Basic Fly Fishing
for Students
Parts of a Fly Rod

Butt Section
- Reel Seat
- Butt Cap
- Grip
- Hook Keeper
- Ferrule – Female
- Ferrule – Male
- Stripping Guide
- Snake Guide
- Tip-top Guide
- Tip Section
- Butt Cap

Parts of a Fly Line

Fly Reel
- Backing
- Fly Line
- Leader
- Tippet
- Fly
Practice Casting Positions

Casting involves a pick up and lay down, four-step process: 1) Pick up, 2) back cast, 3) forward cast, and 4) lay down. The casting arc is created between steps 2 and 3. Good casting loops are created in the “speed up and stop” at the end of steps 2 and 3.

Loading The Rod

Loading energy into the rod requires good timing, not strength. You should feel the rod bend as you cast. Stop the rod immediately after step 2, the backstroke and after step 3, the forward stroke.
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 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.

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.

Koch Knot
A my favorite knot when teaching beginning fly fishers to attach the fly. It is easy to tie and can be done quickly. Always remember to lubricate the knot well with saliva or water before “snugging” it down. Doing this eliminates the heat produced by the friction created when you tighten the knot, keeping the monofilament strong.
The Gotcha Beetle
Terrestrials that fall or are blown onto or into the water are beetles, ants, grasshoppers, crickets and other animals. The Gotcha Beetle is tied using foam sheeting for the body, adding hackle, rubber legs and, if desired, mono eyes adds to the attractiveness of the fly. It is simple to tie and a real fish getter on our local hill country streams.

Materials:
Hook – 9480 dry fly or 3906 wet fly size 12-8
Thread – 6/0 of desired color
For the body: Strip of foam sheeting of desired color, cut to the width of the gap of the hook
For the Ribs: hackle feather of desired color
For the Legs: thin rubber pieces of desired color
Indicator: yellow yarn, combed out or a thin strip of yellow foam
Mono Eyes: extra small or small eye pieces if desired

Step 1
Secure thread on hook shank one quarter the length of the hook shaft behind the eye of the hook. Wrap the thread back to slightly below the bend of the hook. Wrap the thread forward to the tie-in point then back and forward twice more. This creates a thick thread base to cement the foam underbody to the hook. Apply head cement liberally over the thread base.

Step 2
Bind a strip of foam starting at the tie-in point back to slightly below the bend of the hook by creating 5 to 6 segments about 1/10 inch apart. Use 2 to 3 snug wraps at each segment to secure the foam to the shaft of the hook.

Step 3
Wrap thread one segment forward (at the bend of the hook). Strip the fuzzy fibers from the thick part of the hackle stem. Hold the feather by the tip (using left thumb and forefinger) stroke down the shaft of the feather with the right thumb and forefinger so the hackle fibers spring out at right angles to the stem. Bind the bare stem of the feather to the shaft of the hook with 3 to 4 snug wraps. The tip of the feather should be pointing well behind the bend of the hook and the shiny side of the feather is facing the fly tier.

Step 4
Wrap the thread forward covering the previous wraps to the mid shank. Cut two pieces of rubber leg material about 2 1/2 inches in length. Bind one on each side of the hook shank with 2 loose wraps. Even the legs and position them as desired. Then make a third snug wrap around the hook shank and the legs, securing them in the desired position.

Step 5
Wrap the thread forward to a position in front of the foam body. Grasp the feather by its tip with hackle pliers and palmer the hackle forward to just in front of the foam body. Tie off and clip excess feather. If mono eyes are to be added to the fly, tie them on just behind the eye of the hook.

Step 6
Pull the foam strip up and forward and bind the strip to the hook shank just in front of the under body. After making several snug wraps around the hook shank, add a tuft of combed-out yarn or a thin strip of foam and secure it with several more snug wraps. Make a whip finish and apply head cement. Trim the foam sheeting forward of where it is bound to the hook shank and immediately behind the eye.

Your Gotcha Beetle is ready to GO FISH!
The Mayfly Life Cycle

The mayfly cycle is: egg, nymph, dun (subimag) and spinner (imago). The nymphs hatch from the eggs and live on the bottom, where they become vulnerable to the fish if the current knocks them free or if they swim from one place to another. During emergence — the mayfly’s most vulnerable stage — the nymphs swim to the surface, split their nymphal shucks, and emerge as duns. The duns drift on the surface for a short while before flying off to the streamside vegetation where they molt into spinners. The spinners return to the stream to mate above the water, deposit their eggs, and fall spent to the stream. Fish also eat the spinners.

Nymph Natural and Pattern

Natural mayfly nymphs are not smooth; they have gills and legs that move about in the water. There are many types of fur nymphs that imitate the naturals.
Bug Picking – Is Your Creek Polluted?

Have you ever noticed the many small animals such as insects, snails, and worms that live on the rocks and roots at the bottom of creeks, rivers, ponds, and lakes? Some of these small aquatic animals are very sensitive to changes in the water and will die if the water becomes polluted. By looking for and recognizing the different types of aquatic animals in aquatic environments, you can begin investigating the water quality of those environments.

**Equipment:** safe footwear for wading, forceps, magnifiers, small aquatic nets, pipettes, Bug Picking Data Sheet, pencils and shallow pans for holding specimens

**Directions:**
1. Wade into shallow water, turning over rocks, looking for aquatic animals (“bugs”). Replace rocks where you found them after you inspect them.
2. Place each “bug” you find in a specimen pan and begin to divide them into different types and groups according to the Bug Picking Data Sheet. (Water in the pans will keep them alive while you take data.)
3. On the Bug Picking Data Sheet, put a tally mark next to the picture that matches each aquatic animal you find. Gently return the animals to the water.
4. Look at the 3 different groups of aquatic animals you found in the water. To determine if your water might be polluted, answer these questions or circle the correct response.

- Did you find animals that are pollution sensitive?
  - None
  - 1-3 species
  - More than 3 species

- Did you find animals that are somewhat sensitive?
  - None
  - 1-3 species
  - More than 3 species

- Did you find animals that are tolerant of pollution?
  - None
  - 1-3 species
  - More than 3 species

**This water appears to be (circle one):** Not Polluted OK Polluted

What could be happening upstream or on land around the water to affect the water quality where you are sampling?

I am basing this hypothesis (guess) on:
Bug Picking Data Sheet

Group 1
Pollution Sensitive

- Stonefly Larva
- 1 in.
- Whirligig Beetle
- 0.5 in.
- Mayfly Nymph
- 1 in.
- Caddisfly Larva
- 0.5 in.
- Grass Shrimp
- 1-2 in.
- Dobsonfly Larva
- up to 3.0 in.

Number of Species Found
- 3 or More
- 1 to 3 Species
- No Species Found

Group 2
Somewhat Sensitive

- Diving Beetle
- 1-1.5 in.
- Dragonfly Larva
- 1 in.
- Damselfly Nymph
- 0.3 in.
- Scud
- 1 in.
- Water Boatman
- 0.4 in.
- Coiled Snail
- 0.2 in.
- Midge Larva

Number of Species Found
- 3 or More
- 1 to 3 Species
- No Species Found

Group 3
Pollution Tolerant

- Mosquito Larva
- 0.3 in.
- Gilled Snail
- 0.5 in.
- Freshwater Clam
- 0.5 - 1.0 in
- Leeches
- to 3 in.
- Aquatic Worm
- 1 in.
- Midge Larva
- 0.2 in.

Number of Species Found
- 3 or More
- 1 to 3 Species
- No Species Found
Safety Equipment
A checklist of things to take with you on your fishing trip.

- Life Jacket/PFD
- Hat
- Sunglasses
- Sunscreen
- Water
- Pliers
- Small First Aid Kit
- Hemostats (optional)

Note
Wading sticks help judge water depth when wade fishing and help maintain balance on slippery rocks or muddy bottoms. Swift water is dangerous, especially if above your knees. Fishing with a buddy is an essential safety measure.
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.
It’s fun to learn to clean and cook your fish. Ask an adult for help and be careful with the knife. Keep cleaned fish ice-cold.

**Scaling**
For most fish, you’ll want to remove the scales if they are not skinned.

**To scale fish:**
Hold the fish by its tail and scrape from tail to head with a fish scaler, butter knife or tablespoon. Cut around the head with a sharp knife.

Remove the head and insides.

**Skinning**
Skin a fillet by placing it skin-side down on the cutting board. Start at the tail and keep a tight grip on the skin. With the knife at an angle, saw the flesh off the skin.

Catfish have tough skins and you need pliers to pull them off. First, cut around the head with a sharp knife, then pull the skin back with the pliers. Finally, remove the head and insides.

**Filleting**
Always cut away from yourself.

**To make boneless fillets:**
Cut down to the backbone behind the head and along the side of the fish. Slice the meat off the bones. Turn the fish over and repeat. The cheek meat just behind the eye is a delicacy in some households.

**Proper Cleaning**
Trimming fat reduces your intake of PCBs, which accumulate in fatty tissue. Mercury accumulates in muscle tissue, the part you eat, so limit your consumption. For consumption bans and advisories, visit the Texas Department of State Health Services Web site: www.dshs.state.tx.us/seafood/