

# Care of Fish

Keeping tropical fish in a home aquarium is a popular hobby in the United States.

A tank full of tropical fish is a window through which to observe nature in miniature. Watching a tank of fish is relaxing. Studies show it even lowers your blood pressure.

There are hundreds of species of fish which can be kept in the home aquarium covering a broad range of colors, sizes and behaviors. If you wish to keep fish as pets you need some knowledge of their requirements and behavior to increase your chances of keeping them happy and healthy.

## EQUIPMENT FOR THE AQUARIUM

In purchasing an aquarium remember that it will be your fish's future home, so buy an aquarium that will be adequate for the type of fish you desire to keep and fit the space you have available. In general, buy the largest tank your pocketbook and space will allow. The larger the volume of the tank the less it will be affected by external temperature changes in water quality.

Filters are used to keep the aquarium water clear and safe for the fish. A good filter is probably the most important piece of equipment for your tank. Filtration should be both mechanical and biological; it should remove particulate material from the water and neutralize toxins produced by the fish.

The best filter for the beginning aquarist is an undergravel filter. This filter is a perforated plate which fits the bottom of the aquarium and circulates water through the gravel in the tank. The gravel serves as a mechanical filter. The bacteria that live in the gravel consume and neutralize the waste material produced by the fish. Buy an undergravel filter with large lift tubes as this will allow more water circulation. External power filters can be used to supplement the undergravel filter if you have a very large tank or large numbers of fish.

The undergravel filter is usually powered by air supplied by an air pump. Most pumps consist of a vibrating diaphragm powered by a small motor. Pumps vary considerably in air production and noise level so discuss quality with your fish dealer.

Most tropical fish need a water temperature of 70-75 degrees Fahrenheit, which is higher than normal room temperature. An aquarium heater/thermostat is used to provide constant water temperature regulation. It is best to purchase a good quality heater with about 5 watts of rating for each gallon of aquarium water, i.e. a 100 watt heater for a 20 gallon tank. An aquarium thermometer should be purchased also. Liquid crystal thermometers that attach to the front of the tank are easy to read. Lighting is best supplied by a fluorescent light and hood. Fluorescent light is cooler, less expensive to operate and shows off your fish's natural color better than an incandescent light. The hood keeps your fish from jumping out, reduces evaporation of water and temperature fluctuation. It also helps keep things from getting into the tank, like dust, children's fingers, and cat's paws.

Purchase gravel and decorations from an aquarium shop to be sure they are safe for your fish. The gravel should be 1-2 inches deep over the undergravel filter and the decorations should fit your taste and decor.

Decorations may include plants which make the tank seem more natural to the fish. You may use either living plants or plastic simulations of real plants. Living plants require strong lighting and careful control of water quality, so start with hardy specimens recommended by your dealer. Wash living plants in tepid running water and remove any snails or other pests from them before placing them in the tank.

The completed aquarium is very heavy and is best placed on a stand designed to support an aquarium's weight and keep stress off the aquarium glass. Many styles are available.

## SETTING UP THE AQUARIUM

Now that you have your equipment, you must

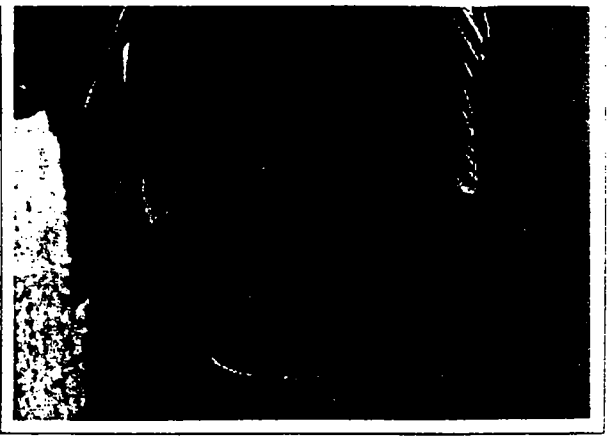


set up your fish's future home. Before filling the aquarium, wash it and check it for leaks. The tank may be cleaned in a bath tub. Place a rubber mat or towel in the tub to prevent chipping or scratching the tank. *Do not use any soaps or cleaning solutions as they may be toxic even in small amounts.* Nylon scrubbers and razor blades work well to clean the tank and remove labels and decals. Check the aquarium for leaks prior to placing it in its permanent location.

This is best done by placing it on a firm surface, outside if possible, and filling it with water. If a leak is found, return the tank to your dealer. Tanks can be resealed with a silicon cement, but consult your dealer for products and techniques.

Now rinse off any aquarium decorations and rinse the aquarium gravel thoroughly to clean off fine particulates which may cloud your tank. This can be done by putting the gravel in a bucket, and washing with a garden hose until the water runs clear. Again, be sure there is no residue of soap or cleaning solutions in the bucket you use.

If you have purchased a background for the tank, attach it before placing the aquarium in its permanent location. Choose a location away from direct sunlight, since excess light can pro-



duce an overabundance of algae growth. Do not place the tank over a heat source, which can cause the temperature to fluctuate. Since the tank will have a variety of electrical equipment it is best if it is near an electrical outlet.

The completed tank with water, gravel and decorations is extremely heavy and impossible to move, so be positive in your choice of location and confident the stand or table it is placed on is strong enough to support the aquarium. Each gallon of water weighs more than eight pounds.

Assemble the undergravel filter and place it in the tank. Next, hook up air lines, air diffusers and gang valves and connect them to your air pump. Add the washed aquarium gravel to the tank, making the gravel deepest in the back of the tank and sloping it towards the front. You may use rocks to form terraces and slopes but be sure they are firmly seated in the gravel so they won't fall against the glass.

Place a saucer or newspaper on the gravel and gently pour water into the tank. The saucer prevents the water from disturbing the gravel. Fill the tank three quarters full, then place other decorations and artificial plants in the tank. If you use live plants, wait two days for

temperature and water conditions to stabilize before planting them. Once satisfied with your decorations, finish filling the tank with water.

Attach the aquarium heater to the back of the tank, making sure it will not interfere with the aquarium hood. Wait a few minutes for the thermostat to adjust to tank temperature, then plug the heater into the outlet. By watching the indicator light on the heater and observing the tank thermometer you can adjust the thermostat to maintain the desired temperature range. Allow several days for the tank conditions to stabilize before adding any live fish to the aquarium. Aquarium dealers are willing to check water samples from your tank to determine whether the water quality is compatible with the fish you wish to purchase.

### SELECTING FISH FOR THE AQUARIUM

There are two basic qualities to remember when selecting fish for your aquarium: size and temperament.

Be sure you do not make the mistake of selecting fish too large for the size of your aquarium. Fish have little else to do but swim about and they will appear more natural when sufficient area for unrestricted movement is provided.

Most beginning aquarists like to see several varieties of fish in the aquarium, which is commonly known as a community tank. Since fish may be similar in size at a young age but may vary greatly as adults, it is important to be able to determine their adult size when planning a community type aquarium.

Fish can be divided into three general temperament categories. Docile varieties get along with other fish and are good for a community aquarium. A few varieties included in this category are the Zebra Danio, Neon Tetra, Corydoras (a group of small catfish), Mollys, Guppies and Swordtails.

The second category includes reasonably peaceful varieties. When kept with fish of equal size they do not appear to be overly aggressive. A few varieties in this category are the Rosy Barb, Giant Gourami and Angelfish.

One third of the more aggressive species of fish must be kept singly or in pairs. Jewel Fish, Piranhas, Bettas (male) and Jack Dempsey are typical varieties.

One sick fish can infect all the inhabitants of your aquarium. It is best to place newly acquired fish in a separate isolation tank for a few days of observation before placing them with your other fish. If you do not have an isolation tank the following information will be helpful in making your selection. Select each fish individually. It should swim surely (not erratically) with fins held alert, and it should not have spots or signs of fungus or bacteria on its body. If the tail is not in good condition, if there seems to be a kink in its body, or if it behaves differently from its tank mates, you'd best forget about choosing it.

When you have made your selection the salesman will place the fish and a small amount of water in a plastic bag and inflate the bag with air. Take your purchases directly home and float the bag in the aquarium for 15-20 minutes to allow the temperatures to equalize. Now open the bag and add tank water to the bag to double the volume of water. Wait another few minutes and gently net the fish out of the bag and place them in the tank. Disease often occurs in new aquariums due to lack of the healthy bacteria required to provide good water quality. These bacteria take several weeks to multiply to sufficient numbers, so start with a few fish, then build up your tank population over a period of weeks.

### FEEDING

All fish do not require the same food but commercially prepared food is available that should basically satisfy each appetite and dietary need. There are dry fish foods to increase growth, breeding, color and a number of other needs. Most dry foods are available in flake form with a few specific types in floating pellet form for the larger varieties of fish. To accommodate young or smaller fish, both flake and pellet varieties can be broken up by rubbing them between your fingers.

With the more recent freeze-dried varieties of fish food appearing on the market, you are now

able to give your pets a more natural diet. Some of the larger varieties of fish may require small fish for food.

Fresh foods include those that are frozen. The fresh frozen foods include brine shrimp, daphnia and beef heart. These should be defrosted before feeding and can cloud the water if not completely consumed by the fish.

Live foods are more expensive and may be difficult to obtain in some areas. They include brine shrimp, tubifex worms, daphnia and cyclops. Live foods are considered by hobbyists to be closest to the fish's natural diet but may contain disease or parasites and therefore should be placed in a fine nylon mesh net to be able to be seen feeding.

These fish with vegetarian tastes enjoy aquatic plants and algae which grow in their surroundings.

Since a variety of fish foods are available in dry, fresh and frozen forms it is best to vary the diet of your fish to keep their appetites healthy.

Many experts feed their fish twice a day, but some believe that once a day will suffice. However, all agree that overfeeding is one of the most harmful and common errors in caring for fish. Fish eat a relatively small amount for their total size. Establish a feeding time and try to stick to it. Offer your fish a small amount of food dropped into their tank. If they consume all the food in 2 to 3 minutes and continue to come to the surface looking for more, a small amount can be added. Catfish will eat some of the food that falls to the bottom of the tank but will not be able to consume large amounts of excess food. Food left over after five minutes should be immediately removed with a small net. You will soon be able to determine the correct amount.

#### GENERAL CARE

Only one of your pets should include their feeder and a quick observation to make sure all the fish are present and appear healthy. Make sure the filter and air diffusers are working and the temperature is remaining between 70° and 78° F.

On a weekly basis you should stir the gravel in the tank to break up any caking of the sand, then remove the debris by running a siphon hose close to the top of the gravel. Siphon off one third of the water each week, then replace it with tap water of equal temperature. Your dealer will inform you of any precautions necessary because of chemicals in your tap water.

Other weekly maintenance includes scraping algae off the inside of the glass walls, trimming excess growth or dead leaves from plants, and replacing charcoal and floss in supplemental filters.

#### THE SICK FISH

The leading cause of disease in fish is environmental stress. This stress can be from many things, such as harassment by larger more aggressive fish, overcrowding, pollution of the tank due to overfeeding or inadequate weekly maintenance or water quality, inappropriate or inconsistent water temperature, poor diet, or external toxins such as smoke or paint fumes.

Daily observation of your pets allows you to become aware of changes in your fish's behavior, sores developing on the fins or body, gasping at the surface, or loss of appetite that can indicate a developing problem. If you see any of these conditions developing you should examine your recent maintenance procedures. Have you missed any water changes? Have you recently added any new fish to the tank? Has the tank temperature varied, or your air pump become unplugged? If you cannot determine a reason for the behavior change, then examine each fish closely for clues to what disease conditions may be present.

The most common disease is "Ich" or White Spot Disease. Infected fish show speckling on the body and fins with white protozoal cysts. Ich can be treated with medications, but since it's often associated with stress you should do further research into your tank's condition. When disease occurs it's a good idea to take a small amount of water to your dealer for an analysis of pH, ammonia and nitrite levels to see if water quality may be the problem.

Velvet is another parasitic disease of fish which is indicated by a fine powdery discoloration of

the fish's body. Velvet affects some varieties of fish more readily than others and can be difficult to treat.

Fin rot appears as dissolving of the extremities of the fish's fins and will progress rapidly unless treated. Fin rot is often a symptom of severe water quality deterioration. Remove fish affected with fin rot to a separate container for treatment and have quality checks done on your water.

White cottony fungal growths are usually secondary to injury. Affected fish should be isolated for treatment.

If disease is a problem with your fish consult your veterinarian or fish dealer for recommendations on treatment and prevention of further disease.

American Humane is a national federation of concerned individuals and animal care and control agencies dedicated to the prevention of cruelty, neglect, abuse and exploitation of animals. Founded in 1877, it is a charitable, tax-exempt organization with headquarters in Denver, Colorado, and offices in Washington D.C. and Hollywood, California. There are over 3,000 agencies in the United States and Canada which are concerned with the prevention of cruelty to animals. Learn the name and address of your nearest humane agency. Then, when you need advice and help with any animal problem, you will know where to turn for help. If you do not find an agency near you, ask:



American Humane  
P.O. Box 1266  
Denver, CO 80201

**AMERICAN HUMANE**

© 1985, The American Humane Association

PA107