



“ALTERED STATE” EXHIBIT ADDRESSES CLIMATE CHANGE IN CALIFORNIA AND AROUND THE WORLD

Exhibit uses fossils, interactive technology, and live animals to communicate complex yet urgent topic; opens with new California Academy of Sciences on September 27

SAN FRANCISCO (September 18, 2008) — In a 2007 research study commissioned by the California Academy of Sciences, a pool of 4,000 respondents claimed that they were well-informed about global warming, assigning an average rating of 75 out of 100 to their level of confidence. However, when these same respondents were asked which nation was most responsible for global warming, they named five other countries more frequently than the United States. (In reality, the United States has been the world’s largest emitter of carbon dioxide for decades, and even today remains in the top two.) In an effort to address such misconceptions, and to engage visitors in one of the most important scientific topics of our time, the California Academy of Sciences will unveil the exhibit *Altered State: Climate Change in California* as part of its grand reopening on September 27.

Altered State uses California as a case study to explore 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. California is one of the world’s 34 “biodiversity hotspots,” and it harbors a diverse array of life. Shaped by the state’s unique geology, climate, and ecosystems, many of the native plants and animals cannot be found anywhere else on Earth—and many are now threatened due to the local impacts of global climate change.

“Climate change is the largest and most significant problem that we will face in the foreseeable future,” says Dr. Peter Roopnarine, Academy scientist and lead curator for the exhibit. “It’s something we should all care about, because we stand to lose a lot—especially here in California where our natural resources are so rich and beautiful. Fortunately, California is in a unique position to study and address the problem. The state is one of the largest economies in the world, so the actions we take here will make a difference. It also has a long tradition of innovation and a wealth of technological and scientific expertise.”

The *Altered State* exhibit is divided into four free-standing “modules,” each of which covers a different aspect of climate change at both the local and global levels: changing oceans, melting snow and ice, hotter and drier climates, and endangered and extinct organisms. A variety of exhibit elements brings these modules to life, including multimedia displays, interactive stations, live animals, and dozens of specimens from the Academy’s unrivaled collection of California plants, animals, fossils, and minerals.

Suspended from the ceiling above the “changing oceans” module is an 87-foot, 6000-pound blue whale skeleton—the largest animal on Earth. Part of the Academy’s collections since 1915, this skeleton is a reminder of the stunning biodiversity that exists in California’s waters. Also on display in this module is a live tidewater goby, a

fish that is endemic to California’s wetlands but is now threatened by habitat loss. Other topics in this area include rising sea levels, ocean acidification, hurricanes, and changes in circulation and productivity.

In the “melting snow and ice” module, visitors can find a display of live *Nebria* beetles, which inhabit the snowfields of the Sierra Nevadas. In recent years, scientists have had to search for them at higher altitudes because their icy habitats are shrinking. This module also has an interactive projection room that demonstrates how disappearing Arctic ice causes the remaining ice on Earth to melt even faster. By moving their arms and bodies, visitors can block virtual sunlight from melting ice floes on a screen. As a result, ice floes connect and allow a mother polar bear to reunite with her cub.

In the “hotter and drier” module, a live rattlesnake slithers and serves as an ambassador for California’s desert habitats. Topics addressed here include heat waves in Europe, wildfires in California, and the impact of climate change on the state’s delicate redwood forests and chaparral regions.

The final module focuses on “endangered and extinct” organisms. Here, a full-size cast skeleton of a *Tyrannosaurus rex* reminds visitors of Earth’s last global extinction, 65 million years ago, while a saber-tooth cat skull and mammoth tusk represent more recent extinction events. Humans are widely regarded as the cause of the current mass extinction. Mounted specimens of Monarch, California’s last grizzly bear, and a condor provide evidence for this—since the 1849 Gold Rush brought an influx of humans to the state, grizzly bears have become locally extinct in California, and condors have become endangered.

While the reality of climate change may be daunting, one final area in the *Altered State* exhibit empowers visitors to fight back. Anchored in the center of the exhibit, the “Arena for Engagement” encourages visitors to take action, dream of solutions, assess their personal carbon consumption, and learn surprising facts about their everyday activities. They can videotape themselves making a pledge to reduce their carbon footprints, and then email the video to their friends; submit ideas for alternative energy technologies on a communal bulletin board; use a scale to assess their carbon consumption based on how many miles they drive, how much energy they use at home, and more; and select from a “menu” of everyday food items and learn the total carbon cost of producing them. Content for the Arena for Engagement was drawn in part from Pacific Gas and Electric Company (PG&E), an active leader in the field of renewable energy solutions and provider of some of the nation’s cleanest energy.

PG&E’s support of *Altered State* is part of the utility’s charitable \$1.5 million, four-year collaboration with the Academy. In addition to advising exhibit designers on energy-related topics and providing an alternative energy website for visitors to browse in the exhibit, PG&E contributed content specifically about their solar thermal energy projects. Solar thermal energy uses sunlight to heat water, create steam and spin turbines, generating “clean” electricity when demand is highest in California—during the afternoon hours.

“Climate change is a global problem requiring a global solution and education is the critical foundation that empowers people to take action,” said Nancy McFadden, senior vice president of public affairs for PG&E. “PG&E is honored to support the new California Academy of Sciences, especially as the Academy takes on the important mission of inspiring all of us to create a more sustainable environment.”

Surrounding *Altered State* are plenty of opportunities to learn more about California and sustainable practices. Nearby, seawater crashes against the shores of a 100,000-gallon California Coast tank, home to hundreds

of local fish and marine invertebrates. Adjacent to *Altered State* is *Building Green*, a wall of images and panels highlighting the sustainable design features of the new Academy. Finally, visitors can enter the gardens next to *Altered State* and gaze at *Where the Land Meets the Sea*, a wireframe sculpture by Maya Lin depicting the topography of San Francisco Bay.

Support for *Altered State: Climate Change in California*

Altered State is sponsored by Pacific Gas and Electric Company, the lead sponsor for the exhibit, as well as the Susie Tompkins Buell Foundation, 11th Hour Project, and California Cultural and Historical Endowment. The James Irvine Foundation provided support for the Arena for Engagement.

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 7 to 11; and free for children ages 6 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. (415) 379-8000.

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