FLY FISHING: KNOTS & RIGGING

A hands-on workshop and discussion of essential knots used in fly fishing, as well as various styles of rigging for specific fish species or styles of casting.
TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Popular Knots</td>
<td>3</td>
</tr>
<tr>
<td>Knot-tying Terminology</td>
<td>4</td>
</tr>
<tr>
<td>Knot-tying Tips</td>
<td>4</td>
</tr>
<tr>
<td>Knot Strength</td>
<td>5</td>
</tr>
<tr>
<td><strong>KNOTS</strong></td>
<td></td>
</tr>
<tr>
<td>Terminal Knots (Tippet to Fly)</td>
<td>6</td>
</tr>
<tr>
<td>Improved Clinch</td>
<td>6</td>
</tr>
<tr>
<td>Double Davy</td>
<td>7</td>
</tr>
<tr>
<td>Uni Knot (Duncan or Griner)</td>
<td>8</td>
</tr>
<tr>
<td>Palomar Knot</td>
<td>9</td>
</tr>
<tr>
<td>Terminal Loops (Presented as loop-to-loop connections as well as terminal knot)</td>
<td>10</td>
</tr>
<tr>
<td>Non-Slip Loop</td>
<td>10</td>
</tr>
<tr>
<td>Perfection Loop</td>
<td>12</td>
</tr>
<tr>
<td>Surgeon’s Loop</td>
<td>13</td>
</tr>
<tr>
<td>Whipping a Loop</td>
<td>14</td>
</tr>
<tr>
<td>Leader to Tippet (Adding Tippet to Leader)</td>
<td>14</td>
</tr>
<tr>
<td>Double Surgeon’s Knot</td>
<td>14</td>
</tr>
<tr>
<td>Blood Knot</td>
<td>16</td>
</tr>
<tr>
<td><strong>Fly Line to Leader</strong></td>
<td>17</td>
</tr>
<tr>
<td>Loop-to-Loop</td>
<td>17</td>
</tr>
<tr>
<td>Nail Knot</td>
<td>18</td>
</tr>
<tr>
<td>Knotless Connection</td>
<td>19</td>
</tr>
<tr>
<td><strong>Back to Fly Line</strong></td>
<td>20</td>
</tr>
<tr>
<td>Albright Knot</td>
<td>20</td>
</tr>
<tr>
<td>Bimini Twist</td>
<td>21</td>
</tr>
<tr>
<td><strong>Back to Reel Arbor</strong></td>
<td>22</td>
</tr>
<tr>
<td>Arbor Knot</td>
<td>22</td>
</tr>
<tr>
<td><strong>Saltwater Considerations</strong></td>
<td>22</td>
</tr>
<tr>
<td>Haywire Knot</td>
<td></td>
</tr>
<tr>
<td>Stinger or Trailing Hook</td>
<td>23</td>
</tr>
<tr>
<td>Snell Knot</td>
<td>23</td>
</tr>
<tr>
<td><strong>Summary of Knot/Loop Uses and Functions</strong></td>
<td>24</td>
</tr>
<tr>
<td>Attach Tippet to a Fly</td>
<td>24</td>
</tr>
<tr>
<td>Terminal Loop Knots</td>
<td>24</td>
</tr>
<tr>
<td>Tie Leader to Fly Line</td>
<td>24</td>
</tr>
<tr>
<td>Attach Fly Line to Backing</td>
<td>24</td>
</tr>
<tr>
<td>Attach Backing to Reel</td>
<td>24</td>
</tr>
<tr>
<td>Join Two Lines Together</td>
<td>24</td>
</tr>
<tr>
<td>Wire Leaders</td>
<td>24</td>
</tr>
<tr>
<td>Specialty Knot</td>
<td>24</td>
</tr>
<tr>
<td><strong>RIGGING</strong></td>
<td>25</td>
</tr>
<tr>
<td>Dropper Rig</td>
<td>25</td>
</tr>
<tr>
<td>Nymph Rig</td>
<td>26</td>
</tr>
<tr>
<td>Tight Line Nymph Rigging Tactics</td>
<td>26</td>
</tr>
<tr>
<td>Czech Style Nymphing</td>
<td>26</td>
</tr>
<tr>
<td>High Stick Nymphing</td>
<td>26</td>
</tr>
<tr>
<td>George Harvey/Joe Humphreys Method</td>
<td>26</td>
</tr>
<tr>
<td>French Nymphing Method</td>
<td>26</td>
</tr>
<tr>
<td><strong>Bounce Method Rigging</strong></td>
<td>28</td>
</tr>
<tr>
<td><strong>Sink Tip</strong></td>
<td>29</td>
</tr>
<tr>
<td><strong>Skagit</strong></td>
<td>29</td>
</tr>
<tr>
<td>Saltwater Considerations</td>
<td>30</td>
</tr>
<tr>
<td>Building Your Own Leader</td>
<td>31</td>
</tr>
</tbody>
</table>

Note: throughout this document, the tippet is tied to the fly, instead of referring to the leader tied to the fly.
A very special thank you to Jo Starling, of Jo Starling Creative, Tuross Head, New South Wales, Australia for the illustrations of the knot tying sequences.

**POPULAR KNOTS/LOOPS**

» Improved Clinch Knot
» Uni Knot (Duncan, Griner Knot)
» Davey Knot (and Double Davey Knot)
» Blood Knot
» Palomar Knot
» Nail Knot
» Surgeon’s Knot

» Non-slip Loop
» Surgeon’s Loop
» Perfection Loop
» Albright Knot
» Arbor Knot
» Haywire Knot
» Snell Knot
KNOT-TYING TERMINOLOGY

1. **Butt**: The thick part of the leader. The butt of a leader is attached to the fly line.
2. **Standing End**: The part of the line opposite the knot.
3. **Tag End**: The part of the line where the knot is tied. The opposite of the Standing End.
4. **Tippet**: The last two feet of a leader to which the fly is attached. The tippet can be the end of a leader or an added piece of monofilament to the end of a leader.
5. **Turns or Wraps**: A turn or wrap is one complete revolution of line around another.

KNOT-TYING TIPS

1. **Lubricate Knot**: Before tightening a knot, lubricate it with water, saliva, or a lubricant prior to drawing it tight. This will help the knot slide and seat properly. Lubrication decreases excessive heat which weakens monofilament.
2. **Pull Standing Line or Tag End Slowly**: When tightening turns, wraps, or loops of a knot, be sure they are pulled in a neat spiral and each wrap coil aligns edge-to-edge with the next wrap coil as the knot closes. Do not let the loops/wrap cross over each other. If loops are pulled up quickly, the loops may cross over one another. This can cause the upper loops to cut the ones beneath as tension is applied.
3. **Pull Knots Tight**: Slippage in a loosely-tied knot can cut the line and cause breakage in the knot when suddenly tightened. Tighten the knot with a slow, steady continuous pull of the standing parts in opposite directions.
4. **Seat the Knot**: Once the knot is tight, hold both standing parts of the lines close to the knot and make one, and only one, sharp pull to seat the knot.
5. **Monofilament**: A single strand of line as opposed to multi-filament lines, which are strung from multiple strands fused, braided, or bundled together. Monofilament is typically made from a variety of plastics, but most commonly nylon or fluorocarbon.
6. **Avoid Twisting Lines**: Where a double line knot is tied, keep the two lines parallel rather than twisting them together.
7. **Trim the Tag End:** When the knot is properly snug, trim the tag end close to the knot, approximately ¼” from the knot. Use clippers or nippers to trim the tag end. Never use heat to trim the line. Heat will weaken the line.

**KNOT STRENGTH**

Knots weaken the line in which they are made and reduce the breaking strength of the line. When knotted line is strained to its breaking point, it almost always fails at the knot or close to it, unless it is defective or damaged elsewhere. The bending, crushing, and chafing forces that hold a knot in place also unevenly stresses line fibers and ultimately leads to a reduction in strength.

The exact mechanisms that cause weakening and failure are complex and are the subject of continued study. Relative knot strength, also called knot efficiency, is the breaking strength of a knotted line in proportion to the breaking strength of the line without the knot. Determining a precise value for a particular knot is difficult because many factors can affect a knot efficiency test: the type of material, the size of line, whether it is wet or dry, how the knot is dressed before loading, how rapidly it is loaded, whether the knot is repeatedly loaded, and so on. The efficiency of common knots range between 40-80% of the line’s original strength.

Knot strength indicates the performance of a line when there is a knot, and this is usually referred to as a percentage of the linear strength. For example, a line that has a linear strength of 4lbs and knot strength of 3lbs would be said to have a ‘75%’ knot strength.

Different knots will produce different results. The worst performing knot is an ‘overhand knot’ also known as a ‘granny knot’ which should never be used for angling.

A normal or ‘dry knot’ test is made by tying a knot in the line before wetting and drawing it slowly tight before testing its breaking strain.

A ‘wet knot’ test is made by first tying the knot, then submerging the line in water for a period of at least two hours. During this period the line takes on the maximum amount of water for its diameter and the effect upon breaking strain can be accurately measured.
TERMINAL KNOTS

Leader (Tippet) to Fly

» Improved Clinch Knot (and Clinch Knot)
» Davy Knot (and Double Davy Knot)
» Uni Knot (Duncan, Griner Knot)
» Palomar Knot

IMPROVED CLINCH KNOT

The Improved Clinch is a time-tested and very popular choice for tying a monofilament line to a fly. It is reliable and easy to tie. It can be difficult to tie in lines testing greater than 25 pounds breaking strength. It is not recommended for braided line.

1. Pass tag end of line through eye of hook. Place standing line parallel to tag end, then wrap tag end 5 or more turns around standing line.

2. Bring the tag end of the line back through the first loop formed behind the eye. If you pull the tag end tight (close the knot) at this point, you have tied the Clinch Knot. However, if you do not close the knot, but instead pass the tag through the big loop as illustrated below, wet the knot, then pull the tag end tight and close the knot, you just tied the Improved Clinch Knot. Seat the knot by pulling on the standing line, and by pulling the tag end.

3. Pull standing line to close knot and cut the tag end close.
**DOUBLE DAVY KNOT**

The Double Davy Knot is attributed to Davy Wotton. The positive aspects of this knot are speed, size and strength—all great attributes for a fishing knot. Once learned, the Double Davy Knot can be tied very quickly which gets you back to fishing in a minimal amount of time. It is also a very compact knot making it a nice knot for small flies. Various tests rate it between 85 to 100 percent of line strength, with 90% as a safe assumption. The Double Davy Knot should be in every fly fisher’s arsenal of knots!

1. Pass 3 to 4 inches of tippet through the hook eye.

2. Make a simple overhand knot then bring the tag end back through the loop making sure to pass between the overhand knot and the hook itself.

3. Continue the tag end over the top of the loop, then down through the loop, then around the bottom of the loop, then back.

4. Tighten the knot by pulling first on the tag end to draw up the knot (1), then on the standing line to set the knot (2).

5. Cut the tag end.
UNI KNOT (DUNCAN OR GRINNER KNOT)

Also known as the Duncan or the Grinner Knot the Uni Knot is a good and dependable knot for tippet to fly connections. Some anglers find it easier to tie than the Improved Clinch and equally dependable.

1. Pass tippet through eye of hook and double back parallel to the standing line. Make a loop by laying tag end over the doubled line.

2. Make 4-6 turns (depending on size of tippet diameter) with the tag end around the double line and through the loop.

3. Moisten lines and pull tag end to snug up the turns.

4. Pull the standing end to slide knot down to the eye or leave a small loop if desired. Cut the tag end.
PALOMAR KNOT

The Palomar Knot comes close to a 100% knot when tied properly. This is also a very good knot to use with braided fishing line.

1. Double 6 inches of tippet and pass end of loop through eye of hook.

2. Tie a loose overhand knot with hook hanging from bottom.

3. Holding overhand knot between thumb and forefinger, pass loop of line over the hook. Slide loop above eye of hook.

4. Pull on both the standing line and tag end to tighten knot down onto eye. Cut the tag end close.
TERMINAL LOOPS

Note: loops are most commonly used to connect two lines (loop-to-loop connection), but in this document, loops can also be used as a terminal knot to the fly

Tippet to Fly

» Non-slip Loop
» Perfection Loop
» Surgeon’s Loop
» Whipping a Loop

NON-SLIP LOOP

The Non-slip Loop is also known as the “Kreh Loop” as it has been popularized by fishing legend Lefty Kreh. As its name suggests it forms a non-slip loop at the end of a fishing line. The loop connection to a fly can give the fly more natural action.

1. Make an overhand knot in the line about 10 inches from the end. Pass the tag end through the hook eye and back through the loop of the overhand knot.

2. Wrap the tag end around the standing part 3 to 5 times.
3. Bring tag end back through overhand knot, entering from same side of the loop it exited from before.

4. Moisten he knot then pull slowly on the tag end to cinch the wraps loosely together. Pull the loop and the standing line in opposite directions to seat the knot.

5. Cut the tag end
PERFECTION LOOP

Strong and effective the Perfection Loop is a favorite for tying a loop at the end of the line. Besides being strong and reliable, it can be tied to make a very small loop. It can also be effective as a terminal knot.

1. Form a loop at the end of the line by passing the tag end behind the standing line.

2. Pass the tag end around the first loop (A).

3. Continue the tag end around the first loop (A) then between the two loops.

4. Drop the loop (B) and fly through the first loop (Loop A).

5. Close and seat the knot, cut the tag end.
SURGEON’S LOOP

The popularity of the Surgeon’s Loop lies in its simplicity as well as its strength.

1. Double the end of the line.

2. Make an overhand loop and tighten the knot.

3. Pass the loop through again (Double Surgeon Loop). Pass the loop through again for a Triple Surgeon Loop.

4. Hold the standing line and tag end and pull the loop to tighten the knot.

5. Cut the tag end.
WHIPPING A LOOP

Note: Refer to one of the animated knot references mentioned at the beginning of this document for illustrations describing the method to Whip a Loop. Whipping a Loop is utilized for a loop-to-loop connection not as a terminal knot.

1. Fold a couple of inches of the fly line back on itself.
2. Having secured a few wraps of the thread from a bobbin holder on the
3. Wrap until the ends of the loop are covered, and finish with a whip
   finish on the wraps. Apply head cement or UV goo to the wraps.

LEADER TO TIPPET

Adding Tippet to a Leader

» Double Surgeon’s Knot
» Blood Knot

DOUBLE SURGEON’S KNOT

This knot ranks as one of the best and easiest to tie knots for joining lines of equal or unequal diameters. It can also be used to join lines of different materials. It is simply two overhand knots with the entire leader pulled through the knot each time. When properly tied, the Surgeon’s Knot approaches 100%-line strength. It must be tightened by pulling on all four strands to properly seat the knot. To tie the Triple Surgeon’s Knot, proceed to do a total of three wraps of the loop through the overhand knot (hence the triple in the name). While the Triple Surgeon’s knot may be a bit bulky, there is some measure of added security with this knot.

1. Lay the line and tippet on top of one another overlapping each other by several inches.
2. Form a simple loop. Pass both the tag end and the entire leader through the loop.

3. Pass both the tag end and the entire leader through the loop a second time (Double Surgeon’s). (Optional: Pass both tag end and leader through the loop an additional time to tie the ‘Triple Surgeon’s Knot’.)

4. Moisten knot and pull all four (4) ends tight.

5. Cut both tag ends.
**BLOOD KNOT**

The Blood knot can be used to join two lines together. The Blood Knot is a tried and true fishing knot and a favorite of fly fishermen. The Blood Knot can be used to add tippet to a leader, but it is also a good knot to connect backing to fly line, or fly line to leader, in place of a loop-to-loop connection. The strength of the knot is increased by making at least 5 and up to 7 wraps on each side of the knot. It works best with lines of approximately equal diameter.

1. Overlap ends of lines to be joined. Twist one tag end around the other making five (5) turns. Bring tag end back between the two lines.

2. Repeat with the other end wrapping in opposite direction the same number of turns. Then insert the second tag end through the loop between the two lines, in the opposite direction from the first tag end.

3. Slowly pull lines in opposite directions. Turns will wrap and gather. Clip ends close to the knot.

4. Cut the tag ends.
FLY LINE TO LEADER

» Loop-to-Loop
» Nail Knot
» Knotless Connection

LOOP-TO-LOOP KNOT

The Loop-to-Loop Knot is not really a knot. It is a method of joining or interconnecting two loops and is often referred to as interlocking loops. The method is simple enough but there is one pitfall to be avoided. That is where one loop folds the wrong way making a girth hitch. The loop-to-loop connection is exceptionally strong.

Many fly lines now come with pre-made loops on their ends. Just tie a loop at the end of the leader you are attaching (Perfection Loop, Surgeon’s End Loop, etc.) and use the Loop-to-Loop knot to join the two lines.

1. Slip one loop over the other loop. (Fly Line in left hand, leader in right hand; Leader loop over Fly Line loop).
2. Run leader line through same Fly Line loop.
3. Pull lines in opposite directions to lock the loops together. Be careful that the loops join together end-to-end and that one does not fold back forming a girth hitch. (Fly Line in left hand, leader in right hand; Leader loop over Fly Line Loop).
NAIL KNOT

There are several nail knot tools available in the marketplace. This knot can be used to attach backing to a fly line or a leader to a fly line. The Nail Knot is a good knot to connect two pieces of line together, of the same or different diameters.

1. Hold the tool in the palm of either hand. Place the leader (or backing if that is what you are attaching to the fly line) between the metal guides on top of the pad and through the tips. Run at least six (6) inches beyond the tip of the tool and hold in place with the thumb of the hand holding the tool.

2. Make 4 or 5 tight wraps around the tip of the tool working back toward your thumb.

3. Feed the tag end of the line under the coils just made and back out the tip of the tool.

4. Holding coils in place on the tool with your thumb, feed the end of the fly line into the tip of the tool under the coils and out about a half inch past the coils.
5. Hold everything in place gently and give a quick tug on the tag end of the leader or backing. This causes the knot to slide off the tool and onto the fly line. Make any adjustments needed and tighten down the knot firmly. Trim tag end and fly line close to the knot.

6. Trim the tag end.

KNOTLESS CONNECTION

This connection is ultra-smooth, exceptionally strong, and won’t cause the line tip to sink, hinge, or splash during fly presentation.

Materials Needed:
1. Embroidery needle: size 8, 9, or 10
2. Pin vise
3. Razor blade
4. Sand paper: 100 grit
5. Zap-a-Gap
6. Snips

Tying Instructions:
1. Insert a number 9 needle point in a pin vise.
2. Insert eye of needle into center of fly line core with a twisting motion.
3. Push and twist the needle ¾ of an inch into the flyline tip and out the side of the line coating.
4. Pass the needle tip thru the needle eye about an inch.
5. Put a simple overhand knot into the end of the leader butt section.
6. Withdraw the needle and leader tip from the fly line tip, stopping at the last 2-4 inches of leader butt section.
7. Roughen ⅜ inch of leader butt at a point of ½ inch beyond the tip of the fly line with 100-grit sand paper.
8. Apply a small amount of Zap-a-Gap just to the roughened area.
9. Carefully pull the roughened leader butt area inside the fly line, with a continuous smooth motion.
10. With clippers, cut excess leader butt off very close to exit hole.
11. Place a small amount of Zap-a-Gap on the leader.
12. Make a couple quick, strong pulls of the line and leader.
BACKING TO FLY LINE

» Albright Knot
» Bimini Twist

ALBRIGHT KNOT

The Albright Knot is one of the most reliable knots for joining lines of greatly unequal diameters or different materials such as monofilament to braided line.

1. Make a loop in the heavier line and run about 10” of the lighter line through the loop.

2. Hold the three lines between your thumb and index finger. Wrap the light line back over itself and both strands of the loop.

3. Make 10 tightly wrapped turns. Feed the tag end back through the loop and exit the loop the same side as it entered.
4. Hold both ends of the heavy line and slide the wraps to the end of the loop. Pull the light line to tighten and clip tag end close to the knot.

5. Cut the tag end.

**BIMINI TWIST**

The Bimini is considered to be a 100% knot providing 100%-line strength. It creates a double line with a loop at the end to which a leader can be attached with a loop-to-loop connection. This is a good knot to observe on the [www.netknots.com](http://www.netknots.com), [www.annimatedknots.com](http://www.annimatedknots.com), or [www.howtoflyfish.orvis.com](http://www.howtoflyfish.orvis.com).

**Tying Instructions:**

1. Double the line into a loop and make twenty twists in the end of the loop.
2. Slip the open end over a knee (or both knees or your feet for a long loop) and keep constant pressure on both ends of the loop.
3. Lower the hand that is holding the tag end until the tag end slips back over the first twists. Open the angle of the loop and let the tag end roll over the column of twists to the end of the twists.
4. After the line is rolled down to the end of the twists, make a half hitch (overhand knot) on the near side of the loop to lock everything in place. Maintain tension on all lines.
5. Secure the knot by making 3 to 5 half hitches around both lines of the loop, working from the loop end back toward your knot. Tighten-up half hitches against the base of the knot.
6. Clip excess tag end to about ¼ inch.
BACKING TO REEL

Arbor Knot

ARBOR KNOT

Use the simple Arbor Knot to tie your fishing line to the spool of your reel. The goal here really isn’t in thinking that a knot is going to hold if a fish has taken all the line down to the end your reel spool, but to have something strong enough to hold in the event you lose a rod and reel overboard and have to pull it up by the line.

Tying Instructions:
1. Wrap your line around the arbor of the spool with the tag end of the line. Then tie a simple overhand knot around the standing part with the tag end.
2. Tie a second overhand knot in the tag end just an inch or two from the first overhand knot.
3. Pull the standing part of the line to slide the first overhand knot down to the spool and the second knot to jam against the first. Trim tag end close.

SALTWATER CONSIDERATIONS

Haywire Twist Knot

HAYWIRE TWIST KNOT

The Haywire Twist is considered by big game fishermen to be the strongest connection for joining wire to a hook. It can also be used to make a loop in the end of a wire leader. The first twists are called haywire wraps and the second twists are considered barrel wraps. It is the combination of the two that make the Haywire Twist so dependable.

Tying Instructions:
1. Thread the wire through the eye of the hook. Hold the loop between first finger and thumb. Cross one strand of wire under the other strand. Grip the two strands between finger and thumb of the other hand and twist.
2. Make sure the standing part of the wire and the tag end cross each other at an angle in excess of 90 degrees. This is the critical part of tying the Haywire. If they do not have sufficient angle, you will find that one wire is only wrapping around the other. You also must twist both at the same time so that they are both crossing each other. Make at least 3½ haywire wraps.
3. Next, start to make your first barrel wrap. Push the tag end until it is at a right angle to the standing part. Then make about five (barrel) wraps around the standing part with the tag end. Bend the tag end into a little “handle” and use that to rock the handle back and forth until the wire breaks at the last barrel wrap. Never cut the wire with pliers as that will leave a dangerous burr that can make a nasty cut to hand or finger.
“STINGER’ HOOK OR TRAILING HOOK

» Snell Knot (Traditional)

SNELL KNOT (TRADITIONAL)

“Snelling a hook” is one of the oldest methods to attach a line to a hook. The Snell Knot is actually a nail knot and provides a reliable straight-line pull when setting the hook. There are several ways to tie this knot and this version is easy. The Snell Knot is included in this manual because many fly fishers use “tube flies” which use a terminal knot to secure the “stinger” or trailing hook.

1. Pass the tag end through the hook eye then through the hook eye again in the same direction. This should form a loop below the hook.

2. Pinch the eye and both parts of the tippet.

3. Continue to wrap the loop for 5 to 7 turns. While holding turns in place, pull the standing line that is through the eye slowly and steadily.
4. Wrap the loop around the hook bend.

5. When knot is almost tight slide it up against the hook eye then pull the other end of the leader with pliers to fully tighten and set the knot.

6. Using a hemostat can be very helpful to set this knot.

**SUMMARY OF KNOTS/LOOP USE AND FUNCTIONS**

**ATTACH TIPPET TO A FLY**
- Popular
  - Improved Clinch
  - Palomar Knot
  - Uni Knot
  - Davy Knot
  - Double Davey
  - Duncan Knot

**TERMINAL LOOP KNOT (ATTACH TIPPET TO A FLY)**
- Non-Slip Loop
- Perfection Loop

**TIE A LEADER TO A FLY LINE**
- Albright Knot
- Blood Knot
- Nail Knot
- Surgeon’s Knot
- Loop to Loop
- Knotless Connection

**ATTACH FLY LINE TO BACKING**
- Albright Knot
- Bimini Twist Knot

**ATTACH BACKING TO A REEL**
- Arbor Knot
- Duncan Knot

**JOIN TWO LINES TOGETHER**
- Join lines of similar diameter and material
  - Blood Knot
  - Double Uni Knot
- Join lines of unequal size
  - Nail Knot
  - Albright Knot
  - Surgeon’s Knot

**WIRE LEADERS**
- Haywire Twist

**SPECIALTY KNOTS**
- Snell Knot

**MAKE A LOOP AT THE END OF A LINE**
- Perfection Loop
- Surgeon’s Loop
- Non-Slip Loop
FLY FISHING: KNOTS & RIGGING

RIGGING

DROPPER RIG

The basic dropper rig is created by attaching a length of monofilament to the hook bend of the top fly. To this section of monofilament (or fluorocarbon), tie a second fly on the other end. The distance between the two flies is normally determined by the depth of the water. A general “rule of thumb” to determine the length of the monofilament is to multiply the depth of the water being fished by 1.5. For example, if the depth of the water you are fishing is 3 feet, then 3 x 1.5 would equal 4.5 feet, so the length of the monofilament could be 4.5 feet long. When the top fly is a dry fly, this rigging is called the “dry-dropper” and no strike indicator is necessary. When the top fly is a nymph, or wet fly, and the second fly is a nymph fly, this rig will normally have a strike indicator strategically attached and is called a “double-dropper”.

An alternative method of tying a dropper rig is to attach the section of monofilament (or fluorocarbon) to the hook eye of the first fly, then tie the other end of this section to the eye of a bottom fly.

Yet another alternative is to use a “tippet ring”. Tie a 6- or 7-foot length of leader to a tippet ring. Then tie a short length of monofilament or fluorocarbon to the same tippet ring, and tie on a fly that is 9” or less from the tippet ring. From the same tippet ring, tie a second length of monofilament or fluorocarbon (depending on the depth of the water you are fishing), then tie on your second fly at the other end. Normally in moving water, the length of this monofilament is 1.5 times the depth of the water you are fishing.
FL Y FISHING: KNOTS & RIGGING

NYMPH RIG

Tight Line Nymph Rigging Tactics

The goal of tight line nymph rigging is to keep a taut connection between the nymphs and the leader or line so the leader or line will hesitate the moment the nymphs stop during the drift. This is the method of nymphing without a strike indicator. This style of nymphing requires complete focus and concentration.

You must control the speed and depth at which your flies drift.

This style of nymphing is most obvious with Czech and Polish styles of nymphing.

Czech Style Nymphing

In the Czech and Polish style of nymphing, the rods are often longer. The heavy flies and level tippets reach the stream bottom without the use of a tuck cast. Often highly visible sighters are built into the leader.

Fishing this rig normally requires a straight up or slightly straight up and across approach, which is common to ensure the line and leader end up in the current flowing at the same speed.

- Drift length: short (approximately 1 - 20’)
- Line will rarely lie on the water due to short drift
- Leader length: approximately as long as the rod
- Tippet diameter: 3X to 5X
- Weight: light to heavy bead head nymph without split shot
- Strike indicator: sighter (colored piece of mono built into leader)
- Casting: short lob with weighted flies

High Stick Nymphing

High stick nymphing and the Harvey/Humphreys method have many similarities. The difference between the two methods is essentially the casting style. The Harvey/Humphreys method actually developed the “tuck” cast.
**Harvey/Humphreys Technique:** After you make the cast and the flies reach the appropriate depth, elevate the rod tip and gather slack with the line hand using a slow strip retrieve. Then, begin leading the nymphs through the drift, watching the fly line tip for any hesitation.

The tuck cast is achieved by stopping the rod tip high with a very abrupt stop on the forward cast, tucking the nymph flies into the pockets.

**George Harvey/Joe Humphreys Method**

- Drift length: short to medium (1 to 30’)
- Line will often lie on top of the water and gradually get picked up during drift
- Leader length: 8 - 12’
- Tippet diameter: 3x to 5x
- Weight: non-weighted or lightly weighted flies in combination with split shot
- Strike indicator: knotted leader sections or line/leader connection
- Casting: similar to high stick nymphing but incorporated into the tuck cast

**French Nymphing Method**

The French have won six World Fly Fishing Championships using a fishing method and nymph rigging unlike any other.

- A “curley-Q” or “slinky” as a strike indicator
- Rods are 10’ to 12’ (or longer), size 2-4 weight
- At the completion of the cast extend and elevate your arm and rod and never allow the leader to touch the water (tippet is submerged)
- No slack in the line
- Leader is 18’ to 20’ long with 10’ to 12’ of leader, curley-Q section, and tippet (size depends on fish species)
» Cast directly upstream; pull flies back toward you by raising the rod tip up and moving the rod through the drift

» Belgian style forward cast

» On forward cast, quickly drop rod tip to water then immediately raise rod tip to elevate the leader (and curley-Q)

» To make a curley-Q section: wrap 15 to 20-pound test monofilament tightly around a nail or pen tube and tape it at each end; submerge wraps into a pot of boiling water for 5 minutes, remove and place in freezer overnight

BOUNCE METHOD RIGGING

The Bounce method of nymphing is very common in Utah and the Provo River in particular, or rivers where the bottom is mostly gravel and void of big rocks and structure.

The rig is typically set up with a strike indicator and two nymph flies. A variant is to use a dry-dropper rig.

In either case, a piece of mono is tied on to the bottom fly with split shot attached at the bottom of this piece of mono. A substantial knot is then tied at the bottom of the mono.

This rig is fished with a pick-up/lay-down style of cast and requires a “Belgium” style wide arc on the upstream cast.
SINK TIP RIGGING

In addition to intermediate fly line and full sinking fly line, it is occasionally desirable to attach a length of sink tip to the floating line. This type of sink tip is normally a Versileader or Polyleader type of material and different from the sink tip used in a Skagit style rigging, in that it is less dense and has a slower sink rate.

SKAGIT RIGGING

This style of rigging was created and developed on the Skagit River in Washington by Ed Ward and Jerry French. It was primarily intended to be used in the “swinging a fly” style of Steelhead and Salmon fishing, however, the basic rigging can be very effective when fishing for other species, including Carp. It was also intended to be used for winter run fish typically requiring a deeper presentation of the fly. This has, however, evolved to be a “year-round” set up.

The running line is typically a monofilament with several companies now make a mono running line just for this purpose. In front of the running line, is the shooting head.

The grain weight of the shooting head is determined by the species of fish, size of the fly, and rod construction. The length of the shooting head is now in the 20’ to 26’.

A newer addition to the Skagit rigging is to tie a “swivel” between the running line and the shooting head, which is intended to reduce the coiling of the line due to the torque created by the two-hand cast.

In front of the shooting head is the leader, which is typically 1.5 times the length of the rod and is comprised of a section of sink tip, and a section of level monofilament.

This style of rigging has evolved over the past 30 years and continues to evolve as evidenced by use of shorter, lighter rods, and shorter shooting heads, although their grain weight is the same.
SALTWATER CONSIDERATIONS

SURF AND FLOATABLE BAYS:

1. Fly Lines
   » Floating
   » Intermediate or full sinking
   » Shooting head or full sinking

2. Leaders
   » Level leaders (4# - 12# test mono or fluorocarbon) perfection loop and preferred knot to fly (6’ to 18”)
   » Level leaders (4# - 12# test mono or fluorocarbon) with dropper, perfection loop, surgeons loop, preferred knot to fly (6” to 12”)

3. Tippet generally not needed

INSHORE/HARBORS:

1. Fly Lines
   » Floating (limited use)
   » Intermediate head, floating belly or full sinking
   » Shooting head, with intermediate or full sinking belly

2. Leaders
   » Level leaders (4# - 12# test mono or fluorocarbon) perfection loop and preferred knot to fly (6’ to 18”)
   » Level leaders (4# to 12# test mono or fluorocarbon) with dropper, perfection loop, surgeons loop, preferred knot to fly (6’ to 12”)
   » Around kelp: Level leaders (4# - 12# spider wire or similar) perfection loop, helps to “saw” through kelp with hook-up and running fish

3. Tippet generally not needed
FLY FISHING: KNOTS & RIGGING

OPEN WATER:

1. Fly Lines
   » Floating (limited use)
   » Intermediate head, floating belly (limited use) or full sinking
   » Shooting head, with intermediate or full sinking belly the faster the better for some species

2. Leaders
   » Level leaders (4# - 12# test mono or fluorocarbon) perfection loop and preferred knot to fly (6’ to 18’)
   » Level leaders (4# - 12# test mono or fluorocarbon) with dropper, perfection loop, surgeons loop, preferred knot to fly (6’ to 12’)
   » Around kelp: Level leaders (4# - 12# braided or similar) perfection loop, helps to “saw” through kelp with hook-up and running fish.

3. Tippet
   » Bite tippet from monofilament (surgeons knot with figure 8 knot at fly)
   » Bite tippet from wire (surgeons knot with a Davy Knot, Figure 8 knot at fly
   » Use level leader directly

BUILDING YOUR OWN LEADER

Today, most people will buy a knot-less tapered leader. For a long time, anglers would use different diameters of monofilament in specific lengths to construct their own leaders. To connect each of those lengths of monofilament, the angler would tie a knot. The final construction of the leader would result in a tapered leader with a knot indicating where each diameter size changed.

Basically, leaders are constructed using a 60%/20%/20% formula. Meaning, 60% butt section, 20% taper or mid-section, and 20% tippet. Also, basically, a combined length of each section will typically result in a leader 9 feet long.

The purpose of constructing a shock tippet is to provide a tippet at the fly that resists cutting and abrasion by sharp teeth, gill plates, or abrasive skin, and is usually used with the pursuit of salt water fish.
To construct a shock tippet you will need a butt section of 25 - 40 lbs. for 3 to 4 feet. Connect a short section of class tippet (class meaning the class of fish that will determine the weight that you want to play the fish) to the butt section with an Albright knot for 18 to 24 inches, and connect about one foot of wire or heavy monofilament shock tippet to the class tippet with a loop-to-loop connection for one foot.

**LEADER MATERIALS**

*Monofilament:* Made from a single fiber of plastic, this line is the most common leader material and comes in a variety of sizes, stiffness, and diameters.

*Fluorocarbon:* A synthetic material that claims to be nearly invisible underwater by having the same refraction index as water. Fluorocarbon is good for the last section (2’ or 3’) of the leader (the tippet section), and also for specific species of fish. Fluorocarbon also claims to have a faster sink rate when compared to mono.

*Furled:* Made from thread, monofilament, or a braid, this leader is knotless, tapered, and does not retain memory so energy transfer is very good. Many varieties available and are typically 5 feet long.

**LEADER CONFIGURATIONS**

*Monofilament:* Relatively longer with very good transparency. Strong and abrasion resistant.

*Northern Pike and Muskie:* Short, strong, abrasion resistant tippet

*Dry Fly:* Typically, 9 feet, and tapered

*Nymphing:* Longer, faster sinking, transparent

*Streamer:* Longer heavy butt section to turn over heavy flies

*Anadromous:* Strong and measured in relation to the length of the rod, to include sink tip

*Bass:* Short and strong for thick cover, heavy butts and shorter lengths for turning over big flies

---

*Author:*

*Dutch Baughman | FFI Board of Directors | Executive Committee | Education Committee Chair*

*Fly Fishers International has express permission from the authors to use this material. The material may be reproduced but cannot be altered without written permission from the author(s).*
OUR MISSION

FLY FISHERS INTERNATIONAL has been an organized voice for fly fishers since 1964. We represent all aspects of fly fishing—from the art of fly tying and casting instruction, to the protection of and access to fisheries around the world.

A 501c3 non-profit organization, FFI is driven by three fundamental pillars: CONSERVATION, EDUCATION, AND COMMUNITY. Together, these pillars provide the foundation for our vision of the future of fly fishing—a future in which anglers have access to prime waters and fish can thrive in healthy, protected habitats; in which learning never stops and artistry is not forgotten; and that recognizes the true value of camaraderie. If we want this legacy to be experienced by future generations, we have to work to make that happen.

JOIN FLY FISHERS INTERNATIONAL TODAY to help ensure that fly fishing can continue to instill the kind of passion it does today in so many of us.