

FALL 2022

The Loop

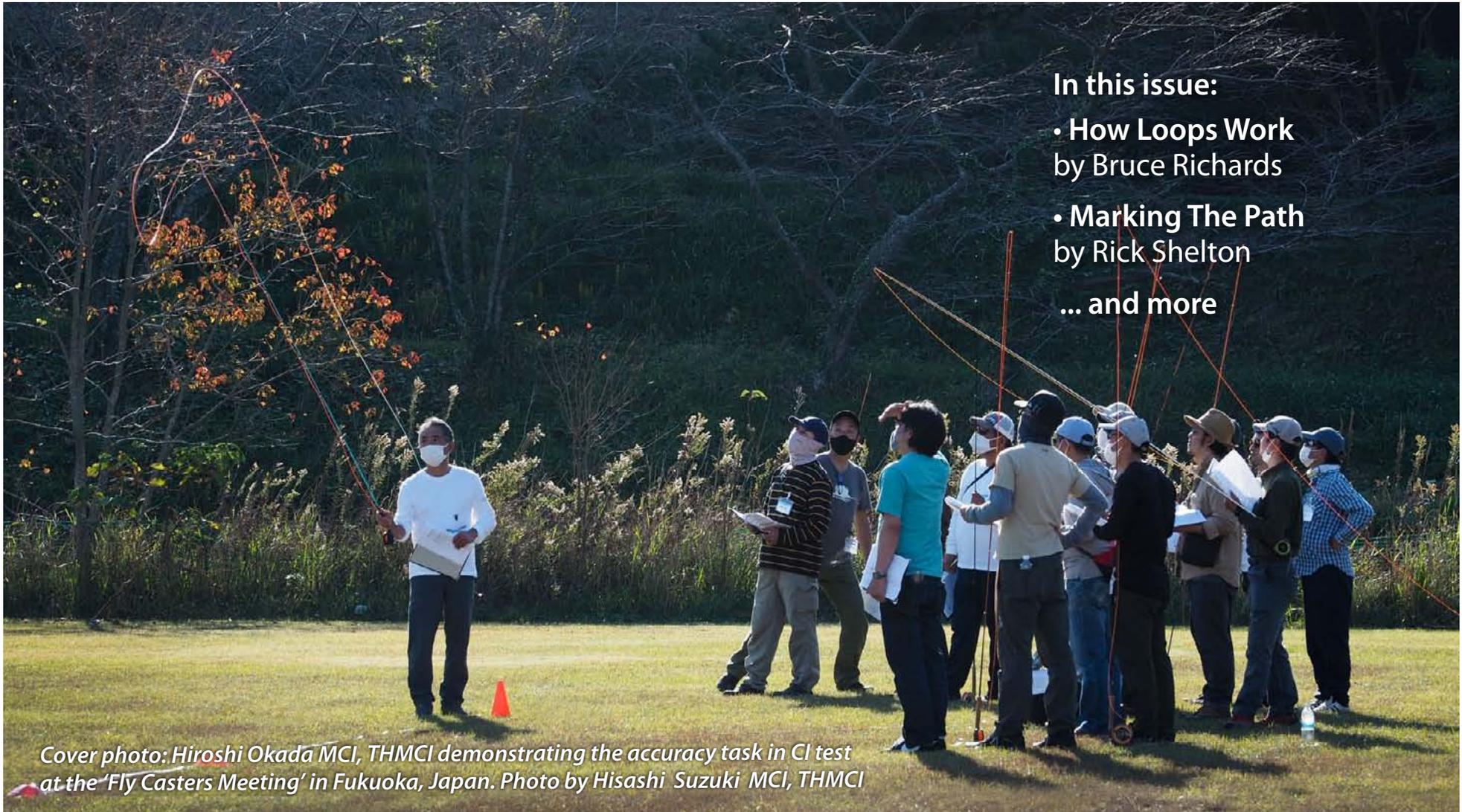


THE JOURNAL OF FLY CASTING PROFESSIONALS

In this issue:

- **How Loops Work**
by Bruce Richards
- **Marking The Path**
by Rick Shelton
- ... and more

Cover photo: Hiroshi Okada MCI, THMCI demonstrating the accuracy task in CI test at the 'Fly Casters Meeting' in Fukuoka, Japan. Photo by Hisashi Suzuki MCI, THMCI



Editorial

As I write this editorial, 2022 is winding down. As I look back, I am thankful for a year filled with opportunities to spend time with family, to camp, to fish, to teach fly casting, and to interact with authors and editors of The Loop. Similarly, the FFI casting program has experienced a resurgence with individuals from around the globe becoming certified as single hand and two hand instructors. I am sure that we are all looking forward to even more normalcy in 2023 and increased opportunities to fish and to teach the sport we all love.

We experienced some changes to our editorial team for The Loop this year. After years of service as an associate editor, Peter Morse recently stepped down from his position. I am very appreciative of Peter's contributions to The Loop.

I am happy to report that Chuck Iossi recently agreed to serve as an associate editor. He has extensive experience in the publishing industry that will be invaluable to improving our journal. You can read about Chuck's background in the Editorial Team summary found in this issue.

I hope you enjoy reading this issue of The Loop. I believe we have a diverse mix of articles that should appeal to a wide range of readers. Bruce Richards discusses how fly-casting loops work. Caleb Higdon describes the influence of variable air density of fly casting. Rick Shelton and six co-authors, all recent certified Casting Instructors (CIs), offer advice on preparing for CI certification. Finally, Robbins Church shares an anecdote about Joe Brooks having fun casting massive single-hand rods.

Jim Wigington - Editor-in-Chief

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WANTED

We're calling for article ideas from all CICP members, all casting instructors, and all fly fishing photographers worldwide.

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HOW LOOPS WORK

by Bruce Richards

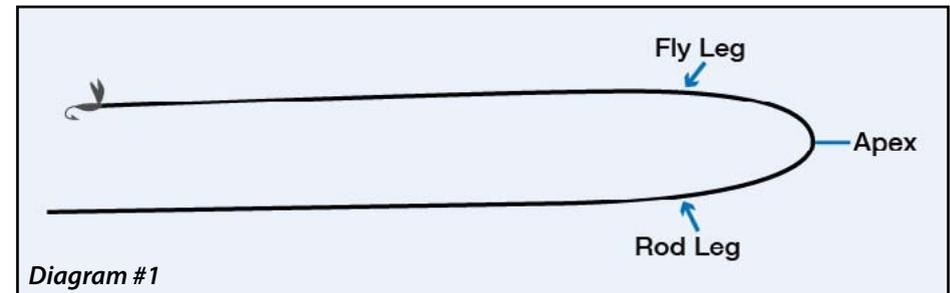
As fly casting instructors we talk about loops a lot. But how much do we really know about those gorgeous loops of line we cast? I thought I knew about loops until I met Prof. Noel Perkins at the University of Michigan many years ago. He is a top engineering professor and was a budding fly fisher when I met him. He and a grad student were working on developing a computer simulation for fly casting and had some questions. Noel was referred to me, maybe I could help. The math was well beyond me but the basics of what happens with rod and line when casting were not. I suggested some minor changes in their initial assumptions and the simulation improved! Eventually they did very accurately simulate what happens when we cast. That relationship, which ultimately yielded the electronic Casting Analyzer, also led to a much higher level of understanding of loops. First I want to address loop formation and loop efficiency.... For more information on the Casting Analyzer Manual.

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CASTING ANALYZER MANUAL



Loop formation

Loops have two parts, a fly (top) leg and rod (bottom) leg. They are separated at the apex of the loop, as seen in *Diagram #1*. Some people like to think of loops as having 3 parts, fly and rod legs and a "nose" or "loop front". This really complicates how we think about and teach about loops. If we think of them as having just two parts things become much simpler. *See Diagram #1*.



We all know what forms loops, we accelerate the fly rod which bends the rod and also accelerates the fly line. Then we decelerate the fly rod butt which causes the rod to "unload" or unbend. As the rod butt decelerates the rod tip continues to accelerate until the fly rod is straight (Rod Straight Position, RSP1) then the rod tip begins to decelerate. But the fly line does not decelerate, it overtakes the decelerating rod tip and a loop is formed. The line is still connected to the fly rod tip so when the line overtakes the rod tip the rod leg is formed. Initially the fly leg is very long and the rod leg is very short, but that changes quickly as the loop propagates, as the fly leg transitions to the rod leg.

Loop efficiency

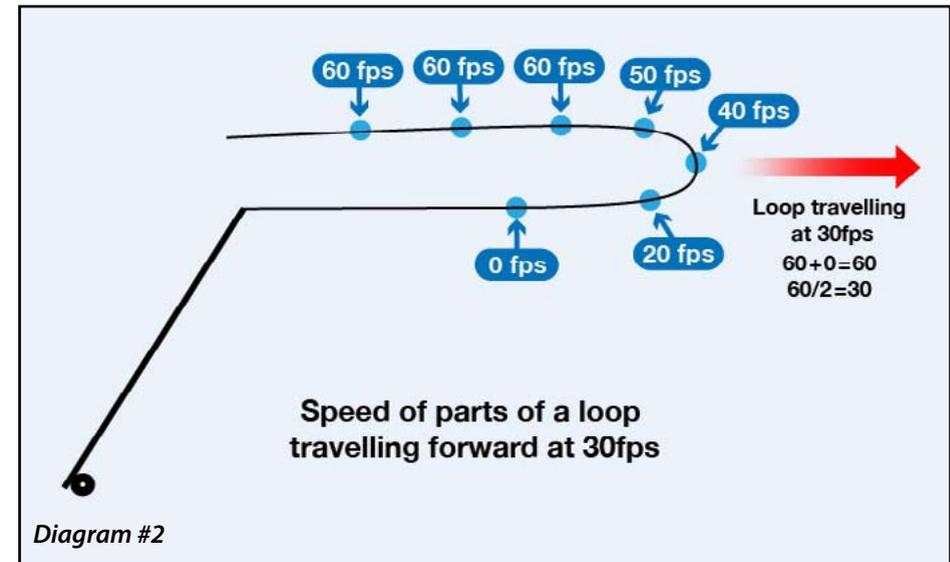
The rod tip path during the casting stroke determines what the fly leg of the loop will look like, whether it is straight or curved in one direction or another. The straighter the rod tip path during the casting stroke, the straighter the fly leg will be. Loops with straight fly legs are the most efficient.

How Loops Work *continued...*

How the rod tip moves after the casting stroke ends, after loop formation at RSP1, determines what the rod leg of the loop will look like. Once the loop has formed the less the rod tip moves downward the straighter and higher the rod leg will be. Having the rod leg be straight and close to the fly leg (a "tight loop") might seem important but it really isn't. If we are not hauling or shooting line the straight part of the rod leg is stationary and is not affected by wind resistance as is the fast moving fly leg. Loops that have relatively straight fly legs will be efficient regardless of what the rod leg looks like. As a fly casting instructor or avid fly caster, just concentrating on making the fly leg straight and not worrying about the rest of the loop really simplifies casting flaw analysis and cure. Before we go further we need to look at how loops travel a bit more specifically.

When a loop forms the fly leg is moving fast, the rod leg much slower, if at all. As the loop propagates, the fast moving fly leg transitions into the stationary rod leg as it moves through the curved transition from fly leg to rod leg at the front of the loop. Think of a line as a bead chain, made of a series of connected beads and consider what happens to each "bead" as it transitions from fly leg to rod leg. Consider a loop where the fly leg is traveling 60 ft./sec. (fps), every bead in the straight part of the fly leg is traveling 60 fps. As soon as a bead reaches the curved part of the fly leg, as it begins its transition to the rod leg, it starts to decelerate. This deceleration continues all through the transition until the bead stops moving when it reaches the straight part of the rod leg. Each bead transitions from going 60 fps to 0 fps as it moves from fly leg to rod leg. **See Diagram #2.**

If you want to know how fast your loop is moving forward, called loop travel, simply add the speeds of the fly and rod legs and divide by 2. In this case the loop fly leg is traveling 60 fps, the rod leg is not moving,



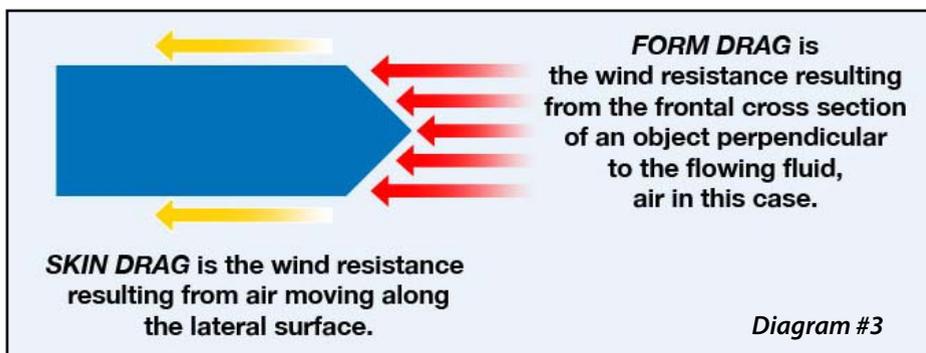
speed= 0. $60 + 0 = 60$, $60 / 2 = 30$ fps. This loop is traveling at 30 fps. The same calculation works if the rod leg is not stationary. If you are hauling or shooting line, rod leg speed will no longer be zero. If you were to shoot line at 10 fps on this cast loop travel would change like this: $60 + 10 = 70$, $70 / 2 = 35$ fps. When you shoot line the loop travels faster, but propagates slower, which results in a longer cast assuming there is enough energy in the loop for it to turn over completely. Obviously, if you were to pull the rod leg back the loop will travel slower but propagate faster and cast distance will be shorter. $(60 + (-10)) = 50$, $50 / 2 = 25$ fps)

That explains how all loops form, and how they propagate and travel forward. But not all loops are the same, of course. **Understanding wind resistance better really helps understand what is truly important about the loops we cast.**

How Loops Work *continued...*

An important physics fact about wind resistance is that it increases quadratically with an object's speed (e.g. increases with the square of the object's speed). You would think that if you doubled the speed of something that wind resistance against it would also double, but that is not the case. When an object's speed doubles the wind resistance force against it quadruples. If speed increase triples, wind resistance increases 9 times! Making sure that the part of a loop that is moving very fast has minimal exposure to wind resistance is very important if casting efficiency is part of your goal as a fly caster. Loops with the straightest fly legs have the least exposure to wind resistance.

Wind resistance is commonly called "drag" and there are two kinds of drag that work against us when we cast. First is skin drag. That is the drag that results from air moving along the surface of a line parallel to that surface. Skin drag is a minor force in fly casting. Much more significant is form drag which is the wind resistance resulting from the frontal cross section of an object moving perpendicular to the flowing fluid, air in our case. This graphic shows both skin and form drag on an object. *See Diagram #3*



The following is a real world scenario that explains the importance of form drag and loop shape.

When I was practicing distance casting years ago it occurred to me that my loops did not seem to be affected by gravity. If I carried a very long line, 80-85 ft., it would take about 1 second for the loop to fully straighten. In one second an object dropped, or a bullet shot from a gun, will drop about 16 ft. But my loops didn't seem to drop at all. I asked my friend Prof. Perkins why that was. He wasn't sure but put one of his very bright grad students on task to figure it out. What they discovered, and published a technical article about was fascinating.

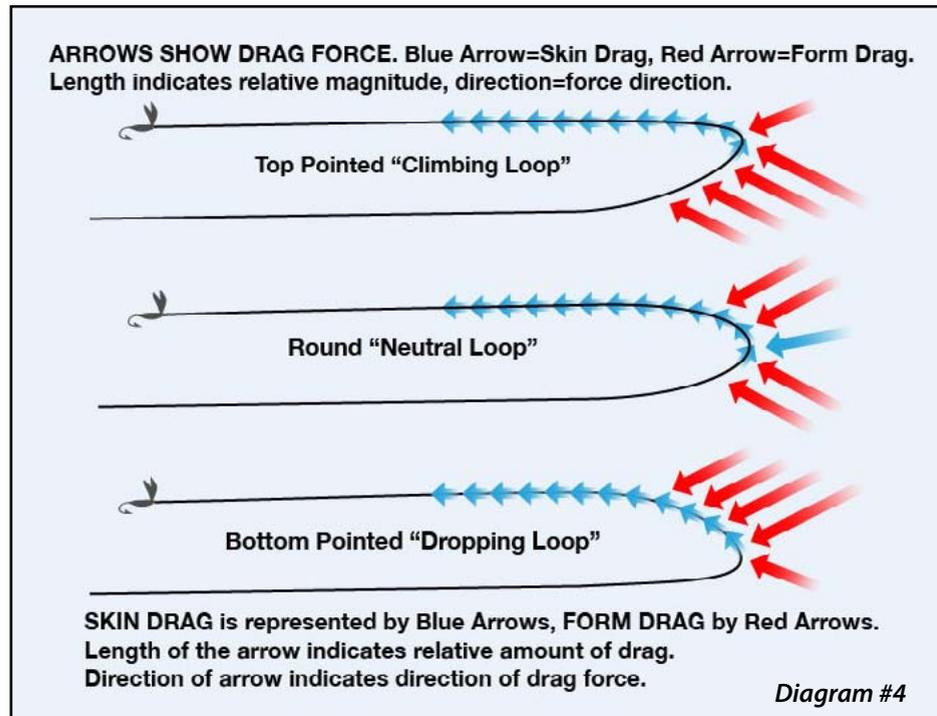
[Click to download and read the Prof. Perkins Technical Article](#)



I had heard other casters talk about loops as being like airplane wings and that lift was generated the same way. The most effective loops are shaped somewhat like the cross section of an airplane wing but they are *upside down*. If the same kind of lift was working on line loops as affects airplane wings they would be pulled down, not up. It turns out that wings work as they do because they have very broad surfaces, the comparable line surface width of a fly line loop is very small, typically .040-.080 inches, not many feet as with wings. Something else causes the lift.

What Noel and his students learned was that it was the shape of the loop itself that caused the lift, some loop shapes develop lift, others do not. If you've ever watched any high level distance casting competitions you'll see that all the best casters, the ones who win, throw the same loop shape. All have very straight fly legs, that is the key to high efficiency fly casting, if that is your goal. Look at the 3 loops on *Diagram #4*. The top two loops are very common, the bottom loop is not often seen but helps to explain the drag forces at work on the loop.

How Loops Work *continued ...*



The top loop, a top pointed "climbing" loop has a very straight fly leg. The red and blue arrows show the main drag forces, blue arrows show skin drag, red show form drag. The longer the arrow the more the force. The direction the arrow points shows the direction of the force. You can clearly see that the main drag force impacting each loop is form drag, skin drag has much less impact.

The first loop has a very straight fly leg. The straighter the fly leg of the loop the less downward form drag force there will be, and the more upward force. This is known as a climbing loop.

Of course significant downward gravitational forces oppose these upward drag forces so the loops don't actually climb significantly, but they also don't drop as we might expect. There is enough lift to counteract gravity, and that was my initial question to Noel. These loops also generate much less form drag than the others since there is very little line exposed to drag above the loop apex, the fast moving part of the loop. The combination of loop lift and very low form drag is the reason these loops are so efficient and are the preferred loop shape for distance, accuracy and casting in the wind.

The middle loop is certainly a typical loop that we see most of the time, a circular loop, and it works well for most general fishing applications where long distances aren't required and wind isn't an issue and extreme accuracy isn't needed. You can see that the form drag forces on this loop are equal up and down, the shape of the loop doesn't cause it to climb, or dive. There is a small amount of upward skin drag so the net effect of drag is upward, but it is small.

The bottom loop is not one we see often in the real world, a falling loop. It is a difficult loop for even good casters to form, and there is no reason to make these loops except to see if you can. And you can see that the primary drag force is form drag that will force this loop down, not something we want.

Line tension does play a role too. One end of the fly line is held in place by contact with the rod tip, the other end is pulled on by the propagating loop. Resistance at one end and a pull at the other provides line tension in the rod leg that will hold it up IF the front of the loop is not falling. If the loop front falls, as with a falling loop, the rod leg will fall too.

How Loops Work *continued ...*

For line tension to hold the rod leg up the front of the loop must not be falling, tension only holds the line between two points. The effect of tension on the loop is dependent on loop shape.

My friend Prof. Perkins asked me if I had ever thought about what would happen if we were to cast in a vacuum, no wind resistance, I had not. He explained...

During the casting stroke we accelerate the rod and the rod accelerates the line.

When the loop first forms the line has a certain amount of kinetic energy and almost all of it is in the fly leg of the loop as that is the only part of the loop that is moving. As the loop propagates the fly leg gets shorter and the rod leg gets longer. If we are casting in a vacuum there is no energy loss to wind resistance. There will be a little energy lost to internal friction from the line bending but that is very small and we'll disregard it for this theoretical cast. If the energy in the line remains constant but the fly leg gets shorter we will have the same amount of energy contained in a shorter fly leg which obviously has less mass than a longer fly leg. If the energy remains constant but the mass of the moving line decreases, the speed of the top leg must increase.

Remember this about wind resistance. It increases quadratically with speed, if you double the speed of something the wind resistance force against it quadruples. And that is how wind resistance works to prevent fly legs from accelerating much when we cast in air. Even small increases in line speed result in significantly higher wind resistance which prevents uncontrolled acceleration of the fly leg. Back to our vacuum casting experiment.... As our fly leg gets shorter

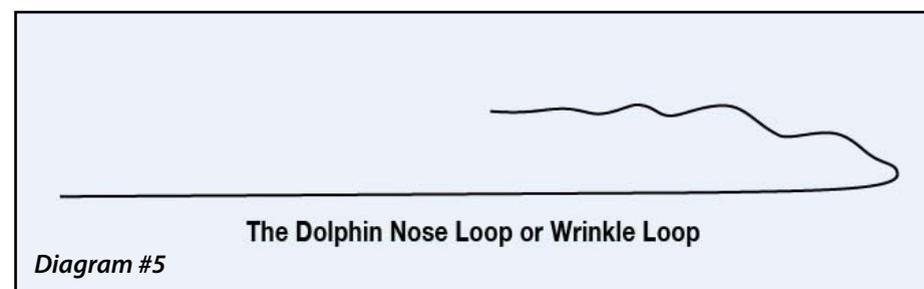
and shorter it goes faster and faster. Eventually only the leader will be left in the fly leg, and it is going VERY fast now. Fly leg mass is very small but almost all of the energy of the cast remains. Finally there will only be a small length of tippet in the fly leg, almost no mass. As fly leg mass approaches zero, fly leg speed will approach the speed of LIGHT! I know that sounds fantastic but that is what the math says...

And we know that even when casting in air without a fly, line speed can be very high.

The whip crack we sometimes hear while casting (poorly) is from the final loop of tippet reaching the speed of sound (~ 760 m.p.h.) and making a small sonic boom.

And this helps to explain another interesting loop phenomenon, often called the "dolphin nose", or "wrinkle".

See Diagram #5



Many good casters have seen these loops and some think they are due to a design flaw in their fly line but that is not the case. As explained above, the fly leg gets lighter as it gets shorter. But it gets lighter even faster when the front taper of the line and tapered leader is all that is left in the fly leg. Front line tapers and tapered leaders

How Loops Work *continued...*

are designed to help dissipate the energy of the cast. They do that by more quickly reducing the mass of the fly leg causing it to accelerate even faster. This further increases wind resistance which dissipates excess energy and allows those gentle fly deliveries we want.

When we cast with a very straight, efficient fly leg this last minute acceleration of the fly leg can result in the fly leg accelerating and piling into itself causing curves in the fly leg known as the wrinkle, or dolphin nose. Only talented casters will ever see this phenomenon and they should be proud of it!

Loops are fascinating things and have not been well understood until recent years. We are all very lucky that Prof. Noel Perkins took an interest in fly fishing and fly casting when he did. Now if someone asks you can explain to them why their loops don't fall from the sky as they should, or what will happen when we are finally able to cast on a planet without atmosphere! And now you can be proud of that pesky "wrinkle" instead of trying to fix it!

About the author:



Bruce Richards, MCI, Montana, USA, designed many great lines for Scientific Anglers and wrote the seminal work, *Modern Fly Lines*.

He is a former chair of CBOG and was instrumental in the development of the Casting Instructors' Certification Program (CICP). Bruce is also member of The Loop editorial team

What is FLY CASTING ANALYZER?

The *Fly Casting Analyzer* changes all that by providing completely new capabilities to support the teaching and learning of fly casting. It does so by giving you immediate and quantitative measurements of the casting stroke right at your finger tips. The easy-to-use software breaks your casting stroke into its major parts and provides a quantitative measurement of each. This innovation arises from the marriage of novel sensor hardware, software, and scientific research as summarized herein. The Fly Casting Analyzer is specifically designed to be a tool for fly casting schools, instructors, and any avid student of casting.



The entire *Fly Casting Analyzer System*: a sensor capsule, a small cable that connects the capsule to the (black) circuit box, the circuit box, and an attached Palm Pilot. A casting signature can be immediately analyzed using the Fly Casting Analyzer software installed on the Palm.

VARIABLE AIR DENSITY AND THE FLY CAST

by Caleb Higdon

When we fly cast, we direct our line through the air towards a target in the form of a loop. Air is not an empty space but is made of a mixture of gases. During the loop's travel through the air, these gases cause the loop to experience frictional force and to lose energy. If the frictional force is large enough, the loop will no longer possess the required energy to continue unrolling and will fail to reach the intended target or distance. Changes in air temperature, air pressure, and water vapor in the atmosphere influence the characteristics of gases in the air and air density. As the air becomes denser, the frictional force becomes larger, and the unrolling loop becomes increasingly inefficient. The opposite is true as the air becomes less dense. For maximum distance and efficiency, the unrolling loop should experience the least amount of frictional force possible, which can be achieved by casting on days when the air density is low. By knowing what conditions cause air density changes, you can plan your distance practice on days when the air density is lowest.

Density is a measure of the mass per unit volume of a substance. The formula for density is:

$$\rho = m/v$$

where, ρ = density, m = mass, v = volume. The factors that influence density are best understood through examples. Suppose I have two shoeboxes of different size: shoebox A is 7"x7"x5"; shoebox B is 12"x12"x5". If I place ten golf balls in both shoebox A and B, which one is denser?

Shoebox A is denser because it has less volume to hold the same amount of mass. Now, suppose I have two shoeboxes of the same size, and I place 10 golf balls in one and 10 cotton balls in the other. Which shoebox is denser? The shoebox with 10 golf balls is denser because it has more mass contained within the same volume. Lastly, suppose I place 20 golf balls in shoebox A and 10 golf balls in shoebox B, which one is denser? Shoebox A is denser because it has more mass and less volume than shoebox B. Air density functions in the same manner as the shoebox examples. If the mass of air is increased while its volume remains constant or is decreased, then air density will increase. If the volume of air is decreased while its mass remains constant or is increased, then air density will increase. In summary, a change in the volume, mass, or both of air will result in a change in density. Next, we will look at what physical factors influence air's volume and mass.

Air temperature is a measure of the average kinetic energy of the gas molecules in the air because the motion of air molecules is directly related to temperature (Lutgens and Tarbuck, 2016). Air molecule motion is higher at high temperatures than at low temperatures. When kinetic energy is high, gases move faster and move further apart (expansion) than gases with low kinetic energy. Therefore, as air temperature increases, air density decreases. Assuming all other conditions are the same, the air will be less dense on a hot day than on a cold day.

Variable Air Density And The Fly Cast *continued ...*

Air gas molecules also expand and contract depending on the response to changes in air pressure, the weight of air above an object. As air pressure increases, gas molecules contract and become closer together, thus increasing air density. Assuming all other conditions are the same, air will be less dense at high-altitude locations than at low-altitude locations.

Dry air is 99 percent nitrogen and oxygen (Lutgens and Tarbuck, 2016). The remaining one percent consists of many different gases, such as carbon dioxide, argon, and methane (Lutgens and Tarbuck, 2016). Air can also consist of 0 to 4 percent water vapor. Avogadro's law states that "... under the same conditions of temperature and pressure, equal volumes of different gases contain an equal number of molecules" (Encyclopaedia Britannica, 2019). This means, under constant temperature and pressure, the same volume of dry air (0 percent water vapor) and humid air (0.1 to 4 percent water vapor) contain the same number of molecules. As water vapor molecules enter the air, they displace nitrogen and oxygen. Because nitrogen and oxygen molecules weigh more than water vapor molecules, an increase in water vapor decreases air mass and density. In other words, the greater the amount of water vapor in the air, the lower the air density.

A reasonable question is what is the best measurement of water vapor to be able to estimate its influence on air density? Relative humidity is the ratio (expressed as a percent) of the "...air's actual water vapor content compared with the amount of water vapor required for saturation at that temperature" (Lutgens and Tarbuck, 2016). Relative humidity is a measure of how close the air is to being

saturated with water vapor, not a measure of how much actual water vapor is in the air. As air temperature increases, the amount of water vapor required to saturate the air increases. In fact, the amount of water vapor required to saturate air nearly doubles for every 18°F increase in air temperature (Lutgens and Tarbuck, 2016).

Dew point temperature is the "...temperature air needs to be cooled to (at constant pressure) in order to achieve a relative humidity (RH) of 100[%]" (National Oceanic and Atmospheric Administration) and is directly related to the actual water vapor content of the air (Lutgens and Tarbuck, 2016). High dew point temperatures indicate that air contains more water vapor than air with low dew point temperatures. For every 18°F increase in dew point temperature, water vapor content in the air nearly doubles (Lutgens and Tarbuck, 2016). If the dew point temperature is 60°F, there is almost twice as much water vapor in the air as when the dew point temperature is 42°F. Therefore, assuming all other conditions are the same, air is less dense when the dew point temperatures are high compared to when they are low.

In summary, variable air density affects the efficiency of the unrolling loop. The lower the air density, the less the frictional force, the more efficient the loop unrolls, and the further distance the line will travel. Air density decreases as air temperature increases, air pressure decreases, and water vapor (dew point temperature) increases. This article was written primarily with distance casting in mind but considering the relationship between air density and line friction can help all fly casters understand why casting efficiency is better on some days than others.

Variable Air Density And The Fly Cast *continued...*

Below are three true/false problems to test your ability to apply your knowledge of air density to fly casting:

1. True/False. Assuming my gear, casting motion, and force applied are constant, the distance I cast in Columbus, Georgia (altitude: 243 feet) will be further than in Denver, Colorado (altitude: 5,280 feet) if the temperature and dew point are the same in both locations.

2. True/False. Assuming my gear, casting motion, and force applied are constant, if I am in Columbus, Georgia, I will be able to cast further on a day when the air temperature is 80°F and the dew point temperature is 50°F than on a day when the air temperature is 80°F and the dew point temperature is 60°F.

3. True/False. Assuming my gear, casting motion, and force applied are constant, if I am in Denver, Colorado, I will be able to cast further on a day when the air temperature is 55°F and the dew point temperature is 33°F than on a day when the air temperature is 35°F and the dew point temperature is 33°F.

Answers:

1. False – As altitude increases, air pressure decreases. The lower the air pressure, the lower the air density. Therefore, the statement is false, as you will cast further in the high altitude of Denver, Colorado than in the low altitude of Columbus, Georgia.

2. False – As the dew point temperature increases, the water vapor content in the air increases. The more water vapor in the air, the lower the air density. Therefore, the statement is false, as you will cast further on a day when the dew point temperature is 60°F than on a day when the dew point temperature is 50°F.

3. True - As air temperature increases, air density decreases. Therefore, the statement is true, as you will cast further on a day when the air temperature is 55°F than on a day when air temperature is 33°F.

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About the author:



Caleb Higdon is a fly fishing guide, CI, and fly tier who resides in Charlotte, NC.

He graduated from Berry College in 2020 with a degree in biology and plans to continue his studies with graduate work in aquatic entomology.

MARKING THE PATH

Seven newly-minted CIs offer their advice for sanity and success along the road to Casting Instructor certification

by Rick Shelton, with Brian Esque, Caleb Higdon,
Tony Brooks, Jim Vota, Justin Burns, and Jerry Yates

On a warm weekend in Bryson City, North Carolina, near the end of August, 2021, seven candidates passed the FFI CI exam to become Certified Casting Instructors. Our journeys to that destination began in different places: Ohio, Georgia, Alabama, North Carolina, and Utah; and at different levels of skill and experience. Some of us took years; others made the trip over a few intense months. For several of us there were starts and stops along the way, our efforts interrupted or delayed by work, family responsibilities, school, self-doubt, and a pandemic. In short, we all walked our own paths, but we shared the desire to become better teachers and to sharpen our fly casting skills in order to improve our instruction. Here are some of the insights, advice, and practices we hope will help you as you make your own CI journey.

It's About the Teaching

It is not an exaggeration to say that everything along the path to CI certification is centered on teaching; even, and especially, the casting tasks. As Tony Brooks puts it, the casting tasks "are about demonstrating that you have enough 'control' so that a new casting student can see what 'good' looks like and how little effort it takes."

Performing these tasks with relative ease is essential for success on the exam, but your examiners may well ask you *how, why, where, and/or when* you would teach or use each cast. Jim Vota comes right to the point, "Practice, practice, practice, and teach, teach, teach." Jim's work with his fly fishing club's members, as well as teaching at casting clinics, allowed him to "to work out various methods of teaching" and to "see a wide variety of fly fishers who have different skills, from beginners to the very experienced." Brian Esque frames it this way, "Teaching beginners exposed me to casting faults and subsequent corrections and forced me to articulate my understanding of casting mechanics."

A candidate's responses to the CI teaching tasks should be as efficient and controlled as her casting stroke. This point was driven home during our online CI workshop led by MCIs Dave Barron and Jeff Ferguson. Demonstrations and answers need to be streamlined and straightforward so that students can comprehend them quickly. "Script the teaching tasks, practice them out loud, and reduce them to the bare essentials," Esque advises. Know and understand Bruce Richards' *Six Step Method* for identifying and correcting casting faults.

Marking The Path *continued...*

Whether you are teaching at casting clinics, enlisting your friends and family as students, or taking the CI exam, effortless demonstration and concise explanation are the keys to good casting instruction.

Don't Go It Alone

Our cadre of CIs is unanimous in the opinion that a mentor is crucial to developing this successful combination of knowledge, confidence and casting skill. In fact, it would be hard to overestimate the positive influences MCIs Mac Brown, Leslie Holmes, and David Diaz had on this group. Caleb Higdon is unequivocal, "Without question, I passed the CI test on my first attempt because I worked with a mentor. If I had not worked with Mac Brown, I am confident I would currently be preparing for a re-test." My own road began several years ago with Dr. David Diaz. His initial evaluation that I could do what it took to become a CI gave me a solid shot of confidence. And, later, it was his advice that convinced me to study with Leslie Holmes and Mac Brown. In fact, Leslie Holmes' voice is with me every time I pick up a fly rod. His first comment on my casting was, "What are you in such a hurry for, man?" There is a lot of serious casting and life wisdom in that question. "Mac Brown taught me to be a better fly fisher and encouraged me to raise the bar both personally and professionally," says Jerry Yates. "I was not on this journey alone." "Finding someone who knows the program and the test is very helpful," Vota offers, but there is more to it than that. "I needed someone who was part casting instructor, part psychologist," Esque adds, "and Mac fit the bill." A mentor can give you a clearer vision of your own abilities, as well. Only a few weeks before the exam, Justin Burns wasn't convinced of his chances for success, "I simply didn't feel like I was ready. Mac assured me that I would be fine, 'Take the test, you have a good stroke. You are better than you are giving yourself credit for.' He was right!"



"Examiners Paul Gallo (left) and Jeff Ferguson (right) congratulate Rick Shelton (center) on becoming a Certified Casting Instructor (CI)."

Another huge advantage to having a mentor is being able to run through a practice exam with an experienced examiner. "Pre-testing three weeks before the exam was critical, leaving time for adjustments before the test," says Esque. "Pre-testing exposed our gaps, and provided us with teaching opportunities through identifying and correcting other candidates' faults." Through his work with Mac Brown, Higdon "became very familiar with the exam format and expectations. When it came time to take the real exam, I

Marking The Path *continued...*

was not confused about how the test would be conducted or what I was expected to do on any given task. This allowed me to keep test anxiety to a minimum and helped me to perform at my best."

Following a mentor down this path, says Jerry Yates, along with "... others who were on their own road to fly fishing excellence" had great benefits.

"We practiced together and tested one another," Yates says, "We met in person and on Zoom. Master FFI Instructors from around the world freely shared their knowledge with us and provided much needed encouragement." The CICP is definitely a connective experience. Take advantage of the mentors, instructors, and CI candidates who are available to help you.

Practice, Practice, Practice...but Practice Well

Many of us have long ago figured out that the old adage, "Practice makes perfect," doesn't quite work. **How** you practice makes all the difference. The CI exam was, for me, the first meaningful test I had taken since 1985! Preparation anxiety got the better of me, and my early practice sessions were chaotic attempts to work on as many tasks as I could every time I picked up the rod and stepped up to the tape.

Tony Brooks' advice would have saved me a lot of time and worry, "Practice often, initially, but keep your practices brief and deliberate (15 minutes)." Eventually, I settled on a 30-45 minute practice time, twice a day when I had the chance.

On this path to learning how to practice well, Brian Esque echoes my own experience, "I would have failed without the tips on structured



Brian Esque - As a member of Fly Fishers International and local leader in Trout Unlimited, Brian is a passionate ambassador for the sport of fly fishing, fly tying and conservation.

Brian grew up fishing in Florida and Oklahoma, and calls North Carolina waters home since 1995.

Brian specializes in single handed casting and focuses on wild trout in western North Carolina in addition to largemouth bass and bluegills near his home in Davidson, North Carolina. Presently, Brian is a Casting Instructor, certified by Fly Fishers International, serving Charlotte, North Carolina, and surrounding areas. He especially enjoys introducing children and beginners to the sport.



Caleb Higdon is a fly fishing guide, CI, and fly tier who resides in Charlotte, NC.

He graduated from Berry College in 2020 with a degree in biology and plans to continue his studies with graduate work in aquatic entomology.

Marking The Path *continued ...*

practice in *The Loop* and in the *CI Preparation Guide*. I had a standard routine that included a warm-up, one or two casting tasks or skills and a review. I started practice the same way every time: determine wind direction, set up the course, set up the camera, and practice." "Practice with a purpose," adds Jim Vota. But he reminds us not to be rigid in our approach to the skills and tasks, "Try various methods and ideas. See what works and what doesn't. Pay attention to how changing specific aspects of your cast changes the whole cast."

To emphasize one aspect of Esque's routine: **Don't forget to make use of a video camera.** Having another pair of eyes to observe your casting—whether they belong to your iPhone, a knowledgeable friend, or your mentor—is invaluable. In our online CI workshop, Jeff Ferguson, MCI, described the caster's perspective as "the worst viewpoint for diagnosing faults." "I couldn't agree more," Esque adds. "Video recording of my casting enabled me to visualize, isolate, and correct my faults." Justin Burns reiterates the importance of having these outside perspectives when you practice, "If you can, spend some time with others who are working through the test." Throughout this process, Jim Vota says, "You have to be patient and be willing to work hard. You need to be able to take criticism and have an open mind."

And be sure to keep a record of your work. Several of us used practice logs or journals. My own journal included highlights from casting lessons I received or gave, notes on articles or books I read; written rehearsals of teaching task responses, as well as a running record of all of my practice sessions. At least once a week, I would write down Bill and Jay Gammel's *Five Essentials*, along with the order and description of the casting and teaching tasks on the CI exam.



Tony Brooks - Having deep roots in East Tennessee and Western North Carolina, Tony has nearly five decades of experience fly fishing. Tony is a Fly Fishers International certified casting instructor, Fly Fishing Guide School instructor, Fly Fishing Team USA sector judge and has guided professionally since 2009. He is a member of Team Stonefly, Hilltop Fly Tyers and a volunteer with Casting Carolinas (a nonprofit that provides comprehensive support for women surviving cancer); French Broad Fly Fishers-FFI Charter Club. Tony also competed in the 2016 US National Fly Fishing Championship-Lake Placid, NY and was a fly fishing caddy in the 2014 Pro Fly Angler Tour.



Jim Vota grew up in the state of Michigan around or on the water. He earned a bachelor's degree in Mechanical Engineering from Michigan Technological University at Houghton in the upper peninsula and spent the next 40+ years working in the aerospace and power industries in Cincinnati, Ohio. He never thought he'd move that far south. Fly fishing came later for Jim, as it does with a lot of people. Jim is a past president of the Buckeye United Fly Fishers in Cincinnati and is now one of the casting instructors for the club. He is never happy away from the water.

Marking The Path *continued ...*

Okay, maybe that's a little much, but my journal became something of a security blanket for me. Now it is a rich resource for my teaching.

Anyone who has taken even a few steps down the CI path knows how much advice there is out there, especially about how to practice. It can be complicated and a bit confusing. More often than not, though, the best advice is the simplest. One insight that helped several of us was voiced by Tony Brooks: "Any time your casting goes bad, stop. Drop the rod on the ground. Step off the line. Rethink. Refocus. Restart where it was perfect before. And end on a good cast every time." Learn how to pause and breathe when you practice, so that anxiety doesn't wreck your performance when the exam comes around.

Use the FFI Resources!

There is a universe of books, articles, and videos targeted at folks who want to become better casters and casting instructors. Many of them are extremely well-done and helpful, but scrolling through random videos can be, as Brian Esque puts it, "a trap of conflicting information you may have to dig yourself out of." He continues, "I limited my study content for the purposes of the test to FFI recommended resources." Caleb Higdon "utilized the Loop journal, the CI study guide, and the casting descriptions under the ***Learning Center Resources*** tab of the FFI website."

"All of these resources," Higdon says, "helped me to get a good grasp of casting mechanics and introduced me to different approaches to teaching. One thing I definitely recommend is to commit to memory all of the vocabulary terms listed in the CI study guide." I agree whole-heartedly with Brian and Caleb (and, yes, Jeff Ferguson, I now



Justin Burns began fly fishing around 10 years ago chasing trout in the mountains of North Carolina. His love of fly fishing for trout eventually led to an interest in saltwater fly fishing for False Albacore Tuna and Tarpon.

This passion quickly turned into an appreciation for the necessity of a quality fly fishing cast and led him into his journey of becoming a certified casting instructor. Justin's continues to remain focused on the development of his skills and helping others improve their casting through professional and patient instruction.

have the difference between ***drag*** and ***creep*** tattooed on my left forearm!). Be sure to find and study the "CI Preparation Video" on the FFI website. Bruce Richards and Molly Semenik do an amazing job of demonstrating and discussing the casting tasks on the CI exam, including common faults. These resources, along with extensive help from our mentors, certainly provided the foundation, for our success on the CI exam, but they also continue to supply a wealth of useful techniques and exercises for teaching.

Our group was also privileged to participate in several ZOOM meetings in the run-up to the Bryson City testing event. These meetings covered topics ranging from a discussion of Daniels Coyle's book, ***The Talent Code*** to the application of casting terminology and the essentials for problem-solving in teaching, among many others.

Marking The Path *continued...*

These were open forums where no question was too simple or too complicated. George Forster, MCI, from Australia, and Eric Cook, MCI, from Atlanta, joined Mac Brown on these occasions. We could not have had a more insightful and patient group to guide us. Again, if you have opportunities such as these, take advantage of them.

Practice Gratitude

When your CI path has taken you deep into the forest of Straight Line Path of the rod tip, Rod Straight Position., tailing loops, double hauls, and off-side accuracy casts to 45 feet, it can be difficult to remember that you are being supported on all sides in this journey. "It is quite evident," Jerry Yates says, "that Fly Fishers International is 100% dedicated to the future of fly fishing." Simply looking at the range and amount of resources available to prospective CI candidates bears this out. However, it is the gracious generosity of the people involved and the almost instant community it produces that is so compelling. At no point in this journey have I felt disparaged or been "talked down to." I knew that my mentors and fellow candidates wanted me to succeed from the outset. In our final CI workshop, Dave Barron and Jeff Ferguson made it obvious that our examiners wanted to see us pass; they weren't gunning for our failure.

The overwhelming response of our CI group has been one of gratitude. Justin Burns makes that clear, "I am grateful for those that took time out of their days and practice sessions to work with me, to critique my approach and technique. I look forward to using this certification to teach others what it took me so long to figure out and to give back a little of what was afforded to me along the way." We have mentioned some of the people who gave their encouragement, knowledge, and time so graciously by name already, but I will list



Jerry Yates, an FFI-certified casting instructor and North Carolina licensed fly-fishing guide, is the creator of Frog's Fanny Fly Treatment, a dry fly powder sold by retailers across the country. Yates grew up in Salt Lake City Utah and started fly fishing the Rocky Mountains at age 12. Jerry has been fly-fish guiding rivers and streams across the Country for the past 20 years; and now, after 27 years as a law enforcement officer, Yates retired and he's living the fly-fishing dream and guiding full time in the Smoky Mountains of western North Carolina. Yates built **Stream Team Anglers**, a professional guide service and fly-fishing school. With clients, Yates focuses on appropriate casting and setting techniques, the entomology of aquatic insects, and how to effectively read water conditions to find fish. He particularly enjoys teaching those who are new to the sport, hoping to inspire an appreciation of the quiet sport for generations to come. In the off season you will find Yates instructing fly fishing classes and speaking at various fly fishing expos around the country.

them again here: Dr. David Diaz, Leslie Holmes, Eric Cook, and George Forster. We are all indebted to Mac Brown for organizing and hosting the event while shepherding many of us along the CI path; and to Gail Gallo, Paul Gallo, Dave Barron, and Jeff Ferguson, our examiners, who made the time and effort to come to the mountains of Western North Carolina to see if we had what it took to become Certified Casting Instructors.

Marking The Path *continued...*

They were fair, honest, patient, and imminently qualified. And they treated us like family.

For Jerry Yates, "The challenging road to becoming an FFI-CI is one that I would travel a million times over. It has made me a better fly caster and fly fishing angler than I ever thought possible." I can only say, "Hear! Hear!" If you are on the CI path already or thinking about taking the first step, we hope our thoughts and experiences will shed some light along the way. Let us know if we can help!

A Final Thought

No, you don't need to buy a new fly rod a month before the exam. It will only confuse things.

Tight lines and narrow loops!

About the author:



Rick Shelton FFI CI teaches casting for the Alabama School of Fly Fishing (@alabamaschoolofflyfishing) and works at Deep South Outfitters in Birmingham, Alabama.

Rick is also on the Casting Advisory Board for the Southeastern Council of Fly Fishers International. He is a published author and has taught writing and writing instruction for 25 years to students and teachers in schools across the Southeast.

IF YOU ARE INTERESTED WITH THE FFI CASTING INSTRUCTOR CERTIFICATION PROGRAMS
 Please click these following links for further information on:

- **Casting Instructor Certification Program**
- **CI, MCI, THCI and THMCI study materials**
- **Click here to download CI, MCI, THCI and THMCI Exams**
- **Click here for further information on Next available CICP Exam dates.**



CICP Exam in progress with two examiners, two EDP participants and an interpreter.

CASTING WITH JOE

(Who needs the Buffalo Paddock?)

by Robbins Church

To me and my buddies Marvin and Bert, Joe Brooks was a gentleman to be regarded with the deepest respect and the utmost admiration (see "Mister Brooks - The Joe Brooks We Knew," *The Loop*, Spring 2021). Nearly 50 years separated us in age, almost two generations. He was of another time, a different vintage.

But he was not above having some fun.

In the summer of 1966, Marvin and I had just graduated from high school in Richmond, Virginia. With encouragement and help from Joe and his wife Mary, we tied flies for a bit of income that summer, and being close neighbors to the Brooks, we dropped by their house now and then to visit. Marvin was there more regularly than I, as he mowed their lawn and also helped Joe prepare for his fishing trips around the world.

One mid-August day, Marvin and I were shooting some hoops in the back alley a few houses down from Joe and Mary's home. During a break, we decided, "Hey, let's go see what Joe is up to." Not considering the possibility that he might be deep into a book chapter, or an *Outdoor Life* column, or on the phone making arrangements for another trip.

Mary came to the door. "***Go down to the office and see Joe,***" she said. "***He just got some new toys.***"

Music to our ears.

Sure enough - "***Hey, look at what I got today,***" Joe said. And he rushed to bring out two new bamboo rods—big rods—one 13 feet long, the other 15 feet. These were overhead casting rods (not spey rods) for an upcoming Atlantic salmon fishing trip with Bing Crosby to the Cockermouth Castle Estate in England, for an episode of ABC's *The American Sportsman*.

"Let's take these babies out and see how they cast," he said.

Writing could wait.

"Where are we going to cast them?" we asked.

Joe and Mary had little yard, nothing that would accommodate these monsters.

"Let's go down front," Joe said. "I'll grab a reel and put a tag of yarn at the end of the leader."

"Down front" was Prince George Road extended, a dead end with a small strip of grass beside it—better than the side yard, but with quite a few overhanging trees. It was not the ideal spot to cast any fly rod, much less these giants.

Casting with Joe *continued ...*

Only the tightest loops would work on our makeshift casting lawn.

Down the hill we went. Joe pulled the rods and rigged them up.

“Look at these guys,” he said. ***“Aren’t they beauties?”***

Beauties indeed, but huge—and heavy.

Joe worked out some line and made a few casts.

“Man, they are powerful. These will be just the ticket for some classic camera shots for the show. We head out to fish the Derwent River in a couple of weeks.”

These new big rods were for show for TV, part of the background color. Such rods are needed to handle the huge salmon flies, up to size 9/0 (Joe had received a few of those, as well), that have been used to fish for large Atlantic salmon in European rivers with heavy flows. Joe, himself, often used Battenkill rods of 8 ½ to 9 ½ feet for his salmon fishing, amazing his hosts and gillies, who considered those to be “trout rods.”

After a few casts, Joe handed the 13-foot rod over to Marvin. It was a challenge to get the backcast under the overhanging tree limbs, but Marvin managed it well. With a big GAAAF (perhaps it was even a 4A) line loaded onto one of Joe’s big Fin-Nor Wedding Cake reels, the outfit was a handful, but, man, could it throw a line.

Marvin handed it off to me, and I made a few casts. This was an outfit for giants, for sure. Another world.



“Atlantic salmon flies from Joe Brooks’s collection given by Joe to Marvin Williams circa 1970”
(Arrangement and photograph by Marvin T. Williams)

Casting with Joe *continued ...*

Joe rigged up the 15-footer and limbered it up.

Just then, a mailman appeared to deliver some mail to the next-door neighbor, whose front steps were far down the block.

“Let’s see what this rod can do,” Joe said.

A couple of false casts and a double-haul, and Joe shot enough line to softly drop the bit of yarn just inches short of the mailman’s feet as he headed up the steps, intent on his mission. The mailman never noticed it. Even if he had, he wouldn’t have connected it to the three figures standing so far away.

Marvin and I grinned at each other as Joe chuckled. This was a side of Joe we seldom got to see, but when we did, it was a special treat. Just one of the gang, hanging out, having fun—fooling around with a fly rod.

About the author:



Robbins Church (Ph.D.) is a retired aquatic chemist/ecologist, whose wide-ranging research has appeared in multiple peer-reviewed scientific journals.

He now writes stories. Look for his work in recent or forthcoming issues of *The Loop*, *Backcountry Journal*, *Swing the Fly Anthology 2022 (and 2023)* and *Anglers Journal*. In 1969 he held Idaho Non-Resident Fishing Guide License #3, guiding out of Sun Valley.

Introducing Charles ‘Chuck’ Iossi

The Loop New Editorial member



Chuck Iossi is a retired publishing executive living in Teton Valley, ID pursuing the mighty trout with fly rod. During his 35-year career, he managed higher education and library reference businesses for leading organizations including Thomson Reuters (London), Addison Wesley (San Francisco), Macmillan (Sydney), John Wiley and Sons (New York) and Prentice-Hall (Englewood Cliffs). He served in the U.S. Army as a military police officer.

Chuck is a Fly Fishers International Certified Casting Instructor with 14 seasons of experience fishing the Upper Snake River drainage with principle focus on the South Fork, Henry’s Fork, and Teton Rivers. He is a Board of Directors President Emeritus for the Friends of the Teton River and is a member of Trout Unlimited and FFI. His fly rod has touched water in the Bristol Bay Region of Alaska, chalk streams of England, South Africa, France and many rivers of North America.

NEW REGISTERED INSTRUCTORS

First Name	Last Name	City	Country	Certification	Test Date
Drew	Alway	Kamloops	Canada	CI	09/24/22
Leff	Andropof	Melbourne	Australia	CI	07/24/22
Martin	Barrera Oro	Mendoza	Argentina	CI	05/25/22
Thatcher	Beaty	Chattaroy	United States	CI	07/06/22
David	Becconsall	Pearcedale	Australia	CI	07/25/22
Corrado	Benassi	Bagnolo in Piano	Italy	CI	05/29/22
Matteo	Bessi	Piacenza	Italy	CI	05/29/22
Jim	Black	Edmonds	United States	CI	04/22/22
Akasha	Bopp	Kelowna	Canada	CI	04/24/22
Trisha	Campbell	Clarkston	United States	CI	09/23/22
Philippe	Charron	Saint-Eustache	Canada	CI	07/30/22
Louise	Christison	Alexandra	Australia	CI	07/22/22
Scott	Connell	Bellevue	United States	CI	06/20/22
Doug	Cook	Aldergrove	Canada	CI	04/23/22
Richard	Cooper	West Leederville	Australia	CI	07/20/22
Eamonn	Donnellan	Leichhardt, NSW	Australia	CI	07/21/22
Peter	Henderson	Minnamurra	Australia	CI	07/24/22
Marion	Hiller	Blaine	United States	CI	09/23/22
Rob	Holmes	Twickenham	United Kingdom	CI	04/28/22
Yoshiomi	Hosone	Setagaya Tokyo	Japan	CI	10/23/22
Yoshihisa	Ichikura	Toyohashi-city	Japan	CI	10/22/22
Charles	Iossi	Garden City	United States	CI	09/13/22
Jeff	Jackson	Pembroke	Canada	CI	09/07/22
Yuki	Kajimoto	Hiroo-gun Taiki-cho	Japan	CI	10/21/22
Bob	Martin	McCrae	Australia	CI	07/25/22
Hiro	Masaki	Tokyo	Japan	CI	10/21/22
Arata	Matsumoto	Date-city	Japan	CI	10/23/22
Thomas	McCarthy	Hoover	United States	CI	07/30/22
Marty	McVey	Boone	United States	CI	07/19/22

For incoming test date and other CICP events information, please visit:
<http://flyfishersinternational.org/Casting/CalendarofEvents/tabid/616/Default.aspx>

NEW REGISTERED INSTRUCTORS

First Name	Last Name	City	Country	Certification	Test Date
Yudai	Mochizuki	Kamifuranocho Sorachigun	Japan	CI	10/23/22
James	Norney	Alexandra	Australia	CI	07/22/22
Matt	O'Connor	Ketchum	United States	CI	06/20/22
Taite	Pearson	Ketchum	United States	CI	06/21/22
Nicola	Picconi	Vaiano (PO)	Italy	CI	05/28/22
Shawn	Robinson	Okanagan Falls	Canada	CI	04/23/22
Ronald	Scott	Sutton	United States	CI	07/30/22
Iwao	Shimoyama	Sapporo	Japan	CI	10/22/22
Ruth	Sims	Seattle	United States	CI	09/25/22
Tomasz	Skurski	Suprasl	Poland	CI	06/08/22
Jonathan	Smith	Brisbane	Australia	CI	07/23/22
Bill	Stewart	Parker	United States	CI	09/17/22
Piotr	Stopczynski	Siedlce	Poland	CI	06/08/22
Takashi	Tanaka	Tokyo	Japan	CI	10/21/22
Ben	Thompson	Beaconsfield	Australia	CI	07/24/22
Steven	Thoms	Pimpama	Australia	CI	07/24/22
Kenro	Tsuzuki	Nishio-city	Japan	CI	10/22/22
Stephen	Williams	Terrebonne	United States	CI	05/28/22
Ken	Woodward	Kamloops	Canada	CI	04/22/22
Yoshiaki	Yasue	Osaka-city	Japan	CI	10/22/22
Jonathan	Connelly	Oregon	United States	MCI	09/24/22
Jim	Hund	Texas	United States	MCI	09/16/22
Marek	Puczynski	OP	Poland	MCI	06/10/22
Dave	Jacobson	Maine	United States	THCI	09/08/22
Steve	Smith	New Brunswick	Canada	THCI	09/07/22
James	Gruetzman	Oregon	United States	THCI	09/23/22
John	Clark	Hampshire	United Kingdom	THCI	04/28/22

For incoming test date and other CICIP events information, please visit:
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The Editorial Team



Jim Wigington, MCI, Editor-in-Chief, Redding, California USA. Jim is a retired research hydrologist who spent his career evaluating the effects of human activities on watersheds and streams. He has published in many scientific journals and previously was Editor-in-Chief of the Journal of the American Water Resources Association. Currently, Jim is an active casting instructor and L-1 examiner.



Mac Brown, MCI, is the owner of Mac Brown Fly Fish and Fly Fishing Guide School in Bryson City, NC. He is the author of Casting Angles and contributor to numerous magazine articles. Mac will serve as a technical advisor for the Loop. He enjoys adventure travel with his family when not teaching fly fishing techniques.



Chuck Iossi, CI, Teton Valley, ID is a retired academic publishing executive of university level textbooks and library reference material. His last assignment was CEO of Thomson Reuters Academic in London, UK. He is a Board of Directors President Emeritus, Friends of the Teton River, and is also a member of Trout Unlimited and FFI.



Bruce Richards, MCI, Montana, USA, designed many great lines for Scientific Anglers and wrote the seminal work, Modern Fly Lines. He is a former chair of CBOG and was instrumental in the development of the Casting Instructors' Certification Program (CICP).



Paul Brown, MCI, THMCI & L-1 Examiner, England. Paul is also a member of the UK's Game Angling Instructors' Association (GAIA) and holds the Advanced Professional Game Angling Instructors' qualification (APGAI) in both double-handed and single-handed and is also a qualified GAIA Mentor and Assessor. Paul is a published author of children's books, he also has 30 years media experience with some of the best ad agencies in England.



Bintoro Tedjosiswoyo is a **CI & THMCI** who lives in Melbourne, Australia. Bintoro is a commercial graphic designer and illustrator, he is *The Loop's* graphic design editor and illustrator.

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