



Animal Diets at Shedd

Sustainability is integrated into every aspect of Shedd Aquarium's operations – animal care, guest service, business practices and building management. A conservation ethic permeates our culture, energizes our staff members and volunteers, inspires our guests and colleagues, and supports Shedd's vision for a healthy global environment.

Your organization can become more sustainable, too. Use our best practices as a starting point or create your own strategy for sustainability. Routinely assess the overall impact of your decisions and you'll soon discover that supporting a healthy environment is also good for your business.

ANIMAL DIETS

Feeding our animals nutritious, sustainable diets can be a challenge, especially for those with special needs. Of the more than 1,500 species at Shedd, three proved to be the most challenging to feed sustainably: the delicate leafy and weedy sea dragons and the high-energy Alaska sea otters.

LIVE FOODS PROGRAM

Mysid shrimp are the staple food for Shedd's leafy and weedy sea dragons. Home aquarists typically purchase wild-caught mysids for their animals, and for several years Shedd did the same. But we worried that the shrimp might carry diseases and parasites. We also found that our regular supply could be interrupted by hurricanes and other weather factors. Our conservation concerns included the heavy carbon footprint of the long overnight flights required to transport the mysids and the potential for habitat damage during the trawling required to collect the shrimp in their native seagrass beds.

Our aquarists decided that if they could successfully rear sea dragons, they could likely raise mysids as well, and Shedd's live foods program was born. We now have a thriving mysid population that supplies 30 percent of our feed. The sea dragons are well-fed, and we are assured that our homegrown mysids have not been exposed to disease or parasites that could harm our collection. An extra bonus is the annual \$4,000 we save by not buying and shipping wild mysids. The goal is to supply 100 percent of our mysid needs in-house.

The live foods program does not just involve mysids. The aquarists raise fruit flies, crayfish, water fleas, rotifers, copepods and microalgae, all as food for our animals. The program saves us thousands of dollars every year, as well the greenhouse gases that would have been released flying the food from source to Shedd.





DESERT SWEET SHRIMP

Shedd's Right Bite program encourages seafood lovers to choose sustainably caught or farmed fish. Most imported wild-caught and farmed shrimp fisheries are unsustainable due to the habitat damage caused by both and the large amounts of wildlife accidentally caught in bottom-trawl nets. Shrimp is a necessary part of our sea otters' diet. While Shedd worked hard to raise awareness on seafood issues, we couldn't locate a sustainable and affordable source for the 12,000 pounds of shrimp our five sea otters were gobbling down every year.

We discovered a small, innovative shrimp farm in Gila, Arizona. Desert Sweet Shrimp taps into an ancient briny Permian seabed far beneath the Arizona water table. The company pumps this water into ponds where it raises its shrimp without antibiotics, preservatives, or other additives. The waste water is then used to irrigate salt-tolerant wheat fields and an olive grove.

Desert Sweet was able to supply our 12,000 annual pounds, dedicating three of their ponds to Shedd's order. The price was right, too. Our costs went up only a few cents – rather than several dollars – a pound. Our last hurdle was the sea otters themselves. But these finicky eaters loved the new shrimp.

SEAFOOD

The amount of food needed to feed our animal collection is enormous, and we make every effort to purchase the most nutritious, sustainable products available. The 100 pounds of farmed mussels we buy annually come from a sustainable fishery. So do our yearly 12,000 pounds of Alaska pollock—a fishery certified by the Marine Stewardship Council. The clams, squid and herring purchased for our marine mammals currently fall into our "good" Right Bite category, and we are looking for alternatives that would be among our "best choices" ranking. As information is available for the sustainability of the rest of our animals' food, we are committed to make improvements.

WASTE

When buying for more than 32,000 animals, we sometimes find ourselves with extra food. Our animal care staff members constantly seek creative ways to use this excess to save money and reduce waste.

Our marine mammals department shares overstocked feed with the fishes department. We are also currently looking for a partner who is interested in taking our waste fish as a resource for a new product, perhaps fish meal or fertilizer. We don't want our waste to go to waste.

The scraps from our herbivores' diets are also reclaimed and reused. The fishes department has a large worm bin where staffers compost the plant matter left over from the animals' meals. The worms munch their way through the greens, generating pounds of compost that is then used in our gardens and exhibits. As for the worms -- they also become part of our system, as snacks for the fishes and rays.

FUTURE PLANS

The animal care staffers at Shedd are always thinking of new ways to improve our environmental footprint. Our aquarists envision a day when they raise larger shrimp on site as well as other seafood that we currently purchase. And what about the waste generated by our fishes after feedings? Our team has designs on building an aquaponics system that will clean the water while growing plants, causing less reliance on filtration systems and water changes – and providing staff members with fresh herbs!

