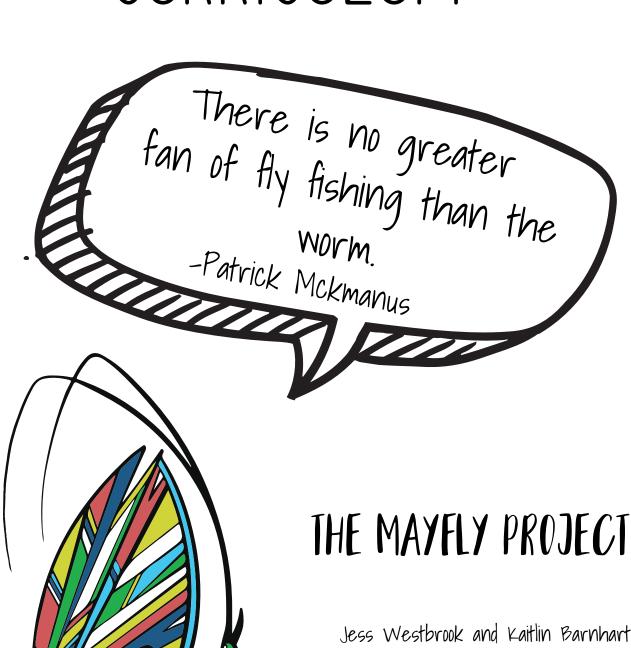
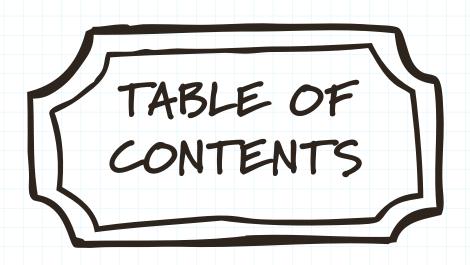


# MENTEE CURRICULUM



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www.themayflyproject.com



# WELCOME!

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## WELCOME

Dear Mayfly Mentee,

Welcome to The Mayfly Project! You may wonder, 'WHY DO THESE PEOPLE CARE SO MUCH ABOUT FLY FISHING?' Well, the funny thing is, your mentors working with you love fly fishing because they get to act like a kid out on the river! Because when you're out fishing, you don't have time to think about concerns, or worry about what your brain worries about, you get to just fish, spend time in nature, and yell really loud when you catch a big fish!

That's what we hope for your time with The Mayfly Project - you get to have fun, enjoy your time in nature, and join our club of people who just turn into kids on the big playground of the great outdoors!

#### HERE'S WHAT TO EXPECT:

Each outing you will learn something new about fly fishing. You will have a mentor to help you learn how to cast, tie knots, set the hook, land fish, and release fish. We will go over safety rules, teach you how to take care of the rivers, feed you sugar probably, and you will have an opportunity to win some rad prizes.

Fly fishing can be challenging to learn, and is different than traditional fishing, but once you trick a trout with a fly that you made float perfectly in the water, you will understand why it's so fun and worth the hard work!



#### QUESTION: WHAT IS FLY FISHING?

Answer: Fly fishing is an angling method in which an artificial "fly" is used to catch fish. The fly is cast using a fly rod, reel, and specialized weighted line. Fly anglers use hand tied flies that resemble natural invertebrates, baitfish, or other food organisms, to provoke the fish to strike.

#### QUESTION: DO I HAVE TO TOUCH A FISH?

Answer: Only if you want to!

#### QUESTION: WHAT IF I DON'T THINK I LIKE FISHING?

Answer: We have lots of things you can do besides fish, but we think you'll enjoy the art of casting. You won't know until you try!

### QUESTION: ARE THE FISH HARMED DURING OUR FISHING TIME?

Answer: Scientists believe that the lips on fish do not have big pain sensors. We use barbless hooks and release the fish we catch quickly so they can go back to doing their life. If we properly release fish, they go on to grow big and strong.



# CHARACTERISTICS OF AN ANGLER

What's an Angler? An Angler is another fancy way to say a person who fishes. There are all types of ways to fish and enjoy nature, but because fly fishing requires some patience and practice, there's a lot you can learn from becoming a fly angler! Here are some characteristics, or things you will learn, by becoming a fly angler:

#### PATIENCE

Sometimes you have to switch your fly out 20 times before you find the correct match of what the fish are eating. Does this require patience? You betcha!

You'll also find sometimes you'll get wind knots in your fly line, which can be maddening. But if you take the time to slow down, have patience and work out the knot, you will learn that it's easier to fix the knot than letting your anger get the best of you. WHY IS THIS AN IMPORTANT TOOL TO LEARN? Patience is needed in all aspects of life—whether waiting for the bus to get to your stop, or trying not to yell at your sibling for being annoying. Just as with fishing, you'll realize that working on having patience in life will help you get through the times where anger can make things worse. So, when you start to feel your blood boiling, take a deep breath of river air and remember you are practicing patience.

### SELF CONFIDENCE

What we love about finding adventure in the outdoors is that when you pick the right fly, get a stellar drift, and land a fish all on your own, you feel like you're the real deal. WHY IS SELF CONFIDENCE GOOD TO HAVE? There's lots of things in this world that can bring us down,

and happenings that can make us feel like we don't measure up. The truth is, you are an amazing human and no matter what happens or what people say about you, if you feel good about yourself and trust that you have the inner power to overcome, you will succeed. Fly fishing teaches you to trust yourself, to believe in your skills, and to have positive self-talk so you can trick the biggest fish possible!

#### FINDING BRAIN REST

Scientists say that time in nature and in water can actually calm your brain down. Your brain needs time around trees and rivers to relax. The angler understands this benefit and takes every opportunity to get out fishing because it makes them feel good and it helps them rest their brain from life.

For some, rivers become a place where they find peace and where they can just be themselves without the world asking them a million questions. WHY DOES IT HELP US TO CHECK OUT OF REAL LIFE AND CHECK INTO NATURE? Some fancy folks call it "coping techniques", which means to find ways to take care of yourself and your brain by doing things that make you feel better and improve your moods. When you find coping techniques that work for you, you will find they help you with anger, frustrations, fears, anxieties, and can sometimes help you make better decisions about life and who you want to be. Try out brain rest through fishing or time outdoors—you may really like it!

#### BUILDING GRIT

What in the world is grit? Grit is defined as a combination of perseverance and passion— it's a powerful motivation to achieve a goal. Grit is not based on how smart you are or

what you have learned from a school book, it's a characteristic that you develop when you overcome difficult obstacles. Some of the most successful people on this planet didn't have a huge IQ or have the most stable environment to grow up in, but they developed grit and they learned how to be successful through finding their passion and learning how to persevere through the tough stuff. HOW DOES FLY FISHING TEACH GRIT? The best anglers are the ones who have failed hundreds of times, but kept going back to the river, to use what they learned through failing to succeed. So, every time you spit on a knot before tying it, think of the word 'grit' and realize you're learning more than just how to fish.

#### SEEKING WISDOM

One of the best things about fly fishing is there is always something to learn... always. In order to become the best angler it helps to ask questions, seek out knowledge, and to be willing to admit you need help at times. How does seeking wisdom help you in UFE? Sometimes adults can be really annoying, we understand. But when you find an adult you trust or that you think is a good person, don't be afraid to ask questions about how to overcome the obstacles in your life. Knowledge is power because the more you can learn about the ways to build a healthy future for yourself, from people that have maybe already walked that road, the more you can

wisdom will always catch the biggest fish!

I learn to fight your own battles in life. The angler who seeks

#### APPRECIATING THE ENVIRONMENT

How cool is it that the rivers run without the help of humans? Or that the animals adapt to the changing seasons, including the little bugs in the water or the fish we get to enjoy! The angler appreciates their environment and takes time to notice the little things and the big things happening around them. Then, the angler does everything in their power to protect these environments, knowing that humans can cause so much damage.

The angler is dedicated to picking up after themselves, taking care of the fish they catch, and making sure they are leaving no trace. WHY DOES TAKING CARE OF THE ENVIRONMENT MATTER? The rivers and outdoor places you get to enjoy actually need your help more than you may know. By joining a cycle of healing and caring for the environment, you are providing a better tomorrow for people in the future to enjoy. Doing good always ends up making you feel good too, which means it benefits both you and the world!

# EARNING BUTTONS!

DID GONEONE GAY PRIZES? During your time with The Mayfly Project, you will have a chance to win buttons created by a professional fly fishing artist. The buttons are listed below, along with the ways you will earn them. You must have a mentor with you to prove you completed each task. Your lead mentor will go over which button they will have available for you

\* Please be safe with your buttons and talk to your foster parent or group home parent about where to store your buttons



to learn on the project outing date!

CASTING - Practice your cast and cast a piece of yarn into a hula hoop from a distance set by your mentor.



CATCH AND RELEASE - Demonstrate how to hold and release a fish properly, either with a live fish or a plastic practice fish. Remember: Wet Hands. Soft Hands. Swim from your Hands.



KEEP OUR RIVERS CLEAN - Pick up a minimum of 3 items of trash during a fishing outing and throw it away. Make sure you don't throw your tippet on the ground and leave no trace!

AQUATIC INVASIVE SPECIES - Complete the identifying invasive species game OR if you use boots and waders, wash them appropriately after your fishing time is done.



KNOT BUTTON - Demonstrate a proper Clinch, Surgeons, uni or other knot used in fly fishing.

FISH ON! - This button is earned during your last outing by making sure you have read over the characteristics of an angler with your mentor, and by just simply being an awesome kid or young adult!!!





SAFETY- Explain to your mentor how you can be the safest around water, around hooks, and what safety equipment is recommended while fishing.

FLY TYING BUTTON (optional)— Tie a fly you are proud of (simple or complex does not matter).





ENTOMOLOGY (optional)— Turn over a rock in the stream and identify a bug on the rock after you mentor shows you how to. Explain what happens to that bug and why it is an important part of the ecosystem or why it matters to fish!

## CONSERVATION!

# POSTITIVE PRINTS CONSERVATION INITIATIVE

During each project outing our goal is to have fun, but to also work on restoring local fisheries and being mindful anglers. We encourage you to join our efforts and make a difference by leaving "positive prints," whether it be properly handling fish, picking up trash, or by teaching others the importance of good stewardship!

CATCH AND RELEASE - When we take care of the fish we catch we are giving a gift to future anglers, because if you let it go it gets to grow. When you catch a fish, carefully hold it in the right way, not crushing its heart or holding it in the gills where it breathes. See the section about Catch and Release to find out more.

CLEAN RIVERS - Approximately 40 percent of the rivers in the U.S. are too polluted for fishing and swimming. Fish need clean water to survive; therefore, The Mayfly Project strives to leave the river better than we found it. Help us keep the rivers clean by picking up garbage and being a good steward.

CONTAMINATION - Scientists believe that aquatic invasive species are one of the greatest threats to America's trout and salmon populations. It's important to clean your boots and waders, or anything you had in the water for an extended amount of time, to make sure you are not carrying these invasive species to other rivers.



"TOGETHER IN THE WATER THERE IS SWEETNESS, HOPE,
FEARLESSNESS, CONFIDENCE, BEAUTY, SERENITY,
COMMUNITY, JOY, POETRY, OPPORTUNITY, MOVEMENT, PATIENCE,
EMPATHY, MYSTERY, INDEPENDENCE, AND A NEW MEMORY WAITING. THIS IS
THE OPPOSITE OF THE DRY NEGLECT, DECLINE OF THE PAST."

-DR. NICHOLS

## AQUATIC INVASIVE SPECIES

#### WHAT ARE THEY?

Aquatic invasive species (AIS) (sometimes called exotic, invasive, nonindigenous or non-native) are aquatic organisms that invade ecosystems beyond their natural, historic range. Their presence may harm native ecosystems or commercial, agricultural, or recreational activities dependent on these ecosystems. They may even harm human health since they can degrade water quality.

#### HOW DO THEY GET INTO OUR WATERWAYS?

People have helped spread species around the globe for centuries either intentionally or unintentionally. People, and the goods we use, travel around the world very quickly, and they often carry uninvited species with them.

### AQUATIC INVASIVE SPECIES ARE A PROBLEM BECAUSE THEY...

- \* Outcompete native species
- \* Change and degrade how ecosystems function
- \* Require maintenance, monitoring, and removal

## 4 AQUATIC INVASIVE SPECIES:

# ALGAE



#### IMPACT:

- FORMS DENSE MATS AT THE BOTTOM OF FRESH WATER **STREAMS**
- DEPRIVES NATIVE SPECIES OF HABITAT AND DEPLETES OXYGEN IN THE WATER

# MOLLUSK

SPECIES: ZEBRA MUSSELS



#### IMPACT:

- ATTACHES TO NATIVE MUSSELS MUCH LIKE THEY DO DOCKS, AND TAKES OVER WATERWAYS
- OUTCOMPETES THE NATIVE MUSSELS FOR FOOD AND SPACE DUE TO THEIR FAST REPRODUCTION

# CRUSTACEAN

(NATIVE TO OHIO RIVER BASIN BUT HAS INVADED OTHER WATERWAYS.)



#### IMPACT:

- OUTCOMPETES AND DISPLACES NATIVE CRAYFISH AND REDUCES RESOURCE AVAILABILITY
- CONSUMES NATIVE VEGETATION

# PARASITE

SPECIES: WHIRLING DISEASE



#### IMPACT:

- · ENTERS THE FISH WHERE IT MULTIPLIES RAPIDLY AND CAUSES ILLNESS IN THE FISH
- INFECTED FISH SWIM ERRATICALLY (WHIRL) AND HAVE DIFFICULTY FEEDING AND **AVOIDING PREDATORS**

## AQUATIC INVASIVE SPECIES— WHAT CAN WE DO?

#### STEPS TO ELIMINATE SPREADING INVASIVE SPECIES FROM ONE WATERWAY TO ANOTHER

- \*Become familiar with the invasive species in your area and their impact on waterways
- \*use the **CLEAN, DRAIN, DRY** philosophy- remove any mud, vegetation and other debris from all equipment that entered the waterbody (e.g. boating, wading and fishing equipment) before leaving the waterbody. \*Allow time for equipment to thoroughly dry prior to entering another waterbody\*

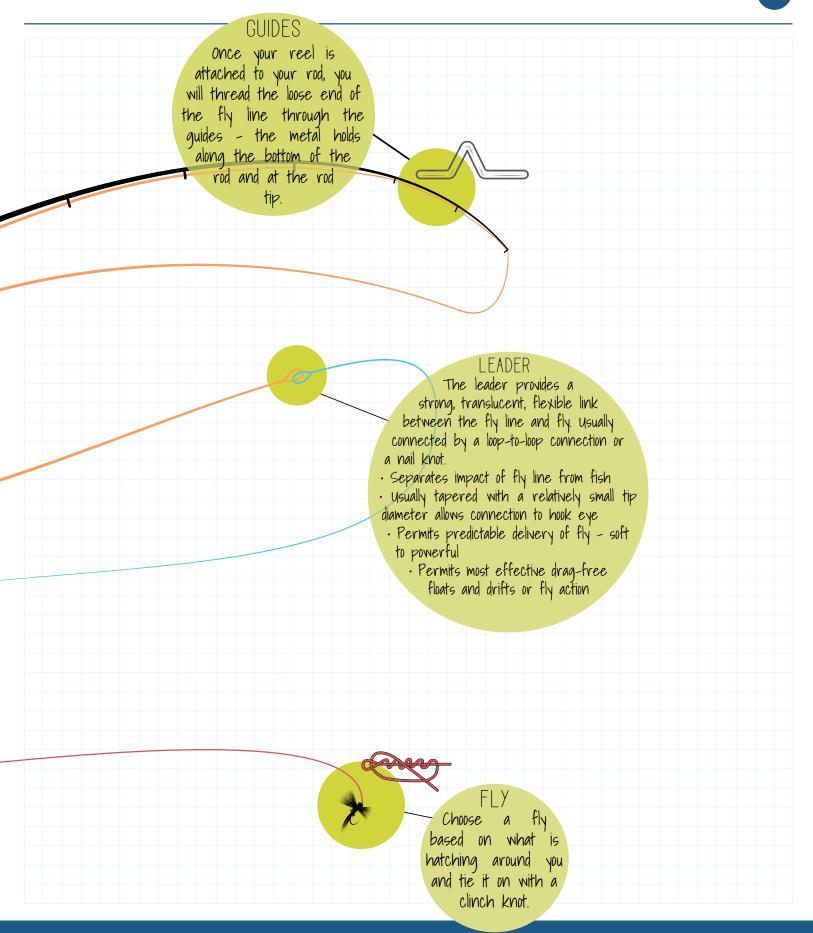


- \*Drain boats, equipment, coolers, live bait wells and any other water containers before leaving the site since they can harbor invasive species.
- \*Never move fish (whether alive or dead or fish parts) or plants from one waterway to another.
- \*Find alternatives to releasing unwanted aquatic pets into waterways—Contact your state's fish and game department or local pet stores.



\* Talk to and inform others about the dangers of aquatic invasives and how to practice environmental stewardship

#### FLY FISHING EDUCATION FLY ROD ANATOMY OF THE FLY ROD Fly rods are rated on a scale of weight from 1-15. Everything from the reel to the line must be in balance with the rod. Most rods break down into at least two. if not more parts to make them easy to store. When assembling, you will put these parts together, making sure to align the guides (which should point towards the water) FLY LINE The fly line must also match the weight BACKING of the rod. This provides the necessary heft to cast your fly where you want it. TIPPET Tying tippet onto your leader using a surgeon's knot tricks the fish so they can't see FLY RFFL the leader or line. Leaders and The reel must match tippets are referred to by an X code the rod weight; some reels are The X code provides a quick way to sized to fit a range of fly rods. Hold communicate tippet material size and your rod in your dominant hand and strength. The larger the X code, the attach the reel - also pointing toward finer the tippet. The smaller the the water - so the reel's handle is x code, the stronger and usable with your nondominant hand. bigger the tippet There will be a small dial on your reel that sets the drag - a term for how quickly (or not) your reel will release line



## FLY RODS

WHAT ARE THE DIFFERENT SIZES OF FLY RODS?

Fly rods are rated on a scale of weight from 1 to 15. The numbers are assigned by the American Fly Fishing Trade Association (AFFTA).

The weight rating indicates the line "weight" needed to properly flex or load the rod for casting. A 1-weight is the lightest rod and 15-weight is the heaviest.

#### NOTE: MORE 5-WEIGHT RODS ARE SOLD THAN ANY OTHER WEIGHT.

1- AND 2-WEIGHT - EXTREME ULTRALIGHT FRESHWATER

Suitable where small flies are used for panfish and small trout.

3- AND 4-WEIGHT - ULTRALIGHT FRESHWATER

Best with small flies for smaller panfish and trout where wind is less problematic.

5-WEIGHT - LIGHT FRESHWATER

The most popular rod for the trout stream, also excellent for panfish and small bass

6- AND 7-WEIGHT - MEDIUM FRESHWATER/LIGHT SALTWATER

A good choice for throwing larger flies, larger trout rivers. Great medium-weight bass rods and ultralight to light saltwater rods for small flats species. Easier for casting in windy conditions.

8- AND 9-WEIGHT - HEAVY FRESHWATER/ MEDIUM SALTWATER

Freshwater, such as carp or bass fishing with large flies: medium saltwater for bonefish, baby tarpon, Snook, etc.

10-WEIGHT - EXTREMELY HEAVY FRESHWATER/MEDIUM-HEAVY SALTWATER For very strong fish, such as tarpon, salmon, etc. use in extreme wind situations.

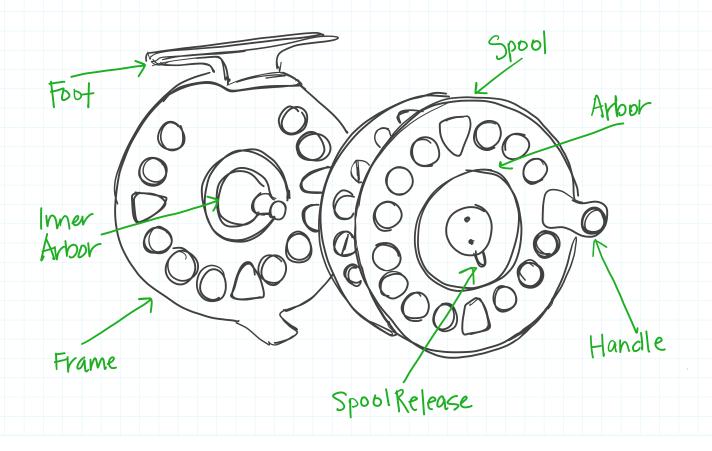
11- AND 12-WEIGHT - HEAVY SALTWATER
Built for large saltwater species such as adult tarpon.

What size fly rod do I need to catch a shark?

13- 14- AND 15-WEIGHT - EXTREMELY HEAVY SALTWATER used for billfish, sharks, tuna and other extreme big-game fish.



Your fly reel is where all of your line is held. Your reel will need to match your rod weight so if you have a 5 weight rod you will need a 5 weight reel to match your rod!





## FLY LINE

#### FLY LINE ANATOMY

- 1. TIP:: Short (6") piece of line to which leader is attached.
- 2. FRONT TAPER:: Section of line that reduces mass/diameter of line from belly to tip, allows line to cast and deliver the fly well.
- 3. BELLY:: Section of the line that contains most of the line's weight, that loads the rod for casting.
- 4. REAR TAPER: Section of the line that reduces mass/diameter of line from belly to running line to allow longer casts.
- 5. RUNNING LINE: Small-diameter rear section of line that shoots through the rod guides well as it is small and light.

  | Shooting Line/Running Line | Rear | Body/Belly
- 6. HEAD: Front taper, Belly and Rear taper, combined.

Note: Most fly lines range from 90 to 120 feet in length!

> Front Taper |Tip|

Headlength

### HOW TO READ A FLY LINE BOX

All of the main designations of a fly line are available on the box. Take a look at this example on how to read a box of fly line.

#### WF-5-F

WF = Weight Forward

5 = 5 weight

F = Floating

90 FT = 90-feet line length



## LEADERS & TIPPET

#### WHAT IS A LEADER?

- \* Provides a strong, translucent, flexible link between the fly line and fly.
- \* Separates impact of fly line from fish
- \* Permits predictable delivery of fly soft to powerful
- \* Permits most effective drag-free floats and drifts or fly action
- \* Relatively small tip diameter allows connection to hook eye

#### WHAT IS TIPPET?

Tippet is what you tie onto your leader so you can trick a fish into eating your fly. Leaders and tippets are referred to by an X code. The X code provides a quick way to communicate tippet material size.

Example: 11 - .006"= 5X

# NOTE: REMEMBER, THE LARGER THE X CODE, THE FINER THE DIAMETER OF THE TIPPET.

#### TIPPET STRENGTH

This table can be used as a general guide for matching tippet size to hook size. Fly design and variations in leader material stiffness affect performance and may dictate larger tippet or permit smaller tippet to be used.

Tippet	Xcode	Lb. Test	Hook Size
.003"	8X	1-2	24, 26, 28
.004"	7X	2-3	20, 22, 24, 26
.005"	6X	3-4	16, 18, 20, 22
.006"	5X	4-5	14, 16, 18
.007"	4X	5-6	12, 14, 16
.008"	3X	6-8	10, 12, 14
.009"	2X	8-10	6, 8, 10
.010"	1X	9-12	4, 6, 8
.011"	OX	10-14	1/0, 1, 2, 4

NOTE: TENSILE STRENGTH [LB. TEST] IN THE TABLE IS APPROXIMATE

## ALL ABOUT FLY CASTING!

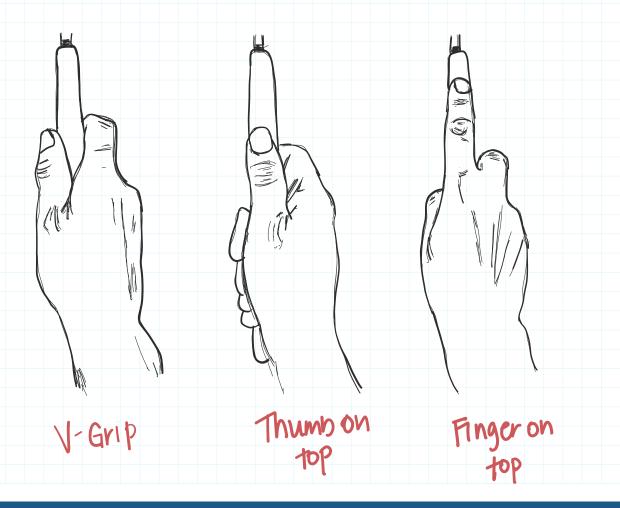
The reason of the fly cast is to deliver the fly to the fish. Accuracy is a major key in being successful. There are many methods of fly fishing and a multitude of different casts, but they all serve the same purpose...

#### TO CATCH FISH!

#### **GRIP**

Grip choice is part of an individual's casting style. In addition to casting style, there is the age-old question of what is the primary objective: Power versus Control?

The three primary grip types are:



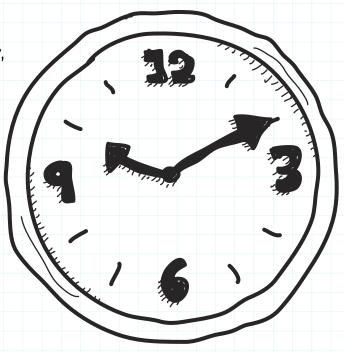
## PICKUP/ LAYDOWN

The Pickup/Lay Down cast is one full casting motion that will deliver a fly.

Pick-up/Lay Down cast is performed in this order:

- 1. Start rod tip low with 30 feet of line straight on water in front, raise the rod tip slowly to a 10 o'clock position
- 2. Then without pausing, smoothly accelerate the rod to the 2 o'clock position
- 3. Stop firmly
- 4. Pause long enough for the line to straighten out behind you
- 5. Accelerate the rod back to the 10 o'clock position
- 6. Stop firmly
- 7. As the line unrolls and begins to drop, follow it to the surface with the rod tip

NOTE: THE 10 TO 2 RANGE IS A
GOOD STARTING POINT. THESE
POSITIONS SHOULD BE ADJUSTED
AS MORE OR LESS LINE IS USED.

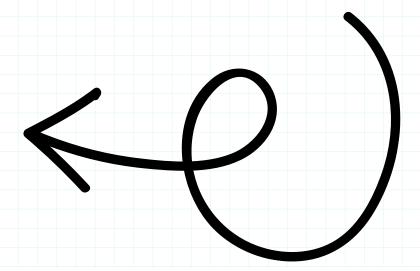


#### ROLL CAST

A Roll Cast uses the tension of the fly line against the water surface to make the cast. This is especially useful when there isn't room behind you for a back cast.

A Roll Cast is performed in this order:

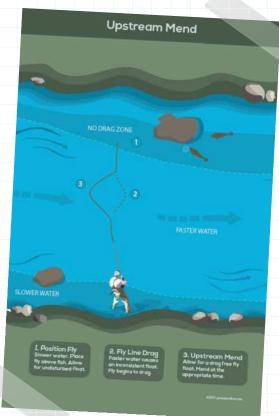
- 1. Start rod tip low with 30 feet of line straight on water in front
- 2. Slowly, raise the rod from the 9 o'clock position to the 2 o'clock position with the rod and hand slightly outside of the caster (approximately 20 degrees)
- 3. Stop rod briefly forming a D loop
- 4. Accelerate the rod to the 10 o'clock position
- 5. Stop firmly, loop will begin to form
- 6. As the line unrolls and begins to drop, follow it to the surface with the rod tip NOTE: A ROLL CAST CAN BE THOUGHT OF AS HALF OF A PICKUP/LAY DOWN CAST.



### ABOUT MENDING

Mending is the process of moving your fly line and set up to create a natural drift. When the fly hits the water and the line follows, you don't want the line to drag the fly through the water, you want the fly to lead in front of the line so it looks as natural as possible. Here are some tips on mending:

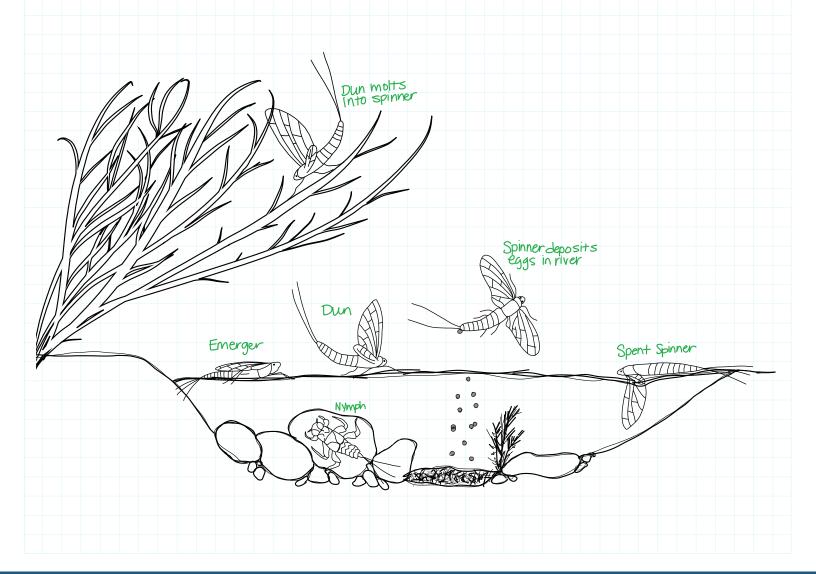
- Mend as soon as the fly hits the water to make sure the line does not drag the fly under water and to keep the leader and tippet from getting too wet before you mend it.
- 2. To mend, hold your line tight in your hand and start with the rod tip down and pick up the line and flick the line upstream, holding your rod tip up higher during the mend and lowering it when you set the line on the water.
- 3. Sometimes if the currents are varied you will need to mend more than once to make sure the fly is presented correctly.
- 4. The goal is for you to mend the line before the fly gets to where the fish are at to ensure there is not weird movement on the fly so it looks as natural as possible.
- 5. For nymphing, you mend the same way except you treat the indicator like it's a fly and try to keep as much line off the water as possible.



# ALL ABOUT FLIES AND TYPES OF FLY FISHING

## STAGES OF A MAYFLY

You'll find Mayflies in several parts of the country, but their life cycle is also an example of the different forms of fishing. If you notice fish eating off the surface, you want to use an emerger or a dry fly. If you see bugs hatching but you don't see fish rising, you will want to try a nymph and an emerger. Most of what a fish eats is underwater, but watching a fish take your dry fly on the top of the water is pretty fun!



## ALL ABOUT FLIES

Flies are what we use to catch fish. Flies may imitate insects or other food, but may also be an attractant based upon color or movement. Some fish on top of the water and others fish below the water.



#### FLY TYPES

The categories listed below are the main groupings. However, these categories are not mutually exclusive and the same fly may fall into more than one category. When you're at the river, go pick up a rock and see what types of nymphs you see. This helps you figure out what the fish could be eating!

- · Dry Floats
- · Wet / Nymphs Sinks
- · Terrestrials Floats and Sinks
- · Streamers / Woolly Buggers Sinks

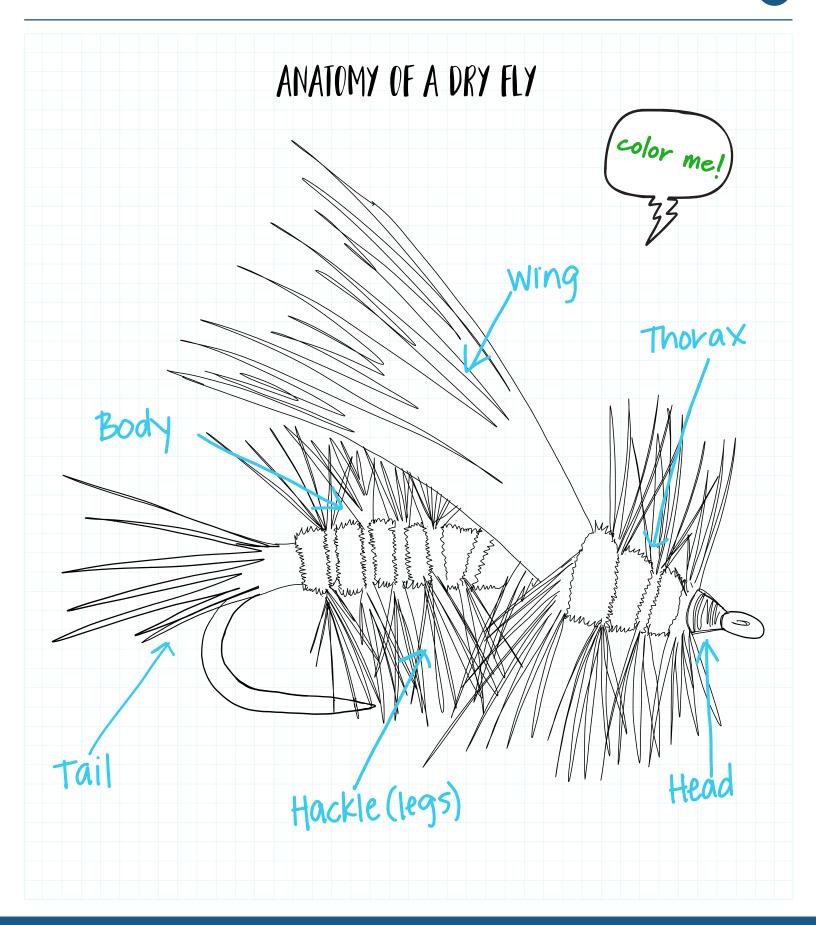
#### HOW TO FISH DRY FLIES

To fish a dry fly, the first thing you want to do is match the hatch, which means try to match what you see the fish eating to what you have in your fly box. Decide which size tippet works best for top-water; generally 5x or 6x is your best bet because they are not easily seen. Add some fly gunk or floatant to the fly after you get it tied on so the fly floats on top of the water as pictured below:



#### TIPS FOR DRY FLY FISHING/

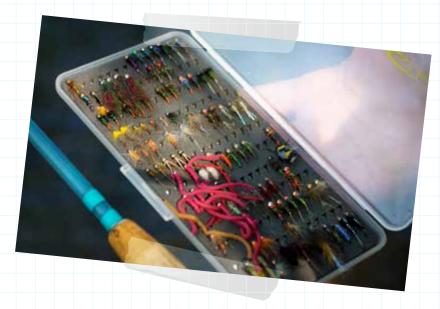
- 1. Choose to dry fly fish when you see fish eating on top or you know there is a hatch in the area. You can either match the hatch or try a fly called a stimulator, which is a fly that looks delicious but isn't hatching.
- 2. Don't be afraid to trade out your fly several times to find the right size of fly or even the right color. Some fish can be pretty picky!
- 3. Make sure you mend your line and let the fly float as natural as possible.



#### HOW TO FISH NYMPHS

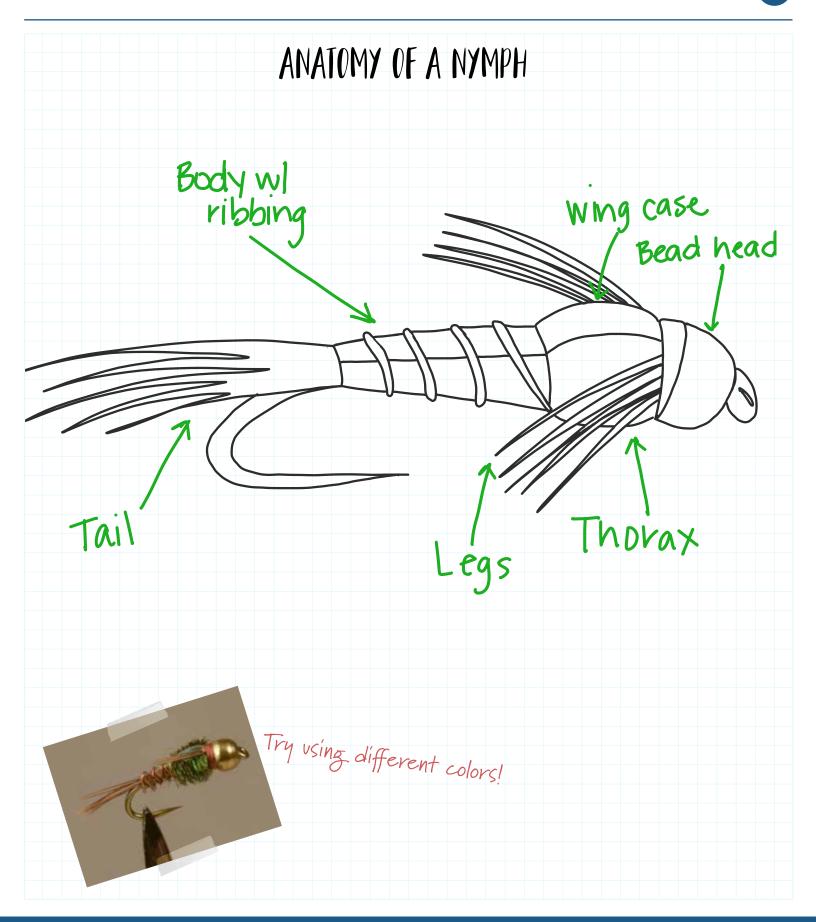
The nymph is considered to be the most productive of all of the flies to use for trout. Trout feed approximately 80% of the time underwater. The nymph is the stage in which the insects live their lives under the surface of the water along the stream beds or lake bottom. In this stage they become very abundant. That is precisely why trout feed primarily on these types of insects.

Because this fly is fished sub-surface, it is necessary to use certain fishing techniques in order to detect the strike of the fish. Many anglers use a strike indicator. This is essentially a small float that is attached to your leader above the fly and floats along the surface as your fly drifts along. When a fish takes the fly, the indicator can do a few different things. It will either stop, slow down, move upstream, or even some other slightly different action that is not normal.



#### TIPS FOR NYMPH FISHING/

- 1. Generally, the distance from the indicator to your top fly should be 1.5-2 times the depth of water. These bugs live on the bottom, so you have to get your flies to the bottom.
- 2. When you see the indicator make an abnormal movement, gently lift your rod to set the hook. Remember, hook sets are free, so set the hook often.



#### HOW TO FISH STREAMERS

The streamer can be one of the most fun flies to catch trout, along with one of the most productive, second only to the nymphs. Most strikes to a streamer tend to be aggressive and explosive as the fish attempts to eat the fly as fast and hard as possible.

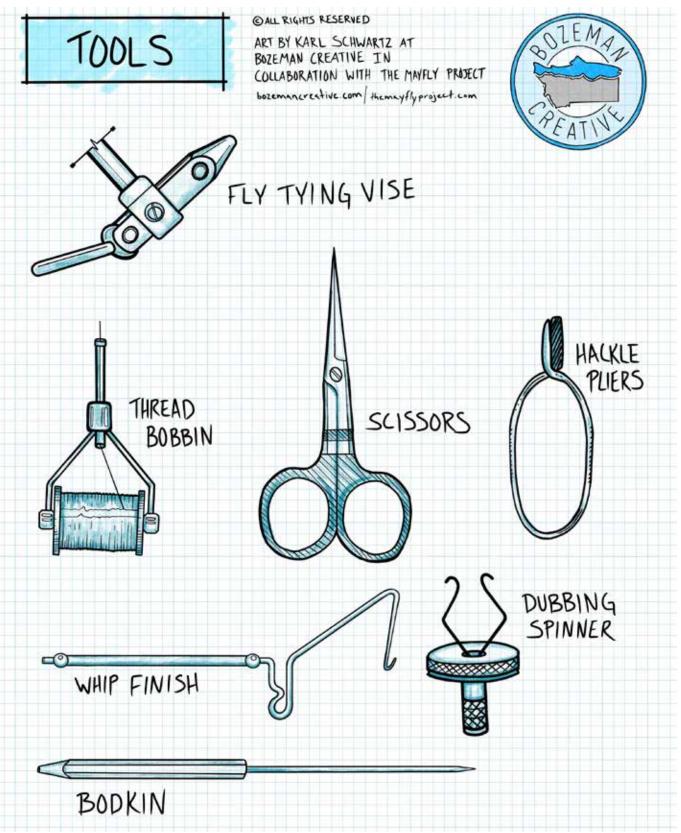
Streamer flies tend to imitate foods such as leaches, minnows, sculpins, and other types of larger underwater fish foods. A streamer is fished by casting your line out to a likely looking spot in a lake or river and stripping, or pulling, your fly line in in short pulls or longer pulls. This stripping method moves your streamer through the water in short or long bursts. It creates a pulsing type of action that most fish simply can't resist.



#### TIPS FOR STREAMER FISHING/

1. Use a heavier weight tippet so you don't break off from the aggressive take.

## TYING YOUR OWN FLIES!



# WOOLY BUGGER

#### MATERIALS

HOOK: STREAMER HOOK - SIZE #10

WEIGHT: 0.030" LEAD-FREE WIRE

TAIL : GRIZZLY MARABOU RIB : COPPER UTL BRWIRE BODY MEDIUM CHENILLE

HACKLE : GRIZZLY SADDLE HACKLE

THREAD: UTC 70





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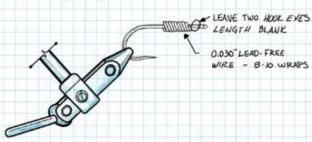


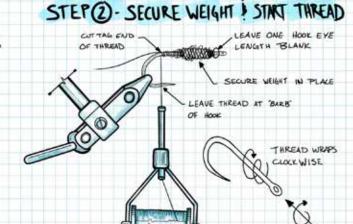
EAT

INSTRUCTIONAL VIDEO AVAILABLE ON THE MENTEE INFORMATION CENTER

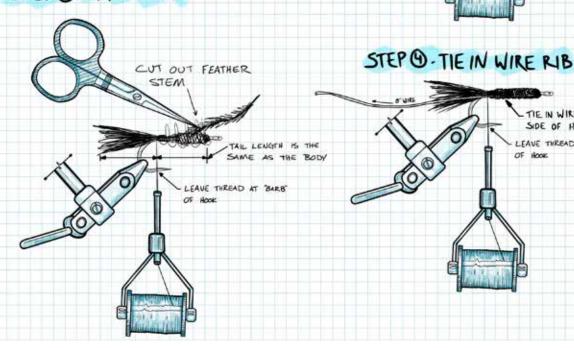
TIE IN WIRE RIB ON SIDE OF HOOK LEAVE THREAD AT BARB

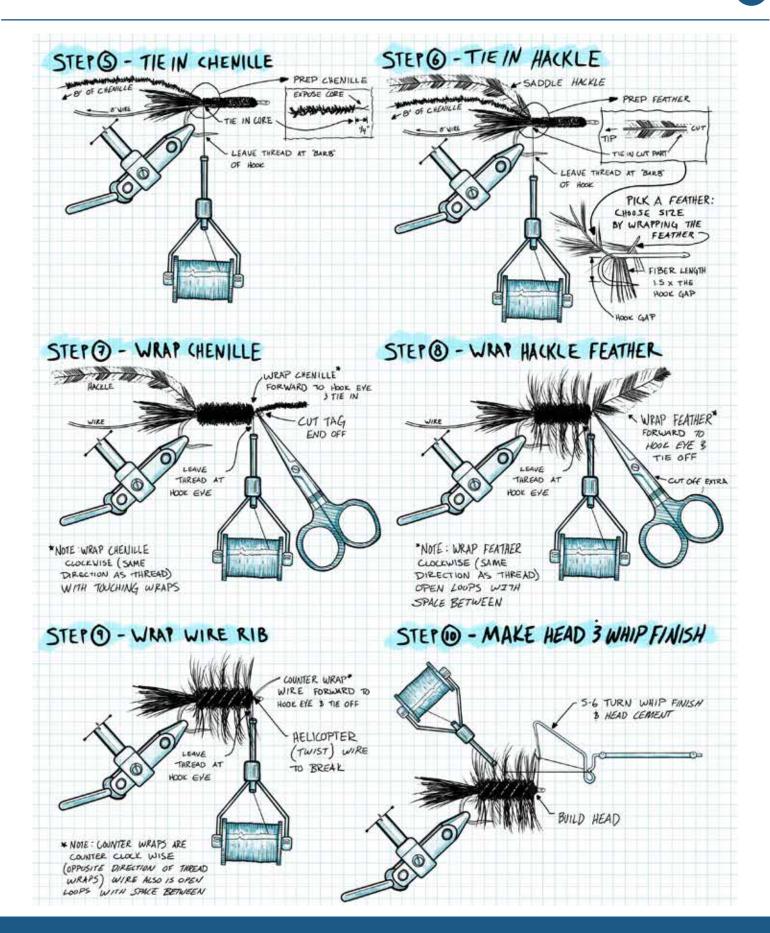
#### STEP O- WEIGHT HOOK





#### STEP 3 - TIE IN TAIL





# GURGLER

# MATERIALS

HOOK: STREAMER HOOK

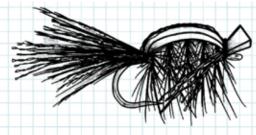
THREAD: UNI 12/0 TAIL : MARABOU

FLASH : CRYSTAL FLASH

SHELL BACK: CRYSTAL FLASH/ FOAM

BODY : CLOSED CELL FOAM

HACKLE: SADDLE HACKLE LEGS: CRYSTAL FLASH





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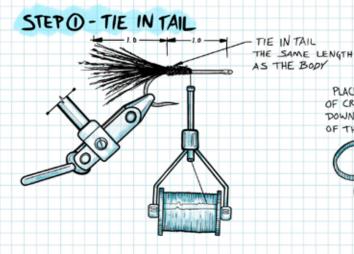
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USE LATER



STEP @ - TIE IN CRYSTAL FLASH LEAVE REMAINING CRYSTAL FLASH FOR

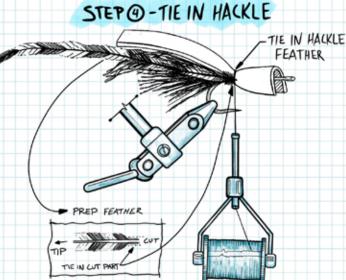
PLACE 3 STRANDS OF CRYSTAL FLASH DOWN EACH SIDE OF THE TAIL

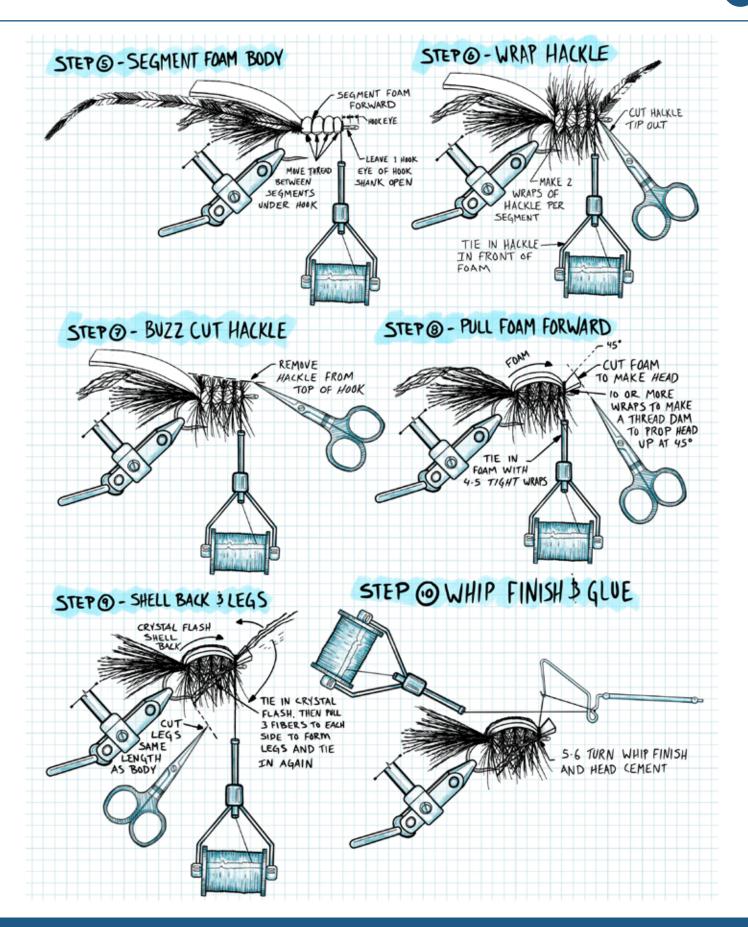
> CUT CRYSTAL FLASH SLIGHTLY

LONGER THAN TAIL

STEP 3 - PREP 3 TIE IN FOAM

TIE IN FOAM WITH 3-4 TIGHT WRAPS FOLD FOAM OVER HOOK SHANK FOLD BACK CRYSTAL FLASH CUT FOAM TO SIZE LENGTH 3x HACK LENGTH THREAD UNDER FOAM WIDTH IS SLIGHTLY TO MAKE LOCKING WRAPS LARGER THAN THE HOOK GAP





# PHEASANT TAIL

# MATERIALS

HOOK: CURVED NYMPH HOOK

BEAD : TUNG STEN BEAD

TAIL : PHEASANT TAIL FIBERS RIB : SMALL BRASS WIRE

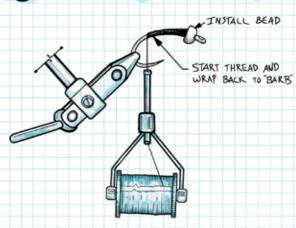
BODY PHEASANT TAIL FIBERS

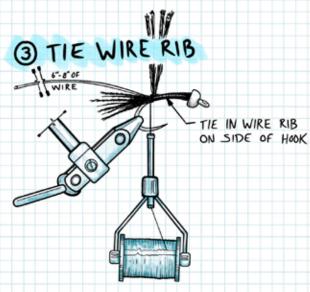
THORAY : PEA COCK HERL WING CASE : PHEASANT TAIL FIBERS

LEGS: PHEASANT TAIL FIBERS

THREAD: BROWN UTC 70

# 1 BEAD & START THREAD







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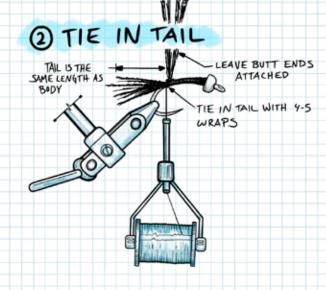
PEAT

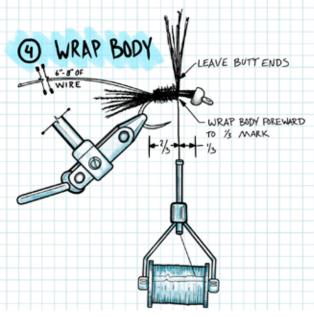
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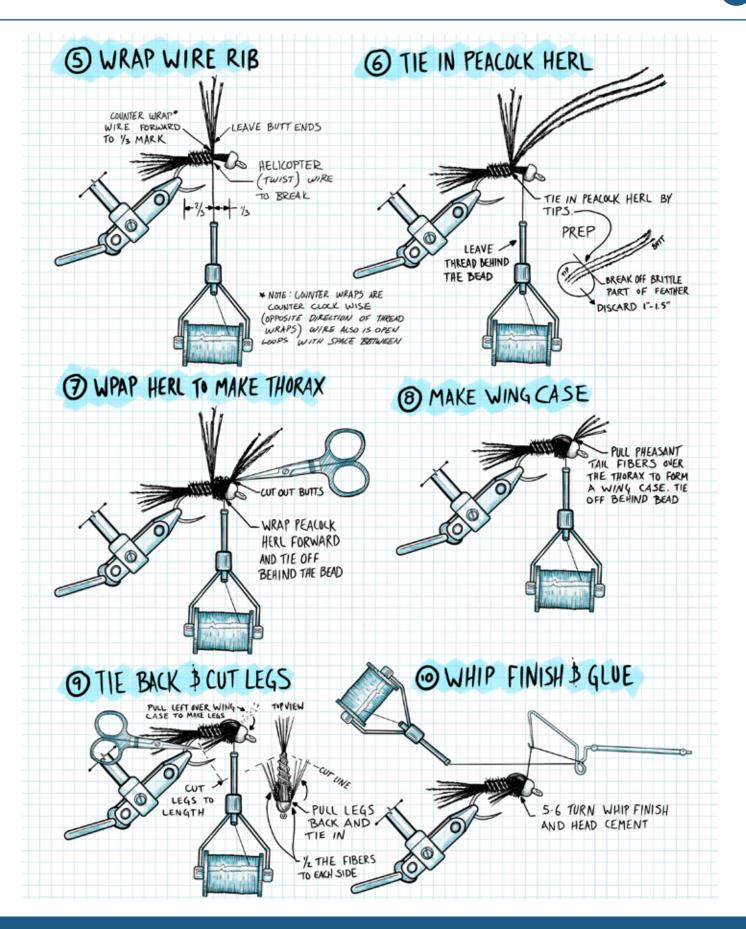
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# KNOTS!

There's nothing worse than tricking a fish and then losing it to a knot fail. Practice this knot as much as you can in order to make sure you don't lose fish! Once you get to step 4, give the knot a bit of your spit to keep it from burning the line... YA, SPIT ON IT!

CONNECTING YOUR LEADER TO YOUR LINE - LOOP TO LOOP

#### STEP 1

Hold the line loop in your left hand and the leader butt section with loop in your right hand.



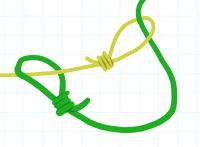
# STEP 2

Pass the line loop through the loop in the butt section of the leader.



## STEP 3

find the end of the leader and pass it through the line loop.



# STEP 4

Pull the loops in opposite directions to draw them together. When done correctly they should form a "handshake" style interlocking connection that will flex and move naturally to transfer the energy of your cast smoothly from line to leader.

# TIE TIPPET TO YOUR LEADER - SURGEONS KNOT

# STEPI

Hold the end of your leader in one hand and the tippet you are attaching in the other hand. In each hand you should have about 4-6 inches of free tag material to work with. Arrange the tags so they overlap, laying alongside one another and facing in opposite directions.

# STEP 2

Find the center of the overlap and form a big loop in the overlapping portion, pinching at the junction where the loop crosses between your left thumb and forefinger.

# STEP 3

Using your right hand, wrap the tag end of the leader and the end of the tippet around the loop and pull it through. Repeat this step once more so that you have made a total of two wraps through the loop.

REMEMBER: ALWAYS TEST YOUR KNOTS!

# STEP 4

Hold both the short and the long portion on both sides of the knot. Wet the knot (spit on it!) and tighten by pulling with both hands in opposite directions. Trim the two tag ends close to the knot.



# TIE ON YOUR FLY - CLINCH KNOT

### STEP 1

Hold the hook in your left hand. Pass the tippet through the eye of the hook and double the tag end back so it lays parallel to the standing line. Use your left forefinger to keep an open loop just in front of the hook eye and hold the standing line in your right hand.

# STEP 2

use the thumb and forefinger on your right hand to wind the tag end around the standing line 4-5 times.

# STEP 3

Once the tag is twisted around the standing portion, remove your forefinger from the hook eye taking care to keep an open loop. Pass the tag end of the tippet through the open loop in front of the hook eye.

# STEP 4

Snug the knot by pulling softly on the tag end until the wraps come together but do not tighten all the way. Release the tag, wet the knot (spit on it!), and pull from the standing portion of the tippet to allow the knot to fully tighten. Trim the tag end close to the hook eye.

# ALL ABOUT FINDING FISH - READING THE RIVER

SECTIONS OF A RIVER



# RIFFLE

A riffle is a rocky, shallow area in a stream where water cascading over rocks creates a noticeable surface disturbance. To identify a riffle, look for a choppy surface or whitewater spilling over shallow rocks into deeper water. A good riffle will fulfill all of the basic needs of a trout. The shallow, highly oxygenated water is a perfect environment for the aquatic insects trout eat. Boulders and rocks create plentiful hiding and resting spots. Deeper water downstream gives trout rest and security. All of these aspects make a riffle a great starting point when looking for trout.

### RUN

A run is an in-between zone directly below a riffle, where the water becomes deeper and the current is more uniform. Aside from a riffle, a run is one of the top places to look for trout in a stream. Trout like the shelter provided by deeper water and the proximity to an easy meal. Fish often suspend at the edge of the current or lie along the bottom eating insects that are carried downstream out of a riffle.

# POOL

A pool is the deepest portion of any given section of river with the slowest current. Fish will often retreat to a pool on bright, sunny days or if they feel threatened. In shallow streams, pools might be the only areas that hold fish, but it is different for larger rivers. While most river trout - especially big ones - may spend a portion of their day in a pool, typically this is when they are least active.

# **EDDY**

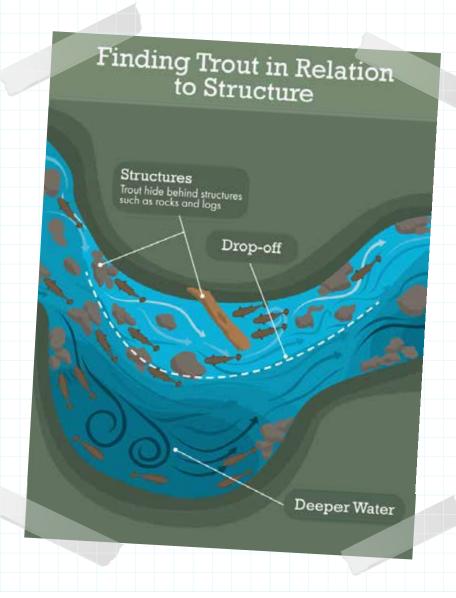
An eddy is an area of the river where structure such as an indent in the riverbank, a log, or a large boulder blocks the current flow and influences its direction. Directly downstream of the object, a pocket of swirling water will form opposite the main direction of current flow. Trout love eddies because they funnel and trap insects drifting by in the current. Look for foam or bubbles collecting on the surface where the main current meets up with the swirling water and place your casts there

# **TAILOUT**

A tailout is a shallow, flat section at the end of a pool before the water spills over into another riffle. Where the water becomes shallow, a natural funnel is formed that brings anything drifting downstream right to the fish. Trout will often wait in a tailout and sip hatching insects off the surface as they float by, so it is a good spot to look for rising fish.

# EXAMINING THE STRUCTURE

Learning to pinpoint structure in different sections of a river is the final step to reading water like a pro and increasing your likelihood of finding trout. Structure can refer to objects in and around the river such as boulders, gravel bars, holes, and changes in bottom contour. Less obvious examples are eddies and current seams created by the river flow, or shade from a high bank. A good section of river might contain several of these features, and as a rule, areas where different types of structures intersect are prime locations to look for trout.

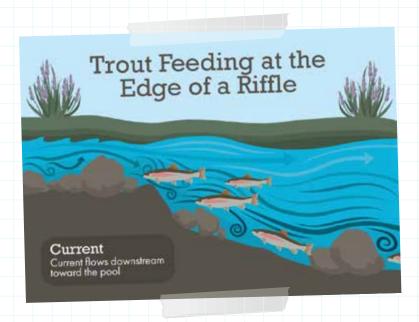


# BOULDERS, LOGS, AND OTHER OBSTRUCTIONS

Any object that impedes the current flow is worth investigating. It's worth bonus points if it is located in a favorable section of the river such as a riffle, run, or tailout. Multiple casts placed upstream, to the side, and downstream of the object will give you a shot at any fish that may be sitting there.

#### CHANGES IN THE RIVER

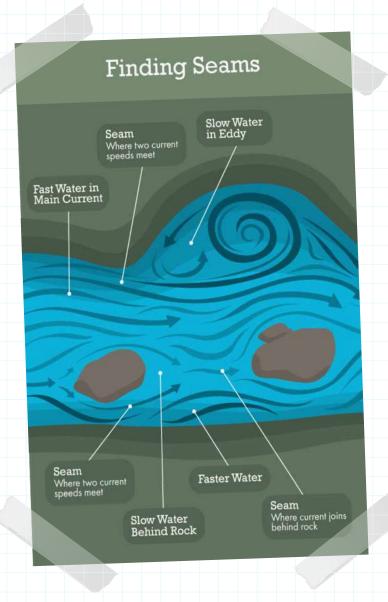
Bends, gravel bars, shelves, holes, and other changes in the river or bottom contour are great places to look for trout. A good example is the area right where a riffle drops into deeper water. Trout will often rest in the slower current below the drop-off, eating insects that are swept over the edge.



Other good locations are the insides of river bends, points jutting into the current, and indentations along the bank. A good pair of polarized sunglasses can help locate structure hidden below the surface. Dark areas often signify deeper holes. Look for gravel bars mid-river, and drop-offs or shelves at the river's edge where the current begins to slow. Fish will be resting and feeding on the deeper side of these areas.

# FINDING SEAMS

A "seam" is any spot where two currents converge. Trout like seams because the joining currents create feeding lanes that collect drifting food, so when looking at any structure in a river it is important to locate any associated seams. With some experience you will be able to detect seams as subtle lines along the surface where slower current meets with fast. Watch the current carefully as it flows over and around structure. Look for bubble trails floating downstream or any area where there is a noticeable difference in current speed.



Finding Fish source: www.fix.com/blog/locating-trout-in-a-stream/



# ALL ABOUT RIVER SAFETY



# NEVER GO ALONE

Never go to the river without an adult with you unless you are over the age of 18 years old, or have permission from an adult and are a strong swimmer. Even if you are old enough to go, bring a buddy with you to make sure you have someone who can call for help. Rivers and lakes can be unpredictable, so choosing the safest place; a place you are familiar with, is your best bet. If you're going to explore new waters, make sure you have a buddy or adult with you. If you're young, make sure you are holding on to an adult's arm if you are wading in the water.

# WEAR YOUR WADING BELT AND BOOTS

The wading belt is the belt on your waders that fits tight around your waist. This is an important safety measure, because if you fall in, water will not be able to fill up your waders quickly. When your waders fill up, it makes it almost impossible to swim or walk in the water. Your boots will keep you from slipping on the rocks. Make sure you have waders that fit you snug and comfortably.

# DON'T GO PAST YOUR KNEES

until you are a skilled wader, it's recommended you do not wade past your knees in the water. When you work with The Mayfly Project, it's our policy you do not go past your knees so you have more mobility.

# KEEP IT SIDEWAYS AND LEAD WITH DOWN RIVER FOOT

Standing sideways in the river will allow you to maintain much more control and stability. Avoid facing straight up or straight down river because the river can swipe your feet from under you if it's fast. As you cross the river, always feel your way across the streambed with your downriver foot. Plant your downriver foot firmly and then slowly slide your upriver foot forward until it's even with your downriver foot. Once the upriver foot has found a firm hold, repeat the process of feeling your way forward with your downriver foot. Unless you're wading through very shallow water, having your upriver foot overtake your downriver foot throughout the crossing will never be the most stable way wade in swift, off-color water.

# TRUST YOUR INSTINCTS

If you feel scared, and aren't sure if you should be wading in a certain spot, you need to listen to your gut and back out slowly. The river bottom could look not deep, but as you inch out you could find it gets deep quickly. Always make sure you have an adult to show you where to go and how to go in the water, and trust your instincts.



# KNOW THE SEASON

Never wade in winter, and if you live where there is winter snow melt, the rivers could be very high and fast during Spring. You can check how fast the river is flowing by looking up river databases in most main river basins, but talk to a local fly shop to find out as well.



# WEAR GLASSES

Protect your eyes from hooks and make sure you have safety or sun glasses on every time you are fishing. There have been many stories of people losing their eyesight because of a hook in the eye!



# RIVER ETIQUETTE

When you're out fishing on a river or a pond, make sure you are being respectful to those fishing around you. Try to keep a distance of about 60 feet if possible, meaning give the other angler space and find another spot. It depends where you live though and what time of year you are fishing. Ask before you go! Also, anglers generally fish upstream, so if you see someone ahead of you, either wait for them to go up or go find another spot so you don't put pressure on them.

# FISHING LICENSE

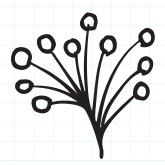
In order to fish in your state, you need to check with your local Game and Fish, or Fish and Game (depending what part of the USA you live), to see what their local fishing regulations are for your county.

Usually, if you are under the age of 16, you will not need to have a fishing license to fish.

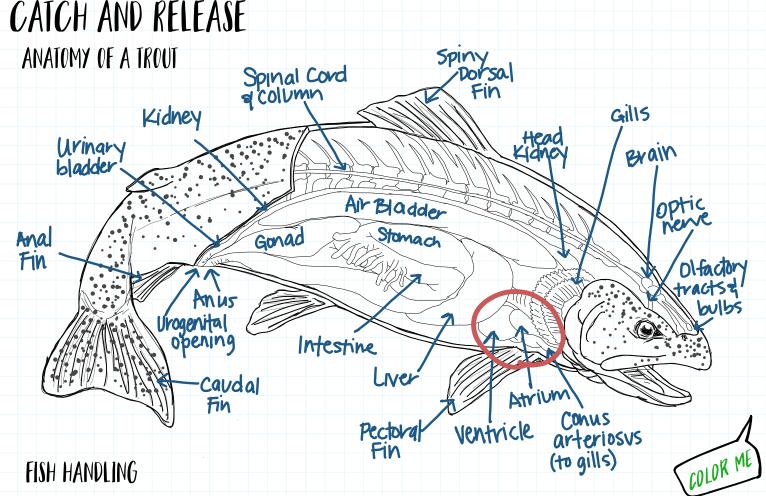
If you are over the age of 16, you will need to purchase a fishing license for the year. Talk with your lead mentor about helping you purchase your fishing license for the year, or check online or call your local Fish and Game, and check back with TMP if you would like help again purchasing your fishing license once it expires.

Before you go to fish somewhere, it's important to check the local fishing regulations, which can be found at sporting goods stores or online. Some parts of the year rivers or creeks may be closed for fishing due to spawning or stocking schedules.









- 1. Wet your hands before handling the fish (this will prevent removal of their protective slime)
- 2. Keep the fish in the water as much as possible (considered by nearly everyone the most important fish handling technique.) The fish need only be out of the water for less than 5 seconds for a photo.
- 3. Do not "lip" the fish, do not put them on the grass, beach, or snow.
- 4. Keep the fish near the water. If a large fish is dropped it risks bursting its air bladder.
- 5. When holding the fish, keep fingers out of gills. The area between the tail fin and the body can be held firmly as it is all bone.
- 6. However the area around the pectoral fins must be cradled ... not squeezed (aka, Death Grip), as it can do damage to the heart and/or liver. Note in the fish anatomy picture the red circle around the heart area.

# RELEASING

- I. Find some slow moving water to release fish.
- 2. Start with one hand under the belly and the other on the caudal peduncle.
- 3. Face fish into slow current and remove hand from belly. Observe to see if fish is stable (stays upright.)
- 4. Move tail from side to side. Fish should swim out of your hand, upright.
- 5. Stay with fish until first four steps are accomplished successfully.
- 6. If fish goes to bottom and sits, it is not a bad thing, but don't leave it. Let it recover some more and then gently move the tail. A surviving fish will eventually swim away from you.
- 7. In a lake add a back and forth motion to the side to side tail motion.



# STAY CONNECTED!

Now that you've had a chance to try out fly fishing, learn about characteristics of an angler, and you have the tools to join in the cycle of healing the environment, there's much to do! Here are some things you can do to keep learning:

\*Get into tying flies, if applicable where you live. Ask a mentor to help you get started before your last outing with TMP.

\*Talk to your guardian or group home staff about taking you to a local pond or river to keep practicing fly fishing during the warmer months of the year. Or, set up a game outside

with duct tape and practice casting a piece of yarn or tape, to keep working on your cast.

\*If you're old enough to be on the internet, sign up for Trout Unlimited, search YouTube videos of fly fishing, and visit local fly shops to learn more about what is fishing well in your area.

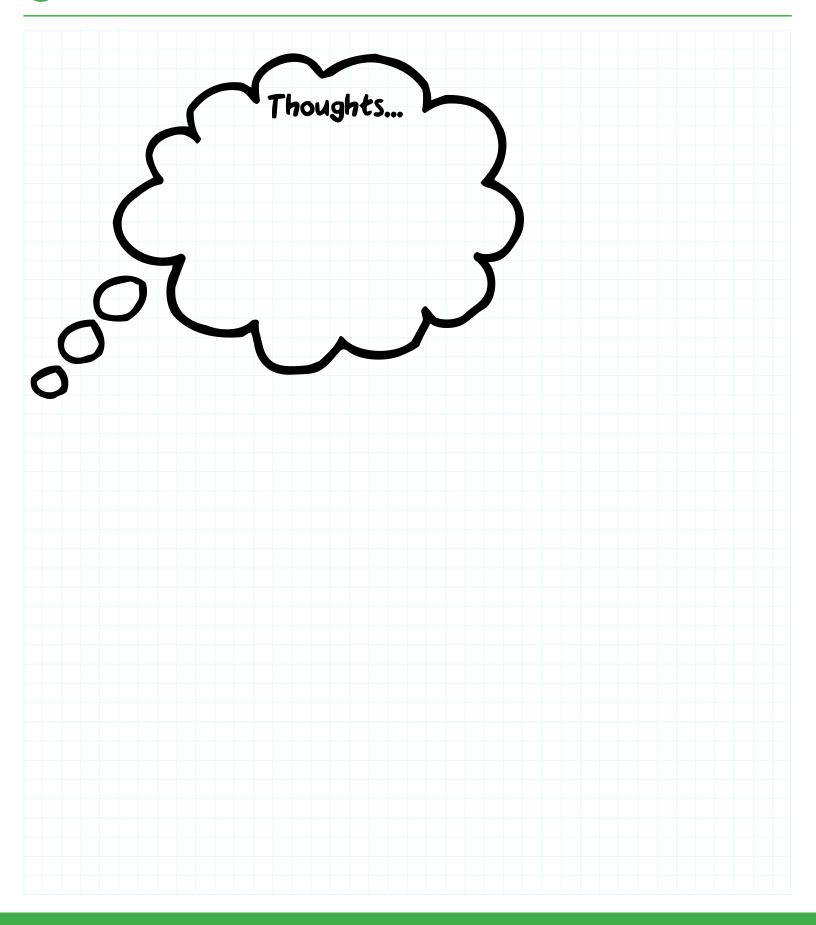


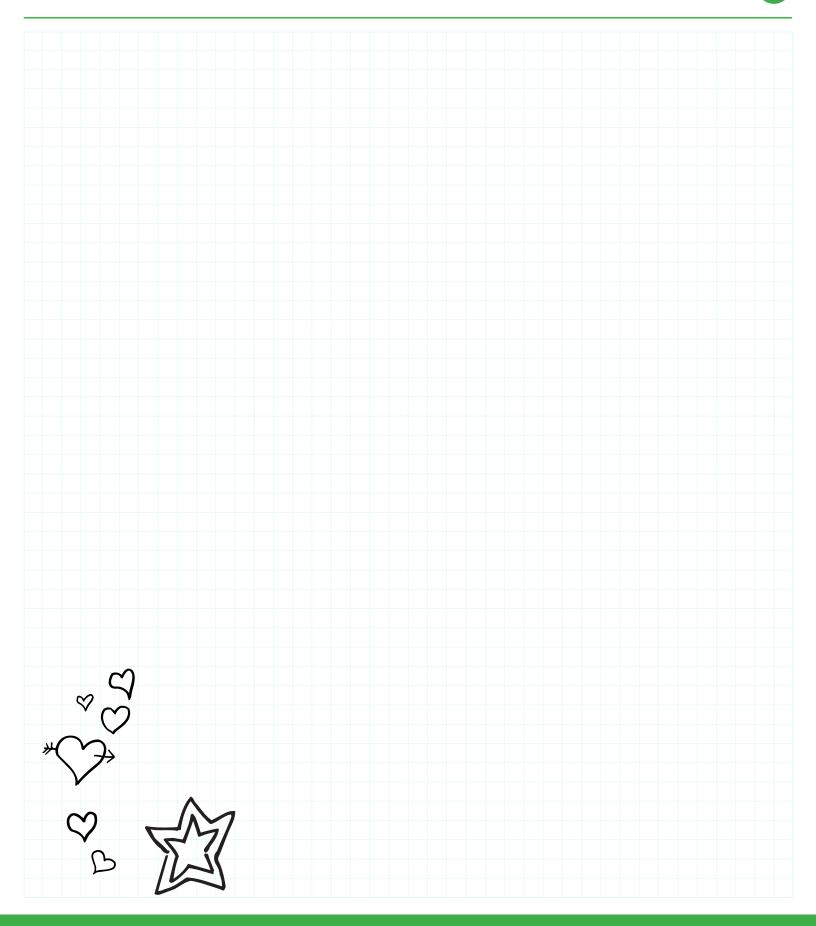
\*Consider looking into all of the careers that involve taking care of fish habitat, restoration projects, conservation jobs, outdoor industry jobs, or even fly fishing jobs! You're never too young to get involved in local projects or to get excited about careers that interest you.

\*Check back at our website, www.themayflyproject.com we will have a mentee information center soon where you can see fly tying videos, find gear at a cheaper cost, and learn more about what's going on across the country.

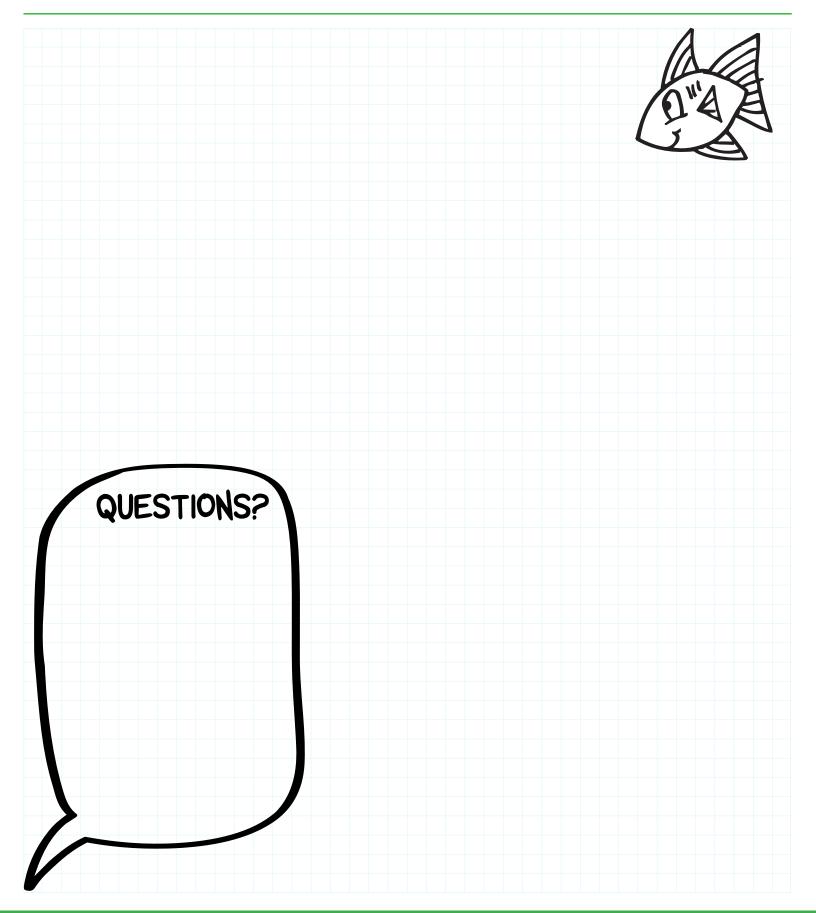
We hope that you learned a lot and that you realized how time outside can help you manage stress or to make your brain feel a bit better! Thank you for your time and for letting us play on the river with you!



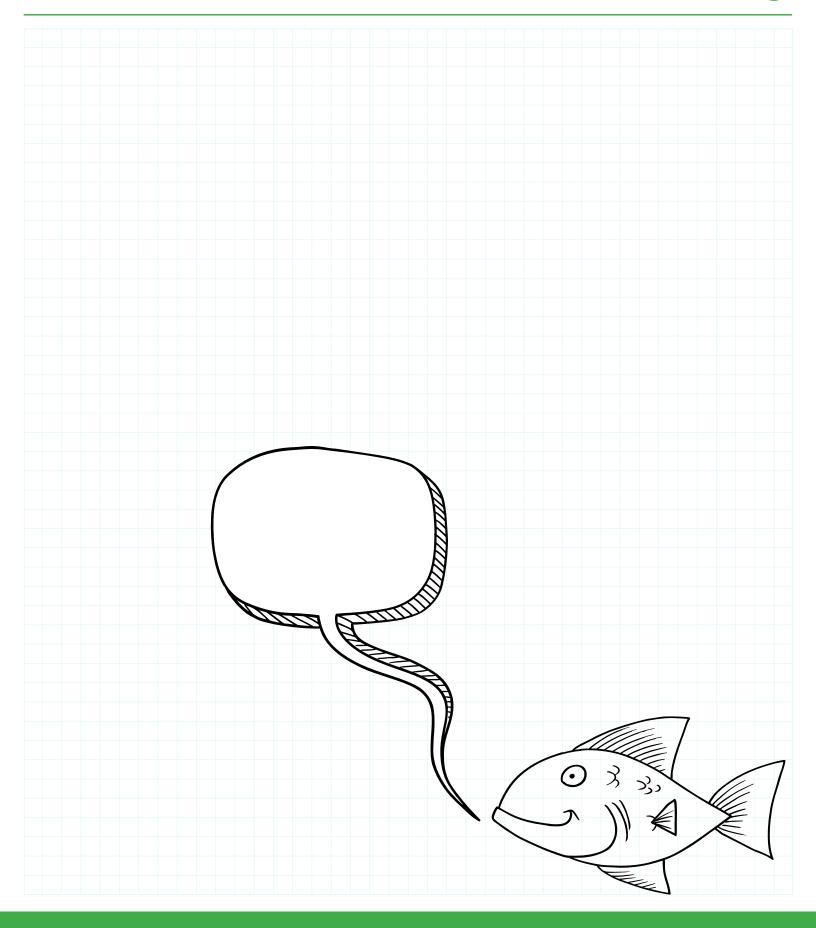




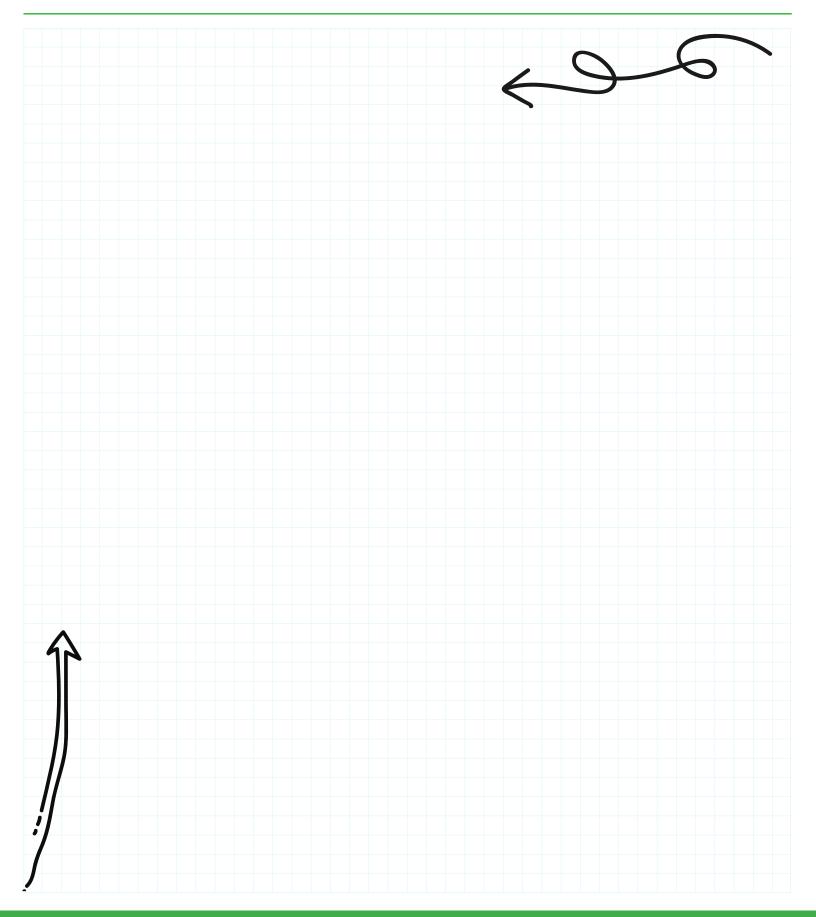




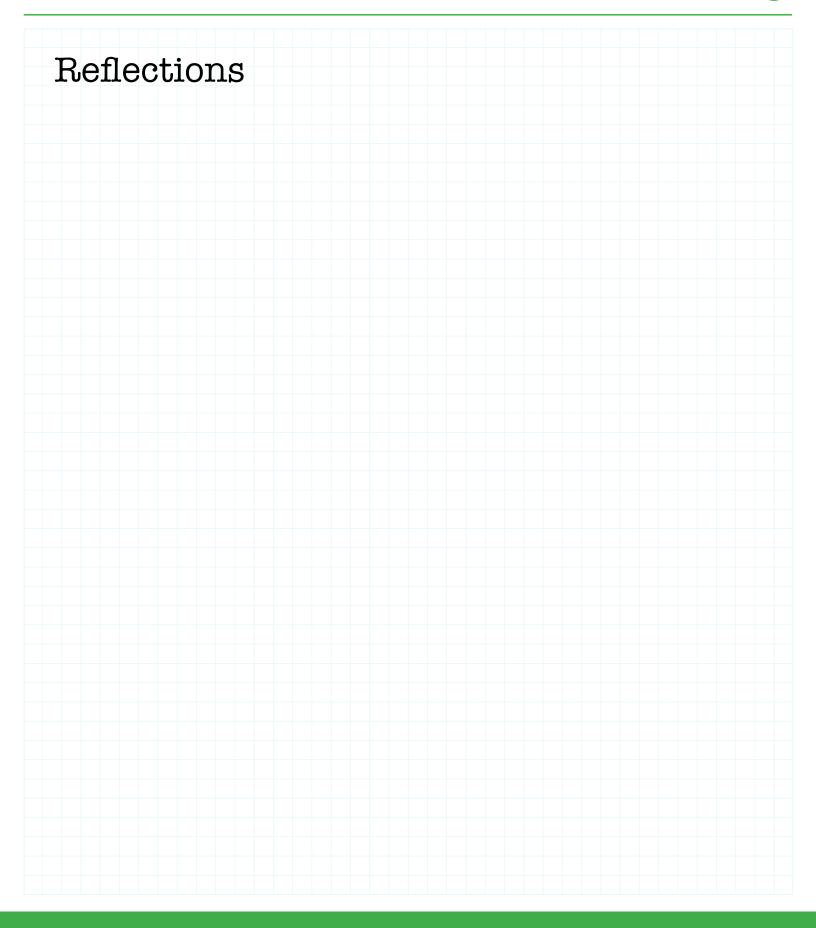












# TERMS TO CHECK OUT

# [A]

#### Abdomen

posterior section of an insect's body; located just behind the thorax; typically segmented and large in size relative to other body parts.

#### Action

a term used to describe the flexing characteristics of a particular rod, generally broken into three categories: fast, medium, and slow. Fastaction rods tend to be stiff. require high line speeds to load, and can perform well against the wind and with larger flies: medium-action rods flex further into the body of the rod, require less force to load, and are typically used in freshwater fishing; slow-action rods flex nearly to the butt, load at short distances, and are most often used for dry-fly fishing.

#### Adipose Fin

a small, rayless fin located between the dorsal and caudal fins of salmonids. The adipose fin of hatcheryraised salmon, steelhead, and trout is often removed to distinguish hatchery fish from wild fish.

#### Adult

the winged stage of aquatic insects; reproductive stage.

#### Anadromous Fish

migratory fish, such as salmon and steelhead, that live the majority of their lives in salt water before migrating to fresh water in order to spawn.

#### Anodizing

a process used to increase the thickness of the natural oxide layer on the surface of metal parts; often utilized in the construction of aluminum reels and parts intended for saltwater use.

#### Arbor

the center part of the spool, where fly line and backing are tied, wound, and connected to the reel.

#### **Arbor Knot**

knot used in fly fishing to attach backing to the spool of a fly reel.

#### Attractor

an impressionistic fly pattern, such as a Royal Wulff, tied with certain fishenticing characteristics, meant to elicit a strike rather than to realistically imitate an insect.

# [B]

#### Backcast

that portion of any fly cast that extends behind the caster (as in false casting).

#### Backing

usually braided Dacron, used to take up space on the spool before the fly line is attached (see spool and nail knot); on salmon, steelhead, and saltwater reels, also becomes important in fighting fish.

#### **Baetis**

widely distributed genus of mayflies typically found in sizes 16 to 22.

#### Bamboo

oldest rod building material still in use; the classic fly rod material.

#### Barb

the backward-facing projection cut into a hook near the point to reduce the chances of hooked fish escaping.

#### Barrel Knot

same as blood knot (see blood knot).

#### Bass Bug

name used to describe a large number of surface bass flies usually tied with hollow hair (such as deer hair).

#### Bass Bug Taper

a special weight-forward floating fly line with a short front taper so that the generally wind-resistant bass bugs can turn over (see weight forward and turn over).

#### Beadhead

term used to describe a fly tied with a bead near the eye of the hook, simulating a head, such as a Beadhead Pheasant Tail. Beads can be brass, nickel, tungsten, or ceramic, and typically add weight to the fly in order to help it sink; however, some beads increase buoyancy.

#### Belly

middle component of a tapered fly line; located past the tip and front taper, but before the rear taper and running line (see running line, front taper, rear taper, and head).

#### Bimini Twist

a strong, shock-absorbing alteration to a leader using a series of twists and knots, used almost exclusively in saltwater fly fishing for large game such as tarpon.

#### Biot

a short thick barb from the leading edge of a first-flight feather, typically from a goose or a duck, that is used to simulate tails, legs, or antennae.

#### Blank

the long, slender, tapered cylinder-typically constructed of graphite, bamboo-to fiberglass. orwhich other components are attached during the manufacturing of a fly rod; simply the "rod" part of a fly rod.

#### Blood Knot

the most widely used knot for tying two pieces of monofilament with similar diameters together; the best knot for construction of a knotted tapered leader; also called the barrel knot.

#### Bobbin

a fly-tying tool used for holding thread.

#### Bodkin

fly-tying tool used to deposit cement or lacquer to a fly, usually consisting of a thin, pointed metal rod attached to a handle.

#### Breaking Strength

amount of effort required to break a single strand of unknotted monofilament or braided line, usually stated in pounds (example: 6 lb. test).

#### Bucktail

(1) the hair found on the tail of the Eastern whitetail deer, used in the tying of many types of flies; can be dyed any color, or used natural (2) a type of minnowsimulating fly, usually constructed of bucktail.

#### **Butt Section**

the thick end of a tapered leader, the section usually attached to the fly line via a loop-to-loop connection or a nail knot.

# [4]

#### Caddis

one of the three most important aquatic insects imitated by fly fishers; found around the world in all freshwater habitats; adult resembles a moth when in flight; at rest the wings are folded in a tent shape down the back; the most important aquatic state of the caddis is the pupa, which is its emerging stage (also see larva, pupa and emerger).

#### Callibaetis

widely distributed genus of mayfly that is commonly found in lakes; often called the "Speckled Wing Dun" because of the speckled markings on the leading edge of the adult's wings. Callibaetis are usually found in sizes 16 and 18.

#### Cape

part of a bird skin used for tying flies.

#### Casting Arc

the path that the fly rod follows during a complete cast, usually related to the face of a clock.

#### Caudal Fin

the tail fin of a fish.

#### CDC

stands for "Cul de Canard" which literally translates to "butt of the duck." Used both to refer to the feathers from the area around the oil gland of a duck and also to the flies tied with these feathers. The feathers from this area are very wispy and impregnated with natural oils making them extremely waterproof.

#### Char

genus of fish related to trout that prefer cold water and are found many places in the world, identified by a dark body with lighter-colored spots and white-tipped pectoral, pelvic, and anal fins; examples of char are brook trout, lake trout, arctic char, Dolly Varden, and bull trout.

#### Chenille

a fuzzy rope-like material used for creating the bodies of artificial flies, often utilized in patterns such as the Woolly Bugger.

#### Chironomid

scientific name for the family of insects commonly known as midges; in the pupae stage they typically appear to be small aquatic worms.

#### Click Drag

a traditional system on many fly reels used to slow down or resist the pulling efforts of a fish, created by a steel ratchet snapping over the teeth of a gear in the reel spool.

#### Clinch Knot

universally used knot for attaching a hook, lure, swivel, or fly to the leader or line; a slight variation results in the improved clinch knot, which is an even stronger knot for the above uses.

#### Collar

a fly-tying term for a ring of feathers or hair placed immediately behind the head of the fly.

#### Comparadun

series of no-hackle dry flies developed by Caucci and Nastasi in the 1970s using a hair wing tied in a 180° flair. They are very effective patterns in slow-moving clear water where an imitative (as opposed to impressionistic) pattern is needed.

#### Co-Polymers

mixtures of various nylons and plastics along with anti-UV chemicals that have resulted in the exceptionally high breaking strength of modern tippet material. Orvis Super Strong is a copolymer tippet material. It allows us to use very fine tippets with breaking strengths two-to-four times as strong as regular nylon monofilament. However, copolymers are not as abrasion resistant as regular nylon monofilament.

#### Czech Nymphing

a style of fishing multiple nymphs that trades a standard tapered leader for pieces of small-diameter fluorocarbon in order to get the flies to the bottom quickly; tight-line style of nymphing that evolved in Europe and generally covers water considered unsuited for traditional techniques; ideal for use with 10-foot fly rods.

# [D]

#### Dacron

braided nylon line used for backing.

#### Damping

reducing excess vibrations in the rod blank when unloading the rod during a cast. This causes fewer waves in your fly line resulting in more power and distance for less effort.

#### Damselfly

an important stillwater aquatic insect most commonly imitated in the nymphal form; usually hatches in early to midsummer. Adult looks like a dragonfly, but folds its wings along its back when at rest.

#### Dead Drift

a perfect float (the fly is traveling at the same pace as the current); used in both nymph and dry-fly fishing (see mending line and "S" cast).

#### Deer Hair

most commonly used of the hollow hairs for fly tying; used for the Humpy and the Muddler Minnow styles of flies.

#### Delivery

term used to describe the action of casting a fly to a fish or into a promising-looking area of water; synonymous with presentation.

#### Disc Drag

a mechanical system within a fly reel that creates resistance as the line is pulled off the spool, created by the application of pressure between two or

more discs, often made of cork or carbon.

#### Dorsal Fin

the fin on the back of a fish, often divided into two or three separate sections.

#### Double Haul

a cast during which the caster quickly pulls and releases the line on both the back cast and the forward cast, used to create greater line speed, enabling the caster to reach farther or cut through wind.

#### Double Taper (DT)

a standard fly line design in which both ends of the line are tapered, while the greater portion or "belly" of the line is level; excellent line for short or moderate length casts, and for roll casting; not as well suited for distance casts; commonly available in floating or sinking styles.

#### Drag

- (1) term used to describe an unnatural motion of the fly caused by the effect of the current on line and leader. Drag is usually detrimental, though at times useful (such as imitating the actions of the adult caddis).
- (2) Resistance applied to the reel spool to prevent it from turning faster than the line leaving the spool (used

in playing larger fish).

#### **Drag Free**

see dead drift.

#### Dragonfly

important stillwater aquatic insect most commonly imitated in the nymphal form; usually hatches in early to mid-summer. Unlike the Damselfly, the Dragonfly adult holds its wings straight out (like an airplane) when at rest.

#### Drop-off

steep drop in the bottom of a stream, lake, or beach; often a major attraction for fish as it offers access to shallow water for feeding with the safety of deep water for escape if threatened.

#### Dropper

anything added to the main leader or to the fly at the end of the leader, most often a second fly or a weight such as split shot. The most common practice is to tie a piece of tippet (from four to 18 inches long) with a clinch knot onto the bend of the hook of a fly already attached to a leader, adding a second fly to the extra piece of tippet. The term "dry-dropper rig" usually refers to an arrangement where a nymph is attached to a high-floating dry fly in this manner.

#### Dry Fly

any fly fished upon the surface of the water; usually constructed of non-water-absorbent materials; most commonly used to imitate the adult stage of aquatic insects.

#### Dry-Fly Floatant

chemical preparation that is applied to a dry fly (before using the fly) to waterproof it; may be a paste, liquid, or aerosol.

#### Dubbing

material used in fly tying, typically used to create the body of a fly.

#### Dun

- (1) first stage in the adult mayfly's life cycle; usually of short duration (1 to 24 hours); this is the stage most often imitated by the dry fly;
- (2) a darkish gray-blue color that is very desirable in some fly-tying materials.

# [E]

# Eddy

a section of water in a stream found on the edge of a current that is less disturbed than the surrounding water, providing a place for fish to hold and for insects to emerge.

#### Elk Hair

hair from the body of an elk that is used in many fly patterns to supply bulk for a body or to provide added flotation.

#### Emerger

pertaining to a quatic insects, the name used to describe that time frame when the nymph reaches the surface and the adult hatches out; the emerging nymph may well be the single most important nymph phase for the fly fishers to imitate.



#### False Cast

standard fly-fishing cast: lengthen and used shorten line, to change direction, and to dry off the fly; frequently overused. In false casting, the line is kept moving backwards and forwards without being allowed to touch the surface of the water or the ground (see casting arc, back cast, and forward cast).

#### Ferrule

the point where sections of a fly rod are joined; the end of one section fits inside the end of another in an overlapping fashion at the ferrule.

#### Fingerling

an immature fish.

#### Flashback

any type of nymph fly pattern that has a flashy or reflective material tied in at the wing case.

#### Flat

an area of water with a relatively stable depth, often over a sand or grass bottom; common area for fish such as bonefish, stripers, and redfish to forage for food.

#### Float Tube

a one-person watercraft, typically oval or U-shaped with a seat across the bottom; popular with warmwater anglers and with individuals who fish alpine lakes.

#### Floating Fly Line (F)

a fly line where the entire line floats; best all round fly line (see double taper, level, shooting head, weight forward).

#### Fluorocarbon

tippet or leader material with a low refractive index, making it nearly invisible underwater; known for its tensile and knot strength as well as its UV- and abrasion resistance; best used for saltwater fly fishing or freshwater nymph rigs.

#### Fly Casting

standard method of presenting a fly to a target using a fly rod and fly line; involves many different casts (see back cast, forward cast, false cast, roll cast, "S" cast, and shooting line).

#### Fly Line

key ingredient to fly fishing; made of a tapered plastic coating over a braided Dacron nylon orcore; available in several tapers and in floating, sinking, and sink-tip styles (see double taper, shooting head, weight forward, sink-tip, and floating fly line).

#### Fly Reel

fishing reel used in fly fishing to hold the fly line. There are three basic types: single action, multiplier, and automatic. Single action means that one turn of the handle equals one turn of the spool. Multiplying reels use a gear system to increase this ratio. Automatic fly reels are becoming less common; they operate by a manually wound spring which is activated by a lever.

#### Fly Rod

a type of fishing rod especially designed to cast a fly line; fly rods differ from other types of rods in that the reel attaches at the butt of the rod with the rod handle always above the reel; fly rods usually have more line guides than other types of rods of the same length; fly rod lengths vary, with common lengths being between 7 and 9 feet; materials used in fly rod construction are bamboo, fiberglass, and graphite.

#### Forceps

hand-operated medical instrument widely used in fly fishing to remove flies from the jaws of a hooked fish; feature pliers-like jaws with locking clips so that once they are clamped to the hook, they stay there until released.

#### Forward Cast

the front portion of the false cast or pick-up and laydown, and a mirror image of the back cast.

#### Forward Taper

see weight forward.

#### Foul Hook

to hook a fish anywhere but in its mouth.

#### Freestone

type of river or stream with a significant gradient resulting in medium to fast-movingwater; may be springfed, but most flows result from snow melt, run-off, or tributaries; fast-moving water inhibits vegetation growth; less fertile than

spring creeks, but often full of opportunistic fish.

#### Front Taper

the transition between the tip and the belly of a fly line.

#### Fry

the first stage of a fish after hatching from an egg.

# [G]

#### Gel-Spun Polyethylene

A synthetic fiber that is extremely thin, supple, slippery, abrasion resistant, and strong; often used as a braided fly line backing where large amounts of backing are needed and space on the reel is limited.

#### Graphite

the most popular rodbuilding material in use today; offers the best weight, strength, and flex ratio of any rod building material currently available.

#### **Gravel Guards**

a standalone neoprene sock or attachment on a wader to pull over the top of wading boots to prevent gravel from collecting inside the boots.

#### Grip

the handle of a fly rod, generally made of cork rings sanded in several different configurations, including a cigar grip, full-wells grip, half-wells grip, and superfine grip.

#### Grilse

an immature Atlantic salmon that returns to freshwater having spent a year or less at sea.

# [H]

#### Hackle

a feather, usually from the neck area of a chicken; can be any color (dyed or natural); hackle quality, such as the stiffness of the individual fibers and amount of web, determines the type of fly tied with the hackle; many hackles are grown specifically for fly tying.

#### Hackle Pliers

fly-tying tool for wrapping hackle feathers around the hook.

#### Hair Stacker

fly-tying tool; a small tube that is used to gather and trim a clump of hair, usually deer hair.

#### Hatch

a large number of the same species of insects emerging around the same time.

#### Haul

a pull on the fly line with the non-casting hand to increase line speed and achieve greater distance.

#### Head

the tip, front taper, belly, and rear taper of a fly line considered together as one section; generally the first 30 to 40 feet of a fly line on the casting end.

#### Headwaters

upstream section of the river before the main tributaries join it; this section is typically much smaller in width and flow than the main section of the river.

#### Hollow Hair

hair from some animals is mostly hollow, thus holding air and making these hairs float; ideal for tying dry flies and bass bugs; antelope, deer, and elk all have hollow hair.

#### Hook

the object upon which the fly is tied; can be any size from tiny to huge; made from steel wire, and either bronzed, cadmium coated, or stainless; hook designs are variable; style used depends upon the type of fly being tied.

# [I]

#### **Imitative Flies**

flies tied to more closely match specific insects (for instance BWO  $\mathbf{a}$ Comparadun); imitative flies are most effective in slow-moving, clear water, with finicky trout in fertile streams with large populations of aquatic insects.

#### Impressionistic Flies

flies tied to loosely suggest a variety of insects or insect families; for instance, a Hare's Ear nymph in sizes 12-16 can be used as both a mayfly and a caddisfly imitation and in larger sizes as a stonefly imitation; impressionistic flies are usually most effective in medium to fast water, in streams with sparser populations aquatic insects.

#### Indicator

floating object placed on the leader or end of the fly line to "indicate" the take of the fly by a fish or to indicate the path of the drift of the fly; used when nymph fishing with a slack line; very effective.

# [K]

#### Knotless Tapered Leader

a fly-fishing leader entirely constructed from a single piece of monofilament. Extrusion or acid immersion is most commonly used to taper the leader.

#### **Knotted Leader**

fly-fishing leader constructed by knotting different sections of diameter leader material to each other to make a tapered leader. Most commonly used knots to construct such a leader are blood (or barrel) knot and surgeon's knot (see blood knot, surgeon's knot, leader, tapered leader, leader material).

#### **Kype**

a male spawning trout or salmon develops a hook-like protrusion on the mandible; particularly striking in salmon and brown trout.

# [4]

#### Larva.

the immature, aquatic, growing stage of the caddis and some other insects; many species of caddis larva build a protective covering of fine gravel or debris to protect them in this stage; a bottom-dwelling non-

swimming stage of the insect.

#### Lateral Line

horizontal line along the sides of fish - clearly marked by coloration in some, nearly invisible in others - that works as a sensory organ, composed of a series of canals that detect pressure variations and vibrations in the water.

#### Leader

the section of monofilament or fluorocarbon line between the fly line and the fly; usually tapered to deliver the fly softly and away from the fly line (see knotted leader, knotless tapered leader, turn over, and monofilament).

#### Line Tip

the front part of a fly line where the leader is attached; located before the front taper, but still considered part of the head.

#### Line Weight

the weight (measured in grains) of the first 30 feet of a fly line, used as a way to standardize fly lines in matching them to fly rods of differing stiffness.

#### Loading the Rod

phrase used to describe the bend put in the rod by the weight of the line as it travels through the air during the cast.

#### Loop-to-Loop

quick and easy connection system typically used to attach a fly line to a leader by making a loop at the end of the leader (perfection loop knot), pulling the flyline loop through the leader loop, then pulling the entire leader back through the loop attached to the end of the fly line.

# [M]

#### Mayfly

world wide, the most commonly imitated aquatic insect; most dry-fly and nymph patterns imitate this insect; nymph stage of the mayfly lasts approximately one year; adult stages last one to three days; adults have one pair of upright wings, making it look like a small sailboat; commonly found in cold orcool freshwater environments.

#### Marabou

soft underfeathers found on most birds; fly-tying marabou generally comes from chickens, turkeys or other domestic fowl.

#### Mending Line

method used after the line is on the water to achieve

a drag-free float, typically consisting of a flip, or series of flips, with the rod tip which puts a horseshoeshaped bow in the line; this slows down the speed with which the line travels if mended upstream, and speeds up the line if mended downstream.

#### Midge

a term properly applied to the small Dipterans that trout feed on; often called gnats; similar to mosquitoes in appearance; midges have two wings that lie in a flat "V" shape over the back when at rest; term sometimes loosely applied (and incorrectly so) when referring to small mayflies.

#### Monofilament

a clear, supple nylon filament used in all types of fishing that is available in many breaking strengths (see breaking strength) and diameters.

# [N]

#### Nail Knot

method used to attach a leader or butt section of monofilament to the fly line, and of attaching the backing to the fly line; most commonly tied using a small diameter tube rather than a nail.

#### Narrow Loop

term that describes what the fly line should look like as it travels through the air; a narrow loop can best be described as the letter "U" turned on its side; it is formed by using a narrow casting arc.

#### Needle Nail Knot

same as the nail knot except that the leader or backing is run up through the center of the fly line for 3/16 to 3/8 inch, then out through the side of the fly line before the nail knot is tied; this allows the backing or the leader to come out the center of the fly line rather than along the side of it as in the nail knot.

#### Nymph

immature form of insects; as fly fishers, we are concerned only with the nymphs of aquatic insects.

# Nymphing

word describing fish feeding on nymphs or the act of fly fishing with nymphs.

# [0]

# Open Loop

term used to describe what the fly line looks like as it travels through the air during a poor cast; caused by a very wide casting arc.

# [P]

#### Palming

a term referring to the use of the palm of the hand against the spool edge of a rimless fly reel as a means of applying drag against the release of line in fighting a fish.

#### Parachute

type of dry fly where the hackle is wound horizontally around the base of the wing like a parachute instead of vertically around the hook of the fly. This drops the body of the fly down into the surface film of the water. It is usually most effective in medium to slow moving waters.

#### Pectoral fins

the pair of fins just behind the head of a fish.

#### Pelvic fins

the pair of fins on the lower body of a fish; also called ventral fins.

#### Pick-Up and Lay Down

a fly fishing cast using only a single backcast. The line is lifted from the water and a back cast made, followed by a forward cast which is allowed to straighten and fall to the water, completing the cast; good wet fly cast; also useful in bass bugging; most efficient cast to use,

when possible, because the fly spends more time in the water (also see presentation).

#### Popping Bug

a bass bug made from a hard material. Usually cork or balsa wood, as these are high floating materials that can be made into a variety of shapes.

#### Presentation

the act of putting the fly on the water and offering it to the fish; the variety of presentations is infinite, and changes with each fishing situation. The object is to present the fly in a manner similar to the natural insect or food form that you are imitating.

#### Pupa

in insects, the transition stage between the larva and the adult; to fly-fishers, caddis pupa are the most important of these insects.

# [R]

#### Reach Cast

a cast used for adding extra slack in the line, or when fishing downstream, in order to provide a more natural float.

#### Rear Taper

the transition between the belly and the running line sections of a fly line.

#### Redd

a clearing in the sand or gravel of a riverbed created by breeding trout or salmon for use as a spawning area.

#### Reel Seat

mechanism that holds the reel to the rod, usually using locking metal rings or sliding bands.

#### Retrieve

bringing the fly back towards the caster after the cast is made; can be done in a variety of ways; important points of retrieving are to keep the rod tip low and pointed straight down the line.

#### Riffle

a small rapid in a river or stream.

#### Riparian

a term that describes anything of, inhabiting, or situated on a riverbank.

#### Rise

the action of a fish as it comes to the surface of the water to feed.

#### Rod Flex

synonymous with action; the manner in which the rod bends during the cast during the acceleration phase of the cast; Tip-Flex rods bend primarily through the tip section, Mid-Flex rods bend down into the middle section, and Full-Flex rods bend throughout the entire rod during the cast; Orvis has put together a Flex Index rating system so fly fishers can tell at a glance what type of flex to expect from a particular rod.

#### Roll Cast

one of the three most basic fly casts; allows a cast to be made without a back cast; essential for use with sinking lines, to bring the line to the surface so it may be picked up and cast in a normal manner.

#### Run

- (1) the pulling out of line a hooked fish makes while trying to escape;
- (2) a section of stream where relatively shallow water goes over a rough or gravel bottom and then into a pool.

#### Running Line

- (1) the long, thin part of a fly line that connects to the backing at the reel end
- (2) a thin line attached to the back of a shooting taper (shooting head) line; may be 20 to 30 pound monofilament, braided

nylon, narrow floating or sinking line, or other material; usually around 100 feet in length, it allows the fly fisher to quickly change the type of line being used by interchanging only the head section; used frequently saltwater in situations. especially for striped bass.

# [5]

#### "S" Cast

cast used to put deliberate and controlled slack into a cast; used in getting a drag free float and in conjunction with mending line (see drag, dead drift, and mending line).

#### Saltwater Taper

a weight forward fly line that is similar to a bass bug taper (see weight forward and bass bug taper).

#### Scud

a small freshwater crustacean similar in appearance to shrimp; found in large numbers in fertile tailwater streams.

#### Setting the Hook

the act of pulling the hook into the flesh of the fish's mouth.

#### Shooting Taper (ST) or

#### Shooting Head

short, single-tapered fly line, 30-40 feet long; shooting heads are designed longest casts with minimum effort; shooting heads allow quick change (floating, line types sinking, sink-tip, etc.) by quickly interchanging head sections; shooting heads are most commonly used with salmon, steelhead. saltwater, and shad fishing, though they can be used in all types of fly fishing.

#### Sink Rate

the speed at which a sinking fly line sinks; there are at least 6 different sink rates for fly lines, from very slow to extremely fast.

### Sink-Tip Fly Line (F/S)

a floating fly line where the tip portion sinks; available in 4 foot, 10 foot, 12 foot, 15 foot, 20 foot, 24 foot, and 30 foot sinking tips; the 10 foot sink-tips are most commonly used and are practical in many applications; sink-tip lines are useful in all types of fly fishing, but especially in wet fly or streamer fishing.

#### Sinking Fly Line (S)

a fly line in which the entire length of the line sinks beneath the surface of the water.

#### Spawn

the reproductive behavior of fish; varies by species.

#### Spey Cast

a particular casting technique using elongated two-handed rods and a modified roll cast; named after a river in Scotland where the method was developed.

#### Spinner

the egg-laying stage of the mayfly.

#### Spool

the part of the fly reel that revolves and which holds the backing and the fly line; may be purchased separately.

#### Standing Line

the part of the line that is joined to another piece of line when tying the tag ends together; two standing lines are joined by tying their tag ends into a knot.

#### Steelhead

a migratory rainbow trout that reaches great size after spending most of its life in the ocean; also found in the Great Lakes.

#### Stonefly

very important aquatic insect; nymph lives for one to three years, depending on species; most species

hatch out by crawling to the shoreline and emerging from its nymphal case above the surface, thus adults are available to trout only along shoreline and around midstream obstructions; adult has two pair of wings which are folded flat along its back when at rest; stoneflies require a rocky bottomed stream with very good water quality.

#### Streamer

fly tied to imitate the various species of baitfish upon which game fish feed; usually tied using feathers for the wing, but can be tied with hair and/or feathers; tied in all sizes (see bucktail).

#### Stripping line

Retrieving the line by pulling it in through your fingers as opposed to winding it in on the reel. Term sometimes used to refer to running line (not a common usage).

#### Surgeon's Knot

excellent knot used to tie two lengths of monofilament together; the lines may be of dissimilar diameters.

# ITI

# Tag (Tag End)

the end of the line that is used to tie a knot.

#### Tailwater

the downstream section of a river or stream found below a large man-made dam.

#### Tapered Leader

a. leader made of monofilament and used for fly fishing; the back or butt section of the leader is of a diameter nearly as large as the fly line, then becomes progressively smaller diameter as you approach the tip end (see knotless tapered leader, knotted leader, and tippet).

#### Terrestrial

land-based insects, such as ants or grasshoppers, that are often food for fish.

#### Thorax

normally associated with nymphs, however can be a part of the fly, usually the area behind the head, mainly constructed with dubbing.

#### Tight Loop

see narrow loop.

#### Tip Section

the top section of a fly rod, smallest in diameter and furthest from the rod grip.

#### **Tippet**

the end section of a tapered leader; the smallest diameter section of a tapered leader; the fly is tied onto the tippet.

#### Turn Over

words that describe how the fly line and leader straighten out at the completion of the cast.

# [U]

#### Unloading the Rod

unbending the rod. Transferring the casting energy from the rod back into the fly line.

# [٧]

#### Vest

a fly fisher's wearable tackle box; numerous styles available; particularly important in wading situations.

#### Vise

fly-tying tool used for holding the hook while materials are attached.

# [W]

#### Waders

high topped waterproof boots; two main types used in fishing: boot foot and stocking foot; boot foot have boots built in, just pull on and go; stocking foot requires the use of a pair of wading shoes and provides better support and traction.

#### Wading Shoes

shoes built specifically to be worn over stocking foot waders; can be made of leather, nylon or other synthetic materials.

#### Warm Water

lakes, ponds, orslowmoving bodies of fresh water that generally maintain a temperature considered too high to support salmonids: popular warmwater species include bass, panfish, and carp.

#### Weight Forward (WF)

an easy casting fly line because it carries most of [X] its weight in the forward section of the line: instead X of a level middle section, like a double taper, it quickly tapers down to a fine diameter running line which shoots through the guides with less resistance for added distance; the most versatile fly line.

#### Wet Fly

- (1) any fly fished below the surface of the water; nymphs and streamers are wet flies;
- (2) a traditional style of fly tied with soft, swept back hackle, and a backward

the sweeping wing; forerunner of the nymph and streamer.

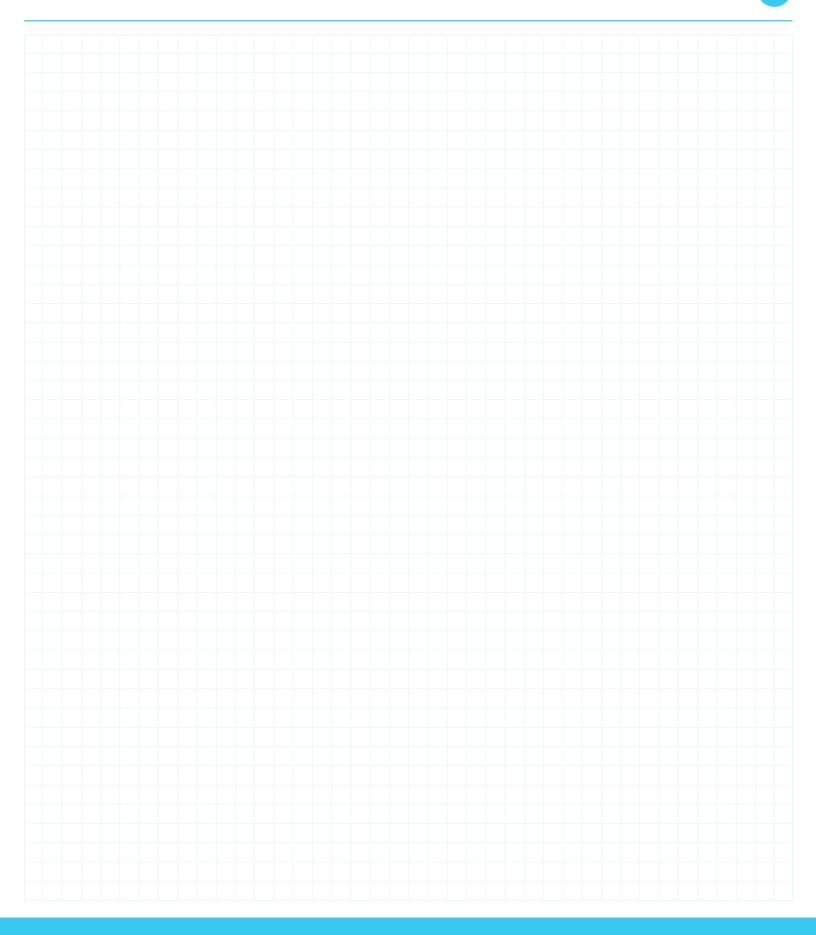
#### Wet Fly Swing

typical presentation method for fishing a wet fly, consisting of a cast down and across the stream followed by swimming the across the current; used to imitate swimming mayflies, emerging caddis, and small fish.

#### Wind Knot

an overhand knot put in the leader by poor casting, reducing greatly the breaking strength of the leader

measurement used to designate diameter of leader and tippet material used in conjunction with a numeral, as in 4X; To determine the actual diameter of 4X or any "X" number, subtract the numeral from the number 11 (eleven); the result is the diameter in thousandths of an inch; for example, the diameter of 4X material is .007"



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