

My Terminal Knots

By Beth Jappay

Last month I gave an overview of my research on fishing knot strength. If you missed that article, [here is the link](#). The biggest new thing I learned with all this research is that the improved clinch knot, one of my go-to knots, can be tied two different ways—with the final tuck forward or backward. I will go into more detail about this later in this article. This makes a surprisingly large difference in the strength of the knot and virtually all of the online knot diagrams show it tied with the weaker backward tuck. I also learned that most knots are weaker when tied with fluorocarbon, and the improved clinch suffers more than most. After completing my research I became dissatisfied with this knot and began looking for an alternative. Today's article is about what I learned during this journey.

The first new knot I tried was a plain clinch knot when using mono (usually when I am dry fly fishing) as I saw in the results on the Toitfishing.com website that an 8 turn clinch knot was stronger than a 5 turn improved clinch knot (with mono). I ended up losing a couple of fish unnecessarily. The Toit website didn't test this knot with any line lighter than 10lb, and I came to the conclusion that with 5x tippet more than 8 turns must be needed with this knot.

The next knot I tried was the [Trilene knot](#)—both with mono and with fluoro. It is basically a clinch knot in which two wraps are done around the eye of the hook, and the tuck is done through both wraps. It is important with this knot that the initial wraps around the eye do not cross, and after losing a couple of fish on this knot, I have concluded it should mainly be used with larger line, because I am not able to see if 5x tippet is getting crossed inside the eye of a size #16 hook!

I next took a brief look at the [Palomar knot](#). It is rated as a very strong knot, but just like the Trilene knot, the line passes twice through the eye of the hook, and if the lines cross they can cut one another. It also seems to use a lot more tippet than I would like, so I ended up not spending much time on this knot—like the Trilene this knot seems best suited to salt water fishing.



The [San Diego Jam knot](#)

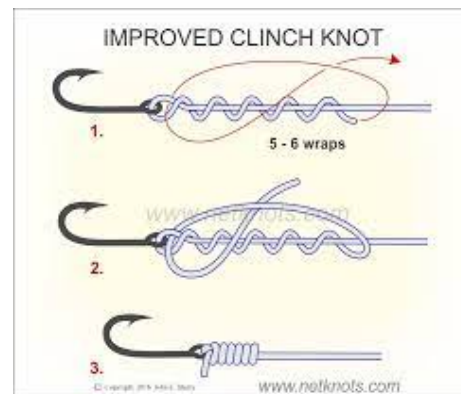
is the next knot I tried, and I have spent quite a bit of time trying to master this knot. It is one of the few knots that performed well with fluorocarbon, and it doesn't use a whole lot of tippet. The knot diagram does not seem too complicated, but I found myself, especially with smaller tippet, having a lot of difficulty coordinating the turns and tucks. I guess I should have taken more to heart the clue that in San Diego most fishermen hang their hook off of the boat rail

in order to free enough hands and fingers to tie this knot! I even tried to hang my hook off of one of the guides on my rod to emulate them, but that just didn't work out. I find this knot easier to tie with heavier line, and made sure I used this knot when I was fishing for huge Lahontan Cutthroat at Pyramid lake this spring. I plan to keep trying this knot when using lighter fluoro (when I'm not in a hurry).

I am more recently concentrating on the Orvis knot. It is a slip knot that has not been reviewed on the Toitfishing.com website, but performed well in the Yellowstone Anglers tippet shootout, especially with lighter mono tippet at a >90% strength. I am quite happy so far with the strength of this knot, and feel that with a little more experience I will become as comfortable tying this knot as I have been with the improved clinch. This is my current go-to knot for my point fly when I am dry fly fishing.

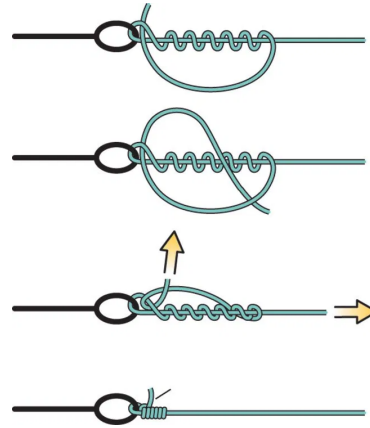
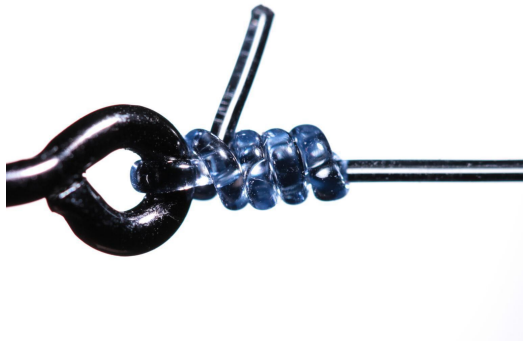
Improved Clinch Knot

The biggest advantage of this knot is that it is easy to tie and uses little tippet. Many people do not know that even if you tie this knot with big turns and loops (necessary with cold or fat fingers), you can end up using very little tippet. I now most often use this knot when tying a fly on a dropper. The biggest disadvantage is that if tied in a traditional manner it is a weak knot. This is especially true with fluorocarbon, something I learned at the Toitfishing.com website and which I presented in last month's article. The strength gain of the improved clinch knot over the clinch knot is due to the tag end being tucked again, decreasing slippage. If you are right-handed you probably wrap the knot clockwise. Looking on the internet for illustrations nearly all I have found show the tag end, after exiting the first loop, coming back in a counterclockwise (reverse) direction for the tuck, making the knot look like this:



Notice that the tag end exits before the first turn of the knot.

However, if you tuck the tag end in a forward direction, i.e. clockwise with a clockwise wrap, the tuck exits between the first and second turn. Those wraps grasp the tag, strengthening the knot. This version of the knot looks like this:



The above two illustrations are a little confusing, since the first is tied in a clockwise direction and the second is counterclockwise, but the second illustration was the only one I could find on the internet that demonstrated a forward tuck. An improved clinch knot tied with a forward tuck is significantly stronger than one tied with a reverse tuck. I had no idea, previously not paying attention to my final tuck. This likely explains many of my lost fish! Still confused? Watch this [YouTube video explaining it](#).

I wanted to be able to cite exact knot strengths in this article for the forward vs reverse tuck, so I contacted Wayne Du Toit, requesting raw results comparing both options for this knot, but he told me that the results for the reverse tuck were so bad he didn't keep them. I can report that in his overview video he rates the improved clinch knot strength as 7/10 with a forward tuck, and 5/10 with a reverse tuck.

I tie this knot large if I can, and I try to tie it so that I end up with a 4-10mm tag end protruding through the second loop. Then I put the tag end between my teeth, wet the knot with saliva by having it fully in my mouth, and pull the standing end (the leader side of the knot) to cinch it tight. Doing it this way ends up using the least amount of tippet. I then trim the tag end so that $\frac{1}{8}$ " or 3 mm remains. This is important to prevent slippage.

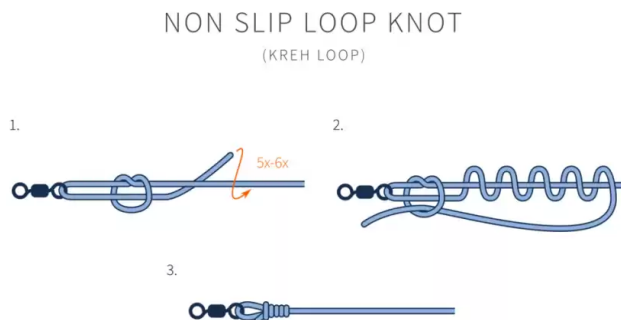
This knot is not as strong with fluorocarbon as with monofilament (this was demonstrated with both the Toit Fishing testing and the Yellowstone Anglers testing) as I discussed in last month's article. I am currently only using this knot when I have limited tippet to work with, such as on a dropper, when I have cold fingers, or when I am in a hurry.

Lefty Kreh Non-slip Loop

This is a strong knot that allows the fly to move freely, which is important when fishing midge pupa, boobies, damsel nymphs, and streamers (or steelhead flies). This knot has rarely failed me, usually only if I ran out of tippet on a dropper and used fewer wraps. Its biggest disadvantage is that it is tricky to control the size of the loop, and if the loop is too big smaller flies can get caught in it. Another disadvantage is that it also uses a little more tippet than the improved clinch, and it takes longer to tie (especially I have found if you are trying to minimize the tippet use of the dropper and start with a teeny tiny initial loop and a very short tag). The

Toitfishing.com website has not reviewed this knot yet, so I do not have his cool pictures, nor his confirmation of the knot's strength, but I have had this knot recommended to me by guides when going for steelhead, so you know it must be strong. It performed well with 2x, 4x, and 6x tippet in the Yellowstone Angler tippet shootout; the results can be found at <https://www.yellowstoneangler.com/gear-review/tippet-shootout>.

The trick to getting the right-sized knot loop is (after passing the tag end through the initial loop) to pull on the tag end until the eye of the hook is pulled to the desired distance from the initial loop. Then pinch the hook and initial loop between your index finger and thumb of your non-dominant hand while doing the wraps. Next pass the tag end back through the loop in the same direction. At this point I put the ~1 cm tag end between my teeth, put the knot in my mouth to lubricate it, and pull on the **tag end** of the knot to cinch it. Pulling on the standing end will make the loop of the knot larger.



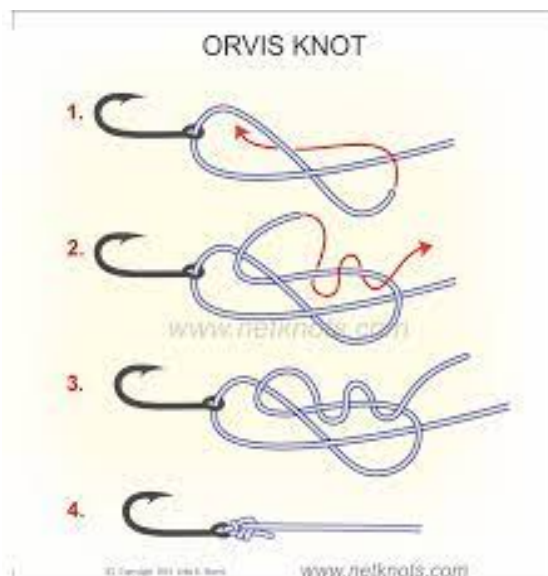
Suggested number of wraps for this knot depends on the diameter of the line:

Line test strength. Turns recommended

6-8 lbs.	7
8-12 lbs.	5
15-40 lbs.	4
50-60 lbs.	3
60 lb +	2



Orvis knot



This knot won a best-new knot contest at Orvis several years ago. Don't let the complexity of the diagram discourage you from trying this knot. It is basically a Davy knot with an extra turn in the second loop, which considerably improves its strength. I found it best understood by watching YouTube videos, and this one is my [favorite](#). I find it easiest to tie by pulling at least 6" of tippet through the eye of the hook. Don't worry about wasting tippet—just like the improved clinch knot at the end you end up pulling on the standing end of the line.

This is my current favorite knot for smaller mono tippet.

Wow, looking back on the article as a whole...that is a lot of information, so I will try to distill it:

I recommend all fly fishermen feel comfortable with the non-slip loop and one non-loop knot.

The improved clinch knot is a good choice **if tied with a forward tuck**. If you are not getting break-offs at the fly you are golden. If you are like me and have had frustrations with knot failure (and not from cutting the tag end too short) I am hoping that these past 2 articles will give you ideas and resources to assess your situation and come up with a better knot.

Next month: line to line knots.