

THE WALL STREET JOURNAL.

Fish Out of Water Moving 38,000 Living Specimens Creates Logistical Problem for Aquarium Curators

By JIM CARLTON
March 5, 2008

SAN FRANCISCO -- Here is what keeps Bart Shepherd lying awake at night: How to transport 38,000 living specimens of the Steinhart Aquarium -- including bat-eating snakes and an army of leaf cutter ants -- from a makeshift museum here to new digs in the city's rebuilt California Academy of Sciences in Golden Gate Park.

In 2004, the academy, one of the oldest and largest in the U.S., closed for an extensive renovation to make it bigger and seismically safer. In the four years since, the academy has been rebuilt as a model of environmental sustainability, with updated climate controls, rainwater harvest cisterns and a "living roof" of gardens that carpet the entire rooftop.

Seth Wolters, an aquatic biologist at the California Academy of Sciences, discusses the transporting of one of the largest living coral reefs in captivity. WSJ's Jim Carlton reports.

But the move of the academy's living denizens from temporary quarters near downtown San Francisco is what has curators most nervous now. The "Great Migration," as museum officials call it, began in January. Until the academy reopens as scheduled

Sept. 27, Mr. Shepherd, curator of the aquarium in the museum, will be overseeing the shipment in trucks of critters big and small four miles to the new building. The task, never attempted by another aquarium anywhere, is already a logistical headache.

One recent day, for example, Mr. Shepherd affixed a rock containing a coral colony to some rocks in a giant salt-water tank at the new museum. But he was careful to make sure that the galaxea coral were placed nowhere near any other coral species, because they would likely attack them with stinging tentacles.

"People think of coral reefs as tranquil and serene, but they're not," said Mr. Shepherd, who had to wear gloves to protect his own flesh from the stingers. "It's like biological warfare in there."

He is even more concerned about moving the larger creatures and the physical threats that might pose to him and his workers. For example, the aquarium has alligator gars that weigh well over 100 pounds and whose bite could send a person to the emergency room. It will take as many as four workers to approach a razor-toothed gar, squirt more anesthesia in its face if needed and then try to wrap it into a stretcher quickly for shipping.

"You have to be really careful, because that thing can break you," Mr. Shepherd said. "It's a solid cord of muscle."

Equally daunting is the prospect of moving a six-foot-long arapaima, a fish able to leap as high as three feet out of water. The last time Mr. Shepherd and his crew tried to wrap that critter into a moving stretcher, when the old academy closed four years ago, the fish wriggled free for a few anxious seconds. "He jumped up and out of the stretcher as four of us were holding him," he recalls. "It was awful."

There are other uncertainties for human and animal. Seth Wolters found out the hard way what happens when you poke your hand where it shouldn't be, the last time the fish were moved. A tank was almost empty, and he was feeling behind rocks in his dive suit to see if there were any more when an Atlantic blue tang slashed his hand with its razor-sharp dorsal fin.

This time it promises to be even more treacherous for him and the other divers, because the tank they are emptying is five times larger than the one they had before, and the collection has grown to include venomous fish such as rabbit fish. So Mr. Wolters plans to use the "pelican technique": Drop food into the tank and scoop up as many fish as possible off the top in nets. And then he will go in and pray that technique got them all out.

The animals face even more peril. Last time around, the red devil cichlids that for decades had coexisted with the alligator gars suddenly began disappearing in their new tank. The culprits: the alligator-jawed gars.

"The new tank didn't have a pile of rocks at the bottom that would allow the cichlids to hide while they rested," said Stephanie Stone, the academy's spokeswoman. This time, biologists have built dozens of what they call "hidey holes" for the cichlids to escape the gars.

Biologists said they hope the wait will be worthwhile for the animals as well as for the public. The new "living coral reef" exhibit, for example, is billed by academy curators as the world's deepest, at 25 feet.

And in a departure from other natural-history museums, the animals are being dispersed throughout the museum. Twenty African penguins, for example, will live in a hall filled with stuffed animals.

"This," Ms. Stone said, "will help us tell stories about biodiversity and sustainability in ways that no other natural history museum can."

