

# FISH

## ALL AROUND US

by Phyllis McIntosh







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A colorful home aquarium



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Goldfish bowl

In the hit animated film *Finding Nemo*, a clownfish (Nemo), through a series of misadventures, ends up in a fish tank in a dentist's waiting room. The film's writer and director, Andrew Stanton, admits that the story was inspired in part by his own childhood memories of looking forward to a visit to the dentist so he could watch the fish in the aquarium in the dentist's office.

Fish tanks are popular fixtures in dental and medical facilities throughout the United States—for good reason. Research shows that gazing at fish swimming in an aquarium has a calming influence on people facing anxiety-producing situations and coping with certain medical conditions.

The pleasure derived from caring for and watching fish leads millions of Americans to purchase aquariums for their homes. According to a recent National Pet Owners Survey, over 14 million U.S. households own fish, making fish the third most popular pets in the country, after cats and dogs.

Because aquariums are universally appealing, they are part of the decor in all sorts of public places, from restaurants to baseball stadiums. Huge state-

of-the-art aquarium complexes that create ocean environments and exhibit spectacular aquatic species rank among the most popular tourist destinations in a number of U.S. cities.

## Keeping Fish as a Hobby

Keeping fish to look at rather than eat is nothing new. The Chinese were breeding carp for decorative purposes well over a thousand years ago, although ornamental goldfish did not appear in Europe until the 17th century. The first public aquarium opened in 1853 at Regent's Park in London. Within a few years, American showman P.T. Barnum opened the first display aquarium in the United States at the American Museum in New York City.

Home aquariums became popular in the mid-20th century as commercial fish-breeding operations and air transport made it easy and affordable for many Americans to purchase tropical fish. At the same time, more durable tanks and improved filtration systems enabled hobbyists to sustain fish for longer periods.

Today, home aquariums range from a child's goldfish bowl to elaborate tanks holding several hundred gallons of water and dozens of exotic fish. Most

beginners start with a five- to ten-gallon freshwater tank and fish such as tetras, mollies, and gouramis, which can be purchased inexpensively at large department stores and pet stores.

More adventurous hobbyists opt for saltwater tanks, which take more work and equipment to maintain a stable environment. Saltwater fish are more costly and more susceptible to changes in temperature and water quality than freshwater species. On the positive side, they are spectacularly colorful and turn a tank into a dramatic focal point. Popular choices for aquarium owners are lionfish, tangs, marine angelfish, and—especially since the release of *Finding Nemo*—clownfish.

Other trends in fishkeeping include:

- **Backyard fish ponds.** An aquarium is not the only choice for fish enthusiasts. Some people incorporate a pond—usually stocked with goldfish or colorful koi—into their outdoor landscape. A large pond that includes plants as well as fish becomes a self-sustaining ecosystem. If the pond is three feet deep or more, fish can survive the winter, even in cold climates.
- **Pampered pet fish.** Like other pet parents, fish owners are increasingly willing to spend



Lionfish



Yellow tang



Powder blue tang



Marine angelfish



Clownfish

considerable sums on their pets' well-being. Reportedly, there are now more than 2,000 veterinary fish specialists who perform surgery, x-rays, ultrasounds, and CAT scans on goldfish, koi, and other pet species.

In a recent survey, 31 percent of fish owners admitted to buying gifts for their pets. Saltwater enthusiasts are especially indulgent, spending an average of 27 dollars per gift. One in ten saltwater-fish owners buy their fish a birthday gift. And just what is an appropriate gift for a fish? One option is the R2 Fish School kit, which includes a feeding wand and all the other paraphernalia an owner needs to train fish to do “amazing tricks” such as limbo, fetch, and slalom.

- **Aquariums as home decor.** Modern aquariums have evolved far beyond the boring rectangular tank. Today's models come in almost any shape imaginable—round, hexagonal, bow front, concave, free-form, and flat to hang on the wall, to name just a few.

Aquariums also have become key elements in home and office decor. They are built into walls and incorporated into tables, lamps, desks, the ends of sofas, and even bathtubs and bathroom sinks. Almost any object, it seems, can be turned into a fish tank. Aquariums have been installed in telephone booths, old wooden TV sets, and the shells of Apple Macintosh computers. The latter are called Macquariums.

- **Professional aquarium maintenance.** Owners who enjoy having an attractive aquarium but dislike the dirty work of maintaining one can hire professional companies that regularly send technicians to change the water, clean the tank, and monitor water quality. As one expert noted, maintaining an aquarium ecosystem “is really no different than having a beautiful lawn and garden. You can do the work yourself or pay someone else to do it. Either way, the beauty is there for all to enjoy.”

## Fish (in the Tank) Are Good for You

Fishkeeping has benefits that make it an attractive hobby for millions of Americans. Aquariums can bring a bit of nature, a living ecosystem, into any home, including apartments that do not allow other pets. Like tending a furry animal, helping to maintain a fish tank can teach a child the responsibility of caring for other living creatures.

As pets, fish have distinct advantages: They are quiet, they do not chew or scratch the furniture, and with a few slow-release feeders in their tank, they can safely be left alone for a week or two.

But it is likely the documented benefit to human health that has helped make aquariums so popular in the United States. Like petting a dog or cat, gazing at an aquarium at the end of a long, hard day can reduce stress and lower blood pressure. Likewise, research shows that people waiting to see a doctor or undergo medical procedures were less anxious after watching fish swimming in a tank. In one study, for example, patients who viewed fish before seeing a dentist were more relaxed and required less pain medication than patients who did not encounter fish.

Watching fish also has a significant calming effect on children with attention deficit/hyperactivity disorder, as well as on elderly people with Alzheimer's disease. A Purdue University study of Alzheimer's patients in three health care facilities found that those who were exposed to aquariums had increased appetite and exhibited less aggressive behavior.

In addition to their popularity in medical facilities, aquariums are now found in restaurants, libraries, shopping malls, department stores, grocery stores, and even some churches.

## A Strange Home for Fish

Probably the strangest, and most controversial, location for an aquarium in the United States is behind home plate at Miami's professional baseball stadium. Perhaps the marine theme is understandable because the team is known as the Miami Marlins, named for a popular Florida sport fish. The giant fish tanks are just one of the quirky features at the ballpark, which also boasts a swimming pool, a nightclub, and a garish outfield structure that comes alive with lights and "jumping" fish when the Marlins hit a home run.



A girl at a clinic watches fish in an aquarium as she waits to see the doctor.



Monterey Bay Aquarium juts out over Monterey Bay at the edge of the Pacific Ocean.

The two 22-foot-long 450-gallon aquariums house one hundred or so saltwater fish, including angelfish, triggerfish, tangs, surgeonfish, and wrasses, that swim among artificial corals. Before the fish arrived, Marlins first baseman Gaby Sanchez hurled balls at the tanks to test their sturdy acrylic panels, designed to protect the fish from foul balls, wild pitches, and thrown bats.

The tanks are suspended on a flexible neoprene material intended to act as a shock absorber. Nevertheless, animal rights activists, who argue that a baseball stadium is no place for an aquarium, question whether the fish are sufficiently protected from the noise and vibration created by thousands of shouting, sometimes jumping, fans.

## Aquarium Attractions

For the ultimate fish-watching experience, Americans can visit dozens of large aquarium complexes across the country. Designed to re-create coral reefs and other ocean features, these aquariums exhibit

large and exotic sea creatures in settings that make visitors feel as though they are part of the marine environment.

The best of these public aquariums include:

- **Shedd Aquarium.** A lakefront fixture in downtown Chicago since 1930, the Shedd Aquarium houses 1,500 species ranging from alligator snapping turtles to zebra sharks. Its elaborate aquatic habitats include Caribbean Reef, a 90,000-gallon circular habitat featuring rays, sea turtles, and moray eels; Wild Reef, with more than 20 sharks; and Amazon Rising, a re-creation of an Amazon flood plain, complete with thatched huts, birds, snakes, lizards, and spiders. The highlight of any visit is the aquatic show starring dolphins, beluga whales, and sea lions.
- **Monterey Bay Aquarium.** Located on the site of a former sardine cannery along historic Cannery Row in Monterey, California, this

aquarium exhibits an array of marine creatures, including seahorses, penguins, sea turtles, and sea otters. Special features include The Jellies Experience, a colorful display of 16 unusual species of jellyfish, and a 28-foot-high kelp forest (like those along the California coast) that houses leopard sharks, wolf-eels, and a host of other fish.

- **National Aquarium.** Highlights of this complex in Baltimore, Maryland, include the 225,000-gallon Shark Alley that encircles visitors and the Dolphin Discovery exhibit, where guests can watch training, feeding, and play activities of the marine mammals. Special exhibits on Australia, a tropical rain forest, and an Amazon River forest feature a variety of animals, such as frogs, snakes, crocodiles, birds, sloths, and monkeys, as well as fish.

- **Georgia Aquarium.** One of the newest aquarium complexes in the United States, Georgia Aquarium, located in downtown Atlanta, also ranks among the world's largest. Its 10 million gallons of water house 120,000 animals of 500 different species, including whale sharks, beluga whales, and manta rays. Visitors can walk through a 100-foot-long tunnel with water around them on three sides. Other features include touch pools, crawl tunnels for children, and pop-up windows where kids can get a close-up look at penguins and piranhas.

The major aquariums typically offer additional experiences, such as Halloween and Christmas programs, behind-the-scenes tours, children's classes and camps, and sleepovers for families and other groups. Some also use their exhibits to provide services to groups in the community. Mystic Aquarium in Connecticut, for example, offers two



Colorful fish swim among coral in one of the many tanks at the Monterey Bay Aquarium.



Crown jellyfish attract attention in The Jellies Experience exhibit at the Monterey Bay Aquarium.

programs to help children and teens with learning and developmental disorders improve their social

skills. Teens encounter marine mammals with a variety of social behaviors and meet with aquarium staff to learn about preparing to get a job. Younger children with autism, attention deficit disorder, and other intellectual disabilities learn to focus and interact with their peers through touch-and-learn sessions with the aquarium's invertebrates.

Via a video camera in its Passages of the Deep exhibit, Oregon Coast Aquarium in Newport, Oregon, feeds live images to the emergency room waiting area at a nearby hospital. The underwater scenes help calm people in stressful situations while sparing the hospital the costs of installing and maintaining an actual aquarium.

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Whether in a home tank, in a state-of-the-art aquarium complex, or even on a video screen, fish—as they go about their business of simply being fish—have a remarkable ability to soothe the human spirit.



Visitors to the Georgia Aquarium view some of the 500 species of fish there.

## Fish Talk

**acclimation** – the process of slowly introducing a fish to a new tank or new water conditions

**algae eater** – a fish that feeds on algae and helps keep an aquarium clean

**aquascaping** – the process of decorating or arranging an aquarium to suit the needs of the fish and to be aesthetically pleasing

**brine shrimp** – a quarter-inch-long species of shrimp used as fish food

**bubble nest** – a fish nest constructed of tiny air bubbles; produced by the male to protect the eggs and fry (baby fish)

**detritus** – organic waste matter that collects on the bottom of fish tanks

**ich** – a common parasitic disease in aquariums that causes white specks on the fish

**substrate** – material such as sand or gravel used to cover the bottom of a fish tank

## Websites of Interest

### Aquatic Community

[www.aquaticcommunity.com](http://www.aquaticcommunity.com)

This website contains detailed information about dozens of species of freshwater and saltwater tropical fish, listed by both their common and scientific names. An extensive list of articles covers everything from algae control in the home aquarium to vegetables for your fish. A forum for fishkeepers is conveniently divided according to skill level and interest in specific kinds of fish.

### Fish Lore

[www.fishlore.com](http://www.fishlore.com)

Billing itself as a website designed for hobbyists, this site provides step-by-step guides to setting up freshwater and saltwater tanks, profiles and photos of different species of fish, and a detailed rundown on fish diseases. Especially fun is a section of fish-related computer games, complete with reviews by people who have played them.

### Rate My Fish Tank

[www.ratemyfishtank.com](http://www.ratemyfishtank.com)

The attractions here are color photos of beautiful home aquariums. Hobbyists upload pictures of their freshwater and saltwater tanks, which are then rated by visitors to the site. Also useful are interactive tools to help people determine which fish are compatible with one another and what equipment is required for tanks of various sizes. There is also a guide to help you find a public aquarium in your state.



Algae eater



The marine park and sanctuary of Hanauma Bay, Oahu, Hawaii, is a favorite locale for snorkelers.

# SWIMMING WITH THE FISH

As thousands of diving and snorkeling enthusiasts can attest, no aquarium exhibit can compare with the thrill of joining fish in their own environment. Not surprisingly, the best scuba diving and snorkeling spots in the United States are in the tropical waters of Florida and Hawaii, although waters off the California coast also offer excellent opportunities to observe marine environments up close.

Top locations include:

- **The Florida Keys.** This 120-mile-long chain of islands off the southern tip of Florida offers spectacular settings for observing hundreds of species of tropical fish. Shallow waters and a stunning array of corals make the country's first undersea preserve, John Pennekamp Coral Reef State Park at Key Largo, a top choice for snorkelers. The Florida Keys National Marine Sanctuary contains a trail of nine historic shipwreck sites, from Key Largo to Key West, that provides excellent habitat for marine life. So, too, do three artificial reefs off Hutchinson Island. Consisting of a sunken ship, a pile of old tires, and a cluster of plumbing fixtures, these man-made marine habitats attract

numerous fish and provide an excellent diving spot for enthusiasts at all levels.

- **Biscayne National Park, Florida.** Located within sight of downtown Miami, this park is famous for its Elkhorn coral formations, more than 500 species of fish, and an underwater interpretive trail for snorkelers.
- **Hanauma Bay, Oahu, Hawaii.** A collapsed volcanic crater has created a protected cove, now a marine park and sanctuary, just off a beach 10 miles from downtown Honolulu. The shallow clear waters, home to 400 species of fish, are a paradise for snorkelers, who especially enjoy the abundance of parrotfish and green sea turtles.
- **Southern California coast.** La Jolla Cove in San Diego, Laguna Beach near Santa Ana, and Catalina Island 22 miles from Los Angeles are prime diving and snorkeling spots. The waters are cold enough that divers need wet suits, but all three locations provide excellent views of underwater forests of kelp (a giant seaweed) and the numerous species of fish they harbor.