Chapter 29

Design and development of the Steinhart aquarium’s Philippine coral reef exhibit

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ABSTRACT

The Steinhart Aquarium and the California Academy of Sciences will reopen its Golden Gate Park facility in late 2008 following a total renovation. A major component of the new museum is an exhibit gallery focusing on Philippine coral reefs. The centerpiece of this gallery is an 800 m$^3$ living coral aquarium that is 7.6 m deep. Visitors will observe this exhibit from the water surface, as well as through five distinct underwater views. An aquarium of this size and scope created multiple challenges for the design team. In order to stock this exhibit in an ecologically responsible manner, we constructed an indoor coral farm in downtown San Francisco. Here we are growing more than 1,000 colonies obtained as cuttings from fellow zoos and aquariums as well as from private hobbyists. We have researched and designed an artificial lighting system that provides sufficient Photosynthetically Active Radiation (PAR) at depths varying from 0.3 to 7.6 m, while remaining unobtrusive from the visitor space. This paper will describe how the challenges of creating such an exhibit have been overcome through the collaborative efforts of architects, exhibit designers, engineers, electricians, research scientists, outside consultants and Steinhart Aquarium biologists.