



## Dry Flies Featuring Spun Hair

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### Objectives

Participating young people and adults will:

1. Practice spinning deer hair bodies and heads
2. Practice trimming spun hair to shape
3. Practice following complex patterns
4. Apply basic tying skills
5. Have fun while learning

### Youth Development Objectives

Participating young people will develop:

1. Enhance coordination and fine motor skills
2. Practice planning for sequential processes
3. Enhance self concept and self worth
4. Practice critique and application to improvement
5. Practice social and communication skills

### Roles for Teen and Junior Leaders

1. Demonstrate tying patterns, explaining each step
2. Assist participants as needed
3. Evaluate flies and suggest ways to improve them
4. Encourage participants while leaning tying skills

### Potential Parental Involvement

1. See "Roles for Teen and Junior Leaders" above
2. Arrange for or provide teaching location
3. Arrange for or provide materials and equipment
4. Arrange for or provide transportation
5. Arrange for or provide refreshments.
6. Discuss personal experiences with these patterns

**Best Time:** after basic skills and hair spinning have been learned

**Best Location:** Well lighted, comfortable setting

**Time Required:** about 60 to 90 minutes

### Equipment/Materials

*See patterns for details on material*

vise	hackle pliers
bobbin	bobbin threader
dubbing needle	6/0 thread, black or tan
head cement	2x and 3x long hooks
pale yellow-green deer hair	
black deer hair	natural deer hair
brown deer hair dyed yellow	
yellow-brown turkey quill	
mottled turkey quill	black goose quill
tan or yellow dubbing fur	
black dubbing fur	red wool
woodchuck or bucktail (black, natural)	

### References

See references in introduction

### Safety Considerations

No special considerations

### Evaluation Activities/Suggestions

1. Observe tying procedures used by youth
2. Observe interactions of youth and leaders

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3. Observe trimming techniques
4. Observe proportions and detail work
5. Observe ability to evaluate personal ties
6. Observe communications among participants
7. Observe confidence and experimentation by participants

## Lesson Outline

### Presentation

- I. Spinning hollow hair
  - A. Exception to hold tightly bind tightly
    1. Relaxing fingers as the thread tightens
    2. Allowing material to roll around the hook
  - B. Flare, spin and pack
    1. Flaring because of pinching hollow hair
    2. Spinning
      - a. Rolling around the hook shank
      - b. Winding through hair to lock in place
    3. Packing for a tighter body
      - a. Thumbnail and fingernail technique
        - 1) Push spun hair together with nails
        - 2) Turn or two in front of clump
        - 3) apply multiple small clumps
      - b. Packing tools like pen body
  - C. Trim to shape
    1. Removing excess material to final shape
    2. Keeping scissors flat
    3. Easy to take more off -not to put back on
    4. Watch the scissor tips!
- II. Tying the oak leaf roller (inch worm)
  - A. Pattern
    1. Hook
      - a. 2x - 3x long light wire
      - b. Size 14 to 10
    2. Thread
      - a. 6/0 to match head color
      - b. Monocord or 3/0 if needed
    3. Body
      - a. Deer body hair spun and clipped
      - b. Color to match natural larvae
        - 1) Light green
        - 2) Tan-yellow
        - 3) Brown
        - 4) usually does not make a difference
  - B. Tying procedure
    1. Select and clamp hook in vise
    2. Attach thread at rear of shank
    3. Select a small bunch of dyed deer hair
      - a. 8-10 hairs about enough
      - b. Natural tips to the rear
    4. Hold in place and bind loosely
      - a. Two loosely applied wraps

### Application

**DEMONSTRATE** spinning a small clump of deer hair on a hook. **NOTE** that many small clumps packed together are better than a few larger clumps.

**DEMONSTRATE** the packing and trimming technique, including keeping the scissors flat rather than cutting with the tips. **STATE** that trimming to shape is merely cutting away anything that does not look like the item being tied.

**NOTE** that caterpillars like inchworms and oak leaf rollers are used during the summer by fish in wooded areas. These simple patterns can be very effective when the worms are falling into the streams or lake edges.

**PASS** out the materials for the pattern as the pattern is discussed.

**Note: If the kids are having problems breaking the tying thread try going to monocord or 3/0 material rather than 6/0.**

**SELECT** hair and thread colors to match local natural insects. **NOTE** that most of the time, the shape and size of the pattern is adequate to draw strikes from surface-minded fish.

**DEMONSTRATE** the tying procedure and leave the finished fly in the vise for a model.

**HOLD** the hair moderately tightly in place while placing a couple loose wraps of thread over the bundle. **RELAX** the grip on the

- b. Increase pressure on thread while relaxing grip on hair
- 5. Increase pressure, allowing hair to spin and flare around hook
- 6. Pack hair tightly
  - a. Thumbnail and index fingernail
  - b. Pen barrel packer
  - c. Specialized tools
- 7. Anchor with a couple wraps of thread
- 8. Repeat until shank covered with spun hair
- 9. Wind and whip finish head
  
- 10. Trim body to shape
  - a. Hold scissors parallel to the shank
  - b. Trim carefully
    - 1) Trim to shape of natural
    - 2) Remove anything that does not look like the natural being imitated

### III. Tying a dry muddler

#### A. Pattern

- 1. Thread - black or amber 6/0
- 2. Tail - yellow mottled turkey slips
- 3. Body - yellow or tan dubbing
- 4. Underwing - brown bucktail dyed yellow
- 5. Wings - dyed mottled turkey slips
- 6. Head and legs - spun deer hair trimmed to shape

#### B. Tying instructions

- 1. Attach thread at rear of shank
  
- 2. Select and cut tail of mottled turkey slips
  
- 3. Wind dubbed fur body
- 4. Apply sparse underwing
  - a. Bucktail
  - b. Woodchuck guard hair
- 5. Select and cut wings of mottled turkey
- 6. Apply mottled turkey wing slips
- 7. Select small bunch of natural deer hair
  - a. Hold with natural tips covering about a body length
  - b. Bind and trim first clump before spinning and flaring
  - c. Add small clumps to complete head
  - d. Trim head to size
- 8. Whip finish and add head cement

### IV. Tying a Letort Cricket

#### A. Pattern

- 1. Hook: 94845 or equivalent 2x long dry
- 2. Thread: black 6/0 or monocord
- 3. Body: black spun fur
- 4. Underwing: black goose or duck quill

hair clump as the thread is drawn tight, flaring the hair and spinning it around the shank.

**DEMONSTRATE** the use of the index finger nail and thumbnail as an effective hair packer. **PACK** the hair densely and apply additional clumps until the hook's shank is covered, looking like a frightened bottlebrush.

**HOLD** the hair out of the way and wind a smooth head, whip finishing the tying thread when complete.

**DEMONSTRATE** the flat trimming method keeping the scissors parallel to the shank as the hair is trimmed. **CAUTION** the participants to trim carefully. **NOTE** that it is very easy to take a bit more hair off the fly, but very difficult to add hair once it is trimmed away.

**PASS OUT** materials for the muddler to each participant. **NOTE** that the pattern can be tied in many variations, suggesting grasshoppers that are present in the area.

**DEMONSTRATE** the tying process, leaving the completed pattern in the vise for reference by the participants.

**NOTE** that most tiers use matched wing quill slips while others use a single one for the tail.

*Applying a generous body is advised.*

**DISCUSS** the differences between bucktail and woodchuck for this purpose.

**CUT** matching wing quill slips and **BIND** them in over the underwing.

**BIND** in a collar of natural deer hair extending about a of the body length. **TRIM** the butts to approximately head size before spinning the remainder of the head.

**SPIN** deer hair to fill the head area and whip finish the thread before **TRIMMING** the head to size and your desired shape.

**APPLY** a drop or two of head cement to the whip finished thread. **NOTE** that the Letort Cricket and Letort Hopper differ primarily in color, having similar tying characteristics and pattern elements.

**DISTRIBUTE** the materials needed to tie the pattern while **DISCUSSING** their use in the pattern.

5. Wing (Collar): black deer hair
  6. Head: spun black deer hair
- B. Tying procedure
1. Dub black fur body to shoulder area
  2. Prepare and bind in goose quill slips
  3. Bind in deer hair tips as a collar and wing
  4. Spin deer hair head
  5. Whip finish thread and lacquer
  6. Trim head to shape
- C. Letort Hopper
1. Hook: 94845 or equivalent
  2. Thread: yellow 6/0 or monocord
  3. Body: yellow spun fur
  4. Underwing: mottled turkey slips
  5. Collar and wing: brown deer hair
  6. Head: spun deer hair

#### V. Tying Dave's Hopper

- A. Originator - Dave Whitlock
- B. Pattern
1. Hook: down eye, 2X or 3X long
  2. Tail: Red hackle barbs with loop of yellow poly yarn over
  3. Body: yellow poly yarn, acrylic or foam
  4. Hackle: palmered brown, trimmed short
  5. Underwing: brown bucktail dyed yellow
  6. Wing: mottled turkey wing quill
    - a. Coat with vinyl cement
    - b. Tied tent style
  7. Legs: mottled wing quill barbs, dyed yellow and knotted
  8. Head and Collar: spun deer hair, natural or natural dyed yellow, clipped square.
- C. Tying procedure
1. Bind in clump of red hackle fibers
  2. Bind in loop of yellow poly yarn over tail
  3. Bind in long brown hackle for rib
  4. Wind or dub poly yarn body to shoulder
  5. Palmer hackle to shoulder
  6. Bind off and trim hackles short
  7. Apply vinyl cement to turkey quill
  8. Clip matching pairs of wing quill slips
  9. Bind over body and tail tent fashion
  10. Trim base of quill slips
  11. Prepare and attach rear legs
    - a. Knot wing quill barbs
    - b. Bind in "kickers" beside head
    - c. Allow to extend nearly to tail
  12. Bind in deer body hair collar
    - a. Leave natural tips to rear
    - b. Pack butts of hair

**TIE** a demonstration fly and leave it in the vise as a model.

**DUB** a fairly stout body about 6 shank length.

**CUT** matching goose quill slips and **BIND** them in as a tent-style wing.

**APPLY** black deer hair as a collar and wing extending over the goose quill wing. **TRIM** the butts about head size.

**APPLY** a spun deer hair head, and whip finish the thread.

**TRIM** the head to a rounded shape, leaving a generous head.

**DISCUSS** the Letort Hopper and the materials used in it. Have the participants **TIE** one if desired.

**NOTE** that this is a much more complex hopper pattern originally designed by professional Dave Whitlock as a western terrestrial. It works well wherever hoppers are found.

**DISTRIBUTE** the materials needed for the pattern while **DISCUSSING** their use.

**BIND** in a generous clump of red hackle fibers as a tail, then **ADD** a loop of yellow poly yarn over it as part of the extended grasshopper body.

**BIND** in a long brown hackle to be used as a rib.

**WIND** or **DUB** a yellow poly yarn body to the shoulder area, leaving enough room for the head and collar.

**PALMER** the hackle over the body, binding it off at the shoulder; then **TRIM** the hackle fibers short.

**PREPARE** matching turkey wing quills by **APPLYING** vinyl cement to the feathers, **CLIPPING** matched slips, and **BINDING** them in tent-style over the body and tail.

**TRIM** the bases of the quill slips closely.

**KNOT** two large yellow or mottled wing quill barbs (turkey or goose) in the middle and **BIND** them in beside the wing as the jumping legs, **ALLOWING** them to extend almost to the tail.

**BIND** in a deer hair collar (brown dyed yellow) covering about a to 2 the body. **PACK** the butts of the hair and **TRIM** them roughly to shape.

**SPIN** the same body hair to cover the head area, packing after

13. Spin body hair head
14. Whip finish and lacquer
15. Trim head to shape - square off face

each small bunch is applied.

**WHIP** finish the thread and apply a drop of two of head cement.  
**TRIM** the head to shape, leaving it **SQUARE** at the face.

**NOTE** that many other types of flies can be tied suggesting ants, beetles, caterpillars and similar organisms.

#### VI. Other spun hair patterns

- A. Ants
- B. Beetles
- C. Caterpillars of all sizes

### Summary Activity

Review the patterns tied and the skills developed in tying them. Hold a “fly show” having each tier discuss their efforts, the skills they have learned, and ways they might want to improve later efforts at tying the same patterns or similar ones. Have them suggest other patterns they might be able to tie using these skills.

### Lesson Narrative

#### Spinning Hollow Hair

In general, spinning hollow hair, like deer body hair, is the exception to the hold-tightly-and-bind-tightly rule. Either taking a loose turn or two around the hair clump and shank or finishing a turn while letting the fingers relax will cause the hair to flare and spin around the shank until it locks in place. The flaring is the result of squeezing or pinching a hollow, air-filled hair. The spinning results from the hair sliding around the shank as the thread is tightened. Winding a turn or two of thread through the hair usually will cause it to lock in place. Packing the hair by pressing it backward with either a hair packer or the nails on the index finger and thumbnail makes the spun hair body or head tighter and more buoyant. Packing tools can be purchased commercially or a very serviceable one can be made from the barrel of a ballpoint pen.

A turn or two of thread in front of each clump after it is packed will hold it in place. Multiple small clumps of hair results in a much tighter, more durable spun hair fly. In addition, this approach results in less thread breakage and much more even distribution of the hair. For most purposes, a clump about half the size of a common lead pencil is just about right, but experiment to see what works best for you.

Once the hair has been applied (it should look a bit like a frightened bottle brush), it must be trimmed to shape. This process is simply removing everything that does not look like what you want to have at the end. Holding the scissors flat to the shank rather than cutting into the spun hair with the tips of the scissors will nearly always produce a better body. Remember that it is easier to take a bit more material off than it is to put even a little bit back on, so trim carefully. Watch the scissor tips!

#### Tying an Oak Leaf Roller

Oak leaf rollers are small caterpillars, often called inchworms. They are abundant in many regions during the summer, and fish feed on them heavily when they are falling into the water along lake or pond edges or on wooded streams. The pattern follows:

Hook: 2-3z long, # 10-14

Thread: 6/0 yellow, green or brown

Body: yellow or green deer body hair spun and clipped to shape

Head: tying thread

Clamp a hook in the vise and attach the thread near the rear end of the shank. Select a small bunch or deer body hair of the desired color (6-10 hairs is about right) and clip them off the skin as close to the skin as possible. Holding the natural tips to the rear, take one or two loose turns of tying thread around the middle of the hair clump. Increase the pressure on the thread while relaxing the grip on the deer hair. The hair should flare and begin to spin around the shank. Take a turn or two through the hair clump, then pack the spun hair together, either by using a tool or with the fingernails. Once the material has been packed, take a turn or two in front of the clump to stand it up straight. Repeat the process until the entire shank is covered with tightly packed spun deer hair. Wind a small head, whip finish the thread, and apply a drop or two of

head cement before removing the hook from the vise. Holding the scissors parallel to the shank, trim the deer hair into a cylinder about the same diameter as the inchworms you are seeing by removing anything that does not look like the caterpillar.

### **Tying a Dry Muddler**

The muddler minnow is a wonderfully useful pattern that can be fished below the surface as a streamer or on the surface as a wounded minnow, stonefly or grasshopper. This pattern is tied as a hopper, but useful for the other purposes.

Hook: 2-3x long, 8-14  
Thread: black or amber 6/0  
Tail: yellow mottled turkey slips  
Body: yellow or tan dubbing  
Underwing: brown bucktail dyed yellow  
Wings: yellow mottled turkey slips  
Collar: yellow deer hair tips  
Head: spun yellow deer hair trimmed to shape

Attach the tying thread at the rear of the shank. Prepare a pair of yellow mottled turkey wing quill slips, match them carefully, and bind them in place as a tail. Trim the bases of the wing quill slips closely. Dub a body of yellow or tan dubbing material over the base of the tail tie-down, winding it to the shoulder. Bind in a sparse underwing of either woodchuck guard hairs (on the legs) or yellow bucktail from the brown part of the tail. Select and cut a pair of wings from matched dyed yellow mottled turkey wing quills. Hold them over the underwing and bind them in place with several tight turns of tying thread. Trim the butts of the material away and wind over them to provide a smooth tie-down area for the spun hair head and collar. Clip a small bunch of coarse bucktail (near the rump) or fine yellow dyed brown deer hair. Holding the clump so the natural tips come about 1/4 to 1/2 of the way back on the body and in place near the base of the wings, spin the hair around the hook. Trim the butts of this clump before completing the head. Spin deer hair to fill the remainder of the shank, packing tightly and whip finishing the thread at the eye of the hook. Apply head cement to the whip finished area before removing the fly from the vise and trimming the head to shape carefully.

### **Tying a Letort Cricket**

The Letort cricket was originated as a companion to the Letort hopper. Both patterns were intended for trout during the late summer when these insects often brought large trout to the surface. Both of them are suggestive, rather than strictly imitative patterns, but they are effective. They are very similar to the previous pattern except for the order in which the materials are applied.

Hook: 94845 or equivalent 2x long dry  
Thread: black 6/0 or monocord  
Body: black spun fur  
Underwing: black goose or duck quill  
Wing (Collar): black deer hair  
Head: spun black deer hair

Start the pattern by dubbing a black fur body from the rear of the shank to the shoulder area. Prepare and bind in a pair of black goose quill slips tent style over the body. Using techniques used in the previous pattern, bind in a clump of black deer hair with the tips of the hair forming a collar that extends back over the wing and body. Trim the butts of the hair and spin the remainder of the shank full of black deer hair. Whip finish and apply head cement to the thread. Remove the fly from the vise and trim the deer hair to form a somewhat large, rounded head in a cricket shape.

The Letort hopper is tied in the same fashion using the following pattern.

Hook: 94845 or equivalent  
Thread: yellow 6/0 or monocord

Body: yellow spun fur  
Underwing: mottled turkey slips  
Collar and wing: brown deer hair  
Head: spun deer hair

### **Tying Dave's Hopper**

Dave's hopper was originated by professional tier, Dave Whitlock. It is a somewhat more imitative pattern than the Letort hopper and a very popular pattern among western fly fishermen during the summer. The pattern follows.

Hook: 2-3x long dry fly  
Tail: red hackle barbs with loop of yellow poly yarn over  
Body: yellow poly yarn, acrylic or foam  
Hackle: palmered brown, trimmed short  
Underwing: brown bucktail dyed yellow  
Wing: mottled turkey wing quill tied tent style  
Legs: mottled wing quill barbs, dyed yellow and knotted  
Head and collar: spun deer hair, natural or natural dyed yellow, clipped square.

Bind in a generous clump of red hackle fibers for a tail and add a loop of yellow poly yarn over the tail as an extended body. Bind in a long brown hackle for a rib, then wind the yellow poly yarn or dub a yellow fur body to the shoulder. Palmer the brown hackle over the body, binding it off at the shoulder; then trim the hackle fibers short. Bind in a sparse underwing of the brown part of a yellow bucktail. Prepare the wings by applying vinyl cement to a matched pair of mottled turkey wing quills. Clip a pair of matched wing quill slips from them. Bind those wings in over the body and tail so they form a low profile tent. Trim the quill slips closely and wind over them to form a smooth base for the collar and head. Clip a pair of mottled yellow wing quill fibers, knotting them in the middle. Bind them in place along the wings, so the tips extend back toward the tail. Bind in a clump of dyed yellow deer hair extending back about 1/4 to 1/2 way on the body, leaving the natural tips to the rear. Pack the butts of the hair, wind in front of them to stand them up and spin the rest of the shank full of tightly packed hair. Whip finish the thread at the rear of the eye and apply a drop or two of head cement to seal the thread. Remove the hook from the vise and trim the head to shape, squaring off the face of the head vertically.

### **Other Patterns**

Spun hair can be used for a wide array of patterns beyond those presented here. It can be used to tie floating ants, beetles, caterpillars, or even small fish imitations as well as hair bugs (in another lesson). The techniques are the same. Only the shapes have been changed to protect the innocent.

### **Exhibit or Sharing Suggestions**

1. Prepare a poster, models or photographs to show the steps in tying a selected spun hair pattern.
2. Study fly-fishing books or magazines to locate patterns for some other flies using these hair-spinning techniques. Try the flies and share the results of your work with your group or other interested persons.
3. Prepare a method demonstration on tying a spun hair fly. Using partially tied flies in different stages of development, present the demonstration in an appropriate setting.
4. Prepare a photographic story of tying a selected spun hair fly from the beginning of the tying process to using it in fishing.
5. Record your experiences with tying and using flies in a tying and fishing journal. Share that journal with others in an appropriate setting.
6. Make a series of flies and fly pattern cards that can be exhibited at a fair or similar gathering.

7. Try variations of these patterns to see if you can develop something that works more effectively for the fish in your area. Record your experiments and experimental patterns in a journal and share your findings with others in your group.

### **Community Service and "Giving Back" Activities**

1. Consider ways of helping other young people learn how to tie flies, setting up tying clinics or instructional programs for interested people.
2. Tie a set of flies that can be used as auction items or door prizes in community events or fundraisers.
3. Donate flies to a local fishing program.
4. Participate in a fly tying demonstration at a National Hunting and Fishing Day celebration.

### **Extensions or Ways of Learning More**

1. Observe the fish in your area and the foods they eat at various times of the year. From fish you have kept, analyze their preferences or common foods during the year and begin constructing a "hatching table" to assist you in planning your fishing efforts in future years.
2. Study about specific searching images and their role in predation. Tie a series of flies from minimal parts to those that seem to imitate the natural insect to you. Determine if possible which ones are most readily taken by the fish and attempt to determine which features they may be using as cues or releasers to trigger their feeding.
3. Collect stomach contents from fish you like to catch. Observe the contents of those stomachs and record what you find in a notebook. Determine if their food habits are the same all the time or if they change with the time of day and season. Use references to entomology or other fields to assist in identifying what the fish are eating and attempt to create a seasonal reference to their favorite foods.
4. Observe fish actively feeding on a local stream, pond or lake. By careful study, see what they are eating and how they feed. Do they take everything that is a potential food item, or are they selecting something from a set of food choices? What characteristics seem to determine which food items are taken and which ones are rejected? How can that apply to your fly tying efforts.

### **Links to Other Programs**

Links to the rest of the sportfishing program are obvious. Fly tying is a natural link to fly fishing as well as to crafting other types of tackle. Rod building can be a means of having an excellent fly rod at a lower cost. The feathers, furs and other materials needed by a fly tier can lead to interests in hunting, trapping, waterfowl, poultry science or other seemingly unrelated fields. Understanding aquatic ecology as well as keen observation skills are important to success in both tying and fishing flies. This can provide entry into the sciences, either as a future vocation or as an avocational activity. Fishing flies can lead to an interest in several fields of physics and engineering from materials science to mechanics. Tying flies can be a great introduction to economics and marketing for young entrepreneurs. Finally, the hobby of tying flies is both craft and art. It can lead into many other areas of activity from writing and photography to science.