An Introduction to Fly-fishing

Aquatic Education Program
Iowa Department of Natural Resources
Des Moines, Iowa

Fish Iowa! A Teaching Module

Fish Iowa! is a basic spincasting module designed for use in physical education classes or with youth groups. The module is provided to educators and youth leaders, free-of-charge, through mentor sessions and workshops. For more information or questions, email: EdInfo@dnr.iowa.gov or visit our website: www.iowadnr.gov/.

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An Introduction to Fly-fishing

Introduction

This unit is designed to introduce the angler to the basics of fly-fishing. Basic equipment, assembly and casting techniques are presented. *Fish Iowa! An Introduction to Fly-fishing* was designed as an extension of *Fish Iowa! A Teaching Module.* See page one for more information about that module and how you might obtain it.

Objectives

- Students will become familiar with the functions of the various parts of a fly-fishing outfit.
- Students will learn the procedures to tie basic fly-fishing knots.
- Students will learn basic procedures for casting with fly-fishing equipment.
- Students will be introduced to basic care of fly-fishing equipment.
- Students will participate in a fly-fishing experience.

Materials

Brochures/handouts:
Iowa Fishing Regulations
Iowa Fish ID Guide
Optional: Length limit rulers

Other:
chalkboard or easel and markers
fly-fishing equipment
samples of various flies, lines, and leaders for demonstration
rope and line samples for knot tying

Time

1-2 50-minute class periods or longer if a fishing experience is included

For Additional Information About Fly-fishing:

Hawkeye Fly Fishing Association
www.hawkeyeflyfishing.com

Narrative

History

"They fasten red wool around a hook and fix to the wool two feathers that grow under a cock's waddles, and which in color are like wax. The rod they use is six feet long and the line of the same length. Then the angler lets fall his lure. The fish, attracted by its color and excited, draws close and…forthwith opens its mouth, but is caught by the hook, and bitter indeed it the feast it enjoys, inasmuch as it is captured."

Claudius Aelian

This description of fly-fishing was written by Aelian more than 17 centuries ago. It is not known whether they fished for food or for sport but clearly fly-fishing has been around for a very long time. The earliest written reference to fly-fishing in America dates from 1775.

The early American fly rods were anywhere from 12 to 20 feet long and made of three sections – butt of ash, middle of hickory and tip of lancewood. These rods eventually evolved to split bamboo in about 1850, to fiberglass, then to the graphite rods of today.

The fly reel was developed at about the same time as split bamboo rods. Previously line hung to the side of the angler. The horsehair lines also became tapered – having more strands in the middle than at the end. Fly casting as we now know it began to develop a few years later when silk oil dressed lines were introduced.

How is fly-fishing different from spincasting?

The biggest difference between spincasting and fly-fishing is that the line, not the lure or bait, provides the weight for casting. So in essence you cast the line, not the bait. The fly rod is commonly seven to 10 feet long, much longer than spinning rods. The rod provides the means to propel the line.

The reel serves as a storage unit for the fly line. In spincasting the line is cranked back into the reel between casts. During fly-fishing the fly line is left hanging or coiled on the ground between casts.

Fly line is different from the monofilament line used for spincasting. It's much heavier and thicker because it provides the weight to get the fly to the target.

Why fly-fish?

Many novices ask themselves. "Why would I want to fly-fish? Spincasting works just fine for me." The accomplished fly-fisher enjoys the sport for many reasons. He enjoys the challenges – coming up with the right fly for the fishing conditions, learning about the insects he is trying to imitate, "reading" the river to locate water that holds fish, and the feeling when a day of fishing comes together just right.

Equipment

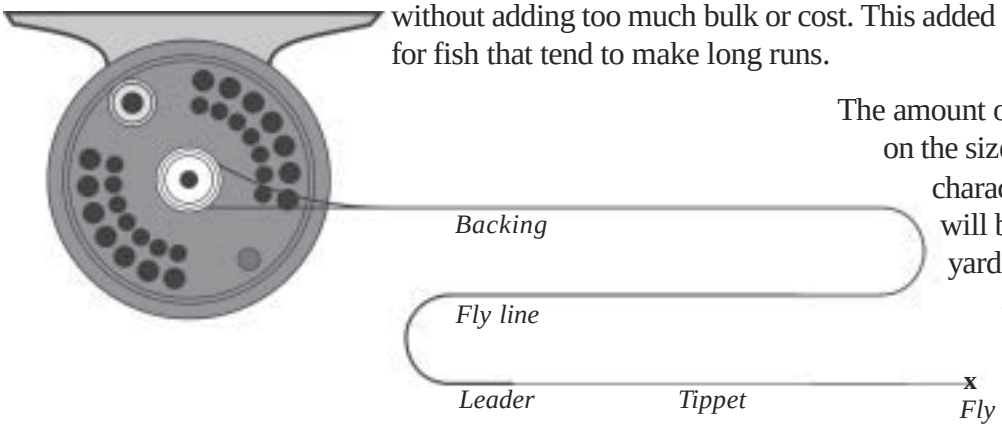
The equipment for fly-fishing is quite different from that of spincasting. Fly-fishing components are similar in name, but there the similarities end.

Line

The **fly line** is attached to the fly reel by a section of braided line called b**acking**. The thick fly line is attached to the fine diameter **leader** and the leader in turn ends in an even finer diameter t**ippet**.

Backing

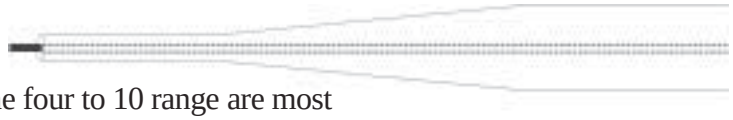
The backing usually is made of braided nylon Dacron™ It simply adds length to the fly line without adding too much bulk or cost. This added length is important when fishing for fish that tend to make long runs.



The amount of backing you choose depends on the size of your reel and the fighting characteristics of the type of fish you will be catching. For most fish 50 yards should be fine, but for fish that are known to make long runs 100 yards or more should be used.

Fly line

The line is the "heart" of fly-fishing. Remember, the fly line provides the weight for casting. Many types of fly line have been developed for ease of casting and greater efficiency. Fly lines are classified by their taper, weight, and density (in that order).



Line weight is measured on a scale of aught (lightest) to 14 (heaviest). Lines in the four to 10 range are most common. Trout anglers commonly use lines between four and six-weight. Lines in the seven to nine range work well for bass.

Recommendations for Line Weights

Line Weight	Recommended Use
0 to 3	Light fresh water, usually small streams, small flies
4 to 6	Average fresh water; suitable for most fresh water conditions and fish sizes
7 to 9	Heavy fresh water; lakes, larger streams, rivers, windy conditions, large flies, to light average salt water
10 and up	Heavier salt water, very heavy fresh water

Adapted from "First Cast: Teaching Kids to Fly-Fish"

level line

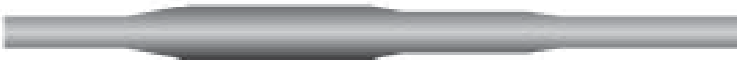
Lines vary in thickness throughout the length of the fly line to accomplish different goals. For instance a **level line** does not change thickness, just as its name suggests. Level lines are priced economically because of the uniform thickness, but are very difficult to cast. A common mistake of a beginner fly-fisher is to purchase a level line because of its cost, but then fail at fly casting because it's too difficult to use.

A **double taper** line tapers at both ends. The midsection provides the weight for casting. The small eight to 12-foot tapered end provides the flexibility required for the delicate presentation of flies. It is a very versatile line that can be used with both wet and dry flies and generally is used when casting shorter distances. Since both ends are tapered the same, this line can be reversed after one end wears out so you get two lines for the price of one!

double taper line

Weight forward line typically has a short, fine front taper, followed by a heavier body section that provides the weight for casting. The body section is in turn followed by a more slender section of line known as the shooting line. The weight in the forward part of this line helps the fly-fisher make long casts while the fine front taper aids in delicate presentation of flies.

weight forward line



Specialization of the fly line increases even more as the density of the line is changed. All line profiles are available in lines that are meant to float on the water or in lines that are meant to sink.

In 1961, the American Fishing Tackle Manufacturers Association (AFTMA) introduced a code of marking all fly lines according to their different characteristics. The first series of letters stand for the line taper: level-L, weight forward-WF, and double taper-DT. The number is the line weight and the last letter is the density – floating (F) or sinking (S). So a manufacture's code stating WF5F is a weight forward, five-weight, floating line.

Leaders

The **leader** is a length of tapered, fine diameter line that connects the fly line to the fly. It is usually made of monofilament and provides a nearly invisible connection between the fly and the line.

Leaders are normally tapered. The end with the largest diameter is attached to the fly line and is known as the **butt**. The butt is followed by the **midsection** and then the section to which the flies are tied, called the **tippet**. The leader should taper gradually down from the butt to the tippet.

Horsehair was the leader material used during the 19th Century until it was replaced with silk gut. Nylon monofilament was developed during World War II. Its design has improved greatly. It is still used today

Leader material is measured in a system called the X size. The X rating of monofilament is a standardized diameter. (The pound test rating varies between manufacturers.) No matter who the manufacturer, a 5X piece of tippet material is the same diameter while the pound test rating may vary (sometimes greatly).

A small tippet is not always better. A fly that is too large on a small tippet is difficult to cast and creates a stress point at the fly/leader connection. For example, a #8 wooly bugger attached to a 6X tippet won't stay attached for long. Give some thought to the size flies you likely will be using and tie on your tippet accordingly before you go fishing. Usually a couple spare tippet spools are sufficient, one size above and one size below the size tied to your leader

Selection of tippet size is a matter of experience and choice. Choose a size too big and the fish may not take the fly; choose a size too small and it will likely break before you land the fish.

A good guideline to follow when choosing a tippet size is the "**rule of four**." This means taking the size of your fly and dividing it by four to arrive at the tippet size. (e.g., A #16 fly divided by four equals a 4X tippet. A #20 fly divided by four equals a 5X tippet.) Keep in mind, this is a general guideline. You may need to go larger or smaller based on your situation.

A wide variety of leaders are available. Most are made of monofilament. They may be purchased as a continuous piece of line that tapers from the butt to the tippet or you can tie your own using gradually smaller diameters of monofilament until the desired tippet size is reached.

X designations of leaders

Diameter (inches)	Size
.011	0X
.010	1X
.009	2X
.008	3X
.007	4X
.006	5X
.005	6X
.004	7X
.003	8X

Rods

The fly rod is a very important piece of equipment. It is the fly rod that delivers the energy from the casting angler to propel the fly line. When it comes to fly rods the old adage, "You get what you pay for," is especially true.

Modern rods may be made of any one of three different materials: bamboo, fiberglass, or graphite. Some traditional fly-fishers don't believe that you are really fly-fishing unless you use a split bamboo rod. There are still some very fine and expensive bamboo rods available, but today most rods are made of graphite. Graphite rods generally are lighter than their fiberglass or bamboo counterparts.

It is critical to "balance" your outfit (e.g., use the correct weight fly line for your rod). Manufacturers label rods with the information you need to put together a "well balanced" outfit. Unfortunately, that information is not always located in the same place or written in the same format. An example of one of these codes would read, "G763." This rod is graphite, seven feet six inches long, and intended for use with a three-weight line.

Keep in mind what type and size of flies you will be casting when selecting a rod. A six-weight rod is a good choice for most beginners. It is appropriate for catching most pan fish, yet it is diverse enough to present small flies delicately and heavy enough to cast large flies long distances.

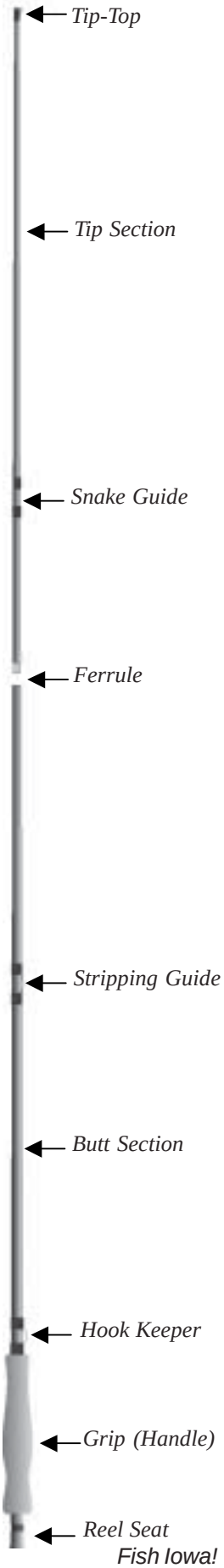
Fly rods are rated by the weight of the fly line they cast best. Weights range from 0 (aught), the lightest, through 14, the heaviest. Rods at either end of the range are considered "specialty" rods and not suitable for general fly-fishing. Most trout-weight rods range from about a four-weight (used for smaller waters and shorter casts) up to a six or seven-weight (used for longer casts and larger waters).

A seven, eight, or nine-weight rod often is used for bass fishing. Rods heavier than eight or nine-weight are generally used in saltwater fishing for large fish such as tarpon, marlin, or even sharks.

Modern rod manufacturers rate their rods using a double taper (DT) line. When using a weight forward (WF) line you should go up a line size. Thus, a five-weight rod casts best with a five-weight double taper line or a six-weight forward line.

Line weight ratings are approximate and you may have a rod that you feel casts better with a line that's one size heavier or lighter than it's rated for.

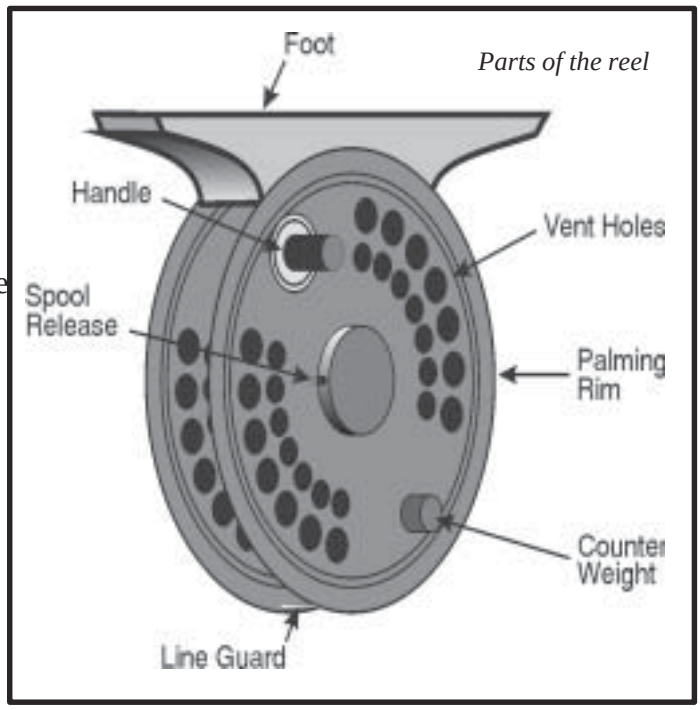
Fly rods come in a variety of lengths, each designed to fit individual needs. Short rods (six to eight feet) work well for small brush lined creeks. If, however, you fish large rivers, lakes, or from a boat or float tube where there is ample room, an eight or nine-foot rod makes longer casts more easily.



The Reel

The fly-fishing reel serves as a storage unit of the line when it is not being cast. Most of the time a fly-fisher's line is simply lying on the ground beside her, or held in loose coils in the "off" hand.

The most popular and versatile reel, by far, is the **single action reel**. It is readily adaptable to many fishing situations, has a simple retrieve mechanism (one crank of the handle results in one turn of the spool), comes in many sizes, and is inexpensive.



Parts of the reel

Some fly-fishing reels have a disc drag system, similar to a car's brakes. These normally are used for large fish which make long runs. Many reels have an exposed rim that allows you to create your own drag on the line by pushing on the rim with the palm of your hand.

The reel also must balance with the rod and the line. Reel spool sizes vary greatly Reel manufacturers list the capacity of their reels. For example, a reel might hold a double taper six-weight line and 100 yards of backing or a double taper seven-weight line and 60 yards of backing.

Tackle Care

Following are some important tips to remember:

- Handling equipment carefully will provide years of trouble-free enjoyment. Always transport rods broken down and in their protective rod tubes.
- When moving from spot to spot while fishing, attach the fly to the flykeeper (if provided) or hook the point inside the forward shroud that holds the reel foot. (Never place the hook into the grip.)
- Reel in all slack so the rod remains straight but the fly line and/or leader are tight.
- While walking, grip the rod so the reel is next to the front of your hand and the rod extends out the backside of your arm. This prevents catching the rod tip on brush or other obstructions because the rod follows whatever opening your body passes through.
- Never lay the rod on the ground. Instead, stand it against a tree or large rock while taking a break.
- Never let the fly reel come into contact with sand or gravel.
- **Always place your rod and reel under the windshield wiper** of your vehicle when you first return from fishing, before getting out of your waders and packing other gear away. This prevents accidentally leaving your fly rod behind.
- Periodically clean the fly line by running the working end through a rag soaked with fly line cleaner. Many cleaners are available just for this purpose. This will extend the life of your line and help maintain its performance.
- When disjointing the rod, grip the rod firmly with your hands (dry) close together on each side of the ferrule. Pull with each hand and gently twist the two sections at the same time. If the rod is stuck use a piece of tire inner tube to get a firmer grip on it.

Tackle Storage

During the off season, remove the fly line from the reel, clean thoroughly and hang in large, loose coils. Use a single twist-tie to prevent tangling. Leave a tag of the backing knotted to the fly line to distinguish which end is which. Check the head of the fly line for cracks or other damage and clip off the old leader and any damaged fly line. The line's performance will suffer if more than a foot of fly line is removed. Consider a new line in the case of a weight forward (WF) line or swap ends in the case of a double taper (DT) line.

a

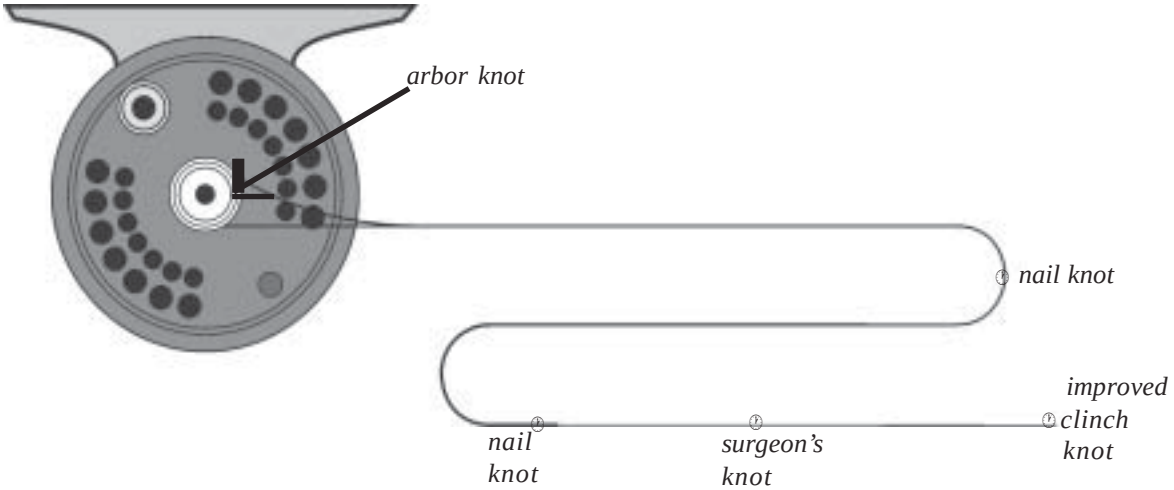
Tie on a new leader at the beginning of the fishing season. Always store the line away from heat or sunlight.

Clean the reel by removing the spool (if removable) and soak both the frame and spool in a bowl of water containing mild dish soap. Allow it to soak overnight and then scrub all interior and exterior surfaces with an old toothbrush. Rinse it thoroughly and lay on a towel. Let the reel dry completely then make sure all screws and rivets are tight and lubricate moving parts with reel grease. If the reel has an adjustable drag, set the drag knob to its lightest setting to avoid spring fatigue. Store it in an old clean sock.

Putting it all together

Using the proper knots to assemble your fly-fishing tackle is as important as the equipment itself. Specific knots are used for each purpose, from tying lines of similar diameter, to tying the flies onto your tippet. Following are the basic knots included in this manual:

Knot	Used For
arbor knot	tie backing to the arbor of the reel
nail knot	attach fly line to backing attach fly line to leader
surgeon's knot	tie monofilament lines together
improved clinch knot	connects fly to tippet



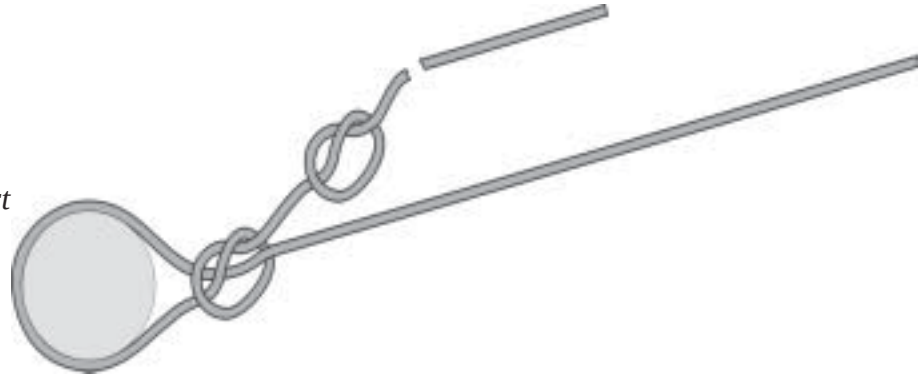
arbor knot

This strong but simple knot, also known as the **reel knot,** is used to secure one end of the line to the spool arbor of the reel, hence the name.

1 *Take the line around the spool arbor of the reel. Then take the tag end around the standing part and tie an overhand knot.*

2 *Tie a second overhand knot in the tag end as close as possible to the first overhand knot.*

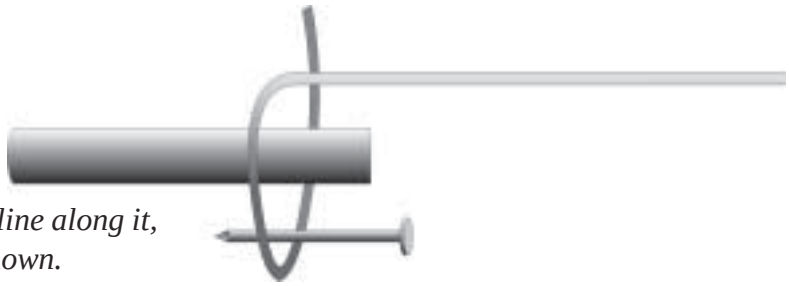
3 *Pull on the standing part of the line. The two overhand knots will jam together against the spool. Trim the tag end.*



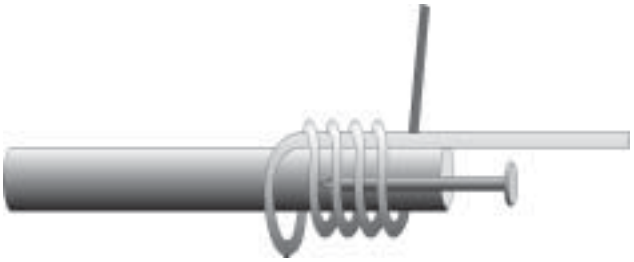
nail knot

This knot is used to attach backing line or a leader to a fly line. It is tied with assistance of a small-diameter nail or needle. The nail or needle stiffens the fly line and helps form the knot.

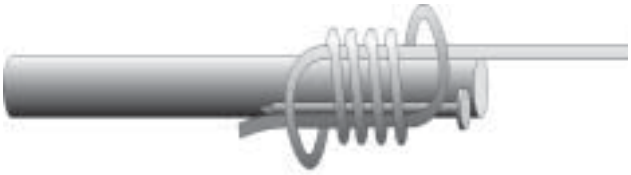
1 *Assemble your fly line, the line you want to attach to it, and a small-diameter nail or needle.*



2 *First, position the nail or needle along the fly line. Then lay the leader or backing line along it, and make a turn as shown.*



3 *Hold all pieces securely and, depending on the line type, make between five and eight turns back toward the end of the fly line.*



4 *Bring the tag end over, ready to push along the channel created by the nail or needle. Push the tag end along the channel.*

5 *Remove the nail or needle, and then continue pulling the tag end to loosely tighten the turns. Make sure the turns are in place and not too close to the end of the fly line. Pull the standing part and the tag end to finalize the knot. Trim the tag end.*

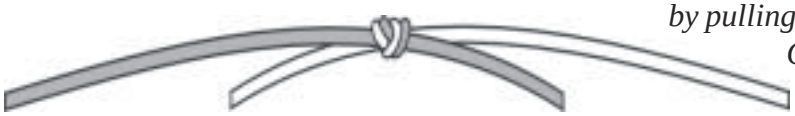
surgeon's knot

This knot is the simplest efficient knot you can tie and it's very, very strong. Use the surgeon's knot when you make your own leaders or when you've used up a lot of the end of your leader (called *tippet)* and you want to tie on another piece.

1 *Overlap two lines six inches with the tag ends facing opposite directions.*

2 *With both lines together, make a loop and pass the right side over and around the left side twice.*

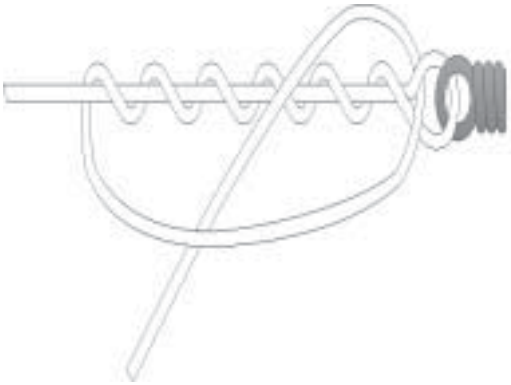
3 *Moisten the knot and pull on all four ends at once. Cinch down by pulling on each end separately. Clip the tage ends close to the knot.*



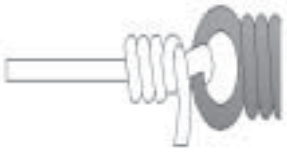
improved clinch knot

The improved clinch knot is used to tie the fly to the tippet.

1 *Pass the line through the eye of the hook or lure and wrap it around the standing line five or six times. Thread the line through the first loop above the eye and then through the big loop.*



2 *Hold the free end of the line and the standing line. Moisten the line and pull the coils tight against the eye of the hook. Clip the tag end.*



Casting

Fly casting is not about strength, but about timing and practice. When you are fly casting it is important to keep the following points in mind:

- You are casting the line, not the lure at the end of the line.
- You are transferring your energy to the rod and the rod casts the line.
- A good backcast is just as important as a good forward cast.
- The line will go where the rod tip points!

Getting Ready

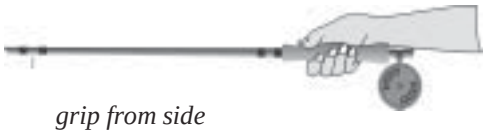
Safety

Always wear sunglasses and a broad-billed cap while casting. They provide protection from the sun and serve as a shield to prevent eye or head injuries.

The Grip

Using the correct grip on the rod is critical to casting success. Hold the rod on the grip above the reel with the reel hanging beneath the rod. Your thumb MUST be on top of the grip pointing down the rod shaft toward your target. Keep the rod butt under, and in line with, your forearm so the rod becomes an extension of your arm. Lock your wrist and bend your arm at the elbow. Strive for all your movements to be smooth.

grip from above



grip from side

Foot Position

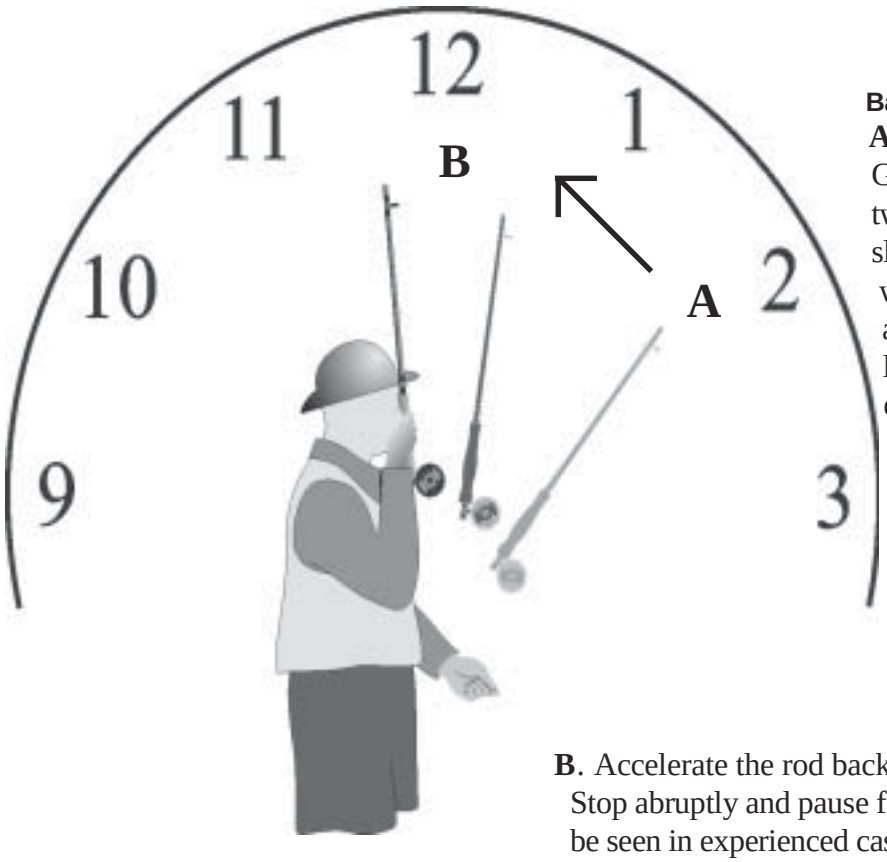
Stand with your feet shoulder width apart with the foot on the same side as the line hand slightly forward, aiming at your target. Always look at the place you want the end of your fly line to go.

Casting stance mistakes

- Bending the wrist – the rod is an extension of your arm and the rod tip will follow and exaggerate each movement. Using only your wrist to cast will quickly tire you and cause a poorly executed cast. Your arm has much more power and strength when casting.
- Arm held too high – you tire quickly and have a poor cast.
- Arm going up and down – the rod tip does not move evenly when your hand is not kept in an even plane. This causes a sloppy and ineffective cast.

The Overhead Cast

Remember to check your grip and stance before each cast. Strip two to three rod lengths of line out in front of you plus a few more feet. Hold the line in loose coils in your off hand. These coils will be pulled from your fingers as you complete your forward cast and want to increase your distance. Check for clearance for your backcast. You need the same amount of distance for your backcast as for your forward cast.



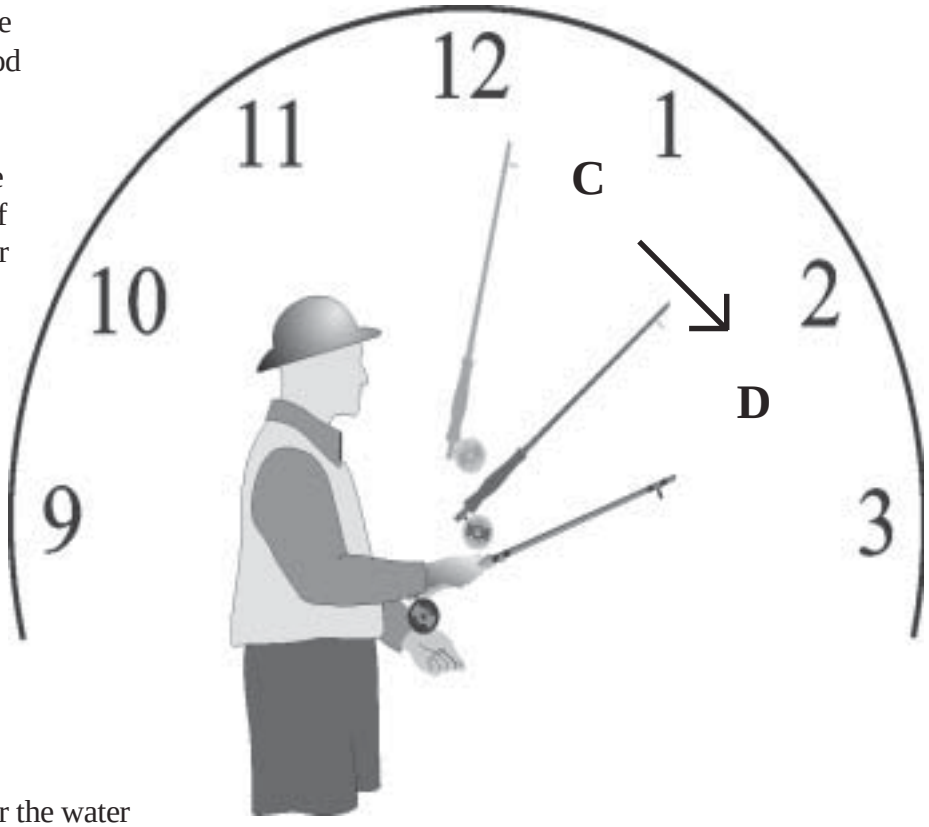
Backcast

A. Begin with your rod tip horizontal. Gently lift your rod tip to about the two o'clock position. This eliminates slack and helps free the line from the water's surface tension. Bend your arm at the elbow, keeping your wrist locked, so the rod becomes an extension of your arm.

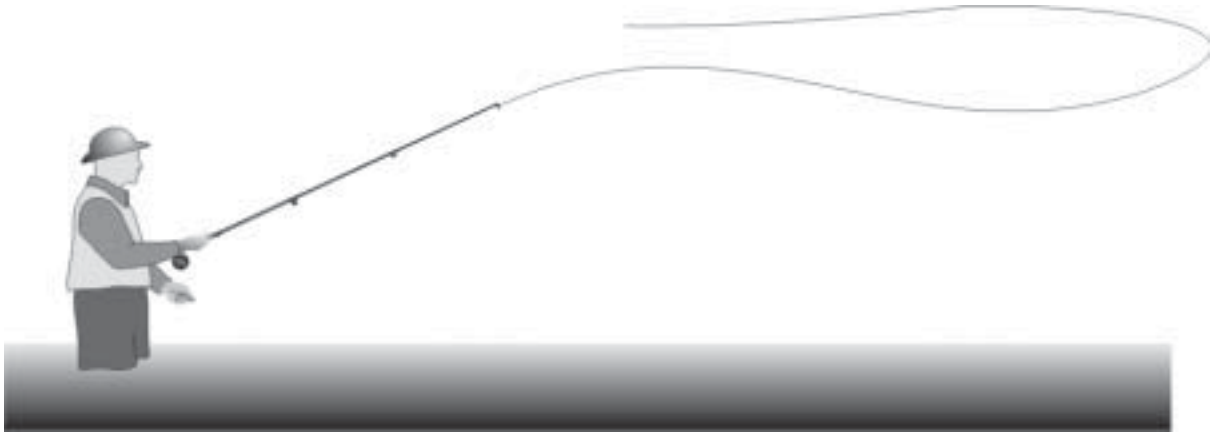
B. Accelerate the rod back to just past the 12 o'clock position. Stop abruptly and pause for just a moment. (This pause may not be seen in experienced casters, but it definitely is there.) Watch your backcast over your shoulder

The Forward Cast

C. The forward cast begins when your line is almost uncurled in the air behind you. Accelerate the rod forward stopping abruptly between the one and two o'clock position. At this point release the line held in loose coils in your off hand if you wish to lengthen your cast.



D. As the line straightens out over the water lower the rod tip to between the two and three o'clock position. Your goal is to have the line straightened out in front of you with all of its energy spent, about a foot above the water's surface. This allows your fly to settle naturally on the water with minimal disturbance.



Casting checklist

- Check your stance – comfortable, legs shoulder width apart, line hand foot slightly forward, thumb on top, grip not too tight, rod tip down
- "Throw the line up over the trees!"- quick pick up, crisp hitch hiking motion, rigid wrist, hand in a level plane, turn to follow the stroke
- Accelerate to an abrupt STOP – stop the rod at just past the 12 o'clock position
- Watch your backcast – start to bring the rod forward a split second before the line uncurls
- "Flick that apple off the rod tip!" – stop the rod between the one and two o'clock position, rigid wrist, hand in a level plane
- Finish your cast - lower your casting arm and rod, the line will lay out straight on the lawn over your target
- "Good job!"

Common casting problems

- Wrist casting – the most common problem. Using this weak part of your body tires you quickly
- Casting too much line – a very common problem. Limit the amount of line to 30 to 40 feet maximum. Control is more important than distance.
- Line slamming into the water on the forward cast – caused by using too wide of a casting arc and not stopping your cast high enough (between the one and two o'clock position) and following through. Aim higher and stop your forward cast sooner
- Line collapsing on the backcast – your wrist is bent and there isn't enough power on the pickup. If the line hits the ground on the backcast, your cast will be unsuccessful.
- Not enough power on the pickup – really throw the line up in the air on your backcast to make the rest of the cast work.
- Whip-cracking sound on the forward cast – caused by starting your forward cast before your backcast is straightened. Follow your cast backward and wait one second on the abrupt stop before bringing your cast forward.

Lures or Flies

A "fly" is the name used for the artificial lure used in fly-fishing. The name comes from the first patterns that were tied to imitate the insect called a "mayfly." Today flies are tied to imitate nearly any kind of food a fish might eat. Some don't imitate anything in nature at all!

Flies may be purchased in stores but many fly-fishers find that tying their own flies is a wonderful hobby in itself. Flies are made by tying bits of feather, fur, or tinsel onto a fish hook using a special thread made just for that purpose.

There are many books and videotapes available to help you learn how to tie flies but it's probably easier to learn by having a fly tier show you how to get started. Check in sporting goods shops to see if someone ties locally. Nearly all states have at least one fly tying club whose members get together for tying sessions during the winter months. They welcome the chance to help get someone "new" started.

Flies may be broken down into several categories; dry flies, wet flies, nymphs, streamers, and bass bugs.

Dry flies are designed to ride on the water's surface and imitate the adult stage of many aquatic insects or terrestrial insects that have fallen into the water, such as grasshoppers, ants, or beetles.

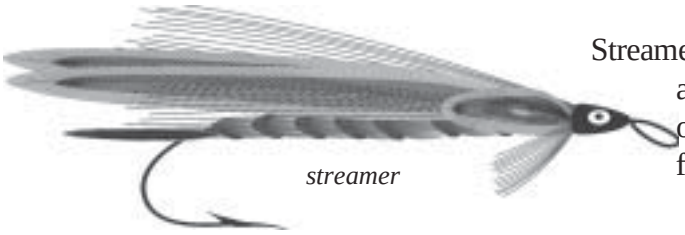
dry fly

wet fly

Wet flies are fished below the water's surface and imitate immature aquatic insects or insects which have drowned.

Nymphs are a special form of wet fly and imitate the larval form of aquatic insects.

nymph



streamer

Streamers are another special form of wet fly and are intended to imitate minnows or other small fish upon which larger fish feed.

Bass bugs or surface lures may imitate things such as frogs or mice, but don't necessarily resemble any living thing. They are often brightly colored or fished in a way to create a commotion that attracts large predatory fish species such as bass or northern pike.

bass popper

Approach

Introduce students to the basic components of the fly-fishing outfit. Note the function of each. If appropriate, compare the components with their spincasting counterparts. If you are working with a larger group, have multiple rods and reels, as well as flies, line, and leaders, on hand so students can view components up close. Discuss the importance of having a balanced outfit that is appropriate for the fish being sought and the fishing situation. Demonstrate and discuss the proper care of fly-fishing equipment in transit and for storage. (Optional: invite a local fly-fisher to discuss basic equipment and demonstrate how to properly care for it.)

Discuss the various knots used to assemble a fly-fishing rig. Demonstrate each knot as illustrated in the narrative, using large rope, so students can see the procedures. Have students practice tying the knots using rope, then line. (Optional: copy the knot tying diagrams and provide them to students.) **Skills test:** Each student should be able to correctly tie the knots as demonstrated.

Tie a short piece of bright yarn to the tippet to simulate a fly. Demonstrate proper casting techniques and discuss appropriate safety precautions. Place students in pairs and distribute fly-fishing rods and reels, one per pair. Make sure all students are wearing their sunglasses and hats. Have pairs line up at least 10 feet apart, all facing the same direction. One student in each pair should prepare to cast while the other watches for mistakes. Have students cast directly in front of themselves to avoid crossing lines with their neighbors. Emphasize that the caster should make sure others are out of the way before casting and observers should always be alert when their partner is casting. Repeat each step of the casting procedure with the first group of casters as they cast. Allow them to practice a few times and repeat with the second group. Partners should take turns casting until both get the procedure down.

Only after students have demonstrated the correct casting procedure, they can work on casting for accuracy. They can cast toward targets or play games such as *F-I-S-H* or *plug golf*. (See the *Fish Iowa!* manual, *Unit #3* for instructions.)

Cautions: Practice casting in an area with short grass or a smooth surface with few obstructions to decrease the chances of "flies" getting snagged (e.g., football or soccer field, empty parking lot.) Avoid areas covered with blacktop or dirt; repeated casting on these surfaces can destroy fly lines. There should be 50 feet of safe area in front of and behind each caster. Be aware of any overhead obstructions such as trees, rafters (gym), or power lines. Have observers stand on the right side of right-handed casters and the left side of left-handed casters to better observe the casting procedure.

Damage Control:

- Have a few eight-foot, four or five-weight rods around with slimmer grips for smaller kids.
- Don't use flies in practice; tie a short piece of bright yarn to the tippet to simulate a fly.
- Students should focus on casting technique. This will slow them down, make them think, and improve their casting.
- Make sure students keep rod tips down when they are not casting. Successful casting is difficult when rod tips are kept high and are waving about.
- Don't let students lay rods on the ground. They can be stepped on and broken.
- Watch the length of classes. Concentration becomes difficult as young arms weaken.

Skills Test: Each student should be able to cast a fly-fishing rig using the correct procedures as outlined in the narrative and demonstrated. Optional: Students also may be tested for accuracy using casting games.

Field Trip

Review the *Fly-fishing Field Trip Checklist* included at the end of this unit. Have students discuss the importance of each item listed. (For more details about general field trip considerations, see the *Fish Iowa!* manual, *Unit #1*.) Optional: Invite a local fly-fisher to come talk about the items listed.

Be sure to select a site that is easily accessible and where students will experience some success. Farm ponds or recently stocked trout streams are good areas. (Be sure to ask permission from the landowner before visiting a private pond.) Review pertinent fishing rules and regulations using the most current copy of the *Iowa Fishing Regulations*. Discuss the rules of good ethics listed below

A Consideration of Fly-fishing Ethics

- In all cases, follow the "Golden Rule; " Do unto other fly-fishers only what you would have them do unto you.
- Practice "catch and release," keeping only those fish needed. In all cases, follow the law. Fishing regulations are designed to prevent the over harvest of the resource and, at the same time, provide equal fishing opportunities for everyone.
- Respect other anglers' space. The angler sitting on shore where you intended to fish may be "resting" the fish in the pool or studying his strategy. Either way, the pool is his and you should pass quietly to another spot.
- When passing other anglers on stream, pass at a distance, walking softly to avoid spooking fish.
- Avoid unnecessary wading and, where necessary, wade gently. Wading disrupts the stream bottom, in some cases dislodging stabilizing plant beds and increasing water turbidity.
- Do not cut off another angler's approach to the water. Leave enough space between yourself and the other angler that it would take 20-30 minutes to fish through.
- When fishing private property, remember you are a guest of the landowner. Follow his wishes; don't trespass, leave gates open, damage fences or other property, build fires, remove things, or leave items behind.
- Take part in conservation efforts to protect the watershed of the lakes and streams you fish.
- Share your angling knowledge and skills with your friends. By doing so you enlist the help of an ally in protecting the resource.
- When fishing public water, remember there is an ever increasing, often competing, demand on this limited resource. Never litter the land or water. Never pollute and leave no trace for others to find.
- Remember; "We do not inherit this land from our ancestors but, rather, borrow it from our grandchildren."

Develop a scavenger hunt list of questions to familiarize students with the regulations pamphlet. Review general safety precautions around water (*Fish Iowa!* manual, *Unit #1*) and specific safety precautions for fly-fishing.

Using *Appendix F: Tips for Conducting a Fishing Field Trip* from the *Fish Iowa!* manual, organize a fly-fishing experience. Make sure your students have Iowa fishing licenses if they need them and have paid the trout fee if you plan to pursue trout. Iowa residents who are 16 years of age or older are required, by law, to possess a valid Iowa fishing license if they are fishing. They also must pay the trout fee to possess trout.

Fly-fishing Field Trip Checklist

Dress

_ sunglasses (essential)
_ broad-billed cap (essential)
_ vest or small pack
_ extra clothes (just in case)
_ sturdy shoes
_ old sneakers or waders (if wading)
_ sunscreen
_ insect repellant
_ rain jacket or water repellant wind breaker

Safety

_ basic first aid kit
_ water bottle
_ snacks
_ 50 feet (or more) rope
_ throw jug

Equipment

_ fly rod and reel
_ flies (various, based on fishing situation)
_ spools of spare tippet material
_ screw drivers
_ trash bags
_ creel or coolers (if fish are to be kept)

Note: For a complete discussion of preparation steps for a field trip, see the *Fish Iowa!* manual, *Unit #1*.

An Introduction to Fly-fishing Review Sheet 1

1. What is the biggest difference between spincasting and fly-fishing?

2. The _____ attaches the fly line to the reel. A length of tapered, fine diameter line called the _____ attaches the fly line to the fly

3. Leaders with the same "X" designation have the same **(circle one)**
   a. pound test b. diameter c. color d. weight

4. Briefly describe the following types of fly line:

   Level line_____

   Double taper _____

   Weight forward _____

5. Most fly rods commonly are made of what material? _____

6. What does "balanced" rig mean?

7. Which knot commonly is used for each of the following:

   _____ tie backing to the arbor of the reel

   _____ attach fly line to backing

   _____ connects fly to tippet

8. Briefly describe the various types of flies.