

**KEEP THAT  
BAIT  
ALIVE!**

Texas A&M University  
Sea Grant College Program

# KEEPING BAIT COMFORTABLE

*Saltwater fishing along the Texas coast can yield a variety of fish, especially if the bait used is moving. Coastal fishermen have found live bait, properly fished, consistently outproduces comparable dead bait. But keeping bait alive is a challenge, especially during warm summer months. What kind of artificial environments can bait live in comfortably? This pamphlet will describe different bait containers as well as the basic physical needs of bait and conditions that should be avoided.*

## SHRIMP, FISH NEED OXYGEN, COOL WATER

Shrimp and fish can only survive with a sufficient oxygen supply and a habitat within certain temperature ranges. As water temperature increases, the water holds less oxygen (Figure 1). In warm water, the metabolism of cold-blooded animals, such as shrimp and fish, tends to speed up, increasing oxygen consumption and toxic waste production. It's necessary, therefore, to keep the water cool — preferably around 70°F in the summer. At this temperature bait will not only use less oxygen, but the water will more easily absorb oxygen when aerated. Adding ice is the most convenient way to cool the water.

However, live animals caught or purchased should be gradually acclimated to the temperature in the bait container. An abrupt change will shock the animals. Bait can tolerate a change of about 5°F per half hour until the holding temperature, usually about 70°F, is reached. Likewise, bait should be taken from a cool bait container and placed in another, warmer container before being fished, to prepare it for the plunge into outside fishing waters. To do this, keep a 5-gallon bucket at a mid-range temperature handy where a few animals can be put before being fished.

One of the most frequent problems, related to temperature/oxygen requirements, is overcrowding. A half-gallon of bait, placed in a

container holding a gallon of water, won't survive very long. However, two solutions are possible: bait can be put in a floating bait bucket and then set in a larger pail or ice chest so the water cools; or, preferably in mid-summer, the bait can be put in a larger, cooled container and taken out a few animals at a time to be put in a floating bait box, as needed, for wade fishing. Floating bait buckets are ideal for spring and fall fishing when surface water temperatures are lower. In summer, it's usually better to keep the bait in a larger, insulated container with cooled water.

Salinity is also important for marine baits, but is not nearly as critical as temperature and oxygen. Most baits can easily withstand the slight decrease in salinity when ice is added to the salt water in the container.

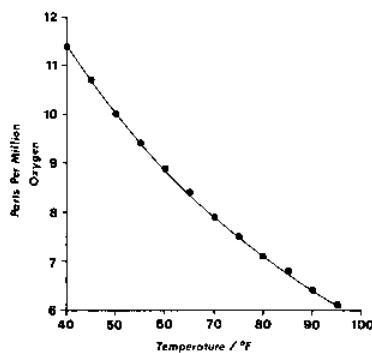


Figure 1. As temperature increases, water holds less oxygen.

## KEEP CRABS COOL, MOIST

Live fiddler crabs, small blue crabs and mole crabs are not only excellent bait for certain kinds of fishing, but are by far the easiest bait to keep alive. Only two precautions must be taken. First, keep the animals moist so their gills don't dry out. (It's not only unnecessary to submerge them in water, it's not recommended.) Second, keep them cool and out of the sun. Almost any bucket, bait well or box is an adequate container. In extremely hot weather cover the animals with a

damp cloth and keep them cool by sprinkling ice on top of the cloth.

## DON'T MIX BAIT, CHEMICALS

When petroleum products or other chemicals come into contact with bait, problems occur. The materials can directly poison the bait or suffocate the animals by clogging their gills and preventing gas exchange. Chemicals in the container can reduce the overall oxygen content of the water by chemically capturing dissolved oxygen and can also prevent evaporative cooling by "coating" the water's surface. Even if the bait survives in the container, once outside it may be avoided by certain predator fish that feed by smell and are offended by petroleum odors.

It's also important to put different types of bait in separate containers. Putting predator/prey bait together can encourage cannibalism or cause emotional stress for the prey species.

## HANDLING, HOOKING

In addition to storing bait carefully, anglers also need to handle and hook animals properly.

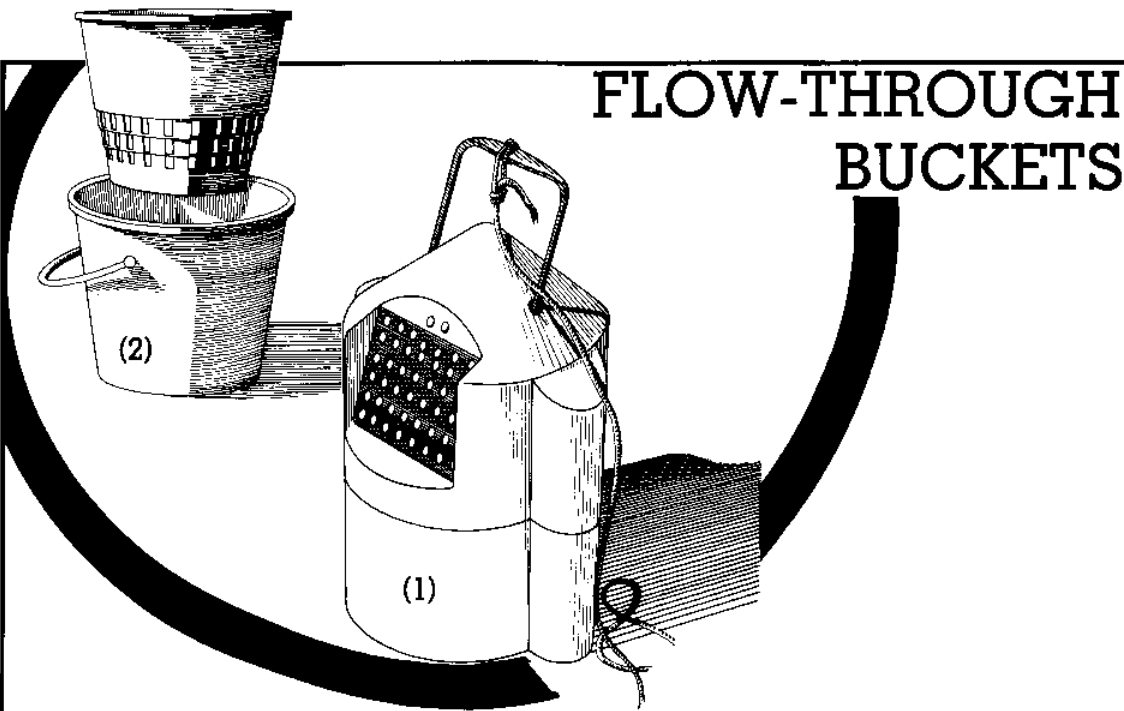
Common sense dictates users should avoid dropping, throwing or otherwise handling bait roughly. A small bait dip net is a worthwhile investment if the bait is being kept in a large container, such as an ice chest or live well. The net can save the angler frustration and save the bait from excess stress.

Careful hooking can serve two purposes. It can prevent "instant" or "inevitable" mortality and give the animal a degree of freedom of movement which helps increase its "bait action." Many fish are believed to be attracted to prey which appears injured or moves erratically; lively, properly-hooked bait will do both.

Shrimp, crab or fish that die before being used should be removed from the container as soon as possible. Carry a few plastic bags or sealable containers along and place fresh, dead bait in them. Keep the bait cool until it can be frozen. It can be used when live bait is scarce.

# BAIT SYSTEMS

LIVE BAIT SYSTEMS CAN BE PURCHASED OR CONSTRUCTED TO FIT YOUR FISHING NEEDS.

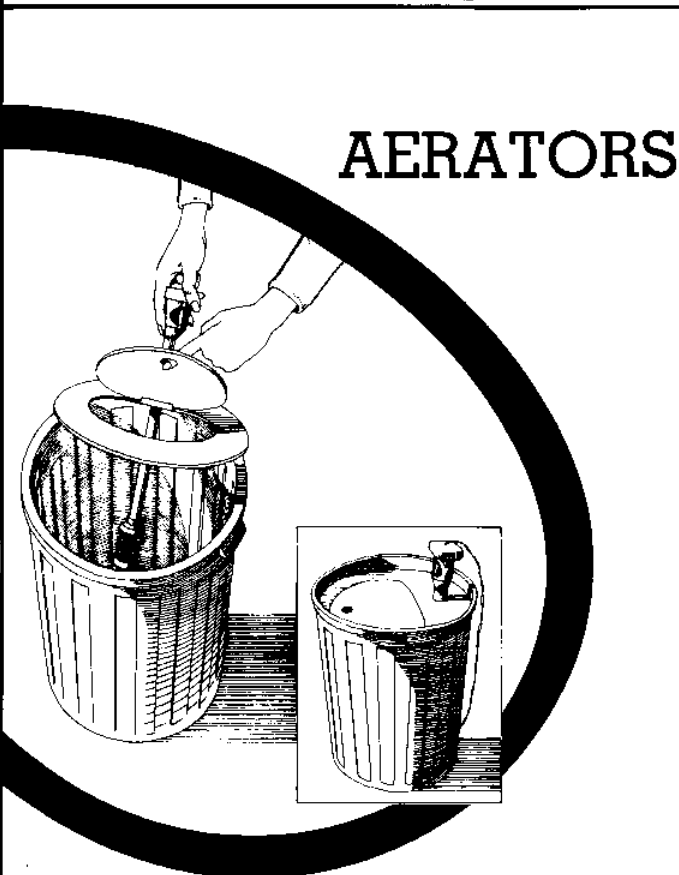


## FLOW-THROUGH BUCKETS

THESE CAN BE single-unit, floating buckets (1) with holes that allow water to flow through, or, two-piece, minnow bucket types (2) with perforated, floating, inner buckets and solid, water-holding outer buckets.

**Advantages:** Allows a constant exchange of water • Can be easily managed while wade fishing • Can be placed outside the boat, allowing more fishing room inside • Is simple, sturdy and inexpensive.

**Disadvantages:** The amount of bait that can be kept alive is limited by the small volume of the bucket, unless it's placed in a larger container • On hot days, particularly in shallow areas, surface waters may be too warm to maintain live bait. In some cases, as in a river, the water may be fresh at the surface and salty near the bottom • If the bucket is outside the boat, pulling it in and out of the water to get bait will stress the animals.

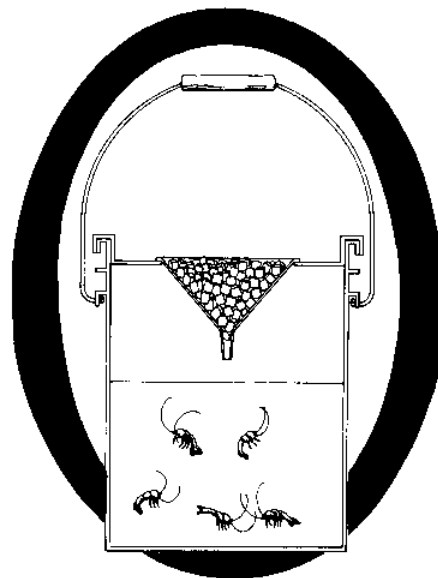


## AERATORS

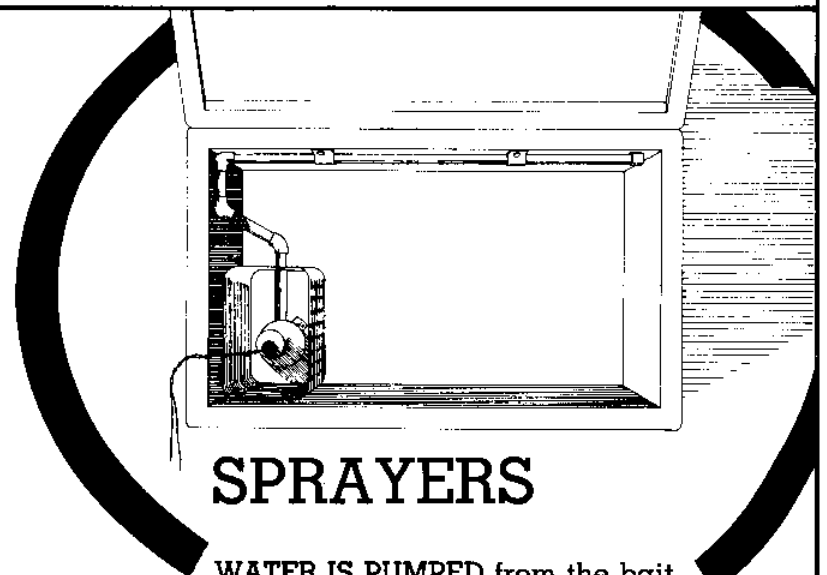
AN AIR PUMP mechanically forces air through a tube and bubbles it through the water in the bait bucket or other container.

**Advantages:** Forces oxygen back into the water and cools the water (through evaporation) to some degree • Can be used with a drip-ice arrangement. Ice is placed on the lid and allowed to melt into the bait container, gradually lowering the water temperature • Can be adapted to most bait containers • Is relatively inexpensive.

**Disadvantages:** Some aerators operate from dry cell batteries which must be replaced periodically (sometimes during the middle of a fishing trip). More expensive models connect directly to the boat battery • Smaller models are inadequate for use with larger containers. (Several small aerators may be needed to do the job.) • The metallic parts on many aerators are not resistant to saltwater corrosion. They require extra care and have a limited useful life.



*Drip-ice arrangement. Ice, placed in funnel, melts into the bait bucket, slowly lowering the water temperature.*

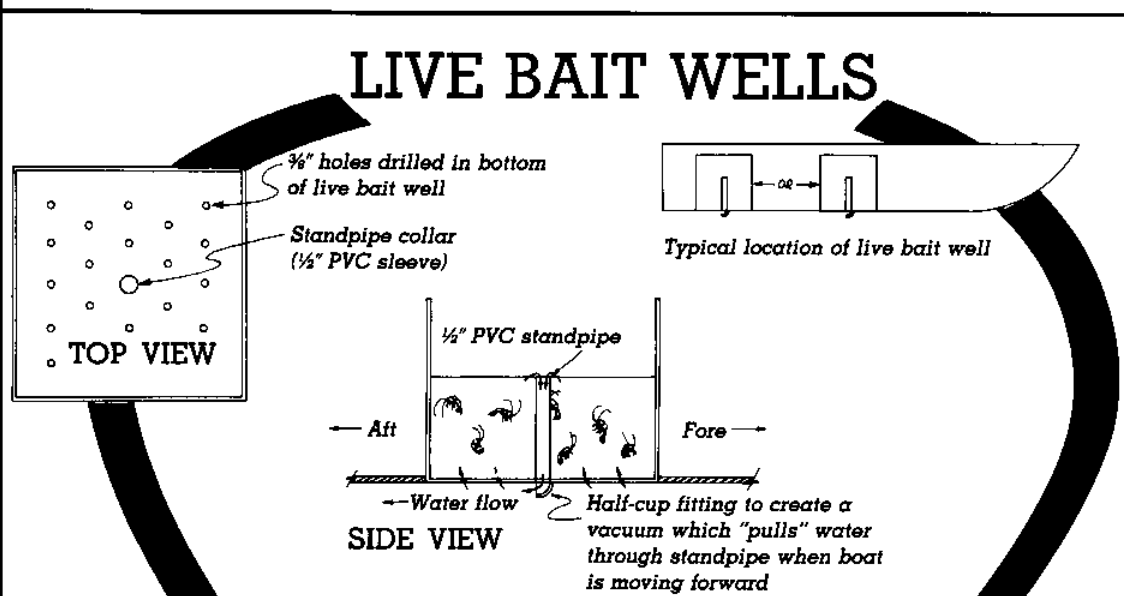


## SPRAYERS

WATER IS PUMPED from the bait container, circulated and sprayed back into the container.

**Advantages:** Spraying helps lower the water temperature by enhancing evaporative cooling. This decreases the animal's metabolism and increases the amount of oxygen that can be taken up by the water. Evaporative cooling only occurs if the container lid is kept open • Some units incorporate filters that help prevent buildup of biological wastes (helpful if the bait is to be kept for several days).

**Disadvantages:** A submerged pump, often used as part of these systems, generates heat, stressing the animals and lowering the amount of oxygen the water can absorb without additional cooling. Sprayer systems with external pumps are a better choice • Containers in sprayer systems are often bulky making them inconvenient in small fishing boats • The system includes many components which can represent a major initial investment as well as constant upkeep.



## LIVE BAIT WELLS

A BAIT BOX OR container built into a fishing boat and designed to allow an inflow/outflow exchange of surrounding waters.

**Advantages:** The constant exchange of water regulates temperature and prevents oxygen depletion (provided surface waters aren't too warm) • Can be used with an aerator or sprayer to increase cooling and oxygen • Can be temporarily closed or shut off from outside waters when moving into extremely fresh water or water of doubtful quality. (Be careful, some wells drain when the boat is underway unless properly plugged or closed off.)

**Disadvantages:** Generally adds to the cost of a fishing boat • The boat configuration may make it inconvenient to retrieve bait from the well • Lacks mobility.

## SALTWATER BAITS

*Live baits commonly used along the Texas coast*

BAIT	PRINCIPAL SPECIES CAUGHT
Shrimp	Speckled Trout Red Drum Flounder Pompano Sand Trout
Pin Perch	Cobia (ling) King Mackerel Flounder Snapper Grouper
Piggy Perch	Flounder Speckled Trout Gafftop
Mole Crab (sand flea)	Whiting Pompano
Fiddler Crab	Sheepshead
Blue Crab (claws removed)	Tarpon Red Drum Black Drum
Bluefish, Croaker	Cobia (ling) King Mackerel Tarpon
Mullet	Speckled Trout Red Drum
Mudfish (mud minnows)	Speckled Trout Flounder
Menhaden	Red Drum

**REMEMBER**, to increase the chances for survival and maximize the use of bait:

- Lower temperature stress and maintain adequate oxygen levels by cooling the water with ice or evaporative cooling;  
Mechanical means (aerators, spray pumps or hand swishing);  
Not overcrowding (use several bait containers if necessary);  
Removing dead animals immediately.
- When cooling the water or introducing new water to a container, do so slowly to acclimate the animals.
- Keep crabs moist and shaded.
- Don't unnecessarily jostle or jolt the bait.
- Don't mix fish, shrimp and crabs.
- Avoid exposing bait to petroleum substances such as gasoline, diesel, grease, reel lubricants, etc. Wash and wipe hands thoroughly before retrieving bait.
- Exercise care in handling and hooking.

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