



Tying Hair Bugs

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Objectives

Participating young people and adults will:

1. Develop skill in tying spun deer hair bodies
2. Practice shaping hair bodies
3. Develop finishing techniques for hair bug patterns
4. Develop techniques for attaching eyes to patterns
5. Have fun while learning.

Youth Development Objectives

Participating young people will develop:

1. Enhanced fine motor skills
2. Enhanced sense of three dimensional proportion
3. Enhanced communications skills
4. Enhanced ability to follow patterns and directions
5. Enhanced self-confidence and self-image

Roles for Teen and Junior Leaders

1. Help with set up or clean up of work area
2. Demonstrate tying each pattern, explaining each step
3. Assist participants as needed
4. Evaluate and positively critique finished bugs
5. Encourage participants as they learn 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/or equipment
4. Arrange for or provide transportation
5. Arrange for or provide refreshments

Best Time: Any time (after tying basics)

Best Location: Well lighted, comfortable area

Time Required: Approximately 1 to 2 hours

Equipment/Materials

tying vice	hackle pliers
tying bobbin	bobbin threader
dubbing needle	scissors
head cement	hair packer (pen tube)
monocord or 2/0	CA cement
black goose quill	natural deer hair
green deer hair	yellow deer hair
white deer hair	black deer hair
red deer hair	natural bucktail
green bucktail	yellow bucktail
white super hair	silver flashabou
grizzly saddle hackles	red saddle hackles
chartreuse saddle hackles	
yellow saddle hackles	orange saddle hackles
black lacquer	doll's eyes
black mono eyes	

Safety Considerations

Observe the normal precautions exercised when using cyanoacrylate ("super") glues and lacquers, e.g. using in a well-ventilated area.

References

See references in introduction

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6. Discuss personal experience in fishing

Evaluation Activities/Suggestions

1. Observe tying skills and applications to pattern
2. Observe interactions with adults and teen leaders
3. Observe sculpting skills and their development
4. Observe eye placement and balance on pattern
5. Observe questions or technique breakdowns that require additional instruction or assistance

Lesson Outline

Presentation	Application
<p>I. Hair bugs</p> <p>A. Hollow hair flies</p> <ol style="list-style-type: none">1. Deer hair most common2. Other hairs used<ol style="list-style-type: none">a. Cariboub. Pronghorn <p>B. Surface or diving lures</p> <ol style="list-style-type: none">1. Traditional use for bass and panfish2. Growing use for other surface feeders<ol style="list-style-type: none">a. Pike and pickerelb. Stripers and white bassc. Species feeding on or near surface <p>C. General techniques</p> <ol style="list-style-type: none">1. Spinning hair<ol style="list-style-type: none">a. Small clumps of hairb. Hold tightly, bind looselyc. Loosen finger pressure, tighten threadd. Pack hair denselye. Trim to shape2. Stacking hair<ol style="list-style-type: none">a. Small clumps of hairb. Hold tightly, bind tightlyc. Pack layers tightlyd. Trim to shape	<p>SHOW several examples of hair bugs in a variety of styles and sizes while discussing their uses and the materials used in tying them.</p> <p>SHOW examples of spun hair and stacked hair techniques.</p>
<p>II. Tying the micro-mouse</p> <p>A. Pattern</p> <ol style="list-style-type: none">1. Hook: #4 - 6 dry fly or wet fly2. Thread: black monocord or 2/03. Tail: fiber from goose or turkey primary4. Body: natural deer hair5. Whiskers: javelina bristles (optional)6. Eyes: black lacquer or mono eyes <p>B. Tying procedure</p> <ol style="list-style-type: none">1. Attach thread at rear of shank2. Bind in tail3. Form body<ol style="list-style-type: none">a. Clip small bunch of deer hair<ol style="list-style-type: none">1) About half pencil size2) Too little better than too muchb. Hold hair in place over tail tie down	<p>PASS OUT the materials needed to tie the micro-mouse while explaining the pattern and basic tying process.</p> <p>ATTACH the thread near the end of the shank and BIND IN a single goose or turkey quill fiber as a tail.</p> <p>CUT a small bunch of deer hair at the skin line. NOTE that small bunches will spin more easily and form a tighter body than will larger ones.</p> <p>HOLD the hair in place over the base of the tail and APPLY two turns of thread rather loosely.</p>

- c. Take one or two loose turns of thread
- d. Slowly relax finger pressure while pulling down on thread
- e. Allow hair to spin around shank
- f. Pack hair
 - 1) Thumbnail / fingernail technique
 - 2) Hair packer
 - a) Ball point pen barrel
 - b) Commercial packer
- g. Take 2-4 turns in front of clump
- h. Repeat process to fill entire shank
 - 1) Add whiskers if desired
 - 2) Add mono eyes if desired

RELAX finger pressure on the hair bundle while **PULLING** down to tighten the thread. The hair should spin around the shank, standing up at nearly right angles to the shank. Using the nails of the thumb and forefinger or a ballpoint pen barrel, **PACK** the hair tightly, standing it upright and taking 2-3 turns of thread in front of the clump to secure it.

SPIN successive small bunches of deer hair on the shank, repeating the packing and winding process until the shank is filled. **ADD** mono eyes and whiskers if desired.

- I. Form head, whip finish and lacquer

FORM the head, whip finish and lacquer the windings.

- j. Trim body to shape
 - 1) Hold whiskers away from scissors if added
 - 2) Hold scissors flat to trim
 - 3) Trim belly flat
 - 4) Shape teardrop shaped body
 - 5) Leave ears full length
 - 6) Trim ears to rounded shape
- k. Add lacquer eyes if desired

Holding the scissors flat (not using the points) **TRIM** away everything that does not look like a mouse, making the belly flat and shaping the body in a teardrop shape. **LEAVE** long hair for the ears and **TRIM** them to a rounded shape.

Use a nail or round toothpick to add lacquer eyes if desired.

C. Large mouse

- 1. Pattern
 - a. Hook: #4 - 3/0 dry or wet fly
 - b. Thread: monocord, kevlar or 2/0
 - c. Tail: buckskin or pigskin strip
 - d. Body: spun natural deer hair
 - e. Whiskers: javelina or pig bristles
 - f. Eyes: mono or small doll's eyes
- 2. Tying techniques as above

NOTE that the larger mouse for bass, large nocturnal trout or pike can be tied on larger hooks using the same techniques. **ADD** monofilament eyes or **GLUE** on doll's eyes with a CA glue.

II. Tying a hair popper

- A. Pattern
 - 1. Hook: dry fly, wet fly or stinger
 - a. Sized to need
 - 1) Panfish - #10-8
 - 2) Bass - #8-2 or larger
 - 2. Thread: monocord, kevlar or 2/0
 - 3. Tail: splayed hackle feathers
 - a. Colors of choice
 - b. Monochrome or mixed
 - 4. Collar: wound saddle hackles at waist
 - 5. Body: spun deer hair
- B. Tying procedure
 - 1. Bind thread to the rear of the shank
 - 2. Attach two pairs of hackles as a tail
 - a. Strip away excess feather fibers
 - b. Arrange hackles to curve outward
 - c. Hold hackles in place firmly
 - d. Bind hackles in place with thread
 - e. Trim butts and wind over ends
 - 3. Attach two hackles as a collar

DISTRIBUTE the materials to tie a deer hair popper of your choice. selecting the size and color combinations for the fish being sought.

ATTACH the thread at the rear of the shank.

PREPARE 4-6 saddle hackles by stripping away the excess fibers from the base of the feathers. **ARRANGE** them so the hackles curve away from each other in pairs or triads. Holding the hackles firmly in place, **BIND** them in place with several turns of thread before trimming the butts and winding over them.

- a. Bind in over base of tail
 - b. Wind one at a time to back of body
 - c. Bind off and trim ends
 - d. Whip finish thread
4. Spin deer hair body to eye of hook
- a. Build of small bunches

BIND in a pair of prepared hackles matching or contrasting with the tail hackles. **BIND** them off and trim the tips, whip finishing the thread and applying a drop of lacquer.

In small bunches about the thickness of a lead pencil or smaller, **SPIN** the remainder of the shank full of deer hair in your choice of colors.

- b. Pack tightly between bunches

PACK each bunch tightly in place with a hair packer, pen barrel, or you thumbnail and index fingernail as it is added and **WIND** a turn or two of thread to stand it up in place.

5. Whip finish thread at eye

WHIP finish the thread at the eye and **APPLY** a drop or two of head cement to complete the tying process.

6. Trim body to shape
- a. Hold hackles out of the way
 - 1) Hackle guards or paper strip
 - 2) Fingers
 - b. Trim with scissor blades, not tips
 - c. Trim close at bottom
 - d. Round and taper sides and back

Holding the hackles out of the way with a hackle guard, a strip of stiff paper or your fingers, use the scissors held nearly parallel to the shank to **TRIM** the body to the desired shape. Be sure to **TRIM** the underside of the body enough to allow for easy hook setting.

III. Tying a Ron's hair frog

A. Pattern

1. Hook: dry fly or wet fly sized to need
2. Thread: monocord, kevlar or 2/0
3. Legs: yellow and green bucktail
4. Ankles: stainless wire core, thread over-wrap
5. Belly: yellow or white spun deer hair
6. Sides and back: green or brown deer hair
7. Eyes: lacquer or doll's eyes

PASS out the materials for Ron's Frog while explaining their use. **ALLOW** the participants to determine which colors they would like to use in their own frog.

B. Tying procedure

DEMONSTRATE the pattern and leave the completed bug in the vise as a model.

1. Form rear legs
 - a. Clamp stainless wire in vise
 - b. Attach thread to center of wire
 - c. Stack dark over light bucktail on wire
 - d. Wind over bucktail and wire with thread
 - e. Whip finish and lacquer thread

CLAMP a 1/2-inch piece of thin stainless steel wire in the vise. **ATTACH** the thread to the middle of the wire in the normal manner, and **STACK** dark over light bucktail, winding over the wire and leaving a foot-length of hair from the windings to the natural tips of the hair. **WHIP FINISH** and **LACQUER** the windings. Set the legs aside for a moment.

2. Clamp hook in vise
3. Apply and trim small clump of hair at bend
4. Trim clump to small ball
5. Bind in legs to sides

CLAMP the hook in the vise and **APPLY** a small clump of the back hair at the rear of the shank. **TRIM** the hair almost to size.

BIND the legs in place with the dark color up and the light one down, pushing the thread back and standing it up with thread wraps.

6. Stack hair and wind in place
 - a. Apply dark hair on top
 - b. Apply light hair on belly

FILL the remainder of the hook with small clumps of dark and light deer hair, **STACKING** them with the dark hair on top and the light hair underneath. **PACK** the hair tightly as it is tied in and continue to the eye of the hook.

7. Whip finish, and lacquer head
8. Trim body to frog shape

9. Set bend in legs to form feet

10. Apply doll's eyes
 - a. "Super" glue or cyanoacrylate cement
 - b. Silicone glue (e.g. "Shoe Goo")

Whip finish and lacquer the head, then **TRIM** the body to a frog shape, relatively flattened on the top and bottom and somewhat teardrop shaped in outline.

SET a bend in the legs so the feet extend to the sides and kick when pulled through the water.

APPLY doll's eyes or molded eyes to the frog using either a silicone glue or a super glue to hold them in place.

IV. Tying a slider

A. Design

1. Minimum disturbance
2. Slide over surface

NOTE that sliders are designed to create a minimum disturbance in the water, suggesting wounded baitfish.

B. Pattern for a white slider

1. Hook: dry fly, wet fly or wide gap
2. Thread: white monocord or 2/0
3. Tail: 4-8 white saddle hackles around a white bucktail core
4. Tail Highlight: 10-12 strands flashabou

NOTE that the size can be varied to the fish being sought and the prey being imitated.

5. Collar: white bucktail or deer hair tips
6. Head: bullet shaped deer hair
7. Eyes: doll's eyes or molded eyes

C. Tying procedure

1. Bind in the tail material
 - a. Small bunch of white bucktail
 - b. 4-6 long , white saddle hackles
 - c. Top with flashabou strands
2. Bind in white body hair as a collar

3. Form a body and head
 - a. Small bunches of body hair
 - b. Flare, pack and wind in front of each
 - c. Fill shank with white hair
4. Whip finish and lacquer the head
5. Trim body to bullet shape

BIND in a small bunch of white bucktail of appropriate length, then **ADD** 4-6 white saddle hackles topped with silver or gold flashabou.

TIE the tips of the white deer hair backward in a cone around the base of the tail.

PACK small bunches of white deer hair, spinning the hair around the shank, packing it together and winding in front of each bunch until the shank is full.

FINISH the head in the usual manner.

PROTECT the collar from the scissors and **TRIM** the head to a cone or cylinder that will slide over the water or create a small wake rather than a splash or pop.

D. Alternatives

1. Tail materials
 - a. Artificial hair
 - b. Angora goat
 - c. Flash fiber
 - d. Marabou
2. Color patterns
3. Head shapes
 - a. Short, stout cone
 - b. Elongate cone
 - c. Cylinder
 - d. Bullet shape

NOTE that alternate tailing materials can be synthetic hair, bucktail, angora goat, or mixtures of these materials with mylar tinsel, flashabou, flash fiber or other colors of materials mixed in. Colors can match or contrast, with tails, collars and heads being variable to one's choices.

Head shapes can be long cylinders, long cones, short cones, or bullet shaped.

V. Tying divers

A. Design

1. Float at rest
2. Dive when stripped
3. Return to surface on pause

B. Pattern - Chartreuse Dahlberg Diver

1. Hook: Mustad 34011 or equivalent
2. Thread: monocord or 2/0
3. Tail: pearl flashabou, chartreuse marabou and silver flash fiber
4. Throat: pearl and red flashabou
5. Topping: flashabou and barred chartreuse hackles
6. Collar: deer body hair
7. Diving lip: lacquered deer hair collar
8. Head: flat bottom, bullet shaped top
9. Eyes: doll's eyes or molded eyes

C. Tying procedures

1. Start with thread near midpoint of shank
2. Bind in pearl flashabou
3. Bind in chartreuse marabou
4. Bind in silver flashabou
5. Bind in barred chartreuse saddle hackles at sides
6. Bind in pearl and red flash fiber throat
7. Attach collar of chartreuse deer hair
8. Bind butts of hair back to base of collar

9. Stack butts of second bunch of hair to lip
9. Stack or spin hair to fill shank
10. Whip finish thread and lacquer

11. Trim bottom of head flat to collar
12. Trim diving lip on short of collar
13. Trim top and sides of head to cone shape
14. Lacquer diving lip

D. Variations

1. Tail materials - mix or use alone
 - a. Bucktail
 - b. Artificial hair
 - c. Angora goat
 - d. Hackle feathers
 - e. Marabou feathers
 - f. Flash fiber
 - g. Flashabou or similar fibers
2. Color variations
 - a. Contrast or match colors of tail and body
 - b. Head and body colors
 - c. Stacked or spun hair
3. The mega diver
 - a. Hook: wide gap ringed eye hook
 - b. Thread: monocord or 2/0
 - c. Tail: mega hair, big fly fiber, angora

NOTE that divers are designed to float at rest, dive while being retrieved, and return to the surface during pauses in the retrieve.

PASS OUT the materials for the Dahlberg Diver while discussing their use in the pattern. **NOTE** that this is an example of a series that can be tied in nearly any combination that the user desires using a wide variety of materials.

DEMONSTRATE the pattern and leave the finished fly in the vise for comparison purposes.

BIND in the thread near the midpoint of the shank and **ATTACH** a small bunch of pearl flashabou.

BIND in a bunch of chartreuse marabou as the main Awing@ or tail and **ADD** a few strands of silver flashabou on top.

BIND in two barred chartreuse saddle hackles on each side of the tail with their tips flared out.

BIND in a few strands of pearl and red flash fiber at the throat.

BIND in a collar of chartreuse deer hair at the base of the tail, allowing the hair to flare around the tail base. **BIND** the butts of the hair back to form the beginning of the diving lip.

STACK the butts of the second bunch of hair to reinforce the diving lip, then **STACK** or **SPIN** small bunches of hair to fill the shank.

WHIP finish and lacquer the thread.

TRIM the bottom of the head flat to the collar, and allow plenty of room for hook setting.

TRIM the diving lip as at a slant that will force the head downward when pulled through the water, then **TRIM** the top and sides of the head to a cone shape.

LACQUER the diving lip to reinforce it and enhance its action.

DISCUSS some of the variations that can be developed using the base pattern.

DISPLAY a mega diver and allow the participants to tie one if time and interest allow.

- goat with hackles at sides
- d. Flash: flash fiber or flashabou
- e. Collar: deer hair
- f. Diving lip: clipped deer body hair

VI. Hair Gerbubble bug

A. Old smallmouth pattern

1. Cork or hair body
2. Hackle tail
3. Hackle in sides

DISCUSS the history of the Gerbubble Bug.

B. Pattern

1. Hook: #10-2 1 x long- 3x long
2. Thread: black monocord
3. Tail: splayed saddle hackle
4. Collar: bucktail or wound hackle
5. Sides: hackles pulled forward into body
6. Body: clipped deer hair
7. Head: tying thread, lacquered

PASS out the materials needed to tie the hair Gerbubble bug, explaining their use as you do so.

C. Tying procedure

1. Bind it saddle hackle tails
2. Bind in collar materials

3. Bind in side hackles

4. Spin or stack deer hair body
5. Wind and whip finish head
6. Trim body to shape
 - a. Flat on belly and back
 - b. Tapered sides with rounded edges
 - c. Broad, flat front
7. Pull side hackles forward
 - a. Work into body materials
 - b. Bind off at head
 - c. Leave hackles at sides
 - d. Trim ends flush
8. Wind head, whip finish and lacquer

Start the pattern by **BINDING** in the saddle hackle tails, adjusting their length and number to the size and density of the pattern being tied. **ADD** a collar of deer hair or bucktail covering the bases of the tail hackles.

BIND in a large hackle on either side of the tail to be used as side hackles or *Alegs@* for the bug.

SPIN or **STACK** a densely packed deer hair body to the eye of the hook, whip finishing the thread at the head.

TRIM the body flat top and bottom, slightly thicker at the front, and **TRIM** the sides tapering outward toward the head end of the fly and **ROUND** the edges slightly.

PULL the broad hackles forward, combing the fibers back with the fingers and **BIND** them off at the head. **TRIM** the excess away and **FORM** a neat head, finishing it conventionally.

VII. Fishing them

- A. Long pause and twitch
- B. Slow strip with pauses
- C. Rapid stripping
- D. Long pulls with pauses

DISCUSS an array of techniques useful for fishing these patterns in your local waters.

Summary Activity

Compare the flies completed in the lesson, holding an open and positive critique of the techniques and skills being practiced. Discuss possible ways to improve the patterns or variations on them that may work for local waters. If possible stage a fishing activity that can be used to test the flies on local fishes.

Lesson Narrative

Hair bugs are flies tied with hollow hair that flares as pressure is applied to the thread. Deer body hair is the most commonly used material for hair bugs, but many others are useful. Caribou is somewhat softer and an excellent spinning hair for smaller patterns. Pronghorn is coarser and a bit more brittle. Elk and moose are somewhat similar to white-tailed deer. Mule deer and blacktail deer are a bit darker in color, more gray than tan.

These patterns are used as surface or diving lures. They have been used traditionally for bass and other sunfishes, but they are growing in use for other fishes that may feed on the surface like pickerel and pike, temperate basses like stripers, white bass and their hybrids, spotted seatrout, redfish or channel bass, and even large trout. Both floating and floating - diving - surfacing models are extremely useful when fish are surface minded or waters are shallow enough that a wounded baitfish imitation or similar things will draw strikes.

Two basic techniques are common to tying hair bugs - spinning, where hollow hair is bound down and the thread is gradually tightened as the hair is allowed to spin around the hook, and stacking, where the hollow hair is held in place and bound down securely while being held in place. With both techniques, the hair is commonly packed tightly together after each bunch is added. Small bunches of hair, about the size of a common lead pencil or smaller, handle better and provide a more consistent body. Packing can be done with a hair packer, a tool made from the barrel of a pen, or with the thumbnail and index fingernail. Once packed, the clump is held in place with a few tight turns of thread. More hair is added until the hook is filled, giving it a bottlebrush appearance. Then, with the scissors held relatively parallel to the shank, trim away everything that does not look like the form you are attempting to shape. Eyes can be attached with silicone cement or super glue, the former being a bit more durable.

Tying the Micro-mouse

The micro-mouse is an excellent panfish pattern useful when bluegills or similar panfishes are feeding on the surface. The pattern follows.

Hook: #4 - 6 dry fly or wet fly
Thread: black monocord or 2/0
Tail: fiber from goose or turkey primary
Body: natural deer hair
Whiskers: javelina bristles (optional)
Eyes: black lacquer or mono eyes

Start tying the micro-mouse by attaching a tail of one goose or turkey primary feather fiber. Spin the shank full of small bunches of deer hair, using the following procedure. Clip a small bunch of deer hair (about pencil sized or less Bsmaller is better). Holding the hair in place tightly, take one or two relatively loose turns of thread around the clump and the shank. Relax the pressure on the hair clump as the tension on the thread is increased. This will cause the hair to spin around the hook and flare out from the tie down area. If needed, take a turn or two of thread through the hair clump to finish the spinning job, then pack it tightly together. Pressure from the thumbnail and a fingernail, use of a hair packer, or a barrel from a ballpoint pen will get the packing done effectively. Take a turn or two in front of each clump to stand the hair up and make a tight body. Once the shank is full, bind in whiskers and/or black mono eyes if desired. Form a small head of tying thread, whip finish the thread and apply a drop or two of head cement to complete the tying process.

Trim the body to shape by holding the scissors more or less parallel to the shank of the hook (i.e. flat to the surface being cut), and trimming away everything that does not look like a tiny mouse. Start by trimming the belly of the mouse flat and quite short to provide excellent hooking characteristics to the fly. Trim the sides to a more or less teardrop shape, narrow at the nose and wide at the rump. About two-thirds of the way up the sides, leave small clumps of hair full length while trimming the back and sides to shape. Trim those small clumps to a rounded shape to represent ears. If mono eyes are not used, add small drops of black lacquer to represent eyes.

A bass-sized mouse can be tied on a larger hook by substituting a buckskin or pigskin strip for the tail on a #4 to 3/0 hook. Mono eyes or small doll's eyes can be added along with javelina or pig bristles for whiskers.

Tying a Hair Popper

Hair poppers can be tied in a wide variety of sizes and color patterns to meet the needs and interests of the tier. Bass poppers are generally tied on size 8 to 2 or larger hooks, while panfish poppers are commonly tied on size 10 to 8 hooks. A generalized pattern follows.

Hook: dry fly, wet fly or stinger
Thread: monocord, kevlar or 2/0
Tail: splayed hackle feathers
Collar: wound saddle hackles at waist
Body: spun deer hair trimmed to shape

Bind in the thread at the rear of the shank. Prepare four matched saddle hackles by stripping away the excess feather fibers from their bases. Arrange the hackles to curve outward evenly at the sides. Bind them tightly in place while holding them tightly in place. Trim the butts and wind over the ends of the hackles to secure the tail hackles. Bind in a pair of hackles to form a collar. Trim the excess material away and wind the hackles to form a relatively dense collar over the bases of the tail hackles. Bind them off, trim the ends, and take a couple turns in front of them to set them in place. Using the techniques developed in the micro-mouse, spin small clumps of deer hair to fill the shank of the hook, packing tightly between clumps. Whip finish the thread at eye at the eye, adding a drop or two of head cement. Hold the hackles out of the way with the fingers, a stiff piece of paper or a hackle guard, and trim the popper to the desired shape. As with the other ties, trim the fly close on the bottom to allow maximum hook exposure, then round the top and sides of the popper, leaving the face flat.

Tying a Ron's Hair Frog

Ron's hair frog is a swimming frog pattern tied using stacked hair techniques. It may be tied in a variety of colors, but a green back and yellow belly work well. The pattern follows.

Hook: dry fly or wet fly sized to need
Thread: monocord, kevlar or 2/0
Legs: yellow and green bucktail
Ankles: stainless wire core, thread over-wrap
Belly: yellow or white spun deer hair
Sides and back: green or brown deer hair
Eyes: lacquer or doll's eyes

Start by clamping a piece of stainless steel wire in the vise. Attach the thread near the middle of the wire and lacquer it to lock it in place. Stack a bunch of green bucktail on the wire, leaving enough of the natural tips beyond the wire to form a large, splayed foot. Wind over it for the length of the wire. Stack the light bucktail on the wire to fill the other side. Wind over the wire again to cover both colors equally, whip finish the thread and lacquer it. Repeat the process with the second wire to prepare a set of legs. Clamp the hook in the vise and spin a small clump of back-colored hair at the rear of the shank. Bind the legs on the shank in front of the clump, pushing them back tightly against it to flare them outward from the body. Continue stacking deer hair to fill the shank with a two-tone body - light on the belly and dark on the back. Whip finish the head behind the eye and apply a drop of head cement to the thread. Trim the belly flat and close to the shank, leaving plenty of gap to allow good hook setting. Round the back, making it deeper at the rear than at the front of the hook. Trim the sides to a frog shape with rounded edges. Set a bend in each of the legs in the center of the wire, pointing the "feet" outward. The bends should match so the frog will swim straight when stripped through the water. Apply a pair of doll's eyes using either cyanoacrylate or silicone cement.

Tying a Slider

Sliders are designed to create minimum disturbance while suggesting a wounded baitfish or similar prey to game fishes. They have rounded or cone-shaped heads to allow them to create minnow-like disturbances when stripped or pulled through the water. They can be tied in a wide variety of sizes and color combinations to suite the tier's needs or desires. Several shapes are also useful. The pattern included here is a white slider.

Hook: dry fly, wet fly or wide gap
Thread: white monocord or 2/0
Tail: 4-8 white saddle hackles around a white bucktail core
Tail Highlight: 10-12 strands flashabou
Collar: white bucktail or deer hair tips
Head: bullet shaped deer hair
Eyes: doll's eyes or molded eyes

Begin tying the fly by binding in the tail materials near the end of the shank. Start with a small bunch of white bucktail, followed by 4-6 long saddle hackles (more on larger sizes) and topped by a few strands of flashabou or flash fiber. Bind in a small bunch of white body hair as a collar, with the natural tips pointing toward the rear of the hook. Continue spinning hair on the shank until it is filled to the eye, packing each bunch tightly as it is added. Next, wind a small head, whip finish and lacquer the head. Using the scissors carefully, shape a nearly cone-shaped body and head, tapering out to the collar, but relatively flat underneath the hook.

A number of alternatives can be used effectively in these patterns. Tails may include artificial hairs of several types, Angora goat, streamer fleece, flash fiber or marabou. Head shapes can be varied to the use as well from short, stout cones or rounded heads to relatively elongate cones, cylinders or rounded bullet shapes. Color patterns can be varied to meet the immediate needs as well.

Tying Divers

Divers are designed to float at rest, dive when stripped sharply, and return to the surface when the retrieve pauses. This diving and surfacing action is extremely attractive to predatory fishes, suggesting crippled and easy prey. Some of these divers are capable of reaching depths of two feet or more before surfacing. Dahlberg's Diver is the trademarked name for the pattern included here, and we have chosen to use a chartreuse pattern.

Hook: dry fly, wet fly or wide gap
Thread: monocord or 2/0
Tail: pearl flashabou and chartreuse marabou
Topping: silver flashabou and barred chartreuse hackles
Throat: pearl and red flash fiber
Collar: chartreuse deer body hair
Diving lip: lacquered deer hair collar
Head: flat bottom, conical sides and top
Eyes: doll's eyes or molded eyes

Starting near the midpoint of the shank, bind in a small bunch of pearl flashabou. Bind in chartreuse marabou over the flashabou, and add a small amount of silver flashabou on top. Bind in several barred chartreuse saddle hackles at the sides, splaying them outward at the tips. Add a few strands of pearl and red flash fibers at the throat. Stack a bunch of chartreuse deer body hair with the natural tips pointing back over the base of the tail, binding the base of the hair back over the base of the collar hair. Stack a second bunch of deer hair with the butts back over those of the first bunch. Continue to spin or stack hair to cover the remainder of the shank. Form a small head, whip finish the thread and apply lacquer to the windings. Trim the bottom of the head flat to collar, keeping the gap of the hook open for easy hook setting. Trim the diving lip in front of the collar, then form a cone shaped head to the base of the diving lip. Apply head cement to the diving lip to stiffen it and reinforce it.

Variations on this pattern feature a variety of tail materials, either alone or mixed - bucktail, artificial hair, Angora goat, streamer fleece, hackle feathers, marabou feathers, flash fiber, flashabou or similar fibers. Color variations either mixed or matched between head and body or within each part can make nearly endless variations. The hair may be stacked or spun.

The mega-diver is an example of this pattern type as well. It may be tied in lengths up to 10-12 inches long for use on large pike and bass.

Hook: wide gap ringed eye hook Color variations: white, black, chartreuse,
Thread: monocord or 2/0 red, red and white, light blue and brown, or
Tail: mega hair, big fly fiber, angora goat with hackles at sides others of your choice - gold, silver or pearl
Flash: flash fiber or flashabou flashabou or flash fiber
Collar: deer hair
Diving lip: clipped, lacquered deer body hair

Tying the Hair Gerbubble Bug

This pattern originated in a hard-bodied popper designed primarily for fishing smallmouth bass. The spun hair version is just as effective (some would say more so) and may be tied in sizes suitable for panfish or much larger prey. The original featured a cork body flattened above and below and tapered outward from the tail to the head. The hair version is similar in shape. A hair or hackle tail, or a combination of the two is used, and hackles are bound into the sides of the bug, either in slots cut in the cork or simply by binding the hackle into the hair. The pattern follows.

Hook: #10-2 1 x long- 3x long
Thread: black monocord
Tail: splayed saddle hackle
Collar: bucktail or wound hackle
Sides: hackles pulled forward into body
Body: clipped deer hair
Head: tying thread, lacquered

Start by binding in a pair of saddle hackles (or several pairs) at the rear of the shank, adding a bit of bucktail between them or as a collar if desired. Bind in a pair of very large hackles to serve as the side hackle. Spin or stack the shank full of deer hair, finishing just behind the eye of the hook. Whip finish the thread, and trim the body to shape. Cut it flat above and below, tapering slightly inward toward the rear of the hook. Leave the sides somewhat wider, but also tapered inward toward the rear of the shank. Round the edges slightly. Next, pull the side hackles forward, imbedding them along the middle of the flanks on the sides and allowing the hackle fibers to appear as legs. Bind the butts of the hackles down at the front of the body, trim the excess material away, and wind a small head. Whip finish the thread and lacquer the windings thoroughly.

Fishing Them

A broad array of fishing techniques is useful to the angler. All of them are effective in some situations. Often, the least disruptive approach is most effective. Leaving the fly on the water after the cast is completed, wait until all the ripples die, then wait a bit more. Twitch the fly slightly a time or two, then strip it in a short distance. Pause again. This ultra slow technique often produces strikes when other approaches fail.

An approach using brief pauses with interspersed twitches or strips can be an excellent one as well. Similarly, under some conditions, the fly is best retrieved by quickly repeated short strips or by pulses of such strips with pauses between them. Finally, long, rapid and splashy strips may be excellent for some species and conditions. Experiment with these techniques to determine which ones will work best with your patterns and the fish under various conditions.

Exhibit or Sharing Suggestions

1. Prepare a poster, models or photographs to show the steps in tying one or more hair bugs.
2. Study fly fishing books or magazines to see what other types of hair bugs might be useful for fish and other found in your area. Share the results of your studies with your group or other interested persons.
3. Prepare a method demonstration on tying a hair bug and present that demonstration in an appropriate setting. Consider having bugs finished to various stages to use as examples.
4. Prepare a photographic story of tying a selected hair bug 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 hair bugs and bug pattern cards that can be exhibited at a fair or similar gathering.
7. Try variations of one or more hair bug types in an attempt to find something that the fish in your area hit readily. Record your experiments and 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.

Extensions or Ways of Learning More

1. Observe fish behavior and the foods they eat in your local waters. Using what you know about tying hair bugs, try to develop a patterns or variations of them that would be effective in taking those fishes.
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. Study the feeding habits of some fishes of interest to you. Try to determine factors that seem to trigger their feeding activity and determine when, how and with what to fish to be most effective in catching them. Record your studies in your fishing notebook.

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.