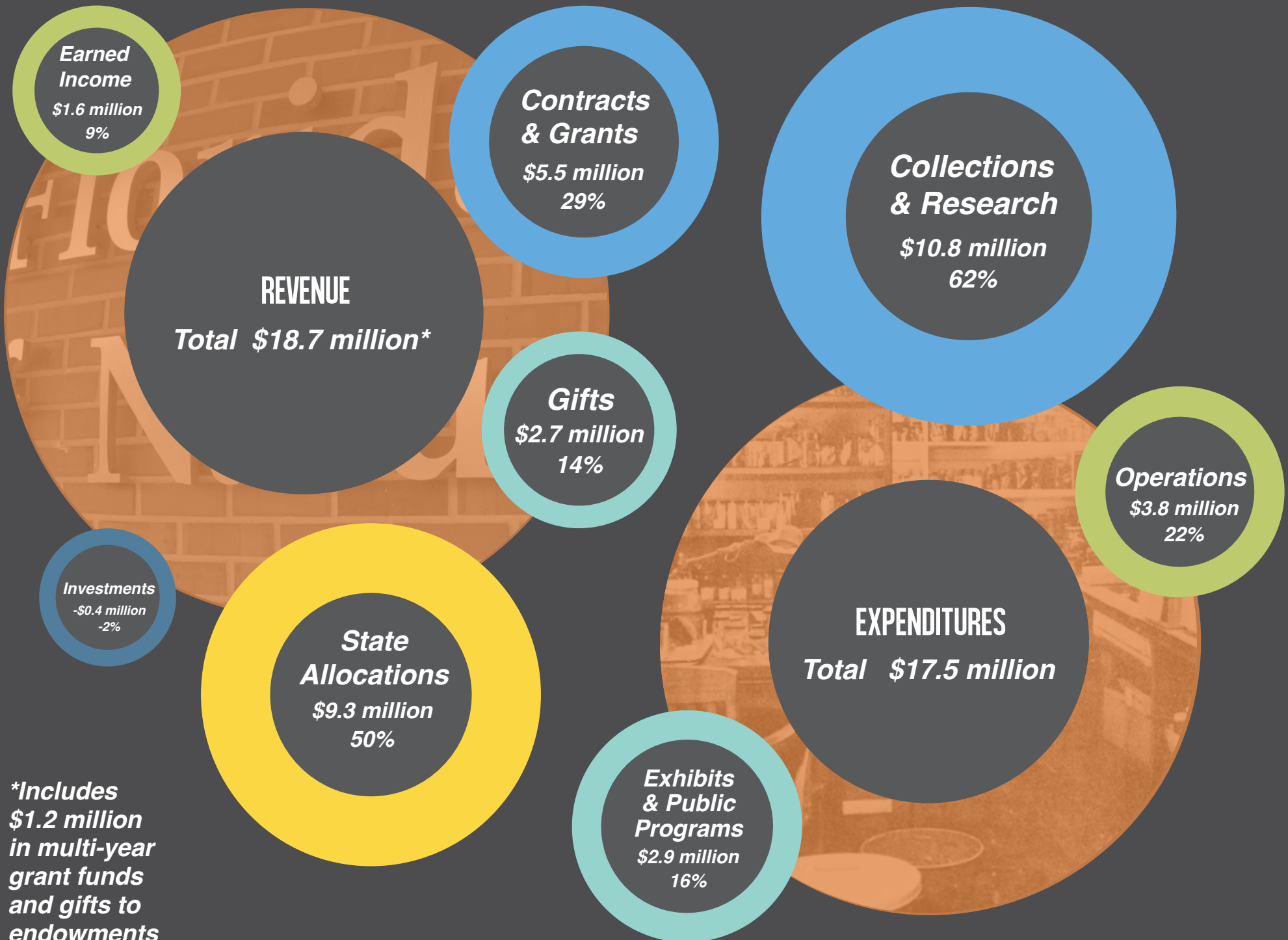
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# A BRIEF HISTORIC VIEW



1891

Florida Agricultural College (*Lake City*) biology faculty create a collection of natural history teaching specimens.



1905

Florida Agricultural College closes.

1906

The natural history collections move to Thomas Hall, a dormitory, on the new University of Florida campus in Gainesville.





# THE EVOLVING FLORIDA MUSEUM OF NATURAL HISTORY - PLANS FOR FUTURE



1910

The Museum moves to Science Hall (later named Flint Hall) on the UF campus.



1971

The Museum reopens back on campus in Dickinson Hall, still home to most of its collections and research activities.



1917

The Florida Legislature officially charts the Florida State Museum.

1939

The Florida State Museum exhibits open to the public in the Seagle Building downtown.



1997



# PUBLIC EXHIBITS AND RESEARCH CENTER



2004

The McGuire Center for Lepidoptera and Biodiversity, including the popular *Butterfly Rainforest* exhibit, is added to the Museum and opens to the public Aug. 14.



2012



Powell Hall, the Museum's Education and Exhibition facility in the UF Cultural Plaza, is completed and opens to the public.



The SmithGroup of Washington, D.C., completes a site master plan for a reunited Florida Museum building for the 21st century.





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