



## **NEW CALIFORNIA ACADEMY OF SCIENCES RECONCEIVES TRADITIONAL SCIENCE MUSEUM; OPENS SEPTEMBER 27 IN GOLDEN GATE PARK**

**Record-setting “green” building designed by Renzo Piano houses an aquarium, planetarium,  
natural history museum, and world-class research facility—all under one living roof**

SAN FRANCISCO (September 18, 2008) — One of the world’s most innovative museum building programs—a record-setting, sustainable new home for the California Academy of Sciences—has reached completion in San Francisco’s Golden Gate Park. After nearly a decade of planning and the largest cultural fundraising effort in San Francisco history, the new Academy will open to the public on September 27. Designed by Pritzker Prize winner Renzo Piano, the new building stands as an embodiment of the Academy’s mission to explore, explain and protect the natural world. Expected to earn a LEED Platinum certification from the U.S. Green Building Council, the new Academy is topped with a 2.5-acre living roof and employs a wide range of energy-saving materials and technologies.

The California Academy of Sciences is one of the world’s preeminent natural history museums and is an international leader in scientific research about the natural world. Founded in 1853 as the first scientific institution in the West, it is the only institution in the world to house an aquarium, planetarium, natural history museum, and world-class research and education programs under one roof. This major new initiative builds on the Academy’s distinguished history and deepens its commitment to advancing scientific literacy, engaging the public, and documenting and conserving Earth’s natural resources.

“Science is more influential and relevant to our daily lives than ever before, and natural history museums can and must deal head-on with the issues of the 21st century,” said Academy Executive Director Dr. Gregory Farrington. “Our goal was to create a new facility that would not only hold powerful exhibits but serve as one itself, inspiring visitors to conserve natural resources and help sustain the diversity of life on Earth.”

### **Design Driven by Nature**

The Renzo Piano Building Workshop, in collaboration with local firm Stantec Architecture (formerly Chong Partners), worked with the Academy to create a design that grows out of the institution’s mission, history, and setting. The new design unifies the Academy’s original array of twelve buildings, which were built over eight decades, into a single modern landmark that places a visual and intellectual emphasis on the natural world.

“With the new Academy, we are creating a museum that is visually and functionally linked to its natural surroundings, metaphorically lifting up a piece of the park and putting a building underneath,” says architect Renzo Piano. “We are excited to collaborate with the Academy on a project in which design and mission are so seamlessly integrated. Through sustainable architecture and innovative design we are adding a vital new element to Golden Gate Park and expressing the Academy’s dedication to environmental responsibility.”

Piano's goal was to create a sense of transparency and connectedness between the building and the park through both a careful selection of materials and a thoughtful arrangement of space. Glass is used extensively in the exterior walls, allowing visitors to look through the museum to the surrounding green space of the park along both the east-west axis and the north-south axis of the building. The glass, which is manufactured in Germany, is famous for its especially clear composition. To enhance the open, airy feeling created by the glass, Piano designed the central support columns to be extremely slender. A series of carefully configured cables prevent these slim columns from bending. The concrete for the walls and floors will remain untreated, continuing the emphasis on natural materials.

"Museums are not usually transparent," says Piano. "They are opaque, they are closed. They are like a kingdom of darkness, and you are trapped inside. You don't see where you are. But here we are building a natural history museum in the middle of a park, and those are two things that should belong to each other. They should be as connected as possible."

The building is topped by a colorful living roof—a 2.5 acre expanse of native California plants and wildflowers that creates a new link in the ecological corridor for wildlife. Steep undulations in the roofline roll over the Academy's domed planetarium, rainforest, and aquarium exhibits, echoing the topography of the building's setting and evoking the interdependence of biological and earth systems.

The new Academy site is located directly across from the new de Young museum, which opened in October 2005 and was designed by Swiss architects Herzog & de Meuron. The architectural dialogue between the two buildings and their unique responses to the environment of Golden Gate Park furthers San Francisco's growing role in supporting groundbreaking architecture and design.

### **Setting a New Standard for Sustainable Architecture**

The new Academy is one of ten pilot "green building" projects of the San Francisco Department of the Environment, part of a vanguard initiative to develop models for workable, sustainable public architecture. Designed to be the greenest museum in the world, the new Academy optimizes the use of resources, minimizes environmental impacts, and serves as an educational model by demonstrating how humans can live and work in environmentally-responsible ways. The new facility integrates architecture and landscape, and helps to set a new standard for energy efficiency and environmentally responsible engineering systems in a public, architecturally distinguished building.

In Piano's design, the environmentally sensitive components of the building are featured, rather than hidden. The living roof, which reduces storm water runoff by up to 3.6 million gallons of water per year, includes an observation deck, allowing visitors to admire the rooftop wildlife haven and learn about the benefits of this sustainable feature. The roof is bordered by a glass canopy containing nearly 60,000 photo voltaic cells, which will produce up to 10 percent of the Academy's annual energy needs. These photo voltaic cells are clearly visible in the glass canopy, providing both shade and visual interest for the visitors below. Additional green features throughout the building are highlighted with informational signage.

There are varying shades of green as measured by the U.S. Green Building Council through its LEED™ (Leadership in Energy and Environmental Design) rating system. The LEED rating system is a voluntary, consensus-

based national standard for evaluating high-performance, sustainable buildings. Through all aspects of design and construction, the Academy will strive to achieve the highest possible rating: LEED platinum. The Academy's rating is expected to be awarded by the end of 2008.

In recognition of this commitment to sustainable "green" design, the Academy project was selected as the North American winner of the silver Holcim Award for Sustainable Construction in September 2005. The competition, organized by the Holcim Foundation for Sustainable Construction in collaboration with five of the world's leading technical universities, promotes sustainable approaches to the built environment.

The Academy was also awarded the EPA's regional 2006 Environmental Award in recognition of the new building's sustainable design. The EPA received more than 160 nominations in 2006; the Academy of Sciences was one of 39 recipients to be selected in this very elite group of environmental champions.

### **Innovative Exhibits and Programs**

Unlike the dark halls and "cabinet of curiosities" displays that have traditionally characterized natural history museums, the new Academy's open, airy galleries are bursting with light and life. Its exhibits address not only the history of life on Earth, but also its future, engaging visitors in conversations about two of the most important scientific questions of our time: "How did life evolve?" and "How will it survive?"

From the colony of penguins swimming in African Hall (members of the Species Survival Plan breeding program) to the wildflowers blooming on the iconic living roof (sources of nectar for local birds and butterflies), the Academy's exhibits bring new vibrancy to topics like biodiversity and sustainability. The 38,000 animals of Steinhart Aquarium, once confined to their own halls, are now found throughout the building. The exhibits are also infused with human life—Academy scientists and trained docents are a critical component of the exhibition program, facilitating discussions and providing hands-on learning opportunities. New technologies appear not only inside the planetarium dome, but also throughout the museum and aquarium displays, creating additional opportunities for interaction.

The exhibits will draw heavily on the Academy's own research, incorporating many of the scientific specimens Academy scientists have collected over the past 155 years. The stories behind these specimens are told through videos, graphic panels, podcasts, and live programming. Windows into an active research laboratory and collections room create additional transparency between the Academy's scientific and public faces.

#### **African Hall**

The original African Hall opened at the Academy in 1934 and quickly became one of San Francisco's best-loved attractions. To preserve a piece of its history, the Academy saved two of the exterior walls of the original hall and recreated the dioramas in meticulous detail. While many features of the hall now look nearly identical to the original, there are also some new surprises. Plasma touch screens near the dioramas allow visitors to take a virtual safari, viewing video footage of the animals in the wild and learning more about their adaptations. A new human evolution panel traces the origin of *Homo sapiens* in Africa, reminding visitors that "we are all Africans." Additionally, five of the dioramas feature live animals: chameleons, tortoises, endangered cichlids from Lake Malawi, a white-throated monitor, and a colony of African penguins. The penguins are fed twice daily, at 10:30 am and 3:30 pm.

#### **Altered State: Climate Change in California**

Beneath the dramatic skeleton of an 87-foot-long blue whale, the Altered State exhibit explores the science of climate change, the effects we might expect to see in our own backyard, and the steps that can be taken to mitigate these dramatic changes. Inside interactive exhibit modules, families can measure the impact of their

everyday decisions on a carbon scale, help save polar bears stranded on ice floes in an Arctic Ice projection room, and share their ideas for treading more lightly on the planet. The exhibit will also showcase dozens of specimens from the Academy's unrivaled collection of California plants, animals, fossils, and minerals.

### **Early Explorers Cove**

A special exhibit for infants, preschoolers and their caregivers, the Early Explorers Cove was designed to support a young child's active energy and provide an introduction to the natural world. Here, tots can explore a 15-foot replica of the Academy's 1905 research schooner, climb into a tree-house, tend a miniature organic garden, sort and study toddler-friendly research specimens, or crawl into a child-sized burrow. The exhibit is also well-stocked with books, toys, puzzles, and dress-up costumes.

### **Islands of Evolution**

Inside this new exhibit, guests can visit the remote islands of Madagascar and the Galápagos through the eyes of Academy scientists and discover why islands function as laboratories for evolution. Flexible exhibit modules will allow content to be updated frequently in response to new scientific discoveries. The modules will incorporate the latest technologies, such as Wii gaming wands and motion-sensor projection screens, encouraging visitors to practice field research techniques by netting virtual butterflies and setting pit-fall traps for virtual beetles. The exhibit will also feature specimens collected during Academy research expeditions, including Galápagos tortoise shells and Darwin's famous finches, as well as displays of live Madagascar tortoises and hissing cockroaches.

### **Morrison Planetarium**

Visitors will leave Planet Earth behind as they fly to the farthest reaches of the Universe inside the world's largest all-digital planetarium. During each show, a live presenter will take guests on a guided tour of the Solar System and beyond, using current data from NASA to produce the most accurate digital Universe ever created. The opening show, called Fragile Planet, explores possible homes for life elsewhere in the Universe, allowing audiences to visit the Moon, Mars, and even extra-solar planets before retuning to take a closer look at Earth—the only planet currently known to support life. The show will air every hour on the half-hour.

### **Naturalist Center**

The Naturalist Center is a portal to the Academy's library and research collections, housing a diverse sampling of the museum's 210,000 books, 25,000 maps, 300,000 images, and 20 million animals, plants, minerals, and cultural artifacts. Using reference materials, computers, microscopes, and contacts with in-house experts, the Naturalist Center staff will answer visitors' questions about the natural world and help them identify their rocks, leaves, feathers, and other personal treasures. The space is a resource center for school groups and teachers, offering workshops, programs, and lending and reference libraries. It is also a resource for visitors seeking in-depth knowledge about sustainable technologies and green practices.

### **Northern California Coast**

It never rains at the Academy's Northern California Coast, an exhibit that highlights the state's diverse marine environments. The main tank, a 100,000-gallon display filled with leopard sharks, rockfish, sea urchins and other animals that are native to the Gulf of the Farallones National Marine Sanctuary, is fitted with a surge machine that sends waves rolling from a deep kelp forest into a shallow salt marsh. A walkway along the surface of the tank allows visitors to smell the sea water while peering down into the tide pools below. Smaller supporting tanks house moray eels, a giant Pacific octopus, and a 165-pound giant sea bass. Nearby, the Discovery Tidepool gives visitors a chance to touch sea stars, hermit crabs and other inhabitants of the rocky coast.

### **Philippine Coral Reef**

Five underwater viewing windows offer a shark's-eye view into the world's deepest living coral reef display, where visitors can find Nemo—and over 2,000 other reef fish—darting through a Technicolor forest of coral, watch garden eels emerge from their underwater burrows, and admire the brilliant hues of a giant clam. Up on the surface, a boardwalk through a mangrove lagoon allows guests to watch sharks and rays cruise beneath their feet. The main tank holds 212,000 gallons of water and showcases the stunning diversity of Philippine coral reefs, which are among the most diverse ecosystems in the world. Smaller supporting tanks house eels, venomous fish, and corals from other parts of the world.

**Rainforests of the World**

Water dripping from mahogany and palm trees sets the beat for a symphony of croaking frogs and chirping birds inside the Academy's living rainforest. The four-story exhibit takes visitors on a journey through the rainforests of Borneo, Madagascar, Costa Rica, and the Amazon. By following a winding ramp through the 90-foot-diameter glass dome, guests can peer into one of Borneo's bat caves, meet geckos and chameleons from Madagascar, and climb into the tree-tops of Costa Rica, where long lines of industrious leaf cutter ants march along vines and hundreds of tropical butterflies flutter like colorful confetti. A glass elevator then carries visitors down into the Amazonian flooded forest—the land of anacondas, piranhas, and electric eels. An acrylic tunnel allows guests to gaze up at the Amazonian river fish that swim overhead.

**Science in Action**

Updated regularly, Science in Action encourages visitors to go beyond the headlines and gain in-depth information about recent scientific discoveries around the world. Featuring six flat screen displays topped by a reader board with science headlines, the overall design is reminiscent of a bustling newsroom, reflecting the ever-changing world of science. Live talks by Academy scientists, audio-visual displays, computer stations, and podcasts provide a reliable source of timely and relevant news about the natural world. The exhibit will also include spaces for physical specimens from the Academy's collections, making the research more tangible. Visitors will be able to “talk back” by posting questions and comments about the stories.

**The Living Roof**

Visitors can stop and smell the wildflowers during a visit to the Academy's living roof, a 2.5-acre expanse of native California plants. Part of the museum's green building strategy, the roof provides superior insulation, prevents storm water runoff, reduces the urban heat island effect, and creates a new habitat for native birds, butterflies, and other beneficial insects. An engineering marvel, the seven hills of the living roof roll over the Academy's major exhibits and echo the hilly topography of San Francisco.

**The Swamp**

A longtime favorite feature of the original Steinhart Aquarium, The Swamp is once again home to American alligators and alligator snapping turtles. The bronze seahorse railing and hand-painted tiles that were first installed in 1923 have been incorporated into the new exhibit, providing a familiar reference for visitors who grew up visiting the original Academy facility. However, the exhibit also includes a few new surprises, including an albino alligator with startling white skin and a new underwater viewing window. Snakes, frogs, and salamanders live in smaller tanks nearby.

**Water Planet**

Silvery, sculpted walls and dramatic lighting set the scene for a unique foray into the Water Planet, a media-rich and interactive exhibit about the critical relationship between water and life. Animals that have evolved particularly interesting solutions to living in and around water are featured throughout the exhibit, alongside interactive “touch surfaces” that address the physical and chemical properties of water. The perimeter walls double as a surround-view theater screen; a five-minute movie about the central role of water on our planet plays across their surfaces once an hour. Exhibit favorites include leafy and weedy seadragons, medicinal leeches, Australian lungfish, and giant salamanders.

**Public Art Installations by Maya Lin**

The Academy and the San Francisco Arts Commission selected Maya Lin to create two public art installations in association with the new facility. The first installation, a tubular wire sculpture called “Where the Land Meets the Sea,” hangs from the solar canopy on the west side of the building. The 36 foot by 60 foot wire landscape describes the terrain both above and below water level of the San Francisco Bay, including Angel Island and the Marin Headlands. The sculpture, which Lin refers to as “a drawing in space,” calls attention to the fact that although we think of water and land as two separate entities, they are quite literally connected to one another. The second work, which will be installed beneath the solar canopy on the east side of the building, will be unveiled in late 2009. Entitled “What is

Missing?” it is part of Lin’s last memorial—a memorial to extinct and endangered species and places. “What is Missing?” will reconceive the traditional monument, existing in several mediums simultaneously. In addition to an installation at the Academy, the memorial will also take the form of a book and a video that will be shown in major cities on outdoor billboards.

### **Sustainable Dining Options**

Renowned chefs Loretta Keller (chef and owner of COCO500) and Charles Phan (chef and owner of The Slanted Door) have partnered to create an innovative new café and restaurant for the Academy. The casual Academy Café and the full service Moss Room will be treated like exhibits, encouraging visitors to ponder the vital relationship between food and culture, and to consider the benefits of eating sustainably. Both menus will highlight local, seasonal, organic produce; sustainable seafood that adheres to the Academy’s Seafood Watch standards; and locally-sourced, hormone-free meats. Additionally, featured menu offerings will be created to complement temporary exhibits and special programming elsewhere in the museum.

### **About the Renzo Piano Building Workshop**

Renzo Piano has emerged as the leading architect for museum projects in the United States. In addition to his design for the California Academy of Sciences, Piano is currently working on or has recently completed designs for the Art Institute of Chicago, the Los Angeles County Museum of Art, the Whitney Museum of American Art in New York, the Isabella Stewart Gardner Museum in Boston, and the Morgan Library & Museum in New York. The firm was also selected to design the New York Times Building, a new satellite campus for New York’s Columbia University, and the London Tower Bridge. Among his completed projects are the Menil Collection Museum in Houston, the Beyeler Foundation Museum in Basel, the Nasher Sculpture Center in Dallas, the Kansai Air Terminal in Osaka, and the reconstruction of the Potsdamer Platz in Berlin. His buildings show a sensitivity for the design, habitability, and sustainability of structures. Renzo Piano is a winner of the Pritzker Architecture Prize – considered to be the architectural equivalent of the Nobel Prize, as well as the AIA Gold Medal.

The California Academy of Sciences is home to Steinhart Aquarium, Morrison Planetarium, Kimball Natural History Museum, and world-class research and education programs—all under one living roof. The new Academy, designed by award-winning architect Renzo Piano, opens to the public on September 27. Admission to the Academy is: \$24.95 for adults; \$19.95 for youth ages 12 to 17, Seniors ages 65+ and students with valid ID; \$14.95 for children ages seven to 11; and free for children ages six and younger. The Academy is free to the public on the third Wednesday of each month. Admission fees include all exhibits and shows. Hours are 9:30 am – 5:00 pm Monday – Saturday, and 11:00 am – 5:00 pm on Sunday. The Academy is closed on Thanksgiving and Christmas. [www.calacademy.org](http://www.calacademy.org). (415) 379-8000.

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