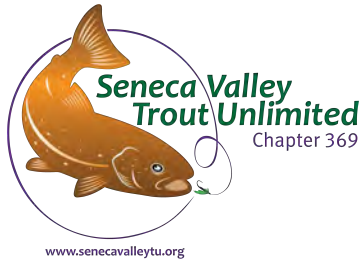


# Fly Fishing 101

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## Introduction to Fly Fishing



## Differs from Conventional Fishing

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- Conventional
  - One line from reel to hook
  - Weight of lure pulls line from reel
  - Line is retrieved into reel
- Fly fishing
  - Combination of lines from reel to fly
  - Weight of line cast the fly - fly is too light
  - Line remains off reel during casting and retrieve



## Fly Rod Purpose



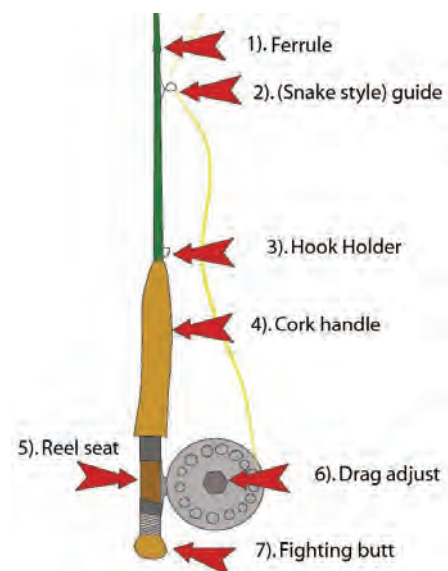
- Cast fly to fish - control direction and distance
- Assist in fighting fish
- Stiffness - flexibility under load, heavier flies/lines need stiffer
- Action - speed of recovery - slow, medium, fast
- Slow feels rod flex sooner - longer time to cast
- Fast hold line in air longer - longer casts



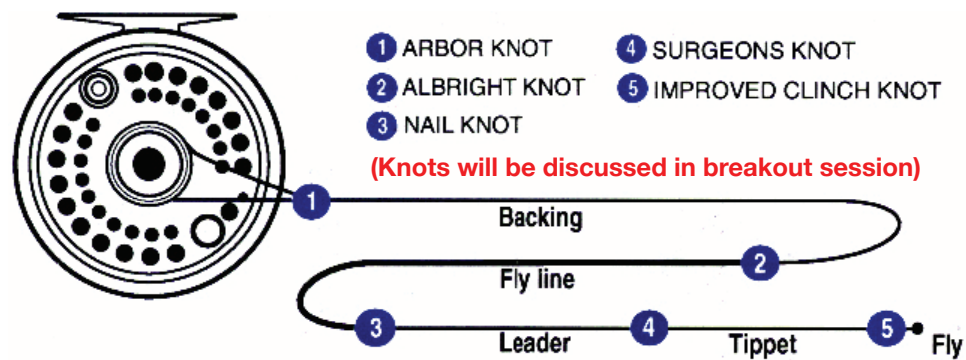
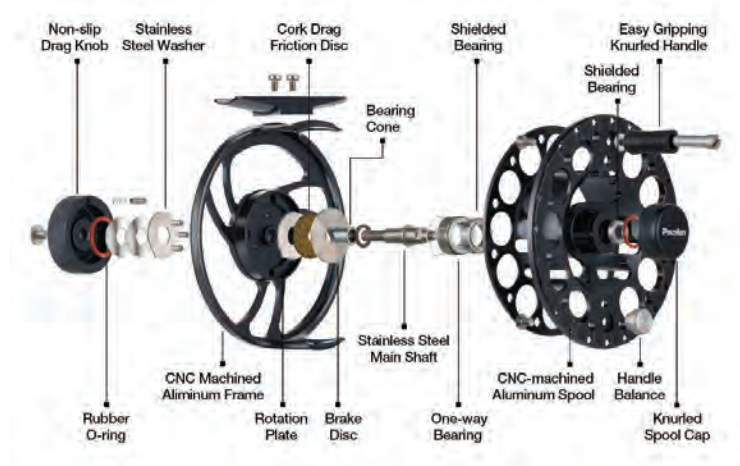
## Fly Rod Design



- Ferrules - join rod sections
- Guides - keep line from tangling
- Hook holder - keep fly attached when moving
- Handle - grip - various styles
- Reel seat - attached reel
- Butt - large rods have fighting butt
- Weight - 0 (lightest) to 16
- Length - 6 -11 feet (9 most common)
- Action/flex - affects casting
- Beginners - 8 1/2 to 9 feet, 5-6 weight



- Purpose
- Hold line
- Provide drag
- Balance rod
- Comfort
- Arbor size
- Line retrieval speed



## Backings

- Fills up reel - 100 yards +
- Protect against long runs
- Typically 20-30 lb. test



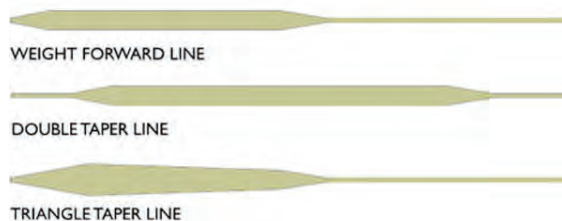
# Fly Line



- Provides weight to cast flies (matched to rod)
- Length 90 -100 feet

Level Tip	Front taper	Body	Back taper	Running Line	Grains (Grams)
4' (1.21 m)	8' (2.43 m)	24' (7.31 m)	3' (0.91 m)	51' (15.54 m)	140 (9.07)
Example: WF 5 F					

- Floating, sinking, intermediate
- Various tapers to aid casting



# Leader/Tippet



## Leader

- Transition from thick fly line
- Thin leader/tippet - "X" size
- Tapered to assist turnover of fly
- Typically 7 -10 feet long

## Tippet

- Attached fly to leader
- Sized by "X" designation
  - 0X to 10X (thinnest)
- Fly hook size determine tippet size
- 4X - 5x most common

**LEADER & TIPPET SIZE CHART**

SIZE IN X	0X	1X	2X	3X	4X	5X	6X	7X	8X
DIAMETER	.011"	.010"	.009"	.008"	.007"	.006"	.005"	.004"	.003"
APPROXIMATE BREAKING STRENGTH	15.5 LBS	13.5 LBS	11.5 LBS	8.25 LBS	6 LBS	4.75 LBS	3.5 LBS	2.5 LBS	1.75 LBS
FISH TYPE	SALMON, STEELHEAD	BONEFISH, REDFISH, PERMIT	LARGE & SMALL-MOUTH BASS	BASS & LARGE TROUT	TROUT	TROUT & PANFISH	TROUT & PANFISH	TROUT & PANFISH	TROUT & PANFISH



## Other Equipment



- Forceps - hook removal, pinching barbs
- Floatant - keep dry flies afloat
- Split shot - help sink flies
- Net - land fish, protect fish, fingers and tippet/leader
- Waders/boots - boot foot vs stocking foot
- Sunglasses - polarized to see fish and underwater structure
- Vest/sling pack/fanny pack - carry gear



## What is a Fly?

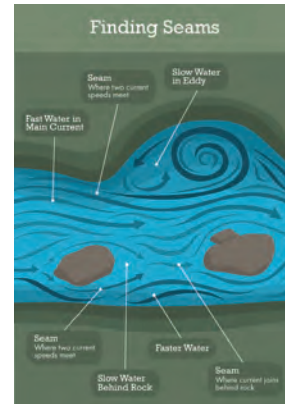
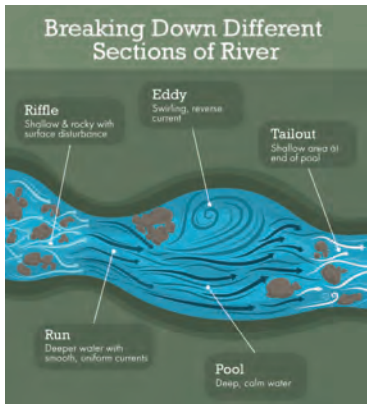




## Finding Fish



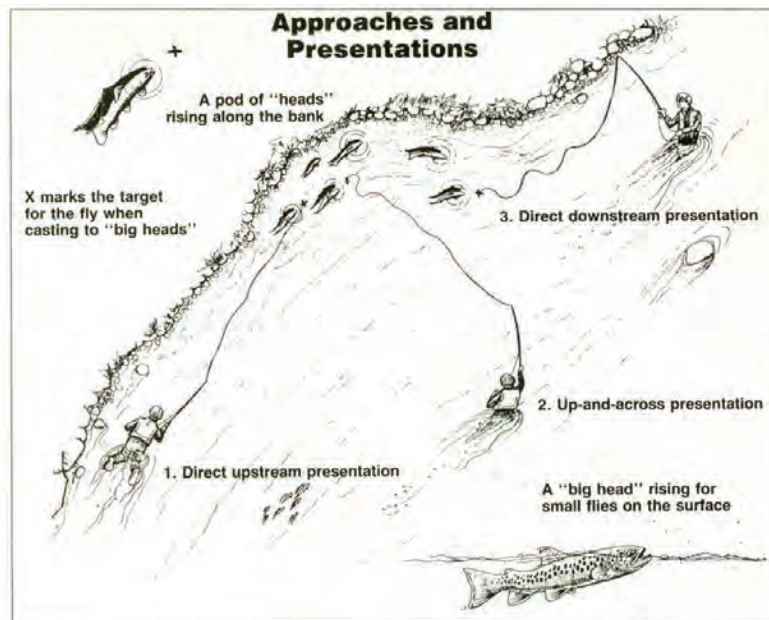
- Safety/shelter - structure rocks, ledges, weeds, trees and branches
- Oxygen - closer to current
- Food - bugs, minnows, crawfish, etc. - what/where is the supply?



## Fly Presentation



- Imitate what they eat
- Dinner is usually served drifting in the current
- Look natural - imitate a naturally drifting insect
- Manipulate your fly in the current - avoid drag
- Delicate Presentation - aim for the trees
- Upstream presentation - if possible
- Better drag free drift
- Fish sees fly first



- Set hook by lifting rod tip
- Fly rod is shock absorber - protects tippet
- Line guides create friction - tire fish
- Move rod opposite of fish direction
- Keep fish away from structure





# Fishing Access—Where to Fish (and When)

## General Information:

- Maryland DNR Public Fishing Access Guide:  
<https://gisapps.dnr.state.md.us/coastalatl2019/PublicFishingAccess/>

This is a great resource for both freshwater and saltwater access. It is searchable and you can limit it by county and species of fish you would like to catch. Each listing contains detailed information about hours, ease of access, parking, whether restrooms are available, and more.

## Maryland Trout Stocking

- <https://dnr.maryland.gov/fisheries/Pages/trout/stocking.aspx>

Hundreds of thousands of trout are stocked throughout the state each spring and fall.

## Maryland Fly Fishing Trail

- Public access to places in every county <https://fishandhuntmaryland.com/marylands-fly-fishing-trail>

## Streamflow Data

- <https://dashboard.waterdata.usgs.gov/app/nwd/?region=lower48&aoi=state-md>

Check before you go to ensure that conditions are promising and safe.

## When to Fish

- Anytime is a good time to go fishing, and there are plenty of good places to go fishing anytime.
- Other good times: dusk/dawn; cloudy overcast days; spring and fall for warm water species; spring, fall, and winter for trout

## Find the Fish

- **Q:**What makes for good fish real estate?  
**A:**Oxygen/temperature, food, shelter

## Rivers and stream common characteristics:

- riffle→pool→run structure
- current seams

Ponds, lakes, and reservoir common characteristics

- drop-offs
- feeder streams





# Fishing Access—Where to Fish (and When)

Important characteristics commonly found in all types of water: structure (downed trees, rocks/rocky points, weed beds (both submerged and on the surface), shade, overhanging grass/brush, eddies, and underwater springs.

Find the fish, but don't let them find you!

## Resources:

- Orvis Flyfishing Learning Center: <https://howtoflyfish.orvis.com/>
- Charlie Gelso and Larry Coburn, *Guide to Maryland Trout Fishing, The Catch and Release Streams*, 3<sup>rd</sup> edition, 2014
- Steve Moore, *Maryland Trout Fishing, The Stocked and Wild Rivers, Streams, Lakes, and Ponds*, 2011
- Harry Murray, *Fly Fishing for Smallmouth Bass*, 1989
- Maryland/Delaware Atlas and Gazetteer, 2022
- Google Maps: <https://maps.google.com>
- Seneca Valley TU: <https://senecavalleytu.org/newsletters-and-maps/>



# Additional Resources

## Additional resources for Fishing Ethics<sup>1</sup>

### Maryland fishing regulations

<https://dnr.maryland.gov/fisheries/pages/regulations/index.aspx>

### General Ethics and good things to know

- **Orvis:** <https://www.youtube.com/c/orvis/search?query=ethics>
- **Fly Fishers International**  
<https://www.flyfishersinternational.org/Learn/Learning-Center-Resources/Fly-Fishing-Skills/Safety-Etiquette>
- Maryland DNR has a "permission to fish on private land" form. ***Don't assume***, ask the landowner if you can fish there. This form will formalize your request and permission.  
<https://compass.dnr.maryland.gov/Content/Downloads/MD%20DNR%20COMPASS%20Permission%20to%20Fish%20Form.pdf>

### Conservation

- **Fly Fishers International**  
<https://www.flyfishersinternational.org/Learn/Learning-Center-Resources/Conservation>

### More specific information about respecting the resource

- Catch and Release for Freshwater and Saltwater  
<https://www.flyfishersinternational.org/Conservation/Ethos/Catch-Release>
- Michigan catch and release video  
<https://www.youtube.com/watch?v=TQRGP4dY2rI>
- Bass - removing deep hooks in largemouth bass  
<https://www.youtube.com/watch?v=9FIJ74-79pk>
- Boy Scouts Leave No Trace Fishing  
<https://www.youtube.com/watch?v=PzsCGnso9BU&t=365s>

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<sup>1</sup> All the hyperlinks in this handout may be accessed online by going to the Seneca Valley TU Website ([senecavalleyTU.org](http://senecavalleyTU.org)) and clicking Quick Links in the main heading, then Fishing Resources and Fly Fishing 101. (Note that there is a Fishing 101 page that shares much of the same information, but is not in this handout.)



# Rigging and Knots

## Rigging<sup>1</sup>

Among the websites with general rigging information and other general information are:

- Take me fishing at <https://www.takemefishing.org/>
- Fly Fishers International at <https://www.flyfishersinternational.org/Learn/Learning-Center-Resources>, <https://www.flyfishersinternational.org/Learn/Learning-Center-Resources/Fly-Fishing-Skills/Knots-Rigging>

## Knots

There are five main types of knots used by fly fisherman, each designed to meet a specific need. I list a few options for each type, but there are often many more, these are commonly used.

1. Connect leader to fly line without loop
  - a. Use a nail knot
2. Connect leader to fly line with loops
  - a. Use a handshake knot
3. Create a loop
  - a. Use a perfection loop
  - b. Use a surgeon's loop
4. Connect leader to tippet or tippet to tippet
  - a. Use a triple surgeon's knot
  - b. Use an Orvis tippet knot
5. Connect leader/tippet to a terminal connection (fly, tippet ring, swivel)
  - a. Use a clinch knot (fluorocarbon) or improved clinch (monofilament)
  - b. Use an Orvis knot
  - c. Use a Davey knot

There are many different websites with knot information. Some have static instructions, while others have diagrams and animated instructions. There are instructions for the specific knots on these websites.

Among the set we use is:

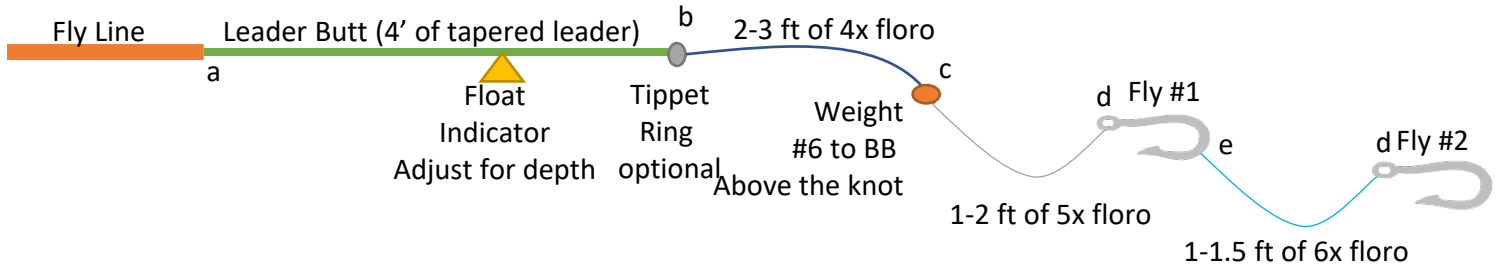
- Orvis at <https://howtoflyfish.orvis.com/fly-fishing-knots/>
- Net knots at [https://www.netknots.com/fishing\\_knots](https://www.netknots.com/fishing_knots)
- 101knots at <https://www.101knots.com/>

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<sup>1</sup> All the hyperlinks in this handout may be accessed online by going to the Seneca Valley TU Website ([senecavalleyTU.org](http://senecavalleyTU.org)) and clicking Quick Links in the main heading, then Fishing Resources and Fly Fishing 101. (Note that there is a Fishing 101 page that shares much of the same information but is not in this handout.)

# Rigging Examples

## Example of a standard nymph rig



a – knots: if your fly line does not have a loop use a nail knot; if it has a loop then a handshake knot

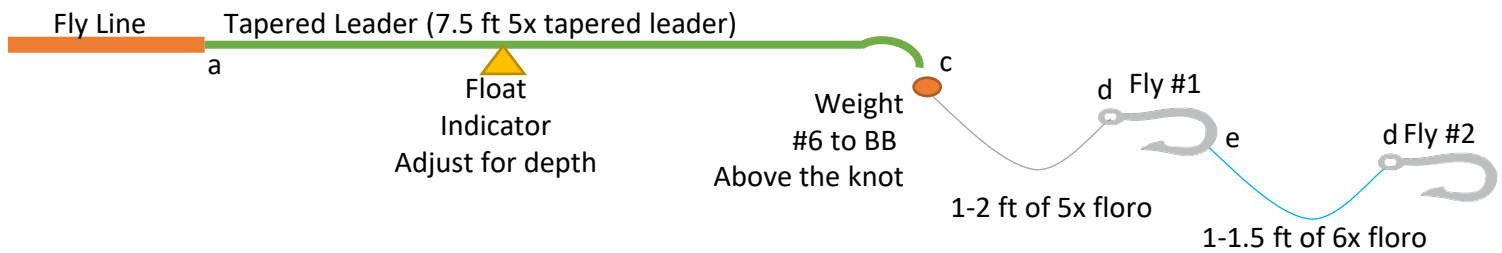
b – knots: if you are using a tippet ring use an improved clinch knot for both leader butt and tippet; if no tippet ring use a triple surgeons knot or Orvis tippet knot

c – knots: use a triple surgeons knot or Orvis tippet knot to attach tippet sections together

d – knots: use an improved clinch, Orvis knot or Davey knot to attach fly to tippet

e – knots: use an improved clinch or Orvis knot to attach tippet to bend of hook

## Example of a nymph rig on a new leader



a – knots: if your fly line does not have a loop use a nail knot; if it has a loop then a handshake knot

b – knots: if you are using a tippet ring use an improved clinch knot for both leader butt and tippet; if no tippet ring use a triple surgeons knot or Orvis tippet knot

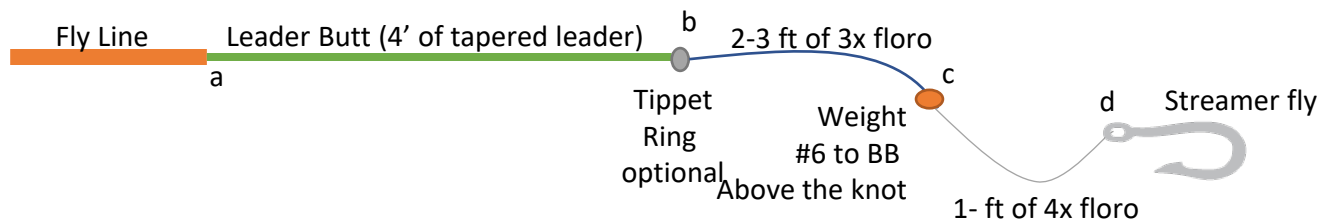
c – knots: use a triple surgeons knot or Orvis tippet knot to attach tippet sections together

d – knots: use an improved clinch, Orvis knot or Davey knot to attach fly to tippet

e – knots: use an improved clinch or Orvis knot to attach tippet to bend of hook

# Rigging Examples

## Example of a streamer rig



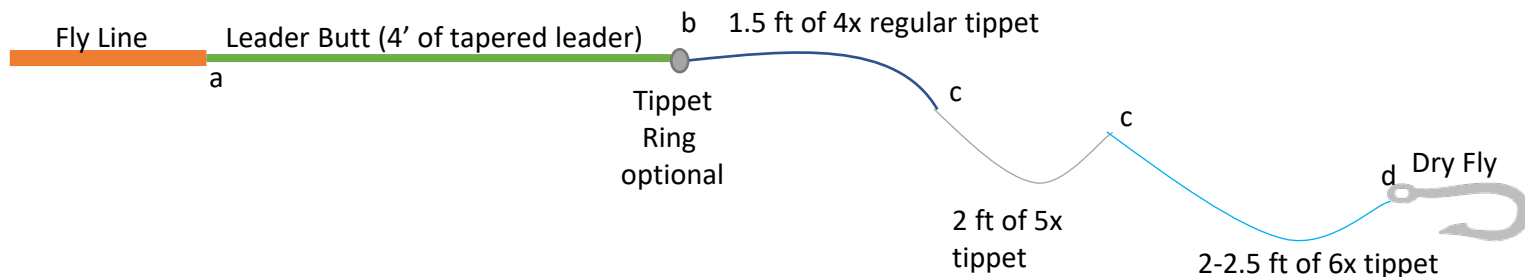
a – knots: if your fly line does not have a loop use a nail knot; if it has a loop then a handshake knot

b – knots: if you are using a tippet ring use an improved clinch knot for both leader butt and tippet; if no tippet ring use a triple surgeons knot or Orvis tippet knot

c – knots: use a triple surgeons knot or Orvis tippet knot to attach tippet sections together

d – knots: use an improved clinch, Orvis knot or Davey knot to attach fly to tippet

## Example of a dry fly rig using a tippet ring



a – knots: if your fly line does not have a loop use a nail knot; if it has a loop then a handshake knot

b – knots: if you are using a tippet ring use an improved clinch knot for both leader butt and tippet; if no tippet ring use a triple surgeons knot or Orvis tippet knot

c – knots: use a triple surgeons knot or Orvis tippet knot to attach tippet sections together

d – knots: use an improved clinch, Orvis knot or Davey knot to attach fly to tippet

e – knots: use an improved clinch or Orvis knot to attach tippet to bend of hook

# Fly Fishing 101

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## What Is A Fly?



## Imitate Natural Food

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- Imitation of a food source the fish eats in the water
- Stimulator/attractor to annoy or entice fish



- Dry flies - look like flying insects - land and float on the water
- Nymphs - resemble aquatic creatures - float at or below surface
- Streamers - designed to mimic aquatic life (leeches, minnows)



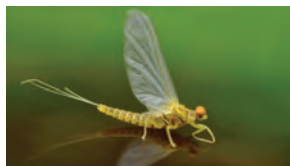
# What Fish Eat



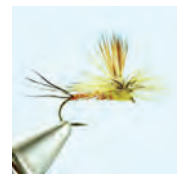
- Insects - aquatic and terrestrial
- Fish
- Frogs
- Invertebrate larvae
- Crustaceans
- Fish Eggs
- Worms
- Small mammals



## Dry Flies/Imitations



Mayfly



Grasshopper



Frog







## Wet Flies/Imitations



Nymph



Shrimp



Sowbug



## Streamers/Imitations



Minnow



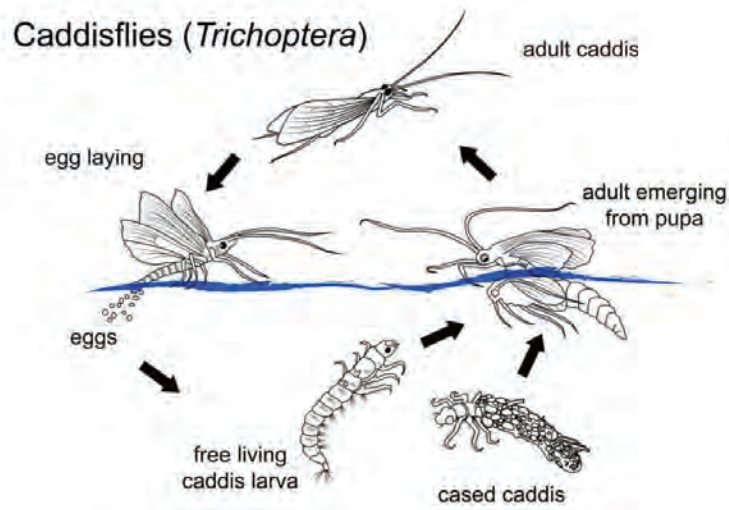
Leech



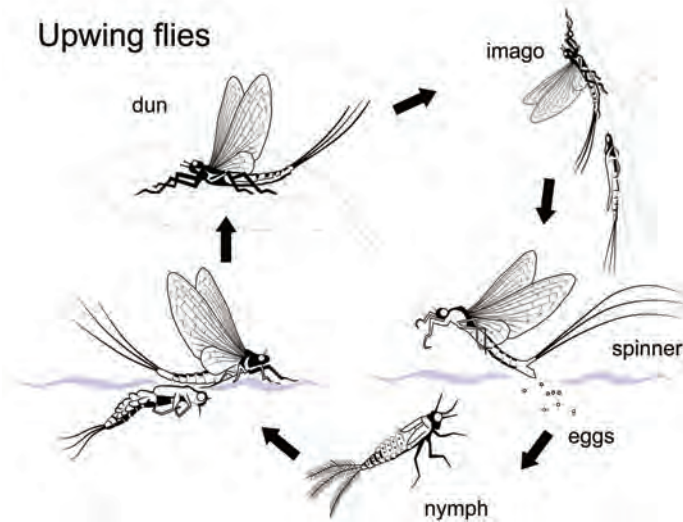
Squid



# Insect Life Cycle



# Insect Life Cycle





## Why Tie Flies?



- Its fun!
- Sense of pride and accomplishment catching fish on a fly you tied yourself
- Be creative and develop your own custom fly patterns
- A great activity for the winter and “down” months to get ready for fishing season
- Fly tying is a great social activity – get together for a beer and tie some flies!
- Increased dexterity and fine motor skills



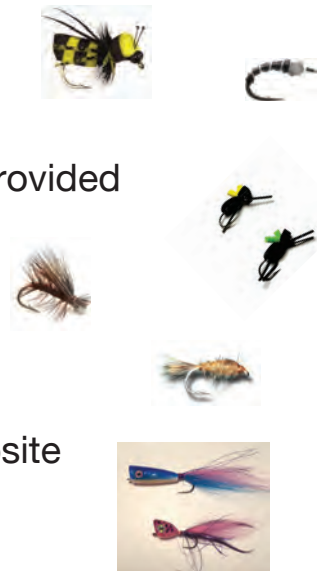
9



## SVTU Fly Tying



- Begins in January
- Izaak Walton League clubhouse
- Free - materials and equipment provided
- 7 sessions - every 2 weeks
- Introductory session
- 1-2 flies/session
- Resources and info on SVTU website
- <https://senecavalleytu.org/>



10

# MAY FLY



A



**NYMPH**

B



**EMERGER**

C

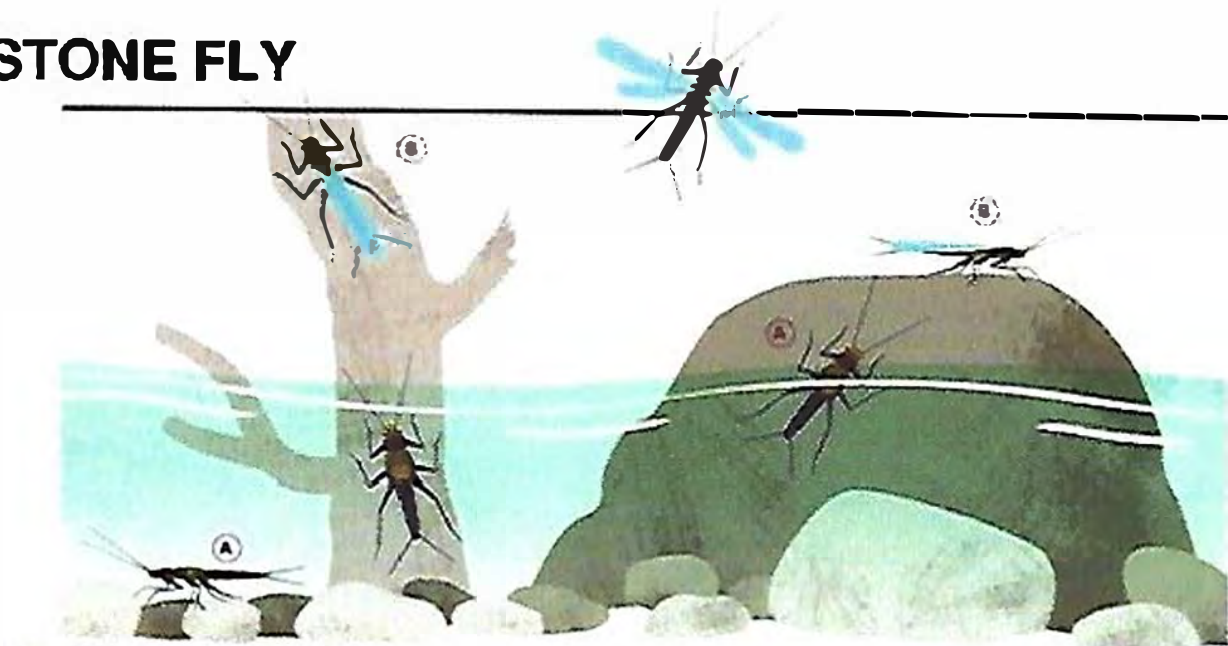


**ADULT**





**STONE FLY**



**A**



**NYMPH**



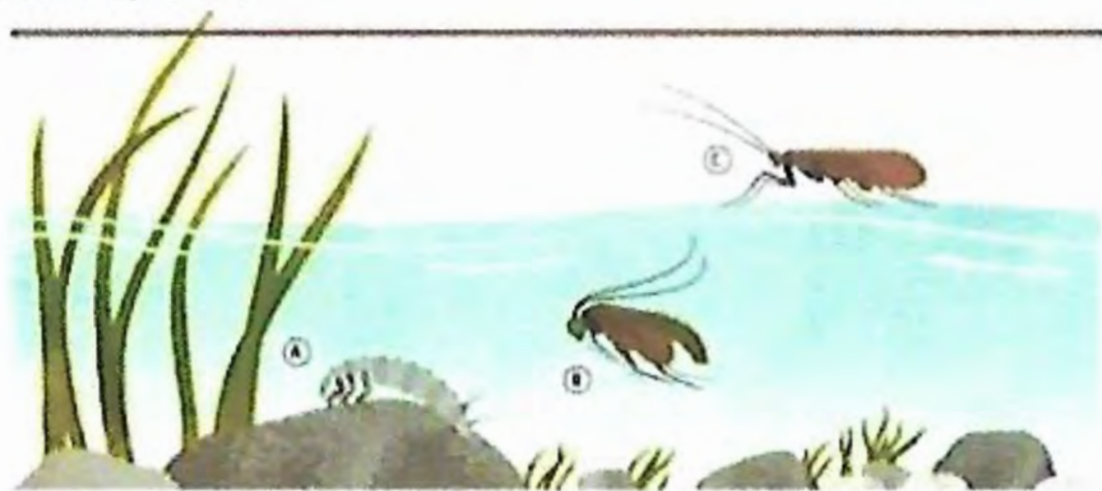
**B**



**ADULT**

## CADDIS FLY

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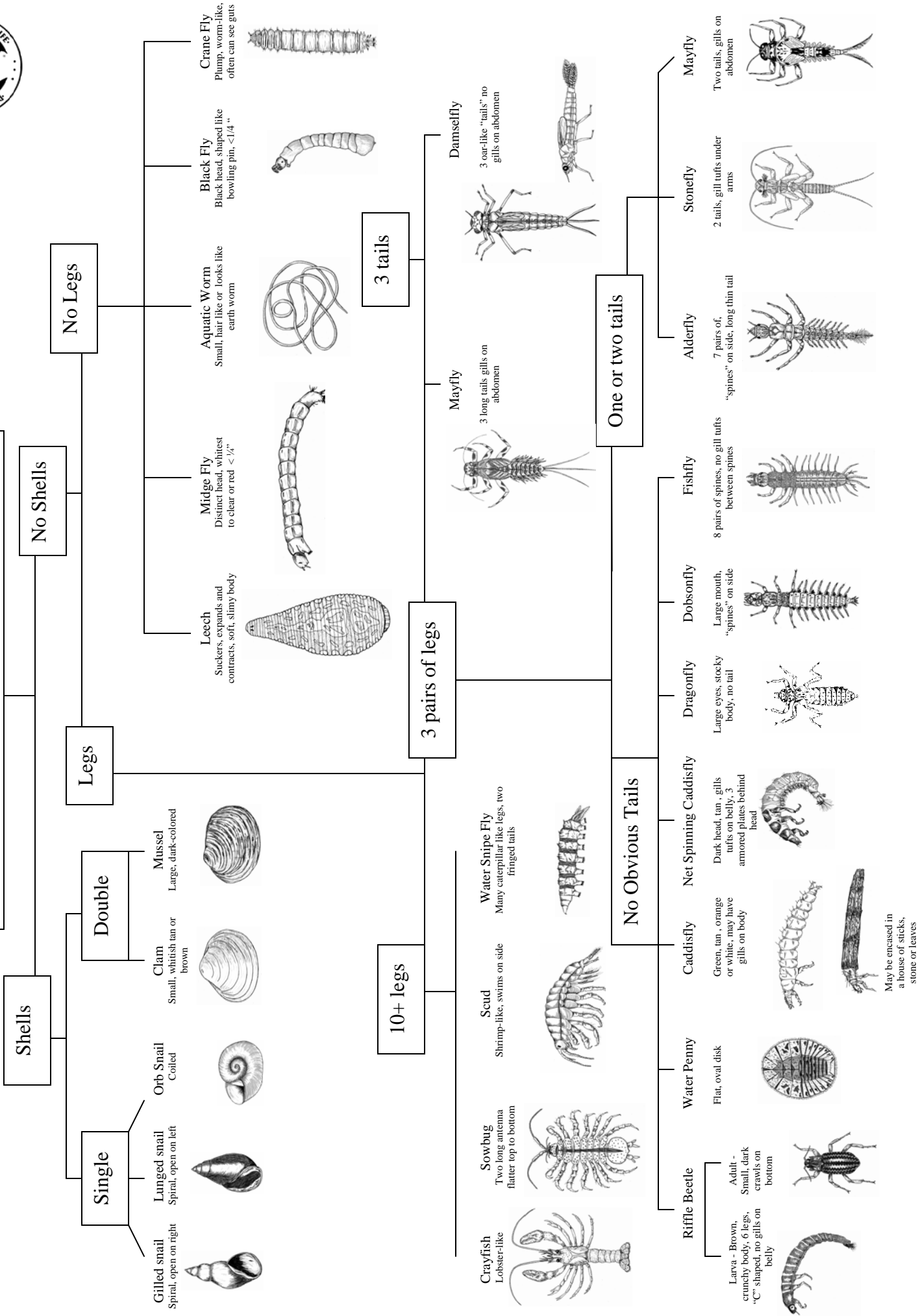
A  NYMPH

B  EMERGER

C  ADULT

# Key to Stream Macroinvertebrates

Izaak Walton League  
Save Our Streams





**The Adaptive Caster**

**Dave Cleaves**

## **FLY FISHING AND CASTING**

*/ Learning Resources – Print, Video, Organizations*

**Contact: Dave Cleaves, Seneca Valley Chapter, Trout Unlimited**

**[cleaves.david@comcast.net](mailto:cleaves.david@comcast.net) 301.525.2332**

## **FLY FISHING**

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- [Fly Fishers International – Learning Center](#)

## **BOOKS**

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- [LL Bean Fly Fishing Handbook, Second Edition. \(2006\) by Dave Whitlock](#)
- [LL Bean Fly Casting Handbook, Revised and Updated. \(2007\) by Macauley Lord and Jim Rowinski](#)
- [The Orvis Guide to Beginning Fly Fishing – 101 Tips for the Absolute Beginner. Tom Rosenbauer. 2009](#)
- [The Orvis Fly-Fishing Guide. Revised and Updated. \(2017\) by Tom Rosenbauer](#)

## **FLY CASTING**

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- [Seneca Valley TU – Adaptive Caster series](#)

### **Fly Fishers International Learning Center – Casting**

- [Fundamentals of Fly Casting - Loops](#)
- [Pick-Up/Lay-Down Cast](#)
- [False Casting](#)
- [Change-of-Direction Casts](#)
- [Roll Cast](#)

### **Fly Casting Clinics and Educational Programs**

- [Antietam Fly Anglers](#) (MD)
- [Tidal Potomac Fly Rodders](#) (DC metro)
- [Goose Creek Casting Club](#) (VA)
- [Potomac Valley Fly Fishers](#) (MD)
- [Seneca Valley Chapter of Trout Unlimited.](#) (MD)

## **FLY TYING**

- [SVTU Fly Tying Resources and Classes](#)
- [Fly Fishers International – Introduction to Fly Tying](#)
- [Fly Fishers International – Fly Tying Manual – Fundamental Flies](#)

## **KNOTS AND RIGGING**

- <https://www.flyfishersinternational.org/Learn/Learning-Center-Resources/Fly-Fishing-Skills/Knots-Rigging>

**The Adaptive Caster**

**Dave Cleaves**

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**[cleaves.david@comcast.net](mailto:cleaves.david@comcast.net) 301.525.2332**

### **PLACES TO FISH**

- <https://senecavalleytu.org/newsletters-and-maps/>

### **FISH BEHAVIOR**

- [Fish Behavior](#)

### **CONSERVATION**

- [Fly Fishers International](#)
- [Conservation and Fly Fishers](#)
- [Personal Conservation](#)
- [Catch-and-Release – Freshwater](#)

### **QUICK LINKS**

- [Quick links to Fly Shops, Conservation, and Fishing Groups](#)

## **Fly Fishers International (FFI) Casting Techniques Articles**

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### **1. Loops**

<https://www.flyfishersinternational.org/Learn/Learning-Center-Resources/Fly-Casting/Casting-Instruction/Fundamentals-of-Fly-Casting>

### **2. Pick up/Lay Down - basic strokes:**

[https://www.flyfishersinternational.org/Portals/0/LearningCenter/Presentations/Casting/FFI\\_LC\\_Curriculum\\_Casting\\_PULD\\_Overview\\_sm.pdf](https://www.flyfishersinternational.org/Portals/0/LearningCenter/Presentations/Casting/FFI_LC_Curriculum_Casting_PULD_Overview_sm.pdf)

### **3. Roll Casting:**

[https://www.flyfishersinternational.org/Portals/0/LearningCenter/Presentations/Casting/FFI\\_LC\\_Curriculum\\_Casting\\_Roll\\_Cast\\_Overview\\_sm.pdf](https://www.flyfishersinternational.org/Portals/0/LearningCenter/Presentations/Casting/FFI_LC_Curriculum_Casting_Roll_Cast_Overview_sm.pdf)

## **Want more information about casting?**

**Visit the “Adaptive Caster” on Seneca Valley TU.org.**



# Glossary



**Action** - term used to describe the flexing characteristics of a rod, generally broken into three categories: fast, medium, and slow. Fast-action rods tend to be stiff 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.

**Attractor** - a fly pattern tied with certain fish-enticing characteristics, meant to elicit a strike rather than to realistically imitate an insect.

**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; on salmon, steelhead, and saltwater reels, also becomes important in fighting fish.

**Dead Drift** - a perfect float (the fly is traveling at the same pace as the current); used in both nymph and dry-fly fishing.

**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).

**Dropper** - anything added to the main leader or to the fly, most often a second fly or a weight.

**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.



# Glossary



**Emerger** - pertaining to aquatic 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; used to lengthen and shorten line, to change direction, and to dry off the fly.

**Flat** - an area of water with a relatively stable depth, often over a sand or grass bottom; common area for fish to forage for food.

**Floatant** - chemical preparation that is applied to a dry fly (before using the fly) to waterproof it.

**Fluorocarbon** - tippet or leader material nearly invisible underwater. Heavier than mono and more likely to sink.

**Forceps** - 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.

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

**Imitative Flies** - flies to more closely match specific insects; most effective in slow-moving, clear water, with finicky trout in fertile streams with large populations of aquatic insects.



# Glossary



**Impressionistic Flies** - flies to loosely suggest a variety of insects or insect families; usually most effective in medium to fast water, in streams with sparser populations of 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.

**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.

**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** - used to describe the bend put in the rod by the weight of the line 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 fly-line loop through the leader loop, then pulling the entire leader back through the loop attached to the end of the fly line.

**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.

**Palming** - 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.



# Glossary



**Presentation** - the act of putting the fly on the water and offering it to the fish. The object is to present the fly in a manner similar to the natural insect or food form that you are imitating.

**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.

**Rod Flex** - synonymous with action.

**Strike 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

**Stripping line** - retrieving the line by pulling it in through your fingers.

**Tag (Tag End)** - the end of the line that is used to tie a knot.

**Turn Over** - how the fly line and leader straighten out at the completion of the cast.

**Wind Knot** - overhand knot put in the leader by poor casting, reducing the strength of the leader

**X** - 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".