



Monofilament Leaders For Fly Fishing

Phil Genova¹ and Ronald A. Howard Jr.²

Leaders and their Purposes

Leaders serve as the connection between the heavy fly line and the light fly. They make the fly appear to be disconnected from the line appearing more natural and suitable as prey. They also carry the energy of the line to the fly, laying it out smoothly and fully extending it from the line. This is the primary reason for using a tapered leader made from relatively hard monofilament.

These monofilament leaders have three primary sections: a butt, a mid-section, and a tippet. The butt is constructed of heavier and stiffer materials to more smoothly transfer the energy of the line to the fly. It should be of a diameter and stiffness that will form a smooth arc with the tip of the line once they are tied together and bent between the hands. This provides a good transfer of energy to the leader and prevents hinging. The mid-section serves primarily as a transition or taper between the heavy materials of the butt and the lighter materials of the tippet. Since connecting strands of material over about 0.002-0.003 inch different in diameter may result in a weak knot, the taper takes the line down in steps, with each piece in the transition at least 6 inches or so long. It also continues the transmission of energy from the line to the tippet. The tippet is the thinnest and softest part of the leader. In most cases, it is connected to the fly directly, providing a thinner, less obvious (at least to us) connection between the line and the fly. It is generally about as long as the butt section.

A properly tied leader will allow the fly to be presented quietly, leading the fly out smoothly in a straight line from the line to the fly. This makes hooking fish easier and imparts casting accuracy. The tippet provides concealment for the fly and may result in more strikes from selective fish.

Sometimes it is necessary to provide a shock tippet or bite tippet to protect the leader from being cut by sharp teeth or gill plates. These tippets are usually short and constructed of heavy monofilament or either single strand or braided wire. They are usually attached to the tippet with an Albright knot (See ***Knots***).

Choice of leader length, taper and tippet size depend upon fishing conditions, fly size, and personal preference. As a result, fly fishers must develop some experience before these choices come easily. As a rule, however, minor differences in leader length or tippet size have minimal impacts on angling success.

¹ Volunteer leader, New York State 4-H Sportfishing and Aquatic Resources Education Program; Chair, Federation of Fly Fishers Youth Committee

² Professor and Extension Specialist, Texas Agricultural Extension Service, College Station, TX 77843-2473

Remembering a few simple guidelines and keeping a basic selection of leader materials on hand will allow the angler to make changes on the water to meet current conditions.

In general, leaders should be about 50 to 60 percent butt section, 20 -30 percent mid-section or transition, and 10-30 percent tippet. IGFA rules require that the tippet section be a minimum of 18 inches long, but much longer tippets are advised when the leader material is light and the fly is very small. In that situation, the tippet becomes part of the cushioning at the end of the cast, assisting the tiny fly in landing delicately on the water. Since materials need to be about the same diameter, a leader may have lots of knots, and good line to line knots like the blood knot, surgeon's knot or double nail knot are needed to maintain line strength. Leaders intended for surface fishing are most often from about 72 to 12 feet long, and well tied leaders up to 18 or 20 feet will behave well. For sub-surface fishing with a floating line, these same leaders may work well, but using a sinking line or sink tip line requires shorter leaders or the addition of a mini-lead head to avoid having the fly buoy up behind the tip of the line. Some fly fishers use leaders as short as 3-4 feet under those circumstances.

Freshwater trout leaders are often long and fine. Bass leaders tend to be much stouter, allowing the angler to pressure fish that are headed for trouble with snags. Saltwater leaders may have only 3 or 4 diameters, perhaps with the addition of a shock tippet. Tippet strength needs to be matched to the fly, the conditions, and the fish being taken. Size 28 midges will not fit 1X tippet material, and an 8X tippet would not turn over even a small bass bug without excessive force in the cast. Similarly, small stream trout may be handled easily with 4-6X tippets, but monster pike, false albacore, big bass in cover, or red drum may call for much heavier ones, perhaps as large as 0.013 or 0.015 as opposed to 0.004-0.006.

Mason, maker of hard nylon leader material, suggests the following formulas:

For 5-weight or lighter lines

Butt 0.019 - 18 inches, 0.018 - 18 inches, 0.016 - 18 inches, 0.015 0 18 inches
 Mid-section 0.014 or 0.013 - 7 inches, 0.012 or 0.011 - 6 inches, 0.010 - 5 inches
 Tippet 0.009 - 0.006 - 18 inches on terminal end (remember to step it down)

For 6-weight or heavier lines, insert an 18 inch section of 0.021 (0.023 with lines 9 weight or higher)

For heavier flies and larger fish

Butt 0.021 - 18 inches, 0.019 - 18 inches, 0.017 - 18 inches, 0.015 - 18 inches
 Mid-section 0.014 - 12 inches, 0.013 - 12 inches
 Tippet 0.012 - 18 inches

For light saltwater work

Butt 0.021 - 18 inches, 0.019 - 18 inches, 0.018 - 18 inches, 0.017 - 18 inches
 Mid-section 0.016 - 12 inches, 0.015 - 12 inches
 Tippet 0.014 - 18 inches

The Orvis Company has an excellent flyer with their leader-tie kits. It suggests that tippet size be adjusted to the fly being used. Note that each tippet size covers a range of hooks and that most hook sizes can be accommodated with several tippet sizes. For bulky or weighted flies, consider going up in tippet size.

Hook Size	Tippet Size	Hook Size	Tippet Size
2-1/0	0X - 0.011	16-12	4X - 0.007
8-4	1X - 0.010	18-14	5X - 0.006
10-6	2X - 0.009	22-16	6X - 0.005
14-10	3X - 0.008	28-18	7X - 0.004

I have adapted the leader formulae in *Notes to Fly Fishermen about Leaders* by attaching a permanent 36 inch butt of either 0.021 or 0.023 material to my fly lines. Leaders from 72 to 12 or even 18 feet can be constructed on that butt. Pre-made leaders are carried in a leader wallet, but the materials to do some leader construction on the water are always present. Four examples of typical leaders are listed below.

72 foot Trout	9 foot Trout	12 foot Trout	9 foot Bass, Saltwater
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3X	4X	6X	Medium
24" - 0.019	36" - 0.021	36" - 0.021	40" - 0.021
16" - 0.017	16" - 0.019	24" - 0.019	26" - 0.019
14" - 0.015	12" - 0.017	16" - 0.017	22" - 0.017
6" - 0.013	6" - 0.015	12" - 0.015	20" - 0.015
6" - 0.011	6" - 0.013	7" - 0.013	
6" - 0.009	6" - 0.011	7" - 0.011	
18" - 0.008	6" - 0.009	7" - 0.009	
	20" - 0.007	7" - 0.007	28" - 0.005

Nearly any leader material manufacturer will provide some guidelines for tying leaders with their materials. Start with one of those suggestions, and modify the formulae to fit your line, casting style, and angling conditions.

While the sizes as designated by the X system are standardized, the flexibility, durability and strength of tippet material varies with the manufacturer and the formulation used in constructing it. Today's leaders are made primarily of nylon monofilament or fluorocarbon materials. The formulas make them hard and stiff or soft and flexible. As you grow in experience as a fly fisher, you will develop preferences for materials to be used in the various parts of your leaders and for different conditions. Fluorocarbon leaders are much more transparent than nylon, and they are heavier than water, so they sink and have lower visibility. Nylon leaders are much less expensive and suitable for most situations. They also have a bit more stretch, letting them give a bit under sudden pressure. Try them and see what you like, but learn to tie your own.