



Tying Hackle Dry Flies

Ronald A. Howard Jr.¹

Objectives

Participating young people and adults will:

1. Practice selection of materials appropriate to dry flies
2. Practice appropriate proportions for hackle dry flies
3. Practice application of tail, body and hackles
4. Critique personal ties to improve tying skills
5. Have fun while learning

Youth Development Objectives

Participating young people will develop:

1. Enhanced hand-eye coordination
2. Enhanced planning and execution skills
3. Potential life-long avocational skills
4. Enhanced interpersonal skills

Roles for Teen and Junior Leaders

1. Demonstrate tying patterns while explaining each step.
2. Assist participants having problems with any tying step.
3. Evaluate flies suggesting ways to improve.
4. Encourage young people as they learn tying skills.
5. Assist with set up and break down of tying area

Potential Parental Involvement

1. See "Roles for Teen and Junior Leaders" above
2. Arrange for or provide teaching location
3. Arrange for or provide tying materials and/or equipment
4. Arrange for or provide transportation
5. Arrange for or provide refreshments.
6. Discuss personal experience in fishing

Best Time: As an introductory dry fly lesson

Best Location: Well lighted, comfortable setting

Time Required: 60 to 90 minutes

Equipment/Materials

tying vice	hackle pliers
tying bobbin	bobbin threader
dubbing needle	whip finisher
6/0 thread: black, white, orange, yellow	
1x to 3x fine dry fly hooks	
5x short dry fly hooks	
dark blue dun hackles	
pale blue dun hackles	
red grizzly hackles	grizzly hackles
brown hackles	olive hackles
cream or straw hackles	
fine gold tinsel	head cement

Safety Considerations

No special considerations

References

See references in introduction

¹ Professor and Extension Specialist, 4-H Youth Development, Texas Agricultural Extension Service, Texas A&M University, College Station, TX

Evaluation Activities/Suggestions

1. Compare participant ties with patterns and models
2. Evaluate participant ability to follow patterns
3. Observe cooperation and interactions among participants
4. Observe changes between successive patterns

Lesson Outline

Presentation	Application
<p>I. Variants, spiders and bivisibles</p> <p>A. Basic pattern elements</p> <ol style="list-style-type: none">1. Hackles2. Tail in most patterns3. Body material in some patterns <p>B. Utility of these patterns</p> <ol style="list-style-type: none">1. High floating patterns2. Large mayflies3. Searching patterns4. Something different	<p>Use an illustration of one of the flies to outline the basic pattern components.</p> <p>Discuss the use of the patterns in fishing your local area.</p>
<p>II. Spiders and skaters</p> <p>A. Badger Spider</p> <ol style="list-style-type: none">1. Materials<ol style="list-style-type: none">a. 5x short to standard hooksb. Badger tailc. Tinsel body sometimesd. Very long badger hackle2. Tying procedure<ol style="list-style-type: none">a. Bind in tail<ol style="list-style-type: none">1) Very long and stiff2) Spade hackle fibersb. Bind in and wind hackles<ol style="list-style-type: none">1) 2-3 saddle hackles2) Bushy appearancec. Wind head and finish <p>B. Brown Spider</p> <ol style="list-style-type: none">1. Materials<ol style="list-style-type: none">a. 5x short shankb. Brown hackle tailc. Gold tinsel body optionald. Long brown saddle hackles2. Tying procedures<ol style="list-style-type: none">a. Bind in tail<ol style="list-style-type: none">1) Very long and stiff2) Spade hackle fibersb. Wind gold mylar bodyc. Bind in and wind hackles<ol style="list-style-type: none">1) 2-3 long saddles2) Bushy appearanced. Wind head and finish	<p>Display the components of the badger spider as you set up to demonstrate the pattern for the group.</p> <p>Demonstrate the pattern as you discuss the tying process. Leave the finished fly in the vise for an example while the young people finish their own samples. Critique each fly positively pointing out ways to improve technique.</p> <p>Display the components of the brown spider as you are preparing to demonstrate the fly.</p>
<p>C. Grizzly Skater (no tail - 6-8 hackles larger</p>	<p>Tie a sample fly the participants can use as a sample. Discuss the tying process as you are doing so.</p> <p>Show a completed grizzly skater (or another color if you wish)</p>

than 50 cent piece)

1. Materials
 - a. 5x short to standard dry
 - b. Very long, heavy hackle
2. Tying procedure
 - a. Select very long hackles
 - 1) Superior neck or saddle hackles
 - 2) Barbules about width of 50 cent piece
 - b. Bind in 6-8 hackles at bend
 - c. Wind very bushy hackle
 - d. Wind head and finish
3. Fishing skaters
 - a. Skim or skate over water
 - b. Attractor or exciter patterns

III. Variants

A. General pattern elements

1. Light wire hooks
2. Long tail
3. Stripped quill or dubbed body
4. Extra long hackles

B. Gray Fox Variant

1. Materials
 - a. Extra fine wire
 - 1) Short shank
 - 2) Regular shank
 - 3) Sizes 10 to 20
 - b. Extra long red grizzly hackle tail
 - c. Stripped brown hackle quill body
 - d. Long hackles
 - 1) Mixed grizzly and red grizzly
 - 2) About 2 times gap width
2. Tying procedure
 - a. Bind in tail

 - b. Bind in stripped quill by tip

 - c. Carry thread forward to shoulder
 - d. Wind thread smoothly to shoulder
 - e. Wind body quill to shoulder
 - 1) Bind down
 - 2) Trim butt

 - f. Bind in hackles
 - 1) Prepare hackles
 - 2) One red grizzly, one grizzly
 - g. Wind 3-5 turns of each hackle
 - h. Form head and finish

C. Other variants

1. Dun variant
 - a. Dark blue dun hackles and tail
 - b. Coachman brown hackle quill body
2. Cream variant

and the components you need to complete one.

Demonstrate the tying process and **leave** the fly in the vise for a sample.

Use a large illustration or a large sample fly to point out the components of a basic variant.

Note that size 10 to 14 flies may be easier for beginners to tie.

Outline the materials required as they are being used in tying this pattern. **Note** that the hackles should be tied so the colors are mixed thoroughly.

Demonstrate how to strip a hackle quill with the thumbnail and index fingernail or by plucking the fibers from the quill. **Emphasize** the value of soaking the quill briefly in warm water to soften it and make it less likely to break when being wound on.

Note that quills give a better body appearance and are more durable when the middle sections of the quill are used, at least of flies size 14 and larger.

Stress the importance of a smooth underbody in getting an excellent finished body with the quill.

Note that the importance of the smooth underbody is the same for the hackles as for winding bodies.

Leave the finished fly in the vise as a model for the other tiers.

Show samples of the other variants as examples in case the participants want to tie another one.

- a. Cream tail and hackles
- b. Cream quill body
- c. White or cream thread
- 3. Tie as for other variants
 - a. Yellow tying thread
 - b. Stripped olive quill body
 - c. Pale olive hackles and tails
 - d. Sizes 16-20

IV. Bivisibles

- A. All hackle flies
 - 1. Two-tone hackle flies
 - a. General body color
 - 1) Suggest food
 - 2) Light and active
 - 2. White facing hackle
 - a. Good visibility
 - b. Easily followed on water
- B. Brown Bivisible
 - 1. Materials
 - a. Fine wire, standard hooks
 - b. Brown and white hackles
 - 2. Tying procedure
 - a. Bind in tail
 - 1) Tips of two brown hackles
 - 2) Hackle fibers optional
 - b. Bind in brown hackles at tips
 - 1) Hackles about 12 times gap width
 - 2) Shiny sides up
 - c. Palmer hackles to shoulder
 - 1) Wind from tip to butt
 - 2) Merge hackles
 - d. Bind in white hackle at shoulder
 - e. Wind 2-3 turns of white hackle
 - f. Form head and finish
- C. Other bivisible patterns
 - 1. Grizzly bivisible
 - 2. Gray bivisible
 - 3. Light ginger bivisible
 - 4. Olive bivisible
 - 5. Others as chosen

Discuss the uses of bivisibles and their high visibility on the water.

Reinforce the appropriate way to have the hackle feather bound on the hook.

Demonstrate the hackle preparation process and the way the hackles may be folded or spread before being palmered.

Demonstrate the palmering process clearly.

Summary Activity

Lay out the flies that were tied in this session. Have each youngster critique his or her own flies, then discuss their technique with each one. Remember to be positive and to reinforce the things they are doing right. Offer positive means of correcting errors in their technique.

Lesson Narrative

Variants, spiders and bivisibles are all primarily hackle flies. Although bivisibles are not as popular as they once were, they are still effective fish catchers. Variants are primarily imitator patterns for large mayflies or large flying aquatic insects. Spiders are usually used as attractor or shock patterns, often used when fish are rising to a pattern that one cannot effectively imitate or as searching patterns.

These patterns consist mostly of hackles: extra long hackle tails and extra long hackles. Variants use stripped quill bodies, although they can be effective with dubbed fur bodies as well. Spiders may have

short tinsel bodies, although most tiers do not apply bodies to them. Bivisbles are constructed almost entirely of hackle and tying thread, although some patterns may include a tinsel underbody. Skaters are tied like bushy spiders without tails. They are most often used as attractor or exciter patterns, particularly for sight fishing for reluctant fish. They are skimmed or skated over the water's surface to generate strikes.

Tying the Badger Spider

The badger spider is typical of the spider group. It is tied on a 5x short hook to provide more hook gap for the length of the fly, although it could be tied on a standard hook several sizes smaller than the hackles would suggest. The hackles are left very long, as is the tail. This presents a rather large silhouette with very little material in contact with the water. The fly is usually used as a searching pattern in broken water or as a shock fly to generate strikes from fish that are refusing other offerings. These flies can be tied effectively without bodies, but some patterns call for various floss and/or tinsel bodies or underbodies.

The pattern for the badger spider calls for 5x short to standard dry fly hooks. The tail and hackles are badger. Both of them should be "too long" for the gap width of the hook, perhaps two to three times the gap width. Good saddle hackles are excellent choices for the hackle and spade hackles may be the best source of tailing material.

Start by binding in a long tail of stiff badger hackle fibers. Next bind in two or three hackle fibers with fibers about two to three times the gap width. Trim the butts of the quills and carry the thread forward to the head area. Wind each hackle in place, binding them down at the head. Trim the excess hackle away. Finally, wind a smooth head, whip finish and apply head cement. A drop of thin head cement at the bases of the hackles and the base of the tail can help in stiffening them for better floatation. More than that simply adds weight.

Tying the Brown Spider

Materials for the brown spider are analogous to those used in the badger spider except for the addition of a short tinsel body. The tail and hackles are long, stiff brown hackle. A short-shanked hook is used to provide greater gap while keeping the fly compact.

Start tying the brown spider by binding the tail material in place with a few turns of thread. If a body is desired, bind in the fine gold tinsel. Carry the thread forward evenly for a few turns over the butt end of the tinsel and the butts of the tail fibers, making a smooth, even base for the tinsel body. Wind a few turns of tinsel with each wrap touching but not overlapping the previous one until the desired body length is achieved. Bind and trim the end of the tinsel before binding in the bases of two or three brown saddle hackles. Trim the butts of the hackle quills and carry the thread forward to the rear of the head area. Wind a bushy ring of hackles, tying off each one as its useful length is consumed. Trim the tips away, wind a smooth head, and finish the fly.

Grizzly Skater

Skaters are like spiders without tails and with huge hackles. Their primary use is for salmon or reluctant trout where sight fishing is possible. Short-shanked hooks are commonly used, although standard dry fly hooks could be used if desired. These flies demand high quality hackles, either neck or saddles.

Carefully select six to eight hackle feathers with barbs about 1/2 to 1/4 inches long, and strip away any soft or webby fibers from the base of the quill. Attach the hackle feathers at the rear of the shank and carry the thread forward to just behind the head area. Trim the butts of the feathers and bind the ends down securely and smoothly. Wind them on the shank one at a time, making a very bushy hackle. Trim the ends after they have been bound down, then finish with a smooth head and a drop of head cement.

Fishing Skaters - Skaters are designed to skim or skate over the water creating a wake. Most of the time they are used to incite surface-minded fish into a strike when other approaches to raising the fish have failed. The cast is usually made down and across, so the fly will swing in front of a fish that is in view or a likely holding spot. Several attempts may be required before a strike ensues.

Variants

Variants are basically spiders with bodies on regular shanked hooks. Unlike the spiders, which most tiers would concede are primarily attractor patterns or shock patterns, most of the variants are designed to suggest common fish prey items. They are tied with long tails and long hackle for their sizes - about 2 times gap width or a bit more. The bodies are usually constructed of stripped hackle quill or dubbed fur (or polypropylene).

Gray Fox Variant

The gray fox variant is tied on extra-fine wire dry fly hooks, with most tiers using standard length hooks in sizes from about 10 to 20. Tail material is stripped from a red grizzly hackle feather (in larger sizes, spades may be best). The body is a stripped coachman brown or red grizzly hackle quill, and the hackles are a mixture of red grizzly and grizzly about twice the gap length in barb length. The tying thread may be either black or a pale orange. The very similar multi-variant is tied with Cree hackles and tails.

Gray Fox Variant

Hook: 1x to 3x fine dry fly
Thread: pale orange or black
Tail: red grizzly hackle fibers
Body: stripped red grizzly or brown hackle quill
Hackles: mixed grizzly and red grizzly

Tying procedure for the gray fox variant starts with binding in the tail of red grizzly hackle fibers. Bind in the tip of the stripped quill at the base of the tail. [**Tip:** Do not use too fine a quill or get too close to its tip when tying larger patterns. They tend to break in winding or from fish teeth.] Carry the thread forward winding a smooth underbody. Grasp the base of the stripped quill with the hackle pliers and wind a smoothly tapered body to the shoulder of the fly. [**Tip:** If you have trouble breaking hackle quills, try soaking them for a while in warm water. This softens them and makes them more flexible.] Trim the butt of the body quill and wind a smooth layer over it. Select and prepare the two hackle feathers, stripping away the webby fibers at the base of the feathers. Bind them to the shank with the upper side facing you. Trim the butts of the hackles and wind a smooth layer of thread to the back of the head area. Grasp one hackle at a time, winding it around the shank toward the head. Repeat with the second hackle, making sure the fibers mix well. Having bound in the tips of the hackles, trim them away and wind a smooth, tapered head. Whip finish the head and apply a drop or two of head cement. Finish the body by coating it with a layer or two of thinned head cement. This brings out its colors, makes it seem more translucent, and yields a tougher body.

Additional Variants

The major difference among variants are in the color of the hackles and the body materials. The tying procedure is essentially the same. The cream variant, dun variant, and a tiny olive variant are all useful in some situations. Patterns for these three flies are listed below for tiers who would like to add them to their fly boxes. The dun variant is commonly used as an imitator for the dun variant or white-gloved howdy, a large dark mayfly with sooty, dun wings in the subimago (dun) or emerger stage. Cream variants are useful in suggesting the pale creamy to very pale yellow mayflies in several genera. The pale olive variant supplied here was used to suggest skittering stone flies and pale olive caddisflies.

Patterns are listed below for some useful variants.

Cream Variant

Hook: 1x to 3x fine dry fly
Thread: cream, white or pale yellow 6/0
Tail: cream hackle fibers
Body: stripped cream hackle quill
Hackle: cream or straw

Dun Variant

Hook: 1x to 3x fine, size 8 to 20
Thread: brown or black
Tail: dark blue dun hackle fibers
Body: stripped coachman brown hackle quill
Hackle: dark blue dun (sooty)

Little Olive Variant

Hook: 3x fine dry fly, size 18 and 20

Thread: yellow
Tail: pale olive hackle fibers
Body: stripped olive hackle quill
Hackle: pale olive or pale olive and pale blue dun

Bivisibles

Bivisibles are all hackle flies, although some tiers add an underbody of floss or tinsel. The flies use a hackle point tail or a small bunch of stripped hackle fibers as a file. The hackles are palmered, i.e. they are tied in at the tips and wound toward the butt, putting the longest hackle fibers toward the front of the fly. They are generally tied in a two-tone fashion, with two or three hackles of the main body color and a single white hackle as a facing for the fly. This white hackle collar makes the fly relatively easy to see on the water, but the general body color suggests food items. The flies are light and active on the water, making them possible choices for fluttering flies or for fishing broken water.

The brown bivisible is a sample fly in this group. It is a simple tie, consisting of only hackles, a tail and a head. The pattern is as follows.

Brown Bivisible

Hook: 1x to 3x fine, dry fly
Thread: black 6/0
Tail: brown hackle points
Hackles: brown
Facing hackle: white

Start the tying process by binding in the tips of two brown hackles (or a small bunch of brown hackle fibers) as a tail. Select two or three hackle feathers with fibers about 12 times the width of the hook gap. Gently stroke the fibers toward the butt of each feather to make them stand out from the quill at nearly right angles. Bind in two or three hackle feathers by their tips and carry the thread forward smoothly to the shoulder of the fly. Grasp the hackles one at a time by their bases with the hackle pliers, and wind them toward the shoulder. Bind each one down and trim the butts. Select and prepare a similar-sized white hackle. Tie it in at its tip or by its base as you wish. Carry the thread forward to the back of the head area. Wind several turns of white hackle, bind and trim the feather. Wind a smooth and compact head. Whip finish the head and apply a drop of two of head cement to finish the fly. As with the other hackle patterns, this one benefits from a drop of thinned head cement at the bases of the hackles as a stiffener.

Other Bivisible Patterns

Bivisibles can be tied in any combination of colors that the tier might desire. In general, they are best when tied in approximately the size and color of predominant insects on that body of water at that time of year. A few combinations that you might consider include grizzly hackles and tail, mixed grizzly and brown hackles, light ginger hackles, cream or straw hackles and olive hackles. All of them should be faced with white for visibility. For panfish, one might consider yellow, red or black with a contrasting color at the front.

Exhibit or Sharing Suggestions

1. Prepare a poster, models or photographs to show the steps in tying one or more of these hackle flies.
2. Study fly-fishing books or magazines to see what other types of hackle flies might be useful for fishes in your area. Share the results of your studies with your group or other interested persons.
3. Prepare a method demonstration on tying one of these flies and present that demonstration in an appropriate setting.
4. Prepare a photographic story of tying one of these patterns 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.

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 fund raisers.
3. Donate flies to a local fishing program.

Extensions or Ways of Learning More

1. Observe fish and the foods that they eat on your local waters. Using what you know about tying flies, try to develop a pattern that imitates or suggests a food the fish seem to prefer. Research existing fly patterns to see if someone has developed a fly that does what you want. Modify existing patterns or create your own pattern in an attempt to catch the fish you are seeking.
2. 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.
3. 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

The link to the rest of the sportfishing program is 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 engineering. 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.