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The History of Jelly Husbandry at the Monterey Bay Aquarium

Die Geschichte der Quallenhaltung im Monterey Bay Aquarium



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Abstract

The Monterey Bay Aquarium (MBA) has been exhibiting jellyfish since 1985. Mr. David Powell, MBA's first Curator, learned culturing techniques for moon jellies (*Aurelia aurita*) from Mr. Yoshitaka Abe, who was then Curator at Ueno Zoo. Abe-san sent Mr. Powell and his staff their first *Aurelia aurita* polyps, and they used his tank design to build MBA's first moon jelly exhibit. Since those early days, a number of passionate aquarists have sought to find new gelatinous species to culture and new ways to interpret them to the public. After the first moon jelly exhibit, MBA next exhibited jellyfish in the temporary exhibitions Living Treasures of the Pacific (1989) and Planet of the Jellies (1992), testing out not only the ability to maintain a jellyfish gallery long term but also the public's interest in these ill-known creatures. In 1996, MBA committed to a permanent jellyfish gallery. The construction of the Outer Bay Wing included the Drifters Gallery, which exhibits jellyfish species local to Monterey Bay and the California coast. In the subsequent years, MBA continued to work with tropical and other exotic species in temporary exhibitions, including Jellies: Living Art and The Jellies Experience. These exhibitions gave the team opportunities to experiment with new ways to culture and exhibit unique species. In addition, MBA has been able to contribute to science by describing the life cycles of several jellyfish species and discovering new jellyfish species in the Monterey Submarine Canyon. MBA's work has not been conducted in a vacuum, however, as we have collaborated with institutions in the United States, Japan, and around the world to expand our collective knowledge of jellyfish husbandry.

Keywords: Jellyfish; Husbandry; Monterey Bay Aquarium; Kreisel

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Introduction

The Monterey Bay Aquarium (MBA) is located on the west coast of the United States in Monterey, CA. Monterey lies on a peninsula at the southern end of Monterey Bay, which is part of the larger Monterey Bay National Marine Sanctuary and features a 2 mile (3.2 km) deep submarine canyon just offshore. The Monterey Bay Aquarium is a 2.3 million gallon (8.7 million liter) facility that draws natural seawater from the bay to supply its exhibits and holding tanks. The exhibits feature the diverse habitats and marine life of Monterey Bay as well as fish and invertebrates from around the world.

The Monterey Bay Aquarium's jellyfish exhibits have been an important part of its history, and jellyfish are always among the most popular animals with visitors. The permanent jellyfish exhibition, the Drifters Gallery, exhibits 9 species local to the temperate waters of Monterey Bay and the California coast. Most of the jellyfish on exhibit are cultured in the laboratory, but aquarists are also able to take advantage of the proximity to Monterey Bay and collect jellies when blooms occur. This especially allows MBA to display animals that are extremely delicate or difficult to culture, such as comb jellies. The temporary exhibition, The Jellies Experience, which opened in 2012 and closes in September of 2015, explores how jellies stimulate our senses. The exhibits feature jellies with a wide variety of shapes, colors, and movement styles from tropical and temperate waters all over the world. MBA is currently exhibiting 21 jellyfish species between the 2 galleries and has over 40 species in culture behind the scenes.

The Beginning

The Monterey Bay Aquarium's jelly program began soon after the aquarium opened in 1984. Mr. David Powell, the original Curator and Director of Husbandry at MBA, continued to seek ways to diversify the exhibits and introduce the public to new and interesting animals. The husbandry team wanted to exhibit jellyfish, as they are quite abundant and diverse in Monterey Bay at times. However, the presence of jellies in the bay could be sporadic and unpredictable, so it was necessary to learn to culture them in order to ensure well-stocked exhibits.

Mr. Powell was familiar with the research of Mr. Yoshitaka Abe, who was then Curator at the Ueno Zoo, regarding the culture and exhibit of the moon jelly, *Aurelia aurita*. One of the aquarists, Ms. Freya Sommer, was very motivated to learn these new culture techniques and bring Mr. Powell's vision to life. Abe-san gave Mr. Powell and Ms. Sommer *A. aurita* polyps and advice on how to keep them and grow up the medusae. Ms. Sommer was successful at growing up the moon jellies, and a new exhibit was built using Abe-san's designs. The exhibit had rounded edges and a curved back with many small holes. This allowed the seawater to drain gently and diffusely through the holes, preventing the jellyfish from getting stuck to the outflow (Powell, 2001).

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