

TEXAS PARKS AND WILDLIFE



Fish Texas

A Basic Guide for
the Beginning Angler



Your angler dollars help clean up rivers and streams, restore fish populations, and create public access to waterways. Every purchase of fishing tackle carries a tax that goes from the U.S. Fish and Wildlife Service to state fish and wildlife agencies for fisheries research, habitat improvement, aquatic resource education programs and fishing and boating access.

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WELCOME TO FISHING IN TEXAS!

Learning to fish can be as simple as tying your shoe. You may find yourself sitting on the bank of a river or pond using a cane pole and a can of worms, or using a fully-rigged boat with state-of-the-art equipment. Either way, with some basic knowledge and a minimum of skill, a beginning angler can embark on a lifetime of fun, relaxation, and camaraderie with other anglers.

Texas Parks and Wildlife Department offers two levels of angler training. A **Basic or Junior Angler** class teaches basic skills of assembling tackle, identifying fish, understanding fishing regulations and safety, and describing good fish habitat. An **Advanced or Master Angler** class teaches about both fresh and saltwater fishing, identifying several fish in both categories, and using different types of fishing equipment and techniques.

In the next few pages, we'll discuss several styles of fishing, types of rods, reels, knots, baits, lures, fresh and saltwater fish, and aquatic habitats. You'll find tips to improve your skills and what you can use to have a fun, exciting, and successful fishing trip. You'll also learn how you can help protect our state's precious aquatic resources.

And don't forget – fishing isn't just about catching fish! As experienced anglers will tell you, fishing is one of the best ways families and friends relax together as they enjoy being outdoors and learning new skills.



**From surf fishing along the coast
to casting in a Hill Country stream,
TEXAS HAS IT ALL!**

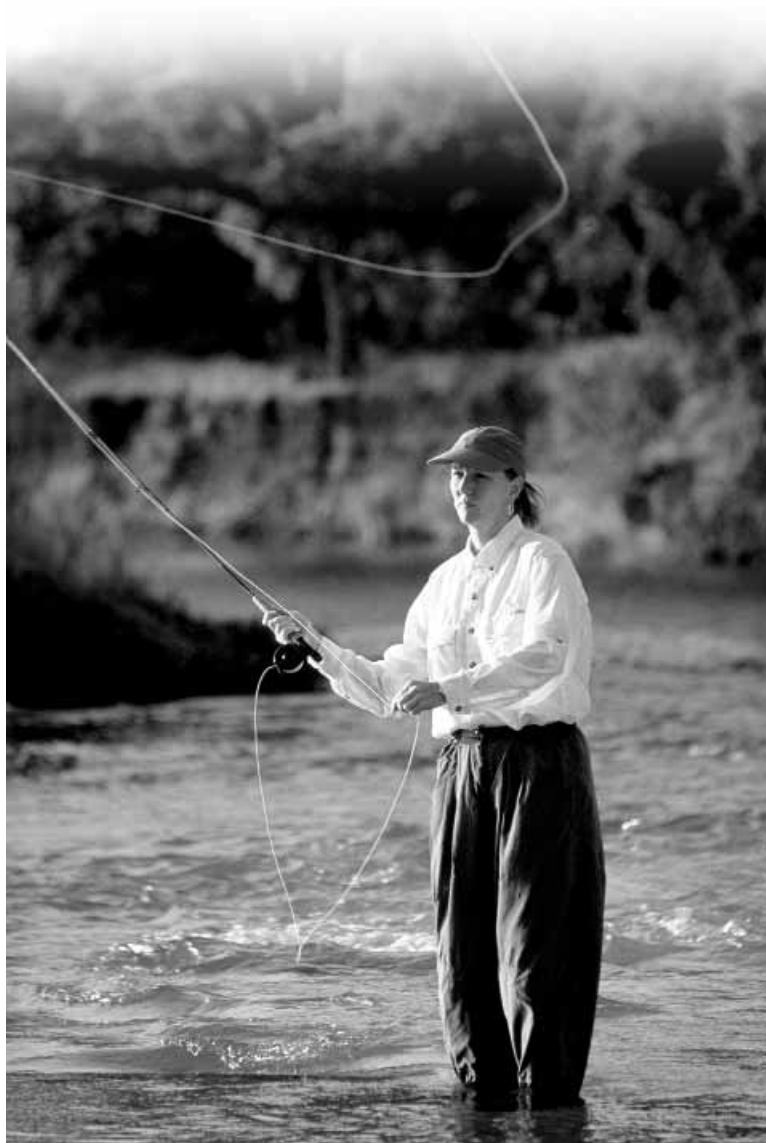


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Hooks

Hooks come in an assortment of sizes and styles and must be kept sharp to be effective. If you plan to release your catch, bend down the barb to make it easier to remove the hook. Choose the size of hook for the species of fish you are trying to catch and the type of bait you are using. Ask a seasoned angler or a bait and tackle dealer for suggestions.

Line

Fishing line comes in pound-test, (the line size or strength). The larger the line size the stronger it is. Six-pound test line is more flexible but is not as strong as 12-pound test line. Match your fishing line to your rod and reel capability and the species of fish you want to catch. Using heavier line or higher pound test than needed may reduce the number of hits or strikes you get because heavier line is more visible to fish.

Sinkers

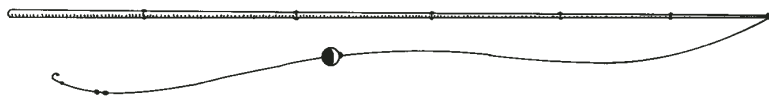
Sinkers are weights used to cast your bait, take bait to the bottom, hold bait in place, or keep your bobber upright. Sinkers are designed in several different shapes and sizes and are used for various types of fishing techniques. They range in size from BB split shot to five pounds, something short of a cannon ball. In many cases, you will place your sinker 4 to 8 inches above your hook to allow live bait to look natural to the fish.

Bobbers

Bobbers, floats and corks are used for three reasons. They keep your bait where the fish are biting, keep bait off the bottom, and they tell you when you're getting a bite or strike by bobbing up and down. Bobbers come in various shapes from round, to pencil or quill, to popping, and oblong. Most bobbers are spring-loaded and attach to your fishing line with a clip. Some are tied directly to your line or allow the line to slip entirely through for slip-cork fishing.

Rods come in several varieties, each with its own advantages. Choosing a rod is a personal choice. You can fish with a can and string or a fancy rod and reel. One of the simplest and easiest fishing rods is the cane pole.

Cane Poles



Cane poles are simply a pole or straight rod with a fishing line tied on to it. Use cane poles mainly for shoreline fishing since you're restricted to depth and distance you can reach. Cane poles can be made of bamboo, fiberglass, graphite or even a straight tree branch. Cane poles work, are easy to use and are inexpensive.

Spincasting and Baitcasting Rods



PISTOL GRIP OR STRAIGHT HANDLE
LINE GUIDES ON TOP

Casting rods have “spincast” or “baitcast” reels and line guides mounted on top. Spincasting rods are easy to handle and perfect for Junior Anglers. These rods have straight handles and small line guides. Spincast tackle is the most popular. Baitcasting rods have either a pistol-grip or straight handle. The baitcast rod with its more complex reel is more difficult to control and is better suited for an experienced angler.

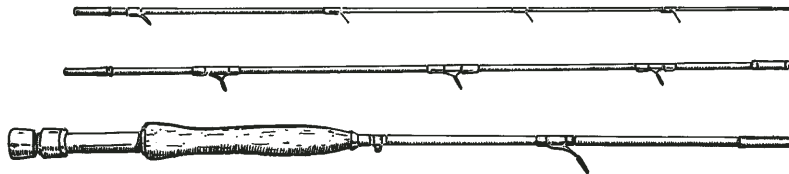
Spinning Rods



STRAIGHT HANDLE, LINE GUIDES ON BOTTOM

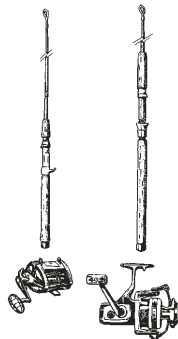
Spinning rods have straight handles with large line guides and reels mounted on the bottom. Spinning reels cast quickly and long distances, making this rod suitable for all types of freshwater and saltwater fishing.

Fly Rods



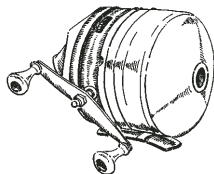
LONG FLEXIBLE ROD, LINE GUIDES ON BOTTOM

Fly rods are very long, flexible rods. In flyfishing, you cast the line, not the lure. You'll see anglers develop almost artistic casting techniques, adding to the appeal of the sport. Line guides and reel are mounted on bottom of the rod. Fly rods come in various weight classes and lengths, suited for different locations and fish.



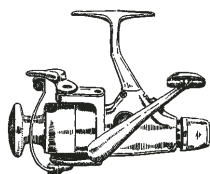
Saltwater Tackle

Going after saltwater fish involves a little change in the strength of the equipment. The rods, reels, hooks, line and lures or baits vary just as in freshwater fishing, but they can be stronger and heavier, built to withstand larger fish and natural or artificial structures.



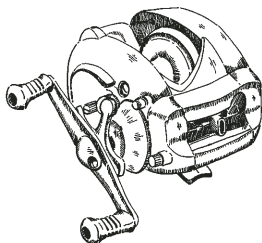
Spincast

This popular reel is ideal for beginners. Known as a “closed-faced reel,” it’s the easiest reel to use.



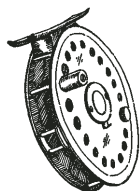
Spinning

This “open-face reel” mounts under the rod. Fishing line spools off quickly allowing longer casts. This reel is able to cast lighter baits and lures.



Baitcast

Baitcast tackle is suitable for all types of fish and fishing. The spool turns when you cast, however, and can entangle the line if not properly adjusted. You’ll need to practice with this model.



Fly reel

The fly reel is designed to allow fluid movement of the fishing line. This reel is mounted on the bottom of the rod.

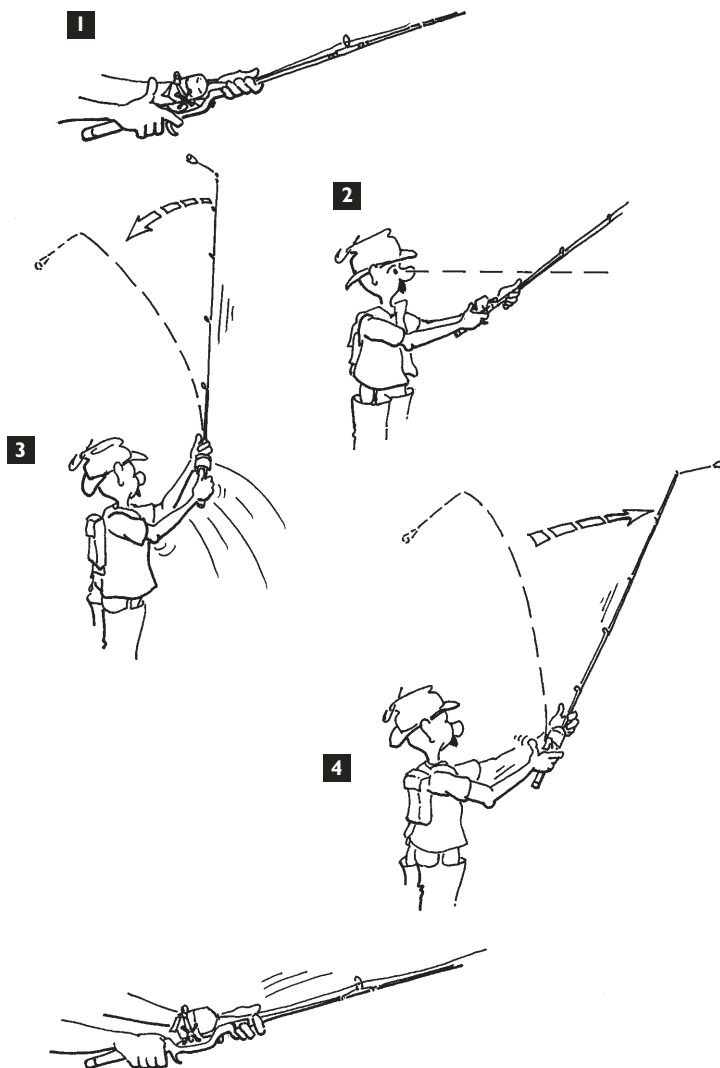
Spincasting

A spincasting reel has a button that you push with your thumb to release the line.

1. Grasp the rod's handle or pistol grip with one hand. Push the reel's thumb button down and hold it in.
2. Face the target area with your body turned to a slight angle, about a quarter turn. Aim the rod tip toward the target, about level with your eyes.
3. Swiftly and smoothly bend your arm at the elbow, raising your hand with the rod until it almost reaches eye level. When the rod is almost straight up and down, it will be bent back by the weight of the practice plug. As the rod bends, move your forearm forward with a slight wrist movement.
4. When the rod reaches eye level, release the thumb button.

If the plug landed close in front of you, you released the thumb button too late. If the plug went more or less straight up, you released the thumb button too soon.

SPINCASTING



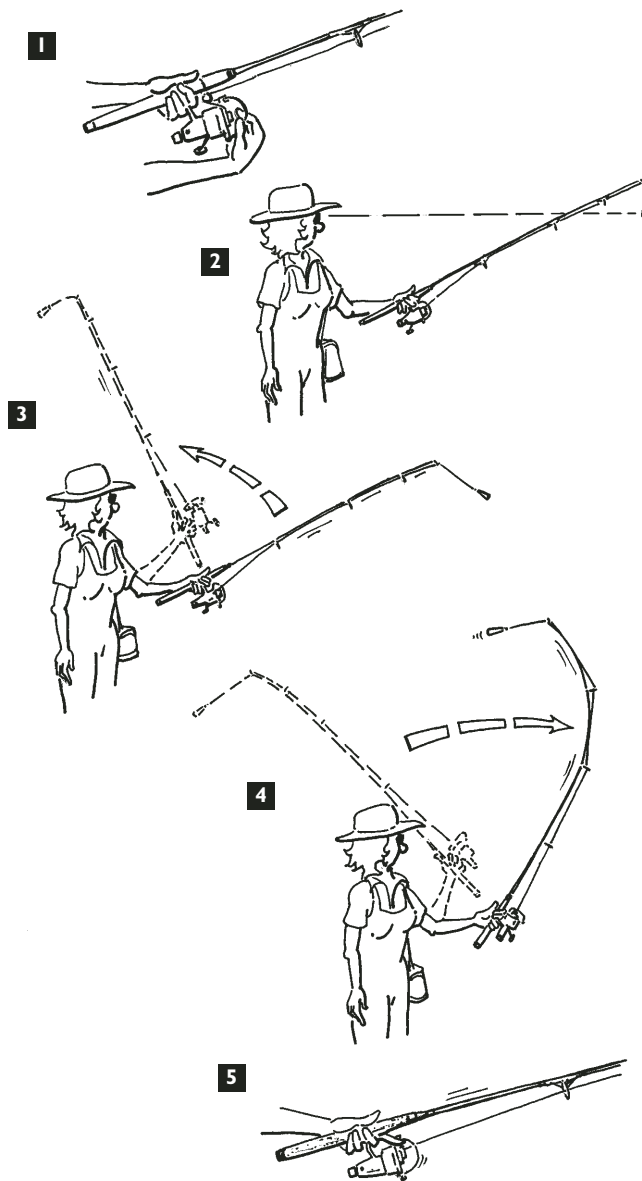
Spinning

With a spinning reel, you use your finger to release the line.

1. Grasp the rod's handle, placing the reel "stem" that attaches the reel to the rod between your middle fingers. Extend your forefinger to touch the spool cover. Open the reel's bail with your other hand.
2. Face the target area with your body turned at a slight angle, about a quarter turn. The arm holding the rod handle should be closest to the target. Aim the rod tip toward the target at about eye level.
3. Swiftly and smoothly, using just one motion, bend your casting arm at the elbow and raise your forearm so that your hand is almost at eye level.
4. When the rod is almost straight up and down, it will be bent by the weight of the practice plug. As the rod bends, move your forearm forward with a slight wrist movement.
5. When the rod reaches eye level, straighten your forefinger to release the line.

If the plug landed close in front of you, you straightened out your index finger too late. If the plug went more or less straight up or behind you, you straightened your index finger too soon.

SPINNING



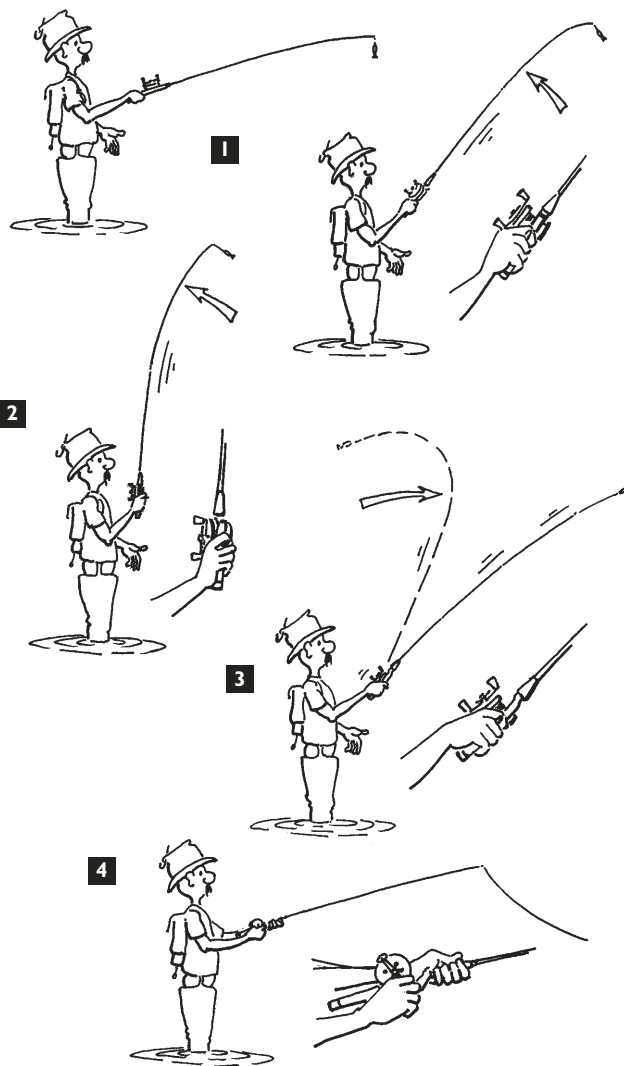
Baitcasting

The baitcasting reel has a button either on the top right-hand side of the reel or a “thumb” button behind and center of the spool that you push with your thumb to release the line.

1. Grasp the rod's pistol grip or handle with one hand. Push the reel's thumb button down and move your thumb on the spool. Release the line so that the casting plug falls to the ground. Adjust the spool tension knob (located on the side of the reel) so that the spool stops when the plug hits the ground. It may take a couple of times to accomplish this and adjust it correctly. This will reduce the reel from backlash when cast. Backlash occurs when momentum from the cast allows the spool to keep rotating causing line to ball up once the plug hits the water or ground.
2. Face the target area with body turned at a slight angle, about a quarter turn. Aim the rod tip toward the target, about level with your eyes.
3. Swiftly and smoothly bend your arm at the elbow, raising your hand with the rod until it almost reaches eye level. When the rod is almost straight up and down, it will be bent back by the weight of the practice plug. As the rod bends, move your forearm forward with a slight wrist movement.
4. When the rod reaches eye level, release your thumb off the spool. As the practice plug hits the ground, place your thumb back on the spool to reduce backlash.

If the plug landed close in front of you, you released your thumb too late. If the plug went more or less straight up, you release your thumb too soon.

BAITCASTING



Fly rod casting

Casting with a fly rod and reel is different than casting a lure or heavy bait. With spincasting, spinning and baitcasting, the weight of the bait or lure and any added weight pulls the line behind it to the target. Fly lures are light and have little weight and you cast the line to bring the lure to the fish. Lay your rod down and measure out 20 to 25 feet of line from the tip of the rod. Do not have a fly tied on for practice; tie on a piece of bright colored yarn.

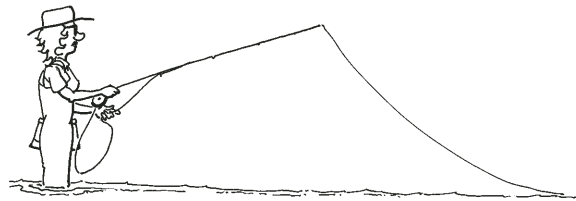
1. Grasp the rod as though shaking hands with it. Your thumb should be on top of the grip. Using this grip, the line will go in the direction your thumb points.
2. With your elbow at your side and bent at a 90° angle, point your rod in front of you. Cock your wrist slightly. Do not bend your wrist as you would with the other 3 methods.
3. Lift your forearm smoothly, bringing the rod straight up and back. Keep your wrist cocked.
4. When the rod reaches just past 12 o'clock, stop moving your forearm. Snap your wrist back.
5. Your line should form a nice tight loop in the air behind you.
6. As the loop opens and the line becomes nearly straight behind you (don't rush it), begin your forward cast.
7. Push your forearm back in the direction you started and down to about a 45° angle (10 o'clock). End with a snap of the wrist in the direction of the target. Lower the rod slowly and smoothly toward the surface of the water.

Line should drift down gently. If the line splashes, either you have aimed too low or the forward cast was not delivered in one smooth action.

FLYCASTING

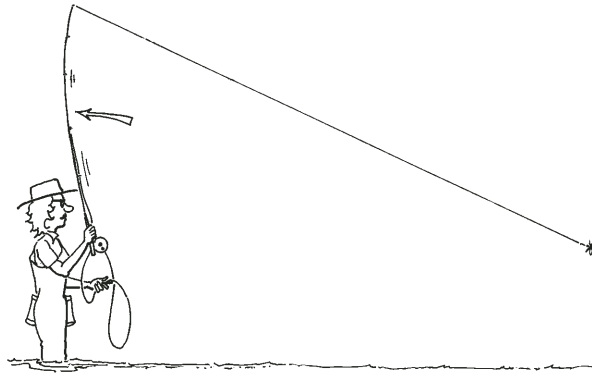
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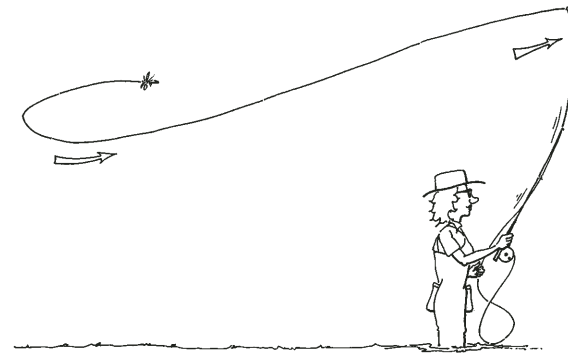
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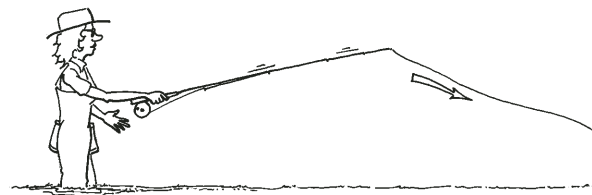


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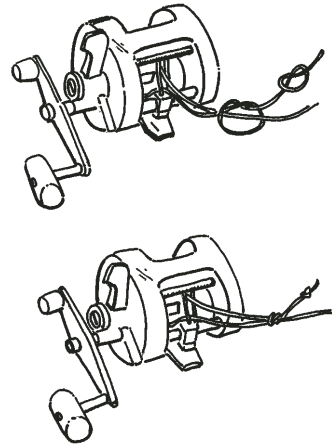
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Arbor Knot

Quick, easy connection for attaching line to the reel spool.

1. Pass the line around the reel arbor (spool).
2. Tie an overhand knot around the main line.
3. Tie a second overhand knot in the tag (loose) end.
4. Pull the knot in the tag end tight and clip off the excess line.

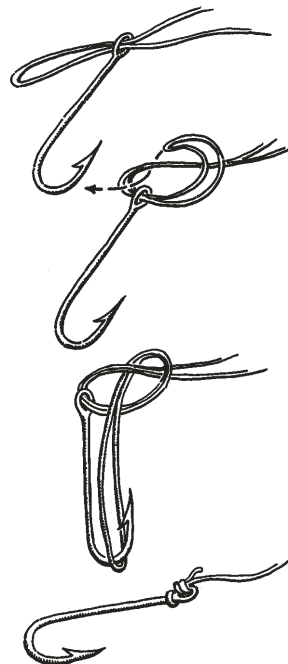


Snug down the first overhand knot on the reel.

Palomar Knot

The easiest to tie and the strongest knot known to hold terminal tackle.

1. Double 4 inches of line to form a loop and pass the loop through the eye of the fishing hook. Let the hook hang loose.
2. Tie an overhand knot in the doubled line. Don't twist or tighten line.
3. Pull the loop far enough to pass it completely over the hook.
4. Wet the line.
5. Hold the hook carefully, and pull the loose end with the standing line slowly to tighten the loose end.

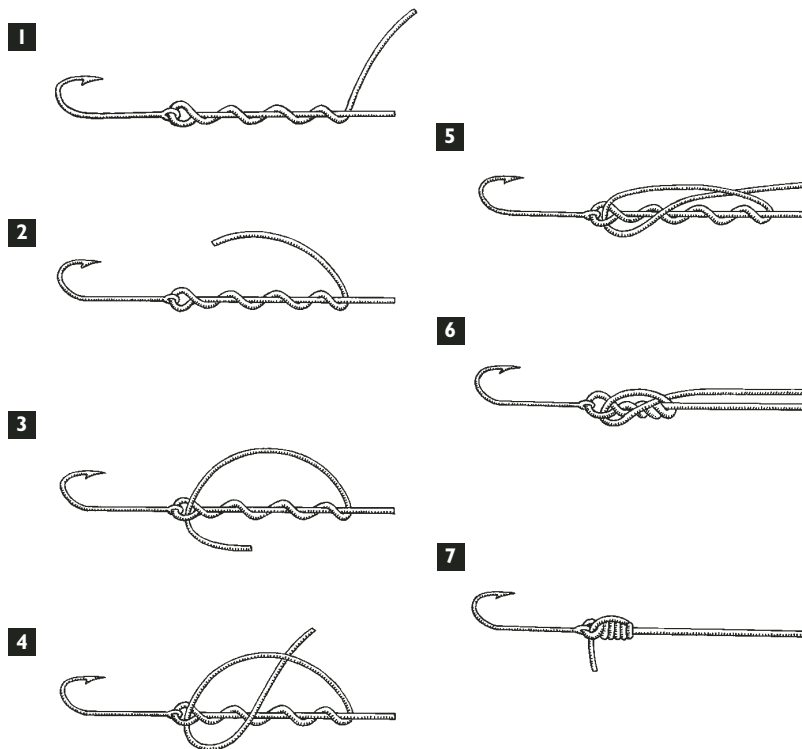


Improved Clinch Knot

An “old standby” known as the fisherman’s knot.

1. Pass the line through the hook eye and, with the tag end, make 5 turns around the standing line.
2. Insert the loose end of the line between the eye and the first loop formed.
3. Bring the end through the large second loop formed.
4. Wet the line and tighten the knot slowly while holding the loose end of the line end between thumb and index finger so the knot is partly closed before it’s secured against the eye.

Clip the loose end of the line.

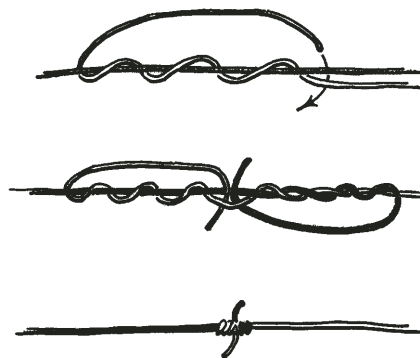


Simplified Blood Knot

Mostly used to join two lines together of about the same diameter.

1. Take the two lines' ends and tie an overhand knot (this knot will be clipped off later).
2. Tighten to combine the two lines into one.
3. Form a loop where the two lines meet, with the overhand knot in the loop.
4. Pull one side of the loop down and begin taking turns with it around the standing line. Keep point where turns are made open so turns gather equally on each side.
5. After eight to ten turns, reach through center opening and pull remaining loop (and overhand knot) through. Keep finger in this loop so it will not spring back.
6. Hold loop with your teeth and pull both ends of line, making turns gather on either side of loop.
7. Set knot by pulling lines tightly as possible. Tightening coils will make loop stand out perpendicular to line.

Then clip off the loop and overhand knot close to the newly formed knot.



Double Surgeon's Loop

Quick, easy way to tie a loop in the end of a leader; often used as part of a leader because it's relatively strong.

1. Double the end of line to form a loop and tie an overhand knot at the base of double line.
2. Leave the loop open in the knot and bring the double line through again.
3. Hold the main line and tag end and pull the loop to tighten the knot. The size of the loop can be determined by pulling the loose knot to the desired point, and holding it while the knot is tightened.



Clip end 1/8" from knot.

Snelled Knot

Makes a strong connection when fishing with bait and using a separate length of leader.

1. Thread the line through hook eye about 6 inches.
2. Hold line against hook shank and form a circle.
3. Make 5 or 6 wraps through loop and around line and shank.
4. Close the knot by pulling on tag end of the line.



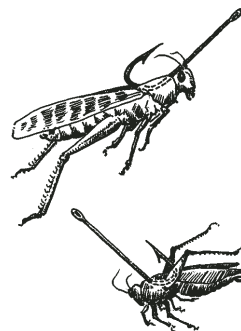
Tighten by pulling on main line in one direction and the hook in the other.

*Always check current fishing regulations (see page 46)
to make sure your choice of bait is legal.*

COMMON FRESHWATER BAITS

Crickets and Grasshoppers

These are excellent choices for sunfish, bass and catfish. Both of these insects can be caught by hand or with an insect net. Look for them in thick, tall grass or at night under lights. Laying a cloth, towel, cardboard or newspaper on the grass will attract crickets. You want to use thin wire hooks for sunfish (#6-#10) and medium-sized hooks for bass and catfish (#1 or #2). Make sure the point of the hook is completely covered to increase bites.



Worms

Whether it's an earthworm, red wiggler or nightcrawler, worms are a favored choice for the majority of freshwater fish in Texas.



You can either raise your own in a compost pile, dig them from your garden or purchase from bait shops and fishing tackle stores. Remember to cover the point of the hook when fishing for sunfish to keep them from pulling the worm off the hook. Store live, leftover worms in the refrigerator for the next time you go fishing.

Minnows

Varieties of minnows are used to catch both fresh and saltwater fish. Keep minnows in an aerated minnow bucket and don't crowd them. Remember to change the water often to keep the minnows lively. Hook them through the lips or under the dorsal fin. Avoid hooking through the backbone because this will kill the minnow.



Crayfish

Crayfish, known as crawfish, crawdads or mudbugs, are used for catching large-mouth and smallmouth bass, white bass, catfish and freshwater drum. They can be caught in small ponds, roadside ditches or where depressions hold water frequently and usually after a rain. These can be fished either live, dead or using just the tail. Hook through the underside of the tail so the point protrudes through the top. Catfish and freshwater drum don't mind if it's live or dead. Grasp the crayfish, and pull the tail away from the head, threading the hook through its tail or both sides of body. Freshwater drum prefer crayfish to any other type of live or dead bait.



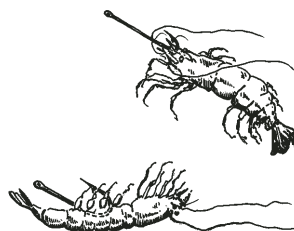
PREPARED BAITS

From homemade concoctions to commercially-made baits, these are primarily used for catching bottom-feeding fish like catfish and carp. Your choices include canned corn, stink bait, cottonseed cake, hot dogs, dough balls – the list goes on with this type of bait. Fishing with treble hooks works best to keep the bait from being flung off during casting.

COMMON SALTWATER BAITS

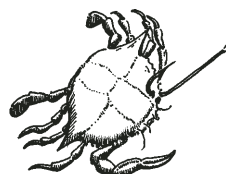
Shrimp

Shrimp are widely-used bait for saltwater fishing. Shrimp can be either alive or dead. Hook shrimp under the rostrum “horn” on the head to fish with live shrimp. You can either peel or leave the shell on fresh dead shrimp for fishing on the bottom. Many anglers fishing for freshwater catfish use dead shrimp for bait.



Crab

Different species are used for saltwater fishing to catch sheepshead, black drum, cobia and snapper. Sheepshead and snapper go after hermit and fiddler crabs hooked through the body. Black drum and cobia have a liking for blue crabs. Break in half or quarters for black drum and hook through the body sections. Use small, whole, live blue crab for cobia by removing the pinchers and hook through the body.



Squid

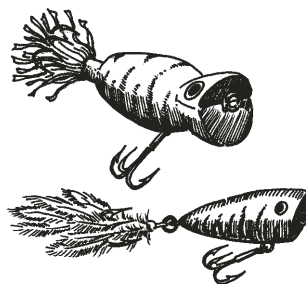
You can purchase dead squid for saltwater bottom-fishing. Fish such as gafftopsail, catfish, and snapper are good examples. Hook the squid two or three times in and out through body to avoid small fish stealing the bait.

Many companies make fishing lures in different types, patterns, sizes and colors. "How to" instructions are either on the package or inside with the lure. Both fresh and saltwater anglers use lures interchangeably to catch a variety of fish.

Plugs

black bass, crappie, striped, white and hybrid bass, seatrout, red drum, flounder and several offshore species

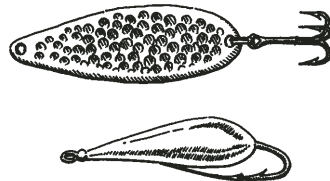
Plugs can be made of various materials such as plastic, wood and sometimes cork. Plugs are classified as topwater and crankbaits (shallow diving, medium diving and deep diving). Either two or three treble hooks are attached to plugs to cover the fish's striking area.



Spoons

black bass, striped, white and hybrid bass, seatrout, red drum, flounder and several offshore species

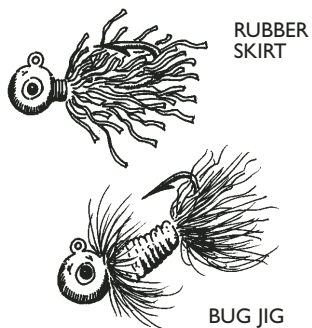
Spoons are metal, spoon-shaped lures made to resemble a swimming or injured baitfish. You can jig them (jiggle them up and down), cast and reel them in, or troll them behind a boat (let it drag on a fishing line behind the boat). Many anglers attach a swivel to the spoon to prevent it from twisting their line during retrieval.



Jigs

black bass, striped, white and hybrid bass, crappie, seatrout, red drum, flounder and several offshore species

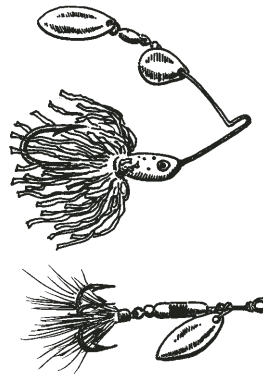
Jigs have weighted metal or lead heads with a body and tail made of rubber skirts, feathers, soft plastic or animal hair. Numerous sizes, colors and patterns are used to catch a large majority of fresh and saltwater fish.



Spinnerbaits

black bass, rainbow trout, crappie on small in-line spinners

Spinnerbaits have one or more blades that spin or rotate around a straight wire or “safety pin” type shaft. Nearly all spinnerbaits have tails and bodies made of rubber skirts, animal hair, soft plastic, feathers or other materials.



Soft Plastics

black bass, seatrout, red drum and flounder

Soft plastics are pliable lures made into worms, grubs, lizards, crayfish, minnows, shrimp, crabs and many others, resembling what fish eat. Plastics are available in different sizes, colors, and some with fish-attracting scent. They can be used with or without bullet weight sinkers, jig heads or spinnerbaits.



Flies and Poppers

almost all common sport fish will strike a fly or popper of some variety

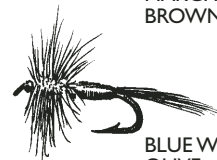
Flies and poppers are small, very light, almost weightless lures used primarily for flyfishing. A spincast or spinning rod and reel outfitted with a “bubble” (clear bobber) placed four to five feet above the lure works well if you don’t have a fly rod. These lures are excellent for sunfish and bass, but most any fish can be caught on these baits.



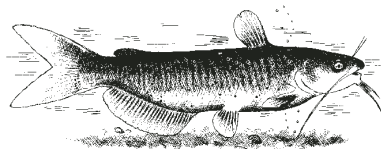
POPPERS



MARCH BROWN



BLUE WING OLIVE

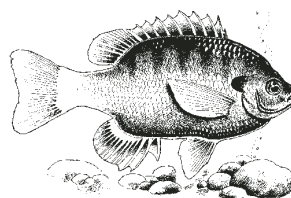


Channel Catfish

Ictalurus punctatus

Other names: channel, willow cat, fiddler cat, twister

Fishing Tips: Most active in the evening or early night. Easily attracted and caught during the day by baiting holes with soured grain, cottonseed cake, hard dog food or alfalfa cubes. Use worms, cutbait, shrimp, liver, blood or stink baits.

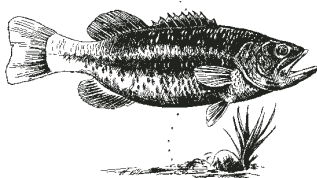


Bluegill

Lepomis macrochirus

Other names: bream, perch, tiger sunfish, gills

Fishing Tips: The simplest of tackle is all that is needed to catch these feisty, hand-sized fish. Preferred baits are worms, crickets, mealworms, small jigs, spinners, miniature insect crankbaits or flyfishing tackle (i.e. flies, poppers, worm imitations, etc.).

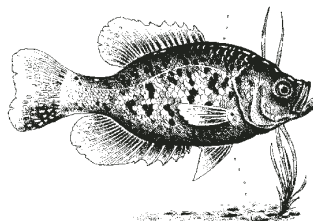


Largemouth Bass

Micropterus salmoides

Other names: bass, largemouth, bigmouth, bucketmouth

Fishing Tips: They will strike artificial baits including crankbaits, spinner baits, jigs, soft plastics, spoons, flies and other various live bait look-alikes. Largemouth bass relish live baits such as minnows, earthworms, crawfish, leeches, frogs, lizards, insects and even small mice when the opportunity offers itself.

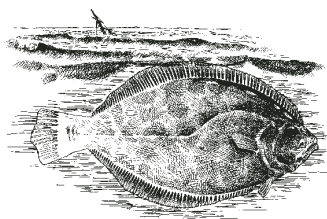


Black Crappie

Pomoxis nigromaculatus

Other names: crappie, white perch, papermouth

Fishing Tips: Black crappie are fond of small minnows, small streamer flies, small marabou or plastic jigs and worms.

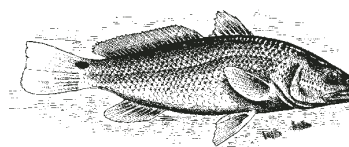


Southern Flounder

Paralichthys lethostigma

Other names: flounder

Fishing tips: Fish with live finger mullet, mud minnows, live shrimp or artificial lures close to the bottom. May also be gilled in shallow water along reefs or shorelines during low moon phases with a tide movement using a lantern or some other artificial light.



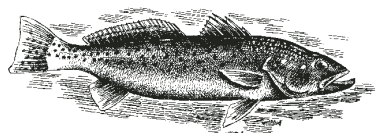
Red Drum

Sciaenops ocellatus

Other names: redfish, reds, bull red, rat red

Fishing tips: Use live finger mullet, cut mullet, live croaker, live or dead shrimp and lures fished close to the bottom. Gold and silver spoons also work well.

Note: There are stocked red drum in a few of our fresh water impoundments.

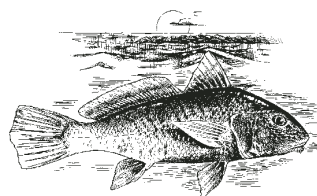


Spotted Seatrout

Cynoscion nebulosus

Other names: Specks, speckled trout, trout, spotted weakfish

Fishing tips: Use live shrimp, live finger mullet, live croaker or artificial baits (i.e. shrimp/shad imitations).



Atlantic Croaker

Micropogon undulatus

Other names: golden croaker, croaker

Fishing tips: Offer peeled shrimp fished close to the bottom. In fall, catch larger fish during migration to the Gulf.



Texas has 191,000 miles of streams and rivers (3,700 named streams and 15 major rivers). These waterways are the key element in maintaining much of our state's natural heritage.

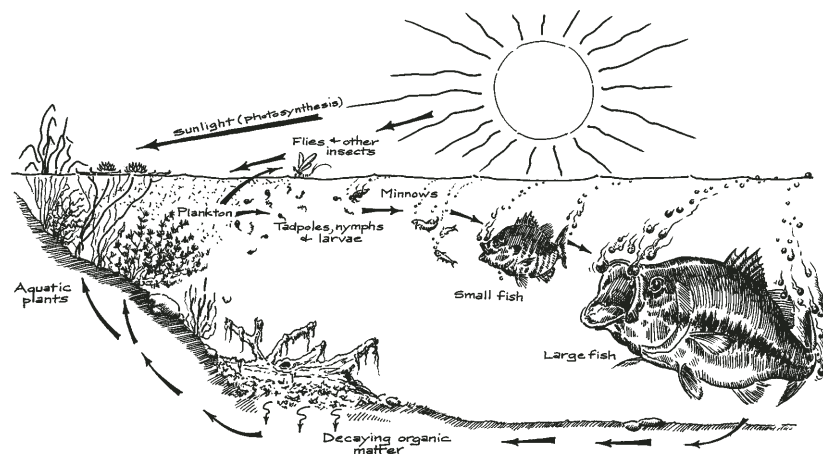
Each waterway forms an ecosystem that flows into one of 212 major reservoirs and eventually into seven major estuaries along the Texas coast, supporting the best inland and coastal fisheries in the United States.

Additionally, healthy aquatic communities in Texas rivers, reservoirs and estuaries provide unparalleled recreational opportunities to millions of Texans.

Our fresh and saltwater environments vary from streams, to rivers, lakes and reservoirs, marshes, bays and the Gulf of Mexico. Each one provides unique habitats for a diversity of fish, bird, reptile, amphibian, crustacean and insect species.

Micro-organisms (tiny plants and animals) feed macro-invertebrates (like insect larvae) and small fish, which feed larger fish, birds, reptiles and amphibians. Of course, humans also play a role by eating fish and other aquatic organisms. When aquatic life dies and starts to decay, micro-organisms feed off the decaying material and the process starts over.

This is called the food chain.



Texas Farm Ponds

Farm ponds are common in Texas. They vary widely in size, water quality and the habitats they offer aquatic life. Most are less than an acre in size, but even these small ponds can be home to sport fish like largemouth bass, sunfish and catfish.

Good fishing requires good pond management. Careful stocking and proper harvest help maintain the balance of predatory fish and their prey. Control of aquatic plants keeps a balance between shelter and open water.

To receive a Texas Parks and Wildlife pond management packet, call (800) 792-1112, Ext. 4444. Or, for more information about farm ponds or private ponds, visit www.tpwd.state.tx.us/faq/landwater/fisheries/.



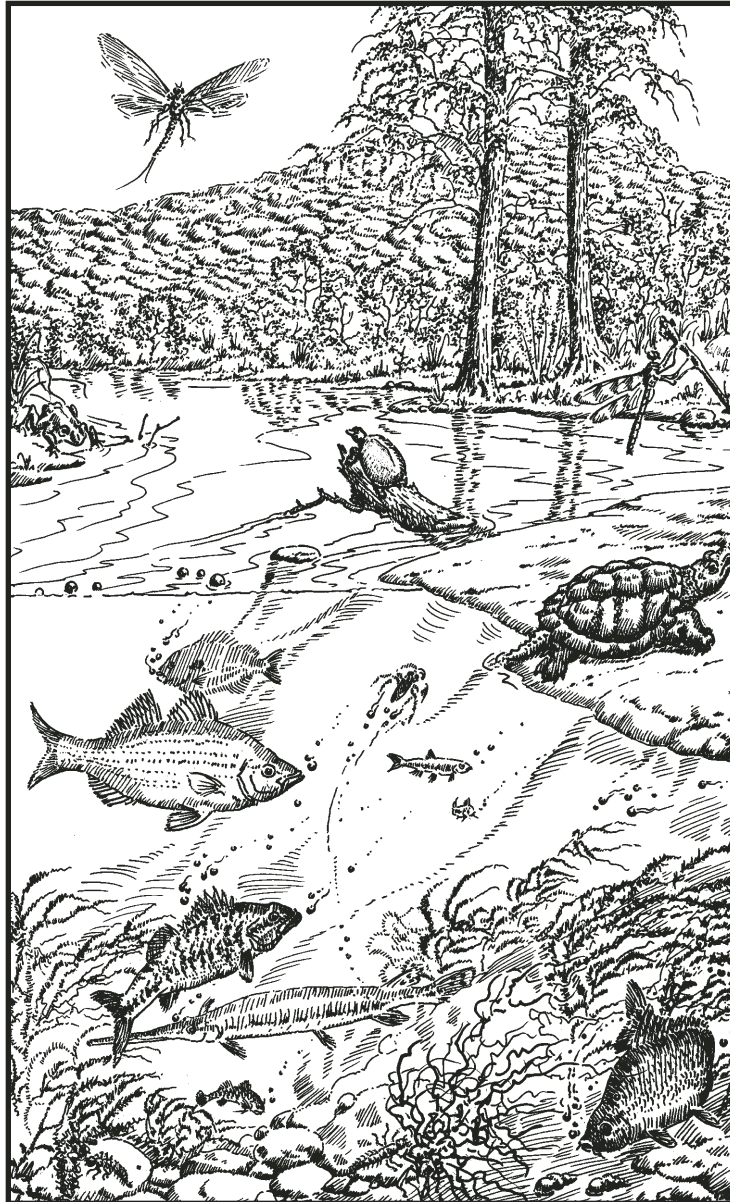
POND LIFE

Texas Hill Country Streams

Many of the streams that run swiftly through the rocky, tree-shaded hills of Central Texas are fed by springs. These streams are home to many species of fish, amphibians, plants and insects, which depend on a steady flow of clean water for survival. Some of these species (salamanders in particular) are found only in these special spring-fed environments. Our state fish, the Guadalupe bass, is found in several streams and rivers of Central Texas.

Hill Country streams provide good cover for fish with tree roots, branches and other vegetation along the edges and uneven, rocky bottoms. Insect larvae like to hide under rocks to catch bits of food in the current. These larvae, in turn, become food for fish. Many fish lay their eggs in the streams' shallow, gravelly riffles. Anglers can expect to catch bluegills, bass and catfish in the Hill Country on a variety of baits.

Hill Country streams have always been popular among people who love to fish, paddle, swim or watch nature. Many community groups have organized to help keep these streams clean, healthy, and flowing through wise water use and land use planning.



A TYPICAL HILL COUNTRY AQUATIC COMMUNITY

East Texas Streams

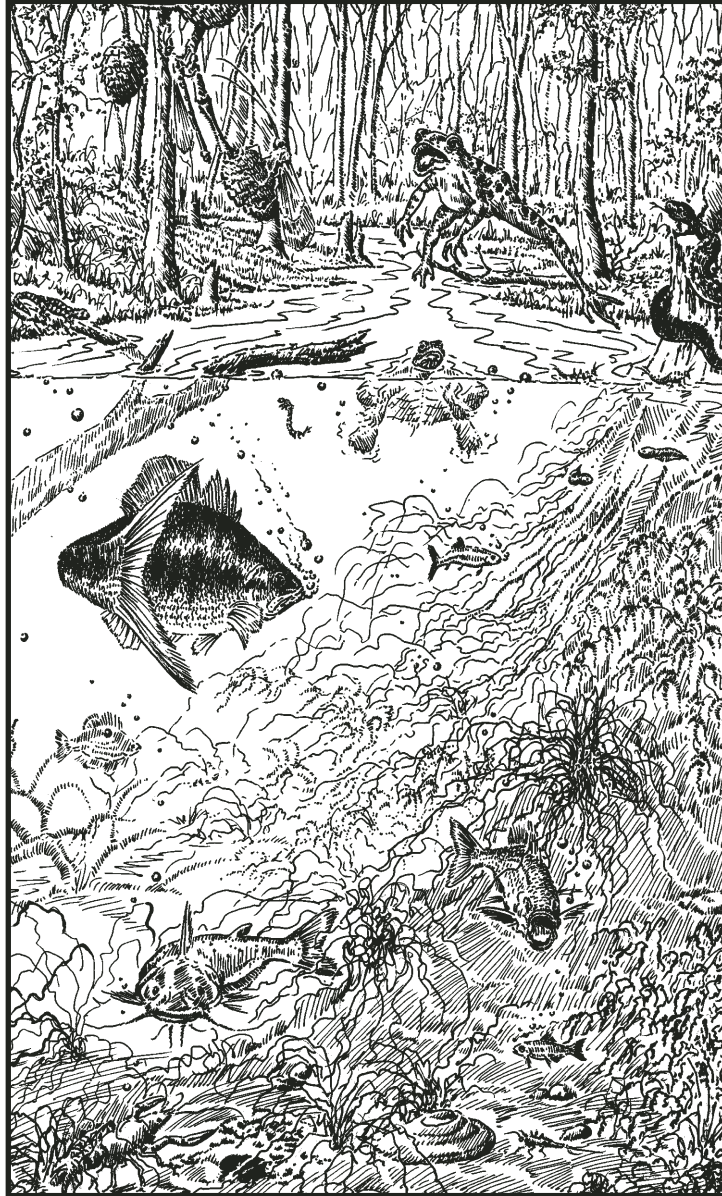
Streams wander between the hills and across the plains of East Texas, through banks lined with pines, hardwoods and brush. Leaf litter and muddy bottoms cause the water to be cloudy, but they also add vital nutrients, providing for a healthy ecosystem.

East Texas streams include a number of different habitats – riffles, runs, open water pools and sloughs, as well as oxbow lakes (remnants of streams cut off from the main channel). Seasonal flooding of nearby bottomlands provides yet another habitat for the catfish, sunfish, bass and other species that thrive there. Catfish are especially adapted to this environment and can be caught by fishing near the bottom using worms, stink-bait or shrimp.

West Texas Streams

West Texas streams are part of a very fragile ecosystem, dependent upon a scarce water supply, often fed by springs. As in other parts of the state, these streams provide a variety of habitats, from shallow, swift-flowing areas to deeper, slow-moving pools supporting a variety of fish, reptiles, amphibians, insects and mammals. Because water is scarce in West Texas, the riparian areas (banks of a river, stream or lake) team with wildlife.

Human activities can affect these streams in several ways. First, overuse of water from aquifers can lower the water table to the point that springs stop flowing and streams dry up. Second, groundwater can carry pollutants to these streams if care is not taken to contain or dispose of pollutants properly. Third, any action that destroys vegetation along stream banks or disturbs streambeds will reduce cover and food for fish. Some of the best fishing spots in West Texas streams are located just downstream from an undisturbed riffle, where the water begins to slow.



A FRESHWATER RIVER AQUATIC COMMUNITY

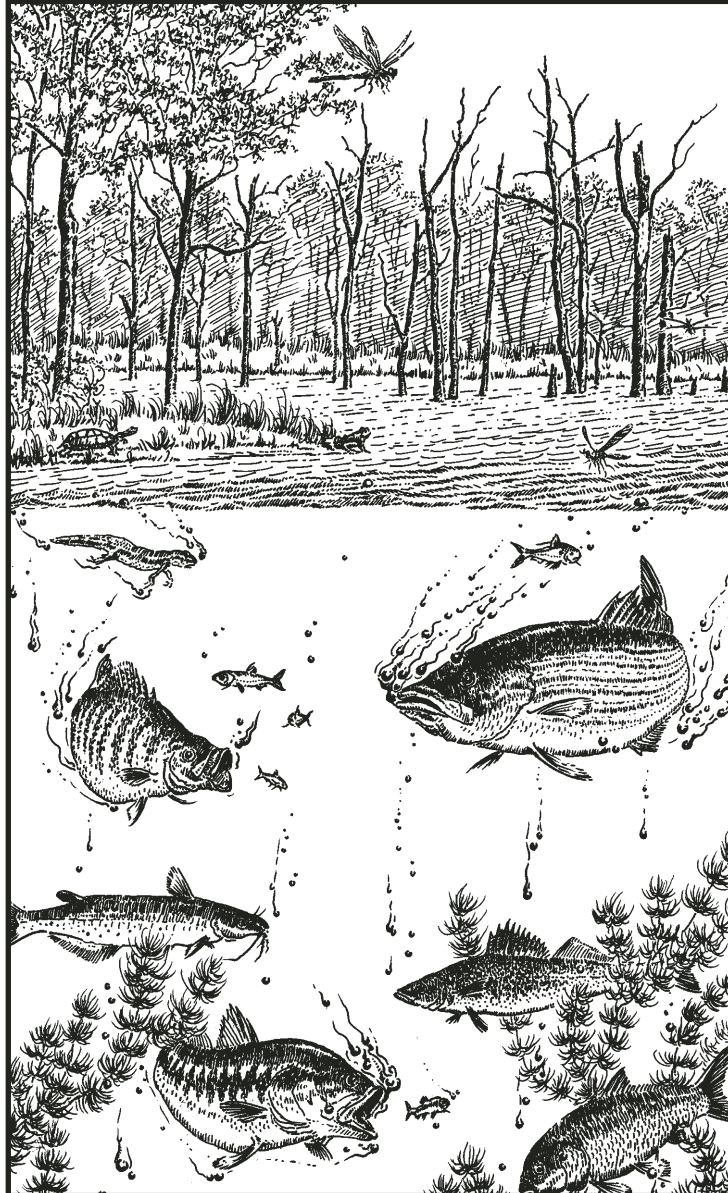
Reservoirs

Did you know that Texas has only one natural lake – Caddo Lake? All other lakes are “reservoirs,” made when streams or rivers are dammed for flood control, public water supply, agriculture and recreation.

Texas reservoirs vary in size, shape, depth and clarity across the state. In the west, they tend to be broad, flat, shallow and somewhat cloudy with sediments, their water level changing with amounts of rainfall. Central Texas reservoirs are often steep-sided and deep. These waters are relatively clear, depending upon amounts of storm water run-off. Water levels can fluctuate dramatically on some lakes during drought and flood events. East Texas reservoirs are shallow and relatively clear with a more constant water level.

Each reservoir’s combination of water, aquatic vegetation and substrate, or bottom, provides habitat for fish and other aquatic organisms. The fish draw anglers who support a statewide, multi-billion dollar sportfishing industry.

Many reservoirs are stocked with fish such as striped bass, largemouth bass, crappie and catfish. Anglers use a wide variety of tackle and fishing techniques. Check with local marinas and bait shops for current fishing forecasts and tips. You can also check the weekly fishing reports on the Texas Parks and Wildlife Web site: www.tpwd.state.tx.us



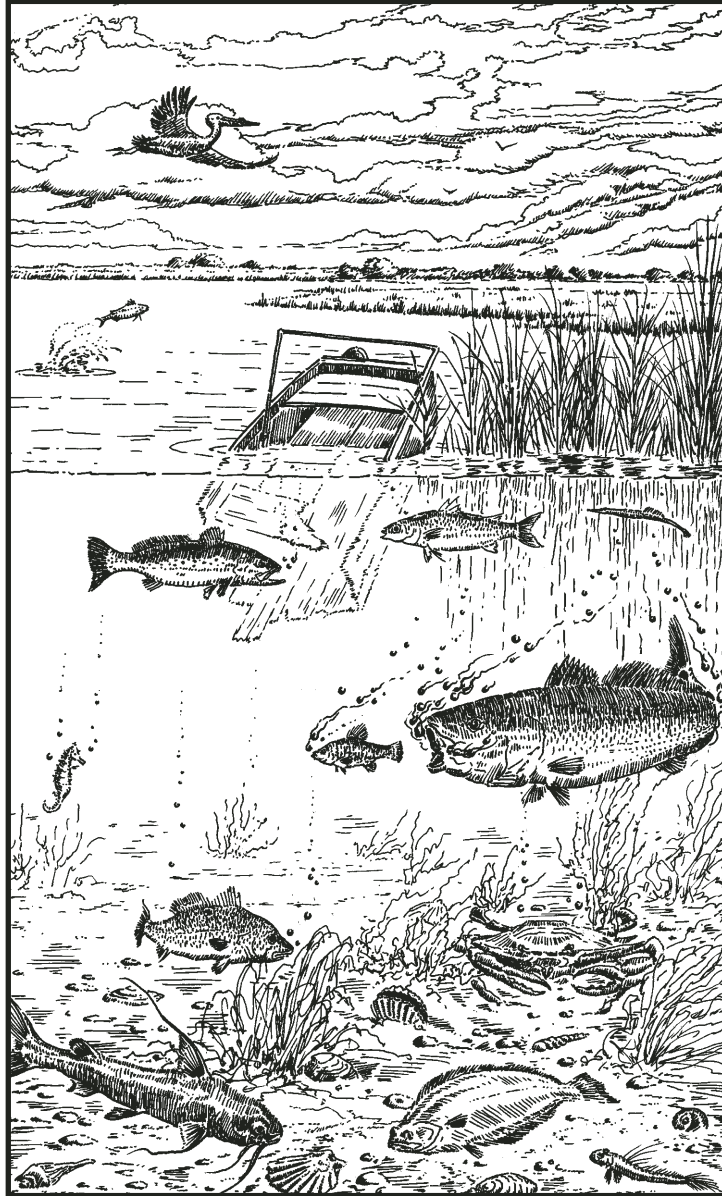
AQUATIC LIFE IN A RESERVOIR

Coastal Bays/Marshes

Coastal wetland habitats contain the largest diversity of plants and animals of any aquatic ecosystem. This is due in large part to the diversity of habitats that make up coastal wetlands. In the bays, water is salty, but fairly shallow, with seagrass beds providing important cover for fish, crabs, shrimp and shellfish. Sandbars, spoil islands and shell reefs also provide structure. Tidal movements influence the feeding activity of all species.

At the mouths of rivers and streams, the water is less salty with cattails and salt-tolerant reeds providing cover. The flow of freshwater helps maintain a fragile balance of water chemistry that many plants and animals have become adapted to and dependent upon. These areas are the nurseries for many saltwater fish, crabs, shrimp, and shellfish and their importance can't be overstated. In addition to aquatic species, coastal wetlands also support a diversity of bird life such as shore birds, wading birds, gulls, terns and pelicans. Songbirds migrating in the spring often travel great distances across the Gulf of Mexico before landing safely on Texas shores. Sadly, coastal wetland habitats are being destroyed at an alarming rate as a result of development, decreases in water quality and other threats. Communities and resource professionals are teaming up to conserve these productive habitats.

Anglers will find exciting fishing opportunities in these more shallow saltwater habitats. Spotted seatrout, red drum and southern flounder are a few of the more popular species to catch. Anglers use striped mullet, sheepshead minnows, shrimp and blue crab for bait along with a variety of lures.



COASTAL BAY AND MARSH HABITAT

Gulf Beachfront/Offshore Waters

The Gulf waters range from beachfront to offshore environments with depths varying from 1 or 2 feet for the beachfront to depths of over 100 feet offshore.

Several species of crustaceans, jellyfish, sea turtles and others, inhabit inshore and offshore waters supplying food for fish and others of their kind. The beachfront will contain fine shell deposits along with sandbars as one ventures out into the water.

The Gulf, on the other hand, has deep, open water with rock piles, drop-offs, gas and oil rig platforms and artificial reefs (wrecks, ash rock, rig platforms, etc.) for structure. Several species of mackerels, sharks, tunas, billfish and others are found following schools of baitfish throughout the Gulf. They frequent the rigs and other structure for easy meals.

Our structure-loving fish, snappers, triggerfish, spadefish and groupers, are a few which are found regularly occupying space around sunken wrecks, rock piles, platforms and artificial reefs. Anglers do well concentrating their fishing efforts in these locales.

Texas Parks and Wildlife works to achieve a balance between commercial fisheries and healthy fish populations.



AN ARTIFICIAL REEF PROVIDES HABITAT FOR COASTAL FISH

Fishing is best in water that provides good fish habitat:
food, oxygen, water, shelter, and space.

Food

Food sources vary for different species of fish. Food can include plants, plankton, insects and insect larvae, smaller fish, crayfish, worms, and freshwater shrimp. Learn more about the particular food favored by different fish species on pages 18-23 (baits or lures) or read about different fish species on the Texas Parks and Wildlife Web site, www.tpwd.state.tx.us.

Oxygen

Oxygen levels in the water vary with water temperature, water movement, and with the amount of algae present. In the summer when water temperatures are high and flow is low, algal blooms can cause oxygen levels to dip at night, causing a fish kill. Oxygen levels are increased when water moves over water falls or riffles.

Water

Water quality is also important and sometimes difficult to determine by just looking. If the water is very muddy, light can't penetrate, making it hard for many fish to find food. However, some catfish can thrive in water that is not clear because they can find their food mainly by smell. Also, particles in the water protect a catfish's skin from being sunburned.

"Clean" looking water, however, may have harmful chemicals, too much or too little salt, or may be too acidic or basic. A healthy ecosystem helps maintain a good balance of nutrients and chemical composition in water, making it ideal for fish.

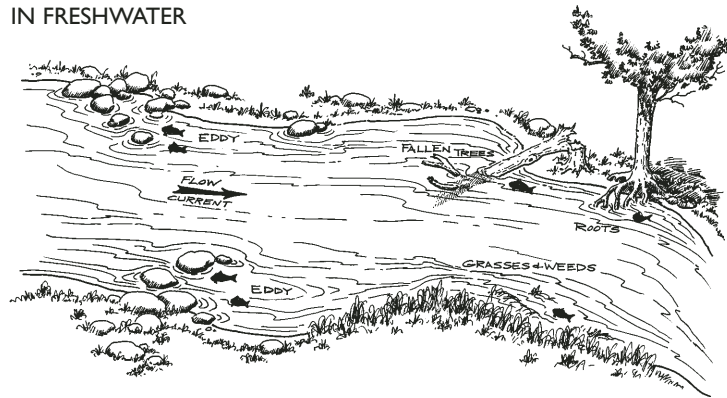
Shelter

All fish need "**structure**" such as rocks, stumps, aquatic plants, and piers to provide cover from predators or to hide out and wait for prey. If the water is flowing, try fishing downstream below one of these structures. In saltwater, fish deal with currents and tides. Near the shoreline, find a fishing spot down-current from structures such as jetties, piers, and rocks where fish are somewhat protected and can catch food floating by. In bays and other shallow areas, seagrass meadows provide good cover for small fish, crabs, and shrimp. These organisms attract larger predatory fish like spotted seatrout and red drum.

Space

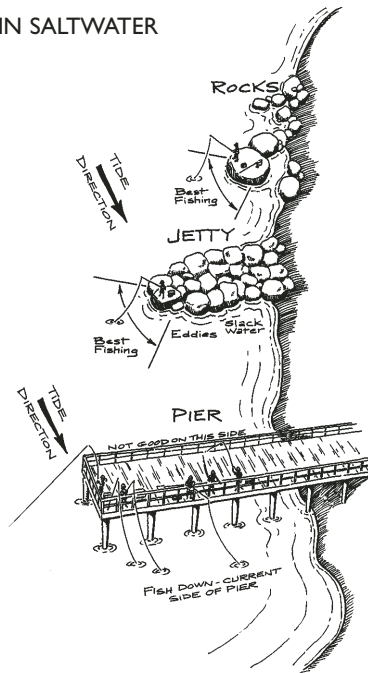
Fish, like people, can't handle being too crowded. Good fish habitat has enough space to provide a good arrangement of structure for protection and rest, not only for them, but for their prey species as well.

IN FRESHWATER



IN SALTWATER

Try fishing down-current from "structures" such as rocks, trees and stumps, jetties and piers.



Handling fish properly protects both you and the fish. Some fish have sharp fins or teeth that can cut you if you don't hold them correctly. Thus, different fish species need to be handled in different ways. Hold some fish by the jaw, such as bass or trout, and others along the body, such as a catfish. Learn by watching an experienced angler, but keep the following rules in mind:

1. Always wet your hands first before handling fish. Wet hands are less likely to damage the protective coating of mucous on the outside of the fish. This slimy layer helps protect the fish's skin from disease and makes it glide easily in the water.
2. Don't allow fish to flop around on the bank, the dock, or the floor of the boat. If keeping fish, put them on ice or in a bucket of cool water.
3. If you are not keeping the fish, take the fish off the hook as soon as possible. Gently lower it into the water until it begins to swim away. If it isn't ready to swim, you may need to slowly swish it in the water first. Remember, no fish is a "junk" or "trash" fish. All fish play important roles in the aquatic ecosystem.
4. If you are not keeping the fish, using barbless hooks can make it easier to take the fish off the hook.

1. Youth should only go fishing under adult supervision.
2. Keep at least one rod's length between you and the next angler before, during and after you cast.
3. Look behind you and to the side before casting to avoid hooking anyone or anything.
4. Consider fishing with barbless hooks or have an adult bend the barbs down with pliers. If you hook yourself, anyone else, or a fish, a barbless hook will be easier to remove.
5. Wear a properly fitting Personal Flotation Device (PFD or life jacket) and fasten it securely. Eighty-five percent of drowning victims would be alive today if they were wearing a PFD.
6. To rescue a person who falls into the water: **Reach** the person with something they can hang on to; **Throw** a flotation device to them; **Row** out to them if you are in a boat; and then **Go** – for help! Don't jump in and risk drowning yourself.
7. Use the "buddy system" when fishing. If something happens to you like slipping down a bank, your buddy can help.
8. When fishing in hot or cold weather, protect head, eyes, hands, feet, and skin from exposure to wind and sun. In hot months, wear light-colored clothing, hat, sunscreen, and take plenty of water with you. In cold months, wear layers of clothing, gloves, a knit hat and water-proof shoes.
9. If your line gets snagged when you have cast it out, gently jiggle your line back and forth and from side to side to loosen it. If you pull too hard, the hook and line could come loose with such force that it could fly back at you and hit you (or someone else).
10. When cleaning a fish, always use safety glasses and gloves to protect eyes and hands. Always cut away from your body when using a knife. The regulations booklet has good fish-cleaning tips for you.

Your Fishing Compass

Which way will you go when faced with tough choices while fishing? Your ethics will play a big role in making that decision. Your ethics are the rules or values you use to help you choose behavior that is fair to others and to yourself. We practice ethical behavior when we “do the right thing” even when we think we won’t be caught or punished for our behavior.

Ethics are difficult to teach and are not equally shared by all people. However, ethical anglers can “do the right thing” to be fair to other anglers and to help conserve fish and aquatic environments. Wise use of fish and aquatic resources by all anglers will ensure that those resources will still be available in the future.

To decide if your behaviors are ethical, ask yourself the following questions.

- Is it legal?
- Would it be good if everybody did it?
- Would it make you proud?

Obey the Law

1. If you are 17 years old or older, purchase appropriate fishing licenses and tags.
2. Know and follow the fishing regulations for the place you are fishing. Always check the current Texas fishing regulations, available for free when you purchase a fishing or hunting license. Remember that fishing rules can change from one location to another.
3. If a fish dies while in your possession but it is not legal to keep it, regulations state that you must still release it.
4. It is not legal to catch fish and purposely allow them to die. The law doesn’t recognize any fish as a “nuisance fish.”

Be Considerate of Others

1. Respect other anglers' rights. Don't crowd another angler or make loud noises when another person is fishing.
2. Always get permission before fishing on private land.
3. If you are fishing on private land and keeping fish, share your catch with the landowner.
4. Always leave your fishing area cleaner than when you arrived so that other anglers can enjoy it as you did.
5. Share your knowledge of fishing with others.

Conserve Fish and Aquatic Ecosystems

1. Place excess fishing line, bait boxes, and litter in trash cans or pack it out with you. A major cause of injury for fish and wildlife along waterways is getting tangled in abandoned fishing line, not to mention that people and boat propellers can also get tangled.
2. Dispose of motor oil and gasoline in receptacles made for that purpose ... away from water resources.
3. Obey all rules posted at parks and other natural areas.
4. If you are not going to use the fish you catch, gently place them back in the water as quickly as possible. (See Handling Fish on page 42.)
5. Remember that all native fish (even the ones you may consider nuisance fish) play important roles in aquatic ecosystems and should be released carefully.

Fishing regulations are important for several reasons. First, many regulations help assure that certain types of fish or certain areas will not be over-fished. This leaves enough fish to reproduce for future generations. Second, some regulations protect certain sizes of fish, allowing for better fish reproduction. Finally, fishing regulations protect the rights of all anglers as well as the rights of landowners. Below are answers to some of the most frequently asked questions about fishing regulations.

1. Where do I find all fish and wildlife regulations for the state of Texas?

Fishing regulations are found in the Texas Parks and Wildlife Outdoor Annual, which is free to everyone and available when you purchase your fishing or hunting license.

2. At what age do I need to purchase a fishing license?

When you turn 17, you must have a fishing license in order to fish legally in public waters.

3. How often do I need to renew my fishing license?

A fishing license is good for one year, with two options available. You can purchase a license that is good from September 1 to August 31. Or you may purchase a license that is good for one year from the date of purchase.

4. Do I need a fishing license to fish from my private property?

Yes, you will need a license if you are fishing into public waters (such as lakes and rivers) even if you are on private land. But you don't need a license to fish on private property in a private pond unless the landowner requires it.

5. What does a “daily bag limit” for fish mean?

It is the amount of fish that one person can keep in a 24-hour period (midnight to midnight).

6. What does “possession limit” for fish mean?

It is the maximum amount of fish (2-day limit) that one person can have in their possession while not in the act of fishing.

7. Do I need a fishing license or related stamps to fish with a cane pole or to catch shrimp or crabs or to gather oysters?

Yes, regardless of the method you are using to fish, you must have a fishing license to fish in public waters. You must also possess a saltwater conservation stamp to take any coastal species within the saltwater zone.

8. Can I give another person my fish if I don't want to bring them home?

Yes, but you need to give them a Wildlife Resource Document along with the fish you're giving them.

9. What is a Wildlife Resource Document (WRD) and when is it necessary to have one?

A WRD is a written statement from the person who legally caught or killed the wildlife resource to the person who receives or possesses the resource. This applies to any resources that require a tag or permit to be attached or which are protected by a bag or possession limit.

10. What is involved in giving or obtaining a WRD?

The WRD may be hand written or a person may use the document provided in the Outdoor Annual. The document must have the following information:

- *Name, signature, address, and fishing or hunting license number, as required, of the person who caught or killed the wildlife resource*
- *Name of the person receiving the fish*
- *Description of the fish (number and type of species or parts)*
- *Date fish was caught or killed*
- *Location where fish was caught or killed (name of county, lake, area, bay, stream or ranch)*

11. What does “slot limit” mean?

There are two different types of slot limits:

1. *Freshwater – Slot limits mean you must release any fish between the slot limit numbers. For instance, a largemouth bass at a particular lake has a 14” - 21” slot limit. That means you must release largemouth bass between 14 and 21 inches. Depending on the fish species, some lakes, reservoirs, rivers and streams have exceptions to statewide fresh-water harvest regulations. See the Outdoor Annual for those exceptions.*
2. *Saltwater – Slot limit means you may retain any fish between the slot limits. For example, a black drum with a 14” - 30” slot limit means you may retain any black drum between 14 and 30 inches. All others must be released.*

Remember to check your state bag and size limits before going fishing.

12. What if I have a question about fishing regulations?

Call your local game warden or district or regional Texas Parks and Wildlife law enforcement office. You can find those numbers in your Outdoor Annual, in the state government section of the phone book or at our Web site: www.tpwd.state.tx.us

If you see someone who is not following
fishing or hunting regulations...

Call **Operation Game Thief** – Texas' wildlife crime-
stoppers program. It's that easy, and it's the right thing
to do.

You can make a difference by reporting illegal hunting
and fishing activity. Up to \$1,000 may be paid for infor-
mation leading to the arrest and conviction of poachers.

1-800-792-GAME

*Operation
Game Thief*

Want to Learn More? Want to Get Involved?

Look here for additional resources:

ACTIVITIES AND PROGRAMS

Volunteer Angler Education Instructor Workshops
Tackle Loaner Sites
Advanced Angler Workshops
Fishing Clinics at State Parks
4-H Sportfish Program
Hooked on Fishing Not on Drugs
Becoming An Outdoors-Woman
Aquatic WILD
Texas Parks & Wildlife Expo

PLACES TO GO

Local Texas Parks and Wildlife Fish Hatcheries
Texas Freshwater Fisheries Center, Athens, Texas
Sea Center Texas, Lake Jackson, Texas
State Parks

ONLINE AT WWW.TPWD.STATE.TX.US

Fishing Report and Latest Stocking Schedules
Fish Species and Fishing Tips
Guide to Lake and Reservoir Access Points, Boat Ramps
Water Conservation and Planning
Live Webcasts
Program Information, Calendar of Events and Workshops

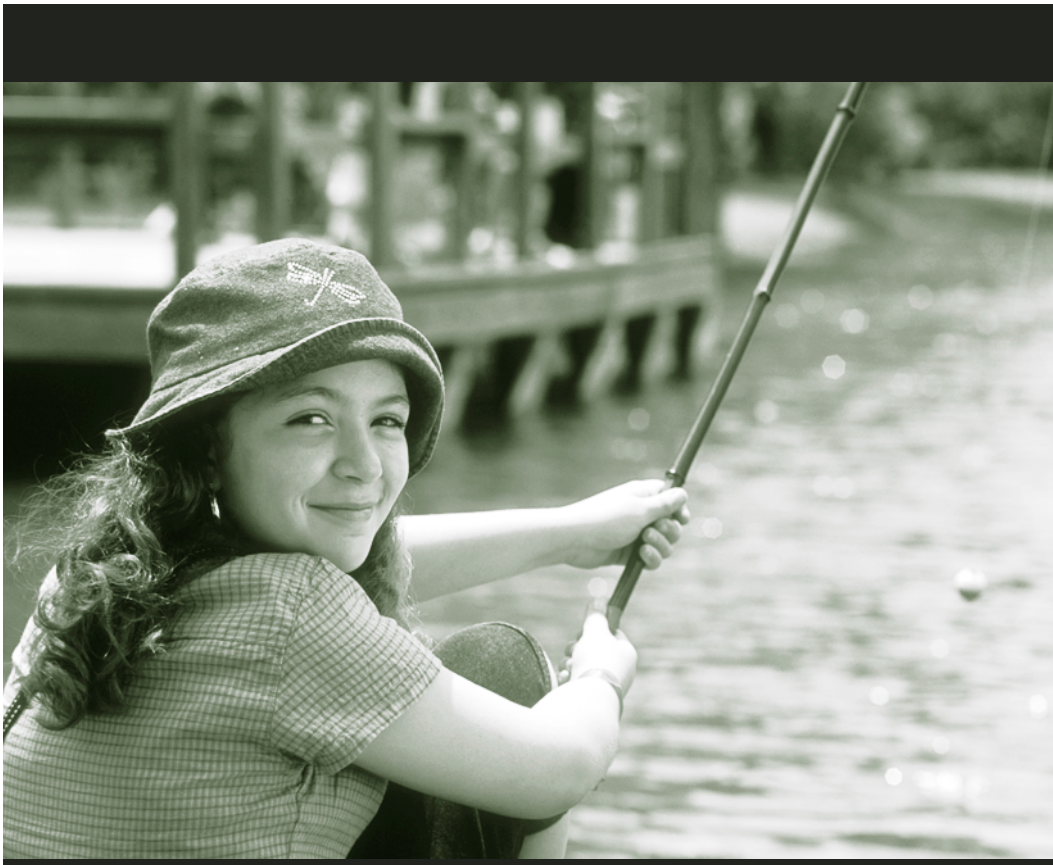
What skills have you learned?

Basic or Junior Angler Checklist

- ☐ Assemble basic tackle
- ☐ Tie one fishing knot
- ☐ Cast safely with a spincast reel
- ☐ Identify 3 fish species and baits used to catch them
- ☐ Discuss 2 fishing safety rules (1 water safety rule; 1 fish handling rule)
- ☐ Discuss 2 ethical dilemmas (1 catch and release; 1 environmental responsibility)
- ☐ Know 1 fishing regulation and where fishing regulations are found
- ☐ Explain the elements of good fish habitat

Advanced or Master Angler Checklist

- ☐ Tie 3 additional fishing knots
- ☐ Identify 4 different rods and reels
- ☐ Learn to cast the spinning reel and either the baitcasting reel or the fly reel
- ☐ Identify at least 5 fish species (both saltwater and freshwater) and the tackle used to fish for them
- ☐ Know 5 fish body parts and their functions
- ☐ Discuss 4 ethical dilemmas (2 catch and release; 2 environmental responsibility)
- ☐ Discuss 5 fishing safety rules (water safety and fish handling)
- ☐ Know 4 fishing regulations and where to find them
- ☐ Describe 4 aquatic habitats in Texas and good fishing spots in each habitat (2 saltwater & 2 freshwater)



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